

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL Meeting Materials - Book 2

October 27-28, 2022 Bethel



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On the cover...

A string of salmon called kairneq (jerky) hang in the smokehouse, curing into food that will last the rest of the year.



JSFWS Photo

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YUKON KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Yupiit Piciryarait Cultural Center Bethel, AK October 27-28, 2022 9:00AM-5:00PM

- **TELECONFERENCE:** call the toll-free number: 1-866-326-9183, then when prompted enter the passcode: 48576438
- **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

*Asterisk identifies action item.

1. Invocation

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- 8. Service Awards
- 9. Public and Tribal Comment on Non-Agenda Items (available each morning)

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11. New Business (Chair)

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		ii. Donlin Gold LLC	
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		i. Anchorage Field Office Report	
	f.	Alaska Department of Fish and Game	
		i. Division of Subsistence Report	
	g.	Office of Subsistence Management	
13.	Fu	ture Meeting Dates*	
	a.	Confirm winter 2023 meeting date and location	

14. Closing Comments

15. Adjourn (*Chair*)

To call into the meeting, dial the toll free number: 1-866-326-9183, then when prompted enter the passcode: 48576438

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 Brooke McDavid, 907-891-9181, brooke_mcdavid@fws.gov, or 800-877-8339 (TTY), by close of business on October 20, 2022.

	FP23–02 Executive Summary		
General Description	Proposal FP23-02 requests the Federal Subsistence Board to recognize customary and traditional uses of Chinook, summer Chum, Coho, Sockeye, and Pink salmon in the Yukon River drainage by residents of Chevak, Hooper Bay, and Scammon Bay. <i>Submitted by:</i> <i>Chevak Native Village</i> .		
Proposed Regulation	Customary and traditional use determinations—Fish		
	Yukon-Northern Area		
	Yukon River drainage	Salmon other than- Fall Chum- Salmon	Rural residents of the Yukon River drainage and the community of community of Stebbins, Scammon Bay, Hooper Bay, and Chevak
	Yukon River drainage	Fall Chum Salmon	Rural residents of the- Yukon River drainage- and the communities of- Stebbins, Scammon Bay,- Hooper Bay, and Chevak
	Yukon River drainage	Freshwater fish species (other than salmon)	<i>Residents of the Yukon-</i> <i>Northern Area</i>
	Remainder of the Yukon-Northern Area	All fish	Residents of the Yukon- Northern Area, excluding the residents of the Yukon River drainage and excluding those domiciled in Unit 26B
	Tanana River drainage contained within the Tetlin NWR and the Wrangell-St. Elias NPP	Freshwater fìsh (other than salmon)	Residents of the Yukon- Northern Area and residents of Chistochina, Mentasta Lake, Slana, and all residents living between Mentasta Lake and Chistochina

	FP23–02 Executive Summary
OSM Preliminary Conclusion	Support
Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation	
Western Interior Alaska Subsistence Regional Advisory Council Recommendation	
Seward Peninsula Subsistence Regional Advisory Council Recommendation	
Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	None

DRAFT STAFF ANALYSIS FP23-02

ISSUES

Proposal FP23-02, submitted by the Chevak Native Village, requests the Federal Subsistence Board (Board) to recognize customary and traditional uses of Chinook, summer Chum, Coho, Sockeye, and Pink salmon in the Yukon River drainage by residents of Chevak, Hooper Bay, and Scammon Bay.

DISCUSSION

The proponent states that residents of Chevak, Hooper Bay, and Scammon Bay depend on Chinook, summer Chum, Coho, Sockeye, and Pink salmon in the Yukon River drainage and should be able to harvest salmon under Federal regulations. The current customary and traditional use determinations for Yukon River drainage salmon were adopted from State regulations in 1992 at the beginning of the Federal Subsistence Management Program and should be modified to include these three coastal communities.

For the purpose of the customary and traditional use determinations for salmon, the Yukon River drainage consists of waters flowing into the Bering Sea from Point Romanof extending south and west along the coast of the delta to approximately one nautical mile south of the mouth of the Black River, based on the description of the Yukon River drainage in regulation in **Appendix 1**. District 1 of the Yukon River drainage encompasses the mouth of the Yukon River and the Black River, as shown in **Figure 1**. The Coastal District, which encompasses the three communities, is shown in **Figure 2**.

In contrast, for the propose of managing seasons, harvest limits, and gear, the "Yukon River drainage" encompasses the entire Yukon Area. This has confused interpretation of these customary and traditional use determinations, which this analysis is intended to fix.

Existing Federal Regulation

Customary and traditional use determinations—Fish

Yukon-Northern Area

Yukon River drainage	Salmon other than Fall Chum Salmon	<i>Residents of the Yukon River</i> <i>drainage and the community of</i> <i>community of Stebbins</i>
Yukon River drainage	Fall Chum Salmon	Residents of the Yukon River drainage and the communities of Stebbins, Scammon Bay, Hooper
		Bay, and Chevak

Yukon River drainage	Freshwater fish species (other than salmon)	<i>Residents of the Yukon-Northern</i> <i>Area</i>
Remainder of the Yukon- Northern Area	All fish	Residents of the Yukon-Northern Area, excluding the residents of the Yukon River drainage and excluding those domiciled in Unit 26B
Tanana River drainage contained within the Tetlin NWR and the Wrangell-St. Elias NPP	Freshwater fish (other than salmon)	Residents of the Yukon-Northern Area and residents of Chistochina, Mentasta Lake, Slana, and all residents living between Mentasta Lake and Chistochina

Proposed Federal Regulation

Customary and traditional use determinations—Fish

Yukon-Northern Area

Yukon River drainage	Salmon other than Fall Chum Salmon	Residents of the Yukon River drainage and the community of community of Stebbins, Scammon Bay, Hooper Bay, and Chevak
Yukon River drainage	Fall Chum Salmon	Residents of the Yukon River drainage and the communities of Stebbins, Scammon Bay, Hooper- Bay, and Chevak
Yukon River drainage	Freshwater fish species (other than salmon)	Residents of the Yukon-Northern Area
Remainder of the Yukon- Northern Area	All fish	Residents of the Yukon-Northern Area, excluding the residents of the Yukon River drainage and excluding those domiciled in Unit 26B

Tanana River drainage contained within the Tetlin NWR and the Wrangell-St. Elias NPP* Freshwater fish (other than salmon)

Residents of the Yukon-Northern Area and residents of Chistochina, Mentasta Lake, Slana, and all residents living between Mentasta Lake and Chistochina

*Note: NWR=National Wildlife Refuge and NNP=National Park and Preserve.

Relevant Federal Regulations

50 CFR 100.14 Relationship to State procedures and regulations.

(a) State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part.

Relevant State Regulations

5 AAC 05.100 - Description of Yukon Area

The Yukon Area includes all waters of Alaska between a line extending 315° northwest from Point Romanof at 63° 12.16' N. lat., 162° 49.72' W. long. to a point three nautical miles offshore at 63° 14.27' N. lat., 162° 54.40' W. long. and the latitude of the westernmost point of the Naskonat Peninsula, including those waters draining into the Bering Sea.

Descriptions of Yukon Area districts and subdistricts in State regulations are in **Appendix 1**. These State regulations that include Federal public waters are incorporated into these Federal regulations.

Extent of Federal Public Waters

For purposes of this discussion, the phrase "Federal public waters" is defined as those waters described under 50 CFR 100.3. Federal public waters in the Yukon Area include all navigable and non-navigable freshwaters located within and adjacent to the exterior boundaries of the following Federal conservation units: Arctic, Innoko, Kanuti, Koyukuk, Nowitna, Tetlin, Yukon Delta, and Yukon Flats National Wildlife Refuges, Yukon-Charley Rivers National Preserve, Gates of the Arctic National Park and Preserve, and Wrangell St. Elias National Park and Preserve, Steese National Conservation Area, and White Mountains National Recreation Area. Federal public waters also include those segments of Beaver Creek, Birch Creek, Delta River, and Fortymile River National Wild and Scenic River systems located outside the boundaries of the other listed Federal conservation units (see Lower Yukon River Map and Upper Yukon River Map).

Inland freshwaters in Yukon District 1 and the Coastal District, nearby the communities in this proposal, are entirely within the outer boundary of the Yukon Delta National Wildlife Refuge. District 1



Figure 1. Map showing District 1 of the Yukon River drainage. The Black River drainage is situated within District 1 (Source: Estensen et al. 2018).



Figure 2. Map showing the Coastal District of the Yukon Area. The communities of Chevak, Hooper Bay, and Scammon Bay are situated within the Southern Coastal District (Source: Estensen et al. 2018).

encompassing the mouth of the Yukon River and the Black River is shown in **Figure 1**. The Coastal District, which encompasses the three communities, is shown in **Figure 2**.

Regulatory History

In 1987, the Alaska Board of Fisheries adopted a regulation limiting the subsistence harvest of fall Chum Salmon in the Yukon River drainage to rural residents of the Yukon River drainage and the communities of Chevak, Hooper Bay, Scammon Bay, and Stebbins (State of Alaska July 1987 Register 102: page 5-14). The communities of Chevak, Hooper Bay, Scammon Bay, Scammon Bay, and Stebbins were considered outside the Yukon River drainage. Stebbins was outside the northern boundary of the Yukon Area.

It appears the definitions differ between the "Yukon River drainage" and the broader "Yukon Area," because the communities of Chevak, Hooper Bay, and Scammon Bay were specifically cited. The new regulation is in **bolded** language:

5 AAC 01.235 Limits on Participation in Subsistence Finfish Fisheries—Yukon Area

(a) Only those residents domiciled in the community of Nenana between mile posts 300 and 309 of the Parks Highway and in the community of Minto may take pike in the waters of the Tolovana River drainage upstream of its confluence with the Tanana River.

(b) Only those residents domiciled in rural locations in the Yukon River drainage as determined by the joint Boards of Fisheries and Game under 5 AAC 99, and the communities of Stebbins, Scammon Bay, Hooper Bay, and Chevak may take Yukon River Fall chum salmon for subsistence purposes.

In 1988, the Alaska Board of Fisheries adopted a regulation limiting subsistence harvests of all salmon in the Yukon Area to rural residents of the Yukon Area and the community of Stebbins (State of Alaska April 1988 Register 105: page 5-15). Scammon Bay, Hooper Bay, and Chevak were considered within the Yukon Area. This new regulation for the Yukon Area, *(a)* below, encompassed the previous regulation for the Yukon River drainage, *(b)* below. The new regulation is in **bolded** language:

5 AAC 01.235 Limits on Participation in Subsistence Finfish Fisheries—Yukon Area

(a) Only those residents domiciled in the community of Nenana between mile posts 300 and 309of the Parks Highway and in the community of Minto may take pike in the waters of the-Tolovana River drainage upstream of its confluence with the Tanana River.

(a) Only those residents domiciled in the rural locations of the Yukon Area, as determined by the joint Boards of Fisheries and Game in 5 AAC 99.014 and in the community of Stebbins may take salmon in the Yukon Area.

(b) Only those residents domiciled in rural locations in the Yukon River drainage, as determined by the joint Boards of Fisheries and Game under 5 AAC 99, and the communities of Stebbins,

Scammon Bay, Hooper Bay, and Chevak may take Yukon River Fall chum salmon for subsistence purposes.

(c) Only those residents domiciled in rural locations in the Yukon Area, as determined by the joint Boards of Fisheries and Game in 5 AAC 99.014, may take freshwater fish species, including sheefish, whitefish, lamprey, burbot, sucker, grayling, pike, char, and blackfish, in the Yukon Area.

. . . .

In 1992, the Federal Subsistence Board adopted Yukon Area customary and traditional use determinations for salmon and freshwater fishes that were in State regulations (57 Fed. Reg. 104, 22962 [May 29, 1992]). The difference between the definitions of the "Yukon River drainage" and the "Yukon Area," mentioned above, appeared to still exist in the new Federal regulations:

Customary and Traditional Use Determinations for Fish—Yukon Area

Yukon Area	Salmon	Rural residents of the Yukon Area, including the community of Stebbins
Yukon River	Fall Chum Salmon	Rural residents of the Yukon River drainage, including the communities of Stebbins, Scammon Bay, Hooper Bay, and Chevak
Yukon Area	Freshwater fish	Residents of the Yukon Area

In 1993, the Alaska Board of Fisheries revised all State customary and traditional use findings to include all residents of Alaska (State of Alaska July 1993 Register 126: page 21). Subsequently, for the State, any question of effects of these regulations on residents of Chevak, Hooper Bay, and Scammon Bay was no longer relevant. The new regulation was the following:

5 AAC 01.236 Customary and Traditional Uses of Fish Stocks—Yukon-Northern Area

The Alaska Board of Fisheries finds that the following fish stocks are customarily and traditionally taken or used for subsistence:

(1) Salmon in the Yukon-Northern Area

• • •

In 1999, the Federal Subsistence Board announced it was revisiting customary and traditional use determinations statewide for fish and shellfish to incorporate determinations that the Board of Fisheries had made since 1990 where they applied on Federal public waters and were consistent with Title VIII of

the Alaska National Interest Lands Conservation Act, ANILCA. For those determinations made by the Board of Fisheries since 1990, the Board made a determination that eligibility for fisheries should be limited to the residents of the area identified (64 Fed. Reg. 64; 1279–1284 [January 8, 1999]). The new regulations are in **bolded** language:

Yukon River Area drainage	Salmon other than Fall Chum Salmon	Rural residents of the Yukon River drainage and the community of community of Stebbins
Yukon River drainage	Fall Chum Salmon	Rural residents of the Yukon River drainage and the communities of Stebbins, Scammon Bay, Hooper Bay, and Chevak
Yukon River drainage	Freshwater fish species (other than salmon)	Residents of the Yukon-Northern Area
Remainder of the Yukon- Northern Area	All fish	Residents of the Yukon-Northern Area, excluding the residents of the Yukon River drainage and excluding those domiciled in Unit 26B

Customary and traditional use determinations for fish-Yukon-Northern Area

Again, the difference between the definitions of the "Yukon River drainage" and the "Yukon Area," mentioned above, appeared to still exist in the newly modified Federal regulations (67 Fed. Reg. 26, 5893 [February 7, 2002]). It appears residents of the communities of Chevak, Hooper Bay, and Scammon Bay were considered to be outside of the Yukon River drainage for the purposes of these customary and traditional use determinations. Instead, the three communities were within the "Remainder" area of the Yukon-Northern Fisheries Management Area. If this was true, the communities had a determination for all salmon species in the Yukon-Northern Area except for in the Yukon River drainage. In the Yukon River drainage, the communities were eligible to harvest fall Chum Salmon only. In contrast, for the propose of managing seasons, harvest limits, and gear, the "Yukon River drainage" encompasses the entire Yukon Area. This has confused interpretation of these customary and traditional use determinations is intended to fix.

Eight Factors for Determining Customary and Traditional Use

Customary and traditional uses in a community or area is generally exemplified through the 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. 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 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.

Introduction

The ancestors of people living in the area of Chevak, Hooper Bay, and Scammon Bay have relied on a seasonal round of wild resource harvesting in which salmon was prominent for at least several thousand years. Evidence suggests the ancestors of contemporary Central Yup'ik people most likely settled coastal areas of the Yukon-Kuskokwim delta by sometime after 4,500 years ago. The area consists of an intricate web of waterways ultimately flowing into the Bering Sea. VanStone (1984a:227) notes, "From the earliest times people were oriented toward a maritime economy in which the seal was the most important animal hunted. On the adjacent tundra there was some caribou hunting, and fishing for salmon was significant at the mouths of rivers and in certain bays."

A resident of Chevak further describes this longevity,

Before the missionaries, we were nomadic. . . . There are no further records, but we can establish that our forefathers have lived for generations before our first known establishment or communal remains in *Nunaruluq*. . . . Artifacts are proof that our forefathers were here for generations before the influx of the western society (Slats 2022, pers. comm.)

The area is crisscrossed by waterways, sloughs, and lakes that allow routes for people to access interior areas. Coastal areas are shallow, which discouraged Europeans from visiting the area, and as a result Yupiit in coastal areas had intensive contact with Europeans later than those who lived along the banks of the Yukon River, for example. While people lived in numerous settlements situated near to seasonal

migrations of fish, birds, seals, caribou, and other animals, "It was the presence of predictable supplies of salmon that made possible large and stable concentration of population" in this nomadic network (VanStone 1984b:207).

Historical settlements in the vicinity of these three communities are numerous (Fienup-Riordan 1986, Frink 2016, Godduhn et al. 2020). "Much of this rhythm of harvesting foods across the landscape is practiced even today. But a significant change is that the people of Chevak and other coastal communities are permanently settled. Some families still move out to the summer fish camp, and some will still travel to berry camp" (Frink 2016:26). Contemporary village sites are generally bases for winter activities. During summer, families disperse and reorganize into a number of smaller settlements, known as summer camps or fish camps. Some people are highly mobile between alternative dwelling places, especially during summer months (Ikuta 2016).

Processing, Preservation, and Storage

The ability to keep foods edible is time-consuming and requires training and ability because proper processing is critical. "In the extreme Arctic environment, being able to find and harvest your foods is crucial. But just as important is the attendant processing of the harvested animals. Without the proper processing of foods, the harvest would be meaningless. Women have perfected the art of processing foods for appropriate consumption and storage in the Arctic climate for thousands of year" (Frink 2016:31). Frink (2016) describes women processing salmon,

Salmon are commonly cut with their tails still in place and hung. . . After the fish are dried, some are smoked in plywood sheds enclosed by plastic tarps. Before these structures were used, women would smoke the fish with willow wood (still used as fuel) in small, sod-covered pits. After the fish are properly prepared, they are stored in five-gallon plastic buckets, which have largely replaced the use of woven grass bags (Frink 2016:40).

People at Scammon Bay said that they begin salmon harvesting with the arrival of the first Chinook and summer Chum Salmon. At Scammon Bay,

Salmon fishers set gillnets in coastal areas to harvest these fish and process their harvests by cutting, hanging, and drying fish for long-term storage. Some salmon are also smoked, salted, partially dried and frozen, fresh frozen, or eaten fresh. Salmon fishing continues throughout the summer months depending on the needs of individual families and fishing groups Fishers also set gillnets for pink salmon, coho salmon, and whitefishes in summer months (Ikuta et al. 2016:28).

People use store-bought foods to supplement meals but rely on subsistence or traditional foods (Frink 2016, Ikuta 2016).

The Subsistence Way of Life

People show animals respect in many ways (see Fienup-Riordan 1994, 2007). A resident of Chevak explained,

The subsistence way of life is taught from childhood until they begin living the subsistence ways, and the subsistence users will then teach their own children as they have been taught. . . . Hunting, fishing, handling, preparing, preserving, and storing are taught throughout their lives. The subsistence ways are a generational practice that is handed down for generations since time immemorial. . . . Fish and game that allowed itself to be caught is shown respect and is handled with care and processed with respect. All the parts are put back to the earth or the river with the understanding that they will return to you. All parts are used. . . . Nothing is wasted and we never take more than we need. We rely on the fish for maintaining our culture and heritage. Our fish camps are an integral part of what we use to teach our children subsistence (Slats 2022, pers. comm.).

Community Background

Residents of Chevak, Hooper Bay, and Scammon Bay rely on a seasonal round of wild resource harvesting in which salmon are prominent. These three communities are situated near one another on the Bering Sea coast in southwestern Alaska. Chevak is approximately 140 air miles from Bethel and 520 air miles from Anchorage, Alaska. These communities are accessible by airplane only. Residents are primarily of Yup'ik and Cup'ik (in Chevak and Hooper Bay) cultural traditions (Fienup-Riordan 1986; Slats 2022, pers. comm.).

Chevak (*Cev'ak*), or *Qissunamiut* "Kashunamiut" (people of *Qissunaq* "Kashunak"), is located on the north bank of the Ninglikfak River, which empties into Hooper Bay 17 miles to the east of Chevak. Earlier, people lived at Kashunak (known locally as *Nunaraluq*),

... when traders, and following them Jesuit missionaries, entered the region in the later 1800s and early 1900s. ... In 1949, the people of Kashunak left their village mound and brought their belongs upriver to Old Chevak, conveniently located at the confluence of the Keoklivik and Kashunak rivers. ... Shortly after the establishment of the village, Old Chevak was vacated in 1950, and the entire group moved to the present village of Chevak (Frink 2016:13)

Chevak was established in about 1950 by residents of Old Chevak because the Bureau of Indian Affairs would not build a school in the low marshy lands surrounding the site of Old Chevak (Frink 2016; Slats 2022, pers. comm.).

Hooper Bay (*Naparyaarmiut*) is the largest coastal community in the Yukon-Kuskokwim delta area and functions as the hub of transportation and trade for nearby villages. It is located two miles from the Bering Sea on the shores of Hooper Bay. The protected bay and abundance of wild resources attracted people to this village site. Hooper Bay was also known as *Askinuk* or *Askinaghamiut* (Orth 1967, FWS 1988).

The community of Scammon Bay (*Marayaaq*) is situated about one mile from the Bering Sea at the mouth of the Kun River. Historically, people called the people living there *Marayaarmiut* (people of *Marayaaq*). In the 1930s, people moved to the site of the contemporary Scammon Bay community to escape flooding, to attend church, to visit the nearby trading post, for children to attend school, and for other reasons (Ikuta et al. 2016, Godduhn et al. 2020).

The combined population of these communities has more than tripled in the 60 years between 1960 and 2020; in 2020, an estimated 2,926 people were permanent rural residents (**Table 1**, ADLWD 2022).

-			-				
Community	1960	1970	1980	1990	2000	2010	2020
Chevak city	315	387	466	598	765	938	951
Hooper Bay city	460	490	627	845	1,014	1,093	1,375
Scammon Bay city	115	166	250	343	465	474	600
Total	890	1,043	1,343	1,786	2,244	2,505	2,926

Table 1. The estimated number of people living in the communities of Chevak, Hooper Bay, and Scammon Bay, based on the U.S. Census (ADLWD 2022).

Geographic Use Areas/Method and Means

People living in the coastal communities of Chevak, Hooper Bay, and Scammon Bay harvest salmon from marine waters and freshwater rivers, streams, sloughs, and lakes.

Chevak residents harvest salmon primarily along the coast and in the lower stretches of some rivers from Nuok Spit in Hooper Bay south to the mouth of the Aphrewn River. Set and drift nets are used to harvest salmon (FWS 1988), but as put forth by a Chevak resident, "Methods and mean of harvest would be those that are allowed by law and regulation. We are law abiding citizens. We prefer use of traditional tools and means of taking fish and game to maintain our culture and heritage" (Slats 2022, pers. comm.) (see **Figure 3**). A resident of Chevak continued,

We have fished for all fish in the ponds, streams, creeks, rivers, and our seas. . . . We have hunted and fished for the land and water resources in Kashunak and the river south from Chevak, the Bay, and mainly the rivers south of our location since time immemorial. We will continue to hunt and fish so long as the wind shall blow and the grass still blooms. Closing of fish that has been our mainstay will turn a culture and tradition into a life of extreme hardship through regulations, instead of environmental and climatic challenges that have been evident throughout our lives" (Slats 2022, pers. comm.).

Hooper Bay residents harvest salmon primarily with set nets in Hooper Bay and numerous rivers near the community. A popular area is the tidal flats inward of Nuok Spit. The lower Kokechik River, the Kashunak River from Nanvaranak Lake downstream to the Keoklevik River, the Keoklevik River, and the mouth of the Kashunak River are all important salmon fishing areas. Chinook and Chum salmon are



Figure 3. Map showing some of the rivers, creeks, and lakes visited by residents of Chevak, Hooper Bay, and Scammon Bay to harvest salmon (base map google.com)

the primary species of salmon harvested. Some Pink and Coho salmon are also harvested (FWS 1988) (see **Figure 3**).

At Scammon Bay, sea ice-out typically occurs in late May, and people begin herring fishing. Salmon fishing begins with the arrival of the first Chinook and summer Chum salmon:

Some people set gillnets in the Kun River or in Scammon Bay within a short distance from the community. Others travel to family fish camp sites, some of which are within five to ten miles west of Scammon Bay along the coast. Other fish camps are as far away as 20 miles north along the coast at the mouth of Melatolik Creek, to 40 miles north in the lower portion of Black River (Ikuta et al. 2016:28).

Scammon Bay residents described where they traveled in 2013 in order to harvest salmon:

[People] harvested salmon in the lower five miles of the Black River, in an area of the Bering Sea surrounding the mouth of the Black River, and in a strip of ocean along the coast extending approximately 15 miles from the mouth of the Black River southwest towards the mouth of Melatolik Creek. Fishers also harvested salmon in the mouth of Melatolik Creek and in the mouth of the Kipungolak River where it drains into the Black River. [People] harvested salmon in locations close to Scammon Bay including in the Kun River, from the mouth of the Kikneak River and other sites downstream to the mouth of the Kun River. Fishers also harvested salmon in an area of the Scammon Bay water body extending from the community eight miles west along the coast (Ikuta et al. 2016:68).

Residents of the three communities travel to the mouth of the Yukon River to participate in salmon commercial and subsistence fisheries there (Wolfe 1981, 1982; Fienup-Riordan 1986; Crawford and Lingnau 2004; Ikuta et al. 2016). In the 1980s, "Scammon Bay families regularly moved north to fish salmon around the mouth of the Black River. In 1981 some Scammon Bay people fished along the south pass, apparently with fish camps established on Manning Island" at the south mouth of the Yukon River (Wolfe 1981:59). Residents of Hooper Bay and Chevak worked at the salmon processor in Mountain Village. Fienup-Riordan (1986) reported that from their fish camps just inside the mouth of the Black River (about 30 miles below the south mouth of the Yukon River), Scammon Bay "men sometimes move into the Yukon River proper, as far up as Mountain Village, to try their luck drifting. Also, after the commercial season closes at Black River, several families normally relocate to the north or middle mouths of the Yukon River to take advantage of the fall runs of Chum and Coho, which only briefly visit the Black River area" (Fienup-Riordan 1986:136).

Estimated Harvest of Salmon

In addition to population growth, social and economic changes have affected salmon harvesting in the area. One subsistence activity that impacted salmon harvesting levels was the use of salmon to feed sled dogs, described below.

The period from 1900 to 1940 encompasses the peak sled dog era in the Yukon River drainage . . . virtually every family maintained a small number of sled dogs In the 1930s airplanes began to replace commercial dog teams for the movement of freight and mail but sled dogs continued to provide the bulk of winter transportation for individuals and families throughout the Yukon River drainage (Andersen and Scott 2010:2–5).

During the summer of 1957, the U.S. Fish and Wildlife Service collected harvest information in the community of Scammon Bay and estimated a harvest of 2,270 Chum Salmon and observed 140 sled dogs. In Hooper Bay they estimated a harvest of 12,150 Chum Salmon and observed 116 sled dogs. In Chevak they estimated a harvest of 14,480 Chum Salmon and observed 350 sled dogs (Mattson 1962).

By the 1970s snowmobiles had largely replaced the family dog team although some people continue to keep dogs (Andersen and Scott 2010).

Division of Subsistence ADF&G Household Harvest Survey

Residents of the community of Scammon Bay collaborated with researchers at the Alaska Department of Fish and Game (ADF&G) Division of Subsistence in 2013 to estimate their community's harvests and describe their uses of wild resources (Ikuta et al 2016). While Chevak and Hooper Bay were not included in this research, some insight into the general use patterns of salmon can be gained because of their proximity and cultural similarities to Scammon Bay. Additionally, subsistence harvest surveys and ethnographic interviews were conducted by ADF&G Division of Subsistence in winter 2022 in Chevak and Hooper Bay, but results of these surveys have not yet been published at the time of this analysis (McDavid 2022, pers. comm.). Harvest of salmon plays a vital role in the seasonal round of all three communities.

Based on the household survey conducted in 2013, people at Scammon Bay harvested an estimated 11,488 salmon in 2013, or 85 pounds in edible weight per person. By far, most of the harvest was summer Chum Salmon (**Table 2**).

	Salmon	Lower harvest	Upper harvest	Per person harvest
Salmon species	estimated harvest	estimate	estimate	(in pounds of
-	(in fish)	(in fish)	(in fish)	edible weight)
Summer Chum	9,680	9,669	9,691	71.4
Fall Chum	157	156	159	1.2
Unknown Chum	43	43	43	0.3
Coho Salmon	139	138	139	1.0
Chinook Salmon	455	454	456	6.9
Pink Salmon	930	927	932	4.0
Sockeye Salmon	84	84	85	0.6
Total	11,488	11,475	11,500	85.4

Table 2. The estimated harvest of salmon by species in numbers of fish and per person in pounds of edible weight at Scammon Bay in 2013 (N=86 households) (Source: ADF&G 2022b).

Division of Commercial Fisheries ADF&G Postseason Harvest Survey

Only two of these communities are included in the State's salmon harvest monitoring program: Scammon Bay and Hooper Bay. **Table 3** describes the harvest of salmon by species and year from 2006 to 2021, based on the annual postseason salmon harvest survey conducted by the Division of Commercial Fisheries at ADF&G. Summer Chum Salmon are harvested at the highest levels in these communities. People have been able to harvest fewer and fewer salmon each year as conservation concerns for salmon have increased and harvest opportunities have been curtailed, especially in recent years, as demonstrated in **Table 3**.

Sharing of Wild Food Harvests

A Chevak resident described that people normally share their wild food harvests,

Sharing is our tradition, within our families, community members, and especially our elders. Customary trade is based on need for certain types of food that is not available in our areas, i.e. interior communities that don't have fish and game from the sea and vice versa. . . Gift giving is done during festivals, potlucks, and potlatches. Communities will give gifts to other communities that come to their communities for celebrations, festivals, potlatches, and potlucks (Slats 2022, pers. comm.)

People sharing their harvests of wild resources is a predominant feature of subsistence economies in Alaska. Salmon were and continue to be distributed through kin and community networks. A high level of sharing occurs at Scammon Bay, and households share, either through giving (45% of households) or receiving (58% of households), based on household surveys conducted in 2013 and local oral interviews with residents (ADF&G 2022b). For example, Ikuta and others (2016) documented that Scammon Bay households received salmon shared by Hooper Bay and Chevak households.

Reliance upon a Wide Diversity of Fish and Wildlife

Residents of Chevak, Hooper Bay, and Scammon Bay rely on a wide variety of wild resources. These resources comprise a substantial portion of their diet. The ADF&G Division of Subsistence household survey conducted in Scammon Bay in 2013 demonstrates this variety of use. **Table 4** describes this variety of wild foods. The overall harvest rate was 417 pounds in edible weight per person. Residents of Scammon Bay harvest fish (including salmon, halibut, herring, and whitefish), land mammals (including caribou and moose), and marine mammals (including seals), at the highest levels. Birds and eggs, vegetation (including berries), marine invertebrates (including clams and mussels), and small land mammals (including hares and porcupines) comprise smaller portions of annual harvests but are important components of the diet (ADF&G 2022b).

Chevak residents were not surveyed. Pink and Sockeye salmon questions were not on the survey (Source: ADF&G 2022a; 2019, 2020, Table 3. Estimated harvests of salmon for subsistence at Hooper Bay and Scammon Bay 2006–2021, based on postseason surveys.

Table 4. The harvest of wildlife resources by resource category, in pounds of edible weight, during one study year in 2013 at Scammon Bay, based on household surveys (N=86 households) (Source: ADF&G 2022b).

Wild resource category	Per Person harvest (in pounds edible weight)	Percentage of total wild resources harvested
Salmon	85	20%
Nonsalmon Fish	103	25%
Land Mammals	82	20%
Large Land Mammals	82	20%
Small Land Mammals	<1	<1%
Marine Mammals	84	20%
Birds and Eggs	40	10%
Marine Invertebrates	1	<1%
Vegetation	21	5%
All Resources	417	100%

Recent Events

In spring 2022, the Federal Subsistence Board adopted Fisheries Special Action FSA22-01 and closed Federal public waters of the Yukon Area to the harvest of salmon from June 1 through September 30, 2022. Any subsistence fishing opportunity on Federal public waters would be announced by the Federal Manager. This highlighted an issue, that Chevak, Hooper Bay, and Scammon Bay residents' customary and traditional use determination for salmon in the Yukon River drainage is for fall Chum Salmon only. If the Federal Manager provided opportunity to harvest salmon in District 1, residents of the three communities would not be eligible to harvest other species of salmon there, and Federal regulations prevent the Office of Subsistence Management from accepting a Special Action Request between two-year fishery regulatory cycles to modify a customary and traditional use determination, and therefore, a Special Action Request was not an option.

Staff requested the Chevak Native Village to submit this proposal requesting the Federal Subsistence Board to recognize the customary and traditional uses of all salmon species in the Yukon River drainage by residents of Chevak, Hooper Bay, and Scammon Bay.

Effects of the Proposal

If this proposal is adopted, residents of Chevak, Hooper Bay, and Scammon Bay will be eligible to harvest Chinook, summer Chum, Coho, Sockeye, and Pink salmon, in additional to fall Chum Salmon, under Federal regulations in the Yukon River drainage beginning April 1, 2023.

If this proposal is adopted, the primary effect on the three communities is to make them eligible to continue harvesting these salmon species, Chinook, summer Chum, Coho, Sockeye, and Pink salmon, in the Yukon River drainage when the Federal Manager, one, closes the drainage to the harvest of salmon

except by Federally qualified subsistence users, and two, provides subsistence fishing opportunity. Currently, residents of the three communities are not Federally qualified subsistence users of these salmon species, and most salmon harvesting in the Yukon River drainage by them has been under State regulations.

If this proposal is not adopted, residents of the three communities will continue to be non-eligible to harvest Chinook, summer Chum, Coho, Sockeye, or Pink salmon in the Yukon River drainage when it is closed to the harvest of these salmon species except by Federally qualified users and when harvest opportunity is provided by the Federal Manager. The effect on these communities can be substantial because they are highly dependent on salmon. For example, Yukon District 1 includes the Black River, which is a fish harvesting area frequently mentioned by residents of the communities.

OSM PRELIMINARY CONCLUSION

Support Proposal FP23-02.

Justification

Residents of Chevak, Hooper Bay, and Scammon Bay exemplify the customary and traditional use of all species of salmon in the Yukon River drainage. Traditionally and historically, residents of the three communities have used this area to harvest salmon, which is an important component of their diet and a large portion of their subsistence harvests each year.

Fisheries Special Action FSA22-01 was adopted by the Board in spring 2022 and highlighted that these three communities do not have a customary and traditional use determination for Chinook, summer Chum, Coho, Sockeye, or Pink salmon in the Yukon River drainage. The Chevak Native Village submitted this proposal on behalf of the residents of Chevak, Hooper Bay, and Scammon Bay.

In the past, State regulations have provided opportunities for these communities to harvest salmon in the Yukon River drainage, but FSA22-01, described above, closed the Federal public waters in the drainage to the harvest of salmon, and State regulations were no longer effective.

The Board should recognize the customary and traditional uses of all salmon in the Yukon River drainage by residents of Chevak, Hooper Bay, and Scammon Bay.

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APPENDIX 1

YUKON AREA FISHING DISTRICTS AND SUBDISTRICTS

5 AAC 05.100 - Description of Yukon Area

The Yukon Area includes all waters of Alaska between a line extending 315° northwest from Point Romanof at 63° 12.16' N. lat., 162° 49.72' W. long. to a point three nautical miles offshore at 63° 14.27' N. lat., 162° 54.40' W. long. and the latitude of the westernmost point of the Naskonat Peninsula, including those waters draining into the Bering Sea.

5 AAC 05.200 - Fishing districts and subdistricts

(a) District 1 consists of that portion of the Yukon River drainage from a line extending northwest from Point Romanof at 63°12.16' N. lat., 162° 49.72' W. long., to a point three nautical miles offshore at 63° 14.27' N. lat., 162° 54 .40' W. long., extending south and west along the coast of the delta to a line approximately one nautical mile south of the mouth of the Black River from 62° 20.58' N. lat., 165° 22.66' W. long., to a point located three nautical miles offshore at 62° 22.67' N. lat., 165° 27.37' W. long., including the waters within three nautical miles seaward from any grassland bank within that area, and upstream from the mouth of the Black River to the northern edge of the mouth of the Anuk River and all waters of the Black River.

(b) District 2 consists of that portion of the Yukon River drainage from the northern edge of the mouth of the Anuk River upstream to an ADF&G regulatory marker located at Toklik, and includes the Anuk River drainage.

(c) District 3 consists of that portion of the Yukon River drainage from an ADF&G regulatory marker located at Toklik upstream to an ADF&G regulatory marker at the mouth of an unnamed slough three-fourths of a mile downstream from Old Paradise Village.

(d) District 4 consists of the Yukon River drainage from an ADF&G regulatory marker at the mouth of an unnamed slough three-fourths of a mile downstream from Old Paradise Village upstream to the western edge of the mouth of Illinois Creek at Kallands.

(1) Subdistrict 4-A consists of that portion of the Yukon River drainage from an ADF&G regulatory marker at the mouth of an unnamed slough three-fourths of a mile downstream from Old Paradise Village upstream to the tip of Cone Point;

(2) Subdistrict 4-B consists of the Yukon River drainage from the tip of Cone Point upstream along the north bank of the river to the westernmost edge of Illinois Creek and includes the following islands: Cook, Lark, Serpentine, Louden, Fish, Dainty, Yuki, Melozi, Dasha, Straight, Kit, Fox, Hardluck, Mickey, Florence, Doyle, Chokoyik, Lady, Liner, Flora and Cronin;

(3) Subdistrict 4-C consists of the Yukon River drainage from the tip of Cone Point upstream along the south bank of the river to a point opposite the westernmost edge of Illinois Creek and includes the following islands: Cat, Hen, Jimmy, Big, Ninemile, Ham, Emerald, Edith, Kathaleen, Henry, Burns, Youngs, Weir, Clay, Large and Brant.

(e) District 5 consists of that portion of the Yukon River drainage (excluding the Tanana River drainage) from the western edge of the mouth of Illinois Creek to the United States-Canada border, and includes the Illinois Creek drainage.

(1) Subdistrict 5-A consists of the Yukon River drainage from a point opposite the westernmost edge of Illinois Creek upstream along the south bank of the river to the easternmost edge of the Tanana River mouth and includes the following islands: Second, Corbusier, Sixmile, Deet'laa', Swanson, Blind, Basco, Sword, Leonard, Still, Tanana and Mission;

(2) Subdistrict 5-B consists of the Yukon River drainage from the westernmost edge of Illinois Creek upstream along the north bank of the river to a point opposite the easternmost edge of the Tanana River mouth upstream along both banks of the Yukon River to the westernmost tip of Gar-net Island and includes the following islands: Willow I, II, and III, Steamboat, Grant, Darvin, Little Joker, Station, Tozitna, Circle, Bull, and Long;

(3) Subdistrict 5-C consists of the Yukon River drainage upstream from the westernmost tip of Garnet Island to ADF&G regulatory markers located approximately two miles downstream from Waldron Creek;

(4) Subdistrict 5-D consists of the Yukon River drainage from ADF&G regulatory markers located approximately two miles downstream from Waldron Creek upstream to the United States-Canada border.

(f) District 6 consists of the Tanana River drainage to its confluence with the Yukon River.

(1) Subdistrict 6-A consists of that portion of the Tanana River drainage from its mouth upstream to the eastern edge of the mouth of the Kantishna River and includes the Kantishna River drainage;

(2) Subdistrict 6-B consists of that portion of the Tanana River drainage from the eastern edge of the mouth of the Kantishna River upstream to the eastern edge of the mouth of the Wood River and includes the Wood River drainage;

(3) Subdistrict 6-C consists of the Tanana River drainage from the eastern edge of the mouth of the Wood River upstream to the eastern edge of the mouth of the Salcha River and includes the Salcha River drainage;

(4) Old Minto Area consists of that portion of Subdistrict 6-B from the downstream end of upper Tolovana Island, located approximately two miles upstream of the Tolovana River, to three miles upstream of the mouth of the Totchaket Slough.

(g) Repealed 7/13/2012.

(h) Coastal District: all waters between the latitude of the westernmost point of the Naskonat Peninsula and a line extending 315° northwest from Point Romanof at $63^{\circ} 12.16'$ N. lat., $162^{\circ} 49.72'$ W. long. to a point three nautical miles offshore at $63^{\circ} 14.27'$ N. lat., $162^{\circ} 54.40'$ W. long. not included in (a) - (f) of this section.

	FP23–01 Executive Summary
General Description	Proposal FP23-01 requests the Federal Subsistence Board rescind the closure to the harvest of nonsalmon fish in the Jim River drainage by Federally qualified subsistence users and modify regulations to allow rod and reel gear only and an Arctic Grayling harvest and possession limit of 10 per day.
Proposed Regulation	§27(e)(3) Yukon-Northern Area

	<i>(ix)</i> You may not subsistence fish in the following drainages located north of the main Yukon River:

	(C) Jim River including Prospect and Douglas Creeks.

	(xii) You may take salmon only by gillnet, beach seine, dip net, fish wheel, or rod and reel, subject to the restrictions set forth in this section.

	(D) In the Jim River drainage, including Prospect and Douglas Creeks, you may not harvest salmon.

	(xvi) Unless otherwise specified in this section, you may take fish other than salmon by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear, lead, or rod and reel, subject to the following restrictions, which also apply to subsistence salmon fishing:

	(G) In the Jim River drainage, including Prospect and Douglas Creeks, you may harvest fish other than salmon with rod and reel only; the grayling harvest and possession limit is 10 per day.

	FP23–01 Executive Summary
OSM Preliminary Conclusion	Support
Yukon-Kuskokwim Delta	
Subsistence Regional	
Advisory Council	
Recommendation	
Western Interior Alaska	
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 FP23-01

ISSUES

Proposal FP23-01, submitted by the Western Interior Alaska Subsistence Regional Advisory Council (WIRAC), requests the Federal Subsistence Board (Board) rescind the closure to the harvest of nonsalmon fish in the Jim River drainage by Federally qualified subsistence users and modify regulations to allow rod and reel gear only and an Arctic Grayling harvest and possession limit of 10 per day.

DISCUSSION

The proponent states this proposal would continue subsistence uses by allowing harvest of nonsalmon fish by Federally qualified subsistence users in an area that is currently closed. The Council believes there is verifiable traditional use of nonsalmon fish in this drainage and a limited harvest by rod and reel should be allowed. If subsistence users are going to travel for Arctic Grayling, the harvest limit should be increased to justify time and expense. Allowing for a reasonable harvest of Arctic Grayling would re-establish a subsistence priority use of fish. Limiting harvest to rod and reel gear only would ensure continued viability of fish in the area. While the Council also believes there is verifiable traditional use of salmon in this drainage, the salmon runs cannot support any harvest at this time and the closure should be rescinded only for nonsalmon fish.

Existing Federal Regulation

§____.27(e)(3) Yukon-Northern Area

(i) Unless otherwise restricted in this section, you may take fish in the Yukon-Northern Area at any time...You may subsistence fish for salmon with rod and reel in the Yukon River drainage 24 hours per day, 7 days per week, unless rod and reel are specifically otherwise restricted in this paragraph (e)(3).

(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060 [emergency orders]), unless superseded by a Federal special action.

(v) Except as provided in this section, and except as may be provided by the terms of a subsistence fishing permit, you may take fish other than salmon at any time.

(ix) You may not subsistence fish in the following drainages located north of the main Yukon *River:*

(C) Jim River including Prospect and Douglas Creeks.

(xii) You may take salmon only by gillnet, beach seine, dip net, fish wheel, or rod and reel, subject to the restrictions set forth in this section.

(xvi) Unless otherwise specified in this section, you may take fish other than salmon by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear, lead, or rod and reel, subject to the following restrictions, which also apply to subsistence salmon fishing:

Proposed Federal Regulation

§____.27(e)(3) Yukon-Northern Area

(ix) You may not subsistence fish in the following drainages located north of the main Yukon *River:*

(C) Jim River including Prospect and Douglas Creeks.

(xii) You may take salmon only by gillnet, beach seine, dip net, fish wheel, or rod and reel, subject to the restrictions set forth in this section.

(D) In the Jim River drainage, including Prospect and Douglas Creeks, you may not harvest salmon.

(xvi) Unless otherwise specified in this section, you may take fish other than salmon by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear,

lead, or rod and reel, subject to the following restrictions, which also apply to subsistence salmon fishing:

(G) In the Jim River drainage, including Prospect and Douglas Creeks, you may harvest fish other than salmon with rod and reel only; the grayling harvest and possession limit is 10 per day.

Relevant Federal Regulation

§____.27 (b) Subsistence Taking of Fish

(16) Unless specified otherwise in this section, you may use a rod and reel to take fish without a subsistence fishing permit. Harvest limits applicable to the use of a rod and reel to take fish for subsistence uses shall be as follows:

(ii) Except as otherwise provided for in this section, if you are not required to obtain a subsistence fishing permit for an area, the harvest and possession limits for taking fish for subsistence uses with a rod and reel are the same as for taking fish under State of Alaska subsistence fishing regulations in those same areas. If the State does not have a specific subsistence season and/or harvest limit for that particular species, the limit shall be the same as for taking fish under State of Alaska sport fishing regulations.

Existing State Regulation

Yukon Area—Subsistence

5 AAC 01.225. Waters closed to subsistence fishing

(b) The following drainages located north of the mainstem Yukon River are closed to subsistence fishing:

(4) Jim River, including Prospect Creek and Douglas Creek;

Yukon River Area—Sport

5 AAC 73.010. Seasons, bag, possession, and size limits, and methods and means for Yukon River Area

(a) Except as otherwise specified in this section or through an emergency order issued under AS 16.05.060, sport fishing is permitted year round in the waters of the Yukon River Area.

(b) Except as otherwise specified in (c) of this section, the following are the general bag, possession, and size limits for finfish and shellfish in the waters of the Yukon River Area:

(1) king salmon 20 inches or greater in length: the bag and possession limit is three fish, of which only two fish may be 28 inches or greater in length;

(2) salmon, other than king salmon: the bag and possession limit is 10 fish, with no size limit;

(3) Arctic char/Dolly Varden and lake trout:

(B) in all flowing waters: the bag and possession limit is 10 fish of all species combined, of which only two fish may be 20 inches or greater in length, and of which only two fish may be lake trout;

(5) Arctic grayling: the bag and possession limit is five fish, with no size limit;

(6) sheefish: the bag and possession limit is 10 fish, with no size limit;

(7) northern pike: the bag and possession limit is 10 fish, with no size limit;

(8) burbot: the bag and possession limit is 15 fish, with no size limit;

(10) finfish and shellfish species that are not specified in this section: there are no bag, possession, or size limits;

(c) The following are the exceptions to the general bag, possession, and size limits, and fishing seasons specified in (a) of this section for the Yukon River Area:

(4) in the Dalton Highway corridor (Trans-Alaska Pipeline corridor) within the Yukon River Area, which is described as a corridor five miles wide on each side of the Dalton Highway north of the Yukon River, excluding the Ray River,

(A) sport fishing for salmon is closed;

(B) lake trout may be taken only by catch-and-release fishing, and may not be possessed or retained; all lake trout caught must be immediately released;

(*C*) the bag and possession limit for northern pike is five fish, of which only one fish may be 30 inches or greater in length;

Extent of Federal Public Lands/Waters

For purposes of this analysis, the phrase "Federal public waters" is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. Approximately three miles of Jim River exist within the Kanuti Refuge boundary, managed by the U.S. Fish and Wildlife Service (**Figure 1**). The remainder of the Jim River drainage is general domain land managed by the Bureau of Land Management (BLM). On general domain lands, Federal subsistence regulations apply only to non-navigable waters.



Figure 1. Map of the Dalton Highway Corridor (red lines), the Jim River drainage, and the other closed systems in the area.

Customary and Traditional Use Determination

Residents of the Yukon-Northern Area have a customary and traditional use determination for freshwater species other than salmon in the Yukon River drainage.

Regulatory History

Under State regulations, the portion of the Jim River within the Dalton Highway Corridor (5 miles on either side of the highway) has been closed to subsistence fishing since the late 1970s, beginning with construction of the Dalton Highway (Holen et al. 2012). The opening of the Dalton Highway to public travel in 1994 provided new access to lakes and streams along the route. Increases in recreational fishing effort and harvest have resulted in reductions in sport fishing bag limits for Northern Pike and Arctic Grayling, no retention of Lake Trout, and a salmon fishing closure within the Dalton Highway Corridor (Stuby 2021).

In 1992, the Federal Subsistence Management Program promulgated regulations governing the harvest of fish for subsistence uses in non-navigable waters within and adjacent to Federal public lands (57 Fed. Reg. 22940 [May 29, 1992]). These regulations incorporated many provisions from State of Alaska subsistence fishing regulations. The Jim River closure was incorporated into Federal regulations in this manner and has not been subsequently modified.

In 1999, the Board also adopted Federal regulations for fish in navigable waters within and adjacent to Federal public lands where there is a Federal reserved water right (64 Fed. Reg. 1276 [January 8, 1999]). These regulations do not apply on navigable waters within and adjacent to Bureau of Land Management general domain lands (see 50 CFR 100.3).

The Federal Subsistence Management Program justification for the original closure in Federal regulations was to minimize disruption to the State's continuing fish and game management, because of the uncertainty over the resumption of State management of subsistence, yet still fulfill the requirements of Title VIII of ANILCA (55 FR 27114, June 29, 1990).

The Jim River closure was reviewed during the 2021–2023 Fisheries Regulatory Cycle. The WIRAC and Seward Peninsula Subsistence Regional Advisory councils recommended eliminating the closure to the harvest of all fish in the Jim River drainage and modifying regulations to allow rod and reel gear only and an Arctic Grayling harvest and possession limit of 10 per day. The Yukon-Kuskokwim Delta, Eastern Interior Alaska, and North Slope Subsistence Regional Advisory councils deferred to WIRAC. The Alaska Department of Fish and Game (ADF&G) was neutral and provided no comment. However, during the Board's 2021 Fisheries regulatory meeting, the Department of Interior Solicitor's Office expressed concern that any action taken by the Board beyond simply eliminating or maintaining the closure would not allow appropriate notice and opportunity for public comment. Therefore, the Board voted to maintain the closure with the expectation that a proposal could be submitted by WIRAC to eliminate the closure.

Biological Background

Salmon

Chinook, Chum, and Coho salmon are known to spawn and rear in the Jim River. Aerial surveys were flown sporadically from 1960 to 2015 to count Chinook and Chum salmon in the Jim River (ADF&G 2022a). The 1960 to 2015 average count of live Chinook Salmon is 120 fish with a range of 0–358 fish. The average number of Chinook Salmon carcasses for these same years is 13 with a range of 0–126. Summer Chum Salmon averaged 278 live fish (range 0–1,484) and 116 carcasses (range 0–1,690). Fall Chum Salmon averaged 103 live fish (range 0–1,057), and 41 carcasses (range 0–672). During 2009–2012, and 2015, a mean of 183 Chinook Salmon and 462 Chum Salmon were counted per year (ADF&G 2022a). There is no escapement goal for any salmon species in this drainage.

Nonsalmon

The nonsalmon fish community in the Jim River drainage is comprised of Arctic Grayling, Burbot, Humpback and Round whitefish, Longnose Sucker, Northern Pike, and Slimy Sculpin (BLM 2005, ADF&G 2022b). While population assessments have been conducted for Arctic Grayling in the Jim River, less is known about the other nonsalmon species in this system. Information related to the habitat use, seasonal movements, and population status of Arctic Grayling, Burbot, whitefish, Longnose Sucker, and Northern Pike was provided by local experts during a Traditional Ecological Knowledge study conducted by ADF&G Division of Subsistence (Andersen et al. 2004). The local knowledge provided in this study applies to the broader Koyukuk River drainage.

Arctic Grayling

Arctic Grayling are found throughout the Koyukuk and Jim River drainages. Local knowledge indicates Arctic Grayling spend most of their time in clear, quickly moving water in tributary streams and headwater areas whenever this habitat is clear of ice. They are reported to move into this habitat after breakup in April or May, spawning shortly afterwards and feeding on insects. Later, larger Arctic Grayling occupy higher quality feeding areas farthest upstream, and smaller fish occupy poorer feeding areas downstream (Hughes 1992, Andersen et al. 2004). Arctic Grayling move from tributary streams to overwintering areas in deeper water downstream during September and October. Arctic Grayling overwinter in the Koyukuk River mainstem and large tributaries, as well as lakes in the far upper portions of the Koyukuk drainage (Andersen et al. 2004).

Stock assessments of Arctic Grayling within the Jim River and its tributaries adjacent to the Dalton Highway were conducted during 1995–1997 (Fish 1997). The abundance of Arctic Grayling was estimated in a 4 mile section of Prospect Creek in 1996. The estimated abundance was 770 Arctic Grayling (SE = 231) with a density of 193 fish/mile. The Jim River population abundance and age structure was estimated in 1995 and 1997 for a 13.2 mile stretch near the Dalton Highway. In 1995, the Arctic Grayling abundance estimate was 5,105 fish (SE = 1,103) which resulted in a density of approximately 387 fish/mile. The age of Arctic Grayling ranged from 2 to 15 years. Approximately 32% of the population was 5 years old, the most common age reported from this study year. In 1997,

the estimated abundance and density of Arctic Grayling was 12,059 fish (SE = 2,650) and 914 fish/mile, respectively. The sampled fish ranged from 2 to 16 years old, with 25% of the samples being 3 years old, the most common age during this study year (Fish 1997).

Burbot

According to local experts, Burbot are found in major tributaries of the Koyukuk drainage, but not the smallest tributaries. Burbot may occupy headwater lakes or the mainstem of the Koyukuk River year-round. Most non lake-adapted Burbot follow a different seasonal movement pattern from other fish, moving upstream along shallow water areas beginning around October through January or February. Spawning takes place under the ice in winter (Andersen et al. 2004).

Whitefish

Local experts indicate whitefish move upstream in the Koyukuk River just before and during spring break up. As the water becomes fast and high due to spring run-off, the fish move into calmer side waters, returning when water levels drop. They repeat this movement whenever water levels rise. Some whitefish spend summers feeding in lakes, while others stay in the Koyukuk River and major sloughs. In fall, whitefish move towards spawning areas upstream, then descend downstream after spawning around September and October. Whitefish are said to overwinter in an inactive state in deep lakes from December to March (Andersen et al. 2004). Round Whitefish is a "clear water fish" that prefers to spend time in smaller streams and headwaters, "similar to graying" (Andersen et al. 2004: 93).

According to local knowledge, the abundance and quality of whitefish in the Koyukuk drainage has declined over the previous 60 years. These declines were attributed to changes in habitat and die-offs resulting from being stranded in shallow lakes during high water periods (Andersen et al. 2004).

Longnose Sucker

Local knowledge indicates that Longnose Sucker are present in small numbers in the Koyukuk River drainage but occur at relatively high numbers in the Jim River. Longnose Sucker spend the open water period river in mainstems, sloughs, large and small tributaries, and lakes, and move into deep portions of the main lower Koyukuk River during winter. Spawning occurs in small streams after breakup (Andersen et al. 2004).

Northern Pike

According to local experts, Northern Pike in the Koyukuk drainage overwinter in deep lakes and move into shallow lakes and sloughs in spring. Spawning takes place in early summer. After mid-September, Northern Pike move back towards the main river and deep lakes (Andersen et al. 2004).

Cultural Knowledge and Traditional Practices

Of those communities with a customary and traditional use determination for fish in the Yukon River drainage, those located in reasonable proximity to Jim River as it crosses the Dalton Highway are most

likely to subsistence fish in the area, were the closure rescinded. This includes Wiseman and Coldfoot. In addition to these communities, which are located on the road system, the communities of Evansville and Bettles are connected to the Dalton Highway via a winter road to Evansville from January through March (Holen et al. 2012). However, there is a mismatch between the timing of this road opening and that of nonsalmon fishing by these communities (Andersen et al. 2004). Furthermore, an ADF&G Division of subsistence survey indicated that residents of Bettles and Evansville focus their subsistence use in areas closer to these communities (Holen et al. 2012).

The community of Stevens Village also has access to the Dalton Highway as it crosses the Yukon River, via boat and snow machine (Trainor 2022, pers. comm.). However, a subsistence survey of Stevens Village conducted from 1984 to 1985 showed that residents focus most of their subsistence fishing activity closer to their community on the Yukon River (Sumida 1988); a more recent ADF&G Division of Subsistence survey did not map subsistence use areas (Brown et al. 2016).

Wiseman and Coldfoot

Wiseman and Coldfoot are very small communities located on the Dalton Highway. Both communities fall within the traditional boundaries of the Koyukon Athabascan people, an area which has also been influenced by historical interaction with Iñupiat. Both Wiseman and Coldfoot were established as the result of the gold mining industry in the late 1800s and early 1900s. Coldfoot was abandoned by 1930, before being re-settled in the 1970s in connection with construction of the Dalton Highway and the Trans-Alaska Pipeline. As of 2018 there were an estimated eight full-time residents in Coldfoot and 11 in Wiseman (ADLWD 2019). The area also includes a small number of residents along the Dalton Highway Corridor in camps and other isolated households. ADF&G Division of Subsistence conducted its only subsistence survey of Wiseman and Coldfoot in 2012, for the 2011 calendar year.

At the time of ADF&G's survey, there were five year-round households in Wiseman, and all were surveyed. Four of these households attempted to fish, and all households used fish, although in small quantities (Holen et al. 2012). Residents of Wiseman and Coldfoot can fish within the Jim River closure area with rod and reel under State sport fishing regulations.

Salmon

Wiseman residents traditionally harvested and used small amounts of Chum and Chinook salmon locally. However, in part because of local closures to both subsistence and sport fishing for salmon in place since 1978 (sport fishing for salmon is closed within a 5-mile radius of the Dalton Highway), Wiseman residents primarily harvest salmon at locations far afield, such as in the Copper and Yukon rivers.

During the 2011 study year, only one of the five Wiseman households fished for salmon (at locations distant from the community), resulting in an estimated 12 pounds of Sockeye Salmon per person, or 4% of Wiseman's total wild food harvest in weight. In addition, Wiseman households received and shared Chinook Salmon, although they did not directly harvest any. All households used salmon (Holen et al. 2012).

Nonsalmon fish

According to Holen et al., "Since the salmon fishing closure was initiated, non-salmon fish have become even more important to Wiseman residents" (2012: 369). Nonsalmon fishing can take place under subsistence regulations in areas that are not closed (in addition to the Jim River closure, subsistence fishing is also closed in Bonanza Creek and a portion of the Kanuti River). In addition, nonsalmon fish can be taken by rod and reel under State sport fishing regulations throughout the area. Within these regulatory restrictions, during the study period, nonsalmon fishing was reported as occurring close to Wiseman and Coldfoot adjacent to the Dalton Highway, as well as on the South Fork Koyukuk River and as far south as the Jim River (Holen et al. 2012, **Figure 2**).

During the study period, four of the five Wiseman households fished for nonsalmon species, resulting in an estimated 13 pounds of nonsalmon fish per person, or 5% of Wiseman's total wild food harvest in weight. The three most significant nonsalmon harvests in terms of weight were Arctic Grayling, Longnose Sucker, and Burbot (Holen et al. 2012, ADF&G 2020, **Table 1**).

In 2011, about 52% of Wiseman's nonsalmon fish harvest (measured in edible weight) was taken with gillnet or seine, about 28% was taken with "other subsistence methods," which includes set lines, and the remainder was taken by rod and reel. However, the only nonsalmon species that participants reported taking by rod and reel was Lake Trout; a little less than half of the Lake Trout harvest was taken with this gear. The fish most significant in terms of subsistence harvest were taken entirely with subsistence gear during the study period, described in more detail below, although Wiseman's harvest methods for Longnose Sucker and whitefish species were not quantified in the relevant subsistence survey report (Holen et al. 2012).

Arctic Grayling

In this description of harvest practices for Arctic Grayling, and for other species, below, ethnographic data are drawn both from ADF&G's subsistence survey in Wiseman for the 2011 calendar year (Holen et al. 2012) and from a Traditional Ecological Knowledge Study conducted by ADF&G Division of Subsistence from 2001 to 2003 (Andersen et al. 2004). The latter study incorporated interviews with 29 key respondents who were life-long residents of the wider Koyukuk River drainage communities of Alatna, Allakaket, Bettles/Evansville, Hughes, Huslia, Koyukuk, and Wiseman. Where available, information specific to practices by residents of Wiseman is emphasized.

In the Koyukon language Arctic Grayling are called *tleghelbaaye*, which likely refers to their gray coloring (Andersen et al. 2004). Fall and early winter are the preferred times for harvesting Arctic Grayling by Koyukuk River communities (Andersen et al. 2004). In the 2011 study year, Wiseman residents harvested Arctic Grayling with gillnet or seine (25%) and "other subsistence methods" (75%) (Holen et al. 2012). Residents of the wider region fish for Arctic Grayling with hook and line beginning when rivers begin to freeze, usually in October. They use rod and reel in open eddies until freeze-up is complete, after which they fish through holes in the ice. Arctic Grayling are also sometimes caught during fall seining for whitefish. Arctic Grayling are easily preserved by freezing,

and people prefer to eat them raw and frozen. As winter progresses, Arctic Grayling are further downstream in deep water, and are less accessible (Andersen et al. 2004).

Burbot

Burbot are known as *tl'eghes*, in the Koyukon dialect of the lower Koyukuk River, and *tsoneye* in the upper river dialect. Burbot can be an important subsistence resource for Koyukuk River communities in winter when other fish are not available. They are harvested beginning in the fall. In the middle Koyukuk River conditions are ideal for Burbot traps in winter, but in areas closer to the headwaters Burbot are most commonly taken with set hooks through the ice beginning around October. According to a key informant from Wiseman, Burbot have also traditionally been taken from lakes in the summer with spears (Andersen et al. 2004). During the 2011 study year, Wiseman residents took Burbot entirely with subsistence gear "other than gillnet or seine" (Holen et al. 2012).

In the fall and winter Burbot can be preserved by natural freezing, but do not preserve well, and people prefer to eat them soon after they are harvested. The fatty liver is the most prized part of the fish. For subsistence purposes, people prefer to catch them before they spawn, when they are a better source of fat. Burbot return downstream beginning in February (Andersen et al. 2004).

Whitefish

The generic term for whitefish in the Koyukon language is *ts* 'ol. There are two species of large whitefish in the Koyukuk drainage, Broad Whitefish (*taaseze*, or "water bear") and Humpback Whitefish (*holehge*, "it swims upwards"). There are also two species of small whitefish, Least Cisco (*tsaabaaya*) and the Round Whitefish (*hulten*). According to local experts, the latter is only thinly distributed in the Koyukuk drainage (Andersen et al. 2004).

One key informant said that he had observed a decline in whitefish populations over the previous sixty years, and that the fish had also become less fatty. He attributed this decline to habitat change, and especially to decreased weeds and insects, as well as increased silt and water temperatures. Whitefish are susceptible to die-offs after being trapped in shallow lakes during high water periods (Andersen et al. 2004).

Gillnets are used to catch whitefish in the spring after breakup and in the fall as fish move between seasonal habitats. Whitefish are considered to be in prime condition in fall. After freeze-up they can be caught with set nets. Least Cisco may be caught with seining nets, although river conditions prevent the use of these in the upper portion of the river. In the summer, whitefish are sometimes incidentally caught in nets used for salmon. Round Whitefish are very thinly distributed and are not commonly caught. Wiseman's harvest methods for whitefish were not specifically described in Holen et al. (2012).

Longnose Sucker

The Koyukon term for Longnose Sucker is *toonts'ode*, "something bad went into the water" (Andersen et al. 2004). Longnose Sucker are mostly caught in the KoyukukRiver drainage as by-catch in nets set

out for whitefish in the spring. In areas suitable to the harvest method, they are sometimes taken during fall whitefish seining. Finally, they are sometimes taken in the winter with under-ice Burbot traps. In the past, spring-harvested Longnose Sucker were important for feeding both humans and dogs, but today they are primarily used as dog food. The many small bones in the fish make the end portion of Longnose Sucker inedible for humans (Andersen et al. 2004). Wiseman's harvest methods for Longnose Sucker were not specifically described in Holen et al. (2012).

Northern Pike

Northern Pike are known as *k'oolkkoye* in the Koyukon language, and are an important food resource that is available year-round. Northern Pike are present but not common in the Koyukuk River near Bettles, and are not present in the Middle Fork of the Koyukuk near Wiseman.

On the Koyukuk River, Northern Pike are caught with gillnets in spring and fall. "Pike are sometimes caught during the summer using artificial lures and rod and reel gear in area lakes or specific river or slough locations known for being good pike fishing. Pike are also frequently taken as by-catch in summer nets and fishwheels targeting salmon" where conditions permit use of this gear (Andersen et al. 2004: 74). In winter they can be harvested with a hook through the ice where streams leave or enter lakes.

Key informants from the wider region reported harvesting Northern Pike with gillnets, fish traps, and hook and line gear. According to Andersen et al., "The ability to take pike using unusual methods contributed to the utility of pike as a subsistence resource" (2004:75). During the subsistence survey study year, Wisemen residents harvested Northern Pike entirely with gillnet or seine (Holen et al. 2012).

Fish species	Estimated number of fish	Estimated pounds per person
Arctic Grayling	111	5.97
Longnose Sucker	40	2.15
Burbot	9	1.66
Northern Pike	4	1.38
Char	11	1.11
Lake Trout	9	0.97
Whitefish	25	0.96
Dolly Varden	2	0.13

Table 1: Estimated number of nonsalmon fish and corresponding pounds per
person harvested by Wiseman households in the 2011 calendar year
(ADF&G 2020).



Figure 2. Wiseman's nonsalmon fish search and harvest areas, 2011. Source: Holen et al. 2012.

Coldfoot was also surveyed by ADF&G Division of Subsistence for the 2011 calendar year. At that time, there were five year-round households in Coldfoot, four of which were surveyed, representing 10 individuals. During the survey year, no residents of the community fished for either salmon or

nonsalmon fish, but one household received and used Coho and Sockeye salmon. No use of nonsalmon fish was documented in Coldfoot during the study period (Holen et al. 2012).

Harvest History

Subsistence fishing is prohibited in the Jim River under State and Federal regulations so there is no legal subsistence harvest in this system. Harvest is allowed under State sport fishing regulations and is not limited to Federally qualified subsistence users.

During years when sport fishing for Chinook Salmon isn't closed or restricted by emergency order, Chinook Salmon throughout the Yukon River Management Area (excludes the Tanana River) can be harvested with a limit of three per day, three in possession over 20 inches (only two can be over 28 inches), and ten per day, ten in possession for under 20 inches. Other salmon have a ten per day, ten in possession limit. However, salmon fishing is closed within a 5-mile radius on either side of the Dalton Highway.

Per the general sport fish regulations that apply to the entire Yukon River Management Area that extends from the Yukon River Delta to the border with Canada and includes the entire Yukon River drainage (excluding the Tanana River), Dolly Varden can be harvested with a limit of ten per day, ten in possession (only two can be 20 inches or longer). Allowable Lake Trout harvest is two per day, two in possession, only two of which may be 20 inches or longer. Arctic Grayling have no size limit and have a limit of five per day, five in possession. Sheefish and Northern Pike have a limit of ten per day, ten in possession and Burbot have a harvest limit of 15 per day, 15 in possession.

Special regulations apply to all streams within the Trans-Alaska Pipeline corridor, which is defined as the length of the Pipeline north of the Yukon River extending 5 miles on either side of the Dalton Highway, excluding the Ray River where General Regulations apply. The Jim River crosses the Dalton Highway Corridor. In this area, sport fishing for salmon is closed. In addition, retention of Lake Trout is prohibited and the limit of Northern Pike is 5 per day, 5 in possession (only one of which may be 30 inches or longer).

The majority of sport fish harvest along the Dalton Highway corridor for the Yukon River Management Area is for Arctic Grayling (Stuby 2021). Sport fish harvest estimates for Arctic Grayling in streams along the Dalton Highway south of Atigun Pass reported an average of 324 fish annually during 2009–2018. Of these, an average of 122 Arctic Grayling were harvested from the Jim River. Fishing effort for this entire area for all species during 2009–2018 was approximately 928 angler days (Stuby 2021). Sport fishing effort and harvest in Alaska have been estimated and reported annually since 1977 using a mail survey. Estimates based on fewer than 12 responses indicate that the sport fishing occurred and are subject to high variance. The majority of estimates for the Dalton Highway during 2009–2018 were based on fewer than 12 respondents (Stuby 2021). These data suggest that sport fish harvest and effort may not be large enough to cause conservation concerns for Arctic Grayling in the Jim River.

Other Alternatives Considered

An alternative is to rescind the closure to the harvest of all fish in the Jim River drainage by Federally qualified subsistence users. Rescinding the closure would provide a Federal subsistence priority not currently in regulation. If the closure is rescinded, Federal subsistence regulations for the Yukon-Northern Area would apply. Harvest of salmon would be allowed, and Federal subsistence fishing schedules, openings, closings, and fishing methods would be the same as those issued by State emergency order for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal special action. For nonsalmon species, harvest would be unrestricted for all gear types other than rod and reel. Harvest and possession limits for rod and reel would match State sport fishing regulations. This alternative was rejected because the Jim River is road accessible, allowing easy access and harvest of fish. Allowing unrestricted harvest for gear types other than rod and reel in an easily accessible system may lead to overharvest and local depletion of stocks.

Effects of the Proposal

If Proposal FP23-01 is adopted, subsistence fishing for salmon would remain closed under Federal regulations in the Jim River drainage. Nonsalmon fish could be taken by rod and reel only. Subsistence rod and reel harvests would match State sport fishing harvest and possession limits except for Arctic Grayling, which would have a harvest and possession limit of 10 per day (the current sport fish harvest and possession limit is five per day). This proposal would increase harvest opportunity for Federally qualified subsistence users and provide a subsistence priority as mandated by ANILCA. No conservation concerns exist for this proposal as salmon fishing would remain closed and nonsalmon fishing would be restricted to rod and reel only.

If Proposal FP23-01 is not adopted, subsistence fishing will remain closed under both Federal and State regulations in the Jim River drainage. Sport fishing would be allowed and Federally qualified subsistence users could continue to harvest salmon and nonsalmon fish under State sport fishing regulations. Federal regulations would remain more restrictive than State sport fishing regulations, which does not support the subsistence priority mandated by ANILCA.

OSM PRELIMINARY CONCLUSION

Support Proposal FP23-01

Justification

This drainage is currently closed to subsistence fishing by Federally qualified subsistence users but open to other uses. There is likely a small amount of harvest under State sport fishing regulations, predominantly near the Dalton Highway. Allowing a limited subsistence harvest using rod and reel only would provide subsistence opportunity in an area that is currently closed and protect populations from overharvest. If this system is opened to rod and reel only, State sport fish harvest and possession limits would apply. Increasing harvest and possession limits of Arctic Grayling would provide a subsistence priority for Federally qualified subsistence users and justify the time and expense of traveling to harvest this species. Maintaining the closure to salmon will protect small populations within the drainage.

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FCR23–02 Executive Summary		
General Description	FCR23-02 reviews the closure to the harvest of all fish in the	
	Kanuti River drainage by Federally qualified subsistence users.	
Comment De colettere		
Current Regulation	§27(e)(3) Yukon-Northern Area	

	(ix) You may not subsistence fish in the following drainages	
	locatea north of the main Tukon Kiver.	
	(A) Kanuti River upstream from a point 5 miles downstream	
	of the State highway crossing;	

OSM Preliminary Conclusion	Rescind the closure	
Vukon-Kuskokwim Dolta		
Subsistence Regional		
Advisory Council		
Recommendation		
Western Interior Alaska		
Subsistence Regional		
Advisory Council		
Recommendation		
Seward Peninsula Subsistence		
Regional Advisory Council		
Recommendation		
Eastern Interior Alaska Subsistence Degional		
Advisory Council		
Recommendation		
North Slope Subsistence		
Regional Advisory Council		
Recommendation		
Interagency Staff Committee		
Comments		
ADF&G Comments		
Written Public Comments	None	

FEDERAL FISHERIES CLOSURE REVIEW FCR23-02

Issue

FCR23-02 is a standard review of a Federal subsistence fishery closure to the harvest of all fish in the Kanuti River drainage. It is the Board's policy that Federal public lands and waters should be reopened as soon as practicable once the conditions that originally justified the closure have changed to such an extent that the closure is no longer necessary. The purpose of this closure review is to determine if the closure is still warranted and to ensure the closure does not remain in place longer than necessary.

Closure Location: Yukon River Drainage, Kanuti River-all fish

Current Federal Regulation

§____.27(e)(3) Yukon-Northern Area

(i) Unless otherwise restricted in this section, you may take fish in the Yukon-Northern Area at any time... You may subsistence fish for salmon with rod and reel in the Yukon River drainage 24 hours per day, 7 days per week, unless rod and reel are specifically otherwise restricted in this paragraph (e)(3).

(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060 [emergency orders]), unless superseded by a Federal special action.

(v) Except as provided in this section, and except as may be provided by the terms of a subsistence fishing permit, you may take fish other than salmon at any time.

(ix) You may not subsistence fish in the following drainages located north of the main Yukon *River:*

(A) Kanuti River upstream from a point 5 miles downstream of the State highway crossing;

(xii) You may take salmon only by gillnet, beach seine, dip net, fish wheel, or rod and reel, subject to the restrictions set forth in this section.

(xvi) Unless otherwise specified in this section, you may take fish other than salmon by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear, lead, or rod and reel, subject to the following restrictions, which also apply to subsistence salmon fishing:

(B) You may not use an aggregate length of set gillnet in excess of 150 fathoms, and each drift gillnet may not exceed 50 fathoms in length.

(C) In Districts 4, 5, and 6, you may not set subsistence fishing gear within 200 feet of other fishing gear operating for commercial, personal, or subsistence use . . .

(xvii) In District 4, from September 21 through May 15, you may use jigging gear from shore ice.

Relevant Federal Regulation

§____.27 (b) Subsistence Taking of Fish

(16) Unless specified otherwise in this section, you may use a rod and reel to take fish without a subsistence fishing permit. Harvest limits applicable to the use of a rod and reel to take fish for subsistence uses shall be as follows:

(ii) Except as otherwise provided for in this section, if you are not required to obtain a subsistence fishing permit for an area, the harvest and possession limits for taking fish for subsistence uses with a rod and reel are the same as for taking fish under State of Alaska subsistence fishing regulations in those same areas. If the State does not have a specific subsistence season and/or harvest limit for that particular species, the limit shall be the same as for taking fish under State of Alaska sport fishing regulations.

Closure Dates: Year-round

Current State Regulation

Yukon Area—Subsistence

5 AAC 01.225. Waters closed to subsistence fishing

(b) The following drainages located north of the mainstem Yukon River are closed to subsistence fishing:

(1) Kanuti River upstream from a point five miles downstream of the state highway crossing;

Yukon River Area—Sport

5 AAC 73.010. Seasons, bag, possession, and size limits, and methods and means for Yukon River Area

(a) Except as otherwise specified in this section or through an emergency order issued under AS 16.05.060, sport fishing is permitted year round in the waters of the Yukon River Area.

(b) Except as otherwise specified in (c) of this section, the following are the general bag, possession, and size limits for finfish and shellfish in the waters of the Yukon River Area:

(1) king salmon 20 inches or greater in length: the bag and possession limit is three fish, of which only two fish may be 28 inches or greater in length;

(2) salmon, other than king salmon: the bag and possession limit is 10 fish, with no size limit;

(3) Arctic char/Dolly Varden and lake trout:

(B) in all flowing waters: the bag and possession limit is 10 fish of all species combined, of which only two fish may be 20 inches or greater in length, and of which only two fish may be lake trout;

(5) Arctic grayling: the bag and possession limit is five fish, with no size limit;

(6) sheefish: the bag and possession limit is 10 fish, with no size limit;

(7) northern pike: the bag and possession limit is 10 fish, with no size limit;

(8) burbot: the bag and possession limit is 15 fish, with no size limit;

(10) finfish and shellfish species that are not specified in this section: there are no bag, possession, or size limits;

(c) The following are the exceptions to the general bag, possession, and size limits, and fishing seasons specified in (a) of this section for the Yukon River Area:

(4) in the Dalton Highway corridor (Trans-Alaska Pipeline corridor) within the Yukon River Area, which is described as a corridor five miles wide on each side of the Dalton Highway north of the Yukon River, excluding the Ray River,

(A) sport fishing for salmon is closed;

(B) lake trout may be taken only by catch-and-release fishing, and may not be possessed or retained; all lake trout caught must be immediately released;

(*C*) the bag and possession limit for northern pike is five fish, of which only one fish may be 30 inches or greater in length;

Regulatory Year Initiated: 1992

Extent of Federal Public Lands/Waters

For purposes of this analysis, the phrase "Federal public waters" is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. The closure area is located on general domain land managed by the Bureau of Land Management (BLM; **Figure 1**). On general domain lands, Federal subsistence regulations apply only to non-navigable waters.



Figure 1. Map of the Dalton Highway Corridor (red lines), Kanuti River, and the other closed drainages in the area. The Kanuti River closure area (highlighted) is upstream from a point 5 miles downstream of the State highway crossing.

Customary and Traditional Use Determination

Residents of the Yukon River drainage and the community of Stebbins have a customary and traditional use determination for salmon, other than fall Chum Salmon, in the Yukon River drainage.

Residents of the Yukon River drainage and the communities of Chevak, Hooper Bay, Scammon Bay, and Stebbins have customary and traditional use determination for fall Chum Salmon in the Yukon River drainage.

Residents of the Yukon-Northern Area have a customary and traditional use determination for freshwater species other than salmon in the Yukon River drainage.

Regulatory History

Under State fishing regulations, the portion of the Kanuti River within the Dalton Highway Corridor (5 miles on either side of the highway) has been closed to subsistence fishing since the late 1970s, beginning with construction of the highway. The opening of the Dalton Highway to public travel in 1994 provided new access to lakes and streams along the route. Increases in recreational fishing effort and harvest have resulted in reductions in the sport fishing bag limits for Northern Pike and Arctic Grayling, no retention of Lake Trout, and a salmon fishing closure within the Dalton Highway Corridor (Stuby 2021).

In 1992, the Federal Subsistence Management Program promulgated regulations governing the harvest of fish for subsistence uses in non-navigable waters within and adjacent to Federal public lands (57 Fed. Reg. 22940 [May 29, 1992]). These regulations incorporated many provisions from State of Alaska subsistence fishing regulations. The closure under review in this analysis was incorporated into Federal regulations in this manner and has not been subsequently modified.

In 1999, the Federal Subsistence Board (Board) also adopted Federal regulations for fish in navigable waters within and adjacent to Federal public lands where there is a Federal reserved water right (64 Fed. Reg. 1276 [January 8, 1999]). These regulations do not apply on navigable waters within and adjacent to BLM general domain lands (see 50 CFR 100.3).

Closure Last Reviewed

There have been no previous reviews of this closure.

Justification for Original Closure

The Federal Subsistence Management Program justification for the inclusion of the original closure in Federal regulations was to minimize disruption to the State's continuing fish and game management, because of the uncertainty over the resumption of State management of subsistence, yet still fulfill the requirements of Title VIII of ANILCA (55 FR 27114, June 29, 1990).

Council Recommendation for Original Closure

N/A

State Recommendation for Original Closure

N/A

Biological Background

Salmon

According to local knowledge and the Anadromous Waters Catalog, Chinook and summer Chum salmon are present in the Kanuti River, downstream of the closure area (Trainor et al. 2019, ADF&G 2022a). However, few assessment projects have been conducted in the Kanuti River. Aerial surveys were flown in 1969, 1971, 1975, and 1985 (ADF&G 2022b). Chinook Salmon were only observed in 1985 and eight fish were counted (JTC 1985). Summer Chum Salmon were only observed in 1969 and 25 fish were counted (ADF&G 2022b).

Nonsalmon Fish

Nonsalmon fish species, such as Arctic Grayling, Burbot, Round Whitefish, Northern Pike, and Slimy Sculpin have been observed in the Kanuti River but information in the closure area is limited (BLM 2005). In addition, local knowledge indicates Longnose Sucker also inhabit the drainage (Andersen et al. 2004). Most information related to the habitat use, seasonal movements, and population status of these species (excluding Slimy Sculpin) was provided by local experts during a Traditional Ecological Knowledge study conducted by the Alaska Department of Fish and Game (ADF&G), Division of Subsistence (Andersen et al. 2004). The information collected in this study applies to the broader Koyukuk River drainage.

Arctic Grayling

Arctic Grayling have been documented in the closure area but population assessments have not been conducted (ADF&G 2022c). Local knowledge indicates Arctic Grayling spend most of their time in clear, quickly moving water in tributary streams and headwater areas whenever this habitat is clear of ice. They are reported to move into this habitat after breakup in April or May, spawning shortly afterwards and feeding on insects. Later, the larger Arctic Grayling occupy higher quality feeding areas farthest upstream and smaller fish occupy poorer feeding areas downstream (Hughes 1992, Andersen et al. 2004). Arctic Grayling move from tributary streams to overwintering areas in deeper water downstream during September and October. Local knowledge indicates that Arctic Grayling are usually the last fish to leave the tributary streams in the fall. Arctic Grayling overwinter in the Koyukuk River mainstem and large tributaries including the Alatna and Kanuti Rivers, as well as lakes in the far upper portions of the Koyukuk drainage (Andersen et al. 2004).

According to local experts, the population of Arctic Grayling in the Koyukuk drainage appeared healthy and abundant at the time of the interviews. However, they are susceptible to large mortality events from periodic flooding events in the upper portion of the Koyukuk drainage (Andersen et al. 2004).

Longnose Sucker

Local knowledge indicates that Longnose Sucker are present in small numbers in the Koyukuk River drainage but occur at relatively high numbers in the Kanuti River. Longnose Sucker occupy mainstems, sloughs, large and small tributaries, and lakes during the open water period, and move into deep portions of the main lower Koyukuk River during winter. Spawning occurs in small streams after breakup (Andersen et al. 2004).

Burbot

According to local experts, Burbot are found in major tributaries of the Koyukuk drainage, but not the smallest tributaries. Burbot may occupy headwater lakes or the mainstem of the Koyukuk River year-round. Most non lake-adapted Burbot follow a different seasonal movement pattern from other fish, moving upstream along shallow water areas beginning around October through January or February. Spawning takes place under the ice in winter (Andersen et al. 2004).

Whitefish

Several whitefish species that include Broad, Humpback, and Round whitefish and Least Cisco have been captured in the Kanuti River (Brown 2009). In addition, Humpback Whitefish and Least Cisco spawning has been documented in the Kanuti River, downstream of the closure area (Brown 2009).

Local experts indicate whitefish move upstream in the Koyukuk River just before and during spring break up. As the water becomes fast and high due to spring run-off, the fish move into calmer side waters, returning when water levels drop. They repeat this movement whenever water levels rise. In June there is a pulse of Broad Whitefish that precedes the arrival of Chinook Salmon by about two weeks. Some whitefish spend summers feeding in lakes, while others stay in the Koyukuk River and major sloughs. In fall, whitefish move towards spawning areas upstream, then descend downstream after spawning around September and October. Whitefish are said to overwinter in an inactive state in deep lakes from December to March (Andersen et al. 2004).

Local knowledge indicates the abundance and quality of whitefish in the Koyukuk drainage has declined over the previous 60 years. These declines were attributed to changes in habitat and die-offs resulting from being stranded in shallow lakes during high water periods (Andersen et al. 2004).

Northern Pike

According to local experts, Northern Pike in the Koyukuk drainage overwinter in deep lakes and move into shallow lakes and sloughs in spring. Spawning takes place in early summer. After mid-September, Northern Pike move back towards the main river and deep lakes (Andersen et al. 2004).

Cultural Knowledge and Traditional Practices

Of those communities with a customary and traditional use determination for fish in the Yukon River drainage, those located in reasonable proximity to the Kanuti River as it crosses the Dalton Highway are most likely to subsistence fish in the closed area. This includes Wiseman and Coldfoot. In addition to these communities, which are located on the road system, the communities of Evansville and Bettles are connected to the Dalton Highway via a winter road to Evansville from January through March (Holen et al. 2012). However, there is a mismatch between the timing of this road opening and that of nonsalmon fishing by these communities (Andersen et al. 2004). Furthermore, an ADF&G Division of subsistence survey indicated that residents of Bettles and Evansville focus their subsistence use in areas closer to these communities (Holen et al. 2012).

The community of Stevens Village also has access to the Dalton Highway as it crosses the Yukon River, via boat and snow machine (Trainor 2022, pers. comm.). However, a subsistence survey of Stevens Village conducted from 1984 to 1985 showed that residents focus most of their subsistence fishing activity closer to their community on the Yukon River (Sumida 1988); a more recent ADF&G Division of Subsistence survey did not map subsistence use areas (Brown et al. 2016).

Wiseman and Coldfoot

Wiseman and Coldfoot are very small communities located on the Dalton Highway. Both communities fall within the traditional boundaries of the Koyukon Athabascan people, an area which has also been influenced by historical interaction with Iñupiat. Both Wiseman and Coldfoot were established as the result of the gold mining industry in the late 1800s and early 1900s. Coldfoot was abandoned by 1930, before being re-settled in the 1970s in connection with construction of the Dalton Highway and the Trans-Alaska Pipeline. As of 2018 there were an estimated eight full-time residents in Coldfoot and 11 in Wiseman (ADLWD 2019). The area also includes a small number of residents along the Dalton Highway Corridor in camps and other isolated households. ADF&G Division of Subsistence conducted its only subsistence survey of Wiseman and Coldfoot in 2012, for the 2011 calendar year.

At the time of ADF&G's survey, there were five year-round households in Wiseman, and all were surveyed. Four of these households attempted to fish, and all households used fish, although in small quantities (Holen et al. 2012). Residents of Wiseman and Coldfoot can fish within the Kanuti River closure area with rod and reel under State sport fishing regulations.

Salmon

Wiseman residents traditionally harvested and used small amounts of Chum and Chinook salmon locally. However, in part because of local closures to both subsistence and sport fishing for salmon in place since 1978 (sport fishing for salmon is closed within a five-mile radius of the Dalton Highway), Wiseman residents primarily harvest salmon at locations far afield, such as in the Copper and Yukon rivers.

During the 2011 study year, only one of the five Wiseman households fished for salmon (at locations distant from the community), resulting in an estimated 12 pounds of Sockeye Salmon per person, or 4% of Wiseman's total wild food harvest in weight. In addition, Wiseman households received and shared Chinook Salmon, although they did not directly harvest any. All households used salmon (Holen et al. 2012).

Nonsalmon fish

According to Holen et al., "Since the salmon fishing closure was initiated, non-salmon fish have become even more important to Wiseman residents" (2012: 369). Nonsalmon fishing can take place under subsistence regulations in areas that are not closed (in addition to the Kanuti River closure area, subsistence fishing is also closed in Bonanza Creek and Jim River, including Prospect Creek and Douglas Creek). In addition, nonsalmon fish can be taken by rod and reel under State sport fishing regulations throughout the area. Within these regulatory restrictions, during the study period, nonsalmon fishing was reported as occurring close to Wiseman and Coldfoot adjacent to the Dalton Highway, as well as on the South Fork Koyukuk River and as far south as the Jim River (Holen et al. 2012, **Figure 2**).

During the study period, four of the five Wiseman households fished for nonsalmon species, resulting in an estimated 13 pounds of nonsalmon fish per person, or 5% of Wiseman's total wild food harvest in weight. The three most significant nonsalmon harvests in terms of weight included Arctic Grayling, Longnose Sucker, and Burbot (Holen et al. 2012, ADF&G 2020, **Table 1**).

In 2011, about 52% of Wiseman's nonsalmon fish harvest (measured in edible weight) was taken with gillnet or seine, about 28% was taken with "other subsistence methods," which includes set lines, and the remainder was taken by rod and reel. However, the only nonsalmon species that participants reported taking by rod and reel was Lake Trout; a little less than half of the Lake Trout harvest was taken with this gear. The fish most significant in terms of subsistence harvest were taken entirely with subsistence gear during the study period, described in more detail below, although Wiseman's harvest methods for Longnose Sucker and whitefish species were not quantified in the relevant subsistence survey report (Holen et al. 2012).

Arctic Grayling

In this description of harvest practices for Arctic Grayling, and for other species, below, ethnographic data are drawn both from ADF&G's subsistence survey in Wiseman for the 2011 calendar year (Holen et al. 2012) and from a Traditional Ecological Knowledge Study conducted by ADF&G Division of Subsistence from 2001 to 2003 (Andersen et al. 2004). The latter study incorporated interviews with 29 key respondents who were life-long residents of the Koyukuk River drainage communities of Alatna, Allakaket, Bettles/Evansville, Hughes, Huslia, Koyukuk, and Wiseman. Where available, information specific to practices by residents of Wiseman is emphasized.

In the Koyukon language Arctic Grayling are called *tleghelbaaye*, which likely refers to their gray coloring (Andersen et al. 2004). Fall and early winter are the preferred times for harvesting Arctic

Grayling by Koyukuk River communities (Andersen et al. 2004). In the 2011 study year, Wiseman residents harvested Arctic Grayling with gillnet or seine (25%) and "other subsistence methods" (75%) (Holen et al. 2012). Residents of the wider region fish for Arctic Grayling with hook and line beginning when rivers begin to freeze, usually in October. They use rod and reel in open eddies until freeze-up is complete, after which they fish through holes in the ice. Arctic Grayling are also sometimes caught during fall seining for whitefish. Arctic Grayling are easily preserved by freezing, and people prefer to eat them raw and frozen. As winter progresses, Arctic Grayling are further downstream in deep water, and are less accessible (Andersen et al. 2004).

Longnose Sucker

The Koyukon term for Longnose Sucker is *toonts'ode*, "something bad went into the water" (Andersen et al. 2004). Longnose Sucker are mostly caught in the Koyukuk River drainage as by-catch in nets set out for whitefish in the spring. In areas suitable to the harvest method, they are sometimes taken during fall whitefish seining. Finally, they are sometimes taken in the winter with under-ice Burbot traps. In the past, spring-harvested Longnose Sucker were important for feeding both humans and dogs, but today they are primarily used as dog food. The many small bones in the fish make the end portion of Longnose Sucker inedible for humans (Andersen et al. 2004). Wiseman's harvest methods for Longnose Sucker were not specifically described in Holen et al. (2012).

Burbot

Burbot are known as *tl'eghes*, in the Koyukon dialect of the lower Koyukuk River, and *tsoneye* in the upper river dialect. Burbot can be an important subsistence resource for Koyukuk River communities in winter when other fish are not available. They are harvested beginning in the fall. In the middle Koyukuk River conditions are ideal for Burbot traps in winter, but in areas closer to the headwaters Burbot are most commonly taken with set hooks through the ice beginning around October. According to a key informant from Wiseman, Burbot have also traditionally been taken from lakes in the summer with spears (Andersen et al. 2004). During the 2011 study year, Wiseman residents took Burbot entirely with subsistence gear "other than gillnet or seine" (Holen et al. 2012).

In the fall and winter Burbot can be preserved by natural freezing, but do not preserve well, and people prefer to eat them soon after they are harvested. The fatty liver is the most prized part of the fish. For subsistence purposes, people prefer to catch them before they spawn, when they are a better source of fat. Burbot return downstream beginning in February (Andersen et al. 2004).

Whitefish

The generic term for whitefish in the Koyukon language is *ts* 'ol. There are two species of large whitefish in the Koyukuk drainage, Broad Whitefish (*taaseze*, or "water bear") and Humpback Whitefish (*holehge*, "it swims upwards"). There are also two species of small whitefish, Least Cisco (*tsaabaaya*) and the Round Whitefish (*hulten*). According to local experts, the latter is only thinly distributed in the Koyukuk drainage (Andersen et al. 2004).

One key informant said that he had observed a decline in whitefish populations over the previous sixty years, and that the fish had also become less fatty. He attributed this decline to habitat change, and especially to decreased weeds and insects, as well as increased silt and water temperatures. Whitefish are susceptible to die-offs after being trapped in shallow lakes during high water periods (Andersen et al. 2004).

Gillnets are used to catch whitefish in the spring after breakup and in the fall as fish move between seasonal habitats. Whitefish are considered to be in prime condition in fall. After freeze-up they can be caught with set nets. Least Cisco may be caught with seining nets, although river conditions prevent the use of these in the upper portion of the river. In the summer, whitefish are sometimes incidentally caught in nets used for salmon. Round Whitefish are very thinly distributed and are not commonly caught. Wiseman's harvest methods for whitefish were not specifically described in Holen et al. (2012).

Northern Pike

Northern Pike are known as *k'oolkkoye* in the Koyukon language, and are an important food resource that is available year-round. Northern Pike are present but not common in the Koyukuk River near Bettles, and are not present in the Middle Fork of the Koyukuk near Wiseman.

On the Koyukuk River, Northern Pike are caught with gillnets in spring and fall. "Pike are sometimes caught during the summer using artificial lures and rod and reel gear in area lakes or specific river or slough locations known for being good pike fishing. Pike are also frequently taken as by-catch in summer nets and fishwheels targeting salmon" where conditions permit use of this gear (Andersen et al. 2004: 74). In winter they can be harvested with a hook through the ice where streams leave or enter lakes.

Key informants from the wider region reported harvesting Northern Pike with gillnets, fish traps, and hook and line gear. According to Andersen et al., "The ability to take pike using unusual methods contributed to the utility of pike as a subsistence resource" (2004:75). During the subsistence survey study year, Wisemen residents harvested Northern Pike entirely with gillnet or seine (Holen et al. 2012).

(ADF&G 2020).		
Fish species	Estimated number of fish	Estimated pounds per person
Arctic Grayling	111	5.97
Longnose	40	
Sucker		2.15
Burbot	9	1.66
Northern Pike	4	1.38
Char	11	1.11

Table 1: Estimated number of nonsalmon fish and corresponding pounds per person harvested by Wiseman households in the 2011 calendar year (ADF&G 2020).

Fish species	Estimated number of fish	Estimated pounds per person
Lake Trout	9	0.97
Whitefish	25	0.96
Dolly Varden	2	0.13



Figure 2. Wiseman's nonsalmon fish search and harvest areas, 2011. Source: Holen et al. 2012.

Coldfoot was also surveyed by ADF&G Division of Subsistence for the 2011 calendar year. At that time, there were five year-round households in Coldfoot, four of which were surveyed, representing 10 individuals. During the survey year, no residents of the community fished for either salmon or nonsalmon fish, but one household received and used Coho and Sockeye salmon. No use of nonsalmon fish was documented in Coldfoot during the study period (Holen et al. 2012).

Harvest History

Subsistence fishing is prohibited in the Kanuti River closure area under both State and Federal regulations so there is no legal subsistence harvest in this area. Harvest is allowed under State sport fishing regulations and is not limited to Federally qualified subsistence users.

During years when sport fishing for Chinook Salmon is not closed or restricted by emergency order, Chinook Salmon throughout the Yukon River Management Area (excludes the Tanana River) can be harvested with a limit of three per day, three in possession over 20 inches (only two can be over 28 inches), and ten per day, ten in possession for under 20 inches. Other salmon have a ten per day, ten in possession limit. However, salmon fishing is closed within a 5-mile radius on either side of the Dalton Highway.

Per the general sport fish regulations that apply to the entire Yukon River Management Area that extends from the Yukon River Delta to the border with Canada and includes the entire Yukon River drainage (excluding the Tanana River), Dolly Varden can be harvested with a limit of ten per day, ten in possession (only two can be 20 inches or longer). Allowable Lake Trout harvest is two per day, two in possession, only two of which may be 20 inches or longer. Arctic Grayling have no size limit and have a limit of five per day, five in possession. Sheefish and Northern Pike have a limit of ten per day, ten in possession, and Burbot have a harvest limit of 15 per day, 15 in possession.

Special regulations apply to all streams within the Trans-Alaska Pipeline corridor, which is defined as the length of the Pipeline north of the Yukon River extending 5 miles on either side of the Dalton Highway, excluding the Ray River where General Regulations apply. The area of the Kanuti River that is closed to subsistence fishing crosses the Dalton Highway Corridor. In this area (five miles on each side of the highway), sport fishing for salmon is closed. In addition, retention of Lake Trout is prohibited and the limit of Northern Pike is five per day, five in possession (only one of which may be 30 inches or longer).

The majority of sport fish harvest along the Dalton Highway corridor for the Yukon River Management Area is for Arctic Grayling (Stuby 2021). Sport fish harvest estimates are not available for specifically the Kanuti River. Sport fish harvest estimates for Arctic Grayling in streams along the Dalton Highway south of Atigun Pass report an average of 324 fish annually during 2009–2018. Annual harvest for Northern Pike for this area during this time frame was 22 fish. Fishing effort for this entire area for all species during 2009–2018 was approximately 928 angler days (Stuby 2021). Sport fishing effort and harvest in Alaska have been estimated and reported annually since 1977 using a mail survey. Estimates based on fewer than 12 responses indicate that the sport fishing occurred and are subject to high variance. The majority of estimates for the Dalton Highway during 2009–2018 were based on fewer than 12 respondents (Stuby 2021). These data suggest that sport fish harvest and effort may not be large enough to cause conservation concerns for Arctic Grayling in the Kanuti River.

Other Alternatives Considered

One alternative is to retain the closure. Population statuses are unknown in the closure area, which is road-accessible, allowing easy access and harvest of fish. If the closure is rescinded, harvest of nonsalmon species would be unrestricted for all legal gear types other than rod and reel, and gillnets could be used to harvest high numbers of fish. Retaining the closure would protect populations from overharvest until a proposal to restrict harvest and/or gear types in the closure area could be submitted. Federally qualified subsistence users could harvest fish under State sport fishing regulations while the Federal closure was in place. This alternative was rejected because it would not provide a Federal subsistence priority in the closure area.

A second alternative is to modify the closure by closing the fishery to all users and uses. This would fully protect salmon and nonsalmon fish populations in the closure area. Under this alternative, there would be no subsistence or sport fishing opportunity. Closing to all users and uses would eliminate the current situation, in which Federal public waters are closed to subsistence fishing while remaining open to other uses. This alternative was rejected because it would be an unnecessary restriction on non-subsistence uses as sport fish harvest data suggest the sport fishery does not present a conservation concern. In addition, subsistence surveys indicate subsistence users may harvest a portion of their wild foods under sport fishing regulations.

Effects

If the closure is rescinded, Federal subsistence regulations for the Yukon-Northern Area would apply. Harvest of salmon would be allowed, and Federal subsistence fishing schedules, openings, closings, and fishing methods would be the same as those issued by State emergency order for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal special action. Salmon could be taken by gillnet, beach seine, dip net, fish wheel, or rod and reel.

Nonsalmon fish could be taken by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear, lead, or rod and reel, with some restrictions on this gear (see "Current Federal Regulation" in this analysis). Subsistence rod and reel harvest limits would match State sport fishing harvest and possession limits. Harvest would be unrestricted for all other legal gear types.

Rescinding the closure would establish a Federal subsistence priority and provide subsistence harvest opportunity in an area that is currently closed to subsistence fishing but open to other uses. However, allowing unrestricted harvest in a road-accessible system may increase harvest pressure on stocks and result in a conservation concern.

OSM PRELIMINARY CONCLUSION

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

The modified regulation should read:

§____.27(e)(3) Yukon-Northern Area

(ix) You may not subsistence fish in the following drainages located north of the main Yukon River:

(A) Kanuti River upstream from a point 5 miles downstream of the State highwaycrossing;

Justification

Currently, a portion of the Kanuti River is closed to the harvest of all fish by Federally qualified subsistence users but open to sport fishing under State regulations. Rescinding the closure would establish a Federal subsistence priority in the area. However, allowing unrestricted harvest for gear types other than rod and reel in an easily accessible system may lead to overharvest and local depletion of stocks. While populations may be protected by limiting subsistence harvest to rod and reel only and/or modifying harvest limits, these modifications are not possible through the closure review process and would require a fisheries proposal be submitted. Until a proposal can be submitted, the Federal inseason manager may use their delegated authority to restrict gear types and/or harvest limits, for up to 60 days, to protect populations in the closure area. Actions exceeding 60 days would require a temporary special action be implemented by the Board. If a proposal is submitted, the Office of Subsistence Management recommends that harvest be limited to rod and reel only in the Kanuti River closure area.

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FCR23–03 Executive Summary		
General Description	FCR23-03 reviews the closure to the harvest of all fish in the	
	Bonanza Creek drainage by Federally qualified subsistence users.	
Current Regulation	§27(e)(3) Yukon-Northern Area	
	(\cdot) V. (\cdot) $($	
	(ix) You may not subsistence fish in the following drainages	
	localea north of the main Tukon River:	

	(B) Bonanza Creek;	

OSM Preliminary Conclusion	Rescind the closure	
Yukon-Kuskokwim Delta		
Subsistence Regional		
Advisory Council		
Recommendation		
Western Interior Alaska		
Subsistence Regional		
Advisory Council		
Recommendation		
Seward Peninsula 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	

FEDERAL FISHERIES CLOSURE REVIEW FCR23-03

Issue

FCR23-03 is a standard review of a Federal subsistence fishery closure to the harvest of all fish in the Bonanza Creek drainage. It is the Board's policy that Federal public lands and waters should be reopened as soon as practicable once the conditions that originally justified the closure have changed to such an extent that the closure is no longer necessary. The purpose of this closure review is to determine if the closure is still warranted and to ensure the closure does not remain in place longer than necessary.

Closure Location: Yukon River Drainage, Bonanza Creek-all fish

Current Federal Regulation

§____.27(e)(3) Yukon-Northern Area

(i) Unless otherwise restricted in this section, you may take fish in the Yukon-Northern Area at any time... You may subsistence fish for salmon with rod and reel in the Yukon River drainage 24 hours per day, 7 days per week, unless rod and reel are specifically otherwise restricted in this paragraph (e)(3).

(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060 [emergency orders]), unless superseded by a Federal special action.

(v) Except as provided in this section, and except as may be provided by the terms of a subsistence fishing permit, you may take fish other than salmon at any time.

(ix) You may not subsistence fish in the following drainages located north of the main Yukon *River:*

*** (B) Bonanza Creek; ***
(xii) You may take salmon only by gillnet, beach seine, dip net, fish wheel, or rod and reel, subject to the restrictions set forth in this section.

(xvi) Unless otherwise specified in this section, you may take fish other than salmon by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear, lead, or rod and reel, subject to the following restrictions, which also apply to subsistence salmon fishing:

(B) You may not use an aggregate length of set gillnet in excess of 150 fathoms, and each drift gillnet may not exceed 50 fathoms in length.

(C) In Districts 4, 5, and 6, you may not set subsistence fishing gear within 200 feet of other fishing gear operating for commercial, personal, or subsistence use . . .

(xvii) In District 4, from September 21 through May 15, you may use jigging gear from shore ice.

Relevant Federal Regulation

§____.27 (b) Subsistence Taking of Fish

(16) Unless specified otherwise in this section, you may use a rod and reel to take fish without a subsistence fishing permit. Harvest limits applicable to the use of a rod and reel to take fish for subsistence uses shall be as follows:

(ii) Except as otherwise provided for in this section, if you are not required to obtain a subsistence fishing permit for an area, the harvest and possession limits for taking fish for subsistence uses with a rod and reel are the same as for taking fish under State of Alaska subsistence fishing regulations in those same areas. If the State does not have a specific subsistence season and/or harvest limit for that particular species, the limit shall be the same as for taking fish under State of Alaska sport fishing regulations.

Closure Dates: Year-round

Current State Regulation

Yukon Area—Subsistence

5 AAC 01.225. Waters closed to subsistence fishing

(b) The following drainages located north of the mainstem Yukon River are closed to subsistence fishing:

(3) Bonanza Creek;

Yukon River Area—Sport

5 AAC 73.010. Seasons, bag, possession, and size limits, and methods and means for Yukon River Area

(a) Except as otherwise specified in this section or through an emergency order issued under AS 16.05.060, sport fishing is permitted year round in the waters of the Yukon River Area.

(b) Except as otherwise specified in (c) of this section, the following are the general bag, possession, and size limits for finfish and shellfish in the waters of the Yukon River Area:

(1) king salmon 20 inches or greater in length: the bag and possession limit is three fish, of which only two fish may be 28 inches or greater in length;

(2) salmon, other than king salmon: the bag and possession limit is 10 fish, with no size limit;

(3) Arctic char/Dolly Varden and lake trout:

(B) in all flowing waters: the bag and possession limit is 10 fish of all species combined, of which only two fish may be 20 inches or greater in length, and of which only two fish may be lake trout;

(5) Arctic grayling: the bag and possession limit is five fish, with no size limit;

(6) sheefish: the bag and possession limit is 10 fish, with no size limit;

(7) northern pike: the bag and possession limit is 10 fish, with no size limit;

(8) burbot: the bag and possession limit is 15 fish, with no size limit;

(10) finfish and shellfish species that are not specified in this section: there are no bag, possession, or size limits;

(c) The following are the exceptions to the general bag, possession, and size limits, and fishing seasons specified in (a) of this section for the Yukon River Area:

(4) in the Dalton Highway corridor (Trans-Alaska Pipeline corridor) within the Yukon River Area, which is described as a corridor five miles wide on each side of the Dalton Highway north of the Yukon River, excluding the Ray River,

(A) sport fishing for salmon is closed;

(B) lake trout may be taken only by catch-and-release fishing, and may not be possessed or retained; all lake trout caught must be immediately released;

(*C*) the bag and possession limit for northern pike is five fish, of which only one fish may be 30 inches or greater in length;

Regulatory Year Initiated: 1992

Extent of Federal Public Lands/Waters

For purposes of this analysis, the phrase "Federal public waters" is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. The entire length of Bonanza Creek is on general domain land managed by the Bureau of Land Management (BLM; **Figure 1**). On general domain lands, Federal subsistence regulations apply only to non-navigable waters.



Figure 1. Map of the Dalton Highway Corridor (red lines), Bonanza Creek, and the other closed drainages in the area.

Customary and Traditional Use Determination

Residents of the Yukon River drainage and the community of Stebbins have a customary and traditional use determination for salmon, other than fall Chum Salmon, in the Yukon River drainage.

Residents of the Yukon River drainage and the communities of Chevak, Hooper Bay, Scammon Bay, and Stebbins have customary and traditional use determination for fall Chum Salmon in the Yukon River drainage.

Residents of the Yukon-Northern Area have a customary and traditional use determination for freshwater species other than salmon in the Yukon River drainage.

Regulatory History

Under State regulations, the portion of Bonanza Creek within the Dalton Highway Corridor (5 miles on either side of the highway) has been closed to subsistence fishing since the late 1970s, beginning with construction of the Dalton Highway (Holen et al. 2012). The opening of the Dalton Highway to public travel in 1994 provided new access to lakes and streams along the route. Increases in recreational fishing effort and harvest have resulted in reductions in the sport fishing bag limits for Northern Pike and Arctic Grayling, no retention of Lake Trout, and a salmon fishing closure within the Dalton Highway Corridor (Stuby 2021).

In 1992, the Federal Subsistence Management Program promulgated regulations governing the harvest of fish for subsistence uses in non-navigable waters within and adjacent to Federal public lands (57 Fed. Reg. 22940 [May 29, 1992]). These regulations incorporated many provisions from State of Alaska subsistence fishing regulations. The closure under review in this analysis was incorporated into Federal regulations in this manner and has not been subsequently modified.

In 1999, the Federal Subsistence Board (Board) also adopted Federal regulations for fish in navigable waters within and adjacent to Federal public lands where there is a Federal reserved water right (64 Fed. Reg. 1276 [January 8, 1999]). These regulations do not apply on navigable waters within and adjacent to BLM general domain lands (see 50 CFR 100.3).

Closure Last Reviewed

There have been no previous reviews of this closure.

Justification for Original Closure

The Federal Subsistence Management Program justification for the inclusion of the original closure in Federal regulations was to minimize disruption to the State's continuing fish and game management, because of the uncertainty over the resumption of State management of subsistence, yet still fulfill the requirements of Title VIII of ANILCA (55 FR 27114, June 29, 1990).

Council Recommendation for Original Closure

N/A

State Recommendation for Original Closure

N/A

Biological Background

Salmon

Information regarding salmon is limited in Bonanza Creek. According to the Anadromous Waters Catalog (AWC), Chum Salmon may spawn in Bonanza Creek and have been documented downriver of the Dalton Highway (ADF&G 2022a). No other salmon species are listed in the AWC and population assessment near and above the Dalton Highway for all salmon species is lacking.

Nonsalmon Fish

The nonsalmon fish community in Bonanza Creek is comprised of Arctic Grayling, Burbot, Slimy Sculpin, Round Whitefish, Longnose Sucker, and Northern Pike (BLM 2005, ADF&G 2022b). Information for these species is limited in the closure area. However, the habitat use, seasonal movements, and population status of these species (excluding Slimy Sculpin) was provided by local experts during a Traditional Ecological Knowledge study conducted by the Alaska Department of Fish and Game (ADF&G), Division of Subsistence (Andersen et al. 2004). The local knowledge provided in this study applies to the broader Koyukuk River drainage.

Arctic Grayling

Local knowledge indicates Koyukuk River drainage Arctic Grayling spend most of their time in clear, quickly moving water in tributary streams and headwater areas whenever this habitat is clear of ice. They are reported to move into this habitat after breakup in April or May, spawning shortly afterwards and feeding on insects. Later, the larger Arctic Grayling occupy higher quality feeding areas farthest upstream and smaller fish occupy poorer feeding areas downstream (Hughes 1992, Andersen et al. 2004). Arctic Grayling move from tributary streams to overwintering areas in deeper water downstream during September and October. Local knowledge indicates that Arctic Grayling are usually the last fish to leave the tributary streams in the fall. Arctic Grayling overwinter in the Koyukuk River mainstem and large tributaries, as well as lakes in the far upper portions of the Koyukuk drainage (Andersen et al. 2004).

Arctic Grayling abundance and age composition were assessed in Bonanza Creek in 1996 (Fish 1997). Abundance of Arctic Grayling (>150 mm FL) was estimated using mark recapture techniques in a 3.3 mi section of Bonanza Creek that crosses the Dalton Highway. The estimated abundance of Arctic Grayling within the study area was 1,152 fish (SE = 445) which resulted in a density of 349 fish/mi.

Ages of Arctic Grayling ranged from age-3 to age-9. Age-6 made up the largest proportion of sampled fish (P = 0.39), followed by age-4 (P = 0.19) and age-5 (P = 0.14).

Burbot

According to local experts, Burbot are found in major tributaries of the Koyukuk drainage, but not the smallest tributaries. Burbot may occupy headwater lakes or the mainstem of the Koyukuk River year-round. Most non lake-adapted Burbot follow a different seasonal movement pattern from other fish, moving upstream along shallow water areas beginning around October through January or February. Spawning takes place under the ice in winter (Andersen et al. 2004).

Whitefish

Local experts indicate whitefish move upstream in the Koyukuk River just before and during spring break up. As the water becomes fast and high due to spring run-off, the fish move into calmer side waters, returning when water levels drop. They repeat this movement whenever water levels rise. Some whitefish spend summers feeding in lakes, while others stay in the Koyukuk River and major sloughs (Andersen et al. 2004). In fall, whitefish move towards spawning areas upstream, then descend downstream after spawning around September and October. Whitefish are said to overwinter in an inactive state in deep lakes from December to March. Round Whitefish is a "clear water fish" that prefers to spend time in smaller streams and headwaters, "similar to graying" (Andersen et al. 2004: 93).

Local knowledge indicates the abundance and quality of whitefish in the Koyukuk drainage has declined over the previous 60 years. These declines were attributed to changes in habitat and die-offs resulting from being stranded in shallow lakes during high water periods (Andersen et al. 2004).

Longnose Sucker

Local knowledge indicates that Longnose Sucker are present in small numbers in the Koyukuk River drainage but occur at relatively high numbers in some tributaries. Longnose Sucker occupy mainstems, sloughs, large and small tributaries, and lakes during the open water period, and move into deep portions of the main lower Koyukuk River during winter. Spawning occurs in small streams after breakup (Andersen et al. 2004).

Northern Pike

According to local experts, Northern Pike in the Koyukuk drainage overwinter in deep lakes and move into shallow lakes and sloughs in spring. Spawning takes place in early summer. After mid-September, Northern Pike move back towards the main river and deep lakes (Andersen et al. 2004).

Cultural Knowledge and Traditional Practices

Of those communities with a customary and traditional use determination for fish in the Yukon River drainage, those located in reasonable proximity to Bonanza Creek as it crosses the Dalton Highway are

most likely to subsistence fish in the closed area. This includes Wiseman and Coldfoot. In addition to these communities, which are located on the road system, the communities of Evansville and Bettles are connected to the Dalton Highway via a winter road to Evansville from January through March (Holen et al. 2012). However, there is a mismatch between the timing of this road opening and that of nonsalmon fishing by these communities (Andersen et al. 2004). Furthermore, an ADF&G Division of Subsistence survey indicated that residents of Bettles and Evansville focus their subsistence use in areas closer to these communities (Holen et al. 2012).

The community of Stevens Village also has access to the Dalton Highway as it crosses the Yukon River, via boat and snow machine (Trainor 2022, pers. comm.). However, a subsistence survey of Stevens Village conducted from 1984 to 1985 showed that residents focus most of their subsistence fishing activity closer to their community on the Yukon River (Sumida 1988); a more recent ADF&G Division of Subsistence survey did not map subsistence use areas (Brown et al. 2016).

Wiseman and Coldfoot

Wiseman and Coldfoot are very small communities located on the Dalton Highway. Both communities fall within the traditional boundaries of the Koyukon Athabascan people, an area which has also been influenced by historical interaction with Iñupiat. Both Wiseman and Coldfoot were established as the result of the gold mining industry in the late 1800s and early 1900s. Coldfoot was abandoned by 1930, before being re-settled in the 1970s in connection with construction of the Dalton Highway and the Trans-Alaska Pipeline. As of 2018 there were an estimated eight full-time residents in Coldfoot and 11 in Wiseman (ADLWD 2019). The area also includes a small number of residents along the Dalton Highway Corridor in camps and other isolated households. ADF&G Division of Subsistence conducted its only subsistence survey of Wiseman and Coldfoot in 2012, for the 2011 calendar year.

At the time of ADF&G's survey, there were five year-round households in Wiseman, and all were surveyed. Four of these households attempted to fish, and all households used fish, although in small quantities (Holen et al. 2012). Residents of Wiseman and Coldfoot can fish within Bonanza Creek with rod and reel under State sport fishing regulations.

Salmon

Wiseman residents traditionally harvested and used small amounts of Chum and Chinook salmon locally. However, in part because of local closures to both subsistence and sport fishing for salmon in place since 1978 (sport fishing for salmon is closed within a 5-mile radius of the Dalton Highway, Wiseman residents primarily harvest salmon at locations far afield, such as in the Copper and Yukon rivers.

During the 2011 study year, only one of the five Wiseman households fished for salmon (at locations distant from the community), resulting in an estimated 12 pounds of Sockeye Salmon per person, or 4% of Wiseman's total wild food harvest in weight. In addition, Wiseman households received and shared Chinook Salmon, although they did not directly harvest any. All households used salmon (Holen et al. 2012).

Nonsalmon fish

According to Holen et al., "Since the salmon fishing closure was initiated, non-salmon fish have become even more important to Wiseman residents" (2012: 369). Nonsalmon fishing can take place under subsistence regulations in areas that are not closed (in addition to Bonanza Creek, subsistence fishing is also closed in Jim River, including Prospect Creek and Douglas Creek and a portion of the Kanuti River). In addition, nonsalmon fish can be taken by rod and reel under State sport fishing regulations throughout the area. Within these regulatory restrictions, during the study period, nonsalmon fishing was reported as occurring close to Wiseman and Coldfoot adjacent to the Dalton Highway, as well as on the South Fork Koyukuk River and as far south as the Jim River (Holen et al. 2012, **Figure 2**).

During the study period, four of the five Wiseman households fished for nonsalmon species, resulting in an estimated 13 pounds of nonsalmon fish per person, or 5% of Wiseman's total wild food harvest in weight. The three most significant nonsalmon harvests in terms of edible weight included Arctic Grayling, Longnose Sucker, and Burbot (Holen et al. 2012, ADF&G 2020, **Table 1**).

In 2011, about 52% of Wiseman's nonsalmon fish harvest (measured in edible weight) was taken with gillnet or seine, about 28% was taken with "other subsistence methods," which includes set lines, and the remainder was taken by rod and reel. However, the only nonsalmon species that participants reported taking by rod and reel was Lake Trout; a little less than half of the Lake Trout harvest was taken with this gear. The fish most significant in terms of subsistence harvest were taken entirely with subsistence gear during the study period, described in more detail below, although Wiseman's harvest methods for Longnose Sucker and whitefish species were not quantified in the relevant subsistence survey report (Holen et al. 2012).

Arctic Grayling

In this description of harvest practices for Arctic Grayling, and for other species, below, ethnographic data are drawn both from ADF&G's subsistence survey in Wiseman for the 2011 calendar year (Holen et al. 2012) and from a Traditional Ecological Knowledge Study conducted by ADF&G Division of Subsistence from 2001 to 2003 (Andersen et al. 2004). The latter study incorporated interviews with 29 key respondents who were life-long residents of the Koyukuk River drainage communities of Alatna, Allakaket, Bettles/Evansville, Hughes, Huslia, Koyukuk, and Wiseman. Where available, information specific to practices by residents of Wiseman is emphasized.

In the Koyukon language Arctic Grayling are called *tleghelbaaye*, which likely refers to their gray coloring (Andersen et al. 2004). Fall and early winter are the preferred times for harvesting Arctic Grayling by Koyukuk River communities (Andersen et al. 2004). In the 2011 study year, Wiseman residents harvested Arctic Grayling with gillnet or seine (25%) and "other subsistence methods" (75%) (Holen et al. 2012). Residents of the wider region fish for Arctic Grayling with hook and line beginning when rivers begin to freeze, usually in October. They use rod and reel in open eddies until freeze-up is complete, after which they fish through holes in the ice. Arctic Grayling are also sometimes caught during fall seining for whitefish. Arctic Grayling are easily preserved by freezing,

and people prefer to eat them raw and frozen. As winter progresses, Arctic Grayling are further downstream in deep water, and are less accessible (Andersen et al. 2004).

Burbot

Burbot are known as *tl'eghes*, in the Koyukon dialect of the lower Koyukuk River, and *tsoneye* in the upper river dialect. Burbot can be an important subsistence resource for Koyukuk River communities in winter when other fish are not available. They are harvested beginning in the fall. In the middle Koyukuk River conditions are ideal for Burbot traps in winter, but in areas closer to the headwaters Burbot are most commonly taken with set hooks through the ice beginning around October. According to a key informant from Wiseman, Burbot have also traditionally been taken from lakes in the summer with spears (Andersen et al. 2004). During the 2011 study year, Wiseman residents took Burbot entirely with subsistence gear "other than gillnet or seine" (Holen et al. 2012).

In the fall and winter Burbot can be preserved by natural freezing, but do not preserve well, and people prefer to eat them soon after they are harvested. The fatty liver is the most prized part of the fish. For subsistence purposes, people prefer to catch them before they spawn, when they are a better source of fat. Burbot return downstream beginning in February (Andersen et al. 2004).

Whitefish

The generic term for whitefish in the Koyukon language is *ts* 'ol. There are two species of large whitefish in the Koyukuk drainage, Broad Whitefish (*taaseze*, or "water bear") and Humpback Whitefish (*holehge*, "it swims upwards"). There are also two species of small whitefish, Least Cisco (*tsaabaaya*) and the Round Whitefish (*hulten*). According to local experts, the latter is only thinly distributed in the Koyukuk drainage (Andersen et al. 2004).

One key informant said that he had observed a decline in whitefish populations over the previous sixty years, and that the fish had also become less fatty. He attributed this decline to habitat change, and especially to decreased weeds and insects, as well as increased silt and water temperatures. Whitefish are susceptible to die-offs after being trapped in shallow lakes during high water periods (Andersen et al. 2004).

Gillnets are used to catch whitefish in the spring after breakup and in the fall as fish move between seasonal habitats. Whitefish are considered to be in prime condition in fall. After freeze-up they can be caught with set nets. Least Cisco may be caught with seining nets, although river conditions prevent the use of these in the upper portion of the river. In the summer, whitefish are sometimes incidentally caught in nets used for salmon. Round Whitefish are very thinly distributed and are not commonly caught. Wiseman's harvest methods for whitefish were not specifically described in Holen et al. (2012).

Longnose Sucker

The Koyukon term for Longnose Sucker is *toonts'ode*, "something bad went into the water" (Andersen et al. 2004). Longnose Sucker are mostly caught in the Koyukuk River drainage as by-catch in nets set

out for whitefish in the spring. In areas suitable to the harvest method, they are sometimes taken during fall whitefish seining. Finally, they are sometimes taken in the winter with under-ice Burbot traps. In the past, spring-harvested Longnose Sucker were important for feeding both humans and dogs, but today they are primarily used as dog food. The many small bones in the fish make the end portion of Longnose Sucker inedible for humans (Andersen et al. 2004). Wiseman's harvest methods for Longnose Sucker were not specifically described in Holen et al. (2012).

Northern Pike

Northern Pike are known as *k'oolkkoye* in the Koyukon language, and are an important food resource that is available year-round. Northern Pike are present but not common in the Koyukuk River near Bettles, and are not present in the Middle Fork of the Koyukuk near Wiseman.

On the Koyukuk River, Northern Pike are caught with gillnets in spring and fall. "Pike are sometimes caught during the summer using artificial lures and rod and reel gear in area lakes or specific river or slough locations known for being good pike fishing. Pike are also frequently taken as by-catch in summer nets and fishwheels targeting salmon" where conditions permit use of this gear (Andersen et al. 2004: 74). In winter they can be harvested with a hook through the ice where streams leave or enter lakes.

Key informants from the wider region reported harvesting Northern Pike with gillnets, fish traps, and hook and line gear. According to Andersen et al., "The ability to take pike using unusual methods contributed to the utility of pike as a subsistence resource" (2004:75). During the subsistence survey study year, Wisemen residents harvested Northern Pike entirely with gillnet or seine (Holen et al. 2012).

nousenoids in the 2011 calendar year (ADF&G 2020).				
Fish species	Estimated	Estimated pounds		
	number of fish	per person		
Arctic Grayling	111	5.97		
Longnose	40			
Sucker		2.15		
Burbot	9	1.66		
Northern Pike	4	1.38		
Char	11	1.11		
Lake Trout	9	0.97		
Whitefish	25	0.96		
Dolly Varden	2	0.13		

Table 1: Estimated number of nonsalmon fish and
corresponding pounds per person harvested by Wiseman
households in the 2011 calendar year (ADE&G 2020)



Figure 2. Wiseman's nonsalmon fish search and harvest areas, 2011. Source: Holen et al. 2012.

Coldfoot was also surveyed by ADF&G Division of Subsistence for the 2011 calendar year. At that time, there were five year-round households in Coldfoot, four of which were surveyed, representing 10 individuals. During the survey year, no residents of the community fished for either salmon or

nonsalmon fish, but one household received and used Coho and Sockeye salmon. No use of nonsalmon fish was documented in Coldfoot during the study period (Holen et al. 2012).

Harvest History

Subsistence fishing is prohibited in Bonanza Creek under State and Federal regulations so there is no legal subsistence harvest in this system. Harvest is allowed under State sport fishing regulations and is not limited to Federally qualified subsistence users.

During years when sport fishing for Chinook Salmon isn't closed or restricted by emergency order, Chinook Salmon throughout the Yukon River Management Area (excludes the Tanana River) can be harvested with a limit of three per day, three in possession over 20 inches (only two can be over 28 inches), and ten per day, ten in possession for under 20 inches. Other salmon have a ten per day, ten in possession limit. However, salmon fishing is closed within a 5-mile radius on either side of the Dalton highway.

Per the general sport fish regulations that apply to the entire Yukon River Management Area that extends from the Yukon River Delta to the border with Canada and includes the entire Yukon River drainage (excluding the Tanana River), Dolly Varden can be harvested with a limit of ten per day, ten in possession (only two can be 20 inches or longer). Allowable Lake Trout harvest is two per day, two in possession, only two of which may be 20 inches or longer. Arctic Grayling have no size limit and have a limit of five per day, five in possession. Sheefish and Northern Pike have a limit of ten per day, ten in possession, and Burbot have a harvest limit of 15 per day, 15 in possession.

Special regulations apply to all streams within the Trans-Alaska Pipeline corridor, which is defined as the length of the Pipeline north of the Yukon River extending 5 miles on either side of the Dalton Highway, excluding the Ray River where General Regulations apply. Bonanza Creek crosses the Dalton Highway Corridor. In this area (five miles on each side of the highway), sport fishing for salmon is closed. In addition, retention of Lake Trout is prohibited and the limit of Northern Pike is five per day, five in possession (only one of which may be 30 inches or longer).

The majority of sport fish harvest along the Dalton Highway corridor for the Yukon River Management Area is for Arctic Grayling (Stuby 2021). Sport fish harvest estimates are not available for specifically Bonanza Creek. Sport fish harvest estimates for Arctic Grayling in streams along the Dalton Highway south of Atigun Pass report an average of 324 fish annually during 2009–2018. Fishing effort for this entire area for all species during 2009–2018 was approximately 928 angler days (Stuby 2021). Sport fishing effort and harvest in Alaska have been estimated and reported annually since 1977 using a mail survey. Estimates based on fewer than 12 responses indicate that the sport fishing occurred and are subject to high variance. The majority of estimates for the Dalton Highway during 2009–2018 were based on fewer than 12 respondents (Stuby 2021). These data suggest that sport fish harvest and effort may not be large enough to cause conservation concerns for Arctic Grayling in Bonanza Creek.

Other Alternatives Considered

One alternative is to retain the closure. Population statuses are unknown in Bonanza Creek, which is road-accessible, allowing easy access and harvest of fish. If the closure is rescinded, harvest of nonsalmon species would be unrestricted for all legal gear types other than rod and reel, and gillnets could be used to harvest high numbers of fish. Retaining the closure would protect populations from overharvest until a proposal to restrict harvest and/or gear types in the closure area could be submitted. Federally qualified subsistence users could harvest fish under State sport fishing regulations while the Federal closure was in place. This alternative was rejected because it would not provide a Federal subsistence priority in the closure area.

A second alternative is to modify the closure by closing the fishery to all users and uses. This would fully protect salmon and nonsalmon fish populations in Bonanza Creek. Under this alternative, there would be no subsistence or sport fishing opportunity. Closing to all users and uses would eliminate the current situation, in which Federal public waters are closed to subsistence fishing while remaining open to other uses. This alternative was rejected because it would be an unnecessary restriction on non-subsistence uses as sport fish harvest data suggest the sport fishery does not present a conservation concern. In addition, subsistence surveys indicate subsistence users may harvest a portion of their wild foods under sport fishing regulations.

Effects

If the closure is rescinded, Federal subsistence regulations for the Yukon-Northern Area would apply. Harvest of salmon would be allowed, and Federal subsistence fishing schedules, openings, closings, and fishing methods would be the same as those issued by State emergency order for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal special action. Salmon could be taken by gillnet, beach seine, dip net, fish wheel, or rod and reel.

Nonsalmon fish could be taken by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear, lead, or rod and reel, with some restrictions on this gear (see "Current Federal Regulation" in this analysis). Subsistence rod and reel harvest limits would match State sport fishing harvest and possession limits. Harvest would be unrestricted for all other legal gear types.

Rescinding the closure would establish a Federal subsistence priority and provide subsistence harvest opportunity in an area that is currently closed to subsistence fishing but open to other uses. However, allowing unrestricted harvest in a road-accessible system may increase harvest pressure on stocks and result in a conservation concern.

OSM PRELIMINARY CONCLUSION

Retain the Status Quo
X Rescind the Closure
Modify the Closure
Defer Decision on the Closure or Take No Action

The modified regulation should read:

§____.27(e)(3) Yukon-Northern Area

(ix) You may not subsistence fish in the following drainages located north of the main Yukon *River:*

*** (B) Bonanza Creek; ***

Justification

Currently, Bonanza Creek is closed to the harvest of all fish by Federally qualified subsistence users but open to sport fishing under State regulations. Rescinding the closure would establish a Federal subsistence priority in the area. However, allowing unrestricted harvest for gear types other than rod and reel in an easily accessible system may lead to overharvest and local depletion of stocks. While populations may be protected by limiting subsistence harvest to rod and reel only and/or modifying harvest limits, these modifications are not possible through the closure review process and would require a fisheries proposal be submitted. Until a proposal can be submitted, the Federal inseason manager may use their delegated authority to restrict gear types and/or harvest limits, for up to 60 days, to protect populations in Bonanza Creek. Actions exceeding 60 days would require a temporary special action be implemented by the Board. If a proposal is submitted, the Office of Subsistence Management recommends that harvest be limited to rod and reel only in Bonanza Creek.

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FCR23–05 Executive Summary			
General Description	FCR23-05 reviews the closure to the harvest of all fish in the Delta		
	River by Federally qualified subsistence users.		
Current Regulation	§27(e)(3) Yukon-Northern Area		

	(x)You may not subsistence fish in the Delta River.		
	(<i>i</i>)		
OSM Preliminary Conclusion	Rescind the Closure		
Yukon-Kuskokwim Delta			
Subsistence Regional			
Advisory Council			
Recommendation			
Western Interior Alaska			
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		

FEDERAL FISHERIES CLOSURE REVIEW FCR23-05

Issue

FCR23-05 is a standard review of a Federal subsistence fishery closure to the harvest of all fish in the Delta River. It is the Board's policy that Federal public lands and waters should be reopened as soon as practicable once the conditions that originally justified the closure have changed to such an extent that the closure is no longer necessary. The purpose of this closure review is to determine if the closure is still warranted and to ensure the closure does not remain in place longer than necessary.

Closure Location: Yukon River Drainage, Delta River-all fish

Current Federal Regulation

§____.27(e)(3) Yukon-Northern Area

(i) Unless otherwise restricted in this section, you may take fish in the Yukon-Northern Area at any time...You may subsistence fish for salmon with rod and reel in the Yukon River drainage 24 hours per day, 7 days per week, unless rod and reel are specifically otherwise restricted in this paragraph (e)(3).

(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060 [emergency orders]), unless superseded by a Federal special action.

(v) Except as provided in this section, and except as may be provided by the terms of a subsistence fishing permit, you may take fish other than salmon at any time.

(x) You may not subsistence fish in the Delta River.

(xvi) Unless otherwise specified in this section, you may take fish other than salmon by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear, lead, or rod and reel, subject to the following restrictions, which also apply to subsistence salmon fishing:

(B) You may not use an aggregate length of set gillnet in excess of 150 fathoms, and each drift gillnet may not exceed 50 fathoms in length.

(C) In Districts 4, 5, and 6, you may not set subsistence fishing gear within 200 feet of other fishing gear operating for commercial, personal, or subsistence use . . .

Relevant Federal Regulation

§____.27 (b) Subsistence Taking of Fish

(16) Unless specified otherwise in this section, you may use a rod and reel to take fish without a subsistence fishing permit. Harvest limits applicable to the use of a rod and reel to take fish for subsistence uses shall be as follows:

(ii) Except as otherwise provided for in this section, if you are not required to obtain a subsistence fishing permit for an area, the harvest and possession limits for taking fish for subsistence uses with a rod and reel are the same as for taking fish under State of Alaska subsistence fishing regulations in those same areas. If the State does not have a specific subsistence season and/or harvest limit for that particular species, the limit shall be the same as for taking fish under State of Alaska sport fishing regulations.

Closure Dates: Year-round

Current State Regulation

Yukon Area—Subsistence

5 AAC 01.225. Waters closed to subsistence fishing

(e) The Delta River is closed to subsistence fishing

(1) between the mouth of the Delta River and an ADF&G regulatory marker placed two miles upstream from the mouth of the Delta River;

(2) for salmon;

(3) for finfish other than salmon in that portion of the Delta River not included in the nonsubsistence area described in 5 AAC 99.015(a)(4).

Tanana River Area—Sport

5 AAC 74.010. Seasons, bag, possession, and size limits, and methods and means for the Tanana River Area

(a) Except as otherwise specified in this section or through an emergency order issued under AS 16.05.060, sport fishing is permitted year round in the waters of the Tanana River Area.

(b) Except as otherwise specified in (c) and (d) of this section, the following are the general bag, possession, and size limits and means for finfish in the waters of the Tanana River Area:

(1) king salmon 20 inches or greater in length: the bag and possession limit is one fish;

(2) salmon, other than king salmon: the bag and possession limit is three fish, with no size limit;

(3) Arctic char/Dolly Varden: the bag and possession limit is 10 fish, with no size limit;

(4) lake trout: the bag and possession limit is two fish, with no size limit;

(6) Arctic grayling: the bag and possession limit is five fish, with no size limit;

(7) whitefish: the bag and possession limit is 15 fish, with no size limit;

(8) sheefish: the bag and possession limit is two fish, with no size limit;

(9) northern pike: the bag and possession limit is five fish, of which only one fish may be 30 inches or greater in length;

(10) burbot: the bag and possession limit is 15 fish, with no size limit;

(11) finfish species that are not specified in this section: there are no bag, possession, or size limits;

(c) The following are the exceptions to the general bag, possession, and size limits, and fishing seasons specified in (a) and (b) of this section for the Tanana River Area:

(6) in the Delta River and its tributaries,

(A) sport fishing for salmon is closed;

(B) all sport fishing is closed in that portion of the Delta River between its mouth and an ADF&G regulatory marker located two miles upstream;

(24) in the Tangle Lake system, including all waters of the Delta River drainage upstream from Wildhorse Creek,

(B) the bag and possession limit for lake trout is one fish, no size limit;

(C) the bag and possession limit for burbot is two fish, with no size limit;

(d) In the Tanana River Management Area, the following special provisions to methods and means apply:

(1) from October 15 through May 15, set lines may be used to take burbot in all lakes in the Tanana River drainage, except

(G) the Tangle Lake system;

(19) in the Tangle Lake system, the use of set lines is prohibited;

Regulatory Year Initiated: 1992

Extent of Federal Public Lands/Waters

For purposes of this analysis, the phrase "Federal public waters" is defined as those waters described under 36 CFR §242.3 and 50 CFR §100.3. ANILCA established the upper portion of the Delta River (**Figure 1**) as a component of the National Wild and Scenic River System to be administered by the Bureau of Land Management (BLM). The first 20 miles of the Delta River, from the outlet of Lower Tangle Lake, are classified as "wild." The subsequent 18 miles of the Delta River are classified as "recreational". Approximately 12 miles of the Delta River downstream of the "recreational" waters are on general domain land which is also managed by BLM (**Figure 1**). On general domain lands, Federal subsistence regulations apply only to non-navigable waters.



Figure 1. Federal public waters of the Delta River (BLM n.d.).

Customary and Traditional Use Determination

Residents of the Yukon-Northern Area have a customary and traditional use determination for freshwater species other than salmon in the Yukon River drainage.

Regulatory History

In 1992, the Federal Subsistence Management Program promulgated regulations governing the harvest of fish for subsistence uses in non-navigable waters within and adjacent to Federal public lands (57 Fed. Reg. 22940 [May 29, 1992]). These regulations incorporated many provisions from State of Alaska subsistence fishing regulations. The closure under review in this analysis was incorporated into Federal regulations in this manner and has not been subsequently modified.

In 1999, the Federal Subsistence Board (Board) also adopted Federal regulations for fish in navigable waters within and adjacent to Federal public lands where there is a Federal reserved water right (64 Fed. Reg. 1276 [January 8, 1999]). These regulations do not apply on navigable waters within and adjacent to Bureau of Land Management general domain lands (see 50 CFR 100.3).

Closure Last Reviewed

There have been no previous reviews of this closure.

Justification for Original Closure

The Federal Subsistence Management Program justification for the inclusion of the original closure in Federal regulations was to minimize disruption to the State's continuing fish and game management, because of the uncertainty over the resumption of State management of subsistence, yet still fulfill the requirements of Title VIII of ANILCA (55 FR 27114, June 29, 1990).

Council Recommendation for Original Closure

N/A

State Recommendation for Original Closure

N/A

Biological Background

Salmon

Chum and Coho salmon spawn in the lower section of the Delta River (ADF&G 2022a); however, salmon do not inhabit the closure area (BLM n.d.).

Nonsalmon Fish

The nonsalmon fish community in the Delta River is comprised of Arctic Grayling, Burbot, Round Whitefish, Longnose Sucker, Lake Trout, Dolly Varden, and Slimy Sculpin (Gryska 2011). Arctic Grayling is the predominant member of the nonsalmon fish community and limited information exists for the other nonsalmon species.

Arctic Grayling

Arctic Grayling abundance and seasonal movements were assessed within an approximately 10.5 mile portion of the Delta River closure area by the Alaska Department of Fish and Game (ADF&G) and BLM (Gryska 2011, 2015). The abundance of Arctic Grayling was estimated using mark-recapture techniques in 2008. The estimated number of Arctic Grayling \geq 240 mm FL was 44,212 fish (SE = 9,108), \geq 270 mm FL was 23,152 fish (SE = 3,189), and \geq 330 mm FL was 5,864 fish (SE = 818; Gryska 2011). The density estimates for Arctic Grayling \geq 240 mm and \geq 270 mm FL were among the highest ever documented for this species in Alaska. The seasonal movements and locations of Arctic Grayling (\geq 320 mm FL) were assessed using radio telemetry in 2008 and 2009 (Gryska 2015). Approximately 95% of radio tagged fish overwintered in the study area. Locations and patterns of dispersal varied by season. In summer, Arctic Grayling were dispersed throughout the study area before concentrating in two locations during winter. Spawning likely occurred in late spring/early summer with most fish occupying the upper portion of the study area. This research indicates the study area provides year-round habitat for this large population of Arctic Grayling.

Cultural Knowledge and Traditional Practices

Of the communities with a customary and traditional use determination for fish in the Yukon River drainage, those located in reasonable proximity to the Delta River and to road access to the river along the Richardson Highway are most likely to subsistence fish in the closed area, were the closure to be rescinded. This includes Big Delta and Delta Junction. In 2019, the estimated populations of Big Delta and Delta Junction were 476, and 1,157, respectively (ADLWD 2019).

Unfortunately, there are no readily available data on fishing by residents of Big Delta and Delta Junction in the Delta River. Although these communities are only able to fish on the Delta River under sport fishing regulations, their harvest by rod and reel would be included in any subsistence survey of these communities. However, although Big Delta and Delta Junction are considered "rural" by the Board, they are in the State of Alaska's Fairbanks Nonsubsistence Use Area, and ADF&G Division of Subsistence has never conducted a subsistence survey for either of these communities.

Data are available for Delta Junction and Big Delta's reported subsistence harvest of nonsalmon species in areas adjacent to the closure area under the Upper Tanana River subsistence permit. This permit includes both the Delta River drainage south of the Fairbanks nonsubsistence area (but not the Delta River itself, which is closed), as well as the Upper Tanana River, but data for these two areas cannot be disaggregated. Despite these limitations, the data are included here to give a general sense of the communities' nonsalmon subsistence use patterns for a nearby area (**Table 1**). Of the five species

harvested, residents harvested the greatest number of whitefish, followed by Northern Pike. Overall, harvest was greatest from 2017 to 2020.

Table 1. Reported nonsalmon harvest under the Upper Tanana drainage subsistence use permit (which includes the portion of the Delta River drainage south of the Fairbanks nonsubsistence area, excluding the Delta River itself), by residents of Delta Junction and Big Delta from 2012 to 2021. The table includes permits registered to residents with a Delta Junction or Big Delta mailing or physical address. Source: Ransbury 2022, pers. comm.).

Year	Permits	Whitefish	Northern	Arctic	Burbot	Longnose
			Pike	Grayling		Sucker
2021	5	5	14	0	9	0
2020	11	514	284	5	55	86
2019	7	406	126	23	2	0
2018	8	342	67	5	25	0
2017	5	311	23	0	5	1
2016	3	12	0	0	23	0
2015	2	Confidential	Confidential	Confidential	Confidential	Confidential
2014	1	0	0	0	0	0
2013	3	0	0	0	0	0
2012	7	41	0	0	0	0
Total	47	1626	500	33	110	87

Paxson-Sourdough, the only other community in proximity to the Delta River, does not have a customary and traditional use determination for salmon or nonsalmon in any portion of the Yukon-Northern Area, which includes the Delta River. Paxson's nonsalmon fishing takes place primarily under State sport and subsistence fishing regulations and is focused on lakes located near the community, including the Tangle Lakes (Holen et al. 2015). As Paxson would not be qualified to fish in the Delta River under Federal regulations, were the closure to be rescinded, its fishing patterns are not described here.

Harvest History

Subsistence fishing is prohibited in the Delta River under State and Federal regulations so there is no legal subsistence harvest in this system. Harvest is allowed under State sport fishing regulations and is not limited to Federally qualified subsistence users.

In the Delta River and its tributaries sport fishing for salmon is closed. Arctic Char and Dolly Varden can be harvested with a limit of ten per day with no size limit. Lake Trout have a harvest and possession limit of two fish with no size limit. The Arctic Grayling harvest and possession limit is five fish with no size limit. Whitefish and Burbot harvest and possession limits are 15 fish with no size limits. Sheefish have a limit of two per day and two in possession with no size limit. Northern Pike harvest and possession limit is five fish (only one can be 30 inches or longer). There are no harvest, possession, or size limits for other finfish species. In all waters of the Delta River drainage upstream

from Wildhorse Creek (approximately two miles to the outlet of Lower Tangle Lake), the Lake Trout harvest and possession limit is one fish with no size limit and the Burbot harvest and possession limit is two fish with no size limit.

Sport fish harvest estimates for the Delta River are provided by the Alaska Sport Fishing Survey (ADF&G 2022b). Estimates for the Delta River below Tangle Lakes are available for 1996 to 2006. For Arctic Grayling, median estimated sport fish harvest over this time period was 298 fish and ranged from 159 fish in 1998 to 770 fish in 1997. Lake Trout were reportedly harvested in 1999 (14 fish) and 2002 (48 fish). There were multiple other nonsalmon species where harvest was only estimated for a single year. Dolly Varden were harvested in 1996 (12 fish), whitefish were harvested in 2000 (7 fish), and Burbot were harvested in 2002 (26 fish). Over the time period when sport fishing harvest estimates are available, the median number of anglers was 319 and ranged from 311 in 1996 to 381 in 1997. Sport fish harvest estimates are not reported when fewer than 12 estimates were received. The Delta River below Tangle Lakes has not received more than 12 responses since 2006 suggesting sport fish harvest and effort may not be large enough to cause conservation concerns in the Delta River below Tangle Lakes.

Other Alternatives Considered

One alternative is to retain the closure. The closure area is road accessible allowing for easy access and harvest of fish. If the closure is rescinded, harvest would be unrestricted for all legal gear types other than rod and reel, and gillnets could be used to harvest high numbers of fish. Retaining the closure would protect populations from overharvest until a proposal to restrict harvest and/or gear types in the closure area could be submitted. Federally qualified subsistence users could harvest fish under State sport fishing regulations while the Federal closure was in place. This alternative was rejected because it would not provide a Federal subsistence priority in the closure area.

A second alternative is to modify the closure by closing the fishery to all users and uses. This would fully protect fish populations in the closure area. Under this alternative, there would be no subsistence or sport fishing opportunity. Closing to all users and uses would eliminate the current situation, in which Federal public waters are closed to subsistence fishing while remaining open to other uses. This alternative was rejected because it would be an unnecessary restriction on non-subsistence uses as sport fish harvest data suggest the sport fishery does not present a conservation concern.

Effects

If the closure is rescinded, Federal subsistence regulations for the Yukon-Northern Area would apply. Nonsalmon fish could be taken by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear, lead, or rod and reel, with some restrictions on this gear (see "Current Federal Regulation" in this analysis). Subsistence rod and reel harvest limits would match State sport fishing harvest and possession limits. Harvest would be unrestricted for all other legal gear types.

Rescinding the closure would establish a Federal subsistence priority and provide subsistence harvest opportunity in an area that is currently closed to subsistence fishing but open to other uses. However,

allowing unrestricted harvest in a road-accessible system may increase harvest pressure on stocks and result in a conservation concern.

OSM PRELIMINARY CONCLUSION

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

The modified regulation should read:

§___.27(e)(3) Yukon-Northern Area

.

(x)You may not subsistence fish in the Delta River.

Justification

Currently Federal public waters of the Delta River are closed to the harvest of all fish by Federally qualified subsistence users but open to sport fishing under State regulations. Rescinding the closure would establish a Federal subsistence priority in the area. Previous research indicates the closure area contains an abundant population of Arctic Grayling with one of the highest recorded densities in the State of Alaska. However, allowing unrestricted harvest for gear types other than rod and reel may lead to overharvest and local depletion of stocks. While populations may be protected by limiting subsistence harvest to rod and reel only and/or modifying harvest limits, these modifications are not possible through the closure review process and would require a fisheries proposal be submitted. Until a proposal can be submitted, the Federal inseason manager may use their delegated authority to restrict gear types and/or harvest limits, for up to 60 days, to protect populations in the closure area. Actions exceeding 60 days would require a temporary special action be implemented by the Board. If a proposal is submitted, the Office of Subsistence Management recommends that harvest be limited to rod and reel only in the Delta River.

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Fisheries Resource Monitoring Program (FRMP)

2024 Overview

Quick Info

- Established in 2000
- Focuses on subsistence fisheries in Federal public waters in Alaska
- Solicits proposals every two years
- Projects may be awarded up to four years of funding
- See https://www.doi.gov/subsistence/frmp for more information

What is the FRMP?

The Office of Subsistence Management (OSM) funds research to provide information that can help manage subsistence fisheries in Federal public waters in Alaska. *Projects are required to focus on harvest monitoring, traditional ecological knowledge (TEK), and stock status and trends.* Proposals are evaluated based on strategic priority, scientific merit, investigator ability and resources, cost/benefit, and the extent to which they meaningfully involve Alaska Native and rural organizations (partnerships and capacity building). Projects may be led by Alaska Native and rural organizations, universities, government agencies, or private contractors.

Priority Information Needs (PINs)

PINs are research needs that could be addressed through FRMP projects. Federal Subsistence Regional Advisory Council (Council) members help develop potential PINs throughout the summer before an FRMP cycle. Potential PINs are then discussed and finalized during the fall Council meetings. Finalized PINs are included in the FRMP project solicitations and ultimately influence the direction of the Monitoring Program.

FRMP Timeline

<u>March–November 2022</u>: Council members develop potential 2024 priority information needs and finalize them at fall Council meetings

December 2022: OSM publishes Notice of Funding Opportunity

February-May 2023: OSM reviews proposals

June 2023: Technical Review Committee evaluates and scores proposals

<u>September–November 2023</u>: Councils and Interagency Staff Committee comment on proposals <u>January 2024</u>: Federal Subsistence Board provides recommendation on the draft Monitoring Plan that includes proposals recommended for funding

<u>February 2024</u>: Assistant Regional Director for OSM approves Monitoring Plan and notification letters are sent to applicants

May-July 2024: Projects begin

Project Number	Project Title	Investigators
	Salmon Projects	
00-003	Effects of Ichthyophonus on Chinook Salmon	UW
00-005	Tanana Upper Kantishna River Fish Wheel	NPS
00-018	Pilot Station Sonar Upgrade	ADF&G
00-022	Hooper Bay Test Fishing	ADF&G, NVHB
00-024	Pilot Station Sonar Technician Support	AVCP
00-025	Henshaw Creek Salmon Weir	USFWS
00-026	Circle and Eagle Salmon and Other Fish TEK	NVE
01-014	Yukon River Salmon Management Teleconferences	YRDFA
01-015	Yukon River Salmon TEK	YRDFA
01-018	Pilot Station Sonar Technician Support	AVCP
01-026	East Fork Andreafski River Salmon Weir	BSFA
01-029	Nulato River Salmon Weir	BSFA
01-032	Rampart Rapids Tagging Study	USFWS
01-038	Kateel River Salmon Weir	USFWS
01-048	Innoko River Drainage Weir Survey	USFWS
01-050	Kaltag Chinook Salmon Age-Sex-Length Sampling	COK
01-058	East Fork Andreafsky Weir Panel Replacement	USFWS
01-122	Lower Yukon River Salmon Drift Test Fishing	ADF&G, EMV
01-141	Holitna River Chinook, Chum, and Coho Telemetry	ADF&G
01-177	Rampart Rapids Extension	USFWS
01-197	Rampart Rapids Summer CPUE Video	SZ
01-199	Tanana Fisheries Conservation Outreach	TTC
01-200	Effects of Ichthyophonus on Chinook Salmon	USGS
01-211	Upper Yukon, Porcupine, & Black River Salmon TEK	CATG
02-009	Pilot Station Sonar Technician Support	AVCP
02-011	Rampart Rapids Fall Chum Handling/ Mortality	USFWS
02-097	Kuskokwim Yukon Sex Ratios of Juvenile & Adult Chinook	USFWS
02-121	Yukon River Chinook Salmon Genetics	USFWS, ADF&G, DFO
02-122	Yukon River Chinook & Chum Salmon In-season Subsistence	USFWS
03-009	Tozitna River Salmon Weir	BLM
03-013	Gisasa River Salmon Weir	USFWS
03-015	Phenotypic Characterization of Chinook Salmon Harvests	YRDFA, USFWS
03-034	East Fork Andreafsky River Salmon Weir	USFWS
03-038	Yukon River Sub-District 5-A Test Fishwheel	BF
04-206	Tozitna River Salmon Weir	BLM
04-208	East Fork Andreafsky River Salmon Weir	USFWS
04-209	Gisasa River Salmon Weir	USFWS
04-211	Henshaw Creek Salmon Weir	USFWS
04-217	Rampart Rapids Fall Chum Salmon Abundance	USFWS

Yukon Region FRMP Projects Since 2000

Project Number	Project Title	Investigators
04-228	Yukon River Chum Salmon Genetic Stock Identification	USFWS
04-229	Lower Yukon River Salmon Drift Test Fishing	ADF&G
04-231	Yukon River Chinook Salmon Telemetry	ADF&G
04-234	Kaltag Chinook Salmon Age-Sex-Length Sampling	COK
04-251	Fort Yukon Traditional Ecological Knowledge Camp	TCC, CATG, ADF&G
04-255	Yukon River Salmon Fishery Traditional Ecological Knowledge	NPS
04-256	Tanana Conservation Outreach	TTC, USFWS
04-263	Yukon River Salmon Management Teleconferences	YRDFA
04-265	Yukon River TEK of Customary Trade of Subsistence Fish	YRDFA
04-268	Hooper Bay Subsistence Monitoring	ADF&G, HBTC
05-203	Yukon River Coho Salmon Genetics	USFWS
05-208	Anvik River Salmon Sonar Enumeration	ADF&G
05-210	Tanana River Fall Chum Salmon Abundance	ADF&G
05-211	Henshaw Creek Salmon Weir	TCC, USFWS
05-254	Yukon Salmon In-Season Subsistence Harvest Monitoring	USFWS
06-205	Yukon River Chum Salmon Mixed Stock Analysis	USFWS
07-202	East Fork Andreafsky River Salmon Weir	USFWS
07-204	Lower Yukon River Salmon Drift Test Fishing	ADF&G
07-207	Gisasa River Salmon Weir	USFWS
07-208	Tozitna River Salmon Weir	BLM
07-209	Yukon River Salmon Management Teleconferences	YRDFA
07-210	Validation of DNA Gender Test Chinook Salmon	USFWS
07-211	Kaltag Chinook Salmon Age-Sex-Length Sampling	COK
07-253	Yukon River Salmon Harvest Patterns	RWA, AC
08-200	Kaltag Chinook Salmon Age-Sex-Length Sampling	COK
08-201	Henshaw Creek Salmon Weir	TCC
08-202	Anvik River Chum Salmon Sonar Enumeration	ADF&G
08-253	Yukon River Teleconferences and In-Season Management	YRDFA
10-200	Yukon River Chinook Salmon Run Reconstruction	BUE
10-205	Yukon River Chum Salmon Mixed Stock Analysis	USFWS
10-206	Nulato River Salmon Assessment	TCC
10-207	Gisasa Chinook and Summer Chum Salmon Assessment	USFWS
12-202	Henshaw Creek Abundance and run timing of adult salmon	TCC
12-204	Anvik River Sonar Project	ADF&G
12-205	Kaltag Chinook Salmon Sampling Project	KAL
12-251	In-season Salmon Teleconferences and Interviews	YRDFA
14-201	Gisasa R Salmon Video	USFWS
14-202	East Fork Andreafsky Salmon	USFWS
14-203	Gisasa River Salmon	USFWS
14-206	Yukon River Coho Salmon	USFWS
14-207	Yukon River Chum Salmon	USFWS

Project Number	Project Title	Investigators
14-208	Koyukuk River Chum Salmon	USFWS
14-209	Henshaw Creek Salmon	TCC
16-204	Henshaw Creek Abundance and Run Timing of Adult Salmon.	TCC
16-251ª	Yukon Burbot Habitats, Migration, Spawning Populations	ADF&G
16-255	Yukon River In-Season Community Surveyor Program	YRDFA, USFWS
16-256	In-Season Salmon Management Teleconferences	YRDFA
18-201 ^a	E. Fork Andreafsky Chinook and Summer Chum Salmon	USFWS
18-202 ^a	Gisasa River Chinook and summer Chum Salmon	USFWS
18-250ª	Salmon Spawning Upper Tanana River Drainage	ADF&G
18-251ª	Traditional Knowledge Fish Yukon Flats Draanjik Basin	TCC
18-252ª	Subsistence salmon networks in Yukon River communities	ADF&G
20-200 ^a	Yukon River Coho Salmon Radio Telemetry	ADF&G, USFWS
20-201ª	Mixed Stock Analysis for Yukon River Chum Salmon	USFWS
20-251ª	In-season Yukon River Subsistence Salmon Survey Program	YRDFA, USFWS
20-252 ^a	Customary Trade in the Lower and Middle Yukon River	ADF&G
20-256ª	Yukon River In-Season Salmon Management Teleconferences	YRDFA
22-201	East Fork Andreafsky River Weir Chinook and Summer Chum Salmon Abundance and Run Timing Assessment	USFWS
22-202	Gisasa River Weir Chinook and Summer Chum Salmon Abundance and Run Timing Assessment	USFWS
22-204	Western Alaska Coho Salmon Genetic Baseline Development	ADF&G
22-251	Presence and Use of Salmon in the Pastolik and Pastoliak Rivers	ADF&G
	Nonsalmon Fish Projects	
00-004	Humpback Whitefish/ Beaver Interactions	USFWS, CATG
00-006	Traditional Ecological Knowledge Beaver/ Whitefish	ADF&G, CATG
00-021	Dall River Northern Pike	ADF&G, SV
00-023	Upper Tanana River Humpback Whitefish	USFWS
01-003	Old John Lake TEK of Subsistence Harvests and Fish	ADF&G, AV, USFWS
01-011	Arctic Village Freshwater Fish Subsistence Survey	ADF&G, AV, USFWS
01-100	Koyukuk Nonsalmon Fish TEK and Subsistence Uses	ADF&G, TCC
01-140	Yukon Flats Northern Pike	ADF&G, SV
01-238	GASH Area Working Group	USFWS
02-006	Arctic Village Freshwater Fish Subsistence	ADF&G, NVV
02-037	Lower Yukon River Nonsalmon Harvest Monitoring	ADF&G, TCC
02-084	Old John Lake Oral History and TEK of Subsistence	USFWS, AV, ADF&G
04-253	Upper Tanana Fisheries Traditional Ecological Knowledge	USFWS, UAF, ADF&G
04-269	Kanuti NWR Whitefish TEK and Radio Telemetry	USFWS, RN
06-252	Yukon Flats Nonsalmon Traditional Ecological Knowledge	ADF&G, BLM, USFWS CATG

Project Number	Project Title	Investigators
06-253	Middle Yukon River Nonsalmon TEK and Harvest	ADF&G, LTC
07-206	Innoko River Inconnu Radio Telemetry	USFWS, ADF&G
08-206	Yukon and Kuskokwim Coregonid Strategic Plan	USFWS, ADF&G
08-250	Use of Subsistence Fish to Feed Sled Dogs	RN, AC
10-209	Yukon Delta Bering Cisco Mixed-stock Analysis	USFWS
10-250	Yukon Climate Change Impacts on Subsistence Fisheries	RN
12-200	Alatna River Inconnu Population Structure	USFWS
12-207	Yukon Bering Cisco Spawning Origins Telemetry	USFWS
12-700	Yukon and Kuskokwim Rivers Inconnu Genetic Baseline	USFWS
14-252	Lower Yukon Whitefish	ADF&G
14-253	Upper Yukon Customary Trade	YRDFA
16-203	Bering Cisco Spawning Abundance in the Upper Yukon Flats	ADF&G, USFWS
16-205 ^a	Burbot Population Assessments in Lakes of the Upper Tanana and Upper Yukon River Drainages	NPS
16-752	Yukon Kuskokwim Coastal Communities Harvest and Use of Fish	ADF&G
20-202ª	Evaluating Dart and Telemetry Tags in an Effort to Track Run Timing and Migration Patterns of Yukon River Arctic Lamprev	USFWS, UAF, ADF&G
22-252	Humpback Whitefish and other Nonsalmon Fishes Traditional Ecological Knowledge and Biological Sampling in the Upper Koyukuk Region	ADF&G

a= Ongoing projects.

Abbreviations: **AC** = Alaskan Connections, **ADF&G** = Alaska Department of Fish and Game, **AVCP** = Association of Village Council Presidents, **AV** = Arctic Village, **BF** = Bill Fliris, **BUE** = Bue Consulting, **BLM** = Bureau of Land Management, **BSFA** = Bering Sea Fisherman's Association, **CATG** = Council of Athabascan Tribal Governments, **COK** = City of Kaltag, **DFO** = Department of Fisheries and Oceans, **EMV** = Emmonak Village Council, **KAL** = City of Kaltag, **NPS** = National Park Service, **LTC** = Louden Tribal Council, **NVE** = Native Village of Eagle, **NVHB** = Native Village of Hooper Bay, **NVV** = Native Village of Venetie, **RN** = Research North, **RW** = Robert Wolfe and Associations, **SVNRC** = Stevens Village, **SZ**=Stan Zuray, **TCC** = Tanana Chiefs Conference, **TTC** = Tanana Tribal Council, **UAF** = University of Alaska Fairbanks, **USFWS** = U.S. Fish and Wildlife Service, **USGS** = U.S. Geological Survey, **UW** = University of Washington, and **YRDFA** = Yukon River Drainage Fisheries Association.

Kuskokwim Region FRMP Projects Since 2000

Project Number	Project Title	Investigators
	Salmon Projects	
00-007	Tatlawiksuk River Salmon Weir	ADF&G, KNA
800-00	Bethel In-Season Subsistence Harvest Data	ONC
00-009	Bethel Postseason Harvest Monitoring	ADF&G, ONC
00-019	Kwethluk River Salmon Weir	USFWS, OVK
00-027	Goodnews River Salmon Weir	ADF&G
00-028	Kanektok River Salmon Weir	ADF&G, USFWS
00-029	Documentation/ Communication on Floating Weirs	AVCP
00-030	Kuskokwim Salmon Project Site Surveys	ADF&G, USFWS
01-019	Planning Meetings in AVCP Region	AVCP, KNA
01-023	Upper Kuskokwim River In-Season Data	ADF&G, MNVC
01-024	Bethel Postseason Fishery Household Surveys	ADF&G, ONC
01-053	Tuluksak River Salmon Weir	USFWS, TNC
01-070	Kuskokwim River Chinook Salmon Genetic Diversity	ADF&G, USFWS
01-086	Kuskokwim River Escapement Project Technician	ONC
01-088	Natural Resource Internship Program	KNA
01-116	Kuskokwim River Salmon Work Group Support	ADF&G
01-117	Kuskokwim Salmon Age-Sex-Length Assessment	ADF&G
01-118	Kanektok River Salmon Weir	ADF&G, BSFA
01-132	Bethel In-Season Subsistence Salmon Harvest Data	ONC, ADF&G
01-141	Holitna River Chinook, Chum, and Coho Telemetry	ADF&G
01-147	Aniak River Sport Fisheries Survey	ADF&G, KNA
01-225	Middle Kuskokwim River In-Season Salmon Harvest	KNA, ADF&G, USFWS
01-226	Subsistence Fisheries Research Capacity Building	ADF&G
02-036	Aniak Postseason Subsistence Fishery Surveys	ADF&G, KNA
02-046	Kuskokwim River Chinook Salmon Inriver Abundance	ADF&G
03-030	Kuskokwim River Salmon Mark-Recapture	ADF&G, KNA
03-041	Kuskokwim Coho Salmon Genetics	ADF&G, USFWS
03-931	Kuskokwim Science Plan	BSFA
04-301	Kwethluk River Salmon Weir	USFWS, OVK
04-302	Tuluksak River Salmon Weir	USFWS, TNC
04-305	Kanektok River Salmon Weir	ADF&G, BSFA

Project Number	Project Title	Investigators
04-310	Tatlawiksuk River Salmon Weir	ADF&G, KNA
04-311	Kuskokwim Coho Salmon Genetic Mixed Stock Assessment	USFWS
04-312	Goodnews River Coho Salmon Weir	ADF&G
04-351	Kuskokwim Bay Traditional Ecological Knowledge and Oral History	USFWS
04-353	Bethel In-Season Subsistence Salmon Data Collection	ADF&G, ONC
04-359	Kuskokwim Postseason Salmon Subsistence Harvest Surveys	ADF&G, KNA, ONC
05-302	Kuskokwim River Chinook Salmon Inriver Abundance	ADF&G
05-304	George and Takotna River Salmon Weirs	ADF&G
05-305	Kuskokwim Chinook Salmon Genetic Stock Identification	ADF&G
05-306	Kuskokwim River In-Season Subsistence Harvest Data	ADF&G, ONC
05-307	Lower Kuskokwim Subsistence Fisheries Catch Monitoring	ONC
05-353	Nunivak Island Subsistence Cod Fisheries	NPT
05-356	Kuskokwim Area Postseason Subsistence Salmon Harvest Survey	ADF&G
06-306	Lower Kuskokwim Salmon In-Season Subsistence Catch Monitoring	ADF&G
06-307	Kuskokwim River Salmon Management Working Group	ADF&G
07-302	Kuskokwim River Chum Salmon Run Reconstruction	ADF&G, BC
07-303	Kuskokwim River Salmon Age-Sex-Length Assessment	ADF&G
07-304	Tatlawiksuk River Salmon Weir	ADF&G, KNA
07-305	Kanektok-Goodnews River Salmon and Dolly Varden Weirs	ADF&G
07-306	Kwethluk River Salmon Weir	USFWS, OVK
07-307	Tuluksak River Salmon Weir	USFWS, TNC
08-302	Lower Kuskokwim Subsistence Chinook Salmon Age-Sex- Length	ADF&G
08-303	George River Salmon Weir	ADF&G
08-304	Takotna River Salmon Weir	ADF&G
08-351	Tuluksak River Subsistence Chinook Salmon Age-Sex-Length	USFWS
08-352	Bethel and Aniak Postseason Subsistence Salmon Harvest Surveys	ADF&G
10-300	Kanektok and Goodnews River Salmon Assessment	ADF&G
10-303	Kuskokwim River Salmon Age Sex Length Assessment	ADF&G
10-304	Tatlawiksuk River Salmon Assessment	ADF&G
10-306	Kwethluk River Salmon Assessment	USFWS
10-307	Tuluksak River Salmon Assessment	USFWS
10-352	Kuskokwim Salmon Postseason Harvest Monitoring	ADF&G
10-353	Kuskokwim Salmon Working Group Support	ADF&G
10-354	Kuskokwim Salmon In-Season Harvest Monitoring	ADF&G
12-302	Lower Kuskokwim River Subsistence Chinook Salmon Harvest ASL	ADF&G, ONC

Project Number	Project Title	Investigators
12-303	George River Salmon Weir	ADF&G, KNA
12-304	Takotna River Salmon Weir	ADF&G, TCA
12-309	Kwethluk River Salmon Weir	USFWS
14-302	Tatlawiksuk River Salmon Weir	ADF&G
14-303	George River Salmon Weir	ADF&G
14-306	Tuluksak River Salmon Weir	USFWS
14-308	Kwethluk River Salmon Weir	USFWS
14-351	Kuskokwim Delta Chinook Salmon Non-local Harvesters	USFWS
14-352	Kuskokwim Area Salmon Post-season Subsistence Harvest Surveys	ADF&G
14-353	Kuskokwim River Salmon In-Season Subsistence Survey	ADF&G
14-354	Kuskokwim River Support for Cooperative Management	ADF&G
16-301	Lower Kuskokwim River Subsistence Chinook Salmon Harvest ASL	ADF&G, ONC
16-302	Salmon River of the Pitka Fork Weir	ADF&G, MTNT
16-351	Middle Kuskokwim River In-season Subsistence Salmon Harvest Monitoring and Estimation	ADF&G, NVN
18-304ª	George River Salmon Weir	ADF&G
18-350ª	Bethel Subsistence Harvest Surveys	ONC, ADF&G
18-351ª	Kuskokwim Area Salmon Post Season Subsistence Harvest Surveys	ADF&G, ONC
20-301ª	Kuskokwim River Coho Salmon Abundance Estimation and Whitefish Indices Using Sonar	ADF&G, ONC
20-302ª	Salmon River of the Pitka Fork Chinook Salmon Escapement Monitoring	ADF&G, MTNT
20-303ª	Middle Kuskokwim River Chinook and Chum Salmon In-Season Assessment	NVN
20-308ª	Kwethluk River Salmon Run Timing and Abundance	USFWS, OVK, BSFA, USFWS
22-300	Takotna River Weir Salmon Run Timing and Abundance	KRITFC
22-304	George River Salmon Weir	ADF&G
22-350	Bethel Subsistence Harvest Survey	ONC
22-351	Kuskokwim Management Area Postseason Subsistence Salmon Harvest Survey	ADF&G
22-352	Local and Traditional Knowledge of Salmon Harvest and Use for Subsistence in the Lower Kuskokwim River Drainage	ADF&G
22-353	Natural Indicators of Salmon in the Lower Kuskokwim Drainage	ADF&G
22-354	Community-Based Harvest Monitoring Network for Kuskokwim River Chinook Salmon	KRITFC
	Nonsalmon Fish Projects	
01-052	Whitefish Lake Humpback & Broad Whitefish	USFWS. KNA
01-112	Aniak River Subsistence Fisheries Study	ADF&G, KNA
Project Number	Project Title	Investigators
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01-235	Upper Kuskokwim Community Use Profiles	ADF&G
04-304	Whitefish Lake Whitefish Telemetry	USFWS
05-301	Whitefish PIT Tags	USFWS
06-303	Kuskokwim River Whitefish Migratory Behavior	USFWS, KNA
06-305	Kuskokwim River Inconnu Spawning Distribution	ADF&G
06-351	Lower Kuskokwim Nonsalmon Harvest and TEK	ADF&G, AVCP
08-206	Yukon Kuskokwim Whitefish Research Strategic Plan	USFWS, ADF&G
08-300	Aniak River Rainbow Trout Seasonal Distribution	ADF&G
10-305	Kuskokwim River Sheefish Spawning, Distribution and Timing	ADF&G
12-312	Status of Sheefish in Highpower Creek and Upper Kuskokwim River	ADF&G
12-313	Location, Migration Timing, and Description of Kuskokwim River Bering Cisco Spawning Origins	KNA, USFWS
12-352	Whitefish Trends on the Upper Kuskokwim, Alaska	ADF&G
12-700	Yukon and Kuskokwim Rivers Inconnu Genetic Baseline	USFWS
14-301	Kuskokwim River Broad Whitefish Spawning above McGrath	USFWS
14-307	Upper Kuskokwim River Sheefish Enumeration	USFWS
14-356	Lower Kuskokwim Villages Whitefish	CEC
16-303	Enumeration and Spawning Area Characterization of Sheefish in the Upper Kuskokwim River	ADF&G
16-752	Yukon Kuskokwim Coastal Communities Harvest and Use of Fish	ADF&G
18-75	Togiak Drainage Dolly Varden	ADF&G, BBNA, USFWS
22-301	Kuskokwim River Broad Whitefish Subsistence Harvest and Spawning Abundance	USFWS

a = On-going projects during 2020.

Abbreviations: **ADF&G** = Alaska Department of Fish and Game, **AVCP** = Association of Village Council Presidents, **BC** = Bue Consulting, **BSFA** = Bering Sea Fisherman's Association, **CEC** = Calista Education and Culture, **KNA** = Kuskokwim Native Association, **KRITFC** = Kuskokwim River Inter-Tribal Fish Commission, **MNVC** = McGrath Native Village Council, **MTNT** = McGrath, Takotna, Nikolai, Telida Ltd. **NPT** = Nuniwarmiut Piciryarata Tamaryalkuti, Inc., **NVN** = Native Village of Napaimute , **ONC** = Orutsararmiut Native Council, **OVK** = Organized Village of Kwethluk, **TCA** = Takotna Community Association, **TNC** = Tuluksak Native Community, **USFS** = U.S. Forest Service, and **USFWS** = U.S. Fish and Wildlife Service.

Partners for Fisheries Monitoring Program Notice of Funding Opportunity

The Office of Subsistence Management is seeking proposals for the Partners for Fisheries Monitoring Program to strengthen Alaska Native and rural involvement in Federal subsistence management. The Partners for Fisheries Monitoring Program is a competitive grant program that provides funding for biologist/social scientist/educator positions in Alaska Native and rural nonprofit organizations with the intent of increasing the organizations' ability to participate in Federal subsistence management. In addition, the program supports a variety of opportunities for rural students to learn about subsistence resource monitoring and management through science camps and paid internships.

More information about the Partners for Fisheries Monitoring Program Notice of Funding Opportunity can be found in *GrantSolutions.gov*, *Grants.gov*, or on the Office of Subsistence Management Website *https://www.doi.gov/subsistence/partners*, or by contacting Karen Hyer at Karen_Hyer@fws.gov, 907-786-3689.



McLees Lake Weir, Unalaska Island. Photograph by Jenny Renee.



Yukon Kuskokwim Delta Subsistence Regional Advisory Council

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.



Federal Subsistence Board News Release



Forest Service

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

For Immediate Release: September 13, 2022 **Contact:** Katerina Wessels Council Coordination Division Supervisor (907) 786-3885 or (800) 478-1456 katerina_wessels@fws.gov

Applicants Sought for Subsistence Regional Advisory Council Membership Deadline: February 21, 2023

The Federal Subsistence Board is accepting applications through February 21, 2023 to fill seats on the 10 Subsistence Regional Advisory Councils (Councils). Council membership appointments are typically for 3-year terms. There are approximately 45 seats open for appointment among all Councils.

The Councils meet at least twice a year and provide recommendations to the Federal Subsistence Board on subsistence management issues. Council meetings serve as a forum for regional public involvement in Federal subsistence management. Council members must be knowledgeable about the uses of fish and wildlife resources in their region and reside in the region they wish to represent.

Individuals may apply for membership themselves, or an individual or organization may nominate someone for Council membership. The application form and information about the application process and the Subsistence Regional Advisory Councils is available on the Federal Subsistence Management Program's website: <u>www.doi.gov/subsistence/regions</u>. The application form and additional information is also available by contacting Katerina Wessels, Council Coordination Division Supervisor at the Office of Subsistence Management, at (800) 478- 1456 or (907) 786-3885 or *katerina_wessels@fws.gov*.

Additional information on the Federal Subsistence Management Program may be found on the web at <u>www.doi.gov/subsistence</u> or by visiting <u>www.facebook.com/subsistencealaska</u>.

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 <u>fws-fsb-subsistence-request@lists.fws.gov</u>.

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1011 East Tudor Road MS-121 • Anchorage, Alaska 99503-6199 • subsistence@fws.gov • (800) 478-1456 / (907) 786-3888 This document has been cleared for public release #8109132022.



PO Box 2898, Palmer, Alaska 99645 Ph: 907-272-3141 Fax 907-272-3142 <u>www.yukonsalmon.org</u> Email: serena@yukonsalmon.org

Report to the Yukon Kuskokwim Delta Yukon River Regional Advisory Councils October 2022

FRMP PROJECTS

In-Season Salmon Management Teleconferences:

The In-Season Salmon Management Teleconferences began on June 7, 2022. In preparation for the teleconferences, posters were sent to all the communities along the Yukon River including Canadian First Nations. A meeting was held with the fishery managers to discuss any concerns or issues associated with the upcoming season. It was agreed that we provided assessment project updates first before we went into community reports. Throughout the season we provided other special reports, such as, Area M updates from ADF&G, Bycatch Report from NPFMC, water monitoring report from Yukon River Inter-Tribal Watershed Council, and climate change research project from NOAA. If questions were not answered or available during the call; YRDFA staff would follow up with the participant. Many of the presentations were determined by the comments and concerns of the participants. This year the interest in participating in the teleconference was low. With the 3rd year of no harvest of salmon we tried our best to engage the communities. We will continue to look for ways our teleconference calls can be more productive for both user and manager.

Date	# of Callers	Length of Call	Highlights
6/7/22	62	114	-high water -dry conditions -Food security
6/14/22	43	103	-High water -Food security -Area M management
6/21/22	73	124	-extremely dry conditions

			-Bycatch donations -Actions taken on Area M issue
6/28/22	85	160	-Donations -water dropping -Frustrated by lack of salmon
7/5/22	68	130	-Water Quality Monitoring -Ichthyophonus study -Culturally Displaced
7/12/22	75	165	-Social/Mental struggles -Sheefish runs -Bycatch Report
7/19/22	71	152	-Social/Mental Struggles -Food Banks -high cost of living/gas prices
7/26/22	59	119	-Water level still high -Cultural Displaced -Afraid restriction on non-salmon
8/2/22	54	83	-Single digit numbers of Chinook in Canada -Area M -Food security
8/9/22	52	123	-Ichthyophonus study -Area M study -Social/Mental struggles
8/16/22	44	81	-water levels high -Cultural displaced -Need more advocacy
8/23/22	48	83	-Climate Change Presentation -Test fishery ending -Water temperature
8/30/22	56	103	-Board of Fisheries meetings -Mtg w/Governor -Hatcheries

In-Season Salmon Survey:

The In-season Subsistence Salmon Survey Program is an important communication tool that helps managers ensure that both Yukon River escapement is met and, in a normal year, as many subsistence fishers are meeting their goals as possible. YRDFA hires a local person in 10 communities along the Yukon River stretching from Alakanuk to Eagle to survey fishers during

Yukon River Drainage Fisheries Association Update

the Chinook salmon season in their community. The observations fishers share with YRDFA surveyors are summarized by the community to protect anonymity and then shared with Yukon River In-season Managers and the Yukon River community through the In-season Salmon Management Teleconferences. This project is funded by the Fisheries Resource Monitoring Program through March of 2024.

YRDFA surveyors conducted Final Interviews for the 2022 season with fishers in their community. The results are summarized in a separate handout for this meeting. YRDFA surveyors also completed an evaluation survey summarizing their experience with the program this year. In general, the surveyors felt that they were well trained and supported for their position. They were challenged by the fishing conditions this year which led to fishers being more reluctant to participate in the survey. We are looking at ways to improve this program including possibly upgrading the program to an electronic version or an app.

OTHER PROJECTS:

Yukon River Watershed Clearinghouse: A culturally responsive monitoring program. This new project, funded by the State of Alaska, has YRDFA partnering with the Yukon River Intertribal Watershed Council to establish a clearinghouse that allows tracking of both social and ecological changes in ways that are culturally relevant and responsive to the needs of stakeholders in the Yukon River watershed. This 5-year project began in July 2022. The clearinghouse aims to: 1) to assess existing Traditional Ecological Knowledge (TEK) records of observed freshwater system, climate, fish health and abundance changes in the YRW; 2) to identify TEK gaps and conduct additional semi-structured interviews with Elders to generate a historical timeline of observed changes; 3) to develop and apply TEK indicators to assess freshwater and ecosystem health conditions; 4) to establish a comprehensive YRW database that incorporates all available historical and current climate, water quality and quantity data to identify spatial and temporal trends; 5) to develop and incorporate TEK indicators with western science data in order to understand patterns and trends to provide a holistic and long-term understanding of aquatic systems, fish abundance and health changes; and 6) to ultimately identify impacts to vulnerable water bodies and fish habitat areas in order to prioritize these hotspots for increased data collection and to improve the design of coordinated, long-term monitoring efforts in the YRW.

They Told Us There'd Come a Time, Conserving Fish, Preserving Tradition on the Yukon River, A catalog of Elders Warnings: This project, funded by the North Pacific Research Board, has YRDFA partnering with the Tanana Chiefs Conference young adult Emerging Leaders to research documented Local and Traditional Knowledge of salmon and search for advice or warnings from the Elders. We are approaching the end of year two of our three-year project and planning our third training event. The goal of this training will be to prepare to create final products which will include short videos, presentations, summary brochures, and reports. In year two, we held a training event to learn to do qualitative interviews with today's Elders and record them in a high quality way that can be submitted to the University of Alaska Fairbanks archives. Our team

has spent the last two years digging through the archives, learning about Elders from their communities, and conducting interviews with their Elders. We look forward to their exploration into how to share all we have learned.

Integrating Local and Traditional Ecological Knowledge (LTK) into Anadromous Waters Cataloging and Fish Inventories of select drainages of the Tanana and Yukon rivers 2021-2023:

This project, funded by the Alaska Sustainable Salmon Fund (AKSSF), is a partnership between YRDFA and the Alaska Department of Fish and Game. Together, we are working with the communities of Tanana, Nenana, and Manley Hot Springs to identify important areas with anadromous fish and other fish for investigations to nominate areas for the anadromous waters catalog and the fish inventory. In the first year of the project, we traveled to all three study communities and held LTK interviews and mapping activities with knowledgeable fishers and hunters. We were able to conduct a total of 20 interviews; five in Manley Hot Springs, five in Tanana, and ten in Nenana. These knowledgeable subsistence providers shared important information about fish locations. This summer, the team from the ADFG attempted to document fish presence, rearing, and spawning through river boat and helicopter surveys. They floated the Tanana River from Nenana to Tanana in early June and traveled to Tanana to conduct field surveys by boat and helicopter in July. They had planned to also travel to Nenana and Manley Hot Springs for the July work but fires in the area required them to abbreviate their work. We hope to get back to the field in September and to the communities to share about the project this fall.

IMPORTANT ISSUES

Meeting with Governor: On August 29, thirty residents from the Bristol Bay, Norton Sound, Yukon and Kuskokwim (BBAYK) regions of Alaska met with Governor Dunleavy and the Commissioner of Fish and Game to appeal to them to use their power to stop the interception of fish bound for the spawning grounds in the Arctic-Yukon-Kuskokwim (AYK) region. Fists pounded the table as the frustration over the intercept of Chinook and chum salmon continues to happen in the Area M fishery. Those fishermen rake in an average of \$647,000 per vessel while subsistence users in the AYK stand on the banks. Stricter management of Area M is long overdue. Robin Samuelsen, of Dillingham, Alaska, told the Governor and Commissioner of Fish and Game that they have the power to limit interception of Yukon and Kuskokwim bound chum and Chinook salmon in Area M June fisheries. "Our constitution clearly states that fisheries must be managed for sustained yield and it's not happening in the Yukon and Kuskokwim regions." Samuelson said.

Concerns about the near-complete loss of subsistence salmon fishing in the AYK brought together 15 organizations asking Governor Dunleavy for this meeting. The survival of the people in the AYK is at stake as we witness the dramatic declines of some or all species of salmon in Norton Sound, and on the Yukon and Kuskokwim rivers. The Yukon River communities are bearing the brunt of this loss, too, as they are seeing historic lows of Chinook salmon entering the river while the chum salmon have not reached the 300,000 mark to allow for subsistence harvest. A mere 44,581 Chinook salmon were counted at the Pilot Station sonar with 12,025 passing the Eagle sonar, heading to the spawning grounds in Canada. "The State of Alaska Department of Fish and Game cannot stand by while the Yukon River salmon fishery is failing and continue to allow an intercept fishery to resume as normal." stated Serena Fitka, executive director of the Yukon River Drainage Fisheries Association. Commissioner Doug Vincent-Lang recommended going to the Board of Fisheries and asking them to make the necessary changes to the regulations. There is a conservation and food security issue at stake here. The Commissioner must do more than redirect the people of the AYK. We've asked him to support an upcoming proposal to the Board of Fisheries that would limit Area M fishers to conserve and protect chum and Chinook salmon bound for the AYK based on a conservation concern. BBAYK residents asked for a second meeting with the Governor in two months to further discuss solutions and to take action.

UPCOMING PROJECTS:

Engaging Fishers in Chinook and Chum Salmon Decline

This project, funded by the North Pacific Research Board, will begin in January of 2023 and has a goal of contributing to an understanding of the drivers of decline and collapse in Yukon Chinook and chum salmon. Local and Traditional Knowledge interviews on historical Chinook salmon health in Alakanuk and Emmonak will inform biological research on drivers of salmon decline. Additionally, Yukon River fishers in St. Mary's and Huslia will be recruited and trained to document carcass/egg studies, temperature monitoring, and develop a rapid community response Standard Operating Plan to document heat events and impacts on Yukon River salmon. This project will go through February 2026.

Meetings:

The YRDFA annual meeting was held in Anchorage, March 22-23, 2022. Due to lack of funding the meeting was held both in person and virtually, which made it difficult to establish a quorum. Throughout the 2-day meeting a quorum was established to take action on the following items:

- Catherine Moncrieff was given an award for her 20 years of service to YRDFA.
- New Board members elected see YRDFA's website <u>www.yukonsalmon.org</u>
- New Resolutions passed.

The YRDFA Preseason Planning Meeting was held on March 24, 2022 in Anchorage. This meeting was also held in person and virtually with over 50 people on line and over 80 people in the meeting room. We had representation from every community on the Yukon River. The YRDFA executive director facilitated this meeting that began with introductions and concerns, which stretched into mid day. We put the agenda aside because the director felt the people from the communities needed to be heard. Overwhelming attendance showed the significance of this annual meeting to discuss Yukon River salmon issues. The meeting concluded with a presentation from our Emerging Leaders and a presentation from USFWS on the Special Action Request to move into federal management of the Yukon River.

Upcoming meetings:

Take Action on the Salmon Crisis (TASC) Reception hosted by YRDFA October 19, 2022 from 5:00 p.m. - 8:00 p.m. BP Energy Center Light food and drinks provided

Yukon River Science Symposium TENTATIVE: February 16-17, 2022 Virtual

Yukon River Salmon Management Pre-Season Planning meeting TENTATIVE: APRIL 19-20, 2023 in Fairbanks, AK Location: TBD

YRDFA Annual Board meeting

TENTATIVE: April 17-18, 2023 in Fairbanks, AK Location: TBD

IMPORTANT DATES:

Yukon River Panel Post Season Meeting Closed US Section mtg December 3-4, 2022 Closed US and Canada mtg December 5-6, 2022 Public Meeting December 8-9, 2022 Location: Anchorage, Alaska www.yukonriverpanel.com

Arctic Rivers Summit December 6-7, 2022 in Anchorage, AK Location: Alaska Native Heritage Center

Board of Fisheries Written Comment Deadline for the AYK Region December 30, 2022

Board of Fisheries: AYK Finfish January 14-18, 2022 at Anchorage, AK Location: Egan Civic and Convention Center



YUKON RIVER DRAINAGE FISHERIES ASSOCIATION

In-season Subsistence Salmon Survey - Final Interviews with fishers

To wrap up the fishing season and to better understand how it went for fishers in the survey communities, the In-season Salmon Surveyors ask a series of questions aimed at summarizing the season. This year was another difficult year for fishing as well as for surveying. Although we were able to hire and train a surveyor for each community, most found it very difficult to survey frustrated fishers who were not fishing. Eight surveyors were able to conduct the Final Interview Questions with a small group of fishers in their communities.

The Final Interview Questions included:

- How did Covid-19 impact your fishing season?
- Despite salmon fishing closures, were you able to get a few salmon in 4-inch gear or selective gear?
- Considering salmon conditions this year, were you able to get more of other species? If not, what were the barriers for you?
- Fishing closures are devastating to traditional practices and meeting food needs. When runs are very poor, do you think closures are necessary to protect future salmon runs?
- Overall, were you able to harvest enough fish, salmon or non-salmon, for your family for the winter?
- What was your main source of information?

Overall Summary:

- The impact of Covid-19 was greatly reduced this year with most participants stating that Covid-19 did NOT impact their fishing season. But some participants in almost every community felt some impact or stayed isolated from others.
- Despite the salmon closures, some participants in the communities of Alakanuk, Marshall, and Tanana were able to get a few salmon with their 4" nets or selective gear. Anvik had mixed results but most participants in Anvik did not get any salmon. In Mountain Village, Ruby, Huslia, and Fort Yukon, participants did not get any salmon.
- Participants in Alakanuk, Marshall, and Huslia caught some nonsalmon species. In Tanana and Fort Yukon nonsalmon harvest success was mixed with less than half reporting harvesting nonsalmon. In Mountain Village, Anvik, and Ruby, participants reported no nonsalmon harvest.
- When asked if closures are necessary when salmon runs are very poor to protect future runs, all
 or the majority of participants in Alakanuk and Tanana said yes; in Mountain Village, Anvik,
 Ruby, and Huslia, participants were evenly split; and in Fort Yukon, all four participants said no.
 There were many comments from the split answers such as "we need at least one opening" or
 "limit household harvest".
- Almost all of the participants in all of the communities stated that they did not harvest enough fish for the winter.

Yukon River Drainage Fisheries Association Update

Yukon River Drainage Fisheries Association – In-Season Subsistence Salmon Survey 2022

• These fishers get their fishing information from the radio, YRDFA teleconferences, ADF&G News Releases, Facebook/social media, word of mouth, friends, and their Tribe.

By Community:

<u>Alakanuk</u>- Eleven final interviews were completed in Alakanuk. Covid-19 affected two participant's fishing seasons and nine were unaffected by Covid-19 this year. Despite the challenges this year, nine participants were able to get a few salmon while two did not get any salmon. They also caught a few whitefish, pink salmon, and sheefish. Barriers to fishing for Alakanuk fishers included travel, debris in river, and high water. When salmon runs are poor, eight fishers in Alakanuk think that closures are necessary while two do not. Comments included: "Not on the Yukon, trawlers need to stop," "Don't really know why they close," "[at at] certain point, need to subsist for salmon," "yes, so that our grandkids will have fish." Overall, five fishers were able to harvest (or receive) enough other fish for the winter but six were not able to harvest enough for the winter. One fisher received fish from the Kuskokwim River and one caught whitefish to supplement their harvest. Finally, fishers in Alakanuk get their fishing information from the Radio KNOM, ADFG news releases, YRDFA, and Facebook.

<u>Mountain Village</u> – Three final interviews were completed in Mountain Village. Covid-19 affected two out of the three participants' fishing seasons. With the challenges to fishing this year, all participants reported that they were NOT able to get <u>any</u> salmon with the 4" or selective gear this year. They also reported that they were NOT able to get any other species of fish due to salmon closures and health issues. Two participants agreed that closures are necessary when salmon runs are poor but one stated that "at least one opening was needed". None of the participants were able to harvest enough fish for the winter. Participants in Mountain Village get their fishing information from the YRDFA teleconferences and the ADFG News Releases.

<u>Marshall</u> – Two final interviews were completed in Marshall. Covid -19 affected one participant but not the other. Both participants <u>were able</u> to get a few salmon this year, despite the challenging conditions. They were also able to get some non-salmon including whitefish, sheefish as well as a few chum and sockeye. Both fishers thought that closures were necessary for the Area M fishery. One fisher was able to get some fish for the winter and planned to fish in the fall. The other fisher did not get enough fish for winter. They keep informed through 'word of mouth', ADFG News Releases and the YRDFA surveyor.

<u>Anvik</u> – Six final interviews were conducted in Anvik. As for Covid-19 impacts to the fishing season, two people said it did not affect their fishing because there was no fishing. Three said there was no impact by Covid-19, one gave "no comment" and one person said they were "greatly affected" by Covid-19 this year. Two participants reported they were able to get a few salmon this year but five were unable to harvest salmon. One person complained about the gas at \$8/gallon. As for harvesting non-salmon, all six said they were unable to harvest. Reasons for a lack of non-salmon harvest included: price of fuel, no boat motor, and never fished. Fishers in Anvik were split on whether the closures are necessary in times of poor runs, four said yes and three said that households should be allowed a limited harvest. All participants in Anvik reported that they did NOT get enough fish for the winter. One participant received some fish as a gift. A seventh participant did not want to answer questions but said they did not fish this year and they were very upset. Fishers get their information in Anvik through the radio, friends, Facebook, YRDFA and the ADFG news releases.

<u>Ruby</u> – Seven final interviews were conducted in Ruby. Covid-19 did not impact their fishing seasons. Fishers did not have 4" nets or other selective gear to fish this year. They were not able to get non-salmon due to high water, a lack of gear, lack of a fishing spot, and a lack of open fishing periods. Three

Yukon River Drainage Fisheries Association Update Yukon River Drainage Fisheries Association – In-Season Subsistence Salmon Survey 2022

participants said yes and no to necessary closures during poor salmon runs (expressing their understanding of the need for the fishery and the need for their households), three said closures <u>are</u> necessary and one was undecided. None of the participating fishers in Ruby were able to harvest enough fish for this winter. They get their fishing information from Facebook, their Tribe, and the Radio.

<u>Huslia</u> – Four final interviews were conducted in Huslia this year. Covid-19 did not impact them except for one person who reported they could not travel to Nulato to fish. All four reported that they were NOT able to get a few salmon in selective gear or 4" nets. Three reported getting sheefish and other nonsalmon species. When asked if closures are necessary when runs are very poor to protect future runs, two participants said yes, one said no, and one said, "I think it's important to save fish but also important we get fish". No one got enough fish for the winter, but one fisher was still trying, and another said, "not really". In Huslia, they get their fishing information from Facebook, the YRDFA teleconferences, family, radio and other social media.

Tanana – Ten final interviews were completed in Tanana/Rapids area. Covid-19 had no impact on the fishing season of five participants and some impact on five participants. Some reported that they caught Covid-19 but were not sick for long or badly and one stated that they stayed away from people to avoid Covid-19. Despite the salmon fishing closures, six participants reported that they were able to get some salmon. They reported they "got 1 salmon from the ICH project in the Rapids", "caught small salmon", "just a few", or "pulled their nets during the pulse". Four participants reported that they "never fished" or had "no 4" net". Considering the salmon conditions this year, only four fishers reported getting more nonsalmon species and commented that they "got enough to feed their dogs" and multiple people commented that "whitefish seemed less this year". One fisher reported that they, "got more Bering cisco than Humpback [whitefish]". All ten participants in the Tanana/Rapids area felt that closures are necessary when salmon runs are very poor. They also commented that the 4" net was necessary, or all the fish camps would close. Some comments included, "need a way to feed dogs", "the closures should have started long ago", "have to allow some fishing", and "no commercial ever again". None of the participants reported harvesting enough fish for the winter this year. Some said, "nothing at all", some said "no winter food" or "just fed dogs and a few for people", and some called it the "worst year ever". Fishers in Tanana/Rapids get their fishing information from YRDFA, the radio, the Rapids Research Center, word of mouth and through the ADFG updates.

<u>Fort Yukon</u>- Four final interviews were conducted in Fort Yukon. Covid-19 did not affect three of the participants but probably caused some isolation. One participant said, "I stayed away", another said, "I couldn't fish with families". All four reported that they were NOT able to get a few salmon with 4" or selective gear this year. For nonsalmon, two participants harvested sheefish, pike and whitefish while two did not. All four agreed that they did NOT think fishing closures were necessary during poor salmon runs. And all four did NOT harvest enough fish for the winter. In Fort Yukon, participants get their information from the radio, Facebook, and the YRDFA teleconferences.

For more information, contact Catherine Moncrieff at 907-382-8990 or catherine@yukonsalmon.org

DONLIN ADVISORY TECHNICAL REVIEW & OVERSIGHT COMMITTEE (DATROC)

Donlin Gold is committed to ongoing outreach and communications with the region, having conducted more than 500 community meetings throughout the development phase.

WHAT IS DATROC?

As project partners, Donlin Gold, Calista Corporation, and The Kuskokwim Corporation are committed to maintaining a strong process for communications, dialogue and problem solving among the partners and with Kuskokwim River communities.

DONLIN ADVISORY TECHNICAL REVIEW & OVERSIGHT COMMITTEE (DATROC)

WHAT IS THE PURPOSE OF DATROC?

A critical role of the companies' Donlin Advisory Technical Review and Oversight Committee (DATROC) is to **establish community advisory committees** to gather input on topics such as environmental protection, reclamation, subsistence uses, and community impacts.

DONLIN ADVISORY TECHNICAL REVIEW & OVERSIGHT COMMITTEE (DATROC)

Input from stakeholders in the region has strengthened Donlin Gold's knowledge of the area and contributed to positive changes in the Project.

WHY IS DATROC IMPORTANT?

Community Advisory Committees (CACs) are an important way for the people of the Yukon-Kuskokwim Region and the Donlin Gold project to communicate, and a best practice for good relationships between mining projects and the communities where they operate.

Donlin Gold's Environmental Impact Statement (EIS), approved in August 2018, commits to formulating and maintaining community advisory committees throughout the life of the Project.

DATROC COMMUNITY ADVISORY COMMITTEES (CACs)

There are four CACs, each focused on an important topic related to the Donlin Gold project:

Subsistence Committee: This committee focuses on the relationship between the Donlin Gold project and subsistence activities within the Kuskokwim River drainage.

Transportation and Infrastructure Committee: This committee focuses on transportation and infrastructure in the Region related to the Donlin Gold project, including barging activities, land and river transportation and Project-related infrastructure.

Environmental Committee: This committee addresses ongoing environmental monitoring and other studies related to the Donlin Gold project, including review and discussion of findings from ongoing studies.

Social and Cultural Responsibility Committee: This committee advises on how the Donlin Gold project can best fulfill its social and cultural responsibility to the Region by supporting strong communities and healthy people.

Yukon Kuskokwim Delta Subsistence Regional Advisory Council

DATROC COMMUNITY ADVISORY COMMITTEES

As a developer, Donlin Gold and its owners are committed to supporting subsistence activities, protecting the environment, and responding to questions and concerns.

SUBSISTENCE COMMUNITY ADVISORY COMMITTEE (SCAC)

This committee focuses on **the relationship between the Donlin Gold**

project and subsistence activities within the Kuskokwim River

drainage. This committee will hold its first meeting once members are

recruited through an application process.

Learn more at <u>www.letstalkdonlin.com</u>

DATROC COMMUNITY ADVISORY COMMITTEES

SUBSISTENCE COMMUNITY ADVISORY COMMITTEE (SCAC)

ROLE OF SCAC MEMBERS:

1. Receive and distribute information on Donlin Gold's plans, operations and monitoring activities.

 Communicate information of local subsistence activities and traditional knowledge as it relates to information shared by Donlin.
 Provide a forum for stakeholders to discuss potential issues of concern related to Donlin Gold's plans, operations or monitoring activities on subsistence activities, wildlife or habitat.

4. Make recommendations to DATROC related to subsistence and assist DATROC into developing and periodically updating a subsistence plan for lands and waters affected by the Project.

DATROC COMMUNITY ADVISORY COMMITTEES

SUBSISTENCE COMMUNITY ADVISORY COMMITTEE (SCAC) WHO CAN APPLY FOR A SEAT ON THE SCAC?

Membership: SCAC members are appointed by the DATROC, with seats and term length as follows.

Member	Term Cohort	Term Begins	Term Ends	Represents
A: TKC Villages	10	2021	2025	Communities: Aniak, Chuathbaluk, Crooked Creek,
B: TKC Villages	1	2021	2023	Georgetown, Lower Kalskag, Napaimute, Red Devil, Sleetmute, Stony River, Upper Kalskag
C. Upper Kuskokwim	п	2021	2024	Communities: Lime Village, McGrath, Nikolai, Takotna, Telida
D: Lower Kuskokwim	U	2021	2024	Communities: Akiachak, Akiak, Bethel, Eek, Kwethluk, Napakiak, Napaskiak, Oscarville, Tuluksak, Tuntutullak
E: Federal Subsistence RAC	Ú.	2021	2023	Member of Federal Y-K Delta Subsistence Regional Advisory Council
F: ADF&G Advisory Committee	- UL	2021	2025	Member of Alaska Department of Fish & Game Local Advisory Committees located in the Kuskokwim River Drainage
G: Elder Member		2021	2024	Elder member, at-large seat
H: Young Adult Member	10	2021	2023	Young adult member, age 18-26, at-large seat
Staff resource: DATROC coordinator	N/A	N/A	N/A	Non-voting position; meeting support, documentation

DATROC COMMUNITY ADVISORY COMMITTEES

SUBSISTENCE COMMUNITY ADVISORY COMMITTEE (SCAC)

TO APPLY, PLEASE CONTACT:

Colleen Laraux, Community Relations & DATROC Coordinator

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907-543-0745 Phone

907-543-0779 Fax

Donlin Gold LLC

P.O. Box 509

Bethel, AK 99559

FOR MORE INFO PLEASE VISIT: <u>https://letstalkdonlin.com/</u>



United States Department of the Interior

FISH AND WILDLIFE SERVICE Togiak National Wildlife Refuge P.O. Box 270 Dillingham, Alaska 99576 Phone 907-842-1063 Fax 907-842-5402



INFORMATION BULLETIN - August 2022

Kanektok River salmon weir removal

Contact: Pat Walsh

The Alaska Department of Fish and Game operated a salmon weir on Togiak Refuge on the Kanektok River from 2002-2015. The weir has been inoperative since 2016 due to lack of funding. In spring 2022, ADF&G began removing the weir materials and field camp. It is anticipated that weir removal will be complete by spring 2023.

Aerial Salmon Survey

Contact: Truett Cawlfield

The Fish and Wildlife service has initiated an aerial survey of the Salmon River which flows into the Kuskokwim Bay. The aim of this survey is to establish a baseline for salmon run timing and run size for this system. A weir will be constructed on the Salmon River in 2023 and will be managed by the Kenai Fish and Wildlife Conservation Office, who is partnering with the Togiak Refuge staff on this project. The weir will be utilized to ensure the accuracy and precision of aerial surveys.

Arctic Char Population Inventory

Contact: Truett Cawlfield

Togiak Refuge has developed a multi-year study to inventory Arctic char populations throughout the Refuge. This species was previously confirmed to occur in 27 lakes. Since the beginning of the study 34 lakes have been sampled, and Arctic char occurrence has been documented in 13 new lakes. We have collected size and genetic information from 355 fish and provided the UAF museum with voucher specimens. If you have any first-hand knowledge of small or unique Arctic char populations and would be willing to share that information please contact Truett Cawlfield at the Togiak Refuge office.

Mulchatna Caribou

Contact: Andy Aderman

Togiak Refuge assisted ADF&G with telemetry and law enforcement flights, satellite data acquisition, data entry and database management. A June 2022 post-calving survey estimated the Mulchatna herd at 12,112 caribou, slightly down from 12,850 estimated in 2021, and well below the population objective of 30,000-80,000 caribou.

Togiak Refuge Manager Moos, under authority delegated by the Federal Subsistence Board, closed caribou hunting and closed Federal public lands in the RC503 hunt area for caribou hunting.

ADF&G staff radiocollared 12 caribou in April 2022 in the area from Cape Newenham north to the Arolik River. On June 23, 2022 we located 11 collars in 8 groups and 1 collar that was a recent mortality. We also observed 9 uncollared groups ranging from 1-7 caribou. The combined total for all

groups was a minimum of 470 caribou. Thus far these caribou have remained in the general proximity of where they were captured.

Nushagak Peninsula Caribou

Contact: Andy Aderman

A photocensus of the Nushagak Peninsula Herd on June 25, 2022 found a minimum of 359 caribou in 7 groups which resulted in a total population estimate of 442 +/- 118 (359-560) caribou at the 95% confidence interval. A similar effort in 2021 found a minimum of 258 caribou in 2 groups resulting in an estimate of 287 +/- 47 (258-334) caribou.

The Nushagak Peninsula Caribou Planning Committee met via teleconference July 27, 2021 and reviewed results of previous hunts, population and lichen monitoring, and the harvest strategy. Following the Harvest Strategy adopted in 2019, the Committee favored having a hunt with a total of 48 permits, with 8 permits going to each of the 6 communities: Aleknagik, Clark's Point, Dillingham, Manokotak, Togiak and Twin Hills. Refuge Manager Moos' decision was to open the Federal caribou hunt on the Nushagak Peninsula from August 1-March 15 with a harvest objective of 48 caribou, a harvest limit of 1 caribou per hunter, and 8 permits going to each of the six communities.

Nushagak Peninsula Lichen Monitoring Contact: Andy Aderman

Lichen cover on the Nushagak Peninsula declined from 48.1% in 2002 to 18.7% by 2022. Surveys estimated cover had declined 2.3% from 2002 to 2007; 6.3% from 2007 to 2012; 8.9% from 2012 to 2017, and 11.4 from 2017 to 2022. The declining trend from 2002 on, suggests lichen cover could decrease to a low enough level in the next 10 years, such that caribou may abandon the Nushagak Peninsula. It is likely Nushagak Peninsula caribou would leave the peninsula before lichens were depleted. What is not known is if caribou leave the peninsula will it be temporary, seasonal, or long term.

Moose

Contact: Andy Aderman

In 2022, 14 of 19 collared adult cows produced a minimum of 25 calves (3 singles and 11 sets of twins) suggesting a production rate of 131.6 calves per adult 100 cows. Adult twinning rate was 78.6%. Three of 8 2-year old cows had a single calf. We will check calf survival in November.

During the 2021-2022 fall moose hunts in Unit 17A (RM 571, RM 573, and DM 570), hunters reported harvesting 60 moose (57 bulls, 3 cows) which was similar to the 60 moose (55 bulls, 5 cows) taken the previous year. During the 2021-2022 winter moose hunts in Unit 17A (RM 575 and RM 576), hunters reported harvesting 86 moose (28 bulls, 58 cows). In southern Unit 18, hunters reported harvesting 7 bulls in the RM 617 hunt and 12 bulls in the RM 620 hunt. Harvest was down 5 moose for the RM 617 hunt and no change for the RM 620 hunt.

The relationships of wolf and brown bear predation with moose population density and growth at Togiak National Wildlife Refuge and BLM Goodnews Block, Alaska

Contact: Pat Walsh

In summer 2014, Togiak Refuge, the USFWS Genetics Lab, ADF&G, and BLM initiated a study to understand the effects of wolf and brown bear predation in regulating the populations of moose. The study relies on radio telemetry and stable isotope analysis. Our approach is to relate the predation impact by wolves and bears on moose at varying levels of moose population density. This requires having population estimates of both bears and wolves. We estimate the brown bear population totals approximately 855 bears (95% confidence limits: 664 - 1,154). Using radio telemetry, we estimate the

wolf population varies widely but averages 90-100 wolves consisting of approximately 12 packs averaging 7 wolves plus approximately 10% of wolves unaffiliated with packs. Using these demographic data, we will model wolf and bear predation on moose based on the diet composition of both species determined through analysis of carbon and nitrogen isotopes occurring in wolf and bear tissues. Lab analyses are complete and modelling is currently underway.

Walrus

Contact: Pat Walsh

The Togiak Refuge has annually monitored the number and timing of Pacific walruses at haul-outs since 1985, using ground counts (1985-2008), aerial surveys (2003-2011) and time lapse photography (2010-2022). Overall, walrus numbers observed at haul-outs on Togiak Refuge have declined, with the greatest declines at Cape Peirce and Cape Newenham. Peak annual haul-out counts have varied greatly, ranging from >12,000 in 1985 to <300 in 2002. Since 2002, peak counts have averaged 1,615. However, in fall 2021, a group of approximately 7,500 walrus hauled out on Hagemeister Island (Fig. 1), which was the greatest number of walrus using Togiak Refuge since 1998.



Figure 1. An estimated 7,500 walrus hauled out on Hagemeister Island, September 19, 2021.

Seabirds

Contact: Jannelle Trowbridge

The abundance of black-legged kittiwakes, common murres, and pelagic cormorants has been monitored at Cape Peirce since 1990. Monitoring was not conducted in 2015 and 2020. This year's average number of birds counted on study plots was 669 kittiwakes, 241 murres, and 28 cormorants. Over the past 30 years, the average number of birds counted on study plots are 1,040 kittiwakes (range = 238-

1,906), 2,437 murres (range = 53-4,490), and 84 cormorants (range = 14-149). Abundance has been below average for kittiwakes since 2021, murres since 2014, and cormorants since 2016.

Signs of avian influenza were observed at Cape Peirce this year, although lab tests were not possible in most cases. About 230 black brant were found dead along Nanvak Bay this spring. Symptoms of bird flu such as swimming in circles were also observed in living black brant. At Cape Peirce 4 glaucous-winged gulls, 1 glaucous gull, 1 raven, 1 common eider, and 1 jaeger were also found dead.

Invasive Aquatic Plant Surveys

Contact: Kara Hilwig

Elodea spp. is a highly invasive and difficult to control aquatic plant implicated in the degradation and loss of fish habitat across the world. It was confirmed present in Alaska in 2009 and is now found in several waterbodies across the State. Refuge and Park staff are cooperating to complete the fourth *Elodea* survey within the Togiak Refuge, Wood-Tikchik State Park and the surrounding area. Twenty-five annual monitoring sites have been established in high use areas such as lodge docks, boat ramps, and popular float plane destinations. In 2021, crews sampled 9 locations in the Park, 28 in the Refuge, and 13 in the outlying area from August 4 to September 27. Sampling effort included overflights of 20 lakes and 29 fragment searches, and 643 rake samples. No *Elodea* or other invasive aquatic plants were detected. Funding was secured to continue this work in 2022.

Water Temperature Monitoring

Contact: Truett Cawlfield

Stream temperature monitoring has been conducted at 21 locations on 14 rivers in Togiak Refuge since August 2001. Continuous hourly water temperatures were recorded at each site. Over 2.4 million temperature records were collected, quality-graded, and digitally stored in a database. The warmest month each year was July. The warmest temperatures were observed in the Kukaktlim Lake outlet and the coolest temperatures were observed in the Weary River. Project reports are available upon request.

In addition to the stream temperature monitoring, we monitored lake temperature using moored allseason temperature arrays to record hourly temperatures throughout the water column in 2 lakes since 2011. The lakes differed significantly in surface area, water volume, and elevation with Ongivinuk Lake being smaller and at higher elevation than Snake Lake. We observed variation in lake ice timing and fewer days of ice cover on Snake Lake than on Ongivinuk Lake. We observed that both lakes turn over in spring and fall. We observed water temperatures in excess of standards for fish rearing and migration habitats during summer down to 12.5 m in Snake Lake and down to 5 m in Ongivinuk Lake. Project reports are available upon request.

Quantifying River Discharge

Contact: Pat Walsh

Togiak Refuge and the USFWS Water Resources Branch have worked cooperatively since 1999 to acquire hydrologic data of the flow regime (magnitude, duration, timing, frequency, and rate of change) and water quality on rivers throughout the Refuge. A network of stream discharge gages collected stream flow data from 1999-2005 at 20 locations. A subset of five of these stations continued to collect data through fall 2009, after which three of the five stations were removed. We continue to monitor discharge in the Togiak and Kulukak Rivers, although due to Covid-19 travel restrictions, the gages were inoperative in 2020-2021. Both stations were brought back into operation in July 2022.

Education and Outreach

Contact: Terry Fuller

At the time of this writing, Togiak Refuge's education and outreach efforts have slowly started to resume. Togiak Refuge normally has a very active education and outreach program. From an education standpoint, during a normal school year, Refuge staff conducts an average of 60+ classroom visits throughout 12 Bristol Bay villages annually, Classroom visits include lessons about the Migratory Bird Calendar, National Wildlife Refuge Week, careers in natural resource conservation, and numerous teacher requested classroom presentations. The Refuge works with several school districts and private schools including the Southwest Region, Lower Kuskokwim, Dillingham City school districts and the Dillingham 7th Day Adventist School. Some topics often include bird walks, wilderness survival skills, archery, salmon life cycles, aquatic resources, and bear safety. School visits started back up early in 2022 and we anticipate even more during the new school year. The refuge website, one of our educational tools, is undergoing a migration to a new platform, and we are excited about better access it will allow and the content it will provide.

Togiak Refuge, in partnership with ADF&G and the Southwest Region School District, also conducts hunter safety courses throughout western Bristol Bay Villages. Classes have impacted more than 100 students in Manokotak, Dillingham, Twin Hills, Togiak, Aleknagik and Quinhagak. The refuge plans to continue these courses, as requested, in 2022 and is in the planning stages to add a National Archery in School Program to its offerings in the future, pending a return to normal outreach efforts.

The Refuge education program also produces Bristol Bay Field Notes, an award-winning weekly radio program on KDLG 670 AM that covers an array of outdoor-related topics (past episodes can be found on KDLG's website. Togiak Refuge has an active and heavily followed Facebook page which disseminates information on a daily basis to a rapidly growing global audience.

The Refuge normally hosts an Open House event, in celebration of National Public Lands Day and National Hunting and Fishing Day. It was not held in 2021 but is expected to happen during September 2022. This event is usually attended by 100-200 people and includes a wide range of displays, hands on activities, food and beverages.

Togiak Refuge staff continues to work with the Alaska Migratory Bird Co-Management Council and the ADF&G to conduct household subsistence waterfowl surveys. Refuge staff and volunteers conducted surveys in a number of southwest Alaska communities, Aleknagik, Dillingham, Togiak, Clark's Point, Newhalen, Nondalton, Chignik Lake and Chignik Lagoon. Surveys have been on hold still due to covid-19.

Also, the Refuge partners with others to conduct three environmental education camps. As with other Service sponsored education camps, those camps were cancelled for 2021 and have not happened yet in 2021, due to covid-19 related concerns. The descriptions that follow are from the 2019 camps.

Cape Peirce Marine Science and Yup'ik Culture Camp

Contact: Terry Fuller

This camp was scheduled to happen in July 2022 but was cancelled due to weather. Most recent camp: In July 2019 an enthusiastic group of seven area junior high students representing three villages (Dillingham, Togiak and Platinum) traveled to Cape Peirce for this camp. Students were able to observe seabirds, marine mammals, and learn how field work is conducted, as well as learning about the food webs and ecological relationships found at the Cape Peirce area. Students also learned about traditional Yup'ik uses of animals and plants and about Native survival skills. This camp is designed to help students gain a better understanding of the biological diversity of a marine ecosystem. It also strengthens their sense of stewardship for local natural resources. Other topics at this camp included tide pools, wilderness survival skills, archery, bear safety, Leave No Trace camping practices and careers with USFWS. Refuge Interpreter Jon Dyasuk spoke with students about traditional resource uses. A special offering for this year's camp was the chance for the students to try their hand drawing with Colorado pastel artist Penny Creasy. Traditional councils and school districts from throughout western Bristol Bay are cooperators with this camp.

Southwest Alaska Science Academy (Salmon Camp)

Contact: Terry Fuller

*Note: Was not held during 2022. Most recent: In July 2019, Togiak Refuge helped with the 19th year of a summer camp aimed at teaching middle and high school students about fisheries science and the importance of salmon to our ecosystem. Students were selected from the Bristol Bay region. During the camp students worked in the field alongside fisheries professionals. Cooperators with the Refuge on this project included the Bristol Bay Economic Development Corporation, Bristol Bay Science and Research Institute, University of Alaska, University of Washington School of Fisheries, the Dillingham City and Southwest Region school districts, and ADF&G.

Summer Outdoor Skills and River Ecology Float Camp

Contact: Terry Fuller

This camp was a modified camp held during mid-August 2022. The camp still used rafting as one of the major activities, but it was a stationary camp at Pungokepuk Lake for six junior high students. Students observed and learned about the many fish, wildlife and plant species found around Pungokepuk Lake. Rafting skills, water safety, different angling practices (Catch and Release), Leave No Trace camping practices and bear safety were topics during the trip. Students also participated in other outdoor activities such as wilderness survival skills. This camp helps students grasp the biological diversity of riparian ecosystems and the importance of salmon as a nutrient source, while developing a deeper sense of stewardship for local natural resources. Traditional councils and school districts in western Bristol Bay are cooperators with this camp.

Division of Refuge Law Enforcement

Contact: Derek Thompson

Federal Wildlife Officers work to protect wildlife and habitat and make refuges safe places for visitors and staff. Regional Law Enforcement Specialists (LES) Derek Thompson is stationed in Dillingham, AK. He is the Officer responsible for patrolling Togiak NWR and providing Regional assistance and guidance for the AK Division of Refuge Law Enforcement Program.

2022 visitation and use within Togiak NWR has returned to pre-covid levels, with many local and nonlocal users in the Refuge. Mulchatna caribou are a local and regional priority. LES Thompson is the Federal team lead for patrolling and monitoring the Eastern Mulchatna herd. This winter AK DRLE will again team up with up with ADF&G, AWT, BLM, and FWS OLE to enforce the Mulchatna caribou closed season. Nushagak Peninsula caribou permits have been increased for the 2022-2023 season. LES Thompson reminds hunters who obtain a permit for this hunt to be familiar with the permit conditions and designated hunter permits and conditions. Please call if you have any questions.

SFWO Thompson encourages anyone with questions regarding USFWS law enforcement to contact him; and reminds all who enjoy and rely upon the resources in the Bristol Bay Region the USFWS Division of Refuge Law Enforcement is here to help protect those resources for future generations.

Staff Update

Wildlife Biologist Doug Holt accepted the Supervisory Wildlife Biologist position with Sheldon Hart Mountain National Wildlife Refuge in Oregon. Doug left us in mid-January 2022.

The Fisheries Biologist position was filled by Jonathan Cawlfield (aka Truett) in May. Truett comes from South Texas, having completed an acoustic telemetry study on marine fishes in fulfillment of a Master of Science degree in 2021.

Avian Influenza (HPAI) Update

ta Uelt **Highly Pathogenic Avian** ing and X O D Influenza Sampl Monitoring on Yı **Bryan Daniels**

Waterfowl Biologist 907-543-1010

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- For confirmed cases in Alaska:
- outbreaks/#:~:text=On%20April%2029%2C%202022%2C%20the,in%20multipl https://dec.alaska.gov/eh/vet/announcements/avian-influenzae%20locations%20across%20Alaska. •

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Googe: "Alaska HPAI confirmed cases" and select first link



Confirmed HPAI on YKD

- Black Brant
- Glaucous gulls
- Sabines gulls
 Short-billed gull
- Raven
 Dunlin
 Sandhill crane
 - Parasitic jaeger
 - Arctic tern
 - ChickensMallards
 - Pintail

HPAI sampling

- Collected paired blood and oral/cloacal swabs on adults
- 50 Emperor Geese
- 60 black brant
- 63 cackling geese
- 6 Spectacled eiders
 - 225 ducks
- Trying to learn more about past and current infections and immunities
 - Still awaiting results





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- Yukon Delta NWR Facebook posts
- 4 talks on KYUK Radio
- LEO (Local Environmental Observer) network
- Email updates to Jennifer Hooper at AVCP

If sick or dead birds are found, Call the sick/dead bird hotline at:

1-866-527-3358

BLM Anchorage Field Office Update and Alaska Native Vietnam-Era Veteran Land Selection Information



United States Department of the Interior

BUREAU OF LAND MANAGEMENT Anchorage Field Office 4700 BLM Road Anchorage, Alaska 99507-2591 www.blm.gov/alaska



Updates to Subsistence Regional Advisory Councils Fall 2022 Meetings

The Anchorage Field Office completed a busy summer 2022 field operations. The summary below is an overview of priority projects by resource. We are continuing to increase in fieldwork operations, while adhering to any COVID-19 protocols and mitigations.

An overview map of the Anchorage Field Office can be found at: https://www.blm.gov/sites/blm.gov/files/documents/files/Maps_Alaska_Anchorage-Field-Office.pdf

BLM Alaska publicly available interactive maps are available at: https://blm-egis.maps.arcgis.com/apps/MinimalGallery/index.html?appid=d2da853631fe4b60ac768f19bec4e 84b

Wildlife and Subsistence

- Conducted Breeding Bird Survey routes on the Unalakleet and Anvik Rivers in June.
- Completed a peregrine falcon nesting survey on the Kuskokwim River between McGrath and Aniak in July.
- Assisted Alaska Department of Fish and Game with the release of 28 Wood Bison on the Innoko River near Kellen Creek. The bison were barged to the site and held in a temporary corral before being released on August 6th to the wild bison herd already in the area.
- BLM issued federal muskox permits for hunts in Units 22B, 22D and 23.
- BLM issued federal moose permits in Unalakleet for the fall hunt in unit 22A.
- Contributed funds in an Inter-agency Agreement with FWS Togiak Wildlife Refuge to help monitor the Mulchatna Caribou Herd.
- Contributed funds in an Interagency Agreement with NPS to help fund the Western Arctic Caribou Herd Working Group meeting in December. The meeting is funded by BLM, NPS and FWS and ADF&G. The working Group will discuss the management of the herd and its current population status.

INTERIOR REGION 11 • ALASKA

Aquatics

- Conducted e-DNA sampling in the Kigluaik Mountains on the Seward Peninsula for BLM sensitive species Kigluaik Arctic Char.
- Completed initial aquatic habitat baseline data collection from the Seward Peninsula Planning Area based out of Kotzebue and Nome as part of the National Assessment Inventory and Monitoring Program (AIM). AIM data provides a framework to inventory and quantitatively assess the condition and trend of natural resources on public lands.

• Conducted ongoing stream gaging flow quantification efforts on Big River and Unalakleet Wild and Scenic River

• Conducted ongoing water quality monitoring work at Platinum. This is a partnership with USFWS Togiak National Refuge for installation of a Video Weir in 2023 on the Salmon River monitoring salmon escarpment numbers.

Ecology

- Continued collecting Assessment Inventory and Monitoring (AIM) terrestrial and riparian and wetland plot data for the Kobuk Seward Peninsula Planning Area. In July/August 2022, 23 plots were established and sampled using this monitoring framework. Data on plant cover, invasive species, sensitives species, woody structure, phenology, pollinator activity, and soil structure were collected. In addition to these national core monitoring indicators, BLM has developed methods to collect data on lichen cover and disturbance to determine rangeland health in areas that BLM permits reindeer grazing.
- In July 2022, exclosures on the Seward Peninsula were visited and monitored. These small fenced-in areas protect vegetation from grazing, providing a baseline to learn about the long-term effects of grazing on lichens and plants. The exclosures were installed in 2011 and 2012 and baseline data was collected at that time. This is the first year that vegetation has been reassessed to determine how it has changed over the past 10 years. Data will be analyzed during the upcoming winter months.
- Re-issued four firewood harvest permits to residents on the Seward Peninsula.
- Collaborated with the United State Forest Service Forest Inventory and Analysis Program (FIA) to facilitate data collection at 105 plot locations on BLM within the FIA's Southwest Inventory Unit.
- Anchorage Area: Conducted invasive species control treatments on Campbell Tract in July with another planned for August 2021. Bird vetch and orange hawkweed were targeting this year and spot treatment occurred within a 6-acre area that is assessed annually.

• Continuing to support the Anchorage Cooperative Invasive Species Management Area through an assistance agreement to partially fund meetings, public events, and chairperson coordination.

Archaeology

• OTZ Telecom Cooperative has applied to the BLM for rights-of-way to construct several towers that would provide internet service to northwest Alaska. The BLM is working with the USDA Rural Utilities Service, the US Fish and Wildlife Service, the National Park Service, and the State of Alaska to develop a Programmatic Agreement to address potential effects to cultural resources under the National Historic Preservation Act.

Recreation

- Spring 2022- conducted SRP monitoring in the Neacola Mountains and Tordrillo Mountains.
- June 2022- inspected guide and outfitter camps in GMU 19D & 19C.
- July 2022- inspected guide and outfitter camps and airstrips in GMU 23.
- August 2022- a new BLM sign will be placed at the boundary of BLM lands and Unalakleet Native Lands on the Unalakleet Wild and Scenic River.
- Issued new Special Recreation Permit (SRP) for guided bear hunts in GUA 21-03.
- Issued new Special Recreation Permit (SRP) for guided big game hunts in GUA 19-12.
- Issued new Special Recreation Permit (SRP) for guided big game hunts in GUA 21-01.

Iditarod Trail

• The BLM worked with Denali National Park & Preserve personnel to rehabilitate and stabilize the Rohn Public Use Cabin. The work stabilized the condition of this National Register of Historic Places eligible cabin for decades to come.

Realty

- OTZ lease application
- Mukluk Telephone fiberoptic lease application
- Private individual road right of way application

- Bristol Bay Cellular 2 ROW lease renewals
- NPS Nome lease clean-up of Hill 3870 on the Teller Road
- Seldovia Certificate Inspection and Possession Environmental Site Assessment exam

Hazmat

- Kolmakoff Mine Site has been funded for FY23 remedial fieldwork.
- Three remote trespass cabin sites have been remediated and will be submitted for regulatory closure.
- RCRA HAZMAT removed and disposed of from an aircraft crash site in Squirrel River SMRA.
- Accumulated HAZMAT from AFO and GFO properly disposed of.

Minerals

- Minerals staff have had a productive field inspection and are scheduled to accomplish all planned mine inspections by the end of September.
- Salmon River Fish Passage Project is undergoing NEPA review and funding options are being sought after.
- Nixon Fork experienced a severe wildfire fire event that burned much of the surface infrastructure. There continues to be multiple enforcement actions against the operator and staff are trying to bring them into compliance before the end of FY22.
- Multiple operators in Flat have made progress in their mine site reclamation.
- One operator in Nome is beginning reclamation this fall and BLM is pursuing cleanup actions for the other operator.
- Minerals staff have worked extensively in closing out legacy mineral material casefiles associated with Native Allotments.

ALASKA NATIVE VIETNAM-ERA VETERAN'S BLM LAND SELECTION INFORMATION

Please visit the following BLM website for details:

https://www.blm.gov/programs/lands-and-realty/regional-information/alaska/land-transfer/ak-native-allotment-act/alaska-native-vietnam-veterans-land-allotment


f Kuskokwim Area Subsistence Division Projec and OSM proposa Ratie Hayden and Chris McDev ADF&G Subsistence Divisic Presentation to the Yukon-Kuskokwim Delta RA October 27-28, 202

Alaska Department of Fish and Game





subsistence fishing communities in the upper Kuskokwim River drainage through the documentation and incorporation of local and traditional ecological knowledge. This project will specifically focus on natural indicators of salmon run and Purpose: This project seeks to understand the historical abundance, distribution, and health of salmon populations in timing through interviews with knowledgeable fishers



Local and Traditional Knowledge of Subsistence Salmon Harvest and Use the Lower Kuskokwim River
Purpose: This study will focus on fisher knowledge of patterns of movement through customary and tradition areas and the ways in which fishers use this knowled effectively harvest salmon, particularly in the section of Kuskokwim River from the Johnson River mouth dow Kuskokwim Bay. This project will highlight the ways in fishers have adapted their subsistence practices in th dropping King Salmon and Chum numbers, and subs harvests in a time of salmon conservation.
Communities: Napakiak, Nunapitchuk, Kasigluk, Tur and Eek
Work to Date: Community support documented in all communities. Community approval to conduct interviews received in Napakiak, Nunapitchuk, Kasigluk.
Community outreach and interviews started in Napakiak, Nunapitchuk, and Kasigluk in August 2022

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Winter 2023 Regional Advisory Council Meeting Calendar

Last updated 09/29/2022

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
Feb. 19	Feb. 20 PRESIDENTS DAY	Feb. 21 Window	Feb. 22	Feb. 23	Feb. 24	Feb. 25
	HOLIDAY	Opens		NSRAC ((Kaktovik)	
Feb. 26	Feb. 27	Feb. 28	Mar. 1	<i>Mar. 2</i>	Mar. 3	Mar. 4
		SI	EARAC (Junea	u)		
			EIRAC (Arct Fairba	tic Village or anks)		
Mar. 5	Mar. 6	Mar. 7	Mar. 8	Mar. 9	Mar. 10	Mar. 11
	NWARA	C (TBD)				
Mar. 12	Mar. 13	Mar. 14	Mar. 15	Mar. 16	Mar. 17	Mar. 18
		BBRAC (Dilligham)	Anchorage)		
Mar. 19	Mar. 20	Mar. 21	Mar. 22	Mar. 23	Mar. 24	Mar. 25
			SPRAC	(Nome)		
Mar. 26	Mar. 27	Mar. 28	Mar. 29	Mar. 30	Mar. 31	Apr. 1
			KARAC (Lar Harl	sen Bay/Old bor)		
Apr. 2	Apr. 3	Apr. 4	Apr. 5	Apr. 6	Apr. 7	Apr. 8
	YKDRAC	(Alakanuk)			Window	
		WIRAC	(Aniak)		Closes	
		WIITAO				

Fall 2023 Regional Advisory Council Meeting Calendar

Last updated 08/1/2022

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. 13	Aug. 14 Window Opens	Aug. 15	Aug. 16	Aug. 17	Aug. 18	Aug. 19
Aug. 20	Aug. 21	Aug. 22	Aug. 23	Aug. 24	Aug. 25	Aug. 26
Aug. 27	Aug. 28	Aug. 29	Aug. 30	Aug. 31	Sep. 1	Sep. 2
Sep. 3	Sep. 4 Labor Day Holiday	Sep. 5	Sep. 6	Sep. 7	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	Oct. 6	<i>Oct.</i> 7
Oct. 8	Oct. 9 Columbus Day Holiday	Oct. 10	Oct. 11	Oct. 12	Oct. 13	Oct. 14
Oct. 15	Oct. 16	<i>Oct.</i> 17	Oct. 18	Oct. 19	Oct. 20	Oct. 21
Oct. 22	Oct. 23	Oct. 24	Oct. 25	Oct. 26	Oct. 27	Oct. 28
Oct. 29	Oct. 30	Oct. 31	Nov. 1	Nov. 2	Nov. 3 Window Closes	Nov. 4

Subsistence Regional Advisory Council Correspondence Policy

The Federal Subsistence Board (Board) recognizes the value of the Regional Advisory Councils' role in the Federal Subsistence Management Program. The Board realizes that the Councils must interact with fish and wildlife resource agencies, organizations, and the public as part of their official duties, and that this interaction may include correspondence. Since the beginning of the Federal Subsistence Program, Regional Advisory Councils have prepared correspondence to entities other than the Board. Informally, Councils were asked to provide drafts of correspondence to the Office of Subsistence Management (OSM) for review prior to mailing. Recently, the Board was asked to clarify its position regarding Council correspondence. This policy is intended to formalize guidance from the Board to the Regional Advisory Councils in preparing correspondence.

The Board is mindful of its obligation to provide the Regional Advisory Councils with clear operating guidelines and policies, and has approved the correspondence policy set out below. The intent of the Regional Advisory Council correspondence policy is to ensure that Councils are able to correspond appropriately with other entities. In addition, the correspondence policy will assist Councils in directing their concerns to others most effectively and forestall any breach of department policy.

The Alaska National Interest Lands Conservation Act, Title VIII required the creation of Alaska's Subsistence Regional Advisory Councils to serve as advisors to the Secretary of the Interior and the Secretary of Agriculture and to provide meaningful local participation in the management of fish and wildlife resources on Federal public lands. Within the framework of Title VIII and the Federal Advisory Committee Act, Congress assigned specific powers and duties to the Regional Advisory Councils. These are also reflected in the Councils' charters. *(Reference: ANILCA Title VIII §805, §808, and §810; Implementing regulations for Title VIII, 50 CFR 100 _.11 and 36 CFR 242 _.11; Implementing regulations for FACA, 41 CFR Part 102-3.70 and 3.75)*

The Secretaries of Interior and Agriculture created the Federal Subsistence Board and delegated to it the responsibility for managing fish and wildlife resources on Federal public lands. The Board was also given the duty of establishing rules and procedures for the operation of the Regional Advisory Councils. The Office of Subsistence Management was established within the Federal Subsistence Management Program's lead agency, the U.S. Fish and Wildlife Service, to administer the Program. *(Reference: 36 CFR Part 242 and 50 CFR Part 100 Subparts C and D)*

Policy

- 1. The subject matter of Council correspondence shall be limited to matters over which the Council has authority under §805(a)(3), §808, §810 of Title VIII, Subpart B §____.11(c) of regulation, and as described in the Council charters.
- 2. Councils may, and are encouraged to, correspond directly with the Board. The Councils are advisors to the Board.
- 3. Councils are urged to also make use of the annual report process to bring matters to the Board's attention.

- 4. As a general rule, Councils discuss and agree upon proposed correspondence during a public meeting. Occasionally, a Council chair may be requested to write a letter when it is not feasible to wait until a public Council meeting. In such cases, the content of the letter shall be limited to the known position of the Council as discussed in previous Council meetings.
- 5. Except as noted in Items 6, 7, and 8 of this policy, Councils will transmit all correspondence to the Assistant Regional Director (ARD) of OSM for review prior to mailing. This includes, but is not limited to, letters of support, resolutions, letters offering comment or recommendations, and any other correspondence to any government agency or any tribal or private organization or individual.
 - a. Recognizing that such correspondence is the result of an official Council action and may be urgent, the ARD will respond in a timely manner.
 - b. Modifications identified as necessary by the ARD will be discussed with the Council chair. Councils will make the modifications before sending out the correspondence.
- 6. Councils may submit written comments requested by Federal land management agencies under ANILCA §810 or requested by regional Subsistence Resource Commissions (SRC) under §808 directly to the requesting agency. Section 808 correspondence includes comments and information solicited by the SRCs and notification of appointment by the Council to an SRC.
- 7. Councils may submit proposed regulatory changes or written comments regarding proposed regulatory changes affecting subsistence uses within their regions to the Alaska Board of Fisheries or the Alaska Board of Game directly. A copy of any comments or proposals will be forwarded to the ARD when the original is submitted.
- 8. Administrative correspondence such as letters of appreciation, requests for agency reports at Council meetings, and cover letters for meeting agendas will go through the Council's regional coordinator to the appropriate OSM division chief for review.
- 9. Councils will submit copies of all correspondence generated by and received by them to OSM to be filed in the administrative record system.
- 10. Except as noted in Items 6, 7, and 8, Councils or individual Council members acting on behalf of or as representative of the Council may not, through correspondence or any other means of communication, attempt to persuade any elected or appointed political officials, any government agency, or any tribal or private organization or individual to take a particular action on an issue. This does not prohibit Council members from acting in their capacity as private citizens or through other organizations with which they are affiliated.

Approved by the Federal Subsistence Board on June 15, 2004.



Department of the Interior U. S. Fish and Wildlife Service

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Charter

- 1. **Committee's Official Designation.** The Council's official designation is the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (Council).
- 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. Make recommendations on determinations of customary and traditional use of subsistence resources.
- f. Make recommendations on determinations of rural status.
- g. 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 \$196,000, including all direct and indirect expenses and 1.15 Federal 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.

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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:

Thirteen 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 nine of the members (70 percent) represent subsistence interests within the region and four 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.

To ensure that there is geographic membership balance and balanced representation on the Council, the Secretary will strive to appoint members to equally represent the communities across the Yukon-Kuskokwim Delta region and on both the Yukon and Kuskokwim rivers.

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.

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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 of the filed original/ Secretary of the Interior Dec. 10, 2021 Date Signed

______Dec. 13, 2021_____ Date Filed



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