NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL MEETING MATERIALS

October 31-November 1, 2023

Utqiagvik, Alaska

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Photo by Dee Carpenter

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NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL

Inupiat Heritage Center
Utqiagvik, Alaska
October 31-November 1, 2023, 9:00 AM

TELECONFERENCE: call the toll-free number: 1(866) 436-1163, then when prompted enter the conference ID: 611516561#

PUBLIC COMMENTS: Public comments are welcome for each agenda item and for regional concerns not included on the agenda. The Council appreciates hearing your concerns and knowledge. Please fill out a comment form to be recognized by the Council chair. Time limits may be set to provide opportunity for all to testify and keep the meeting on schedule.

PLEASE NOTE: These are estimated times and the agenda is subject to change. Contact staff for the current schedule. Evening sessions are at the call of the chair.

AGENDA

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15. Adjourn (*Chair***)**

To call into the meeting, dial the toll-free number: 1(866) 436-1163, then when prompted enter the conference ID: 611516561#

Reasonable Accommodations
The Federal Subsistence Board is committed to providing access to this meeting for all participants. Please direct all requests for sign language interpreting services, closed captioning, or other accommodation needs to Leigh Honig, 907-891-9053, leigh_honig@fws.gov, or 800-877-8339 (TTY), by close of business on October 24, 2023.

REGION 10
North Slope Regional Advisory Council

Seat	Yr Apptd ***Term Expires***	Member Name	Represents
1	***2023***	**VACANT**	**Subsistence**
2	***2025***	**VACANT**	**Subsistence**
3	2016 ***2025***	**Wanda T. Kippi** *Atqasuk*	**Subsistence**
4	2016 ***2025***	**Steve Oomittuk, *Chair*** *Point Hope*	**Subsistence**
5	***2025***	**VACANT**	**Subsistence**
6	2020 ***2023***	**Edward J. Rexford, Sr.** *Kaktovik*	**Subsistence**
7	2020 ***2023***	**Martha A. R. Itta** *Nuiqsut*	**Subsistence**
8	2021 ***2024***	**Esther S. Hugo** *Anaktuvuk Pass*	**Subsistence**
9	2021 ***2024***	**Brower A. Frantz, *Secretary*** *Utqiagvik*	**Subsistence**
10	2019 ***2024***	**Peter E. Williams** *Anaktuvuk Pass*	**Subsistence**

NORTH SLOPE
SUBSISTENCE REGIONAL ADVISORY COUNCIL
Meeting Minutes

Kaktovik City Hall, Kaktovik, Alaska
February 22-23, 2023

Invocation

Esther Hugo gave an invocation.

Call to Order, Roll Call and Quorum Establishment

Council members Steve Oomittuk and Esther Hugo were present at the meeting in-person. Council member Oomittuk acted as Chair. Council member Brower Frantz called in at 11:00am on the first day followed by Council members Wanda Kippi and Martha Itta at 1:30pm, establishing quorum. Council member Eddie Rexford called in at 3:35pm. With quorum, the Council elected Member Oomittuk as the Chair and voted or chose not to act on all but one action item. On day two of the meeting, only Chair Oomittuk and member Hugo were present for most of the meeting; the Council did not have quorum and was unable to vote on the one remaining action item, which was Member Hugo's reappointment to the Gates of the Arctic Subsistence Resource Commission.

Attendees participating:

Office of Subsistence Management (OSM): ***Jessica Gill, Leigh Honig***, ***Brent Vickers, Kendra Holman, Katya Wessels*, Karen Hyer****, ***Robbin La Vine*, Orville Lind*, Scott Ayers*, Nissa Bates-Pilcher*, and Liz Williams****
Arctic National Wildlife Refuge (NWR), U.S. Fish and Wildlife Service (USFWS): ***Nathan Hawkaluk and Paul Leonard***
U.S. Fish & Wildlife Service: ***Cody Smith and Jill Klein****
Bureau of Land Management (BLM): ***Beth Mikow* and Chris McKee***
Bureau of Indian Affairs (BIA): ***Glenn Chen***
National Park Service (NPS), Anchorage: ***Eva Patton****
Gates of the Arctic National Park and Preserve, NPS: ***Marcy Okada* and Kyle Joly****
Alaska Department of Fish and Game (ADF&G): ***Helen Cold***, ***Carmen Daggett, Mark Nelson, and Alex Hansen****
U.S. Forest Service (USFS): ***Greg Risdahl****
Wildlife Conservation Society: ***Taylor Stinchcomb and Rosemary McGuire***
University of Alaska Fairbanks: ***Daniel Gonzales***
Inupiat Community of Arctic Slope: ***Doreen Leavitt****
Kaktovik City Hall: ***Frances Mongoyak***
The Wilderness Society: ***Andrew Tooyak***

Members of the public: ***Fenton Rexford***

*Indicates participation via teleconference.

Review and Adopt Agenda

Motion by Member Hugo, seconded by Member Itta, to adopt the agenda. The motion passed unanimously.

Election of Officers

Steve Oomittuk was elected Chair.
Gordon Brower was elected Vice-Chair.
Brower Frantz was elected Secretary.

Review and Approve Previous Meeting Minutes

Motion by Member Hugo, seconded by Member Kippi, to approve the Fall 2022 meeting minutes as presented. The motion passed unanimously.

Council Member Reports

Esther Hugo of Anaktuvuk Pass reported that the community has been successful in taking caribou and catching healthy looking cows. Young folks have been catching what they can for elders and those without snowmachines and other vehicles. There have been many predators, such as wolves and wolverines around the village, and people need to be careful. She is thankful for the caribou because people are hungry.

Steve Oomittuk of Point Hope reported that the winter has been cold. The Western Arctic Caribou Herd's population has been in decline. The people want younger generations to continue the lifestyle and continue using these animals – the animals are their identity. Climate change has been taking a big toll on the animals, which is impacting the people.

Wanda Kippi of Atqasuk reported that wolves were around during the late summer until way past freeze up. She went to camp in October and a wolf was nearby. One was caught that looked hungry. The wolves finally left in November. Caribou was ok, and the fishing was fine. There were not as many caribou around the camps as usual, and the wolves might be scaring them away. This is the first winter observed with thin ice and open water near the cabins.

Martha Itta of Nuiqsut reported that caribou and wolves have been around Nuiqsut and the pipeline, which is closed to hunting. The Colville River has been freezing and thawing making it very dangerous, but there are extra people around town in case of accidents. Burbot fishing is normally in November, but she was finally able to get out in February. Residents have not been catching enough food and going hungry. The animals are there, but not everyone has resources to access them. Store costs are very high.

Health is tied to subsistence; 80% of their diet is subsistence and when they cannot go hunting, it weighs heavily on their minds and they we are.

Brower Frantz of Utqiagvik reported that caribou have been around the community, but not in abundance. He thinks there have been more predators caught this year. The winter has been warmer than usual with a late freeze. He wondered if the ice would start to break up in February or early March, as it has been lately. He hopes the ice stays long enough and the whalers have a nice season. He has observed more ducks around, maybe due to ice edge being closer to the community.

Ms. Carmen Daggett, wildlife biologist with Alaska Department of Fish and Game, asked if Member Frantz had been moose hunting on the Colville River and if the freeze-up happened at normal timing. Member Itta responded that the river freezes up around October but was later this year, which resulted in loss of fishing time. Member Frantz responded he couldn't go out hunting in the fall for the first time in 15 years due to work obligations. Member Itta noted that residents of Nuiqsut did catch three moose but that was less than the average five to six caught.

Old Business

The Council received presentations on the following topics:

- Western Arctic Caribou Herd by Mr. Alex Hansen, Alaska Department of Fish and Game
- North American Caribou Workshop and Arctic Ungulate Conference in May 2023 by Ms. Kendra Holman, Office of Subsistence Management

New Business

Wildlife Closure Reviews

The Council reviewed one regional wildlife closure and one crossover wildlife closure. Ms. Holman presented the analysis for regional closure review, WCR24-31 (Unit 26B, remainder and Unit 26C closed to moose hunting except by Kaktovik residents). Dr. Brent Vickers presented the analysis for crossover closure review, WCR24-21 (Unit 25A, Arctic Village Sheep Management Area closed to sheep hunting by Non-Federally Qualified Subsistence Users).

Call for Federal Wildlife Proposals

Ms. Holman reviewed the call for Federal wildlife proposals. The Council voted to submit the following two wildlife proposals to the Federal Subsistence Board within the 2024-2026 wildlife regulatory cycle:

- Unit 25A sheep, rescind the customary and traditional use determination for residents of Kaktovik.
- Unit 23 caribou, close to hunting by non-federally qualified subsistence users, August 1-October 31.

2021 Council Charter Review

Ms. Jessica Gill reviewed the North Slope Regional Advisory Council charter. Member Hugo motioned to approve the 2021 Council Charter with no changes. Member Frantz seconded. The motion passed unanimously.

Review and approve FY2022 Annual Report

Member Hugo motioned to adopt the FY2022 Annual Report as written. Member Rexford seconded. The motion passed unanimously.

Federal Subsistence Board Updated Draft Council Correspondence Policy

Dr. Vickers reviewed the updated Council Correspondence Policy. Member Frantz motioned to forward the draft Council Correspondence Policy as written to the Board and Member Kippi seconded. The motion passed unanimously.

Fisheries Resource Monitoring Program Update

Dr. Vickers presented an update on the Fisheries Resource Monitoring Program. No North Slope projects were submitted for the 2024 funding cycle.

Partners for Fisheries Monitoring Program Update

Dr. Vickers presented an update on the Partners for Fisheries Monitoring Program. No North Slope partners proposals were submitted for the 2024 funding cycle.

Regulatory Cycle Update

Dr. Vickers updated the Council on the fisheries regulatory cycle.

NPS seeks input on proposed changes to 2020 Hunting and Trapping regulations on national preserves in Alaska

Ms. Marcy Okada, Subsistence Coordinator with Gates of the Arctic National Park and Preserve, updated the Council on the proposed rule for sport hunting on national preserves. The Council did not act on this item.

Public Testimony *(for complete testimony, please review transcripts for February 22-23, 2023)*

Andrew Tooyak, Point Hope resident, asked about the Western Arctic Caribou Herd Working Group's proposed harvest limit cuts to four caribou per season. Mr. Hansen, wildlife biologist with Alaska Department of Fish and Game, informed Mr. Tooyak and the Council that the proposal from the Working Group will be submitted to the Alaska Board of Game and to the Federal Subsistence Board in April.

Fenton Rexford, Kaktovik resident, asked about hunting with ATVs and 4-wheeler access for residents of Kaktovik, which is closed in the Arctic National Wildlife Refuge. Mr. Nathan Hawkaluk, acting Arctic

National Wildlife Refuge manager, noted that the refuge is working with Kaktovik to develop an off-road vehicle plan, and noted that folks can access Native allotments with ATVs.

Agency Reports:

- Western Arctic Caribou Herd Working Group update presented by Mr. Hansen, Wildlife Biologist, Alaska Department of Fish and Game
- Wildlife Conservation Society project on Northern Alaska carnivores presented by Taylor Stinchcomb and Rosemary McGuire
- Arctic National Wildlife Refuge update presented by Mr. Hawkaluk, Acting Refuge Manager, and Dr. Paul Leonard, Ecologist, U.S. Fish and Wildlife Service
- Gates of the Arctic National Park and Preserve update provided by Ms. Okada, Subsistence Coordinator. The Council was unable to vote on Member Hugo's reappointment to the Gates of the Arctic Subsistence Resource Commission. Member Hugo can continue to serve on the Subsistence Resource Commission until the Council can vote on her reappointment at the next Council meeting.
- Bureau of Land Management update presented by Ms. Beth Mikow, Anthropologist
- Alaska Department of Fish and Game update Unit 26B and 26C caribou, moose, and musk ox presented by Mr. Mark Nelson, Wildlife Biologist
- Alaska Department of Fish and Game update Unit 26A caribou, moose, and musk ox presented by Ms. Daggett, Wildlife Biologist
- Alaska Department of Fish and Game Division of Subsistence update presented by Ms. Helen Cold, Subsistence Resource Specialist
- Office of Subsistence Management update presented by Dr. Vickers, OSM Anthropology Division Supervisor

Future Meeting Dates:

Fall 2023 meeting to be held October 31-November 1, 2023 in Utqiagvik.
Winter 2024 All Council meeting preferred date is March 4-8, 2024 in Anchorage.
Fall 2024 meeting to be held August 19-20, 2024 in Utqiagvik.

_____

Jessica Gill, Designated Federal Officer
U.S. Fish and Wildlife Service Office of Subsistence Management

_____

Steve Oomittuk, Chair
North Slope Subsistence Regional Advisory Council

These minutes will be formally considered by the North Slope Subsistence Regional Advisory Council at its Fall 2023 meeting, and any corrections or notations will be incorporated in the minutes at that meeting.

A more detailed report of this meeting, copies of the transcript, and meeting handouts are available upon request. Contact Jessica Gill at 1-800-478-1456 (toll free) or 907-310-6129, or by email at jessica_gill@fws.gov.

Federal Subsistence Board
Meeting Advisory

U.S. Fish and Wildlife Service
Bureau of Land Management
National Park Service
Bureau of Indian Affairs

Forest Service

For Immediate Release:
August 3, 2023

Contact: Robbin La Vine
(907) 786-3353 or (800) 478-1456
robbin_lavine@fws.gov

Results from the Federal Subsistence Board Work Session

During its August 2-3, 2023, work session, the Federal Subsistence Board (Board) discussed and approved responses to Regional Advisory Council (Councils) FY22 annual reports, reviewed Council recommendations for changes to Council charters, and received briefings on updates to the Regional Advisory Council Correspondence Policy and a letter from the Southeast Council to the Board on transboundary river watersheds.

The Board voted to recommend the Secretaries of the Interior and Agriculture (Secretaries) adopt the Councils' requests to modify their Council charters s to add language authorizing a non-voting young leader seat to the Membership and Designation Section of all ten Councils' charters. The Board also voted to recommend that the Secretaries adopt charter language submitted by the Northwest Arctic Council to improve geographic representation on the Council. The Board also approved individual customary and traditional use determination proposals ICTP23-01 and ICTP23-02 pertaining to areas managed by the National Park Service in Unit 13.

In addition to the public work session, the Board held an executive session on Thursday, August 3, 2023. The purpose of this meeting was to develop recommendations to the Secretaries of Interior and Agriculture for appointments to the Regional Advisory Councils. A summary of the executive session will be made available to the Councils and, upon request, to the public.

Information about the Federal Subsistence Management Program may be found on the web at www.doi.gov/subsistence or by visiting www.facebook.com/subsistencealaska.

Missing out on the latest Federal subsistence issues? If you'd like to receive emails and notifications on the Federal Subsistence Management Program, you may subscribe for regular updates by emailing fws-fsb-subsistence-request@lists.fws.gov.

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Federal Subsistence Board

1011 East Tudor Road, MS 121
Anchorage, Alaska 99503 - 6199

FISH and WILDLIFE SERVICE
BUREAU of LAND MANAGEMENT
NATIONAL PARK SERVICE
BUREAU of INDIAN AFFAIRS

FOREST SERVICE

AUG 21 2023

In Reply Refer To
OSM.23114

Alzred Steve Oomittuk, Chair
North Slope Subsistence
Regional Advisory Council
1011 E. Tudor Road, MS 121
Anchorage, Alaska 99503

Dear Chair Oomittuk:

The Federal Subsistence Board (Board) met on January 31–February 3, 2023, in Anchorage, Alaska to consider fisheries closure reviews and proposed changes to Federal subsistence management regulations for the harvest of fish, shellfish, and wildlife in Federal public lands and waters in Alaska. This letter provides a report on the actions taken by the Board on proposals and closure reviews affecting federally qualified subsistence users.

Section 805(c) of the Alaska National Interest Lands Conservation Act (ANILCA) provides that the Board will accept the recommendations of Subsistence Regional Advisory Councils (Councils) regarding take unless, (1) the recommendation is not supported by substantial evidence, (2) the recommendation violates recognized principles of fish and wildlife management, or (3) adopting the recommendation would be detrimental to the satisfaction of subsistence needs. When a Council's recommendation is not adopted, the Board is required by Secretarial regulations to set forth the factual basis and reasons for the decision.

The Board acted on 16 fisheries proposals and 19 fisheries closure reviews during the 2023–25 fisheries regulatory cycle, four deferred wildlife proposals WP22-07, WP22-08, WP22-10, and WP22-40 from the 2022–2024 wildlife regulatory cycle, and a threshold assessment of proposal NDP25-01 for rescinding a nonrural determination. The Board agreed with the recommendations of the Regional Advisory Councils (Councils), in whole or with modifications, on all 16 fisheries proposals. The Board accepted the recommendations of the Councils on 17 of 19 fisheries closure reviews. The Board also agreed with the affected Council's recommendations and adopted deferred wildlife proposal WP22-40. Lastly, the Board agreed with the affected Council's recommendation to move forward with a full analysis of the nonrural determination proposal NDP25-01.

Details of these actions and the Board's deliberations are contained in the meeting transcriptions. Copies of the transcripts may be obtained by calling the toll free number 1-800-478-1456 and are available online at the Federal Subsistence Management Program website, https://www.doi.gov/subsistence/library/transcripts/federal-subsistence-board.

The Board uses a consensus agenda on those proposals and closure reviews where there is agreement among the affected Council(s), a majority of the Interagency Staff Committee, and the Alaska Department of Fish and Game concerning a proposed regulatory action. These proposals and closure reviews were deemed non-controversial and did not require a separate discussion. There were no proposals or closure reviews affecting the North Slope Region on the consensus agenda.

The proposals affecting the North Slope Region appeared on the non-consensus agenda. However, for two of the proposals, the Board took action consistent with the North Slope Subsistence Regional Advisory Council's (North Slope Council) recommendations. The Board *adopted* Yukon-Northern area proposal, **FP23-01**, which rescinded a closure to federally qualified subsistence users for non-salmon fish in the Jim River. The Board *deferred* fisheries closure review **FCR23-05**, which reviewed the closure for all fish in the Delta River to federally qualified subsistence users.

The Board's action differed from the North Slope Council's recommendations on the following closure reviews: **FCR23-02**, which reviewed the closure to all fish in Kanuti River by federally qualified subsistence users, and **FCR23-03**, which reviewed the closure to all fish in Bonanza Creek by federally qualified subsistence users. The Board's actions on these proposals and closure reviews are outlined in the enclosed report.

The Board appreciates your Council's active involvement in and diligence with the regulatory process. The ten Councils continue to be the foundation of the Federal Subsistence Management Program, and the stewardship shown by the Council Chairs and their representatives at the Board meeting was noteworthy.

If you have any questions regarding the summary of the Board's actions, please contact Leigh Honig Council Coordinator, at 907-891-9053 or leigh_honig@fws.gov

Sincerely,

Anthony Christianson
Chair

Enclosure

cc: Federal Subsistence Board
North Slope Subsistence Regional Advisory Council
Office of Subsistence Management
Interagency Staff Committee
Administrative Record

FEDERAL SUBSISTENCE BOARD 805(c) REPORT
January 31–February 3, 2023
Anchorage, AK

Section 805(c) of the Alaska National Interest Lands Conservation Act provides that the "Secretary … shall consider the report and recommendations of the regional advisory councils [Councils] concerning the taking of fish and wildlife on the public lands within their respective regions for subsistence uses." The Secretary has delegated authority to issue regulations for the take of fish and wildlife to the Federal Subsistence Board (Board). Pursuant to this language in Section 805(c), the Board defers to the Council's recommendations. However, Section 805(c) also provides that the Board "may choose not to follow any recommendation which [it] determines is not supported by substantial evidence, violates recognized principles of fish and wildlife conservation, or would be detrimental to the satisfaction of subsistence needs." The purpose of this report is to detail how the Board's action differed from the Council's recommendations based on these criteria.

NORTH SLOPE AREA FISHERIES CLOSURE REVIEWS

Crossover Closure Reviews

Fisheries Closure Review FCR23-02—Kanuti River upstream from a point 5 miles downstream of the State highway crossing closure to all fish

DESCRIPTION: FCR23-02 reviewed the closure to the harvest of all fish in the Kanuti River drainage by federally qualified subsistence users.

COUNCIL RECOMMENDATIONS:

Yukon-Kuskokwim Delta Council —**Modify by rescinding to non-salmon species only**

Western Interior Alaska Council —**Modify by rescinding to non-salmon species only**

Seward Peninsula Council —**Take no action**

Eastern Interior Council —**Modify by rescinding to non-salmon species only**

North Slope Council —**Rescind the closure**

BOARD ACTION: The Board voted to modify the closure by rescinding the closure to non-salmon species only.

JUSTIFICATION: Opening the area to fishing for non-salmon species provides an opportunity for federally qualified subsistence users to harvest non-salmon where none currently exists under Federal regulations. Retaining the closure to salmon is a prudent measure due to conservation concerns for the species in the Yukon River drainage. The Federal in-season manager may use

their delegated authority to restrict gear types and/or harvest limits to protect fish populations in the closure area.

Fisheries Closure Review FCR23-03—You may not subsistence fish in the following drainages located north of the main Yukon River: Bonanza Creek

DESCRIPTION: FCR23-03 reviewed the closure to the harvest of all fish in the Bonanza Creek drainage by federally qualified subsistence users.

COUNCIL RECOMMENDATIONS:

Yukon-Kuskokwim Delta Council—**Modify by rescinding to non-salmon species only**

Western Interior Alaska Council —**Modify by rescinding to non-salmon species only**

Seward Peninsula Council —**Take no action**

Eastern Interior Council —**Modify by rescinding to non-salmon species only**

North Slope Council —**Rescind the closure**

BOARD ACTION: The Board voted to modify the closure by rescinding the closure to non-salmon species only.

JUSTIFICATION: Opening the area to fishing for non-salmon species provides an opportunity for federally qualified subsistence users to harvest non-salmon species where none currently exists under Federal regulations. Retaining the closure to salmon is a prudent measure due to conservation concerns for the species in the Yukon River drainage. The Federal in-season manager may use their delegated authority to restrict gear types and/or harvest limits to protect fish populations in the closure area.

Federal Subsistence Board

1011 East Tudor Road, MS 121
Anchorage, Alaska 99503 - 6199

FISH and WILDLIFE SERVICE
BUREAU of LAND MANAGEMENT
NATIONAL PARK SERVICE
BUREAU of INDIAN AFFAIRS

FOREST SERVICE

AUG 02 2023

OSM 23065

Steve Oomittuk, Chair
North Slope Subsistence
Regional Advisory Council
c/o Office of Subsistence Management
1101 East Tudor Road, MS 121
Anchorage, Alaska 99503-6119

Dear Chair Oomittuk:

This letter responds to the North Slope Subsistence Regional Advisory Council's (Council) fiscal year 2022 Annual Report. The Secretaries of the Interior and Agriculture have delegated to the Federal Subsistence Board (Board) the responsibility to respond to these reports. The Board appreciates your effort in developing the Annual Report. Annual Reports allow the Board to become aware of the issues outside of the regulatory process that affect subsistence users in your region. We value this opportunity to review the issues concerning your region.

1. **Food security and preservation methods, particularly the freezing and thawing of ice throughout the season**

The Council has expressed concerns about losing the ability to use traditional practices for preserving food due to changing weather conditions. Harvested fish are traditionally preserved through natural freezing immediately after harvest, and whale meat is stored in underground cellars dug into the permafrost, which keeps the meat frozen. However, warmer conditions preclude freezing fish naturally, and the permafrost has been thawing, spoiling whale meat in cellars. Council members voiced concerns about not being able to harvest large quantities of fish for fear of the catch spoiling before getting eaten. Because of this, there is less food available to community members for sharing and consumption, contributing to higher levels of food insecurity. Council members also voiced concerns about thawed whale meat creating food poisoning issues. The Alaska Department of Fish and Game has been funding projects to buffer traditional ice cellars from thawing and the Council expressed interest in receiving updates about this research.

Response:

Thank you for bringing this issue to the Board's attention. We recognize that you are uniquely positioned to offer first alerts to changing conditions and important trends that impact subsistence in your region. The Board appreciates and values the traditional knowledge, observations, and expertise you share and will direct staff to track this issue in the future. With this information, the Board is better prepared to make informed decisions. Your Council Coordinator will extend an invitation to the Alaska Department of Fish and Game to present their research to the Council at your future meeting.

2. **Request to improve management and research of sport hunting and effects on caribou migration near Anaktuvuk Pass**

The Council expressed concern about sport hunting for caribou near Anaktuvuk Pass. The Council strongly supports research on caribou migration patterns. The Council suggested comparing radio collar data from Alaska Department of Fish and Game and the North Slope Borough's Wildlife Division and dates and locations of hunters with migration patterns to see if there is deflection of traditional migration routes. The Dalton Highway is flooded with caribou sport hunters in August and September as well as fly-in hunters, but the areas where they are hunting have minimal enforcement. The Council inquired about implementing time and area closures during the caribou harvest, as is done for bowhead whales. Industrial activities can cause localized resource depletions by deflection. The Council suggested closures on the lands and waters immediately outside village boundaries that fall under federal jurisdiction during peak subsistence activities. The Council expressed interest in learning more about requesting rezoning around villages to reclassify an area into subsistence activity areas, similar to reclassifying zones for oil and gas development.

Response:

The Board acknowledges the Council's concerns regarding sport hunting for caribou near Anaktuvuk Pass. Anaktuvuk Pass is surrounded by State-managed lands over which the Board has no authority and by National Park lands where sport hunting is prohibited. The Council can submit proposals to the Board requesting temporary spatial and temporal closures to caribou hunting on Federal public lands. The Council can also submit proposals to the Alaska Board of Game, proposing similar closures on State-managed lands.

The Federal Subsistence Management Program does not conduct research, but the Council can invite the Alaska Department of Fish and Game and North Slope Borough researchers to present at Council meetings and discuss the potential to investigate deflection of caribou during migration. Similarly, rezoning land is outside the purview of the Board but could be addressed during a Council meeting by working with your Council Coordinator to invite someone to present on the issue.

3. **Effects of contaminants on fish health and food safety in Anaktuvuk Pass**

The Council was concerned with the quality of fish and the ability to safely harvest them in Anaktuvuk Pass. Council members noted that biologists are rarely in the Anaktuvuk Pass region to investigate issues of fish contamination. The Council noted an instance where a fish was harvested, but the stomach was the consistency of milk. The Council voiced concerns about the pipeline and buried corroded equipment leaching iron into the soil and surrounding sloughs and contaminating fish stocks. The Council is also concerned about population structure, abundance, and health of Lake Trout and Arctic Grayling in the area. This concern is reflected in the Priority Information Needs for the Fisheries Resource Monitoring Program.

Response:

The Board's mechanism for funding fisheries research is the Fisheries Resource Monitoring Program (FRMP). The FRMP focuses on gathering information to manage and conserve subsistence fishery resources. The FRMP funds are not eligible for certain kinds of projects including: (1) habitat protection, mitigation, restoration, and enhancement; (2) hatchery propagation, restoration, enhancement, and supplementation; and (3) contaminant assessment, evaluation, and monitoring. With limited funding and continued Federal fisheries management issues, the Board chose this approach to ensure that existing responsibilities and effort by government agencies were not duplicated under the FRMP. The Board continues to encourage investigators interested in fish populations and contaminants within the scope of Federal fisheries management to explore multiple funding sources and to build collaborations with researchers in relevant fields, such as toxicology and community and environmental health.

A two-year study of the Lake Trout populations in Chandler and Little lakes was funded through the FRMP in 2016. The investigators estimated the abundance of Lake Trout and the yield potential for the population. The results of this study were presented to the Council during their winter 2019 meeting. The Board recognized Lake Trout are one of many important subsistence resources used by the community of Anaktuvuk Pass. The Board encourages the Council to continue to include Anaktuvuk Pass' research concerns in the priority information needs for the FRMP.

4. **Update on Ahtna Intertribal Resource Commission cooperative management agreement with U.S. Department of the Interior**

The Council requests a presentation on the cooperative management agreement between Ahtna Intertribal Resource Commission and the U.S. Department of the Interior. The Council wants to know the Ahtna people successfully managed their own quotas for moose and other resources and wants to learn from Ahtna Intertribal Resource Commission's experiences.

During the discussion, the Council asked that the Board elevate the concerns noted in the FY2022 Annual Report if the Board cannot directly address them.

Response:

In 2017, the Department of the Interior (DOI) and Ahtna Inter-Tribal Resource Commission (AITRC) signed the Memorandum of Agreement (MOA) to provide AITRC with the authority to

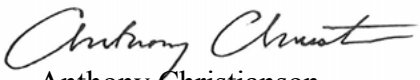
cooperatively manage certain aspects of subsistence hunting within Ahtna's traditional territory. Areas for implementation outlined in the MOA include a community harvest system, the formation of a local advisory committee, cooperative efforts to develop policies, programs, and projects for conservation and sustainable subsistence harvest within the Ahtna region, and the funding and support to build capacity within AITRC for the implementation of the MOA.

Beginning in 2021, with assistance from AITRC, the Federal Subsistence Board established a community harvest system for caribou and moose in Ahtna's traditional territory. AITRC distributes the hunt registration and harvest reporting forms to Federally qualified subsistence hunters living within the eight Ahtna traditional communities. The hunters report their harvests (or lack thereof) to AITRC, who in turn provides this information to federal subsistence managers. The Board encourages the Council to reach out to AITRC and invite them to provide a report on the successes and challenges of their community harvest system, as well as the array of other programs and research in their region.

In July 2022, AITRC asked OSM to initiate steps for establishing the Ahtna Local Advisory Committee to provide input into subsistence hunting management plans and decision-making. Because the MOA is between DOI and AITRC, OSM forwarded the request to DOI to determine next steps. The MOA and draft charter for the Ahtna Local Advisory Committee is currently under review by DOI.

In closing, I want to thank you and your Council for your continued involvement and diligence in matters regarding the Federal Subsistence Management Program. I speak for the entire Board in expressing our appreciation for your efforts and am confident that the subsistence users of the North Slope Region are well represented through your work.

Sincerely,



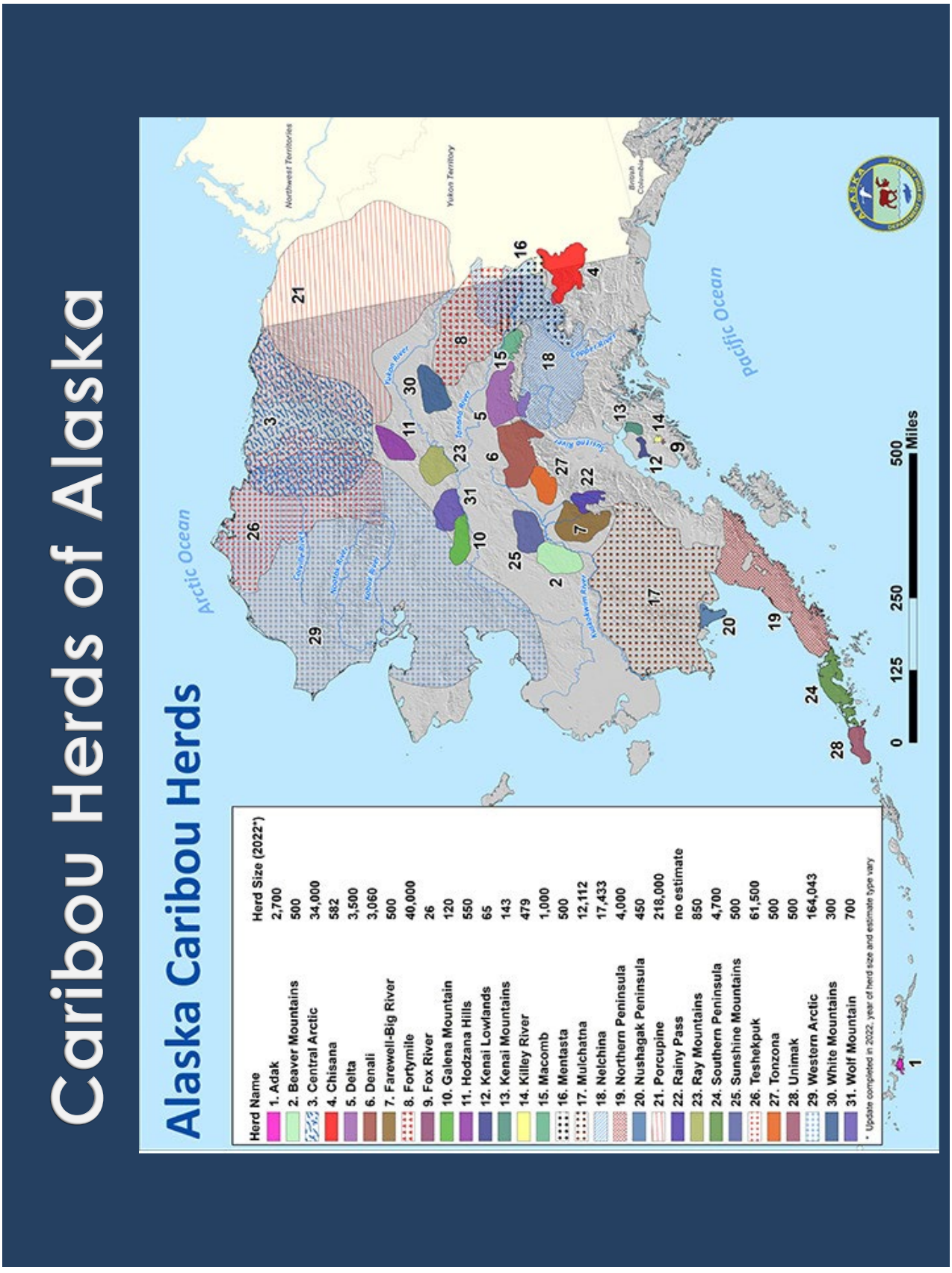
Anthony Christianson
Chair

cc: North Slope Subsistence Regional Advisory Council
Federal Subsistence Board
Office of Subsistence Management
Interagency Staff Committee
Benjamin Mulligan, Deputy Commissioner, Alaska Department of Fish and Game
Mark Burch, Special Project Coordinator, Alaska Department of Fish and Game
Administrative Record

WAH Caribou Overview

Alex Hansen – ADF&G Kotzebue
RAC Update Fall 2023

Caribou Herds of Alaska

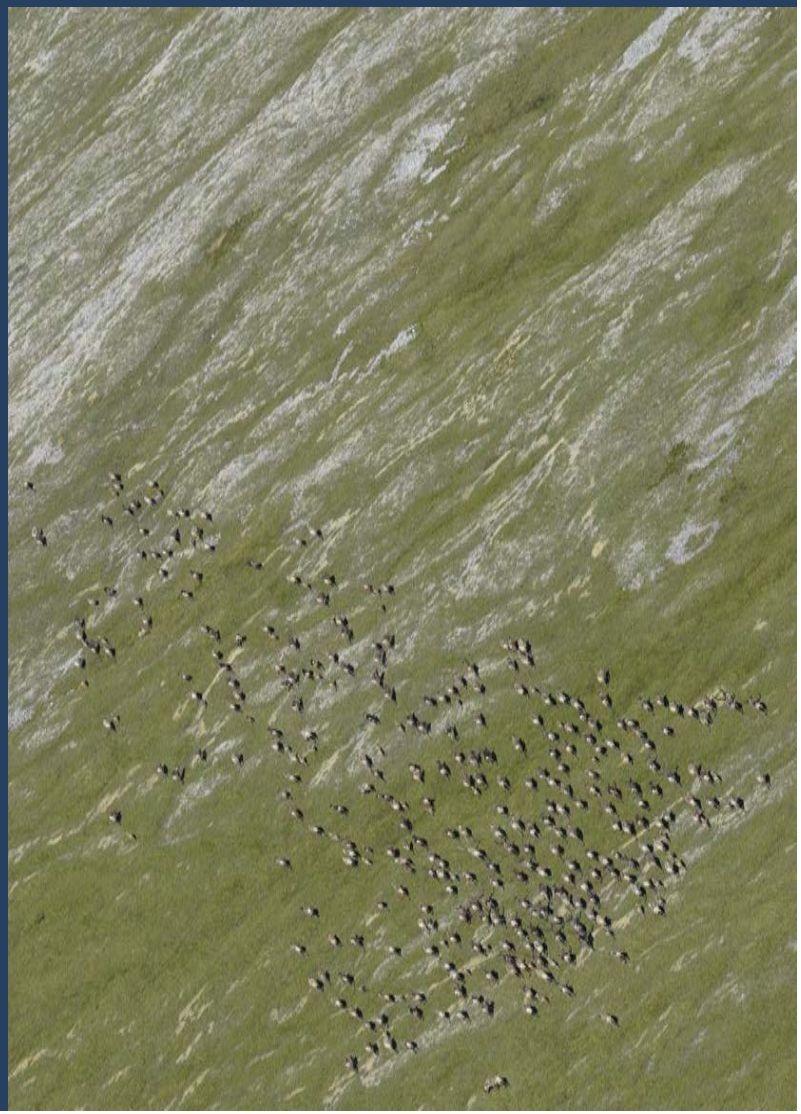


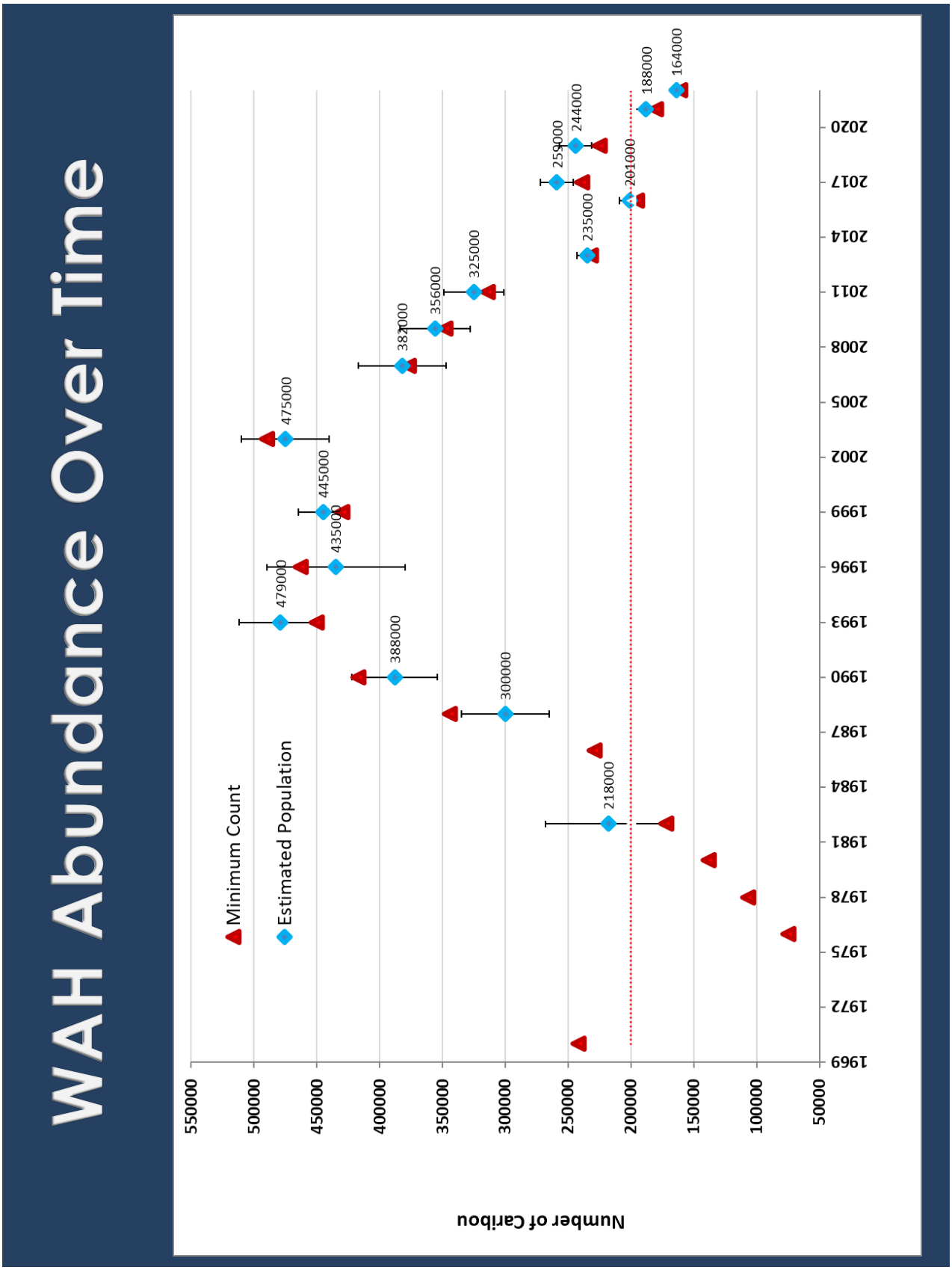
WAH Abundance

2023 Photocensus Results

- Rivest Estimate: **Pending**
- +/- ? (95% CI)
  - Minimum Count: Pending

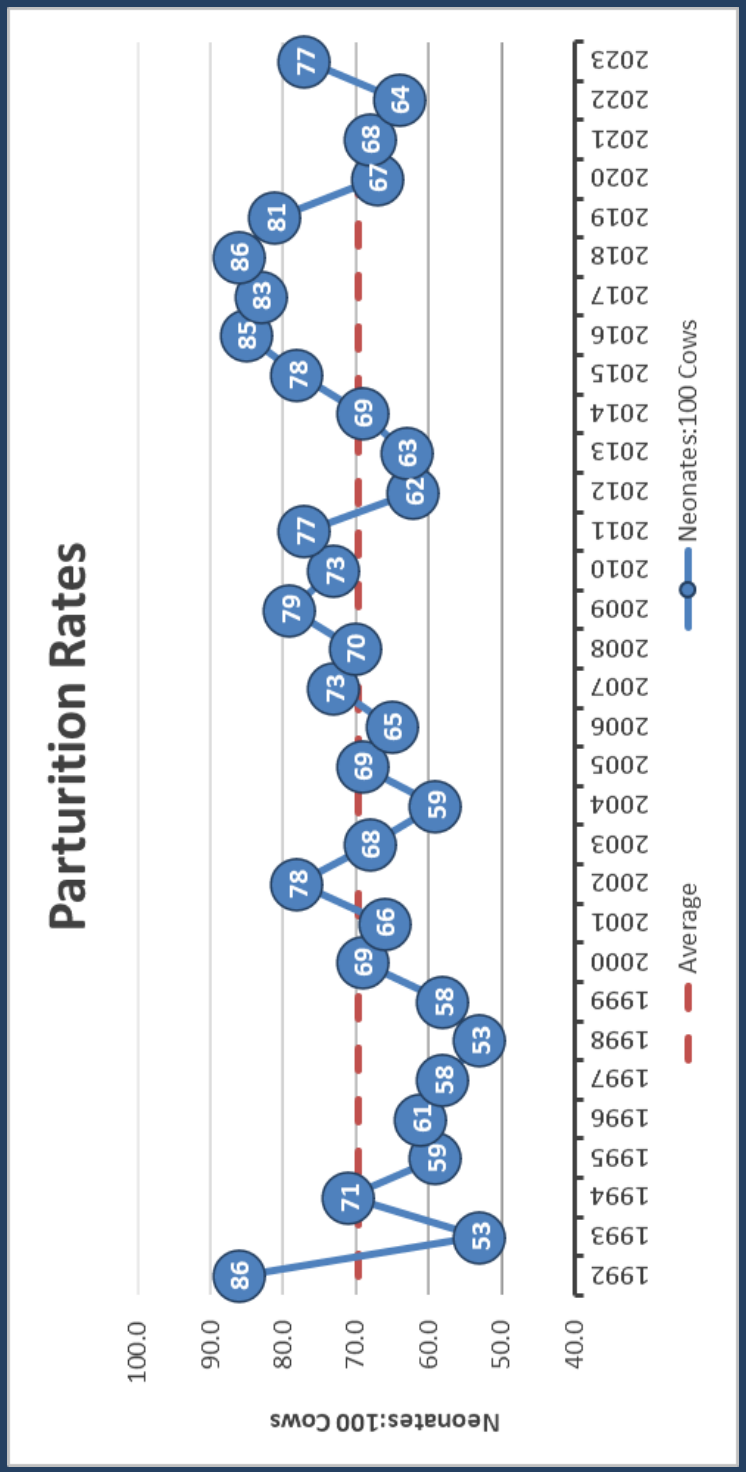
- 2022 – 164,000
- 2021 – 188,000
- 2020 – no census
- 2019 – 244,000
- 2018 – no census
- 2017 – 259,000
- 2016 – 201,000




WAH Abundance Over Time
Minimum Count
Estimated Population
Number of Caribou
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
1969
1972
1975
1978
1981
1984
1987
1990
1993
1996
1999
2002
2005
2008
2011
2014
2017
2020
475000
445000
435000
479000
388000
300000
218000
325000
356000
387000
235000
259000
244000
201000
188000
164000

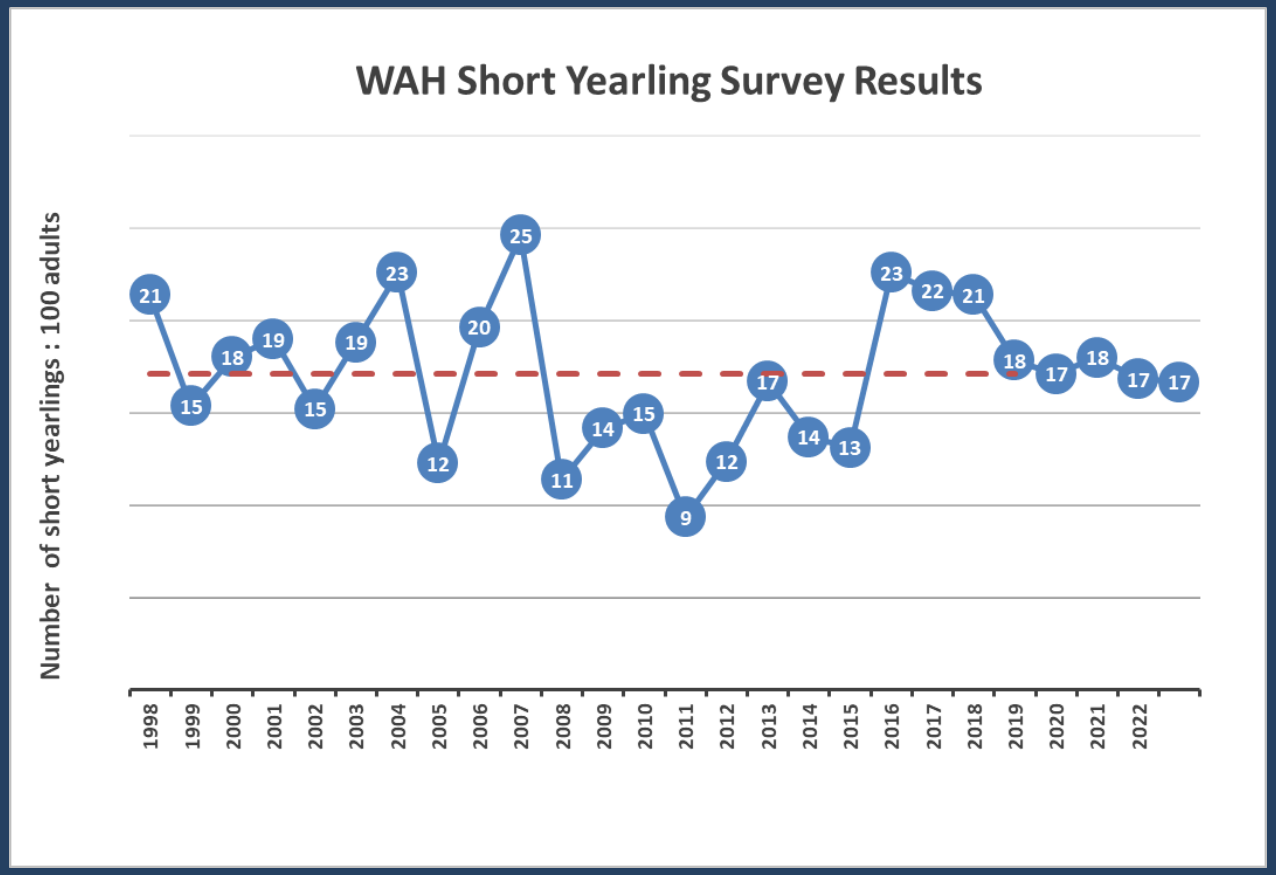
Calving

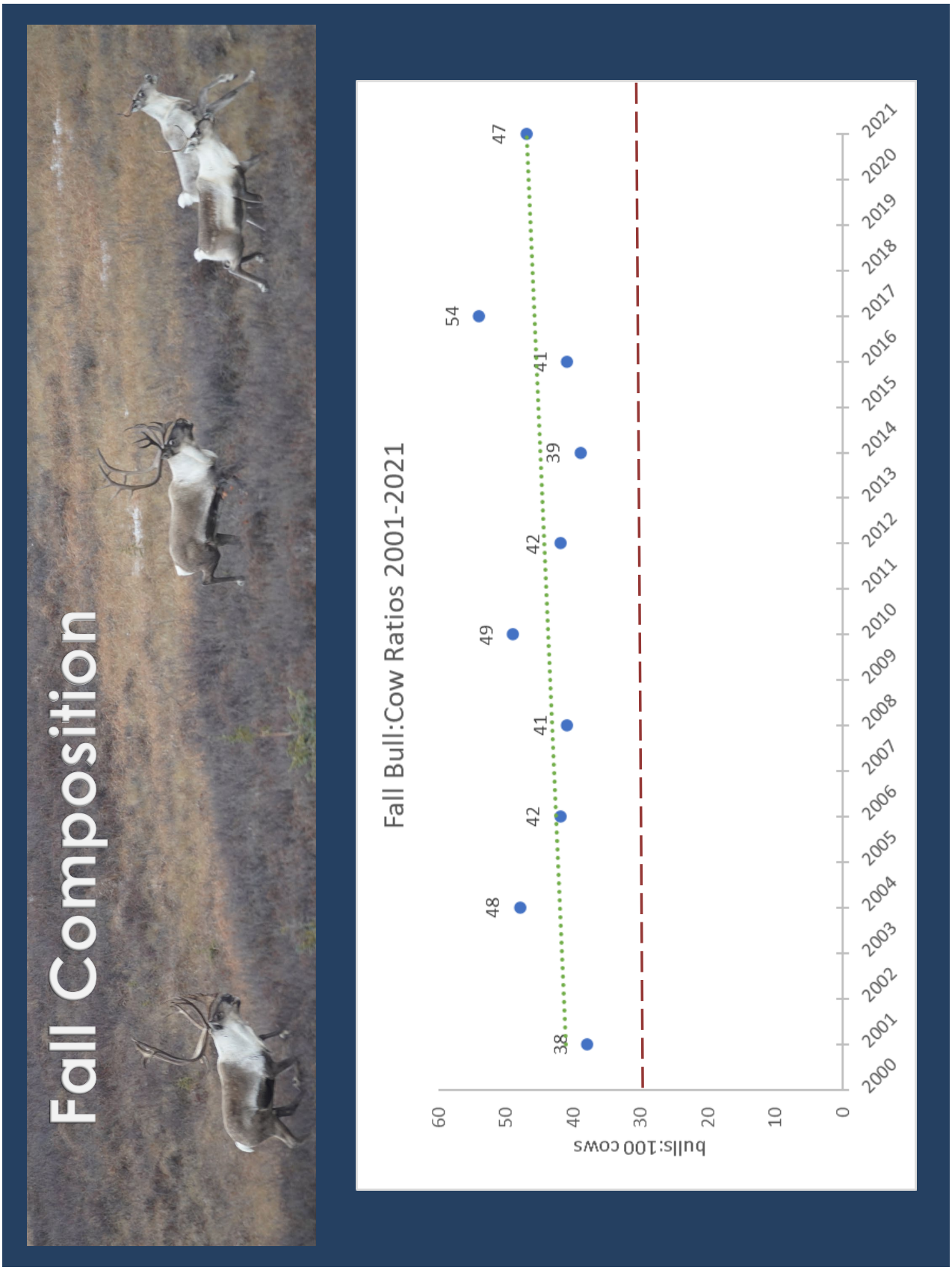
- Parturition - 77% (2023)
  - Long-term average (70%)



Recruitment

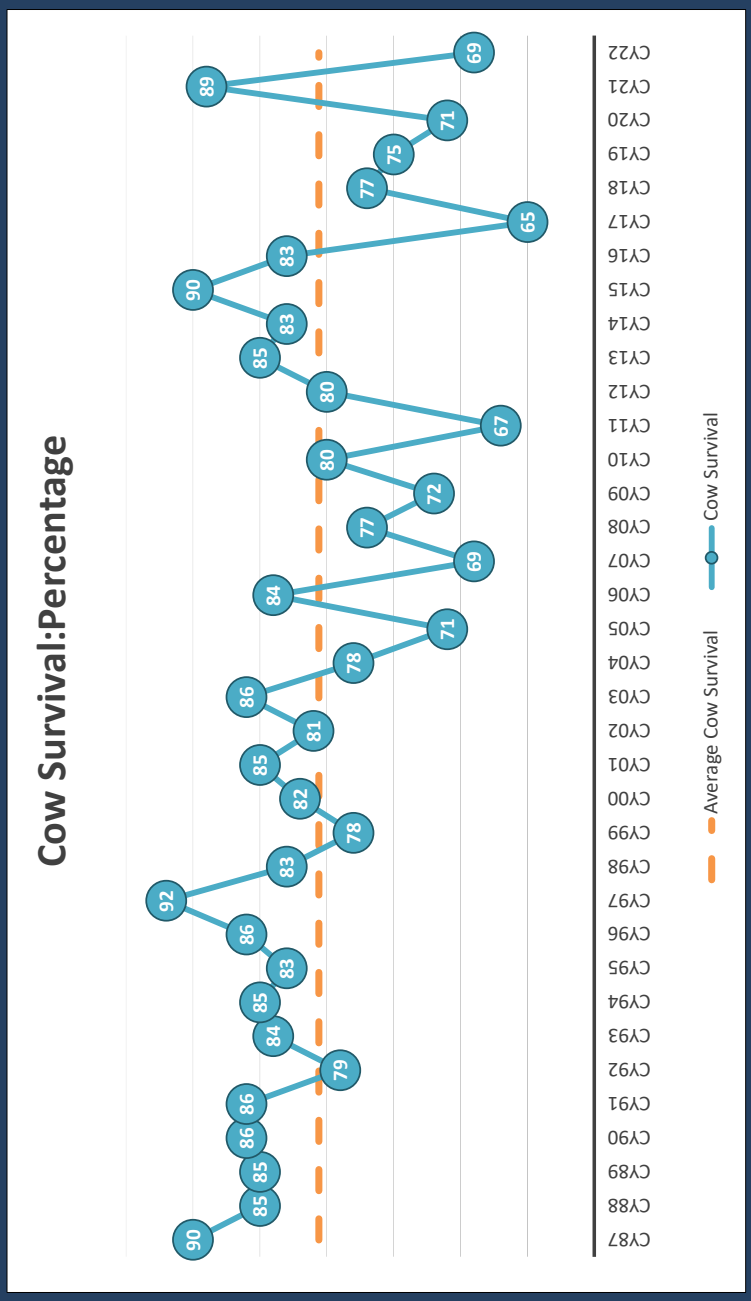
- Short Yearling Recruitment = 17:100 adults (average)
  - Long term average = 17

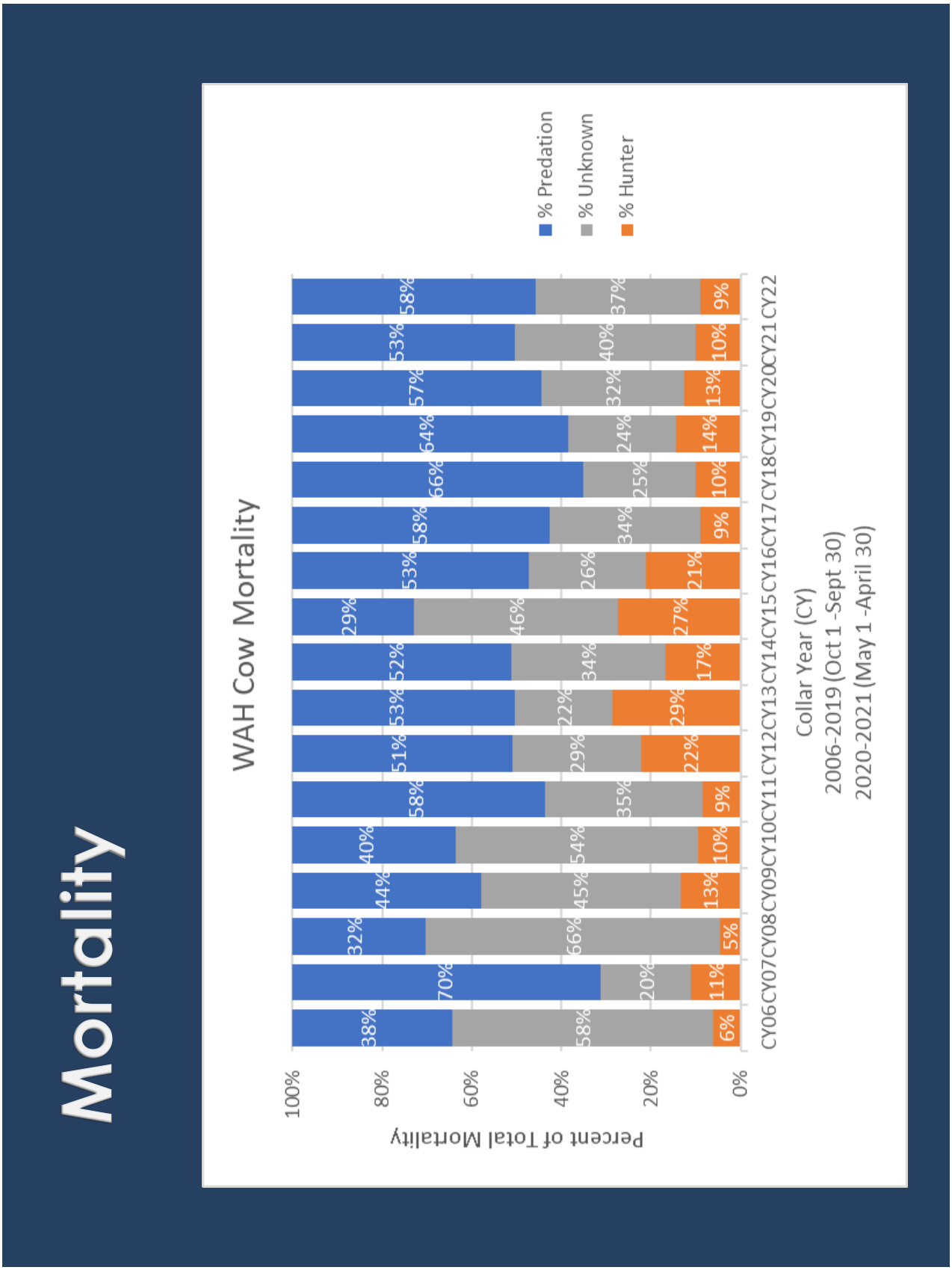



Fall Composition
Fall Bull:Cow Ratios 2001-2021
bulls:100 cows
0
10
20
30
40
50
60
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
38
42
48
41
49
42
39
41
54
47

Adult Survival

- Adult Female Survival – 71% (below average)
  - Long term average = 81%




Mortality
WAH Cow Mortality
% Predation
% Unknown
% Hunter
Percent of Total Mortality
100%
80%
60%
40%
20%
0%
CY06 CY07 CY08 CY09 CY10 CY11 CY12 CY13 CY14 CY15 CY16 CY17 CY18 CY19 CY20 CY21 CY22
Collar Year (CY)
2006-2019 (Oct 1 -Sept 30)
2020-2021 (May 1 -April 30)
38% 58% 6%
70% 20% 11%
32% 66% 5%
44% 45% 13%
40% 54% 10%
58% 35% 9%
51% 29% 22%
53% 22% 29%
52% 34% 17%
29% 46% 27%
53% 26% 21%
58% 34% 9%
66% 25% 10%
64% 24% 14%
57% 32% 13%
53% 40% 10%
58% 37% 9%

Recommended Harvest

Management Level	Population Trend		
	Declining Adult Cow Survival <80% Calf Recruitment <15:100	Stable Adult Cow Survival 80%-88% Calf Recruitment 15-22:100	Increasing Adult Cow Survival >88% Calf Recruitment >22:100
Liberal	Pop: 265,000+ Harvest: 14,000+	Pop: 230,000+ Harvest: 14,000+	Pop: 200,000+ Harvest: 14,000+
Conservative	Pop: 200,000-265,000 Harvest: 10,000-14,000	Pop: 170,000-230,000 Harvest: 10,000-14,000	Pop: 150,000-200,000 Harvest: 10,000-14,000
Preservative	Pop: 130,000-200,000 Harvest: 6,000-10,000	Pop: 115,000-170,000 Harvest: 6,000-10,000	Pop: 100,000-150,000 Harvest: 6,000-10,000
Critical	Pop: <130,000 Harvest: <6,000	Pop: <115,000 Harvest: <6,000	Pop: <100,000 Harvest: <6,000

- Recommended harvest rate at the preservative declining level
  - ~ 4.6% at 130,000
  - ~ 5% at 200,000
- 4.8% harvest of 164,000 combination of bulls/cows/calves
- What about harvest ratios?
  - GMU 23 harvest is approximately 70% bulls and 30% cows
- At 164,000 treating calves as adults, the plan recommends a harvest of up to… 7,872 caribou
  - 70% = 5,511 bulls
  - 30% = 2,361 cows

Management Level

Management Plan: Harvest Recommendations

Conservative Management (orange)

1. Encourage voluntary reduction in calf harvest…√
2. No non-resident cow harvest √
3. Restrict nonresident bull harvest √
4. Encourage voluntary reduction in resident cow harvest √
5. Limit subsistence harvest of bulls only if < 30 bulls:100 cows

Preservative Management (yellow)

1. No harvest of calves
2. Limit harvest of cows by residents through permit hunts and/or village quotas
3. Limit subsistence harvest of bulls to maintain at least 30 bulls:100 cows
4. Harvest restricted to residents only, according to State and federal law, closure of some federal public lands may be necessary

Management Actions

Net reduction of harvest is necessary

- Cow harvest – highest priority
- Bull harvest – maintain healthy bull:cow

Get accurate harvest data

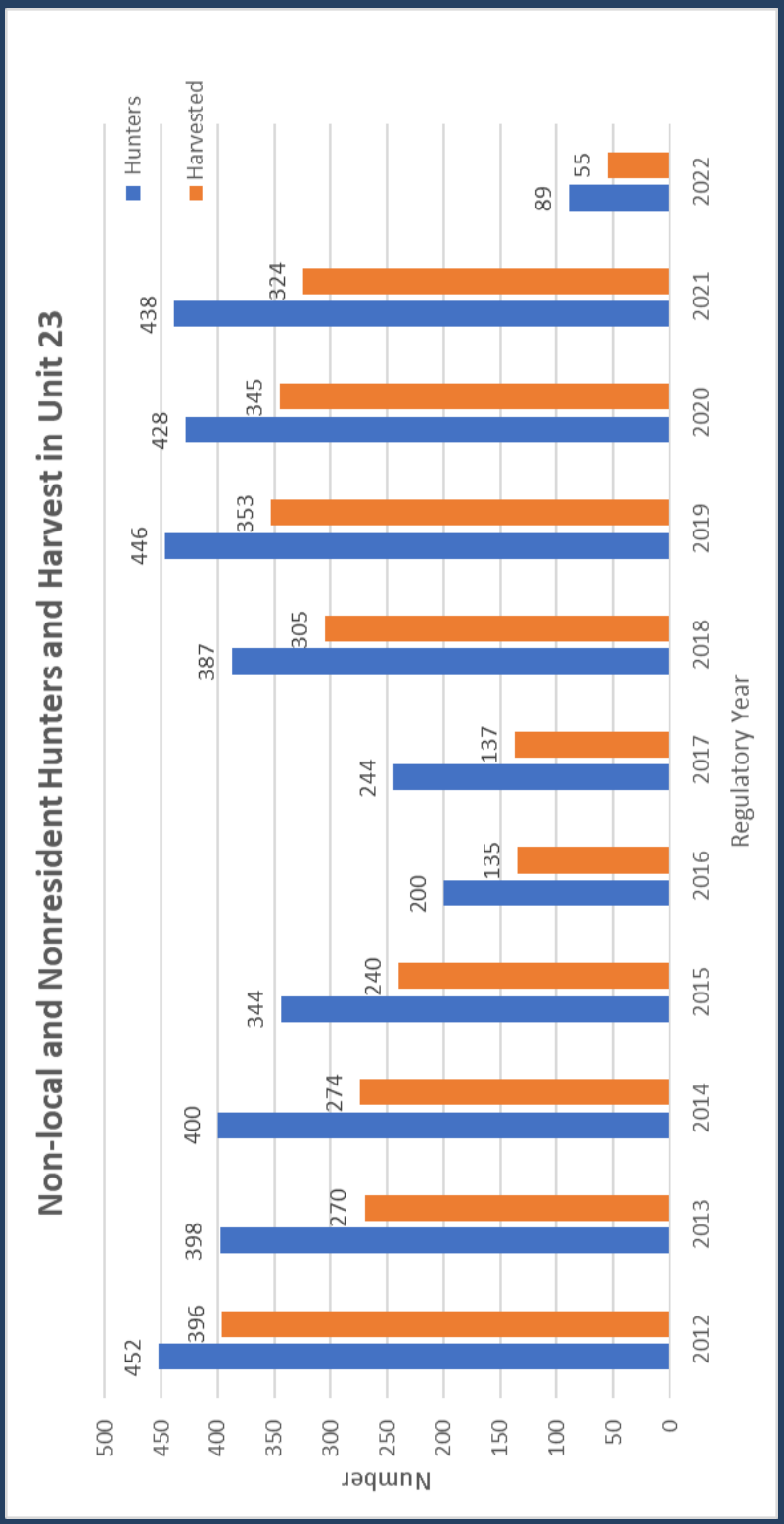
- Through permits
- Other tools as needed

Increase understanding of mortality causes

- Mitigate if possible

Continued Monitoring

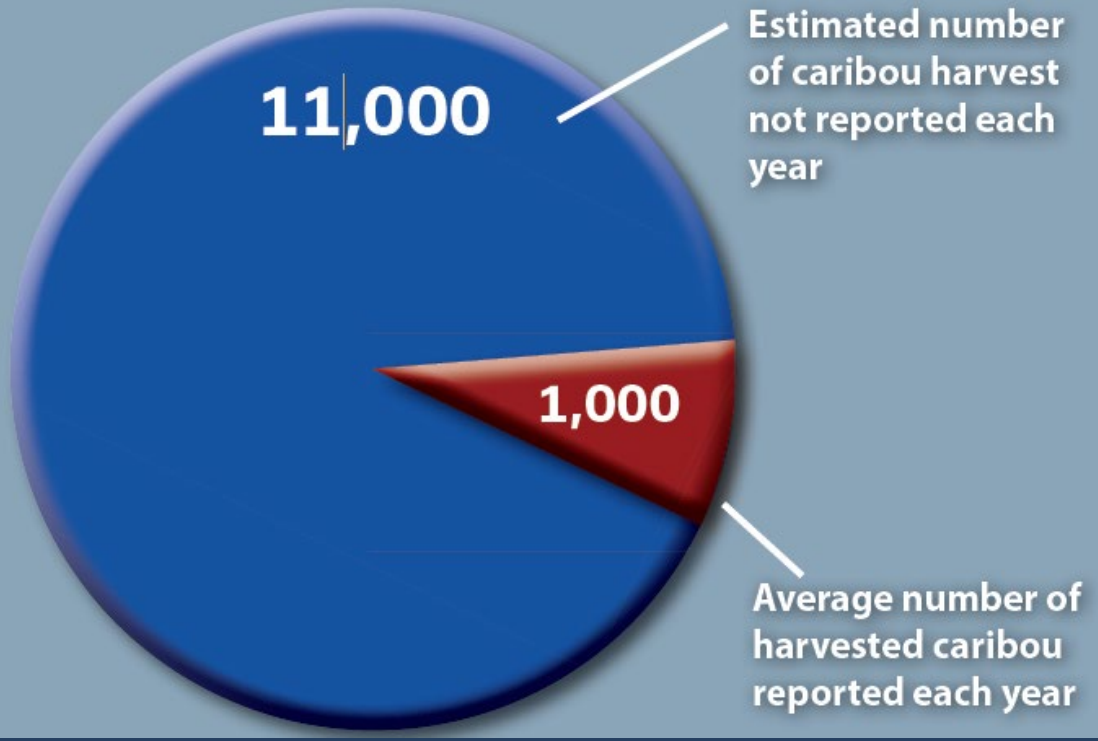
Harvest Reporting



Harvest Reporting

Western Arctic Herd Subsistence Harvest

Long-term subsistence harvest for the Western Arctic Herd is estimated to be 12,000 caribou per year —with an average of 1,000 reported harvests each year, only a small fraction of caribou harvest is currently being documented.



Summary

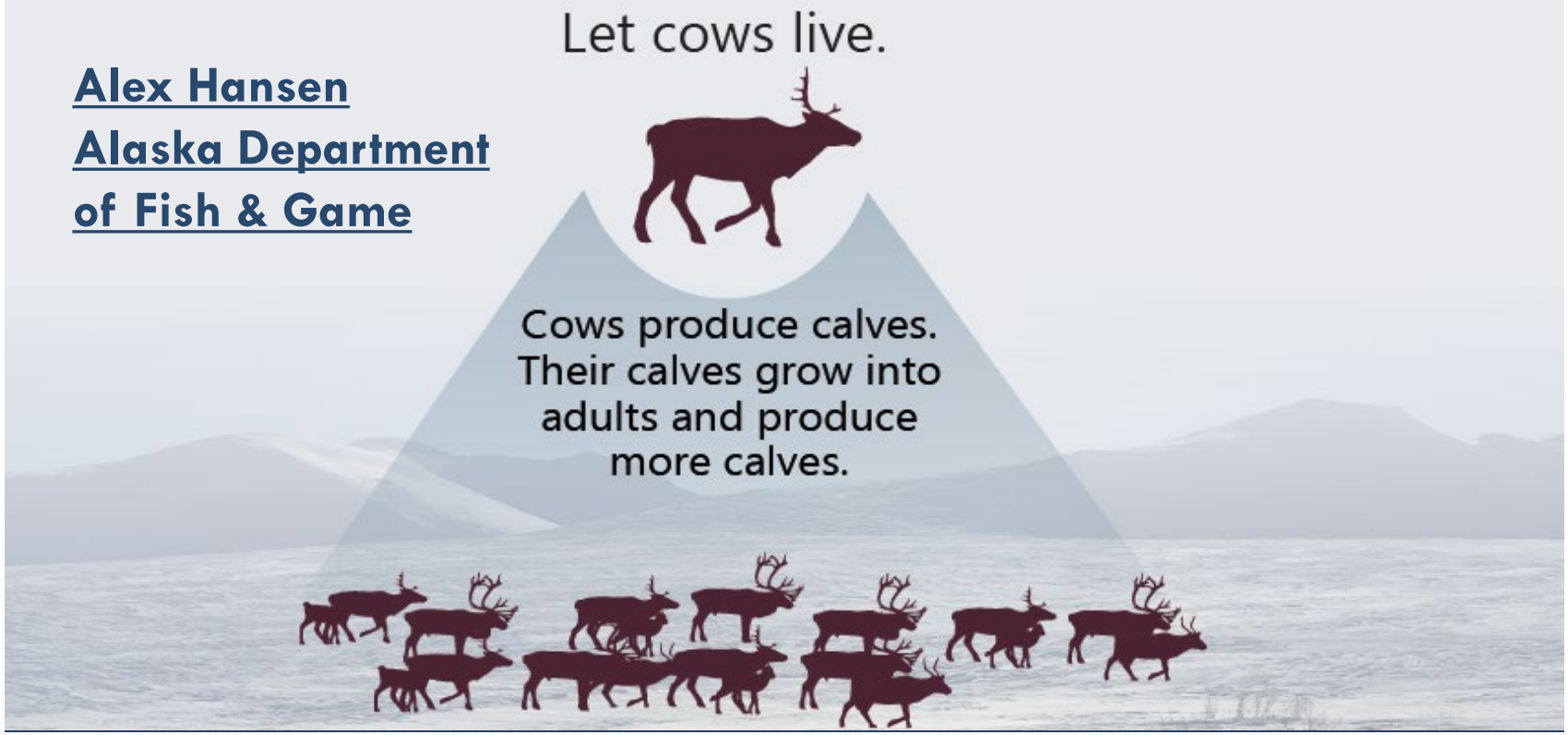
Biological Concerns:

- Approaching the Critical level (WAH WG Plan)
  - Short-yearling recruitment – average
  - Calving – above average
  - Adult cow survival – below average
  - Harvestable Surplus – below long-term average harvest
  - Non-local/Nonresident harvest is a very small part of total harvest
  - Better understanding of resident harvest is necessary

How to help

- ✓ Report caribou harvest through RC907
- ✓ Reduce the harvest of cows

Alex Hansen
Alaska Department of Fish & Game



Presentation Procedure for Proposals and Closure Reviews

1. **Introduction and Presentation of Draft Staff Analysis**
2. **Report on Board Consultations:**
    a. Tribes
    b. ANCSA Corporations
3. **Agency Comments:**
    a. ADF&G
    b. Federal
    c. Tribal
4. **Advisory Group Comments**:
    a. Other Regional Advisory Council(s)
    b. Fish and Game Advisory Committees
    c. Subsistence Resource Commissions
5. **Summary of Written Public Comments**
6. **Public Testimony**
7. **Regional Council Recommendation (motion to support)**
8. **Discussion/Justification**
    - Is the recommendation consistent with established fish or wildlife management principles?
    - Is the recommendation supported by substantial evidence such as biological and traditional ecological knowledge?
    - Will the recommendation be beneficial or detrimental to subsistence needs and uses?
    - If a closure is involved, is closure necessary for conservation of healthy fish or wildlife populations, or is closure necessary to ensure continued subsistence uses?
    - Discuss what other relevant factors are mentioned in OSM Draft Staff Analysis
9. **Restate final motion for the record**
10. **Council's Vote**

WP24–37/38 Executive Summary	
General Description	Wildlife Proposal WP24-37 proposes to remove regulatory language, changing the season to "may-be-announced" Nov. 1-Mar. 31, and delegate authority to the Arctic National Wildlife Refuge manager *Submitted by: Arctic National Wildlife Refuge* Wildlife Proposal WP24-38 proposes to remove regulatory language, change the season to "may-be-announced" Jul. 15-Mar. 31, and delegate authority to the Arctic National Wildlife Refuge *Submitted by: North Slope Fish and Game Advisory Committee*
Proposed Regulation	WP24-37 **Unit 26C−Muskox** *Unit 26C—1 bull by Federal registration permit only. ~~The number of permits that may be issued only to the residents of the village of Kaktovik will not exceed three percent (3%) of the number of musk oxen counted in Unit 26C during a pre-calving census.~~* *Public lands are closed to the taking of* ***muskox****~~musk ox~~, except by rural Alaska residents of the village of Kaktovik hunting under these regulations* ***The Arctic NWR manager may announce season dates between November 1 and March 31 and the number of permits issued annually via delegation of authority letter (Appendix 1)****.* *~~July 15-Mar. 31~~* ***May be announced between Nov. 1-Mar. 31*** WP24-38 **Unit 26C−Muskox** *Unit 26C—1* ***muskox*** *~~bull~~ by Federal registration permit only. ~~The number of permits that may be issued only to the residents of the village of Kaktovik will not exceed three percent (3%) of the number of musk oxen counted in Unit 26C during a pre-calving census.~~* ***May be announced between*** *July 15-Mar. 31*

WP24–37/38 Executive Summary	
	Public lands are closed to the taking of ***muskox****~~musk ox~~, except by rural Alaska residents of the village of Kaktovik hunting under these regulations* ***The Arctic NWR manager may announce season dates between November 1 and March 31 and the number of permits issued annually via delegation of authority letter (Appendix 1)****.*
OSM Preliminary Conclusion	**Support** Proposal WP24-37 **with modification** to harvest 1 muskox and **take no action** on Proposal WP24-38. This modified regulation should read: **Unit 26C−Muskox** *Unit 26C—1* ***muskox*** *~~bull~~ by Federal registration permit only. ~~The number of permits that may be issued only to the residents of the village of Kaktovik will not exceed three percent (3%) of the number of musk oxen counted in Unit 26C during a pre-calving census.~~* ***May be announced between Nov. 1-Mar. 31*** *Public lands are closed to the taking of musk ox, except by rural Alaska residents of the village of Kaktovik hunting under these regulations*
North Slope Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP24-37/38

ISSUES

Proposal WP24-37, submitted by Arctic National Wildlife Refuge (Arctic NWR) and Proposal WP24-38, submitted by the North Slope Fish and Game Advisory Committee (AC), request removing regulatory language stipulating that the number of permits will not exceed 3% of the number of muskoxen counted in Unit 26C, changing the season to "may-be-announced", and delegating authority to the Arctic NWR manager to announce season dates and the number of permits issued via Delegation of Authority Letter (DAL) (**Appendix 1**). WP24-37 requests a harvest of one bull, while WP24-38 requests a harvest of one muskox.

DISCUSSION

WP24-37

The proponent for Proposal WP24-37 states that muskox populations in the Central North Slope are now abundant enough to allow harvest through State regulations in Unit 26B. Muskox in the eastern portion of Unit 26B spend time in both Unit 26B on State lands and in Unit 26C on Federal lands on either side of the Canning River. Since a muskox hunt is allowed on the adjacent State lands and hunt unit are allowing a muskox periodically occupy the neighboring Federal public lands of Arctic NWR, it is desirable to provide subsistence opportunities for federally qualified subsistence users in Kaktovik to harvest one bull muskox on Federal lands in Unit 26C.

The population in this unit has been historically low, but stable. However, animals frequently use and occupy the Canning River drainage on the far western side of the unit. A harvest of a single bull annually would not imperil conservation of the herd, would be minimally additive to the overall harvest occurring under State regulations in Unit 26B, and would provide additional subsistence harvest opportunity.

Due to low abundance of muskoxen on Arctic NWR lands, and the low priority conservation status as a refuge value, biologists do not annually survey the muskox population in Unit 26C. Given the low priority of dedicated, annual surveys for muskox, the Arctic NWR supports removing the requirement of achieving a specific population threshold within Unit 26C before a limited muskox hunt can be opened.

WP24-38

The proponent for Proposal WP24-38 states that the muskox population in the Western and Central Arctic coastal plain has increased and remains stable enough to allow a hunt in these areas under State regulations. The muskox population in Unit 26B sometimes occupies Federal public lands in Unit 26C

on either side of the Canning River. Because a limited muskox hunt is allowed on the adjacent State lands and GMU and some of those animals occupy the neighboring Federal public lands of Arctic NWR, it would be desirable to provide a subsistence opportunity to the federally qualified subsistence users of Kaktovik for the harvest of one muskox in Unit 26C under Federal regulations.

The proponent states, this population of muskox is low but stable and the limited harvest of muskox would not represent a conservation concern and would unlikely be considered additive mortality to this herd given the harvest allowed under State regulations in Unit 26B. This would allow federally qualified subsistence users of Kaktovik an opportunity to provide this nutritional resource to their community. Because the Arctic NWR does not conduct an annual population census of muskox on refuge lands, management of this population cannot be based on annual pre-calving surveys and a specific population threshold; allowing a limited hunt for the residents of Kaktovik is appropriate.

Existing Federal Regulation

Unit 26C−Muskox

Unit 26C—1 bull by Federal registration permit only. The number of permits that may be issued only to the residents of the village of Kaktovik will not exceed three percent (3%) of the number of musk oxen counted in Unit 26C during a pre-calving census.	*July 15-Mar. 31*
Public lands are closed to the taking of musk ox, except by rural Alaska residents of the village of Kaktovik hunting under these regulations	

Proposed Federal Regulation

WP24-37

Unit 26C−Muskox

Unit 26C—1 bull by Federal registration permit only. ~~*The number of permits that may be issued only to the residents of the village of Kaktovik will not exceed three percent (3%) of the number of musk oxen counted in Unit 26C during a pre-calving census.*~~	~~*July 15-Mar. 31*~~ ***May be announced between Nov. 1-Mar. 31***
Public lands are closed to the taking of musk ox, except by rural Alaska residents of the village of Kaktovik hunting under these regulations	

The Arctic NWR manager may announce season dates between November 1 and March 31 and the number of permits issued annually via delegation of authority letter (Appendix 1).

WP24-38

Unit 26C−Muskox

Unit 26C—1 ***muskox*** ~~*bull*~~ *by Federal registration permit only.* ~~*The number of permits that may be issued only to the residents of the village of Kaktovik will not exceed three percent (3%) of the number of musk oxen counted in Unit 26C during a pre-calving census.*~~	***May be announced between*** *July 15-Mar. 31*
Public lands are closed to the taking of musk ox, except by rural Alaska residents of the village of Kaktovik hunting under these regulations	

The Arctic NWR manager may announce season dates between July 15 and March 31 and the number of permits issued annually via delegation of authority letter (**Appendix 1**).

Existing State Regulation

Note: Both the codified and 2023/24 regulatory year State regulations for muskox in Units 26B and 26C are included below.

Unit 26−Muskox

Unit 26B, that portion east of the Dalton Highway (including the Dalton Highway Corridor Management Area)– 1 bull by drawing permit (DX112) only	*Sep. 1 – Oct. 10* *Mar. 10 – 30*
Unit 26A and 26B – east of 153 W longitude, and west of Dalton Highway - Tier II subsistence (TX108) – 1 muskox	*Aug. 1 – Mar. 31*
Unit 26B – east of the Dalton Highway Management Corridor – 1 muskox by registration permit - one muskox by permit available in Kaktovik and Nuiqusut beginning Oct. 1	*To be announced*
Unit 26C	*Fall Season to be announced*

Extent of Federal Public Lands

Unit 26C is comprised of approximately 98% Federal public lands and consists of 98% U.S. Fish and Wildlife Service (USFWS) managed lands, contained entirely within the Arctic NWR.

Customary and Traditional Use Determinations

Residents of Kaktovik have a customary and traditional use determination for muskox in Unit 26C.

Regulatory History

From regulatory years (RY) 1982/83 until 1990/91, the State of Alaska managed the muskox hunt in Unit 26C, increasing the number of permits from 5 to 10 bulls by RY 1988/89. In RY 1991/92, the Federal government assumed management of muskox on Federal public lands in Unit 26C, which are part of the Arctic NWR.

In 1992 the Federal Subsistence Board (Board) adopted Proposal 92 with modification, which closed Federal subsistence hunting of muskoxen in those portions of Unit 26B in the Arctic NWR, restricted the number of permits issued to 10 bulls for Unit 26C, and closed Federal public lands to the harvest of muskox except by residents of Kaktovik. Unit 26B was closed to harvest under Federal regulations because very few muskoxen occupied Federal lands in the unit at that time.

The Board increased the number of permits to 15 bulls in RY 1996/97 via adoption of Proposal P96-67 and permitted the harvest of cows in RY 1998/99 (3 cows, 12 bulls) via adoption of Proposal P98-109. In RY 1996/97, the Board increased the season length in Unit 26C from 2 months (October and March) to the current 8.5--month season of July 15 to March 31 via adoption of Proposal P96-67.

In 2002, the Board approved Wildlife Special Action WSA02-10 which reduced the harvest quota from 15 muskox to 2 bulls and shortened the season from July 15–Mar. 31 to Sept. 15–Mar. 31 because of the low population.

In 2003, the Board adopted Proposal WP03-53, which established a bull only harvest by Federal registration permit, with the number of permits based on 3% of the number of muskoxen counted during spring pre-calving muskox surveys in Unit 26C.

In 2012, Federal public lands remained closed to hunting muskox due to conservation concerns (WCR12-25), except by residents of Kaktovik. Muskox populations in Unit 26C were below the 3% threshold level required to issue Federal registration permits from 2003 to 2007 and from 2009-2014 with only one permit being issued in 2008. There has not been an open season for muskox in Unit 26C under State regulations since RY 1992/93.

At their winter 2017 meeting, the North Slope Subsistence Regional Advisory Council (Council) reviewed Wildlife Closure Review WCR15-25 and voted to maintain the closure because of conservation concerns. Most muskox emigrated to Yukon, Canada with only 2-4 muskoxen sometimes observed in Unit 26C (NSRAC 2017).

In 2020, the Board approved a revised closure policy, which stipulated all closures will be reviewed every four years. The policy also specified that closures, similar to regulatory proposals, will be presented to the Councils for a recommendation and then to the Board for a final decision. Previously, closure reviews were presented to Councils who then decided whether to maintain the closure or to submit a regulatory proposal to modify or eliminate the closure.

In 2022, the Board reviewed the closure WCR22-25 for the harvest of muskox on Federal public lands to everyone except residents of Kaktovik. The Board voted to maintain the status quo of the closure as part of the consensus agenda at its April 2022 meeting. The muskox population in Unit 26C remained very low and could not withstand any harvest.

Current Events

For the regulatory year 2023/24, the State will issue twelve permits. A Tier II permit hunt (TX108) with 4 either sex muskox permits, four registration permits for residents of Alaska, and four permits that will likely be split between Kaktovik and Nuiqsut (NSRAC 2023).

Biological Background

Muskoxen were reintroduced to the Arctic NWR coastal plain in 1969 and 1970. The reintroduced population grew rapidly, expanding its range east into Yukon, Canada and west into Unit 26B after 1986. The Northeast Alaska-Yukon muskox population ranges from eastern Unit 26A in northern Alaska to the Babbage River in northern Yukon, Canada. Numbers of muskox in Unit 26C remained relatively stable (average = 331) between 1987 and 1998 but declined sharply in the early 2000s (Figure 1). Continued declines in calf survival and recruitment and increasing adult mortality reduced the population to 29 muskoxen in 2003. In April 2008, 44 muskoxen were counted in the pre-calving census but most of these animals came from Canada the previous summer and returned to the Yukon in late October (Reynolds 2008). Annual pre-calving census on Arctic NWR have not been conducted since 2009; however, there have been sightings when conducting flights for other purposes. A small group of 18-20 muskox were observed in the Kongakut River drainage along the coastal plain of the Arctic NWR during the summer of 2015, and a small group of six were observed just west of the international boundary in March 2016 (Figure 1) (Reynolds 2011, Lenart 2015, Wald 2015, pers. comm., ANWR 2017).

Currently, no mixed groups of muskoxen live year-round in Unit 26C on Arctic NWR. Small groups move across the border between eastern Unit 26C and Canada as well as between western Unit 26C and Unit 26B (Reynolds, 2015 pers. comm.; Wald 2015, pers. comm.; ANWR 2017; NSRAC 2023). Population surveys conducted over the total range between 2006 and 2011 suggest that the population was relatively stable at about 300 animals, with about 200 muskoxen in Unit 26B, west of the Arctic NWR, and 100 muskoxen in Yukon, Canada east of the Arctic NWR (Reynolds 2011, Lenart 2013).

West of the Arctic NWR, in Unit 26B, muskox abundance increased between the mid-1990s and 2003 to about 302 individuals (Lenart 2007, 2009, 2011, 2013, 2015; Reynolds 2011). The Unit 26B muskox population remained stable at about 200 muskoxen from 2007-2015 and then began increasing

in 2016. In 2022, ADF&G conducted a population survey for muskox in Unit 26B and the eastern portion of Unit 26A, with a total count of 373 muskox (Figure 2) (NSRAC 2023). During tracking flights, groups of them have been located along the border between Units 26B and 26C (Figure 3) (Lenart 2021).

The State of Alaska closed muskox hunts in Unit 26B west of the Arctic NWR in RY 2005/06 (Lenart 2011). State management objectives were revised in 2013 to increase the muskox population to 300 in eastern Unit 26A, 26B, and 26C by reducing brown bear predation on muskox in Unit 26B (Lenart 2013). From 2007–2011, ADF&G determined that 62% of the adult mortality in Unit 26B was the result of brown bear predation (Lenart 2013).

There has been no State season for muskox in Unit 26C, due to low population numbers, since RY 1991/92. The population has reached the minimum of 300 muskoxen and is growing. The State plans to allow for a harvest rate of 1-3% per year of the spring pre-calving population estimate in eastern Unit 26A and Unit 26B. ADF&G anticipates the low harvest rate will not impede the goal of increasing the muskox population to the historical high of 650 muskoxen across eastern Unit 26A, Unit 26B and Unit 26C (Lenart 2015).

The decline of muskox was likely caused by low calf survival in some years, increased adult mortality, and changes in distribution of the population. Weather, predation, quality and quantity of winter forage, and exposure to parasites and disease are all factors affecting calf recruitment, muskox survival, and population distribution (Lenart 2013, 2015; Afema et al. 2017).

Given the gregarious nature of muskox, mature bulls are important for predator defense, foraging, and group cohesion in addition to breeding (Schmidt and Gorn 2013). For example, mature bulls may protect groups of females with calves against predators, effectively increasing calf survival and recruitment. Therefore, muskox may be more sensitive to selective harvest of mature males than other species (Schmidt and Gorn 2013).

Muskoxen reduce movements during the winter to conserve energy (Nelson 1994). Muskoxen depend on areas with low snow cover as they cannot forage in deep, hard-packed snow. Therefore, disturbance to muskox groups during the winter by hunters or predators could decrease survival through increased energetic requirements and movement to unsuitable habitat (Nelson 1994).

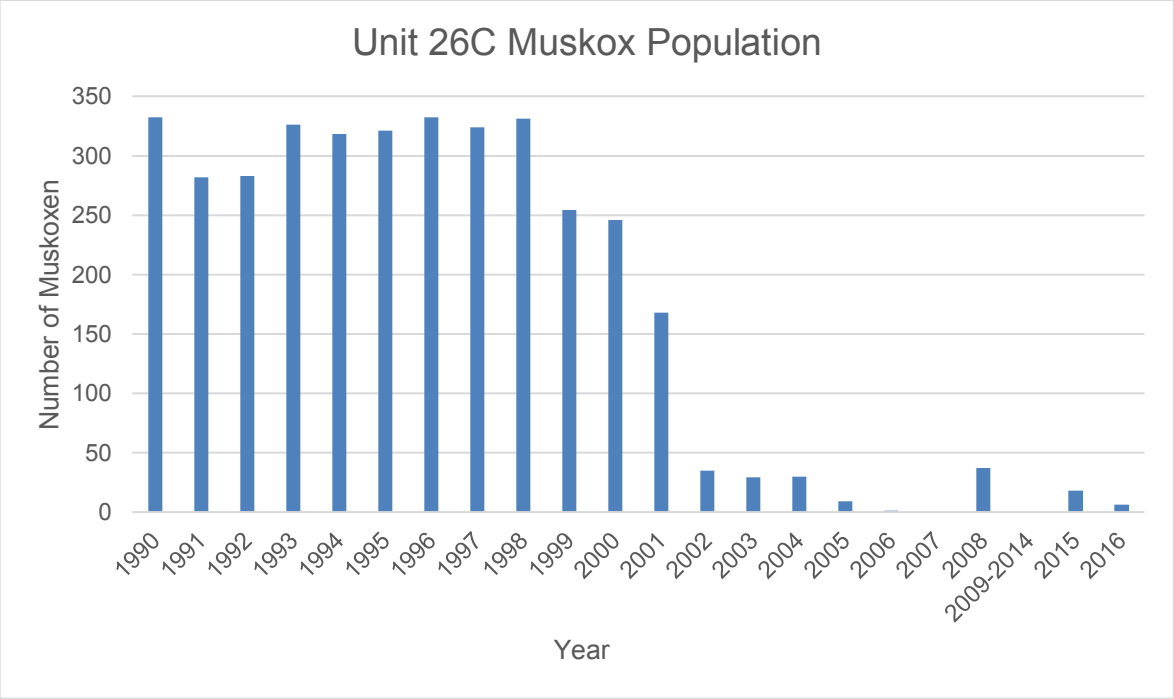


Figure 1. Number of muskoxen in Arctic National Wildlife Refuge, Unit 26C, observed during annual pre-calving censuses, 1990 – 2016. During 2007-2015, a group on the Canning River (Unit 26B-26C boundary) was included in the Unit 26B population estimate and not reported in Unit 26C (Lenart 2015).

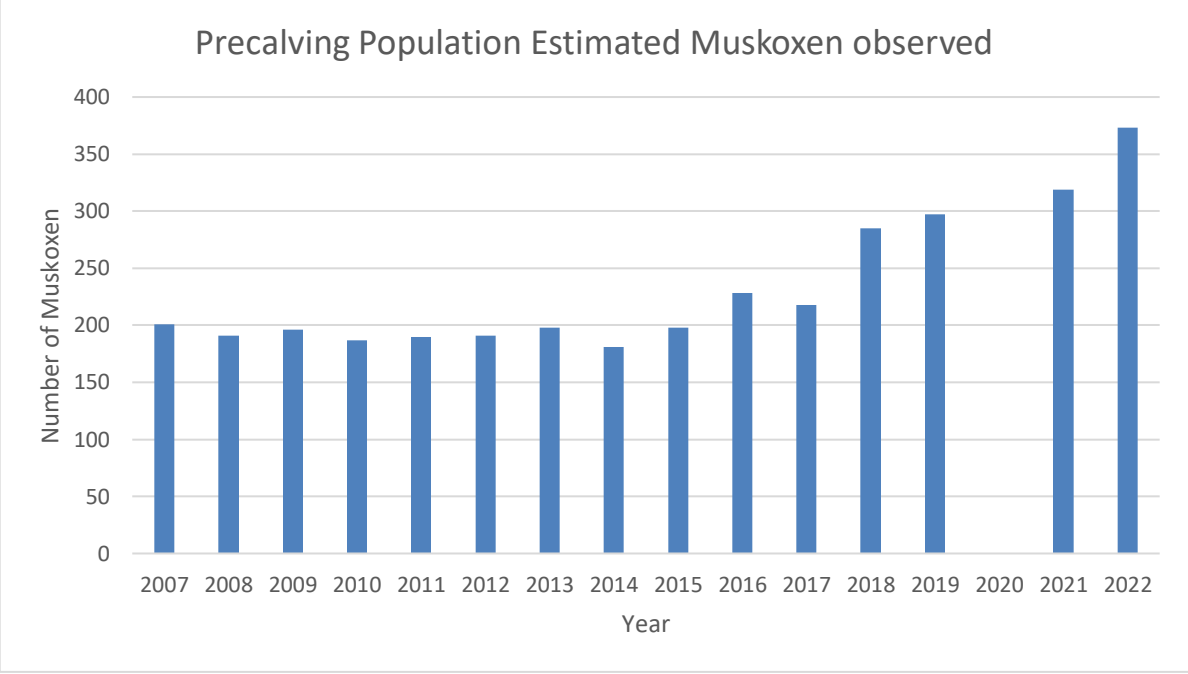


Figure 2. Unit 26A eastern portion, 26B, and 26C muskox pre-calving population estimate from 2007-2022 (Lenart 2021; Nelson 2023; NSRAC 2023). Eastern Unit 26A is included from 2007-2012 (Lenart 2021).

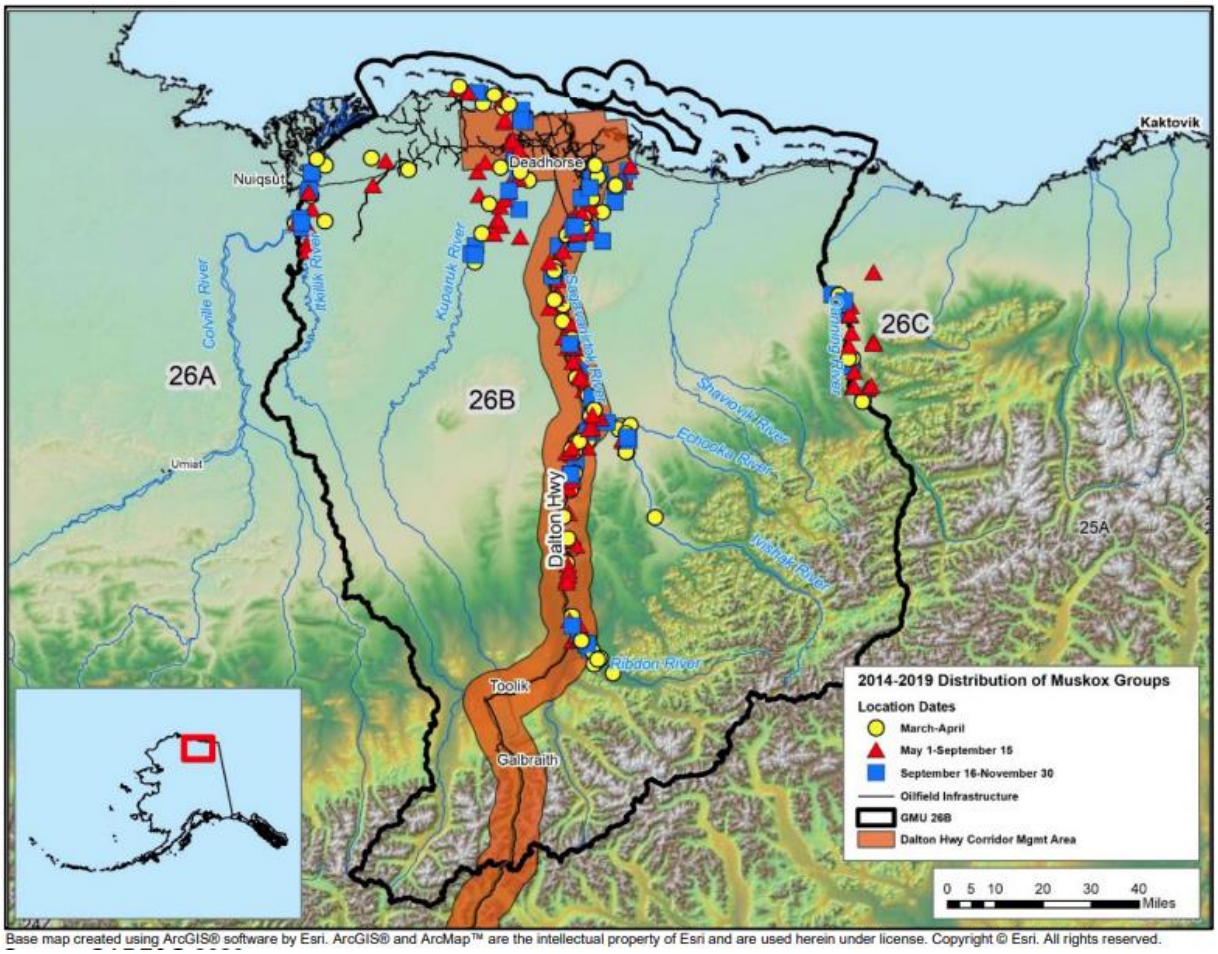


Figure 3. Location of muskox groups located during tracking flights conducted by ADF&G in Units 26B and 26C, from 2014-2019 (Lenart 2021).

Cultural Knowledge and Traditional Practices

In Iñupiaq, muskoxen are called *umingmak*, "the one with hair like a beard" (Lent 1999). The earliest archaeological evidence for use of muskoxen in arctic Alaska dates to Birnirk culture, beginning in approximately 600 A.D. (Lent 1999). Muskoxen were likely always present at relatively low numbers, and their use was limited but continuous over approximately 1500 years.

Historically, muskoxen provided fat when caribou were lean in late winter and early spring and provided an alternative food source in years when caribou were scarce. Muskoxen were more heavily hunted following the introduction of firearms and were also intensively harvested by whalers, trappers, and traders in the 1800s. Muskoxen persisted in the eastern Brooks Range until the 1890s before being extirpated (Lent 1999). During ethnographic fieldwork conducted in the 1960s, Gubser identified known previous muskox hunting areas on the mid and lower Canning River (Gubser 1965, cited in Pederson et al. 1991). Following reintroduction, Pedersen et al. described the initial seasonal use of muskoxen by residents of Kaktovik, which was primarily conducted by snowmachine:

> Even with the fall hunt option (Aug. 15 to Sep. 15) available beginning in 1988-89, Kaktovik hunters have selected to hunt during the spring (March 1-31) season when access to the coastal plain and foothills is far easier and parallel hunting activities bring people to where the musk ox can generally be found (Pedersen et al. 1991).

As noted in the biological background section of this analysis, muskoxen were reintroduced to the Arctic NWR coastal plain in 1969 and 1970. Residents of Kaktovik assisted with this reintroduction, with the hope that eventually their community would benefit from a subsistence hunt (Pedersen et al. 1991). Following the establishment of a hunt, residents of Kaktovik worked to establish a priority for local hunters, and to reestablish traditions related to muskox hunting, which had been interrupted by their extirpation (Pedersen et al. 1991).

Kaktovik is the only community with a customary and traditional use determination for muskoxen in Unit 26C. In 2022, the estimated population of Kaktovik was 265 (ADLWD 2022). The last year in which a resident of Kaktovik was able to harvest muskoxen under the FX2604 permit was over 20 years ago, in 2001 (OSM 2023, **Table 2**). Thus, Kaktovik has experienced a second, though shorter, interruption in practice and transmission of subsistence practices related to muskoxen.

Data from earlier ADF&G, Division of Subsistence surveys in which muskox harvest was documented for surveyed Kaktovik households are shown in **Table 1**. Although outdated, this information gives a general sense of patterns of use and sharing of muskoxen for Kaktovik, given available permits.

Table 1. Four measures of muskox use by surveyed Kaktovik households (CSIS 2023).

	Percent of Surveyed Households Using Muskox	**Percent of Surveyed Households Harvesting**	**Estimated Number of Muskoxen Harvested**	**Estimated Pounds per Person Harvested**
1985	43%	2.4%	1	4.0
1986	68%	4.3%	2	7.3
1992	53%	8.5%	5	16.5
Avg	55%	5%	2.6	9.3

Harvest History

Legal hunting of muskoxen in Unit 26C began in 1982. The total annual harvest of muskoxen in Unit 26C generally increased between RY 1982/83 and 1996/97 as the number of permits increased. Total annual harvest subsequently declined through RY 2002/03, after which only one permit was issued in 2008 (**Table 2**) (Lenart 2015, FWS 2015, Reynolds 2011).

Federal subsistence regulations state that the number of muskox permits issued to residents of Kaktovik will not exceed 3% of the numbers of animals observed in pre-calving censuses of Unit 26C. At least 36 animals need to be observed during pre-calving surveys to have 1 permit issued. From

2002-2007 and from 2009-2022 the Arctic NWR issued no muskox permits because too few muskoxen occupied Unit 26C or the population was too low. In 2008, the Arctic NWR, issued one permit for Unit 26C as the pre-calving census was 44 muskoxen. However, no harvest occurred (Reynolds 2011; Reynolds 2015, pers. comm.; Leacock 2020, pers. comm.).

Table 2. History of muskox harvest in Unit 26C by agency (FWS 2015, Leacock 2020, pers. comm.).

Regulatory Year	Managing Agency	Permits Issued	# Bulls Harvested	# Cows Harvested	Total Harvested
1982/83	ADF&G	5	4		4
1983/84	ADF&G	5	5		5
1984/85	ADF&G	5	4		4
1985/86	ADF&G	5	3	1	4
1986/87	ADF&G	5	5	0	5
1987/88	ADF&G	5	5	1	6
1988/89	ADF&G	10	6	3	9
1989/90	ADF&G	10	10		10
1990/91	ADF&G	11	8		8
1991/92	ADF&G	11	5		5
1992/93	USFWS	10	10		10
1993/94	USFWS	10	8		8
1994/95	USFWS	10	8		8
1995/96	USFWS	10	8	1	9
1996/97	USFWS	15	12	3	15
1997/98	USFWS	15	9	1	10
1998/99	USFWS	13B/2C	8	0	8
1999/2000	USFWS	12B/3C	8	0	8
2000/01	USFWS	12B/3C	5	1	6
2001/02	USFWS	12B/3C	2	0	2
2002/03	USFWS	2	0	0	0
2003/04 – 2007/08[a]	USFWS				
2008/09	USFWS	1	0	0	0
2009/10 – 2022/23[a]	USFWS	–			

[a] No permits were issued because the population of muskox from the pre-calving surveys was below the threshold of 3%.

Effects of the Proposal

If proposals WP24-37 and WP24-38 are adopted, the Federal muskox hunt in Unit 26C will become more flexible, adaptive, and provide for greater subsistence hunting opportunity. Specifically, removing the regulatory language stipulating that the number of permits issued cannot exceed the number of muskoxen counted in Unit 26C during a pre-calving census will enable much greater flexibility in opening hunts and allowing harvest by Kaktovik residents, especially since pre-calving censuses are seldom conducted in Unit 26C. Additionally, changing the season to "may be announced" and delegating authority to the Arctic NWR manager to announce the season and the number of permits issued each year will further allow for flexible, adaptive hunt management. This also mitigates conservation concerns as season length and permit numbers can be adjusted annually in response to herd status and hunt conditions.

Effects on the muskox population in Unit 26C are unknown as little biological and harvest information is currently available. However, the population of muskox in Units 26B and 26C has been increasing since 2014 (**Figure 2**) and now exceeds the State's minimum population threshold of 300 muskox required to open a limited hunt under State regulations. Strategies will need to be developed to manage the population of muskox that is expanding into Unit 26C.

In RY 2023/24, the State will issue 12 muskox tags for Unit 26B. Adoption of these proposals would allow federally qualified subsistence users to harvest muskox from this population as it continues to grow and expand into Unit 26C. These proposals provide the management flexibility needed for a recovering muskox population, as well as optimize subsistence opportunity for the residents of Kaktovik.

OSM PRELIMINARY CONCLUSION

Support Proposal WP24-37 **with modification** to harvest 1 muskox and **take no action** on Proposal WP24-38.

The modified regulation should read:

Unit 26C−Muskox

Unit 26C—1 ***muskox*** ~~*bull*~~ *by Federal registration permit only.* ~~*The number of permits that may be issued only to the residents of the village of Kaktovik will not exceed three percent (3%) of the number of musk oxen counted in Unit 26C during a pre-calving census.*~~	***May be announced between Nov. 1-Mar. 31***
Public lands are closed to the taking of musk ox, except by rural Alaska residents of the village of Kaktovik hunting under these regulations	

Justification

These proposals provide the management flexibility needed for a recovering muskox population, mitigate conservation concerns through annual adaptive management, and optimize subsistence opportunity for the residents of Kaktovik. As the Unit 26B muskox population increases and expands into Unit 26C, there is opportunity for harvest by residents of Kaktovik. Due to the lack of data for Unit 26C muskoxen, it is unknown if a hunt is sustainable at this time. When possible aerial surveys need to occur to determine the muskoxen population.

Adoption of WP24-37 provides a meaningful Federal subsistence preference. Providing in-season management authority to the Arctic NWR manager through a Delegation of Authority Letter provides the flexibility in management to address any conservation concerns, while maximizing subsistence opportunity. WP24-37 proposed a harvest limit of 1 bull muskox. Muskox may be more sensitive, than

other species, for harvest of mature bulls; therefore, one muskox is more appropriate. (Schmidt and Gorn 2013).

The Federal harvest season proposed in WP24-38, for muskox in Unit 26C is Jul. 15–Mar. 31. However, hunting areas cannot be easily accessed when the ground is not frozen. A may-be-announced season between Nov. 1 and Mar. 31 is consistent with the seasonality of local hunting practices by residents of Kaktovik. Limiting the season helps address any potential conservation concern and the limited knowledge of the Unit 26C muskox population.

No action needs to be taken on Proposal WP24-38 due to action taken on WP24-37.

LITERATURE CITED

ADLWD (Alaska Department of Labor and Workforce Development). 2022. Cities and census designated places (CDPs), 2020 to 2022. https://live.laborstats.alaska.gov/pop/index.html. Retrieved: May 23, 2023.

Afema, J.A., K.B. Beckman, S.A. Arthur, K. Burek Huntington, and A.K. Mazet. 2017. Disease complexity in a declining muskox (Ovibos moschatus) Population. Journal of Wildlife Diseases 53(2):1-19.

ANWR. 2017. Summary of Activities: Arctic NWR – Prepared for the North Slope Regional Advisory Council, March 2017. Arctic NWR (ANWR), Fairbanks, AK. 17 pp.

FWS. 2015. Federal Subsistence Management harvest database. Accessed: August 10, 2015.

Gubser, N.J. 1965. The Nunamiut Eskimos: Hunters of Caribou. Yale. New Haven, CT.

Kutz, S., J. Rowell, J. Adamczewski, A. Gunn, C. Cuyler, et al. 2017. Muskox Health Ecology Symposium 2016: Gathering to Share Knowledge on "Umingmak" in a Time of Rapid Change. Arctic 70(2): 225-236.

Leacock, W. 2020. Wildlife Biologist. Personal communication: e-mail. Arctic National Wildlife Refuge. U.S. Fish and Wildlife Service. Fairbanks, AK.

Lenart, E.A. 2007. Units 26B and 26C muskox. Pages 49-69 *in* P. Harper, editor. Muskox management report of survey-inventory activities 1 July 2004-30 June 2006. Alaska Department of Fish and Game. Project 16.0. Juneau, AK.

Lenart, E.A. 2009. Units 26B and 26C muskox. Page 48-69 *in* P. Harper, editor. Muskox management report of survey and inventory activities 1 July 2006-30 June 2008. ADF&G. Project 16.0. Juneau, AK, USA.

Lenart, E.A. 2011. Units 26B and 26C muskox. Pages 63-84 *in* P. Harper, editor. Muskox management report of survey and inventory activities 1 July 2008 – 30 June 2010. Alaska Department of Fish and Game. Project 16.0. Juneau, AK.

Lenart, E.A. 2013. Units 26B and 26C muskox. Pages 75-97 *in* P. Harper, editor. Muskox management report of survey and inventory activities 1 July 2010 – 30 June 2012. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2013-2, Juneau, AK.

Lenart, E.A. 2015. Units 26B and 26C muskox. Chapter 4, pages 4-1 through4-26 *in* P. Harper and L.A. McCarthy, editors. Muskox management report of survey and inventory activities 1 July 2012 – 30 June 2014. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2015-4, Juneau, AK.

Lenart, E.A. 2021. Muskox Management Report and Plan, Game Management Unit 26C and 26C Eastern North Slope: Report Period 1 July 2014-30 June 2019, and Plan Period 1 July 2019-30 June 2024. Alaska Department of Fish and Game, Species Management Report Plan ADF&G/DWC/SMR&P-2021-11, Juneau, AK.

Lent, Peter C. 1999. Muskoxen and their hunters. University of Oklahoma Press. Norman, OK.

Mason, R. 2015. Managing muskoxen in Northwest Alaska: from ice age relic to subsistence species, source of cash, and nuisance animal. Paper given at the 75th Society for Applied Anthropology Meeting: Continuity and Change. March 24-28, 2015. Pittsburgh, PA.

Nelson, R. 1994. Seward Peninsula Cooperative Muskox Management Plan. Alaska Department of Fish and Game, Division of Wildlife Conservation, Nome, AK.

Nelson, M. 2023. Alaska Department of Fish and Game Area Biologist. Personal communication: email. Fairbanks, AK

NSRAC. 2017. Transcripts of the North Slope Subsistence Regional Advisory Council proceedings. March 15, 2017. Utqiagvik, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

NSRAC. 2023 Transcripts of the North Slope Subsistence Regional Advisory Council proceedings. February 23, 2023. Kaktovik, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

Pedersen, S., T.L. Haynes, and R.J. Wolfe. 1991. Historic and current use of muskox by North Slope residents, with specific reference to Kaktovik, Alaska. ADF&G, Div. of Subsistence Tech. Paper 206.

Reynolds, P.E. 2008. Muskoxen in the Arctic NWR Game Management Unit 26C, 2007-2008. Arctic NWR, Fairbanks, AK.

Reynolds, P.E. 2011. 2011 precalving census of muskoxen in Arctic NWR 26C and adjacent regions. Unpublished report. Arctic NWR, Fairbanks, AK.

Reynolds,P. 2015. Wildlife biologist. Personal communication: email. Fairbanks, AK.

Schmidt, J.H., T.S. Gorn. 2013. Possible secondary population-level effects of selective harvest of adult male muskoxen. PLoS ONE 8(6): e67493. doi:10.1371/journal.pone.0067493.

Wald, E. 2015. Wildlife biologist. Personal communication: phone. Arctic NWR, Fairbanks, AK.

Appendix 1

Arctic Wildlife Refuge Manager
U.S. Fish and Wildlife Service
101 12th Avenue, Room 236
Fairbanks, Alaska 99701

Dear Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the manager of the Arctic National Wildlife Refuge (Arctic NWR) to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 26C for the management of muskox on these lands.

It is the intent of the Board that actions related to management of muskox by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), representatives of the Office of Subsistence Management (OSM), and the Chair of the affected Council(s) to the extent possible. The Office of Subsistence Management will be used by managers to facilitate communication of actions and to ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair or alternate, local tribes, and Alaska Native Corporations to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The Arctic NWR manager is hereby delegated authority to issue emergency or temporary special actions affecting muskox on Federal lands as outlined under the **Scope of Delegation**. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

2. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- **To announce the season dates between November 1 and March 31**
- **To determine the number of permits issued annually**

This delegation also permits you to close and reopen Federal public lands to nonsubsistence hunting, but does not permit you to specify permit requirements or harvest and possession limits for State-managed hunts.

This delegation may be exercised only when it is necessary to conserve muskox populations, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the populations. All other proposed changes to codified regulations, such as customary and traditional use determinations, shall be directed to the Board.

The Federal public lands subject to this delegated authority are those within Unit 26C.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will provide subsistence users in the region a local point of contact about Federal subsistence issues and regulations and facilitate a local liaison with State managers and other user groups.

You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 50 CFR 100.19 and 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected Federally qualified subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in OSM no later than sixty days after development of the document.

For management decisions on special actions, consultation is not always possible, but to the extent practicable, two-way communication will take place before decisions are implemented. You will also establish meaningful and timely opportunities for government-to-government consultation related to pre-season and post-season management actions as established in the Board's Government-to-Government Tribal Consultation Policy (Federal Subsistence Board Government-to-Government Tribal Consultation Policy 2012 and Federal Subsistence Board Policy on Consultation with Alaska Native Claim Settlement Act Corporations 2015).

You will immediately notify the Board through the Assistant Regional Director for OSM, and coordinate with the Chair(s) or alternate of the affected Council(s), local ADF&G managers, and other affected Federal conservation unit managers concerning emergency and temporary special actions being considered. You will ensure that you have communicated with OSM to ensure the special action is aligned with ANILCA Title VIII, Federal Subsistence regulations and policy, and that the perspectives of the Chair(s) or alternate of the affected Council(s), OSM, and affected State and Federal managers have been fully considered in the review of the proposed special action.

If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you will seek Council recommendations on the proposed temporary special action(s). If the affected Council(s) provided a recommendation, and your action differs from that recommendation, you will provide an explanation in writing in accordance with 50 CFR 100.10(e)(1) and 36 CFR 242.10(e)(1).

You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, OSM, affected State and Federal managers, law enforcement personnel, and Council members. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, OSM, affected State and Federal managers, and the local Council members at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately. A summary of special action requests and your resultant actions must be provided to the coordinator of the appropriate Council(s) at the end of each calendar year for presentation to the Council(s).

You may defer a special action request, otherwise covered by this delegation of authority, to the Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

6. Support Services: Administrative support for regulatory actions will be provided by the Office of Subsistence Management.

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, North Slope Subsistence Regional Advisory Council
Deputy Commissioner, Alaska Department of Fish and Game
Special Projects Coordinator, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

WCR24–31 Executive Summary	
Closure Location and Species	Unit 26B remainder and 26C—moose
Current Regulation	**Unit 26B remainder and 26C−Moose** *1 moose by Federal registration permit (FM2606) by residents of Kaktovik only.* *May be announced* *Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations.*
OSM Preliminary Conclusion	**Retain the Status Quo**
North Slope Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	None

FEDERAL WILDLIFE CLOSURE REVIEW
WCR24-31

Issue: Wildlife Closure Review WCR24-31 reviews the closure to moose hunting in Units 26B, remainder and 26C, except by residents of Kaktovik.

Closure Location and Species: Unit 26B remainder and 26C—Moose (**Map 1**)

Current Federal Regulation

Unit 26B remainder and 26C−Moose

1 moose by Federal registration permit (FM2606) by residents of Kaktovik only.	*May be announced*
Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations.	

Closure Dates: Year-round

Current State Regulation

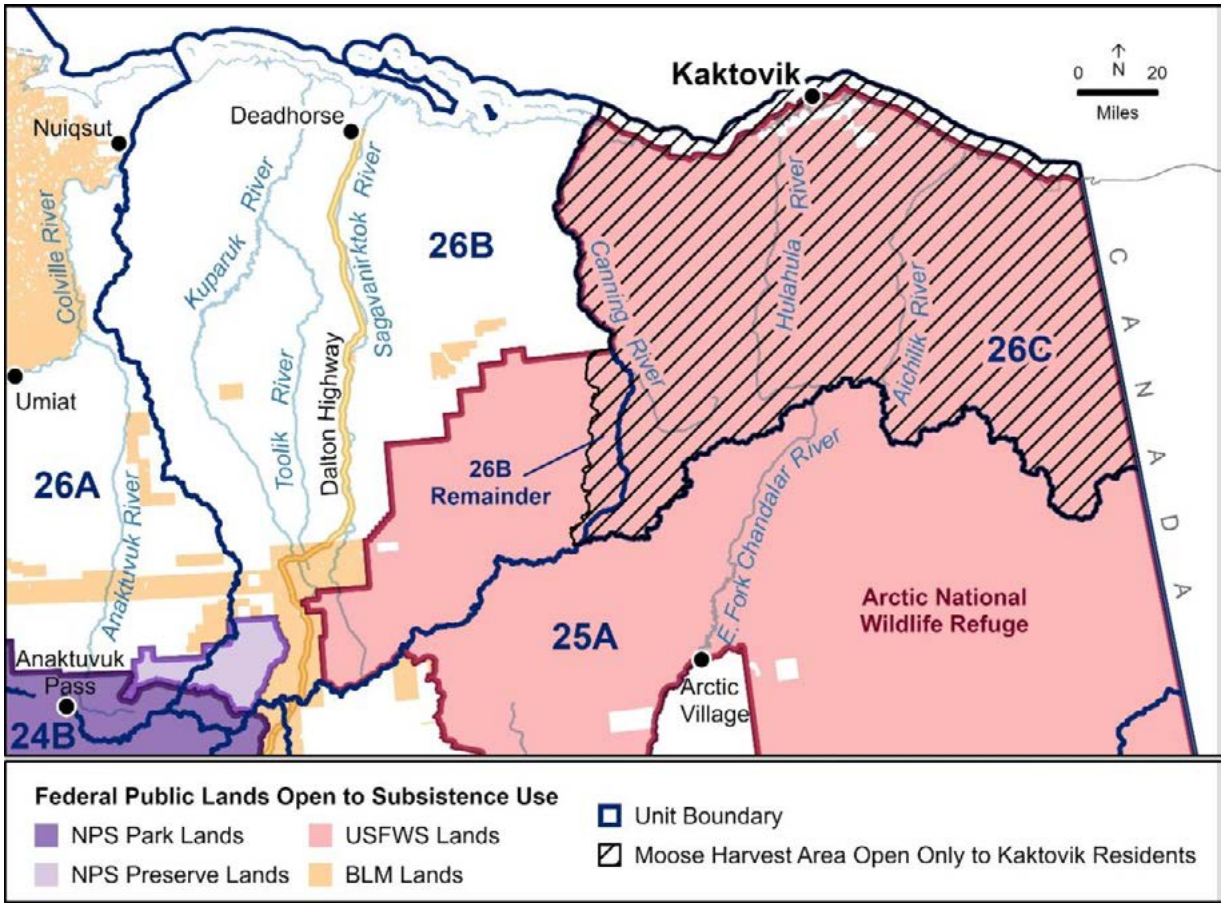
Units 26B and 26C−Moose

Residents and Nonresidents	*No open season*

Regulatory Year Initiated: 2004, closed except by residents of Kaktovik, 2007, closure area modified

Extent of Federal Public Lands

Federal public lands comprise approximately 29% of the lands in Unit 26B and consist of 78% U.S. Fish and Wildlife (FWS) managed lands, 12% Bureau of Land Management (BLM) managed lands, and 10% National Park Service (NPS) managed lands (**Map 1**).
Federal public lands comprise approximately 98% of the lands in Unit 26C and consist of 100% FWS managed lands (**Map 1**).



Map 1. Location of Federal public lands in Units 26B and 26C and lands open to Kaktovik residents.

Customary and Traditional Use Determination

Residents of Unit 26 (excluding the Prudhoe Bay-Deadhorse Industrial Complex), Point Hope, and Anaktuvuk Pass have a customary and traditional use determination for moose in Unit 26.

Regulatory History

Prior to 1996, Federal and State seasons allowed for the harvest of moose in Units 26B and 26C.

In 1996, Wildlife Proposal WP96-66, requested changes to the moose season in Unit 26A (OSM 1996). The Interagency Staff Committee modified the proposed regulation separating Unit 26 into Unit 26A - except that portion of the Colville River drainage downstream from the mouth of the Anaktuvuk River and Unit 26 remainder, which also included Units 26B and 26C. Unit 26, remainder moose regulation was modified to no open season. This modification was adopted by the Federal Subsistence Board (Board) at the April 1996 meeting (FSB 1996). While the modification resulted in no federal open season for moose in Unit 26, remainder, it did not close Federal public lands, meaning moose hunting could still occur under State regulations. However, during this time the State also had closed moose hunts in all of Unit 26, except that portion of the Colville River drainage downstream from the mouth of the Anaktuvuk River.

In 2003, the Board approved WSA03-04 with modification to temporarily allow residents of Kaktovik to harvest one moose in Units 26B or 26C for that years Thanksgiving feast and 1 moose for that year's Christmas feast; however, only 1 of the 2 moose could be harvest in Unit 26C OSM 2003).

In 2004, Proposal WP04-86b, submitted by the City of Kaktovik, requested that a moose season with a community harvest quota of five moose be established for the residents of Kaktovik only in Unit 26C. Analysis of WP04-86b also included ANILCA § 804 analysis for moose in 26C. The Board adopted Proposal WP04-86b with modification to allow a total harvest quota of 3 moose in Units 26B and 26C with the restrictions that no more than 2 bulls and no cows could be harvested in Unit 26C by residents of Kaktovik (OSM 2004a). The modification also included closure of Federal public lands to the taking of moose except by Kaktovik residents holding a Federal registration permit, resulting in the current closure. Proposal WP04-86a requested narrowing of the existing customary and traditional use determination to give priority to residents of Kaktovik only to harvest moose in Unit 26C, but the proposal was withdrawn so an ANILCA § 804 analysis could be completed as part of analysis for WP04-86b (OSM 2004b).

Proposals WP06-67a and WP06-67b requested that residents of Unit 25A be added to the customary and traditional use determination for the Firth and Kongakut river drainages of Unit 26C (WP06-67a) and that a harvest quota be set of two moose per drainage (WP06-67b). Proposal WP06-67a was rejected by the Board because the residents of Arctic Village and the surrounding area did not have a demonstrated pattern of moose harvest in Unit 26C. Proposal WP06-67b was rejected by the Board (FSB 2006) based on conservation concerns (OSM 2006).

In 2007, the Board adopted Proposal WP07-63 with modification to lift the closure of Federal public lands to non-Federally qualified users in the portion of Unit 26B outside of the Canning River drainage (establishing a new hunt area) based on increasing moose numbers (FSB 2007). Therefore, the closure now applied to Federal public lands in Unit 26C and areas within the Canning River drainage in Unit 26B (now called Unit 26B remainder), except for residents of Kaktovik (OSM 2007). The Board rejected Proposal WP07-58, requesting that Federal qualified subsistence users could use a bow and arrow within the Dalton Highway Corridor Management Area (DHCMA). This proposal was opposed by the Western Interior Alaska, Eastern Interior Alaska, and the North Slope Subsistence Regional Advisory Councils (Council), which all stated that it is not an effective method of harvesting the moose needed for subsistence (FSB 2007).

Proposal WP08-54 requested an increase of the moose harvest quota in Unit 26C to 5 moose (4 bulls and 1 of either sex) and a shorter harvest season of Jul. 1 - Dec. 31 versus Jul. 1 - Mar. 31 for Kaktovik residents in Unit 26C. The proposal also requested lifting the closure of Federal public lands in Unit 26B remainder (OSM 2008). The Board adopted the proposal with modification to keep the closure in place in Unit 26B remainder; but changed the harvest quota for the entire hunt area from 3 moose (2 bulls and 1 of either sex) to 3 moose (2 antlered bulls and 1 of either sex) (FSB 2008). Changing the harvest limit to antlered bulls was done to protect cows from being harvested later in the season when bulls have typically shed their antlers. The restriction of harvesting a cow accompanied by a calf was

retained for Units 26B remainder and 26C, and no more than two antlered bulls could be taken from Unit 26C.

In 2010 (WCR10-31) and 2012 (WCR12-31), the closure of moose hunting in Units 26B remainder and 26C, except residents of Kaktovik was reviewed. The North Slope RAC voted to maintain the closure, continuing to limit the moose hunt. For both reviews, there was a conservation concern for the moose population, and the closure was found to be in alignment with ANILCA Section 815(3) (OSM 2010 and 2012).

In March 2012, the Alaska Board of Game (BOG) adopted Proposal 174A to establish a moose season in a portion of Unit 26C, which includes the Firth River, Mancha Creek and Upper Kongakut river drainages due to an increase in the moose population large enough to have a harvestable surplus (Lenhart 2018). While the hunt remains in regulation, no State hunt has occurred because the area consists of Federal public lands that are closed to the harvest of moose, except by residents of Kaktovik.

In 2013, Emergency Special Action (WSA12-12) requested that the moose season in Unit 26B, remainder and 26C be extended two weeks from July 1 – March 31 to July 1 to April 14, and that the harvest limit be increased from three moose to five moose. The Board approved WSA12-12 with modification to allow Kaktovik residents to harvest one additional moose in Unit 26B remainder and to extend the season through April 14, 2013 (OSM 2013). The one additional moose increased the harvest quota to four: two moose in Unit 26B remainder and two bulls in Unit 26C.

In March 2013, the BOG, by Emergency Order 03-03-13, authorized a general moose season with a limit of four moose in Unit 26B, excluding the Canning River drainage, when hunting conditions were favorable for up to 14 days during a may-be-announced season from Feb.15–Apr. 15. It was thought that the moose population of approximately 500 moose in Unit 26B could sustain a harvest of 15 bull moose (ADF&G 2013). In Unit 26B, State lands are closer to the village of Kaktovik than Federal public lands in Unit 26B remainder, thus making it easier for Kaktovik residents to harvest additional moose close to the village without having to travel long distances to access Federal land.

In 2013, ADF&G submitted Proposal WP14-55, which requested the closure to moose hunting by non-Federally qualified users be lifted in the Firth, Mancha, and Upper Kongakut river drainages (upstream from and including Drain Creek) in Unit 26C (OSM 2014a). The remaining Federal public lands in Unit 26C and Unit 26B remainder would remain closed to the harvest of moose, except by residents of Kaktovik. At its April 2014 meeting, the Board rejected Proposal WP14-55 to allow for additional information to be collected on the moose population (OSM 2014a; FSB 2014).

Also, in April 2014 the Board adopted Proposal WP14-54 to increase to the harvest quota from 3 to 5 moose, to allow for the harvest of cows, and cows with calves in Unit 26C, and to lengthen the season in Units 26B remainder and 26C from Jul. 1–Mar. 31 to a year-round season (Jul.1 – June 30) (OSM 2014b).

In May 2014, the BOG reduced harvest limits and season dates for resident moose hunts in Units 26A and 26B, excluding the Canning River drainage, in response to low moose population numbers and poor recruitment. An Emergency Order (05-05-14) closed the general season hunt in Unit 26B and closed drawing permits for moose by residents and nonresidents in Unit 26A and 26B, excluding the Canning River drainage, for the 2014/15 regulatory year (ADF&G 2014a). The seasons were closed to allow for moose population recovery.

In 2014/15, due to the population decline on the North Slope, the Board closed the Federal moose season on Federal public lands in Units 26B remainder and 26C by adopting Temporary Special Action WSA14-02 (OSM 2014c).

In 2015, the Board approved Temporary Special Action WSA15-08 to close the moose season in Units 26B remainder and 26C for 2015/16 regulatory year. This request, submitted by the Arctic National Wildlife Refuge (NWR), was in response to the continued low moose numbers along the coastal plain of Unit 26C and 26B remainder (OSM 2015). Surveys conducted in April 2014 by the Arctic NWR and ADF&G indicated that the North Slope moose populations in the affected area had declined by approximately 50% since 2011 (Wald 2014).

In 2016, the Board adopted Proposal WP16-65 with modification to create a may-be-announced moose season in Units 26B remainder and 26C; remove regulatory language referencing harvest quotas and delegate authority to the Arctic NWR manager to determine annual quotas, set opening and closing season dates, and the number of Federal permits to be issued via a delegation of authority letter (**Appendix A**) only (OSM 2016). The delegation of authority allows for better management of the moose population without submitting special action requests every year.

In August 2020, the Board approved a revised closure policy, which stipulated all closures will be reviewed every four years. The policy also specified that closures, similar to regulatory proposals, will be presented to the Councils for a recommendation and then to the Board for a final decision. Previously, closure reviews were only presented to Councils who then decided whether to maintain the closure or to submit a regulatory proposal to modify or eliminate the closure.

In 2020, the Board voted to maintain status quo on Closure Review WCR20-31, continuing to limit the Units 26B, remainder and 26C moose hunt to Federally qualified subsistence users in Kaktovik (FSB 2020). The Arctic NWR manager has delegated authority to manage the hunt, allowing them to determine sustainable harvest levels based on the status and health of the moose population north of the Brooks Range in Units 26B remainder and 26C.
Closure last reviewed: 2020 – WCR20-31

Justification for Original Closure:

§815(3) of ANILCA states:

> *Nothing in this title shall be construed as – (3) authorizing a restriction on the taking of fish and wildlife for nonsubsistence uses on public lands (other than national parks and monuments) unless necessary for the conservation of healthy populations of fish and wildlife, for the reasons set forth in section 816, to continue subsistence uses of such populations, or pursuant to other applicable law…*

The combination of low moose numbers and low recruitment were direct indicators of a continuing conservation concern. While it was withdrawn, the analysis for Proposal WP04-86 (OSM 2004a, b) also included an ANILCA §804 analysis (prioritizing amongst Federally qualified subsistence users for a limited subsistence resource such as moose) to limit the moose season, with a small quota, to only the residents of Kaktovik.

Council Recommendation for Original Closure:

The North Slope Subsistence Regional Advisory Council supported Proposal WP04-86b as submitted by the City of Kaktovik to allow only residents of Kaktovik to harvest moose because of the limited availability of moose within Unit 26C.

State Recommendation for Original Closure:

The State did not support Proposal WP04-86b as submitted due to conservation concerns regarding the Unit 26C moose population and the requested harvest quota of 5 moose (OSM 2004b). However, they did support a harvest of up to two moose in Unit 26C.

Biological Background

State management goals for moose in Units 26B and 26C are to maintain viable populations throughout their historic range in the region, to provide sustained moose harvest opportunity, and provide an opportunity for moose photography and viewing (Lenart 2010). Specific State management objectives for Unit 26B and Unit 26C are as follows (Lenart 2018):

- Unit 26B – maintain a population of at least 300 moose with a 3-year mean proportion of at least 15% short yearlings (10 to 11 month old calves) in the population.

- Unit 26C – maintain a population of at least 150 moose with a 3-year mean proportion of at least 15% short yearlings (10 to 11 month old calves) in the population.

Unit 26C contains at least two distinct moose populations. The first population occurs on the coastal plain and foothills in the North Slope portion of Unit 26C (North Slope population), and the other population occurs in the Firth, Mancha, and Upper Kongakut river drainages (Old Crow Flats population) (Mauer 1998). A portion of the moose population in the eastern portion of Unit 26C calves and spends the summer in Old Crow Flats in the Yukon and migrates to the Firth, Mancha, and Upper Kongakut river drainages in Unit 26C, and the Sheenjek and Coleen rivers drainages in Unit 25A during the fall and winter. Some moose in the Old Crow Flats population move between drainages during the fall or spring migration (Mauer 1998; Cooley 2013, pers. comm.). The focus of this analysis is on the North Slope population in Unit 26C.

Moose in Unit 26B remainder and Unit 26C are at the northern limits of their range in Alaska. The lack of quality habitat severely limits the potential size of moose populations. Moose are generally associated with narrow strips of shrub communities along drainages, except during calving and summer when some seasonal movement occurs away from riparian habitat (Lenart 2010). In winter, moose are limited almost entirely to the riparian shrub habitat. During surveys in the 1970s and 1980s, small numbers of moose were observed in the Sadlerochit, Hulahula, Okpilak, Okerokovik, Jago, Aichilik and Egaksrak river drainages. Larger concentrations of moose were found on the Canning River and between the Sagavanirktok and Kavik rivers, west of the Canning River. The moose population in Units 26B and 26C peaked during the late 1980s at approximately 1,400 moose (Mauer and Akaran 1991; Lenart 2004, 2008), then declined in the early 1990s, and remained at approximately 700 animals throughout the remainder of the decade (Mauer 1998; Lenart 2008). This decline is thought to be due to a combination of factors, including limited habitat at the northern limits of their range, weather, predation by wolves and brown bears, disease, and possibly insect harassment (Lenart 2008).

The migratory behavior of the North Slope moose population makes it difficult to estimate the total population size. Data from surveys conducted by ADF&G and USFWS suggested that a significant decline in moose populations north of the Brooks Range occurred between 2012 and 2014. Survey results indicated that there had been approximately a 50% reduction of moose since 2011 in Units 26A and 26B. The number of moose counted declined from approximately 400 moose in 2013 to 104 in 2015 in Unit 26A (ADF&G 2014b; Lenart 2015, pers. comm). Although Unit 26A is west of the area affected by this wildlife closure review, it documents widespread declines in moose populations across the North Slope. In Unit 26B remainder, the number of moose counted declined from 176 in 2013 to 57 in 2014, including no short yearlings (10-11 month old calves) (Lenart 2012b). From 2014 to 2018 the moose population in Unit 26C increased to 94 moose, which is the largest population estimate since 1984 (Churchwell 2018).

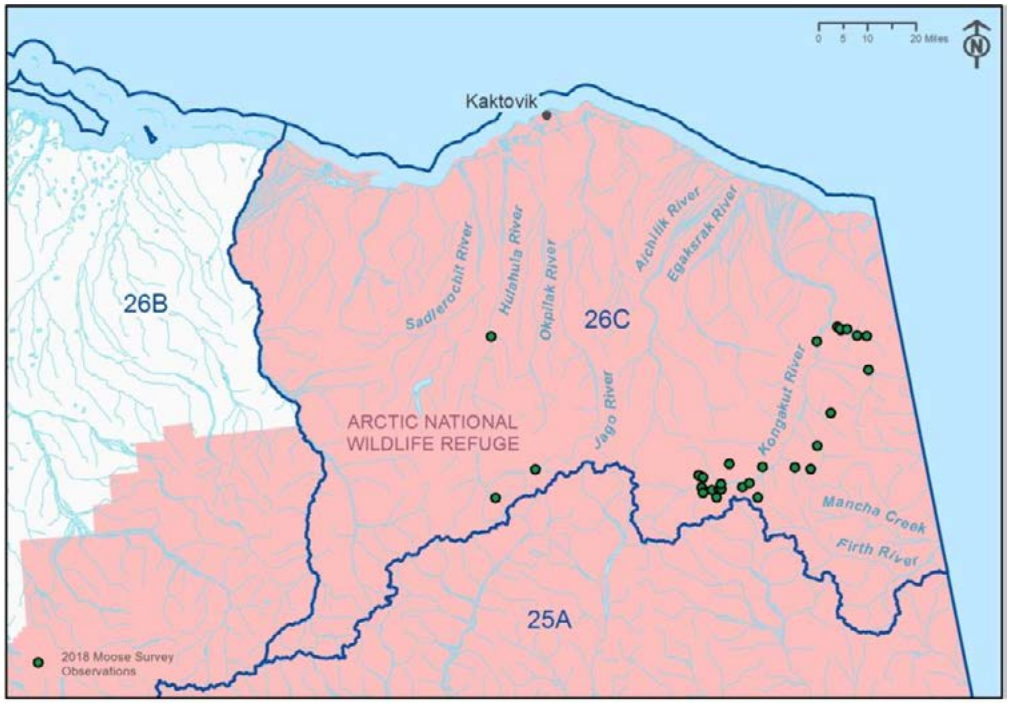
A comprehensive moose survey has not been conducted for Units 26B and 26C; however, smaller scale minimum counts have been conducted in areas where moose concentrate to assess population trends. These trend counts account for a large percentage of the moose in these units as habitat is limited in the region (Lenart 2012a).

The moose population in the eastern portion of Unit 26B, including the Canning River, rebounded from low levels of approximately 150 from 1998–2000 to 339 moose in 2008 (**Figure 1**). During that period, harvest was limited in Unit 26B due to State and Federal harvest closures enacted in 1996. A limited season for Kaktovik residents in Unit 26B remainder and 26C was opened under Federal regulations in 2004. The hunting closure on Federal public lands in Unit 26B was lifted in 2007, except for the Canning River drainage (Unit 26B remainder), which remained open only to Kaktovik residents. The moose population in eastern Unit 26B subsequently declined to 104 moose in 2015 following peak counts in 2005–2008, but then increased to 212 Moose in 2017 (**Figure 1**).

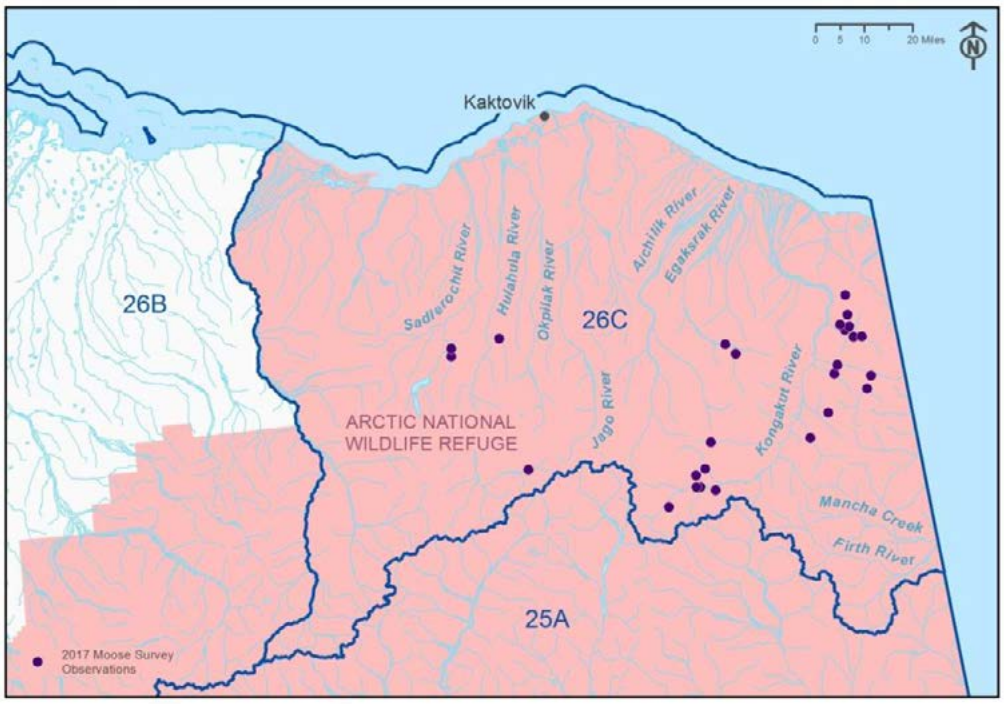
The North Slope population in Unit 26C was surveyed every two years between 2003 and 2018 by Arctic NWR staff (Wald 2014, ANWR 2017a, b). This population occurs on the Coastal Plain from the

Canadian border to the Canning River and from the Beaufort Sea coast to the foothills of the Brooks Range. Moose survey observations from 2017 and 2018 show most of the moose in the Kongakut River drainage (**Map 2 and 3**).

The calf or short-yearling survival increased from 0 in 2014 to 9 in 2017. Based on trend counts between 2003 and 2017, the Unit 26C North Slope moose population reached a low of 23 in 2014 and has since increased to 94 in 2018 (**Figure 2**), which is the largest number since 1984 (Lenart 2012a).



Map 2. Moose survey observations Unit 26C, April 2017 (Arthur 2018, pers. comm.).



Map 3. Moose survey observations Unit 26C, April 2018 (Arthur 2018, pers. comm.).

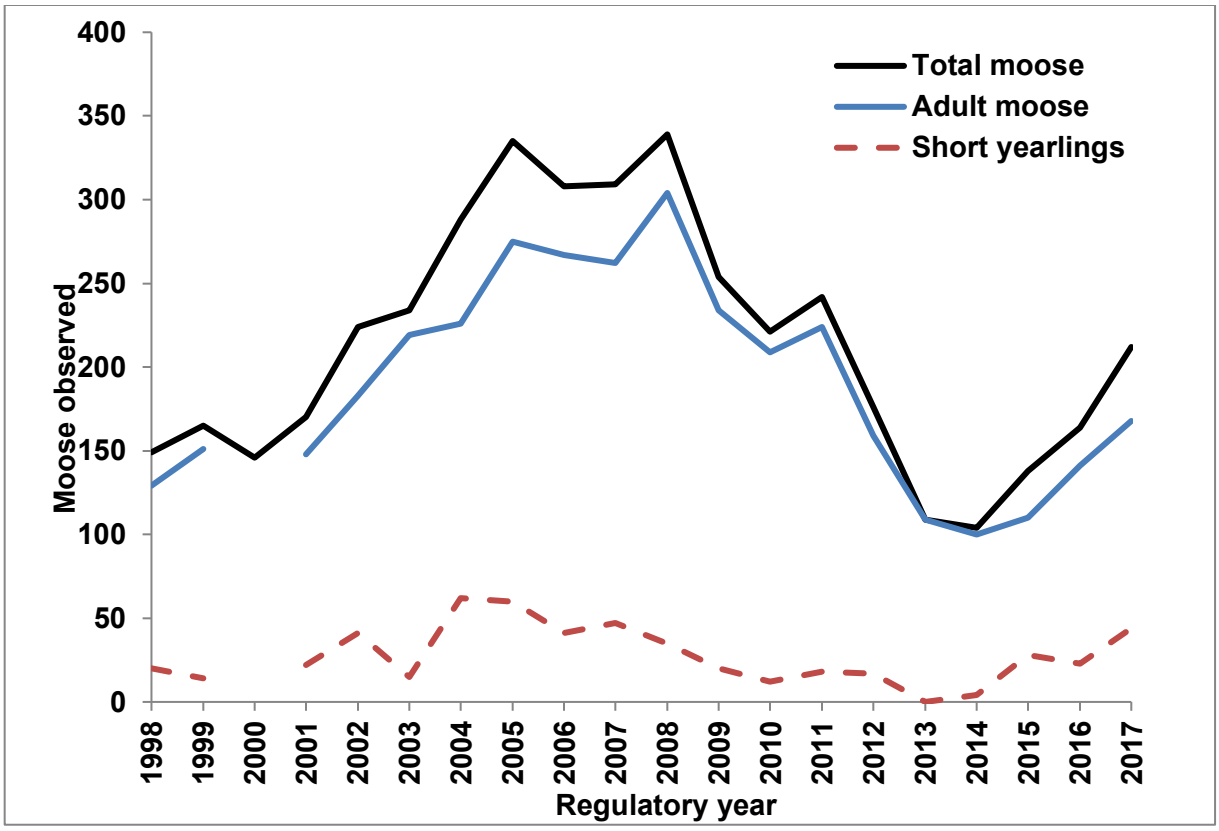


Figure 1. Aerial composition survey counts of moose in Unit 26B, east of the Sagavanirktok River and including the Canning River. Surveys were conducted in regulatory years 1998/1999 to 2016/2017 and moose presented as adults or short yearlings (11–month olds) (Lenart 2012a; 2015, pers. comm.; 2018, pers. Comm).

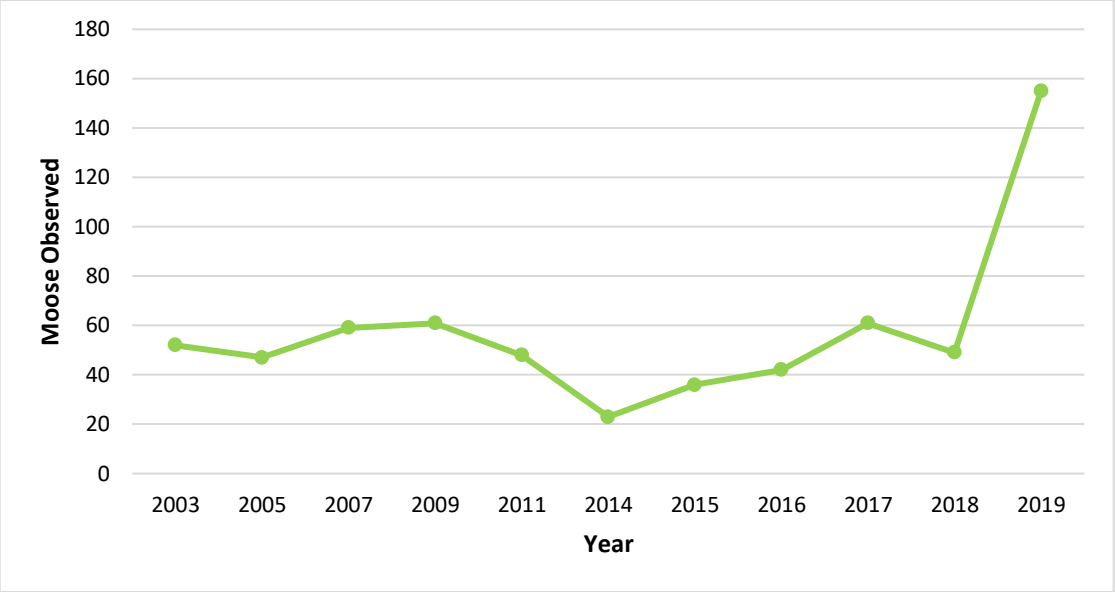


Figure 2. Moose observed during aerial surveys of trend count areas, conducted every other year by the U.S. Fish and Wildlife Service, for the North Slope Population in Unit 26C, 2003–2018 (Wald 2011, 2014, ANWR 2017a, b, 2022).

Cultural Knowledge and Traditional Practices

In 2019, the estimated population of Kaktovik was 265 (ADLWD 2022). Residents of Kaktovik hunt moose at a relatively low level compared to other subsistence resources. They are hunted in the areas around the Sadlerochit, Hulahula and Okpilak rivers during winter and spring, with April and September being the months of highest moose harvest activity (NSB 2015). Based on subsistence household surveys conducted between 1985 and 2010, the average estimated annual number of moose harvested by Kaktovik is 2.8, for an average estimated 6.6 pounds of edible meat per person (**Table 1**, ADF&G 2022).

Table 1. Three measures of moose harvest and use by residents of Kaktovik for survey years 1985 to 2010. (ADF&G 2022). Values for estimated number of moose harvested are rounded to whole numbers.

Survey year	Estimated number of moose harvested	Estimated pounds per person harvested	Percent using
1985	4	10.1	45%
1986	1	3.1	17%
1992	4	10.4	36%
1994	1	2.6	no data
2010	4	6.8	16%
Average	**2.8**	**6.6**	**29%**

Harvest History

Harvest quotas for North Slope moose populations are currently determined using a 3% harvest rate (Lenart 2017, pers. comm.; Wald 2013, pers. comm.). Moose harvest on Federal public lands within the closure area occurs only under Federal regulations by residents of Kaktovik. Since 2016, the Arctic NWR manager announces the harvest quota and the number of permits to issue each year via delegated authority.

Since 2004, 10 bull moose have been reported harvested (**Table 2**). No additional moose were taken by Kaktovik residents in Unit 26B remainder during the two-week extension under Emergency Special Action WSA12-12. Only one moose has been taken between regulatory years 2013/14 and to 2019/20.

In April 2017, in response to the recent increase in moose abundance, the Arctic NWR manager authorized two Federal Registration permits for the harvest of two bull moose in the Kongakut River drainage. Permits were issued to Kaktovik residents only and one moose was harvested (ANWR 2017a).

Table 2. Federal moose registration permits (FM2606) issued to Kaktovik residents and harvest for Units 26B and 26C from 2004 to 2017(Twitchell 2013, pers. comm.; Wald 2015; ANWR 2017a, b; ANWR 2019; OSM 2022).

Regulatory Year	Permits issued	Permits used	Harvest
2004/2005	4	1	1
2005/2006	3	2	2
2006/2007	3	2	2
2007/2008	3	- [a]	- [a]
2008/2009	3	2	1
2009/2010	3	2	- [a]
2010/2011	2	1	1
2011/2012	3	2	0
2012/2013	2	2	2
2013/2014	2	0	0
2014/2015	- [a]	- [a]	- [a]
2015/2016	0	0	0
2016/2017	2	1	1
2017-2018	2	- [a]	0
2018-2019	2	1	0
2019-2020	4	4	0
2020-2021	- [a]	- [a]	- [a]

[a] Data not available for the report.

Effects

Retaining the status quo would continue to limit this moose hunt to Kaktovik residents only. Conservation concerns remain for this low moose population, which is on the fringe of its range. The harvest quota determined annually by the Arctic NWR manager helps ensure sustainable harvests, while providing opportunity for the Federally qualified subsistence users determined to be most dependent on this moose resource.

Modifying the closure to allow hunting by all Federally qualified subsistence users but retaining the closure to non-Federally qualified users would allow for additional subsistence opportunity. However, due to the extremely low harvest quotas, it would reduce opportunity for Kaktovik residents. Due to the harvest quota, no impact to moose population would be expected. Modifying the closure to close to all users would preclude all subsistence opportunity.

Rescinding the closure would allow moose hunting by both residents and non—residents under State regulations, although State hunts are currently closed. If a State hunt were opened, the moose population could not sustain the additional harvest pressure, increasing conservation concerns. Increased hunting pressure may result in unsustainable harvest levels given the small North Slope populations in limited area of Units 26B, remainder and 26C.

OSM PRELIMINARY CONCLUSION:

X Retain the Status Quo
_ Rescind the Closure
_ Modify the closure to . . .
_ Defer Decision on the Closure or Take No Action

Justification

Most of the North Slope moose population occurs in the Kongakut River drainage and remains low elsewhere in the Arctic coastal plain. Current regulations allow management flexibility for the Arctic NWR to determine sustainable harvest quotas each year based on the status and health of the small moose populations north of the Brooks Range in Units 26B remainder and 26C. Recent annual quotas and the number of permits issued has been very low, indication a very low harvestable surplus and that this moose population cannot withstand additional harvest. Continuing to limit the moose hunt to Kaktovik residents only is recommended given the small North Slope population and to provide a meaningful preference.

LITERATURE CITED

ADF&G 2013. Emergency Special Order 03-03-13. Issued March 27, 2013. ADF&G. Fairbanks, AK 2pp.

ADF&G 2014a. Emergency Special Order 05-05-14. Issued March 15, 2014. ADF&G. Fairbanks, AK 4pp.

ADF&G 2014b. ADF&G News Release May 12, 2014. ADF&G closes moose hunts in Unit 26A and 26B for fall 2014. ADF&G. Fairbanks, AK. 2pp.

ADF&G. 2022. Community subsistence information system, ADF&G Div. of Subsistence. https://www.adfg.alaska.gov/sb/CSIS/. Retrieved August 5, 2022.

ADLWD. 2020. Alaska population overview, 2019 estimates. https://live.laborstats.alaska.gov//pop/estimates/pub/19popover.pdf. Retrieved August 1, 2022.

ADLWD. 22. Alaska population overview, 2022 estimates. https://live.laborstats.alaska.gov/data-pages/alaska-population-estimates. Retrieved May 31, 2023.

ANWR. 2017a. Summary of activities of the Arctic National Wildlife Refuge for the North Slope Regional Advisory Council, November 2017. 17 pp.

ANWR. 2017b. Summary of activities of the Arctic National Wildlife Refuge for the North Slope Regional Advisory Council, March 2017. 17 pp.

ANWR. 2019. Summary of activities of the Arctic National Wildlife Refuge for the North Slope Regional Advisory Council, October 2019. 20 pp.

ANWR. 2022. Wildlife Federal Subsistence Moose Season and Quota Established in Unit 26B Remainder and Unit 26C. Letter. Arctic National Wildlife Refuge. Fairbanks, AK. 3 pp.

Arthur, S. 2018. Wildlife Biologist. Personal communication. email. Arctic National Wildlife Refuge, USFWS, Fairbanks, AK.

Churchwell, R. 2018. Trip Report: Arctic National Wildlife Refuge, North Slope Brooks Range moose trend survey. Arctic National Wildlife Refuge, USFWS, Fairbanks, AK. 4 pp.

Cooley, D. 2013. Harvest coordinator. Personal communication: email. Environment Yukon, Whitehorse, Yukon Territories, Canada.

FSB. 1996. Transcripts of Federal Subsistence Board proceedings, April 29, 1996. Office of Subsistence Management, FWS. Anchorage, AK.

FSB. 2006. Transcripts of Federal Subsistence Board proceedings, May 17, 2006. Office of Subsistence Management, FWS. Anchorage, AK.

FSB. 2007. Transcripts of Federal Subsistence Board proceedings, May 2, 2007. Office of Subsistence Management, FWS. Anchorage, AK.

FSB. 2008. Transcripts of Federal Subsistence Board proceedings, May 1, 2008. Office of Subsistence Management, FWS. Anchorage, AK.

FSB. 2014. Transcripts of Federal Subsistence Board proceedings, April 17, 2014. Office of Subsistence Management, FWS. Anchorage, AK.

FSB. 2020. Transcripts of Federal Subsistence Board proceedings, April 17, 2014. Office of Subsistence Management, FWS. Anchorage, AK.

Lenart, E. A. 2004. Units 26B and 26C moose. Pages 613-628 *in* C. Brown, editor. Moose management report of survey and inventory activities 1 July 2003–30 June 2005. ADF&G. Project 1.0. Juneau, AK.

Lenart, E. A. 2008. Units 26B and 26C moose. Pages 668-687 *in* P. Harper, editor. Moose management report of survey and inventory activities 1 July 2005–30 June 2007. ADF&G. Project 1.0. Juneau, AK.

Lenart, E. A. 2010. Units 26B and 26C moose. Pages 666-684 *in* P. Harper, editor. Moose management report of survey and inventory activities 1 July 2007–30 June 2009. ADF&G. Project 1.0. Juneau, AK.

Lenart, E. A. 2012a. Units 26B and 26C moose. Pages 677-693 *in* P. Harper, editor. Moose management report of survey and inventory activities 1 July 2009–30 June 2011. ADF&G, Species Management Report ADF&G/DWC/SMR-2012-5, Juneau, AK.

Lenart, E. A. 2012b. Units 26B and 26C moose. Pages 36-1 through 36-20 *in* P. Harper and L.A. McCarthy, editors. Moose management report of survey and inventory activities 1 July 2011–30 June 2013. ADF&G, Species Management Report ADF&G/DWC/SMR-2014-6, Juneau, AK.

Lenart, E.A. 2018. Units 26B and 26C moose management Report. Page 5 *in* J.J. Kephart and L.A. McCarthy, editors. Moose Management Report and Plan, Game Management Units 26B and 26C Report Period 1 July 2010-30June 2015, and Plan Period 1 July 2015-30July 2020. ADF&G. Juneau, AK.

Lenart, E.A. 2015. Northeast Alaska Area Wildlife Biologist. Personal communication. email, phone. ADF&G. Fairbanks, AK.

Lenart, E.A. 2017. Northeast Alaska Area Wildlife Biologist. Personal communication. email, phone. ADF&G. Fairbanks, AK.

Lenart, E.A. 2018. Northeast Alaska Area Wildlife Biologist. Personal communication. email. ADF&G. Fairbanks, AK.

Mauer , F. J. 1997. Moose surveys on the north slope of the Arctic National Wildlife Refuge. Progress Report FY97-01. USFWS, Fairbanks, AK.

Mauer, F. J. 1998. Moose migration: northeastern Alaska to northwestern Yukon Territory, Canada. Alces 34:75-81.

Mauer, F.J. and J. Akaran. 1991. Moose surveys in the Arctic National Wildlife Refuge, 1991. Arctic National Wildlife Refuge Progress Report, No. FY91-02, Fairbanks, AK. 17pp.

NSB (North Slope Borough). 2015. Kaktovik Comprehensive Development Plan. Department of Planning and Community Services. Barrow, AK.

OSM. 1996. Staff analysis WP96-66. Office of Subsistence Management, FWS. Anchorage, AK. 9 pp.

OSM. 2003. Staff analysis WSA03-04. Office of Subsistence Management, FWS. Anchorage, AK. 17 pp.

OSM. 2004a. Staff analysis WP04-86b. Pages 833–849 *in* Federal Subsistence Board Meeting Materials May 18–May 21, 2004. Office of Subsistence Management, FWS. Anchorage, AK. 1041 pp.

OSM. 2004b. Staff analysis WP04-86a. Pages 820–832 *in* Federal Subsistence Board Meeting Materials May 18–May 21, 2004. Office of Subsistence Management, FWS. Anchorage, AK. 1041 pp.

OSM. 2006. Staff analysis WP06-67a, b. Pages 542–560 *in* Federal Subsistence Board Meeting Materials May 16–May 18, 2006. Office of Subsistence Management, FWS. Anchorage, AK. 579 pp.

OSM. 2007. Staff analysis WP07-63. Pages 584–593 *in* Federal Subsistence Board Meeting Materials April 30–May 2, 2008. Office of Subsistence Management, FWS. Anchorage, AK. 643 pp.

OSM. 2008. Staff analysis WP08-54. Pages 587–598 *in* Federal Subsistence Board Meeting Materials April 29–May 1, 2008. Office of Subsistence Management, FWS. Anchorage, AK. 599 pp.

OSM. 2010. Staff analysis WCR10-31. Office of Subsistence management, FWS. Anchorage, AK. 5 pp.

OSM 2012. Staff analysis WCR12-31. Office of Subsistence management, FWS. Anchorage, Ak. 7 pp.

OSM. 2013. Staff analysis WSA12-12. Office of Subsistence Management, FWS. Anchorage, AK. 9 pp.

OSM. 2014a. Staff analysis WP14-55. Pages 192–208 *in* Federal Subsistence Board Meeting Materials April 29–May 1, 2008. Office of Subsistence Management, FWS. Anchorage, AK. 680 pp.

OSM. 2014b. Staff analysis WP14-54. Pages 174–191 *in* Federal Subsistence Board Meeting Materials April 29–May 1, 2008. Office of Subsistence Management, FWS. Anchorage, AK. 680 pp.

OSM. 2014c. Staff analysis WSA14-02. Office of Subsistence Management, FWS. Anchorage, AK. 13 pp.

OSM. 2015. Staff analysis WSA15-08. Office of Subsistence Management, FWS. Anchorage, AK. 12 pp.

OSM. 2016. Staff analysis WP16-65. Pages 371–389 *in* Federal Subsistence Board Meeting Materials April 12–14, 2016. Office of Subsistence Management, FWS. Anchorage, AK. 948 pp.

OSM. 2018. Harvest database. Office of Subsistence Management, FWS. Anchorage, AK.

OSM. 2022. Alaska Federal subsistence program database. Office of Subsistence Management, U.S. Fish and Wildlife Service. Anchorage, AK. Accessed: August 10, 2022.

Twitchell, H. 2013. Assistant Refuge Manager. Personal communication. email. Arctic National Wildlife Refuge, USFWS. Fairbanks, AK.

Wald, E. 2011. North Slope Moose Survey, April 2011. Arctic National Wildlife Refuge, USFWS. Fairbanks, AK.

Wald, E. 2013. Wildlife Biologist. Personal communication. email, phone. Arctic National Wildlife Refuge, USFWS. Fairbanks, AK.

Wald, E. 2014. North Slope Moose/Muskoxen Survey, April 2014. Arctic National Wildlife Refuge, USFWS. Fairbanks, AK. 13pp.

Wald, E. 2015. Wildlife Biologist. Personal communication. email, phone. Arctic National Wildlife Refuge, U.S. Fish and Wildlife Service. Fairbanks, AK.

Wald, E. 2017. Wildlife Biologist. Personal communication. email, phone. Arctic National Wildlife Refuge, U.S. Fish and Wildlife Service. Fairbanks, AK.

APPENDIX A

Federal Subsistence Board

1011 East Tudor Road, MS121
Anchorage, Alaska 99503

FISH and WILDLIFE SERVICE
BUREAU of LAND MANAGEMENT
NATIONAL PARK SERVICE
BUREAU of INDIAN AFFAIRS

FOREST SERVICE

JUN 2 1 2016

FWS/OSM 16027.PM

Refuge Manager
Arctic National Wildlife Refuge
101 12th Ave, Room 236
Fairbanks, Alaska 99701

Dear Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Arctic National Wildlife Refuge Manager to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of the population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Units 26B remainder and 26C for the management of moose on these lands.

It is the intent of the Board that actions related to management of moose by Federal officials be coordinated, prior to implementation, with the Office of Subsistence Management, the Alaska Department of Fish and Game (ADF&G), the Bureau of Land Management Arctic Field Office, and the Chair of the North Slope Subsistence Regional Advisory Council to the extent possible. Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair, and applicable Council members, to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The Arctic National Wildlife Refuge Manager is hereby delegated authority to issue emergency or temporary special actions affecting moose on Federal lands as outlined under the **Scope of Delegation**. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by regulation at 36 CFR 242.19 and 50 CFR 100.19.

2. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

> To set or adjust annual harvest quotas, determine the number of Federal registration permits to be issued, and season opening and closing dates for moose on Federal public lands in Units 26B remainder and 26C.

This delegation may be exercised only when it is necessary to conserve moose populations, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the population.

All other proposed changes to codified regulations, such as customary and traditional use determinations, adjustments to methods and means of take, or closures and restrictions for take by only non-Federally qualified subsistence users shall be directed to the Federal Subsistence Board.

The Federal public lands subject to this delegated authority are those within Units 26B remainder and 26C.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will review special action requests or situations that may require a special action and all supporting information to determine: (1) consistency with 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected Federally qualified subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Federal Subsistence Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in the Office of Subsistence Management (OSM) no later than sixty days after development of the document.

You will consult with OSM and coordinate with local ADF&G managers, the National Park Service (Superintendent, Gates of the Arctic National Park and Preserve, the BLM Arctic Field Office, and the Chair of the North Slope Subsistence Regional Advisory Council regarding special actions under consideration. You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, OSM, affected State and Federal managers, law enforcement personnel, and Council representatives. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, OSM, affected State and Federal Managers, and the local Council representatives at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately. A summary of special action requests and your resultant actions must be provided to the coordinator of the appropriate Subsistence Regional Advisory Council(s) at the end of each calendar year for presentation to the Council(s).

You may defer a special action request, otherwise covered by this delegation of authority, to the Federal Subsistence Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Federal Subsistence Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

6. Support Services: Administrative support for regulatory actions will be provided by the Office of Subsistence Management, U.S. Fish and Wildlife Service, and Department of the Interior.

Sincerely,

Tim Towarak
Chair

cc: Commissioner, Alaska Department of Fish and Game
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, North Slope Subsistence Regional Advisory Council
Manager, Bureau of Land Management Arctic Field Office
Federal Subsistence Liaison Team Leader, Alaska Department of Fish and Game
Federal Subsistence Board
Interagency Staff Committee
Administrative Record

WP24-27 Executive Summary	
General Description	Wildlife Proposal WP24-27 requests changing the Federal muskox permit system in Units 22 and 23 from a Federal registration permit to a Federal drawing permit. Additionally, BLM and NPS request standardizing language in the eight delegation of authority letters and changing the in-season manager for the muskox hunt in Unit 23, south of Kotzebue Sound and west of and including the Buckland River drainage from the Western Arctic National Parklands superintendent to the BLM Anchorage Field Office manager. *Submitted by the Bureau of Land Management and the National Park Service.*
Proposed Regulation	**Unit 22−Muskox** *Unit 22B — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the taking of musk ox except by federally qualified subsistence users hunting under these regulations* — *Aug. 1-Mar. 15.* *Unit 22D, that portion west of the Tisuk River drainage and Canyon Creek — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the harvest of musk ox except by residents of Nome and Teller hunting under these regulations* — *Sep. 1-Mar. 15.* *Unit 22D, that portion within the Kuzitrin River drainages — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the taking of musk ox except for residents of Council, Golovin, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations* — *Aug. 1-Mar. 15.* *Unit 22D, remainder — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the taking of musk ox except by residents of Elim, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations* — *Aug. 1-Mar. 15.* *Unit 22E — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the harvest of musk ox except by federally qualified subsistence users hunting under these regulations* — *Aug. 1-Mar. 15.*

WP24-27 Executive Summary		
	Unit 22, remainder	*No open season.*
	Unit 23−Muskox	
	*Unit 23, south of Kotzebue Sound and west of and including the Buckland River drainage — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the taking of musk oxen except by federally qualified subsistence users hunting under these regulations*	*Aug. 1-Mar. 15.*
	*Unit 23, Cape Krusenstern National Monument — 1 bull by Federal **drawing** permit.*	*Aug. 1-Mar. 15.*
	*Unit 23, that portion north and west of the Kobuk River drainage — 1 bull by State **permit** or Federal **drawing** ~~registration~~ permit.*	*Aug. 1-Mar. 15.*
	Unit 23, remainder	*No open season.*
OSM Preliminary Conclusion	**Support** Proposal WP24-27.	
Seward Peninsula Subsistence Regional Advisory Council Recommendation		
Northwest Arctic Subsistence Regional Advisory Council Recommendation		
Interagency Staff Committee Comments		

WP24-27 Executive Summary	
ADF&G Comments	
Written Public Comments	None

DRAFT STAFF ANALYSIS
WP24-27

ISSUES

Wildlife Proposal WP24-27, submitted by the Bureau of Land Management (BLM) and the National Park Service (NPS), requests changing the Federal muskox permit system in Units 22 and 23 from a Federal registration permit to a Federal drawing permit. Additionally, BLM and NPS request standardizing language in the eight delegation of authority letters (**Appendix 1**) and changing the in-season manager for the muskox hunt in Unit 23, south of Kotzebue Sound and west of and including the Buckland River drainage (Unit 23 SW) from the Western Arctic National Parklands (WEAR) superintendent to the BLM Anchorage Field Office manager. This proposal will codify into regulation the changes approved in 2022 from Wildlife Temporary Special Action WSA22-01.

DISCUSSION

The proponents state changes to permit distribution language are necessary to reflect how permits have been issued in recent history: via a drawing system which was out of compliance with registration permit language. This change will allow the continuation of subsistence use and further conservation of healthy muskoxen populations on the Seward Peninsula. This housekeeping change will affect five muskox hunts in Unit 22 and three muskox hunts in Unit 23 for a total of eight hunts. Updating the Delegation of Authority letters will standardize and clarify language between all eight of these hunts. Specifically, the scope of delegation language for all eight muskox hunts should read: Close the season, set any needed permit conditions, determine annual quotas, the number of permits to be issued, and the method of permit allocation between State and Federal permits (**Appendix 1**). Changing the in-season manager from the WEAR Superintendent to the BLM Anchorage Field Office manager will better reflect land status in the hunt areas.

Existing Federal Regulation

Unit 22−Muskox

Unit 22B — 1 bull by Federal permit or State permit. Federal public lands are closed to the taking of musk ox except by federally qualified subsistence users hunting under these regulations	*Aug. 1-Mar. 15.*
Unit 22D, that portion west of the Tisuk River drainage and Canyon Creek — 1 bull by Federal permit or State permit. Federal public lands are closed to the harvest of musk ox except by residents of Nome and Teller hunting under these regulations	*Sep. 1-Mar. 15.*

Unit 22D, that portion within the Kuzitrin River drainages — 1 bull by Federal permit or State permit. Federal public lands are closed to the taking of musk ox except for residents of Council, Golovin, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations	*Aug. 1-Mar. 15.*
Unit 22D, remainder — 1 bull by Federal permit or State permit. Federal public lands are closed to the taking of musk ox except by residents of Elim, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations	*Aug. 1-Mar. 15.*
Unit 22E — 1 bull by Federal permit or State permit. Federal public lands are closed to the harvest of musk ox except by federally qualified subsistence users hunting under these regulations	*Aug. 1-Mar. 15.*
Unit 22, remainder	*No open season.*

Unit 23−Muskox

Unit 23, south of Kotzebue Sound and west of and including the Buckland River drainage — 1 bull by Federal permit or State permit. Federal public lands are closed to the taking of musk oxen except by federally qualified subsistence users hunting under these regulations	*Aug. 1-Mar. 15.*
Unit 23, Cape Krusenstern National Monument — 1 bull by Federal permit.	*Aug. 1-Mar. 15.*
Unit 23, that portion north and west of the Kobuk River drainage — 1 bull by State or Federal registration permit.	*Aug. 1-Mar. 15.*
Unit 23, remainder	*No open season.*

Proposed Federal Regulation

Unit 22−Muskox

*Unit 22B — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the taking of musk ox except by federally qualified subsistence users hunting under these regulations*	*Aug. 1-Mar. 15.*

*Unit 22D, that portion west of the Tisuk River drainage and Canyon Creek — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the harvest of musk ox except by residents of Nome and Teller hunting under these regulations*	*Sep. 1-Mar. 15.*
*Unit 22D, that portion within the Kuzitrin River drainages — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the taking of musk ox except for residents of Council, Golovin, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations*	*Aug. 1-Mar. 15.*
*Unit 22D, remainder — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the taking of musk ox except by residents of Elim, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations*	*Aug. 1-Mar. 15.*
*Unit 22E — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the harvest of musk ox except by federally qualified subsistence users hunting under these regulations*	*Aug. 1-Mar. 15.*
Unit 22, remainder	*No open season.*

Unit 23−Muskox

*Unit 23, south of Kotzebue Sound and west of and including the Buckland River drainage — 1 bull by Federal **drawing** permit or State permit. Federal public lands are closed to the taking of musk oxen except by federally qualified subsistence users hunting under these regulations*	*Aug. 1-Mar. 15.*
*Unit 23, Cape Krusenstern National Monument — 1 bull by Federal **drawing** permit.*	*Aug. 1-Mar. 15.*
*Unit 23, that portion north and west of the Kobuk River drainage — 1 bull by State **permit** or Federal **drawing** ~~registration~~ permit.*	*Aug. 1-Mar. 15.*
Unit 23, remainder	*No open season.*

Existing State Regulation

Unit 22−Muskox

22A- One bull by permit.	*TX090*	*Aug 1- Mar 15*
22B east of the Darby Mtns.- including drainages of Kwiniuk, Tubutulik, Koyuk and Inglutalik rivers. One bull by permit.	*TX105*	*Aug 1- Mar 15*
22B remainder- One bull by permit.	*TX105*	*Jan 1- Mar 15*
22C that portion of the Snake River drainage downstream of the Glacier Creek confluence and including the Glacier Creek drainage, that portion of the Nome River drainage downstream of and including the Basin Creek and Shepard Creek drainages, and all drainages flowing directly to Norton Sound between the mouths of the Nome River and the Snake River- One bull, by bow and arrow, muzzleloader, or shotgun only, by permit	*TX095* *TX096*	*Aug 1- Mar 15*
22C that portion of drainages flowing to Norton Sound 1) between the east bank of the Penny River and the Snake River drainage, 2) the Snake River drainage upstream of the Glacier Creek confluence and excluding the Glacier Creek drainage, 3) the Nome River drainage upstream of and excluding the Basin Creek and Shepard Creek drainages, and 4) between the Nome River drainage and the west bank of the Flambeau River extended along Safety Sound to the Safety Bridge- One bull by permit	*TX096*	*Aug 1- Mar 15*
22C Remainder		*No open season*
22D that portion west of the Tisuk River drainage, west of the west bank of the unnamed creek originating at the unit boundary opposite the headwaters of McAdam's Creek and west of the west bank of Canyon Creek to its confluence with Tuksuk Channel- One bull by permit	*TX103*	*Jan 1- Mar 15*
22D Kuzitrin River drainage (Includes Kougarok and Pilgrim rivers)- One bull by permit	*TX102*	*Jan 1- Mar 15*

22D Remainder- One bull by permit	*TX102*	*Aug 1- Mar 15*
22E- One bull by permit	*TX104*	*Aug 1- Mar 15*

Unit 23−Muskox

23 Seward Peninsula west of and including the Buckland River drainage- One bull by permit	*TX106*	*Aug 1- Mar 15*
23 that portion north and west of the Kobuk River drainage—One bull by permit	*TX107*	*Aug 1- Mar 15*
23 remainder		*No open season.*

Extent of Federal Public Lands/Waters

Unit 22 is comprised of 43% Federal public lands and consists of 28% BLM, 12% NPS, and 3% U.S. Fish and Wildlife Service (USFWS) managed lands.

Unit 23 is comprised of 71% Federal public lands and consist of 40% NPS, 22% BLM, and 9% USFWS managed lands.

Customary and Traditional Use Determinations

Residents of Unit 22B have a customary and traditional use determination (C&T) for muskoxen in Units 22B and 22D.

Residents of Unit 22C have a C&T for muskoxen in Units 22B, west of the Darby Mountains, 22C, and 22D.

Residents of Units 22D have a C&T for muskoxen in Unit 22D.

Residents of Unit 22E (excluding Little Diomede Island) have a C&T for muskoxen in Units 22D and 22E.

Residents of Unit 23, south of Kotzebue Sound and west of and including the Buckland River drainage have a C&T for muskoxen in Unit 23, south of Kotzebue Sound and west of and including the Buckland River drainage.

Residents of Unit 23 east and north of the Buckland River drainage have C&T for muskox in Unit 23, remainder.

Residents of the NANA region are considered resident zone communities of Cape Krusenstern National Monument (CAKR). These communities include Kotzebue, Selawik, Noorvik, Kiana, Shungnak, Ambler, Kobuk, Noatak, Kivalina, Buckland, and Deering.

Regulatory History

Seward Peninsula Muskox

In 1995, Proposal P95-44 requested to establish the first Federal muskox hunts and closed all Federal public lands to non-federally qualified users in Units 22D and 22E. This proposal was submitted because the muskox population was robust enough to withstand a harvest of 15 bulls as recommended by the Seward Peninsula Cooperative Muskox Management Plan (OSM 1995). The Federal Subsistence Board (Board) adopted Proposal P95-44 with modification to also establish a Federal muskox season in Unit 23 SW to provide additional subsistence opportunity. The Board added Unit 23 SW because muskox from the Seward Peninsula population occurred in the area. The harvest limit was one bull by Federal registration permit. The season was Sept. 1-Jan. 31 or until 7 muskoxen were harvested.

In 1997, Wildlife Special Action 97-14 established a shared Federal and State permit system for muskox on the Seward Peninsula that was supported by both the Seward Peninsula and Northwest Arctic Subsistence Regional Advisory Councils (Seward Peninsula and Northwest Arctic Councils) and adopted by the Board (FSB 1998). Village recommendations were summarized in a resolution written and passed by the Seward Peninsula Council in 1998 and subsequently presented to the Alaska Board of Game (BOG), which approved a Tier II subsistence muskox hunt for the Seward Peninsula with the assumption that this would be part of a combined Federal/State harvest program.

In 1998, the Seward Peninsula Council also submitted Proposal P98-89 to extend the muskox season by three months to close on March 31 (rather than January 31) for Units 22D, 22E, and 23 SW. However, as part of the consensus agenda, the Board adopted Proposal P98-89 with modification to change the season to Aug. 1 – Mar. 15. This modification was made due to biological concerns that hunting in late March could stress cows shortly before the calving season.

In 2000, the Board adopted Proposal WP00-56 to combine two Federal permit areas in Unit 22D, one on NPS land and the other on BLM land, as designated in 1997. Six of the Federal permits were then transferred into the State Tier II system.

In 2001, the Board adopted Proposal WP01-35, which established a muskox season in Unit 22B and changed the harvest limit from one bull to one muskox in Units 22B, 22D, 22E and 23 SW, however, cows could only be taken from Jan. 1-Mar. 15 and no more than eight cows could be harvested. Total harvest could not exceed 13 muskoxen. The Seward Peninsula Muskox Cooperators Group (Cooperators) unanimously supported submitting the proposal to provide more subsistence opportunity, to better coordinate between State and Federal hunts and because there were no conservation concerns (OSM 2001). The BOG adopted similar regulations.

In 2002, the Board adopted Proposal WP02-37, delegating authority to the Superintendent of the WEAR to set annual harvest quotas and close the season for muskox in Unit 23 SW.

In 2005, the BOG established a Tier I subsistence registration hunt, previously a Tier II hunt, in Unit 22E as proposed by the Cooperators. This was expected to help users reach the harvest quota in an area where the harvestable surplus was greater than the number of permit applicants.

In 2006, the Board adopted Proposals WP06-41 and WP06-55, establishing a designated hunter permit for muskox in Units 22 and 23 SW, respectively. Special provisions allowed a federally qualified subsistence user to designate another federally qualified subsistence user to take muskoxen on their behalf, unless the recipient is a member of a community operating under a community harvest system.

In 2008, the BOG adopted Proposal 77 with modification. This changed the framework of the Seward Peninsula muskoxen hunts in all Seward Peninsula hunt areas by adopting a combination of Tier I subsistence registration hunts and drawing permit hunts. This ended the original Tier II permit hunts that had been in place since 1998 (Gorn 2011, Hughes 2018, pers. comm.)

In 2010, several proposals regarding muskoxen were submitted to the Board. The Board adopted Proposal WP10-74, which requested rescinding the closure of Federal public lands to the harvest of muskoxen in Unit 22E, except by federally qualified subsistence users. Harvest quotas were rarely met in Unit 22E, indicating harvest should be allowed on Federal public lands under both Federal and State regulations, and because conservation concerns were minimal due to the harvest quotas. The Board also adopted WP10-75, which requested the harvest of cow muskoxen be allowed for the entire season in Unit 22E, rather than restricting it to the Jan. 1–Mar. 15 portion. Proposal WP10-77 requested the Federal hunt areas for muskoxen within Unit 22D remainder be aligned with State regulations by establishing hunts in the Kougarok, Kuzitrin, and Pilgrim river drainages. The Board adopted WP10-77 with modification to establish the current Unit 22D Kuzitrin hunt area, which encompasses the Kougarok and Pilgrim river drainages. They also adopted Proposal WP10-84 with modification, clarifying the regulatory language and requiring a Federal permit or State Tier I registration permit (instead of Tier II) to harvest muskox in Unit 23 SW. The Board revised permit requirements to maintain consistency with recent changes under State regulations.

In 2011, the BOG adopted regulations to allow flexibility in managing muskox hunts outside of the normal regulatory cycle. This enabled Alaska Department of Fish and Game (ADF&G) to manage their permits as either Tier I or Tier II and to set harvest thresholds from year to year based on current biological data and the relationship between the harvestable surplus and amount necessary for subsistence (Gorn and Dunker 2015).

In 2014, Proposals WP14-33, -35, -36, -38 and -41 were adopted with modification by the Board in response to a decline in the muskox population and resulting conservation concern. These commonly eliminated the cow hunt, delegated authority to the Superintendent of the Bering Land Bridge National Preserve and the BLM Anchorage Field Office manager to restrict the number of Federal registration permits to be issued in the different hunt areas and further closed Federal public lands in Units 22D, 22E and 23SW to the harvest of muskox except by federally qualified subsistence users.

In 2018, using the flexibility that was adopted into regulations in 2011, the BOG began administering the Unit 22E muskox harvest as a Tier II hunt (TX104). This modification resulted from population surveys suggesting that the current harvest strategy yielded a harvestable portion below the lower end of the ADF&G's goals for the amount necessary for subsistence (Dunker 2018, pers. comm.).

In 2020, the Board reviewed Wildlife closure reviews WCR20-10, -19, -28, -29, -30 and -44 for these six muskox hunts in Units 22 and 23SW and voted to maintain status quo for all of them. Muskox populations had been at low levels since the 2015 decline, and mature bull:cow ratios and rate of recruitment were lower than historical averages. Given the State still managed under a Tier II permit and the current conservative harvest strategy, these closures were deemed necessary to protect the muskox population.

In April 2022, the Board adopted special action WSA22-01, which requested the same changes as this proposal. They recognized drawing permits would maintain the effective administration of these muskox hunts that provide for subsistence hunting opportunity while sustainably managing and conserving the muskox populations. The Seward Peninsula and Northwest Arctic Councils supported the request, considering it to be a housekeeping request and felt administering the permit by random drawing to be the most equitable manner for permit distribution (FSB 2022).

Cape Thompson Muskox

In regulatory year (RY) 2000-2001, the ADF&G started the muskox Tier II permit in Unit 23, that portion north and west of the Noatak River. In RY 2014/15, the boundary was changed to be Unit 23, that portion north and west of the Kobuk River (Unit 23 NW).

In 2003, the NPS prepared an Environmental Assessment under the National Environmental Policy Act, and its Regional Director signed a Finding of No Significant Impact, designating all lands within the NANA Regional Corporation as the resident zone for Cape Krusenstern National Monument (CAKR). With this 2003 decision, the current resident zone communities are Kotzebue, Selawik, Noorvik, Kiana, Shungnak, Ambler, Kobuk, Noatak, Kivalina, Buckland, and Deering.

In 2005, Proposal WP05-19 requested the establishment of a season and allocation of muskoxen within CAKR to provide opportunity for families with "permanent subsistence camps" within CAKR. The Board adopted Proposal WP05-19 with modification, limiting the hunt to resident zone community members with permanent residence within CAKR or the immediately adjacent Napaktuktuk Mountain area, south of latitude 67°05' N and west of longitude 162°30' W and delegating authority to the WEAR Superintendent to set the season closing date and annual harvest quotas. This action included a Section 804 prioritization, resulting in closure of the muskox hunt to some federally qualified subsistence users.

In 2011, the Northwest Arctic Council supported maintaining the CAKR muskox closure to non-federally qualified users based on population concerns at its March 2011 meeting. The Northwest Arctic Council agreed to revisit the closure when further data regarding the population became available.

In 2016, the Board adopted Proposal WP16-50 as modified by OSM as part of the consensus agenda. Proposal WP16-50 removed the 804 restriction for the CAKR hunt area, expanding the pool of users eligible to hunt muskox within CAKR to all resident zone community members who are also federally qualified subsistence users. This regulatory change provided more opportunity for federally qualified subsistence users, while maintaining the permit and harvest quota, resulting in no biological effects to the muskox population.

Additionally in 2016, the Board adopted Proposal WP16-51 as modified by OSM to establish a muskox hunt in the portion of Unit 23 north and west of the Kobuk River drainage with a harvest limit of 1 bull muskox and season of Aug. 1-Mar. 15. The modification specified that harvest would be by State or Federal registration permit and to delegate authority the WEAR Superintendent to close the season, determine annual harvest quotas, and determine the number of Federal permits to be issued, by delegation of authority letter only.

In April 2022, the Board adopted Proposal WP22-55 as modified by OSM which established a hunt for Cape Thompson muskox in Unit 26A from Aug. 1-Mar. 15. The OSM modification was to revise the hunt area descriptor, require a Federal drawing permit (instead of a Federal registration permit), and to delegate authority to the BLM Arctic District Office to manage the hunt. Wildlife closure review WCR22-27, regarding muskox in CAKR, was reviewed at the same time by the Board. They adopted the OSM recommendation to modify or eliminate this closure by removing unnecessary language as a housekeeping change. Both items were included on the Board's consensus agenda (FSB 2022).

In April 2022, the Board adopted special action WSA22-01, which requested the same changes as this proposal. They recognized drawing permits would maintain the effective administration of these muskox hunts that provide for subsistence hunting opportunity while sustainably managing and conserving the muskox populations. The Northwest Arctic and North Slope Councils supported the request, considering it to be a housekeeping request and felt administering the permit by random drawing to be the most equitable manner for permit distribution (FSB 2022).

Biological Background

Muskoxen are adapted for survival in arctic habitats. Their large body size, thick undercoat and long guard hairs allow muskoxen to stay warm in arctic climates and conserve energy (Klein 1992). However, their thick fur does not allow them to regulate their body temperature, especially following high exertion activities, such as running. Their lower chest height and smaller hooves make travelling through deep snow difficult (Klein 1992; Ihl and Klein 2001). They tend towards wind swept areas with reduced snow depth (Dau 2005) as they cannot forage in deep, hard-packed snow, using body-fat reserves and conservative behavior to survive winters. These adaptations limit suitable habitat and lead muskox groups to remain localized during winter months to conserve energy (Klein 1992). Therefore, disturbance to muskox groups during the winter by hunters or predators could decrease survival through increased energetic requirements and movement to unsuitable habitat (Nelson 1994; Hughes 2018).

Seward Peninsula Muskox

Muskoxen had disappeared from Alaska by the late 1800s and maybe earlier from the Seward Peninsula (Lent 1999; Dunker and Germain 2022)). Muskoxen were reintroduced to Units 22C and 22D in 1970 and have since expanded their range to the north and east (Gorn and Dunker 2015). Currently, muskoxen from the Seward Peninsula population occupy suitable habitat in Units 22, 21D, and the southern portion of Unit 23.

Muskox management on the Seward Peninsula was historically guided by recommendations developed by the Cooperators. The group was composed of staff from NPS, BLM, USFWS, ADF&G, Bering Straits Native Corporation, Kawerak Inc., Reindeer Herders Association, Northwest Alaska Native Association, residents of Seward Peninsula communities, and representatives from other interested groups or organizations. The Cooperators Group has not met since January of 2008 (Braem 2022, pers. comm.). The following management goals formed the basis of the cooperative interagency management plan for Seward Peninsula muskoxen developed from 1992 through 1994 (Nelson 1994): 1) manage populations to allow for growth while providing for harvest; 2) protect habitats; and 3) encourage cooperation and information sharing among agencies.

Aerial survey methods used to monitor the Seward Peninsula muskox population include minimum counts, distance sampling, and sex-age composition surveys. Survey areas include the core count area of Units 22B, 22C, 22D, 22E, and 23 SW, and the expanded count area, which include the core count area as well as northern Unit 22A, southeastern Unit 23, western Unit 21D, and western Unit 24. Beginning in 2010, distance sampling techniques, conducted during the winter, were implemented to estimate abundance of Seward Peninsula muskox. This methodology replaced the minimum count surveys used since 1980. The minimum count surveys assumed 100% coverage but had varying effort from year to year. The distance sampling protocol was developed because it was believed that these estimates would provide more useful data and improve long-term monitoring efforts (Gorn and Dunker 2015). Surveys of the expanded count area were also implemented in 2010 to better understand the eastward migration of muskoxen from the Seward Peninsula, their current distribution and total population. Sex-age composition surveys, completed in the spring after distance sampling, document large scale patterns in structure of the population.

After reintroduction, the Seward Peninsula muskox population experienced periods of growth between 1970 and 2000 (14% annual rate of increase) and 2000 and 2010 (3.8% annual rate of increase), peaking at 2,903 muskoxen in 2010 (Gorn 2011). However, a 23.4% decrease in abundance occurred between 2010 and 2012 and since 2015, the muskox population has experienced an annual rate of decline of 2%, to an estimated 2,071 muskoxen in 2021 (**Figure 1**). It was hypothesized the decline was related to the high mortality rates of adult cows and declines in the number of short yearlings (10–12-month-old muskoxen) (Gorn 2012); however, caution should be used when interpreting these mortality rates as they are based on a small sample size (Gorn 2011).

Composition surveys indicated declines in mature bulls between 2002 and 2011 (**Figure 2**), which prompted changes to the method of determining sustainable harvest rates (Gorn 2011). Selective harvest of mature bulls on the Seward Peninsula was thought to be a driver of reduced population

growth. The hypothesis was young male muskoxen may be less effective than mature bulls at maintaining a harem, leading to extended calving seasons, which in turn may decrease calf survival and reduce recruitment. Younger males may also be less effective than mature bulls at defending their harem from predatory attacks, leading to more predation mortality. Therefore, annual harvest was restricted to less than 10% of the estimated number of mature bulls in the interest of conservation (Schmidt and Gorn 2013). Following this change in harvest management, the mature bull:100 cow ratio of Seward Peninsula muskoxen has increased over the 2011 low of 29:100 and remained stable through 2021 at an average of 38:100 (Dunker 2017a, 2022 pers. comm.).

Short yearlings (SY) are muskox between 10 and 12 months old and provide a measure of recruitment and population growth. Composition surveys indicate a decrease in short yearlings between 2002 and 2015, from 44:100 to 23:100, with low recruitment rates of particular concern (Gorn and Dunker 2015; Dunker 2022, pers. comm.). Between 2002 and 2021, SY:cow ratios for the entire Seward Peninsula muskox population ranged from 17-44 SY:100 cows (**Figure 2**). Ratios have been increasing since 2015 to almost as high as 2002 levels, peaking in 2021 at 42:100.

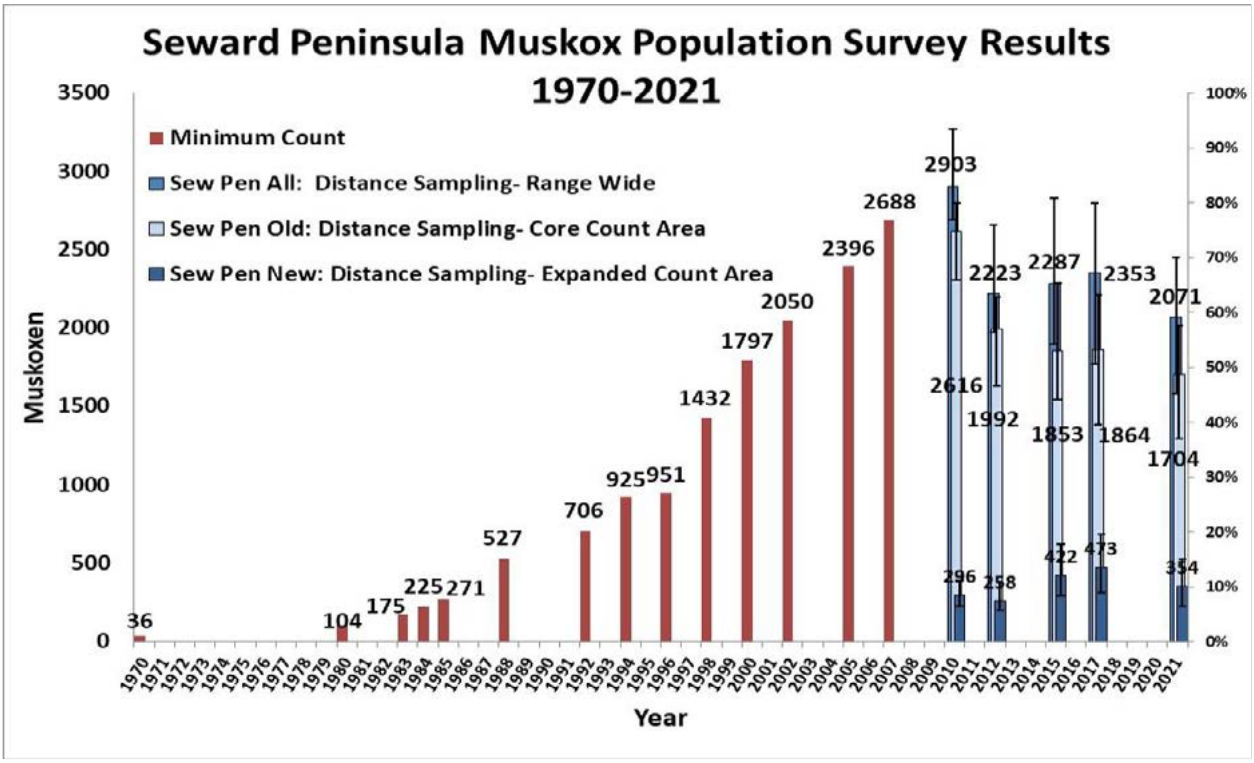


Figure 1. Population estimates for Seward Peninsula muskox. The core count area includes Units 22B, 22C, 22D, 22E, and 23SW. The expanded count area includes the core count area, northern Unit 22A, southeastern Unit 23, and Unit 21D (Gorn and Dunker 2015, Dunker 2017a, 2022 pers. comm.).

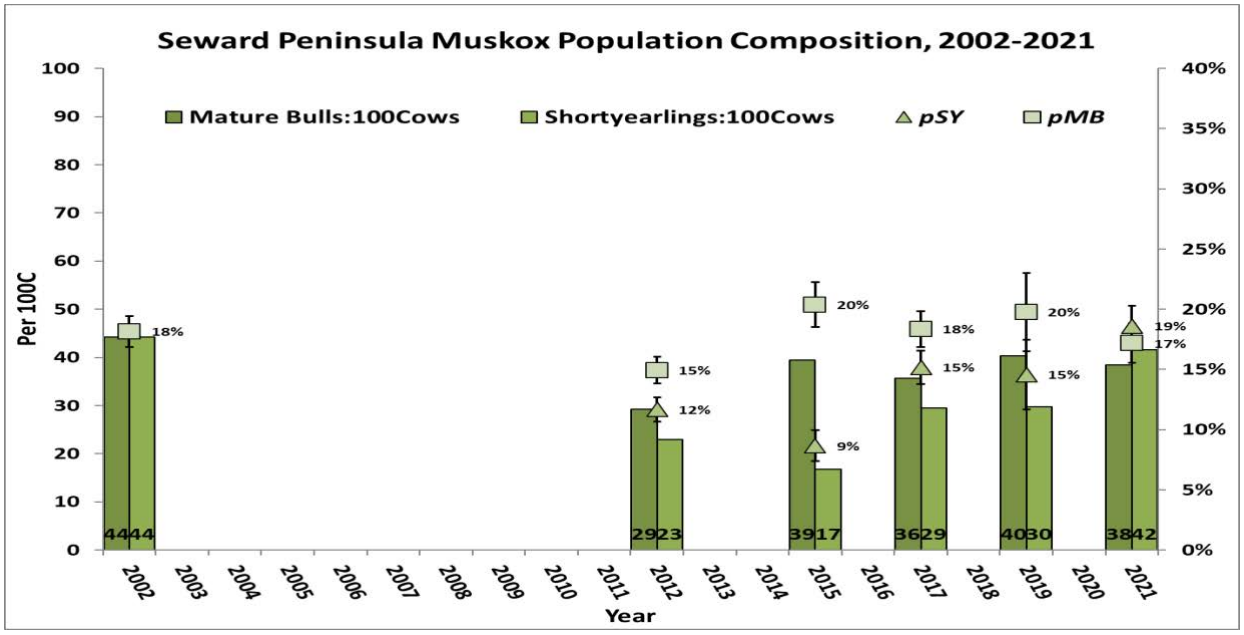


Figure 2. Population composition for Seward Peninsula muskox. Ratios are the number of mature bulls:100 cows and short yearlings:100 cows. Mature bulls are ≥ 4 years old. Short yearling are muskoxen between 10 and 15 months old. (Gorn and Dunker 2015, Dunker 2017b, 2022).

Cape Thompson Muskox

ADF&G translocated 36 muskoxen near Cape Thompson in 1970, with an additional 34 animals released in the same area in 1977 (Westing 2011). Muskox have occupied CAKR since at least 1979 and occupy habitat from the mouth of the Noatak River, north to Cape Lisburne (NPS 2014). Muskoxen in the Cape Thompson area appear to occupy relatively discrete "core areas," separate from the muskox population on the Seward Peninsula, although muskoxen are also widely scattered throughout the remainder of Unit 23 in groups (Westing 2011).

Agencies responsible for management of the muskox population in Unit 23 have several objectives. The NPS manages muskoxen within their lands to maintain a viable population in perpetuity, provide subsistence opportunity when sustainable, and defer to State regulations when not in conflict with NPS regulations (NPS 2014). The Arctic Network Inventory and Monitoring Program objectives include determining late winter sex and age composition, distribution and estimating abundance (Schmidt, Robinson, and Miller 2018). Additionally, ADF&G management objectives include surveying the population at least once every 3 years, assessing range expansion, monitoring sex and age composition, and minimizing the effects of development, hunting, and tourism on muskoxen and their habitat (Hughes 2016).

Since 1987, aerial population surveys of the Cape Thompson herd have occurred in the "core count area," which extends from the mouth of the Noatak River to Cape Lisburne within about 20 miles of the Chukchi Sea coast. Muskox have since expanded their range. In 2011, 2016, and 2020, ADF&G and NPS completed a population-wide survey that included the core count areas as well as expanded

areas in Unit 26A and Unit 23 north of the Kobuk River (Hughes 2016, 2020 pers. comm.; NPS 2017) (**Figure 3**).

From 1970-1998, the Cape Thompson muskox population grew 8% annually, while between 1998 and 2005, the population grew 2% annually. Since 2005, the data suggests a slight decline in population within the core count area, likely due to range expansion into other areas (Hughes 2016, NPS 2017). Between 2011 and 2020, the population within the core count area stabilized, averaging 234 muskoxen. In 2020, the population estimate was 226 muskoxen (**Figure 3**).

The recruitment rate (measured as the proportion of short yearlings in the population) and proportion of mature bulls in the core count area has been stable since 2015 further indicating no population growth. In spring 2019, short yearlings and mature bulls comprised 13% and 16% of the population, respectively. No spring composition survey occurred in 2020 due to constraints from weather, time, and the COVID-19 pandemic (Hughes 2020, pers. comm.).

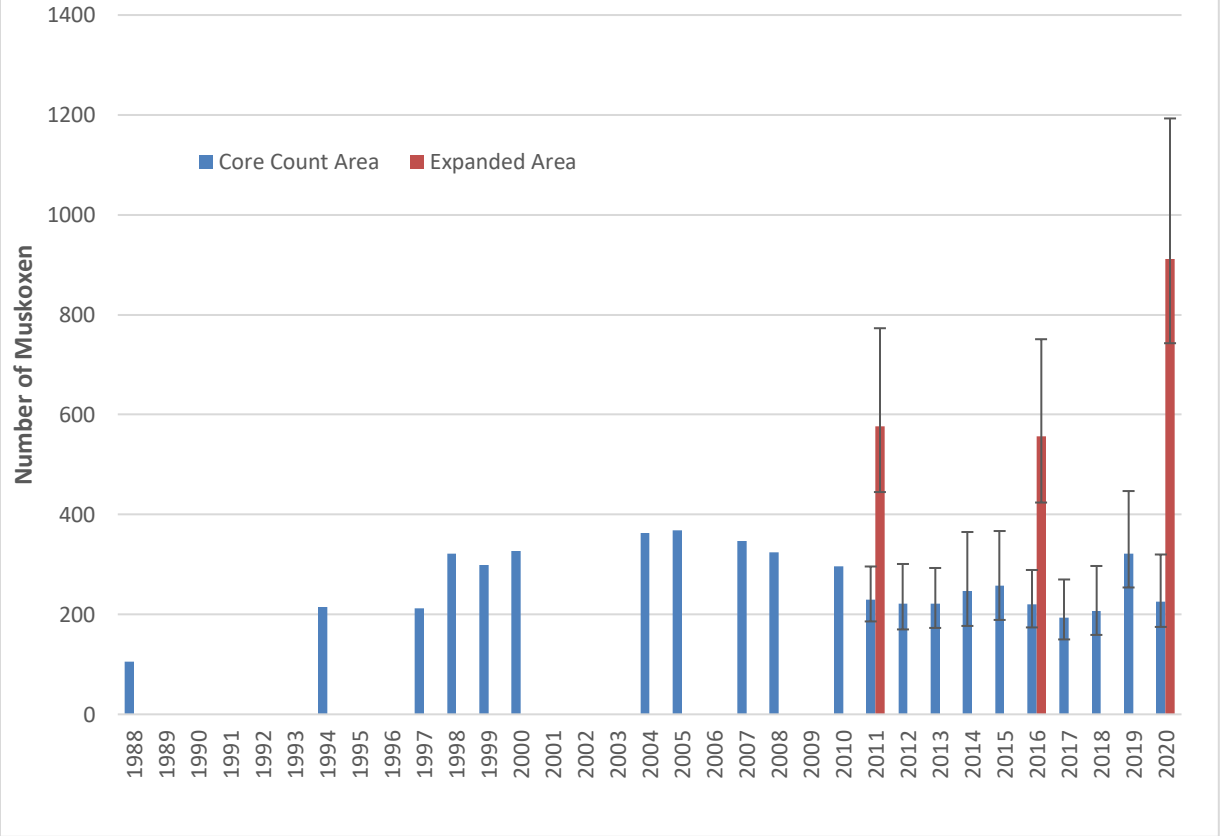


Figure 3. Number of Cape Thompson muskoxen counted in the core count area and expanded survey area (Hughes 2016, 2020 pers. comm., NPS 2017). Prior to 2011, minimum count methods were used. In 2011 minimum counts were replaced with distance sampling methods and error bars represent the 95% credible intervals surrounding those estimates.

Cultural Knowledge and Traditional Practices

In Iñupiaq, muskoxen are called *umingmak*, "the one with hair like a beard" (Lent 1999). The earliest archaeological evidence for use of muskoxen in arctic Alaska dates to Birnirk culture, beginning in approximately 600 A.D. (Lent 1999). In comparison to caribou, the availability of muskoxen was more predictable in time and space (Klein 1989). Muskoxen were likely always present at relatively low numbers, and their use was limited but continuous over approximately 1500 years.

Historically, muskoxen provided fat when caribou were lean in late winter and early spring and provided an alternative food source in years when caribou were scarce. Muskoxen were more heavily hunted following the introduction of firearms, and were also intensively harvested by whalers, trappers, and traders in the 1800s. In Alaska, muskoxen persisted the longest in the eastern Brooks Range, where they were extirpated by the 1890s (Lent 1998). According to ethnohistoric research, the last muskoxen in Northwestern Alaska were hunted in the late 1850s around Wainwright, but the exact timing of their local extirpation further south in the Northwest Arctic and Seward Peninsula regions is difficult to determine (Lent 1999).

Muskoxen were reintroduced to the region in 1970 (Lent 1999). While muskoxen are not a major source of food in relation to other subsistence resources, they have become more important within some families. A harvested muskox yields a large amount of meat and is shared with the community. Muskoxen represent both a valuable subsistence harvest and a potential nuisance or threat to communities and hunters (Lent 1999, Mason 2015, SPRAC 2019 and 2022). Across their range in northern Alaska, the presence of muskoxen is also reported to deter caribou and prevent successful caribou harvests (Kutz et al. 2017).

Harvest History

Seward Peninsula Muskox

Prior to 2012, muskox harvest rates on the Seward Peninsula were calculated as 3% of the total population size. The harvest quota for each hunt area was determined based on the percentage of the range-wide muskox population occurring within that hunt area, with the harvest rate reaching up to 8% of a population in some subunits. However, following declines in recruitment, bull:cow ratios, and overall population size, managers reassessed this strategy. Consequently, a new harvest management strategy was implemented in 2012. Since 2012, Unit 22 muskox harvest rates have been based primarily on the number of mature bulls in the population. Specifically, harvest quotas are calculated as 10% of the estimated number of mature bulls within the hunt area, and range-wide harvest targets are set at 2% of the estimated population size (Gorn and Dunker 2013; Gorn and Dunker 2015).

This shift in harvest management was accompanied by a significant reduction in harvest. Range-wide, harvest declined from 111 muskox in 2011 (5.5% of the total population) to 26 muskoxen in 2012 (1.2% of the total population). Total reported harvest has remained below 2% of the total population, which has likely influenced the subsequent increase in mature bulls (Gorn and Dunker 2015). Between 1995 and 2011, the post-harvest rate for Seward Peninsula muskox ranged from 0.7%-5.8%, peaking in

2009 (**Figure 3**) (Gorn and Dunker 2015; Dunker 2022, pers. comm.). After the population decline in 2012, the post-harvest rate has remained below 2% of the range-wide population estimate, ranging from 1%–1.7% with an average of 1.3% between 2012 and 2021 (Dunker 2022, pers. comm.).

Harvest of muskoxen on the Seward Peninsula by Federal permit has remained low with most muskox harvest occurring by State permit (**Table 2**). From 2001–2012 reported Federal harvest averaged 5.3 muskoxen per year, then from 2013- 2021, after the change in harvest management, reported harvest averaged 3.4 muskoxen per year. From 2001- 2020, Federal permit harvest of muskox ranged from 0-15 muskoxen harvested per year, with an average success rate of 27%. Since 2012, harvest by Federal permit has accounted for 3.4%- 25% of overall muskox harvest on the Seward Peninsula, averaging 10% (**Table 3**) (OSM 2022).

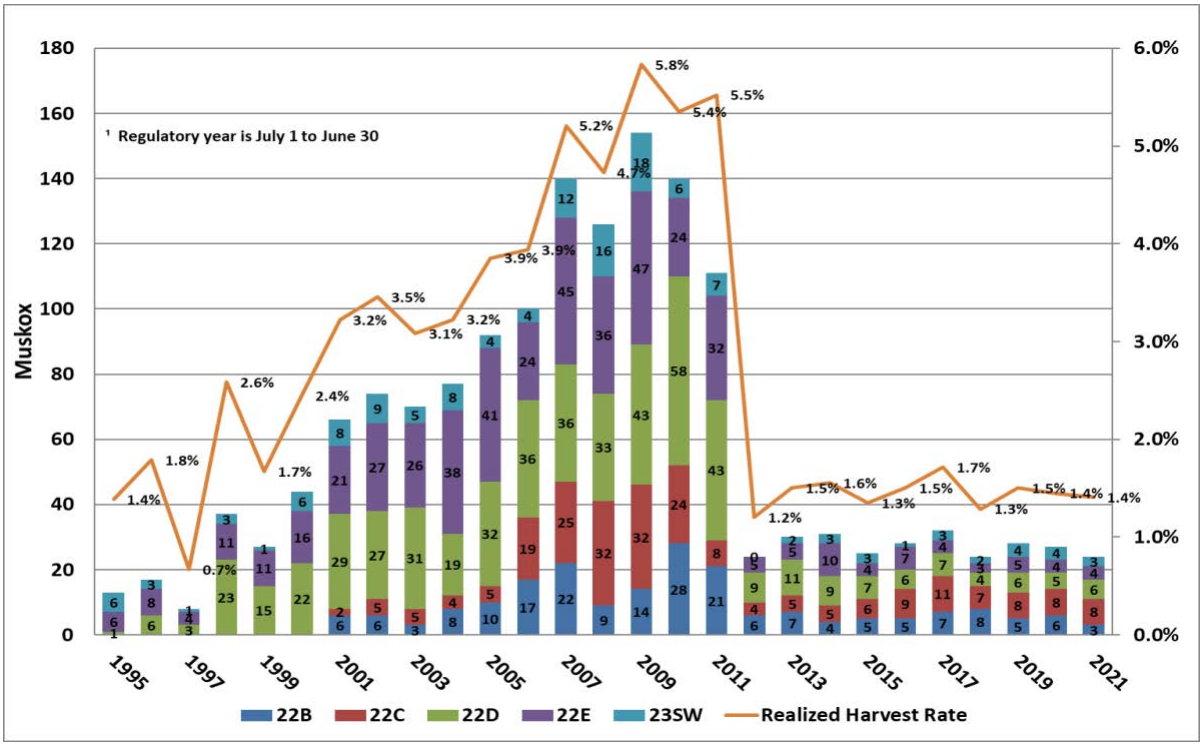


Figure 3. Reported harvest and realized harvest rate as percentage of herd population for Seward Peninsula muskox by subunit (Gorn and Dunker 2015; Dunker 2022, pers. comm.; Germain 2022, pers. comm.).

Table 2. Federal permits issued, reported Federal muskox harvest for Seward Peninsula 2001- 2022 and percent of successful harvest of issued permits (OSM 2022; Hughes 2023). Blanks indicate no data present.

	Unit 22		Unit 23		Total	
Regulatory Year	Issued	Harvested	Issued	Harvested	Issued	Harvested
2001	25	10	6	3	31	13
2002	37	7	3	0	40	7
2003	32	13	6	2	38	15
2004	19	3	5	1	24	4
2005	22	8	2	1	24	9
2006	21	9	3	1	24	10
2007	16	2	6	1	22	3
2008	23	1	5	0	28	1
2009	13	0	4	0	17	0
2010	2	0			2	0
2011	1	0			1	0
2012	9	2	0	0	9	2
2013	12	10	0	0	12	10
2014	9	4	4	0	13	4
2015	6	3	2	0	8	3
2016	9	2	3	0	12	2
2017	6	3	1	0	7	3
2018	8	2	2	2	10	4
2019	12	3	5	1	17	4
2020	11	2	5	2	16	4
2021	11	7	6	1	17	8
2022	11	7	6	2	17	9
Total	315	98	74	17	389	115
Success		31%		23%		30%

Table 3. Percentage of total reported Seward Peninsula muskox harvest by Federal permit (OSM 2022; Germain 2023, pers. comm.; Osburn 2023, pers. comm.).

Year	State Harvest	Federal Harvest	Total	% Federal Harvest
2012	24	2	26	8%
2013	30	10	40	25%
2014	31	4	35	11%
2015	25	3	28	11%
2016	28	2	30	7%
2017	32	3	35	9%
2018	24	4	26	15%
2019	28	4	29	14%
2020	27	4	24	17%
2021	32	8	32	25%
2022	25	9	34	26%

Cape Thompson Muskox

Harvest within CAKR occurs only by Federal registration permit (FX2303). No more than two permits have been issued per year since the hunt was established in 2005. Harvest has ranged from 0-2 muskox per year between 2005 and 2022 (**Table 4**).

Harvest from the Cape Thompson muskox population within the Unit 23 NW hunt area occurs under Federal (FX2303 and FX2312) and State (TX107) regulations. Between 2005 and 2019, the State Tier II (TX107) muskox harvest averaged 3.7 muskoxen with an annual harvest quota of six bull muskoxen (ADF&G 2020, Hughes 2016). In 2016, one muskox was harvested by Federal permit FX2312 (OSM 2020). ADF&G considers a 2-3% harvest rate to be sustainable for the Cape Thompson muskox population (Hughes 2016).

Illegal harvest likely occurs, although the magnitude is not known. Between 2003 and 2014, ADF&G received reports of at least 16 muskoxen that were illegally killed in the northern portion of Unit 23. In 2013, five cow muskoxen from the Cape Thompson population were illegally shot and not salvaged. As a result, ADF&G issued an emergency order in June of 2013, closing the State Tier II hunt prior to the regulatory year 2013/14 season opening date (Hughes 2016).

Table 4. Federal permits issued and muskox harvested for the CAKR muskox hunt (FX2303) and Unit 23 NW hunt (FX2312). Annual reported harvest of muskoxen in Unit 23 north and west of the Kobuk, under State (Tier II, TX207). Only years with data are shown. Harvest in other years is presumed to be zero. The FX2312 hunt began in 2016 (Westing 2013; ADF&G 2015 and 2022; Adkisson 2015, pers. comm.; OSM 2022; Osburn 2023, pers. comm.).

Year	FX2303 Permits Issued	FX2303 Harvest	FX2312 Permits Issued	FX2312 Harvest	TX107 Permits Issued	TX107 Harvest
2000						1
2002						5
2004						5
2005	1	1				
2006	1	0				4
2007	2	1				6
2008						5
2009						4
2010	2	1			6	4
2011					7	5
2012					6	5
2013					7	
2014					6	4
2015					6	5
2016	1	1	3	1	6	5
2017	1	1	3	0	3	3
2018	2	2	0	0	3	3
2019	2	1	0	0	3	3
2020					3	3
2021			1	0	3	3
2022	2	1	1	1		

Effects of the Proposal

If this proposal is adopted there will be no change to how Federal muskox permits are distributed in Units 22 and 23. The Federal in-season managers have distributed permits utilizing a draw system since about 1998, and these changes have already been temporarily implemented through WSA22-01. Delegation of Authority letters will be modified to standardize language among the Federal muskox hunts in Units 22 and 23 to clarify the scope of in-season managers' authority, which currently is unclear and has been misinterpreted. Specifically, for all eight hunts, Federal in-season managers will have the authority to close the season, set any needed permit conditions, determine annual harvest quotas, the number of permits issued, and the method of allocation between Federal and State permits (**Appendix 1**). Transferring authority from the WEAR superintendent to the BLM Anchorage Field

Office manager for in-season management of the Federal muskox hunt in Unit 23 SW better reflects land status within that hunt area. Adoption of this proposal will allow for effective and flexible hunt management and administration, which will ensure the sustainable harvest of muskoxen and equitable distribution of Federal permits amongst federally qualified subsistence users.

OSM PRELIMINARY CONCLUSION

Support Proposal WP24-27.

Justification

Adopting WP24-27 will not change subsistence use of muskoxen by federally qualified subsistence users or affect the Seward Peninsula or Cape Thompson muskox populations, as it is an administrative change only. However, allowing a Federal drawing permit hunt (rather than registration permit hunt) for muskoxen in Units 22 and 23 ensures harvest remains within sustainable levels and responds to both changing hunt conditions and population. A drawing permit also randomizes the selection of who receives a permit, making permit distribution more equitable among federally qualified subsistence users. This proposal provides flexibility in administering the hunt and allows for a limited harvest. Standardizing the language in the delegation of authority letters to close the season, set any needed permit conditions, determine the annual harvest quota, the number of permits issued, and the method of permit allocation between State and Federal permits provides clarity to the in-season managers on what authority they have and allows for effective and flexible hunt administration, while the change in the in-season manager better reflects land status in the Unit 23 SW hunt area **(Appendix 1).**

LITERATURE CITED

ADF&G. 2015. General harvest report database. Internet: <https://secure.wildlife.alaska.gov/index.cfm>. Retrieved 11/27/2015.

ADF&G. 2020. General Harvest Reports. https://secure.wildlife.alaska.gov/index.cfm?fuseaction=harvestreports.main. Accessed December 15, 2020.

ADF&G. 2022. General harvest report database. Internet: <https://www.adfg.alaska.gov/index.cfm?adfg=muskoxhunting.harvest>. Retrieved 04/01/2022.

Dau, J. 2005. Unit 23 muskox management report. Page 38–48 in C. Brown, editor. Muskox management report of survey and inventory activities 1 July 2002–30 June 2004. Alaska Department of Fish and Game. Juneau, AK.

Dunker, W.R. 2017a. 2017 Seward Peninsula muskox population survey summary. Alaska Department of Fish and Game, Division of Wildlife Conservation. Nome, AK.

Dunker, W.R. 2017b. 2017 Seward Peninsula muskox composition survey summary. Alaska Department of Fish and Game, Division of Wildlife Conservation. Nome, Alaska.

Dunker, W. R. 2018. Area Biologist. Personal Communication: email. Alaska Department of Fish and Game, Division of Wildlife conservation. Nome, AK.

Dunker, W. R. 2022. Area Biologist. Personal Communication: email. Alaska Department of Fish and Game, Division of Wildlife conservation. Nome, AK.

Dunker, B. R., and S. R. Germain. 2022. Seward Peninsula muskox management report and plan, Game Management Unit 22: Report period 1 July 2014–30 June 2019, and plan period 1 July 2019–30 June 2024. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2022-26, Juneau.

FSB. 1998. Transcripts of Federal Subsistence Board proceedings, May 4, 1998. Office of Subsistence Management, FWS. Anchorage, AK.

FSB. 2022. Transcripts of Federal Subsistence Board proceedings, April 12-15, 2022. Office of Subsistence Management, FWS. Anchorage, AK.

Germain, S. R. 2022. Area Biologist. Personal Communication: email. Alaska Department of Fish and Game, Division of Wildlife conservation. Nome, AK.

Germain, S. R. 2023. Area Biologist. Personal Communication: email. Alaska Department of Fish and Game, Division of Wildlife conservation. Nome, AK.

Gorn, T. 2011. Unit 22 muskox. Pages 16–47 *in* P. Harper, editor. Muskox management report of survey and inventory activities 1 July 2008–30 June 2010. ADF&G. Project 16.0. Juneau, AK.

Gorn, T. 2012. 2012 muskox survey results memorandum. Alaska Department of Fish and Game. Nome, AK.

Gorn, T. and W. R. Dunker. 2013. Unit 22 muskox. Pages 17-51 *in* P. Harper and L. A. McCarthy, editors. Muskox management report of survey and inventory activities 1 July 2010-30 June 2012. Alaska Department of Fish and Game, Division of Wildlife Conservation, Species Management Report ADF&G/DWC/SMR-2013-2, Juneau, AK.

Gorn, T. and W.R. Dunker. 2015. Unit 22 Muskox. Chapter 2, pages 2-1 through 2-44 [*In*] P. Harper and L.A. McCarthy, editors. Muskox management report of survey and inventory activities 1 July 2012—30 June 2014. Alaska Department of Fish and Game, Division of Wildlife Conservation, Species Management Report ADF&G/DWC/SMR-2015-2, Juneau, AK.

Hughes, L.J. 2016. Units 23 and 26A muskox. Chapter 3, Pages 3-1 through 3-19 [*In*] Harper, P., and L.A. McCarthy, editors. 2015. Muskox management report of survey-inventory activities 1 July 2012-30 June 2014. Alaska Department of Fish and Game. Species Management Report ADF&G/DWC/SMR-2015-2, Juneau, AK.

Hughes, L.J. 2018. Wildlife Biologist. Personal Communication: email. National Park Service. Nome, AK.

Hughes, L.J. 2020. Wildlife biologist. Personal communication: e-mail. Arctic Inventory and Monitoring Network. National Park Service. Nome, AK.

Hughes, L.J. 2023. Wildlife biologist. Personal communication: e-mail. Arctic Inventory and Monitoring Network. National Park Service. Nome, AK.

Ihl, C. and D. R. Klein. 2001. Habitat and diet selection by muskoxen and reindeer in western Alaska. Journal of Wildlife Management. 65(4):964-972.

Klein, D. R. 1989. Northern subsistence hunting economies. Pages 96-111 *in* R. J. Hudson, K. R. Drew, & L. M. Baskin, eds. Wildlife production systems: economic utilisation of wild ungulates. Cambridge University Press, New York, NY.

Klein, D. R. 1992. Comparative ecological and behavioral adaptations of Obivos moschatus and Rangifer tarandus. Rangifer. 12(2):47-55.

Kutz, S., J. Rowell, J. Adamczewski, A. Gunn, C. Cuyler, et al. 2017. Muskox Health Ecology Symposium 2016: Gathering to Share Knowledge on "Umingmak" in a Time of Rapid Change. Arctic 70(2): 225-236.

Lent, P.C. 1998. Alaska's indigenous muskoxen: a history. *Rangifer 18*(5): 133-144..

Lent, P.C. 1999. Muskoxen and their hunters. University of Oklahoma Press. Norman, OK.

Mason, R. 2015. Managing muskoxen in Northwest Alaska: from ice age relic to subsistence species, source of cash, and nuisance animal. Paper given at the 75th Society for Applied Anthropology Meeting: Continuity and Change. March 24-28, 2015. Pittsburgh, PA.

Nelson, R. 1994. Seward Peninsula cooperative muskox management plan. Unpublished report. Nome, AK.

Osburn, C. R. 2023. Area Biologist. Personal Communication: email. Alaska Department of Fish and Game, Division of Wildlife conservation. Kotzebue, AK.

OSM. 1995. Proposal P95-44. OSM database. Office of Subsistence Management, USFWS. Anchorage, AK.

OSM. 2001. Proposal WP01-35. OSM database. Office of Subsistence Management, USFWS. Anchorage, AK.

OSM. 2020. Harvest management database. U.S. Fish and Wildlife Service, Office of Subsistence Management. Accessed on December 15, 2020.

OSM. 2022. Federal permits database. Office of Subsistence Management. https://subsistence.fws.gov/apex/f?p=MENU:101::. Accessed Feb 24, 2022.

Schmidt, J. H., H. L. Robison, and S. D. Miller. 2018. Protocol implementation plan for monitoring muskox sex-age composition in the Arctic Network. Natural Resource Report NPS/ARCN/NRR—2018/1795. National Park Service, Fort Collins, Colorado.

Schmidt, J.H. and T.S. Gorn. 2013. Possible secondary population-level effects of selective harvest of adult male muskoxen. PLoS ONE 8(6): e67493.doi:10.1371/journal.pone.0067493.

SPRAC. 2019. Transcripts of the Seward Peninsula Regional Advisory Council proceedings. October 22-23, 2019. Nome, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

SPRAC. 2021. Transcripts of the Seward Peninsula Regional Advisory Council proceedings. March 11.Teleconference. Office of Subsistence Management, USFWS. Anchorage, AK.

Appendix 1

Superintendent
Bering Land Bridge National Preserve
P.O. Box 220
Nome, Alaska 99762

Dear Superintendent:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Superintendent of the Bering Land Bridge National Preserve to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 22D, that portion within the Kuzitrin River drainage, for the management of muskox on these lands.

It is the intent of the Board that actions related to management of muskox by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), representatives of the Office of Subsistence Management (OSM), the Bureau of Land Management (Field Manager of the Anchorage Field Office), and the Chair of the affected Council(s) to the extent possible. The Office of Subsistence Management will be used by managers to facilitate communication of actions and to ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair or alternate, local tribes, and Alaska Native Corporations to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. <u>Delegation:</u> The Superintendent of the Bering Land Bridge National Preserve is hereby delegated authority to issue emergency or temporary special actions affecting muskox on Federal
lands as outlined under the **Scope of Delegation**. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by regulation at 36 CFR 242.19 and 50 CFR 100.19.

2. <u>Authority:</u> This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."

3. <u>Scope of Delegation:</u> The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- **Close the season, set any needed permit conditions, determine annual harvest quotas, the number of permits to be issued, and the method of permit allocation between State and Federal permits.**

- ~~To set closing dates for the muskox season on Federal public lands in Unit 22D within the Kuzitrin River drainage.~~

- ~~As needed, determine harvest quotas and the number of Federal registration permits to be issued annually and determine the method of permit allocation for muskox on Federal public lands in Unit 22D within the Kuzitrin River drainage.~~

This delegation also permits you to close and reopen Federal public lands to nonsubsistence hunting but does not permit you to specify methods and means, permit requirements, or harvest and possession limits for State-managed hunts.

This delegation may be exercised only when it is necessary to conserve muskox populations, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the populations. All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to methods and means of take, shall be directed to the Board.

The Federal public lands subject to this delegated authority are those within the Kuzitrin River drainage of Unit 22D.

4. <u>Effective Period:</u> This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. <u>Guidelines for Delegation:</u> You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up to date on population and harvest status information. You will provide subsistence users in the region a local point of contact about Federal subsistence issues and regulations and facilitate a local liaison with State managers and other user groups.

You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 50 CFR 100.19 and 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected Federally qualified subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the

Administrative Records Specialist OSM no later than sixty days after development of the document.

For management decisions on special actions, consultation is not always possible, but to the extent practicable, two-way communication will take place before decisions are implemented. You will also establish meaningful and timely opportunities for government-to-government consultation related to pre-season and post-season management actions as established in the Board's Government-to-Government Tribal Consultation Policy (Federal Subsistence Board Government-to-Government Tribal Consultation Policy 2012 and Federal Subsistence Board Policy on Consultation with Alaska Native Claim Settlement Act Corporations 2015).

You will immediately notify the Board through the Assistant Regional Director for OSM and coordinate with the Chair(s) or alternate of the affected Council(s), local ADF&G managers, and other affected Federal conservation unit managers concerning emergency and temporary special actions being considered. You will ensure that you have communicated with OSM to ensure the special action is aligned with ANILCA Title VIII, Federal Subsistence regulations and policy, and that the perspectives of the Chair(s) or alternate of the affected Council(s), OSM, and affected State and Federal managers have been fully considered in the review of the proposed special action.

If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you will seek Council recommendations on the proposed temporary special action(s). If the affected Council(s) provided a recommendation, and your action differs from that recommendation, you will provide an explanation in writing in accordance with 50 CFR 100.10(e)(1) and 36 CFR 242.10(e)(1).

You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, OSM, affected State and Federal managers, law enforcement personnel, and Council members. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, OSM, affected State and Federal managers, and the local Council members at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately. A summary of special action requests and your resultant actions must be provided to the coordinator of the appropriate Council(s) at the end of each calendar year for presentation to the Council(s).

You may defer a special action request, otherwise covered by this delegation of authority, to the Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

6. <u>Support Services:</u> Administrative support for regulatory actions will be provided by the Office of Subsistence Management.

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Seward Peninsula Subsistence Regional Advisory Council
Special Projects Coordinator, Alaska Department of Fish and Game
Deputy Commissioner, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

Superintendent
Bering Land Bridge National Preserve
P.O. Box 220
Nome, Alaska 99762

Dear Superintendent:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Superintendent of the Bering Land Bridge National Preserve to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 22E for the management of muskox on these lands.

It is the intent of the Board that actions related to management of muskox by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), representatives of the Office of Subsistence Management (OSM), the Bureau of Land Management (Field Manager of the Anchorage Field Office), and the Chair of affected Council(s) to the extent possible. The Office of Subsistence Management will be used by managers to facilitate communication of actions and to ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair or alternate, local tribes, and Alaska Native Corporations to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The Superintendent of the Bering Land Bridge National Preserve is hereby delegated authority to issue emergency or temporary special actions affecting muskox on Federal lands as outlined under the **Scope of Delegation**. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by regulation at 36 CFR 242.19 and 50 CFR 100.19.

2. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- **Close the season, set any needed permit conditions, determine annual harvest quotas, the number of permits to be issued, and the method of permit allocation between State and Federal permits.**

- ~~To set closing dates for the muskox season on Federal public lands in Unit 22E.~~

- ~~As needed, set or adjust annual harvest quotas and the number of Federal registration permits to be issued annually and determine the method of permit allocation for muskox on Federal public lands in Unit 22E.~~

This delegation also permits you to close and reopen Federal public lands to nonsubsistence hunting but does not permit you to specify methods and means, permit requirements, or harvest and possession limits for State-managed hunts.

This delegation may be exercised only when it is necessary to conserve muskox populations, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the populations. All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to methods and means of take, shall be directed to the Board.

The Federal public lands subject to this delegated authority are those within Unit 22E.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up to date on population and harvest status information. You will provide subsistence users in the region a local point of contact about Federal subsistence issues and regulations and facilitate a local liaison with State managers and other user groups.

You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 50 CFR 100.19 and 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected Federally qualified subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in OSM no later than sixty days after development of the document.

For management decisions on special actions, consultation is not always possible, but to the extent practicable, two-way communication will take place before decisions are implemented. You will also establish meaningful and timely opportunities for government-to-government consultation related to pre-season and post-season management actions as established in the Board's Government-to-Government Tribal Consultation Policy (Federal Subsistence Board Government-to-Government Tribal Consultation Policy 2012 and Federal Subsistence Board Policy on Consultation with Alaska Native Claim Settlement Act Corporations 2015).

You will immediately notify the Board through the Assistant Regional Director for OSM and coordinate with the Chair(s) or alternate of the affected Council(s), local ADF&G managers, and other affected Federal conservation unit managers concerning emergency and temporary special actions being considered. You will ensure that you have communicated with OSM to ensure the special action is aligned with ANILCA Title VIII, Federal Subsistence regulations and policy, and that the perspectives of the Chair(s) or alternate of the affected Council(s), OSM, and affected State and Federal managers have been fully considered in the review of the proposed special action.

If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you will seek Council recommendations on the proposed temporary special action(s). If the affected Council(s) provided a recommendation, and your action differs from that recommendation, you will provide an explanation in writing in accordance with 50 CFR 100.10(e)(1) and 36 CFR 242.10(e)(1).

You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, OSM, affected State and Federal managers, law enforcement personnel, and Council members. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, OSM, affected State and Federal managers, and the local Council representatives at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately. A summary of special action requests and your resultant actions must be provided to the coordinator of the appropriate Council(s) at the end of each calendar year for presentation to the Council(s).

You may defer a special action request, otherwise covered by this delegation of authority, to the Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

6. <u>Support Services:</u> Administrative support for regulatory actions will be provided by the Office of Subsistence Management.

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Seward Peninsula Subsistence Regional Advisory Council
Deputy Commissioner, Alaska Department of Fish and Game
Special Projects Coordinator, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

Anchorage Field Office Manager
Bureau of Land Management
4700 BLM Road
Anchorage, Alaska 99507

Dear Field Office Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the manager of the Bureau of Land Management (BLM) Anchorage Field Office to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 22B for the management of muskox on these lands.

It is the intent of the Board that actions related to management of muskox by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), representatives of the Office of Subsistence Management (OSM), the National Park Service (Superintendent of the Bering Land Bridge National Preserve), and the Chair of the affected Council(s) to the extent possible. The Office of Subsistence Management will be used by managers to facilitate communication of actions and to ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair or alternate, local tribes, and Alaska Native Corporations to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The BLM Anchorage Field Office manager is hereby delegated authority to issue emergency or temporary special actions affecting muskox on Federal lands as outlined under the **Scope of Delegation**. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

2. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- **Close the season, set any needed permit conditions, determine annual harvest quotas, the number of permits to be issued, and the method of permit allocation**

between State and Federal permits.

- ~~To set closing dates for the muskox season on Federal public lands in Unit 22B.~~
- ~~As needed, set or adjust the annual harvest quotas and the number of Federal registration permits to be issued annually and determine the method of permit allocation for muskox on Federal public lands in Unit 22B.~~

This delegation also permits you to close and reopen Federal public lands to nonsubsistence hunting but does not permit you to specify methods and means, permit requirements, or harvest and possession limits for State-managed hunts.

This delegation may be exercised only when it is necessary to conserve the muskox population, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the populations. All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to methods and means of take, shall be directed to the Board.

The Federal public lands subject to this delegated authority are those within Unit 22B.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up to date on population and harvest status information. You will provide subsistence users in the region a local point of contact about Federal subsistence issues and regulations and facilitate a local liaison with State managers and other user groups.

You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 50 CFR 100.19 and 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected Federally qualified subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in OSM no later than sixty days after development of the document.

For management decisions on special actions, consultation is not always possible, but to the extent practicable, two-way communication will take place before decisions are implemented. You will also establish meaningful and timely opportunities for government-to-government consultation related to pre-season and post-season management actions as established in the Board's Government-to-Government Tribal Consultation Policy (Federal Subsistence Board Government-to-Government Tribal Consultation Policy 2012 and Federal Subsistence Board

Policy on Consultation with Alaska Native Claim Settlement Act Corporations 2015).

You will immediately notify the Board through the Assistant Regional Director for OSM and coordinate with the Chair(s) or alternate of the affected Council(s), local ADF&G managers, and other affected Federal conservation unit managers concerning emergency and temporary special actions being considered. You will ensure that you have communicated with OSM to ensure the special action is aligned with ANILCA Title VIII, Federal Subsistence regulations and policy, and that the perspectives of the Chair(s) or alternate of the affected Council(s), OSM, and affected State and Federal managers have been fully considered in the review of the proposed special action.

If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you will seek Council recommendations on the proposed temporary special action(s). If the affected Council(s) provided a recommendation, and your action differs from that recommendation, you will provide an explanation in writing in accordance with 50 CFR 100.10(e)(1) and 36 CFR 242.10(e)(1).

You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, OSM, affected State and Federal managers, law enforcement personnel, and Council members. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, OSM, affected State and Federal managers, and the local Council members at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately. A summary of special action requests and your resultant actions must be provided to the coordinator of the appropriate Council(s) at the end of each calendar year for presentation to the Council(s).

You may defer a special action request, otherwise covered by this delegation of authority, to the Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

6. <u>Support Services:</u> Administrative support for regulatory actions will be provided by the Office of Subsistence Management.

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Seward Peninsula Subsistence Regional Advisory Council
Superintendent, Bering Land Bridge National Preserve
Deputy Commissioner, Alaska Department of Fish and Game
Special Projects Coordinator, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

Anchorage Field Office Manager
Bureau of Land Management
4700 BLM Road
Anchorage, Alaska 99507

Dear Field Office Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the manager of the Bureau of Land Management (BLM) Anchorage Field Office to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within that portion of Unit 22D west of the Tisuk River drainage and Canyon Creek, for the management of muskox on these lands.

It is the intent of the Board that actions related to management of muskox by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), representatives of the Office of Subsistence Management (OSM), the National Park
Service (Superintendent of the Bering Land Bridge National Preserve), and the Chair of the affected Council(s) to the extent possible. The Office of Subsistence Management will be used by managers to facilitate communication of actions and to ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair or alternate, local tribes, and Alaska Native Corporations to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The BLM Anchorage Field Office manager is hereby delegated authority to issue emergency or temporary special actions affecting muskox on Federal lands as outlined under
the **Scope of Delegation**. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

2. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- **Close the season, set any needed permit conditions, determine annual harvest quotas, the number of permits to be issued, and the method of permit allocation between State and Federal permits.**
- ~~To set closing dates for the muskox season on Federal public lands in Unit 22D west of the Tisuk River drainage and Canyon Creek.~~

- ~~As needed, set or adjust the annual harvest quotas and the number of Federal registration permits to be issued annually and determine the method of permit allocation for muskox on Federal public lands in Unit 22D west of the Tisuk River drainage and Canyon Creek.~~

This delegation also permits you to close and reopen Federal public lands to nonsubsistence hunting but does not permit you to specify methods and means, permit requirements, or harvest and possession limits for State-managed hunts.

This delegation may be exercised only when it is necessary to conserve muskox populations, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the populations. All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to methods and means of take, shall be directed to the Board.

The Federal public lands subject to this delegated authority are those in Unit 22D west of the Tisuk River drainage and Canyon Creek.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up to date on population and harvest status information. You will provide subsistence users in the region a local point of contact about Federal subsistence issues and regulations and facilitate a local liaison with State managers and other user groups.

You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 50 CFR 100.19 and 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected Federally qualified subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in OSM no later than sixty days after development of the document.

For management decisions on special actions, consultation is not always possible, but to the extent practicable, two-way communication will take place before decisions are implemented. You will also establish meaningful and timely opportunities for government-to-government consultation related to pre-season and post-season management actions as established in the Board's Government-to-Government Tribal Consultation Policy (Federal Subsistence Board Government-to-Government Tribal Consultation Policy 2012 and Federal Subsistence Board Policy on Consultation with Alaska Native Claim Settlement Act Corporations 2015).

You will immediately notify the Board through the Assistant Regional Director for OSM, and coordinate with the Chair(s) or alternate of the affected Council(s), local ADF&G managers, and other affected Federal conservation unit managers concerning emergency and temporary special actions being considered. You will ensure that you have communicated with OSM to ensure the special action is aligned with ANILCA Title VIII, Federal Subsistence regulations and policy, and that the perspectives of the Chair(s) or alternate of the affected Council(s), OSM, and affected State and Federal managers have been fully considered in the review of the proposed special action.

If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you will seek Council recommendations on the proposed temporary special action(s). If the affected Council(s) provided a recommendation, and your action differs from that recommendation, you will provide an explanation in writing in accordance with 50 CFR 100.10(e)(1) and 36 CFR 242.10(e)(1).

You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, OSM, affected State and Federal managers, law enforcement personnel, and Council members. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, OSM, affected State and Federal managers, and the local Council members at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately. A summary of special action requests and your resultant actions must be provided to the coordinator of the appropriate Council(s) at the end of each calendar year for presentation to the Council(s).

You may defer a special action request, otherwise covered by this delegation of authority, to the Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

6. <u>Support Services:</u> Administrative support for regulatory actions will be provided by the Office of Subsistence Management.

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Seward Peninsula Subsistence Regional Advisory Council
Superintendent of the Bering Land Bridge National Preserve
Deputy Commissioner, Alaska Department of Fish and Game
Special Projects Coordinator, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

Anchorage Field Office Manager
Bureau of Land Management
4700 BLM Road
Anchorage, Alaska 99507

Dear Field Office Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the manager of the Bureau of Land Management (BLM) Anchorage Field Office to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 22D remainder for the management of muskox on these lands.

It is the intent of the Board that actions related to management of muskox by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), representatives of the Office of Subsistence Management (OSM), the National Park
Service (Superintendent, Bering Land Bridge National Preserve), and the Chair of the affected Council(s) to the extent possible. The Office of Subsistence Management will be used by managers to facilitate communication of actions and to ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair or alternate, local tribes, and Alaska Native Corporations to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The BLM Anchorage Field Office manager is hereby delegated authority to issue emergency or temporary special actions affecting muskox on Federal lands as outlined under the **Scope of Delegation**. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

2. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- To set closing dates for the muskox season on Federal public lands Unit 22D

remainder.

- As needed, set or adjust the annual harvest quotas and the number of Federal registration permits to be issued annually and determine the method of permit allocation for muskox on Federal public lands in Unit 22D remainder.

This delegation also permits you to close and reopen Federal public lands to nonsubsistence hunting but does not permit you to specify methods and means, permit requirements, or harvest and possession limits for State-managed hunts.

This delegation may be exercised only when it is necessary to conserve muskox populations, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the populations. All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to methods and means of take, shall be directed to the Board.

The Federal public lands subject to this delegated authority are those within Unit 22D remainder.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up to date on population and harvest status information. You will provide subsistence users in the region a local point of contact about Federal subsistence issues and regulations and facilitate a local liaison with State managers and other user groups.

You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 50 CFR 100.19 and 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected Federally qualified subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in OSM no later than sixty days after development of the document.

For management decisions on special actions, consultation is not always possible, but to the extent practicable, two-way communication will take place before decisions are implemented. You will also establish meaningful and timely opportunities for government-to-government consultation related to pre-season and post-season management actions as established in the Board's Government-to-Government Tribal Consultation Policy (Federal Subsistence Board

Government-to-Government Tribal Consultation Policy 2012 and Federal Subsistence Board Policy on Consultation with Alaska Native Claim Settlement Act Corporations 2015).

You will immediately notify the Board through the Assistant Regional Director for OSM, and coordinate with the Chair(s) or alternate of the affected Council(s), local ADF&G managers, and other affected Federal conservation unit managers concerning emergency and temporary special actions being considered. You will ensure that you have communicated with OSM to ensure the special action is aligned with ANILCA Title VIII, Federal Subsistence regulations and policy, and that the perspectives of the Chair(s) or alternate of the affected Council(s), OSM, and affected State and Federal managers have been fully considered in the review of the proposed special action.

If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you will seek Council recommendations on the proposed temporary special action(s). If the affected Council(s) provided a recommendation, and your action differs from that recommendation, you will provide an explanation in writing in accordance with 50 CFR 100.10(e)(1) and 36 CFR 242.10(e)(1).

You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, OSM, affected State and Federal managers, law enforcement personnel, and Council members. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, OSM, affected State and Federal managers, and the local Council members at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately. A summary of special action requests and your resultant actions must be provided to the coordinator of the appropriate Council(s) at the end of each calendar year for presentation to the Council(s).

You may defer a special action request, otherwise covered by this delegation of authority, to the Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

6. <u>Support Services:</u> Administrative support for regulatory actions will be provided by the Office of Subsistence Management.

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Seward Peninsula Subsistence Regional Advisory Council
Superintendent, Bering Land Bridge National Preserve
Deputy Commissioner, Alaska Department of Fish and Game
Special Projects Coordinator, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

Anchorage Field Office Manager
Bureau of Land Management
4700 BLM Road
Anchorage, Alaska 99507
~~Superintendent~~
~~Western Arctic National Parklands~~
~~P.O. Box 1029~~
~~Kotzebue, Alaska 99752~~

Dear ~~Superintendent~~ **Field Office Manager**:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the **Bureau of Land Management (BLM) Anchorage Field Office** ~~Superintendent of the Western Arctic National Parklands~~ to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage for the management of muskox on these lands.

It is the intent of the Board that actions related to management of muskox by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), representatives of the Office of Subsistence Management (OSM), **the National Park Service (Superintendent, Bering Land Bridge National Preserve)**, and the Chair of the affected Council(s) to the extent possible. The Office of Subsistence Management will be used by managers to facilitate communication of actions and to ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair or alternate, local tribes, and Alaska Native Corporations to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The **BLM Anchorage Field Office manager** ~~Superintendent of the Western Arctic National Parklands~~ is hereby delegated authority to issue emergency or temporary special actions affecting muskox on Federal lands as outlined under the **Scope of Delegation**. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

2. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest

seasons within frameworks established by the Board."

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- **Close the season, set any needed permit conditions, determine annual harvest quotas, the number of permits to be issued, and the method of permit allocation between State and Federal permits.**
- ~~To set closing dates for the muskox season on Federal public lands in Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage as it applies to muskox on these lands.~~

- ~~As needed, set or adjust annual harvest quotas and the number of Federal registration permits to be issued annually for muskox on Federal public lands in Unit 23 south of Koztebue Sound and west of and including the Buckland River drainage.~~

This delegation also permits you to close and reopen Federal public lands to nonsubsistence hunting but does not permit you to specify methods and means, permit requirements, or harvest and possession limits for State-managed hunts.

This delegation may be exercised only when it is necessary to conserve muskox populations, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the populations. All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to methods and means of take, shall be directed to the Board.

The Federal public lands subject to this delegated authority are those within Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up to date on population and harvest status information. You will provide subsistence users in the region a local point of contact about Federal subsistence issues and regulations and facilitate a local liaison with State managers and other user groups.

You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 50 CFR 100.19 and 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected Federally qualified subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Board for consideration. You will maintain a record of all special action

requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in OSM no later than sixty days after development of the document.

For management decisions on special actions, consultation is not always possible, but to the extent practicable, two-way communication will take place before decisions are implemented. You will also establish meaningful and timely opportunities for government-to-government consultation related to pre-season and post-season management actions as established in the Board's Government-to-Government Tribal Consultation Policy (Federal Subsistence Board Government-to-Government Tribal Consultation Policy 2012 and Federal Subsistence Board Policy on Consultation with Alaska Native Claim Settlement Act Corporations 2015).

You will immediately notify the Board through the Assistant Regional Director for OSM and coordinate with the Chair(s) or alternate of the affected Council(s), local ADF&G managers, and other affected Federal conservation unit managers concerning emergency and temporary special actions being considered. You will ensure that you have communicated with OSM to ensure the special action is aligned with ANILCA Title VIII, Federal Subsistence regulations and policy, and that the perspectives of the Chair(s) or alternate of the affected Council(s), OSM, and affected State and Federal managers have been fully considered in the review of the proposed special action.

If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you will seek Council recommendations on the proposed temporary special action(s). If the affected Council(s) provided a recommendation, and your action differs from that recommendation, you will provide an explanation in writing in accordance with
50 CFR 100.10(e)(1) and 36 CFR 242.10(e)(1).

You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, OSM, affected State and Federal managers, law enforcement personnel, and Council members. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, OSM, affected State and Federal managers, and the local Council members at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately. A summary of special action requests and your resultant actions must be provided to the coordinator of the appropriate Council(s) at the end of each calendar year for presentation to the Council(s).

You may defer a special action request, otherwise covered by this delegation of authority, to the Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

6. <u>Support Services:</u> Administrative support for regulatory actions will be provided by the Office of Subsistence Management.

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Northwest Arctic Subsistence Regional Advisory Council
Superintendent, Bering Land Bridge National Preserve
Deputy Commissioner, Alaska Department of Fish and Game
Special Projects Coordinator, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

Superintendent
Western Arctic National Parklands
National Park Service
PO Box 1029
Kotzebue, Alaska 99752

Dear Superintendent:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Superintendent of the Western Arctic National Parklands to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to
Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Cape Krusenstern National Monument (CAKR) for the management of muskox on these lands.

It is the intent of the Board that actions related to management of muskox by designated Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), representatives of the Office of Subsistence Management (OSM), the National Park Service (NPS) Regional Office, and the Chair of affected Council(s) to the extent possible. The Office of Subsistence Management will be used by managers to facilitate communication of actions and to ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair or alternate, local tribes, and Alaska Native Corporations to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The Superintendent of the Western Arctic National Parklands in Kotzebue is hereby delegated authority to issue emergency or temporary special actions affecting muskox in CAKR as outlined under the **Scope of Delegation**. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulations at 36 CFR 242.19 and 50 CFR 100.19.

2. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulations at 36 CFR 242.26 and 50 CFR 100.26:

- **Close the season, set any needed permit conditions, determine annual harvest quotas, the number of permits to be issued, and the method of permit allocation between State and Federal permits.**
- ~~To set closing dates for the muskox season in CAKR.~~

- ~~As needed, set or adjust the annual harvest quotas for muskox for the Federal hunt in CAKR.~~

This delegation also permits you to close and reopen Federal public lands to nonsubsistence hunting, but does not permit you to specify methods and means, permit requirements, or harvest and possession limits for State-managed hunts.

This delegation may be exercised only when it is necessary to conserve muskox populations, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the populations. All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to methods and means of take, shall be directed to the Board.

The Federal public lands subject to this delegated authority are those in Cape Krusenstern National Monument.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will provide subsistence users in the region a local point of contact about Federal subsistence issues and regulations and facilitate a local liaison with State managers and other user groups.

You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 50 CFR 100.19 and 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected Federally qualified subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in OSM no later than sixty days after development of the document.

For management decisions on special actions, consultation is not always possible, but to the extent practicable, two-way communication will take place before decisions are implemented. You will also establish meaningful and timely opportunities for government-to-government

consultation related to pre-season and post-season management actions as established in the Board's Government-to-Government Tribal Consultation Policy (Federal Subsistence Board Government-to-Government Tribal Consultation Policy 2012 and Federal Subsistence Board Policy on Consultation with Alaska Native Claim Settlement Act Corporations 2015).

You will immediately notify the Board through the Assistant Regional Director for OSM, and coordinate with the Chair(s) or alternate of the affected Council(s), local ADF&G managers, and other affected Federal conservation unit managers concerning emergency and temporary special actions being considered. You will ensure that you have communicated with OSM to ensure the special action is aligned with ANILCA Title VIII, Federal Subsistence regulations and policy, and that the perspectives of the Chair(s) or alternate of the affected Council(s), OSM, and affected State and Federal managers have been fully considered in the review of the proposed special action.

If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you will seek Council recommendations on the proposed temporary special action(s). If the affected Council(s) provided a recommendation, and your action differs from that recommendation, you will provide an explanation in writing in accordance with 50 CFR 100.10(e)(1) and 36 CFR 242.10(e)(1).

You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, OSM, affected State and Federal managers, law enforcement personnel, and Council members. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, OSM, affected State and Federal managers, and the local Council members at least 24 hours before the State action would be effective. If a decision to take no action is made, you will immediately notify the proponent of the request. A summary of special action requests and your resultant actions must be provided to the coordinator of the appropriate Council(s) at the end of each calendar year for presentation to the Council(s).

You may defer a special action request, otherwise covered by this delegation of authority, to the Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action.

6. <u>Support Services:</u> Administrative support for regulatory actions will be provided by the Office of Subsistence Management.

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Northwest Arctic Regional Advisory Council
Chair, Cape Krusenstern National Monument Subsistence Resource Commission
Subsistence Manager, Cape Krusenstern National Monument
Deputy Commissioner, Alaska Department of Fish and Game
Special Projects Coordinator, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

Superintendent
Western Arctic National Parklands
P.O. Box 1029
Kotzebue, Alaska 99752

Dear Superintendent:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Superintendent of the Western Arctic National Parklands to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 23 north and west of the Kobuk River drainage for the management of muskox on these lands.

It is the intent of the Board that actions related to management of muskox by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), representatives of the Office of Subsistence Management (OSM), the Bureau of Land Management, and the Chair of the affected Council(s) to the extent possible. The Office of Subsistence Management will be used by managers to facilitate communication of actions and to ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair or alternate, local tribes, and Alaska Native Corporations to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The Superintendent of the Western Arctic National Parklands is hereby delegated authority to issue emergency or temporary special actions affecting muskox on Federal lands as outlined under **Scope of Delegation**. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

2. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which state: "The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- **Close the season, set any needed permit conditions, determine annual harvest quotas, the number of permits to be issued, and the method of permit allocation**

between State and Federal permits.

- ~~To set closing dates for the muskox season on Federal public lands in Unit 23 north and west of the Kobuk River drainage as it applies to muskox on these lands.~~

- ~~As needed, set or adjust annual harvest quotas and the number of Federal registration permits to be issued annually for muskox on Federal public lands in Unit 23 north and west of the Kobuk River drainage.~~

This delegation also permits you to close and reopen Federal public lands to nonsubsistence hunting, but does not permit you to specify methods and means, permit requirements, or harvest and possession limits for State-managed hunts.

This delegation may be exercised only when it is necessary to conserve muskox populations, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the populations. All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to methods and means of take, shall be directed to the Board.

The Federal public lands subject to this delegated authority are those within Unit 23 north and west of the Kobuk River drainage.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will provide subsistence users in the region a local point of contact about Federal subsistence issues and regulations and facilitate a local liaison with State managers and other user groups.

You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 50 CFR 100.19 and 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected Federally qualified subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in OSM no later than sixty days after development of the document.

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Board's Government-to-Government Tribal Consultation Policy (Federal Subsistence Board Government-to-Government Tribal Consultation Policy 2012 and Federal Subsistence Board Policy on Consultation with Alaska Native Claim Settlement Act Corporations 2015).

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If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you will seek Council recommendations on the proposed temporary special action(s). If the affected Council(s) provided a recommendation, and your action differs from that recommendation, you will provide an explanation in writing in accordance with
50 CFR 100.10(e)(1) and 36 CFR 242.10(e)(1).

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You may defer a special action request, otherwise covered by this delegation of authority, to the Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

6. <u>Support Services:</u> Administrative support for regulatory actions will be provided by the Office of Subsistence Management.

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Northwest Arctic Subsistence Regional Advisory Council
Field Manager, Bureau of Land Management Anchorage Field Office
Deputy Commissioner, Alaska Department of Fish and Game
Special Projects Coordinator, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

WP24-28/29 Executive Summary	
General Description	Proposal WP24-28 requests a reduction in the caribou harvest limit across the range of the Western Arctic caribou herd to four caribou per year, only one of which may be a cow. *Submitted by: The Western Arctic Caribou Herd Working Group* Proposal WP24-29 requests a reduction in the caribou harvest limit in Unit 23 to four caribou per year, only one of which may be a cow. *Submitted by: The Northwest Arctic Subsistence Regional Advisory Council*
Proposed Regulation	Units 21D, remainder; 24B, remainder; 24C; 24D; and all caribou hunt areas within Units 22, 23, and 26A: four caribou per year, only one of which may be a cow
OSM Preliminary Conclusion	**Support** Proposal WP24-29. **Support** Proposal WP24-28 **with modification** to exclude that portion of Unit 26A north and east of a line running from the east/north bank of Wainwright Inlet to the headwaters of the Ketik River, to the headwaters of the Awuna River to the Colville River at Umiat then east to the Dalton Highway at Sagwon. The modified regulation for Unit 26 should read: **Unit 26—Caribou** *Unit 26A - **north and east of a line running from the east/north bank of Wainwright Inlet to the headwaters of the Ketik River, to the headwaters of the Awuna River to the Colville River at Umiat then east to the Dalton Highway at Sagwon**- 5 caribou per day by State registration permit as follows: Calves may not be taken.* *Bulls may be harvested* — *July 1-Oct. 14.* *Dec. 6-June 30.* *Cows may be harvested; however, cows accompanied by* — *July 16-Mar.*

	calves may not be taken July 16-Oct. 15 — *15.* *Noatak National Preserve is closed to caribou hunting from Aug. 1-Sep. 30 for the 2022-24 regulatory cycle, except by federally qualified subsistence users hunting under these regulations.* *Unit 26A remainder -* ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow*** *by State registration permit as follows: Calves may not be taken.* *Bulls may be harvested* — *July 1-Oct. 15.* *Dec. 6-June 30.* ~~*Up to 3 cows per day*~~ ***Only 1 cow*** *may be harvested; however, cows accompanied by calves may not be taken July 16-Oct. 15* — *July 16-Mar. 15.*
Eastern Interior Alaska Subsistence Regional Advisory Council	
Western Interior Alaska Subsistence Regional Advisory Council	
Seward Peninsula Subsistence Regional Advisory Council	
Northwest Arctic Subsistence Regional Advisory Council	
North Slope Subsistence Regional Advisory Council Recommendation	

Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP24-28/29

ISSUES

Wildlife Proposal WP24-28, submitted by the Western Arctic Caribou Herd Working Group, requests a reduction in the caribou harvest limit across the range of the Western Arctic caribou herd to four caribou per year, only one of which may be a cow. Specific areas include Units 21D, remainder; 24B, remainder; 24C; 24D; and all caribou hunt areas within Units 22, 23, and 26A.

Wildlife Proposal WP24-29, submitted by the Northwest Arctic Subsistence Regional Advisory Council (Northwest Arctic Council), requests a reduction in the caribou harvest limit in Unit 23 to four caribou per year, only one of which may be a cow.

DISCUSSION

WP24-28

The Western Arctic Caribou Herd Working Group (WACH Working Group) at its annual meeting in December 2022 assigned the management level "Preservative, Declining" to the herd based on the most recent census (within the range of 130,000-200,000) and adult cow survival rate of less than 80%. The WACH Working Group sees the need to address the current herd decline by limiting the harvest of both bulls and cows to allow the herd to begin a recovery. Data received by the WACH Working Group from an Alaska Department of Fish & Game (ADF&G) biologist illustrated that there has been continued decline in the Western Arctic Caribou Herd (WACH).

WP24-29

The WACH has continued to decline with the most recent estimate being 164,000 caribou. The Northwest Arctic Council is greatly concerned about the precipitous decline of the WACH and feels that action is needed to slow the decline and prevent the herd from reaching a point of no return. The Northwest Arctic Council feels that the harvest recommendations proposed by the WACH Working Group are a starting point for the conservation of the WACH while still allowing some harvest. The Northwest Arctic Council recognizes that federally qualified subsistence users are already facing food insecurities, but this large reduction of caribou harvest is a means to help protect the caribou herd over the long term, while still allowing some harvest.

Existing Federal Regulation

Unit 21D—Caribou

Unit 21D, remainder— 5 caribou per day, as follows: Calves may not

be taken.

Bulls may be harvested.	*July 1-Oct. 14.* *Feb. 1-June 30.*
Cows may be harvested.	*Sep. 1-Mar. 31.*

Unit 22—Caribou

Unit 22B that portion west of Golovnin Bay and west of a line along the west bank of the Fish and Niukluk Rivers to the mouth of the Libby River and excluding all portions of the Niukluk River drainage upstream from and including the Libby River drainage - 5 caribou per day by State registration permit. Calves may not be taken.	*Oct. 1-Apr. 30.* *May 1-Sep. 30, a season may be announced.*
Units 22A, that portion north of the Golsovia River drainage, 22B remainder, that portion of Unit 22D in the Kuzitrin River drainage (excluding the Pilgrim River drainage), and the Agiapuk River drainages, including the tributaries, and Unit 22E, that portion east of and including the Tin Creek drainage - 5 caribou per day by State registration permit. Calves may not be taken.	*July 1–June 30.*
Unit 22A, remainder - 5 caribou per day by State registration permit. Calves may not be taken	*July 1-June 30, season may be announced.*
Unit 22D, that portion in the Pilgrim River drainage - 5 caribou per day by State registration permit. Calves may not be taken	*Oct. 1-Apr. 30.* *May 1-Sep. 30, season may be announced*
Units 22C, 22D remainder, 22E remainder - 5 caribou per day by State registration permit. Calves may not be taken	*July 1-June 30, season may be announced*

Unit 23−Caribou

Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage—5 caribou per day by State registration permit as follows:

Bulls may be harvested	*July 1–June 30*
Cows may be harvested. However, cows accompanied by calves may not be taken July 15–Oct. 14.	*July 15–Apr. 30*

Unit 23−Caribou

Unit 23, remainder—5 caribou per day by State registration permit as follows:

Bulls may be harvested	*July 1–June 30*
Cows may be harvested. However, cows accompanied by calves may not be taken July 31–Oct. 14.	*July 31–Mar. 31*

Federal public lands within a 10-mile-wide corridor (5 miles either side) along the Noatak River from the western boundary of Noatak National Preserve upstream to the confluence with the Cutler River; within the northern and southern boundaries of the Eli and Agashashok River drainages, respectively; and within the Squirrel River drainage are closed to caribou hunting except by federally qualified subsistence users hunting under these regulations.

Bureau of Land Management managed lands between the Noatak and Kobuk Rivers and Noatak National Preserve are closed to caribou hunting from Aug. 1-Sep. 30 for the 2022-24 regulatory cycle, except by federally qualified subsistence users hunting under these regulations.

Unit 24—Caribou

Unit 24B remainder - 5 caribou per day, as follows: Calves may not be taken.

Bulls may be harvested.	*July 1-Oct. 14.* *Feb. 1-June 30.*
Cows may be harvested.	*July 15-Apr. 30.*

Units 24C, 24D - 5 caribou per day, as follows: Calves may not be taken.

Bulls may be harvested.	*July 1-Oct. 14.* *Feb. 1-June 30.*

Unit 23−Caribou

Cows may be harvested	*Sep. 1-Mar. 31.*

Unit 26—Caribou

Unit 26A - that portion of the Colville River drainage upstream from the Anaktuvuk River, and drainages of the Chukchi Sea south and west of, and including the Utukok River drainage - 5 caribou per day by State registration permit as follows: Calves may not be taken

Bulls may be harvested	*July 1-Oct. 14.* *Dec. 6-June 30.*
Cows may be harvested; however, cows accompanied by calves may not be taken July 16-Oct. 15	*July 16-Mar. 15.*

Noatak National Preserve is closed to caribou hunting from Aug. 1-Sep. 30 for the 2022-24 regulatory cycle, except by federally qualified subsistence users hunting under these regulations.

Unit 26A remainder - 5 caribou per day by State registration permit as follows: Calves may not be taken

Bulls may be harvested	*July 1-Oct. 15.* *Dec. 6-June 30.*
Up to 3 cows per day may be harvested; however, cows accompanied by calves may not be taken July 16-Oct. 15	*July 16-Mar. 15.*

Proposed Federal Regulation

Unit 21D—Caribou

Unit 21D, remainder— ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow****, as follows: Calves may not be taken.*

Bulls may be harvested.	*July 1-Oct. 14.* *Feb. 1-June 30.*
Cows may be harvested.	*Sep. 1-Mar. 31.*

Unit 22—Caribou

Unit 22B that portion west of Golovnin Bay and west of a line along the west bank of the Fish and Niukluk Rivers to the mouth of the Libby River and excluding all portions of the Niukluk River drainage upstream from and including the Libby River drainage - ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow*** *by State registration permit. Calves may not be taken.*	*Oct. 1-Apr. 30.* *May 1-Sep. 30, a season may be announced.*
Units 22A, that portion north of the Golsovia River drainage, 22B remainder, that portion of Unit 22D in the Kuzitrin River drainage (excluding the Pilgrim River drainage), and the Agiapuk River drainages, including the tributaries, and Unit 22E, that portion east of and including the Tin Creek drainage - ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow*** *by State registration permit. Calves may not be taken.*	*July 1–June 30.*
Unit 22A, remainder - ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow*** *by State registration permit. Calves may not be taken*	*July 1-June 30, season may be announced.*
Unit 22D, that portion in the Pilgrim River drainage - ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow*** *by State registration permit. Calves may not be taken*	*Oct. 1-Apr. 30.* *May 1-Sep. 30, season may be announced*
Units 22C, 22D remainder, 22E remainder - ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow*** *by State registration permit. Calves may not be taken*	*July 1-June 30, season may be announced*

Unit 23−Caribou

Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage— ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow*** *by State registration permit as follows:*	
Bulls may be harvested	*July 1–June 30*

Cows may be harvested. However, cows accompanied by calves may not be taken July 15–Oct. 14.	*July 15–Apr. 30*

Unit 23, remainder— ~~5 caribou per day~~ ***4 caribou per year, only 1 may be a cow*** *by State registration permit as follows:*

Bulls may be harvested	*July 1–June 30*
Cows may be harvested. However, cows accompanied by calves may not be taken July 31–Oct. 14.	*July 31–Mar. 31*

Federal public lands within a 10-mile-wide corridor (5 miles either side) along the Noatak River from the western boundary of Noatak National Preserve upstream to the confluence with the Cutler River; within the northern and southern boundaries of the Eli and Agashashok River drainages, respectively; and within the Squirrel River drainage are closed to caribou hunting except by federally qualified subsistence users hunting under these regulations.

Bureau of Land Management managed lands between the Noatak and Kobuk Rivers and Noatak National Preserve are closed to caribou hunting from Aug. 1-Sep. 30 for the 2022-24 regulatory cycle, except by federally qualified subsistence users hunting under these regulations.

Unit 24—Caribou

Unit 24B remainder - ~~5 caribou per day~~ ***4 caribou per year, only 1 may be a cow*** *as follows: Calves may not be taken.*

Bulls may be harvested.	*July 1-Oct. 14.* *Feb. 1-June 30.*
Cows may be harvested.	*July 15-Apr. 30.*

Units 24C, 24D - ~~5 caribou per day~~ ***4 caribou per year, only 1 may be a cow*** *as follows: Calves may not be taken.*

Bulls may be harvested.	*July 1-Oct. 14.* *Feb. 1-June 30.*
Cows may be harvested	*Sep. 1-Mar. 31.*

Unit 26—Caribou

Unit 26A - that portion of the Colville River drainage upstream from the Anaktuvuk River, and drainages of the Chukchi Sea south and west of, and including the Utukok River drainage - ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow*** *by State registration permit as follows: Calves may not be taken.*

Bulls may be harvested	*July 1-Oct. 14.* *Dec. 6-June 30.*
Cows may be harvested; however, cows accompanied by calves may not be taken July 16-Oct. 15	*July 16-Mar. 15.*
Noatak National Preserve is closed to caribou hunting from Aug. 1-Sep. 30 for the 2022-24 regulatory cycle, except by federally qualified subsistence users hunting under these regulations.	

Unit 26A remainder - ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow*** *by State registration permit as follows: Calves may not be taken.*

Bulls may be harvested	*July 1-Oct. 15.* *Dec. 6-June 30.*
~~*Up to 3 cows per day*~~ ***Only 1 cow*** *may be harvested; however, cows accompanied by calves may not be taken July 16-Oct. 15*	*July 16-Mar. 15.*

Existing State Regulation

Unit 21D—Caribou

21D remainder	*Residents—5 caribou per day, however, calves may not be taken.*	*July 1-Oct. 14* *Feb. 1-June 30.*

	Bulls	*Sep. 1-Mar. 31.*
	Cows	*Aug. 1-Sep. 30*
	Nonresidents—1 bull; however, calves may not be taken	

Unit 22—Caribou

22A, north of the Golsovia River drainage	*Residents—Twenty caribou total, up to 5 per day by permit.*	
	Bulls RC800	*No closed season*
	Cows RC800	*July 1-Mar. 31.*
	Nonresidents—1 bull	*Aug. 1-Sep. 30*
22A, remainder	*Residents— Twenty caribou total, up to 5 per day by permit. Bulls may not be taken Oct. 15- Jan 31, and cows may not be taken Apr 1- Aug 31. RC800*	*May be announced*
	Nonresidents—1 bull	*May be announced*
22B, west of Golovnin Bay, west of the west banks of Fish and Niukluk rivers below the Libby River, (excluding the Libby River drainage and Niukluk River drainage above, the mouth of the Libby River)	*Residents— Twenty caribou total, up to 5 per day by permit.*	
	Bulls RC800	*Oct. 1-Apr. 30*
	Cows RC800	*Oct. 1-Mar 31.*
	Residents— Twenty caribou total, up to 5 per day by permit. Cows may not be taken Apr 1- Aug 31. RC800	*May be announced*
	Nonresidents—1 bull	*May be announced*
22B, remainder	*Residents— Twenty caribou total, up to 5 per day by permit.*	
	Bulls RC800	*No closed season*
	Cows RC800	*July 1-Mar. 31.*

	Nonresidents—1 bull	*Aug. 1-Sep. 30*
22C	*Residents— Twenty caribou total, up to 5 per day by permit. Bulls may not be taken Oct 15-Jan 31, and cows may not be taken Apr 1-Aug 31. RC800*	*May be announced*
	Nonresidents—1 bull	*May be announced*
22D, Pilgrim River drainage	*Residents— Twenty caribou total, up to 5 per day by permit.*	
	Bulls RC800	*Oct. 1-Apr. 30*
	Cows RC800	*Oct. 1-Mar. 31.*
	Residents— Twenty caribou total, up to 5 per day by permit. Cows may not be taken Apr 1-Aug 31. RC800	*May be announced*
	Nonresidents—1 bull; however, calves may not be taken	*May be announced*
22D, in the Kuzitrin River drainage (excluding the Pilgrim River drainage) and the Agiapuk River drainage	*Residents— Twenty caribou total, up to 5 per day by permit.*	
	Bulls RC800	*No closed season*
	Cows RC800	*July 1-Mar. 31.*
	Nonresidents—1 bull	*Aug. 1-Sep. 30*
22D, remainder	*Residents— Twenty caribou total, up to 5 per day by permit. Bulls may not be taken Oct 15- Jan 31, and cows may not be taken Apr 1 – Aug 31. RC800*	*May be announced.*
	Nonresidents—1 bull	*Aug. 1-Sep. 30*
22E, east of and including the	*Residents— Twenty caribou total, up to 5 per day by permit.*	
	Bulls RC800	*No closed season*

Sanaguich River drainage	*Cows RC800*	*July 1-Mar. 31.*
	Nonresidents—1 bull	*Aug. 1-Sep. 30*
22E, remainder	*Residents— Twenty caribou total, up to 5 per day by permit. Bulls may not be taken Oct 15- Jan 31, and cows may not be taken Apr 1 – Aug 31. RC800*	*May be announced*
	Nonresidents—1 bull	*May be announced*

Unit 23—Caribou

23, north of and including the Singoalik River drainage	*Residents—5 caribou per day by permit.*	
	Bulls RC907	*No closed season*
	Cows RC907	*Jul. 15-Apr. 30*
	Nonresidents—1 bull	*Aug. 1-Sep. 30*
23 remainder	*Residents—5 caribou per day by permit.*	
	Bulls RC907	*No closed season*
	Cows RC907	*Sep. 1-Mar. 31.*
	Nonresidents—1 bull	*Aug. 1-Sep. 30*

Unit 24—Caribou

24B remainder	*Residents—5 caribou per day, however, calves may not be taken.*	
	Bulls	*July 1-Oct 14* *Feb 1-June 30*
	Cows	*July 15-Apr. 30.*
	Nonresidents—1 bull, however, calves may not be taken	*Aug. 1-Sep. 30*

24C and 24D	*Residents—5 caribou per day, however, calves may not be taken.*	
	Bulls	*July 1-Oct 14* *Feb 1-June 30*
	Cows	*Sep. 1-Mar. 31.*
	Nonresidents—1 bull, however, calves may not be taken	*Aug. 1-Sep. 30*

Unit 26—Caribou

26A, the Colville River drainage upstream from the Anaktuvuk River, and drainages of the Chukchi Sea south and west of, and including the Utukok River drainage	*Residents—5 caribou per day by permit.*	
	Bulls RC907	*July 1-Oct. 14* *Feb. 1-June 30.*
	Cows RC907	*Jul. 15-Apr. 30*
	Nonresidents—1 bull	*July 15-Sep. 30*
26A remainder	*Residents—5 caribou per day by permit. RC907*	*July 1-July 15* *Mar 16-June 30.*
	5 caribou per day three of which may be cows by permit; cows with calves may not be taken. RC907	*July 16-Oct 15.*
	3 cows per day by permit. RC907	*Oct 16-Dec 31*
	5 caribou per day three of which may be cows by permit. RC907	*Jan 1-Mar 15*
	Nonresidents—1 bull; however, calves may not be taken	*July 15-Sep. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 55.7% of Unit 21D and consist of 29.3% U.S. Fish and Wildlife Service (USFWS) managed lands and 26.4% Bureau of Land Management (BLM) managed lands.

Federal public lands comprise approximately 43.5% of Unit 22 and consist of 28.1% BLM managed lands, 12.4% National Park Service (NPS) managed lands, and 3% USFWS managed lands.

Federal public lands comprise approximately 70.5% of Unit 23 and consist of 39.6% NPS managed lands, 21.8% BLM managed lands, and 9.1% USFWS managed lands.

Federal public lands comprise approximately 64.4% of Unit 24 and consist of 21.8% NPS managed lands, and 21.8% USFWS managed lands, and 20.8% BLM managed lands.

Federal public lands comprise approximately 67.5% of Unit 26 and consist of 45.2% BLM managed lands, 17.3% USFWS managed lands, and 5% NPS managed lands.

Federal public lands comprise approximately 72.7% of Unit 26A and consist of 66% BLM managed lands, 6.6% NPS managed lands, and 0.01% USFWS managed lands.

Customary and Traditional Use Determinations

Residents of Units 21B, 21C, 21D, and Huslia have a customary and traditional use determination for caribou in Unit 21D.

Residents of Units 21D west of the Koyukuk and Yukon Rivers, 22 (except residents of St. Lawrence Island), 23, 24, Kotlik, Emmonak, Hooper Bay, Scammon Bay, Chevak, Marshall, Mountain Village, Pilot Station, Pitka's Point, Russian Mission, St. Marys, Nunam Iqua, and Alakanuk have a customary and traditional use determination for caribou in Unit 22A.

Residents of Units 21D west of the Koyukuk and Yukon Rivers, 22 (excluding residents of St. Lawrence Island), 23, and 24 have a customary and traditional use determination for caribou in Unit 22 remainder.

Residents of Units 21D west of the Koyukuk and Yukon Rivers, 22, 23, 24 including residents of Wiseman but not other residents of the Dalton Highway Corridor Management Area, 26A, and Galena have a customary and traditional use determination for caribou in Unit 23.

Residents of Unit 24, Galena, Kobuk, Koyukuk, Stevens Village, and Tanana have a customary and traditional use determination for caribou in Unit 24.

Residents of Unit 26, Anaktuvuk Pass, and Point Hope have a customary and traditional use determination for caribou in Unit 26A.

Regulatory History

See **Appendix 1**

Current Events

2024-26 Federal Wildlife Proposals

The Northwest Arctic Council and North Slope Subsistence Regional Advisory Council (North Slope Council) submitted Proposals WP24-30 and WP24-31, respectively, to close caribou hunting to non-federally qualified users in Unit 23 from Aug. 1-Oct. 31.

WSA22-05/06

Temporary Wildlife Special Action WSA22-05, submitted by the Northwest Arctic Council, requested a reduction in the caribou harvest limit in Unit 23 to four caribou per year, only one of which may be a cow for the remainder of the 2022-24 regulatory cycle (see regulatory history, **Appendix 1**).

Temporary Wildlife Special Action WSA22-06, submitted by the Western Interior Subsistence Regional Advisory Council (Western Interior Council), requested a reduction in the caribou harvest limit across the range of the WACH to four caribou per year, only one of which may be a cow for the remainder of the 2022-24 regulatory cycle. Specific areas include Units 21D, remainder; 24A, remainder; 24B, remainder; 24C; 24D; and all caribou hunt areas within Units 22, 23, and 26A (see regulatory history, **Appendix 1**).

A public hearing was held for WSA22-05/06 on April 26, 2023, in Kotzebue, and for WSA22-06 only on May 2, 2023, via teleconference. In addition, consultations with tribes and Alaska Native Claims Settlement Act (ANCSA) corporations were held on May 15, 2023, via teleconference. Summaries of these hearings and consultations are presented here.

April 26, 2023 public hearing summary (WSA22-05 and WSA22-06)

OSM held a public hearing on WSA22-05 and WSA22-06 on April 26, 2023, in person in Kotzebue and via teleconference. Fourteen people testified. The majority of participants spoke in favor of the need for conservation of caribou but in opposition to the four caribou per year as proposed in the special action request. Speakers, almost unanimously, stressed that caribou is their dietary staple and an integral aspect of their cultural identity. They stated that the limit, as proposed, would disrupt a basic aspect of the subsistence economy, the ability to harvest for others who can't hunt for themselves. Climate change was acknowledged as a reason for changing caribou migration patterns. However, other phenomena were discussed. The effects of sport hunters and their use of airplanes is a major cause of concern because it is perceived as a disruption to caribou migration patterns. A couple of speakers said that migrations are interrupted when sport hunters don't follow local conservation practices such as letting the caribou leaders pass so the herd will follow. Speakers told of other local conservation practices and indigenous ways of showing respect, including letting caribou pass in the spring when they are skinny, not hunting cows in times of low numbers and using all parts of the caribou they harvest. One person noted that caribou population crashes are part of Indigenous Knowledge and these practices are enacted during these times.

One of the most pervasive themes was the short amount of time between the Northwest Arctic Council's request submission and public hearing, and the lack of village outreach. The lack of outreach is a major point of contention because, the participants said, those are the people who are the hunters and who make their living off of the land. Most speakers talked about the high cost of living in the region and that residents are not able to just stop hunting. Participants from the North Slope stated that this proposal is not relevant for them because they harvest from the Teshekpuk herd and not the WACH.

As noted, many participants spoke of the need to take conservation measures to preserve the WACH. The Kobuk Valley National Park Subsistence Resource Commission suggested changing the limit to five bulls per day and no cows so that harvesting for others can be sustained. One speaker, an elder, did not overtly support the proposal but candidly shared his thoughts as to how conservation of the herd should be

addressed. He stated that local hunting patterns have changed because of the presence of sport hunters who prefer to take bulls and disrupt migration routes. He said this led to the need for local hunters to shift to cow harvest. He expressed extreme concern that the use of semi-automatic weapons has taken the place of bolt action rifles among local hunters. He observed that some people shoot into the herd and may kill several caribou and that they don't harvest all of them. He acknowledged natural fluctuation in caribou herd numbers and said that local people are going to have to "tighten their belts." Like other speakers, he feels that the prohibition of fly-in hunting would allow for the restoration of caribou migration routes. He sincerely requested that all agencies come to the table to address local concerns and bring their data to find a viable solution to conserving the WACH.

May 2, 2023 public hearing summary (WSA22-06 only)

OSM held another public hearing on WSA22-06 on May 2, 2023, via teleconference. Forty-five people provided testimony. The vast majority of testifiers were from North Slope communities and strongly opposed the request. One person from Ambler supported the request, stressing the importance of protecting cows and the need for conservation now to ensure the herd's preservation into the future. Several commenters did not provide an explicit position.

The primary reason people opposed the request was because the proposed harvest limit reduction would not be enough to provide for people's subsistence uses, potentially resulting in starvation across North Slope communities. Many testifiers stated four caribou per year was not enough to feed their families or share with others in their community, including elders, widows, and people unable to hunt for themselves. One testifier commented that his family uses 30-50 caribou each year, while another stated four caribou would only last her family one month. People also emphasized that caribou are vital for their survival; they rely on caribou both nutritionally and culturally. For example, caribou sinew is used to construct whaling boats. Several testifiers stressed that subsistence users only take what they need and harvest sustainably; they should not be criminalized for feeding their families; sport hunters should be restricted first. Additionally, store-bought food is prohibitively expensive and not as healthy as caribou.

Another reason people opposed the request was because most caribou harvested in Unit 26A are from the Teshekpuk (TCH) or Central Arctic caribou (CACH) herds, not the WACH. As the TCH and CACH populations are not declining like the WACH, this harvest limit reduction would be an unnecessary restriction on subsistence uses. Many also commented that the timing of the public hearing was terrible because many of the region's caribou hunters were out whaling. Several others expressed a need for meaningful tribal consultation on the request.

Several testifiers agreed that some conservation measures were needed to address the decline of the WACH, but that the requested restrictions were too drastic, too soon, and did not allow sufficient time or opportunity for input by the subsistence users who would be most affected by these restrictions. Others expressed frustration at the Western Interior Council dictating what harvest regulations should be outside of their area in the North Slope region.

A representative from ADF&G commented that a similar proposal will be addressed by the Alaska Board of Game (BOG) in January 2024 and that outlying subunits occupied by other herds such as the TCH and CACH should be considered for removal from this request.

Following this public hearing, the Western Interior Council indicated via e-mails that they would like to withdraw this request. While Councils cannot formally withdraw special action requests outside of a public forum, the chair spoke to the Board about this issue when they meet to consider this request on June 8th.

May 15, 2023 Tribal and ANCSA consultation summary

Participants in the Tribal teleconference included representatives of the Inupiat Community of the Arctic Slope (ICAS), Naqsragmiut Tribal Council of Anaktuvuk Pass, and the Arctic Slope Community Foundation.

Participants said that four caribou per household for the year is not enough because hunters harvest for those who cannot hunt, not just their household. They stated that caribou is a staple food, but it is more than that, it is cultural identity and is healthier than store-bought food. Some participants discussed the conflict they face, in that they know WACH caribou needs to be conserved but they also need caribou in order to live. One person described Traditional/Indigenous Knowledge and on-going user conflict, "We know not to overharvest for 10,000 years and now it's all regulated for us. Just difficult to follow your regulations with over 1,000 super cub planes coming to harvest the same caribou."

Discussion of management topics included a request for the State to be at the table with villages and Federal managers to discuss and work out how to conserve the herd. Participants stated that they do not harvest the WACH and asked if enforcement would be herd-specific. OSM staff replied that law enforcement makes no distinction between herds; enforcement occurs according to harvest regulations in specific units and areas.

Participants asked about the timing of the special action and OSM staff replied that the Board is meeting to address it on June 8, 2023. Because this is a temporary special action, if the Board adopted the proposal, it would only last for one regulatory cycle and would end in June 2024. The conflict that hunters face was voiced again when a participant said that he knew he was going against himself but wondered if the closure should last for two cycles in order to save the herd because, he said, "…if we lose them, everything falls apart."

Participants in the Alaska Native Claims Settlement Act (ANCSA) teleconference included representatives of the Inupiat Community of the Arctic Slope (ICAS), Naqsragmiut Tribal Council of Anaktuvuk Pass, and NANA Regional Corporation.

The NANA Corporation representatives stated that NANA does not have an official position on the proposal but wanted to share concerns voiced by NANA shareholders. In general, shareholders have expressed deep and overwhelming worry and a heavy sense of concern. The main concern is that people do not know how they would feed their families and their communities if this special action is adopted. The fast speed of the process and the timing of the public hearings was cited as problematic because communities and families have not had time to discuss the situation among themselves. People expressed worry about shifting harvests away from caribou because other resources are also in decline. The use of the entire caribou for many purposes is also an issue; people will not just lose food, but the ability to make clothing, tools, and art from caribou.

Harvesting caribou for others is a central aspect of Inupiat culture and economy. The ability to harvest for others is a major concern. Participants requested clarification on the designated hunter permit. OSM staff replied that on Federal public lands, any federally qualified user can be a designated hunter for another federally qualified user. One participant asked how law enforcement would deal with several designated hunters in one boat with only their allowed limit of caribou on board. OSM staff replied that it would be permissible as permitted by State or Federal regulations. During the public hearings on April 26 and May 2, 2023, many participants expressed concerns about access to designated hunter permits. OSM staff has contacted U.S. Fish and Wildlife Service Refuge and National Park Service colleagues to identify exactly how to obtain designated hunter permits in hub communities and villages. Per their request, OSM staff has provided preliminary information to NANA representatives.

Participants asked how OSM came to the harvest limit proposed in WSA22-05/06. OSM staff replied that it was proposed by the Western Arctic Caribou Herd Working Group. The Chair of the Western Interior Council, Jack Reakoff, explained further that the Western Interior Council proposal was prompted by the drastic decline of the WACH and the immediate need to conserve caribou cows.

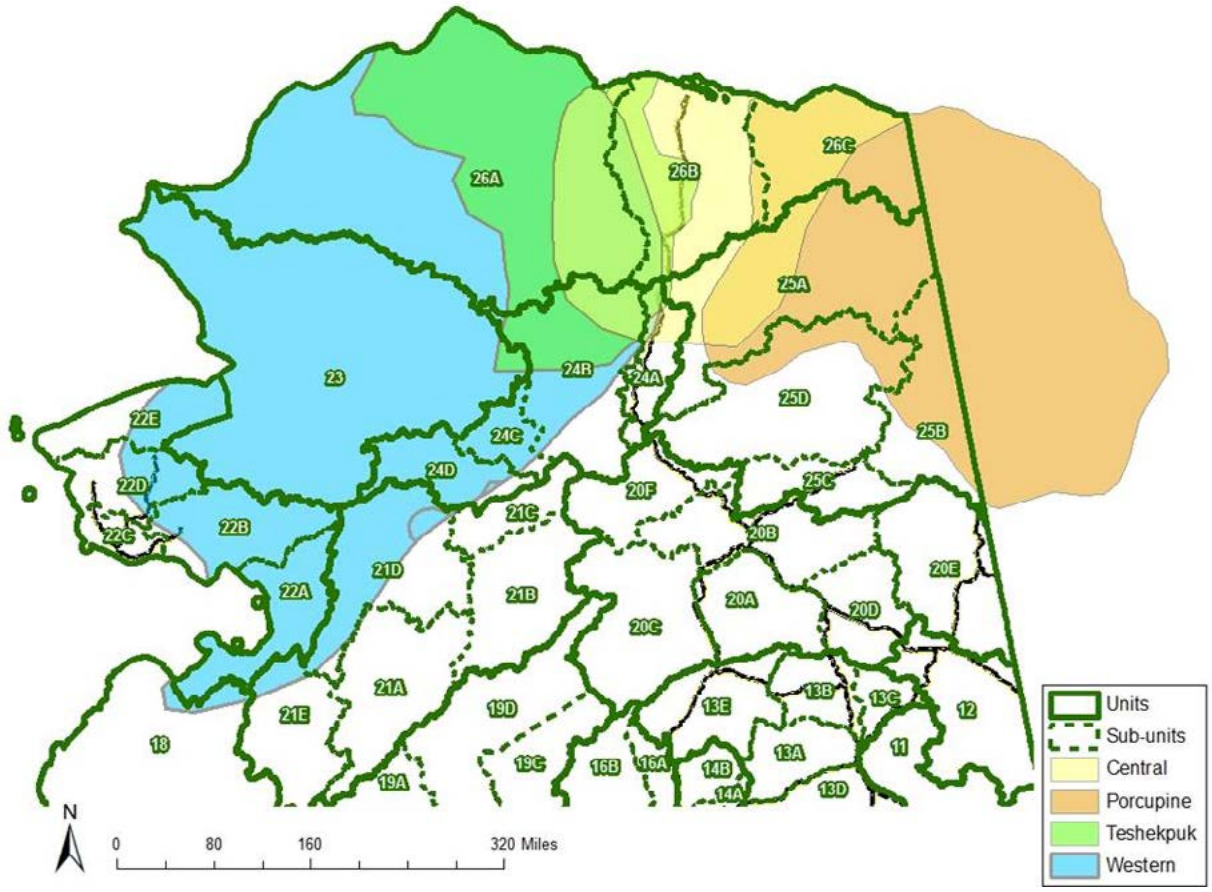
Biological Background

The TCH, WACH, and CACH have ranges that overlap in Units 23, 26A, 24A, and 24B (**Map 1**), and there can be considerable mixing of herds during the fall and winter (Prichard et al. 2020). As the current wildlife proposals focuses on conservation concerns for the WACH, this analysis will focus on the WACH. The TCH primarily occupies Unit 26A, and this analysis will briefly consider TCH biology and range. The CACH, which mostly occurs in Unit 26B, (Dau 2011, 2015; Lenart 2011; Parrett 2011, 2015c, 2015d), will not be considered further in this analysis.

Caribou abundance naturally fluctuates over decades (Gunn 2003; WACHWG 2011). Gunn (2003) reports the mean doubling rate for Alaskan caribou as 10 ± 2.3 years. Although the underlying mechanisms causing these fluctuations are uncertain, climatic oscillations (i.e., Arctic and Pacific Decadal Oscillations) may play an important role (Gunn 2003; Joly et al. 2011). Climatic oscillations can influence factors such as snow depth, icing, forage quality and growth, wildfire occurrence, insect levels, and predation, which all contribute to caribou population dynamics (Joly et al. 2011). Density-dependent reduction in forage availability, resulting in poorer body condition may exacerbate caribou population fluctuations (Gunn 2003).

Caribou calving generally occurs from late May to mid-June (Dau 2013; Cameron et al. 2018). Weaning generally occurs in late October and early November before the breeding season (Taillon et al. 2011). Calves may stay with their mothers through their first winter, which improves calves' access to food and body condition (Holand et al. 2012). Calves orphaned after weaning (October) have greater chances of survival than calves orphaned before weaning (Russell et al. 1991; Joly 2000; Holand et al. 2012, Rughetti and Festa-Bianchet 2014).

Caribou feed on a wide variety of plants including lichens, fungi, sedges, grasses, forbs, and twigs of woody plants. Arctic caribou depend primarily on lichens during the fall and winter, but during summer they feed on leaves, grasses, and sedges (Joly and Cameron 2018; Miller 2003).



Map 1. Herd overlap and ranges of the WACH, TCH, CACH, and PCH.

Western Arctic Caribou Herd

The WACH has historically been the largest caribou herd in Alaska and has a home range of approximately 157,000 square miles in northwestern Alaska. In the spring, most mature cows move north to calving grounds in the Utukok Hills, while bulls and immature cows lag behind and move toward summer range in the Wulik Peaks and Lisburne Hills (**Map 2**; Dau 2011; WACHWG 2011, 2019). After calving, cows and calves move west toward the Lisburne Hills where they mix with the bulls and non-maternal cows. During the summer, the herd moves rapidly to the Brooks Range. Calving locations of individuals average 35 miles apart from one year to the next, and 90% of females calved within one week from the previous year (Joly et al. 2021). The WACH has used the same general calving grounds for more than 100 years (Cameron et al. 2020).

Except for summer periods, little individual site-specific fidelity is observed from year to year, especially during the winter (Joly et al. 2021). The winter range fluctuates year to year as the WACH demonstrate low fidelity to wintering grounds (Joly et al. 2021). Rut occurs during fall migration (Dau 2011, WACHWG 2011). The fall migration is more variable and shows less fidelity to specific migration routes than the spring migration, while caribou still showed a fidelity to certain regions within the herd's range (Joly et al. 2021).

In recent years, the timing of fall migration has been less predictable (Joly et al. 2021). Reasons for changes in migration phenology are unknown. However, Cameron et al. (2021) found that WACH migrated in response to snow events and cold temperatures but would pause migration when they encountered snow free areas or warmer temperatures. This corresponds with Traditional Ecological Knowledge, which has observed caribou migrating in response to weather (NWARAC 2021b). Caribou migrations are also closely related to the population size and density of the herd (Burch 1972, Joly et al. 2021b).

The proportion of caribou using certain migration paths also varies each year (**Figure 1**, Baltensperger and Joly 2019; Joly and Cameron 2020). Changes in migration paths are likely influenced by multiple factors including food availability, snow depth, rugged terrain, and dense vegetation (Nicholson et al. 2016; Fullman et al. 2017). If caribou travelled the same migration routes every year, their food resources would likely be depleted (NWARAC 2016a). Anthropogenic factors can also influence migration paths. Radio collared caribou data has shown that the Red Dog Mine Road, near Kivalina, has delayed the fall migration along the coast with some caribou turning around rather than crossing the road (Wilson et al. 2016, WACHWG 2021).

The WACH Working Group consists of a broad spectrum of stakeholders, including subsistence users, sport hunters, conservationists, hunting guides, reindeer herders and transporters. The Group is also technically supported by NPS, USFWS, BLM, and ADF&G personnel. The WACH Working Group developed a WACH Cooperative Management Plan in 2003 and revised it in 2011 and 2019 (WACHWG 2011, 2019). The WACH Management Plan identifies nine plan elements: cooperation, population management, habitat, regulations, reindeer, knowledge, education, human activities, and changing climate, as well as associated goals, strategies, and management actions. As part of the population management element, the WACH Working Group developed a guide to herd management determined by population size, population trend, and harvest rate. Population sizes guiding management level determinations were based on recent (since 1970) historical data for the WACH (WACHWG 2011, 2019). Revisions to recommended harvest levels under liberal and conservative management were made in 2015 (WACHWG 2015) and 2019 (WACHWG 2019a, **Table 1**).

The WACH population declined rapidly in the early 1970s, bottoming out at about 75,000 animals in 1976. Aerial photocensuses have been used since 1986 to estimate population size. The WACH population increased throughout the 1980s and 1990s, peaking at 490,000 animals in 2003 (**Figure 2**). From 2003-2016, the herd declined at an average annual rate of 7.1% from approximately 490,000 caribou to 200,928 caribou (Dau 2011, 2014; Caribou Trails 2014; Parrett 2016). In 2017, the herd increased to an estimated 259,000 caribou (Parrett 2017a). However, part of this increase may have been due to improved photographic technology as ADF&G switched from film to higher resolution digital cameras. The 2019 population estimate was 244,000 caribou (Hansen 2019a). No photocensus was completed in 2020, but ADF&G completed a census in 2021 (WACHWG 2020). The 2021 population estimate was 188,000 caribou with a 95% confidence interval of +/- 11,855 and a minimum count of 180,374. This is approximately a 24% decline from the 2019 population estimate (WACHWG 2021). The 2022 population estimate was 164,000 caribou with a 95% confidence interval of +/- 7,271 and a minimum count of 161,034, representing an additional 12% decline (**Figure 2**, WACHWG 2022).

Between 1982 and 2011, the WACH population was within the liberal management level prescribed by the WACH Working Group (**Figure 2, Table 1**). In 2013, the herd population estimate fell below the population threshold for liberal management of a decreasing population (265,000), slipping into the conservative management level. In 2020, as no photocensus was completed, the WACH Working Group voted to maintain the herd's status at the conservative declining level (WACH Working Group 2020). The 2021 population estimate fell below the population threshold for conservative management of a decreasing population (200,000). The WACH Working Group voted to place the herd in the preservative declining level in 2021 and 2022 (WACHWG 2021, 2022).

Between 1970 and 2021, the bull:cow ratio exceeded Critical Management level of 30 bulls:100 cows identified in the 2019 WACH Management Plan (**Figure 3**). (Note: Previous management plans identified 40 bulls:100 cows as the critical management level). However, the average annual number of bulls:100 cows was greater during the period of population growth (54:100 between 1976–2001) than during the recent period of decline (44:100 between 2004-2016). However, in 2017 the bull:100 cow ratio was the highest since 1998 at 54 bulls:100 cows. In 2021, that ratio fell slightly to 47 bulls:100 cows (**Figure 3,** WACHWG 2021). Additionally, Dau (2015) states that while trends in bull:cow ratios are accurate, actual values should be interpreted with caution due to sexual segregation during sampling and the inability to sample the entire population, which likely account for more annual variability than actual changes in composition.

Although factors contributing to the 2003-present decline are not known with certainty, increased adult cow mortality, and decreased calf recruitment and survival played a role (Dau 2011, WACHWG 2022). Since the mid-1980s, adult mortality has slowly increased while recruitment has slowly decreased (**Figure 4**, Dau 2013). Prichard (2009) developed a population model specifically for the WACH using various demographic parameters and found adult cow survival to have the largest impact on population size, followed by calf survival and then parturition rates.

Calf production has likely had little influence on the population trajectory (Dau 2013, 2015). Between 1990 and 2003, the June calf:cow ratio averaged 66 calves:100 cows/year. Between 2004 and 2017, the June calf:cow ratio averaged 72 calves:100 cows/year. In June 2018, 86 calves:100 cows were observed, which approximates the highest parturition level ever recorded for the herd (86 calves:100 cows in 1992) (Dau 2016a, WACH Working Group 2021). The 5-year period from 2015-2019 had the highest (83%) parturition rate of any period since monitoring began. Since 2018, the parturition rates have decreased. In 2022, the calf:cow ratio was 64 calves:100 cows. The long-term average (1992-2022) is 70 calves:100 cows/year (**Figure 5**, WACHWG 2022, NWARAC 2023).

Decreased calf survival through summer and fall and recruitment into the herd may have contributed to the recent population decline (Dau 2013, 2015). Fall calf:cow ratios indicate calf survival over summer. Between 1976 and 2017, the fall calf:cow ratio ranged from 35 to 59 calves:100 cows/year, averaging 47 calves:100 cows/year (**Figure 5**).

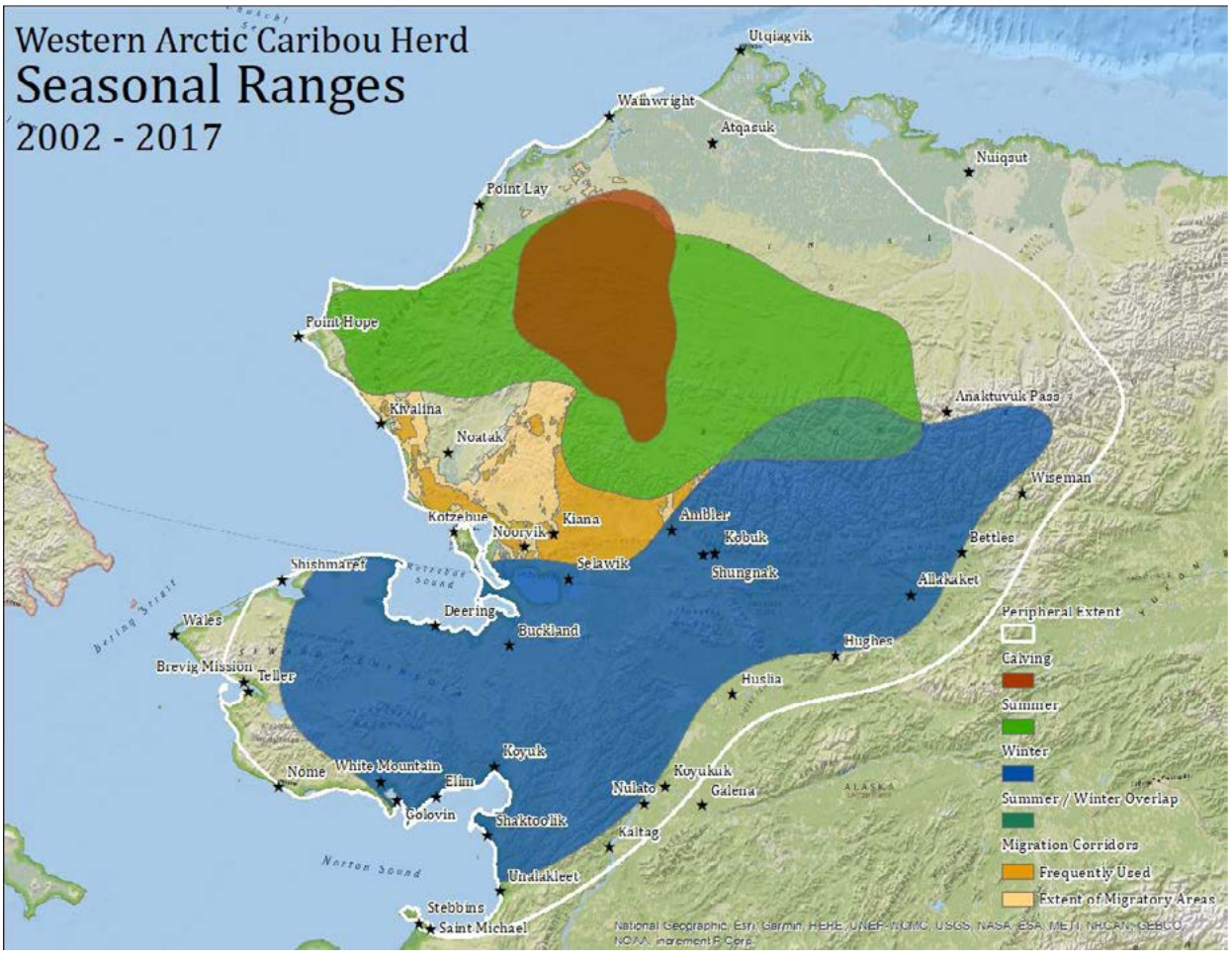
Similarly, the ratio of short yearlings (SY, 10-11 months old caribou) to adults provides a measure of overwintering calf survival and recruitment. Between 1998 and 2022, SY:adult ratios ranged from 9-26

and averaged 17 SY:100 adults/year (**Figure 5**). SY:100 adult ratios were high from 2016-2018, ranging from 21-23 SY:100 adults (Dau 2016b, NWARAC 2019a, NWARAC 2023). The 2022 SY:100 adult ratio was on par with the long-term average at 17 SY:100 adults (WACHWG 2022). Over the past seven years the short yearling ratio has been at or above the long-term average. Thus, recruitment does not appear to be a major driver of herd decline.

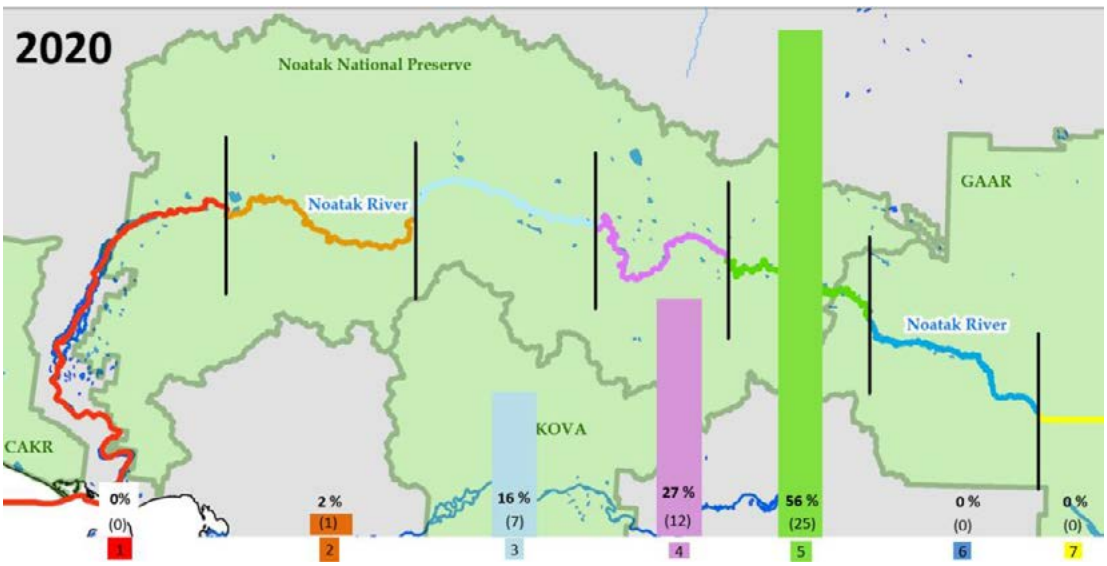
Cow mortality affects the trajectory of the herd (Dau 2011, 2013, Prichard 2009, NWARAC 2019a). The long-term mortality rate of radio-collared adult cows averaged 19% from 1987-2020 (WACHWG 2022). The annual mortality rate increased from an average of 15% between 1987 and 2003 to 23% from 2004-2014 (**Figure 4,** Dau 2011, 2013, 2014, 2015). Mortality rates declined in 2015 and 2016, but then increased sharply in 2017. However, the increased mortality rate in 2017 may have been due to a low and aging sample size as few caribou were collared in the previous two years (Prichard et al. 2012, NWARAC 2019a) and/or difficult weather conditions (Gurarie et al. 2020). Prior to 2019, ADF&G and NPS deployed collars on caribou at Onion Portage via boat in September. Only seven collars total were deployed in both 2017 and 2018 due to fewer caribou migrating through Onion Portage at predictable times. ADF&G and NPS begun deploying collars using net gun techniques via helicopter in April 2019 (Joly and Cameron 2021). Since 2018, estimated mortality rates have remained above the long-term average, ranging from 23-36%. Estimated mortality includes all causes of death including hunting (Dau 2011). Dau (2015) states that cow mortality estimates are conservative due to exclusion of unhealthy (i.e. diseased) and yearling cows from collaring. These mortality estimates are influenced by the age at which individuals were collared (which is unknown), sample size and how long the collars have been on individuals (Dau 2015, Prichard et al. 2012).

Cow mortality is low over winter and then increases in the spring/early summer, likely due to the convergence of declining body condition, demands of migration, and lactation prior to the availability of higher quality forage. Conversely, bull mortality spikes during the fall, both naturally from the demands of rut and from targeted human harvest (Dau 2013, 2014). Additionally, Prichard (2009) and Dau (2015) suggest that harvest levels and rates of cows can greatly impact population trajectory.

Increased predation, hunting pressure, deteriorating range condition (including habitat loss and fragmentation), climate change, fall and winter icing events, and disease may be contributing factors to the population decline (Joly et al. 2011; Dau 2014, 2015). Joly et al. (2007) documented a decline in lichen cover in portions of the wintering areas of the WACH, which continued through at least 2015 (BLM, unpublished data).



Map 2. Western Arctic Caribou Herd seasonal range map, 2002-2017 (image from WACHWG 2019a).



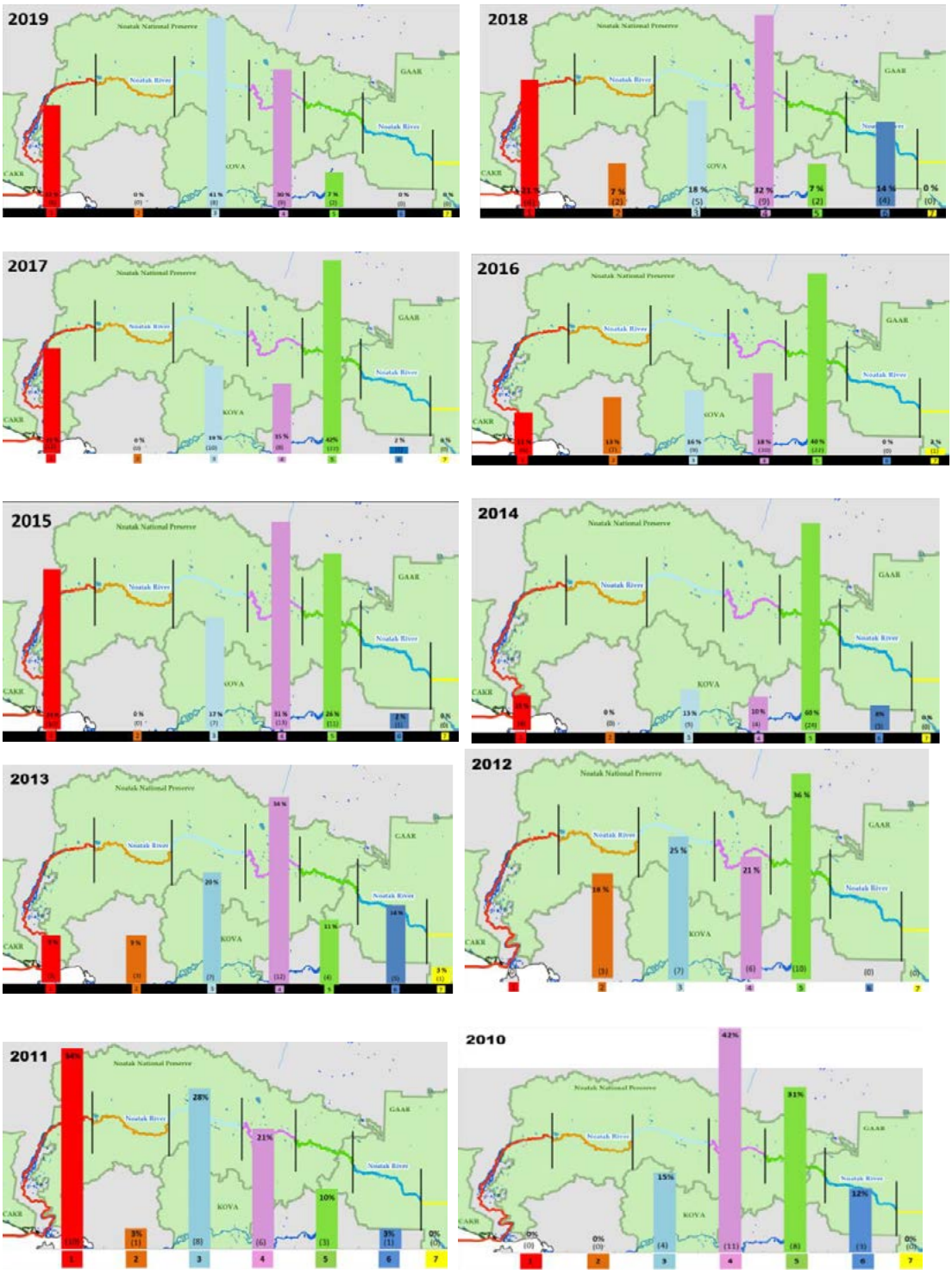


Figure 1. 2010-2020 distribution of caribou crossing the Noatak River during fall. Histograms depict where collared female caribou crossed the Noatak River, generally from north to south, on their fall migration. Relative percentages (top number) and the absolute number (middle number) of caribou are provided. The river is divided into seven (lowest number) color-coded segments which are displayed in the background. The middle five segments are 100 river kilometers long, while the westernmost segment (red) is 200 km (before extending into the Chukchi Sea) and the easternmost (yellow) runs as far east as WACH caribou are known to migrate (Joly and Cameron 2021).

Table 1. WACH management levels using herd size, population trend, and harvest rate (**WACHWG 2019b**).

Management and Harvest Level	Population Trend			Harvest Recommendations May Include:
	Declining Adult Cow Survival <80% Calf Recruitment <15:100	**Stable** Adult Cow Survival 80%-88% Calf Recruitment 15-22:100	**Increasing** Adult Cow Survival >88% Calf Recruitment >22:100	
Liberal	Pop: 265,000+ Harvest: 14,000+	Pop: 230,000+ Harvest: 14,000+	Pop: 200,000+ Harvest: 14,000+	• Reduce harvest of bulls by nonresidents to maintain at least 30 bulls:100 cows • No restriction of bull harvest by resident hunters unless bull:cow ratios fall below 30 bulls:100 cows
Conservative	Pop: 200,000-265,000 Harvest: 10,000-14,000	Pop: 170,000-230,000 Harvest: 10,000-14,000	Pop: 150,000-200,000 Harvest: 10,000-14,000	• Encourage voluntary reduction in calf harvest, especially when the population is declining • No cow harvest by nonresidents • Restriction of bull harvest by nonresidents • Limit the subsistence harvest of bulls only when necessary to maintain a minimum 30:100 bull:cow ratio
Preservative	Pop: 130,000-200,000 Harvest: 6,000-10,000	Pop: 115,000-170,000 Harvest: 6,000-10,000	Pop: 100,000-150,000 Harvest: 6,000-10,000	• No harvest of calves • Limit harvest of cows by resident hunters through permit hunts and/or village quotas • Limit the subsistence harvest of bulls to maintain at least 30 bulls:100 cows • Harvest restricted to residents only, according to state and federal law. Closure of some federal public lands to non-qualified users may be necessary
Critical	Pop: <130,000 Harvest: <6,000	Pop: <115,000 Harvest: <6,000	Pop: <100,000 Harvest: <6,000	• No harvest of calves • Highly restrict the harvest of cows through permit hunts and/or village quotas • Limit the subsistence harvest of bulls to maintain at least 30 bulls:100 cows • Harvest restricted to residents only, according to state and federal law. Closure of some federal public lands to non-qualified users may be necessary

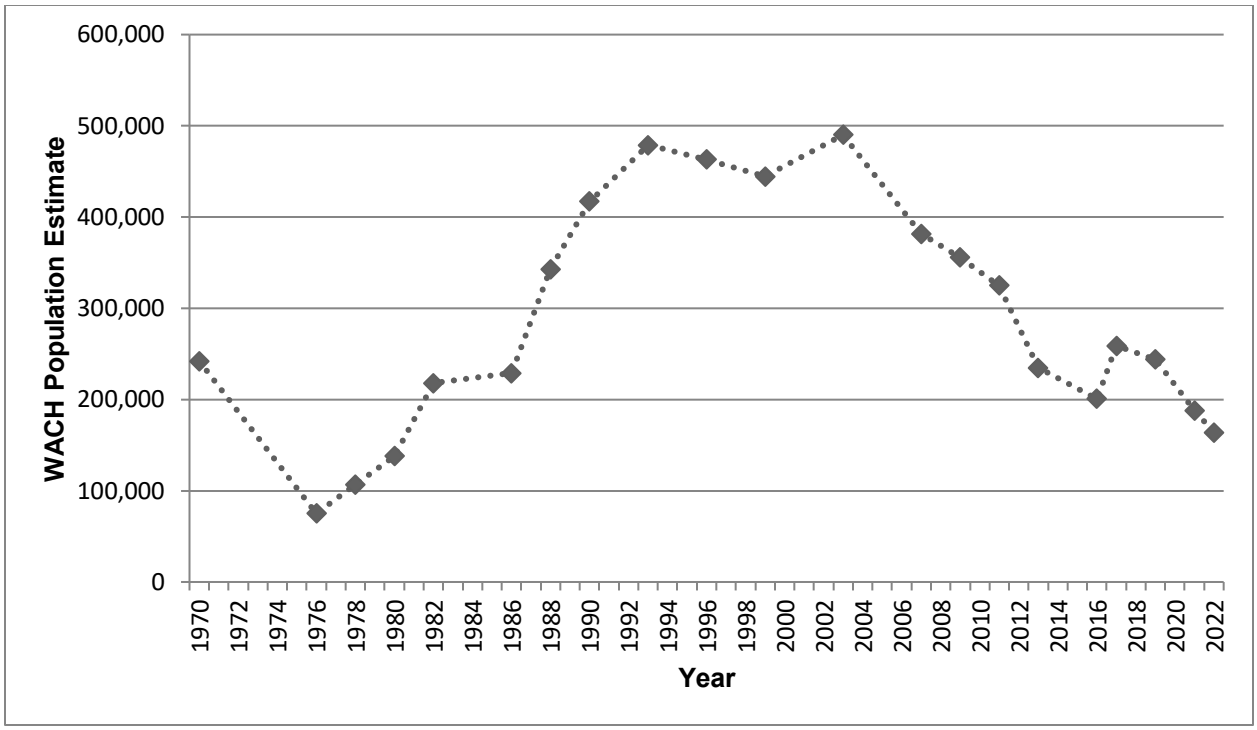


Figure 2. The WACH population estimates from 1970–2022. Population estimates from 1986–2022 are based on aerial photographs of groups of caribou that contained radio-collared animals (Dau 2011, 2013, 2014; Parrett 2016, 2017a; Hansen 2019a; WACHWG 2021, 2022).

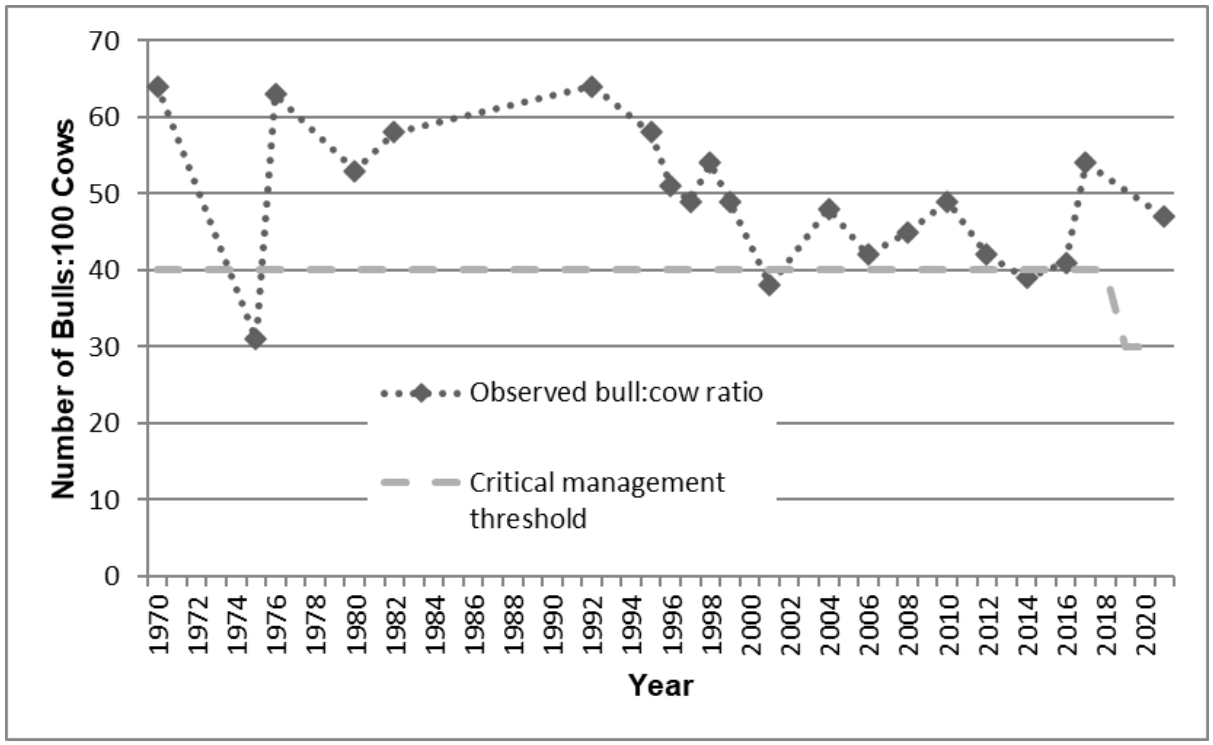


Figure 3. Bull:cow ratios for the WACH (Dau 2015; ADF&G 2017c; Parrett 2017a; WACHWG 2021).

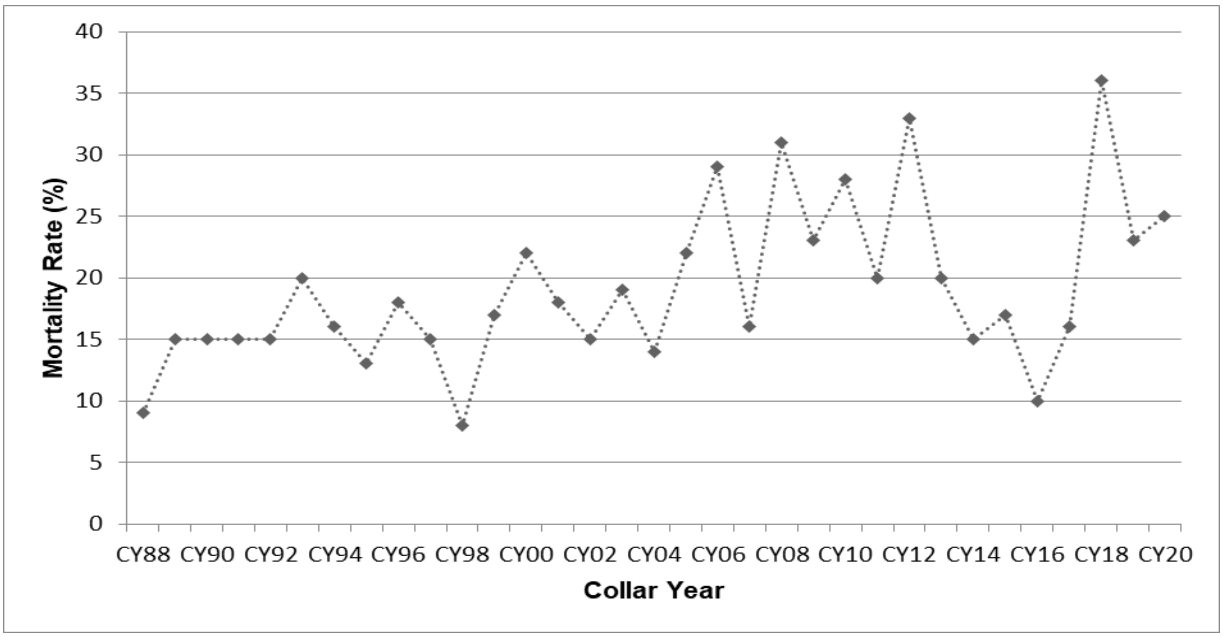


Figure 4. Mortality rate of radio-collared cow caribou in the WACH (Dau 2013, 2015, 2016b; NWARAC 2019a; WACHWG 2020, 2021). Collar Year = 1 Oct-Sep 30. Note: Prior to 2019, collars were deployed via boat in Onion Portage from September to October. Starting in 2019 collars were deployed via net gun techniques in spring (Joly and Cameron 2021).

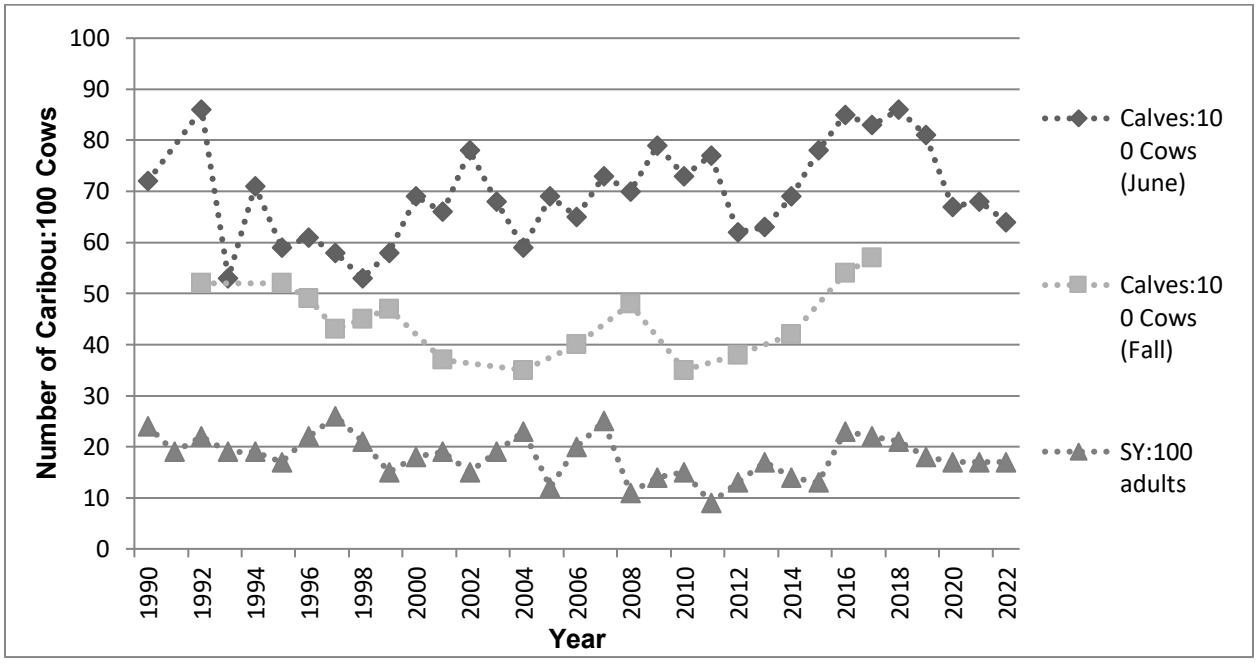


Figure 5. Calf:cow and short yearling (SY):adult ratios for the WACH (Dau 2013, 2015, 2016a; ADF&G 2017c; Parrett 2017a; NWARAC 2019a, 2023; WACHWG 2021, 2022). Short yearlings are 10-11 months old caribou.

Teshekpuk Caribou Herd

The TCH calving and summering areas overlap with the eastern portion of the National Petroleum Reserve–Alaska (NPR–A). Most of the TCH moves toward Teshekpuk Lake in May to calve in early June. The primary calving grounds of the TCH (approximately 1.8 million acres) occur to the east, southeast and northeast of Teshekpuk Lake (**Figure 6**, Person et al. 2007; Wilson et al. 2012). From late June through July cows and bulls move to seek relief from insects (**Figure 6**, Carroll 2007; Parrett 2007). Fall and winter movements are more variable, although most of the TCH winters on the coastal plain (Carroll 2007). The TCH winters in four relatively distinct areas: the coastal plain between Atqasuk and Wainwright; the coastal plain west of Nuiqsut; the central Brooks Range; and the shared winter ranges with the WACH in the Noatak, Kobuk, and Selawik drainages (**Figure 6**, Parrett 2021).

State management objectives for the TCH include (Parrett 2021):

- Maintain a population of at least 15,000 caribou, recognizing that caribou numbers naturally fluctuate.
- Provide a harvest of at least 900 caribou in a sustainable manner.
- Maintain a population with a range of 25–35 bulls:100 cows, depending upon population level.
- Obtain harvest estimates with sufficient data such that a 15% change in annual harvest is detectable.
- Develop regulations that have broad support among users and cooperating agencies.
- Clarify the relationships between both abundance and vital rates with harvest, habitat, body condition, predation, seasonal mixture with adjacent herds, and immigration between adjacent herds.
- Monitor herd characteristics and population parameters.
- Provide high-quality data on distribution, habitat preferences, and movement patterns to facilitate effective planning and mitigation of oil development and associated infrastructure.

Since 1984, the minimum population of the TCH has been estimated from aerial photocensuses and radio-telemetry data. The TCH population increased from an estimated 18,292 caribou (minimum estimate 11,822) in 1984 to 68,932 caribou (minimum estimate 64,106) in 2008. From 2008 to 2014, the population declined by almost half to 39,000 caribou (Parrett 2015a). Interpretation of population estimates is difficult due to movements and range overlap among caribou herds, which results in both temporary and permanent immigration and emigration (Person et al. 2007). For example, the minimum count in 2013 contained an unknown number of CACH caribou (Parrett 2015a). Following the 2013 census, ADF&G made the decision to manage the TCH based on the minimum count because the bulk of the animals that were estimated rather than counted were with the WACH at the time of the photocensus (Parrett 2015b, pers. comm.). In 2017, the minimum count was 56,255 with a population estimate of 55,614 (SE = 2,909). During 2012–2017, the management objective of maintaining a population of at least 15,000 caribou was met (Parrett 2021). The total minimum count for the 2022 photocensus was 51,225 caribou and the abundance estimate was 61,593 animals (95% CI: 52,188-70,998) (Daggett 2023, pers. comm.).

In 2013 and 2016, the number of bulls:100 cows was 39 bulls:100 cows and 28 bulls:100 cows, respectively (Parrett 2011, 2013, 2015a; Parrett 2017a, pers. comm.). Comparison of bull:cow and calf:cow ratios from 1991-2000 and later years is not possible due to changes in methodology. The calf:cow ratio increased from 18 calves:100 cows between 2009-2013 to 48 calves:100 cows in 2016 (Parrett 2013, 2015a; Parrett 2017a, pers. comm.). In addition, the number of SY:adults declined from an average of 20 SY:100 adults between 1999 and 2008 to an average of 14 SY:100 adults from 2009-2014 (Parrett 2013) and increased in 2016 to 29 SY:100 adults (Parrett 2017a, pers. comm.). From 2018-2021, the SY:adults returned to an average of 14 SY:100 adults. The most recent survey in 2023 decreased to 6.8 SY:100 adults (Daggett 2023, pers. comm.).

The annual mortality of adult radio collared females from the TCH has remained close to the long term (1991-2012) average of 14.5% (range 8–25%) (Parrett 2011, 2015a; Caribou Trails 2014). As the TCH declined, calf weights declined, indicating that poor nutrition may have had a significant effect on this herd (Carroll 2015, pers. comm.; Parrett 2015b, pers. comm.). In 2016 increased calf weights, high adult female survival (92%), high yearling recruitment (29 yearlings:100 adults), high calf production (81%), and a high calf:cow ratio (48 calves:100 cows) suggest that the population may be stable or declining at a slower rate (Parrett 2017a, pers. comm.; Klimstra 2017). In contrast, the body condition of individuals from the WACH, which declined dramatically over the same time period, had remained relatively good, indicating that caribou were still finding enough food within their range (Caribou Trails 2014; Dau 2014). Parturition rates from 2018-2022 peaked at 85% in 2020 and have since declined to 45% in 2022 (Daggett 2023, pers. comm.).

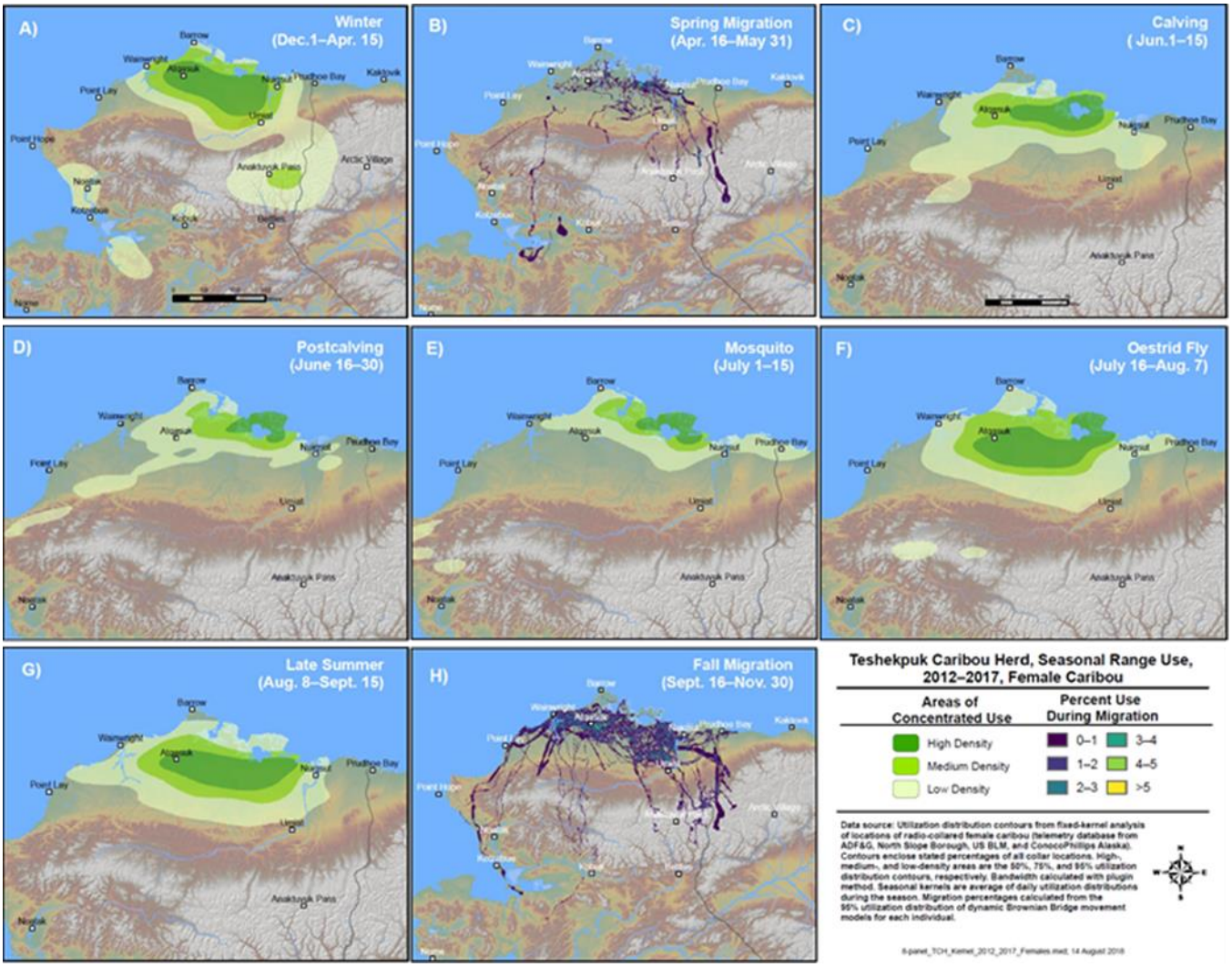
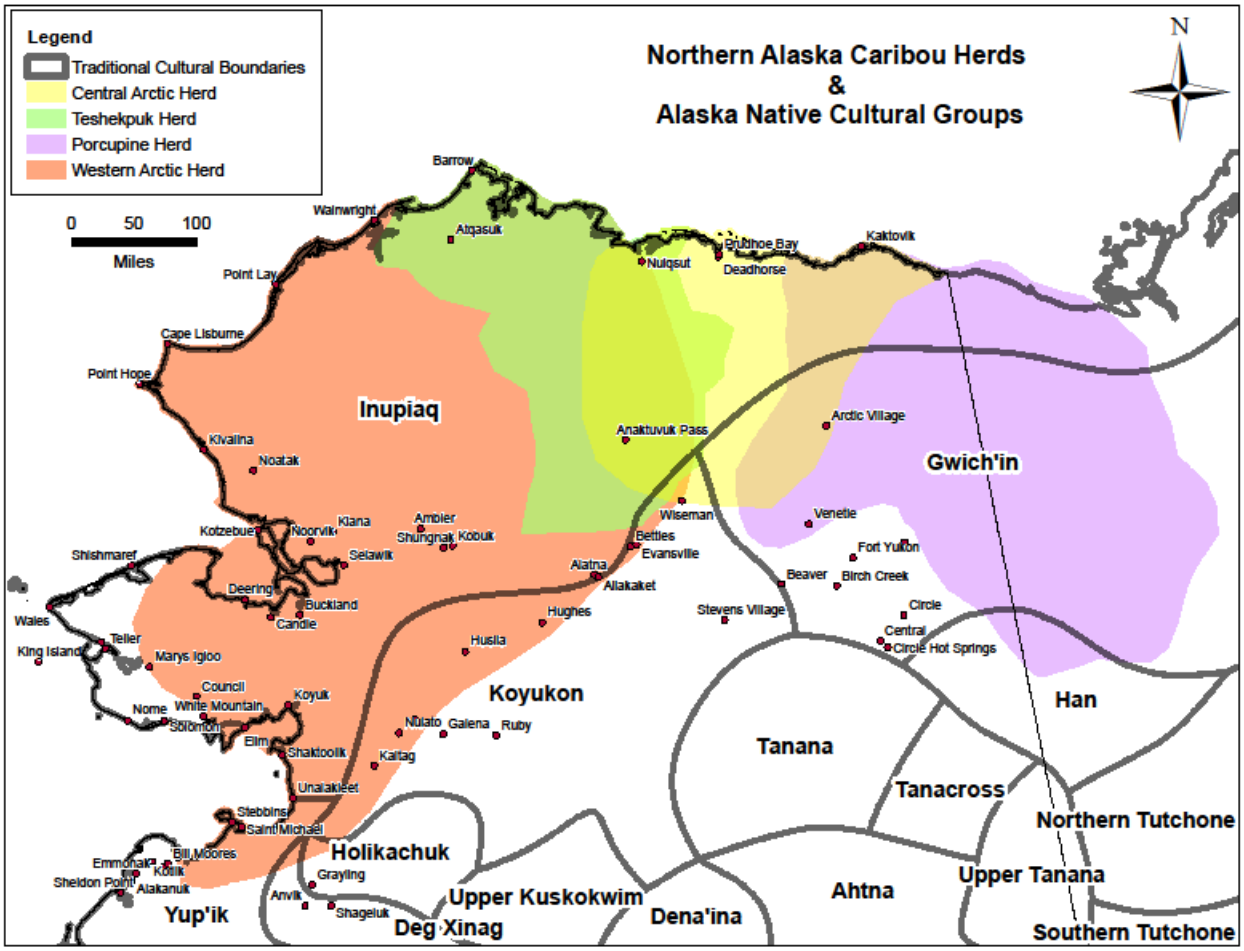


Figure 6. Seasonal ranges, 2012–2017, for satellite collared female caribou of the TCH Alaska (Parrett 2021). Note: Utqiaġvik was known as Barrow until 2016**.**

Cultural Knowledge and Traditional Practices

The potential effects of this proposal span the traditional territory the Iñupiat of the North Slope, Northwest Arctic and the Seward Peninsula, Yup'ik communities in the southern portion of the Seward Peninsula and northern portion of the Yukon region, and the Koyukon Athabascans of the Western Interior (**Map 3**). However, caribou are encountered less frequently by communities on the edges of the WACH's range, particularly during times of population decline (Burch 2012).

Because the communities that would be most directly affected by this proposal are located in traditional Iñupiaq territory, this section focuses on their cultural uses of caribou. Caribou have been a significant resource for the Iñupiat for thousands of years. Archaeological deposits at the Onion Portage site on the Kobuk River document 10,000 years of caribou hunting at this location, which is still used today (Anderson 1968, 1988), and even older archaeological deposits dated to approximately 11,000 years ago occur in the Kivalina River drainage (Buvit et al. 2019).



Map 3. Map depicting the overlap of northern Alaska caribou herds and traditional territories of Alaska Native cultural groups.

Iñupiat values are based on the perspective that the human-animal relationship is reciprocal. Maintaining the reciprocal relationship requires respectful human behavior toward animals that is guided by a system

of rules. Three of the primary rules are 1) that humans must harvest animals who give themselves, 2) they must not waste any part of animals they harvest, and 3), in times of low animal populations, people must intentionally limit their harvest (Burch 1984, 1994, 1995; ADF&G 1992).

Failure to follow these rules or treating animals with disrespect will prevent animals from returning. Northwest Arctic Council members have testified about the decline in local availability of caribou, which has meant that many people have gone without caribou in recent years (NWARAC 2023). This proposal reflects the practice of intentional harvest limitation in order to maintain respectful and reciprocal relations between humans and caribou. At the Northwest Arctic Council meeting in October 2022, one Council member explained:

> Caribou is, I know they're going down. My son got caribou. I have caribou. So, he gave away to elders. And I always tell him don't get any more, I'll stop him when we have enough caribou because a family, my size, there's six of us in the family, and four caribou is enough for the whole year, and I always tell my son that's enough. When you get four caribou, that's good. The caribou herd is going down, we're not going to hunt this spring. And young men now, now days, if you teach them right, they'll listen, and I'm glad my son is doing that. Because I know the caribou is going down and we have to respect that (NWARAC 2022: 20).

Human population of the region

Decision-making on WACH harvest limits may incorporate demographic data for communities within the core range of the WACH. **Tables 2** highlights total population and the number of households for those regions with the highest documented harvest of caribou within the range of the WACH (U.S. Census 2020). **Table 3** shows the number of households harvesting caribou in the most recent ADF&G, Division of Subsistence surveys (CSIS 2023).

Table 2. Population and number of households in the Northwest Arctic Borough, North Slope Borough (excluding Kaktovik), and Nome Census Area (U.S. Census 2020). Kaktovik is excluded from the North Slope data because it is in Unit 26C, beyond the range of the WACH. Note that the Unit 24 community of Anaktuvuk Pass is within the North Slope Borough.

Census Area	Total Population	Number of Households
Northwest Arctic Borough	7,793	1,756
North Slope Borough, excluding Kaktovik	10,748	2,042
Nome Census Area	10,046	2,714
Total	**28,587**	**6,512**

Table 3. The number of households (in areas with a customary and traditional use determination for caribou within the units included in this proposal) harvesting caribou in in the most recent survey years, calculated based on ADF&G, Division of Subsistence data (CSIS 2023). Villages were not all surveyed in the same year. Note that totals for Unit 22 do not include Nome, for which no caribou subsistence survey data are available. Caribou survey data for Nunam Iqua and Kotlik date to 1980 and were deemed too old for inclusion. Some communities in Unit 26A

harvest primarily from the Teshekpuk Herd. These numbers do not reflect recent lack of availability of caribou for many communities, and therefore may over-estimate the number of households currently harvesting caribou.

Unit	Estimated Number of Households Harvesting Caribou in Most Recent Subsistence Survey Years
Unit 18 communities with C&T	12
Tanana (20E) and Stevens Village (25D)	4
Unit 21 (excluding communities in 21A; no C&T)	3
Unit 22 (excluding Nome; no data)	289
Unit 23	784
Unit 24 (excluding Anaktuvuk Pass)	38
Unit 26A and Anaktuvuk Pass	795
Total	**1,925**

Many gaps in the data remain, including the number of individuals (rather than households) harvesting caribou during past survey years and the number of potential caribou permit holders per household or in total. Of note, Wolfe et al. (2010) demonstrated that households producing more food in rural subsistence communities in Alaska were characterized by their inclusion of "multiple working-age males." Estimates of the number of potential permit holders may take into consideration the number of men of working age as one factor, as hunting has traditionally been dominated by men in Iñupiaq regions, although there are important exceptions to this pattern, as not all men of working age participate in the subsistence economy, and some women are active hunters (Satterthwaite-Phillips et al. 2016).

Unequal distribution of harvest effort

This proposal seeks a reduced harvest limit for the WACH, and past subsistence harvest estimates can inform consideration of reduced limits. ADF&G, Division of Subsistence has conducted periodic subsistence surveys for communities within the range of the WACH between 1982 and 2018. These data have limitations, such as the fact that communities are often surveyed only once every ten years, not each survey year is representative of typical subsistence use, and even in representative years, harvest numbers are estimates only. Nonetheless, subsistence surveys do provide valuable information on historical baseline harvest levels.

While wildlife regulations allot harvest limits on an individual basis, not all members of a community harvest and distribute wild foods at equal levels. Generally, many more people use caribou than harvest caribou because of the Iñupiaq cultural value of harvesting and sharing subsistence foods to provide for those who do not have a hunter in the household. As first posited by Wolfe (1987) and supported by decades of ADF&G, Division of Subsistence research, it is common for 30% of the households in rural Alaskan communities to harvest 70% of a community's total annual harvest measured in edible pounds of food (Magdanz et al. 2005: 41, Wolfe et al. 2010).

At their March 7-8, 2023 meeting, the Northwest Arctic Council discussed what they called "super hunters," hunters that provide for a large number of families, and who would need designated hunter permits under a reduced harvest limit scenario:

> We kind of named them as super hunters because a lot of families will -- five families will pull together gas and grub and whatever necessary for three boats to go out and hunt for six or seven families; that's why we call them super hunters, because they're providing for a lot of people that can't, you know, can't afford the gas, can't afford the boats, or don't have a boat, or an elder, that's one of the reasons why we kind of labeled them as super hunters but we need to ensure that they have this paperwork provided to them if they are going to do that" (NWARAC 2023:110).

Tables 4-7 compare the estimated number of caribou harvested in each community distributed over all households with harvest *only per households that actually harvested caribou*. Note that while harvest limits are individual, rather than household based, ADF&G, Division of Subsistence data on the percentage of a community harvesting caribou is only available on a household basis. The average number of potential permit-holders per household is unknown.

Table 4. For communities in Unit 23, this table shows the estimated number of caribou harvested (1) per household, and (2) per household successfully harvesting caribou for all surveys conducted periodically between 1986 and 2018. Calculated based on data from ADF&G, Division of Subsistence Community Subsistence Information System (CSIS 2023) and ADF&G, Division of Subsistence Technical Papers (Mikow et al. 2014., Mikow and Kostick 2016). Survey years with key data missing were excluded.

Community	Estimated Number of Caribou per Household	Estimated Number of Caribou per Households that Successfully Harvested Caribou
Ambler	5.3	10.5
Buckland	7.4	11.2
Deering	5.6	11.0
Kiana	4.2	6.8
Kivalina	2.9	5.5
Kobuk	4.8	7.2
Kotzebue	2.1	5.7
Noatak	3.8	6.7
Noorvik	4.0	6.8
Point Hope	1.1	3.6
Selawik	5.9	10.0
Shungnak	7.6	12.2
Average	**4.6**	**8.1**

Table 5. For communities in Unit 26A and Anaktuvuk Pass, this table shows the estimated number of caribou harvested (1) per household, and (2) per household successfully harvesting caribou for all surveys conducted periodically between 1985 and 2014. Calculated based on data from ADF&G, Division of Subsistence Community Subsistence Information System (CSIS 2023). Survey years with key data missing were excluded.

Community	Estimated Number of Caribou per Household	Number of Caribou per Households that Successfully Harvested Caribou
Anaktuvuk Pass	7.6	16.0
Atqasuk	3.7	5.8
Nuiqsut	4.7	7.3
Point Lay	4.7	7.2
Utqiaġvik	2.1	6.6
Wainwright	6.2	10.1
Average	**4.8**	**8.8**

Although Anaktuvuk Pass is located on the edge of Unit 24, it is included in the table for Unit 26A communities because of cultural continuity with the North Slope Region. However, as an inland community, Anaktuvuk Pass relies more heavily on caribou than coastal North Slope communities that have access to marine mammals (Brown et al. 2016). Despite important differences between communities, taken as a whole, residents of Unit 23 and residents of Unit 26A and Anaktuvuk Pass together have similar levels of average estimated per household harvest (4.6 and 4.8 caribou, respectively) and similar average estimated harvest per households that successfully hunted caribou (8.1 and 8.8 caribou, respectively) (**Tables 4** and **5**).

In terms of harvest per household successfully harvesting caribou, the highest average in Unit 23 was 12.2 caribou per household in Shungnak (**Table 4**), and the highest average in Unit 26 and Anaktuvuk Pass was 16 caribou, in Anaktuvuk Pass (**Table 5**). The estimated number of households harvesting caribou in the most recent survey years was 784 in Unit 23 and 795 in Unit 26A and Anaktuvuk Pass, for a total of 1,579 households (**Table 3**, CSIS 2023).

Note the significant difference between the two measures of caribou harvest (distributed across all households vs. only those households harvesting caribou) for both Units 23 and 26A. In considering how such numbers compare to the proposed reduction to four caribou per year per permit holder, it is worth noting that some "super households" (Wolfe 1987) that harvest for the wider community are likely to have multiple hunters, each of whom could hold a permit.

Table 6. For communities in Unit 22, this table shows the estimated number of caribou harvested (1) per household, and (2) per household successfully harvesting caribou for all surveys conducted periodically between 1989 and 2018. Calculated based on data from ADF&G, Division of Subsistence Community Subsistence Information System (CSIS 2023). Survey years with key data missing were excluded. Note that this table does not include survey data for Nome, which are not available.

Community	Estimated Number of Caribou per Household	Estimated Number of Caribou per Households that Successfully Harvested Caribou
Brevig Mission	0.8	5.1
Elim	2.0	4.0
Golovin	<0.1	1.0

Community	Estimated Number of Caribou per Household	Estimated Number of Caribou per Households that Successfully Harvested Caribou
Koyuk	3.6	6.1
Saint Michael	0.3	3.5
Shaktoolik	2.7	5.2
Shishmaref	3.0	6.7
Stebbins	0.1	6.3
Teller	0.2	2.9
Unalakleet	2.3	6.3
Wales	<0.1	3.4
White Mountain	1.2	4.5
Average	**1.2**	**4.6**

In Unit 22 communities (excluding Nome, for which no data are available), the average estimated per household harvest was 1.2 caribou, while the estimated harvest per harvesting household was 4.6 caribou, with a high of 6.7 caribou in Shishmaref (**Table 6**). The estimated number of households harvesting caribou in the most recent survey years was 289 for Unit 22 (**Table 3**, CSIS 2023).

Table 7. For communities in Unit 24, this table shows the estimated number of caribou harvested (1) per household, and (2) per household successfully harvesting caribou for all surveys conducted periodically between 1982 and 2011. Calculated based on data from ADF&G, Division of Subsistence Community Subsistence Information System (CSIS 2023). Survey years with key data missing were excluded.

Community	Estimated Number of Caribou per Household	Estimated Number of Caribou per Households that Successfully Harvested Caribou
Alatna	1.6	4.1
Bettles	1.2	4.1
Bettles/Evansville	0.2	2.3
Evansville	0.2	1.6
Coldfoot	0.4	1.6
Hughes	0.4	5.3
Huslia	1.4	4.3
Wiseman	0.8	1.3
Average	**0.8**	**3.1**

The availability of the WACH within the traditional territories of the interior Athabascans is more variable; harvest of caribou in these communities depends on the proximity of migrations to each village (Brown et al. 2004). In Unit 24 communities (excluding Anaktuvuk Pass), the average harvest per household was 0.8 caribou, and the average harvest per harvesting household was 3.1 caribou (**Table 7**).

No table is included for Unit 21D, remainder communities, where caribou harvest has only been documented for Galena in surveys conducted in the last 15 years. In that community, households harvesting caribou took an average of 2.5 caribou per household (CSIS 2023). Nor is a table included for Unit 18 communities, or Stevens Village and Tanana, which also have a customary and traditional use determination in portions of the WACH range. These communities historically have very low harvest levels (CSIS 2023). However, lower caribou harvest, reflecting intermittent and marginal availability, does not mean that caribou are not important to these communities.

When considering the per household caribou harvest levels shown in **Tables 4-7**, it is not surprising that the most vocal participants in the recent public hearings and tribal consultations are from the high-harvesting regions: residents of northwest Alaska in Unit 23, residents of the North Slope in Unit 26A and Anaktuvuk Pass.

Caribou harvest is affected by multiple factors: harvest limits, availability of animals, shifting migration routes, the need to share with nearby communities, human population size, community location, and the availability of other resources. The numbers in the tables cited in this section are approximations and do not tell the entire story of caribou harvest or need in these communities.

Multiple considerations and pressures determine how many caribou are harvested when a successful hunt is made. For example, in Unit 23, residents of some communities have had to "greatly increase their expenditure of money and effort to maintain…harvest levels" (Dau 2015:14-30). This is due in part to having to travel farther, more frequently, and for longer durations to find caribou (Halas 2015; Gonzalez et al. 2018), which is made even more expensive by rising fuel prices. A reduced harvest limit may make such large investments untenable for some hunters, who would otherwise have provided for the wider community. Although designated hunter permits could ameliorate this outcome, these permits currently present bureaucratic and logistical challenges to rural residents.

Harvest data from comprehensive subsistence household surveys are not sufficiently up to date to provide accurate information on the full impact that the WACH's decline and altered migration pattern may already be having on caribou availability and harvest levels. These surveys are not collected every year in every community. Currently, ADF&G Division of Subsistence is conducting surveys of caribou harvest in Selawik, Shungnak, Noatak, Deering, and Kobuk. This research is scheduled to be completed in 2024 (Cold 2021).

Cow harvest

In addition to harvest numbers, constraints on whether cows or bulls are harvested must also be taken into consideration. In the fall and prior to freeze-up, bulls have traditionally been preferred because they are fatter than cows (Georgette and Loon 1993; NWARAC 2023). After freeze-up, cows are preferred, because bulls are typically skinnier and in rut by then; the meat smells bad and is of poor quality (Braem et al. 2015; NWARAC 2023).

In some—but not all—survey years, ADF&G, Division of Subsistence data in the CSIS contains a breakdown of caribou harvest by male, female, or sex unknown. In Unit 23, in surveys conducted periodically between 1964 and 2018 for which this information exists, an average of 60% of the harvest was male and 30% was female, with 10% being unknown (**Appendix 2**). In Unit 26A and Anaktuvuk

Pass, in surveys conducted periodically between 1985 and 2014 for which information is available, an average of 70% of caribou harvested were male, 25% were female, and 5% were of unknown sex (**Appendix 2**). However, there was wide variability between years and communities in the breakdown of the harvest by sex.

Factors contributing towards increased harvest pressure on cows

Harvest of caribou by federally qualified subsistence users may be shifting towards cows due to the delayed migration of caribou into Unit 23 community hunting areas, as recently noted by a Northwest Arctic Council member (NWARAC 2023). However, current harvest report data on cow vs. bull harvest by federally qualified subsistence users are not available. With the delayed migration, caribou have been arriving in some Unit 23 communities after the rutting season has begun, at which point bulls are considered inedible. The local preference is to avoid hunting bulls for many months after the rut. The Western Arctic Caribou Herd Working Group has identified limiting cow harvest as the highest priority for WACH conservation (WACH Working Group 2022). The proposed harvest limit includes a significant limitation on cow harvest; an alternative incremental approach would begin with only limiting cow harvest, an option described in the "Alternatives Considered" section of this analysis.

Council rationale for proposing a reduced harvest limit

The Northwest Arctic Council has identified multiple factors that may be negatively affecting the WACH population and local people's ability to harvest caribou. Climate change, delayed caribou migration, development, increased predation by bears and wolves and/or a combination of these factors has led to difficulty for caribou-dependent communities in Unit 23 and (Dau 2015, Braem et al. 2015, NWARAC 2020, 2021). Reducing their harvest is one of the few actions Unit 23 communities can take to attempt to slow the WACH population decline. The requests to intentionally reduce caribou harvest reflect Iñupiaq values and the hope of intentionally limiting harvest to contribute to the recovery of the caribou population upon which communities depend.

During discussion of this proposal and an identical Special Action Request at their March 7-8, 2023 meeting, members of the Northwest Arctic Council discussed their rationale for supporting the reduced harvest limit. Council members emphasized the importance of acting pre-emptively and acknowledged that local residents would have to make sacrifices for the preservation of the herd, including taking fewer cows:

> We don't want to hit rock bottom with the caribou herd. If we lose that, if we go beyond what we have now we don't even know if we can get our caribou back (NWARAC 2023: 59).
>
> We have to do something to try to preserve this herd even if it means a lot less than what we were getting before. [A] limit to hunting of the cows is the only way because they're the ones who…can bring this herd back. It's one of the things that we have to sacrifice (NWARAC 2023: 54).

One Council member from Kotzebue discussed the need for action parallel to the regulatory process to educate the young people in Northwest Arctic communities about the importance of saving the caribou population. Another Council member from Kotzebue emphasized that restricting harvest by federally

qualified subsistence users would demonstrate local will to self-limit harvest in order to protect the WACH (NWARAC 2023).

The two public hearings and the tribal consultations on WSA22-05/06 showed the conflict faced by participants (see summaries in "Current Events"). The affected communities who rely on the Western Arctic Caribou Herd are aware that conservations measures are needed. However, they are concerned about drastic harvest limit reductions and have asked for a decision-making process that is community-based and allows adequate time for input and consultation with federally qualified subsistence users. At the Federal Subsistence Board meeting on WSA22-05/06, the Chair of the Northwest Arctic Council acknowledged that local reaction to the proposed harvest limit had been strongly negative but emphasized that some conservation action would ultimately need to be taken by federally qualified subsistence users (NWARAC 2023).

Harvest History

Western Arctic Caribou Herd harvest

The WACH Working Group provides recommendations on herd management, including harvest levels. Currently, the WACH is within the "preservative declining" level, which prescribes a harvest of 6,000-10,000 caribou (**Table 1**). Previous versions of the WACH management plan recommended a harvest rate of 6% of the estimated population when the herd was declining (WACHWG 2011, Parrett 2017b, pers. comm.). The current recommended harvest rate at the preservative declining level is 5% at 200,000 and 4.6% at 130,000. As the 2022 population estimate was 164,000 caribou, the harvestable surplus is currently 7,872 caribou (4.8% of 164,000) (NWARAC 2023; WACHWG 2022). The State manages the WACH on a sustained yield basis (i.e. managing current harvests to ensure future harvests). Of particular concern is the overharvest of cows, which may have occurred since 2010/11 (Dau 2015). Dau (2015:14-29) states, "even modest increases in the cow harvest above sustainable levels could have a significant effect on the population trajectory of the WACH."

Caribou harvest by local hunters is estimated from community harvest surveys (**Appendix 2**), if available, and from models developed by A. Craig with ADF&G's Division of Wildlife Conservation Region V. These models incorporate factors such as community size, availability of caribou, and per capita harvests for each community, which are based on mean values from multiple community harvest surveys (Dau 2015). In 2015, Craig's models replaced models developed by Sutherland (2005), resulting in changes to local caribou harvest estimates from past years. While Craig's models accurately reflect harvest trends, they do not accurately reflect actual harvest numbers (Dau 2015). This analysis only considers the updated harvest estimates using Craig's new model as cited in Dau (2015). Caribou harvest by nonlocal residents and nonresidents are based on harvest reports from harvest tickets and registration permits (Dau 2015). Hunters considered local by ADF&G are functionally identical to federally qualified subsistence users (e.g. residents of St. Lawrence Island are technically federally qualified subsistence users, but do not frequently harvest Western Arctic caribou).

From 1999–2018, the rangewide average estimated total harvest from the WACH was 14,103 caribou/year, ranging from 11,729-16,219 caribou/year (Hansen 2020 and 2021a, pers. comm.), but has

generally been estimated at 12,000 +/- 1,750 caribou per year since 1996 (WACHWG 2021, WACHWG 2019b). Additionally, harvest estimates do not include wounding loss, which may be hundreds of caribou (Dau 2015). Year-specific harvest estimates have not been generated since 2018, in part because they are not very accurate (Hansen 2021a, pers. comm., WACHWG 2021). While all of these harvest estimates are above the preservative harvest level specified in the WACH Management Plan and indicate unsustainable harvest levels, actual harvest is unknown and could be much lower due to caribou being unavailable for harvest near local communities.

Local hunters account for approximately 95% of the total WACH harvest and residents of Unit 23 account for approximately 58% of the total harvest on average (ADF&G 2017c). Comparison of caribou harvest by community from household survey data (**Appendix 2**) with **Figure 1** demonstrates that local community harvests parallel WACH availability rather than population trends. For example, Ambler only harvested 325 caribou when the WACH population peaked in 2003 but harvested 685 caribou in 2012 when most of the WACH migrated through eastern Unit 23. Similarly, Noatak only harvested 66 caribou in 2010 when no GPS-collared caribou migrated through western Unit 23. Harvest increased substantially (360 caribou) the following year when 37% of the GPS-collared caribou (and thus, a greater proportion of the WACH) migrated through western Unit 23 (**Appendix 2**).

Between 1998 and 2020, annual reported caribou harvest in Unit 23 ranged from 168-814 caribou (Hansen 2021a, pers. comm.). Over the same time period, reported harvest by non-federally qualified users ranged from 131-657 caribou. The lowest reported harvest occurred in 2016 when all Federal public lands in Unit 23 were closed to non-federally qualified users, but before harvest reporting was required for federally qualified subsistence users. Regardless, local compliance with reporting mandates is considered low but increasing. In 2017 and 2018, registration permits became required under State and Federal regulations, respectively, which is reflected in the greater number of reported caribou harvest by federally qualified subsistence users. However, compliance with reporting caribou harvest still remains too low to accurately estimate total caribou harvest. On average, 76% of WACH caribou harvested by nonlocals are harvested in Unit 23 (Dau 2015). Between 2016, when Federal lands closures began, and 2020, reported caribou harvest by non-local hunters in Unit 23 averaged 254 caribou (WinfoNet 2018, 2019, Hansen 2021a pers. comm.).

From 1999-2013, 72% of nonlocal hunters on average accessed the WACH by plane. Most nonlocal harvest (85-90%) occurs between August 25 and October 7. Most local subsistence hunters harvest WACH caribou whenever they are available using boats, 4-wheelers, and snowmachines (Dau 2015, Fix and Ackerman 2015). In Unit 23, caribou have historically been available during fall migration, but this has no longer been the case in recent years; caribou migration has occurred later in fall, resulting in subsistence harvest also occurring later, which in turn contributes to food insecurity.

The caribou harvest in Unit 21D averages 0-10 caribou/year (Dau 2009, 2013, 2016, pers. comm.).

<u>Unit 26A and Teshekpuk Caribou Herd harvest</u>

Reliance on caribou from a particular herd within Unit 26A varies by community. Residents of Atqasuk, Barrow, Nuiqsut, and Wainwright harvest caribou primarily from the TCH while residents from Anaktuvuk Pass, Point Lay, and Point Hope harvest caribou primarily from the WACH (Dau 2011, Parrett 2011, 2013). Weather, distance of caribou from the community, terrain, and high fuel costs are some of the factors that can affect the availability and accessibility of caribou. Residents of Nuiqsut, which is on the northeast corner of Unit 26A, harvest approximately 11% of their caribou from the CACH (**Table 7,** Parrett 2013).

Range overlap between the three caribou herds, frequent changes in the wintering distribution of the TCH and WACH, and annual variation in the community harvest survey effort and location make it difficult to determine the proportion of the TCH, WACH, and CACH in the harvest. Knowledge of caribou distribution at the time of the reported harvest is sometimes used to estimate the proportion of the harvest from each herd. A general overview of the relative utilization based on estimated harvest of each caribou herd by community for regulatory year 2010/11, is presented in **Table 8** (Parrett 2011, Dau 2011, and. Lenart 2011). The percentage of caribou harvested from different herds by community has varied ≤ 2% for all communities between 2008/09, 2009/10, and 2010/11.

Harvest from the TCH is difficult to estimate because of very poor reporting, variation in community survey effort and location, widely varying wintering distribution of the TCH, and mixing of caribou herds. Most of the harvest occurs from July-October by local hunters in Unit 26A. Very low levels of TCH harvest occur in Units 23, 24, and 26B. Non-locals and non-residents account for less than 3% of the TCH harvest (Parrett 2013). Parrett (2013) estimated 3,387 TCH caribou were harvested in Unit 26A by local communities in each of 2010/11 and 2011/12 regulatory years and that previously reported harvest estimates (Parrett 2009) were biased high due to oversampling (**Table 8**). This estimated harvest is well above State objectives.

Table 8. Estimated caribou harvest of the Teshekpuk, Western Arctic and Central Arctic caribou herds during the 2010/2011 regulatory years in Unit 26A by federally qualified users (Parrett 2013, Dau 2013). Note: Due to the mixing or the herds, annual variation in the community harvest surveys and missing data, the percentages for each community do not add up to 100%.

Community	Human population[a]	Per capita caribou harvest[bc]	Approximate total community harvest	Estimated annual TCH harvest (%)	Estimated annual WACH harvest (%)	Estimated annual CACH harvest (%)
Anaktuvuk Pass	331	1.8	582	174 (30)	431 (80)	
Atqasuk	234	0.9	215	210 (98)	6 (2)	
Barrow	4,290	0.5	2,145	2,123 (97)	62 (3)	
Nuiqsut	411	1.1	468	403 (86)	3 (1)	36 (11)
Point Lay	191	1.3	247	49 (20)	120 (40)	
Point Hope	704		894	0	894 (100)	
Wainwright	559	1.3	710	426 (60)	48 (15)	
Total Harvest				3,387	1564	36

[a] Population estimates averaged from the 2010 U.S. Census and 2012 Alaska Department of Commerce, Division of Community and Regional Affairs data

[b] Citations associated with per-capita caribou harvest assessment by community can be found in Table 5 (Parrett 2011).

[c] Sutherland (2005)

Alternatives Considered

Modify to adjust harvest limits to reflect different harvest levels across the WACH range

Reducing the harvest to four caribou per year per permit holder throughout the range of the herd would impact some communities much more profoundly than others. For example, the Unit 24B community of Anaktuvuk Pass, where the estimated average number of caribou harvested yearly by successfully harvesting households is 16 (**Table 5**) (and where true "super households" may take and share more caribou per year), would face greater impacts than communities in Unit 22, where the baseline average estimated number of caribou taken by households that successfully harvest is 4.6, according to subsistence surveys (**Table 6**).

One alternative considered would reduce harvest limits by a consistent percentage (e.g. approximately 25%) of baseline harvest levels, as documented in past subsistence surveys for each community. Under this scenario, the harvest limit in Unit 22 could be set at three caribou per year, while the harvest limit in Unit 24B, remainder could be set at twelve caribou per year.

This alternative was rejected because it is likely untenable. Communities' search and use areas are not neatly confined to single management units, and disparate harvest limits may motivate hunters to travel to adjacent units, altering patterns of use. Furthermore, subsistence survey data on caribou harvest are estimates only, and caution should be used when employing this information to adjust harvest limits on a fine scale.

If levels of past harvest, as documented in subsistence surveys, were to be used to reduce harvest levels by a consistent percentage for each community, this would be best carried out via community hunt systems or quotas and would entail additional analysis that is well beyond the scope of this proposal. Such an approach would entail working closely with communities to distribute and track permits. After the WACH declined to an estimated low of 75,000 in 1976, ADF&G set the harvest limit at one bull per year by registration permit and distributed a limited quota of permits among communities, an approach that was then incrementally liberalized in subsequent years (Davis et al. 1985).

Modify to limit cow harvest only

Another alternative considered would maintain the current harvest limits, with the stipulation that only one of the caribou harvested per year per permit holder could be a cow. This alternative would allow "super households" more flexibility to provide for multiple people over the proposed reduction while still conserving cows, although overall harvest of the WACH may not be reduced. This would represent an incremental approach to conservation, with limits to bull harvest being an option for future implementation. However, the degree of WACH decline may warrant limits on harvest of both cows and bulls at this time.

Modify to reduce the harvest limit, but at a level higher than proposed

Yet another alternative considered would modify this proposal to reduce the current harvest limits, but at a more liberal level than the proposed limit of four caribou per year per permit holder. One option would be to set the individual hunter harvest limit at eight caribou per year, only one of which may be a cow. This alternative would allow some flexibility to super households while conserving cows. For example, a harvest limit of eight caribou per year per permit holder would be largely consistent with the average baseline harvest by households that successfully harvested caribou in communities within Units 23 and 26A and Anaktuvuk Pass combined, as documented in past subsistence surveys (see "Cultural Knowledge and Traditional Practices" section of this analysis). Households that harvest at high levels for the wider community and only have one permitted hunter, including households in Anaktuvuk Pass, would still face harvest reductions (although a designated hunter permit would offer a path for additional harvest). Households with two permit holders could harvest up to 16 caribou per year. This incremental approach would allow communities to adjust to reduced harvest limits in a more gradual manner. However, the degree of WACH decline may warrant greater reduction in harvest limits at this time.

Modify to exclude Units 21D, remainder and 24B, C, and D

As written, the proposal would include Units 21D, remainder, 24B, remainder, 24C, and 24D. As shown in the Cultural Knowledge and Traditional Practices section of this analysis, average baseline harvest by the communities located in these units occurs at levels below the recommended limit of four caribou per year, with the important exception of the Unit 24B community of Anaktuvuk Pass, which relies heavily on caribou. However, baseline harvest levels and search and use areas for all communities with customary and traditional use determinations for these units would need to be taken into account when considering excluding these units from reduced harvest limits (see the "Customary and Traditional Use Determinations" section of this analysis). Additionally, this alternative was rejected because although harvest levels are lower on the edges of the WACH range overall, caribou migration patterns fluctuate and during years when caribou are available, harvest may be higher.

Modify to exclude Unit 26A remainder

Another alternative to consider would be to exclude all of Unit 26A remainder from the hunt areas affected by the proposed harvest limit reductions. Adoption of WP24-28, as written, may cause unnecessary hardship and restrictions for subsistence users in the northeastern portions of Unit 26A that are primarily occupied by Teshekpuk (not Western Arctic) caribou. This alternative could reduce hardships and unnecessary restrictions for subsistence users in the portions of Unit 26A where caribou harvest is primarily from the TCH but it would not reduce WACH harvest in those areas.

Modify to exclude a portion of 26A remainder

Another similar alternative recommended by Selawik NWR and the Western Arctic National Parklands, would be to modify hunt area descriptors and to exclude that portion of Unit 26A north and east of a line running from the east/north bank of Wainwright Inlet to the headwaters of the Ketik River, to the headwaters of the Awuna River to the Colville River at Umiat then east to the Dalton Highway at Sagwon (**Map 4**). This alternative could reduce hardships and unnecessary restrictions for subsistence

users in the portions of Unit 26A where caribou harvest is primarily from the TCH, as well as help conserve the WACH.

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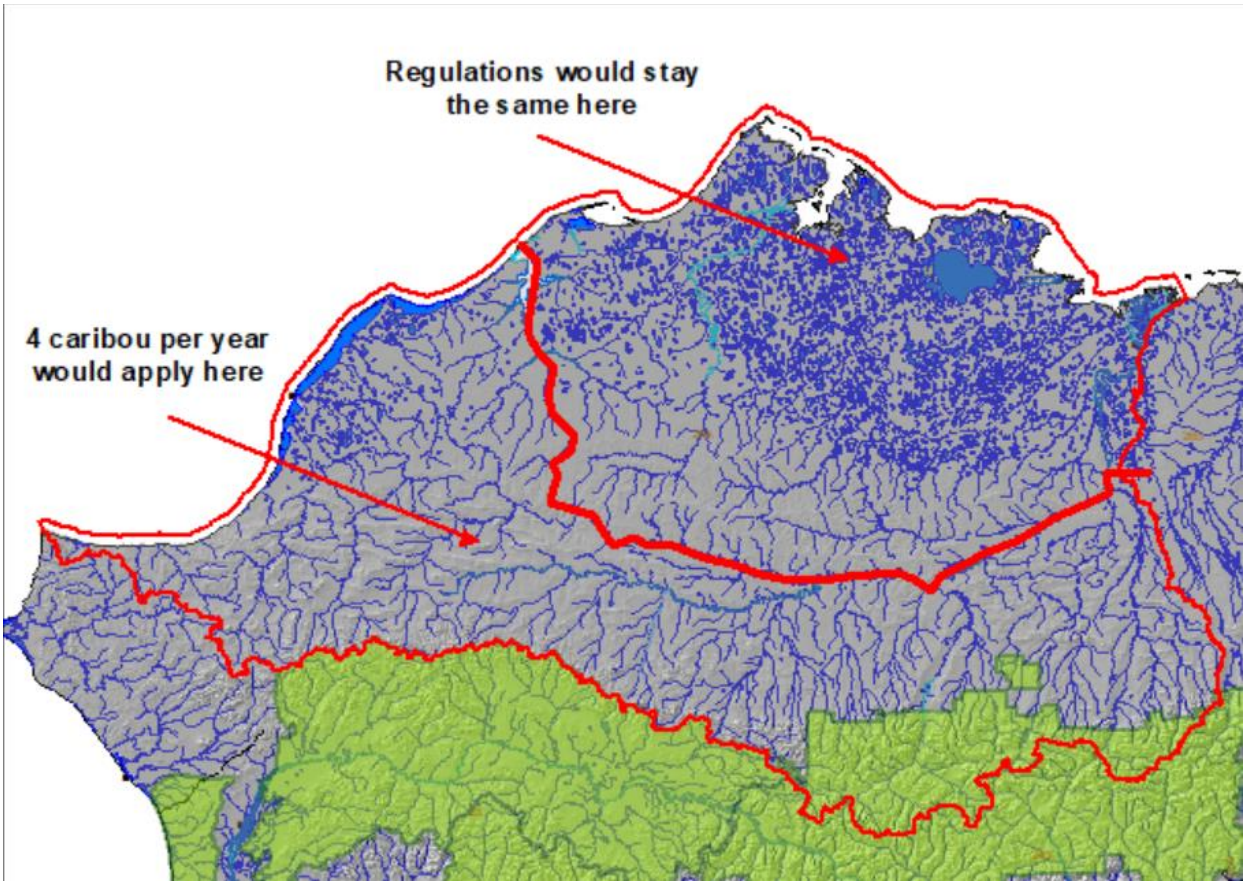


Map 4. Map of the portion of 26A remainder excluded for alternative recommended by Selawik NWR and the Western Arctic National Parklands.

Effects of the Proposal

If WP24-29 is adopted, the Federal caribou harvest limit in Unit 23 would be reduced from five caribou per day to four caribou per year, only one of which may be a cow. If WP24-28 is adopted, the same harvest limit reduction would occur across the entire range of the WACH, including Units 22, 23, 26A, and portions of Units 21D and 24. The decreased harvest limits and more restrictive cow harvest would reduce subsistence hunting opportunity and harvest under Federal regulations, but could help conserve the WACH and aid in its recovery, which, in turn, could provide more subsistence hunting opportunity in the future. Additionally, intentional harvest reduction to conserve the resource aligns with local cultural practices and values.

However, if the BOG does not adopt similar regulations, all Alaska residents could still harvest 5 caribou/day under State regulations on most Federal public lands, which could greatly limit the impacts of adopting these requests on both the WACH and subsistence users. Federal regulations would also become more restrictive than State regulations. However, as only Federal regulations apply on National Park lands and National Monuments, harvest would likely decrease within Gates of the Arctic NP, Kobuk Valley NP, and Cape Krusenstern NM. Further, if adopted, the proposed closure of federal public lands in Unit 23 to caribou hunting by non-federally qualified users from Aug. 1-Oct. 31 (WP2430/31; see "Current Events") would mean that State regulations would no longer apply on federal public lands in Unit 23 during this time, strengthening the effects of these proposed harvest limits within Unit 23.

In recent years, no collared WACH caribou have migrated into Units 22 or 21D, remainder. Therefore, any regulation changes in these units are unlikely to affect WACH harvest. However, caribou movements and distributions are highly variable, and it is possible portions of the WACH will go there in the future (Joly et al. 2021). A resident caribou herd may be present in Unit 22 (SPRAC 2021, 2022), and harvest limit reductions under Federal regulations would curtail harvest from these caribou (although users would still be able to harvest 5 caribou/day under State regulations) which would be an added benefit of the proposal as the small size (~5000, SPRAC 2021, 2022, NPS unpublished data) of this caribou group cannot support a 5 caribou/day bag limit. Additionally, the TCH and CACH occupies Unit 26A remainder and Unit 24B remainder. These herds have not experienced substantial population declines like the WACH. Therefore, reducing the harvest limits in Unit 26A remainder and Unit 24B remainder may not substantially affect WACH harvest or conservation and could unnecessarily restrict subsistence harvest from the TCH and CACH, although again, users would still be able to harvest 5 caribou/day under State regulations.

The reduced Federal harvest limits could also impact sharing networks, which are an important cultural component for subsistence users in these areas and contribute to food security. While four caribou per year may be enough for individuals and some families (NWARAC 2022), many families and elders depend on the "super households" (Wolfe 1987) to provide caribou meat. However, the use of designated hunter permits could dampen these effects and are intended to accommodate the cultural practice of harvesting for others. Designated hunter permits allow federally qualified subsistence users to hunt for others and allow designated hunters to possess two harvest limits at one time. However, it may take time for hunters to embrace the use of these permits.

OSM PRELIMINARY CONCLUSION

Support Proposal WP24-29.

Support Proposal WP24-28 **with modification** to exclude that portion of Unit 26A north and east of a line running from the east/north bank of Wainwright Inlet to the headwaters of the Ketik River, to the headwaters of the Awuna River to the Colville River at Umiat then east to the Dalton Highway at Sagwon.

The modified regulation should read:

Proposed Federal Regulation

Unit 21D—Caribou

*Unit 21D, remainder— ~~5 caribou per day~~ **4 caribou per year, only 1 may be a cow**, as follows: Calves may not be taken.*	
Bulls may be harvested.	*July 1-Oct. 14.* *Feb. 1-June 30.*
Cows may be harvested.	*Sep. 1-Mar. 31.*

Unit 22—Caribou

*Unit 22B that portion west of Golovnin Bay and west of a line along the west bank of the Fish and Niukluk Rivers to the mouth of the Libby River and excluding all portions of the Niukluk River drainage upstream from and including the Libby River drainage - ~~5 caribou per day~~ **4 caribou per year, only 1 may be a cow** by State registration permit. Calves may not be taken.*	*Oct. 1-Apr. 30.* *May 1-Sep. 30, a season may be announced.*
*Units 22A, that portion north of the Golsovia River drainage, 22B remainder, that portion of Unit 22D in the Kuzitrin River drainage (excluding the Pilgrim River drainage), and the Agiapuk River drainages, including the tributaries, and Unit 22E, that portion east of and including the Tin Creek drainage - ~~5 caribou per day~~ **4 caribou per year, only 1 may be a cow** by State registration permit. Calves may not be taken.*	*July 1–June 30.*
*Unit 22A, remainder - ~~5 caribou per day~~ **4 caribou per year, only 1 may be a cow** by State registration permit. Calves may not be taken*	*July 1-June 30, season may be announced.*
*Unit 22D, that portion in the Pilgrim River drainage - ~~5 caribou per day~~ **4 caribou per year, only 1 may be a cow** by State registration permit. Calves may not be taken*	*Oct. 1-Apr. 30.* *May 1-Sep. 30, season may be announced*

*Units 22C, 22D remainder, 22E remainder - ~~5 caribou per day~~ **4 caribou per year, only 1 may be a cow** by State registration permit. Calves may not be taken*	*July 1-June 30, season may be announced*

Unit 23−Caribou

*Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage— ~~5 caribou per day~~ **4 caribou per year, only 1 may be a cow** by State registration permit as follows:*

Bulls may be harvested	*July 1–June 30*
Cows may be harvested. However, cows accompanied by calves may not be taken July 15–Oct. 14.	*July 15–Apr. 30*

*Unit 23, remainder— ~~5 caribou per day~~ **4 caribou per year, only 1 may be a cow** by State registration permit as follows:*

Bulls may be harvested	*July 1–June 30*
Cows may be harvested. However, cows accompanied by calves may not be taken July 31–Oct. 14.	*July 31–Mar. 31*

Federal public lands within a 10-mile-wide corridor (5 miles either side) along the Noatak River from the western boundary of Noatak National Preserve upstream to the confluence with the Cutler River; within the northern and southern boundaries of the Eli and Agashashok River drainages, respectively; and within the Squirrel River drainage are closed to caribou hunting except by federally qualified subsistence users hunting under these regulations.

Bureau of Land Management managed lands between the Noatak and Kobuk Rivers and Noatak National Preserve are closed to caribou hunting from Aug. 1-Sep. 30 for the 2022-24 regulatory cycle, except by federally qualified subsistence users hunting under these regulations.

Unit 24—Caribou

*Unit 24B remainder - ~~5 caribou per day~~ **4 caribou per year, only 1 may be a cow** as follows: Calves may not be taken.*

Unit 23−Caribou

Bulls may be harvested.	*July 1-Oct. 14.* *Feb. 1-June 30.*
Cows may be harvested.	*July 15-Apr. 30.*

Units 24C, 24D - ~~*5 caribou per day*~~ ***4 caribou per year, only 1 may be a cow*** *as follows: Calves may not be taken.*

Bulls may be harvested.	*July 1-Oct. 14.* *Feb. 1-June 30.*
Cows may be harvested	*Sep. 1-Mar. 31.*

Unit 26—Caribou

Unit 26A - ***north and east of a line running from the east/north bank of Wainwright Inlet to the headwaters of the Ketik River, to the headwaters of the Awuna River to the Colville River at Umiat then east to the Dalton Highway at Sagwon****- 5 caribou per day by State registration permit as follows: Calves may not be taken.*

Bulls may be harvested	*July 1-Oct. 14.* *Dec. 6-June 30.*
Cows may be harvested; however, cows accompanied by calves may not be taken July 16-Oct. 15	*July 16-Mar. 15.*

Noatak National Preserve is closed to caribou hunting from Aug. 1-Sep. 30 for the 2022-24 regulatory cycle, except by federally qualified subsistence users hunting under these regulations.

*Unit 26A remainder - ~~5 caribou per day~~ **4 caribou per year, only 1 may be a cow** by State registration permit as follows: Calves may not be taken.*

Bulls may be harvested	*July 1-Oct. 15.* *Dec. 6-June 30.*
*~~Up to 3 cows per day~~ **Only 1 cow** may be harvested; however, cows accompanied by calves may not be taken July 16-Oct. 15*	*July 16-Mar. 15.*

Justification

OSM supports measures to reduce conservation concerns for the WACH. The lengthy and precipitous decline of the WACH warrants strong measures to aid in the recovery and conservation of this population. Current harvest rates, especially the taking of cows, could prolong or worsen the current decline, and hamper recovery efforts. Additionally, while causes of the decline are multi-faceted and uncertain, reducing human harvest is the most controllable factor.

Excluding the areas that primarily depend on other herds and caribou populations would help reduce the impact on sharing networks, which are an important cultural component for subsistence users in these areas and contribute to food security. The exclusion of that portion of Unit 26A north and east of a line running from the east/north bank of Wainwright Inlet to the headwaters of the Ketik River, to the headwaters of the Awuna River to the Colville River at Umiat then east to the Dalton Highway at Sagwon, would reduce the impact on the harvest on the TCH and CACH in 24B, remainder and a portion of Unit 26A. These herds are above State population objectives and are currently not of conservation concern.

LITERATURE CITED

ADF&G. 1992. Customary and Traditional Worksheets. Northwest Alaska GMU's 22 and 23, Black Bear, Brown Bear, Caribou, Dall Sheep, Moose, Muskoxen. Division of Subsistence, Kotzebue, Alaska.

ADF&G. 2009. Summary of Alaska Board of Game Arctic/Western region meeting. Nome, AK. November 13-16, 2009. http://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=11-13-2009&meeting=arctic. Retrieved: May 31, 2021.

ADF&G. 2017a. Board of Game Arctic and Western Region Meeting Materials. January 6-9, 2017. Bethel, AK.

ADF&G. 2017b. 2016-2017 draw supplement. https://www.adfg.alaska.gov/static/license/huntlicense/pdfs/2016-2017_draw_supplement.pdf. Retrieved: February 1, 2017.

ADF&G 2017c. Region V caribou overview. Alaska Board of Game. Arctic and western region. Jan. 6-9, 2017. Bethel, AK. http://www.adfg.alaska.gov/static/regulations/regprocess/gameboard/pdfs/2016-2017/aw/Tab_1.3_RegionV_Caribou_Overview.pdf. Accessed January 20, 2017.

Anderson, D. D. 1968. A stone age campsite at the gateway to America. Scientific American 218(6): 24–33.

Anderson, D. D. 1988. Onion Portage: the archaeology of a stratified site from the Kobuk River, Northwest Alaska. Anthropological papers of the University of Alaska. 22 (1-2): 1-163.

Atkinson, H. 2021. Anthropologist: Personal communication: email. Western Artic National Parklands. National Park Service. Kotzebue, AK.

Baltensperger, A.P. and K. Joly. 2019. Using seasonal landscape models to predict space use and migratory patterns of an arctic ungulate. Movement ecology 7(1): 1-19.

Betchkal, D. 2015. Acoustic monitoring report, Noatak National Preserve – 2013 and 2014. National Park Service. https://science.nature.nps.gov/im/units/cakn/vitalsign.cfm?vsid=71. Retrieved: February 1, 2017.

Brown, C. L., N. M. Braem, M. L Kostick et al. 2016. Harvests and uses of wild resources in 4 interior Alaska communities and 3 arctic Alaska communities, 2014. ADF&G, Div. of Subsistence Tech. Paper No. 426. Fairbanks, AK.

Brown, C.L., R. Walker, S.B. Vanek. 2004. The 2002-2003 Harvest of Moose, caribou, and Bear in Middle Yukon and Koyukuk River Communities. Alaska Department of the Fish and Game, Division of the Subsistence Technical Paper No 280, ADF&G, Juneau, AK.

Burch, Jr., E.S. 1972. The caribou/wild reindeer as a human resource. American Antiquity 37(3): 339–68.

Burch, Jr., E. S. 1984. The Kotzebue Sound Eskimo. In Handbook of North American Indians--Arctic. Volume 5. Edited by David Damas. Smithsonian Institution, Washington, D.C.

Burch, Jr., E. S. 1994. The cultural and natural heritage of Northwest Alaska. Volume V. Nana Museum of the Arctic, Kotzebue, Alaska and U.S. National Park Service, Alaska Region. Anchorage, AK.

Burch, E.S. 1998. The Inupiaq Eskimo nations of Northwest Alaska. University of Alaska Press. Fairbanks, AK.

Burch Jr, E.S. 2012. Caribou herds of northwest Alaska, 1850-2000. University of Alaska Press. Fairbanks, AK.

Buvit, I, Rasic, JT, Kuehn, SR, Hedman. 2019. WH. Fluted projectile points in a stratified context at the Raven Bluff site document a late arrival of Paleoindian technology in northwest Alaska. Geoarchaeology. 34: 3– 14.

Cameron, M.D, J.M., Eisaguirre, G.A., Breed, J., Joly, and K., Kielland. 2021. Mechanistic movement models identify continuously updated autumn migration cues in Arctic caribou. Movement Ecology 9(54). 1-12

Cameron, M.D., K. Joly, G.A. Breed, C.P.H Mulder, and K. Kielland. 2020. Pronounced Fidelity and Selection for Average Conditions of Calving Area Suggestive of Spatial Memory in a Highly Migratory Ungulate. Front. Ecol. Evol. 8:564567. doi: 10.3389/fevo.2020.564567.

Cameron, M. D., K. Joly, G. A. Breed, L. S. Parrett, and K. Kielland. 2018. Movement-based methods to infer parturition events in migratory ungulates. Canadian Journal of Zoology 96: 1187-1195. DOI: 10.1139/cjz-2017-0314.

Caribou Trails. 2014. News from the Western Arctic Caribou Herd Working Group. Western Arctic Caribou Herd Working Group, Nome, AK. Issue 14. http://westernarcticcaribou.org/wp-content/uploads/2014/07/CT2014_FINAL_lowres.pdf. Retrieved: June 23, 2015.

Cold, H. 2021. Alaska Department of Fish and Game Subsistence Division: review of arctic areas Subsistence Division projects. Presentation to the Northwest Arctic Regional Advisory Council, November 1-2.

CSIS. 2023. Community Subsistence Information System. http://www.adfg.alaska.gov/sb/CSIS/. Retrieved June 9, 2023.

Daggett, C. 2023. Wildlife Biologist. Personal communication: e-mail. ADF&G. Utqiaġvik, AK.

Dau, J. 2011. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 187-250 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2008–30 June 30, 2010. ADF&G. Juneau, AK.

Dau, J. 2013. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 201-280 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2010–30 June 30, 2012. ADF&G. Juneau, AK.

Dau, J. 2014. Wildlife Biologist. Western Arctic Caribou herd presentation. Western Arctic Caribou Herd (WACH) Working Group Meeting, December 17-18, 2014. Anchorage, Alaska. ADF&G. Nome, AK.

Dau, J. 2015. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24 and 26A. Chapter 14, pages 14-1 through 14-89 i*n* P. Harper, and Laura A. McCarthy, eds. Caribou management report of survey and inventory activities 1 July 2012–30 June 2014. ADF&G, Species Management Report ADF&G/DWC/SMR-2015-4, Juneau, AK.

Dau, J. 2016a. Memorandum to S. Machida dated June 21, 2016. 2016 Western arctic caribou herd calving survey: 4-12 June. ADF&G Division of Wildlife Conservation, Fairbanks, AK.

Dau, J. 2016b. Memorandum to S. Machida dated April 26, 2016. 2016 Western Arctic caribou herd recruitment survey: 31 March and 5, 19, and 21 April. ADF&G Division of Wildlife Conservation, Fairbanks, AK.

Davis, J. L., C. A. Grauvogel, and P. Valkenburg. 1985. Changes in subsistence harvest of Alaska's Western Arctic caribou herd, 1940–1984. Pages 105–118 in T. C. Meredith, and A. M. Martell, eds. Caribou management: census techniques, status in eastern Canada: Proceedings of the 2nd North American Caribou Workshop, 17-20 October 1984, Van Morin, Quebec. McGill Subarctic Research Paper no. 40, Center for Northern Studies and Research, Schefferville, Quebec, Canada.

Fix, P.J. and A. Ackerman. 2015. Noatak National Preserve sport hunter survey: caribou hunters from 2010-2013. Natural resources report. National Park Service.

Fullman, T.J., K. Joly, A. Ackerman. 2017. Effects of environmental features and sport hunting on caribou migration in Northwest Alaska. Movement Ecology 5: 1-11.

Georgette, S., and H. Loon. 1993. Subsistence use of fish and wildlife in Kotzebue, a Northwest Alaska regional center. ADF&G, Div. of Subsistence Tech. Paper No. 167. Fairbanks, AK.

Gonzalez, D., E. H. Mikow, and M. L Kostick. 2018. Subsistence wildlife harvests in Buckland, Koyuk, and Noatak, Alaska 2016-2017. ADF&G, Div. of Subsistence Special Publication SP2018-05. Fairbanks, AK.

Gunn, A. 2003. Voles, lemmings and caribou – population cycles revisited? Rangifer, Special Issue 14: 105-111.

Gurarie, E., P.R. Thompson, A.P. Kelly, N.C. Larter, W.F. Fagan, and K. Joly. 2020. For everything there is a season: estimating periodic hazard functions with the cyclomort R package. Methods in Ecology and Evolution 11 (1): 129-138. DOI: 10.1111/2041-210X.13305.

Halas, G. 2015. Caribou migration, subsistence hunting, and user group conflicts in Northwest Alaska: A traditional knowledge perspective. University of Fairbanks-Alaska. Fairbanks, AK.

Hansen, D.A. 2019a. 2019 Western Arctic Caribou Herd – herd population status, other metrics. Presentation to Western Arctic Caribou Herd Working Group Technical Committee. December 10, 2019. https://westernarcticcaribou.net/.

Hansen, D.A. 2020. Wildlife Biologist. Personal communication: e-mail. ADF&G. Kotzebue, AK.

Hansen, D.A. 2021a. Wildlife Biologist. Personal communication: e-mail. ADF&G. Kotzebue, AK.

Holand, O., R.B. Weladji, A. Mysterud, K. Roed, E. Reimers, M. Nieminen. 2012. Induced orphaning reveals post-weaning maternal care in reindeer. European Journal of Wildlife Research. 58: 589-596.

Joly, K. 2015. Wildlife Biologist, Gates of the Arctic National Park and Preserve. Personal communication: e-mail NPS. Fairbanks, AK.

Joly, K. 2000. Orphan caribou, *Rangifer tarandus*, calves: a re-evaluation of overwinter survival data. The Canadian field naturalist 114: 322-323.

Joly, K., and M. D. Cameron. 2018. Early fall and late winter diets of migratory caribou in northwest Alaska. Rangifer 38 (1): 27-38. DOI: 10.7557/2.38.1.4107.

Joly, K., and M.D. Cameron. 2020. Caribou vital sign annual report for the Arctic Network Inventory and Monitoring Program, September 2019-August 2020. Natural resource report. National Park Service.

Joly, K., and M.D. Cameron. 2021. Caribou vital sign annual report for the Arctic Network Inventory and Monitoring Program, September 2019-August 2020. Natural resource report. National Park Service.

Joly, K., E. Gurarie, D.A. Hansen, M.D. Cameron. 2021. Seasonal patterns of spatial fidelity and temporal consistency in the distribution and movements of a migratory ungulate. Ecology and Evolution. 2021;11:8183–8200.

Joly, K., A. Gunn, S. D. Côté, M. Panzacchi, J. Adamczewski, M. J. Suitor, and E. Gurarie. 2021b. Caribou and reindeer migrations in the changing Arctic. Animal Migrations 8: 156-167. DOI: 10.1515/ami-2020-0110.

Joly, K., R.R. Jandt, C.R. Meyers, and J.M. Cole. 2007. Changes in vegetative cover on the Western Arctic herd winter range from 1981–2005: potential effects of grazing and climate change. Rangifer Special Issue 17:199-207.

Joly, K., D.R. Klein, D.L. Verbyla, T.S. Rupp, and F.S. Chapin, III. 2011. Linkages between large-scale climate patterns and the dynamics of Arctic caribou populations. Ecography 34: 345-352.

Lenart, E. A. 2011. Units 26B and 26C caribou. Pages 315-345 *in* P. Harper, ed. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. ADF&G. Project 3.0. Juneau, AK.

Magdanz, J., E. Trigg, A. Ahmasuk, P. Nanouk, D. Koster, and K. Kamletz. 2005. Patterns and trends in subsistence salmon harvests Norton Sound and Port Clarence, 1994-2003. ADF&G, Div. of Subsistence Tech Paper No. 294. Juneau, AK. 134 pp.

Mikow, E.H., N. M. Braem, and M. Kostick. 2014. Subsistence Wildlife Harvests in Brevig Mission, Deering, Noatak, and Teller, Alaska, 2011-2012. ADF&G, Div. of Subsistence Special Publication No. 2014-02. Fairbanks, AK.

Mikow, E.H., and M.L. Kostick. 2016. Subsistence wildlife harvests in Kotzebue, Alaska, 2013-2014. ADF&G, Div. of Subsistence Special Publication No. 2016-02. Fairbanks, AK.

Miller, F.L. 2003. Caribou (*Rangifer tarandus*). Pages 965-997 *in* Feldhamer, B.C. Thompson, and J.A. Chapman, *eds*. Wild mammals of North America- biology, management, and conservation. John Hopkins University Press.

Nicholson, K.L., S.M. Arthur, J.S. Horne, E.O. Garton, and P.A. Del Vecchio. 2016. Modeling caribou movements: seasonal ranges and migration routes of the Central Arctic Herd. PLoS ONE 11(4): e0150333. https://doi.org/10.1371/journal.pone.0150333.

NPS. 2020. Commercial use authorization stipulations: 2020 park specific regulations—Western Arctic Parklands. https://www.nps.gov/locations/alaska/stips-wear.htm. Retrieved April 2, 2021.

NWARAC. 2016. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, October 5-6, 2016 in Selawik, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

NWARAC. 2019. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, April 9-10, 2019 in Kotzebue, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

NWARAC. 2020. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, November 3, 2020. Teleconference. Office of Subsistence Management, USFWS. Anchorage, AK.

NWARAC. 2021a. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, February 18, 2021. Teleconference. Office of Subsistence Management, USFWS. Anchorage, AK.

NWARAC 2021b. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, November 1 and 2, 2021. Teleconference. Office of Subsistence Management, USFWS. Anchorage, AK.

NWARAC. 2022. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, October 31 and November 1, 2022 in Kotzebue, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

NWARAC 2023. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, March 7-8, 2023.

Parrett, L.S. 2011. Units 26A, Teshekpuk caribou herd. Pages 283-314 *in* P. Harper, ed. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. ADF&G. Project 3.0. Juneau, AK.

Parrett, L.S. 2015b. Memorandum to P. Bente, Management Coordinator, dated October 29, 2015. 2015 Western Arctic Herd (WAH) captured conducted September 15-17, 2015. ADF&G Division of Wildlife Conservation, Fairbanks, AK.

Parrett, L.S., 2015c. Unit 26A, Teshekpuk caribou herd. Chapter 17, pages 17-1 through 17-28 *in* P. Harper and L.A. McCarthy, eds. Caribou management report of survey and inventory activities 1 July 2012-30 June 2014. ADF&G, Species Management Report ADF&G /DWC?SMR-2015-4, Juneau, AK.

Parrett, L.S. 2015d. Memorandum to P. Bente, Management Coordinator, dated December 31, 2015. Summary of Teshekpuk Caribou Herd photocensus conducted July 6, 2015. ADF&G Division of Wildlife Conservation. Fairbanks, AK.

Parrett, L.S. 2016. Memorandum for distribution, dated August 25, 2016. Summary of Western Arctic Caribou Herd photocensus conducted July 1, 2016. ADF&G Division of Wildlife Conservation, Fairbanks, AK.

Parrett, L.S. 2017a. WAH Caribou Overview. Western Arctic Caribou Herd Working Group Meeting. December 2017. https://westernarcticcaribounet.files.wordpress.com/2017/12/2017-complete-wg-meeting-binder-dec-13-14-2017-for-webpost.pdf. Retrieved December 20, 2017.

Parrett, L.S. 2017b. Wildlife Biologist IV. Personal communication: phone and e-mail. ADF&G. Fairbanks, AK.

Parrett, L. S. 2021. Teshekpuk caribou herd management report and plan, Game Management Units 23, 24, and 26: Report period 1 July 2012–30 June 2017, and plan period 1 July 2017–30 June 2022. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2021-43, Juneau, AK.

Prichard, A.K. 2009. Development of a preliminary model for the Western Arctic Caribou Herd. ABR, Inc. – Environmental Research and Services. Fairbanks, AK.

Prichard, A.K., K. Joly and J. Dau. 2012. Quantifying telemetry collar bias when age is unknown: a simulation study with a long-lived ungulate. Journal of Wildlife Management 76 (7): 1441-1449. DOI: 10.1002/jwmg.394.

Prichard, A.K, L.S. Parrett, E.A. Lenart, J.R. Caikoski, K. Joly, B.T. Person. 2020. Interchange and overlap among four adjacent arctic caribou herd. Journal of Wildlife Management 84 (8): 1500-1514. DOI: 10.1002/jwmg.21934.

Rughetti, M., M. Festa-Bianchet. 2014. Effects of selective harvest of non-lactating females on chamois population dynamics. Journal of applied ecology. 51: 1075-1084.

Russell, D.E., S.G. Fancy, K.R. Whitten, R.G. White. 1991. Overwinter survival of orphan caribou, *Rangifer tarandus*, calves. Canadian field naturalist. 105: 103-105.

Satterthwaite-Phillips, D.A., C. Krenz, G. Gray, and L. Dodd. 2016. Chapter 3: Age, gender, and village variation in subsistence. Pages 394-412 in: Iñuuniaḷiqput iḷiḷugu nunaŋŋuanun (Documenting our way of life with maps): Northwest Arctic Borough subsistence mapping project.

SPRAC 2021. Transcripts of the Seward Peninsula Subsistence Regional Advisory Council proceedings, October 26, 2021.

SPRAC 2022. Transcripts of the Seward Peninsula Subsistence Regional Advisory Council proceedings, October 4, 2022.

Sutherland, R. 2005. Harvest estimates of the Western Arctic caribou herd, Alaska. Proceedings of the 10th North American Caribou Workshop. Girdwood, AK. May 4-6, 2004. Rangifer special issue 16:177-184.

Taillon, J., V. Brodeur, M. Festa-Bianchet, S.D. Cote. 2011. Variation in body condition of migratory caribou at calving and weaning: which measures should we use? Ecoscience 18(3): 295-303.

USFWS. 2014. FY2014 annual report reply to the Norwest Arctic Subsistence Regional Advisory Council. Office of Subsistence Management, USFWS. Anchorage, AK.

WACH (Western Arctic Caribou Herd) Working Group. 2011. Western Arctic Caribou Herd Cooperative Management Plan – Revised December 2011. Nome, AK.

WACH (Western Arctic Caribou Herd) Working Group. 2015. Western Arctic Caribou Herd Cooperative Management Plan. Table 1 Revision – Dec. 2015. https://westernarcticcaribou.net/herd-management/. Accessed June 1, 2017.

WACH (Western Arctic Caribou Herd) Working Group. 2019a. Western Arctic Caribou Herd Working Group Meeting. December 10-12, 2019. Anchorage, AK.

WACH (Western Arctic Caribou Herd) Working Group. 2019b. Western Arctic Caribou Herd Cooperative Management. December 2019. https://westernarcticcaribou.net/herd-management/. Accessed March 31, 2023.

WACH (Western Arctic Caribou Herd) Working Group. 2020. Western Arctic Caribou Herd Working Group Meeting December 9, 2020. Teleconference.

WACH (Western Arctic Caribou Herd) Working Group. 2021. Western Arctic Caribou Herd Working Group Meeting December 16, 2021. Teleconference.

WACH (Western Arctic Caribou Herd) Working Group. 2022. Western Arctic Caribou Herd Working Group Meeting December 14-15, 2022. Anchorage, AK.

Wilson, R.R., L.S. Parrett, K. Joly, and J.R. Dau. 2016. Effects of roads on individual caribou movements during migration. Biological Conservation 195(2016):2-8.

WINFONET. 2018. Wildlife information network. ADF&G. Anchorage, AK. https://winfonet.alaska.gov/. Retrieved: November 2018.

WINFONET. 2019. Wildlife information network. ADF&G. Anchorage, AK. https://winfonet.alaska.gov/. Retrieved: July 2019.

Wolfe, R. J. 1987. The Super-Household: Specialization in Subsistence Economies, Paper presented at the 14th Annual Meeting of the Alaska Anthropological Association, March 12-13, 1987, Anchorage, Alaska.

Wolfe, Robert J., Cheryl L. Scott, William E. Simeone, Charles J. Utermohle, and Mary C. Pete. 2010. "The 'su-per-household' in Alaska Native subsistence economies." Final report to the National Science Foundation, project ARC 0352611.

Appendix 1

Regulatory History

In 2013, an aerial photo census indicated significant declines in the TCH (Caribou Trails 2014), WACH (Dau 2011), and possibly the Central Arctic Caribou Herd (CACH) populations. In response, the Alaska Board of Game (BOG) adopted modified Proposal 202 (RC76) in March 2015 to reduce harvest opportunities for both residents and nonresidents within the range of the WACH and the TCH. These regulation changes – which included lowering bag limits, changing harvest seasons, modifying the hunt area descriptors, and restricting bull and cow harvest and prohibiting calf harvest – were adopted to slow or reverse the population decline. These regulatory changes took effect on July 1, 2015.

Four Special Actions, WSA15-03/04/05/06, submitted by the North Slope Regional Subsistence Advisory Council (North Slope Council) requested changes to caribou regulations in Units 23, 24, and 26. Temporary Special Action WSA15-03, requested designation of a new hunt area for caribou in Unit 23 where the harvest limit would be reduced from 15 caribou per day to 5 caribou per day, the harvest season be reduced for bulls and cows, and the take of calves would be prohibited. Temporary Special Action WSA15-04 requested designation of a new hunt area for caribou in Unit 24, the harvest seasons be reduced for bulls and cows, and the take of calves be prohibited.

Temporary Special Action WSA15-05 requested that bull caribou harvest limit in Unit 26A be reduced from 10 caribou per day to 5 caribou per day, the cow harvest limit be reduced to 3 per day, the harvest seasons for bulls and cows be reduced, and the take of calves and cows with calves be prohibited. Compared to the new State caribou regulations, it requested 3 additional weeks to the bull harvest season (Dec. 6- Dec. 31). Temporary Special Action WSA15-06 requested designation of a new hunt area for caribou in Unit 26B where the harvest limit would be reduced from 10 caribou per day to 5 caribou per day, the harvest season would be shortened, and the take of calves would be prohibited.

The Federal Subsistence Board (Board) approved Temporary Special Actions WSA15-03/04/05/06 with modification to simplify and clarify the regulatory language; maintain the current hunt areas in Units 23 and 24; decrease the harvest limit from 15 to 5 caribou per day and shorten the cow and bull seasons throughout Unit 23; prohibit the harvest of cows with calves throughout the affected units; and reduce the harvest limit in Unit 26B remainder from 10 to 5 caribou per day and shorten the season. These special actions took effect on July 1, 2015.

In 2015, the Northwest Arctic Council submitted a temporary special action request (WSA16-01) to close caribou hunting on Federal public lands in Unit 23 to non-federally qualified users for the 2016/17 regulatory year. The Northwest Arctic Council stated that their request was necessary for conservation purposes but also needed because nonlocal hunting activities were negatively affecting subsistence harvests. In April 2016, the Board approved WSA16-01, basing its decision on the strong support of the Northwest Arctic and North Slope Councils, public testimony in favor of the request, as well as concerns over conservation and continuation of subsistence uses.

In 2016, six proposals (WP16-37, WP16-48, WP16-49/52, WP16-61, and WP16-63) concerning WACH caribou regulations were submitted to the Board. The Board adopted WP16-48 with modification to allow

the positioning of a caribou, wolf, or wolverine for harvest in Unit 23 on BLM lands only. Proposal WP16-37 requested that Federal caribou regulations mirror the new State regulations across the ranges of the WACH and TCH (Units 21D, 22, 23, 24, 26A, and 26B). The Board adopted Proposal WP16-37 with modification to reduce the harvest limit to five caribou per day, restrict bull harvest during rut and cow harvest around calving, prohibit the harvest of calves and the harvest of cows with calves before weaning (mid-October), and to create a new hunt area in the northwest corner of Unit 23. The Board took no action on the remaining proposals (WP16-49/52, and WP16-61, and WP16-63) due to action taken on WP16-37.

In 2016, the BOG adopted Proposal 140 as amended to make the following changes to Unit 22 caribou regulations: establish a registration permit hunt (RC800), set an annual harvest limit of 20 caribou total, and lengthen cow and bull seasons in several hunt areas.

These State and Federal regulatory changes were the first time that harvest restrictions had been implemented for the WACH and TCH in over 30 years and were the result of extensive discussion and compromise among a variety of stakeholders. The requested restrictions were also supported by management recommendations outlined in the Western Arctic Herd Management Plan (WACH Working Group 2011).

In June 2016, the State submitted a special action request (WSA16-03) to reopen caribou hunting on Federal public lands in Unit 23 to non-federally qualified users, providing new biological information (e.g. calf recruitment, weight, body condition) on the WACH. The State specified that there was no biological reason for the closure and that it could increase user conflicts. In January 2017, the Board rejected WSA16-03 due to the position of all four affected Councils (Northwest Arctic, North Slope, Seward Peninsula, and Western Interior) as well as public testimony and Tribal consultation comments opposing the request. Additionally, the Board found the new information provided by the State to be insufficient to rescind the closure.

In January 2017, the BOG adopted Proposal 2, requiring registration permits for residents hunting caribou within the range of the Western Arctic and Teshekpuk herds in Units 21, 23, 24, and 26 (a similar proposal was passed for Unit 22 in 2016). ADF&G submitted the proposal in order to better monitor harvest and improve management flexibility. The BOG also rejected Proposal 3 (deferred Proposal 85 from 2016), which would have removed the caribou harvest ticket and report exception for residents living north of the Yukon River in Units 23 and 26A). Also in January 2017, the BOG rejected Proposal 45, which proposed requiring big game hunting camps to be spaced at least three miles apart along the Noatak, Agashashok, Eli, and Squirrel Rivers. The proposal failed as it would be difficult to enforce.

In March 2017, the Northwest Arctic and North Slope Councils submitted temporary special action requests (WSA17-03 and -04, respectively) to close caribou hunting on Federal public lands in Unit 23 and in Units 26A and 26B, respectively, to non-federally qualified users for the 2017/18 regulatory year. Both Councils stated that the intent of the proposed closures was to ensure subsistence use in the 2017/18 regulatory year, to protect declining caribou populations, and to reduce user conflicts. The Board voted to approve WSA17-03 with modification to close all Federal public lands within a 10 mile wide corridor (5 miles either side) along the Noatak River from the western boundary of Noatak National Preserve upstream to the confluence with the Cutler River; within the northern and southern boundaries of the Eli and Agashashok River drainages, respectively; and within the Squirrel River drainage, to caribou hunting except by federally qualified subsistence users for the 2017/18 regulatory year. The Board considered the

modification a reasonable compromise for all users, and that closure of the specified area was warranted in order to continue subsistence use. The Board rejected WSA17-04 due to recent changes to State regulations that should reduce caribou harvest.

In April 2018, the Board adopted Proposals WP18-46 with modification and WP18-48 (effective July 1, 2018). Proposal WP18-46 requested closing caribou hunting on Federal public lands in Unit 23 to non-federally qualified users (similar to WSA16-01 and WSA17-03). The Board adopted WP18-46 with the same modification as WSA17-03 (see above) as the Northwest Arctic, Western Interior, and Seward Peninsula Councils as well as the village of Noatak supported this modification and viewed the targeted closure as effectively addressing user conflicts and the continuation of subsistence uses. The Board also adopted WP18-48 to require State registration permits for caribou hunting in Units 22, 23, and 26A to improve harvest reporting and herd management, and to align with State regulations.

Also in 2018, the Board considered proposal WP18-57, which requested that caribou hunting on Federal public lands in Units 26A and 26B be closed to non-federally qualified users. This proposal was submitted by the North Slope Council to ensure continuation of subsistence, protect the caribou herds, and reduce user conflicts. The Board rejected WP18-57, choosing to allow time to evaluate the effects of recently implemented harvest restrictions. In addition, the Board expressed concern that closing Federal lands would shift users to State lands, increasing conflict.

In January 2020, the BOG adopted Proposal 20 to open a year-round resident season for caribou bull harvest in Unit 23 under State regulations. The BOG also adopted Proposal 24 as amended to remove the restriction on caribou calf harvest in Units 22, 23, and 26A. Proposal 28, which would have eliminated the caribou registration permit in Units 23 and 26A for North Slope resident hunters, was not adopted by the BOG, due to an ongoing need for harvest data.

In April 2020, the Board adopted Proposal WP20-46 to open a year-round bull season and permit calf harvest for caribou in Unit 23. Creating a year-round season for bulls was intended to allow for harvest of bulls when caribou migration had been delayed, alleviating harvest pressure on cows. The prohibition on calf harvest was lifted in order to permit taking of calves that had been orphaned or injured.

In 2021, the Northwest Arctic Council submitted Temporary Wildlife Special Action WSA21-01, which requested closing Federal public lands in Units 23 and 26A to caribou and moose hunting by non-federally qualified users from Aug. 1 - Sep. 30, 2021. The Council expressed concern about the late migration of caribou into and through Unit 23 and stated that the lack of fall harvest has resulted in empty freezers and stressed communities. The Council hoped a closure would reduce the impacts from transporters and non-local hunters on migrating caribou. In June 2021, the Board deferred action on this request and asked that Office of Subsistence Management (OSM) staff seek additional input on concerns related to caribou from the WACH Working Group, Federal land-managing agencies, local Fish and Game Advisory Committees, the ADF&G, Federal Subsistence Regional Advisory Councils, commercial guides and transporters, and subsistence users in the area.

In March 2022, the Board approved WSA21-01a (for caribou; WSA21-01b applied to moose) with modification to close Noatak National Preserve (including the Nigu River portion of the Preserve in Unit 26A) and BLM managed lands between the Noatak and Kobuk rivers in Unit 23 to caribou hunting by

non-federally qualified users from August 1 through September 30 during the 2022-2023 and 2023-2024 regulatory years. The Board stated this modification was a reasonable compromise that provides for the continuation of subsistence uses and the conservation of the Western Arctic Caribou Herd, while precluding unnecessary restrictions on non-federally qualified users. The partial closure targets the areas of highest user conflicts and minimizes potential disruptions to caribou migration. The Board also expressed concern over the 24% WACH population decline over the past two years, which prompted the WACH Working Group to change the herd's management level to preservative declining.

In April 2022, the Board rejected Proposal WP22-47, which requested that caribou calf harvest be permitted in Unit 22 because four members of the Board felt this would supply new opportunity for federally qualified subsistence users and would align Federal and State regulations. The remaining four Board members opposed the proposal and felt with the herd in decline that it would be unwise to allow the harvest of caribou calves.

In June 2023, the Board voted to reject Wildlife Special Action requests WSA22-05 and WSA22-06. The Board stated that an immediate reduction to four caribou per year would be detrimental to subsistence needs. The Board acknowledged the need to focus on caribou conservation and that reductions in harvest limits may be needed in the future. Additionally, the Board suggested a more robust discussion of potential alternatives to the harvest reductions is essential. The Board stated that the Federal regulatory proposal process is the more appropriate avenue to allow an analysis to be written and reviewed by the public, all of the affected Councils, and our Federal and State agency partners in the range of the Western Arctic Caribou Herd, resulting in formal recommendations.

Controlled Use Areas

Noatak Controlled Use Area

In 1988, the Traditional Council of Noatak submitted a proposal to the BOG to create the Noatak Controlled Use Area (CUA) in order to restrict the use of aircraft in any manner for big game hunting from August 15-September 20 due to user conflicts (Fall 1990). The proposed Controlled Use Area extended five miles on either side of the Noatak River, from the mouth of the Eli River upstream to the mouth of the Nimiuktuk River, including the north side of Kivivik Creek (ADF&G 1988). The BOG adopted the proposal with modification to close a much smaller area extending from the Kugururok River to Sapun Creek from August 20-September 20.

The Controlled Use Area was expanded in 1994 and modified in 2017 (Betchkal 2015; Halas 2015; ADF&G 2017a). From 1994-2016, the Noatak Controlled Use Area consisted of a 10-mile-wide corridor (5 miles either side) along the Noatak River from its mouth to Sapun Creek with approximately 80 miles of the Controlled Use Area within Noatak National Preserve (NP) (**Map 5**, Betchkal 2015). The closure dates from 1994-2009 were August 25-September 15. In 2009 (effective 2010), the BOG adopted Proposal 22 to expand the closure dates to August 15-September 30 in response to the timing of caribou migration becoming less predictable (ADF&G 2009). During the 2016/17 BOG regulatory cycle, the Noatak/Kivalina & Kotzebue AC proposed (Proposal 44) extending the upriver boundary of the Noatak Controlled Use Area to the Cutler River, citing increased user conflicts as their rationale (ADF&G 2017b). In January 2017, the BOG approved amended Proposal 44 to shift the boundaries of the Noatak

Controlled Use Area to start at the mouth of the Agashashok River and end at the mouth of the Nimiuktuk River with approximately 105 miles within Noatak NP (**Map 5**, ADF&G 2017a).

In 1990, the Noatak Controlled Use Area was adopted under Federal regulations. In 1995, the Board adopted Proposal P95-50 to expand the time-period and area of the Controlled Use Area to August 25-September 15 and the mouth of the Noatak River upstream to the mouth of Sapun Creek, respectively, which aligned with State regulations as they existed at that time.

In 2008, Proposals WP08-50 and 51 requested modifications to the Noatak Controlled Use Area dates. These proposals were submitted in response to caribou migration occurring later in the season, to improve caribou harvest for subsistence users, and to decrease conflicts between local and nonlocal hunters. The Board deferred these proposals to the next regulatory cycle. In 2010, Proposals WP10-82, 83, and 85 requested similar date changes. The Board adopted WP10-85 to expand the time period during which aircraft are restricted in the Noatak Controlled Use Area to August 15-September 30, which aligned with the current State regulations.

Selawik National Wildlife Refuge: Area Not Authorized for Commercial Transporters and Guides

In 2011, Selawik National Wildlife Refuge (NWR) designated refuge lands in the northwest portion of the refuge as closed to big game hunting by commercial guides and transporters through their comprehensive conservation plan (USFWS 2011, 2014). These refuge lands are intermingled with private lands near the villages of Noorvik and Selawik (**Map 3**). The purpose of this closure was to minimize trespass on private lands and to reduce user conflicts (USFWS 2011).

At the winter 2021 meeting of the Northwest Arctic Council, a representative of Selawik National Refuge reported that only two hunters were brought into the refuge by air taxis and transporters in 2020. Because caribou are no longer abundant in Selawik National Wildlife Refuge in September, and because the non-resident moose season is already closed in Unit 23, the refuge no longer receives many fly-in hunters (NWARAC 2021a).

Noatak National Preserve Delayed Entry Controlled Use Area

In 2012, the NPS established a Special Commercial Use Area or "delayed entry zone" in the western portion of the Noatak NP (Halas 2015, Fix and Ackerman 2015). Within this zone, transporters can only transport nonlocal caribou hunters after a pre-determined date unless otherwise specified by the Western Arctic Parklands (WEAR) Superintendent in consultation with commercial operators, other agencies and local villages (Halas 2015). In 2020, the delayed entry end date was changed from September 15 to September 22 (NPS 2020) in response to requests from the Cape Krusenstern National Monument and Kobuk Valley National Park SRCs and the Native Village of Noatak (Atkinson 2021, pers. comm.). The purpose of this zone is to allow a sufficient number of caribou to cross the Noatak River and establish migration routes, to limit interactions between local and nonlocal hunters, and to allow local hunters the first opportunity to harvest caribou in that area (**Map 5**, USFWS 2014; Halas 2015).

Aircraft in National Parks and Monuments

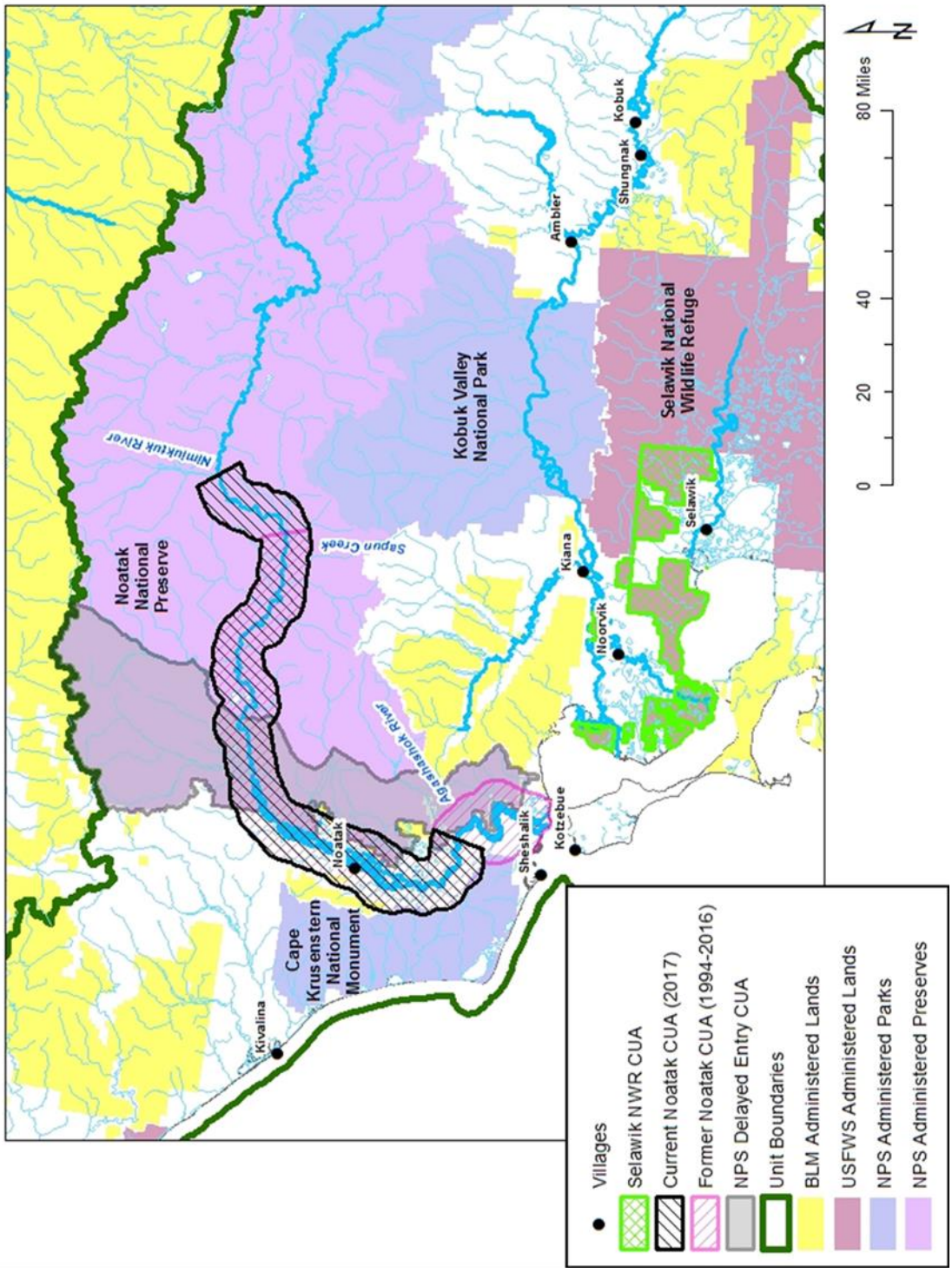
National parks and monuments in Unit 23 include Cape Krusenstern National Monument, Kobuk Valley National Park, and Gates of the Arctic National Park. The use of aircraft for access to or from lands and waters within a national park or monument for purposes of taking fish or wildlife within the national park or monument is prohibited, except in the case of exempted communities and individuals for the purpose of subsistence access. However, aircraft are allowed to access lands and waters in national parks and monuments for the purposes of engaging in any activity allowed by law other than the taking of fish and wildlife.

Anaktuvuk Pass Controlled Use Area

That portion of Unit 26A bounded by a line beginning at 153° 30′ W. long. on the game management boundary between Units 24 and 26A, north along 153° 30′ W. long. to 69° N. lat., east along 69° N. lat. to 152° 10′ W. long., south along 152° 10′ W. long. to 68° 30′ N. lat., east along 68° 30′ N. lat. to 150° 40′ W. long., south along 150° 40′ W. long. to the game management boundary between Units 24 and 26A, and westerly along the game management unit boundary to the point of origin at 153° 30′ W. long. From Aug 15 - Oct 15, the area is closed to the use of aircraft for caribou hunting, including transportation of caribou hunters, their hunting gear, and/or parts of caribou. However, this does not apply to transportation of caribou hunters, their gear, or caribou parts by aircraft between publicly owned airports in the controlled use area

Dalton Highway Corridor Management Area (DHCMA)

Units 20 and 24-26 extending five miles from each side of the Dalton Highway, including the drivable surface of the Dalton Highway, from the Yukon River to the Arctic Ocean, and including the Prudhoe Bay Closed Area. The area within the Prudhoe Bay Closed Area is closed to the taking of big game; the remainder of the DHCMA is closed to hunting; however, big game, small game, and fur animals may be taken in the area by bow and arrow only, and small game may be taken by falconry. Any hunter traveling on the Dalton Highway must stop at any check station operated by the department within the DHCMA.



Map 5. Federal and State controlled use areas in Unit 23.

Appendix 2

For survey years in which the sex of harvested caribou was documented, this table shows the percentage of male, female, and sex unknown caribou harvested in Unit 23 (CSIS 2023).

Community	Year	Estimated total number of caribou harvested	% Male	% Female	% Unknown
Ambler	2009	455	76%	24%	0%
	2012	685	69%	28%	2%
Buckland	2009	535	39%	35%	26%
	2016	693	56%	38%	6%
	2018	949	31%	48%	22%
Deering	2007	182	27%	31%	42%
	2013	404	19%	44%	38%
	2017	342	51%	44%	5%
Kiana	1999	487	84%	10%	6%
	2009	414	87%	5%	8%
Kivalina	2007	268	57%	37%	5%
	1964	256	50%	29%	21%
	1965	1010	28%	30%	42%
	1982	346	41%	47%	12%
	1983	564	29%	55%	15%
Kobuk	2004	134	76%	24%	0%
	2009	210	78%	17%	5%
	2012	119	73%	19%	8%
Kotzebue	2012	1804	61%	20%	20%
	2013	1680	76%	20%	4%
	2014	1286	75%	17%	8%
Noatak	1999	683	66%	30%	4%
	2002	410	88%	12%	0%
	2007	442	73%	23%	4%
	2016	337	64%	34%	2%
Noorvik	2002	987	71%	23%	6%
	2008	767	73%	15%	12%
	2012	851	64%	24%	12%
	2017	250	41%	56%	3%
Point Hope	2014	185	62%	24%	14%
Selawik	1999	1289	62%	37%	1%
	2006	933	73%	26%	1%
	2011	683	60%	39%	1%
Shungnak	1998	561	50%	49%	1%

Community	Year	Estimated total number of caribou harvested	% Male	% Female	% Unknown
	2008	407	43%	50%	7%
	2012	395	71%	27%	2%
Average		611	**60%**	**30%**	**10%**

For survey years in which the sex of harvested caribou was documented, this table shows the percentage of male, female, and sex unknown caribou harvested in Unit 26A and Anaktuvuk Pass (CSIS 2023). No data on the sex of harvested caribou is available for Wainwright.

Community	Year	Estimated total number of caribou harvested	% Male	% Female	% Unknown
Anaktuvuk Pass	2014	770	51%	39%	10%
	2011	616	57%	43%	0%
	2006	695	68%	32%	0%
	1993	574	55%	45%	0%
	1991	545	77%	23%	0%
	1990	591	55%	43%	2%
Atqasuk	2006	170	96%	4%	0%
	2005	202	84%	15%	1%
	2004	313	79%	17%	4%
	2003	189	79%	17%	4%
Kaktovik	1994	79	77%	23%	0%
	1992	159	69%	29%	3%
	1991	181	73%	24%	2%
	1990	114	52%	37%	11%
	1987	186	64%	33%	3%
	1986	178	59%	35%	6%
	1985	235	53%	33%	14%
Nuiqsut	2014	774	73%	21%	6%
	2006	363	93%	5%	3%
	2005	436	96%	4%	0%
	2004	429	83%	11%	6%
	2003	293	87%	7%	5%
	1994	258	73%	13%	14%
	1993	672	71%	22%	7%
Point Lay	2012	356	57%	42%	1%
Utqiaġvik	2014	4323	46%	29%	25%

Community	Year	Estimated total number of caribou harvested	% Male	% Female	% Unknown
Average		527	**70%**	**25%**	**5%**

WP24-30/31 Executive Summary	
General Description	Proposal WP24-30 requests closing Federal public lands in Units 23 to caribou hunting by non-federally qualified users from August 1 to October 31. *Submitted by: The Northwest Arctic Subsistence Regional Advisory Council* Proposal WP24-31 requests closing Federal public lands in Units 23 to caribou hunting by non-federally qualified users from August 1 to October 31. *Submitted by: The North Slope Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 23 – Caribou** **Federal public lands are closed to caribou hunting from Aug. 1–Oct. 31, except by federally qualified subsistence users hunting under these regulations.**
OSM Preliminary Conclusion	**Support** Proposal WP24-30/31 **with modification** to include a threshold that would remove the closure once the WACH Working Group manages the herd at a conservative management and harvest level (population ≥ 200,000) with a stable or increasing population trend (Adult cow survival ≥ 80% and calf recruitment ≥ 15:100).
Northwest Arctic Subsistence Regional Advisory Council	
North Slope Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	

DRAFT STAFF ANALYSIS
WP24-30/31

ISSUES

Wildlife Proposal WP24-30, submitted by the Northwest Arctic Subsistence Regional Advisory Council (Northwest Arctic Council), requests closing Federal public lands in Units 23 to caribou hunting by non-federally qualified users from August 1 to October 31.

Wildlife Proposal WP24-31, submitted by the North Slope Subsistence Regional Advisory Council (North Slope Council), requests closing Federal public lands in Units 23 to caribou hunting by non-federally qualified users from August 1 to October 31.

DISCUSSION

The Northwest Arctic Council and the North Slope Council stated that the Western Arctic Caribou Herd (WACH) population has been in decline for years and the low population level in 2022 is cause for concern. Both Councils are asking to close hunting of the WACH on Federal public lands in Units 23 to non-federally qualified users to help with conservation, while providing a meaningful subsistence priority for federally qualified subsistence users.

Existing Federal Regulation

Unit 23−Caribou

Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage—5 caribou per day by State registration permit as follows:	
Bulls may be harvested	*July 1–June 30*
Cows may be harvested. However, cows accompanied by calves may not be taken July 15–Oct. 14.	*July 15–Apr. 30*
Unit 23, remainder—5 caribou per day by State registration permit as follows:	
Bulls may be harvested	*July 1–June 30*
Cows may be harvested. However, cows accompanied by calves may not be taken July 31–Oct. 14.	*July 31–Mar. 31*

Unit 23−Caribou

Federal public lands within a 10-mile-wide corridor (5 miles either side) along the Noatak River from the western boundary of Noatak National Preserve upstream to the confluence with the Cutler River; within the northern and southern boundaries of the Eli and Agashashok River drainages, respectively; and within the Squirrel River drainage are closed to caribou hunting except by federally qualified subsistence users hunting under these regulations.

Proposed Federal Regulation

Unit 23−Caribou

Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage— 5 caribou per day by State registration permit as follows:

Bulls may be harvested	*July 1–June 30*
Cows may be harvested. However, cows accompanied by calves may not be taken July 15–Oct. 14.	*July 15–Apr. 30*

Federal public lands are closed to caribou hunting from Aug. 1–Oct. 31, except by federally qualified subsistence users hunting under these regulations

Unit 23, remainder— 5 caribou per day by State registration permit as follows:

Bulls may be harvested	*July 1–June 30*
Cows may be harvested. However, cows accompanied by calves may not be taken July 31–Oct. 14.	*July 31–Mar. 31*

Federal public lands are closed to caribou hunting from Aug. 1–Oct. 31, except by federally qualified subsistence users hunting under these regulations

Federal public lands within a 10-mile-wide corridor (5 miles either side) along the Noatak River from the western boundary of Noatak National

Unit 23−Caribou

Preserve upstream to the confluence with the Cutler River; within the northern and southern boundaries of the Eli and Agashashok River drainages, respectively; and within the Squirrel River drainage are closed to caribou hunting except by federally qualified subsistence users hunting under these regulations.

Existing State Regulation

Unit 23—Caribou

23, north of and including the Singoalik River drainage	*Residents—5 caribou per day by permit.*	
	Bulls RC907	*No closed season*
	Cows RC907	*Jul. 15-Apr. 30*
	Nonresidents—1 bull	*Aug. 1-Sep. 30*
23 remainder	*Residents—5 caribou per day by permit.*	
	Bulls RC907	*No closed season*
	Cows RC907	*Sep. 1-Mar. 31.*
	Nonresidents—1 bull	*Aug. 1-Sep. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 70.5% of Unit 23 and consist of 39.6% NPS managed lands, 21.8% BLM managed lands, and 9.1% FWS managed lands.

Customary and Traditional Use Determinations

Residents of Units 21D west of the Koyukuk and Yukon Rivers, Galena, 22, 23, 24 including residents of Wiseman but not other residents of the Dalton Highway Corridor Management Area, and 26A, have a customary and traditional use determination for caribou in Unit 23.

Only resident zone communities can hunt in National Parks and Monuments. The resident zone communities for Kobuk Valley National Park and Cape Krusenstern National Monument include all NANA Regional Corporation communities (all Unit 23 communities except Point Hope). Resident zone

communities for Gates of the Arctic National Park include Alatna, Allakaket, Ambler, Anaktuvuk Pass, Bettles/Evansville, Hughes, Kobuk, Nuiqsut, Shungnak, and Wiseman.

Regulatory History

In 2013, an aerial photo census indicated significant declines in the Teshekpuk caribou herd (TCH) (Caribou Trails 2014), WACH (Dau 2011), and possibly the Central Arctic Caribou Herd (CACH) populations. In response, the Alaska Board of Game adopted modified Proposal 202 (RC76) in March 2015 to reduce harvest opportunities for both residents and nonresidents within the range of the WACH and the TCH. These regulation changes, which included lowering bag limits, changing harvest seasons, modifying the hunt area descriptors, restricting bull and cow harvest, and prohibiting calf harvest were adopted to slow or reverse the population decline. These regulatory changes took effect on July 1, 2015.

Four Special Actions, WSA15-03/04/05/06, submitted by the North Slope Regional Advisory Council requested changes to caribou regulations in Units 23, 24, and 26. Temporary Special Action WSA15-03, requested designation of a new hunt area for caribou in Unit 23 where the harvest limit would be reduced from 15 caribou per day to five caribou per day, the harvest season be reduced for bulls and cows, and the take of calves would be prohibited. Temporary Special Action WSA15-04, requested designation of a new hunt area for caribou in Unit 24, the harvest seasons be reduced for bulls and cows, and the take of calves be prohibited.

Temporary Special Action WSA15-05, requested that bull caribou harvest limit in Unit 26A be reduced from 10 caribou per day to 5 caribou per day, the cow harvest limit be reduced to three per day, the harvest seasons for bulls and cows be reduced, and the take of calves and cows with calves be prohibited. Compared to the new State caribou regulations, it requested three additional weeks to the bull harvest season (Dec. 6- Dec. 31). Temporary Special Action WSA15-06, requested designation of a new hunt area for caribou in Unit 26B where the harvest limit would be reduced from 10 caribou per day to 5 caribou per day, the harvest season would be shortened, and the take of calves would be prohibited.

The Federal Subsistence Board (Board) approved Temporary Special Actions WSA15-03/04/05/06 with modification to simplify and clarify the regulatory language; maintain the current hunt areas in Units 23 and 24; decrease the harvest limit from 15 to five caribou per day and shorten the cow and bull seasons throughout Unit 23; prohibit the harvest of cows with calves throughout the affected units; and reduce the harvest limit in Unit 26B remainder from 10 to five caribou per day and shorten the season. These special actions took effect on July 1, 2015.

These State and Federal regulatory changes were the first time that harvest restrictions had been implemented for the WACH and TCH in over 30 years and were the result of extensive discussion and compromise among a variety of stakeholders. The requested restrictions were also supported by management recommendations outlined in the Western Arctic Herd Management Plan (WACH Working Group 2011).

In 2015, the Northwest Arctic Council submitted a temporary special action request (WSA16-01) to close caribou hunting on Federal public lands in Unit 23 to non-federally qualified users for the 2016/17 regulatory year. The Council stated that their request was necessary for conservation purposes but also

needed because nonlocal hunting activities were negatively affecting subsistence harvests. In April 2016, the Board approved WSA16-01, basing its decision on the strong support of the Northwest Arctic and North Slope Councils, public testimony in favor of the request, as well as concerns over conservation and continuation of subsistence uses.

In 2016, six proposals (WP16-37, WP16-48, WP16-49/52, WP16-61, and WP16-63) concerning WACH caribou regulations were submitted to the Board. The Board adopted WP16-48 with modification to allow the positioning of a caribou, wolf, or wolverine for harvest in Unit 23 on BLM lands only. Proposal WP16-37 requested that Federal caribou regulations mirror the new State regulations across the ranges of the WACH and TCH (Units 21D, 22, 23, 24, 26A, and 26B). The Board adopted Proposal WP16-37 with modification to reduce the harvest limit to five caribou per day, restrict bull harvest during rut and cow harvest around calving, prohibit the harvest of calves and the harvest of cows with calves before weaning (mid-October), and to create a new hunt area in the northwest corner of Unit 23. The Board took no action on the remaining proposals (WP16-49/52, and WP16-61, and WP16-63) due to action taken on WP16-37.

In June 2016, the State submitted a special action request (WSA16-03) to reopen caribou hunting on Federal public lands in Unit 23 to non-federally qualified users, providing new biological information (e.g. calf recruitment, weight, body condition) on the WACH. The State specified that there was no biological reason for the closure and that it could increase user conflicts. In January 2017, the Board rejected WSA16-03 due to the position of all four affected Councils (Northwest Arctic, North Slope, Seward Peninsula, and Western Interior) as well as public testimony and Tribal consultation comments opposing the request. Additionally, the Board found the new information provided by the State to be insufficient to rescind the closure.

In January 2017, the Alaska Board of Game (BOG) adopted Proposal 2, requiring registration permits for residents hunting caribou within the range of the Western Arctic and Teshekpuk herds in Units 21, 23, 24, and 26 (a similar proposal was passed for Unit 22 in 2016). The Alaska Department of Fish and Game (ADF&G) submitted the proposal in order to better monitor harvest and improve management flexibility. The BOG also rejected Proposal 3 (deferred Proposal 85 from 2016), which would have removed the caribou harvest ticket and report exception for residents living north of the Yukon River in Units 23 and 26A). Also in January 2017, the BOG rejected Proposal 45, which proposed requiring big game hunting camps to be spaced at least three miles apart along the Noatak, Agashashok, Eli, and Squirrel Rivers. The proposal failed as it would be difficult to enforce.

In March 2017, the Northwest Arctic and North Slope Councils submitted temporary special action requests (WSA17-03 and -04, respectively) to close caribou hunting on Federal public lands in Unit 23 and in Units 26A and 26B, respectively, to non-federally qualified users for the 2017/18 regulatory year. Both Councils stated that the intent of the proposed closures was to ensure subsistence use in the 2017/18 regulatory year, to protect declining caribou populations, and to reduce user conflicts. The Board voted to approve WSA17-03 with modification to close all Federal public lands within a 10 mile wide corridor (five miles either side) along the Noatak River from the western boundary of Noatak National Preserve upstream to the confluence with the Cutler River; within the northern and southern boundaries of the Eli and Agashashok River drainages, respectively; and within the Squirrel River drainage, to caribou hunting

except by federally qualified subsistence users for the 2017/18 regulatory year. The Board considered the modification a reasonable compromise for all users, and that closure of the specified area was warranted in order to continue subsistence use. The Board rejected WSA17-04 due to recent changes to State regulations that should reduce caribou harvest.

In April 2018, the Board adopted Proposals WP18-46 with modification and WP18-48 (effective July 1, 2018). Proposal WP18-46 requested closing caribou hunting on Federal public lands in Unit 23 to non-federally qualified users (similar to WSA16-01 and WSA17-03). The Board adopted WP18-46 with the same modification as WSA17-03 (see above) as the Northwest Arctic, Western Interior, and Seward Peninsula Councils as well as the village of Noatak supported this modification and viewed the targeted closure as effectively addressing user conflicts and the continuation of subsistence uses. The Board also adopted WP18-48 to require State registration permits for caribou hunting in Units 22, 23, and 26A to improve harvest reporting and herd management, and to align with State regulations.

In January 2020, the BOG adopted Proposal 20 to open a year-round resident season for caribou bull harvest in Unit 23 under State regulations. The BOG also adopted Proposal 24 as amended to remove the restriction on caribou calf harvest in Units 22, 23, and 26A. Proposal 28, which would have eliminated the caribou registration permit in Units 23 and 26A for North Slope resident hunters, was not adopted by the BOG, due to an ongoing need for harvest data.

In April 2020, the Board adopted Proposal WP20-46 to open a year-round bull season and permit calf harvest for caribou in Unit 23. Creating a year-round season for bulls was intended to allow for harvest of bulls when caribou migration had been delayed, alleviating harvest pressure on cows. The prohibition on calf harvest was lifted in order to permit taking of calves that had been orphaned or injured.

In 2021, the Northwest Arctic Council submitted Temporary Wildlife Special Action WSA21-01, which requested closing Federal public lands in Units 23 and 26A to caribou and moose hunting by non-federally qualified users from August 1 through September 30, 2021. The Council expressed concern about the late migration of caribou into and through Unit 23 and stated that the lack of fall harvest has resulted in empty freezers and stressed communities. The Council hoped a closure would reduce the impacts from transporters and non-local hunters on migrating caribou. In June 2021, the Board deferred action on this request and asked that Office of Subsistence Management (OSM) staff seek additional input on concerns related to caribou from the WACH Working Group, Federal land-managing agencies, local Fish and Game Advisory Committees, the ADF&G, Federal Subsistence Regional Advisory Councils, commercial guides and transporters, and subsistence users in the area.

In March 2022, the Board approved WSA21-01a (for caribou; WSA21-01b applied to moose) with modification to close Noatak National Preserve (including the Nigu River portion of the Preserve in Unit 26A) and BLM managed lands between the Noatak and Kobuk rivers in Unit 23 to caribou hunting by non-Federally qualified users from August 1 through September 30 during the 2022-2023 and 2023-2024 regulatory years. The Board stated this modification was a reasonable compromise that provides for the continuation of subsistence uses and the conservation of the WACH, while precluding unnecessary restrictions on non-federally qualified users. The partial closure targets the areas of highest user conflicts and minimizes potential disruptions to caribou migration. The Board also expressed concern over the 24%

WACH population decline over the past two years, which prompted the WACH Working Group to change the herd's management level to preservative declining.

In June 2023, the Board voted to reject Wildlife Special Action requests WSA22-05 and WSA22-06. The Board stated that an immediate reduction to four caribou per year would be detrimental to subsistence needs. The Board acknowledged the need to focus on caribou conservation and that reductions in harvest limits may be needed in the future. Additionally, the Board suggested a more robust discussion of potential alternatives to the harvest reductions is essential. The Board stated that the Federal regulatory proposal process is the more appropriate avenue to allow an analysis to be written and reviewed by the public, all the affected Councils, and our Federal and State agency partners in the range of the WACH resulting in formal recommendations.

Controlled Use Areas

Noatak Controlled Use Area

In 1988, the Traditional Council of Noatak submitted a proposal to the BOG to create the Noatak Controlled Use Area (CUA) in order to restrict the use of aircraft in any manner for big game hunting from August 15-September 20 due to user conflicts (Fall 1990). The proposed CUA extended five miles on either side of the Noatak River, from the mouth of the Eli River upstream to the mouth of the Nimiuktuk River, including the north side of Kivivik Creek (ADF&G 1988). The BOG adopted the proposal with modification to close a much smaller area extending from the Kugururok River to Sapun Creek from August 20-September 20.

The CUA was expanded in 1994 and modified in 2017 (Betchkal 2015, Halas 2015, ADF&G 2017a). From 1994-2016, the Noatak Controlled Use Area consisted of a 10-mile-wide corridor (five miles either side) along the Noatak River from its mouth to Sapun Creek with approximately 80 miles of the CUA within Noatak National Preserve (NP) (**Map 3**, Betchkal 2015). The closure dates from 1994-2009 were August 25-September 15. In 2009 (effective 2010), the BOG adopted Proposal 22 to expand the closure dates to August 15-September 30 in response to the timing of caribou migration becoming less predictable (ADF&G 2009). During the 2016/17 BOG regulatory cycle, the Noatak/Kivalina & Kotzebue Advisory Committees (AC) proposed (Proposal 44) extending the upriver boundary of the Noatak CUA to the Cutler River, citing increased user conflicts as their rationale (ADF&G 2017b). In January 2017, the BOG approved amended Proposal 44 to shift the boundaries of the Noatak CUA to start at the mouth of the Agashashok River and end at the mouth of the Nimiuktuk River with approximately 105 miles within Noatak NP (**Map 3**, ADF&G 2017a).

In 1990, the Noatak CUA was adopted under Federal regulations. In 1995, the Board adopted Proposal P95-50 to expand the time-period and area of the CUA to August 25-September 15 and the mouth of the Noatak River upstream to the mouth of Sapun Creek, respectively, which aligned with State regulations as they existed at that time.

In 2008, Proposals WP08-50 and 51 requested modifications to the Noatak CUA dates. These proposals were submitted in response to caribou migration occurring later in the season, to improve caribou harvest for subsistence users, and to decrease conflicts between local and nonlocal hunters. The Board deferred

these proposals to the next regulatory cycle. In 2010, Proposals WP10-82, 83, and 85 requested similar date changes. The Board adopted WP10-85 to expand the time period during which aircraft are restricted in the Noatak Controlled Use Area to August 15-September 30, which aligned with the current State regulations.

Selawik National Wildlife Refuge: Area Not Authorized for Commercial Transporters and Guides

In 2011, Selawik National Wildlife Refuge (NWR) designated refuge lands in the northwest portion of the refuge as closed to big game hunting by commercial guides and transporters through their comprehensive conservation plan (USFWS 2011, 2014). These refuge lands are intermingled with private lands near the villages of Noorvik and Selawik (**Map 3**). The purpose of this closure was to minimize trespass on private lands and to reduce user conflicts (USFWS 2011).

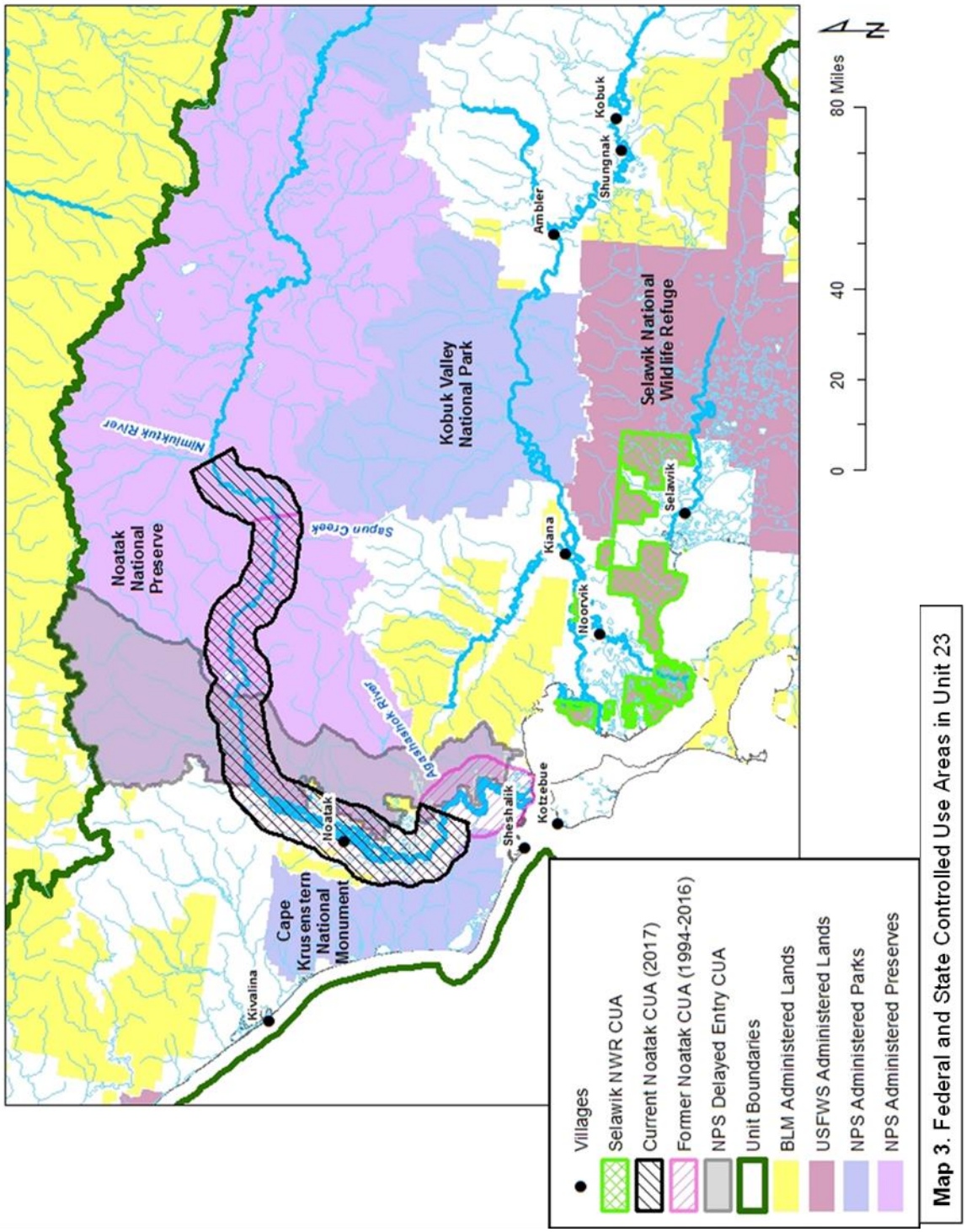
At the winter 2021 meeting of the Northwest Arctic Council, a representative of Selawik National Refuge reported that only two hunters were brought into the refuge by air taxis and transporters in 2020. Because caribou are no longer abundant in Selawik National Wildlife Refuge in September, and because the non-resident moose season is already closed in Unit 23, the refuge no longer receives many fly-in hunters (NWARAC 2021a).

Noatak National Preserve Delayed Entry Controlled Use Area

In 2012, the NPS established a Special Commercial Use Area or "delayed entry zone" in the western portion of the Noatak NP (Halas 2015, Fix and Ackerman 2015). Within this zone, transporters can only transport nonlocal caribou hunters after a pre-determined date unless otherwise specified by the Western Arctic Parklands (WEAR) Superintendent in consultation with commercial operators, other agencies and local villages (Halas 2015). In 2020, the delayed entry end date was changed from September 15 to September 22 (NPS 2020) in response to requests from the Cape Krusenstern National Monument and Kobuk Valley National Park Subsistence Resource Commissions and the Native Village of Noatak (Atkinson 2021, pers. comm.). The purpose of this zone is to allow a sufficient number of caribou to cross the Noatak River and establish migration routes, to limit interactions between local and nonlocal hunters, and to allow local hunters the first opportunity to harvest caribou in that area (**Map 3**, USFWS 2014, Halas 2015).

Aircraft in National Parks and Monuments

National parks and monuments in Unit 23 include Cape Krusenstern National Monument, Kobuk Valley National Park, and Gates of the Arctic National Park. The use of aircraft for access to or from lands and waters within a national park or monument for purposes of taking fish or wildlife within the national park or monument is prohibited, except in the case of exempted communities and individuals for the purpose of subsistence access. However, aircraft are allowed to access lands and waters in national parks and monuments for the purposes of engaging in any activity allowed by law other than the taking of fish and wildlife.



Map 3. Federal and State Controlled Use Areas in Unit 23

Current Events

The WACH Working Group has submitted Wildlife Proposal WP24-28 requesting to change the Federal regulations for caribou in Units 21D, remainder; 24B, remainder; 24C; 24D; and all caribou hunt areas within Units 22, 23, and 26A to reduce the caribou harvest limit from five caribou per day to four caribou per year, however, no more than one cow may be taken. A companion proposal was also submitted to the State for consideration at their January 2024 BOG meeting.

The Northwest Arctic Council has submitted Wildlife Proposal WP24-29 requesting to change the Federal regulations for caribou in Unit 23 to reduce the caribou harvest limit five caribou per day to four caribou per year, only one of which may be a cow per year. A companion proposal was also submitted to the State for consideration at their January 2024 BOG meeting.

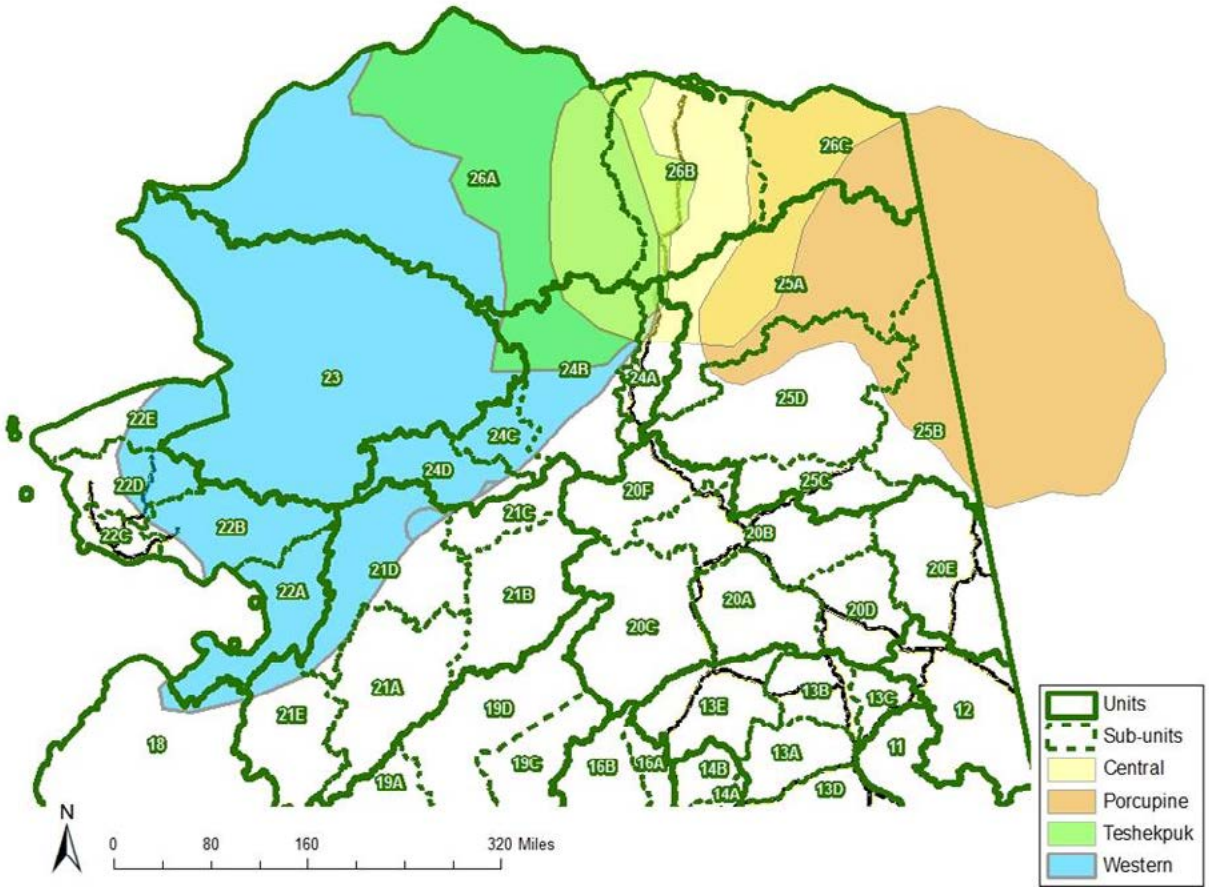
Biological Background

The TCH, WACH, and CACH have ranges that overlap in Units 26A and 24B (Map 1), and there can be considerable mixing of herds during the fall and winter (Prichard et al. 2020). As the wildlife proposals focus on conservation concerns for the WACH, this analysis will focus on the WACH. The TCH and CACH, primarily occupies Unit 26 (Dau 2011, 2015; Lenart 2011; Parrett 2011, 2015c, 2015d), and will not be considered further in this analysis.

Caribou abundance naturally fluctuates over decades (Gunn 2003; WACH Working Group 2011). Gunn (2003) reports the mean doubling rate for Alaskan caribou as 10 ± 2.3 years. Although the underlying mechanisms causing these fluctuations are uncertain, climatic oscillations (i.e., Arctic and Pacific Decadal Oscillations) may play an important role (Gunn 2003; Joly et al. 2011). Climatic oscillations can influence factors such as snow depth, icing, forage quality and growth, wildfire occurrence, insect levels, and predation, which all contribute to caribou population dynamics (Joly et al. 2011). Density-dependent reduction in forage availability, resulting in poorer body condition may exacerbate caribou population fluctuations (Gunn 2003).

Caribou calving generally occurs from late May to mid-June (Dau 2013; Cameron et al. 2018). Weaning generally occurs in late October and early November before the breeding season (Taillon et al. 2011). Calves may stay with their mothers through their first winter, which improves calves' access to food and body condition (Holand et al. 2012). Calves orphaned after weaning (October) have greater chances of survival than calves orphaned before weaning (Russell et al. 1991; Joly 2000; Holand et al. 2012; Rughetti and Festa-Bianchet 2014).

Caribou feed on a wide variety of plants including lichens, fungi, sedges, grasses, forbs, and twigs of woody plants. Arctic caribou depend primarily on lichens during the fall and winter, but during summer they feed on leaves, grasses and sedges (Joly and Cameron 2018; Miller 2003).



Map 1. Herd overlap and ranges of the WACH, TCH, CACH, and Porcupine Caribou Herd.

The WACH has historically been the largest caribou herd in Alaska and has a home range of approximately 157,000 square miles in northwestern Alaska. In the spring, most mature cows move north to calving grounds in the Utukok Hills, while bulls and immature cows lag behind and move toward summer range in the Wulik Peaks and Lisburne Hills (**Map 2**; Dau 2011; WACH Working Group 2011, 2019). After calving, cows and calves move west toward the Lisburne Hills where they mix with the bulls and non-maternal cows. During the summer, the herd moves rapidly to the Brooks Range. Calving locations of individuals average 35 miles apart from one year to the next, and 90% of females calved within one week from the previous year (Joly et al. 2021). The WACH has used the same general calving grounds for more than 100 years (Cameron et al. 2020).

Except for summer periods, little individual site-specific fidelity is observed from year to year, especially during the winter (Joly et al. 2021). The winter range fluctuates year to year as the WACH demonstrate low fidelity to wintering grounds (Joly et al. 2021). Rut occurs during fall migration (Dau 2011, WACH Working Group 2011). The fall migration is more variable and shows less fidelity to specific migration routes than the spring migration. While caribou still showed a fidelity to certain regions within the herd's range (Joly et al. 2021).

In recent years, the timing of fall migration has been less predictable (Joly et al. 2021). Reasons for changes in migration phenology are unknown. However, Cameron et al. (2021) found that WACH migrated in response to snow events and cold temperatures but would pause migration when they encountered snow free areas or warmer temperatures. This corresponds with Traditional Ecological Knowledge, which has observed caribou migrating in response to weather (NWARAC 2021b). Caribou migrations are also closely related to the population size and density of the herd (Burch 1972, Joly et al. 2021b).

The proportion of caribou using certain migration paths also varies each year (**Figure 1**; Baltensperger and Joly 2019; Joly and Cameron 2020). Changes in migration paths are likely influenced by multiple factors including food availability, snow depth, rugged terrain, and dense vegetation (Nicholson et al. 2016; Fullman et al. 2017). If caribou travelled the same migration routes every year, their food resources would likely be depleted (NWARAC 2016a). Anthropogenic factors can also influence migration paths. Radio collared caribou data has shown that the Red Dog Mine Road, near Kivalina has delayed the fall migration along the coast with some caribou turning around rather than crossing the road (Wilson et al. 2016; WACH Working Group 2021).

The WACH Working Group consists of a broad spectrum of stakeholders, including subsistence users, sport hunters, conservationists, hunting guides, reindeer herders and transporters. The Group is also technically supported by NPS, FWS, BLM, and ADF&G personnel. The WACH Working Group developed a WACH Cooperative Management Plan in 2003 and revised it in 2011 and 2019 (WACH Working Group 2011, 2019). The WACH Management Plan identifies nine plan elements: cooperation, population management, habitat, regulations, reindeer, knowledge, education, human activities, and changing climate, as well as associated goals, strategies, and management actions. As part of the population management element, the WACH Working Group developed a guide to herd management determined by population size, population trend, and harvest rate. Population sizes guiding management level determinations were based on recent (since 1970) historical data for the WACH (WACH Working Group 2011, 2019). Revisions to recommended harvest levels under liberal and conservative management were made in 2015 (WACH Working Group 2015) and 2019 (WACH Working Group 2019a; **Table 1**).

The WACH population declined rapidly in the early 1970s, bottoming out at about 75,000 animals in 1976. Aerial photocensuses have been used since 1986 to estimate population size. The WACH population increased throughout the 1980s and 1990s, peaking at 490,000 animals in 2003 (**Figure 2**). From 2003-2016, the herd declined at an average annual rate of 7.1% from approximately 490,000 caribou to 200,928 caribou (Dau 2011, 2014; Caribou Trails 2014; Parrett 2016). In 2017, the herd increased to an estimated 259,000 caribou (Parrett 2017a). However, part of this increase may have been due to improved photographic technology as ADF&G switched from film to higher resolution digital cameras. The 2019 population estimate was 244,000 caribou (Hansen 2019a). No photocensus was completed in 2020, but ADF&G completed a census in 2021 (WACH Working Group 2020). The 2021 population estimate was 188,000 caribou with a 95% confidence interval of +/- 11,855 and a minimum count of 180,374. This is approximately a 24% decline from the 2019 population estimate (WACH Working Group 2021). The 2022 population estimate was 164,000 caribou with a 95% confidence

interval of +/- 7,271 and a minimum count of 161,034, representing an additional 12% decline (**Figure 2**; WACH Working Group 2022).

Between 1982 and 2011, the WACH population was within the liberal management level prescribed by the WACH Working Group (**Figure 2, Table 1**). In 2013, the herd population estimate fell below the population threshold for liberal management of a decreasing population (265,000), slipping into the conservative management level. In 2020, as no photocensus was completed, the WACH Working Group voted to maintain the herd's status at the conservative declining level (WACH Working Group 2020). The 2021 population estimate fell below the population threshold for conservative management of a decreasing population (200,000). The WACH Working Group voted to place the herd in the preservative declining level in 2021 and 2022 (WACH Working Group 2021, 2022).

Between 1970 and 2021, the bull:cow ratio exceeded Critical Management level of 30 bulls:100 cows identified in the 2019 WACH Management Plan (**Figure 3**). (Note: Previous management plans identified 40 bulls:100 cows as the critical management level). However, the average annual number of bulls:100 cows was greater during the period of population growth (54:100 between 1976–2001) than during the recent period of decline (44:100 between 2004-2016). However, in 2017 the bull:100 cow ratio was the highest since 1998 at 54 bulls:100 cows. In 2021, that ratio fell slightly to 47 bulls:100 cows (**Figure 3**; WACH Working Group 2021). Additionally, Dau (2015) states that while trends in bull:cow ratios are accurate, actual values should be interpreted with caution due to sexual segregation during sampling and the inability to sample the entire population, which likely account for more annual variability than actual changes in composition.

Although factors contributing to the 2003-present decline are not known with certainty, increased adult cow mortality, and decreased calf recruitment and survival played a role (Dau 2011; WACH Working Group 2022). Since the mid-1980s, adult mortality has slowly increased while recruitment has slowly decreased (**Figure 4**; Dau 2013). Prichard (2009) developed a population model specifically for the WACH using various demographic parameters and found adult cow survival to have the largest impact on population size, followed by calf survival and then parturition rates.

Calf production has likely had little influence on the population trajectory (Dau 2013, 2015). Between 1990 and 2003, the June calf:cow ratio averaged 66 calves:100 cows/year. Between 2004 and 2017, the June calf:cow ratio averaged 72 calves:100 cows/year. In June 2018, 86 calves:100 cows were observed, which approximates the highest parturition level ever recorded for the herd (86 calves:100 cows in 1992) (Dau 2016a, WACH Working Group 2021). The 5-year period from 2015-2019 had the highest (83%) parturition rate of any period since monitoring began. Since 2018, the parturition rates have decreased. In 2022, the calf:cow ratio was 64 calves:100 cows. The long-term average (1992-2022) is 70 calves:100 cows/year (**Figure 5**, WACH Working Group 2022; NWARAC 2023).

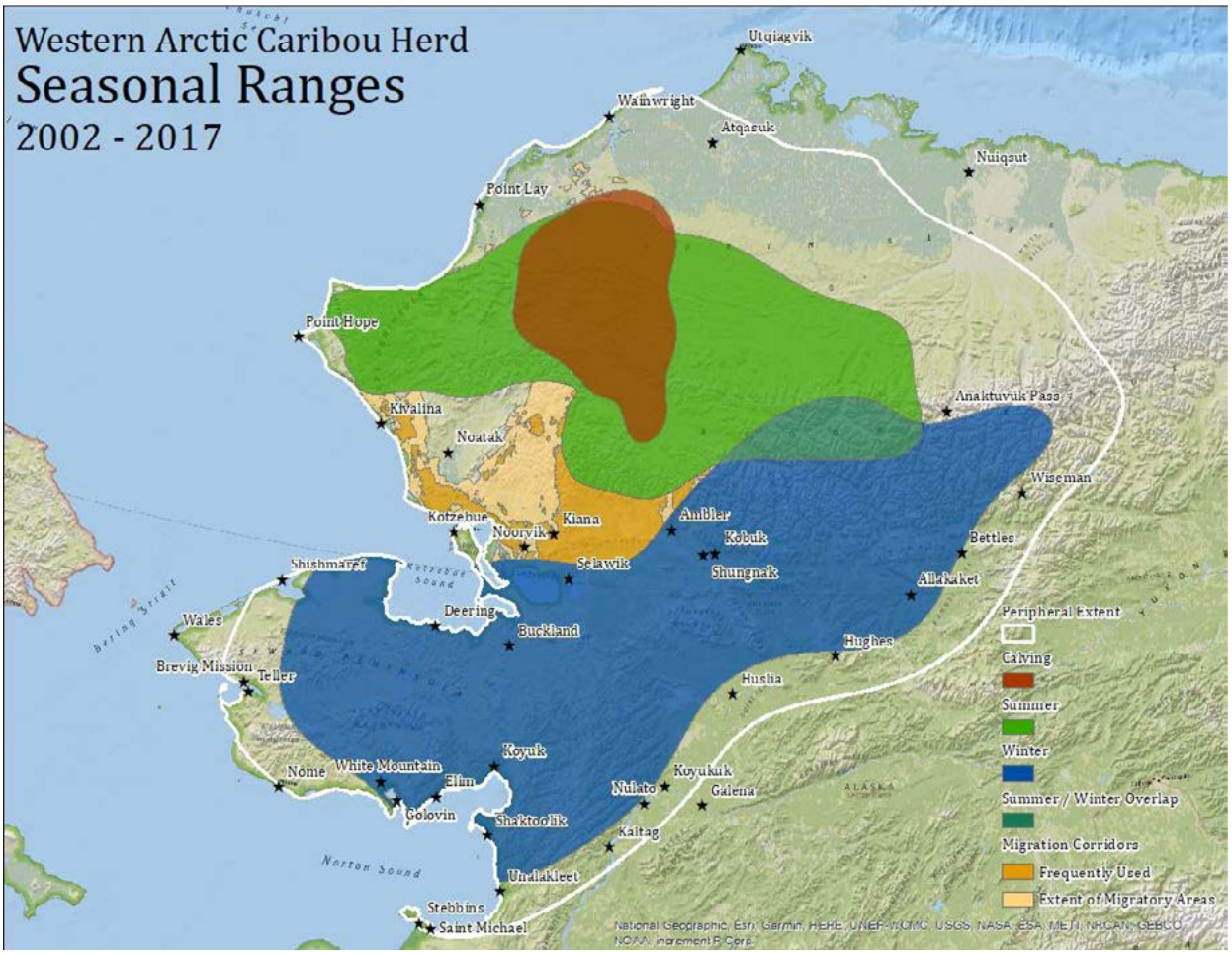
Decreased calf survival through summer and fall and recruitment into the herd may have contributed to the recent population decline (Dau 2013, 2015). Fall calf:cow ratios indicate calf survival over summer. Between 1976 and 2017, the fall calf:cow ratio ranged from 35 to 59 calves:100 cows/year, averaging 47 calves:100 cows/year (**Figure 5**).

Similarly, the ratio of short yearlings (SY, 10-11 months old caribou) to adults provides a measure of overwintering calf survival and recruitment. Between 1998 and 2022, SY:adult ratios ranged from 9-26 and averaged 17 SY:100 adults/year (**Figure 5**). SY:100 adult ratios were high from 2016-2018, ranging from 21-23 SY:100 adults (Dau 2016b, NWARAC 2019a, NWARAC 2023). The 2022 SY:100 adult ratio was on par with the long-term average at 17 SY:100 adults (WACH Working Group 2022). Over the past seven years the short yearling ratio has been at or above the long-term average. Thus, recruitment does not appear to be a major driver of herd decline.

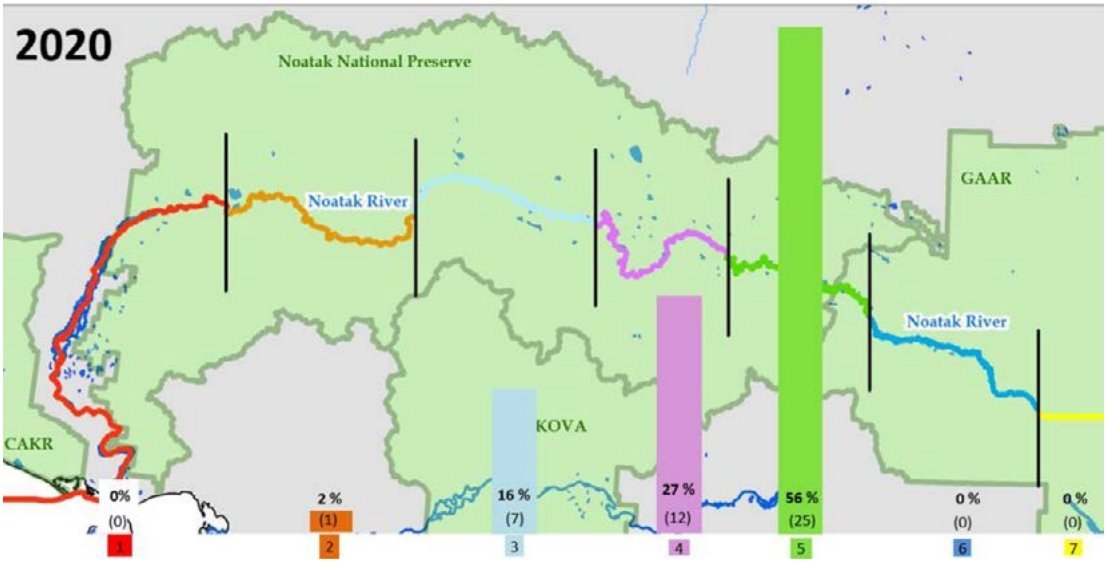
Cow mortality affects the trajectory of the herd (Dau 2011, 2013; Prichard 2009; NWARAC 2019a). The long-term mortality rate of radio-collared adult cows averaged 19% from 1987-2020 (WACH Working Group 2022). The annual mortality rate increased from an average of 15% between 1987 and 2003 to 23% from 2004-2014 (**Figure 4**; Dau 2011, 2013, 2014, 2015). Mortality rates declined in 2015 and 2016, but then increased sharply in 2017. However, the increased mortality rate in 2017 may have been due to a low and aging sample size as few caribou were collared in the previous two years (Prichard et al. 2012; NWARAC 2019a) and/or difficult weather conditions (Gurarie et al. 2020). Prior to 2019, ADF&G and NPS deployed collars on caribou at Onion Portage via boat in September. Only seven collars total were deployed in both 2017 and 2018 due to fewer caribou migrating through Onion Portage at predictable times. ADF&G and NPS begun deploying collars using net gun techniques via helicopter in April 2019 (Joly and Cameron 2021). Since 2018, estimated mortality rates have remained above the long-term average, ranging from 23-36%. Estimated mortality includes all causes of death including hunting (Dau 2011). Dau (2015) states that cow mortality estimates are conservative due to exclusion of unhealthy (i.e. diseased) and yearling cows from collaring. These mortality estimates are influenced by the age at which individuals were collared (which is unknown), sample size and how long the collars have been on individuals (Dau 2015, Prichard et al. 2012).

Cow mortality is low over winter and then increases in the spring/early summer, likely due to the convergence of declining body condition, demands of migration, and lactation prior to the availability of higher quality forage. Conversely, bull mortality spikes during the fall, both naturally from the demands of rut and from targeted human harvest (Dau 2013, 2014). Additionally, Prichard (2009) and Dau (2015) suggest that harvest levels and rates of cows can greatly impact population trajectory.

Increased predation, hunting pressure, deteriorating range condition (including habitat loss and fragmentation), climate change, fall and winter icing events, and disease may be contributing factors to the population decline (Joly et al. 2011; Dau 2014, 2015). Joly et al. (2007) documented a decline in lichen cover in portions of the wintering areas of the WACH, which continued through at least 2015 (BLM, unpublished data).



Map 2. WACH seasonal range map, 2002-2017 (image from WACH Working Group 2019a).



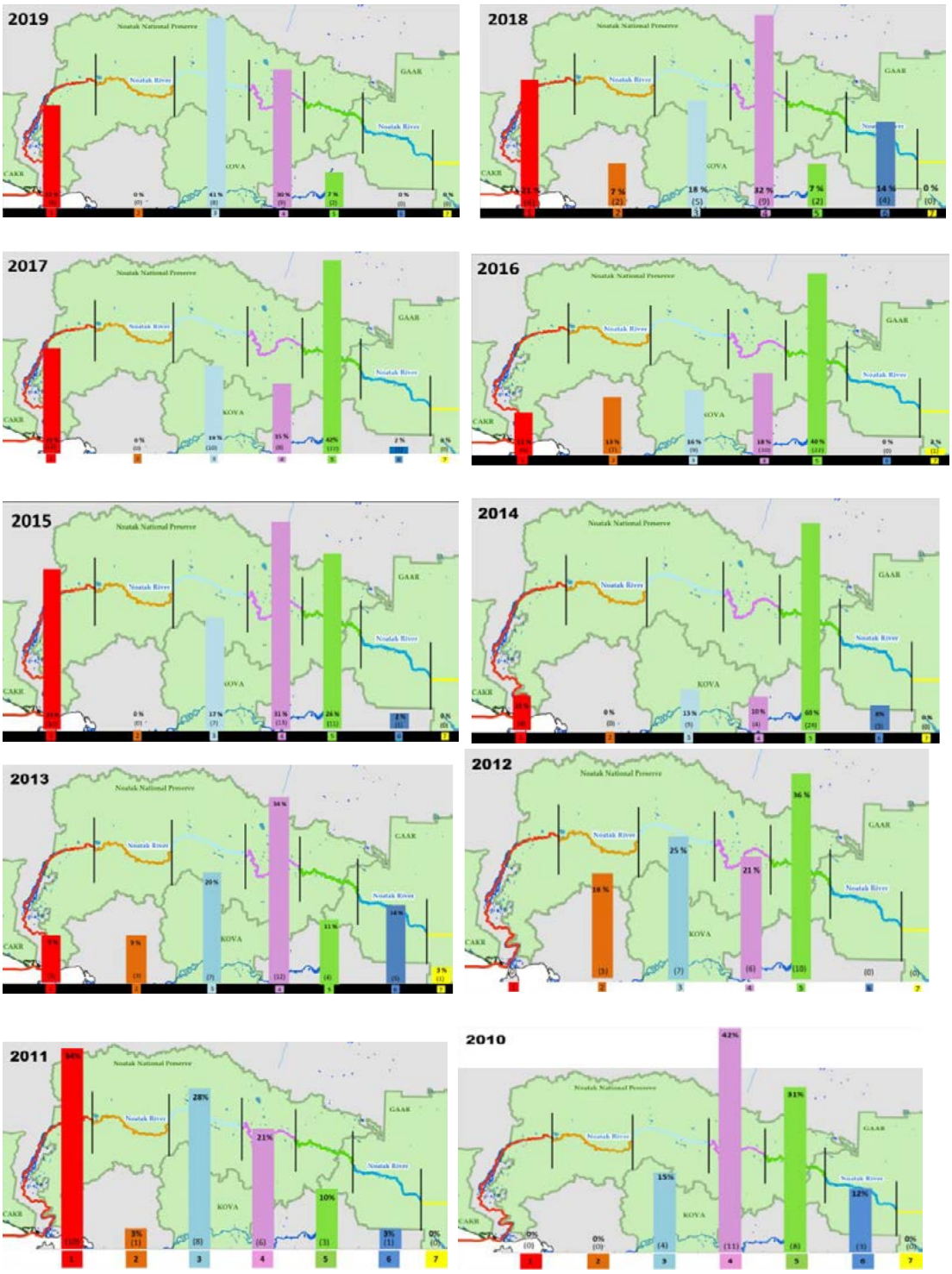


Figure 1. 2010-2020 distribution of caribou crossing the Noatak River during fall. Histograms depict where collared female caribou crossed the Noatak River, generally from north to south, on their fall migration. Relative percentages (top number) and the absolute number (middle number) of caribou are provided. The river is divided into seven (lowest number) color-coded segments which are displayed in the background. The middle five segments are 100 river kilometers long, while the westernmost segment (red) is 200 km (before extending into the Chukchi Sea) and the easternmost (yellow) runs as far east as WACH caribou are known to migrate (Joly and Cameron 2021).

Table 1. WACH management levels using herd size, population trend, and harvest rate (WACH Working Group 2019b).

Management and Harvest Level	Population Trend			Harvest Recommendations May Include:
	Declining Adult Cow Survival <80% Calf Recruitment <15:100	**Stable** Adult Cow Survival 80%-88% Calf Recruitment 15-22:100	**Increasing** Adult Cow Survival >88% Calf Recruitment >22:100	
Liberal	Pop: 265,000+ Harvest: 14,000+	Pop: 230,000+ Harvest: 14,000+	Pop: 200,000+ Harvest: 14,000+	• Reduce harvest of bulls by nonresidents to maintain at least 30 bulls:100 cows • No restriction of bull harvest by resident hunters unless bull:cow ratios fall below 30 bulls:100 cows
Conservative	Pop: 200,000-265,000 Harvest: 10,000-14,000	Pop: 170,000-230,000 Harvest: 10,000-14,000	Pop: 150,000-200,000 Harvest: 10,000-14,000	• Encourage voluntary reduction in calf harvest, especially when the population is declining • No cow harvest by nonresidents • Restriction of bull harvest by nonresidents • Limit the subsistence harvest of bulls only when necessary to maintain a minimum 30:100 bull:cow ratio
Preservative	Pop: 130,000-200,000 Harvest: 6,000-10,000	Pop: 115,000-170,000 Harvest: 6,000-10,000	Pop: 100,000-150,000 Harvest: 6,000-10,000	• No harvest of calves • Limit harvest of cows by resident hunters through permit hunts and/or village quotas • Limit the subsistence harvest of bulls to maintain at least 30 bulls:100 cows • Harvest restricted to residents only, according to state and federal law. Closure of some federal public lands to non-qualified users may be necessary
Critical	Pop: <130,000 Harvest: <6,000	Pop: <115,000 Harvest: <6,000	Pop: <100,000 Harvest: <6,000	• No harvest of calves • Highly restrict the harvest of cows through permit hunts and/or village quotas • Limit the subsistence harvest of bulls to maintain at least 30 bulls:100 cows • Harvest restricted to residents only, according to state and federal law. Closure of some federal public lands to non-qualified users may be necessary

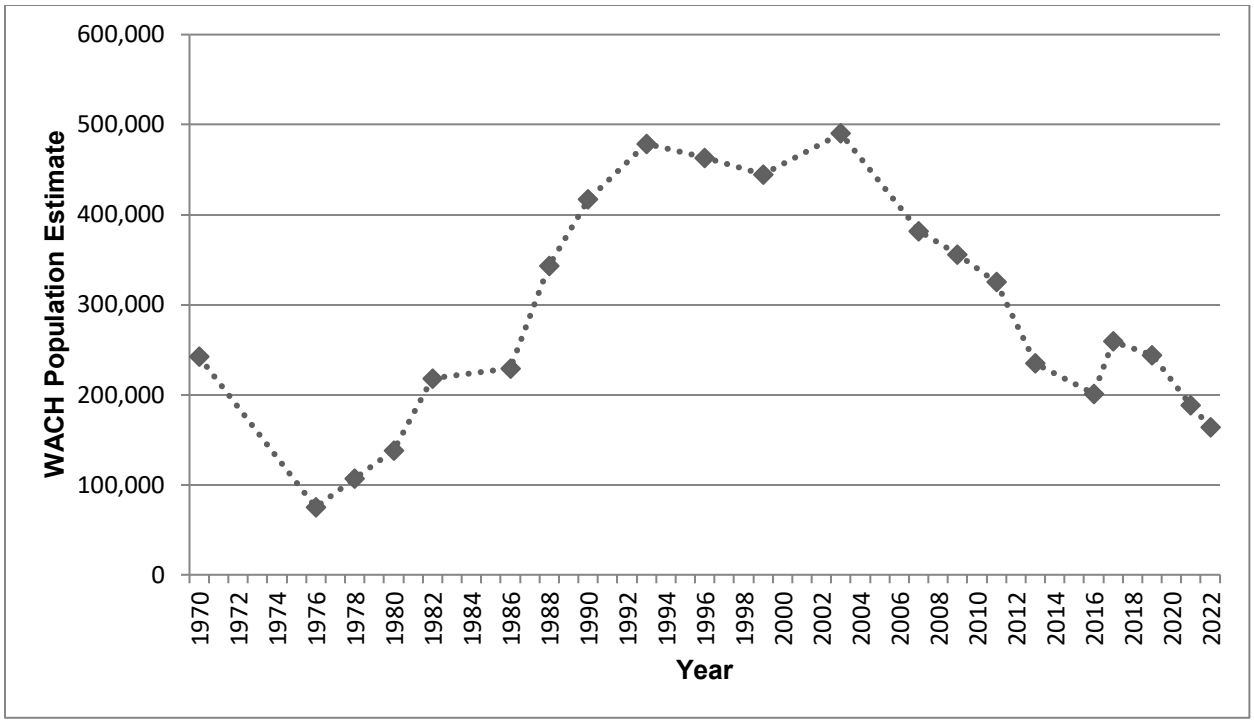


Figure 2. The WACH population estimates from 1970–2022. Population estimates from 1986–2022 are based on aerial photographs of groups of caribou that contained radio-collared animals (Dau 2011, 2013, 2014; Parrett 2016, 2017a; Hansen 2019a; WACH Working Group 2021, 2022).

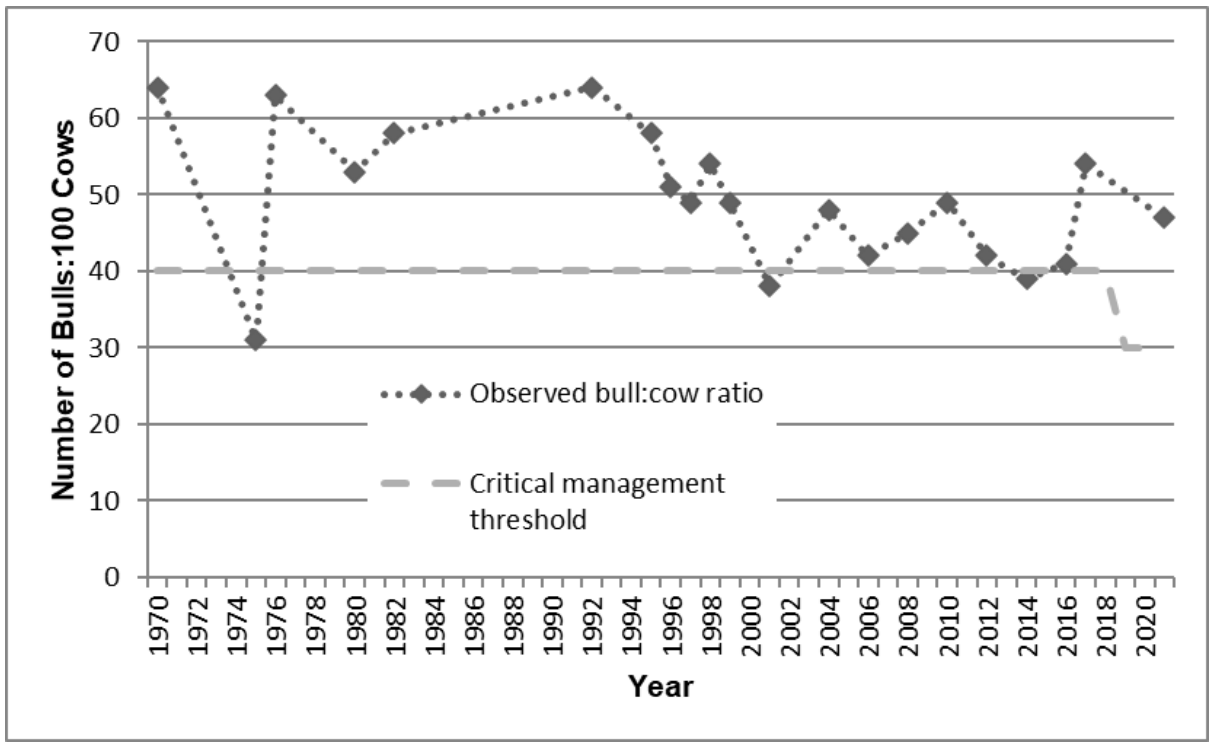


Figure 3. Bull:cow ratios for the WACH (Dau 2015; ADF&G 2017c; Parrett 2017a; WACH Working Group 2021).

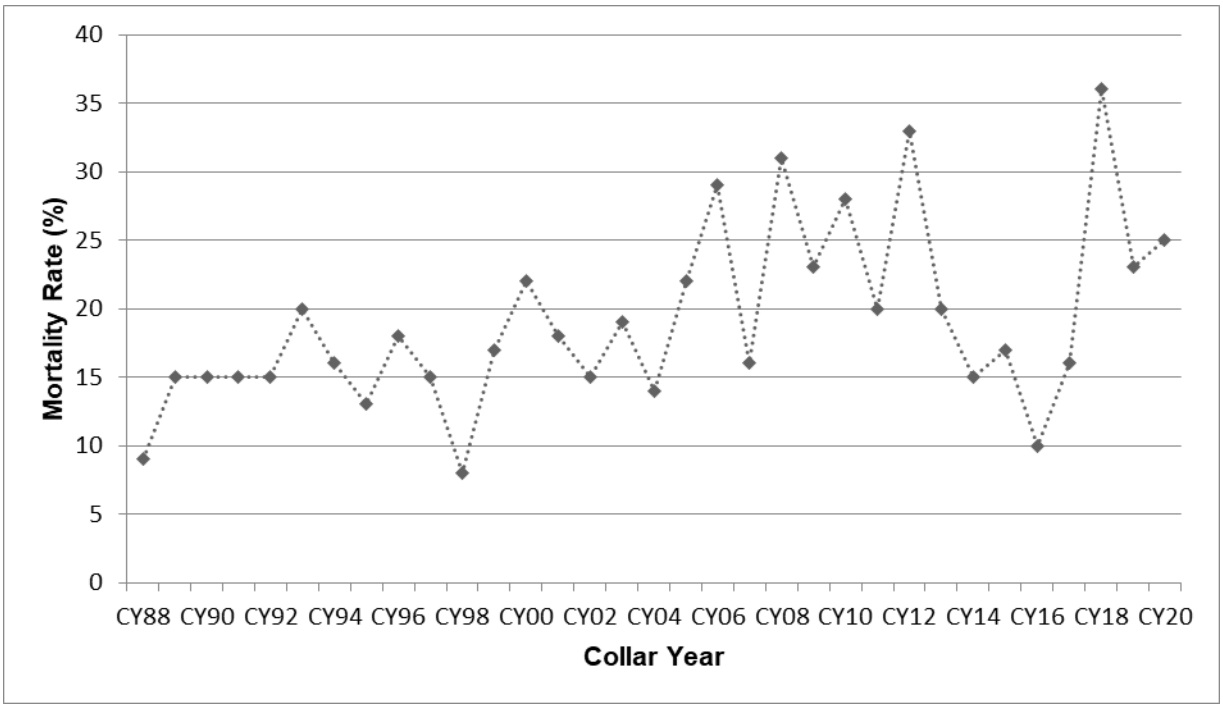


Figure 4. Mortality rate of radio-collared cow caribou in the WACH (Dau 2013, 2015, 2016b; NWARAC 2019a; WACH Working Group 2020, 2021). Collar Year = 1 Oct-Sep 30. Note: Prior to 2019, collars were deployed via boat in Onion Portage from September to October. Starting in 2019 collars were deployed via net gun techniques in spring (Joly and Cameron 2021).

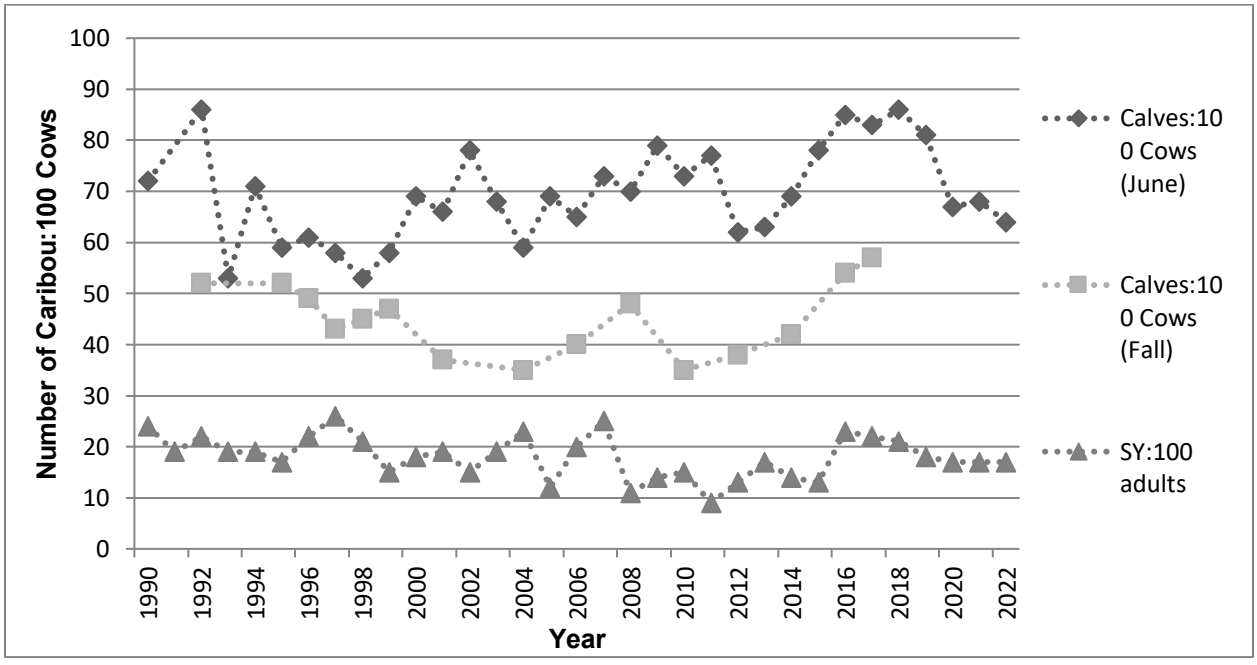


Figure 5. Calf:cow and short yearling (SY):adult ratios for the WACH (Dau 2013, 2015, 2016a; ADF&G 2017c; Parrett 2017a; NWARAC 2019a, 2023; WACH Working Group 2021, 2022). Short yearlings are 10-11 months old caribou.

Cultural Knowledge and Traditional Practices

The present-day human population in Unit 23 includes 11 regional Iñupiaq nations that were intact in the mid-19th century (Burch 1998). The estimated population of the Northwest Arctic Borough was 7,346 in 2022 (ADLWD 2022). Caribou have been a significant resource for the Iñupiat for thousands of years. Archaeological deposits at the Onion Portage site on the Kobuk River document 10,000 years of caribou hunting at this location, which is still used today (Anderson 1968, 1988), and even older archaeological deposits dated to circa 11,000 years ago occur in the Kivalina River drainage (Buvit et al. 2019).

The objective of the fall hunt has historically been to acquire large quantities of high-quality meat to freeze for winter (Burch 1994). Ideally, caribou harvesting occurs when the weather is cool enough to prevent spoilage of meat, but before freeze-up. Hunters search for caribou and attempt to intercept them at known river crossings, making the Kobuk and Noatak Rivers central to traditional hunt areas. Prior to freeze-up, bulls have traditionally been preferred because they are fatter than cows (Georgette and Loon 1993). After freeze-up, cows are preferred, because bulls are typically skinnier and in rut by then; the meat smells bad and is of poor quality (Braem et al. 2015). Small groups of caribou that have over-wintered may be harvested by hunters in areas that are accessible by snowmachine.

During their March 7-8, 2023 meeting, Northwest Arctic Council members discussed the difficulties that communities have had in recent years in their efforts to harvest caribou. A Council member from Kotzebue said, "I had a lot of concerns regarding caribou. We know that they don't come through here anymore. I haven't gotten any fresh caribou meat within well over a year. It is a big concern." He added, "This is beginning to get depressing because people aren't filling their freezers" (NWRAC 2023). Another Council member from Kotzebue said that caribou "didn't migrate down the last three years like they normally would…so that was another concern is that most of the villages where the caribou normally migrate didn't get caribou the last couple years or three years" (NWARAC 2023). These recent accounts build on several years of testimony showing that communities—especially those in the communities in the Kobuk River region—have been unable to harvest caribou at levels needed for subsistence (OSM 2022).

Variability in resource availability is a feature of subsistence economies. Prior to settlement in permanent communities, residents of Northwest Alaska were seasonally nomadic, and were able to adapt to lack of local caribou availability by being mobile, as well as through extensive trading networks (Burch 1984). Communities depended on their Traditional Ecological Knowledge to remember how to draw on alternative resources and survive in difficult times (Minc 1986). Periodic severe shortages in subsistence resources caused larger and more permanent population shifts, such as outmigration from the Northwest Arctic region to the North Slope region in the 1880s (Burch 1984).

Caribou dominate subsistence harvest in most communities in the Northwest Arctic (Braem et al. 2015, 2017). In household harvest surveys conducted between 1964 and 2017, caribou were often the most harvested species, more than any other wild resource, in pounds of edible weight. Based on these surveys, the per person harvest of caribou has been as high as 430 pounds per year in communities in Unit 23 (ADF&G 2021; **Table 7**).

Table 7 highlights variability in the estimated number of caribou harvested annually by Unit 23 communities, based on periodic subsistence surveys conducted by ADF&G, Division of Subsistence. Over time, estimated annual harvest tends to correspond with local availability of caribou. The average estimated annual pounds per person of caribou harvested across survey years ranges from a high of 255.3 pounds in Ambler to a low of 50.5 pounds in Point Hope (**Table 7**).

Table 7. Two measures of caribou harvest between 1982 and 2018 in Unit 23 communities. Data is from the ADF&G, Division of Subsistence Community Subsistence Information System (CSIS 2021) with the following exceptions. Kotzebue data for 2002-2004 is from Whiting 2006; Noatak and Deering data for 2011 is from Mikow et al. 2014; 2018 data for Buckland is from Mikow and Cunningham 2020; Point Hope data for 2000-2001 is from Bacon et al. 2009, rev. 2011. Dashes indicate that no data is available.

Community	Year	Estimated Number of Caribou Harvested	Estimated Pounds of Caribou per Person
Kotzebue	2014	1,286	59
	2013	1,680	75
	2012	1,803	78
	2004	1,915	--
	2003	1,719	--
	2002	2,376	--
	1986	1,917	97
	Avg	**1,814**	**77**
Selawik	2011	683	109
	2006	934	165
	1999	1,289	249
	Avg	**987**	**174.3**
Kivalina	2010	86	32
	2007	268	85
	1992	351	138
	1983	564	283.9
	1982	346	179
	Avg	**323**	**144**
Noatak	2016	337	80
	2011	360	89.8
	2007	441	114
	2002	410	120
	1999	683	224
	1994	615	220
	Avg	**474**	**141.3**
Point Hope	2014	185	34
	2000-2001	219	--
	1994	355	67

Community	Year	Estimated Number of Caribou Harvested	Estimated Pounds of Caribou per Person
	Avg	**253**	**50.5**
	Lower Kobuk River		
Noorvik	2017	250	65
	2012	851	198
	2008	767	173
	2002	988	181
	Avg	**714**	**154.3**
Kiana	2009	440	149
	2006	306	108.5
	1999	488	174
	Avg	**411**	**143.8**
	Upper Kobuk River		
Ambler	2012	685	330
	2009	456	260
	2003	325	176
	Avg	**489**	**255.3**
Shungnak	2012	396	196
	2008	416	218
	2002	403	220
	1998	561	312
	Avg	**444**	**236.5**
Kobuk	2012	119	98
	2009	210	194
	2004	134	148
	Avg	**154**	**146.7**
	Northern Seward Peninsula		
Buckland	2018	950	220
	2016	637	179
	2009	561	176
	2003	637	212
	Avg	**696**	**196.8**
Deering	2017	342	342
	2013	294	430
	2011-2012	237	206
	2007	182	161
	1994	142	131
	Avg	**240**	**254**

Table 8 compares percentages of surveyed Unit 23 households attempting to harvest caribou versus those succeeding in harvesting caribou, according to subsistence surveys. In practice, attempted harvest depends on the presence of caribou in traditional harvest areas. It is worth noting that the percentage of households attempting to harvest caribou in any year may adjust to perceived abundance or availability, so the percentage of households attempting to harvest caribou cannot be taken as a simple proxy of interest or need. However, the disparity between the percentage attempting to harvest and those harvesting can give us some limited information about whether caribou are available. The percent harvesting includes those who harvested even one caribou, so this measure cannot show whether people are getting as many caribou as they need.

Table 8. Percent of surveyed Unit 23 households attempting to harvest and successfully harvesting caribou between 1986 and 2018. Data is from the ADF&G Division of Subsistence Community Subsistence Information System (ADF&G 2021) with the following exceptions. Noatak and Deering data for 2011 is from Mikow et al. 2014; 2018 data for Buckland is from Mikow and Cunningham 2020. Dashes indicate that no data is available.

Community	Year	Percent of Surveyed Households Attempting to Harvest Caribou	Percent of Surveyed Households Attempting to Harvest Caribou but Unsuccessful	Percent of Surveyed Households Harvesting Caribou
Kotzebue	2014	39%	10%	29%
	2013	43%	9%	34%
	2012	44%	5%	39%
	1986	50%	5%	45%
Selawik	2011	70%	16%	54%
	2006	65%	2%	63%
	1999	61%	0%	61%
Kivalina	2010	66%	37%	29%
	2007	64%	0%	64%
	1992	77%	3%	74%
Noatak	2016	70%	19%	51%
	2011	62%	12%	50%
	2007	73%	7%	66%
	2002	76%	5%	71%
	1999	74%	2%	72%
	1994	84%	0%	84%
Point Hope	2014	53%	23%	30%
Lower Kobuk River Communities				
Noorvik	2017	59%	19%	40%
	2012	60%	0%	60%
	2008	70%	0%	70%
	2002	72%	1%	71%
Kiana	2009	83%	3%	80%
	2006	62%	5%	57%
	1999	68%	3%	65%
Upper Kobuk River Communities				
Ambler	2012	70%	8%	62%
	2009	76%	2%	74%
	2003	74%	4%	70%

Community	Year	Percent of Surveyed Households Attempting to Harvest Caribou	Percent of Surveyed Households Attempting to Harvest Caribou but Unsuccessful	Percent of Surveyed Households Harvesting Caribou
Shungnak	2012	52%	4%	48%
	2008	73%	5%	68%
	1998	74%	2%	72%
Kobuk	2012	66%	9%	57%
	2009	86%	4%	82%
	2004	82%	21%	61%
Northern Seward Peninsula				
Buckland	2018	68%	3%	65%
	2016	86%	3%	83%
	2003	61%	3%	58%
Deering	2017	63%	6%	57%
	2013	44%	6%	38%
	2011	63%	0%	63%
	2007	55%	10%	45%
	1994	57%	3%	54%

Harvest data from comprehensive household surveys are not sufficiently up to date to provide accurate information on the full impact of reduced caribou numbers and delayed or truncated migration on subsistence harvest; new comprehensive subsistence surveys and key informant interviews are needed. Currently, ADF&G Division of Subsistence is conducting surveys of caribou harvest in Selawik, Shungnak, Noatak, Deering, and Kobuk. This research is scheduled to be completed in 2024 (Cold 2021).

In the current temporary closure to fall caribou hunting by non-federally qualified users in portions of Unit 23 and a small area in Unit 26A, approved by the Board in 2022 (WSA21-01a), the primary concern driving the Northwest Arctic Council's proposal was potential disruption of caribou migration pathways by transporters and non-local hunters. The rationale for the current proposal is based in the declining WACH population. Therefore, concerns about user conflict are not detailed here, but they continue to be a central concern for local residents, and the reader may refer to analysis of WSA21-01a (OSM 2022) for a full account of local concerns about the impacts of non-local hunters and transporters on caribou availability for federally qualified subsistence hunters.

Harvest History

The WACH Working Group provides recommendations on herd management, including harvest levels. Currently, the WACH is within the "preservative declining" level, which prescribes a harvest of 6,000-10,000 caribou (**Table 1**). Previous versions of the WACH management plan recommended a harvest rate of 6% of the estimated population when the herd was declining (WACH Working Group 2011; Parrett 2017b, pers. comm.). The current recommended harvest rate at the preservative declining level is 5% at 200,000 and 4.6% at 130,000. As the 2022 population estimate was 164,000 caribou, the harvestable surplus is currently 7,872 caribou (4.8% of 164,000) (NWARAC 2023; WACH Working Group 2022). The State manages the WACH on a sustained yield basis (i.e. managing current harvests to ensure future

harvests). Of particular concern is the overharvest of cows, which may have occurred since 2010/11 (Dau 2015). Dau (2015:14-29) states, "even modest increases in the cow harvest above sustainable levels could have a significant effect on the population trajectory of the WACH."

Caribou harvest by local hunters is estimated from community harvest surveys (**Table 7**), if available, and from models developed by A. Craig with ADF&G's Division of Wildlife Conservation Region V. These models incorporate factors such as community size, availability of caribou, and per capita harvests for each community, which are based on mean values from multiple community harvest surveys (Dau 2015). In 2015, Craig's models replaced models developed by Sutherland (2005), resulting in changes to local caribou harvest estimates from past years. While Craig's models accurately reflect harvest trends, they do not accurately reflect actual harvest numbers (Dau 2015). This analysis only considers the updated harvest estimates using Craig's new model as cited in Dau (2015). Caribou harvest by nonlocal residents and nonresidents are based on harvest reports from harvest tickets and registration permits (Dau 2015). Hunters considered local by ADF&G are functionally identical to federally qualified subsistence users (e.g. residents of St. Lawrence Island are technically federally qualified subsistence users, but do not frequently harvest Western Arctic caribou).

From 1999–2018, the range wide average estimated total harvest from the WACH was 14,103 caribou/year, ranging from 11,729-16,219 caribou/year (Hansen 2020 and 2021a, pers. comm.), but has generally been estimated at 12,000 +/- 1,750 caribou per year since 1996 (WACH Working Group 2019b, 2021). Additionally, harvest estimates do not include wounding loss, which may be hundreds of caribou (Dau 2015). Year-specific harvest estimates have not been generated since 2018, in part because they are not very accurate (Hansen 2021a, pers. comm.; WACH Working Group 2021). While all these harvest estimates are above the preservative harvest level specified in the WACH Management Plan and indicate unsustainable harvest levels, actual harvest is unknown and could be much lower due to caribou being unavailable for harvest near local communities.

Local hunters account for approximately 95% of the total WACH harvest and residents of Unit 23 account for approximately 58% of the total harvest on average (ADF&G 2017c). Comparison of caribou harvest by community from household survey data (**Table 7**) with **Figure 1** demonstrates that local community harvests parallel WACH availability rather than population trends. For example, Ambler only harvested 325 caribou when the WACH population peaked in 2003 but harvested 685 caribou in 2012 when most of the WACH migrated through eastern Unit 23. Similarly, Noatak only harvested 66 caribou in 2010 when no GPS-collared caribou migrated through western Unit 23. Harvest increased substantially (360 caribou) the following year when 37% of the GPS-collared caribou (and thus, a greater proportion of the WACH) migrated through western Unit 23 (**Table 7**).

Between 1998 and 2020, annual reported caribou harvest in Unit 23 ranged from 168-814 caribou (Hansen 2021a, pers. comm.). Over the same time period, reported harvest by non-federally qualified users ranged from 131-657 caribou. The lowest reported harvest occurred in 2016 when all Federal public lands in Unit 23 were closed to non-federally qualified users, but before harvest reporting was required for federally qualified subsistence users. Regardless, local compliance with reporting mandates is considered low but increasing. In 2017 and 2018, registration permits became required under State and

Federal regulations, respectively, which is reflected in the greater number of reported caribou harvest by federally qualified subsistence users. However, compliance with reporting caribou harvest still remains too low to accurately estimate total caribou harvest. On average, 76% of WACH caribou harvested by nonlocals are harvested in Unit 23 (Dau 2015). Between 2016, when Federal lands closures began, and 2020, reported caribou harvest by non-local hunters in Unit 23 averaged 254 caribou (WinfoNet 2018, 2019; Hansen 2021a pers. comm.).

From 1999-2013, 72% of nonlocal hunters on average accessed the WACH by plane. Most nonlocal harvest (85-90%) occurs between August 25 and October 7. Most local subsistence hunters harvest WACH caribou whenever they are available using boats, 4-wheelers, and snowmachines (Dau 2015; Fix and Ackerman 2015). In Unit 23, caribou have historically been available during fall migration, but this has no longer been the case in recent years; caribou migration has occurred later in fall, resulting in subsistence harvest also occurring later, which in turn contributes to food insecurity.

Alternatives Considered

One alternative would close Federal public lands in Unit 23 to non-federally qualified users utilizing a population threshold. Federal public lands in Unit 23 would be open to all users when the WACH Working Group adopts a conservative management and harvest level (population ≥ 200,000) with a stable or increasing population trend (Adult cow survival ≥ 80% and calf recruitment ≥ 15:100). Federal public lands in Unit 23 would be closed to non-federally qualified users when the herd status is at a preservative management level to provide subsistence priority for federally qualified subsistence users and help with the conservation and recovery of the WACH.

Effects of the Proposal

If Wildlife Proposals WP24-30/31 are approved, Federal public lands in Unit 23 will be closed to the harvest of caribou by non-federally qualified users from Aug. 1-Oct. 31. Only federally qualified subsistence users, those with a customary and traditional use determination for caribou in Units 23, would be able to harvest caribou on Federal public lands in Unit 23 during this time.

This may increase hunting pressure on State or privately owned lands. State managed lands comprise 19% of Unit 23 and also encompass many of the villages in the unit. If this proposal is adopted, user conflicts and concern about the effects of non-local hunters on caribou migration may increase on State managed lands, particularly along the upper Kobuk River. If Unit 23 is closed to non-Federally qualified users, these users may be displaced onto Federal public lands in adjacent units (i.e. Unit 26A), which could impact hunting and harvest in those units.

If this proposal is approved, those with a history of residency and family connection in Unit 23 who are now residing in nonrural areas would not be able to harvest caribou on Federal public lands in Units 23 Aug. 1-Oct. 31, as they are not federally qualified subsistence users. Non-federally qualified users who are Native corporation shareholders would still be able to hunt on Native corporation lands under State regulations if permission is granted by the landowners.

While harvest by non-federally qualified users on Federal public lands may decrease substantially, between 1998 and 2020, annual reported caribou harvest in Unit 23 by non-federally qualified users was small, ranging from 131-657 caribou (Hansen 2021a, pers. comm.). Any reduction in harvest may be negated by the fact that non-federally qualified users would still be able to access and harvest caribou on gravel bars below the mean high-water mark within Federal public lands, which are considered State land. Reports from law enforcement and nonlocal hunters indicate caribou are commonly harvested on such gravel bars, which may suggest limited impacts of the closure.

This closure is focused on current herd numbers and classification under WACH Working Group management levels; the herd is currently being managed at the "preservative declining" level (**Table 1**), and under this framework it is recommended to restrict harvest to residents only, and closure of some Federal public lands to non-federally qualified subsistence users may be necessary. Approving this proposal may result in increased subsistence opportunity for federally qualified subsistence users and a limited reduction of harvest on the declining WACH. However, Wildlife Proposal WP24-28/29 has been submitted to reduce the harvest on the WACH.

OSM PRELIMINARY CONCLUSION

Support Proposals WP24-30/31 **with modification** to include a threshold that would remove the closure once the WACH Working Group manages the herd at a conservative management and harvest level (population ≥ 200,000) with a stable or increasing population trend (Adult cow survival ≥ 80% and calf recruitment ≥ 15:100).

Justification

OSM supports measures to reduce conservation concerns for the WACH. The length and precipitous decline of the WACH warrants strong measures to aid in the recovery and conservation of this population. Current harvest rates could prolong or worsen the current decline and hamper recovery efforts. Additionally, while causes of the decline are multi-faceted and uncertain, reducing human harvest is the most controllable factor. The WACH is currently being managed at the "preservative declining" level, and under this framework it is recommended to restrict harvest to residents only, and closure of some Federal public lands to non-federally qualified users may be necessary as a tool to help in the recovery.

ANILCA Title VIII requires that Federal land managers give subsistence uses of fish and wildlife priority over other uses. With the continued decline of the WACH, and the concurrent proposals to reduce WACH harvest limits for federally qualified subsistence users, it is appropriate to limit non-subsistence hunting activities in Unit 23.

The current temporary closure applies to portions of Unit 23 and 26A, which were identified as potentially important to protecting migration routes. However, the current proposal is based on concern with the declining WACH population, and therefore, it is reasonable to close all of Unit 23.

Adding a population threshold would ensure that the closure does not result in unnecessary restrictions to non-federally qualified users and this restriction will not remain in effect longer than necessary when the population recovers.

LITERATURE CITED

ADF&G. 2009. Summary of Alaska Board of Game Arctic/Western region meeting. Nome, AK. November 13-16, 2009. http://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=11-13-2009&meeting=arctic. Retrieved: May 31, 2021.

ADF&G. 2015. RC069. Estimated total caribou harvest by community, per capita caribou harvest by community, and data sources, GMUs 21, 22, 23, 24 and 26: Western Arctic caribou herd and Teshekpuk caribou herd. Alaska Board of Game Meeting Information. Southcentral Region, March 13-18, 2015. http://www.adfg.alaska.gov/static/regulations/regprocess/gameboard/pdfs/2014-2015/Southcentral_03_13_15/rcs/rc069_ADFG_Caribou_harvest_data.pdf. Accessed: April 15, 2024.

ADF&G. 2017a. Board of Game Arctic and Western Region Meeting Materials. January 6-9, 2017. Bethel, AK.

ADF&G. 2017b. 2016-2017 draw supplement. https://www.adfg.alaska.gov/static/license/huntlicense/pdfs/2016-2017_draw_supplement.pdf. Retrieved: February 1, 2017.

ADF&G 2017c. Region V caribou overview. Alaska Board of Game. Arctic and western region. Jan. 6-9, 2017. Bethel, AK. http://www.adfg.alaska.gov/static/regulations/regprocess/gameboard/pdfs/2016-2017/aw/Tab_1.3_RegionV_Caribou_Overview.pdf. Accessed January 20, 2017.

ADLWD (Alaska Department of Labor and Workforce Development). 2022. Cities and census designated places (CDPs), 2020 to 2022. https://live.laborstats.alaska.gov/pop/index.html. Retrieved: May 23, 2023.

Anderson, D. D. 1968. A stone age campsite at the gateway to America. Scientific American 218(6): 24–33.

Anderson, D. D. 1988. Onion Portage: the archaeology of a stratified site from the Kobuk River, Northwest Alaska. Anthropological papers of the University of Alaska. 22 (1-2): 1-163.

Atkinson, H. 2021. Anthropologist: Personal communication: email. Western Artic National Parklands. National Park Service. Kotzebue, AK.

Bacon, J.J., T.R. Hepa, H.K. Brower, Jr., M. Pedersen, T.P. Olemaun, J.C. George, and B.G. Corrigan. 2011. Estimates of subsistence harvest for villages on the North Slope of Alaska, 1994–2003. Department of Wildlife Management, North Slope Borough, Alaska.

Baltensperger, A.P. and K. Joly. 2019. Using seasonal landscape models to predict space use and migratory patterns of an arctic ungulate. Movement ecology 7(1): 1-19.

Betchkal, D. 2015. Acoustic monitoring report, Noatak National Preserve – 2013 and 2014. National Park Service. https://science.nature.nps.gov/im/units/cakn/vitalsign.cfm?vsid=71. Retrieved: February 1, 2017.

Braem, N.M, E.H Mikow, S.J Wilson, and M.L. Kostick. 2015. Wild food harvests in 3 Upper Kobuk River communities: Ambler, Shungnak, and Kobuk. ADF&G, Div. of Subsistence Tech. Paper No. 402. Fairbanks, AK

Burch, Jr., E.S. 1972. The caribou/wild reindeer as a human resource. American Antiquity 37(3): 339–68.

Burch, Jr., E. S. 1984. The Kotzebue Sound Eskimo. In Handbook of North American Indians--Arctic. Volume 5. Edited by David Damas. Smithsonian Institution, Washington, D.C.

Burch, Jr., E. S. 1994. The cultural and natural heritage of Northwest Alaska. Volume V. Nana Museum of the Arctic, Kotzebue, Alaska and U.S. National Park Service, Alaska Region. Anchorage, AK.

Burch, E.S. 1998. The Inupiaq Eskimo nations of Northwest Alaska. University of Alaska Press. Fairbanks, AK.

Buvit, I, Rasic, JT, Kuehn, SR, Hedman. 2019. WH. Fluted projectile points in a stratified context at the Raven Bluff site document a late arrival of Paleoindian technology in northwest Alaska. Geoarchaeology. 34: 3– 14.

Cameron, M.D, J.M., Eisaguirre, G.A., Breed, J., Joly, and K., Kielland. 2021. Mechanistic movement models identify continuously updated autumn migration cues in Arctic caribou. Movement Ecology 9(54). 1-12

Cameron, M.D., K. Joly, G.A. Breed, C.P.H Mulder, and K. Kielland. 2020. Pronounced Fidelity and Selection for Average Conditions of Calving Area Suggestive of Spatial Memory in a Highly Migratory Ungulate. Front. Ecol. Evol. 8:564567. doi: 10.3389/fevo.2020.564567.

Cameron, M. D., K. Joly, G. A. Breed, L. S. Parrett, and K. Kielland. 2018. Movement-based methods to infer parturition events in migratory ungulates. Canadian Journal of Zoology 96: 1187-1195. DOI: 10.1139/cjz-2017-0314.

Caribou Trails. 2014. News from the Western Arctic Caribou Herd Working Group. Western Arctic Caribou Herd Working Group, Nome, AK. Issue 14. http://westernarcticcaribou.org/wp-content/uploads/2014/07/CT2014_FINAL_lowres.pdf. Retrieved: June 23, 2015.

Cold, H. 2021. Alaska Department of Fish and Game Subsistence Division: review of arctic areas Subsistence Division projects. Presentation to the Northwest Arctic Regional Advisory Council, November 1-2.

CSIS (Community subsistence information system). 2023. ADF&G, Division of Subsistence. http://www.adfg.alaska.gov/sb/CSIS/. Retrieved: June 9, 2023.

Daggett, C. 2023. Wildlife Biologist. Personal communication: e-mail. ADF&G. Utqiagvik, AK.

Dau, J. 2011. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 187-250 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2008–30 June 30, 2010. ADF&G. Juneau, AK.

Dau, J. 2013. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 201-280 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2010–30 June 30, 2012. ADF&G. Juneau, AK.

Dau, J. 2014. Wildlife Biologist. Western Arctic Caribou herd presentation. Western Arctic Caribou Herd (WACH) Working Group Meeting, December 17-18, 2014. Anchorage, Alaska. ADF&G. Nome, AK.

Dau, J. 2015. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24 and 26A. Chapter 14, pages 14-1 through 14-89 i*n* P. Harper, and Laura A. McCarthy, eds. Caribou management report of survey and inventory activities 1 July 2012–30 June 2014. ADF&G, Species Management Report ADF&G/DWC/SMR-2015-4, Juneau, AK.

Dau, J. 2016a. Memorandum to S. Machida dated June 21, 2016. 2016 Western arctic caribou herd calving survey: 4-12 June. ADF&G Division of Wildlife Conservation, Fairbanks, AK.

Dau, J. 2016b. Memorandum to S. Machida dated April 26, 2016. 2016 Western Arctic caribou herd recruitment survey: 31 March and 5, 19, and 21 April. ADF&G Division of Wildlife Conservation, Fairbanks, AK.

Fix, P.J. and A. Ackerman. 2015. Noatak National Preserve sport hunter survey: caribou hunters from 2010-2013. Natural resources report. National Park Service.

Fullman, T.J., K. Joly, A. Ackerman. 2017. Effects of environmental features and sport hunting on caribou migration in Northwest Alaska. Movement Ecology 5: 1-11.

Georgette, S., and H. Loon. 1993. Subsistence use of fish and wildlife in Kotzebue, a Northwest Alaska regional center. ADF&G, Div. of Subsistence Tech. Paper No. 167. Fairbanks, AK.

Gunn, A. 2003. Voles, lemmings and caribou – population cycles revisited? Rangifer, Special Issue 14: 105-111.

Gurarie, E., P.R. Thompson, A.P. Kelly, N.C. Larter, W.F. Fagan, and K. Joly. 2020. For everything there is a season: estimating periodic hazard functions with the cyclomort R package. Methods in Ecology and Evolution 11 (1): 129-138. DOI: 10.1111/2041-210X.13305.

Halas, G. 2015. Caribou migration, subsistence hunting, and user group conflicts in Northwest Alaska: A traditional knowledge perspective. University of Fairbanks-Alaska. Fairbanks, AK.

Hansen, D.A. 2019a. 2019 Western Arctic Caribou Herd – herd population status, other metrics. Presentation to Western Arctic Caribou Herd Working Group Technical Committee. December 10, 2019. https://westernarcticcaribou.net/.

Hansen, D.A. 2020. Wildlife Biologist. Personal communication: e-mail. ADF&G. Kotzebue, AK.

Hansen, D.A. 2021a. Wildlife Biologist. Personal communication: e-mail. ADF&G. Kotzebue, AK.

Holand, O., R.B. Weladji, A. Mysterud, K. Roed, E. Reimers, M. Nieminen. 2012. Induced orphaning reveals post-weaning maternal care in reindeer. European Journal of Wildlife Research. 58: 589-596.

Joly, K. 2015. Wildlife Biologist, Gates of the Arctic National Park and Preserve. Personal communication: e-mail NPS. Fairbanks, AK.

Joly, K. 2000. Orphan caribou, *Rangifer tarandus*, calves: a re-evaluation of overwinter survival data. The Canadian field naturalist 114: 322-323.

Joly, K., and M. D. Cameron. 2018. Early fall and late winter diets of migratory caribou in northwest Alaska. Rangifer 38 (1): 27-38. DOI: 10.7557/2.38.1.4107.

Joly, K., and M.D. Cameron. 2020. Caribou vital sign annual report for the Arctic Network Inventory and Monitoring Program, September 2019-August 2020. Natural resource report. National Park Service.

Joly, K., and M.D. Cameron. 2021. Caribou vital sign annual report for the Arctic Network Inventory and Monitoring Program, September 2019-August 2020. Natural resource report. National Park Service.

Joly, K., E. Gurarie, D.A. Hansen, M.D. Cameron. 2021. Seasonal patterns of spatial fidelity and temporal consistency in the distribution and movements of a migratory ungulate. Ecology and Evolution. 2021;11:8183–8200.

Joly, K., A. Gunn, S. D. Côté, M. Panzacchi, J. Adamczewski, M. J. Suitor, and E. Gurarie. 2021b. Caribou and reindeer migrations in the changing Arctic. Animal Migrations 8: 156-167. DOI: 10.1515/ami-2020-0110.

Joly, K., R.R. Jandt, C.R. Meyers, and J.M. Cole. 2007. Changes in vegetative cover on the Western Arctic herd winter range from 1981–2005: potential effects of grazing and climate change. Rangifer Special Issue 17:199-207.

Joly, K., D.R. Klein, D.L. Verbyla, T.S. Rupp, and F.S. Chapin, III. 2011. Linkages between large-scale climate patterns and the dynamics of Arctic caribou populations. Ecography 34: 345-352.

Lenart, E. A. 2011. Units 26B and 26C caribou. Pages 315-345 *in* P. Harper, ed. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. ADF&G. Project 3.0. Juneau, AK.

Mikow, E., N. M. Braem, and M. Kostick. 2014. Subsistence Wildlife Harvests in Brevig Mission, Deering, Noatak, and Teller, Alaska, 2011-2012. ADF&G, Div. of Subsistence Special Publication No. 2014-02. Fairbanks, AK.

Mikow, E.H, and M. Cunningham. 2020. Harvest and Use of Wild Resources in Buckland, Alaska, 2018. ADF&G, Div. of Subsistence Tech. Paper No. 472. Fairbanks, AK.

Miller, F.L. 2003. Caribou (*Rangifer tarandus*). Pages 965-997 *in* Feldhamer, B.C. Thompson, and J.A. Chapman, *eds.* Wild mammals of North America- biology, management, and conservation. John Hopkins University Press.

Minc, L.D. 1986. Scarcity and survival: the role of oral tradition in mediating subsistence crises. Journal of Anthropological Archaeology 5(1): 39-113.

Nicholson, K.L., S.M. Arthur, J.S. Horne, E.O. Garton, and P.A. Del Vecchio. 2016. Modeling caribou movements: seasonal ranges and migration routes of the Central Arctic Herd. PLoS ONE 11(4): e0150333. https://doi.org/10.1371/journal.pone.0150333.

NPS. 2020. Commercial use authorization stipulations: 2020 park specific regulations—Western Arctic Parklands. https://www.nps.gov/locations/alaska/stips-wear.htm. Retrieved April 2, 2021.

NWARAC. 2016a. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, October 5-6, 2016 in Selawik, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

NWARAC. 2019a. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, April 9-10, 2019 in Kotzebue, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

NWARAC. 2021a. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, February 18, 2021. Teleconference. Office of Subsistence Management, USFWS. Anchorage, AK.

NWARAC 2021b. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, November 1 and 2, 2021. Teleconference. Office of Subsistence Management, USFWS. Anchorage, AK.

NWARAC 2023. Transcripts of the Northwest Arctic Subsistence Regional Advisory Council proceedings, March 7, 2023.

OSM. 2022. Staff analysis WSA21-01a. Office of Subsistence Management, FWS. Anchorage, AK. 179 pp.

Parrett, L.S. 2011. Units 26A, Teshekpuk caribou herd. Pages 283-314 *in* P. Harper, ed. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. ADF&G. Project 3.0. Juneau, AK.

Parrett, L.S. 2015b. Memorandum to P. Bente, Management Coordinator, dated October 29, 2015. 2015 Western Arctic Herd (WAH) captured conducted September 15-17, 2015. ADF&G Division of Wildlife Conservation, Fairbanks, AK.

Parrett, L.S., 2015c. Unit 26A, Teshekpuk caribou herd. Chapter 17, pages 17-1 through 17-28 *in* P. Harper and L.A. McCarthy, eds. Caribou management report of survey and inventory activities 1 July 2012-30 June 2014. ADF&G, Species Management Report ADF&G /DWC?SMR-2015-4, Juneau, AK.

Parrett, L.S. 2015d. Memorandum to P. Bente, Management Coordinator, dated December 31, 2015. Summary of Teshekpuk Caribou Herd photocensus conducted July 6, 2015. ADF&G Division of Wildlife Conservation. Fairbanks, AK.

Parrett, L.S. 2016. Memorandum for distribution, dated August 25, 2016. Summary of Western Arctic Caribou Herd photocensus conducted July 1, 2016. ADF&G Division of Wildlife Conservation, Fairbanks, AK.

Parrett, L.S. 2017a. WAH Caribou Overview. Western Arctic Caribou Herd Working Group Meeting. December 2017. https://westernarcticcaribounet.files.wordpress.com/2017/12/2017-complete-wg-meeting-binder-dec-13-14-2017-for-webpost.pdf. Retrieved December 20, 2017.

Parrett, L.S. 2017b. Wildlife Biologist IV. Personal communication: phone and e-mail. ADF&G. Fairbanks, AK.

Parrett, L. S. 2021. Teshekpuk caribou herd management report and plan, Game Management Units 23, 24, and 26: Report period 1 July 2012–30 June 2017, and plan period 1 July 2017–30 June 2022. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2021-43, Juneau, AK.

Prichard, A.K. 2009. Development of a preliminary model for the Western Arctic Caribou Herd. ABR, Inc. – Environmental Research and Services. Fairbanks, AK.

Prichard, A.K., K. Joly and J. Dau. 2012. Quantifying telemetry collar bias when age is unknown: a simulation study with a long-lived ungulate. Journal of Wildlife Management 76 (7): 1441-1449. DOI: 10.1002/jwmg.394.

Prichard, A.K, L.S. Parrett, E.A. Lenart, J.R. Caikoski, K. Joly, B.T. Person. 2020. Interchange and overlap among four adjacent arctic caribou herd. Journal of Wildlife Management 84 (8): 1500-1514. DOI: 10.1002/jwmg.21934.

Rughetti, M., M. Festa-Bianchet. 2014. Effects of selective harvest of non-lactating females on chamois population dynamics. Journal of applied ecology. 51: 1075-1084.

Russell, D.E., S.G. Fancy, K.R. Whitten, R.G. White. 1991. Overwinter survival of orphan caribou, *Rangifer tarandus*, calves. Canadian field naturalist. 105: 103-105.

Sutherland, R. 2005. Harvest estimates of the Western Arctic caribou herd, Alaska. Proceedings of the 10th North American Caribou Workshop. Girdwood, AK. May 4-6, 2004. Rangifer special issue 16:177-184.

Taillon, J., V. Brodeur, M. Festa-Bianchet, S.D. Cote. 2011. Variation in body condition of migratory caribou at calving and weaning: which measures should we use? Ecoscience 18(3): 295-303.

USFWS. 2014. FY2014 annual report reply to the Norwest Arctic Subsistence Regional Advisory Council. Office of Subsistence Management, USFWS. Anchorage, AK.

WACH (Western Arctic Caribou Herd) Working Group. 2011. Western Arctic Caribou Herd Cooperative Management Plan – Revised December 2011. Nome, AK.

WACH (Western Arctic Caribou Herd) Working Group. 2015. Western Arctic Caribou Herd Cooperative Management Plan. Table 1 Revision – Dec. 2015. https://westernarcticcaribou.net/herd-management/. Accessed June 1, 2017.

WACH (Western Arctic Caribou Herd) Working Group. 2019a. Western Arctic Caribou Herd Working Group Meeting. December 10-12, 2019. Anchorage, AK.

WACH (Western Arctic Caribou Herd) Working Group. 2019b. Western Arctic Caribou Herd Cooperative Management. December 2019. https://westernarcticcaribou.net/herd-management/. Accessed March 31, 2023.

WACH (Western Arctic Caribou Herd) Working Group. 2020. Western Arctic Caribou Herd Working Group Meeting December 9, 2020. Teleconference.

WACH (Western Arctic Caribou Herd) Working Group. 2021. Western Arctic Caribou Herd Working Group Meeting December 16, 2021. Teleconference.

WACH (Western Arctic Caribou Herd) Working Group. 2022. Western Arctic Caribou Herd Working Group Meeting December 14-15, 2022. Anchorage, AK.

Whiting, Alex. 2006. Native Village of Kotzebue Harvest Survey Program 2002 - 2003 - 2004: Results of Three Consecutive Years Cooperating with *Qikiqtagrugmiut* to Understand Their Annual Catch of Selected Fish and Wildlife." Native Village of Kotzebue, Alaska.

Wilson, R.R., L.S. Parrett, K. Joly, and J.R. Dau. 2016. Effects of roads on individual caribou movements during migration. Biological Conservation 195(2016):2-8.

WINFONET. 2018. Wildlife information network. ADF&G. Anchorage, AK. https://winfonet.alaska.gov/. Retrieved: November 2018.

WINFONET. 2019. Wildlife information network. ADF&G. Anchorage, AK. https://winfonet.alaska.gov/. Retrieved: July 2019.

WP24-36 Executive Summary	
General Description	Wildlife Proposal WP24-36 requests to rescind the customary and traditional use determination for Dall sheep in Unit 25A for the residents of Kaktovik. *Submitted by: North Slope Subsistence Regional Advisory Council*
Proposed Regulation	**Customary and Traditional Use Determination—Sheep** *Unit 25A* — *Residents of Residents of Arctic Village, Chalkyitsik, Fort Yukon, **~~Kaktovik~~**, and Venetie.*
OSM Preliminary Conclusion	**Oppose**
Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	

DRAFT STAFF ANALYSIS
WP24-36

ISSUES

Proposal WP24-36, submitted by the North Slope Subsistence Regional Advisory Council (Council), requests that the Federal Subsistence Board (Board) rescind the customary and traditional use determination for Dall sheep in Unit 25A for the residents of Kaktovik.

DISCUSSION

The Council stated that the residents of Kaktovik have not demonstrated customary and traditional use of sheep in Unit 25A and considers the determination a mistake. The Council member from Kaktovik explained that hunters from Kaktovik do not harvest sheep in Unit 25A and the Arctic Village Sheep Management Area because it is across the Brooks Range from them.

Existing Federal Regulation

Customary and Traditional Use Determination—Sheep

Unit 25A—**Arctic Village Sheep Management Area**	*Residents of Arctic Village, Chalkyitsik, Fort Yukon, Kaktovik, and Venetie.*

Proposed Federal Regulation

Customary and Traditional Use Determination—Sheep

Unit 25A	*Residents of Residents of Arctic Village, Chalkyitsik, Fort Yukon, ~~**Kaktovik**~~, and Venetie.*

Extent of Federal Public Lands/Waters

Unit 25A is comprised of 76.4% Federal public lands; 74.1% is U.S. Fish and Wildlife Service lands, the Arctic National Wildlife Refuge, and 2.3% is under the jurisdiction of the Bureau of Land Management (BLM).

The Arctic Village Sheep Management Area in Unit 25A comprises approximately 99% Federal public lands and consists of U.S. Fish and Wildlife Service managed lands that are within the Arctic National Wildlife Refuge (**Figure 1**).

Regulatory History

At the beginning of the Federal Subsistence Management Program in Alaska in 1990, existing State regulations were adopted into Temporary Subsistence Management Regulations (55 Fed. Reg. 126. 27117 [June 29, 1990]). The customary and traditional use determination for sheep in Unit 25A was and is for residents of Arctic Village, Chalkyitsik, Fort Yukon, Kaktovik, and Venetie. Prior to this proposal, the Board has not received a proposal to modify the determination.

Community Characteristics

Kaktovik is a North Slope community located on Barter Island in Unit 26C. The Arctic National Wildlife Refuge lies immediately to the south of the community. In 2020, the population of Kaktovik was estimated to be 283 people (ADCCED 2023). Kaktovik is an Inupiaq community, and the cultural and subsistence practices of its residents reflect their heritage. Residents primarily harvest caribou, marine mammals, whitefish, and char. However, residents rely on a wide range of wild foods including Dall sheep.

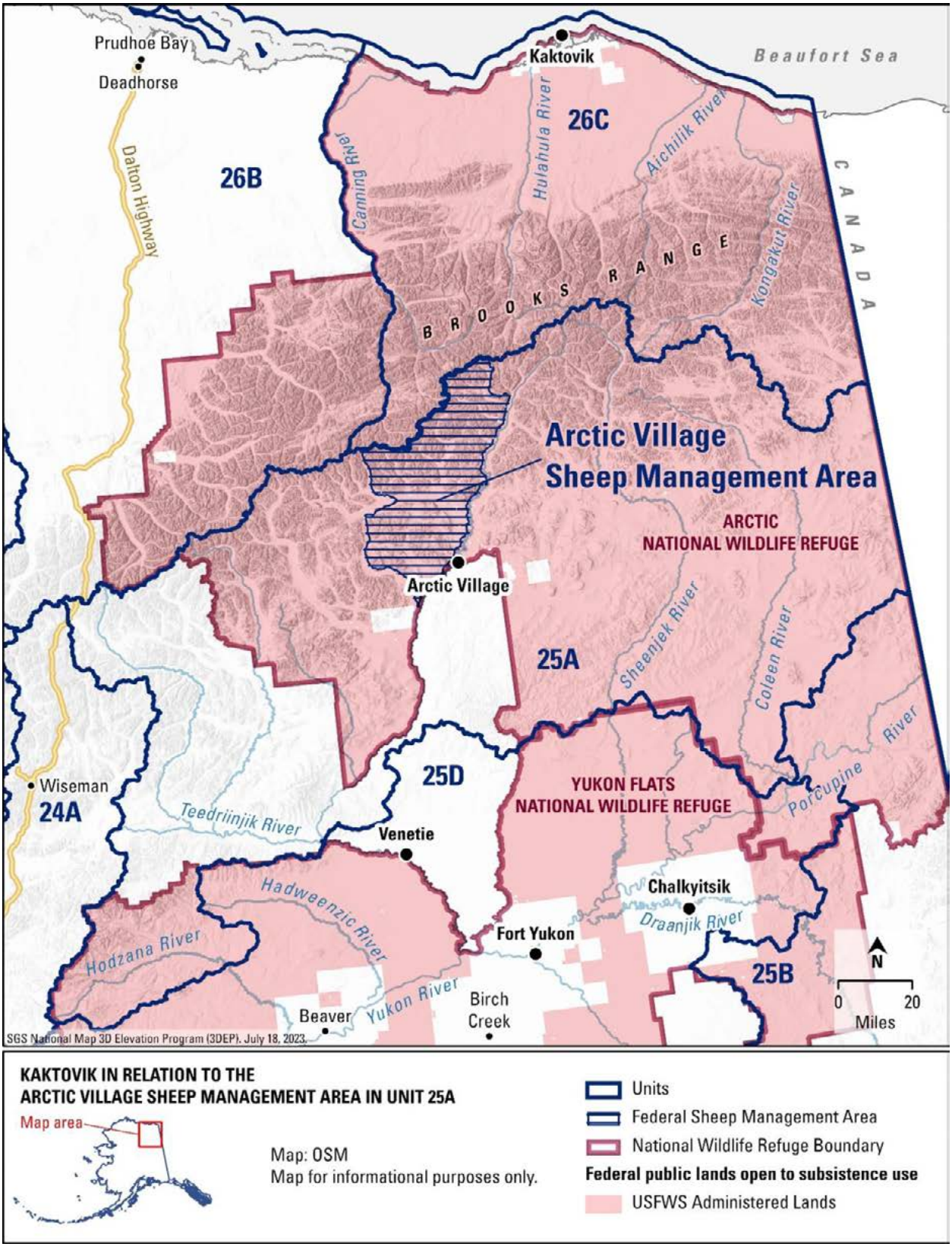


Figure 1. Kaktovik in relation to the Arctic Village Sheep Management Area.

Eight Factors for Determining Customary and Traditional Use

A community or area's customary and traditional use is generally exemplified through these eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit some or all of the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use finding.

In 2010, the Secretary of the Interior asked the Board to review, with Regional Advisory Council input, the customary and traditional use determination process, and present recommendations for regulatory changes. In June 2016, the Board clarified that the eight-factor analysis applied when considering customary and traditional use determinations is intended to protect subsistence use, rather than limit it. The Board stated that the goal of the customary and traditional use determination analysis process is to recognize customary and traditional uses in the most inclusive manner possible.

At least three sources support the inclusion of Kaktovik in the customary and traditional use determination for Dall sheep in Unit 25A because of Kaktovik's historic customary and traditional use of sheep in the area through trade and harvest. Although the use may be historic and irregular, this does not diminish the importance of sheep from Unit 25A to the residents of Kaktovik.

There were prehistoric and historic trading and kinship connections with Kaktovik (located in Unit 26C) and the other communities who share the customary and traditional use determination for sheep in Unit 25A (Arctic Village, Chalkyitsik, Fort Yukon, and Venetie). Several sources document these connections including public testimony by a Council member (see below) (FSB 2018), harvest data (OSM 2018), and an ethnographic account from 1963.

In 2018, Gordon Brower, former Chair of the North Slope Council referenced Kaktovik's use of the Arctic Village Sheep Management Area (AVSMA) during a discussion of WP18-56. The proposal requested opening the AVSMA to non-federally qualified subsistence users. Chairman Brower presented the Council's justification for opposing the proposal and noted that Kaktovik hunters hunt for sheep in Unit 25A:

> The Council has heard testimony from Arctic Village as well as Kaktovik in the past. It was noted that hunters do go and hunt in this area when other animals are not available, and it is an important area because sheep can be reliably found around the natural mineral formations in that small area…It was noted that sheep become much more important for survival when the caribou do not come around the community and even if the harvest is low in some years, it is critical to maintain the population for food security when they need to shift harvest to more sheep in low caribou years (FSB 2018: 571).

In the same OSM analysis of Unit 25A sheep, WP18-56, harvest data for Unit 25A shows that Kaktovik hunters have traveled there to harvest sheep in recent history **(Table 1)**:

Table 1. The harvest of sheep in Unit 25A reported on Federal permits by communities in the customary and traditional use determination, 1995-2015 cumulative (adapted from OSM 2018: 1,237).

FEDERAL PERMITS ONLY- Unit 25A Sheep Harvest						
Community	Arctic Village Sheep Management Area Permit FS2502			Unit 25A remainder Permit FS2503		
	Issued	Hunted	Taken	Issued	Hunted	Taken
Arctic Village	25	7	5	16	3	3
Fort Yukon	5	4	2	2	0	0
Kaktovik	0	0	0	6	4	4

For his 1963 doctoral dissertation, ethnographer Frederick Hadleigh-West conducted field work with the people in Arctic Village and Venetie, the Neets'aii Gwich'in. The people he worked with shared descriptions of the community's relationship with the Inupiat people of the North Slope, the most immediate being the relationship with Kaktovik, the people of Barter Island:

> The traditional enemies of the Netsi Kutchin [Neets'aii Gwich'in] were the Eskimos [Inupiat] whose territory lay to the north. Nevertheless, there existed a well organized system of trade with the Eskimos. Trading with the Eskimos took place annually in the month of August. At that time, family groups of the Netsi Kutchin would be in the north hunting mountain sheep. The men would leave their families just on the north side of the

> Range and would go down to the coast to a place which they called *kle re ti tl*, 'meeting place'…At this place the Indians would meet Eskimos from Barrow, Barter Island and perhaps points farther east…Each Indian had a trading partner and there was said to exist between them considerable cordiality. In fact, they called each other friends…The Indians brought to the trade raw hides of wolverine, wolf, caribou, and sheep (258-259).

During fieldwork in Kaktovik conducted in the early 1990s, ADF&G researchers documented local perspectives on sheep. Residents described the use of fallback species and secondary harvest locations when "regular" resources are not available. They discussed the importance of "…an area and a resource which is not used under normal circumstances but actually provide the basis for household or community survival when other major resource categories fail" (Pederson et al. 1985: 72). First on the list of "emergency" resources is Dall sheep followed by a few fish species, seals, and small land mammals (Pederson et al. 1985: 72).

People in Kaktovik described multiple places they travel to harvest sheep, mostly when caribou are not available. They explained that they usually do not harvest the full agency allocation for sheep because other, more accessible, resources provide for their needs. This provides a window into the Indigenous management strategy for sheep. Subsistence harvesters often tell us they only harvest what they need. In this case, they are telling us that they are only harvesting the sheep they need and not harvesting their full "allocated" limit because they are leaving sheep as a way of growing "money in the bank" for a day when they may need to harvest them to survive (Pederson et al. 1985: 64-65).

Effects of the Proposal

If adopted, the removal of Kaktovik from the customary and traditional use of Dall sheep in Unit 25A would exclude the community from the opportunity to harvest sheep in Unit 25A.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP24-36.

Justification

The people of Kaktovik have a documented customary and traditional use of Dall sheep in Unit 25A. Hunting for sheep in Unit 25A is one of Kaktovik's places to harvest meat when other resources are not available. Although this area may not be used frequently by the people of Kaktovik, it remains important for the future.

LITERATURE CITED

ADCCED (Alaska Department of Commerce, Community, and Economic Development). 2023. Community index., https://dcced.maps.arcgis.com/apps/MapJournal/index.html?appid=e42956e357c441c592540bfdb925026c# Retrieved May 13, 2023. Division of Community and Regional Affairs. Juneau, AK.

FSB. 2018 Transcripts of Federal Subsistence Board proceedings. April 13, 2018. Office of Subsistence Management, USFWS. Anchorage, AK.

Hadleigh-West, R. 1963. The Neets'aii Kutchin: an essay in human ecology. PhD dissertation. Louisiana State University. Ann Arbor, Michigan.

OSM. 2018. Staff Analysis WP18-56. Pages 1,230-1,247 in Federal Subsistence Board meeting materials. April 10-13, 2018. Office of Subsistence Management, USFWS. Anchorage, AK. 1,488 pp.

Pederson, S., M. Coffing, J. Thompson. 1985. Subsistence land use and place name maps for Kaktovik, Alaska. ADF&G, Div. of Subsistence Tech. Paper No. 109. Fairbanks, AK. 150 pp.

WCR24–21 Executive Summary	
Closure Location and Species	Unit 25A, Arctic Village Sheep Management Area—Sheep
Current Regulation	**Unit 25A—Sheep** *Unit 25A, Arctic Village Sheep Management Area – 2 rams by Federal registration permit only.* *Aug. 10–Apr. 30* *Federal public lands are closed to the taking of sheep except by rural Alaska residents of Arctic Village, Venetie, Fort Yukon, Kaktovik, and Chalkyitsik hunting under these regulations.*
OSM Preliminary Conclusion	**Retain the Status Quo**
Western Interior Alaska Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

FEDERAL WILDLIFE CLOSURE REVIEW
WCR24-21

Issue: Wildlife Closure Review WCR24-21 reviews the closure to sheep hunting in the Arctic Village Sheep Management Area in Unit 25A, except by rural Alaska residents of Arctic Village, Venetie, Fort Yukon, Kaktovik, and Chalkyitsik.

Closure Location and Species: Unit 25A, Arctic Village Sheep Management Area—Sheep (**Figure 1**)

Current Federal Regulation

Unit 25A—Sheep

Unit 25A, Arctic Village Sheep Management Area – 2 rams by Federal registration permit only.		*Aug. 10–Apr. 30*
Federal public lands are closed to the taking of sheep except by rural Alaska residents of Arctic Village, Venetie, Fort Yukon, Kaktovik, and Chalkyitsik hunting under these regulations.		

Closure Dates: Year-round

Current State Regulation

Unit 25A−Sheep

Residents: Unit 25A, Eastern Brooks Range Management Area –1 ram with full-curl horn or larger, by youth hunt only.	*HT*	*Aug. 1–5*
OR		
Residents: Unit 25A, Eastern Brooks Range Management Area –1 ram with ¾ curl horn or less every four regulatory years by permit available online at http://hunt.alaska.gov or in person in Fairbanks and Kaktovik beginning Sept. 8.	*RS595*	*Oct. 1–Apr. 30*

> *The use of aircraft for access to hunt and to transport harvested sheep is prohibited in this hunt area except into and out of the Arctic Village and Kaktovik airports. No motorized access from Dalton Highway.*

Regulatory Year Initiated:

1991: AVSMA established, closed to non-federally qualified subsistence users. AVSMA does not initially include Cane and Red Sheep Creek drainages.

1995: AVSMA expanded to include Cane and Red Sheep Creeks, closed to non-federally qualified users.

2007: AVSMA closure partially rescinded, Cane and Red Sheep Creek drainages open to harvest by non-federally qualified subsistence users Aug. 10-Sept. 20.

2012: Closure of Cane and Red Sheep Creeks to non-federally qualified subsistence users. reestablished.

Extent of Federal Public Lands/Waters

Federal public lands comprise approximately 99% of the Arctic Village Sheep Management Area in Unit 25A and consist 100% of U.S. Fish and Wildlife Service (USFWS) managed lands that are within the Arctic National Wildlife Refuge (**Figure 1**).

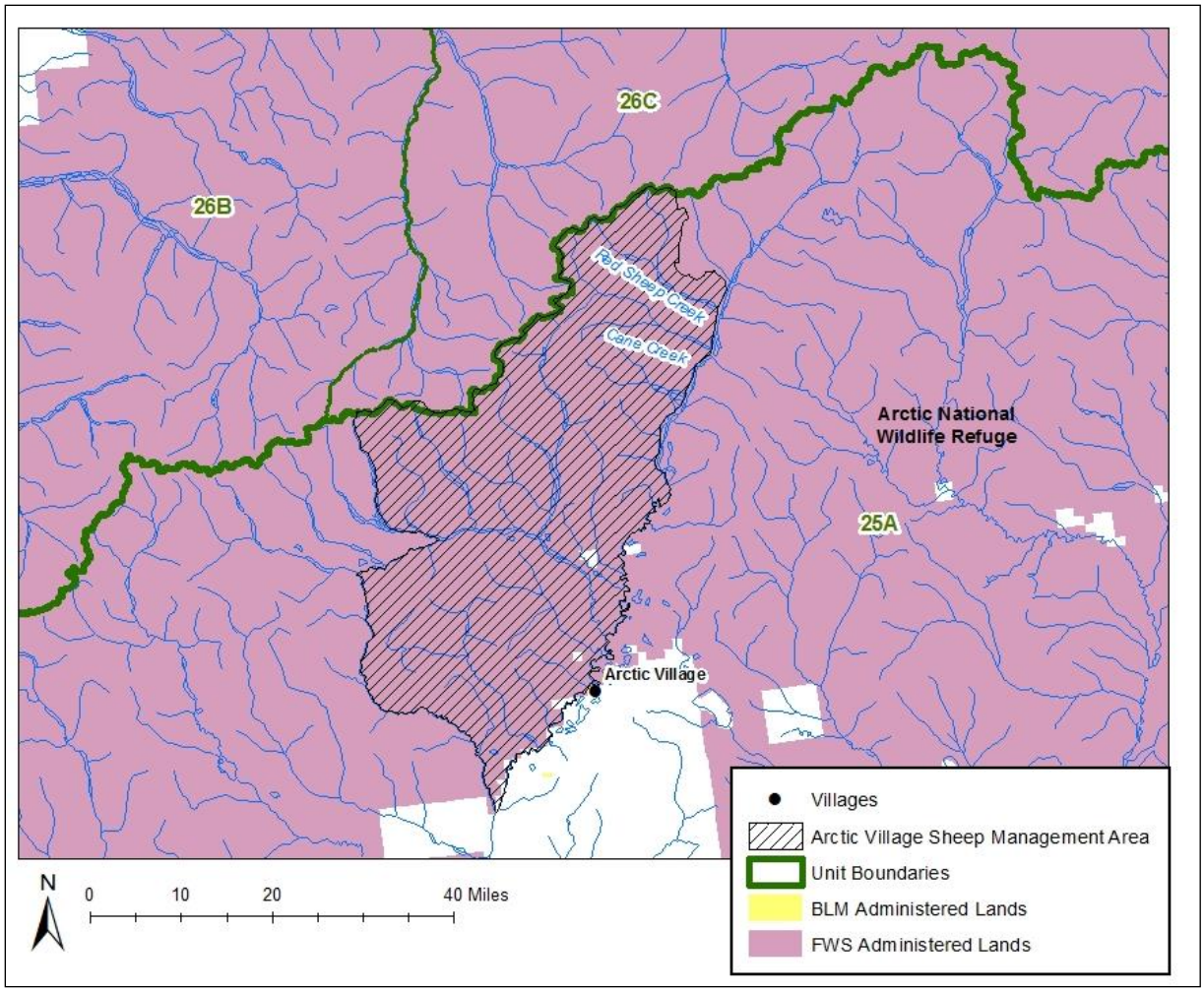


Figure 1. The Arctic Village Sheep Management Area in Unit 25A.

Customary and Traditional Use Determination

Rural residents of Arctic Village, Chalkyitsik, Fort Yukon, Kaktovik, and Venetie have a customary and traditional use determination for sheep in Unit 25A.

Regulatory History

Knowledge of regulatory history necessary to analyze Closure Review WCR24-21 is extensive. It is described in Appendix 1.

Closure last reviewed: 2020 – WP20-49

Justification for Original Closure:

§815(3) of ANILCA states:

> *Nothing in this title shall be construed as – (3) authorizing a restriction on the taking of fish and wildlife for nonsubsistence uses on public lands (other than national parks*

> *and monuments) unless necessary for the conservation of healthy populations of fish and wildlife, for the reasons set forth in section 816, to continue subsistence uses of such populations, or pursuant to other applicable law…*

The Board established the AVSMA in 1991 (56 Fed. Reg. 73 15433 [April 16, 1991]; 56 Fed. Reg. 123 29344 [June 26, 1991]) in response to concerns raised by residents of Arctic Village, who felt that non-federally qualified hunters interfered with sheep hunting by local residents and to address concerns about sheep population health (FSB 1991a: 302; FSB 1991b: 161).

In 1995, the Board extended the original boundary of the AVSMA to include the Cane Creek and Red Sheep Creek drainages to protect the opportunity for subsistence harvest of Dall sheep (60 Fed. Reg. 115 31545 [June 15, 1995]; 60 Fed. Reg. 157 42127 [August 15, 1995]).

In 2007, the Board rescinded the closure in Red Sheep and Cane Creek drainages during Aug. 10-Sept. 20 because it concluded that maintaining the closure to non-subsistence hunting of sheep was no longer necessary for conservation of a healthy sheep population, to provide for continued subsistence use of sheep, for public safety, or for administration (72 Fed. Reg. 247 73248 [December 27, 2007]).

In 2012, the Board re-established the closure to sheep hunting by non-federally qualified users in the Red Sheep and Cane Creek drainages during the fall because the Board said there was no conservation concern, and the closure was needed to ensure the continuation of traditional subsistence uses of sheep by Arctic Village hunters (OSM 2012b:7; 77 Fed. Reg. 114 35485 [June 13, 2012]).

In 2020, the Board rejected a proposal to rescind the closure on public lands to non-federally qualified users for the take of sheep in Unit 25A (Arctic Village Sheep Management Area). The Board stated that there is still a significant conservation concern and the user group conflicts have not yet been resolved (85 Fed. Reg. 226 74798 [November 23, 2020]).

Council Recommendation for Original Closure:

Federal Subsistence Regional Advisory Councils had not yet been established in 1991 when the AVSMA was established and closed to non-federally qualified users. There was no recommendation stated by the Interior Regional Council in the December 17, 1990, or June 4, 1991 Board meeting transcripts.

In 2005, the Eastern Interior and North Slope Regional Advisory Council recommendations on Proposal P95-54 were in support of the Arctic Village positions to maintain the closure to non-federally qualified users and to expand the closure to include the drainages of Red Sheep Creek and Cane Creek within the AVSMA.

In 2007, when the closure was partially rescinded, the Eastern Interior Council recommended deferral of Proposal WP07-56 for one year because they wanted to form a working group to

negotiate harvest terms for non-federally qualified subsistence users, including cultural awareness briefings. The North Slope Council opposed Proposal WP07-56; the Council stated there was no evidence that adoption of the proposal would not impact villages.

In 2012, when the closure was re-established for the fall season within the Red Sheep and Cane Creek drainages, the Eastern Interior Council supported Proposal WP12-76 because of public testimony about non-federally qualified users interfering with subsistence users. The North Slope Council supported Proposal WP12-57 because the closure was needed to ensure the continuation of the traditional subsistence uses of sheep by Arctic Village hunters (OSM 2012b:7).

State Recommendation for Original Closure:

No recommendation by the State is stated in the December 17, 1990, or June 4, 1991 Board meeting transcripts; however, the State's subsequent proposals and Requests for Reconsideration indicate its opposition to the AVSMA closure. The State has consistently demonstrated support for opening the AVSMA to non-federally qualified hunters (please refer to Appendix I for detailed regulatory history). In 1995, the State submitted RFR95-06 to request Board reconsideration of its decision to adopt proposal 95-54 to add the Cane Creek and Red Sheep drainages to the AVSMA. In 2007, the State submitted WP07-56 to open the sheep harvest in the Cane and Red Creek drainages to non-federally qualified hunters. The Board adopted the closure. After the Board rescinded the closure in 2012, the Eastern Interior Council submitted WP14-51 which requested the re-opening of the Cane and Red Sheep Creek drainages to non-federally qualified hunters. The Board adopted the proposal. In 2019, the State submitted WP20-49 requested the re-opening of the Cane and Red Sheep Creek drainages to non-federally qualified hunters. The Board rejected the proposal.

Biological Background

Sheep populations across the eastern Brooks Range of Alaska have appeared relatively stable at low densities since the late 1990s (Caikoski 2014). However, geographic barriers such as large valleys and rivers naturally limit sheep movements and distribution, resulting in discrete subpopulations (Arthur 2013, Caikoski 2014). Therefore, repeated, fine-scale surveys are necessary to understand sheep population status and trends in a specific area such as the Arctic Village Sheep Management Area.

State management goals and objectives for sheep in Unit 25A (Caikoski 2014) include:

- Protect, maintain, and enhance the sheep population and its habitat in concert with other components of the ecosystem.
- Provide for continued general sheep harvest and subsistence use of sheep.
- Provide an opportunity to hunt sheep under aesthetically pleasing conditions.
- Maximize hunter opportunity using a full-curl harvest strategy.

- Maintain an average harvest of rams ≥ 8 years old.

The State manages sheep using a full-curl harvest strategy, a conservative approach (ADF&G 2017a). Once sheep are eight years old, their chance of surviving each additional year is much lower. Harvesting older, full-curl rams (8+ years old) allows younger rams in their prime to continue breeding, assuming consistent recruitment (ADF&G 2017a, Heimer and Watson 1986).

The Arctic National Wildlife Refuge conducts periodic aerial sheep surveys of the AVSMA and surrounding areas. Due to differences in survey areas, comparisons across years are difficult. Sheep densities within the AVSMA have generally been low compared to some other areas in the Brooks Range (Payer 2006 in OSM 2014a). Within the AVSMA, sheep densities north of Cane Creek have been much higher than sheep densities south of Cane Creek, presumably because habitat quality is lower in that area (Mauer 1990 *in* OSM 2014a, Wald 2012). This is probably related to shale formations supporting more vegetation and therefore more sheep that are more common north (versus south) of Cane Creek, (Smith 1979 *in* OSM 2014a). The presence of mineral licks south of Cane Creek also influences sheep densities as most sheep observed by Mauer (1996) and Payer (2006) were clustered around such licks (OSM 2014a).

In 1991, sheep densities in the AVSMA north and south of Cane Creek averaged 2.25 sheep/mi^2 and 0.2 sheep/mi^2, respectively (Mauer 1996 *in* OSM 2014a). In 2006, sheep density north of Cane Creek averaged 1.7 sheep/mi^2 (Wald 2012). The observed decline in density is thought to be weather related (OSM 2014).

The sheep population in the AVSMA likely declined between 2012 and 2015 due to several years of poor lamb production and severe winters (particularly the winters of 2012-13 and 2013-14). In 2012, surveys within and near the AVSMA indicated an average sheep density of 0.79 sheep/mi^2 and 27 lambs:100 ewes (Arthur 2017, pers. comm.). Density north and south of Cane Creek ranged from 1.5–1.8 sheep/mi^2 and 0.25–0.7 sheep/mi^2, respectively (Wald 2012). In 2015, estimated sheep density for the same areas averaged 0.67 sheep/mi^2 and the lamb:ewe ratio was 34 lambs:100 ewes. The 2015 survey also indicated a decline in rams of all age classes (Arthur 2017, pers. comm.).

In 2016, a larger area was surveyed, including the Hulahula River drainage in Unit 26C, which contains higher sheep densities than the AVSMA. While the 2016 overall sheep density averaged 0.86 sheep/mi^2, density within the AVSMA was likely 0.70-0.75 sheep/mi^2 (Arthur 2017, pers. comm.). The ram:ewe ratio for the entire survey area averaged 28 rams:100 ewes, and the density of full-curl rams was 0.005/mi^2. Due to improved lamb production in 2015 and 2016 (>30 lambs:100 ewes), the sheep population in the AVSMA has likely not declined below 2015 levels and may be increasing. However, it will be at least 3–5 years before an increase in mature (8+ year old) rams are observed in the population (Arthur 2017, pers. comm.; 2019 pers. comm.). No surveys have been conducted since 2016. *(COVID interrupted subsequently planned sheep surveys).*

Cultural Knowledge and Traditional Practices

2023 Update:

In March 1-2, 2023, the Eastern Interior Council met in Fairbanks and this closure review was presented to the Council. More than five representatives from Arctic Village and Venetie attended the meeting and five provided extensive testimony in support of continuing the closure and making it permanent (EIRAC 2023: 177-214).
On March 16, 2023, Tanana Chiefs Conference passed Resolution 2023-12 in support of permanent closure of Arctic Village sheep management area to sport hunters (**Appendix 2**).

Cultural Context:

The communities of Arctic Village and Venetie are unique in Alaska because they opted out of the Alaska Native Claims Settlement Act and chose to obtain title to their reserve lands. Steven Dinero, Professor of Human Geography, argues that this is an outgrowth of Neets'aii Gwich'in's cultural heritage of nomadism and independence (2005). This is important context for the history of this closure and the Arctic Village Council's request for government-to-government consultation regarding the AVSMA. There are many pages of testimony in Board and RAC transcripts from the Arctic Village Council regarding the AVSMA. Most pointed, however, is the repeated emphasis by tribal officials and some Council members that the issue of the AVSMA should be addressed through formal government-to-government Tribal consultation (EIRAC 2019: 50, 64, 66, 117). Evon Peter, former Chief of Arctic Village stated:

> …I think it is really important for us to recognize that we have three sovereigns at work in Alaska and those are the Federal government, the State government and Tribal governments. As I began looking at the letter that was sent out to Arctic Village, I think it was addressed to our council or our chief, and it refers to just Arctic Village residents, but that doesn't really adhere to the frameworks of those three government-to-government relationships between our Tribe, the State and the Federal government (EIRAC 2019: 47).

The statement above serves as "current" context to the cultural history of the AVSMA which was traditionally occupied by *Neets'aii Gwichin.* Their traditional territory included the northern reaches of the East Fork Chandalar, Koness, and Sheenjek rivers. Neets'aii Gwich'in continued their nomadic way of life into the 1950s when they established more permanent settlements at Arctic Village and Venetie, taking extended trips to seasonal harvesting sites (McKennan 1965).

Neets'aii Gwich'in follow(ed) routes to the arctic coast that were situated within the AVSMA. Gwich'in regularly visited the arctic coast for the purposes of trade (Burch 1979). Ethnographer, F. Hadleigh-West, who conducted field work with Neets'aii Gwich'in the late 1950s, spoke with people who had made the trip over the Brooks Range to the Arctic coast. They said that families went into the mountains to hunt sheep and caribou. This travel varied from year to year depending on the migration routes of caribou and the availability of other resources. Traders traveled to the Barter Island area to exchange hides for Western goods from

whalers. Hadleigh-West reported people preferred the Phillip Smith Mountains for sheep hunting, where many East Fork Chandalar tributaries originate, including Red Sheep and Cane Creeks and other drainages situated within the AVSMA. This trade continued irregularly until 1928 (Hadleigh-West 1963).

Red Sheep Creek was a recognized favorite sheep hunting area of the Neets'aii Gwichin, on one of their routes to the arctic coast (Hadleigh-West 1963: 257). At the Eastern Interior Council meeting in 2017, the Arctic NWR deputy manager related a conversation with Trimble Gilbert, long-term First Chief of Arctic Village Council, Episcopalian priest, and Gwich'in Athabascan Elder (Dinero 2005: 141). Mr. Gilbert said that food and tools were cached in the mountains in the Red Sheep Creek drainage for the returning traders and for future trips, indicating the cultural importance of the area (EIRAC 2017: 286)

While located approximately 45 miles from Arctic Village, Red Sheep Creek is situated well within the historical territory of Neets'aii Gwich'in. Native allotments cover the confluence of Red Sheep and Cane Creeks with the East Fork Chandalar River; a Native allotment is situated further up Red Sheep Creek, and a native allotment is situated upriver at the confluence of an unnamed creek and the East Fork Chandalar River. The Red Sheep Creek allotments were not conveyed until 1996 (FWS 2019). Prior to this time, the confluence was the site of a large non-local guiding camp; however, currently Arctic NWR does not assign guides to this area (EIRAC 2017). The allotment contains a large airstrip identifiable from the air. Another, smaller non-locally built airstrip is situated between the two Red Sheep Creek Native allotments (Arthur 2019, pers. comm.). A source of community concerns is that guides and hunters create air and foot traffic in areas with prehistoric cultural and scientific value.

Hadleigh-West described Neets'aii Gwich'in relationship to the land and mountains and the nature of the sheep hunt, as described below by (1963):

> The extent to which the Neets'aii Kutchin are adapted to their mountainous environment is evidenced by the willingness and agility with which they attack it. Hiking trails usually take the shortest route between two points. This always entails some climbing. Another evidence is inherent in their knowledge of the country; it is "impossible" to become lost in *Netsai*^{n}. Hunting mountain sheep, nowadays viewed as a kind of family outing, often demands of the hunter an agility approaching that of the quarry. In this connection, too, the former use of a special climbing staff, surely is indicative of a mountaineering people (Hadleigh-West 1963:270).

After caribou, Dall sheep are the most important large land mammal harvested for food. Moose were scarce (Hadleigh-West 1963: 172). Neets'aii Gwich'in relied upon sheep as a

food source primarily in late summer or whenever caribou were scarce. Hadleigh-West (1963: 138) identified four very specific sheep hunting areas used by Arctic Village residents: 1.) along the Junjik River, 2.) East Fork Chandalar River, 3.) Cane Creek, and 4.) Red Sheep Creek. All are within the AVSMA.

The customary and traditional use determination for sheep in Unit 25A, including the AVSMA, consists of five communities with a total population of roughly 1,100 people according to the 2020 U.S. Census. (The other communities are Kaktovik, Fort Yukon, Chalkyitsik, and Venetie.)

Of the five communities with C&T for sheep in Unit 25A, the residents of Arctic Village have the strongest ties to and are the primary users of the AVSMA (OSM 1993; see also Dinero 2003, Gustafson 2004, and Reed et al. 2008). Sheep hunting is a longstanding tradition of Arctic Village residents (Caulfield 1983:68; Dinero 2003; EISRAC 2006:110–137, 2007, 2011; Gustafson 2004), and the Cane Creek and Red Sheep Creek drainages have been a longstanding focus of this activity. Sheep are a prized and subsistence resource, and providing sheep meat to the community is highly respected (cf. Caulfield 1983 and Dinero 2003 for discussion). Sheep are also known as an important "hunger food;" a food source that is critical when caribou are unavailable (Caulfield 1983, Dinero 2011, pers. comm.; Gilbert 2011, pers. comm.). Local people report increasing uncertainty of caribou migrations in recent years (recent years is not clearly defined but some people refer to the construction of the Trans-Alaska crude oil pipeline as a turning point) declining quality of caribou meat and increasing difficulty and travel distances to obtain moose in recent years. For these reasons, local residents say that sheep are an increasingly important resource (Gilbert 2011, pers. comm.; Swaney 2011, pers. comm.). As noted by one prominent elder, "When we have no caribou, that's the time we have to go up [to get sheep]" (Gilbert 2011, pers. comm.).

The public record demonstrates that Arctic Village residents have a long history of using the Cane Creek and Red Sheep Creek drainages, which continue to be culturally significant, sacred areas to harvest sheep and for other activities. Extensive discussion included in previous proposal analyses (OSM 1993, 1995a, 2014a, 2018, 2020) and testimony received during Council and Board meetings (EIRAC 2006, 2007, 2011, 2017, 2019, FSB 2020) demonstrate regular use of these drainages by residents of Arctic Village. Gustafson (2004), in a study of traditional ecological knowledge, discussed the importance and continued use of the Red Sheep Creek drainage for sheep hunting. Discussions with Refuge Information Technicians from Arctic Village, other Arctic NWR staff, researchers working in the area, and subsistence hunters from Arctic Village also confirm continued sheep hunting in the Cane Creek and Red Sheep drainages (Bryant 2011, pers. comm.; Dinero 2011 pers. comm.; Mathews 2011, pers. comm.; John 2011, pers. comm.).

The trip from Arctic Village to Red Sheep Creek and back is about 90 miles, requiring great effort both physically and economically, to hunt sheep in this area (Bryant 2011, pers. comm.; John 2011, pers. comm.; Gilbert 2011, pers. comm.; Swaney 2011, pers. comm.). Residents of Arctic Village have repeatedly expressed concerns about non-federally qualified users hunting sheep in Red Sheep Creek and Cane Creek drainages. These residents have provided testimony and public comment at numerous Council and Board meetings to attest to the importance of Red Sheep Creek, to describe their use of the area, and to explain that the presence of non-federally qualified users has affected their access and reduced their harvest opportunities (EIRAC 2006, 2007, 2011, 2017, 2019; FSB 1991a:291-311, 1995, 2006a, 2007:292–306, 2012, 2020; OSM 1993, 1995a, 1996, 2006b, 2007a, 2014a; 2020; Swaney 2011, pers. comm.; Gilbert 2011, pers. comm.; John 2011, pers. comm.).

Among the Gwich'in, there is a story about how Red Sheep Creek was named, which illustrates the link between subsistence and religious practices and beliefs. It also underscores the importance of this area to the residents of Arctic Village. The story relates Red Sheep Creek to the Episcopalian Church, an influential factor in establishing Arctic Village in the late 19th century and sheds some light on why Arctic Village residents consider Red Sheep Creek a sacred and revered place (Dinero 2007; Dinero 2011, pers. comm.). The story begins with people who were hungry. One day at the church, someone spotted caribou moving in the brush. Upon closer inspection people realized they were looking at unusual sheep with red markings, or what many say were crosses on their coats. The next day, people followed these red sheep far into the mountains where they were finally able to harvest them. The hides of these sheep were kept and passed down because of their distinctive markings (Dinero 2011, pers. comm.). The story of the sheep with red markings links a precious subsistence resource (sheep) to traditional and modern beliefs and practices, and demonstrates the complementary nature of subsistence to place, tradition, culture, and modern beliefs.

Traditionally, Arctic Village residents harvested sheep in early fall (late August or early September) or in early winter (November) (Caulfield 1983, FSB 2007:292–306). "Sheep taste best in the fall," as documented in earlier research (OSM 1995a:353). Residents generally travel to hunt sheep by boat, then by foot from hunting camps in the fall or by snowmachine in late fall, but not in winter given the dangerous terrain and winter weather (OSM 1993).

In his 1963 dissertation, ethnographer Hadleigh-West described Neets'aii Kutchin sheep hunting:

> Sheep hunting methods, both in the past when the bow was the weapon used, and at present with the rifle, are essentially the same. Men hunted singly by stalking sheep; the technique was to get above the sheep because that animal when frightened will seek higher ground. Since sheep are skittish, usually one

> shot at a time was possible and hence only one animal was down at one time (141-142).

Hadleigh-West's account provides context for the AVSMA closure. Arctic Village residents have commented that allowing non-federally qualified users to harvest sheep in Red Sheep Creek and Cane Creek drainages during the time when Arctic Village residents harvested sheep affects Arctic Village residents' ability to access an important sheep hunting area. Since 1993, Arctic Village residents have commented to the Board that the planes used by non-federally qualified users have interfered with their ability to successfully hunt sheep in the Red Sheep and Cane Creek drainages. Residents reported that plane fly-overs "spook" sheep and that "older rams can climb to higher elevations, making them more difficult to hunt" (OSM 1993, see also OSM 1995a for additional discussion). Gideon James from Arctic Village explained that Red Sheep and Cane Creek are both very narrow valleys, and consequently, flights through the area disturb sheep (FSB 2012:201). These disturbances have also been described by Arctic NWR staff (Mathews 2011, pers. comm.), and local residents (Swaney 2011, pers. comm., John 2011 pers. comm., Gilbert 2011, pers. comm.). This phenomenon was documented by Frid (2003) who found that fixed-wing aircraft disrupted resting or caused fleeing behavior in Dall sheep in the Yukon Territory during overflights.

Harvest History

A Federal closure to the harvest of sheep by non-federally qualified users in the AVSMA has been in effect since 1991. In 1995, the AVSMA was expanded north to include the Cane Creek and Red Sheep Creek drainages. The closure to non-federally qualified users was rescinded in these drainages from Aug. 10-Sept. 30 in 2007 (and by special action in 2006) and re-established in 2012. Therefore, the only sheep hunting that has occurred within the AVSMA under State regulations since 1995 was between 2006 and 2011 in the Red Sheep and Cane Creek drainages.

From 1983 to 1990 regulatory years, before most of this area was closed to the harvest of sheep by non-federally qualified users in 1991, approximately 61 sheep harvests (about 8 sheep annually) were reported on State harvest tickets and permits in an area approximating the AVSMA (OSM 2019).

From 1983 to 1994 regulatory years, approximately 27 sheep harvests (about 2 sheep per year) were reported on State harvest tickets and permits in the area north of Cane Creek and in the Red Sheep Creek drainage, before it closed to the harvest of sheep by non-federally qualified users in 1995 (OSM 2019, none were reported by federally qualified subsistence users).

From 2006 to 2010 regulatory years, approximately 22 sheep harvests (about 4 sheep annually) were reported on State harvest tickets and permits in Cane Creek and Red Sheep

Creek drainages, while it was open to the harvest of sheep from Aug. 10-Sept. 30 by non-federally qualified users (OSM 2019, harvest site information is not readily available after the 2010 regulatory year).

Data on the reported use of the AVSMA by federally qualified subsistence users is sparse, and how many sheep are harvested by federally qualified subsistence users in the AVSMA is unknown. It is likely that many Gwich'in hunters have not reported their harvest efforts (Van Lanen et al. 2012, Anderson and Alexander 1992). There are multiple reasons described in the two citations above that account for low and non-reporting in rural communities. Most of these reasons are cultural and include lack of information as to who uses harvest data and how, group hunts that result in shared harvests, "super households" who specialize in a type of harvest and provide food to multiple households in addition to their own (Van Lanen et al. 2012: 5)

Since 1995, federally qualified subsistence users have been required to get a Federal registration permit (FS2502) to hunt for sheep in the AVSMA. **Table 1** shows Federal permit data from 1995 through 2018. During this time period, a total of 40 permits were issued to residents of Arctic Village and Fort Yukon and nine sheep were reported harvested. Only some hunters submitted harvest reports, so these data are incomplete. Hunters did not always report areas they used to hunt for sheep within the AVSMA. Of these incomplete data, three hunters reported using the Red Sheep Creek drainage to hunt for sheep and one sheep harvest was reported. Sixteen hunters reported the type of transportation they used to reach hunt areas: one by boat, 14 by airplane, and one reported using no transportation, perhaps walking or hiking. Of those reporting, hunting trips lasted an average of 5 days (OSM 2019).

Table 1. Federal permit FS2502 data for the Arctic Village Sheep Management Area from 1995 through 2020 regulatory years, cumulative (OSM 2022).

Community	Issued	Hunted	Harvest
Arctic Village	36	14	8
Fort Yukon	7	6	4
Total	**43**	**20**	**12**

ADF&G maintains a harvest reporting database where hunting efforts by users hunting under State regulations are recorded (ADF&G 2019a). Complete records were not kept until the mid-1980s, and it is likely that many Gwich'in hunters have not reported their harvest efforts or have reported their harvest efforts on Federal permits (see above). The following description of hunter effort and success is for Unit 25A.

From 1983 to 2017 regulatory years, hunters with State harvest tickets and permits reported harvesting 1,746 sheep (about 50 sheep annually) from Unit 25A (see **Table 2**, ADF&G 2019a).

Table 2. *State harvest tickets and permits only*: Reported effort to harvest sheep and reported sheep harvested in Unit 25A, from 1983 through 2017, by user group (Source: ADF&G 2019a).

	federally qualified subsistence users:	federally qualified subsistence users:	Other Alaska residents:	Other Alaska residents:	Non-residents of Alaska:	Non-residents of Alaska:	Total:	Total:
Year	Permits issued	Reported sheep harvest	Permits issued	Reported sheep harvest	Permits issued	Reported sheep harvest	Permits issued	Reported sheep harvest
2017			61	20	40	26	101	46
2016			62	20	37	24	99	44
2015			62	16	41	24	103	40
2014			77	24	41	21	118	45
2013			91	36	48	31	139	67
2012			90	36	41	26	131	62
2011			93	42	59	44	152	86
2010			107	47	52	30	159	77
2009			86	45	59	39	145	84
2008			91	39	57	37	148	76
2007			75	36	54	41	132	80
2006			60	36	46	33	107	70
2005			56	28	52	38	108	66
2004			35	9	47	37	82	46
2003			50	20	51	33	102	53
2002			44	14	45	25	89	39
2001			40	15	50	36	90	51
2000			37	12	35	19	72	31
1999			37	16	33	25	70	41
1998			30	12	21	15	51	27
1997			36	16	22	17	58	33
1996			33	13	19	13	52	26
1995			41	14	20	9	61	23
1994			16	2	15	8	31	10
1993			52	17	18	10	70	27
1992			62	15	33	24	96	40
1991			44	19	46	36	92	56
1990			78	27	44	40	126	71
1989			35	23	52	39	87	62
1988			38	24	46	38	85	62
1987			46	22	34	29	80	51
1986			54	22	31	27	86	49
1985			46	22	29	23	75	45
1984			34	14	19	16	53	30
1983			35	13	25	17	60	30

	federally qualified subsistence users:	federally qualified subsistence users:	Other Alaska residents:	Other Alaska residents:	Non-residents of Alaska:	Non-residents of Alaska:	Total:	Total:
Total	14[1]	11[1]	1,934	786	1,362	950	3,310	1,746

Effects

Continuation of this closure will allow for the continuation of culturally important subsistence sheep harvest by federally qualified subsistence users without user conflict.
If the closure were rescinded, non-federally qualified users would be able to hunt sheep in the AVSMA. This could result in more user conflict and interfere with sheep harvest by Federally qualified subsistence users. There are questions about the viability of these sheep populations.

If the closure were extended to all users, it would disconnect federally qualified subsistence users from a subsistence resource, sheep, that is an important subsistence food and culturally significant harvest. It would interrupt intergenerational transmission of knowledge and the reciprocal spiritual/cultural relationship that federally qualified subsistence users have with all of the resources upon which they depend, including sheep.

OSM CONCLUSION:

X Retain the Status Quo
_ Rescind the Closure
_ Modify the closure to . . .
_ Defer Decision on the Closure or Take No Action

Justification

The current closure is still necessary to continue subsistence uses of the AVSMA for federally qualified subsistence users, especially the residents of Arctic Village. The rationale for the closure in 1991 is not completely clear but user conflict, concerns about the health of the AVSMA Dall sheep population and the importance of the area for the continuation of subsistence sheep harvests are consistently cited as reasons for the closure. In 2020, in response to proposal WP20-49, the Board stated that there is still a significant conservation concern and that user group conflicts have not yet been resolved (85 Fed. Reg. 226 74798 [November 23, 2020]).

[1] Four or fewer reports were received in any given year. Only the total is provided to protect confidentiality of federally qualified subsistence users reporting their effort and harvest.

Literature Cited

ADF&G (Alaska Department of Fish and Game). 2017a. Dall sheep hunting full-curl identification guide. ADF&G, Division of Wildlife Conservation.

http://www.adfg.alaska.gov/static/hunting/dallsheephunting/pdfs/dall_sheep_hunting_full_curl_identification_guide.pdf.

ADF&G. 2019a. Harvest general reports. Online database, accessed August 20, 2019. https://secure.wildlife.alaska.gov/index.cfm?fuseaction=harvestreports.main

ADF&G 2019b. 2019/2020 Proposal Book. Alaska Board of Game. http://www.adfg.alaska.gov/index.cfm?adfg=gameboard.main

ADCCED (Alaska Department of Commerce, Community, and Economic Development). 2017. Community index. https://www.commerce.alaska.gov/dcra/DCRAExternal/community, accessed August 24, 2017. Division of Community and Regional Affairs. Juneau, AK.

Anderson, D.B., and C.L. Alexander. 1992. Subsistence hunting patterns and compliance with moose harvest reporting requirements in rural interior Alaska. ADF&G, Division of Subsistence Technical Paper No. 215. Juneau, AK. 30 pages. http://www.adfg.alaska.gov/sf/publications/index.cfm?ADFG=addLine.home

Arthur, S.M. 2013. Demographics and spatial ecology of Dall sheep in the central Brooks Range. ADF&G, Division of Wildlife Conservation, Final research performance report 1 July 2007-30 June 2013. Federal Aid in Wildlife Restoration Project 6.15, Juneau, AK.

Arthur, S.M. 2017. Wildlife Biologist. Personal communication: e-mail. Arctic National Wildlife Refuge. Fairbanks, AK.

Arthur, S. 2019. Supervisory Wildlife Biologist. Personal communication: e-mail and telephone. Arctic National Wildlife Refuge. U.S. Fish and Wildlife Service. Fairbanks, AK.

Burch, E.J. 1979. Indians and Eskimos in North Alaska, 1816–1977: A study in changing ethnic relations. Arctic Anthropology 16(2): 123–151.

Bryant, J.G. 2011. Refuge Information Technician, Arctic National Wildlife Refuge, former resident Arctic Village. Personal communication: phone. July 2011.

Caikoski, J.R. 2014. Eastern Unit 24A and Units 25A, 26B, and 26C Dall sheep. Chapter 16 pages 16-1 through 16-18 in P. Harper and L.A. McCarthy, editors. Dall sheep management report of survey and inventory activities 1 July 2010-30 June 2013. ADF&G, Species Management Report ADF&G/DWC/SMR-2014-4, Juneau, AK.

Caulfield, R. 1983. Subsistence land use in upper Yukon Porcupine communities, Alaska. *Dinjii Nats'aa Nan Kak Adagwaandaii*. ADF&G, Division of Subsistence Technical Paper No.16. Fairbanks, AK. 252 pages.

Dinero, S. 2003. Analysis of a "mixed economy" in an Alaskan Native settlement: the case of Arctic Village. The Canadian Journal of Native Studies XXII, 1:135–164.

Dinero, S. 2005. Globalization and development in a post-nomadic hunter-gatherer village: The case of Arctic Village, Alaska. The Northern Review #25/26 (Summer 2005): 135-160.

Dinero, S. 2007. Globalization and development in a post-nomadic hunter/gatherer Alaskan village: a follow-up assessment. Polar Record 43(226): 225–269.

Dinero, S. 2011. PhD. Anthropologist conducting research in Arctic Village. Personal communication: phone. July/August 2011. Philadelphia University, PA.

EIRAC 1995. Transcripts of the Eastern Interior Alaska Subsistence Regional Advisory Council proceeding. March 3, 1995. Northway, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

EIRAC. 2006. Transcripts of the Eastern Interior Alaska Subsistence Regional Advisory Council Meeting. March 21, 2006. Fairbanks, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

EIRAC. 2007. Transcripts of the Eastern Interior Alaska Subsistence Regional Advisory Council Meeting. March 20, 2007. Arctic Village, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

EIRAC. 2011. Transcripts of the Eastern Interior Alaska Subsistence Regional Advisory Council Meeting. March 3, 2011. Fairbanks, AK. Arctic Village, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

EIRAC. 2017. Transcripts of the Eastern Interior Alaska Subsistence Regional Advisory Council Meeting. November 9 in Fairbanks, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

EIRAC. 2018. Annual Report. Office of Subsistence Management, USFWS. Anchorage, AK.

EIRAC. 2019. Transcripts of the Eastern Interior Alaska Subsistence Regional Advisory Council Meeting. October 9 in Fairbanks, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

Frid, A. 2003. Dall's sheep responses to overflights by helicopter and fixed-wing aircraft. Biological Conservation 110: 387–399.

FSB. 1991a. Transcripts of Federal Subsistence Board proceeding. June 5, 1991. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 1991b. Transcripts of Federal Subsistence Board proceeding. March 6, 1991. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 1991c. Transcripts of Federal Subsistence Board proceeding. March 4, 1991. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 1992. Transcripts of Federal Subsistence Board proceeding. April 9, 1992. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 1993. Transcripts of Federal Subsistence Board proceeding. April 8, 1993. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 1995. Transcripts of Federal Subsistence Board proceeding. April 14, 1995. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 1996. Transcripts of Federal Subsistence Board proceeding. May 2, 1996. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 2006. Transcripts of Federal Subsistence Board proceeding. May 17, 2006. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 2007. Transcripts of the Federal Subsistence Board. May 1, 2007. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 2012. Transcripts of the Federal Subsistence Board. January 19, 2012. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 2020. Transcripts of the Federal Subsistence Board. April 23, 2020. Office of Subsistence Management, USFWS. Anchorage, AK.

FWS (U.S. Fish and Wildlife Service). 2019. Land status within the National Wildlife Refuges of Alaska. https://fws.maps.arcgis.com/apps/webappviewer/index.html?id=3eed8d6b30ea443dafe4380d70d0fa5e, accessed August 29.

Gilbert, T. 2011. Elder, resident of Arctic Village. Personal communication: phone. August 2011.

Gustafson, J. 2004. Traditional ecological knowledge of subsistence harvests and fishes, Old John Lake, Alaska. Final Report No. FIS01-003. Office of Subsistence Management, USFWS. Anchorage, AK.

Hadleigh-West, R. 1963. The Neets'aii Kutchin: an essay in human ecology. PhD dissertation. Louisiana State University. Ann Arbor, Michigan.

John, J. 2011. Arctic Village Council, First Chief, elder, resident. Personal communication: phone. August 2011.

Mathews, V. 2011. Refuge Subsistence Specialist. Personal communication: email, phone. Arctic National Wildlife Refuge. Fairbanks, AK.

Mauer, F.J. 1990. Dall sheep investigations in the Chandalar River drainage of the Arctic National Wildlife Refuge, 1990. ANWR Progress Report No. FY90-03. USFWS. Fairbanks, AK.

Mauer, F.J. 1996. Dall sheep investigations in the Arctic Village area. Arctic National Wildlife Refuge. Unpublished Report. USFWS. Fairbanks, AK.

McKennan, R.A. 1965. The Chandalar Kutchin. Arctic Institute of North America Technical Paper No. 17, Montreal.

NSSRAC 1995. Transcripts North Slope Subsistence Regional Advisory Council proceeding. February 17, 1995. Barrow, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

OSM (Office of Subsistence Management). 1991. Staff Analysis P91-21 *in* Federal Subsistence Board Meeting Materials. April 5–8, 1993. Office of Subsistence Management, USFWS. Anchorage, AK.

OSM. 1993. Staff Analysis P93–58. Pages 1–9 *in* Federal Subsistence Board Meeting Materials. April 5–8, 1993. Office of Subsistence Management, USFWS. Anchorage, AK.

OSM. 1995a. Staff analysis P95-54. Pages 352–359 in Federal Subsistence Board Meeting Materials. April 10–12, 15, 1995. Office of Subsistence Management, USFWS. Anchorage.

OSM. 1995b. Requests for reconsideration 1992–2000: summary of Federal Subsistence Board actions. On file, Office of Subsistence Management, USFWS. Anchorage.

OSM. 1996. Staff analysis of Proposal 55. Pages (Eastern Interior) 2–12 in Federal Subsistence Board Meeting Materials. April 29–May 3, 1996. Office of Subsistence Management, USFWS. Anchorage.

OSM. 2006a. Federal Subsistence Board action report: Eastern Interior proposals. Meeting held May 16–18 in Anchorage, AK. Office of Subsistence Management, USFWS, Anchorage, AK.

OSM. 2006b. Staff analysis of WP06-57. Pages 452–459 in Federal Subsistence Board Meeting Materials. May 16–18, 1996. Office of Subsistence Management, USFWS. Anchorage.

OSM. 2007a. Staff Analysis WP07-56. Pages 529–538 in Federal Subsistence Board Meeting Materials April 30–May 2, 2007. Office of Subsistence Management, USFWS. Anchorage, AK. 622 pages.

OSM. 2007b. Federal Subsistence Board action report: Eastern Interior proposals. Meeting held April 30–May 2 in Anchorage, AK. Office of Subsistence Management, USFWS, Anchorage, AK.

OSM. 2012a. Staff analysis of WP12-76. Pages 529–538 in Federal Subsistence Board Meeting Materials. January 17–20, 2012. Office of Subsistence Management, USFWS. Anchorage.

OSM. 2012b. Federal Subsistence Board action report: Eastern Interior proposals. Meeting held January 17–20 in Anchorage, AK. Office of Subsistence Management, USFWS, Anchorage, AK.

OSM. 2014a. Staff analysis of WP14-51. Pages 336–351 in Federal Subsistence Board Meeting Materials. April 15–17, 2014. Office of Subsistence Management, USFWS. Anchorage.

OSM. 2014b. Federal Subsistence Board non-consensus action report: Eastern Interior Proposals. Meeting held April 15–18 in Anchorage, AK. Office of Subsistence Management, USFWS, Anchorage, AK.

OSM. 2017. Proposal document Library: regulatory actions. Electronic database. Office of Subsistence Management, USFWS, Anchorage, AK.

OSM. 2018a. Staff analysis of WP18-56. Supplemental materials in Federal Subsistence Board Meeting Materials. April 10–13. Office of Subsistence Management, USFWS. Anchorage.

OSM. 2018b. Federal Subsistence Board non-consensus action report: Eastern Interior Proposals. Meeting held April 10-13 in Anchorage, AK. Office of Subsistence Management, USFWS, Anchorage, AK.

OSM. 2019. Federal harvest reporting database. Electronic database. Office of Subsistence Management, USFWS, Anchorage, AK.

OSM. 2020. Staff analysis of WP20-49. Pages 1280–1313 in Federal Subsistence Board Meeting Materials, Vol. II. April 20-23, 2020. Office of Subsistence Management, USFWS. Telephonic. Anchorage.

OSM. 2022. Federal harvest reporting database. Electronic database. Office of Subsistence Management, USFWS, Anchorage, AK.

Payer, D.C. 2006. Dall sheep survey in the Arctic Village Sheep Management area and vicinity. Arctic National Wildlife Refuge. Unpublished report. USFWS. Fairbanks, AK.

Reed, J., C. Villa, and T. Underwood. 2008. Red Sheep Creek airstrip public use monitoring, Arctic National Wildlife Refuge, Alaska, 2006–2007. Report for Arctic National Wildlife Refuge. USFWS. Fairbanks, AK. 10 pages.

Smith, T. 1979. Distribution and abundance of Dall sheep in the Arctic National Wildlife Range. Unpublished report. USFWS. Fairbanks, AK.

Swaney, C. 2011. Subsistence user, resident Arctic Village. Personal communication: phone. July 2011.

Tanana Chiefs Conference. 2023. Resolution 2023-12 for permanent closure of Arctic Village sheep management area to sport hunters. Tanana Chiefs Conference Full Board of Directors. March 16, 2023. https://www.tananachiefs.org/about/resolutions/2023-resolutions/

Van Lanen, J.M., C. Stevens, C.L. Brown, K.B. Maracle, and D.S. Koster. 2012. Subsistence land mammal harvests and uses, Yukon Flats, Alaska: 2008–2010 harvest report and ethnographic update. ADF&G, Division of Subsistence Technical Paper No. 377. Juneau, AK. http://www.adfg.alaska.gov/sf/publications/index.cfm?ADFG=addLine.homeVoss 2011, pers. comm.

Wald, E. 2012. Sheep survey summary for the Arctic Village Sheep Management Area, June 2012. Arctic National Wildlife Refuge. Unpublished Report. USFWS. Fairbanks, AK.

APPENDIX 1
REGULATORY HISTORY

At the beginning of the Federal Subsistence Management Program in Alaska in 1990, existing State regulations were adopted into Temporary Subsistence Management Regulations (55 Fed. Reg. 126. 27117 [June 29, 1990]). The customary and traditional use determination for sheep in Unit 25A was and continues to be (in 2022) for residents of Arctic Village, Chalkyitsik, Fort Yukon, Kaktovik, and Venetie. At this point in FSB history, the Board was operating under the assumption that the State would soon resume fish and wildlife management on Federal public lands in Alaska (FSB 1991c: 164-168).

The Board established the AVSMA in 1991 (56 Fed. Reg. 73 15433 [April 16, 1991]; 56 Fed. Reg. 123 29344 [June 26, 1991]) in response to concerns raised by residents of Arctic Village, who felt that non-federally qualified hunters interfered with sheep hunting by local residents and to address concerns about the health of sheep populations (FSB 1991a: 302; FSB 1991b: 161). In 1991, Proposal 75 was submitted by the Yukon Flats Fish and Game Advisory Committee and Proposal 100A by the Arctic National Wildlife Refuge. Proposal 100A requested the Board, in an area of Unit 25A encompassing most of the contemporary Arctic Village Sheep Management Area, to modify the harvest limit from 3 sheep from October 1 through April 30 and 1 ram with 7/8 curl horn or larger from August 20 through September 20, to 2 rams from August 10 through April 20, by registration permit. The northern boundary of the area was the mainstem of Cane Creek. The area did not include areas north of Cane Creek, including Red Sheep Creek. Regional Advisory Councils did not meet until fall 1993, so there were no Council recommendations for the Board to consider. The Board adopted the Interagency Staff Committee recommendation and adopted the proposal with modification. The modification was to close the area to the harvest of sheep except by federally qualified subsistence users and extend the hunting season to April 30. The justification was that portions of the area did not appear to be able to support more sheep than were currently present, the population of sheep in the Red Sheep Creek drainage was of much higher density and could continue to support existing seasons and harvest limits, the Red Sheep Creek drainage received quite a bit more effort than other areas of Unit 25A, and the remainder of Unit 25A supported a substantial opportunity for all hunters (FSB 1991b:150–164; 56 Fed. Reg. 123. 29344 [June 26, 1991]).

Proposal 75 requested that the Board, in an area of Unit 25A encompassing most of the contemporary Arctic Village Sheep Management Area, to close to the harvest of sheep except by federally qualified subsistence users. The northern boundary of the area was the Red Sheep Creek drainage. The Board adopted the Interagency Staff Committee recommendation and rejected the proposal because of its earlier action taken on Proposal 100A, described above (FSB 1991b:164–168).

In June 1991, the Board met and considered proposals received during the public comment period on wildlife regulations that included actions taken by the Board at its March 1991

meeting, described above (56 Fed. Reg. 73 15433 [April 16, 1991]). Proposals 09, 10, and 11 were submitted by the Arctic Village Council and Proposal 21 was submitted by Brooks Range Arctic Hunts. In Proposal 09, the Arctic Village Council requested the Board to include Cane Creek and Red Sheep Creek drainages in the Arctic Village Sheep Management Area, which had been closed to the harvest of sheep except by federally qualified subsistence users. The proponent said that the area set aside did not include all of the areas that must be included to accommodate customary and traditional uses of sheep by residents of Arctic Village (OSM 1991). The Board adopted the Interagency Staff Committee recommendation and rejected the proposal. The Board said Arctic Village residents used Cane Creek and Red Sheep Creek only for a short time when air taxi service was available. These two areas could support both subsistence and sport harvest (FSB 1991a:297–299). Proposals 10 and 11 requested that the Board eliminate harvest limits in the Arctic Village Sheep Management Area (Proposal 10) or increase the harvest limit to 3 sheep (Proposal 11). The Board adopted the Interagency Staff Committee recommendations and rejected both proposals. The Board said the sheep population in the Sheep Management Area was extremely low and the proposed regulations would jeopardize the continuation of healthy populations of sheep (FSB 1991a:299–301). The Board adopted the Interagency Staff Committee recommendation and also rejected Proposal 21, which requested the Board to open the Sheep Management Area to the harvest of sheep by non-federally qualified users. The Interagency Staff Committee said that the sheep population was extremely low, and subsistence users must be afforded a priority (OSM 1991).

In 1992, Request for Reconsideration (RFR) 23 was submitted by the Arctic Village Council requesting that the Board reconsider its decision on Proposal 9, described above, which if adopted would have added Cane Creek and Red Sheep Creek drainages to the Arctic Village Sheep Management Area, which had been closed to the harvest of sheep except by federally qualified subsistence users. The Office of Subsistence Management incorporated the request into Proposal 58 of the 1993 regulatory cycle, described below (OSM 1993). The Arctic Village Council made the same request during the 1992 regulatory cycle in Proposals 118A and 118B, seeking to eliminate harvest limits in the Sheep Management Area, or alternatively to increase the harvest limit from 2 rams to 3 sheep. In Proposal 118B, the Arctic Village Council requested the Board to include Cane Creek and Red Sheep Creek drainages to the Sheep Management Area. The Board adopted Proposal 118A with modification, in the remainder of Unit 25A, outside of the Sheep Management Area, to lengthen the season from Aug. 10 – Sept. 20 and Oct. 1 – Apr. 30 to Aug. 10 – Apr. 30 and to modify the harvest limit from 1 ram with 7/8 curl horn in fall season to 3 sheep throughout the season (57 FR 103, 22557 [May 28, 1992]). Furthermore, the Board directed the staff to seek alternatives to a Federal registration permit before the opening of the 1992 season for implementation at that time. The Board followed the Interagency Staff Committee recommendation and rejected Proposal 118B because biological data indicated that the sheep population in the Cane Creek

and Red Sheep Creek drainages could support both sport and subsistence use. The Board stated that the Council had not provided adequate justification that subsistence sheep hunting opportunities were being limited. (FSB 1992:59–99).

In 1993, Proposal 58 (OSM 1993:1) was received from the Arctic Village Council, requesting that the Board add Cane Creek and Red Sheep Creek drainages to the Management Area; replace individual harvest limits with a community harvest limit for Arctic Village, to be established in consultation with the village; and to establish, in consultation with Arctic Village, an appropriate harvest reporting method that would avoid the need for registration permits and harvest tickets, relying instead on a community harvest report of an appropriate nature. At its meeting in April 1993, the Board adopted the Interagency Staff Committee recommendation and rejected the proposal. The Board said that Cane Creek and Red Sheep Creek drainages supported adequate sheep to support harvest by non-federally qualified users and that not enough data was available on harvest levels to support community harvest or reporting systems (FSB 1993:140–512).

In 1995, the Board extended the original boundary of the AVSMA to include the Cane Creek and Red Sheep Creek drainages to protect the opportunity for subsistence harvest (60 Fed. Reg. 115 31545 [June 15, 1995]; 60 Fed. Reg. 157 42127 [August 15, 1995]). Proposal 54 was submitted by the Arctic Village Council requesting that the Board add Cane Creek and Red Sheep Creek drainages to the Arctic Village Sheep Management Area. The Eastern Interior Council took no action on the proposal (EIRAC 1995:88–97, OSM 1995a:359). The North Slope Subsistence Advisory Council (North Slope Council) recommended that the Board adopt the proposal (NSSRAC 1995:206, OSM 1995a:359). The Board adopted the proposal with modification. The Board said that although there was no biological reason for closing Cane Creek and Red Sheep Creek drainages to the harvest of sheep except by federally qualified subsistence users, it had heard substantial testimony regarding the fact that due to the customary and traditional hunting practices of the residents of Arctic Village, not adopting the proposal would deny a subsistence opportunity to the residents of Arctic Village (FSB 1995:611–634, 686–693; 60 Fed. Reg. 115, 31545 [June 15, 1995]).

In 1995, Request for Reconsideration RFR95-06 was submitted by the Alaska Department of Fish and Game (ADF&G) requesting that the Board reconsider its decision on Proposal 54. The Board rejected the request in July 1995 (OSM 1995b). The Board determined that the request did not meet the threshold criteria for accepting an RFR (based on information that was not previously considered by the Board, the existing information used by the Board was incorrect, or the Board's interpretation of information, applicable law, or regulation was in error or contrary to existing law) (50 CFR 100.20).

In 1996, ADF&G submitted Proposal 55, requesting that the Board open Cane Creek and Red Sheep Creek drainages to the harvest of sheep by non-federally qualified users. The Eastern Interior Council recommended opposing the proposal. The Eastern Interior Council said it had

heard no compelling evidence to overturn recent Board action closing these drainages. Opposition to the proposal came before the Council from an Arctic Village resident's testimony, a letter from the Arctic Village Council, and from the Eastern Interior Alaska Council's representative from Arctic Village. The Eastern Interior Alaska Council affirmed its support for the existing Arctic Village Sheep Management Area. The North Slope Council recommended deferring action for one year until more information concerning Kaktovik residents' use of AVSMA was available, however, the Council expressed desire to "defer to wishes of their neighbors to the south" (OSM 1996:12). The Board rejected the proposal referring to its action on Proposal 54 the previous year in 1995, described above, and because there had been no dialogue between the State and Arctic Village (FSB 1996:20).

This Regulatory History contains more information on each regulatory proposal below than above. This is because official records of Council and Board justifications were not kept until after 1995. Justification for Board actions that were provided in letters to the Councils, as mandated in ANILCA Section 805(c), were reviewed and compared to transcripts and provide an accurate description of the Board's justifications.

In 2006, Proposal WP06-57 was submitted by ADF&G. It requested that the Board open the AVSMA to the harvest of sheep by non-federally qualified users. The Eastern Interior Council recommended opposing the proposal and said that it needed to see results from sheep population surveys before considering reopening to non-federally qualified users. The Council said that people of Arctic Village were totally dependent on the land for food for their nutritional and cultural needs. The Council said managers cannot only depend on harvest tickets for harvest information. It continued that there was a problem with transporters throughout the region. Transporters brought people up to this area, and they did not clean up after themselves. The Eastern Interior Council heard testimony from Arctic Village residents during the meeting that sheep have been harvested but not reported by subsistence users in this area. The Council indicated there was a need for a meeting with the people of Arctic Village and a need for more work on this issue before the area was opened to non-federally qualified users. The Council said there was no biological reason given to support this proposal, and here was an opportunity for the people in the area to work with non-subsistence users before submitting a proposal (OSM 2006b:452–453). The North Slope Council recommended deferring the proposal to get more information on the status of the sheep population and more harvest information. The Council said it would feel very uncomfortable making a decision that might be detrimental when there was a lack of information (OSM 2006a:452–453). The Board rejected the proposal. The Board said it had listened to public testimony on this proposal and was unable to pass a motion to allow non-federally qualified users to hunt sheep in the drainages of Red Sheep Creek and Cane Creek or to defer action on the proposal with respect to the remainder of the AVSMA. The Board did not see a need for action at this time because

of the commitment of the Arctic National Wildlife Refuge staff to conduct sheep surveys in the area the following summer (FSB 2006:261–283, OSM 2006a:6).

In 2006, Wildlife Special Action Request WSA06-03 was submitted by the U.S. Fish and Wildlife Service. It requested that the Board open Cane Creek and Red Sheep Creek drainages to the harvest of sheep by non-federally qualified users from August 10 through September 20, 2006. The Board approved the request, having reviewed new information on sheep abundance in the AVSMA from a survey conducted by the USFWS in June 2006 and presented in an assessment report.

In 2007, Proposal WP07-56 was submitted by ADF&G. It requested that the Board open Cane Creek and Red Sheep Creek drainages to the harvest of sheep by non-federally qualified users from Aug. 10 - Sept. 20. The Eastern Interior Council recommended the Board defer action on the proposal for one year to allow formation of a working group of representatives from affected villages, hunting interests, and agencies to decide what an acceptable sheep harvest or number of sheep hunters would be in this area, and then draft a proposal to the Alaska Board of Game (BOG) for its March 2008 meeting. The Council said the proposal could contain the number of non-federally qualified users to be allowed to hunt in the Cane Creek and Red Sheep Creek area. The Council said the working group timeline would give the Board time to monitor the progress of the working group, the BOG proposal(s), and the actions of the BOG before the Board met later in the spring of 2008. The Council said it had received testimony from Arctic Village sheep hunters, local elders, and Arctic Village Tribal Council members who all had requested the closure of the Red Sheep and Cane Creek area remain in effect. Testimony included the cultural importance of the area because of burial sites, allotments, and a traditional area where they hunt sheep, and that they would not be able to compete with other hunters if the area was opened to non-federally qualified users. The Council said testimony also included the high cost of accessing the area and the difficulty reaching the area other than by aircraft. Council members discussed the relationship of caribou migrations and the need to hunt for sheep as well as the desired time to harvest sheep. When caribou and moose are plentiful, local hunters do not hunt for sheep, but when caribou and moose are not plentiful, they depend on sheep. The Council shared that the last time a similar proposal to open the area to other hunters was submitted, the Council had unanimously opposed it but was overridden by the Board. The Council sympathized with Arctic Village concerns, but believed the closure of the Cane Creek and Red Sheep Creek drainages would be lifted by the Board based on its action with the recent special action to open the area (WSA06-03, which the Board approved). Several Council members worked with village leaders to see what options were available to limit the number of other hunters allowed to hunt in the area; hence, the recommendation to defer to a working group (OSM 2007a). The North Slope Council recommended the Board oppose the proposal. The Council said that there was no evidence that passage of this proposal

would not impact villages. The Council said resource needs should be assessed to ensure subsistence users' needs were being met at each village. The sheep population was so small, it could not support harvest by commercial and sport hunters (OSM 2007a).

The Board adopted the proposal. The Board said that Section 815(3) of ANILCA only allows restrictions on the taking of fish and wildlife for non-subsistence uses on Federal public lands if necessary for the conservation of healthy populations of fish and wildlife, to continue subsistence uses of such populations, or pursuant to other applicable law. Maintaining the Federal closure to non-subsistence hunting of sheep in the Red Sheep Creek and Cane Creek drainages was no longer necessary for the conservation of a healthy sheep population. Allowing sheep hunting by non-federally qualified users in these drainages would not adversely affect the sheep population because these hunters would be limited to taking one full-curl ram in the fall season. Removal of some full-curl rams from the population was not expected to reduce the reproductive success of the sheep population. Maintaining the closure to non-subsistence hunting of sheep in these drainages was also not necessary to provide for continued subsistence use of sheep. The sheep population could support harvest by both subsistence and non-subsistence hunters. The existing closure was also not justified for reasons of public safety, administration, or pursuant to other applicable law (OSM 2007b).

In 2012, the Board re-established the closure to sheep hunting by non-federally qualified users in the Red Sheep and Cane Creek drainages during the fall because the Board said there was no conservation concern, and the closure was needed to ensure the continuation of traditional subsistence uses of sheep by Arctic Village hunters (OSM 2012b:7; 77 Fed. Reg. 114 35485 [June 13, 2012]). Proposal WP12-76 was submitted by the Eastern Interior Council. It requested that the Board close Cane Creek and Red Sheep Creek drainages to the harvest of sheep by non-federally qualified users from Aug. 10 - Sept. 20. The Eastern Interior Council recommended the Board support the proposal. The Council said the proposal enhanced the ability of the residents of Arctic Village to pursue subsistence opportunities and might reduce incidents of trespass and resource damage. The Council said it appreciated the information provided during public testimony and recognized the powerful connection between residents of Arctic Village and the subject area as one that was deeply culturally rooted. The Council said it was compelled by extensive and detailed public testimony and that subsistence users were concerned that non-subsistence users were interfering with subsistence users, particularly the people of Arctic Village. The North Slope Council also recommended the Board support the proposal. The Council said that the travel time by rural residents was a concern due to long distance required and the cost of fuel. The Board adopted the proposal (OSM 2012a:355).

In 2014, Proposal WP14-51 was submitted by ADF&G. It requested the Board to open Cane Creek and Red Sheep Creek drainages to the harvest of sheep by non-federally qualified users from Aug. 10 - Sept. 20. It also requested that hunters be required to complete courses on

hunter ethics and orientation, including land status and trespass information. The Eastern Interior Council recommended the Board oppose the proposal. The Council said it had heard extensive testimony from Tribal and community members form Arctic Village and Venetie expressing the importance of sheep in this area to their culture and community. The Council said public testimony also noted that air traffic disturbance and hunter activity was pushing sheep further away and higher. The Council said that the cultural importance of the sheep and the area to Arctic Village and other residents was their overriding concern. The North Slope Council also recommended the Board oppose the proposal. The Council said deflection or disturbance of sheep by sport hunters and aircraft flights made it difficult for Arctic Village residents to reach sheep for subsistence hunting. The Council said these sheep were a very important subsistence food shared within the community, and even if local harvest numbers were not high, effort to reach the animals was considerable and the sharing of the meat and organs was widespread and important. The Council said these sheep and this location had special cultural and medicinal value due to their history and relationship with the community as well the mineral licks that the sheep frequented in this area, which made their meat contain unique qualities (OSM 2014a:350).

The Board rejected Proposal WP14-51. The Board rejected this proposal based on the OSM analysis and conclusion, the recommendations of the North Slope and Eastern Interior Councils, and overwhelming public comment over the years, including the testimony presented to the Board in 2012 during consideration of a similar proposal. The Board referenced extensive public testimony of local community concerns and cultural importance of this area and the long-established administrative record on this issue. The Board recognized the cultural importance of the Cane Creek and Red Sheep Creek areas for subsistence harvest of sheep for the residents of Arctic Village and Venetie. The Board said the importance of this area was also demonstrated by the number and location of Native allotments, cultural sites, and ethnographic studies documenting the long history of use in this area (OSM 2014b:3).

Furthermore, the Board heard testimony and reports that aircraft and non-subsistence hunter activity may have interfered with subsistence users' attempts to harvest sheep in this area. The Board concurred with this testimony—that non-subsistence user activities had resulted in the displacement of sheep, pushing them out of range and preventing subsistence hunters from being able to harvest them. The Board supported keeping the closure in place to help ensure the continued subsistence uses of sheep for residents of Artic Village, Venetie, and the several other villages with C&T for sheep in this area: Chalkyitsik, Fort Yukon, and Kaktovik. The Board said that this closure was based on ANILCA Section 815(3), which allows for a restriction on the taking of fish and wildlife for non-subsistence uses on public lands when necessary to continue Federal subsistence uses (OSM 2014b:3).

In 2014, WRFR14-01 was submitted by the State of Alaska requesting that the Board reconsider its actions on Proposal WP14-51, described above. In September 2015, the Board denied the request (OSM 2017). The Board determined that none of the claims in the request met the criteria to warrant further reconsideration, as set forth in 50 CFR Part 100.20.

In 2018, Proposal WP18-56 was submitted by Richard Bishop of Fairbanks, requesting that the Board open the AVSMA to the harvest of sheep by non-federally qualified users. The Eastern Interior Council supported the proposal with modification to open the area north of Cane Creek only. The Council said that the only legitimate reasons under Title VIII of ANILCA to restrict or eliminate the use of a resource on Federal public lands by non-subsistence users are conservation concerns and/or detrimental effects on the satisfaction of subsistence needs. The Council recognized that the issue was of cultural concern and felt that "cultural or social issues" are not a legitimate reason to close the area under provisions of ANILCA. The closing of the AVSMA to the harvest of sheep by non-subsistence users only affects sheep hunters. All other types of visitors to the area, including hikers, wildlife photographers, and flight site-seers, have been allowed to use the area. The Council stated that they consider this issue to be a "political football" and were very disappointed to find out that it was not resolved and was on the table again. The Council felt that sheep conservation was very important and encouraged Federal and State government agencies to work together on this regulatory issue. The Council also suggested requiring a specially designed, respectful hunter education course for users who would hunt in this area. The Council felt that learning respect for other people's uses and for the resource is very important, as well as learning and understanding other cultures. The Red Sheep Creek area is an important cultural place, and Alaska Native cultures value the world and wildlife very differently than Euro-American culture. The importance of a certain area in the Alaska Native culture does not have to manifest itself in a substantial harvest. To alleviate some potential conservation concerns, the Council modified the proposal to only open the area north of Cane Creek, including the Red Sheep Creek drainage (OSM 2018a).

The North Slope Council opposed Proposal WP18-56. The Council found this proposal alarming in that it could potentially take away a very important subsistence priority on Federal public lands that, despite being small in size, has been vital to the community of Arctic Village for generations and was very important to other rural communities in the region with cultural and traditional use of sheep in this area. The Council said opening the AVSMA to hunting by non-federally qualified users would be detrimental to subsistence users, and it was necessary to restrict these other uses in order to provide for subsistence needs. The Council highlighted that there is a considerable amount of historical discussion, and the importance of this area to the local communities is well-supported. There was need for stability and for food security in these communities. The importance of protecting the subsistence opportunity in this area was

well documented and recognized through repeated proposal reviews. The historic and contemporary hunting patterns exist to provide food security to the community, and the closure had allowed for the continued traditional harvest of sheep. The Council also stressed that the concern was not only the harvest of sheep by non-federally qualified users, but also the deflection of these sheep by nonresident hunting and plane activity pushing sheep further and higher up into the mountains, displacing them away from the local community. The Council stated it had heard testimony from Arctic Village as well as Kaktovik in the past. It noted that hunters from Kaktovik hunted in the AVSMA when other animals were not available, and it was an important area because sheep have been reliably found around the natural mineral formations in that small area (OSM 2018a).

North Slope Council members spoke to the cultural importance of this area and that the sheep not only provided important subsistence food but were also considered medicinal, providing minerals and special nourishment for elders and were helpful for recovery from illness. It noted that sheep are an important survival food when caribou do not come around the community, and even if harvest is low in some years, it is critical to maintain the sheep population for food security when people need to shift harvest to more sheep in low caribou years. The Council stressed that the sheep population needs to be higher before opening up the hunt and currently the census data is incomplete and unreliable. It was noted that even though non-federally qualified users would be required to take a full-curl ram, the pressure of numerous hunters traveling into the area to harvest those rams would displace animals that locals would otherwise have been able to hunt. Additionally, the breeding impact of that lone, full-curl ram was important in a sheep population that was struggling, and when there are concerns about recruitment and stabilizing the population (OSM 2018a).

The Board rejected Proposal WP18-56. The Board stated that the AVSMA needs to remain closed because of the significant spiritual/cultural importance of the area and to support the continuation of the subsistence uses by the area's residents. The Board also encouraged the State to come up with suggestions or a proposal to resolve this issue during the next wildlife regulatory cycle (OSM 2018b).

In 2019, ADF&G submitted Proposal WP20-49, which requested re-opening the AVSMA in Unit 25A to the harvest of sheep by non-federally qualified users. ADF&G stated that the closure to non-federally qualified users was not necessary to accommodate local subsistence uses because harvest records indicate (according to the proponent) that residents of the communities rarely hunt sheep. Further, ADF&G claimed that there were no conservation concerns with reopening this hunt and that because of the full-curl ram harvest limit during the fall hunting season, there would be no effect on the sheep population. ADF&G continued that it was unknown if federally qualified subsistence users would be impacted by adoption of this proposal and, based on biological data, federally qualified subsistence users would retain

opportunity to meet their subsistence needs if non-federally qualified users regained opportunity to harvest sheep in the AVSMA. The Eastern Interior and North Slope Councils opposed, and the Board rejected this proposal. The Board stated that there is still a significant conservation concern and the user group conflicts have not yet been resolved (85 Fed. Reg. 226 74798 [November 23, 2020]).

As stated above, the Eastern Interior Council opposed the proposal. However, prior to their October 2019 meeting, the Council attempted to address issues to decrease tension between ADF&G and the Board in regard to the AVSMA closure by submitting Proposal 82 to the BOG (EIRAC 2019: 69-70). In this proposal, the Council stated that it "…intends for this proposal to become a joint effort between the State Board of Game, the Federal Subsistence Board and Arctic Village residents to find a workable solution to a historically contentious issue and build mutual respect between parties" (BOG 2020: 95). Proposal 82 requested that the BOG establish a new hunt area akin to the AVSMA with the following hunt: 1) a draw permit hunt for residents and non-residents in the fall (Aug. 10-Sept. 20) with a harvest limit of one ram with full-curl horn or larger every four regulatory years; 2) a registration permit (RS595) hunt for residents in the winter (Oct. 1-Apr. 30) with a harvest limit of one ram with full-curl horn or larger every four regulatory years; and 3) a youth hunt by harvest ticket in August (Aug. 1-5) with a harvest limit of one ram with full-curl horn or larger. These proposed harvest limits were intended as a compromise to reduce the harvest of non-federally qualified subsistence users. It was not intended as a harvest limit for federally qualified subsistence users. The Council also requested elimination of the nonresident youth hunt in the AVSMA. The Council expressed hope that the BOG would develop a hunter ethics and orientation course for non-federally qualified hunters that included land status and trespass information. According to Proposal 82, the BOG "…addressed this issue by requiring sheep hunters in this area to complete a department approved" course which it required (5 AAC 92.003(i)) but had not been implemented because the AVSMA had been closed to non-federally qualified users (BOG 2020: 97).

In 2020, the EIRAC attempted to form a hunter ethics subcommittee and workshops to address issues in the AVSMA. OSM staff reported on this workshop at the October 2019 meeting, which also informed consideration of Proposal WP20-49 and State Proposal 82. These efforts included tribal officials and residents from Arctic Village and Venetie. A full array of tribal, state, and federal government partners as well as non-governmental organizations attended workshops and developed plans for local community hunter liaisons, coordination and communication to connect with hunters from military bases and a statewide hunter education campaign to encourage awareness and understanding of the wide range of cultural values related to hunting across the spectrum of user groups (EIRAC 2019: 22-31). Prior to the Council meeting, the Council Chair conducted outreach that led to an informal meeting with the First and Second Chiefs of Arctic Village, the Chief of Native Village of Venetie, officials from Village of Venetie Tribal Government, Arctic Village Council, and

Elders (EIRAC 2019: 5, 581). This informal meeting occurred the night before the Council meeting began and led to the Tribal government officials attending the Council meeting and providing extensive testimony through a roundtable discussion (EIRAC 2019: 15). Much of the discussion focused on the issue of harvest data and how lack of data definitely does not indicate lack of harvest or need (EIRAC 2019: 102, 105, 111, 115). Extensive traditional knowledge was shared including the sacredness of Red Sheep Creek, sharing of sheep meat with other villages, traditional management which includes direction from a hunting chief as to when it is and is not appropriate to hunt, and observations of extremely low numbers of sheep in the Red Sheep and Cane Creek drainages (EIRAC 2019: 42-49, 51-54). Most pointed, however, was the repeated emphasis by Tribal officials and some Council members that the issue of the AVSMA must be addressed through formal government-to-government Tribal consultation (EIRAC 2019: 50, 64, 66, 117). Evon Peter, former Chief of Arctic Village stated:

> …I think it is really important for us to recognize that we have three sovereigns at work in Alaska and those are the Federal government, the State government and Tribal governments. As I began looking at the letter that was sent out to Arctic Village, I think it was addressed to our council or our chief, and it refers to just Arctic Village residents, but that doesn't really adhere to the frameworks of those three government-to-government relationships between our Tribe, the State and the Federal government (EIRAC 2019: 47).

As noted above, the Eastern Interior Council voted unanimously to oppose WP20-49.

The North Slope Council also voted to oppose WP20-49 in support of Arctic Village and Venetie and in acknowledgement of the importance of the subsistence sheep harvest. The North Slope Council stated that it is important to protect customary and traditional uses of sheep and the opportunity to hunt without conflict (FSB 2020: 607).

In March 2020, the BOG voted to amend Proposal 82, resulting in the current State regulations. It created the Eastern Brooks Range Management Area (EBRMA) which covers the same area as the AVSMA, and required the hunter education class for all hunters planning to hunt in the AVSMA/EBRMA. Harvest limits were changed under the winter registration permit hunt (RS595) from three sheep to one ram with ¾-curl horn or less every four years and a draw permit fall hunt was established for residents and non-residents as proposed (FSB 2020: 562). Much like at the Eastern Interior Council meeting, Tribal officials and residents of Arctic Village and Venetie shared traditional ecological knowledge and information about the sacredness of sheep and the low numbers of sheep in Red Sheep and Cane Creeks during the BOG meeting (BOG 2020). Again, tribal officials, including the Vice-President of Tanana Chiefs

Conference (TCC) repeatedly emphasized that the path to addressing the AVSMA is formal, government-to-government Tribal consultation (BOG 2020).

In April 2020, the Board voted to reject Proposal WP20-49. Much of the Board discussion covered the same points as the Eastern Interior Council's discussion. Many tribal officials and residents of Arctic Village and Venetie provided testimony on the very low numbers of sheep in the Red Sheep and Cane Creek drainages (FSB 2020). While federal and state officials talked of working groups and subcommittees, Tribal officials repeatedly emphasized their desire for formal, government-to-government consultation to address the AVSMA (FSB 2020: 565, 567, 581). Charlene Stern, Vice-President of TCC stated:

> TCC opposes Proposal WP20-49 and any attempt to open a non-subsistence hunt in the Arctic Village Sheep Management Area. As a tribal member, citizen of Arctic Village, the men in my family, including my grandfather and uncles, were raised with sheep hunting as part of their seasonal subsistence cycle. The Gwich'in people of Arctic Village have intergenerational knowledge about the sheep of Red Sheep Creek and Cane Creek areas and have consistently opposed efforts to open it to non-subsistence hunting. This area is included in our customary and traditional use area and is a critical historical and spiritual site including burial grounds. Any proposed change to the management of sheep must be discussed in advance in tribal consultation with the Arctic Village Council and Venetie Village Council and Native Village of Venetie Tribal Government (FSB 2020: 581).

APPENDIX 1
TANANA CHIEFS CONFERENCE 2023 RESOLUTION

(NEXT PAGE)

RESOLUTION 2023 - 12
Tanana Chiefs Conference Full Board of Directors

Tanana Chiefs Conference

OPPOSING THE OPENING OF TRADITIONAL SUBSISTENCE USE HUNTING AREA TO SPORT HUNTERS IN THE ARCTIC VILLAGE SHEEP MANAGEMENT AREA PERMANENTLY AND CLOSING OTHER CRITICAL SUBSISTENCE AREAS IN NEED OF PROTECTION

WHEREAS, Tanana Chiefs Conference (TCC) is an Alaska Native tribal health and social services consortium established by the Interior Alaska tribes and tribal communities, to provide a unified voice in advancing sovereign tribal governments through the promotion of physical and mental wellness, education, socioeconomic development and culture of the Interior Alaska Native; and

WHEREAS, Alaskan Natives have stewarded their territories for over 10,000 years to ensure the health, well-being, social and cultural foundation, and spiritual existence of their peoples, as well as that of the animals, lands, and waters since time immemorial; and

WHEREAS, The Arctic Village Sheep Management Area is a critical subsistence use sheep hunting area of historical and cultural significance where our ancestors have hunted on this sacred site before us since time immemorial; and

WHEREAS, The Neets'aii Gwich'in and all Interior Tribes have managed their subsistence resources in common with their traditional laws. For the Neets'aii Gwich'in this has translated to this important subsistence use area being closed off to sport hunters, and

WHEREAS, High air traffic activity caused by sport hunting and guiding parties within our traditional hunting areas has created a high influx of hunters that compete with the Neets'aii Gwich'in subsistence hunting and the current Sheep population cannot sustain this; and

WHEREAS, Every two years sport hunters or outside interests propose to open the Arctic Village Red Sheep Creek Management Area to outside sport hunters, and the Neets'aii Gwich'in have to endlessly advocate to keep the area closed to sport hunters and stay abreast of these efforts, and

WHEREAS, While the Neets'aii Gwich'in of Arctic Village will bear the greatest impact of opening the Arctic Village Red Sheep Creek Management area these nonindigenous stressors impact our collective wildlife populations and need additional support and advocacy efforts to keep the area closed off to sport hunters permanently; and

WHEREAS, Sport and commercial hunting and fishing interests are threatening critical subsistence resources throughout the Tanana Chiefs region and have led to a drastic decline in the Chinook salmon runs in the Yukon-Kuskokwim Rivers and the Western Arctic caribou herd; and

WHEREAS,

RESOLUTION 2023 - 12
Tanana Chiefs Conference Full Board of Directors

Tanana Chiefs Conference

TCC and its member villages are endlessly having to advocate at

Alaska Department of Fish and Game for limits on commercial and sport hunting and fishing to protect our food security and survival of our people.

NOW THEREFORE BE IT RESOLVED that the Tanana Chiefs Conference Full Board of Directors does hereby support the Neets'aii Gwich'in traditional sheep management decision to maintain the Red Sheep Creek and Crane Creek closures to sport hunters within the Arctic Village Sheep Management Area permanently; and

BE IT FURTHER RESOLVED the Tanana Chiefs Board of Directors does hereby support all TCC communities to advocate and encourage permanent solutions to protecting the food security of our people; and

BE IT FURTHER RESOLVED that the Tanana Chiefs Board of Directors does direct the Tribal Stewardship Program to work with Arctic Village and other TCC villages to advocate for a permanent solution to closing the Arctic Village Sheep Management Area and other critical subsistence use areas to sport hunting and fishing and outside interests that negatively affect subsistence rights; and

BE IT FINALLY RESOLVED that this resolution shall be the policy of Tanana Chiefs Conference.

CERTIFICATION

I hereby certify that this resolution was duly passed by the Tanana Chiefs Conference Full Board of Directors on March 16, 2023 at Fairbanks, Alaska and a quorum was duly established.

Charlie Wright

Charlie Wright
Secretary/Treasurer

Submitted by: Arctic Village Council

WP24-01 Executive Summary	
General Description	Proposal WP24-01 is a request to allow the sale of brown bear hides. *Submitted by: Kaleb Rowland*
Proposed Regulation	**§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations** *(j) Utilization of fish, wildlife, or shellfish* *. . .* *(13) You may sell the raw/untanned and tanned hide or cape from a legally harvested **brown bear**, caribou, deer, elk, goat, moose, musk ox, and sheep.*
OSM Preliminary Conclusion	**Support** Proposal WP24-01 **with modification** to allow the sale of brown bear hides with claws attached in areas where the Federal harvest limit is two bears every regulatory year and after first obtaining a permit available at the time of sealing from an ADF&G sealing officer. The modified regulation should read: **§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations** *(j) Utilization of fish, wildlife, or shellfish* *. . .* *(13) You may sell the raw/untanned and tanned hide or cape from a legally harvested caribou, deer, elk, goat, moose, musk ox, sheep, **and brown bear with claws attached harvested in an area with a two brown bear limit per regulatory year in Federal regulations only after first obtaining a permit at the time of sealing from the Alaska Department of Fish and Game.***
Southeast Alaska Subsistence Regional Advisory Council Recommendation	
Southcentral Alaska Subsistence Regional Advisory Council Recommendation	

WP24-01 Executive Summary	
Kodiak/Aleutians Subsistence Regional Advisory Council Recommendation	
Bristol Bay Subsistence Regional Advisory Council Recommendation	
Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation	
Western Interior Alaska Subsistence Regional Advisory Council Recommendation	
Seward Peninsula Subsistence Regional Advisory Council Recommendation	
Northwest Arctic Subsistence Regional Advisory Council Recommendation	
Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation	
North Slope Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	

WP24-01 Executive Summary	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP24-01

ISSUE

Proposal WP24-01, submitted by Kaleb Rowland of McCarthy, Alaska, is a request to allow the sale of brown bear hides.

DISCUSSION

The proponent states federally qualified subsistence users in many areas of Alaska must salvage the hides of brown bears, however, the hides must not be sold. The proponent continues that the hides of many other legally harvested big game species may be sold, and brown bears should be added to this regulation.

Existing Federal Regulation

§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations[1]

(j) Utilization of fish, wildlife, or shellfish

. . .

(13) You may sell the raw/untanned and tanned hide or cape from a legally harvested caribou, deer, elk, goat, moose, musk ox, and sheep.

Proposed Federal Regulation

§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations

(j) Utilization of fish, wildlife, or shellfish

. . .

(13) You may sell the raw/untanned and tanned hide or cape from a legally harvested ***brown bear****, caribou, deer, elk, goat, moose, musk ox, and sheep.*

Existing State Regulation

5 AAC 92.200—Purchase and sale of game

[1] Sections of the regulatory booklet produced for the public that describe legal utilization of brown bears are incorrect. The Code of Federal Regulations regarding the utilization of brown bears are correctly reflected in the **Appendix**.

. . .

(b) Except as provided in 5 AAC 92.031, a person may not purchase, sell, advertise, or otherwise offer for sale:

(1) any part of a brown bear, except an article of handicraft made from the fur of a brown bear, and except skulls and hides with claws attached of brown bears harvested in areas where the bag limit is two bears per regulatory year by permit issued under 5 AAC 92.031;*

***Note**: The harvest limit for a resident hunting in Units 16B, 17, 19A, 19D, 20E, 21, 22A, 22B, 22D, 22E, 23, 24B, 25D, and 26A is two brown bears per regulatory year. A person may not take more than one brown bear, statewide, in any regulatory year, except that in these units, a person may take two brown bears per regulatory year (*5 AAC 92.132 Bag limit for brown bears*).

5 AAC 92.031 - Permit for selling skins, skulls, and trophies

. . .

(g) A person may sell, advertise, or otherwise offer for sale a skull or hide with claws attached of a brown bear harvested in an area where the bag limit is two brown bears per regulatory year only after first obtaining a permit from the department. Any advertisement must include the permit number assigned by the department, and the department will permanently mark all hides and skulls intended for sale. All bears sold under this permit must be reported to the department within the time frame specified on the permit.*

***Note**: A "Permit to Sell a Brown/Grizzly Bear Hide and/or Skull" is available at the time of sealing from the sealing officer.

Extent of Federal Public Lands

Federal public lands comprise approximately 54% of Alaska and consist of 20% U.S. Fish and Wildlife Service managed lands, 15% Bureau of Land Management managed lands, 14% National Park Service managed lands, and 6% U.S. Forest Service managed lands.

Customary and Traditional Use Determinations

This is a statewide proposal. For more information refer to the customary and traditional use determinations at *§___.24 Customary and traditional use determinations*.

Background

Convention on International Trade in Endangered Species of Wild Fauna and Flora

All Alaskan brown/grizzly bears are classified as the same species, *Ursus arctos*, but are referred to differently depending on where they are found and their diet. In general, the common name "brown bear" refers to those Ursus arctos found in the coastal regions, and the common name "grizzly bear" refers to those found in the interior. The brown bear conservation environment in the lower 48 is related but very different than in Alaska, which is the only remaining state with an abundant brown bear population. Brown bears once ranged from northern Alaska and western Canada south to Mexico, and from the west coast east across the great plains of the United States. Over the last 200 years, the number and range of brown bears south of Canada has declined by more than 95% largely as a result of excessive human caused mortality and habitat loss (ADF&G 2000). In 1990, fewer than 1,000 brown bears remained in the states south of the Canadian border (Schoen 1990). Today, Alaska is home to more than 98% of the brown bear population in the United States and 70% of the brown bears in North America (ADF&G 2000). With the demise of brown bears in other areas, Alaska has become a premier locale for trophy bear hunting.

In 1975 the North American brown bear was listed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) as an Appendix II species, which means it may become threatened by extinction if trade is not strictly regulated and monitored. This listing is designed to protect threatened populations elsewhere in North America, outside of Alaska. Commercial trade in Appendix II species is allowed only if the state of export issues permits reporting that the trade will not be detrimental to the survival of the species in the wild. The transport of brown bear parts between states or countries is subject to both State and Federal consideration and permitting (USFWS 2023).

Licensed hunting of brown bears occurs in four provinces and territories in Canada (Yukon, Northwest Territories, Nunavut, and British Columbia). In Canada, almost all trade in brown bear parts, including gall bladders and paws, is prohibited (some exceptions apply to Aboriginal groups for personal or ceremonial use). Some manufactured, non-food items, such as tanned hides, may be sold, but such trade in brown bear parts is low. In Canada, brown bears are mainly traded as hunting trophies (skins, rugs, or taxidermy mounts). A provincial or territorial permit is needed to legally possess, sell, and export brown bear parts, including those killed by accident or for defense of life and property. A CITES export permit is required for international export (Government of Canada 2012, 2014).

Sale of Hides

People have sold and exported brown bear pelts from Alaska for centuries. During the Russian Period in Alaska, the Russian American Company exported large numbers of brown bear skins to St. Petersburg and Asia (Bockstoce 2009).

Conservation efforts, led by Eastern conservationists, began with the passage of the Game Law of 1908 that implemented hunting seasons and a licensing system for brown bear parts that were being shipped out of Alaska, and limited exports to three brown bear hides annually per person and a $5 dollar fee on

each hide. The primary deterrent to the sale and export of brown bear hides was the export limit and fee (Holzworth 1930).

In 1925 a new game law was passed that eliminated market hunting of big game, including brown bears, and established the Alaska Game Commission, the predecessor to the Alaska Department of Fish and Game (ADF&G), that was responsible for imposing and revising seasons and harvest limits in Alaska. However, lack of enforcement and increases in sport and trophy hunting, especially for big coastal bears, continued to threaten brown bear populations in some areas of Alaska. Alaska Natives were exempted under the new law and were still permitted to hunt game at any time of year for food and to sell game hides within the state unless otherwise restricted (Dufresne 1965).

Beginning in 1961 after Alaska statehood, the purchase, sale, or barter of brown bears or brown bear parts was prohibited by the State of Alaska (State of Alaska 1961). Salvage and sealing requirements, introduced in 1961, mandated that a hunter retrieve the hide with claws attached and skull so that scientific information regarding the sex, age, and hide quality of harvested bears could be obtained by biologists. Beginning in 1968, the harvest limit in all units open to brown bear hunting was one bear every four regulatory years. Beginning in 1977, all hunters were required to purchase a tag before hunting a brown bear. However, in rural western Alaska, participation by subsistence users was very limited, and few subsistence harvests were reported through this system (Thornton 1992).

The issue of claw retention was examined extensively by the Brown Bear Claw Handicraft Working Group. The group was formed by the Federal Subsistence Board in 2009 to discuss a range of issues relating to brown bear claws including their use in handicrafts, the feasibility of tracking, and potential changes to regulations. Of particular concern to this group was preventing the illegal harvest and sale of brown bear parts that can garner significant monetary value in worldwide markets, and which may incentivize illegal harvest of brown bear populations elsewhere in North America where conservation concerns are prevalent. Brown bear claws, paws, and gall bladders are the primary illegal items sought for these markets (OSM 2010).

Sealing requirements help to track the sale of wildlife parts, to validate that an animal was legally harvested, and to provide documentation to allow individuals traveling to another country to obtain a CITES permit for the item to be legally transported across international borders (OSM 2010). For example, during Alaska Board of Game deliberations on Proposal 57 (sale of brown bear hides with claws attached and/or skulls, see Regulatory History, below) in March 2016, Alaska Wildlife Troopers testified that law enforcement tracks internet activity for hides and attempts to verify permit and sealing records when bear products are encountered. Very few brown bear hides had been encountered. At the time of the testimony, all bear hides sold by Alaska residents were appropriately harvested under a predation control permit. These permits are for the purpose of predation control to recover depleted prey populations such as moose and caribou (ADF&G 2023a).

Western/Northwestern Alaska Brown Bear Management Areas

In 1992, the Alaska Board of Game adopted the Western Alaska and Northwestern Alaska brown bear management areas and more liberal subsistence harvesting regulations. Brown bear subsistence harvest

seasons in most of these areas were lengthened to September 1–May 31, and harvest limits were increased to one brown bear every regulatory year. Under subsistence regulations, Alaska residents did not have to seal brown bears unless the hide or skull was being removed from the area or presented for commercial tanning. For brown bears, sealing means taking the skull and hide (with claws and evidence of sex attached) of the bear you killed to an officially designated "sealing officer." The skull must be skinned from the hide (*5 AAC 92.165 - Sealing of bear skins and skulls*). Hides and skulls are permanently marked by ADF&G (*5 AAC 92.990 – Definitions*).

An Alaska resident hunting in these management areas was required to have a State subsistence registration permit and to salvage the meat, but the hide and skull need not be salvaged. Over time the Alaska Board of Game has further modified these regulations. Currently, State subsistence registration hunts in which the hide and skull need not be sealed, unless removed from the area or presented for commercial tanning, occur in Unit 9B, all drainages in Unit 9E that drain into the Pacific Ocean between Cape Kumliun and the border of Unit 9D and Unit 9E, Unit 17, Unit 18, that portion of Units 19A and 19B downstream of and including the Aniak River drainage, Unit 21D, Unit 22, Unit 23, Unit 24, and Unit 26A (*5 AAC 92.165 Sealing of bear skins and skulls*).

Regulatory History

Customary Trade

In 1992, the Federal Subsistence Board adopted final Federal subsistence regulations in which it defined customary trade to be the following: "*Customary trade means cash sale of fish and wildlife resources regulated herein, not otherwise prohibited by Federal law or regulation, to support personal and family needs; and does not include trade which constitutes a significant commercial enterprise*" (*§___.4 Definitions*). The Board said it would continue to refine the definition of customary trade (57 Fed. Reg. 104, 22941 [May 29, 1992]). Customary trade is part of the definition of subsistence uses in Federal regulations.[2]

The Federal Subsistence Board's customary-trade focus has been refining regulations to address two issues on a region-by-region basis. One is the sale of salmon and the second is the sale of handicrafts that incorporate brown bear claws. The Board appointed working groups to propose regulations with input from Regional Advisory Councils. In 2003, the Board adopted regulations defining a significant commercial enterprise of salmon in some regions of the state and requiring a permit and reporting of customary trades of salmon in other regions of the state (*§___.27(b)(11)(i)* and *(ii)*; *§___.27(b)(12)*) and allowing the sale of handicrafts that incorporate brown bear claws in 2012 (*§___.25(j)(7)(ii)*). To allow the sale of handicrafts incorporating brown claws, a modification to the sealing certificate, which is managed by the State of Alaska, was required to include a place on the certificate indicating that the

[2] *Subsistence means the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for* ***customary trade*** *(§___.4 Definitions)*

bear was harvested by a Federally qualified subsistence user (*§___.25(j) Utilization of fish, wildlife, or shellfish*, see regulations in the **Appendix**) (68 Fed. Reg. 81, 22309, [April 28, 2003]; 77 Fed. Reg. 114, 35498 [June 13, 2012]).

Sale of Brown Bear Hides

In 2002, Proposal WP02-01, submitted by a resident of Fort Yukon, requested the Federal Subsistence Board to classify black bears and brown bears as furbearers, which opened up the possibility that bear hides may be sold (*If you are a Federally qualified subsistence user, you may sell the raw fur or tanned pelt with or without claws attached from legally harvested furbearers (___25(j)(8)*).

Regional Advisory Councils differed in their recommendations. The Southeast Alaska Council was the only one that supported legalizing the sale of brown bear and black bear hides. The Southeast Alaska Council justification read,

> The Council was in favor of full use of subsistence resources and did not believe that allowing sale of bear parts would increase bear harvests, promote illegal trade, or cause conservations concerns. The Council noted that hunting regulations for bear limit the number of bears that can be taken and that sale of parts of legally taken bears would provide only a minor financial return to the harvester. There were no conservation concerns for the brown bear population under existing management; the southeast population is healthy, and fewer bears are taken than the harvest guideline would allow. This change in classification would not affect other users and could be positive for subsistence users (OSM 2002: 23).

One Council supported the sale of black bear pelts only, and five other Councils supported allowing the sale of only handcrafts that incorporate black bear fur (thereby aligning Federal and State regulations). One Council said the sale of bear parts could threaten bear populations and was not a customary and traditional use in the region. A Western Interior Alaska Council member abstained from voting on the proposal because of a cultural taboo that women do not talk about bears. Two Councils said that such decisions should be made on a region-by-region basis and not statewide (OSM 2002). The Board adopted a motion to only allow the sale of handicrafts incorporating black bear fur: *If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a black bear (§___.25(j)(6)*) (67 Fed. Reg. 125, 43711 [June 28, 2002]).

In 2006, the Alaska Board of Game adopted regulations to allow the sale of raw brown bear hides, with claws attached, harvested in specific predator control management areas under a State permit: "*After the skin and skull is sealed as required under 5 AAC 92.165(a), a person may sell the untanned skin, with claws attached, and skull of a brown bear taken in an active brown bear predator control area listed in 5 AAC 92.125 only under a permit issued by the department"* (*5 AAC 92.031(d)*). The purpose of predation control is to recover depleted prey populations such as moose and caribou (ADF&G 2006a, 2006b:5, 2023a).

In 2016, the Alaska Board of Game adopted Proposal 57 to allow the sale of brown bear hides and/or skulls by Alaska residents in units where the harvest limit is two bears annually: *A person may sell, advertise, or otherwise offer for sale a skull or hide with claws attached of a brown bear harvested in an area where the bag limit is two brown bears per regulatory year. . . .* (*5 AAC 92.031(g)*). Currently, these units with two-bear harvest limits in State regulations are 16B, 17, 19A, 19D, 20E, 21, 22A, 22B, 22D, 22E, 23, 24B, 25D, and 26A (*5 AAC 92.132 Bag limit for brown bears*) (ADF&G 2016a, 2016b:32, 2016c:5).

In 2018, the Federal Subsistence Board rejected the recommendations of affected Councils on Proposal WP18-44 to allow the sale of brown bear hides with claws attached and/or skulls in Unit 23. The Board said black markets for illegally acquired brown bear parts are known to encourage poaching and increasing market availability for brown bear parts may intensify illegal harvest. The Board also noted there is insufficient evidence that residents of Unit 23 have an established pattern of customary trade involving brown bear hides and skulls, and few residents of Unit 23 harvest brown bears under the Federal subsistence regulation due to meat salvage and sealing requirements. The lack of a component to the proposal that would require a permit for sale in line with State regulations was also a factor in the Board's justification for rejecting the proposal (OSM 2018).

Current General Regulations

Federal subsistence regulations prohibit the sale of wildlife or their parts unless specifically allowed under Federal subsistence regulations: "*You may not exchange in customary trade or sell fish or wildlife or their parts, taken pursuant to the regulations in this part, unless provided for in this part*" (*§___.7(b) Restriction on use*).

One specific authorization in Federal subsistence regulations for the sale of the non-edible byproducts of brown bears harvested for subsistence is for handicrafts: "*If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26"* (*§___.23(j) Utilization of fish, wildlife, or shellfish*).

Federal subsistence regulations define a brown bear hide as having claws attached: . . . *skin, hide, or pelt of a bear shall mean the entire external covering with claws attached"* (*§___.23(a) Definitions*).

Additionally, customary trade shall not constitute a significant commercial enterprise: *Customary trade means exchange for cash of fish and wildlife resources regulated in this part, not otherwise prohibited by Federal law or regulation, to support personal and family needs; and does not include trade which constitutes a significant commercial enterprise* (§___*.4 Definitions*). Sales that rise to the level of a significant commercial enterprise are not defined on a statewide basis and instead may be defined on a region-by-region basis by placing monetary caps on sales and/or requiring permits for and reporting of customary trades (see examples of these regulations in the **Appendix** at *§___.27 Subsistence taking of fish*).

Biological Background

Brown bears on Kodiak Island are the only distinct subspecies (*Ursus arctos middendorffi)* because they are genetically and physically isolated from other Ursus arctos. However, all "grizzly bears" and "brown bears" are considered "brown bears" for purposes of harvest in Alaska.

Alaska has an estimated 30,000 brown bears statewide (ADF&G 2023b). Brown bears range throughout most of Alaska, except the islands of the Aleutian Chain west of Unimak and in Southeast Alaska south of Frederick Sound (**Figure 1**). High densities of brown bears occur on Kodiak Island, the Alaska Peninsula, and the Admiralty, Baranof, and Chichagof Islands of Southeast Alaska. The density of brown bears in Alaska varies considerably with habitat and ranges anywhere from 2.6 bears/ 1,000 km^2 on the North Slope (Lenart 2021) to 275 bears/1,000 km^2 in Southeast Alaska (Bethune 2021), although these estimates are extrapolated from an estimate derived from a reanalysis of 20-year-old data. Except for breeding pairs and females with offspring, brown bears are typically solitary creatures and avoid the company of other bears.

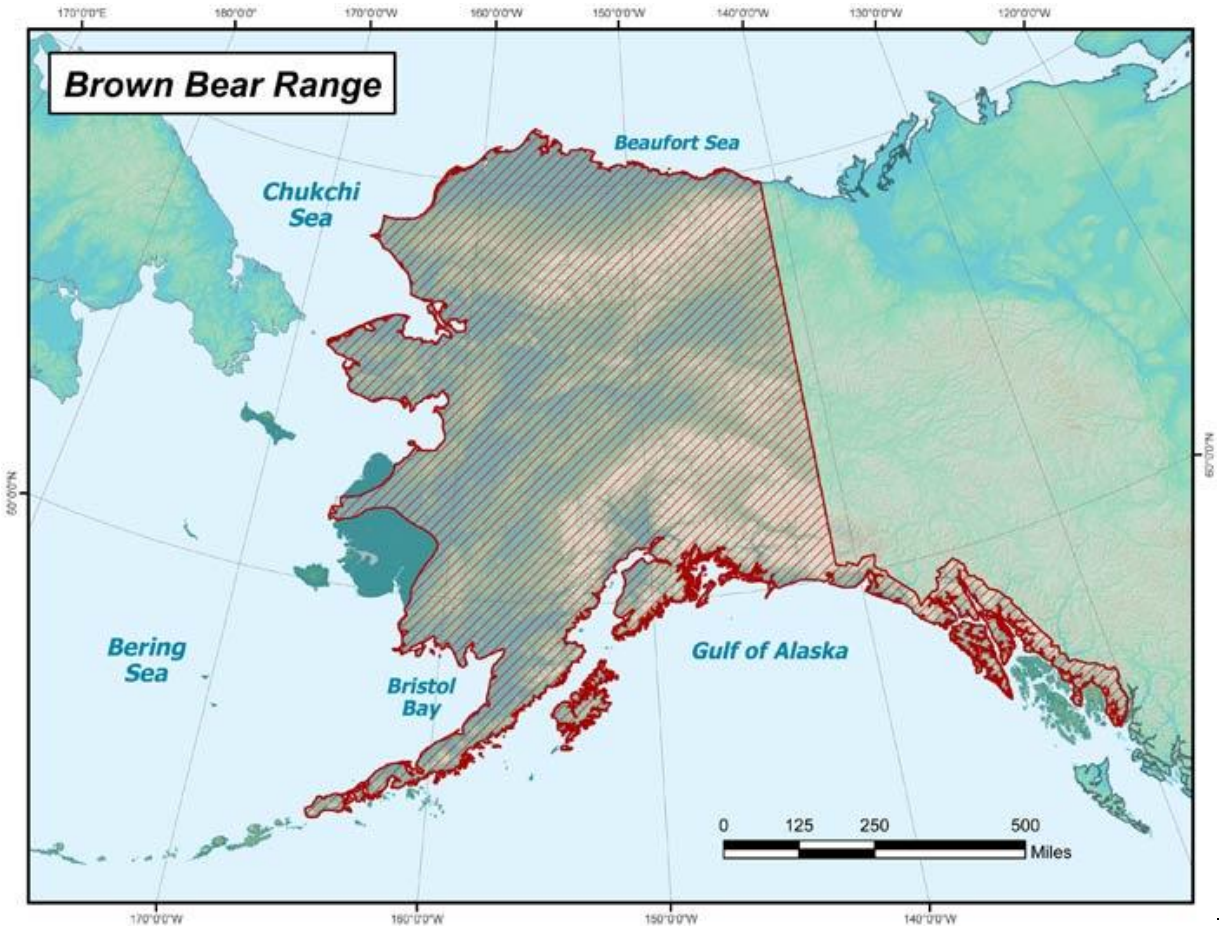


Figure 1. Map showing the range of brown bears in Alaska (ADF&G 2023c).

Brown bear populations are extremely sensitive to disruption. This is because brown bears exhibit the lowest reproduction rate of any North American mammal. In some areas with low population densities, such as in northern Alaska, brown bear populations are often managed conservatively for several reasons: large home ranges are required to meet resource needs (McLoughlin et al. 2002); female brown bears generally do not successfully reproduce until they are more than five years old and have low reproductive rates, small litters, and long intervals between litters. Sows exhibit high fidelity to home ranges with little emigration or immigration, and monitoring methods are imprecise and expensive (USFWS 1982, Reynolds 1989, Miller et al. 2011)

Brown bears are difficult to survey precisely due to their solitary nature and their sensitivity to disturbance, as is evident from the lack of current population data. Statewide, population estimates are sometimes based on surveys conducted in the 1990s or early 2000s and extrapolated to arrive at a current estimate. In Unit 4 in Southeast Alaska, there has not been a population estimate for brown bears for almost two decades (Bethune 2021). Historically, ADF&G estimated densities of between 227 and 275 bears/1000 km^2, with population estimated for Unit 4 of 4,303 bears. In Unit 13, there is currently no population monitoring (Hatcher 2023). The last population estimate was in 1998 and it estimated 1,260 bears in the unit, with a density of 21.3 bears/1,000 km^2. In Units 25 and 26 current population estimates are based on models using population data from 1999. These calculations give an estimated density of 2.6 bears/1,000 km^2, with a non-statistically derived estimate of 333 bears for Unit 26B (Lenart 2021).

Most population data collected is from sealing records of harvested brown bears. In some areas, brown bears harvested under Federal or State subsistence regulations are not required to be sealed except under certain conditions. Where sealing is not required, a Federal or a State hunting permit is required that sometimes allows for the collection of similar data to sealing records The data collected from each is used to assess trends in harvest and to inform in-season management actions (Bethune 2021).

Harvest History

Harvests levels of brown bears have generally increased over the last 40 years with harvest peaking in the early 2010s followed by a downward trend to the current year (ADF&G 2022).

Concerning the sale of the hides with claws attached of legally harvested brown bears in State regulations since 2016, ADF&G has not detected increased harvest. Although brown bear harvest increased slightly (then decreased right back to "normal" levels) when brown bears were first allowed to be taken over bait, hunting seasons were also being lengthened that might have contributed to this slight increase in harvest around the same time. Staff have been instructed to issue sale permits to anyone that harvests a brown bear in a two-bear harvest limit area that might possibly be interested in selling it down the road (Bogle 2023, pers. comm.; Weber 2023, pers. comm.). As of August 2022, ADF&G had distributed 38 sale permits for hunts across 10 subunits and has received seven sale notifications from permit holders (Paragi 2023, pers. comm.).

In addition to a State tag or permit, a Federal subsistence permit has been available in some areas of Alaska to harvest brown bears since 1995. In the 20 years from 2002 to 2021, 158 subsistence hunters

have reported harvesting a total of 40 brown bears by Federal permit cumulatively from Units 5, 8, 9, and in the Southcentral Alaska Region (OSM 2023). Subsistence hunters use these Federal permits because it allows them to hunt in areas where there is competition in the State system to obtain permits (for example draw hunts in Units 8), where there formerly was competition in the State system to obtain permits (for example in Unit 15), the hunt area is on National Park or Monument lands (such as in Unit 9), which are closed to the harvest of brown bears except by subsistence users, or in areas with more liberal Federal harvest limits (in Unit 5 for example).

Cultural Knowledge and Traditional Practices

Alaska Natives have harvested bears and competed with them for subsistence resources for at least 14,000 years (Birkedal 2001). Brown bears have traditionally been a very important part of the Alaska Native cultures. Because of their powerful senses and ability to hear through the ground, brown bears are usually referred to indirectly and respectfully so that they will continue to give themselves to hunters. For this reason, the Yup'ik call them *carayak* (terrible fearsome thing), *ungungssiq* (land animal, quadruped), *naparngali* (one who stands upright) or *kavirluq* (red thing, as opposed to *tan'gerliq*, black bear)" (Fienup-Riordan 2007:164). Athabaskans call the brown bear *ghonoy*, *ghonoy tlaaga* or *dlil ta bahoolaanee*. Tlingits call it *yats'inEt* or *ya'Et'gu tutw'adi'at*. The Iñupiat call it *aklaq*.

Brown bears have been hunted for their meat and hides, and other parts of the bear have been used for traditional medicine or fashioned into such things as tools, amulets, ceremonial regalia, and art (Thornton 1992, Nelson 1983, Fall and Hutchinson-Scarborough1996, Loon and Georgette 1989, Behnke 1981, ADF&G 1990). Nelson (1983) reports that the brown bear takes an apex of power among Koyukon Athabascan spirits of the natural world, perhaps below only the wolverine. People's behavior toward the brown bear is subject to a number of culturally based requirements. Nelson (1983) reports that disregard or violation of these cultural requirements is sharply punished. Traditionally, when Koyukon men hunted brown bears, they followed prescribed rituals. For example, a man is not to openly discuss the brown bear hunt before or after it occurs, and care must be taken to prevent the hide from coming in contact with women. The Koyukon Athabascans have a taboo against women eating brown bear meat or young men eating meat from a brown bear's head (Nelson 1983). Dena'ina Athabascans in the Lake Clark and Katmai areas competed directly with brown bears for subsistence resources; it is thought that the Dena'ina likely displaced brown bear from the very best salmon fishing sites on certain rivers (Birkedal 2001). The Dena'ina reserved some secondary stream drainages for the exclusive use of bears and for bear hunting. It is reported that Alutiiq residents of the Alaska Peninsula believed that bears are human ancestors that must be shown respect (Sherwonit 1998). In the Chignik Bay, Chignik Lagoon, Chignik Lake, Ivanof Bay and Perryville area, brown bear hunting is governed by a system of traditional Alutiiq beliefs that emphasize respectful treatment of the bear and protection of the hunters (Fall and Hutchinson-Scarborough 1996). According to these traditions, the skull and hide of the bear are left at the kill site; the skull is placed facing in a southern or southeastern direction. Traditional Southeast Alaska, brown bear hunting by Alaska Natives was surrounded by numerous behavioral prescriptions that were considered vital to the success of the hunt. Brown bears are an important symbol of Tlingit social and ceremonial life, and there is emphasis on the close relationship

between humans and bears (Thornton 1992). Bear hides were used for ceremonial robes, clothing, rugs and bedding. Thornton (1992) reported that the Tlingit traditionally preferred brown bear hides for children's bedding, as the hides provided not only warmth, but also were thought to prevent illnesses. Loon and Georgette (1989) and Georgette (2001) described the widespread respect of the Iñupiat for bears and the belief that the bears must be treated appropriately. An Iñupiat man is not to openly discuss the bear hunt before or after it occurs. Traditionally, the bear's head is given to the eldest member of the community or hung on a tree or pole in camp. The Iñupiat give the bear hide to an elder or use it for bedding and clothing. It has been customary practice of some Yup'ik villagers to use bear hides for mattresses, trimming on clothing and skin for boats and to bury the bear's skull facing east at the kill site. Brown bear harvesting is a specialized pursuit that is concentrated in certain villages and certain families (Coffing 1991).

Effects of the Proposal

If Proposal WP24-01 is adopted, the sale of the hide of a brown bear legally harvested from Federal public lands under Federal regulations will be legal as long as the edible meat is salvaged for human consumption, claws are attached to the hide, and the hide is sealed by a representative of ADF&G.

However, this outcome might conflict with CITES and State regulations implementing CITES. CITES provides for the commercial trade of hides of legally harvested brown bears only if the state of export issues permits reporting that the trade will not be detrimental to the survival of the species in the wild. The State of Alaska currently issues these permits but only for the sale of the hides of brown bears legally harvested in areas with a two-brown bear harvest limit (in Units 16B, 17, 19A, 19D, 20E, 21, 22A, 22B, 22D, 22E, 23, 24B, 25D, and 26A).

It is already legal under State regulations to sell the hide of brown bears legally harvested in areas of Alaska where the harvest limit is two brown bears per year except for lands designated as National Park or Monument, which are only open to hunting under Federal subsistence regulations. Effects on nonsubsistence users are not anticipated. Effects on the resource, specifically whether, or how much, the harvest of brown bears will increase is anticipated to be minimal.

If Proposal WP24-01 is not adopted, the sale of brown bear hides will not be legal under Federal regulations but will remain legal in areas of Alaska under State regulations where the harvest limit is two brown bears per year including on most Federal public lands, except for lands designated as National Park or Monument. No effects on nonsubsistence users or the resource are anticipated.

OSM PRELIMINARY CONCLUSION

Support Proposal WP24-01 **with modification** to allow the sale of brown bear hides with claws attached in areas where the Federal harvest limit is two bears every regulatory year and after first obtaining a permit available at the time of sealing from an ADF&G sealing officer.

The modified regulation should read:

§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations

(j) Utilization of fish, wildlife, or shellfish

. . .

(13) You may sell the raw/untanned and tanned hide or cape from a legally harvested caribou, deer, elk, goat, moose, musk ox, sheep, ***and brown bear with claws attached harvested in an area with a two brown bear limit per regulatory year* in Federal regulations only after first obtaining a permit* at the time of sealing from the Alaska Department of Fish and Game.***

***Note**: Harvest limits of two brown bears per regulatory year in 2022/24 Federal regulations include all or portions of Units 22B, 22D, 23, 24B, 25D, and 26A. A "Permit to Sell a Brown/Grizzly Bear Hide and/or Skull" is available at the time of sealing from the sealing officer.

Justification

Conservation is a concern regarding brown bear populations in Alaska for several reasons including their low productivity rates, their solitary nature, difficulty obtaining population estimates, and high sport use in some areas. The OSM modification to the proposal puts limits on sales of brown bear hides. The sale of brown bear hides could only occur for brown bears shown to be legally harvested from Federal public lands under Federal regulations, and only in areas where there is a two brown bear harvest limit in Federal regulations. Currently, such areas are all or portions of Units 22B, 22D, 23, 24B, 25D, and 26A. Further, the edible meat must be salvaged (*§___.25(j)(2)(ii)*), the hide must have the claws attached (*§___.25(a)*), and the hide must be sealed by ADF&G before it can be removed from the area (*§___.26(j)*).

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) provides for the commercial trade of hides of legally harvested brown bears only if the state of export issues permits reporting that the trade will not be detrimental to the survival of the species in the wild. Therefore, a permit from ADF&G is required. The Alaska Department of Fish and Game issues this type of permit before selling the hide of a brown bear legally harvested under State regulations but only in areas with a two brown bear harvest limit (in Units 16B, 17, 19A, 19D, 20E, 21, 22A, 22B, 22D, 22E, 23, 24B, 25D, and 26A). Allowing the sale of the hide of a brown bear harvested from other areas would require negotiation with the State over the use of its permitting system.

These requirements would limit from where and how many hides would be sold by federally qualified subsistence users. Limiting legal sales to only brown bears taken from areas with two-bear harvest limits would be a protection from over harvest. Other tools exist for the Board to use if harvests were to rise above sustainable yields in an area. These tools include reducing seasons and harvest limits, placing monetary caps on sales on a region-by-region bases, and requiring permits for and reporting of customary trades.

This is a statewide proposal that will be reviewed by all 10 Regional Advisory Councils. Each Council can inform the Board whether the regulation is culturally appropriate for their region.

LITERATURE CITED

ADF&G. 1990. Determining customary and traditional uses of selected populations of goat, black bear, brown bear, mountain goat and moose in Southeast Alaska. Report to the Board of Game. Subsistence Div. Juneau, AK. 45 pages.

ADF&G. 2000. Kenai Peninsula brown bear conservation strategy. ADF&G Div. of Wildlife Conservation. Juneau, AK. 84 pages.

ADF&G. 2006a. Meeting Summary, Statewide Cycle A. January 27–30, 2006, meeting of the Alaska Board of Game in Anchorage. Juneau, AK. https://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=01-01-2007&meeting=all

ADF&G. 2006b. 2006–2007 Alaska hunting regulations governing general, subsistence, commercial uses of Alaska's wildlife. Juneau, AK. 112 pages.

ADF&G. 2015. Alaska Board of Game meeting information. http://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=01-08-2015&meeting=juneau, accessed May 19. Board Support Section, Juneau, AK.

ADF&G. 2016a. Alaska Board of Game meeting information. Statewide Regulations Cycle A&B, March 18-28, 2016. Fairbanks, AK. Meeting audio. http://www.adfg.alaska.gov/static/regulations/regprocess/gameboard/swf/2015-2016/20160318_statewide/indexlan, accessed August 23, 2017.

ADF&G. 2016b. Analysis and recommendations. Alaska Board of Game statewide regulations meeting March 18–26, 2016 in Fairbanks, AK. Juneau, AK. 10 pages.

ADF&G. 2016c. Meeting summary. Alaska Board of Game statewide regulations meeting March 18–26, 2016 in Fairbanks, AK. Juneau, AK. 10 pages.

ADF&G. 2022. Intensive management briefing. Alaska Board of Game meeting, March 4–12, 2022, in Fairbanks. Department Reports and Recommendations. Table 1.1 Intensive Management. 12 pages. https://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=03-04-2022&meeting=fairbanks, retrieved July 31, 2023.

ADF&G. 2023a. Intensive management in Alaska: Alaska's predator control programs. Juneau, AK. https://www.adfg.alaska.gov/index.cfm?adfg=intensivemanagement.programs

ADF&G. 2023b. Brown/grizzly bear hunting in Alaska: life history. http://www.adfg.alaska.gov/index.cfm?adfg=brownbearhunting.main, accessed May 3, 2023. Juneau, AK.

ADF&G. 2023c. Important information for all bear hunters: tag requirements, salvage and evidence of sex, sealing. requirements. http://www.adfg.alaska.gov/index.cfm?adfg=brownbearhunting.resources, accessed May 3, 2023.

Behnke, S. 1981. Subsistence use of brown bear in the Bristol Bay Area: a review of available information. ADF&G, Div. of Subsistence Tech. Paper No. 46. Juneau, AK.

Bethune, S. W. 2021. Brown bear management report and plan, Game Management Unit 4: Report period 1 July 2014–30 June 2019, and plan period 1 July 2019–30 June 2024. ADF&G Div. of Wildlife Conservation, Species Management Report and Plan ADF&G/DWC/SMR&P-2021-13, Juneau, AK.

Birkedal, T. 2001. Ancient hunters in the Alaskan wilderness: human predators and their role and effect on wildlife populations and the implications for resource management. pages 228-234. in W. E. Brown and S. D. Veirs, editors. 7th Conf. on Resources and Resource Man. in Parks and on Public Lands. 479 pages.

Bockstoce, J.R. 2009. Furs and frontiers in the far North: the contest among Native and foreign nations for the Bering Strait fur trade. Yale University Press. 475 pages.

Bogle, S. Wildllife biologist. Personal communication: email. ADF&G Division of Wildlife Conservation, Juneau, AK.

Coffing, M. W. 1991. Kwethluk subsistence: contemporary land use patterns, wild resource harvest and use and the subsistence economy of a lower Kuskokwim River area community. ADF&G, Div. of Subsistence Tech. Paper No. 157. Juneau, AK. 244 pages.

Courtright, A.M. 1968. Game harvests in Alaska. Federal Aid in Wildlife Restoration Report. Juneau, Ak. 70 pages.

Dufresne, F. 1965. No room for bears. Holt Rinehart and Winston, New York.

Fall, J. A. and L B. Hutchinson-Scarbrough. 1996. Subsistence uses of brown bears in communities of Game Management Unit 9E, Alaska Peninsula, Southwest Alaska. ADF&G, Div. of Subsistence Tech. Paper No. 235. Juneau, AK. 17 pages.

Fienup-Riordan, A. 2007. *Yuungnaqpiallerput*, the way we genuinely live: masterworks of Yup'ik science and survival. University of Washington Press, Seattle, WA.

Georgette, S. 2001. Brown bears on the northern Seward Peninsula, Alaska: traditional knowledge and subsistence uses in Deering and Shishmaref. ADF&G, Div. of Subsistence Tech. Paper No. 248. Juneau, AK. 48 pages.

Government of Canada. 2012. Grizzly bear (*Ursus arctos*): COSEWIC assessment and status report 2012. Ottawa, Ontario. https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status-reports/grizzly-bear-2012.html#_Toc330973003.

Government of Canada. 2014. Grizzly bear: non-detriment finding. Ottawa, Ontario. https://www.canada.ca/en/environment-climate-change/services/convention-international-trade-endangered-species/non-detriment-findings/gizzly-bear.html

Harper, P. and L.A. McCarthy, editors. 2015. Brown bear management report of survey-inventory activities 1 July 2012–30 June 2014. ADF&G Div. of Wildlife Conservation, Species Management Report ADF&G/DWC/SMR-2015-1, Juneau, AK.

Hatcher, H. L. 2023. Brown bear management report and plan, Game Management Unit 13: Report period 1 July 2014–30 June 2019, and plan period 1 July 2019–30 June 2024. ADF&G Div. of Wildlife Conservation, Species Management Report and Plan ADF&G/DWC/SMR&P-2023-8, Juneau, AK.

Holzworth, J.M. 1930. The wild grizzlies of Alaska. G.P. Putnam's Sons, New York.

Lenart, E. A. 2021. Brown bear management report and plan, Game Management Units 25A, 25B, 25D, 26B, and 26C: Report period 1 July 2014–30 June 2019, and plan period 1 July 2019–30 June 2024. ADF&G Div. of Wildlife Conservation, Species Management Report and Plan ADF&G/DWC/SMR&P-2021-17, Juneau, AK.

Loon, H. and S. Georgette. 1989. Contemporary brown bear use in Northwest Alaska. ADF&G, Div. of Subsistence Tech. Paper No. 163. Juneau, AK. 58 pages.

Miller, S.D. 1993. Brown bears in Alaska: a statewide management overview. Wildlife Technical Bulletin No. 11. ADF&G, Div. of Wildlife Conservation. Juneau, AK. 40 pages.

Miller, S.D. and J. W. Schoen. 1999. Status of management of the brown bear in Alaska. Pages 40-46. *in* C. Servheen, S. Herroro, and B. Peyton, editors. Bears-Status survey and conservation action plan. IUCN/SSC Bear and Polar Bear Specialist Group, IUCN, Gland, Switzerland and Cambridge, UK. 309 pages.

Nelson, R. K. 1983. Making prayers to the raven: a Koyukon view of the northern forest. Univ. of Chicago Press, Chicago, IL. 292 pages.

OSM. 2002. Staff analysis WP02-01. Pages 1–24 *in* Federal Subsistence Board Meeting Materials. May 13–15, 2002, in Anchorage. Office of Subsistence Management, USFWS. Anchorage, AK.

OSM. 2004. Staff analysis Proposal WP04-01. Pages 15–20 *in* Federal Subsistence Board Meeting Materials. May 18–24 in Anchorage. Office of Subsistence Management, USFWS. Anchorage, AK.

OSM. 2010. Minutes of the Brown Bear Claw Handicraft Working Group meeting on July 29, 2010. Unpublished document. Meeting held at USFWS Regional Office in Anchorage, AK.

OSM. 2018. Enclosure, 805(c) letter to the Chair of the Northwest Arctic Subsistence Regional Advisory Council from the Chair of the Federal Subsistence Board. On file, USFWS, Anchorage, AK.

OSM 2023. Federal Subsistence Permit System. Online database, accessed May 2, 2023. USFWS, Anchorage, AK.

Paragi, T. 2023. Wildlife biologist. Personal communication: by email. Alaska Department of Fish and Game, Division of Wildlife Conservation, Fairbanks, AK.

Reynolds, H.V. 1987. Populations dynamics of a hunted grizzly bear population in the northcentral Alaska Range. ADF&G Div. of Wildlife Conservation. Juneau, AK.

Reynolds, H. 2001. Wildlife Biologist. Personal communication: email. ADF&G Div. of Wildlife Conservation, Fairbanks, AK.

Robison, H.L. 2017. Wildlife Biologist. Personal communication: e-mail. Western Arctic National Parklands, National Park Service. Kotzebue, AK.

Servheen C. 1999. The trade in bear and bear parts. Pages 33-46 *in* C. Servheen, S. Herroro, and B. Peyton, editors. Bears status survey and conservation action plan. IUCN/SSC Bear and Polar Bear Specialist Group, IUCN, Gland, Switzerland and Cambridge, UK. 309 pages.

Sherwonit, B. 1998. Alaska bears: grizzlies, black bears, and polar bears. Alaska Northwest Books, Portland, OR. 108 pages.

Sherwood, M. 1979. Specious speciation in the political history of the Alaska brown bear. Pages 49–60 *in* Western Historical Quarterly 10 (January).

State of Alaska. 1961. Alaska Game Regulations, No. 2. ADF&G, Juneau, AK. 33 pages.

Suring, L. and G. Del Frate. 2002. Spatial analysis of locations of brown bears killed in defense of life or property on the Kenai Peninsula, Alaska. Ursus, 13.

Thornton, T. G. 1992. Subsistence use of brown bear in Southeast Alaska. ADF&G Div. of Subsistence Tech. Paper No. 214. Juneau, AK. 95 pages.

USFWS. 2023. ECOS Environmental Conservation Online System. Grizzly bear. https://ecos.fws.gov/ecp/species/7642

Weber, N. 2023. Regulations Program Coordinator. Personal communication: email. ADF&G Division of Wildlife Conservation. Juneau, AK.

Appendix

Relevant Federal Regulations

§___.4 Definitions

The following definitions apply to all regulations contained in this part:

. . .

Customary trade *means exchange for cash of fish and wildlife resources regulated in this part, not otherwise prohibited by Federal law or regulation, to support personal and family needs; and does not include trade which constitutes a significant commercial enterprise.*

. . .

Subsistence *means the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade.*

§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations

(a) Definitions

. . .

Bear *means black bear, or brown or grizzly bear*

. . .

Big game *means black bear, brown bear, bison, caribou, Sitka black-tailed deer, elk, mountain goat, moose, musk ox, Dall sheep, wolf, and wolverine.*

. . .

Edible meat *means . . For black bear, brown and grizzly bear, "edible meat" means the meat of the front quarter and hindquarters and meat along the backbone (backstrap).*

. . .

Handicraft *means a finished product made by a rural Alaskan resident from the nonedible byproducts of fish or wildlife and is composed wholly or in some significant respect of natural materials. The shape and appearance of the natural material must be substantially changed by the skillful use of hands, such as sewing, weaving, drilling, lacing, beading, carving, etching, scrimshawing, painting, or other means, and incorporated into a work of art, regalia, clothing, or other creative expression, and can be either traditional or contemporary in design. The handicraft must have substantially greater monetary and aesthetic value than the unaltered natural material alone.*

. . .

Sealing *means placing a mark or tag on a portion of a harvested animal by an authorized representative of the ADF&G; sealing includes collecting and recording information about the conditions under which the animal was harvested, and measurements of the specimen submitted for sealing, or surrendering a specific portion of the animal for biological information.*

. . .

Skin, hide, pelt, or fur *means any tanned or untanned external covering of an animal's body. However, for bear, the skin, hide, pelt, or fur means the external covering with claws attached.*

. . .

Trophy means *a mount of a big game animal, including the skin of the head (cape) or the entire skin, in a lifelike representation of the animal, including a lifelike representation made from any part of a big game animal; "trophy" also includes a "European mount" in which the horns or antlers and the skull or a portion of the skull are mounted for display*

. . .

(j) Utilization of fish, wildlife, or shellfish.

. . .

(2) If you take wildlife for subsistence, you must salvage the following parts for human use:

. . .

(ii) The hide and edible meat of a brown bear, except that the hide of brown bears taken in Units 5, 9B, 17, 18, portions of 19A and 19B, 21D, 22, 23, 24, and 26A need not be salvaged;

. . .

(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26.

(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.

(ii) Prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide must be sealed by an authorized Alaska Department of Fish and Game representative. Old claws may be sealed if an affidavit is signed indicating that the claws came from a brown bear harvested on Federal public lands by a Federally qualified user. A copy of the Alaska Department of Fish and Game sealing certificate must accompany the handicraft when sold.

. . .

(13) You may sell the raw/untanned and tanned hide or cape from a legally harvested caribou, deer, elk, goat, moose, musk ox, and sheep.

§___.27 Subsistence taking of fish.

. . .

(b) Methods, means, and general restrictions.

. . .

(11) Transactions between rural residents. Rural residents may exchange in customary trade subsistence-harvested fish, their parts, or their eggs, legally taken under the regulations in this part, for cash from other rural residents. The Board may recognize regional differences and regulates customary trade differently for separate regions of the State.

(i) Bristol Bay Fishery Management Area—The total cash value per household of salmon taken within Federal jurisdiction in the Bristol Bay Fishery Management Area and exchanged in customary trade to rural residents may not exceed $500.00 annually.

(ii) Upper Copper River District—The total number of salmon per household taken within the Upper Copper River District and exchanged in customary trade to rural residents may not exceed 50 percent of the annual harvest of salmon by the household. No more than 50 percent of the annual household limit may be sold under paragraphs (b)(11) and (12) of this section when taken together. These customary trade sales must be immediately recorded on a customary trade recordkeeping form. The recording requirement and the responsibility to ensure the household limit is not exceeded rests with the seller.

(iii) Customary trade of Yukon River Chinook salmon may only occur between Federally qualified rural residents with a current customary and traditional use determination for Yukon River Chinook salmon.

(12) Transactions between a rural resident and others. In customary trade, a rural resident may exchange fish, their parts, or their eggs, legally taken under the regulations in this part, for cash from individuals other than rural residents if the individual who purchases the fish, their parts, or their eggs uses them for personal or family consumption. If you are not a rural resident, you may not sell fish, their parts, or their eggs taken under the regulations in this part. The Board may recognize regional differences and regulates customary trade differently for separate regions of the State.

(i) Bristol Bay Fishery Management Area—The total cash value per household of salmon taken within Federal jurisdiction in the Bristol Bay Fishery Management Area and exchanged in customary trade between rural residents and individuals other than rural residents may not exceed $400.00 annually. These customary trade sales must be

immediately recorded on a customary trade recordkeeping form. The recording requirement and the responsibility to ensure the household limit is not exceeded rest with the seller.

(ii) Upper Copper River District—The total cash value of salmon per household taken within the Upper Copper River District and exchanged in customary trade between rural residents and individuals other than rural residents may not exceed $500.00 annually. No more than 50 percent of the annual household limit may be sold under paragraphs (b)(11) and (12) of this section when taken together. These customary trade sales must be immediately recorded on a customary trade recordkeeping form. The recording requirement and the responsibility to ensure the household limit is not exceeded rest with the seller.

(iii) Customary trade of Yukon River Chinook salmon may only occur between Federally qualified rural residents with a current customary and traditional use determination for Yukon River Chinook salmon.

WP24-07 Executive Summary	
General Description	Proposal WP24-07 requests clarification of Federal trapping regulations that exempt Federally qualified subsistence users from Municipality of Anchorage trapping closures on Federal public lands in Units 7 and 14C. *Submitted by: Tom Lessard of Cooper Landing*
Proposed Regulation	*§100.26(n)(7)(iii)(**B**) & §100.26(n)(14)(iii)(**A**)* ***Federally qualified subsistence users trapping under these regulations are exempt from Municipality of Anchorage Ordinance AO 2019-050(S) while on Federal public lands which are open to trapping***.
OSM Preliminary Conclusion	**Oppose** Proposal WP24-07.
Southeast Alaska Subsistence Regional Advisory Council Recommendation	
Southcentral Alaska Subsistence Regional Advisory Council Recommendation	
Kodiak/Aleutians Subsistence Regional Advisory Council Recommendation	
Bristol Bay Subsistence Regional Advisory Council Recommendation	
Yukon-Kuskokwim Delta Subsistence Regional	

WP24-07 Executive Summary	
Advisory Council Recommendation	
Western Interior Alaska Subsistence Regional Advisory Council Recommendation	
Seward Peninsula Subsistence Regional Advisory Council Recommendation	
Northwest Arctic Subsistence Regional Advisory Council Recommendation	
Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation	
North Slope Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	None

DRAFT STAFF ANALYSIS
WP24-07

ISSUES

Wildlife Proposal WP24-07, submitted by Tom Lessard of Cooper Landing, requests clarification of Federal trapping regulations that exempt Federally qualified subsistence users from Municipality of Anchorage trapping closures on Federal public lands in Units 7 and 14C.

DISCUSSION

The proponent states that Municipality of Anchorage Ordinance Number 2019-50(S) prohibits otherwise legal Federal subsistence trapping on Federal public lands within the Municipality of Anchorage in the Turnagain Arm and Portage Valley areas. The Anchorage Assembly created "Prohibited Trapping Zones" for safe trails within 50 yards of developed trails, excluding off-shoots; and within one-quarter mile of established trailheads, campgrounds, and permanent dwellings on Municipality of Anchorage managed lands. The proponent states that the Municipal ordinance prohibits trapping, punishable by fines, on approximately 20 square miles within Portage Valley, which is mostly Federal public land.

Existing Federal Regulation

None

Proposed Federal Regulation

*§100.26(n)(7)(iii)(**B**) & §100.26(n)(14)(iii)(**A**)*

Federally qualified subsistence users trapping under these regulations are exempt from Municipality of Anchorage Ordinance AO 2019-050(S) while on Federal public lands which are open to trapping.

Existing State Regulation

5 AAC 92.510 Areas Closed to Trapping

(3) Unit 14(C) (Anchorage Area):

(A) the drainages into Eklutna River and Eklutna Lake, within Chugach State Park except Thunderbird Creek and those drainages flowing into the East Fork of the Eklutna River upstream from the bridge above the lake;

(B) the Eagle River Management Area;

(C) that portion of Chugach State Park outside of the Eagle River, Anchorage, and Eklutna management areas is open to trapping under Unit 14(C) seasons and bag limits, except that trapping of wolf, wolverine, land otter, and beaver is not allowed; killer style steel traps with an inside jaw spread seven inches or greater are prohibited; a person using traps or snares in the area must register with the Department of Natural Resources Chugach State Park area office and provide a trapper identification; all traps and snares in the area must be marked with the selected identification; the use of traps or snares is prohibited within

(i) 50 yards of developed trails;

(ii) one-quarter mile of trailheads, campground, and permanent dwellings;

(iii) repealed 7/1/2009;

(D) all land and water within the Anchorage Management Area as described in 5 AAC 92.530(3);

(E) in the Anchorage Coastal Wildlife Refuge in Unit 14(C), described in AS 16.20.031: all land and water south and west of and adjacent to the toe of the bluff that extends from Point Woronzof southeasterly to Potter Creek;

(F) the Joint Base Elmendorf-Richardson (JBER) Management Area, except for beaver, muskrat, mink, weasel, marten, otter, fox, and coyote in areas designated by the commander;

Extent of Federal Public Lands/Waters

Unit 7 is comprised of 77% Federal public lands and consists of 52% U.S. Forest Service (USFS) managed lands, 23% National Park Service (NPS) managed lands, and 2% U.S. Fish and Wildlife Service (USFWS) managed lands.

Unit 14C is comprised of 16% Federal public lands and consists of 11% USFS managed lands and 5% Bureau of Land Management (BLM) managed lands.

Customary and Traditional Use Determinations

The Federal Subsistence Board (Board) has not made a customary and traditional use determination for furbearers in Units 7 and 14C. Therefore, all rural residents of Alaska may harvest furbearers in these units.

Regulatory History

In 2014, the Board rejected Proposal WP14-01, which requested Federal regulations requiring trapper identification tags on all traps and snares, the establishment of a maximum allowable time limit for checking traps, and establishment of a harvest/trapping report form to collect data on non-target species captured. The proposal analysis indicated statewide application would be unmanageable, would require substantial law enforcement and public education efforts, and could cause subsistence users to avoid the regulation by trapping under State regulations. The proposal was unanimously opposed by all ten Federal Subsistence Regional Advisory Councils, Alaska Department of Fish and Game (ADF&G), and the public as reflected in written public comments.

In 2015, the Alaska Board of Game (BOG) considered Proposal 180, to prohibit trapping within 250 feet of most public roads and trails in the Cooper Landing Area. They opposed the proposal, stating trappers and local residents need to work together to find a solution or compromise upon which all users can agree. BOG members also noted concerns about the enforceability of the proposal and loss of trapping opportunity by requiring trappers to travel 250 feet off trail and back to set and check traps (ADF&G 2015).

In 2016, the BOG considered Proposal 80, to restrict trapping in and around cities with populations over 1,000 people. Specifically, trapping within one-quarter mile of publicly maintained roads, 200 feet of publicly maintained trails, and one mile of permanent dwellings, schools, businesses, and campgrounds would be prohibited. ADF&G stated that proposals restricting trapping should be addressed at regional rather than statewide BOG meetings, so affected local communities can comment. ADF&G also referred to State regulations that limit trapping in management areas. The BOG opposed the proposal due to opposition by 26 Fish and Game Advisory Committees and concern for unintended consequences. The BOG also commented that these types of restrictions could be better handled through city or borough ordinances (ADF&G 2016).

In 2019, the Anchorage assembly passed Municipal ordinance AL No. 2019-50(S), which made it illegal to trap within a prohibited trapping zone. This ordinance established prohibited trapping zones within the Municipality of Anchorage boundaries on public lands owned by the municipality and any land within 50 yards of developed trails and one-quarter mile of trailheads, campgrounds, and permanent dwellings. It also required anyone trapping within the municipal boundary to mark each trap with trapper identification number or contact information of trapper. The Anchorage assembly passed this ordinance for the safety of trail users and pets in Anchorage (MOA 2019).

In 2020, Proposal WP20-20, submitted by Robert Gieringer, requested that hunting and trapping in Unit 7 be prohibited within one mile of roads and trails and that traps be marked with brightly colored tape. This proposal was on the consensus agenda but was removed at the Board meeting by request from a member of the public. The Board rejected the proposal. The Board stated Federal regulations would be more restrictive than State regulations, violating the rural subsistence priority mandated by the Alaska National Interest Land Conservation Act (ANILCA). Furthermore, all users would still be able to hunt and trap without restrictions under State regulations, decreasing the proposal's

effectiveness and increasing user confusion. The Board also stated marking traps with brightly colored tape could result in attracting more people to the trap and possibly pets (FSB 2020).

In March 2022, the BOG considered deferred Proposal 199 at their 2022 Statewide Regulations meeting. Proposal 199 requested 50-yard setbacks along certain multi-use trails and trailheads in Units 13, 14, and 16. This proposal was deferred from the January 2022 BOG meeting so a workshop could be held to reach a compromise on the proposal. The BOG attempted to modify the proposal several times with different amendments, including language created from the workshop. All versions of this proposal were rejected.

In April 2022, the Board considered Proposal WP22-15, submitted by the Cooper Landing Community Safe Trails Committee, requesting setbacks of 1,000 feet on both sides of certain trails; 1,000-foot setbacks on certain roads; and trapping moratoriums in campgrounds plus 1,000-foot setbacks around certain campgrounds. The Southcentral Alaska Subsistence Regional Advisory Council, ADF&G, Interagency Staff Committee and Office of Subsistence Management were all in opposition to this proposal due to potential of lost subsistence opportunity and regulatory confusion. While this proposal received 25 written public comments in support of the action, the Board rejected this proposal on the consensus agenda.

In March 2023, at the Southcentral Region BOG meeting in Soldotna, the BOG considered numerous trap setback proposals. Proposals 145–153 included trap setbacks at various locations throughout Units 7 and 15. While most of these proposals did not pass, three were adopted by the BOG. Amended Proposal 145 made it illegal to hunt and trap within one-quarter mile of wildlife crossings along the Sterling Highway. Amended Proposals 146 and 149 established trap setbacks along certain trails within Kachemak Bay State Park and along the perimeter of campgrounds in Unit 7, respectively. Setback distance was set at 50 yards unless the trap was elevated at least 3 feet above the ground, under water, under ice, or enclosed.

Effects of the Proposal

If this proposal is adopted, clarification would be provided in codified Federal regulations that federally qualified subsistence users trapping under Federal regulations on Federal public lands in Units 7 and 14C are exempt from the trapping closures established by the Municipality of Anchorage Ordinance AO 2019-050(S). Functionally, this would have no effect on subsistence users or wildlife populations as State and municipal regulations do not apply to federally qualified subsistence users taking fish or wildlife on Federal public lands under Federal regulations. However, adoption of this proposal could reduce user confusion by explicitly clarifying this exemption.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP24-07.

Justification

OSM opposes this proposal because the ordinance passed by the Anchorage assembly does not apply to Federal public lands. Therefore, federally qualified subsistence users trapping under Federal regulations are currently exempt from this ordinance.

LITERATURE CITED

ADF&G. 2015. Meeting audio. Alaska Board of Game Southcentral Region meeting, March 13-18, 2015. Alaska Department of Fish and Game. Alaska Board of Game meeting information. http://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=03-13-2015&meeting=anchorage. Accessed June 2, 2021.

ADF&G. 2016. Meeting audio. Alaska Board of Game Statewide Regulations, Cycles A&B meeting, March 18-28, 2016. Alaska Department of Fish and Game. Alaska Board of Game meeting information. http://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=03-18-2016&meeting=fairbanks. Accessed June 2, 2021.

FSB. 2020. Transcripts of Federal Subsistence Board proceedings. April 21, 2020. Office of Subsistence Management, USFWS. Anchorage, AK.

Municipality of Anchorage. 2019. Assembly Agenda. Regular Meeting, May 07, 2019. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://meetings.muni.org/AgendaOnline/Documents/ViewDocument/Assembly_-_Regular_822_Agenda_Packet_5_7_2019_5_00_00_PM.pdf?meetingId=822&documentType=AgendaPacket&itemId=0&publishId=0&isSection=false. 480 pp. Retrieved May 18, 2023.

ANNUAL REPORTS

Background

ANILCA established the Annual Reports as the way to bring regional subsistence uses and needs to the Secretaries' attention. The Secretaries delegated this responsibility to the Board. Section 805(c) deference includes matters brought forward in the Annual Report.

The Annual Report provides the Councils an opportunity to address the directors of each of the four Department of Interior agencies and the Department of Agriculture Forest Service in their capacity as members of the Federal Subsistence Board. The Board is required to discuss and reply to each issue in every Annual Report and to take action when within the Board's authority. In many cases, if the issue is outside of the Board's authority, the Board will provide information to the Council on how to contact personnel at the correct agency. As agency directors, the Board members have authority to implement most of the actions which would effect the changes recommended by the Councils, even those not covered in Section 805(c). The Councils are strongly encouraged to take advantage of this opportunity.

Report Content

Both Title VIII Section 805 and 50 CFR §100.11 (Subpart B of the regulations) describe what may be contained in an Annual Report from the councils to the Board. This description includes issues that are not generally addressed by the normal regulatory process:

- an identification of current and anticipated subsistence uses of fish and wildlife populations within the region;
- an evaluation of current and anticipated subsistence needs for fish and wildlife populations from the public lands within the region;
- a recommended strategy for the management of fish and wildlife populations within the region to accommodate such subsistence uses and needs related to the public lands; and
- recommendations concerning policies, standards, guidelines, and regulations to implement the strategy.

Please avoid filler or fluff language that does not specifically raise an issue of concern or information to the Board.

Report Clarity

In order for the Board to adequately respond to each Council's annual report, it is important for the annual report itself to state issues clearly.

- If addressing an existing Board policy, Councils should please state whether there is something unclear about the policy, if there is uncertainty about the reason for the policy, or if the Council needs information on how the policy is applied.
- Council members should discuss in detail at Council meetings the issues for the annual report and assist the Council Coordinator in understanding and stating the issues clearly.

- Council Coordinators and OSM staff should assist the Council members during the meeting in ensuring that the issue is stated clearly.

Thus, if the Councils can be clear about their issues of concern and ensure that the Council Coordinator is relaying them sufficiently, then the Board and OSM staff will endeavor to provide as concise and responsive of a reply as is possible.

Report Format

While no particular format is necessary for the Annual Reports, the report must clearly state the following for each item the Council wants the Board to address:

1. Numbering of the issues,
2. A description of each issue,
3. Whether the Council seeks Board action on the matter and, if so, what action the Council recommends, and
4. As much evidence or explanation as necessary to support the Council's request or statements relating to the item of interest.

FISHERIES RESOURCE MONITORING PROGRAM

INTRODUCTION

The Fisheries Resource Monitoring Program (Monitoring Program) is a collaborative, interagency, interdisciplinary approach to enhance fisheries research and data in Alaska and effectively communicate information needed for subsistence fisheries management on Federal public lands and waters. In 1999, the Federal government assumed responsibility for management of subsistence fisheries on Federal public lands and waters in Alaska. Section 812 of the Alaska National Interest Lands Conservation Act (ANILCA) directs the Departments of the Interior and Agriculture to research fish and wildlife subsistence uses on Federal public lands and waters and to seek data from, consult with, and incorporate knowledge of rural residents engaged in subsistence. The Secretaries of the Interior and Agriculture are committed to increasing the quantity and quality of information available to manage subsistence fisheries; meaningful involvement by federally-recognized tribes and Alaska Native and rural organizations; and, collaboration among Federal, State, Alaska Native, and rural organizations.

Every two years, the Office of Subsistence Management announces a notice of funding opportunity for investigation plans addressing subsistence fisheries on Federal public lands. The Monitoring Program is administered through regions to align with stock, harvest, and community issues common to a geographic area. There are six distinct Monitoring Program regions (**Figure 1**) as well as a multi-region category for projects that encompass more than one region.

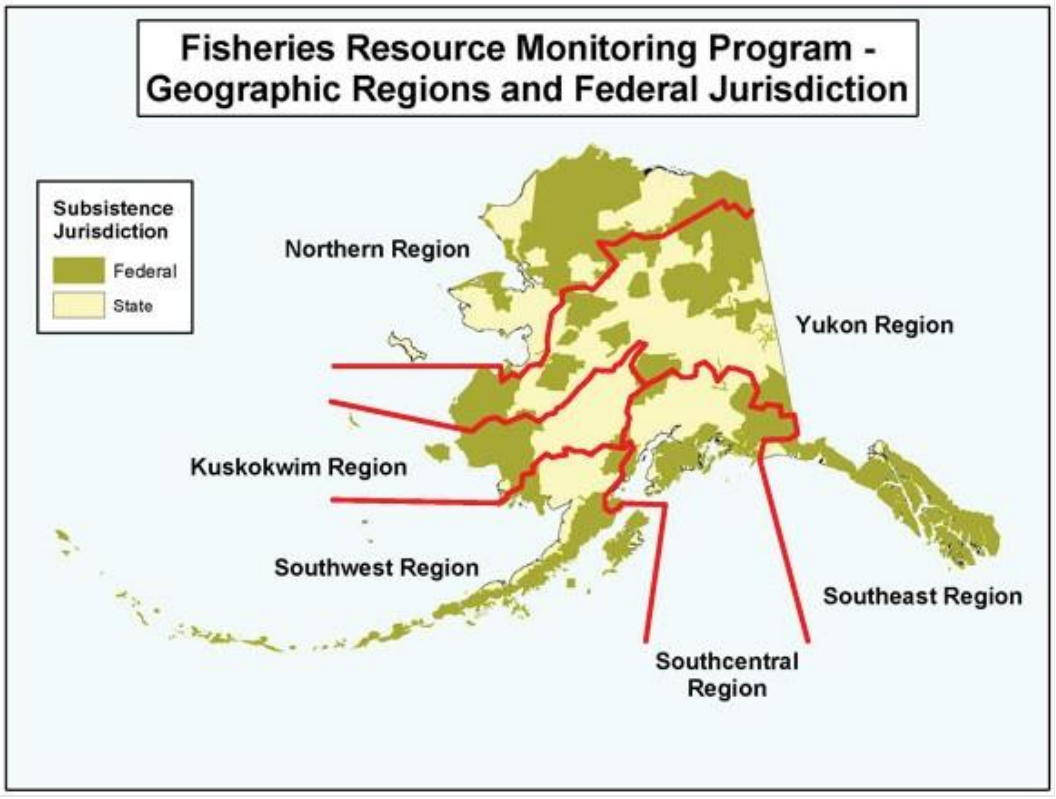


Figure 1. Geographic regions of the Fisheries Resource Monitoring Program in Alaska.

During each two-year funding cycle, the Monitoring Program funds ongoing projects from the previous cycle (projects may be 1–4 years in duration) as well as new projects. Funding allocation guidelines are established by geographic region (**Table 1**). The regional guidelines were developed using six criteria that included level of risk to species, level of threat to conservation units, amount of subsistence needs not being met, amount of information available to support subsistence management, importance of a species to subsistence harvest, and level of user concerns regarding subsistence harvest. Funding allocation guidelines provide an initial target for planning; however, they are not final and are adjusted annually as needed.

Table 1. Regional allocation guideline for Fisheries Resource Monitoring Program Funds.

Region	U.S. Department of the Interior Funds	U.S. Department of Agriculture Funds
Northern Alaska	17%	0%
Yukon Drainage	29%	0%
Kuskokwim Drainage	29%	0%
Southwest Alaska	15%	0%
Southcentral Alaska	5%	33%
Southeast Alaska	0%	67%
Multi-Regional	5%	0%

The Monitoring Program was first implemented in 2000 with an initial allocation of $5 million. Since 2000, a total of $139.9 million has been allocated for the Monitoring Program to fund a total of 524 projects (**Figure 2** and **Figure 3**).

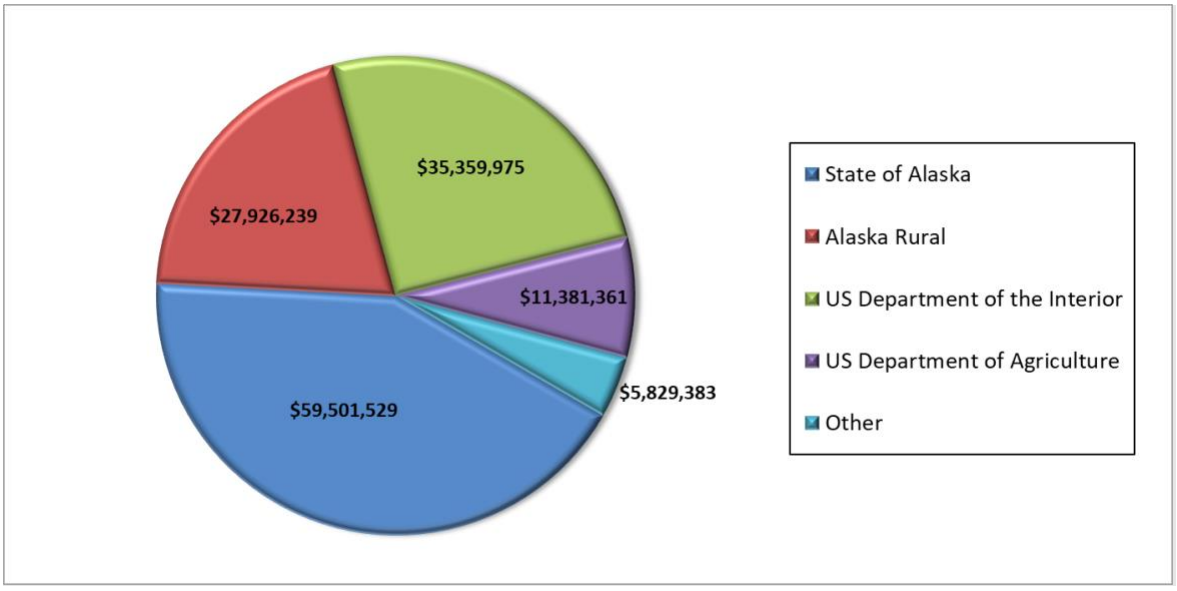


Figure 2. Monitoring Program fund distribution since 2000, identified by primary recipient organization type.

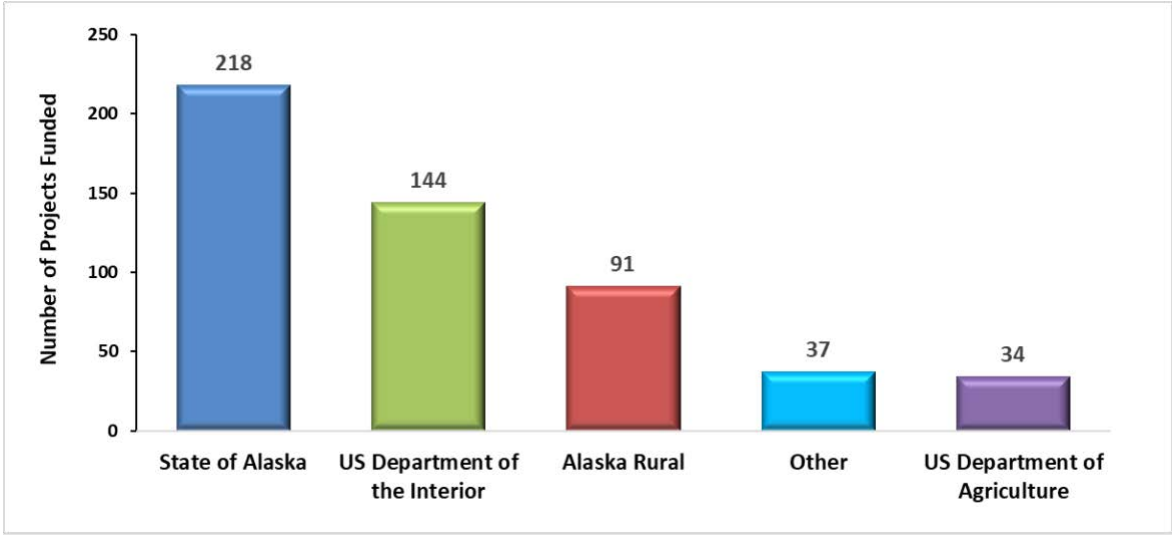


Figure 3. Number of Monitoring Program projects funded since 2000, listed by primary recipient organization type.

The three broad categories of information solicited by the Monitoring Program are (1) harvest monitoring, (2) traditional ecological knowledge, and (3) stock status and trends. Projects that combine these approaches are encouraged.

Harvest monitoring studies provide information on numbers and species of fish harvested, locations of harvests, and gear types used. Methods used to gather information on subsistence harvest patterns may include harvest calendars, mail-in questionnaires, household interviews, subsistence permit reports, and telephone interviews.

Traditional ecological knowledge studies are investigations of local knowledge directed at collecting and analyzing information on a variety of topics such as the sociocultural aspects of subsistence, fish ecology, species identification, local names, life history, taxonomy, seasonal movements, harvests, spawning and rearing areas, population trends, environmental observations, and traditional management systems. Methods used to document traditional ecological knowledge include ethnographic fieldwork, key respondent interviews with local experts, place name mapping, and open-ended surveys.

Stock status and trends studies provide information on abundance and run timing, age-sex-length composition, migration and geographic distribution, survival of juveniles or adults, stock production, genetic stock identification, and mixed stock analyses. Methods used to gather information on stock status and trends include aerial and ground surveys, test fishing, towers, weirs, sonar, video, genetics, mark-recapture, and telemetry.

PROJECT EVALUATION PROCESS

The Monitoring Program prioritizes high quality projects that address critical subsistence and conservation concerns. Projects are selected for funding through an evaluation and review process that is designed to advance projects that are strategically important for the Federal Subsistence Management Program, technically sound, administratively competent, promote partnerships and capacity building, and

are cost effective. Proposed projects are first evaluated by a panel called the Technical Review Committee. The Technical Review Committee's function is to provide evaluation, technical oversight, and strategic direction to the Monitoring Program. This committee is a standing interagency committee of senior technical experts that reviews, evaluates, and makes recommendations about proposed projects that are consistent with the mission of the Monitoring Program. Recommendations from the Technical Review Committee provide the basis for further comments from Subsistence Regional Advisory Councils, the public, the Interagency Staff Committee, and the Federal Subsistence Board, with final approval of the Monitoring Plan by the Assistant Regional Director of the Office of Subsistence Management.

To be considered for funding under the Monitoring Program, a proposed project must have a nexus to Federal subsistence fishery management. Proposed projects must have a direct association to a Federal subsistence fishery, and the subsistence fishery or fish stocks in question must occur in or pass-through waters within or adjacent to Federal public lands in Alaska (National Wildlife Refuges, National Forests, National Parks and Preserves, National Conservation Areas, National Wild and Scenic River Systems, National Petroleum Reserves, and National Recreation Areas). A complete project package must be submitted on time and must address the following five specific criteria.

1. ***Strategic Priorities***—Studies should be responsive to information needs identified in the 2024 Priority Information Needs available at the Monitoring Program webpage at https://www.doi.gov/subsistence/frmp/funding. All projects must have a direct linkage to Federal public lands and/or waters to be eligible for funding under the Monitoring Program. Projects should address the following topics to demonstrate links to strategic priorities:

    - Federal jurisdiction—The extent of Federal public waters in or nearby the project area
    - Direct subsistence fisheries management implications
    - Conservation mandate—Threat or risk to conservation of species and populations that support subsistence fisheries
    - Potential impacts on the subsistence priority—Risk that subsistence harvest users' goals will not be met
    - Data gaps—Amount of information available to support subsistence management and how a project answers specific questions related to these gaps
    - Role of the resource—Contribution of a species to a subsistence harvest (number of villages affected, pounds of fish harvested, miles of river) and qualitative significance (cultural value, unique seasonal role)
    - Local concern—Level of user concerns over subsistence harvests (upstream vs. downstream allocation, effects of recreational use, changes in fish abundance and population characteristics)

    To assist in evaluation of submittals for projects previously funded under the Monitoring Program, investigators must summarize project findings in their investigation plans. This

summary should clearly and concisely document project performance, key findings, and uses of collected information for Federal subsistence management. It should also justify the continuation of the project, placing the proposed work in context with the ongoing work being accomplished.

2. ***Technical-Scientific Merit***—Technical quality of the study design must meet accepted standards for information collection, compilation, analysis, and reporting. To demonstrate technical and scientific merit, applicants should describe how projects will:

    - Advance science
    - Answer immediate subsistence management or conservation concerns
    - Have rigorous sampling and/or research designs
    - Have specific, measurable, realistic, clearly stated, and achievable (attainable within the proposed project period) objectives
    - Incorporate traditional knowledge and methods

    Data collection, compilation, analysis, and reporting procedures should be clearly stated. Analytical procedures should be understandable to the non-scientific community.

3. ***Investigator Ability and Resources***—Investigators must show they are capable of successfully completing the proposed project by providing information on the ability (training, education, experience, and letters of support) and resources (technical and administrative) they possess to conduct the work. Investigators that have received funding in the past, via the Monitoring Program or other sources, are evaluated and scored on their past performance, including fulfillment of meeting deliverable and financial accountability deadlines. A record of failure to submit reports or delinquent submittal of reports will be considered when rating investigator ability and resources.

4. ***Partnership and Capacity Building***—Investigators must demonstrate that capacity building has already reached the communication or partnership development stage during proposal development and, ideally, include a strategy to develop capacity building to higher levels, recognizing, however, that in some situations higher level involvement may not be desired or feasible by local organizations.

    Investigators are requested to include a strategy for integrating local capacity development in their study plans or research designs. Investigators should inform communities and regional organizations in the area where work is to be conducted about their project plans. They should also consult and communicate with local communities to ensure that local knowledge is used and concerns are addressed. Investigators and their organizations should demonstrate their ability to maintain effective local relationships and commitment to capacity building. This includes a plan to facilitate and develop partnerships so that investigators, communities, and regional organizations can pursue and achieve the most meaningful level of involvement. Proposals

demonstrating multiple, highly collaborative efforts with rural community members or Alaska Native Organizations are encouraged.

Successful capacity building requires developing trust and dialogue among investigators, local communities, and regional organizations. Investigators need to be flexible in modifying their work plan in response to local knowledge, issues, and concerns, and must also understand that capacity building is a reciprocal process in which all participants share and gain valuable knowledge. The reciprocal nature of the capacity building component(s) should be clearly demonstrated in proposals. Investigators are encouraged to develop the highest level of community and regional collaboration that is practical including joining as co-investigators.

Capacity can be built by increasing the technical capabilities of rural communities and Alaska Native organizations. This can be accomplished via several methods, including increased technical experience for individuals and the acquisition of necessary gear and equipment. Increased technical experience would include all areas of project management including logistics, financial accountability, implementation, and administration. Other examples may include internships or providing opportunities within the project for outreach, modeling, sampling design, or project specific training. Another would be the acquisition of equipment that could be transferred to rural communities and tribal organizations upon the conclusion of the project.

A "meaningful partner" is a partner that is actively engaged in one or more aspects of project design, logistics, implementation, and reporting requirements. Someone who simply agrees with the concept or provides a cursory look at the proposal is not a meaningful partner.

5. ***Cost/Benefit—***This criterion evaluates the reasonableness (what a prudent person would pay) of the funding requested to provide benefits to the Federal Subsistence Management Program. Benefits could be tangible or intangible. Examples of tangible outcomes include data sets that directly inform management decisions or fill knowledge gaps and opportunities for youth or local resident involvement in monitoring, research, and/or resource management efforts. Examples of possible intangible goals and objectives include enhanced relationships and communications between managers and communities, partnerships and collaborations on critical resource issues, and potential for increased capacity within both communities and agencies.

   Applicants should be aware that the Government shall perform a "best value analysis" and the selection for award shall be made to the applicant whose proposal is most advantageous to the Government. The Office of Subsistence Management strives to maximize program efficiency by encouraging cost sharing, partnerships, and collaboration.

POLICY AND FUNDING GUIDELINES

Several policies have been developed to aid in implementing funding. These policies include:

- Projects of up to four years in duration may be considered

- Proposals requesting Monitoring Program funding that exceeds $235,000 in any one year are not eligible for funding
- Studies must not duplicate existing projects
- Long term projects will be considered on a case-by-case basis

Activities that are not eligible for funding include:

- Habitat protection, mitigation, restoration, and enhancement
- Hatchery propagation, restoration, enhancement, and supplementation
- Contaminant assessment, evaluation, and monitoring
- Projects where the primary or only objective is outreach and education (for example, science camps, technician training, and intern programs), rather than information collection

The rationale behind these policy and funding guidelines is to ensure that existing responsibilities and efforts by government agencies are not duplicated under the Monitoring Program. Land management or regulatory agencies already have direct responsibility, as well as specific programs, to address these activities. However, the Monitoring Program may fund research to determine how these activities affect Federal subsistence fisheries or fishery resources.

The Monitoring Program may fund assessments of key Federal subsistence fishery stocks in decline or that may decline due to climatological, environmental, habitat displacement, or other drivers; however, applicants must show how this knowledge would contribute to Federal subsistence fisheries management. Similarly, the Monitoring Program may legitimately fund projects that assess whether migratory barriers (e.g., falls, beaver dams) significantly affect spawning success or distribution; however, it would be inappropriate to fund projects to build fish passes, remove beaver dams, or otherwise alter or enhance habitat.

2024 NOTICE OF FUNDING OPPORTUNITY

The 2024 Notice of Funding Opportunity focused on priority information needs developed by the Subsistence Regional Advisory Councils with input from subject matter specialists. Investigation plans were due in February 2023. Submitted plans were reviewed and evaluated by the Office of Subsistence Management and U.S. Forest Service staff, and then scored by the Technical Review Committee. Each investigation plan was scored on the following five criteria: strategic priority, technical and scientific merit, investigator ability and resources, partnership and capacity building, and cost/benefit.

2024 FISHERIES RESOURCE MONITORING PLAN

A Fisheries Resource Monitoring Plan is developed during each Monitoring Program cycle that provides an overview of the process, the submitted materials, and the final list of funded projects. The 2024

Fisheries Resource Monitoring Plan will include regional overviews and comments from Regional Advisory Councils and the Interagency Staff Committee. Regional Overviews for each of the seven Monitoring Program regions contain area specific background information as well as the 2024 Technical Review Committee justifications and project executive summaries specific to those regions. The Regional Overviews are distributed for comment through Subsistence Regional Advisory Council meetings, beginning in September 2023. Regional Advisory Council comments are recorded and included in the draft 2024 Fisheries Resource Monitoring Plan that will be forwarded to the Interagency Staff Committee for their comments and finally to the Federal Subsistence Board.

The draft 2024 Fisheries Resource Monitoring plan will be presented to the Federal Subsistence Board at their January/February 2024 public meeting. The Board will review the draft plan and will forward their comments and recommendations to the Assistant Regional Director of the Office of Subsistence Management. Final project selection and funding approval lie with the Assistant Regional Director of the Office of Subsistence Management. For this funding cycle, a total of 26 investigation plans were received and 25 were considered eligible for funding. Investigators are expected to be notified in writing of the status of their proposals by late spring or early summer 2024.

FISHERIES RESOURCE MONITORING PROGRAM
NORTHERN REGION OVERVIEW

Since the inception of the Monitoring Program in 2000, a total of 59 projects have been funded in the Northern Region at a cost of $16.3 million (**Figure 1**). The State of Alaska had the most projects funded in the region, followed by the United States Department of the Interior agencies, Alaska rural organizations, and other organizations (**Figure 2**). See **Appendix 1** for more information on Northern Region projects completed since 2000 and a list of all organizations that have received funding through the Monitoring Program.

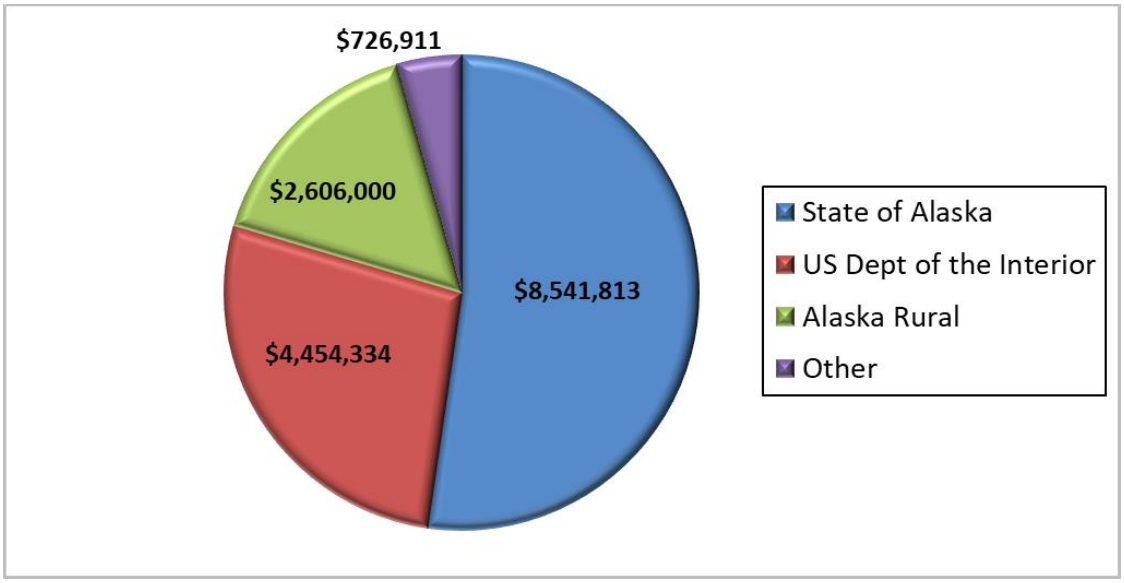


Figure 1. Monitoring Program fund distribution in the Northern Region since 2000.

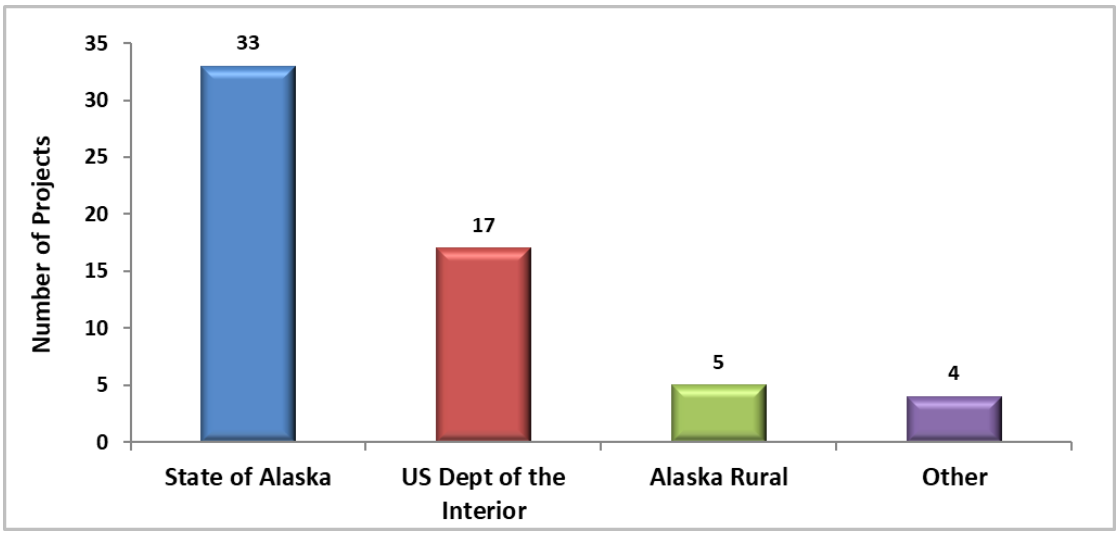


Figure 2. Number of Monitoring Program projects funded in the Northern Region since 2000.

PRIORITY INFORMATION NEEDS

The 2024 Notice of Funding Opportunity for the Northern Region contained the following 20 priority information needs identified by the North Slope, Northwest Arctic, and Seward Peninsula Regional Advisory Councils:

- Chinook, Chum and Coho salmon abundance estimate for Boston, Fish, Pargon, and Wagon Wheel rivers.

- Summer and Fall Chum Salmon abundance estimates for the Agiapuk River drainage including American River and Igloo Creek.

- Chinook, Chum, and Coho salmon abundance estimate for the Pikmiktalik River, with comparison to historical counts.

- Changes in Grayling, Dolly Varden, and Sheefish populations related to climate change.

- Inventory and baseline data of fish in major rivers tied to subsistence use in Northwest Alaska. Investigators should consult with local subsistence users and draw on Traditional Ecological Knowledge literature in designing and carrying out research. When possible, applicants are encouraged to include fisheries proximal to the communities of Shishmaref, Buckland, Deering, Selawik, Kivalina, Point Hope and villages along the Kobuk and Noatak rivers.

- Evaluate changes in water levels, discoloration and mineral deposits, water temperature, and reduced oxygen in major river systems associated with subsistence fishery resources in the Northwest Arctic Region, and how these changes will affect fish vital for subsistence. Investigators should consult with local subsistence users and draw on their knowledge of historic and recent water conditions in designing and carrying out research.

- The effects of expanding beaver populations and range on subsistence fisheries, including whitefish, in the Northwest Arctic Region. Include effects of dams on fish migration and effects of changes to water quality on fish health. Investigators should consult with local subsistence users and draw on their knowledge of historic and changing beaver impacts in designing and carrying out research. Research should also consider the impacts of these changes on subsistence users themselves.

- Document Herring abundance, seasonal movements, and health and investigate causes of large herring mortality events in the Northwest Arctic. Investigators should consult with local subsistence users and draw on their knowledge in designing and carrying out research.

- Document the effects of changing river and tributary conditions on salmon spawning in the Noatak and Kobuk river drainages, with focus on the potential effects of factors such as erosion, discoloration and mineral deposits, and changing precipitation on spawning viability. Investigators should consult with local subsistence users and draw on their knowledge in designing and carrying out research.

- Document abundance, and migration timing, especially of Dolly Varden, Lake Trout, and Whitefish species in the Northwest Arctic, to address changing availability of subsistence fishery

resources. Investigators should consult with local subsistence users and draw on their knowledge in designing and carrying out research.

- Identify the spawning areas, critical habitat and range expansion in major rivers tied to subsistence for Whitefish, Northern Pike, salmon, Grayling, and Dolly Varden in the Northwest Alaska Region. Investigators should consult with local subsistence users and draw on their knowledge in designing and carrying out research.

- Using Traditional Ecological Knowledge and harvest monitoring, document new fish species and changes in abundance, size, timing, and distribution of existing fish species, as well as impacts of new or expanding species on other fish that are important to subsistence in the North Slope Region.

- Document and investigate the possible causes of mold, disease, and discoloration on Broad Whitefish in the Colville River in the vicinity of Nuiqsut. Compare environmental conditions in the Colville River—including temperature—with those in the Ikpikpuk River, where whitefish are healthy, and mold has not been observed to date. Investigators are encouraged to draw on both stock status and trends and Traditional Ecological Knowledge research methods.

- Document the effects of climate change, including late freeze-up, on subsistence fishing access, harvests, and preservation and the impact of these changes on community-wide harvest levels and food security on the North Slope. Research could investigate adaptations for continuing community-wide harvest levels where traditional preservation methods are impacted. Studies including Ikpikpuk River are of particular interest.

- Baseline fish habitat and water quality monitoring (especially temperature, dissolved oxygen, and silt) on the rivers and tributaries important to subsistence fishing for communities of the North Slope Region. Investigators are encouraged to include overwintering area.

- Distribution, abundance, and health of stocks of Broad Whitefish on the Sagavanirktok River.

- Seasonal movement and overwintering habitat of Whitefish on the Colville Delta.

- Document population structure, abundance and health of lake trout in Peters, Schrader, Chandler, and Shainin lakes.

- Health and abundance of Arctic Grayling populations in in Anaktuvuk Pass area.

- Evaluate changes in water levels, discoloration and mineral deposits, water temperature, and reduced oxygen in major river systems associated with subsistence fishery resources in the North Slope Region, and how these changes will affect fish vital for subsistence.

2024 MONITORING PLAN DEVELOPMENT FOR THE NORTHERN REGION

For the 2024 Monitoring Plan, four proposals were submitted for the Northern Region (**Table 1**).

Table 1. Projects submitted for the Northern Region 2024 Monitoring Plan including project duration and total funds requested.

Project Number	Title	Project Duration (Years)	Total Project Request
24-100	An Investigation of Temperature and Dissolved Oxygen Variation in Perennial Spring Overwintering Habitats used by Dolly Varden and Arctic Grayling in NE Alaska	4	$473,957
24-101	Mixed Stock Analysis of Northwest Alaska Dolly Varden Subsistence Harvests	1	$51,117
24-102	Selawik Northern Pike population dynamics, movement, and habitat use	3	$367,881
24-103	Kukpuk River Arctic Grayling – Characterizing Critical Habitats, Seasonal Movements, and Examining Effects of Climate Change-related Stressors	4	$291,696
Total			**$1,184,651**

EXECUTIVE SUMMARIES AND TECHNICAL REVIEW COMMITTEE JUSTIFICATIONS

The following executive summaries were written by the principal investigator and submitted to the Office of Subsistence Management as part of a proposal package. They may not reflect the opinions of the Office of Subsistence Management or the Technical Review Committee. The executive summaries may have been altered for length.

Technical Review Committee justifications are a general description of the committee's assessment of proposals when examining them for strategic priority, technical and scientific merit, investigator ability and resources, partnership and capacity building, and cost/benefit. More in-depth reviews are provided to investigators following project selection.

Investigator Submitted Executive Summary:

Project Number:	24-100
Title:	An Investigation of Temperature and Dissolved Oxygen Variation in Perennial Spring Overwintering Habitats used by Dolly Varden and Arctic Grayling in NE Alaska
Geographic Region:	Northern
Data Types:	Stock Status and Trends
Principal Investigator:	Randy J. Brown, U.S. Fish and Wildlife Service
Co-investigator:	Michael P. Carey, U.S. Geological Survey Alaska Science Center
	Vanessa R. von Biela, U.S. Geological Survey Alaska Science Center

Project Request:	**2024:** $82,451	**2025:** $153,275	**2026:** $153,275	**2027:** $84,956
Total Request:	$473,957			

Issue Addressed: Dolly Varden (*Salvelinus malma*) and Arctic grayling (*Thymallus arcticus*) are two of the most widely distributed and important fish species available to subsistence fishers in NE Alaska. The conservation of both species was specifically included in the purpose statement of the Arctic National Wildlife Refuge's enabling legislation within the Alaska National Interest Lands Conservation Act (ANILCA). It is important to note that char in this region were referred to as "Arctic char (*S. alpinus*)" at the time of legislation and later study revelated these fish to be Dolly Varden char, a closely related species (Reist et al. 1997). Among residents of the area the species is still called Arctic char or Iqalukpik in Iñupiaq.

In NE Alaska and NW Canada, Dolly Varden and Arctic grayling populations are sustained during winter in rivers containing perennial springs that provide stable aquatic habitats when no other liquid water is available. Despite the presence of liquid water in the perennial spring in the Shaviovik River, several hundred Dolly Varden and Arctic grayling died during the winter and were discovered in April, indicating that perennial spring overwintering habitats can become unsuitable for life. We suspect that dissolved oxygen (DO) declined to lethal levels in the pool of water under ice where these fish died, but no measurements were taken there, or to our knowledge, in any other similar perennial springs in the region. Given the importance of perennial spring habitats for fish occupancy in the rivers of NE Alaska, a better understanding of the temperature and DO dynamics they experience during winter would be valuable. This project proposal would specifically address the following Priority Information Need identified for the Northern Alaska Region in the 2024 FRMP call for proposals: "*Baseline fish habitat and water quality monitoring (especially temperature, dissolved oxygen, and silt) on the rivers and tributaries important to subsistence fishing for communities of the North Slope Region. Investigators are encouraged to include overwintering area."*

Objectives: We propose to monitor water quality for three consecutive winters in five small perennial springs that are known to be used by Dolly Varden and potentially Arctic grayling. Specifically, we will:

1) deploy three sets of temperature and DO data logging units in late October or early November in different locations within each of five perennial springs;

2) A continuous record of temperature and DO will be collected throughout three winter deployment periods creating a multi-year record of temperature and DO variation through the winter season.

3) We will retrieve the temperature and DO data loggers in late April, prior to breakup, and in the process will examine the perennial spring habitats for evidence of fish mortality and survival.

4) We will analyze these datasets to identify critical periods of time in which DO minimums decline to < 3 mg/L, which is generally considered to be a lethal threshold for salmonid fishes. Dolly Varden and Arctic grayling are apparently more tolerant of low DO than most other salmonids and have been shown to survive in cold water at concentrations as low as 1 mg/L.

5) By examining these water quality parameters for three seasons, we hope to improve our understanding of environmental conditions that result in fish mortality in these critical habitats.

Methods: We propose to monitor temperature and DO in five perennial springs in NE Alaska that are known to support overwintering Dolly Varden. Four of these springs are in the upper Canning River and a fifth is in the upper Kavik River, a tributary of the Shaviovik River. During a multi-year telemetry project with Dolly Varden in the Canning River, almost half of the fish overwintering in isolated perennial springs in the upper Canning River died during winter of unknown causes. To monitor temperature and DO in these overwintering habitats, we will deploy three sets of datalogging equipment in each perennial spring in late October as the winter comes on. They will remain in place through the winter and be retrieved in late April, as the end of winter approaches. We will examine the overwintering environments under ice and in open leads, if they are present, to determine whether the overwintering population experienced lethal conditions or not. We will download data in a controlled environment and analyze the trends of temperature and DO over time, compare data between the three sites within each of the springs, and then among the five springs for common trends and resulting mortality or not.

Partnerships and Capacity Building: Because of the complexity, personnel limitations, and costs of the field component of this project, we have been unable to directly involve residents of the area in project operations. We do, however, have an indirect partnership with Tom Glass, Louise Bishop, and Kevin Fraley with the Wildlife Conservation Society, the group who discovered the fish kill on the Shaviovik River last April. Vanessa von Biela joined Tom in bringing the matter to the attention of the North Slope RAC last October. The Wildlife Conservation Society subsequently developed a plan to monitor water quality parameters in a selection of overwintering habitats including the Shaviovik perennial spring and other overwintering areas to the west of our study area. We have coordinated our methodologies in such a way that we expect to have comparable data from the two research efforts.

We're also partnering with Dr. Ken Dunton from the University of Texas to share our findings each year with the Traditional Knowledge Panel that was established in Kaktovik. We will also be presenting our findings each year with the North Slope RAC. We believe these outreach activities are effective forums for discussion with residents of the area on the tenuous nature of these essential overwintering habitats and the need to preserve them.

Technical Review Committee Justification: This proposed project studies overwintering habitat in Dolly Varden and Arctic Grayling, two important subsistence fish species. When liquid water is limited during winter, their populations are sustained in rivers containing perennial springs that provide stable aquatic habitats. Overwintering fish survival in the perennial springs was estimated to be 45% during a previous Monitoring Project. The proposed study evaluates winter water temperature and dissolved oxygen to determine if they are limiting factors for fish survival in these springs. A discussion of the survival rate effects on the overall population health would provide information about the population's sustainability. The project consists of deploying data loggers to monitor temperature and dissolved oxygen in the fall and collecting the loggers in the spring to download the data. The investigation plan lacks a discussion of how the data will be used for subsistence management and the continuation of subsistence practices. The principal investigators have successfully completed other Monitoring Program

projects and the co-investigators have the experience to execute the project. Capacity building is minimal consisting of presenting at meetings. The costs are high due to the remoteness of the sample sites. Most funds are requested for travel. There is a 20% match composed entirely of USGS salaries included in the budget.

Investigator Submitted Executive Summary:

Project Number:	24-101
Title:	Mixed Stock Analysis of Northwest Alaska Dolly Varden Subsistence Harvests
Geographic Region:	Northern Alaska
Data Types:	Stock Status and Trends
Principal Investigator:	James Savereide, Alaska Department of Fish and Game
Project Request: 2024:	$51,117
Total Request:	$51,117

Issue Addressed: Dolly Varden (*Salvalinus malma*) in northwest Alaska constitute one of the most important subsistence resources for residents of Noatak, Kivalina, and Kotzebue and Dolly Varden that spawn in the Noatak River contribute to fishery harvests occurring in Noatak, Kotzebue, and Kivalina. Fish are captured in subsistence fisheries with gillnets and beach seines during open water periods, through the ice with jigs/spoons in the winter in the Noatak, Wulik, and Kivalina Rivers, and are incidentally caught in commercial fisheries in Kotzebue Sound. Dolly Varden spawn in most tributaries of the Noatak River including the Kelly, Kugururok, Nimiuktuk, Kaluktavik, Nakolik, and Anisak Rivers as well as in multiple smaller creeks in both the lower and upper Noatak River (Figure 1). While current harvests appear to be sustainable, managers have little to no information to decide whether or not a subsistence and/or sport fishery should be restricted or liberalized if fisheries change due to changing climate, increased oil and gas exploration, or shifting resource use by locals.

This proposal is a 1-year extension of a previously funded project through OSM, F20AC00233 Life-history variability and mixed-stock analysis of Dolly Varden in the Noatak River. During that study an attempt to collect samples from the subsistence fishers using local hires was not successful and the principal investigators decided to collect the samples themselves, which was successful but taxing on the budget, and the desired number of samples from each year was not achieved. This project will collect the remaining samples needed to reliably quantify the contribution of the spawning stocks to the subsistence harvests. This project also speaks to a 2022 priority information need to address the changing availability of Dolly Varden subsistence fishery resources in the Northern Region by using mixed-stock analysis (MSA) to identify the genetic make-up of the significant subsistence harvests as it relates to northwest Alaska Dolly Varden spawning populations. Adding to the limited genetic baseline will provide managers with the opportunity to throroughly identify the relative contribution of spawnming stocks to the subsistence harvests that ultimately influence overall population dynamics.

Objective: *Estimate the stock proportions of Dolly Varden sampled from the Noatak and Kivalina subsistence harvests and the Kotzebue commercial fishery bycatch harvest in 2024 using mixed-stock analysis with genetic characters (N=200 per fishery sample).*

Methods: Mixed-stock analysis will be used to estimate the stock proportions of Dolly Varden sampled from subsistence harvests and as bycatch in the Kotzebue commercial fishery in 2024. Fin clips will be collected from N=200 Dolly Varden from subsistence fisheries in Noatak and Kivalina, and from Dolly Varden bycatch in the Kotzebue commercial fishery.

The baseline for Dolly Varden in western Alaska comprises 50 populations sampled from the North Slope of Alaska to the Nushagak River in Bristol Bay assayed at 11 microsatellite loci. Additional baseline samples will be collected from the Kukpuk River (N=200). For the Kukpuk River, if insufficient spawning adults are available, juveniles will be sampled to obtain the required sample size.

Partnerships and Capacity Building: ADF&G recognizes the importance of continuing to develop the capability, understanding, and expertise of rural and Alaska Native organizations to participate in federal subsistence fisheries management. We have a demonstrated history of working with rural subsistence users by cooperatively collecting fishery and baseline samples in numerous FRMP studies. During previous years' fieldwork, many local residents were interested in our research program, especially our results. In an effort to develop a shared understanding of the need for fisheries research, we will continue to seek informal interactions with local subsistence users to build on improving understanding and collaboration with each other. Strong relationship and local acceptance are key to success in remote rural projects.

Finally, substantial time will be spent ensuring that research results are shared both with the local subsistence users and the Northwest Alaska RAC. Investigators will participate in annual educational outreach trips to Noatak to describe project results, and to one outreach trip to Kivalina. A project investigator will also attend the Northwest Alaska RAC meeting held in Kotzebue annually to describe project results and updates.

In summary, the mutual exchange of knowledge between the proposed research team and Noatak and Kivalina residents gained during fieldwork and outreach will increase the collective knowledge about Dolly Varden. With an increase in collective knowledge, residents, scientists, and managers will be empowered to make more informed decisions regarding management of Dolly Varden, should an active management program need to be implemented to address the changing availability of subsistence fishery resources, as stated in the 2020 Priority Information Needs.

Technical Review Committee Justification: This proposed project completes work begun in project 20-*101 Life-history variability and mixed-stock analysis of Dolly Varden in the Noatak River.* The investigators are seeking one additional year of funding to collect samples as the previous attempt to collect samples from the subsistence fishers using local hires was not successful and sample sizes were not fully met. Awarded funds will allow the investigators to finish collecting the needed samples to complete the analysis. The project methods clearly lay out and built upon previous work. They include a detailed sampling design, data collection, compilation, analyses, and reporting procedures. A summary of

what was accomplished through the previous projects would clarify the importance of this project. While the initial project included strong capacity building component the current investigation plans has limited partnership and capacity building opportunities. Costs are reasonable for a one-year project to ensure successful completion of a prior project funded through this program.

Investigator Submitted Executive Summary:

Project Number:	24-102		
Title:	Selawik Northern Pike population dynamics, movement, and habitat use		
Geographic Region:	Northern Alaska		
Data Types:	Stock Status and Trends		
Principal Investigator:	Jeffrey D. Muehlbauer, U.S. Geological Survey		
Co-investigator:	William K. Carter, III, U.S. Fish and Wildlife Service		
Project Request:	**2024:** $98,020	**2025:** $132,436	**2026:** $137,425
Total Request:	$367,881		

Issue: Northern pike (*Esox lucius*) are an important subsistence resource in the northwest Arctic. In spite of the prevalence of Federally managed lands in the area and the widespread distribution and subsistence use of pike throughout this area, very little is known about the habitat use requirements, movement by life history, and population structure of pike in the region. This knowledge gap has led to the listing of such pike population structure and movement data as a Priority Information Need (PIN) by the Northwest Arctic Subsistence Regional Advisory Council. Specifically, pike are mentioned in the proposed 2024 PINs within the following category:

> "Identify the spawning areas, critical habitat and range expansion in major rivers tied to subsistence for Whitefish, Northern Pike, salmon, Grayling, and Dolly Varden in the Northwest Alaska Region. Investigators should consult with local subsistence users and draw on their knowledge in designing and carrying out research."

This PIN is of particularly high interest to managers and researchers in Selawik NWR, especially given the reliance on pike by people in the Village of Selawik.

This project seeks to provide baseline information about pike movement, habitat use by life history, and identification of potentially discrete sub-populations within Selawik NWR. The proposed project has the support of the refuge, including in particular Refuge Biologist William (Bill) Carter, who is a co-investigator on the project and has been actively involved in its development. No studies, with FRMP funding or otherwise, have been carried out on pike within the refuge. This represents a major data limitation for fisheries and subsistence management on the refuge, but also points to an area of high potential for rapid knowledge generation to greatly benefit managers and subsistence users of pike populations in the Northwest Arctic.

Objectives:
The overarching goal of this project is to determine the life history and movement of pike in Selawik NWR, specifically the Selawik River Delta near the Village of Selawik. Our specific objectives are twofold:

1. To track the movement of pike to discover how pike habitat use varies seasonally and according to pike life history.
2. To identify the extent to which pike in the area exhibit high site fidelity, and thus provide evidence for whether there may be multiple, distinct sub-populations or whether all pike in the area are part of a single, larger population.

Project Activities and Methods:
Project Area: *Project objectives will be met principally by a combination of radiotelemetry monitoring and pike cleithra aging.* This project will concentrate on the pike in the Selawik River Delta near the Village of Selawik where the majority of the subsistence fishery takes place. Sampling and tracking will particularly emphasize the confluence of the Fish River and the connected lakes north of the village. Through our consultations with local fishers we will determine the most productive and appropriate fishing areas to deploy the radio tags.

Pike movement will be assessed by implanting approximately 100 pike with radiotransmitters in summer 2024 and 100 more in late winter/early spring 2025 Pike used in this study will be captured using hook-and-line angling within at least 5-10 known locations of pike abundance based on local knowledge. Pike initial capture and subsequent radiotracking will be accomplished primarily by motorboat, with tracking occurring over two years, with aircraft and snowmachine surveys when conditions require. Pike movements by life history will be assessed additionally with limited used of pike cleithra (membrane bone at the rear of the gill cavity) to determine individual fish age. Habitat conditions will be assessed by deployment of multi-parameter water quality sensors for measuring temperature, dissolved oxygen, and other variables. Collectively, these data will allow pike abundance and movements to be correlated to localized water conditions to understand why pike may be choosing certain habitats.

Partnerships and Capacity Building: Critically for the project and for long-term recruitment of rural residents into science and management of Federal subsistence fisheries, we will actively recruit an Alaska Native Science and Engineering Program (ANSEP) student to take on the project as their masters thesis research at UAF. We will also involve local individuals and Alaska Native organizations to the extent feasible, particularly by recruiting project fieldwork assistance from the Native Village of Selawik. A local motorboat, captain, and technician will be recruited and paid to assist with the project for two weeks every year, particularly with angling and radiotelemetry. The angling activities will benefit especially from local knowledge. These activities also represent a fisheries training opportunity for those hired individuals and will promote further interaction between the village and Selawik NWR. We will also involve youth volunteers as a means of outreach, training, and engagement to promote future interest of local individuals in science and working within the refuge. We will recruit older teenagers (2-5 people, ideally) from the refuge's annual Science and Culture camp to join in radiotelemetry and fishing activities. The youth would play a direct role in meaningful sampling and data collection activities and would gain firsthand knowledge that they can "do science", including on the refuge and close to home. We also propose to involve youth in a similar way in the winter, in this case by snowmachine and by foot over Spring Break, to access sites for fishing and tracking pike through the ice.

We will brief village leadership at least yearly be in regular communication with the village and administrators with regards to staffing and youth involvement activities. At least once near project

completion, and earlier pending interest, we will facilitate a local presentation about the project and its results, for any interested members of the local public.

Technical Review Committee Justification: While Northern Pike are an important subsistence fish in Northwestern Alaska, relatively little is known about them in this area. The proposal addresses a priority information need to identify Northern Pike spawning areas, critical habitat, and range expansion in major rivers tied to subsistence. The proposed project would use radio-telemetry technology to collect habitat and movement data in the Selawik River Delta. The proposal states that local traditional knowledge will be used to identify the sample sites. The investigator is encouraged to continue to include local knowledge in the implementation of the proposal. Efforts would be made to track the fish year-round. Both the investigator and co-investigator have a long history of successfully completing similar projects. The investigators plan to involve local Selawik residents and youth in the project in addition to a graduate student in fisheries. The costs are reasonable for a project of this size and there is a substantial in-kind match from the Selawik National Wildlife Refuge.

Investigator Submitted Executive Summary:

Project Number:	24-103			
Title:	Kukpuk River Arctic Grayling – Characterizing Critical Habitats, Seasonal Movements, and Examining Effects of Climate Change-related Stressors			
Geographic Region:	Northern Alaska			
Data Types:	Stock Status and Trends, Harvest Monitoring			
Principal Investigator:	Dr. Kevin Fraley			
Project Request:	**2024:** $92,085	**2025:** $77,568	**2026:** $74,154	**2027:** $47,889
Total Request:	$291,696			

Issue: (Briefly discuss the issue(s) that the project would address)

Our project will address the Arctic grayling portion of four Priority Information Needs (PINs) identified by the 2024 Fisheries Resource Monitoring Program through information gathered from Northern Alaska Subsistence Regional Advisory Committees. These PINs include baseline information from major rivers tied to subsistence use, changes in populations due to climate change, identifying spawning and critical habitat areas, and quantifying effects on subsistence fisheries of discoloration and mineral deposits in rivers. The findings from our project will enhance the current information known about grayling, allowing federal subsistence managers to make informed decisions in the future based on the movements, habitat use, and stressors on these fish in rivers of northwest Alaska. Additionally, the results from this project will be of great interest to subsistence fishers, particularly given recent reports of poor grayling harvests in the Kukpuk River and satellite imagery evidence of rusty-colored mineral seeps in its headwaters.

Objectives: (Numerically list the objectives in the sequence they would be completed)

1) Identify the seasonal movements and critical habitats (spawning, feeding, overwintering) of Arctic grayling in the Kukpuk River of northwest Alaska with the use of radio telemetry tagging and tracking.

2) Characterize locations, frequency of occurrence, and magnitude of rusty-colored mineral seeps affecting the Kukpuk River drainage using Sentinel-2 satellite imagery available from 2017-2025.

3) Identify grayling movements, habitat preference, or avoidance in relation to river discoloration.

4) Assess heavy metal contaminant loads in grayling caught in the Kukpuk (seeps) and Ipewik (no seeps) rivers to establish baseline levels and identify any differences associated with river discoloration

Methods: (Briefly describe the methods that would be used to conduct the project)

To accomplish our goals, we will surgically implant radio telemetry tags in up to seventy adult grayling in the Kukpuk River and its tributaries and will track their habitat use and movements over the course of two years using fixed wing aircraft. One tracking flight will occur during each of three critical ecological periods every year (spawning, feeding, overwintering) to identify habitats used. Sentinel-2 satellite imagery, available every few days when atmospheric conditions allow, will be perused to identify the locations, frequency, and magnitude of permafrost thaw seeps and river discoloration, which will be compared to grayling critical habitat areas and movements. Finally, forty adult grayling will be caught in the Kukpuk River and its tributaries and retained for heavy metal contaminant load analyses. This will include assessing the concentration of iron, lead, mercury, copper, and zinc in filets, which can be harmful to humans if consumed in high quantities.

Partnerships/Capacity Building: (Describe the ways in which this project would develop partnerships and build the capacity of rural and Alaska Native organizations to participate in management of Federal subsistence fisheries)

This project will be a collaborative effort between the Wildlife Conservation Society, residents of Point Hope, and other scientists involved in fisheries management and research in the region. Collaborating with the community of Point Hope is paramount to the success of this project, and fostering local and Indigenous partnerships is principal for all WCS work (both globally and with respect to the Arctic Beringia program). It is essential that this partnership is ongoing and meaningful during each phase of the project, beginning with design. The community of Point Hope, through North Slope Borough Subsistence Research Specialist Michael Tuzroyluk, was involved in the study design, helped shape the outreach approach, and assisted in revising the project proposal into its current form. Additionally, the initial project idea was based upon remarks from Michael and his Uncle, Guy Omnik, who mentioned that grayling were being harvested in lower numbers, causing great concern within the community.

During project implementation, we will fund local consultation and field support through the Native Village of Point Hope to ensure the success of our activities. This will provide opportunities for outreach, co-production of knowledge, and will cover the cost of any services that local residents may provide during the project duration. Upon completion of the project, we will conduct an outreach meeting to present findings from the study, modeling this after the successful February 2023 fisheries meeting put on by WCS in Point Hope.

Technical Review Committee Justification: Point Hope subsistence users have expressed concerns about declining Arctic Grayling populations to the North Slope Subsistence Regional Advisory Council since 2010. This proposed project provides baseline information about Arctic Grayling ecology. In addition, the investigator will explore the effects of water discoloration from minerals seeping into the rivers from permafrost thaws on Arctic Grayling habitat. The investigator uses standard radio telemetry technics to track the Arctic Grayling. The investigator has a proven track record with similar studies. The capacity building component consists of contracting with the Village of Point Hope, consulting with stakeholders and educational outreach. This investigation plan does not provide any examples of long-term capacity building. The costs seem reasonable for a study this size.

APPENDIX 1
PROJECTS FUNDED IN THE NORTHERN REGION SINCE 2000

Project Number	Project Title	Investigators
	North Slope	
00-002	Eastern NS Dolly Varden Spawning and Over-wintering Assessment	ADF&G, USFWS
01-113	Eastern NS Dolly Varden Genetic Stock ID Stock Assessment	ADF&G, USFWS
01-101	Eastern NS (Kaktovik) Subsistence Fish Harvest Assessment	AD&FG, KIC
02-050	NS (Anaktuvuk Pass) Subsistence Fish Harvest Assessment	ADF&G, NSB, AKP
03-012	SST of Arctic Cisco and Dolly Varden in Kaktovik Lagoons	USFWS
04-103	North Slope Dolly Varden Sonar Feasibility	USFWS
06-108	North Slope Dolly Varden Aerial Monitoring	ADF&G
07-105	North Slope Dolly Varden Genetic Baseline Completion	USFWS
07-107	Hulahula River Dolly Varden Sonar Enumeration	USFWS
12-154	North Slope Salmon Fishery HM/TEK	ADF&G
14-103	Beaufort Sea Dolly Varden Dispersal Patterns	UAF
16-101	Arctic Dolly Varden Telemetry	USFWS
16-106	Aerial Monitoring of Dolly Varden Overwintering Abundance	ADF&G, USFWS
16-107	Chandler Lake Trout Abundance Estimation	ADF&G
16-152	Meade River Changes in Subsistence Fisheries	ADF&G
18-100	Colville River Grayling Habitat and Migration	ADF&G
	Northwest Arctic	
00-001	Northwestern Dolly Varden and Arctic Char Stock Identification	ADF&G, USFWS
00-020	Hotham Inlet Kotzebue Winter Subsistence Sheefish Harvest	ADF&G
01-136	Northwestern Alaska Dolly Varden Genetic Diversity	ADF&G, USFWS
01-137	Northwestern Alaska Dolly Varden Spawning Stock Assessment	ADF&G
02-023	Qaluich Nigingnaqtuat: Fish That We Eat	AJ
02-040	Kotzebue Sound Whitefish Traditional Knowledge	ADF&G, MQ
03-016	Selawik River Harvest ID, Spring and Fall Subsistence Fisheries	USFWS
04-101	Selawik River Inconnu Spawning Abundance	USFWS

Project Number	Project Title	Investigators
04-102	Selawik Refuge Whitefish Migration and Habitat Use	USFWS
04-109	Wulik River Dolly Varden Wintering Stocks	USFWS, ADF&G
04-157	Exploring Approaches to Sustainable Fisheries Harvest Assessment	ADF&G, MQ
07-151	Northwest Alaska Subsistence Fish Harvest Patterns and Trends	ADF&G, MQ
08-103	Kobuk River Sheefish Spawning and Run Timing	ADF&G, USFWS
10-100	Selawik Drainage Sheefish Winter Movement Patterns	UAF, USGS, USFWS, NVK
10-104	Hotham Inlet Kotzebue Winter Subsistence Sheefish Harvest	USFWS
10-152	Climate Change and Subsistence Fisheries in Northwest Alaska	UAF
12-100	Selawik River Sheefish Spawning Abundance and Age Structure	USFWS
12-103	Kobuk River Sheefish Spawning Frequency, Location, and Run Timing	ADF&G, USFWS
12-104	Noatak River Dolly Varden Evaluation of Overwintering Populations	ADF&G, NPS
12-153	NW AK Key Subsistence Fisheries Harvest Monitoring Program	ADF&G, MQ
14-104	Selawik R Inconnu Spawning Population Abundance	USFWS
16-103	Kobuk River Dolly Varden Genetics	ADF&G, USFWS
16-104	Selawik Sheefish Age Structure and Spawning Population	USFWS
16-105	Kobuk River Sheefish Abundance	ADF&G
18-101	Kobuk River Dolly Varden Genetic Diversity	ADF&G, USFWS
20-101	Life-history Variability and Mixed-stock analysis of Dolly Varden in the Noatak River.	ADF&G
20-150	Traditional Ecological Knowledge of Dolly Varden and whitefish species in Northwest Alaska	ADF&G
22-101	Kotzebue Sound Sheefish – Describing Coastal Movement, Temperature Preference, and Potential Range Expansion	WCS
22-104	Selawik River Inconnu Spawning Population Age Structure Evaluation and Spawner Recruitment Response to a 2004 Permafrost Thaw Slump	USFWS
22-150	Traditional Ecological Knowledge of Salmon in the River Drainages of Kotzebue Sound	ADF&G
	Seward Peninsula	
01-224	Nome Sub-district Subsistence Salmon Survey	ADF&G, KI
02-020	Pikmiktalik River Salmon Site Surveys and Enumeration	USFWS, NPS, STB, KI
04-105	Pikmiktalik River Chum and Coho Salmon Enumeration	KI
04-151	Customary Trade of Fish in the Seward Peninsula Area	ADF&G, KI
05-101	Unalakleet River Coho Salmon Distribution and Abundance	ADF&G, NVU
06-101	Pikmiktalik River Chum and Coho Salmon Enumeration	KI
10-102	Unalakleet River Chinook Salmon Abundance Estimate	ADF&G, BLM, NSEDC
10-151	Local Ecological Knowledge of Non-Salmon Fish in the Bering Strait	KI
14-101	Unalakleet River Chinook Salmon Abundance Estimate	NSEDC,NVU
18-103	Unalakleet River Chinook Salmon Escapement Assessment	ADF&G, BLM NSEDC,NVU ADF&G, BLM

Project Number	Project Title	Investigators
20-100	Fish Assemblages and Genetic Stock Determination of Salmon in Bering Land Bridge National Preserve	NPS
22-103	Unalakleet River Chinook Salmon Escapement Assessment	ADF&G

Abbreviations used for investigators are: **ADF&G** = Alaska Department of Fish and Game, **AJ** = Anore Jones, **AKP** = City of Anaktuvuk Pass, **BLM** = Bureau of Land Management, **KI** = Kawarek Inc., **KIC** = Kaktovik Inupiat Corp., **MQ** = Maniilaq, **NSEDC** = Norton Sound Economic Development Corporation, **NVU** = Native Village of Unalakleet, **NSB** = North Slope Borough, **STB** = Stebbins IRA, **SWCA** = SWCA Environmental Consultants, **UAF** = University Alaska Fairbanks, **USFWS** = U.S. Fish and Wildlife Service, and **USGS** = U.S. Geological Survey.

WIRAC Dall Sheep Management Plan Guidelines
April 2023

The Western Interior Alaska Regional Advisory Council continues to have grave concerns regarding the current Dall sheep populations within the Central Brooks and Alaska Ranges. The Council's authority to ensure healthy populations of fish and wildlife using recognized scientific principles is found in ANILCA Title VIII, sec. 805 (3) (A) through D.
Sec 805 (3) (A) is explicit regarding evaluation and recommendation concerning policies and management plans. (3) (D) (i) through (iv) requires councils to identify and make recommendations regarding management of fish and wildlife to ensure subsistence uses.

The Dall sheep populations have been reduced to numbers far below the long-term carrying capacity of the habitat. These declines are due to multiple climate events in the past decade and in some excessive harvest mortalities in popular sport hunting areas. Local Rural residents have utilized and relied on these sheep for non-wasteful consumptive use. The Customary and Traditional use determinations reflect these uses. Many local rural residents have recognized the critical declines in the sheep populations and voluntarily reduced harvest.

The State of Alaska Board of Game endeavored to develop a sheep management plan in 2014/15. The broad based user group's participants could not come to a consensus on several issues. The planning process was a failure. Without a plan to set basic parameters for Dall sheep management, the populations can be harvested beyond sustainability.

WIRAC has successfully advocated for FSB regulatory closure for all hunting of suppressed sheep populations in GMU,s 24A and 26B west of the Sagavnirktok River through 7/1/2024.

The Council is compelled to recommend management strategies regarding the biological parameters needed rebuild and maintain the Dall sheep populations and the subsistence and non-subsistence uses on Federal public lands.

Sheep Ecology

It is a recognized fact that Dall Sheep are a very social animal with minimal movements within their learned habitat. Dall sheep are to be managed within the Game Management Unit (GMU) and sub-units they reside in. These sub populations should not be expected to provide the large majority of sport harvests for the entire mountain Range encompassing multiple GMUs. GMU and sub-units with snow shadow that hold higher sheep populations should not be combined with areas with typically higher snowfalls.

Dall sheep rams and ewes are raised and learn the use areas for the various times of year, feeding, rutting, and mineral uses. Sheep rarely move over 6 to 12 linear miles throughout their lives. As sheep move with older animals than themselves, they learn predator evasion strategies. Younger sheep will run to the mature sheep to lead them out of harms way. Sheep routinely live to 10-12 years of age under normal conditions. Many lightly hunted areas routinely sustain 10-12 year old ram harvests.

Wind scouring of winter habitat is very important to all sheep. Early wet snow with rain on snow seals the ridges, not allowing wind scouring. Dall sheep are not very tall (12-20" to the belly), and have a climbing hoof not conducive to excavating a lot of snow.

Rain on snow, deep snow, and late springs that exhaust the weaker individuals of the population cause population declines. Weaker individuals that are lost first are young of the year, smaller yearlings that were late-born, and older animals over 10 to 12 years old. Most rams 2 to 10 years old survive in real hard winters. Ewes are approximately 50% smaller and have higher mortalities in deep snow than rams.

.

When winter-stressed ewes survive deep wet snow and/or late springs, their physiological recovery can take all summer, and fecundity is affected for the next reproductive cycle. Lambs produced by stressed ewes will typically be late born, smaller than average, with reduced winter survival rates, especially if another bad winter is encountered. Young ewe sheep that survived to adulthood after a hard winter start in life may not produce lambs until their fourth birthday.

Sheep rely on snow melt-off on steep south-facing slopes to access new growth in late April. They will move to very low elevations to get green florescence as soon as it is available. With each additional week that the melt off is delayed, overall sheep mortality increases, especially gestating ewes and yearlings. A one-month delayed melt-off in 2013 proved to be extremely detrimental to vulnerable segments of the sheep population. Most yearlings, older sheep, and lambs died; causing a greater than 50% decline in the overall sheep populations. The severely stressed ewe component again produced extremely low lamb numbers in 2014. The end-result caused three recruitment cohorts, (2012, 2013, and 2014) to be predominately missing.

Sheep move up the south-facing, melted slopes with the green up. In mid to late May through the 14th of June most sheep are on south-facing alpine slopes that have Dryas and other wildflower forbs in pre-blossom and in flower. This is the critical period when there is high protein pollen available to put into muscle recovery and lactation. Periodic rain events delay pollenating insect activity, providing longer access for sheep to this high-quality feed. The sheep move onto ridges and north-facing slopes as the wildflower forbs come into later phenology blossom. Damp, cloudy summers are a big advantage to sheep because this extends their access to high protein. Recruiting lambs will have much heavier fall weights. Conversely, rapid melt off with hot weather maximizes the insects to pollenate the forbs. When they pollinate quickly, the high-protein food source is available for a shorter period of time. Lactating ewes will have less exposure to high quality feed, affecting fall lamb weights, yearling growth rates, and the ewe's own fat reserves. Very young rams leave their natal ewe group in the summer of their second or third year, having 1/4-1/2 curl horns. Established 1/2 and 3/5 curl rams typically ostracize these young rams, as they endeavor to join ram groups. Most rams separate from ewes in summer/and fall working out their pecking orders for dominance. These young rams are inexperienced in predator detection so are at a vulnerable position before they are accepted into a ram group. Young rams all run to the oldest rams when predators are detected. Mature sheep lead the way to escape terrains they know intricately in their home range.

Management should assure that sufficient adult rams (>7 years old) are available post hunting season. Mature rams aged 7 to 12 years old have fat reserves to endure the rutting activity and combat with other rams. Heavy fat reserves translate to kinetic energy when

butting horns. Adult rams' orbital gland weeps a strong pheromone that is attractive to ewes. Adult rams will provide more synchronous first estrus with best advantage to the lamb's survival. These adult rams have a much higher winter survival rate than if only young rams are available. Young rams 3 to 6 years old have less pheromone with a disruptive effect on breeding ewes. Younger rams left as primary breeders reduce successful recruitments to the population. In the absence of older rams, younger rams will expend a tremendous amount of energy chasing ewes that are essentially rejecting them. Often, ewes will pass their first estrus without breeding when only younger rams are available. If they do breed with these younger rams, it may be during their second estrus, resulting in late-born lambs not hearty enough for the coming winter. Young rams with much lower fat reserves and body mass expend too much energy as primary breeders and die prematurely in normal winter stress.

The social presence of 7 to 12 year-old rams is very important to the overall sheep populations' survival. Mature rams defend ewes from young rams while in rut, saving young rams' fat reserves. Mature rams are larger and have more experience evading predators, helping younger rams' survival throughout the annual cycle. Mature rams' larger body mass allows them to access varied feeding areas in winter by break trails for smaller sheep on the mountain. Mature rams and ewes lead younger cohorts throughout their home ranges, to mineral sources, spring feeding sites, rutting areas, and in predator avoidance.

Dall Sheep Management Plan

Remote weather monitoring by staff

Winter weather events should be monitored by federal management agencies that have sheep and habitats. Many times there are remote sensing instruments and weather reporting stations to draw data from. There are also webcams that can be remotely accessed. Regional Advisory Councils' and State Advisory Committees' comments on local conditions such as deep snow, rain on snow, late spring, far fewer animals observed, etc. need to be taken seriously for sheep conservation and management. There should be open dialogue and sharing of findings between managers and local users.

Adverse conditions to sheep's over-winter success:

- Early winter deep snow with rain events
- Extended warm up with liquid rain that freezes crusts on snow throughout the winter.
- Late spring melt off timing

Positive conditions for sheep's successful wintering:

- Freeze up before significant snowfall
- Cold snowfall at typical levels throughout the winter
- High winds to scour the ridges
- Melt-off commencing in late April on south facing slopes

Survey timing and methodology

- Dall sheep are to be managed within the Game Management Unit (GMU) and sub-units they reside in. These subpopulations should not be expected to provide large sport harvests for the entire mountain Range encompassing

multiple GMUs. GMU and subunits with snow shadow that hold higher sheep populations should not be combined with areas with typically higher snowfalls.

- Sheep aerial and ground surveys should be conducted immediately after lambing and when sheep are aggregated on south facing slopes and ridges from June 5 to June 20. Weather is typically still in a dry air mass with good visibility. The sheep are very easily found when on green slopes gorging on flower blossoms in the sun. Federal agencies should seriously look at changing when aerial sheep surveys are conducted. Arbitrarily doing surveys in mid July has large disadvantages. Sheep have dispersed into north-facing shadowed areas, especially during hot weather, making them much harder to spot. By July, wildfire smoke can be excessive in hot summers, affecting sight-ability, or preclude if the surveys can be conducted that season. Mid-July also enters into the typical weather shift to higher precipitation with cloudy weather. Mountain obscuration is normal from Mid-July to late August during the highest precipitation of the entire year. These disadvantages add additional expensive flight time.
- The currently depressed sheep population should be surveyed using what is known as the minimum count method. Distance sampling with extrapolation has very high error rates that have not been documented when sheep populations are historic lows. At a minimum, there needs to be some minimum count units throughout the area where distance sampling is conducted. Depressed sheep population groups since 2018 are few and far between. Encountering an aggregate can overestimate sheep presence and underestimate if the group is missed in the extrapolation calculation.
- Ram groups need to have composition documentation to calculate age classes present in the overall sheep population, and success or loss of certain cohorts. This is best achieved with high definition digital video with optical zoom cameras. All ram groups should be video recorded during the survey, to make classification assessments after the survey. Classification of rams by curl should be 1/2, 5/8, 3/4, 7/8, and 4/4 full curls. It is a management imperative to know if there are adult rams entering a hunted population. Only enumerating only full curl rams that may be killed before the next breeding season is futile. The delineation of the various ram cohorts is a strong indicator of the ewe age classes. Missing cohorts from multiple years can be used to anticipate longer recovery times.
- Data interpretation should not consider recruitment values for neonatal lamb:ewe ratios. Lambs are not recruited until June of the following summer. Lambs can have high mortalities with adverse conditions. The recruitment performance is determined by overall "ewe-likes" relative to the previous surveys. The ewe-like trend shows if gains or losses of the core population are occurring. Rams survive at higher rates than the ewe-likes. Ram trends can be disparate to ewe-like. Ram:ewe ratios can markedly increase as the core ewe-like population is declining. Some managers are encouraged with higher ram:ewe ratios or lamb:ewe ratios, but this is a false understanding and interpretation of the data sets.

Carrying capacity

- There are data sets from surveys done for the last >20 years. Many of the sheep populations have shown the carrying capacity of the habitats. If areas have historically shown 1500-1800 sheep and are currently 500-600, then harvest needs to be curtailed on mature rams to maintain the breeding composition. Sheep populations with healthy breeding cohorts will return to carrying capacity if weather events permit. When suppressed populations have missing cohorts, as determined by composition data, there is a need to reduce hunter encounter rates and harvest to ensure enough mature rams are present through the impending young ram trough. Once more abundant younger ram cohorts move up to mature status, hunting opportunity can increase utilizing "full-curl/both-horns-broken" only management. Many hunters miscount annual ring annuli, mistakenly taking immature rams. Moving away from sport hunters counting annuli is an essential part of this management plan.
- There is only minor documentation of incidental hunting mortalities. The state seizures of sublegal rams at sealing of harvested rams are only the tip of the iceberg. In many areas where moose have antler restrictions, several illegal bulls are found abandoned in the field by Fish and Wildlife enforcement every year. The USFWS Atigun Gorge sheep composition data from 1986 to 2012 reflects young ram cohorts missing after ¾ curl when mature 360-degree full curl rams are unavailable. *(below)
- The State Regulation allowing hunters to estimate age of sheep annuli for 8 rings causes hunters to take ¾ curl to below full-curl rams. Most rams with horns ¾ to just under full curl that are taken are not 8 years old, illegal, and are lost for recruitment as mature rams.

Allocation of Dall sheep on Federal lands

- Priority one is to maintain healthy populations of the Dall sheep resource, using best science. If the recourse needs harvest reduction, this needs to happen once the population data is available. When survey data is unavailable or incomplete for a struggling sheep population, management should default to restrictive management. A lack of data should never lead to overharvest.
- Healthy populations of Dall sheep at carrying capacity will support subsistence harvests annually. This is a priority use, typically nominal when rams only are taken. Some subsistence ewe harvest when sheep populations are at or above carrying capacity is sustainable, especially in remote or limited eligibility areas like Park units.
- Road accessible areas like the Dalton Highway area in GMU 24A, and 26B have high impact use by non-federally qualified resident and commercial hunters, typically 10-20 miles from the road. Sheep move perpendicular to the road in mountainous habitats. Sheep ram populations within the 20-mile zone move in and out of the Dalton Highway Corridor management area. The ram populations are subjected to multiple encounter rates by walk in, aircraft, and boat hunters. The complete lack of any mature rams >7 years old within the Dalton Highway corridor management area's 5-mile-zone attests to the full extirpation by these user groups, primarily with firearms outside of the Archery area.
- Commercial allocations within the high road impact zone 20 miles should be calculated for a small percent of available legal rams. This would maintain subsistence allocation and for the high resident non-federally qualified hunter

participation. Management on Federal public lands should never allocate all available legal rams to commercial permitted guides, as has been happening until recently. Guided hunter success rates are very high.

- Federal management is charged with maintaining healthy populations of fish and wildlife using recognized scientific principles on Federal public lands. When sheep populations show declines with missing cohorts and the need to protect mature rams, it is incumbent to inform the Regional Advisory Council to anticipate needed restrictions. The State should be informed of the same need for conservation. Ideally both Federal and State Boards will support conservation until the sheep populations are well on the way to achieving carrying capacity.

The Alaska Range GMU 19 B and C have had large declines in Dall sheep populations also. The Council is very concerned about the Dall sheep recovery in these units also. The recent Board of Game action to eliminate non-resident harvest will help reduce the most successful segment of the hunting public. There will still be a lot of resident hunters that will continue to affect the recovery of the sheep population. The western Interior Council represents rural residents who have used sheep in GMU 19.

* The data below was provided by USFWS Dall Sheep Composition work done by ground survey annually from 1986 to 2012 in the Atigun Gorge in the Arctic NWR. This area starts near the road extending east. Hunting was closed until 1982, the haul road was open to permitted commercial use only through 1992. Commercial guides were permited, and many resident hunters gained access with false commercial mining claims. By 1986 hunting pressure was extensive in the Atigun valley where this survey work was done. Most sheep hunters walk out of the archery corridor 5 miles to use firearms. Unfortunately this data did not continue into the brutal declines of 2013 to 2020. The ram composition average, on the bottom line graphically shows that rams below 3/4 curl have low mortality rates. Approximately 60% of 7/8 curl sub-legal rams are miss aged by hunters in the long-term average. Few mature rams are left.

Sheet1 | Age comp | Yr_L ratio | L_E ratio

Dates	Year*	Ewes	Da	Yrlgs	2Yr	1/4 curl	3/8 curl	1/2 curl	5/8 curl	3/4 curl	7/8 curl	1/1 curl	Unk	Total	Ann Growth	% change
6 June	1986	79	42	62	24	0	18	9	9	10	0	1	0	254		
15 June	1987	93	47	20	17	7	13	10	10	12	7	0	0	236	0.93	-7
14 June	1988	138	80	54	29	0	11	13	16	10	6	3	16	376	1.59	59
19 June	1989	145	40	56	36	16	15	16	21	12	7	0	0	364	0.97	-3
11-13 June	1990	112	69	19	21	13	8	15	8	13	5	0	0	283	0.78	-22
11-17 June	1991	193	122	82	21	22	10	16	3	18	4	2	22	515	1.82	82
14-15 June	1992	171	39	81	35	22	7	15	0	10	2	0	0	382	0.74	-26
10 June	1993	127	24	21	35	23	5	10	12	14	5	1	0	277	0.73	-27
5 June	1994	169	89	25	13	18	10	12	9	13	3	5	0	366	1.32	32
11 June	1995	165	28	41	18	23	5	10	8	4	5	0	0	307	0.84	-16
6-7 June	1996	90	49	16	8	7	4	4	2	2	0	0	2	184	0.60	-40
14-16 June	1997	51	16	27	13	13	8	3	5	7	4	0	0	147	0.80	-20
11-12 June	1998	99	70	42	0	7	4	9	3	2	0	0	2	238	1.62	62
10-12 June	1999	89	40	29	22	9	8	6	2	4	3	0	8	220	0.92	-8
14-16 June	2001	95	44	16	22	12	5	6	1	5	2	0	0	208	0.97	-3
7-9 June	2003	161	68	52	43	20	10	10	3	8	3	1	10	389	1.37	37
6-8 June	2004	138	34	29	26	17	11	10	6	8	1	3	3	286	0.74	-26
6-8 June	2005	149	80	19	21	22	20	18	6	10	5	2	3	355	1.24	24
8-10 June	2006	123	55	29	20	2	6	13	7	10	4	4	17	290	0.82	-18
11-12 June	2007	44	19	12	14	4	5	4	4	3	1	1	9	120	0.41	-59
7-9 June	2008	96	46	16	20	10	4	9	6	4	3	1	13	228	1.90	90
7-8 June	2011	71	38	14	5	8	6	7	6	2	2	0	3	162	0.89	-11
7-8 June	2012	63	39	18	11	6	1	10	8	9	3	1	1	170	1.05	5
	2014															
Average =		116	51	34	21	12	8	10	7	8	3	1	5	276		

Ram Composition, Atigun Pass, 1986-2014

Western Interior Alaska Subsistence Regional Advisory Council
c/o Office of Subsistence Management
1011 East Tudor Road, MS 121
Anchorage, Alaska 99503-6199
Phone: 907-786-3888 Fax: 1-907-786-3898
Toll Free: 1-800-478-1456

In reply refer to:
OSM.23059

MAY 18 2023

Douglas Vincent-Lang
Commissioner
Alaska Department of Fish and Game
P.O. Box 115526
Juneau, Alaska 99811-5526

Dear Commissioner Vincent-Lang,

I write to you on behalf of the Western Interior Alaska Subsistence Regional Advisory Council (Council). The Council is seeking feedback on the enclosed draft Dall Sheep Management Plan (DSMP) for the Central Brooks and Alaska Ranges.

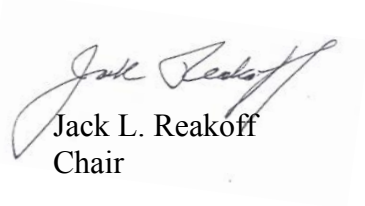
The Council represents subsistence harvesters of fish and wildlife resources on Federal public lands and waters in the Western Interior Alaska Region. The Council was established by the authority in Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA) and chartered under the Federal Advisory Committee Act. Section 805 of ANILCA and the Council's charter establish the Council's authority to initiate, review and evaluate proposals for regulations, policies, management plans, and other matters related to subsistence uses of fish and wildlife within the region. The Council also reviews resource management actions occurring outside their regions that may impact subsistence resources critical to communities served by the Council. The Council provides a forum for the expression of opinions and recommendations regarding any matter related to the subsistence uses of fish and wildlife within the region.

Over the last ten years, the Council has become increasingly concerned about the population decline of Dall sheep in the Central Brooks and Alaska Ranges. These declines are due to multiple climate events that have negatively impacted the sheep's ability to survive winter. The sheep population in these areas has been reduced to numbers far below the long-term carrying capacity of the habitat. The Council members that reside in the region would like to take a proactive role in ensuring the sheep population rebounds as quickly as possible. These animals are relied on for subsistence needs, and the Council wishes to address this decline so that residents can continue to rely on these animals for consumptive use. The enclosed DSMP, which was introduced and discussed at the Council's Winter 2023 meeting, is the Council's way of furthering multi-agency conversations and actions on these concerns to ultimately establish an agreed upon management plan for sheep in these areas.

Currently, the Council is in the process of soliciting comments from the Alaska Department of Fish and Game as well as affected Federal agencies, and the North Slope and Eastern Interior Regional Advisory Councils on the DSMP. The Council will revisit the DSMP, review and assess comments received, and update the plan's draft at their Fall 2023 meeting, which will take place on October 11-12, 2023 in Fairbanks. Afterwards the Council plans on presenting the DSMP to the Federal Subsistence Board for their review and decision.

The Council would like to thank you and the Alaska Department of Fish and Game in advance for reviewing and providing comments on the DSMP. Any questions or comments regarding this matter can be addressed to me or through the Council Coordinator Nissa Pilcher at (907) 891-9054 or nissa_batespilcher@fws.gov.

Sincerely,



Jack L. Reakoff
Chair

Enclosure

cc: Federal Subsistence Board
Office of Subsistence Management
Western Interior Alaska Subsistence Regional Advisory Council
North Slope Alaska Subsistence Regional Advisory Council
Eastern Interior Alaska Subsistence Regional Advisory Council
Interagency Staff Committee
Benjamin Mulligan, Deputy Commissioner, Alaska Department of Fish and Game
Mark Burch, Special Projects Coordinator, Alaska Department of Fish and Game
Administrative Record

Gates of the Arctic National Park
Subsistence Resource Commission
4175 Geist Road
Fairbanks, Alaska 99709
(907) 455-0639 or Fax (907) 455-0601

August 10, 2023

Chairman Steve Oomittuk
North Slope Regional Advisory Council
c/o Leigh Honig
Office of Subsistence Management
U.S. Fish and Wildlife Service
1011 E. Tudor Road, Mail Stop 121
Anchorage, Alaska 99503

Dear North Slope RAC members,

We are submitting a letter from the Gates of the Arctic National Park Subsistence Resource Commission (SRC) asking for the North Slope Regional Advisory Council to reappoint Esther Hugo (Anaktuvuk Pass) to the SRC. At our SRC meeting held in Fairbanks on April 18-19, 2023, it was noted that Esther Hugo's term expired on March 15, 2023. Esther's original appointment source to the SRC is the North Slope RAC and she is qualified and interested to continue serving on the SRC.

Thank you for your time and consideration.

Sincerely,

Taqulik Hepa

Taqulik Hepa, Gates of the Arctic SRC Chair

Jack Reakoff

Jack Reakoff, Gates of the Arctic SRC Vice-Chair

Alaska Department of Fish and Game
Subsistence Division

Review of Arctic Area Subsistence Division Projects

Helen Cold
ADF&G Subsistence Division

Presentation to the North Slope RAC
October 31-November 1, 2023

Assessing the Effects of Oil Activity on Subsistence in Nuiqsut, Alaska

- **Funding Agency:** Oil Search Alaska (OSA)
- **Purpose:** Investigate the effects of oil development activities and associated infrastructure on Nuiqsut subsistence hunters
- **Focus area:** Nuiqsut
- **Methods:**
  - Ethnographic interviews with mapping component
  - Project designed in coordination with Nuiqsut Subsistence Fisheries project to reduce community research fatigue
- **Project timeline:**
  - Project Start 10/2021, project end 02/2025
  - Semi-structured key respondent interviews with a mapping component
  - Conducted 14 total recorded interviews between April 2022-April 2023
- **Future work:**
  - Complete interview analysis
  - Community review of results
  - Finalize project report by February 2025

Wainwright Comprehensive Survey

- **Funding Agency:** Bureau of Land Management (BLM)
  - Partnership between community of Wainwright and ADF&G Subsistence, with NSBWD input and guidance
- **Purpose:** Conduct a subsistence harvest update to assess changes in past 10 years
- **Focus area:** Wainwright
- **Methods:**
  - Household surveys
  - Ethnographic interviews with mapping component
  - Participant observation
- **Project timeline:**
  - Start/End: 2022-2025
  - 1 year of surveys focusing on harvests of major resources
- **Future work:**
  - Fieldwork approved by Village of Wainwright December 2022
  - Community outreach conducted July 25-28, 2023
  - Surveys planned for February 6-15, 2024

Wainwright Beluga TEK Project

- **Funding Agency:** Bureau of Ocean Energy Management (BOEM)
- **Purpose:** Work with Wainwright residents to document TEK of belugas and beluga hunting, including when and where hunters catch belugas, how people hunt and process belugas, and the cultural importance of belugas
- **Focus area:** Wainwright
- **Methods:**
  - Household surveys
  - Ethnographic interviews with mapping component
  - Participant observation
- **Project timeline:**
  - Start/End: 2023-2026
  - Project approved by Village of Wainwright May 2023
  - Community outreach visit July 25-28, 2023
- **Future work:**
  - Initial interviews February 2024
  - Participant observation visit summer 2024


Questions?
Thank you!
Helen Cold
ADF&G Subsistence Division
(907) 328-6107 office
(262) 599-3022 cell
Helen.cold@alaska.gov

Winter 2024 Regional Advisory Council Meeting Calendar

Last updated 5/2/2023

Due to travel budget limitations placed by Department of the Interior on the U.S. Fish and Wildlife Service and the Office of Subsistence Management, the dates and locations of these meetings will be subject to chang

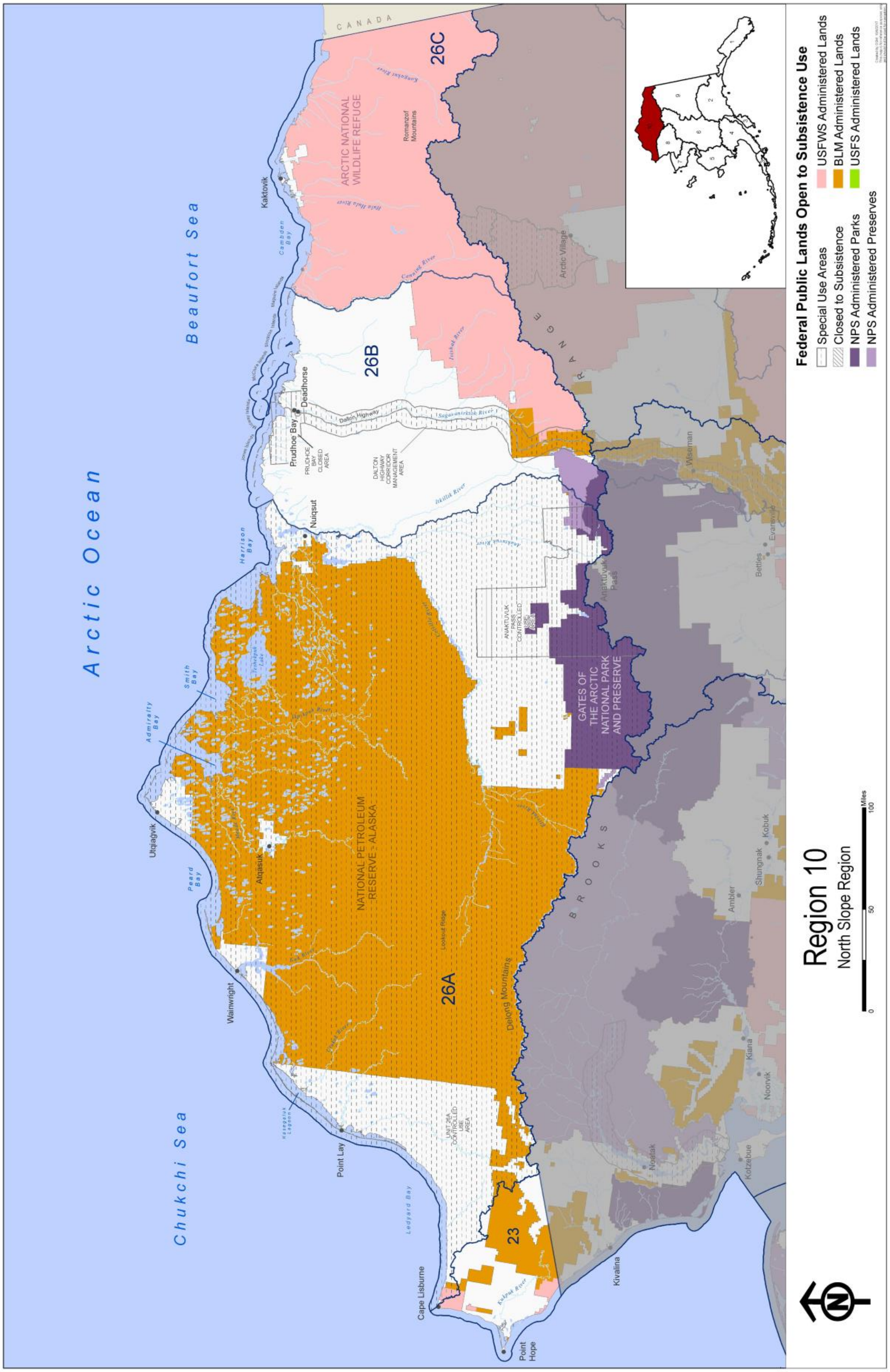
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					Mar. 1	*Mar. 2*
Mar. 3	*Mar. 4 Window Opens*	*Mar. 5*	*Mar. 6*	*Mar. 7*	*Mar. 8*	*Mar. 9*
		All Regions Meeting (Anchorage)				
Mar. 10	*Mar. 11*	*Mar. 12*	*Mar. 13*	*Mar. 14*	*Mar. 15*	*Mar. 16*
Mar. 17	*Mar. 18*	*Mar. 19*	*Mar. 20*	*Mar. 21*	*Mar. 22*	*Mar. 23*
Mar. 24	*Mar. 25*	*Mar. 26*	*Mar. 27*	*Mar. 28*	*Mar. 29 Window Closes*	*Mar. 30*

Fall 2024 Regional Advisory Council Meeting Calendar

Last updated 3/3/2023

Due to travel budget limitations placed by Department of the Interior on the U.S. Fish and Wildlife Service and the Office of Subsistence Management, the dates and locations of these meetings will be subject to chang

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Aug. 18	*Aug. 19* ***Window Opens***	*Aug. 20*	*Aug. 21*	*Aug. 22*	*Aug. 23*	*Aug. 24*
	NSRAC (Utqiagvik)					
Aug. 25	*Aug. 26*	*Aug. 27*	*Aug. 28*	*Aug. 29*	*Aug. 30*	*Aug. 31*
Sep. 1	*Sep. 2* ***Labor Day Holiday***	*Sep. 3*	*Sep. 4*	*Sep. 5*	*Sep. 6*	*Sep. 7*
			KARAC (Unalaska)			
Sep. 8	*Sep. 9*	*Sep. 10*	*Sep. 11*	*Sep. 12*	*Sep. 13*	*Sep. 14*
Sep. 15	*Sep. 16*	*Sep. 17*	*Sep. 18*	*Sep. 19*	*Sep. 20*	*Sep. 21*
Sep. 22	*Sep. 23*	*Sep. 24*	*Sep. 25*	*Sep. 26*	*Sep. 27*	*Sep. 28*
Sep. 29	*Sep. 30*	*Oct. 1*	*Oct. 2*	*Oct. 3*	*Oct. 4*	*Oct. 5*
			WIRAC (Aniak)			
Oct. 6	*Oct. 7*	*Oct. 8*	*Oct. 9*	*Oct. 10*	*Oct. 11*	*Oct. 12*
		EIRAC (Tanana)		**SCRAC** (Anchorage)		
Oct. 13	*Oct. 14* ***Columbus Day Holiday***	*Oct. 15*	*Oct. 16*	*Oct. 17*	*Oct. 18*	*Oct. 19*
		YKDRAC (Bethel)				
Oct. 20	*Oct. 21*	*Oct. 22*	*Oct. 23*	*Oct. 24*	*Oct. 25*	*Oct. 26*
				SPRAC (Nome)		
		SEARAC (Ketchikan)				
Oct. 27	*Oct. 28*	*Oct. 29*	*Oct. 30*	*Oct. 31*	*Nov. 1* ***Window Closes***	*Nov. 2*
		BBRAC (Dillingham)				
	NWARAC (Kotzebue)					


Region 10
North Slope Region
Federal Public Lands Open to Subsistence Use
Special Use Areas
Closed to Subsistence
NPS Administered Parks
NPS Administered Preserves
USFWS Administered Lands
BLM Administered Lands
USFS Administered Lands
Miles
0
50
100
Arctic Ocean
Beaufort Sea
Chukchi Sea
CANADA
26A
26B
26C
23
NATIONAL PETROLEUM RESERVE - ALASKA
ARCTIC NATIONAL WILDLIFE REFUGE
GATES OF THE ARCTIC NATIONAL PARK AND PRESERVE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
PRUDHOE BAY CLOSED AREA
B R O O K S
R A N G E
DeLong Mountains
Romanzof Mountains
Dalton Highway
Utqiagvik
Wainwright
Point Lay
Cape Lisburne
Point Hope
Kivalina
Atqasuk
Nuiqsut
Prudhoe Bay
Deadhorse
Kaktovik
Arctic Village
Anaktuvuk Pass
Wiseman
Bettles
Evansville
Kobuk
Shungnak
Ambler
Kiana
Noorvik
Noatak
Kotzebue

Department of the Interior
U. S. Fish and Wildlife Service

North Slope Subsistence Regional Advisory Council

Charter

1. Committee's Official Designation. The Council's official designation is the North Slope Subsistence Regional Advisory Council (Council).

2. Authority. The Council is renewed by virtue of the authority set out in the Alaska National Interest Lands Conservation Act (ANILCA) (16 U.S.C. 3115 (1988)) Title VIII, and under the authority of the Secretary of the Interior, in furtherance of 16 U.S.C. 410hh-2. The Council is regulated by the Federal Advisory Committee Act (FACA), as amended, (5 U.S.C., Appendix 2).

3. Objectives and Scope of Activities. The objective of the Council is to provide a forum for the residents of the Region with personal knowledge of local conditions and resource requirements to have a meaningful role in the subsistence management of fish and wildlife on Federal lands and waters in the Region.

4. Description of Duties. Council duties and responsibilities, where applicable, are as follows:

a. Recommend the initiation, review, and evaluate of proposals for regulations, policies, management plans, and other matters relating to subsistence uses of fish and wildlife on public lands within the region.

b. Provide a forum for the expression of opinions and recommendations by persons interested in any matter related to the subsistence uses of fish and wildlife on public lands within the Region.

c. Encourage local and regional participation in the decision-making process affecting the taking of fish and wildlife on the public lands within the region for subsistence uses.

d. Prepare an annual report to the Secretary containing the following:

(1) An identification of current and anticipated subsistence uses of fish and wildlife populations within the Region;

(2) An evaluation of current and anticipated subsistence needs for fish and wildlife populations within the Region;

(3) A recommended strategy for the management of fish and wildlife populations within the Region to accommodate such subsistence uses and needs; and

(4) Recommendations concerning policies, standards, guidelines, and regulations to implement the strategy.

e. Appoint one member to the Gates of the Arctic National Park Subsistence Resource Commission in accordance with section 808 of the ANILCA.

f. Make recommendations on determinations of customary and traditional use of subsistence resources.

g. Make recommendations on determinations of rural status.

h. Provide recommendations on the establishment and membership of Federal local advisory committees.

5. Agency or Official to Whom the Council Reports. The Council reports to the Federal Subsistence Board Chair, who is appointed by the Secretary of the Interior with the concurrence of the Secretary of Agriculture.

6. Support. The U.S. Fish and Wildlife Service will provide administrative support for the activities of the Council through the Office of Subsistence Management.

7. Estimated Annual Operating Costs and Staff Years. The annual operating costs associated with supporting the Council's functions are estimated to be $165,000, including all direct and indirect expenses and 1.0 staff years.

8. Designated Federal Officer. The DFO is the Subsistence Council Coordinator for the Region or such other Federal employee as may be designated by the Assistant Regional Director – Subsistence, Region 11, U.S. Fish and Wildlife Service. The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO will:

(a) Approve or call all Council and subcommittee meetings;

(b) Prepare and approve all meeting agendas;

(c) Attend all committee and subcommittee meetings;

(d) Adjourn any meeting when the DFO determines adjournment to be in the public interest; and

(e) Chair meetings when directed to do so by the official to whom the advisory committee reports.

9. Estimated Number and Frequency of Meetings. The Council will meet 1-2 times per year, and at such times as designated by the Federal Subsistence Board Chair or the DFO.

10. Duration. Continuing.

11. Termination. The Council will be inactive 2 years from the date the charter is filed, unless prior to that date, the charter is renewed in accordance with provisions of section 14 of the FACA. The Council will not meet or take any action without a valid current charter.

12. Membership and Designation. The Council's membership is composed of representative members as follows:

Ten members who are knowledgeable and experienced in matters relating to subsistence uses of fish and wildlife and who are residents of the region represented by the Council.

To ensure that each Council represents a diversity of interests, the Federal Subsistence Board in their nomination recommendations to the Secretary will strive to ensure that seven of the members (70 percent) represent subsistence interests within the region and three of the members (30 percent) represent commercial and sport interests within the region. The portion of membership representing commercial and sport interests must include, where possible, at least one representative from the sport community and one representative from the commercial community.

The Secretary of the Interior will appoint members based on the recommendations from the Federal Subsistence Board and with the concurrence of the Secretary of Agriculture.

Members will be appointed for 3-year terms. Members serve at the discretion of the Secretary.

If appointments for a given year have not yet been announced, a member may continue to serve on the Council following the expiration of his or her term until such appointments have been made. Unless reappointed, the member's service ends on the date of announcement even if that member's specific seat remains unfilled.

Alternate members may be appointed to the Council to fill vacancies if they occur out of cycle. An alternate member must be approved and appointed by the Secretary before attending the meeting as a representative. The term for an appointed alternate member will be the same as the term of the member whose vacancy is being filled.

Council members will elect a Chair, Vice-Chair, and Secretary for a 1-year term.

Members of the Council will serve without compensation. However, while away from their homes or regular places of business, Council and subcommittee members engaged in Council, or subcommittee business, approved by the DFO, may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in Government service under Section 5703 of title 5 of the United States Code.

13. Ethics Responsibilities of Members. No Council or subcommittee member will participate in any Council or subcommittee deliberations or votes relating to a specific party matter before the Department or its bureaus and offices including a lease, license, permit, contract, grant, claim, agreement, or litigation in which the member or the entity the member represents has a direct financial interest.

14. Subcommittees. Subject to the DFO's approval, subcommittees may be formed for the purpose of compiling information or conducting research. However, such subcommittees must act only under the direction of the DFO and must report their recommendations to the full Council for consideration. Subcommittees must not provide advice or work products directly to the Agency. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

15. Recordkeeping. The Records of the Council, and formally and informally established subcommittees or other subgroups of the Council, must be handled in accordance with General Records Schedule 6.2, and other approved Agency records disposition schedules. These records must be available for public inspection and copying, subject to the Freedom of Information Act (5 U.S.C. 552).

/signature on the filed original/
Secretary of the Interior

Dec. 10, 2021
Date Signed

Dec. 13, 2021
Date Filed

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