YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Meeting Materials

October 12-13, 2017
Bethel

What's Inside

On the cover...

Moose in Allen Creek, Andreafsky Wilderness, Yukon Delta National Wildlife Refuge

Yukon Delta NWR USFWS photo by Kristine Sowl

What's Inside

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Yupiit Piciryarait Cultural Center
Bethel

October 12-13, 2017
9:00 a.m. to 5:00 p.m. daily

TELECONFERENCE: call the toll free number: 1-866-864-5314, then when prompted enter the passcode: 3091862.

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**
2. **Call to Order** (*Chair*)
3. **Roll Call and Establish Quorum** (*Secretary*).....4
4. **Welcome and Introductions** (*Chair*)
5. **Review and Adopt Agenda*** (*Chair*) 1
6. **Review and Approve Previous Meeting Minutes*** (*Chair*) 5
7. **Reports**
   - Remembrance and moment of silence for Greg Roczicka
   - Council Member Reports
   - Chair's Report
8. **Service Awards**
   - David Bill, Sr. – 5 years
   - James Charles – 20 years
9. **Public and Tribal Comment on Non-Agenda Items** (available each morning)
10. **Old Business** (*Chair*)

a. Kuskokwim Partnership Project – Status Update (*Carol Damberg and Stewart Cogswell*)

11. New Business (*Chair*)

a. Wildlife Proposals* (*OSM Wildlife/Anthropology*) 22

Note: All Proposals' Analyses provided as Supplemental materials

Regional Proposals

WP18-27: Establish customary and traditional use determination for musk ox in Unit 18 for residents of Nunivak Island

WP18-28: Addition of winter may-be-announced season for moose in Unit 18, Goodnews Bay

WP18-29: Lengthen moose season by one month in Unit 18 remainder

Unit 18 remainder Map 23

WP18-30: Shorten season and decrease harvest limit and possession limit for ptarmigan in Unit 18

WP18-31: Shorten caribou season in portions of Unit 18 by 15 days

Crossover Proposals

WP18-21: Change harvest limit to 2 caribou throughout Mulchatna caribou herd range and consolidate hunt

WP18-23: Add residents of Units 9C and 9E to customary and traditional use determination for caribou in Units 17A and 17C

WP18-25/26: Establish new hunt area and may-be-announced season for moose in Unit 17C

WP18-33/36: Shorten season to align with State and require state registration permit for moosein Unit 21E

Statewide Proposals

WP18-51: Modify bear baiting restrictions to align with State regulations

Discussion on Regional Proposals with no Customary and Traditional use determination

b. 2018 Fisheries Resource Monitoring Program (*OSM Fisheries/Anthropology*) 24

c. Identify Issues for FY2017 Annual Report* (*Council Coordinator*) 94

d. Revised Delegation of Authority Letter for Kuskokwim In-Season Manager (*OSM Fisheries*) 104

12. Agency Reports

(Time limit of 15 minutes unless approved in advance)

Tribal Governments

a. Orutsararmiut Native Council

b. Native Village of Napaimute

ANSEP Students

Native Organizations
a. Association of Village Council Presidents
b. Kuskokwim River Inter-Tribal Fish Commission

Special Actions

a. Kuskokwim Fisheries Special Actions

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Temporary Special Action FSA17-05 115

b. Kuskokwim Fisheries Inseason Management Actions 116

USFWS

a. Yukon Delta National Wildlife Refuge
b. Togiak National Wildlife Refuge 152
c. Western Alaska Landscape Conservation Cooperative
d. Yukon Salmon Season Overview (*Joint USFWS and ADF&G presentation*)

ADF&G

YRDFA

YRDFA Report to the YK Delta, Western Interior & Eastern Interior Regional Advisory Councils, Fall 2017 157

BLM

BLM Reply letter to YKDRAC letter in support of Native Village of Marshall Traditional Council and Ohagamiut Traditional Council ACEC nomination 166

OSM

13. Future Meeting Dates*

Confirm Winter 2018 meeting date and location 168

Select Fall 2018 meeting date and location 169

14. Closing Comments

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

To teleconference into the meeting, call the toll free number: 1-866-864-5314, then when prompted enter the passcode: 3091862.

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 Eva Patton, 907-786-3358, eva_patton@fws.gov, or 800-877-8339 (TTY), by close of business on October 3, 2017.

REGION 5
Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Seat	Year Appointed *Term Expires*	Member Name and Community
1	2004 ***2019***	**William F. Brown** Eek
2	1997 ***2019***	**James A. Charles** Tuntutuliak
3	2006 ***2019***	**John W. Andrew** Kwethluk
4	2014 ***2019***	**Michael P. Peters** Marshall
5	1996 ***2017***	**Lester Wilde, Sr.** **Chair** Hooper Bay
6	2014 ***2017***	**Dale T. Smith, Jr.** Mekoryuk
7	2014 ***2017***	**Anthony F. Ulak** **Secretary** Scammon Bay
8	2014 ***2017***	**Annie C. Cleveland** Quinhagak
9	2014 ***2017***	**Dorothy G. Johnson** Mountain Village
10	2001 ***2018***	**Raymond J. Oney** Alakanuk
11	 ***2018***	**VACANT**
12	2003 ***2018***	**Robert E. Aloysius** Kalskag
13	2012 ***2018***	**David Bill, Sr.** Toksook Bay

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

AVCP Regional Housing Authority Building Meeting Room
Bethel, Alaska
February 15-16, 2017

DRAFT MEETING MINUTES

Council Members Present:
Lester Wilde Sr., (telephonic first day and in person on Feb. 16)
Greg J. Roczicka
William Brown
James A. Charles
John W. Andrew
Michael Peters
Annie C. Cleveland
Raymond J. Oney
Robert E, Aloysius
David Bill, Sr.
Dorothy Johnson (telephonic first day and in person Feb. 16)
Anthony Ulak (via teleconference)
Dale T. Smith, Jr. (via teleconference)

Yupik Translation Services: Patrick Samson and Sophie Evan

Meeting Attendees:
Eva Patton, Council Coordinator, Office of Subsistence Management
Suzanne Worker, Wildlife Biologist, Office of Subsistence Management
Robbin LaVine, Anthropologist, Office of Subsistence Management
Gary Decossas, Fisheries Statistician, Office of Subsistence Management

Tribal Organizations:
Walter Jim, Tribal Chairman, Orutsararmiut Native Council
Robert Lekander, Orutsararmiut Native Council
Raymond Pete, Orutsararmiut Native Council Tribal Member, Bethel
Nicholai Stevens, Oscarville Tribal President

Public and Agency Staff:
Chariton Epchook, Kwethluk Inc.
Adrian Sergie, Kwethluk
Maria Cruz-Guilloty
Moses M. (unable to read spelling of last name), Bethel
Jennifer Hooper, Natural Resources Director, Association of Village Council Presidents
David Phillips, USFWS Yukon Delta National Wildlife Refuge RIT, Aniak
Ray Born, Deputy Manager, Yukon Delta National Wildlife Refuge

Spencer Rearden, Wildlife Biologist, USFWS Yukon Delta National Wildlife Refuge
Aaron Webber, Fisheries Biologist, USFWS Yukon Delta National Wildlife Refuge, Bethel
Susanna Henry, Refuge Manager, Togiak National Wildlife Refuge
Hollis Twitchell, Arctic National Wildlife Refuge
Fred Bue, USFWS Yukon Subsistence Fisheries, Fairbanks
Wayne Jenkins, Yukon River Drainage Fisheries Association
Jill Klein, Alaska Department of Fish and Game
Pat Petrivelli, Subsistence Anthropologist, Interagency Staff Committee, BIA

Via teleconference:
Bill Alstrom, St. Mary's
Michael Stevens, Oscarville Traditional Council
Dan Gillikin, Native Village of Napaimute
Orville Lind, Native Liaison, Office of Subsistence Management
Pippa Kenner, Anthropologist, Office of Subsistence Management
Joshua Ream, Anthropologist, Office of Subsistence Management
Palma Ingles, Anthropologist, Office of Subsistence Management
Jeff Estensen, Yukon River fall season fisheries manager, Alaska Department of Fish and Game
Holly Carroll, Yukon Area Fisheries Manager, Alaska Department of Fish and Game
Aaron Poetter, Kuskokwim Area Fisheries Manager, Alaska Department of Fish and Game
Deena Jallen, Yukon Area Assistant Fisheries Manager, Alaska Department of Fish and Game
Christy Gleason, Yukon Fall Season Assistant Fisheries Manager, Alaska Department of Fish and Game
Wayne Jenkins, Director, Yukon River Drainage Fisheries Association.
Dan Sharp, Interagency Staff Committee, BLM
Trevor Fox, Interagency Staff Committee, USFWS

Roll call: Quorum established. All 13 Council members participating including two calling in via teleconference due to blizzard conditions preventing their travel to Bethel for the meeting. Weather conditions delayed Chair Lester Wilde Sr. flight and Greg Roczicka served as acting Chair until Mr. Wilde arrived.

Invocation: Council member Bob Aloysius provide the invocation

Welcome and Introductions: Walter Jim, Tribal Chairman, Orutsararmiut Native Council welcomed everyone to Bethel and addressed the importance of subsistence for the people of the Y-K Delta. He relayed that through trial and error, observation and a will to live; our ancestors honed a way of life in these Arctic regions and passed that on to our elders and from them to us. Much of that lifestyle our ancestors lived is gone but one important aspect of life that will always be passed on to our younger generation is that knowledge of how to survive off these lands and waters that sustained our people for generations. Walter Jim stressed that is vital that people who live in our rural areas continue to be allowed to subsist off the lands and waters. He relayed that he has never observed a family take more than what they themselves needed.

Adoption of agenda: The Council reviewed and approved the agenda with amendments to add North Pacific Fisheries Management Council under agency reports and change the order of some items to attend to action items and presenters schedules.

Election of Officers:
Chair: Lester Wilde, Sr. was re-elected Chair by unanimous vote.
Vice Chair: Greg Roczicka was re-elected Vice Chair by unanimous vote.
Secretary: Anthony Ulak was re-elected Secretary by unanimous vote.

Review and Approve Previous Meeting Minutes: The Council reviewed and approved the previous meeting minutes from October 12-13, 2017 with the following addition and corrections: Dale Smith requested further detail be added under his comments on the concerns about oil spill and emergency response for the Bering Sea coastal communities. Greg Roczicka corrected a typo in the spelling of his last name and Michael Peters corrected that he is from Marshall (not St. Mary's as mistakenly listed.) Bob Aloysius requested clarification in his reference on page 10 to closing the entire river to specifically closing of the entire *Kuskokwim* River.

Public and Tribal Comment on Non-Agenda Items:
Chariton Epchook, of Kwethluk Incorporated addressed the Council on several items of concern. 1). Kwethluk Inc. passed a resolution in support a five year moratorium on sports hunting, fishing, and rafting on the upper Kwethluk River in order to prevent the sports participants from disturbing sensitive fish habitat during this time of low Chinook Salmon returns. 2). Establishing more stringent regulations for sport fishers to utilize all edible parts of fish. Kwethluk residents have observed wanton waste of Coho Salmon by sports fishers that had set up camp at the Mouth of Magic Creek on the upper Kwethluk River, noting that much of the remains of the Coho salmon left were edible. 3). Barge and heavy equipment have been left abandoned in the Kuskokwim River and the responsible company needs to be held accountable for cleanup and removal.

After Mr. Epchook's comments there was general council discussion of heavy equipment falling through the ice or other industrial contaminants causing concern for the health of the local environment. The Council specifically referenced the barge that sank near Kwethluk a couple years ago is still sitting there under the river leaking oil and causing a navigation hazard for boats. Members of the council would like to see agency response to these environmental threats and cleanup.

*The Council voted unanimously in support of a motion to draft a letter to both State and Federal agencies that are responsible for environmental cleanup and emergency response to oil spills urging them to take action on incidents of environmental contamination. The Council would like to invite representative of these agencies such as the Coast Guard to address the Council at their next meeting. The Council also requested to cc the Board of Fish and the Governor of Alaska on this letter of concern regarding spill response and contaminants impacts to subsistence.

*The Council received a copy of Kwethluk Inc. Resolution 17-02 requesting a five year moratorium on rafting and sport fishing and hunting on the upper Kwethluk River as a measure to protect sensitive salmon spawning grounds. The Council voted unanimously to support a motion to draft a letter of support for this resolution citing concern for low Chinook Salmon returns and all efforts needed to help with conservation and protection of Chinook Salmon including salmon spawning habitat.

Bill Alstrom - St. Mary's discussed concerns about the sale of moose antlers and someone offering cash for antlers in numerous lower Yukon villages. He felt that this incentive of cash for antlers was promoting harassment of moose and worried that the younger generation might harvest more than needed for subsistence or wanton waste to get antlers.

Raymond Pete - Bethel relayed that he has relatives upriver in Chauthbaluak and Aniak and he would like to see more subsistence fishing opportunity for upriver communities because they depend on fish for their families to meet their needs too. Council member from Quinhagak and Eek and expressed understanding shared some of the differences for fishing in their region such as Quinhagak fishing for Kenektok River fish and Eek and other lower communities having to fish while navigating the tides and a broad, braided river channel.
Mr. Pete expressed concern about people hunting moose on his Native Allotment and requested clarification of the hunt regulations. Hollis Twitchell, USFWS Assistant Manager for Arctic National Wildlife Refuge, responded that Native Allotment and Native Corporation land is private property and the owner can identify who can hunt on their land or not. However, it was noted that unless property boundaries and no trespass signs are posted that it is very difficult to enforce. Mr. Twitchell further clarified that federal hunting regulations do not apply on private property but Native Allotments are subject to State of Alaska regulations.

Moses - Bethel Elder, shared traditional laws that he grew up with. He noted that while he grew up in Nunapitchuk, his father was a reindeer herder and they would go to the Bogus Creek area to care for the reindeer and they would go upriver on wood gathering trips and raft down. He learned about hunting and the land and ways of respect for the animals. Moses stated if things become noisy or people toy with a resource then they may go away. He reminded people that animals are not to be toyed with or they might be depleted. He was taught as a boy if animals are to be depleted they will head down to the coast to the ocean, including the moose. He noted these teachings were good and the elders and their ancestors communicated and worked well together. Council members expressed great appreciation for Moses sharing traditional teachings and that even though they grew up in a different part of the Y-K Delta that the Yupik morals and teachings were the same.

Council Member Reports:
David Bill, Sr. – Toksook Bay. David Bill stated that the community of Toksook Bay wants to use the muskox in the area to provide for the people that that are having a hard time finding food for subsistence. He noted that there is a very low cash economy in the region and all opportunities for subsistence foods are very important.

Annie Cleveland – Quinhagak. Annie reported seeing dead fish floating down the Kenektok River last summer and this winter someone working for the Goodnews Native Council called about Dolly Varden on the Goodnews River with deformities and lumps with pus. Annie noted they were able to get pictures of a few of these fish and would have the pictures sent via email during the meeting so that Togiak National Wildlife Refuge staff could take a look to see if they could determine what the cause of these abnormalities might be.
Annie noted that she had heard about the bison shot near Quinhagak and was very sad about that. She had helped to post the message from Fish and Wildlife about the tagged bison in the area and to not shoot it. Annie noted that the individual who had done that was not from Quinhagak.

William (Charlie) Brown – Eek. Charlie reported that the dog mushers in the area were having a hard time making it through the winter to feed their dogs due to fishing restrictions. The gillnet restrictions this past summer made it hard to get enough dog salmon for their dog teams. He relayed that it is important to be able to fish for other non-salmon fish too like Pike and Sheefish to be able to feed their dogs.

Charlie stressed that it is really important to understand that every year they try to fillet fish and cut and dry them before the May flies or house flies come out and lay eggs on fish in June and cause it to spoil. That's why they usually drop everything and fish in June so they can put up and dry fish in about a two week window. Regulations last year that would not allow fishing in June affected the quality of the fish that they worked hard to preserve to provide for their families. Charlie stressed that being able to fish in June made a world of difference in being to protect the quality of the fish because the drying weather is better in June and it is before the time when the flies come out and lay eggs on the fish which destroys the flesh of the meat. He noted his fish camp is right at the mouth of the Eek River and he sees a lot of people coming and going and he hopes to address this with Fish and Wildlife and Fish and Game so that they understand the importance of this concern for being able to provide for their families.
Charlie reported that the fall moose hunt is sometimes too hot in August which is also an issue for preserving the meat and August is peak time for the May flies which destroy the meat. People are interested in seeing a later moose hunt in order to wait a little bit until the weather gets cooler and the flies are not so abundant.

Charlie noted that in the last two years the moose hunt notices describing what was open where and when was very confusing between the two agencies (State and Federal). People reported being very confused about what was open and what was closed. Charlie encouraged the two agencies to work together to clarify this so that people have the opportunity to hunt when it is open and know where they can go to hunt.

Bob Aloysius – Kalskag. Bob expressed frustration at regulations being made outside of the region in big cities like Anchorage or Fairbanks. He stressed that if people have not actually been in the region they have no concept of the place or subsistence. Bob noted ongoing problems with the Unit maps that still had incorrect boundaries after having tried to get it fixed for a number of years. He suggested staff actually come to the community to work directly with people that are affected by the regulation. Bob reiterated that there is a ridge behind Kalskag that goes north and west almost all the way to Devil's Elbow that divides the Yukon and Kuskokwim River drainage and the Unit 21E map is still incorrect.

Bob relayed that there is a surplus of moose in the area between Kalskag and Aniak and his village has been overrun with moose. People are asking if it is possible to have an emergency order to have a 10 day hunt in that area to allow for extra opportunity for those that were not able to harvest during the fall moose hunt.

John Andrew – Kwethluk. John relayed that every year is getting harder and harder to harvest salmon with fishing closures through May until June 25th and mesh restrictions to 4 inch or 6 inch mesh. He stressed that people in his community do not want to harvest sheefish because it is not their main traditional food – salmon is their traditional food. John noted sadly that many fish camps on the Kwethluk River are abandoned. Hardly any families go to fish camp now when there used to be fish camp after fish camp lining the river. He noted that his own family still goes and they try to share with several families but that is becoming difficult to share because they are not able to harvest the quantity to give it away. He also concurred with Council member Annie Cleveland that they are seeing more salmon with sores, lumps or discoloration especially the Chum and Coho Salmon.

John noted that a lot of people were not able to get moose for their freezer. He relayed the weather in the fall time is too warm for moose hunting now. He stressed the bull moose do not move around when it is warm and just stay put and so the hunting success rate is much lower if the season opens early when it is still warm out.

John concurred with other Council members that the sunken barges in Steamboat Slough and the recent Faulkner Walsh barge and heavy machinery that sunk near Kwethluk and another near Napakiak were a serious environmental concern. He thought the freshwater laws should impose a fine to get it cleaned up.

James Charles – Tuntutuliak. James relayed that he really appreciated that the Fish and Wildlife Service (USFWS) has been working with communities all along the Kuskokwim including Tuntutuliak to be able to fish in the non-salmon spawning rivers. He noted that USFWS had put in markers on the non-salmon spawning rivers 100 yards upstream from the main channel of the Kuskokwim River so that they would know where they could fish and the community found this very helpful. He noted that the tide and ice and river erosion have moved some markers that would need to be replaced but that is was really appreciated that these efforts to mark fishing areas are being made. He noted that he sometimes catches salmon that had lost their way and ended up far into these non-spawning rivers.

James stated that he works as the Chair for the Lower Kuskokwim State Advisory Committee (AC) which includes the communities if Tuluksak down to the mouth of the Kuskokwim River with Bethel having its own AC. He noted his AC had recently voted down a Board of Fish proposal for a subsistence fishing permit system. James noted that people in his group do not like the permit system for subsistence fishing and he hopes they will not have to deal with any fishing permit proposals from the Federal side.

James relayed that people in his community really appreciate the extended season for the Federal moose hunt on Refuge lands. He stated that it is helpful to know dates that they can hunt on Federal lands because it is hard to keep track of how many moose have been harvested under the State hunt. James concurred with Charlie Brown that it is helpful to be clear about what areas are open and closed and details on where the Federal lands are so they can know for sure where they can hunt in the season extension.

Michael Peters – Marshall. Mike relayed that there are two Tribes in Marshall, and many Elders and people who are affected by the fishing regulations on the Yukon and he is hearing feedback that they are not getting news of the new fishing regulations. He stressed the importance of working directly with the community and getting their input on regulations and subsistence fish and wildlife proposals. He notes it is especially important to hear from the Elders and take their knowledge and concerns into consideration.

Mike relayed that they are seeing some sort of infection in the salmon and this impacts people from being able to get their subsistence needs met in addition to the fishing restrictions. He is not sure if this observation of new diseases in the fish is related to global warming or what is causing it but he hopes the State or the Federal agencies can look into it because it is having an effect on the communities' livelihood. Mike asked if people on the Kuskokwim were experiencing similar diseases in their salmon.

Raymond Oney – Alakanuk. Ray noted for the Council's information that he also serves on the Coastal Yukon State Advisory Committee (AC).

Ray noted that the mid-Yukon AC had received a letter from regarding concerns about an individual that was going up and down the Yukon River buying moose antlers and as a result people were beginning to see moose without horns in some areas. He relayed it is a concern of communities in the area that moose are being harassed to make fast cash from the horns.

Ray thought perhaps Bill Alstrom of St. Mary's could relay more to the Council on this issue since he was at the meeting where this concern was brought up. He felt this was an issue of subsistence concern to make sure the moose were not being harassed and a way to get the message out especially to the youth or dissuade the buyer from incentivizing sale of moose antlers.

Ray expressed concern that his Tribal office had received numerous calls about wanton waste mostly of moose in the landfill. Ray stated the both the Tribal Office and the Alakanuk Environmental Program had addressed this issue through a newsletter and communicating with people that if they had enough food to share it with those that are less fortunate to ensure everyone had their subsistence needs met and food was not wasted.

Dale Smith – Mekoryuk. Dale relayed that since the last Council meeting his primary concern is still the issue of the potential for oil spills in the Bering Sea and emergency response preparedness. He noted he has been making some contacts himself to see what can be done in terms of being prepared in the event of a major shipping accident.

Dale relayed that ADF&G issued 45 muskox permits in January for harvest on Nunivak Island and 40 of those went to people from his village and 5 from Bethel. He was pleased that local people were able to go out and harvest cow muskox for subsistence consumption.

Anthony Ulak – Scammon Bay. Anthony relayed that he agrees with the concerns he had heard from Kuskokwim area hunters that opening the fall moose hunt later is a better time to go out moose hunting now. He suggested that perhaps mid-September would be a better time to open the hunt.

Tony expressed concern for subsistence harvest of salmon that the Yukon fishing opening has been too late. He expressed that the earlier the better for subsistence fishers to be able to harvest and put up salmon in good weather conditions as has been always been their tradition.

Tony also concurred with James Charles that people in his region are not interested in a permit system for subsistence salmon. Right now the only permit they have to obtain is for commercial fishing. He also noted that similar to comments from other Council members on the Yukon that someone was coming around to their community too to buy moose antlers.

Greg Roczicka – Bethel. Greg relayed that many of the concerns expressed by other Council members were also shared by many in Bethel. Greg shared that one of the ongoing challenges for ONC Tribal members is working with finding some balance between State and Federal management and sometimes confusing messages between the two. He noted it has been a source of a lot of frustration for people who are not sure what regulations to follow at which time. He was encourage by and had hopes for the Kuskokwim Inter-Tribal Fish Commission being able to help work out some of these issues and more fully work on efforts agreed upon in the MOU with the State. Greg referenced the Kuskokwim Fisheries Coalition working together on these issues back in the 1908s and 90s and it working very well with local managers but still sees the challenge when it gets to higher administrative levels.

Greg relayed the Tribe's unique challenges of managing subsistence in Bethel as the largest village in the region and a third of the Kuskokwim River salmon harvest. But he stressed that the majority of Bethel is people from the region who have grown up with subsistence and those who have moved to Bethel from other villages throughout the Yukon, Kuskokwim, and Delta for whom subsistence remains just as important and does not change just because they live in Bethel now.

Greg reminisced that a lot had changed over the last generation. He recalled learning to fish in a row boat and being admonished by his uncles and in-laws to turn off the boat motor to not scare the fish away. Greg also recalled growing up on the tributary rivers and seeing moose track on every bend in the river back in the 70s and 80s but with the increase of snow machine use that all changed with moose declining until the moose hunting moratorium on the Kuskokwim was established. Greg cautioned that it was important to be very careful in helping build that moose population back up since the moratorium was just lifted not that many years ago. He hoped people would be careful with the high demand and ability to travel and not overharvest so that the moose would be there for subsistence for the future generations. Greg relayed what the elders had said about being part of the environment and it had been that way across the region for 10,000 years but now are seeing rapid changes in the last 50 years and it can destroy what was given to our ancestors to protect and if not careful with the technology it could bring about destruction.

Chairman Lester Wilde Sr. – Hooper Bay. Chair Lester Wilde concurred with many Greg that this they have been seeing many changes in recent years. He expressed that in his lifetime on the Yukon River he's never seen the high number of moose that they have now. In light of that Hooper Bay was considering submitting a proposal for some boundary changes for the lower Yukon area that might help clarify hunt areas and prevent potential problems in the future.

Call for Federal Wildlife Proposals Development of Wildlife Proposals:

Suzanne Worker, OSM Wildlife Biologist, provided the Council with an overview of the Federal Subsistence Wildlife Regulatory Process which occurs every two years alternating with Federal Subsistence Fisheries Proposals. The actual call for proposals was delayed this year due to a hold placed on federal register notices by the New Presidential Administration but Councils are

requested to develop proposals on the record at the meeting that can then be submitted later. All proposals submitted through the public process will also come before the Council at the fall 2017 meeting. The Council discussed proposals they would like to submit for consideration by the Federal Subsistence Board at the Spring 2018 meeting.

Council member Dale Smith of Mekoryuk discussed the communities' interest in submitting a C&T proposal for muskox on Nunivak Island. Currently muskox is managed by the State and there is no Federal Season for muskox on Nunivak Island. OSM Wildlife Biologist Suzanne Worker and OSM Anthropologist Robbin LaVine addressed that the first step would be to submit a proposal for analysis and consideration of Customary and Traditional Use Determination. David Bill of Toksook Bay relayed that his community had not discussed this and wanted to make sure each community spoke for itself so the proposal was developed just for C&T for Nunivak Island and not the Nelson Island area.

*The Council made a motion to submit a proposal for an analysis for Customary and Traditional Use determination for residents of Nunivak Island for muskox on Nunivak Island. Motion passed unanimously.

Chair Lester Wilde relayed that community of Hooper Bay was working on a proposal in to change of boundaries in the remainder portion of Unit 18 in an effort to help clarify this hunt area.

The Council discussed that people in the Kuskokwim communities are interested in a later moose season in Unit 18 but thought this might be able to be achieved administratively and discussed the possible approaches with OSM staff and Yukon Delta Refuge Deputy Manager Ray Born. Council member Charlie Brown said that the affected villages should know what is being proposed before moving forward.

The Council further discussed the interest by Unit 18 residents on the Kuskokwim to push back the start date of the fall moose season due to warmer weather and extend it later for increased opportunity since the moose population is now quite high in the area. John Andrew of Kwethluk suggest perhaps a later start date of September 10 or so for the Kuskokwim to take advantage of cooler weather and then extend the season later in the fall for more opportunity to hunt during good weather for harvest and preservation of moose meat. Ray Born, Deputy Refuge Manager for Yukon Delta National Wildlife Refuge noted that last year's harvest objective was 90 moose but only 45 were harvested last year. The recent moose count conducted in collaboration with the State indicated that the moose population had increased and so they were considering additional harvest opportunity. Ray Born noted that the refuge had discussed the possibility of a winter hunt on the upper tributaries when it was easier to access with snow. The Council discussed that they would want to discuss this potential for a winter hunt with people in their communities before making a motion on this due to concerns for difficulty of determining cow from bull moose after antlers had been shed but with easy access by snow machine maybe they could get closer to make that determination. OSM Wildlife Biologist Suzanne Worker noted that currently the regulations for fall moose harvest on the books is September 1st to September 30 and extending it beyond those dates or creating a more flexible window would require a proposal

either by the public or the Refuge to increase the flexibility. This could also be done through a Special Action request for addressing short term management needs.

Annual Report:

Council Coordinator, Eva Patton presented an overview of the Council's FY2016 annual report. The Council unanimously approved the annual report as written. Council member Bob Aloysius requested that in the future the format of the Annual Report have a clear header at the top indicating that it is the Council's Annual Report and date.

Kuskokwim River Partnership Project Update:

Trever Fox, Subsistence Coordinator for the US Fish and Wildlife Regional Office in Anchorage gave an update on the status of the Kuskokwim Partnership Project. Trevor relayed that the he has been working on this for the past couple years and the main objectives of the Kuskokwim River Partnership project are to provide advice directly to the in-season managers and to have State participation in to all Rural residents. This has been approached through two different parts. Part one of the project is focus on providing Tribal input on inseason management. The memorandum of understanding (MOU) between the Kuskokwim River Inter-Tribal Fish Commission (KRITFC). The MOU was signed in 2016. The Inter-Tribal Fish Commission has operated successfully for two years.

The second part of the projects is intended to provide a meaningful role for all rural residents of the Kuskokwim River communities and the management of fisheries in Federal waters of the region. Last year they had been looking at forming a subcommittee between the Y-K Delta RAC and Western Interior RAC and asked for representative from each Council to participate in meetings on the best path forward. Fish Commission representatives Lamont Albertson and Mike Williams have been involved in these meetings. The Y-K Delta RAC appointed Bob Aloysius to participate in these meetings. Discussions to date investigate how best to form an official Advisory Committee that would include all parties including the State in inseason management decision making without duplicating efforts already in place.

Council member Bob Aloysius expressed concerns about participation in the Partnership Planning because input from the Council could only happen twice a year at the regularly scheduled meetings and he was clearly informed of his role. Bob noted he does not have internet and phone connection is poor from Kalskag. He relayed frustration with the communications with the Partnership Project staff on what this subcommittee was doing and had not received information in time through the US Postal Service to know what they were talking about. Bob relayed that he found the whole Partnership Project process very confusing.

Greg Roczicka expressed frustration at the lack of communications with the Council from those involved in the development of the Partnership Project. He noted he had heard little about what was going on the with its development and felt that the two Council's involvement on the subcommittee was very important along with developing a platform for all on the Kuskokwim to participate in the inseason management. He was concerned that key points lined out in the MOU had not yet been addressed.

Greg passed out a pre-drafted motion encouraging the Federal Subsistence Board (FSB) to approve the subcommittee charter as soon as possible and no later than this fall. He further stressed that the March 31, 2016 joint letter from the USFWS and KRITFC made several requests to the Board, which have not been addressed yet.

*The Council made a motion to request OSM and the FSB make a good-faith effort to implement the requests listed in the statement drafted by Greg Roczicka as soon as possible. In addition, the Council requests that OSM should develop a timeframe for Board action on these issue and requests that be by the end of March. The Council unanimously voted to support the motion.

Agency Reports:

Association of Village Council Presidents (AVCP). Jennifer Hooper introduced herself as the new Natural Resources Director for AVCP. She noted that currently she is a staff of one for the program but was hoping to be able to hire for an additional position to keep up with the many natural resource and subsistence areas that AVCP covers throughout the Y-K Delta Region. AVCP is in the process of re-forming the regional Waterfowl Conservation Committee and getting the program back on track after a two year hiatus. They planned to hold a spring meeting in March 2017 in Bethel. AVCP has also been involved in discussions with Tanana Chiefs Conference on the formation of a Yukon River Intertribal Fish Commission and seeking input from lower Yukon River communities in the AVCP region.

Ms. Hooper also relayed that there were many new staff at AVCP in the different departments including a new CEO, Vivian Korthius and they were in the process of some reorganization.

DRAFT US Fish and Wildlife Service Alaska Native Relations Policy. Hollis Twitchell, Assistant Manager for Arctic National Wildlife presented the Council with an update on the status of the US Fish and Wildlife Service Alaska Native Relations Policy. Hollis relayed to the Council that it was a great honor to be in Bethel to present to the Council especially since he grew up on the Kuskokwim in Tokotna and has many family connections throughout the Delta on both his mom and dad's side as well as his Grandparents.

Hollis provided two documents; one titled Native American Policy and the other a policy specific to US Fish and Wildlife Service in relating with Native America and Alaska Native people. The first was conducted in a cooperative effort over the last two years by a large team of people that he was a part of including 16 Tribal representatives from across the Country as well as 13 USFWS representatives. Hollis addressed the Alaska Native Relations policy in more detail since numerous Federal acts have special provisions for Alaska Natives such as ANILCA, Marine Mammal Protection Act, Migratory Bird Treaty Act and also the Endangered Species Act. This policy helps to outline the USFWS responsibilities under these laws and also how USFWS is directed by law to work with Tribes and Native Entities such as AVCP and organizations such as Migratory Bird Co-management Council, Alaska Eskimo Whaling Commission and many more. There are numerous parts of the Alaska policy that mirror the National Policy and other guidance developed by feedback from Tribal and ANCSA Corporation

representatives in Alaska that are unique to Alaska. Crystal Leonetti, USFWS Native Affairs for Alaska has been reaching out to Tribes for feedback and this is also being presented at all Regional Advisory Council meetings.

Hollis noted that there are 9,120,000 acres of Native Corporate land and over 1,900 Native Allotments within the Boundaries of Alaska National Wildlife Refuges. He relayed the USFWS has a very important duty and responsibility for communication and outreach to Villages and Tribes and Native Corporations.

Council member James Charles suggested that Refuge Information Technicians (RITs) could help get the information out on this policy by talking directly with people in the communities. James noted that often people are very busy and may not time to attend meetings but just talking with people directly is a good way to help get important information like this out to more communities.

Council members suggested a longer comment period since Tribal Councils may only meet quarterly to make formal recommendations. A 180 day comment period was suggested as being more suitable for Tribal feedback rather than the standard 90 day comment period.

Council member Bob Aloysius expressed concern about the inclusion of Alaska Native Claims Settlement Act (ANCSA) Corporations when discussing Tribal Consultation. He feels that a corporation's primary goal is to make money and that could be at the expense of the people, the land, and the resources. Hollis explained the reason Native Corporations are considered under the Tribal Consultation Policy is a result of the Consolidated Appropriations Act of 2004 which directed all agencies to be consulting with ANCSA Corporations as well as Tribes but it is still on a different level. Hollis reiterated that the Federal government has a unique Trust Responsibility with Federally Recognized Tribes and Tribes will be given deference if there is difference of opinion between the Tribes and the Corporations. He noted pages 16 of the policy addressed many of these questions.

Council member Greg Roczicka requested consideration of local people who have lived and hunted in an area for thousands of years and have evolved as part of the natural diversity of the land. He expressed concern for how natural diversity is interpreted and implemented that could make a difference for subsistence management and understanding the relationship of Alaska Native people as a part of the ecosystem.

Council member John Andrew recommended use of much less technical language and acronyms to make the document more accessible to Tribes. He also recommended doing outreach to Tribes and communities with a translator who can help convey at least the key points in the local language such as Yupik.

Yukon Delta National Wildlife Refuge. Ray Born, Deputy Manager for Yukon Delta National Wildlife Refuge, provided an overview of the Refuge wildlife surveys and management activities and provided a written handout.

The Refuge conducted a fall moose hunt from September 1st through the 15th in Unit 18 based on the 2015 moose surveys. Spencer Rearden, Refuge Wildlife Biologist, provided the Council with further detail on the moose surveys, noting that there are five primary survey areas within the Refuge on the Yukon and Kuskokwim. The last couple low snow years has made it difficult to get good survey data but indications on the Kuskokwim and tributaries show high calf ratio. This year they hope to have better snow conditions and will be focusing on the Lower Yukon area from Mountain Village down to Kotlik and anticipate the moose numbers will be quite good as the population has been expanding into habitat everywhere and showing up in areas where moose have not been seen before. The increasing moose population and has allowed the Refuge to expand the season and harvest quota for Y-K Delta communities. They are working to learn more about peoples hunt behavior and where they are going to provide more opportunity for the harvest quota to be achieved. Spencer noted he is seeking feedback from local people for how to best develop hunt objectives as the moose population expands and get into hard to reach habitat areas like the upper Kwethluk and Kisaralik Rivers.

The Refuge has been working with the Kuskokwim Inter-Tribal Fish Commission and the Alaska Department of Fish and Game and the Kuskokwim River Salmon Management Working Group on inseason management and felt that has gone well. An overview of the summer 2016 post season salmon summary was provided to the Council. ADG&G preliminary Kuskokwim Chinook escapement was 146,000. Subsistence harvest estimates for the Kuskokwim was 77,000 salmon total all species with approximately 27,000 Chinook harvested and the rest chum and sockeye harvest.

There was a 30 day waterfowl closure based on the field count and the Refuge worked to get that information out to all the villages and it seemed to go well. Ray asked to hear back if there were any challenges with receiving information and that the Refuge is dedicated to communications with the Tribes and has been working with Refuge Information Technicians to meet in villages in person.

The Refuge reported the federal proposed rule for the harvest of emperor good to open in Spring of 2017. This will be the first time since the Emperor Goose closure in 1897. The proposal also will address allowing egging for brants. The Council discussed their observations of seeing more Emperor Goose numbers and support for the opportunity to hunt them after so many years of conservation. Council members also discussed observations of changing migration and nesting patterns based on snow cover and also high water causing them to nest further inland.

*The Council made a motion in support to the Yukon Delta National Wildlife Refuge for the opportunity hunt Emperor Goose and egging of Black Brants. Motion passed unanimously.

Council member Dale Smith of Mekoryuk requested some follow up from Refuge staff for on the status of the Muskox Management Plan for Nunivak Island .

Togiak National Wildlife Refuge. Susanna Henry, Refuge Manager for Togiak National Wildlife Refuge, provided a written report and overview presentation of ongoing research and monitoring work at Togiak National Wildlife Refuge. She highlighted the fall moose harvest for the Goodnews River portion of Unit 18 was 16 bull moose and population seemed to be going up

in that area. She also discussed the Refuge outreach programs and highlighted how much she values the work of the Councils and the knowledge they bring to help inform management decision making.

Susanna Henry responded to concerns raised by Council member Annie Cleveland of Quinhagak who had provided photos of Dolly Varden Char from the Kenektok River that appeared to have some ailment. In consultation with ADF&G fisheries pathologist Dr. Ted Meyers it was concluded that the fish likely were affected with a common fresh water mold called saprolegnia. The mold sometimes shows up on fish when they have other injuries but poses no human health concern. Susanna relayed that Dr. Ted Meyers welcomed samples sent to the ADF&G fish pathology lab in Anchorage and staff from Togiak or Yukon Delta NWR could assist with that if there were any questions.

Yukon River Salmon Management Review and Discussion. Fred Bue, USFWS Federal Subsistence Fisheries Inseason Manager, provided information and overview on the inseason salmon fisheries management on the Yukon River for last year and solicited questions and feedback from the Council. Fred highlighted that all the inseason subsistence fisheries management was conducted jointly with ADF&G and that information and actions were coordinated between the State and Federal fisheries managers. Holly Carrol, ADF&G Yukon River Area Management Biologist was on teleconference to provide support.

Fred Bue provided handouts for the Council to review the salmon escapement and harvest data and discussed the Yukon River salmon monitoring projects. He noted that the low Chinook Salmon runs and several years of not meeting escapement required actions to substantially reduce subsistence harvest from 2013, 2014, and 2015 and communities have made substantial efforts to help with conservation. He stressed that everyone is very appreciative of these efforts and it is helping to rebuild the Chinook run. He also highlighted that the Chinook run is creeping back up and escapement is being met so they were able ease up on subsistence restrictions this year. They have been working to find ways to provide a little bit more opportunity to harvest Chinook and harvest abundant Chum and Coho Salmon while still managing for Chinook conservation. They hope to be able to increase opportunity more in the coming years as the Chinook population rebounds.

North Pacific Fisheries Management Council. Diana Stram, Ph.D. and Steve MacLean, fisheries analyst with the North Pacific Fishery Management Council (NPFMC) called in via teleconference to provide the Council with an update and overview on Bering Sea bycatch. Dr. Stram relayed that the Bering Sea Pollock and ground fish fisheries catch salmon and halibut as by-catch but that they are prohibited species in regulation and must be avoided and cannot be retained or sold. Some bycatch is donated to food banks through a program called Sea Share that helps to distribute the fish for hunger relief efforts. Distribution locations in Alaska have been expanded to include Anchorage, Cordova, Kenai, Kotzebue, Juneau, Nome and Galena. They have also been working to increase distribution to smaller communities.

Dr. Stram reported on the bycatch management measures which include limits and caps for how much halibut, Chinook and Chum salmon bycatch can be caught which is monitored by observers on the boat. The industry is also encouraged to use gear modifications and increased

communications amongst the fleet to reduce bycatch. Gear modifications include salmon excluders on nets. They are also working with geneticists to better identify where Chinook and Chum Salmon are from and time and space of congregation so those areas can be better avoided.

Dr. Stram reported that salmon and halibut bycatch has been substantially reduced in recent years and they continue to work on reducing it even further. For halibut specifically, NPFMC will be reviewing an abundance based cap that would fluctuate up and down based on estimated halibut abundance in the Bering Sea. They are also working with staff from National Marine Fisheries Service to improve discard mortality rates for halibut.

Alaska Department of Fish and Game. Jill Klein, Alaska Department of Fish and Game Special Assistant to the Commissioner, provided a handout and discussed the history of the Yukon Salmon Management Plan currently underway. The old plan was completed in 1998. Jill Klein discussed the general plan and review and revision process to update the plan. The plan addresses restoration, rehabilitation and the possibility of enhancement. The plan is focused on developing salmon production and harvest goals by species, area, and time.

The comprehensive salmon plan is authorized by the State of Alaska Statute and guided by regulation established by the commission of ADF&G. The planning team is comprised of 13 voting members and includes nine members nominated from the Yukon River Drainage Fisheries Association (YRDFA), four ADF&G fisheries and subsistence division staff. There are also non-voting members that help inform the plan including representatives from Association of Village Council Presidents, Tanana Chiefs Conference, Yukon Delta Fisheries Association (CDQ group), Yukon River Inter-Tribal Fish Commission and U.S. Fish and Wildlife Service. Chair Lester Wilde, Sr. serves on the management plan review as a YRDFA member. Bering Sea Fisherman's Association received some funding to help with logistical planning. So far there have been three public meetings held for the planning process, and another one is being planned for April.

Fred Bue, USFWS Fairbanks Subsistence Fisheries Branch Chief, serves on the Yukon Salmon Management planning team for USFWS and shared a document reviewing information on fisheries enhancement through artificial propagation or hatcheries. Fred stated that the USFWS position on artificial propagation was in line with the 1998 plan, the Yukon River salmon agreement with Canada, and the American Fisheries Society Alaska Chapter 1993 resolution that recognizes that Yukon River as one of the largest producers of Chum and Chinook Salmon in North America and that the Yukon River should continue to be managed sustainably as a wild stock and protected from the risks associated with hatchery production .

Yukon River Drainage Fisheries Association. Wayne Jenkins, Director for the Yukon River Fisheries Association (YRDFA) provided the Council with an overview of their work. He noted that they are an association of subsistence and commercial fisherman with the mission of protecting and promoting healthy fisheries and cultures along the Yukon River. They work with all three Regional Advisory Councils with communities on the Yukon River. Mr. Jenkins provided an overview of the many research and monitoring projects they have been involved with and grant funded community support for salmon resource management. Much of their work involves outreach to communities all along the Yukon River, managing the inseason salmon

teleconferences and convening a river wide pre-season planning meeting to discuss feedback form local communities and work on salmon management strategies with State and Federal fisheries biologists to meet escapement goals as well as provide for subsistence and commercial fisheries.

YRDFA also been working to assist Yukon River communities in engagement with the Bureau of Land Management's planning process for Central Yukon and Bering Sea/Western Interior regions. Many communities have expressed concern for protecting the habitat and access to lands that have been traditionally used for hunting, fishing, and gathering. YRDFA thanks the Council for submitting a letter in support of the Ohagamiut Traditional Council and community of Marshall to protect important lands and waters on BLM lands that are important to traditional and subsistence resources.

Danielle Stickman introduced herself as the new communications and outreach director for YRDFA and relayed that her father is from Galena and her mother from Nondalton. She has been reaching out to communities on the Yukon to learn more about their cultural subsistence practices and working on developing effective outreach and communication tools. YRDFA is currently working on developing a young fishermen's workshop to involve the younger generation in salmon management on the Yukon. Danielle provided brief updates on other projects YRDFA Anthropologist Catherine Moncrieff has been working on. These projects include: inseason subsistence harvest surveys, customary trade of the upper Yukon River, another study looking at how people on the Yukon River value and share salmon, and a project investigating how local and traditional knowledge is used in Federal fisheries management.

Office of Subsistence Management. OSM Anthropologist Robbin LaVine reported on the Federal Subsistence Boards action on non-rural determination policy which underwent a long process of review and input from the Regional Advisory Councils, tribes, and ANCSA corporations and the public. The Federal Subsistence Board formally adopted its non-rural determination policy at the January 2017 meeting in Anchorage. This policy now provides guidance on submission of proposals to change the status, rural/non-rural status of communities, and the decision-making process. The call for proposals will occur every three years with the first call anticipated in January 2018. The Council will be notified when the call is published and participate in the process of making recommendations to the Board. The Council asked questions regarding rural status and population thresholds. OSM staff clarified that the criteria previously used to determine rural status such as specific population thresholds would no longer be applied under the new policy.

OSM staff Robbin LaVine provided the Council with a brief overview of the status of the Federal Subsistence Board draft Memorandum of Understanding with State of Alaska on how to work together in a coordinated way and cooperate on fish and wildlife research and management. The Draft MOU was provided to the Councils at the fall 2016 meeting cycle and work is underway to incorporate the Councils recommendations and comments along with State AC and State of Alaska comments into the draft document. The revised version will be presented to the Federal Subsistence Board for their approval and then the updated version will be presented back to the Council again.

Robbin LaVine also announced the 2018 call for funding proposals for the OSM Fisheries Resource Monitoring Program and presented a short update on OSM staffing changes.

Kodiak/Aleutians Regional Advisory Council letter:

A letter from the Kodiak/Aleutians Subsistence Regional Advisory Council requesting that the Board forward Council comments on the Refuges final rule on hunting to the Secretary, with a request that the Secretary rescind the rule, was read into the record along with the request from the Kodiak/Aleutians Council that the Yukon Kuskokwim Delta Council endorse it. The Council discussed that they were opposed to the rule when it was first proposed. The Council made a motion to endorse the letter with the suggestion to change the word "request" to "recommend". *The Council voted unanimously to support the Kodiak/Aleutians RAC letter.

Future Meeting Dates:

The Council confirmed October 12 & 13, in Bethel for its fall 2017 meeting. The meeting was pushed back by one day in order to not overlap with the Western Interior RAC meeting that same week. The Council selected March 14 & 15, 2018 in Bethel for the next Winter meeting.

Closing Comments: Chair Lester Wilde thanked staff and all the meeting participants. The Council expressed appreciation for the support and assistance in their work and for all the information shared at the meeting.

The meeting adjourned by unanimous consent at 5:30 pm.

I certify that, to the best of my knowledge, the foregoing minutes are accurate and complete.

_____

Eva Patton, Designated Federal Officer
USFWS Office of Subsistence Management

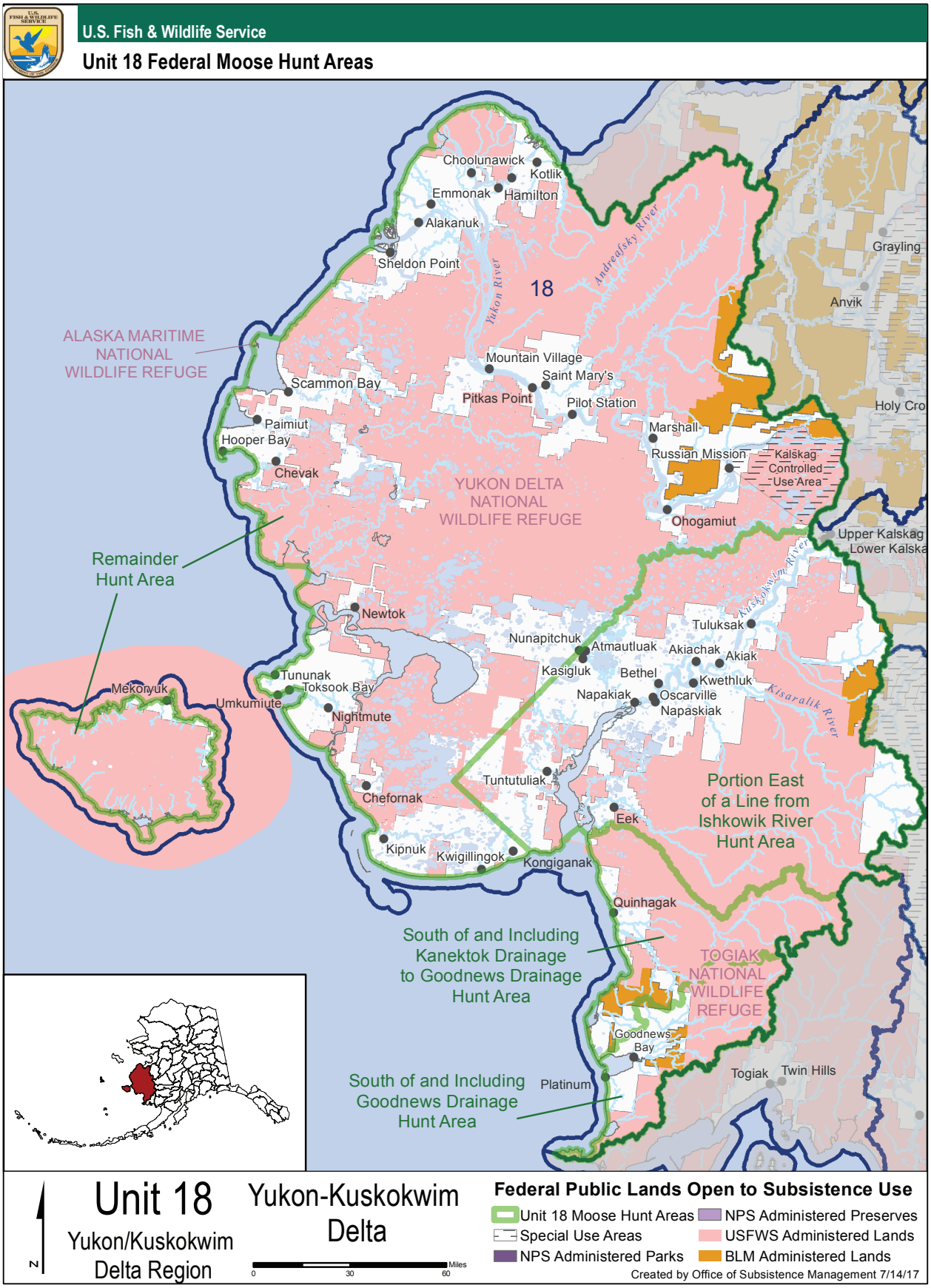
_____

Lester Wilde, Sr. Chair
Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

*These minutes will be formally considered by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council at its Fall 2017 public meeting.

Presentation Procedure for Proposals

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


U.S. Fish & Wildlife Service
Unit 18 Federal Moose Hunt Areas
Choolunawick
Kotlik
Emmonak
Hamilton
Alakanuk
Sheldon Point
Yukon River
Andreafsky River
18
Grayling
Anvik
Holy Cro
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
Mountain Village
Saint Mary's
Scammon Bay
Pitkas Point
Pilot Station
Paimiut
Hooper Bay
Chevak
Marshall
Russian Mission
Kalskag Controlled Use Area
YUKON DELTA NATIONAL WILDLIFE REFUGE
Ohogamiut
Upper Kalskag
Lower Kalska
Remainder Hunt Area
Kuskokwim River
Newtok
Tuluksak
Nunapitchuk
Atmautluak
Akiachak
Akiak
Kasigluk
Bethel
Kwethluk
Tununak
Toksook Bay
Napakiak
Oscarville
Napaskiak
Mekoryuk
Umkumiute
Nightmute
Kisaralik River
Tuntutuliak
Portion East of a Line from Ishkowik River Hunt Area
Chefornak
Eek
Kipnuk
Kwigillingok
Kongiganak
Quinhagak
South of and Including Kanektok Drainage to Goodnews Drainage Hunt Area
TOGIAK NATIONAL WILDLIFE REFUGE
Goodnews Bay
South of and Including Goodnews Drainage Hunt Area
Platinum
Togiak
Twin Hills
Unit 18
Yukon/Kuskokwim Delta Region
Yukon-Kuskokwim Delta
N
0
30
60
Miles
Federal Public Lands Open to Subsistence Use
Unit 18 Moose Hunt Areas
Special Use Areas
NPS Administered Parks
NPS Administered Preserves
USFWS Administered Lands
BLM Administered Lands
Created by Office of Subsistence Management 7/14/17

FISHERIES RESOURCE MONITORING PROGRAM

BACKGROUND

Beginning in 1999, the Federal government assumed expanded management responsibility for subsistence fisheries on Federal public lands in Alaska under the authority of Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA). Expanded subsistence fisheries management introduced substantial new informational needs for the Federal system. Section 812 of ANILCA directs the Departments of the Interior (DOI) and Agriculture (USDA), cooperating with the State of Alaska and other Federal agencies, to undertake research on fish and wildlife and subsistence uses on Federal public lands. To increase the quantity and quality of information available for management of subsistence fisheries, the Fisheries Resource Monitoring Program (Monitoring Program) was established within the Office of Subsistence Management (OSM). The Monitoring Program was envisioned as a collaborative interagency, interdisciplinary approach to enhance existing fisheries research, and effectively communicate information needed for subsistence fisheries management on Federal public lands.

Biennially, OSM announces a funding opportunity for investigation plans addressing subsistence fisheries on Federal public lands. The 2018 Notice of Funding Opportunity focused on priority information needs developed by the Subsistence Regional Advisory Councils with input from strategic plans and subject matter specialists. The Monitoring Program is administered through regions to align with stock, harvest, and community issues common to a geographic area. The six Monitoring Program regions are shown in **Figure 1**.

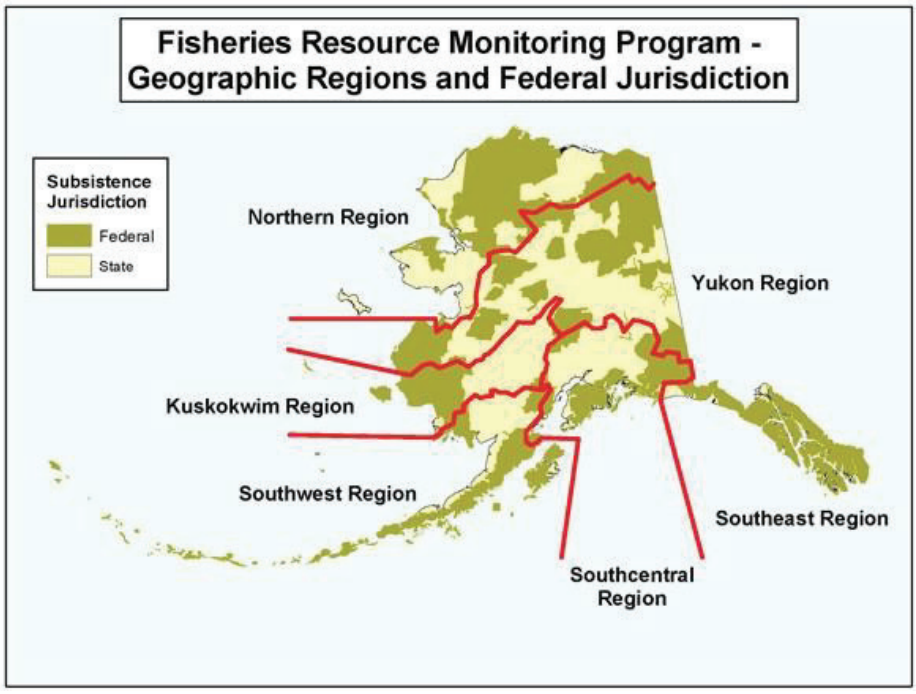


Figure 1. Geographic Regions for the Fisheries Resource Monitoring Program.

Strategic plans sponsored by the Monitoring Program have been developed by workgroups of fisheries managers, researchers, Subsistence Regional Advisory Councils, and by other stakeholders for three of the six regions: Southeast, Southcentral (excluding Cook Inlet Area), and Southwest Alaska. These plans identify prioritized information needs for each major subsistence fishery and are available for viewing on the Federal Subsistence Management Program website (https://www.doi.gov/subsistence/frmp/funding). Individual copies of plans are available by placing a request to OSM. Independent strategic plans were completed for the Yukon and Kuskokwim regions for salmon in 2005. For the Northern Region and the Cook Inlet Area, assessments of priority information needs were developed from regional working groups and experts on the Subsistence Regional Advisory Councils, the Technical Review Committee (a committee comprised of representatives from each of the five Federal agencies involved with subsistence management, and relevant experts from the Alaska Department of Fish and Game), and Federal and State managers, with technical assistance from OSM staff. Finally, a strategic plan specifically for research on whitefish species in the Yukon and Kuskokwim River drainages was completed in spring 2011 as a result of efforts supported through Monitoring Program project 08-206 (Yukon and Kuskokwim Coregonid Strategic Plan).

Investigation plans are reviewed and evaluated by OSM and Forest Service staff, and then by the Technical Review Committee. The Technical Review Committee's function is to provide evaluation, technical oversight, and strategic direction to the Monitoring Program. Each investigation plan is scored on these five criteria: strategic priority; technical and scientific merit; investigator ability and resources; partnership and capacity building; and cost benefit.

Project abstracts and associated Technical Review Committee proposal scores are assembled into a draft 2018 Fisheries Resources Monitoring Plan. The draft plan is distributed for public review and comment through Subsistence Regional Advisory Council meetings, beginning in August 2017. The Federal Subsistence Board will review the draft plan and will accept written and oral comments at its January 2018 meeting. The Federal Subsistence Board takes into consideration recommendations and comments from the process, and forwards their comments to the Assistant Regional Director of OSM. Final funding approval lies with the Assistant Regional Director of OSM. Investigators will subsequently be notified in writing of the status of their proposals.

HISTORICAL OVERVIEW

The Monitoring Program was first implemented in 2000, with an initial allocation of $5 million. Since 2001, a total of $117.2 million has been allocated for the Monitoring Program to fund a total of 452 projects (**Figure 2; Figure 3**).

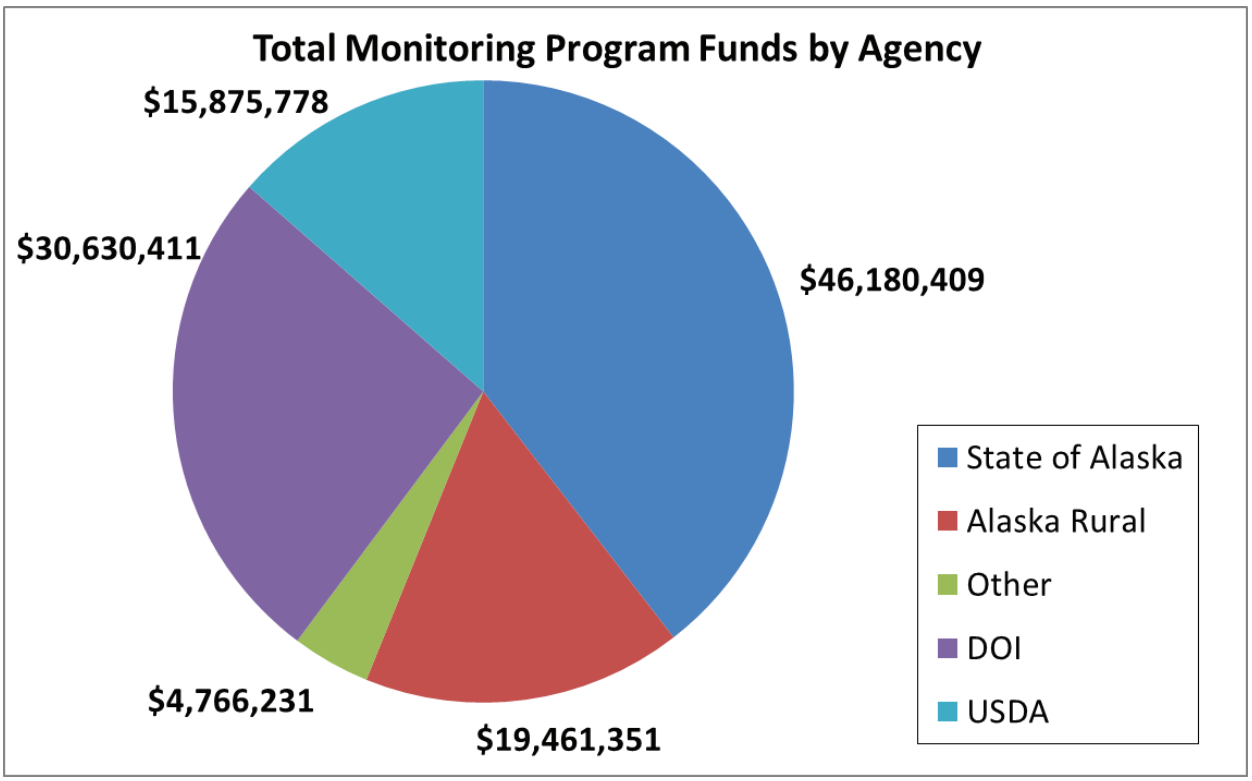


Figure 2. Total Project funds through the Monitoring Program from 2000 through 2016 listed by the organization of the Principal Investigator for projects funded. The funds listed are the total approved funds from 2000 to 2016. DOI = Department of Interior and USDA = U.S. Department of Agriculture.

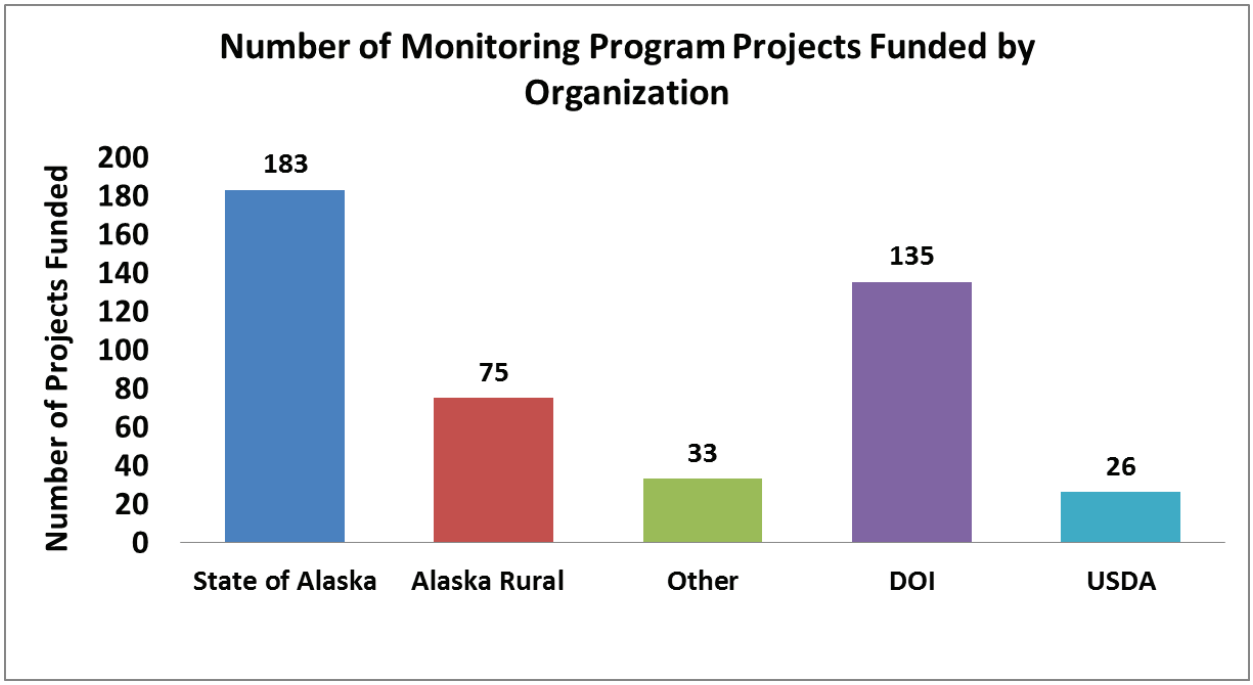


Figure 3. The total number of projects funded through the Monitoring Program from 2000 through 2016 listed by the organization of Principal Investigator. DOI = Department of Interior and USDA = U.S. Department of Agriculture.

During each biennial funding cycle, the Monitoring Program budget funds ongoing multi-year projects (2, 3 or 4 years) as well as new projects. Budget guidelines are established by geographic region (**Table 1**) and data type. The regional guidelines were developed using six criteria that included level of risk to species, level of threat to conservation units, amount of subsistence needs not being met, amount of information available to support subsistence management, importance of a species to subsistence harvest and level of user concerns with subsistence harvest. Budget guidelines provide an initial target for planning; however they are not final allocations and will be adjusted annually as needed (**Figure 4; Figure 5**).

Table 1. Regional allocation guideline for Fisheries Resource Monitoring Funds.

Region	Department of Interior Funds	U.S. Department of Agriculture Funds
Northern	17%	0%
Yukon	29%	0%
Kuskokwim	29%	0%
Southwest	15%	0%
Southcentral	5%	33%
Southeast	0%	67%
Multi-Regional	5%	0%

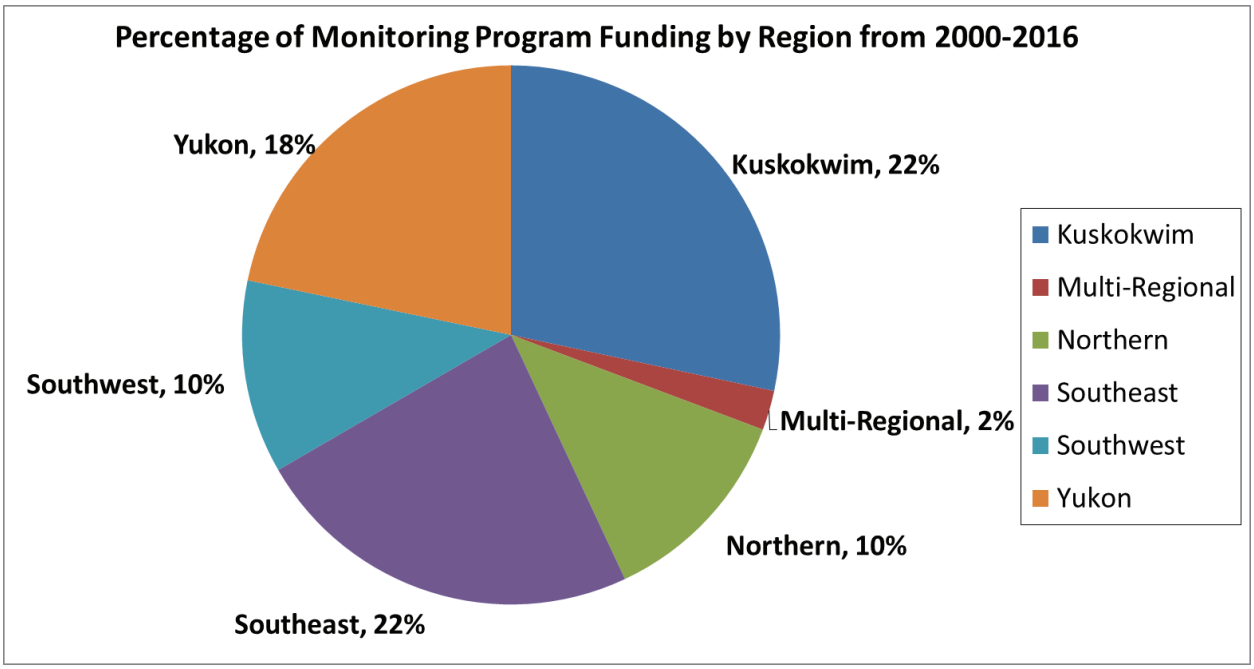


Figure 4. Total Project Funding by Geographic Region from 2000 through 2016.

Two primary types of research projects are solicited for the Monitoring Program including Harvest Monitoring/Traditional Ecological Knowledge (HMTEK) and Stock, Status and Trends (SST), although projects that combine these approaches are also encouraged. Project funding by type is shown in **Figure 5.**

Definitions of the two project types are listed below:

Harvest Monitoring and Traditional Ecological Knowledge (HMTEK) -These projects address assessment of subsistence fisheries including quantification of harvest and effort, and description and assessment of fishing and use patterns.

Stock Status and Trends Studies (SST) - These projects address abundance, composition, timing, behavior, or status of fish populations that sustain subsistence fisheries with linkage to Federal public lands.

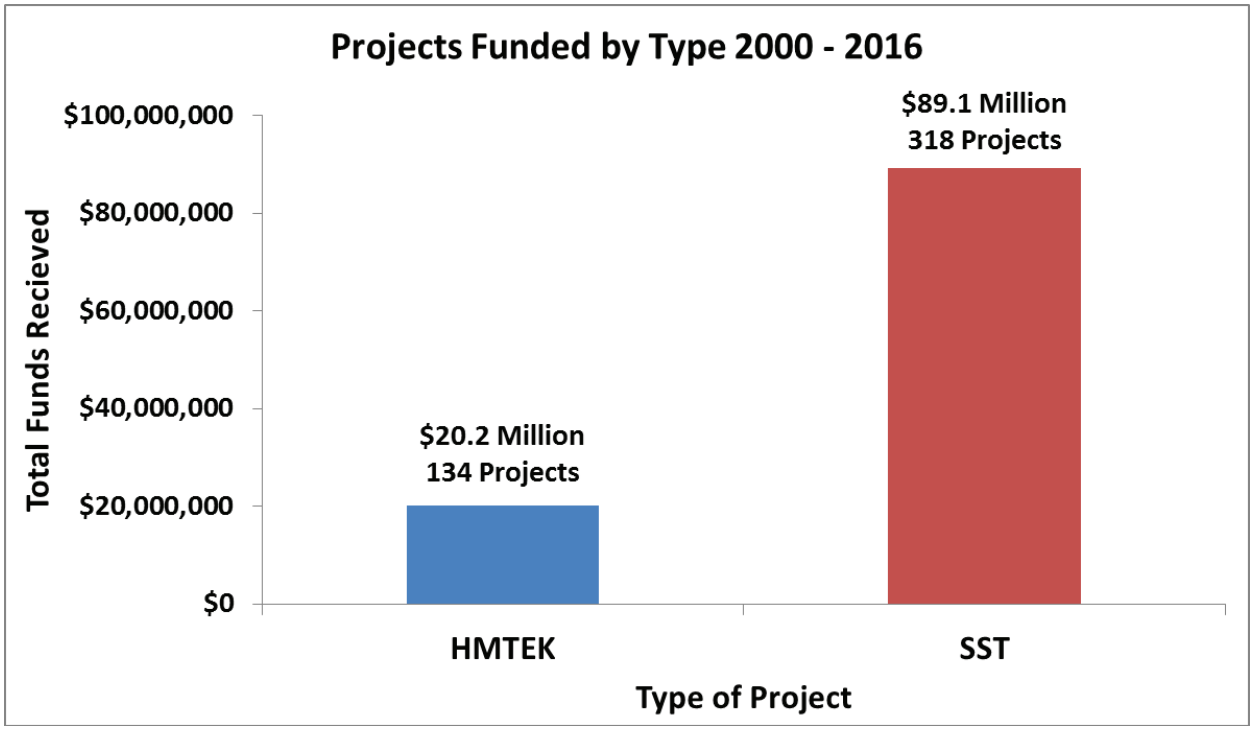


Figure 5. Total Project funding by type from 2000 through 2016. HMTEK = Harvest Monitoring/ Traditional Ecological Knowledge and SST = Stock, Status and Trends.

PROJECT EVALUATION PROCESS

In the current climate of increasing conservation concerns and subsistence needs, it is imperative that the Monitoring Program prioritizes high quality projects that address critical subsistence questions. Projects are selected for funding through an evaluation and review process that is designed to advance projects that are strategically important for the Federal Subsistence Program, technically sound, administratively competent, promote partnerships and capacity building, and are cost effective. Projects are evaluated by a panel called the TRC. This committee is a standing interagency committee of senior technical experts that is foundational to the credibility and scientific integrity of the evaluation process for projects funded by the Monitoring Program. The TRC reviews, evaluates, and make recommendations about proposed projects, consistent with the mission of the Monitoring Program. Fisheries and Anthropology staff from

the OSM provide support for the TRC. Recommendations from the TRC provide the basis for further comments from Subsistence Regional Advisory Councils, the public, the Interagency Staff Committee (ISC), and the Federal Subsistence Board, with final approval of the Monitoring Plan by the Assistant Regional Director of OSM.

To be considered for funding under the Monitoring Program, a proposed project must have a nexus to Federal subsistence fishery management. Proposed projects must have a direct association to a Federal subsistence fishery, and the subsistence fishery or fish stocks in question must occur in or pass through waters within or adjacent to Federal public lands. Complete project packages need to be submitted on time and must address five specific criteria (see below) to be considered a high quality project. Five criteria are used to evaluate project proposals:

1. ***Strategic Priorities*** – Studies should be responsive to information needs identified in the *2018 Priority Information Needs* https://www.doi.gov/subsistence/frmp/funding. All projects must have a direct linkage to Federal public lands and/or waters to be eligible for funding under the Monitoring Program. To assist in evaluation of submittals for projects previously funded under the Monitoring Program, investigators must summarize project findings in their investigation plans. This summary should clearly and concisely document project performance, key findings, and uses of collected information for Federal subsistence management. Projects should address the following topics to demonstrate links to strategic priorities:
    - **Federal jurisdiction,**
    - **Conservation mandate**,
    - **Potential impacts on the subsistence priority,**
    - **Role of the resource, and**
    - **Local concern.**

2. ***Technical-Scientific Merit*** – Technical quality of the study design must meet accepted standards for information collection, compilation, analysis, and reporting. Studies must have clear objectives, appropriate sampling design, correct analytical procedures, and specified progress, annual, and final reports.

3. ***Investigator Ability and Resources*** – Investigators must show they are capable of successfully completing the proposed study by providing information on the ability (training, education, and experience) and resources (technical and administrative) they possess to conduct the work. Applicants that have received funding in the past will be evaluated and ranked on their past performance, including fulfillment of meeting deliverable deadlines. A record of failure to submit reports or delinquent submittal of reports will be taken into account when rating investigator ability and resources.

4. ***Partnership and Capacity Building*** – Collaborative partnerships and capacity building are priorities of the Monitoring Program. ANILCA Title VIII mandates that rural residents be afforded a meaningful role in the management of subsistence fisheries, and the Monitoring

Program offers opportunities for partnerships and participation of local residents in monitoring and research. Investigators must not only inform communities and regional organizations in the area where work is to be conducted about their project plans, but must also consult and communicate with local communities to ensure that local knowledge is utilized and concerns are addressed. Letters of support from local communities or organizations that will collaborate on the proposed project add to the strength of a proposal. Investigators and their organizations must demonstrate their ability to maintain effective local relationships and commitment to capacity building. This includes a plan to facilitate and develop partnerships so that investigators, communities, and regional organizations can pursue and achieve the most meaningful level of involvement.

Investigators are encouraged to develop the highest level of community and regional collaboration that is practical. Investigators must demonstrate that capacity building has already reached the communication or partnership development stage during proposal development, and ideally, include a strategy to develop capacity building to higher levels, recognizing, however, that in some situations higher level involvement may not be desired or feasible by local organizations. Successful capacity building requires developing trust and dialogue among investigators, local communities, and regional organizations. Investigators need to be flexible in modifying their work plan in response to local knowledge, issues, and concerns, and must also understand that capacity building is a reciprocal process in which all participants share and gain valuable knowledge. The reciprocal nature of the capacity building component(s) must be clearly demonstrated in proposals.

5. Cost Benefit

Cost/Price Factors – An applicant's cost/price proposal will be evaluated for reasonableness. For a price to be reasonable, it must represent a price to the government that a prudent person would pay when consideration is given to prices in the market. Normally, price reasonableness is established through adequate price competition, but may also be determined through cost and price analysis techniques.

Selection for Award – Applicant should be aware that the Government shall perform a "best value analysis" and the selection for award shall be made to the Applicant whose proposal is most advantageous to the Government, taking into consideration the technical factors listed above and the total proposed price across all agreement periods.

POLICY AND FUNDING GUIDELINES

Several policies have been developed to aid in implementing funding. These policies include:

1. Projects of up to four years duration may be considered in any year's monitoring plan.
2. Studies must not duplicate existing projects.
3. A majority of Monitoring Program funding will be dedicated to non-Federal agencies.

4. Long term projects will be considered on a case by case basis.
5. Capacity building is considered a critical component of all projects, and all investigators are expected to incorporate capacity building and partnerships within their projects.
6. Activities that are not eligible for funding include:
   a) habitat protection, mitigation, restoration, and enhancement;
   b) hatchery propagation, restoration, enhancement, and supplementation;
   c) contaminant assessment, evaluation, and monitoring; and
   d) projects where the primary or only objective is outreach and education (for example, science camps, technician training, and intern programs), rather than information collection.

The rationale behind these policy and funding guidelines is to ensure that existing responsibilities and efforts by government agencies are not duplicated under the Monitoring Program. Land management or regulatory agencies already have direct responsibility, as well as specific programs, to address these activities. However, the Monitoring Program may fund research to determine how these activities affect Federal subsistence fisheries or fishery resources.

The Monitoring Program may fund assessments of key Federal subsistence fishery stocks in decline or that may decline due to climatological, environmental, habitat displacement, or other drivers; however applicants must show how this knowledge would contribute to Federal subsistence fisheries management. Similarly, the Monitoring Program may legitimately fund projects that assess whether migratory barriers (e.g. falls, beaver dams) significantly affect spawning success or distribution; however, it would be inappropriate to fund projects to build fish passes, remove beaver dams, or otherwise alter or enhance habitat.

2018 FISHERIES RESOURCE MONITORING PLAN

For 2018, a total of 53 investigation plans were received and 53 are considered eligible for funding. Of the projects that are considered for funding, 40 are SST projects and 13 are HMTEK projects.

For 2018, the Department of the Interior, through the U.S. Fish and Wildlife Service, will provide an anticipated $1.0 to $1.5 million in funding for new projects and up to $1.6 million for ongoing projects that were initially funded in 2016. The U.S. Department of Agriculture, through the U.S. Forest Service, has historically provided $1.8 million annually. The amount of U.S. Department of Agriculture funding available for 2018 projects is uncertain.

FISHERIES RESOURCE MONITORING PROGRAM
KUSKOKWIM REGION OVERVIEW

Since the inception of the Monitoring Program in 2000, 100 projects have been undertaken in the Kuskokwim Region for a total of $27.2 million (**Figure 1**). Of these, the State of Alaska conducted 59 projects, Alaska Rural organizations conducted 16 projects, the Department of the Interior conducted 21 projects, the U.S. Department of Agriculture conducted one project, and other organizations conducted three projects (**Figure 2**). Sixty-nine projects were Stock, Status, and Trends (SST), and 31 projects were Harvest Monitoring and Traditional Ecological Knowledge (HMTEK). A list of all Kuskokwim Region Monitoring Program projects from 2000 to 2016 is provided in **Appendix A**.

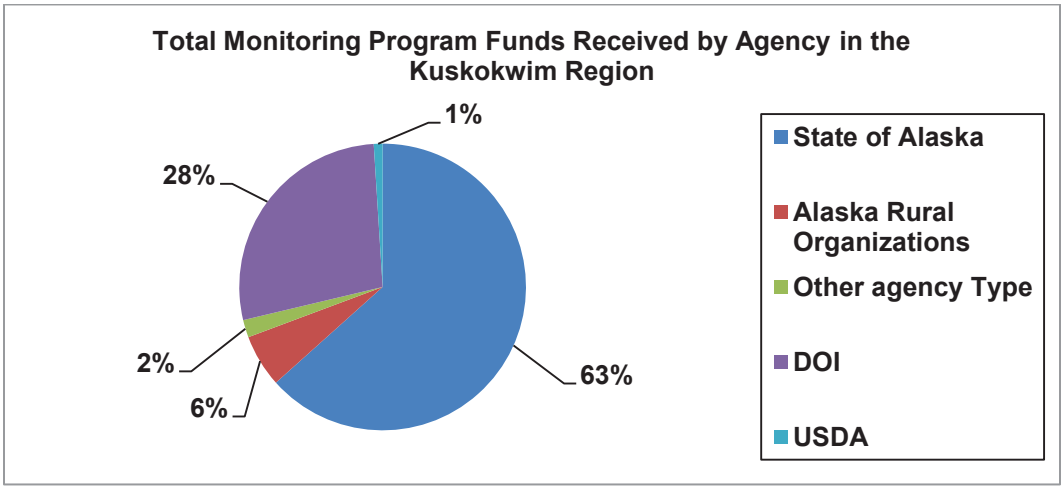


Figure 1. Monitoring Program funds received by agencies for projects in the Kuskokwim Region. The funds listed are the total approved funds from 2000 to 2016. DOI = Department of the Interior and USDA = U.S. Department of Agriculture.

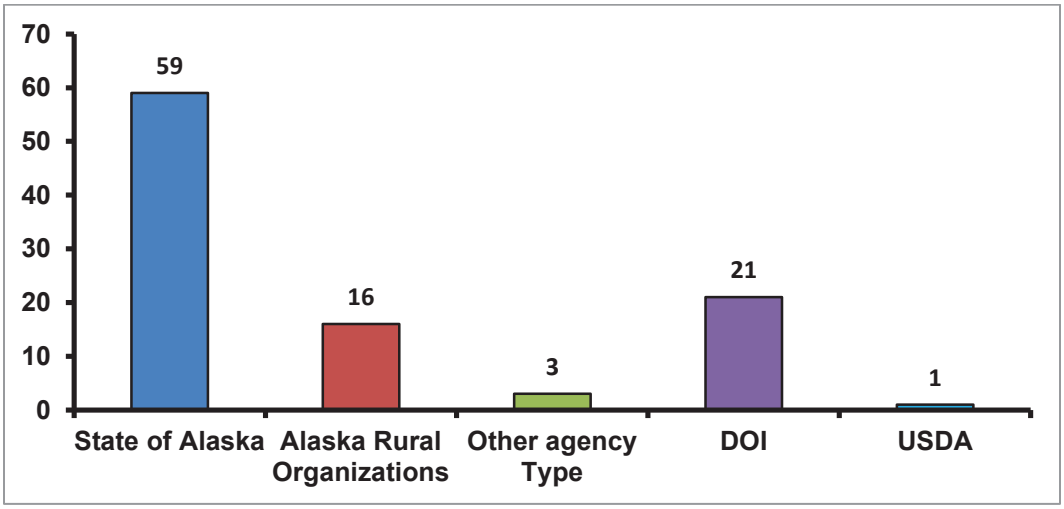


Figure 2. Total number of Monitoring Program projects funded, by agency, in the Kuskokwim Region from 2000 to 2016. DOI = Department of the Interior and USDA = U.S. Department of Agriculture.

2018 DRAFT FISHERIES RESOURCE MONITORING PLAN

OVERVIEW

Priority Information Needs

The 2018 Notice of Funding Opportunity for the Kuskokwim Region identified seven priority information needs:

- Reliable quantitative and/or qualitative estimates of salmon escapements and/or harvests.
- Methods for including "quality of escapement" measures (for example, potential egg deposition, sex and size composition of spawners, spawning habitat utilization) in establishing Chinook Salmon spawning goals and determining the reproductive potential and genetic diversity of spawning escapements.
- Estimate the size and future growth of the sport fishery, and impacts of the sport fishery on cultural values and social systems.
- An understanding of the meaning and significance of sharing in the context of the social, cultural, and economic life of people in the lower Kuskokwim Area.
- Traditional ecological knowledge or other knowledge of whitefish in the Kuskokwim River drainage, especially in lower and middle Kuskokwim communities. Groups of communities might include Kwethluk, Akiachak, and Tuluksak, or Kalskag, Lower Kalskag, Aniak, and Chuathbaluk, or Red Devil, Sleetmute, and Stony River.
- A spatially robust indexing method for estimating species-specific whitefish harvests on an annual basis for the Kuskokwim drainage.
- Origin of Chinook Salmon harvested for subsistence in marine waters of Etolin Strait.

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. Regional budget guidelines provide an initial target for planning. For 2018, the U.S. Department of the Interior, through the U.S. Fish and Wildlife Service, will provide an anticipated $1.0 to $1.5 million in funding for new projects and up to $1.6 million for ongoing projects that were initially funded in 2016. The U.S. Department of Agriculture, through the U.S. Forest Service, has historically provided up to $1.8 million annually. The amount of U.S. Department of Agriculture funding available for 2018 projects is uncertain.

Technical Review Committee Proposal Score

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary and collaborative program. It is the responsibility of the Technical Review Committee (TRC) to develop the

strongest possible Monitoring Plan for each region and across the entire state.

For the 2018 Monitoring Program, nine proposals were submitted for the Kuskokwim Region. The TRC evaluated and scored each proposal for Strategic Priority, Technical and Scientific Merit, Investigator Ability and Resources, Partnership and Capacity Building, and Cost/Benefit (**Table 1,** 1= first place, 2 = second place, etc.). Projects that place higher comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and promote cooperative partnerships and capacity building. The projects listed are currently being considered for funding in the 2018 Monitoring Program. Projects which were not eligible due to the nature of the activity are not included. For more information on projects submitted to the 2018 Monitoring Program please see the abstracts in **Appendix B**.

Table 1. Technical Review Committee (TRC) score for projects in the Kuskokwim Region. Projects are listed by TRC score and include the total funds requested and the average annual request for each project submitted to the 2018 Monitoring Program within the Kuskokwim Region (1 = first place, 2 = second place, etc.). The projects listed are currently being considered for funding in the 2018 Monitoring Program. Projects which were not eligible due to the nature of the activity are not included.

TRC Score	Project Number	Title	Total Project Request	Average Annual Request
1	18-350	Bethel In-season Subsistence Harvest Surveys	$271,702	$67,926
2	18-351	Kuskokwim Area Salmon Post season Subsistence Harvest Surveys	$840,225	$210,056
3	18-304	George River Salmon Weir	$726,492	$181,623
4	18-302	Kwethluk River Salmon Run Timing and Abundance	$754,808	$188,702
5 (tied)*	18-303	Tuluksak River Salmon Run Timing and Abundance	$385,180	$96,295
5 (tied)*	18-305	Kuskokwim River Sonar	$388,809	$97,202
6 (tied)*	18-352	Support for Cooperative Management of the Kuskokwim River Subsistence Salmon Fishery	$416,169	$104,042
6(tied)*	18-300	Kuskokwim River Broad Whitefish	$613,877	$153,469
7	18-301	Inferring production patterns of Kuskokwim River Chinook Salmon Using Otolith Microchemistry and River Isoscapes	$823,207	$205,802
		Total	$5,220,469	$1,305,117

* Proposals with identical scores during the rating process may be further assessed by comparing the average annual cost. Proposals with a lower average annual cost may be ranked above a similar rated proposal that has a higher annual average cost.

TECHNICAL REVIEW COMMITTEE JUSTIFICATION FOR PROJECT SCORE

TRC Score: 1
Project Number: 18-350
Project Title: Bethel In-season Subsistence Harvest Surveys

TRC Justification: Sizes of recent Chinook Salmon runs have been some of the lowest on record resulting in fishery managers implementing harvest restrictions. Drainage residents are highly dependent on local salmon runs, and the harvest of Chinook Salmon by Bethel residents (approximately 6,000 people) is 34% of the recent 10-year average total harvest by residents of the drainage. The study area is encompassed by the Yukon Delta National Wildlife Refuge. This project addresses a priority information need in the Kuskokwim Region identified in the 2018 Notice of Funding Opportunity, "*Reliable quantitative and/or qualitative estimates of salmon escapements and/or harvests*." The project's strategic need and Federal linkage are clear.

The overall goal of the project is to describe relevant subsistence fishing effort and catch information collected from a representative sub-set of families who harvest salmon for subsistence purposes in the Bethel Area. The project has three objectives: (1) describe Bethel area subsistence users' annual harvest goals for Chinook, Chum and Sockeye Salmon; (2) document subsistence fishing activity in the Bethel area, including catch per unit effort by gear type, and catch composition; and (3) estimate the annual age-sex-length composition of Chinook Salmon harvested in the Bethel area subsistence fishery. Two previously-funded projects and research goals (inseason harvest monitoring and age-sex-length data collection) have been integrated in this proposal resulting in the need for less funding. The average annual cost of the proposal is $67,000 and has decreased from the $82,926 average annual cost of the project 2016–2018. Budget tables and justifications were provided. Partner organizations are contributing $78,477 ($19,619 per year).

This project has received Monitoring Program funding since 2001 and has been successfully re-conceived to address comments from the Technical Review Committee and better address information needs in the Kuskokwim Region. The project now includes the objective of calculating catch per unit effort by gear type. Near real-time harvest estimates are available to fishery managers contributing to better in-season management of the Chinook Salmon run. The project provides a strong and meaningful partnership between the Alaska Department of Fish and Game (ADF&G) and the Orutsararmiut Native Council, which administers much of the project. Investigators are qualified to conduct the research, and provided resumes and multiple letters they received supporting the project. The investigation plan is well-written and complete.

TRC Score: 2
Project Number: 18-351
Project Title: Kuskokwim Area Salmon Post season Subsistence Harvest Surveys

TRC Justification: Investigators propose to continue this 26 year data set and conduct voluntary household surveys that will be used to estimate subsistence salmon harvests by residents of the Kuskokwim Management Area. The Monitoring Program has provided funds since 2000. This project

addresses a priority information need for the Kuskokwim Region identified in the 2018 Notice of Funding Opportunity that is the following: (1) *Reliable quantitative and/or qualitative estimates of salmon escapements and/or harvests.* Data collected during this survey contributes a vital input to State, Federal, and Tribal fisheries managers for Kuskokwim Area salmon stocks. Quantifying subsistence harvest has been an essential data element of recent salmon reconstructions, run reconstructions, and stock assessment; this project allows for the development of productivity models of salmon species that are then used in every aspect of salmon resource management, including preseason forecasting, inseason management, postseason assessment, and the definition of escapement goals.

The lower Kuskokwim River drainage, where most people living in the Kuskokwim Area reside, is encompassed by the Yukon Delta National Wildlife Refuge. The drainage stretches to parts of Denali National Park and Preserve and Lake Clark National Park and Preserve. The harvest survey is conducted with south Kuskokwim Bay residents relying on salmon that spawn in the Togiak National Wildlife Refuge. The Federal linkage and strategic priority are clear

The project was reconceived in 2008 when ADF&G, Commercial Fisheries Division, evaluated and changed methods. The sampling design is clearly stated and the investigation plan is well-written and complete. Harvest information will be collected through postseason household interviews and harvest calendars. Simple random sampling and stratified random sampling techniques will be used, based on community size and user group designations, to select households to be interviewed. In instances when minimum sample requirements are not met, statistical expansion will not be performed. Instead, community-based harvest will be estimated using Bayesian methods. In addition to salmon, respondents are asked to report their harvests of humpback whitefish, broad whitefish, sheefish, and a combined count for smaller whitefish (round whitefish, and Bering and least cisco). Broad and humpback harvest data have been expanded to generate total harvest estimates for these species since the late 2000s, and sheefish and cisco harvests have been expanded since 2014. Concerning salmon harvest timing, this investigation plan includes more robust methods than previously used to increase the use of harvest calendars. Data will be archived in the ADF&G's Arctic-Yukon-Kuskokwim Database and community-level harvest estimates made available to the public. The final report of findings will be peer reviewed and published in the ADF&G's Fisheries Data Series.

The project provides a strong and meaningful partnership between Orutsararmiut Native Council and ADF&G that began in 1999. Investigators are qualified to conduct the research and provided resumes.

This is an expensive project, and the funding request has increased 20% since the last funding cycle in 2014. The average annual cost of the request is $210,056. Investigators are requesting funding for 57% of overall costs of this long-term project. Investigators provided budget tables and justifications.

TRC Score: 3
Project Number: 18-304
Project Title: George River Weir

TRC Justification: The funding requested is to support the continued operation of the George River weir

for four years (14-303 was project from 2014 FRMP cycle). The George River weir monitors distribution, abundance and quality of Chinook, Chum and Coho Salmon escapement into the middle Kuskokwim River Drainage. The Kuskokwim River supports one of the state's largest subsistence salmon fisheries. The majority of this harvest occurs in the lower Kuskokwim River, within the Yukon Delta National Wildlife Refuge. A nexus to Federal subsistence fisheries management occurs because George River salmon stocks are harvested by Federally qualified subsistence users on the Yukon Delta National Wildlife Refuge. Beginning in 2018 the George River weir would be the only project monitoring salmon in the middle Kuskokwim River, and has an escapement goal for Chinook Salmon. As such, the George River weir has high value.

Technical merit is high; the objectives are clearly written, quantifiable, and achievable. Returns of Chinook, Chum, and Coho Salmon will be estimated using proven weir methods for this system. The project does not have any operational or technical deficiencies. Age, sex, and length data are routinely collected and reported, as well as environmental data. Daily escapement estimates are provided to managers for in-season management needs, and annual escapement summaries will be used to develop formal escapement goals for the George River and to contribute to modeling to the estimate total annual escapement in the Kuskokwim River. This proposal will continue a 21 year dataset used to help monitor Chinook, Chum, and Coho Salmon in the middle portion of the Kuskokwim River drainage. This project addresses the 2018 Priority Information Need for *reliable quantitative and/or qualitative estimates of salmon escapements and/or harvests*.

The principal investigator has supplied a resume and has been a principal investigator for weir projects with the ADF&G. The co-investigators also have extensive experience with Kuskokwim River Area salmon research and management. The primary investigator and first co-investigator are not rural Alaska Natives or a part of a Tribal organization; however, the second co-investigator is a biologist for the Native Village of Napaimute as well as the Environmental Director for the Native Village of Napaimute and a former Director of Fisheries for the Kuskokwim Native Association. The tribal organization has a meaningful role in the project. The Native Village of Napaimute will conduct a high school internship program that will serve as an advance opportunity for a small group of students with expressed interest in pursuing degrees in fisheries or related fields, and who have participated at least once in the Aniak River Math and Science Expedition organized by the Kuskpuk School District. The proposed internship will provide ten students with three complementary experiences aimed at teaching watershed concepts, physical habitat assessment, biological sampling, and data analysis. The native organization also will help ADF&G disseminate project results and related fisheries management issues to middle river communities during quarterly shareholder newsletters and community meetings. The project has multiple letters of support from varying local, Federal, Tribal, State, and independent entities: Yukon Delta National Wildlife Refuge, Kuskokwim River Inter-Tribal Fish Commission, Kuskokwim River Salmon Management Working Group, and the ADF&G Bethel Advisory Committee. Detailed budget tables and budget justifications were provided by the investigators. The average annual cost of the project is $181,623, with the total cost of the project over four years being $726,492. This project was previously funded in 2014 (14-303) at an average yearly cost of $216,206, with a four year total cost of $864,822. The 2018 total costs are approximately 19% smaller than the 2014 total costs.

TRC Score: 4
Project Number: 18-302
Project Title: Kwethluk River Salmon Run Timing and Abundance

TRC Justification: The Kwethluk River weir is a well-established and successful salmon monitoring project that provides information on a majority of the escapement that occurs in the lower section of the Kuskokwim River. Escapement data gathered from the Kwethluk weir is utilized as an input to help assess the Kuskokwim River drainage-wide run-size and escapement assessment for Chinook Salmon. The age composition data collected from Chinook Salmon at the weir is also utilized as input into the spawn-recruit analysis for Chinook Salmon, which helps set drainage-wide escapement goals for the Kuskokwim River.

The weir has operated for 17 years, providing information on escapement magnitude and run timing for all salmon species with additional age and sex collection for Chinook, Chum, and Coho Salmon. The previously funded projects had objectives that enumerated all salmon species in the Kwethluk, while the current proposed project only enumerates Chinook and Chum Salmon. As a result, the collection of age, sex, and length information will be limited to Chinook and Chum Salmon. In order to decrease costs of the project, the investigators propose ceasing weir operations on August 15 rather than the normal date of September 10.

The project occurs within the Kwethluk River, which is fully within the Yukon Delta National Wildlife Refuge. Residents of the village of Kwethluk harvest salmon within Refuge waters in both the Kwethluk and Kuskokwim rivers. This project addresses the 2018 Priority Information Need for the Kuskokwim Region for *reliable quantitative and/or qualitative estimates of salmon escapements and/or harvests*. The project also marginally addresses the 2018 Priority Information Need for the Kuskokwim Region for methods including *"quality of escapement" measures in establishing Chinook Salmon spawning goals and determining the reproductive potential and genetic diversity of spawning escapements*.

Consultations and capacity building have been ongoing between the U.S. Fish and Wildlife Service Kenai Fish and Wildlife Field Office and the Organized Village of Kwethluk since the early 1990s. All three biologists have multiple years' experience working closely with resource partners and with Tribal organizations in the Kuskokwim River drainage, although there have been issues with support for the weir from some elders in the village who believe the weir kills fish. In an effort to raise support for the weir operations, the investigators propose an annual "elder's tour", which would help educate the elders on any misconceptions they may have about the operation of the weir. Project also has multiple letters of support from varying local, Federal, and independent entities (Organized Village of Kwethluk (OVK), Tuluksak Native Community (TNC), Native Village of Napaimute (NVN), Association of Village Council Presidents (AVCP), Orutsararmiut Native Council (ONC), Kuskokwim Watershed Council (KRWC), and the Yukon Delta National Wildlife Refuge). The project also plans on hiring one rural Alaskan technician each season as a local hire, as well as an Alaska Native Science and Engineering Program (ANSEP) student. However, no budget or letter of support for an ANSEP student is provided in the project documentation.

The average annual cost of the project is $187,702, with the total cost of the project over four years being $754,808. This project was previously funded in 2014 (14-308) at an average yearly cost of $200,199, with a four year total cost of $853,077. Cost of the project has been reduced by 13% as compared to previous years, which is primarily associated with the reduction in the amount of time the weir will be in operation. Despite the budget reduction, the project still provides data on Chinook Salmon and Chum Salmon, which are two stocks that have faced serious population issues in recent years in the Kuskokwim River.

TRC Score: 5 (tied)
Project Number: 18-303
Project Title: Tuluksak River Salmon Run Timing and Abundance

TRC Justification: The funding requested is to support the continued operation of the Tuluksak River weir for four years (14-306 was project from 2014 FRMP cycle). The Tuluksak River is a lower-river tributary of the Kuskokwim River that flows through the Yukon Delta National Wildlife Refuge and supports all Pacific salmon species, but has experienced disrupted hydrological flow from mining in and near the river, which has possibly decreased available habitat for the salmon returning to the river. The data collected from the Tuluksak River weir is a data component in the drainage-wide assessment for management of Chinook Salmon in the Kuskokwim River. It is one of the two weirs located in the lower section of the Kuskokwim River that are used to monitor escapement (with the other being the Kwethluk). Although it is small in magnitude as compared to overall escapement and does not greatly influence management of the aggregate Chinook Salmon stock in the Kuskokwim River, one of the Yukon Delta Wildlife Refuge's purposes as mandated by Congress is to preserve the natural diversity of species located within Refuge boundaries. Since the Tuluksak River Chinook Salmon sub-stock is a component of the much larger Kuskokwim Chinook Salmon stock, the weir allows for the monitoring of the smaller sub-stock and provides information to the Refuge if a management action is needed to protect the sub-stock in the future. The protection of the sub-stock could be needed in the future as the number of Chinook Salmon returning to the Tuluksak River has dropped substantially since 2007 (pre-2007 ~ 1,549 fish, post-2007 ~ 461 fish).

Technical merit is high with clear, measurable, and achievable objectives. The project uses proven weir methodology that utilizes a resistance board weir affixed with an underwater video camera that spans a 60 meter section of the Tuluksak River approximately 49 river kilometers upstream from the confluence of the Kuskokwim River. The weir was in operation from 1991 through 1994 and then from 2002 to present. The previously funded projects had objectives that enumerated all salmon species in the Tuluksak River, while the current proposed project only enumerates Chinook and Chum Salmon. Age, sex, and length information will be collected on Chinook and Chum Salmon. Sampling would follow established and technically sound methods developed by ADF&G and USFWS for estimating salmon ASL composition. Data gathered from the project for Chinook Salmon is utilized to measure lower river escapement in the Kuskokwim River drainage-wide Chinook Salmon assessment. Biological data obtained from the escapement data is then used in the spawn-recruit analysis for Kuskokwim River Chinook Salmon, which is used to help set drainage-wide escapement goals. This project addresses the

2018 Priority Information Need for the Kuskokwim Region for *reliable quantitative and/or qualitative estimates of salmon escapements and/or harvests*. The project also marginally addresses the 2018 Priority Information Need for the Kuskokwim Region for methods including *"quality of escapement" measures in establishing Chinook Salmon spawning goals and determining the reproductive potential and genetic diversity of spawning escapements*.

The principal investigator has supplied a resume and has participated in numerous Fisheries Resource Monitoring Program funded project in the past, including being the Principal Investigator for the Tuluksak. The project has multiple letters of support from varying local, Federal, and independent entities, Tuluksak Native Community (TNC), Organized Village of Kwethluk (OVK), Native Village of Napaimute (NVN), Association of Village Council Presidents (AVCP), Orutsararmiut Native Council (ONC), and the Kuskokwim Watershed Council (KRWC). The project also plans on hiring one rural Alaskan technician each season as a local hire, as well as an Alaska Native Science and Engineering Program (ANSEP) student. However, no budget or letter of support for an ANSEP student is provided in the project documentation.

Detailed budget tables and budget justifications were provided by the investigators. The average annual cost of the project is $96,295, with the total cost of the project over four years being $385,180. This project was previously funded in 2014 (14-306) at an average yearly cost of $184,239, with a four year total cost of $784,448.The 2018 total costs are approximately 51% smaller than the 2014 total costs. The reduction in costs is primarily associated with the reduction in the amount of time the weir will be in operation and reduction from four weir operations staff to two weir operations staff.

TRC Score: 5 (tied)
Project Number: 18-305
Project Title: Kuskokwim River Sonar

TRC Justification: The funding requested is to enable ADF&G to continue annual sonar operations during the month of August to enumerate the annual Coho Salmon run in the Kuskokwim River. From 2014-2016, ADF&G conducted a feasibility study using sonar in combination with drift-gillnetting to estimate salmon abundance in the Kuskokwim River. As a result of the successful completion of the feasibility study, ADF&G has secured long-term funding for continued sonar operations; however, the existing budget is only adequate to operate the project through the overlapping Chinook, Chum, and Sockeye Salmon runs. The proposed project can also indirectly improve our knowledge on whitefish species abundance (although not specifically stated as an objective of the project). The proposal also seeks transportation and lodging funds to allow four trips per year (8 total) in order for local representatives to visit the project where they will be exposed to the daily sonar operations at the field camp. By funding this proposed project, all Pacific salmon species utilized in the subsistence fishery in the Kuskokwim River will be monitored via sonar at the confluence of the Kuskokwim River and Church Slough.

This project addresses the 2018 Priority Information Need for the Kuskokwim Region for *reliable quantitative and/or qualitative estimates of salmon escapements and/or harvests*. Data collected from

this project will result in more reliable and timelier estimates of Coho Salmon abundance for the Kuskokwim River drainage. The project could eliminate the need to calculate Coho Salmon abundance through the run-reconstruction model. Daily results would provide real-time abundance data and timing information to fishery managers, which would allow for better informed decisions with regards to harvest opportunities for local subsistence users. All of the information from this project will help assess the effects of increased Coho Salmon harvest on the Coho Salmon run in the Kuskokwim River, given the restrictions in Chinook Salmon harvest since 2012. This project is even more important given that two weirs in the lower Kuskokwim River (Kwethluk and Tuluksak) will not be monitoring Coho Salmon escapement if funding is approved for those two projects through the Monitoring Program process this year. The project also will help the managers for salmon in the Kuskokwim River transition slowly away from the Bethel Test Fishery as the standardized methodology the sonar provides makes year to year comparisons of run size more reliable.

Technical merit is high with clear, measurable, and achievable objectives. Investigators are all highly skilled and the plans for this project have been discussed with all State, local, rural, and tribal management groups in the area. In turn, each of these groups have provided a letter of support (Kuskokwim River Salmon Management Working Group, Kuskokwim River Inter-Tribal Fish Commission, Bethel Fish and Game Advisory Committee, the Native Village of Napaimute, and the Yukon Delta National Wildlife Refuge). The sonar methodology outlined in the proposal has proven to be a valuable tool for estimating run-timing and daily abundance of annual salmon runs to large Alaskan rivers similar to the Kuskokwim River. Similar methods are used on the Yukon, Kenai, and Cooper rivers.

The sonar site is located on land owned by the Native Village of Kwethluk. To show their support for the sonar project, the Kwethluk Tribal Council issued permits for the feasibility work conducted in 2015 and 2016 and has agreed to issue a five-year land use permit for constructing a sonar camp. Fish harvested in the sonar test fishery will be donated to local communities through the Kwethluk Tribal Council and the Orutsararmiut Native Council, which will be similar to what is currently done in the Bethel Test Fishery.

No local hires or student interns will be hired to assist with project management or fieldwork for the length of the project. In order to promote capacity building with management advisory groups, all members of the Working Group, Fish Commission, in-season managers, and Refuge staff will be invited to visit the sonar project while in operation.

Detailed budget tables and budget justifications were provided by the investigators. The average annual cost of the project is $97,202, with the total cost of the project over four years being $388,809. ADF&G proposes $55,492 in matching funds, which is approximately 14% of the total cost of the project.

TRC Score: 6 (tied)
Project Number: 18-352
Project Title: Support for Cooperative Management of the Kuskokwim River Subsistence Salmon Fishery

TRC Justification: This project supports the activities of the Kuskokwim River Salmon Management Working Group. The Working Group is considered to be a successful model of collaboration, and it provides a much needed public forum in which rural subsistence fishers and other stakeholders meet and have discussions with State and Federal fishery managers regarding salmon subsistence, commercial, and sport fisheries. The Working Group reaches a consensus on how to proceed with management. The size of recent Chinook Salmon runs into the Kuskokwim River drainage have been some of the lowest on record resulting in fishery managers implementing harvest restrictions. Drainage residents are highly dependent on local salmon runs. The lower Kuskokwim River drainage, where most people living in the Kuskokwim Area reside, is encompassed by the Yukon Delta National Wildlife Refuge. The drainage stretches to parts of Denali National Park and Preserve and Lake Clark National Park and Preserve.

This project does not address a priority information need for the Kuskokwim Region as identified in the 2018 Notice of Funding Opportunity. However, activities of the Working Group have been a major feature of collaborative management for almost three decades.

The investigator is qualified to conduct the project and provided a resume. The investigation plan is well-written and complete. The budget request has increased significantly by 59% since 2014. The average annual cost of the request is $104,042. Investigators are requesting funding for 70% of overall costs for this long-term project, and cost sharing has gone down significantly from previous funding cycles when ADF&G contributed more to the support of its staff.

TRC Score: 6 (tied)
Project Number: 18-300
Project Title: Kuskokwim River Broad Whitefish

TRC Justification: Broad whitefish are an important subsistence species in the Kuskokwim River region and are presumed to be heavily utilized by Federally-qualified subsistence users within the Yukon Delta National Wildlife Refuge, as well as, other locations in the Kuskokwim River drainage. Local users have expressed concerns that numbers have decreased and some populations may be over-exploited; however, population demographics and harvest data are very limited in the upper Kuskokwim River.

This project addresses two Priority Information Needs identified by the Monitoring Program, which are as follows: (1) Traditional ecological knowledge or other knowledge of whitefish in the Kuskokwim River drainage, especially in lower and middle Kuskokwim River communities and (2) a spatially robust indexing method for estimating species-specific whitefish harvest on an annual basis for the Kuskokwim River drainage. The proposed project also addresses a priority research need identified in the Office of Subsistence Management-funded *Strategic Plan for Research of Whitefish Species in the Yukon and Kuskokwim River Drainages in Alaska*.

Methodology is sound and objectives are clear, measurable, and achievable. If properly done, this project could provide more information about Broad Whitefish in the Kuskokwim River than any other project done to date. This is because the methodologies used in the project can simultaneously estimate abundance, exploitation rates, and population demographics through the combination of mark-recapture

and mark-recovery techniques. This project would also lend insight the frequency of "skip-spawning" that has been identified to occur in the Broad Whitefish population in the Kuskokwim River.

Both of the co-investigators, the Native Village of Napaimute and the Orutsararmiut Native Council play meaningful roles in the project as they are integral components in achieving the first objective of the project, which is to "estimate subsistence exploitation rates in the lower, middle, and upper Kuskokwim River for Broad Whitefish". The co-investigators for this project are from the lower and middle Kuskokwim River, where a majority of the Broad Whitefish subsistence harvest comes from; thus, their works in providing outreach and communication about the project is important.

Detailed budget tables were provided by the investigators. The budget justification is extremely detailed. The average annual cost of the project is $153,469, with the total cost of the project over four years being $613,877. The level of requested funding is justifiable when considering the large geographic scale of the study and given the potential diversity of results that will add substantially to the knowledge of Broad Whitefish exploitation, abundance, and population demographics in the Kuskokwim River.

TRC Score: 7
Project Number: 18-301
Project Title: Inferring Production Patterns of Kuskokwim River Chinook Salmon Using Otolith Microchemistry and River Isoscapes

TRC Justification: The proposed project is seeking to quantify the production patterns and life-history strategies of Kuskokwim River Chinook Salmon at spatial and temporal scales relevant to fisheries management. The project would do this by generating a geo-spatial model of strontium isotope signatures collected from water samples collected throughout the Kuskokwim River drainage. This new model then would be able to reapportion Chinook Salmon harvested in the lower portion of the Kuskokwim River based on strontium isotope signatures found in otoliths collected from the harvested Chinook Salmon in the subsistence fishery or at the Bethel Test Fishery. This analytical framework can then be used to assess inter-annual variability in production and how this production varies with environmental variation or fishery harvests. The same type of work has been done in the Nushagak River in the Bristol Bay system and the same working is currently being done in the Yukon River. These new assessments then could help guide in-season management decisions once completed.

This project involves the collaborations of many Federal, State, and University entities (ADF&G, USGS, USFWS, the University of Washington, and the University of Utah). The project does not have any letters of support from any State, Federal, Tribal, or independent entities, nor are any of the investigators part of any rural organization. There is no plan to hire any local hires for the project. The investigators indicate that they will take advantage of the capacity building plan that is in place through AYKSSI funded projects in order to communicate the importance and implications of the work produced in the proposal. The investigators offer to inform communities of the project and its findings and members of the research team will offer to make annual presentations at the annual meetings of the Association of Village Council Presidents (AVCP) in Anchorage and Bethel, as well as at the Kuskokwim Area Interagency meeting.

This project is highly technical and the investigators are well regarded in their research fields. Similar high quality work has been successfully completed for Chinook Salmon stocks within the Nushagak River. The investigators are also doing similar work for Chinook Salmon stocks within the Yukon River. The overall results produced by the project could provide important insights that can be used to develop and implement effective management and conservations strategies given uncertainty in Chinook Salmon populations within the Kuskokwim River.

Detailed budget tables and budget justifications were provided by the investigators. The average annual cost of the project is $205,802, with the total cost of the project over four years being $823,207. The price of the project is high, with each year's cost being within 10% of the $215,000 cap.

APPENDIX A

Table A.1. Fisheries Resource Monitoring Program projects funded in the Kuskokwim Region from 2000 to 2016.

Project Number	Project Title	Investigators
	Kuskokwim River Salmon	
00-007	Tatlawiksuk River Salmon Weir	ADF&G, KNA
00-008	Bethel Inseason 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 Inseason 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 Inseason 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 Inseason 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
04-306	Holitna River Chinook and Chum Salmon Telemetry	ADF&G
04-307	Kuskokwim Age-Sex-Length Sampling	ADF&&G
04-308	Kalskag Salmon Mark-Recapture	ADFG
04-309	Kuskokwim Native Association Internship Program	KNA

Continued on next page

Table A.1 continued

Project Number	Project Title	Investigators
	Kuskokwim River Salmon (continued)	
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 Inseason 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 Inseason Subsistence Harvest Data Collection	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 Inseason 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 Inseason Harvest Monitoring	ADF&G
12-302	Lower Kuskokwim River Subsistence Chinook Salmon Harvest ASL	ADF&G, ONC
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

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Table A.1 continued

Project Number	Project Title	Investigators
	Kuskokwim River Salmon (continued)	
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	USFS
14-352	Kuskokwim Area Salmon Post-season Subsistence Harvest Surveys	ADF&G
14-353	Kuskokwim River Salmon Inseason Subsistence Survey	ADF&G
14-354	Kuskokwim River Support for Cooperative Management	ADF&G
16-301[a]	Lower Kuskokwim River Subsistence Chinook Salmon Harvest ASL	ADF&G, ONC
16-302[a]	Salmon River of the Pitka Fork Weir	ADF&G, MTNT
16-351[a]	Middle Kuskokwim River In season Subsistence Salmon Harvest Monitoring and Estimation	ADF&G, NVN
	Resident Species	
01-052	Whitefish Lake Humpback & Broad Whitefish	USFWS, KNA
01-112	Aniak River Subsistence Fisheries Study	ADF&G, KNA
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 Non-salmon Harvest and TEK	ADF&G, AVCP
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
14-301	Kuskokwim River Broad Whitefish Spawning above McGrath	USFWS
14-307	Upper Kuskokwim River Sheefish Enumeration	USFWS
14-356	Lower Kuskokwim Villages Whitefish	UAA
16-303[a]	Enumeration and spawning area characterization of Sheefish in the Upper Kuskokwim River	ADF&G

a = On-going projects during 2017.
Abbreviations: **ADF&G** = Alaska Department of Fish and Game, **AVCP** = Association of Village Council Presidents, **BC** = Bue Consulting, **BSFA** = Bering Sea Fisherman's Association, **KNA** = Kuskokwim Native Association, **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, **UAA** = University of Alaska Anchorage, **USFS** = U.S. Forest Service, and **USFWS** = U.S. Fish and Wildlife Service.

APPENDIX B

The following abstracts were written by the Principal Investigators and submitted to the Office of Subsistence Management as part of the proposal package. The statements and information contained in the abstracts were not altered and they may not reflect the opinions of the Office of Subsistence Management or the Technical Review Committee.

Project Number: 18-301
Title: Inferring production patterns of Kuskokwim River Chinook Salmon using otolith microchemistry and river isoscapes
Geographic Region(s): Kuskokwim Region
Data Type: Stock Status and Trends (SST)
Principal Investigator: Daniel Schindler (University of Washington)
Co-Investigator(s): Zachary Liller (Alaska Dept. of Fish & Game), Lewis Coggins (US Fish and Wildlife Service), Christian Zimmerman (US Geological Survey), Diego Fernandez (University of Utah), Sean Brennan (University of Washington).

Cost:	**2018:** $211,019	**2019:** $196,014	**2020:** $205,239	**2021:** $209,935
Total: $823,207				

Issue: Kuskokwim River Chinook Salmon have experienced critically low returns during the last decade, critically challenging the health, culture, and economies of subsistence-based human communities within this vast watershed. The Kuskokwim Region represents the largest subsistence fishery in Alaska, and is one of the largest in North America. However, fundamental knowledge gaps concerning the ecology of its Chinook Salmon populations remain but are critical to their effective management. In particular, it is unknown how Chinook Salmon production is distributed across the Kuskokwim's diverse tributaries and habitats, and how these production patterns change over time in response to climate forcing, industrial development (e.g., mining activity), and fishery interceptions during subsistence harvests in the lower river. Also unclear is the extent to which juvenile salmon exhibit different life history strategies during their early life phase within the freshwater environment, and how these translate to adult recruitment. Heterogeneity in both of these aspects of Chinook Salmon biology impart resilience to populations to environmental change by distributing the risk of poor performance, or production, across a variety of distinct sub-populations, habitats, and life-history strategies. We currently lack the tools to easily delineate how production patterns change over time across this vast and diverse watershed.

Objectives: Here, we propose to apportion the production of Chinook Salmon returning to the Kuskokwim River annually for the years 2018-2021 using strontium isotope records within the otoliths of these fish. Otoliths represent a life-long record of the movements of migratory fish through different habitats; strontium isotopes have proven to be a particularly powerful tracer to discern the natal sources and life history strategies of Chinook Salmon.

Methods: Using a Bayesian assignment framework, we will employ a strontium isotope baseline to determine the natal origins and freshwater movements of fish caught in the Bethel Test Fishery (BTF)

annually, run by the Alaska Department of Fish and Game, based on a match between the strontium isotopes recorded in their otoliths and the spatial variation that exists across the watershed.

Outcomes: This information can then be used to inform stock assessments that are currently hampered by a distinct lack of data describing the distribution of returning fish among tributary populations. Overall, the result will be an annual reconstruction of the relative production patterns of Chinook Salmon at fine spatial scales and their life-history strategies. Such insights will provide a framework to quantify the inter-annual variation that characterizes these two fundamental aspects of Chinook Salmon biology at multiple spatial and temporal scales and how they contribute to the overall stock portfolio of Kuskokwim River Chinook Salmon. Doing so is a first and necessary step to evaluate i) how environmental changes may affect the productivity of Kuskokwim River Chinook Salmon into the future, and ii) the trade-offs between harvests and the conservation of Chinook Salmon biodiversity.

Partnerships/Capacity Building: This project is a unique collaboration between academia and the state and federal agencies in charge of monitoring and managing Kuskokwim River Chinook Salmon. Our work will improve stock assessments needed for sustainable management of this subsistence resource.

Project Number: 18-302
Title: Kwethluk River Salmon Run Timing and Abundance
Geographic Region: Kuskokwim Region
Data Type: Stock Status and Trends
Principal Investigator: Ken Harper and Aaron Webber, USFWS Kenai FWCO, Aaron Moses, USFWS Yukon Delta NWR

Cost:	**2018:** $189,752	**2019:** $189,058	**2020:** $188,521	**2021:** $187,477
Total: $754,808				

Issue: This project focuses on two of the identified priority information needs for the Kuskokwim Region of the 2018 Fisheries Resource Monitoring Plan Priority Information Needs: Reliable qualitative and/or quantitative estimates of salmon escapements and/or harvests, and methods for measuring quality of escapement. This project will collect salmon escapement numbers, run timing, age, sex, and length data, all of which are vital for managers for run reconstructions and inseason management. Monitoring of salmon returns to the Kwethluk River is essential to ensuring that Federal conservation mandates are fulfilled within the Yukon Delta National Wildlife Refuge (Alaska National Interest Lands Conservation Act (Section 303 (7) (8) a, b, c). Escapement monitoring also helps ensure that subsistence harvest needs will be met.

Objectives:

1. Enumerate the daily passage and characterize the run timing of Chinook and Chum Salmon.
2. Estimate the weekly sex and age composition of Chinook and Chum Salmon such that the simultaneous 95% confidence intervals have a maximum width of 0.2.

3. Estimate the mean length of Chinook and Chum Salmon by sex and age such that the simultaneous 95% confidence intervals have a maximum width of 0.2.
4. Identify and count other fish species passing through the weir and enumerate salmon carcasses passing back over the weir.

Methods: The USFWS will operate a resistance board weir affixed with an underwater video system in the Kwethluk River approximately 88 river kilometers upstream from the confluence with the Kuskokwim River. Enumeration of salmon will occur between mid-June and August 15. Daily escapement counts will be relayed to staff daily, thus contributing to daily in-season management decisions. Data on fish age, sex, and length will be collected weekly. Sampling consists of measuring length, determining sex, collecting scales, examining fish for gill net marks, and then releasing the fish upstream of the weir. Days with partial or zero counts will be considered incomplete and estimates will be calculated for those dates.

Partnerships/Capacity Building: We will provide an opportunity for up to 5 elders from Kwethluk each year to have an "Elders Tour". We will transport them to the weir, tour the site, provide an opportunity for them to help with hands-on sampling of salmon, share a nice meal, and return them back to their homes. We hope this experience will eliminate misconceptions some elders have about negative consequences of weirs to salmon, and by so doing, positively influence other village residents who form opinions based on the experience of the elders. We will also visit other villages and give presentations at rural schools about subsistence issues as an outreach tool. In addition, we will hire, train, and mentor one technician and one ANSEP student from local rural villages to work at the weir each year. We hope these technicians use that experience to become more involved in their communities, such as being active on their local RAC.

Project Number: 18-303
Title: Tuluksak River Salmon Run Timing and Abundance
Geographic Region: Kuskokwim Region
Data Type: Stock Status and Trends
Principal Investigator: Ken Harper and Aaron Webber, USFWS Kenai FWCO, Aaron Moses, USFWS Yukon Delta NWR

Cost:	**2018:** $93,953	**2019:** $99,153	**2020:** $96,320	**2021:** $95,754
Total: $385,180				

Issue: This project focuses on two of the identified priority information needs for the Kuskokwim Region of the 2018 Fisheries Resource Monitoring Plan Priority Information Needs: Reliable qualitative and/or quantitative estimates of salmon escapements and/or harvests, and methods for measuring quality of escapement. This project will collect salmon escapement numbers, run timing, age, sex, and length data, all of which are vital for managers for run reconstructions and inseason and post-season management. Monitoring of salmon returns to the Tuluksak River is essential to ensuring that Federal conservation mandates are fulfilled within the Yukon Delta National Wildlife Refuge (Alaska National Interest Lands Conservation Act (Section 303 (7) (8) a, b, c). Escapement monitoring also helps ensure that subsistence

harvest needs will be met.

Objectives:

1. Enumerate the daily passage and characterize the run timing of Chinook and Chum Salmon.
2. Estimate the weekly sex and age composition of Chinook and Chum Salmon such that the simultaneous 95% confidence intervals have a maximum width of 0.2.
3. Estimate the mean length of Chinook and Chum Salmon by sex and age such that the simultaneous 95% confidence intervals have a maximum width of 0.2.
4. Identify and count other fish species passing through the weir and enumerate salmon carcasses passing back over the weir.

Methods: The USFWS will operate a resistance board weir affixed with an underwater video system in the Tuluksak River approximately 49 river kilometers upstream from the confluence with the Kuskokwim River. Enumeration of salmon will occur between mid-June and August 1. Daily escapement counts will be relayed to staff daily, thus contributing to daily in-season management decisions. Data on fish age, sex, and length will be collected weekly. Sampling consists of measuring length, determining sex, collecting scales, examining fish for gill net marks, and then releasing the fish upstream of the weir. Days with partial or zero counts will be considered incomplete and estimates will be calculated for those dates.

Partnerships/Capacity Building: We will provide an opportunity for up to 5 elders from Tuluksak each year to have an "Elders Tour". We will transport them to the weir, tour the site, provide an opportunity for them to help with hands-on sampling of salmon, share a nice meal, and return them back to their homes. We hope this experience will eliminate misconceptions some elders have about negative consequences of weirs to salmon, and by so doing, positively influence other village residents who form opinions based on the experience of the elders. We will also visit other villages and give presentations at rural schools about subsistence issues as an outreach tool. In addition, we will hire, train, and mentor one technician from a rural village to work at the weir as a local hire each year. We hope these technicians use that experience to become more involved in their communities, such as being active on their local RAC.

Project Number: 18-304
Title: George River Salmon Weir
Geographic Location: Kuskokwim Region
Data Type: Stock Status and Trends
Principle Investigator: Jordan M Head, Alaska Department of Fish and Game (ADF&G)
Co-Investigators: Zachary Liller ADF&G and Dan Gillikin Native Village of Napaimute

Cost:	**2018**: $214,853	**2019**: $179,473	**2020**: $186,752	**2021**: $145,414
Total: $726,492				

Overview of need: We propose to continue operations of a weir on the George River to index Chinook (*Oncorhynchus tshawytscha*), Chum (*O. keta*), and Coho Salmon (*O. kisutch*) escapement to the middle

portion of the Kuskokwim River drainage, as well as conduct a high school internship program as part of our long-term efforts to build local capacity. Our proposal is in response to the priority information needs identified in the 2018 FRMP request for proposals to obtain reliable quantitative estimates of salmon escapements and estimate the age-sex-length composition of the escapement. This proposal would continue a 21 year dataset used to evaluate the size and composition of Chinook, Chum, and Coho Salmon escapements to the middle Kuskokwim River. Annual monitoring is needed to evaluate if escapements are within the bounds of the established George River Chinook Salmon escapement goal. The success of the George River weir has made it an integral component of the broader salmon escapement monitoring program on the Kuskokwim River. Apart from its utility to the management of the Kuskokwim River subsistence fishery, the George River weir has been important in fostering community awareness, understanding, and direct involvement in fisheries assessment. Since 2005, the George River weir has been the site of high school mentorship and college internship programs sponsoring hundreds of high school age students and multiple college interns from throughout the Kuskokwim Region. The internship program has proven to be highly successful. In recent years, a majority of fisheries technicians and crew leaders working on Kuskokwim River weir projects are past graduates of the high school and college internship programs. Several are currently pursuing degrees in fisheries science.

Project Goals and Objectives: Our overall project goals are to index escapement of Chinook, Chum, and Coho Salmon to the middle portion of the Kuskokwim River drainage and provide capacity building and education opportunities for local stakeholders. Specific objectives of this project are to:

1. Estimate the daily and total annual Chinook, Chum, and Coho Salmon escapements from 15 June to 20 September;
2. Estimate age-sex-length composition of the annual Chinook, Chum, and Coho Salmon escapements to the George River such that 95% confidence intervals of age composition will be no wider than ±10% (a=0.05, d=0.10);
3. Foster local interest in natural resource management and field biology, and expose high school students to employment and post-secondary education possibilities.

Specific project activities: We will conduct daily visual counts of salmon escapement to the George River from 15 June to 20 September and collect age-sex-length samples from 230 Chinook Salmon, 400 Chum Salmon, and 400 Coho Salmon throughout the run in proportion to run abundance. All data will be uploaded to a publicly accessible database and made available weekly at inseason meetings to inform fisheries management decisions. Final results will be published in the ADF&G Fishery Data Series. An 8 day internship will be provided for up to 10 students.

Anticipated outputs and outcomes: Escapement estimates from the George River Weir will be used as data input for run reconstruction models used to estimate total annual abundance and escapement of Chinook and Coho Salmon returning to the Kuskokwim River. Annual Chinook Salmon escapement to the George River will be evaluated relative to an established sustainable escapement goal. Annual Chum and Coho escapements to the George River will be compared to historical observations to monitor the

adequacy of escapement of those species. Age-sex-length data will be used to reconstruct brood year production and monitor escapement composition relative to the total run and harvest.

Project Number: 18-305
Title: Kuskokwim River Sonar
Geographic Location: Kuskokwim Region
Data Type: SST
Principle Investigator: Nicholas J. Smith, Alaska Department of Fish and Game
Co-Investigators: Zachary Liller and Carl T. Pfisterer, Alaska Department of Fish and Game

Cost:	**2018**: $95,590.59	**2019**: $98,870.30	**2020**: $95,739.04	**2021**: $98,609.55
Total: $338,809.48				

Overview of need: We propose to use sonar and drift gillnet apportionment methods to estimate daily and total abundance of adult salmon species (*Oncorhynchus sp.*) returning to the Kuskokwim River. Our proposal is in direct response to the need for inseason abundance estimates for all salmon species and is consistent with Alaska Department of Fish and Game's (ADF&G) strategic plan towards integrating a sonar-based salmon assessment program within the current suite of Kuskokwim River assessment projects. Towards that goal, ADF&G has secured long-term funding for sonar operations, but the existing budget is only adequate to operate the project through the overlapping Chinook (*O. tshawytscha*), Chum (*O. keta*), and Sockeye (*O. nerka*) Salmon runs. Coho Salmon (*O. kisutch*) enter the Kuskokwim River beginning in late July, after the migration of other species has all but ended. By the end of July, only about 20% of the Coho Salmon run has passed through the lower river, where most harvest occurs. Our request would continue annual sonar operation during the month of August to enumerate the annual Coho Salmon run. Our proposal addresses the priority information needs identified for the Kuskokwim Area by providing *reliable quantitative estimates of salmon escapements* for the entire Kuskokwim River, which are easily obtained from total run and harvest estimates.

Project Goals and Objectives: The overarching goal of the Kuskokwim River sonar project is to estimate daily and total abundance of Chinook, Chum, Sockeye, and Coho Salmon near Bethel and provide those estimates to State and Federal fisheries managers inseason to inform sustainable fisheries management. Towards that goal, SOA has secured long-term funding to operate the sonar program during June and July annually to assess the overlapping Chinook, Chum, and Sockeye Salmon runs. This proposal seeks to continue project operations through August, to meet the following specific objective: Estimate the daily and total passage of Kuskokwim River Coho Salmon at rkm 130 through August 24, 2018, 2019, 2020, and 2021.

Specific project activities: We propose to use sonar and drift gillnet apportionment methods on the mainstem Kuskokwim River just upriver from Bethel to estimate daily and total number of adult Coho Salmon through August 24, 2018, 2019, 2020, and 2021. Sonar data files will be processed using software developed by ADF&G. A drift gillnet test fishery that overlaps the ensonified areas will be used to apportion abundance estimates to species. ADF&G/CF staff will maintain all physical and electronic data

produce tabular and graphical summaries for the use by State and Federal managers and advisory groups engaged in inseason salmon management. Abundance estimates will be updated daily in the publicly accessible Arctic Yukon Kuskokwim Database Management System and ADF&G Fish Counts Page.

Anticipated outputs and outcomes: Project results are expected to influence inseason management decisions by providing the first ever reliable daily estimates of abundance near the dominant fishery. This information will be used by managers within formal and informal decision making frameworks to evaluate management options and execute the fishery. Final project results will be published in the ADF&G Fishery Data Series.

Project Number: 18-350
Title: Bethel Subsistence Harvest Surveys
Geographic Region: Kuskokwim Region
Data Type: Harvest Monitoring, Stock Status and Trends
Principal Investigator: Janessa Esquible
Co-Investigators: Greg Roczicka ONC, Zachary Liller ADF&G

Cost:	**2018**: $67,662	**2019**: $66,487	**2020**: $67,994	**2021**: $67,559
Total: $271,702				

The proposed project will collect detailed quantitative subsistence harvest and age-sex-length (ASL) information in the Bethel area to quantify subsistence harvest effort and catch composition during the Chinook Salmon (*Oncorhynchus tshawytscha*), Chum Salmon (*Oncorhynchus keta)* and Sockeye (*Oncorhynchus nerka)* Salmon runs. Data collected in this project addresses several 2018 priority information needs by providing reliable quantitative estimates of salmon harvests and documenting the extent that subsistence fish are shared among the people of the lower Kuskokwim River. This project will also provide information that could be used for measuring quality of escapement with the collection of Chinook Salmon ASL data as it may apply to state and federal management considerations for the subsistence fishery. Subsistence harvest information will be collected through weekly visits to surrounding

Bethel fish camps and opportunistic encounters at the Bethel boat harbor in the months of June and July. ASL information will be obtained through concerted recruitment efforts of 50 fishermen in the Bethel area that will voluntarily sample their Chinook Salmon harvest. Project objectives are as follows:

1. Describe Bethel area subsistence users' annual harvest goals for Chinook, Chum and Sockeye Salmon, determine the relative change in harvest goals compared to the prior year, and monitor weekly progress towards achieving annual harvest goals.
2. Document subsistence fishing activity in the Bethel area, including: when families begin subsistence fishing, weekly participation, catch per unit effort by gear type, and catch composition.

3. Estimate the annual ASL composition of Chinook Salmon harvested in the Bethel area subsistence fishery.

The overarching goal of this proposed project is to provide state and federal managers with relevant subsistence fishing effort and catch information. This information is collected from a representative subset of families, which are identified as "work groups" who harvest salmon for subsistence purposes in the Bethel Area. Continuous contact with subsistence fishing work groups in June and July provides a meaningful opportunity for subsistence users to share their perspectives on the annual salmon runs, harvest needs, and personal impacts of management decisions. Inseason subsistence harvest data can also be utilized to inform inseason harvest models and decisions while also serving as a time-series that provide insight into trends in gear usage, fishing effort and subsistence fleet timing. These long-term datasets can ultimately improve our understanding of Chinook Salmon subsistence harvest patterns and the resulting impact on escapement and run dynamics. All goals and outcomes will be achieved through a collaborative effort between Orutsararmiut Native Council and Alaska Department of Fish & Game to collect, process, and analyze all data.

Project Number: 18-351
Title: Kuskokwim Area Salmon Post Season Subsistence Harvest Surveys (continuation of FRMP #14-352)
Geographic Location: Kuskokwim Region
Data Type: Harvest Monitoring, Stock Status/Trends
Principal Investigator: Aaron Tiernan, Alaska Department of Fish and Game (ADF&G)
Co-Investigators: Toshihide Hamazaki**,** ADF&G and Janessa Esquible, Orutsararmiut Native Council

Cost:	**2018**: $206,568	**2019**: $205,751	**2020**: $214,659	**2021**: $213,247
Total: $840,225				

The Alaska Department of Fish and Game (ADF&G) in partnership with Orutsararmiut Native Council (ONC) in Bethel propose to conduct a voluntary survey program to estimate subsistence salmon harvest for the Kuskokwim Management Area. Harvest information will be collected through postseason household interviews and harvest calendars. Simple random sampling and stratified random sampling techniques will be used, based on community size and user group designations, to select households to be interviewed. For the community of Bethel, subsistence salmon harvest information will be collected by ONC, and ADF&G will survey the remaining communities in the Kuskokwim Management Area.

This proposal would continue a 26 year dataset of the subsistence salmon harvests and would also continue to build upon the dataset of white fish harvests in the Kuskokwim Area. Currently there are no annually required subsistence harvest permits or reporting requirements for salmon harvest in the Kuskokwim Area. This project provides the only estimate of salmon harvest in these areas. Since 2008 the Kuskokwim Subsistence Salmon Monitoring Program has been estimating subsistence harvest, primarily through household surveys and to a lesser extent harvest calendars and post card surveys.

This information has been critical for Alaska Department of Fish and Game (ADF&G), U. S. Fish and Wildlife Service (FWS), the Alaska Board of Fisheries, and the Federal Subsistence Board to manage the fishery and provide a reasonable opportunity for continued customary and traditional uses of salmon throughout the region. This harvest Monitoring Program has partnered with Orutsararmiut Native Council (ONC) in Bethel since 1999.

This project provides managers with critical information for effective stewardship of subsistence salmon resources in the Kuskokwim Area and associated federal conservation units. Data provided by this project are the basis for the development of Amounts reasonably Necessary for Subsistence (ANS) for salmon, and for assessing whether these needs have been met.

Beyond serving as a measure for ANS, data collected during this survey contributes a vital input to state, federal, and tribal fisheries managers for Kuskokwim Area salmon stocks. Quantifying subsistence harvest has been an essential data element of recent salmon reconstructions, run reconstructions, and stock assessment; this project allows for the development of productivity models of salmon species that are then used in every aspect of salmon resource management, including preseason forecasting, inseason management, post season assessment, and the definition of escapement goals.

Project Number: 18-352
Title: Support for Cooperative Management of the Kuskokwim River Subsistence Salmon Fishery (continuation of FRMP #14-354)
Geographic Location: Kuskokwim Region
Data Type: Stock Status Trends (SST), Harvest Monitoring (HM), Traditional Ecological Knowledge (TEK)
Principal Investigator: Aaron Tiernan, Alaska Department of Fish and Game (ADF&G)

Cost:	**2018**: $118,596	**2019**: $102,856	**2020**: $106,566	**2021**: $88,151
Total: $416,169				

The Alaska Department of Fish and Game is proposing for the continued support of The Kuskokwim River Salmon Management Working Group (Working Group). The Working Group is made up of 13 member seats (held by one member with one or more alternates), each representing a group of salmon resource users with interest in Kuskokwim River salmon: two elder seats (Upriver, Downriver), four subsistence fisher seats (Lower River, Middle River, Upper River, and Headwaters), one commercial processor representative, one commercial fisherman's representative, one sport fisherman's representative, one Member at Large, two Federal Subsistence RAC members (Yukon-Kuskokwim Delta, Western Interior), and ADF&G. This group provides a forum by which ADF&G, USFWS, and area salmon resource users representing subsistence, commercial, sport fishing interests, and federal advisory councils meet to discuss, collaborate and co-manage salmon resources in the Kuskokwim River drainage. In addition, everyone is able to gain detailed information and context on the current status of Kuskokwim River salmon runs, salmon utilization, and management decisions as they happen.

The State of Alaska, Department of Fish and Game (ADF&G) and the U.S. Fish and Wildlife Service (USFWS) participate in cooperative management of subsistence salmon resources in the Kuskokwim area. The Kuskokwim River Salmon Management Working Group (Working Group) participates in this process as an advisory body under direction from the Alaska State Board of Fish (BOF). This project supports the proceedings of the Working Group and directly affects subsistence salmon fisheries that occur within the waters of the Yukon Delta National Wildlife Refuge conservation unit.

FISHERIES RESOURCE MONITORING PROGRAM
YUKON REGION OVERVIEW

Since the inception of the Monitoring Program in 2000, 114 projects have been undertaken in the Yukon Region for a total of $20.6 million (**Figure 1**). Of these, the State of Alaska conducted 26 projects, the Department of the Interior conducted 49 projects, Alaska Rural organizations conducted 19 projects, and other organizations conducted 20 projects (**Figure 2**). Eighty-six projects were Stock, Status, and Trends (SST), and 28 projects were Harvest Monitoring and Traditional Ecological Knowledge (HMTEK). A list of all Yukon Region Monitoring Program projects from 2000 to 2016 is provided in **Appendix A**.

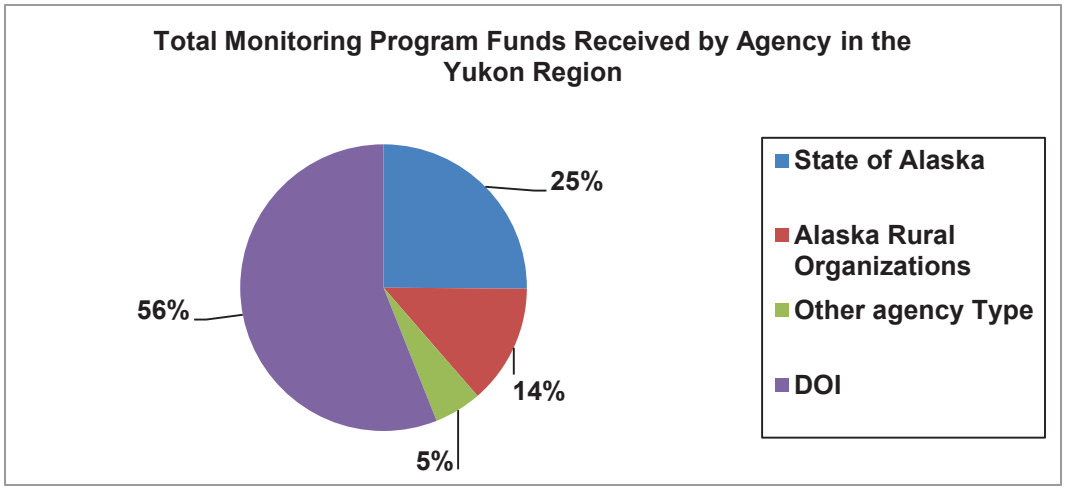

Figure 1. Monitoring Program funds received by agencies for projects in the Yukon Region. The funds listed are the total approved funds from 2000 to 2016. DOI = Department of the Interior.

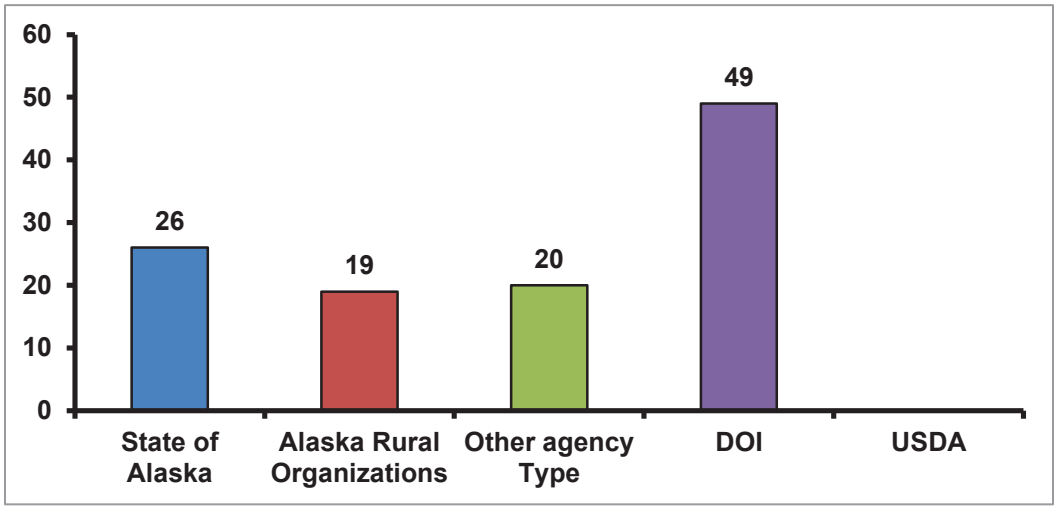

Figure 2. Total number of Monitoring Program projects funded, by agency, in the Yukon Region from 2000 to 2016. DOI = Department of Interior and USDA = U.S. Department of Agriculture.

2018 DRAFT YUKON REGION FISHERIES RESOURCE MONITORING PLAN

OVERVIEW

Priority Information Needs

The 2018 Notice of Funding Opportunity for the Yukon Region identified ten priority information needs:

- Reliable qualitative and/or quantitative estimates of salmon escapements and/or harvests.
- Salmon run timing and run strength from Yukon River District 5.
- Geographic distribution of salmon and whitefish species based on traditional ecological knowledge or other knowledge, and incorporation of anadromous information into the Anadromous Waters Catalog.
- A spatially robust indexing method for estimating species-specific whitefish harvest on an annual basis for the Yukon drainage.
- Methods for including "quality of escapement" measures (for example, potential egg deposition, sex and size composition of spawners, or spawning habitat utilization) in establishing Chinook Salmon spawning goals and determining the reproductive potential and genetic diversity of spawning escapements.
- A review of escapement data collection methods throughout the Yukon drainage to ensure that test fisheries are accurately accounting for size distribution and abundance of fishes (for example, are smaller Chinook Salmon being counted accurately).
- Assessment of incidental mortality with gillnets, with particular consideration for delayed mortality from entanglement or direct mortality from drop-outs (for example, loss of Chinook Salmon from 6-inch mesh net Chum Salmon fisheries).
- Harvest and spawning escapement changes through time in relation to changes in gillnet construction and use (for example, set versus drift fishing, mesh size changes) for Chinook Salmon subsistence harvests in the mainstem Yukon River.
- Incorporation of traditional ecological knowledge into fishery management processes.
- The effects of beaver dams on salmon spawning.

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. Regional budget guidelines provide an initial target for planning. For 2018, the Department of the Interior through the U.S. Fish and Wildlife Service, will provide an anticipated $1.0 to $1.5 million in funding for new projects and up to $1.6 million for ongoing projects that were initially funded in 2016. The U.S. Department of Agriculture, through the U.S. Forest Service, has historically provided up to $1.8 million annually. The amount of U.S. Department of Agriculture funding available for 2018 projects is uncertain.

Technical Review Committee Proposal Score

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary and collaborative program. It is the responsibility of the Technical Review Committee (TRC) to develop the strongest possible Monitoring Plan for each region and across the entire state.

For the 2018 Monitoring Program, nine proposals were submitted for the Yukon Region. The TRC evaluated and scored each proposal on Strategic Priority, Technical and Scientific Merit, Investigator Ability and Resources, Partnership and Capacity Building, and Cost/Benefit (**Table 1,** 1= first place, 2=second place, etc.). Projects that rank higher comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and promote cooperative partnerships and capacity building. The projects listed are currently being considered for funding in the 2018 Fisheries Resource Monitoring Program. Projects which were not eligible due to the nature of the activity are not included. For more information on projects submitted to the 2018 Fisheries Resource Monitoring Program please see the abstracts in **Appendix B**.

Table 1. Technical Review Committee (TRC) score for projects in the Yukon Region. Projects are listed by TRC score and include the total funds requested and the average annual request for each project submitted to the 2018 Monitoring Program within the Yukon Region (1 = first place, 2 = second place, etc.). The projects listed are currently being considered for Funding in the 2018 Fisheries Resource Monitoring Program. Projects which were not eligible due to the nature of the activity are not included.

TRC Score	Project Number	Title	Total Project Request	Average Annual Request
1	18-251	Traditional knowledge of anadromous fish in the Yukon Flats with a focus on the Draanjik Basin	$190,086	$63,362
2	18-250	Documentation of salmon spawning and rearing in the upper Tanana River drainage	$160,584	$53,528
3	18-252	Subsistence salmon networks in Yukon River communities	$331,742	$110,581
4	18-202	Gisasa River Chinook and summer Chum Salmon abundance and run timing assessment, Koyukuk National Wildlife Refuge, Alaska.	$583,676	$145,919
5(tied)*	18-203	Application of mixed-stock analysis for Yukon River Chum Salmon	$501,212	$125,303
5 (tied)*	18-205	Yukon River Coho Salmon radio telemetry	$429,910	$214,955
5 (tied)*	18-201	East Fork Andreafsky River Chinook and summer Chum Salmon abundance and run timing, Yukon Delta National Wildlife Refuge, Alaska	$678,485	$169,621
6	18-204	Yukon River Coho Salmon mixed-stock analysis	$96,000	$24,000
7	18-200	Identification and protection of habitat for Chena River Chinook Salmon	$46,661	$15,554
		Total	$3,018,356	$922,823

* Proposals with identical scores during the rating process may be further assessed by comparing the average annual cost. Proposals with a lower average annual cost may be ranked above a similar rated proposal that has a higher annual average cost

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TECHNICAL REVIEW COMMITTEE JUSTIFICATION FOR PROJECT SCORE

TRC Score: 1
Project Number: 18-251
Project Title: Traditional knowledge of anadromous fish in the Yukon Flats with a focus on the Draanjik Basin

TRC Justification: This project seeks to identify and verify the salmon and whitefish species present in the Draanjik (Black River) drainage for the purpose of making nominations to Alaska's Anadromous Waters Catalog. Proposed methods include the use of traditional ecological knowledge, environmental DNA (eDNA), minnow traps and aerial surveys to document anadromous waters used for spawning and rearing of salmon and whitefish. The principal investigators will use their findings to submit nominations to the Anadromous Waters Catalog for all waterbodies in which salmon and whitefish were documented in this drainage.

This project contains a linkage to Federal public lands/waters for subsistence use as the Draanjik (Black River) flows within and adjacent to the Yukon Flats National Wildlife Refuge. Salmon and whitefish in this drainage are harvested by residents of the proximal communities of Fort Yukon and Chalkytsik, both of which have customary and traditional use determinations for salmon. This proposal directly addresses the priority information need submitted by the Eastern Interior Subsistence Regional Advisory Council: *documentation of the geographic distribution of salmon and whitefish species based on traditional ecological knowledge or other knowledge, and incorporation of anadromous information into the Anadromous Waters Catalog*.

The results of the project will assist managers in understanding fish distribution within the watershed. Inclusion in the Anadromous Waters Catalog enables fisheries managers and biologists to better understand and evaluate sustainable harvest levels, protect habitats necessary for spawning, rearing, and migrating of anadromous fishes. The results would have wide geographic implications considering that management implications of inclusion in the Anadromous Waters Catalog would protect several anadromous species that utilize waters outside of the drainage in various stages of their life history.

The project will use ethnographic and biological methods to document fish presence and life history characteristics. The researchers propose following a rigorous sampling and research design, both in the traditional ecological knowledge components of the work and in the biological sampling of fish and eDNA. The proposal also suggests that important partnerships and capacity building with local residents and tribal organizations will be possible. Tribal governments will select the local research assistants to assist with the project. Local research assistants will be trained to carry out several aspects of the fieldwork and associated logistics and will also be trained to utilize biological sampling equipment. The Tribal Councils will be consulted in the development of project design and timing of field work. Letters of support were provided by the Chalkitsik Village Council, the Gwichyaa Zhee Gwich'in Tribal Government, the Venetie Village Council, the Yukon Flats National Wildlife Refuge and the Alaska Department of Fish and Game. The average annual cost of the project is $60,209.

TRC Score: 2
Project Number: 18-250
Project Title: Documentation of salmon spawning and rearing in the upper Tanana River drainage

TRC Justification: This study addresses the Yukon Region priority information need identified in the 2018 Notice of Funding Opportunity, "*Geographic distribution of salmon and whitefish species based on traditional ecological knowledge or other knowledge, and incorporation of anadromous information into the Anadromous Waters Catalog*." Evidence strongly suggests a much wider distribution of salmon in the Chisana and Nabesna drainages than is documented in the Anadromous Waters Catalog. The two largest tributaries of the upper Tanana River are the Chisana and Nabesna Rivers. Both drainages are almost entirely encompassed within Tetlin National Wildlife Refuge and Wrangell St. Elias National Preserve. While residents in the upper reaches of the Tanana River harvest the majority of their salmon from the Copper River or in the Yukon River near Eagle, they do harvest some salmon in the Tanana River. The proposal did not adequately address why the information is needed in this area at this time.
This project will utilize a combination of social and biological science methods. Documentation and verification of salmon spawning and rearing areas will be conducted over two open water seasons (2018 and 2019). Sampling during the first season will include minnow trapping and water sampling to test for environmental DNA (eDNA) in areas of the Chisana and Nabesna drainages previously identified as potential salmon spawning or rearing areas. Sampling during the second season will include minnow trapping in any areas identified during interviews with local knowledgeable residents and additional tributaries with positive eDNA results. All verified waters used by salmon will be submitted for listing in the Anadromous Waters Catalog. The investigation plan lacks a complete explanation of ethnographic methods and how the information will be used. The sampling protocol describes one eDNA sample event per site, which is not considered adequate for accurately determining the presence of fish species within a waterbody. Finding juveniles through trapping methods can be difficult, and widespread use of electrofishing should be considered to verify eDNA findings.

This project is designed in partnership with Yukon River Drainage Fisheries Association and Tanana Chiefs Conference. In separate proposals, they are focusing on Yukon Flats (18-251) while this proposal focuses on the upper Tanana River drainage. The proposals each stand-alone but, if funded, will collaborate through mirrored methodology and consultation during the analysis phase. By forming this partnership investigators are incorporating an inter-regional initiative to expand the information in the Anadromous Waters Catalog and to assist with capacity building efforts with a new sampling technique.

Investigators are qualified to conduct the research and provided resumes. Investigators provided multiple letters they received supporting the project. The average annual cost of the project is $53,528. The cost is reasonable for the work being proposed. The Alaska Department of Fish and Game is contributing $27,712 ($6,928 per year) in matching funds.

TRC Score: 3
Project Number: 18-252
Project Title: Subsistence salmon networks in Yukon River communities

TRC Justification: This project proposes to describe how salmon are shared within, between, and beyond the communities of Pilot Station, Nualto, and Beaver using social network analysis. The specific goal of this project is to provide information on how social networks "function in the allocation and management of subsistence resources… and how such a model might be applied and utilized in Federal subsistence management." The project generally addresses a Yukon Region priority information need requesting "incorporation of traditional ecological knowledge into fisheries management processes." The technical and scientific merits are strong, as is investigator capacity, and the cost of the project is reasonable for the research proposed.

This project addresses an immediate subsistence concern; it would highlight and advance understanding of harvesting, processing, and sharing Chinook Salmon on the Yukon River, cultural practices that are currently at risk.

There is no rural, Alaska Native, or Tribal organization involved as a meaningful partner and no letters of support were included with the proposal. Investigators claim building local capacity as a project objective, however, capacity building as described by this objective and indicated throughout the investigation plan is simply standard practice for the Division of Subsistence. One local research assistant from each project community will be hired to assist with the administration of the survey and local logistics. Resolutions of support are being sought from participating communities. The principal investigator has a track record of maintaining relationships and working closely with rural organizations. A similar project with Dr. Gerkey is currently under way in Southwest Alaska for Monitoring Program project 16-451. The average annual cost of the project is $110,000.

TRC Score: 4
Project Number: 18-202
Project Title: Gisasa River Chinook and summer Chum Salmon abundance and run timing assessment, Koyukuk National Wildlife Refuge, Alaska

TRC Justification: The Gisasa River weir is an established Monitoring Program project, operating since 1994. This project provides important in-season information on tributary run strength, run timing, and quality of escapement for management decisions. This project is located within the Koyukuk National Wildlife Refuge boundaries, and addresses Chinook and Chum Salmon populations that are harvested by Federally qualified subsistence users from the mouth of the Yukon River and into the Koyukuk River. Gisasa River stocks contribute an unknown amount to subsistence harvests in villages of the lower Yukon River, which have harvested approximately 19,000 Chinook Salmon, and 51,500 summer Chum Salmon annually (2002 – 2011 average). Currently the project uses video technology to count fish as they pass the weir. Also, the investigator is proposing to use video data to collect length frequencies on all adult Chinook and Chum Salmon, particularly during periods of high water levels or high water temperatures, which can reduce stress on fish and allow crews to collect data when they typically couldn't in the past.

The majority of the methods used have a proven track record to achieve the results, and have gone through rigorous sampling design review. The systematic sampling used at the weir was designed

according to the recommendations of Cochran (1977); these data have been evaluated for performance, and are among the most reliable types of data collected for migratory salmon. The project answers immediate conservation concerns by providing vital data to in-season fisheries managers about fish stocks in the lower Koyukuk River. Primary investigator lays out a complete plan to show when progress, annual, and final reports will be submitted. This project addresses the following Priority Information Needs presented in the 2018 FMRP Notice of Funding Opportunity: *reliable qualitative and/or quantitative estimates of Chinook Salmon and Chum Salmon escapements, methods for including "quality of escapement" measures (e.g., egg deposition, sex and size composition of spawners, or spawning habitat utilization) in establishing Chinook Salmon spawning goals and determining the reproductive potential and genetic diversity of spawning escapements, and harvest and spawning escapement changes through time in relation to changes in gillnet construction and use (e.g., set versus drift fishing, mesh size changes) for Chinook Salmon subsistence harvests in the mainstem Yukon River*.

The investigators have supplied a resume and have participated in several Fisheries Resource Management Program funded projects on the Gisasa River weir. They have experience building, installing, and repairing resistance board weirs, and had a major role in incorporating video monitoring into the Gisasa and Andreafsky weirs. The investigators have received two letters of support, from the Alaska Department of Fish and Game and from Tanana Chiefs Conference. The proposal does include hiring either locally or a student from the Alaska Native Science and Engineering Program (ANSEP). The total cost of the project is $859,825 for the four years of the project, of which $276,149 is match from the Fairbanks Fish and Wildlife Field Office. The average annual cost to the monitoring program is $145,919, which is reasonable throughout the agreement periods and is reasonable for the work being proposed.

TRC Score: 5 (tied)
Project Number: 18-203
Project Title: Application of mixed-stock analysis for Yukon River Chum Salmon

TRC Justification: The investigators seek funding to continue in-season mixed stock genetic analysis of Yukon River summer and fall Chum Salmon. The samples, collected at the Pilot Station sonar run by the Alaska Department of Fish and Game, are shipped to the United States Fish and Wildlife Genetics Conservation Lab in Anchorage for analysis. Stock composition estimates will be available to fisheries managers within 24-48 hours, supporting the in-season management of Chum Salmon as these stocks progress up the Yukon River. This proposal will estimate stock composition of both summer run and fall run Chum Salmon as they pass through the lower Yukon River, are harvested in, or spawn in the Yukon Delta, Innoko, Koyukuk, Nowitna, Yukon Flats, Arctic, Kanuti, and Tetlin NWR's, along with the White Mountain National Recreation Area, Steese National Conservation Area, Yukon Charley Rivers National Preserve, and Denali National Park. Federally qualified subsistence users harvested an average of 73,959 summer and 81,639 fall Chum Salmon annually from 2006-2010, making these stocks very important to subsistence users of the region.

The application of mixed-stock analysis for Yukon River Chum Salmon has wide geographic implications, affecting the in-season management of summer and fall run Chum Salmon throughout the

drainage. The data from this project, along with the sonar estimates, are used by Alaska Department of Fish and Game and United States Fish and Wildlife to estimate stock abundance in the lower Yukon River which facilitates the management of the fishery. Stock identification as fish enter the lower river allows fisheries managers to time fishing opportunities, potentially minimizing harvest on weak stocks as they travel up the river. The study design is sound and relatively uncomplicated and is greatly benefitted by data inputs that are based on several decades of genetic stock biology and sonar enumeration research and application. The project addresses the priority information need: *Reliable qualitative and/or quantitative estimates of salmon escapements and/or harvests*.

The investigators have extensive experience with this type of project and the principal investigator has been the lead investigator on this project since its inception in 2004. The project plans to partner with the Association of Village Council Presidents to employ a local hire for collecting genetics samples at Pilot Station. The investigator's plan to cooperate with Alaska Department of Fish and Game with sample collections and will share data with them for in-season management. The average requested amount is $125,303, which represents a decrease from the 2014 funding amount from the Fisheries Resource Monitoring Plan.

TRC Score: 5 (tied)
Project Number: 18-205
Project Title: Yukon River Coho Salmon Radio Telemetry

TRC Justification: The investigators seek funding to conduct radio telemetry on Coho Salmon in the Yukon River Drainage. A total of 300 Coho Salmon will receive esophageal radio tags with uniquely numbered external spaghetti tags. Capture will occur near Russian Mission on the Lower Yukon and tracking would occur in the mainstem Yukon River up to the oil pipeline crossing, including tributaries such as the Koyukuk and Tanana Rivers. This is a two year project that is broken into two parts: the first year is spent setting up telemetry sites and purchasing equipment, and the second year will involve tagging and tracking Coho Salmon. The results of this project will give managers a better understanding of migratory distribution patterns, run timing and spawning areas of Coho Salmon in the Yukon River Drainage. This proposal aims to gain baseline information on the Coho Salmon stocks within the Yukon River and that migrate through, are harvested in, or spawn in the many Federal public waters located on the Yukon Delta, Innoko, Koyukuk, Nowitna, Yukon Flats, Arctic, Kanuti, and Tetlin National Wildlife Refuges, along with the White Mountain National Recreation Area, Steese National Conservation Area, Yukon Charley Rivers National Preserve, and Denali National Park.

This project addresses a subsistence resource used throughout the drainage that has seen increased exploitation in the last 5 years. However, the majority of this increase in harvest is taken coincidentally in the commercial fishery while targeting fall Chun Salmon below the Alaska Department of Fish and Game Sonar located in Pilot Station. The project addresses the priority information need: *geographic distribution of salmon and whitefish species based on traditional knowledge or other knowledge, and incorporation of anadromous information into the Anadromous Waters Catalog*.

The investigators have the abilities and resources to fully accomplish a project of this magnitude. They have support from Tanana Chiefs Conference, The Iqurmiut Traditional Council, United States Fish and Wildlife Service Fairbanks Field Office, and Bureau of Land Management. The proposal included both the budget justification and budget tables and the average annual cost to the monitoring program would be $214,955. Telemetry projects are expensive to operate and require a large amount of equipment costs up front. The long distances and difficulty involved with accessing a project of this magnitude increase the helicopter and airplane costs over what may be seen in smaller systems. For example, radio tags in year one exhausts about 26% of the requested budget, and helicopter time to maintain radio telemetry sites uses another 30%. The investment into a project with high costs that only collects data for one year is hazardous, as many situations can arise during the one year that may affect the outcome of the project. The costs, while high, are in line with a project of this magnitude. The Technical Review Committee suggests collecting Coho Salmon genetic samples while capturing fish to add value to the project.

TRC Score: 5 (tied)
Project Number: 18-201
Project Title: East Fork Andreafsky River Chinook and summer Chum Salmon abundance and run timing, Yukon Delta National Wildlife Refuge, Alaska

TRC Justification: The East Fork Andreafsky River weir is an established monitoring project, operating since 1994. This project provides important information on tributary run strength and quality of escapement for in-season management decisions, especially during years with low returns as it is one of the few escapement projects that monitor populations down river of the majority of the subsistence harvest on the Yukon River. Additionally, the East Fork of the Andreafsky River is one of only two on the U.S. portion of the Yukon River to have escapement goals for both Chinook and Chum Salmon. This project is located within the Yukon Delta National Wildlife Refuge boundaries, and addresses Chinook and Chum Salmon populations that are harvested by Federally qualified subsistence users from the mouth of the Yukon River upstream to the village of St. Mary's. Stocks headed for the Andreafsky River contribute to the approximately 11,000 Chinook Salmon, 60,000 summer Chum Salmon, 4,500 Pink Salmon, and 2,500 Coho Salmon annually harvested below the Andreafsky River by Federally qualified subsistence users. Currently the project uses video technology to count fish as they pass the weir. Additionally, the investigator is proposing to use video data to collect length frequencies on adult Chinook and Chum Salmon during periods of high water levels or high water temperatures, which can reduce stress on fish and allow crews to collect data when they typically couldn't in the past.

The majority of the methods used have a proven track record to achieve the results, and have gone through rigorous sampling design review. These methods are standardized throughout the region, as is the analysis and reporting procedures. The project answers immediate conservation concerns by providing vital data to in-season fisheries managers about fish stocks downstream of the Pilot Station sonar. The principal investigator lays out a complete plan to show when progress, annual, and final reports will be submitted. This project addresses the following Priority Information Needs presented in the 2018 Fisheries Management Resource Program Notice of Funding Opportunity: *reliable qualitative and/or quantitative estimates of Chinook Salmon and Chum Salmon escapements, methods for including "quality of escapement" measures (e.g., egg deposition, sex and size composition of spawners, or*

spawning habitat utilization) in establishing Chinook Salmon spawning goals and determining the reproductive potential and genetic diversity of spawning escapements, and harvest and spawning escapement changes through time in relation to changes in gillnet construction and use (e.g., set versus drift fishing, mesh size changes) for Chinook Salmon subsistence harvests in the mainstem Yukon River.

The principal investigator has supplied a resume and has participated in several Fisheries Resource Management Program funded projects on the Gisasa River weir. He has experience building, installing, and repairing resistance board weirs, and had a major role in incorporating video monitoring into the Gisasa and Andreafsky weirs. The investigator has received two letters of support, from the Alaska Department of Fish and Game and from Association of Village Council Presidents. The investigator intends on hiring locally or hiring a student from the Alaska Native Science and Engineering Program (ANSEP) In the future, it is suggested that the investigator obtains a letter of support from ANSEP to show how serious they are in pursuing a student from this program. The total cost of the project is $968,856 for the four years of the project, of which $290,371 is match from the Fairbanks Fish and Wildlife Field Office. The average annual cost to the monitoring program is $169,621, which is reasonable throughout the agreement periods and is reasonable for the work being proposed.

TRC Score: 6
Project Number: 18-204
Project Title: Yukon River Coho Salmon mixed-stock analysis

TRC Justification: The investigators seek funding to conduct mixed stock genetic analysis of Yukon River Coho Salmon, building upon the genetic baseline created in the Fisheries Resource and Monitoring Program funded project 14-206. The samples, collected at the Pilot Station sonar run by the Alaska Department of Fish and Game, are shipped to the United Stated Fish and Wildlife Service Genetics Conservation Lab in Anchorage for analysis. Stock composition estimates will be derived by combining the sonar passage estimates with the stock composition estimates. Also, the investigators will be testing the samples against the baseline to estimate the probability of a missing baseline stock group. The project addresses the priority information need: *Reliable qualitative and/or quantitative estimates of salmon escapements and/or harvests*.

Application of mixed-stock analysis for Yukon River Coho Salmon has wide geographic implications as these stocks migrate through, are harvested in, or spawn in the many Federal public waters located on the Yukon Delta, Innoko, Koyukuk, Nowitna, Yukon Flats, Arctic, Kanuti, and Tetlin National Wildlife Refuges, along with the White Mountain National Recreation Area, Steese National Conservation Area, Yukon Charley Rivers National Preserve, and Denali National Park. The study design is sound and relatively uncomplicated and is greatly benefitted by data inputs that are based upon results of previously funded project 14-206.

The investigators have extensive experience with this type of project and the principal investigator has been the lead investigator on similar projects since its inception in 2004. The investigator's plan to cooperate with Alaska Department of Fish and Game with sample collections and will share data once it has been analyzed. The project does not mention any capacity building, but plans to consult with the

appropriate Regional Advisory Councils. However, in the future, it is recommended that the investigator consults with Regional Advisory Councils prior to the proposal to elicit support for the project, and documenting when and if this has happened. The average requested amount is $24,000, which is a decrease in the amount requested from the Fisheries Resource Monitoring Plan to develop the genetic baseline for Yukon River Coho Salmon during the 2014 funding cycle.

TRC Score: 7
Project Number: 18-200
Project Title: Identification and Protection of Habitat for Chena River Chinook Salmon

TRC Justification: The Chena River hosts one of the largest Chinook Salmon returns in the U.S. portions of the Yukon River. Although the Chena Rivers hosts large returns, the watershed has seen increased development within the last decade with new housing and roads being built. The surge in human population increases the potential for degradation of the watershed, much of which hasn't been fully sampled for anadromous fish populations. Chinook Salmon from the Chena River are harvested by many Federally qualified subsistence users throughout the drainage as they pass by 21 communities of which 16 are within and adjacent to the Yukon Delta, Innoko, Koyukuk, or Nowitna National Wildlife Refuges. This project fully addresses the following Priority Information Needs: Geographic distribution of salmon and whitefish species based on traditional ecological knowledge or other knowledge, and incorporation of anadromous information into the Anadromous Waters Catalog.

The investigators request three years of funding to assess the waters in the Chena River drainage for the presence of anadromous fish species, of particular interest is Chinook Salmon. Sampling methods include minnow traps, electrofishing, and seines to capture fish, and collect species ID, sex (where applicable) and length data throughout the drainage. This project uses proven science and logistics to produce objectives that are clear, measurable and achievable. The methods are standard for a project of this nature, and the investigators are able build upon recent work performed by the University of Alaska. All newly identified anadromous waterways will be added to the Anadromous Waters Catalog and researchers will identify the life stage encountered at the sampling site.

The investigators work for the United States Fish and Wildlife Service at the Fairbanks Fish and Wildlife Field Office, with extensive experience in field projects throughout the Yukon River and Northern Alaska. The project does not build capacity at this time due to previous commitments of Tanana Chiefs Conference Fisheries Department. All efforts will be made to include them when conditions warrant. Tanana Valley Watershed Association, a local non-profit, has agreed to facilitate public outreach. The average annual amount requested is $15,554, with this amount used to cover seasonal employee salary. Budget tables and justification were provided, and the cost of the proposal is reasonable across all agreement periods. The cost is reasonable for the work being proposed.

APPENDIX A

Table A.1. Fisheries Resource Monitoring Program projects funded in the Yukon Region from 2000 to 2016.

Project Number	Project Title	Investigators
	Yukon River 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 Rivers 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 Subsistence Harvests	YRDFA, USFWS

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Table A.1 continued

Project Number	Project Title	Investigators
	Yukon River Salmon Projects (continued)	
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
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 River Salmon Inseason 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

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Table A.1 continued

Project Number	Project Title	Investigators
	Yukon River Salmon Projects (continued)	
08-202	Anvik River Chum Salmon Sonar Enumeration	ADF&G
08-253	Yukon River Teleconferences and Inseason 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 River 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[a]	E Fork Andreafsky Salmon	USFWS
14-203[a]	Gisasa R Salmon	USFWS
14-206[a]	Yukon R Coho Salmon	USFWS
14-207[a]	Yukon R Chum Salmon	USFWS
14-208[a]	Koyukuk R Chum Salmon	USFWS
14-209[a]	Henshaw Crk Salmon	TCC
16-204[b]	Henshaw Creek Abundance and run timing of adult salmon.	TCC
16-251[b]	Seasonal habitats, migratory timing and spawning populations of mainstem Yukon River Burbot and their subsistence use in the communities of Pilot Station, Galena and Fort Yukon Alaska	ADF&G
16-255[b]	Yukon River In-Season Community Surveyor Program	YRDFA, USFWS
16-256[b]	In Season Salmon Management Teleconferences	YRDFA
	Yukon River Non-Salmon Projects	
00-004	Humpback Whitefish/Beaver Interactions	USFWS, CATG
00-006	Traditional Ecological Knowledge Beaver/Whitefish Interactions	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 Non-salmon Fish TEK and Subsistence Uses	ADF&G, TCC
01-140	Yukon Flats Northern Pike	ADF&G, SV
01-238	GASH Working Group	USFWS
02-006	Arctic Village Freshwater Fish Subsistence	ADF&G, NVV
02-037	Lower Yukon River Non-salmon Harvest Monitoring	ADF&G, TCC
02-084	Old John Lake Oral History and TEK of Subsistence	USFWS, AV, ADF&G

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Table A.1 continued

Project Number	Project Title	Investigators
	Yukon River Non-Salmon Projects (continued)	
04-253	Upper Tanana Subsistence Fisheries Traditional Ecological Knowledge	USFWS,UAF, ADF&G
04-269	Kanuti NWR Whitefish TEK and Radio Telemetry	USFWS, RN
06-252	Yukon Flats Non-salmon Traditional Ecological Knowledge	ADF&G, BLM, USFWS, CATG
06-253	Middle Yukon River Non-salmon 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
08-300	Aniak River Rainbow Trout Seasonal Distribution	ADF&G
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
14-252[a]	Lower Yukon Whitefish	ADF&G
14-253	Upper Yukon Customary Trade	YRDFA
16-203[b]	Bering Cisco Spawning Abundance in the Upper Yukon Flats, 2016-2017	ADF&G, USFWS
16-205[b]	Burbot Population Assessments in lakes of the Upper Tanana and Upper Yukon River Drainages	NPS

[a] = Final Report in Preparation.

[b] = On-going projects during 2018.

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.

APPENDIX B

The following abstracts were written by the Principal Investigators and submitted to the Office of Subsistence Management as part of the proposal package. The statements and information contained in the Executive Summaries were not altered and they may not reflect the opinions of the Office of Subsistence Management or the Technical Review Committee.

Project Number: 18-200
Title: Identification and Protection of Habitat for Chena River Chinook Salmon
Principal Investigator: Ray Hander, U.S. Fish and Wildlife Service
Co-investigator: Jimmy Fox, U.S. Fish and Wildlife Service

Project Cost by Year:

Project Cost:	**2018:** $15,322	**2019:** $15,553	**2020:** $15,786	**2021:** $0
Total Cost: $46,661				

Issue:
The Chena River supports the second-largest run of Chinook Salmon *Oncorhynchus tshawytscha* within the Alaska portion of the Yukon River drainage. Federally qualified rural residents from 21 villages may harvest Chinook Salmon returning to spawn in the Chena River. However, the lower Chena River and two major sloughs are considered impaired by Clean Water Act standards. In addition, historical and current anthropogenic instream and riparian habitat degradation and destruction results from housing, roads and commercial development such as mining, forestry, dredging, and wetland filling. Major tributaries and associated streams in the Chena River drainage lack adequate habitat protection from an absence of evidence of anadromous fish use (spawning, rearing or migration). These tributaries and streams are not listed in the State of Alaska Anadromous Waters Catalog (AWC), thus not protected by the State of Alaska Anadromous Fish Act. This project will sample for juvenile Chinook Salmon and other anadromous fish in Chena River tributaries not listed in the AWC, and nominate waters that meet AWC requirements.

Objectives:

1. Determine the presence of juvenile Chinook Salmon and other anadromous fish species in Chena River tributaries not listed in the AWC;
2. Describe life history stages of Chinook Salmon in tributaries of the Chena River;
3. Publish fish species information in the AWC for all waters that satisfy AWC requirements.

Methods: We will conduct juvenile fish capture operations on selected tributaries to the Chena River. The tributaries have been chosen where habitat disturbance is most likely to occur and where positive results from environmental DNA sampling are located. Sampling will occur in three periods in 2018, 2019 and 2020: 1) late May to early June; 2) late July to early August; and 3) late August to early September to detect the presence of juvenile or adult salmon. This temporal sampling approach increases the opportunity of encountering juvenile or adult salmon based on the differential migration timing.

Sampling methods will include: baited minnow traps, electrofishing, small mesh beach seines, dip nets, and visual observation (adult salmonids). All anadromous fish captured will be identified and nominations to the AWC will be submitted where applicable and a comprehensive report will be made at the project's completion.

Partnerships/Capacity Building:
Due to the proximity of the TCC headquarters within the project area, this project presents an excellent opportunity for TCC to develop capacity to document anadromous waters within or adjacent to tribal lands. TCC recruits local hires and has personnel trained to conduct fisheries work. Our office cooperates with TCC annually on operation of the Henshaw River weir. A fisheries biologist with the TCC was invited to be a cooperator for this project but declined on December 21, 2017 due to direct competition with a similar proposal. However, this representative agreed to be a partner on a similar 2017 pilot project. If TCC is unsuccessful, and this project is funded every effort will be made to involve TCC employees to build tribal capacity. In addition, partner Tanana Valley Watershed Association, a local non-profit, has agreed to facilitate public outreach.

Project Number: 18-201
Title: East Fork Andreafsky River Chinook and summer Chum Salmon abundance and run timing, Yukon Delta National Wildlife Refuge, Alaska.
Geographic Region(s): Yukon Region
Data Type: Stock Status and Trends
Principal Investigator: Jeff Melegari, U.S. Fish and Wildlife Service (USFWS), Fairbanks Fish and Wildlife Field Office (FFWFO)

Project Cost:	**2018:** $158,551	**2019:** $175,755	**2020:** $169,265	**2021:** $174,914
Total Cost: $678,485				

Issue: Through Section 302 of the Alaska National Interest Lands Conservation Act, the USFWS has a responsibility to ensure that salmon populations within federal conservation units are conserved in their natural diversity, that international treaty agreements are met, and subsistence opportunities are maintained. The East Fork Andreafsky River provides important spawning and rearing habitat for Chinook and summer Chum Salmon that contribute to complex Yukon River mixed stock commercial and subsistence fisheries. The East Fork Andreafsky River's location below the Pilot Station Sonar project and the fact that it has established escapement goals for both Chinook and Chum Salmon make it an important project for management. This project will provide data that managers need to inform and evaluate in-season management decisions, build run reconstructions, and make future run predictions. These data will also help evaluate long term trends in species abundance and age, sex, and length composition.

Objectives:

1. Use video weir technology to enumerate daily passage of all fish species.

2. Estimate seasonal escapement of Chinook Salmon and summer Chum Salmon using Sethi and Bradley (2016) model, and characterize their run timing.
3. Estimate the weekly age, sex, and length composition of adult Chinook and summer Chum Salmon such that the simultaneous 90% confidence intervals have a maximum width of 0.20.
4. Evaluate the use of VidSync software with a stereo camera system to measure lengths of Chinook Salmon and Chum Salmon via video (this will begin in 2017).
5. Continue to build a more robust Sockeye Salmon ASL data set on the recently observed spawning aggregation upriver of the East Fork Andreafsky River weir.

Methods: A resistance board weir will be installed and operated on the East Fork Andreafsky River from mid-June through early to mid-August during each year. A trap equipped with a video counting chute will allow all fish passing through the weir to be identified to species and counted. Count data will be provided to managers and other interested parties daily. Age (scales), sex, and length data will be collected from Chinook, and Chum Salmon following a stratified random sampling design, and collected opportunistically for Sockeye Salmon. Scales will be sent to Alaska Department of Fish and Game for aging.

Partnerships/Capacity Building: The FFWFO has strived for local involvement and capacity building with the project and is committed to continually promoting capacity building by describing project opportunities at RAC, YRDFA, and Refuge coordination meetings. In the past the project has served as a platform to host a science camp for youth from Yukon River communities. The project actively recruits for and fills a local hire position.

Project Number: 18-202
Title: Gisasa River Chinook and summer Chum Salmon abundance and run timing assessment, Koyukuk National Wildlife Refuge, Alaska
Geographic Region(s): Yukon Region
Data Type: Stock Status and Trends
Principal Investigator: Jeremy Carlson, U.S. Fish and Wildlife Service (USFWS), Fairbanks Fish and Wildlife Field Office (FFWFO)
Co-Investigator: Jeff Melegari, USFWS, FFWFO

Project Cost:	**2018:** $149,355	**2019:** $140,209	**2020:** $144,997	**2021:** $149,115
Total Cost: $583,676				

Issue: Through Section 302 of the Alaska National Interest Lands Conservation Act, the USFWS has a responsibility to ensure that salmon populations within federal conservation units are conserved in their natural diversity, that international treaty agreements are met, and subsistence opportunities are maintained. The Gisasa River provides important spawning and rearing habitat for Chinook and summer Chum Salmon that contribute to complex Yukon River mixed stock commercial and subsistence fisheries. The Gisasa River weir is currently one of only two projects within the Koyukuk River drainage that

provide in-season run information. This project will provide data that managers need to inform and evaluate in-season management decisions, build run reconstructions, and make future run predictions. These data will also help evaluate long-term trends in species abundance and age, sex, and length composition.

Objectives:

1. Use video weir technology to enumerate daily passage of all fish species.
2. Estimate seasonal escapement of adult Chinook Salmon and summer Chum Salmon using Sethi and Bradley (2016) model, and characterize their run timing.
3. Estimate the weekly age, sex, and length composition of adult Chinook and summer Chum Salmon such that the simultaneous 90% confidence intervals have a maximum width of 0.20.
4. Evaluate the use of VidSync software with a stereo camera system to measure lengths of Chinook Salmon and Chum Salmon via video (this will begin in 2017).

Methods: A resistance board weir will be installed and operated on the Gisasa River from mid-June through early to mid-August during each year. A trap equipped with a video counting chute will allow all fish passing through the weir to be identified to species and counted. Count data will be provided to managers and other interested parties daily. Age (scales), sex, and length data will be collected from Chinook, and Chum Salmon following a stratified random sampling design. Scales will be sent to Alaska Department of Fish and Game for aging.

Partnerships/Capacity Building: The FFWFO has strived for local involvement and capacity building with the project and is committed to continually promoting capacity building by describing project opportunities at RAC, YRDFA, and Refuge coordination meetings. Project staff has worked with staff from Tanana Chiefs Conference's Henshaw River Weir, the other Koyukuk River monitoring project, to share knowledge, methods, and labor for weir setup. The FFWFO has also worked with Koyukuk National Wildlife Refuge to provide field work experience for Alaska Native Science & Engineering Program students and local hires from the Refuge.

Project Number: 18-203
Title: Application of mixed-stock analysis for Yukon River Chum Salmon
Geographic Region(s): Yukon River
Data Type: Stock Status and Trends
Principal Investigator: Blair Flannery, Conservation Genetics Laboratory (CGL), USFWS
Co-Investigator: John Wenburg, CGL, USFWS

Project Cost:	**2018:** $125,303	**2019:** $125,303	**2020:** $125,303	**2021:** $125,303
Total Cost: $501,212 (a 16.5% reduction from the total cost of the project under 14-207)				

Issue: This project relates to the following priority information need identified in the 2014 Office of Subsistence Management (OSM) Request for Proposals:
• *Reliable qualitative and/or quantitative estimates of salmon escapements and/or harvests*.

This proposal is a continuation of Fisheries Resource Monitoring Program (FRMP) projects 04-228, 06-205, 10-205, and 14-207, which have provided in-season stock composition estimates of Chum Salmon to fishery managers within 24 to 48 hours of receiving samples from the Pilot Station sonar test fishery.

The disparate strength of individual stocks within and among years makes it clear that in-season stock return data assists management to meet escapement. It provides a real-time tool that allows for informed decisions on regulating fisheries to meet escapement and harvest goals.

Objectives: 1) Estimate the stock compositions of summer and fall Chum Salmon sampled from the Pilot Station test fishery each year (June 1 – August 31). 2) Assess the accuracy of the results by comparison with other sources of escapement and harvest data.

Methods: Genetic samples will be collected from every Chum Salmon caught in the Pilot Station sonar test fishery from June 1 – August 31, and sent to the CGL every week and at the conclusion of each run pulse. Samples will be stratified by time period or run pulse and a subsample of size 288, selected so that daily sample size is proportional to the daily sonar passage estimate within a stratum, will be genotyped for each stratum of the run. Stock composition will be estimated using Bayesian mixture modeling and reported to fishery managers as soon as practicable. Stock abundance estimates will be derived by combining the sonar passage estimates with the stock composition estimates. A post season analysis will be conducted to compare these stock specific abundance estimates against escapement and harvest estimates.

Partnerships/Collaboration: We will work with ADF&G biologists to coordinate sample collection. We will contract with the Association of Village Council Presidents (AVCP) to hire a local to collect the genetic samples. We completed the baseline in partnership with the DFOC. We will consult, collaborate and coordinate with ADF&G, USFWS, and DFOC managers.

Project Number: 18-204
Title: Yukon River Coho Salmon mixed-stock analysis
Geographic Region(s): Yukon River
Data Type: Stock Status and Trends (SST).
Principal Investigator: Blair Flannery and John Wenburg, Conservation Genetics Laboratory (CGL), U.S. Fish and Wildlife Service (USFWS)

Project Cost:	**2018:** $24,000	**2019:** $24,000	**2020:** $24,000	**2021:** $24,000
Total Cost: $96,000				

Issue: This project relates to the following priority information need identified in the 2018 Office of Subsistence Management (OSM) Request for Proposals:
• *Reliable qualitative and/or quantitative estimates of salmon escapements and/or harvests*.

This project to conduct mix-stock analysis for Yukon River Coho Salmon extends the work done to create the genetic baseline under FRMP project 14-206.

With the recent decline in abundance of Yukon River Chinook Salmon, the exploitation rate for Coho Salmon has increased dramatically. From 1997−2010, an average of 29% of the Yukon River Coho Salmon run (as estimated by mainstem sonar) has been harvested, whereas since 2011, the average harvest has increased to 86% of the run (JTC 2014). The lack of stock composition data for Coho Salmon in light of this increased pressure is problematic. Stock identification and determining relative contributions of harvested stocks are essential for management of mixed stock fisheries (Larkin 1981). Differential harvest can result in excessive exploitation of individual stocks, which can decrease overall production in the long run for the entire system (Allendorf et al. 1987).

Objectives: 1) Estimate regional stock contributions and run timing of Yukon River Coho Salmon from mainstem sonar test fishery harvests; 2) determine if baseline is missing significant stock groups.

Methods: Genetic samples will be collected from Coho Salmon caught in the mainstem sonar test fishery. Samples will be stratified by run quartile. A sample size of 150 will be analyzed for each stratum, with the daily sample size proportional to the daily sonar passage estimate within a stratum. The mixture data will be compared to the genetic baseline (Figure 1) to estimate the relative stock compositions using the Bayesian mixture modeling method as implemented in the program Bayes (Pella and Masuda 2001). Stock composition estimates will be reported for the following stock groups: lower river, Nenana River, Tanana River, and Porcupine River. Abundance data will be obtained from Pilot Station sonar. Stock specific abundance estimates will be derived by combining the sonar passage estimates with the stock composition estimates.

Partnerships/Collaboration: We will work with ADF&G biologists to coordinate sample collection from the Pilot Station sonar test fishery.

Project Number:	18-205
Title:	Yukon River Coho Salmon Radio Telemetry
Geographic Region(s):	Yukon River
Data Type:	Stock Status and Trends (SST).
Principal Investigator:	Bonnie Borba, Fisheries Biologist III, Alaska Department of Fish and Game
Co-Investigator:	Sean Larson, Fisheries Biologist II, Alaska Department of Fish and Game
	Raymond Hander, United States Fish and Wildlife Service
	Randy Brown, United States Fish and Wildlife Service

Project Cost:	**2018:** $0	**2019:** $214,969	**2020:** $214,941	**2021:** $0
Total Cost: $888,224				

Overview of need: We propose to conduct a radio telemetry project to track adult Coho Salmon (*Oncorhynchus kisutch)* to their spawning areas. This proposal is in direct response to the need for information on this highly exploited species, which has recognized large spawning distribution data gaps. Coho Salmon are targeted as the last salmon species migrating into the Yukon River each season. Especially during times when other species such as Chinook and fall Chum Salmon runs are weak, Coho Salmon are needed to supplement subsistence harvests. This project will improve Coho Salmon management to better provide for sustainable fisheries. Coho Salmon are a recognized as a priority for subsistence with an established *Amounts Reasonably Necessary for Subsistence*. This proposal addresses one of the priority information needs identified for the Yukon Region by providing *reliable qualitative and/or quantitative estimates of salmon escapement and/or harvests*. It will also provide data on *geographic distribution of Coho Salmon for incorporation into the Anadromous Waters Catalog*.

Project Goals and Objectives: The goal of this Yukon River telemetry project is to learn as much as possible about Coho Salmon migration and spawning distribution, to better inform fisheries managers responsible for ensuring sustainable use of the resource to benefit the people of Alaska. Identifying migration routes, stock specific run timing, migration rates, movement patterns, and distribution of Coho Salmon spawning areas in combination with an estimated total run size will help fishery managers spread the harvest throughout the run and indicate where escapement monitoring projects might be practical.

Specific project activities: This proposal seeks funding to apply esophageal radio tags in Coho Salmon in the lower Yukon River, just upstream of Russian Mission, and track them via an array of radio tracking stations located strategically along the mainstem and main tributaries of the Yukon River. These radio tracking stations will provide information used to plan the aerial survey tracking to locate fish at their spawning grounds. Analysis of the tower and aerial data together will address the information needs outlined in the objectives (i.e. migration routes, stock specific run timing, migration rates, movement patterns, and distribution).

Anticipated outputs and outcomes: Project results are expected to provide information for fishery management of Coho Salmon, and for development of management plans, development of escapement projects, and habitat projection. These benefits will be realized soon after the spawning areas are documented. All data collected through this proposal will be archived in perpetuity in ADF&G databases. Final project results will be published in the ADF&G Fishery Data Series.

Project Number: 18-250
Title: Documentation of salmon spawning and rearing in the Upper Tanana River Drainage.
Geographic Region(s): Yukon Region (Tanana River Drainage).
Data Type: Stock Status and Trends (SST), Traditional Ecological Knowledge (TEK).

Principal Investigator: Brandy Baker**,** Alaska Department of Fish and Game, Division of Sport Fish
Co-Investigator(s): Caroline Brown, Alaska Department of Fish and Game, Division of Subsistence

Project Cost:	**2018:** $78,087	**2019:** $67,106	**2020:** $15,391	**2021:** $0
Total Cost: $160,584				

Issue: This study addresses the Yukon Region Priority Information Need: geographic distribution of salmon and whitefish species based on traditional ecological knowledge or other knowledge and incorporation of anadromous information into the Anadromous Waters Catalog. Documentation and inventory of anadromous fish species has been limited in the upper Tanana River drainage due to perceived low salmon abundance and the greater importance of Non-salmon species to local users. Presence of Chinook *O. tshawytscha*, which are currently not listed in this area, as well as Chum Salmon *O. keta,* and Coho Salmon *O. kisutch* which have limited documentation in this area, are mentioned in a recent TEK study from Northway and in the Tetlin NWR Fishery Management Plan as being present. This study proposes to document and list Pacific salmon *Oncorhynchus sp* spawning and rearing habitat in the upper Tanana River drainage (the largest tributary of the Yukon River).

Objectives:

1. Document traditional ecological knowledge (TEK) related to locally reported spawning and rearing areas of Chinook, Chum, and Coho Salmon not listed in the AWC within the Chisana and Nabesna drainages.
2. Verify presence of juvenile and adult salmon and document spawning and rearing areas in select waters identified through TEK, anecdotal accounts, and field observations.
3. Submit all verified waters used by salmon for listing in the Anadromous Stream Catalog.
4. Contribute to local capacity building by working with local research assistants on both ethnographic and biological sampling data collection.

Methods: Researchers will use a combination of social and biological science methods. First, researchers will use ethnographic methods to identify potential search areas based on local knowledge. Next, PIs will use aerial surveys, water sample collection for eDNA analysis, and minnow trapping to document and identify salmon presence and rearing habitat in those areas identified from the local knowledge as well as other areas that appear to have suitable habitat.

Partnerships/Capacity Building: This project is designed to incorporate an inter-regional initiative to assist with capacity building efforts with a new sampling technique for a similar proposal being submitted by YRDFA-TCC. Capacity building for this project will occur in the following ways: we will work with local residents and tribal councils to identify key respondents for the TEK interviews; we will work with TCC Partners Biologist to advertise and hire a local technician(s) to assist with ethnographic and field data collection; we will work YRDFA-TCC to collaborate on mirrored methodology and consultation during the analysis phase; we will work with agency staff from Tetlin and NPS to communicate areas of priority and collaborate on any additional habitat information from other surveys.

Project Number: 18-251
Title: Traditional Knowledge of anadromous fish in the Yukon Flats with a focus on the Draanjik Basin.
Geographic Region(s): Yukon Region
Data Type: Stock Status and Trends
Principal Investigator: Catherine Moncrieff, Yukon River Drainage Fisheries Association (YRDFA)
Co-Investigator: Brian McKenna, Tanana Chiefs Conference (TCC)

Project Cost:	**2018:** $97,458	**2019:** $62,379	**2020:** $20,791	**2021:** $0
Total Cost: $180,628				

Issue: This proposal addresses the Yukon Region Priority Information Need of geographic distribution of salmon and whitefish species based on traditional ecological knowledge (TEK) and incorporation of anadromous information into the Anadromous Waters Catalog. This proposal will provide information critical to the management of anadromous Pacific salmon *Oncorhynchus sp* and whitefish species *Coregoninae subfamily* and the habitat utilized by them throughout their life cycles. Multiple salmon and whitefish species are known to utilize habitats within the Yukon Flats, and the Draanjik (Black River) subbasin at multiple stages in their life cycles for migration, spawning, and rearing. However, while their presence is known, the extent of their anadromous geographic distribution is not fully identified and documented within the AWC. This project will collect and document TEK of anadromous species within the Yukon Flats region, and will verify documentation of spawning and rearing activity within the Draanjik subbasin.

Objectives: The goal of this proposal is to provide information critical to the management of anadromous fishes and the habitats that support them and will achieve this through the following objectives:

1. Document and record TEK of anadromous waters utilized by salmon and whitefish species occurring in the Yukon Flats with a focus on the Draanjik subbasin
2. Verify the presence of salmon and whitefish species and document and record anadromous waters used for spawning and rearing as described by TEK ecological knowledge, primary literature, and field observations for the Draanjik subbasin
3. Submit nominations to the Anadromous Waters Catalog for all verified waterbodies used by salmon and whitefish species to maximize the spatial extent of mapped anadromous waters.
4. Engage the local communities and build capacity by collaborating with the Tribal Councils and by hiring local research technicians to assist with the ethnographic and biological research.

Methods: This research project has been designed to be a collaborative project, seeking and confirming locally observed contributions to the AWC, using a combination of social and biological methods and

collaborating amongst agencies and communities. Broadly, researchers will engage standard anthropological methods of ethnographic fieldwork (participant observation, semi-structure interviews, and mapping) to identify potential search areas based on local knowledge. Next, PIs will use aerial surveys, water sample collection for eDNA analysis, and minnow trapping to document and identify salmon presence and rearing habitat gained from the local knowledge. Subsequent year sampling locations will be refined dependent on minnow trap and eDNA results and visual observations from aerial surveys.

Partnerships/Capacity Building: This project is designed in partnership with the ADF&G (Upper Tanana proposal) as parallel proposals as well as a partnership with the Tribal Councils of the Chalkyitsik, Venetie, and Gwichyaa Zhee. The TCs will select local research assistants for the ethnographic fieldwork. Local hires will be trained in interviews, mapping techniques and will participate in outreach activities.

Project Number: 18-252
Title: Subsistence salmon networks in Yukon River communities
Geographic Region(s): Yukon Region
Data Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: Caroline Brown, Division of Subsistence, Alaska Department of Fish
Co-Investigator: Dr. Drew Gerkey, Department of Anthropology, Oregon State University

Project Cost:	**2018:** $133,742	**2019:** $96,013	**2020:** $101,733	**2021:** $0
Total Cost:				

Issue: Priority information needs identified in the 2015 Fisheries Resource Monitoring Program for the Yukon River included: "Incorporation of traditional ecological knowledge into fishery management processes." This project will focus on 3 communities: Pilot Station, Nulato, and Beaver, each of which has a unique regional sharing pattern as identified during previous studies carried out by project researchers. The goal of this project is to provide information on how social networks "function in the allocation and management of subsistence resources… and how such a model might be applied and utilized in Federal subsistence management." Understanding how the social obligations of sharing that underpin subsistence economies drive harvest will help State and Federal managers anticipate fluctuations in subsistence harvests in order to develop locally meaningful and effective regulations, especially in times of low abundance.

Objectives:

1. Using a social network survey and building on documented harvest data from the fall 2018, systematically document the scope of and local characteristics of exchange in 3 Yukon river communities, paying attention to exchanges both within and between communities;

2. Using the assembled social network data as an empirical framework, conduct indepth ethnographic interviews about exchange practices. Interviews will include questions about a) the amounts and types of fish or other resources shared; b) the relationships between people who shared wild food; c) decision making factors that structure sharing; d) the ceremonial context of exchange; e) forms of exchange, such as sharing, barter, and customary trade; f) perceptions of change in the environment, particularly with regard to salmon and other subsistence resources, and how these affect exchange practices; and g) perceptions of change in exchange practices in order to describe how exchange practices fit within the overall social, cultural, and economic life in the Yukon River; and
3. Contribute to local capacity building by utilizing a framework of community involvement in research.

Methods: The research will employ two integrated social science data gathering methods—systematic household harvest and network surveys and key respondent interviews—to analyze subsistence salmon sharing networks in 3 communities along the Yukon River: Pilot Station, Nulato, and Beaver. Harvest data will be collected using a census sample. Building off of that harvest data, researchers will administer the network survey with community households. The ethnographic research for this project will include anthropological methods of semi-structured key respondent interviews and participant observation. Researchers will attempt to interview 5-10 individuals per community. Network data will be analyzed using "R," an open-source statistics software program. Researchers will take a final trip to each community to present preliminary findings and follow-up with any informational gaps.

Partnerships/Capacity Building: Tribal councils in study communities will be consulted about the project, and project approvals will be obtained prior to conducting fieldwork. Temporary field assistants will be hired by ADF&G in coordination with tribal councils in each study community to assist with administration of the survey instrument and to help coordinate local logistical support and participation.

FISHERIES RESOURCE MONITORING PROGRAM MULTI-REGIONAL OVERVIEW

Since the inception of the Monitoring Program in 2000, 16 projects have been undertaken in the Multi-regional category for a total of $2.5 million (**Figure 1**). Of these, the State of Alaska was principal investigator on 11 projects, the Department of Interior conducted 3 projects, and other organizations conducted 2 projects (**Figure 2**). 12 projects were Stock, Status, and Trends (SST), and 4 projects were Harvest Monitoring and Traditional Ecological Knowledge (HMTEK). For more information on Multi-Regional projects completed from 2000 to 2016, please see **Appendix A.**

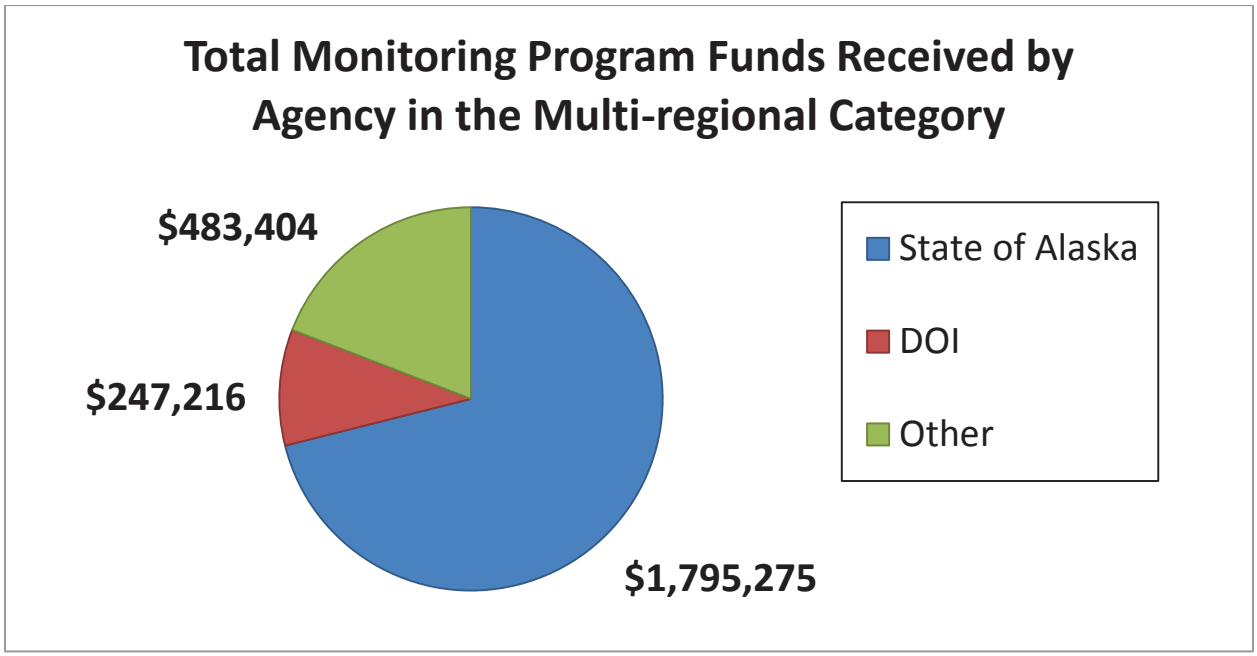

Figure 1. Monitoring Program funds received by agencies for projects in the Multi-regional category. The funds listed are the total approved funds from 2000 to 2016. DOI = Department of Interior.

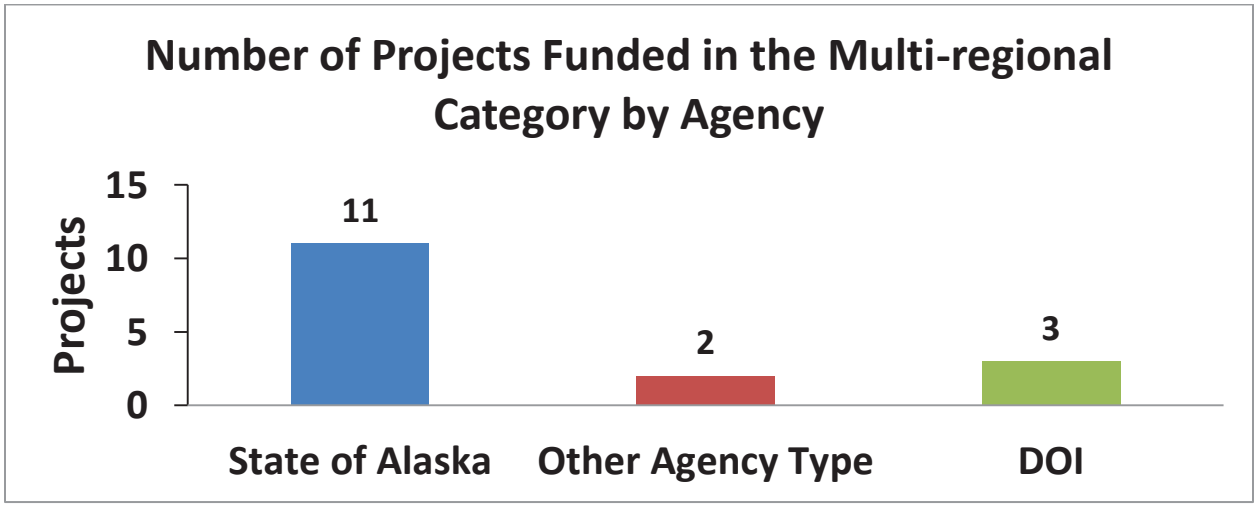

Figure 2. Total number of Monitoring Program projects funded, by agency, in the Multi-regional category from 2000 to 2016. DOI = Department of Interior and USDA = Department of Agriculture.

2018 DRAFT MULTI-REGIONAL FISHERIES RESOURCE MONITORING PLAN

OVERVIEW

Priority Information Needs

The Multi-regional category is for projects that are applicable in more than one region. No priority information needs for the Multi-regional category were identified for the 2018 Notice of Funding Opportunity. However, proponents submit proposals which have research components in more than one Monitoring Program region.

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. Regional budget guidelines provide an initial target for planning. For 2018, the Department of the Interior, through the U.S. Fish and Wildlife Service, will provide an anticipated $1.0 to $1.5 million in funding for new projects and up to $1.6 million for ongoing projects that were initially funded in 2016. The U.S. Department of Agriculture (USDA), through the U.S. Forest Service, has historically provided up to $1.8 million annually. The amount of USDA funding available for 2018 projects is uncertain.

Technical Review Committee Proposal Ranking

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the TRC to develop the strongest possible Monitoring Plan for each region and across the entire state.

For the 2018 Monitoring Program, two proposals were submitted in the Multi-regional category. The TRC evaluated and scored each proposal for Strategic Priority, Technical and Scientific Merit, Investigator Ability and Resources, Partnership and Capacity Building, and Cost/Benefit (Table 1. 1 = first place, 2 = second place, etc.) The projects listed are currently being considered for funding in the 2018 Monitoring Program. Projects which were not eligible due to the nature of the activity are not included. For more information on projects submitted to the 2018 Monitoring Program please see the abstracts in **Appendix B**.

Table 1. TRC scores for projects in Multi-regional. Projects are listed by TRC score (1 = first place, 2 = second place, etc.) and include the total funds requested and the average annual requested. The projects listed are currently being considered for funding in the 2018 Monitoring Program.

TRC Score	Project Number	Title	Total Project Request	Average Annual Request
1	18-751	Togiak River Harvest Assessment of Dolly Varden	$120,236	$40,079
2	18-750	Kuskokwim, Southcentral and Southeast Wild Food Sharing Events	$34,686	$11,562
		Total	**$154,922**	**$51,641**

TECHNICAL REVIEW COMMITTEE JUSTIFICATION FOR PROJECT SCORE

TRC Score: 1
Project Number: 18-751
Project Title: Subsistence Harvest Assessment and Stock Composition of Dolly Varden and Nonsalmon fish stocks in the Togiak National Wildlife Refuge

TRC Justification: This 3-year interdisciplinary project will collect subsistence harvest data of nonsalmon fish in the communities of Togiak and Twin Hills, and collect Traditional Knowledge and estimate the stock composition of subsistence caught Dolly Varden from the Togiak and Kanektok Rivers in the Togiak National Wildlife Refuge. This project directly addresses priority information needs from the 2018 Notice of Funding Opportunity and builds upon current 2016 Monitoring Program projects. Advantages include infrastructure, logistics, data and cost sharing with the foundational projects, good interagency partnership and capacity building opportunities, and a reasonable budget. Investigator ability is strong and there is general community support for the work with local hire and participation opportunities.

This is an interdisciplinary project and the implications for knowledge sharing and integration of datasets and results are intriguing. Greater intentionality in developing the interview protocol, the Yup'ik taxonomy used in species identification for each sampling event, and more staff time allotted for collaborative report writing and review are recommended.

TRC Score: 2
Project Number: 18-750
Project Title: A descriptive investigation of rural community-wide wild food sharing events at upper Copper River, lower Kuskokwim River, and Southeast areas of Alaska

TRC Justification: This three-year, multi-region ethnographic study proposes to use semi-directed interviews and participant observation to document community-wide wild food sharing events in three regions of rural Alaska – the upper Copper River, the lower Kuskokwim River, and Southeast Alaska (community of Wrangell). The project has a clear connection with the Federal Subsistence Management Program in that fish harvested from federal waters play an important role in the subsistence economy and way of life in each of these regions. Each member of the research team would be responsible for the work a specific region, and each has previous fieldwork experience in that region. The team members also each have prior experience with projects documenting the harvest and use of subsistence resources in rural Alaskan communities. The project employs well recognized ethnographic methods – key informant interviews and participant observation; however, time in the field is limited – no more than 16 days per person over the length of the project. Partnerships and capacity building appear to be limited to consulting with local organizations on the selection of study communities or a local research assistant along with hiring local assistants to help with organizing the interviews. The end result of the project will be a technical report along with educational materials describing the food sharing events, with an intended

audience of both the villages and Federal fishery management staff. From the standpoint of Federal management, the goal of the educational materials is to help managers incorporate the local cultural values represented by the food sharing events in their decision making. Because the research team is comprised of federal employees, funding is requested only for travel expenses, honoraria, local research assistants, interview transcription/translation, and supplies. Project costs seem generally reasonable in relation to the work being proposed, although a few discrepancies between planned work and anticipated expenses in a given year should be clarified.

APPENDIX A

Table A.1. Monitoring Program projects funded in the Multi-regional category from 2000 to 2016.

Project Number	Project Title	Investigators
00-016	Information Access of AYK Fish Data	ADF&G
00-017	Statewide Subsistence Harvest Strategy	ADF&G, AIT
01-010	Regulatory History of Alaska Salmon Regulations	ADF&G, EA
01-106	Validity and Reliability of Fisheries Harvest	ADF&G, AITC, NPS
01-107	Implementation of Statewide Fisheries Harvest Strategy	ADF&G, AITC
01-154	Project Information and Access System	ADF&G
02-043	Alaska Subsistence Fisheries Database GIS Integration	ADF&G
02-069	Shared Fishery Database	ADF&G
04-701	Develop Shared Fishery Database	ADF&G
04-751	Subsistence Harvest Database Update and Report	ADF&G
05-702	Whitefish Genetic Species Markers	USFWS
06-701	Dolly Varden Stock Composition	USFWS
08-701	Stream Temperature Monitoring	ARRI
12-700	Genetic Baseline for Inconnu from the Yukon and Kuskokwim Rivers	USFWS
14-701	Stream Temperature Monitoring	ARRI
16-752	Subsistence Harvest and Use Patterns of Nonsalmon by Yukon-Kuskokwim Delta Coastal Communities	ADF&G

Abbreviations used: ADF&G=Alaska Department of Fish and Game, AITC=Alaska Inter-Tribal Council, ARRI=Aquatic Restoration and Research Institute, EA=Elizabeth Andrews, NPS=National Park Service, USFWS=U.S. Fish and Wildlife Service.

APPENDIX B

The following abstracts were written by the Principle Investigators and submitted to the Office of Subsistence Management as part of the proposal package. The statements and information contained in the abstracts were not altered and they may not reflect the opinions of the Office of Subsistence Management or the Technical Review Committee.

Project Number: 18-751
Title: Subsistence Harvest Assessment and Stock Composition of Dolly Varden and Nonsalmon fish stocks in the Togiak National Wildlife Refuge
Geographic Region: Multi-Regional: Kuskokwim River and Yukon River Drainages
Data Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: Bronwyn Jones, Division of Subsistence, Alaska Department of Fish and Game
Co-Investigators: Cody Larson, Department of Natural Resources, Bristol Bay Native Association; Penelope Crane, Conservation Genetics Laboratory, U. S. Fish and Wildlife Service; Amanda Cochran, Togiak National Wildlife Refuge, U. S. Fish and Wildlife Service

Project Cost:	**2018**: $23,176	**2019**: $49,054	**2020**: $48,006
Total Cost: $120,236			

Addressed: This project addresses two priority information needs of the 2018 FRMP, 1) obtaining harvest estimates and use of salmon and nonsalmon fish in Togiak and 2) Dolly Varden char harvest and use by residents of Togiak and Twin Hills. Though residents of communities within the TNWR use a wide variety of resources, salmon and nonsalmon fish, including Dolly Varden char, provide the most reliable annual source of subsistence foods. Dolly Varden in TNWR rivers home to natal streams to spawn, but can migrate to nonnatal rivers for overwintering, therefore subsistence harvests are likely mixed. This project will estimate subsistence harvests for salmon, Dolly Varden, and other nonsalmon fish in Togiak and Twin Hills, conduct participant observation in-season and gather Traditional Ecological Knowledge in Togiak, Twin Hills, and Quinhagak to better understand how subsistence stakeholders use, share, and report nonsalmon fish harvests. Dolly Varden will be sampled from subsistence fisheries in the Togiak and Kanektok rivers. Genetic data will be used to estimate the proportions of major stocks of Dolly Varden contributing to subsistence catches and using these rivers for overwintering habitat and how Yup'ik terms for char harvested correspond to different life history strategies and species of char to improve harvest estimates for char.

Objectives:

1. Collect fin clips for genetic analysis from Dolly Varden harvested in the subsistence fishery in the Togiak and Kanektok rivers and estimate the stock composition of fishery samples (CGL, TNWR).
2. Conduct participant observation in fall in winter in Togiak, Twin Hills, and Quinhagak to document how residents harvest, use and report Dolly Varden and nonsalmon fish harvests (BBNA, ADF&G).

3. Conduct interviews with local subsistence users to document their historical and contemporary knowledge of nonsalmon fish abundance and use in the Togiak River watershed (BBNA, ADF&G).
4. Conduct post-season harvest surveys to obtain amount and locations of household harvests to estimate the subsistence harvests of salmon and nonsalmon fish in Togiak and Twin Hills (ADF&G).

Methods: (Objective 1) Fin clips (N=800 total) will be collected from fish harvested in fall and winter fisheries in the Togiak and Kanektok rivers. Length and Yup'ik name ("annerluaq", "yugyaq") will be recorded for sampled fish. Stock composition estimates will be made using genetic methods to determine proportions of major stocks contributing to subsistence catches and overwintering aggregates within these rivers and if Yup'ik describing fish correspond to different species or gene pools. (Objectives 2,3) Participant observation and Key Respondent Interviews will be conducted in Togiak, Twin Hills, and Quinhagak. Data will be summarized to evaluate the harvest and use of Dolly Varden (uses, sharing, competition, trends) and patterns between communities. (Objective 4) Household surveys of fish harvests will be conducted in Togiak and Twin Hills.

Partnerships/Capacity Building: Refuge information technicians (RITs) and local research assistants (LRAs) from Togiak and Quinhagak will participate in data collection, analysis, and reporting. Principal investigators will visit with communities at the beginning of the project and at the end to disseminate final results. Principal investigators will provide technical training for the RITs and LRAs; RITS will participate in genetic analysis of Dolly Varden at the CGL. TNWR will provide logistic support.

Project Number: 18-750
Title: A Descriptive Investigation of Rural Community-wide Wild Food Sharing Events at Upper Copper River, Lower Kuskokwim River, and Southeast areas of Alaska.
Geographic Region: Multi-Regional: Kuskokwim, Southcentral and Southeast
Data Type: Traditional Ecological Knowledge
Principal Investigator: Pippa Kenner; Office of Subsistence Management, U.S. Fish and Wildlife Service
Co-Investigators: Robbin La Vine; Office of Subsistence Management, U.S. Fish and Wildlife Service; Dr. Joshua Ream; Office of Subsistence Management, U.S. Fish and Wildlife Service

Project Cost:	**2018**: $9,618	**2019**: $17,090	**2020**: $7,918
Total Cost: $34,686			

Issue: This study will demonstrate a primary aspect of subsistence needs and harvest goals regarding fish taken in Federal subsistence fisheries. Subsistence needs and harvest goals are regularly discussed by Federal fisheries management staff. Details of people's motivations for harvesting are little understood. Meeting nutritional needs is one aspect informing subsistence needs and harvest goals. Another aspect is

common occurrences of community-wide wild foods sharing events in rural Alaska that are the focus of this study. Detailed contemporary descriptions of what this looks like are rare. This descriptive ethnographic study is structured to give Federal fishery management staff tools that will provide a bridge between cultures of Federal fishery management staff and local residents of three study areas. Findings will be organized in educational materials describing these events. Residents of regions in the study will respond positively when managers incorporate local cultural values represented by these sharing events in their management decision-making processes.

Objectives:

1. Detailed decriptions of one or more contemporary community-wide wild food sharing events at upper Copper River, lower Kuskokwim River, and Southeast Alaska areas of Alaska. The study will answer questions of who participates, what happens, where and when they occur, and what role wild-caught fish plays in supporting these events.
2. Education packages for each of three regions in the study describing the findings of the study, including tools to incorporate Alaska Native cultural values demonstrated by these events into Federal fisheries management decision-making.
3. Bridges between cultures of Federal fishery management staff, villages, and the public.

Methods: Semi-directed interviews with communities in each region of the study and participant observation of community-wide sharing events.

Partnerships/Capacity Building: The study follows a collaborative research methodology. Participants in the study will be asked to help determine the best appropriate approaches to the research within the study design. Researchers will assist study participants to document their activities so that findings will be meaningful to them and appropriate for representing community events to outsiders. Each researcher will hire a local research assistant to help with the study. Every interview respondent will receive an honorarium payment. Findings will be organized in educational materials for villages and Federal fishery management staff describing community sharing events. The study is designed to give Federal fishery management staff important information and tools that will provide a bridge between cultures of Federal fishery management staff and local residents. Residents of regions in the study will respond positively when managers incorporate local cultural values represented by these sharing events in their management decision-making processes.

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

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

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

FOREST SERVICE

OSM 17049.EP

AUG 14 2017

Lester Wilde, Sr., Chair
Yukon-Kuskokwim Delta Subsistence
Regional Advisory Council
c/o Office of Subsistence Management
1011 E. Tudor Road, MS 121
Anchorage, Alaska 99503

Dear Chairman Wilde:

This letter responds to the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council's (Council) fiscal year 2016 Annual Report. The Secretaries of the Interior and Agriculture have delegated to the Federal Subsistence Board (Board) the responsibility to respond to these reports. The Board appreciates your effort in developing the Annual Report. Annual Reports allow the Board to become aware of the issues outside of the regulatory process that affect subsistence users in your region. We value this opportunity to review the issues concerning your region.

1. Dip Nets

The Council had addressed dip nets in the FY2015 Annual Report and in reviewing the Boards' reply wanted to further specify that while the Council is aware that dip nets are provided as an additional option for use, we want to reiterate that the use of a dip net on the Yukon and Kuskokwim Rivers is not a traditional subsistence gear type for most of the region and does not allow users to meet subsistence needs. The Council heard feedback from many communities represented that due to the nature of the river and tidal influence near their villages that it is not possible to catch salmon with a dip net. Council members from Tuntutuliak, Eek, Kwethluk, and Marshall relayed specific challenges from their experiences as well as feedback from the community they represent that dip nets do not provide a subsistence opportunity for them. The Council would like for both the Board and managers to recognize that for many communities it is not feasible to catch salmon with a dip net, and therefore should not be considered as a real subsistence opportunity even if it is offered as an option in place of traditional fishing methods.

Chairman Wilde 2

Response:

In the Yukon Area, the Board has not adopted dip nets as a legal gear type for the harvest of salmon in the subsistence fishery. It is worth noting, however, that Federal subsistence regulations do provide the following: "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), unless superseded by a Federal Special Action." This means that if the State issued an emergency order authorizing the use of dip nets, that emergency order could apply to Federal subsistence fishing.

In the Kuskokwim Area, dip nets have been legal gear in Federal salmon subsistence regulations since 2014. The Yukon-Kuskokwim Delta and Western Interior Alaska Subsistence Regional Advisory Councils recommended that the Board adopt dip nets as a legal gear type. When Yukon Delta National Wildlife Refuge (Refuge) waters are closed to the harvest of Chinook Salmon, the Federal in-season manager (the Yukon Delta National Wildlife Refuge Manager) allows the harvest of other salmon species using all other legal gear. These include dip nets, beach seines, fish wheels, and rod and reel. The Board is aware that people use dip nets to harvest smelt rather than salmon is a traditional method for whitefish. The Federal in-season manager has also been notified during Kuskokwim River Salmon Fisheries Management Working Group meetings that dip nets are inefficient and ineffective in harvesting salmon due to the fast flowing morphology of the Kuskokwim River. As a consequence, the Federal in-season manager has never restricted the subsistence harvest of salmon to only the use of dip nets.

2. Timing of subsistence fishing opportunities when weather is conducive to safely dry fish.

At its fall 2016 meeting the Council heard testimony from members of the public about concerns that subsistence salmon harvest opportunities have been provided too late in the season, when rainy weather and flies pose a real problem to prepare and dry salmon properly to put away for the year. The Council is supportive of conservation efforts to protect Chinook salmon but also wants to bring to the attention of the Board and managers that weather conducive to drying salmon on open air racks is also an important conservation consideration so that harvested salmon are not lost to spoilage later in the summer when wet weather is prevalent and flies emerge and lay eggs on the fish.

Response:

Since 2010, Chinook Salmon escapements into the Kuskokwim River drainage have been some of the lowest on record. As a consequence, in May 2014 and 2015 and June 2016, the Federal in-season manager determined Refuge waters must be closed for most of June to the harvest of Chinook Salmon by all user groups; commercial, sport, and both State and Federal subsistence. The Board is aware of the negative effects of these actions on Federally qualified subsistence users, especially those who reside in the drainage and are most reliant on the salmon runs. The Board has directed its staff to document these hardships in several ways. One has been the Section 804 subsistence user prioritization included in each of three analyses of special action

requests received since 2014 requesting that Refuge waters be closed to the harvest of Chinook Salmon except by a prioritized group of Federally qualified subsistence users. Residents of Kipnuk, Kwigillingok, Tuntutuliak, Kasigluk, Nunapitchuk, Atmauthluak, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, Kalskag, Aniak, and Sleetmute specifically described the difficulty of drying and smoking salmon after June. A resident of Tuntutuliak said in 2012, "Drying fish in wet weather is more demanding, takes longer, and produces an inferior product, if it works at all." Additionally, rainy weather can be rough and dangerous, he said: "Better to let the weather make the windows." The windows are when there are opportunities allowing the harvest of salmon with gillnets.

During the public hearing that was held in Bethel on April 18, 2017, concerning two special action requests to the Board, FSA17-03 and FSA17-04, people described the necessity of having Chinook Salmon harvest opportunities as early in June as possible to avoid spoilage due to wet weather more likely to occur after mid-June. Ethnographic research also describe Chinook Salmon's importance in the seasonal round of villages harvesting wild foods and the tremendous efforts people make to harvest and preserve salmon in early June to take advantage of the runs and avoid spoilage.

The Board is hopeful that with increasing run sizes, there will be additional opportunities to harvest, dry, and smoke salmon in June in the coming years.

3. Timing of fall subsistence moose hunt.

The Council discussed the experience of the fall moose hunt with members of the public attending the meeting and concurred that warmer weather in recent years is making it difficult to harvest and safely protect the meat. Also many people do not have freezers and have to dry meat and need cooler temperatures to preserve the meat for the winter. The Council recommends consideration of shifting the fall moose hunt opening back by a week or two from the current September 1 opening date in order to start the hunt when the weather conditions may be cooler and more conducive to safe preservation of the meat.

Additionally, the Council also discussed that the moose tend to be further up near the headwaters of tributary rivers and into the foothills of the mountains. To pool resources and save on gas many hunters will travel together in one boat to access where the moose are in Unit 18. The current requirement to report harvest within three days poses hardship when having to travel far for the hunt and ensuring that both hunters have an opportunity to harvest a moose before having to return back to file a report. Due to these circumstances, the Council requests consideration of more time to submit a moose harvest report.

Response:

The Yukon Delta National Wildlife Refuge Manager is aware that this is an issue and has been responsive to the needs and ideas of Federally qualified subsistence users. Despite the Refuge's willingness to accommodate local needs, the in-season manager has limited flexibility under the

authority delegated to him by the Federal Subsistence Board. The Refuge manager is able to set the quota, which happens annually in consultation with the Alaska Department of Fish and Game, and to close the season once the quota has been met. However, the Refuge manager does not have the authority to open the season later than September 1, or to reopen the season later in the fall or winter in cases where the quota was not met during the initial opening.

This sort of issue should be addressed through the regulatory process. The Council has several options for revising the regulatory structure to better accommodate subsistence users' needs. On a year-to-year basis, the Council may submit special action requests to the Federal Subsistence Board to reopen the season in cases where the quota was not met during the initial opening. To modify the regulatory structure for a longer term, the Council may wish to submit a proposal during the biennial call for wildlife proposals. While the Council may propose any solution it deems appropriate, one option would be to propose an expansion of the Refuge manager's authority to manage the hunt. For instance, the authority to open and reopen the season within a designated time frame would allow the manager to be responsive to changing weather and travel conditions as well local needs and desires. This added flexibility would likely benefit Federally qualified subsistence users and would allow for more nimble management of the moose population during a time when it is experiencing rapid growth. However, as the deadline for submitting wildlife proposals has passed, the only remaining option for this year would be to submit a special action. The next call for wildlife proposals will be in winter 2019.

Federally qualified subsistence users who hunt moose in the Kuskokwim area under Federal regulations are required to have a State registration permit, which requires reporting successful harvest within three days. If the Council feels that local hunters would be better served by hunting under a Federal permit, which might have different reporting requirements, they can submit a regulatory proposal during the next call for proposals. However, it is worth bearing in mind that requiring a different permit for State and Federal hunts is likely to increase confusion among users and is contrary to the recent action by Alaska Board of Game to align State regulations with Federal regulations for this hunt.

4. Opportunity to harvest spring sheefish in advance of the Chinook Salmon closure.

The Council discussed that sheefish has always been an important subsistence food for many communities on the Kuskokwim, and even more so now with fishing restrictions in place for the conservation of Chinook Salmon. The spring run of sheefish provides an opportunity for some of the first harvest of fresh fish after a long winter and, as Council members noted, it makes good dryfish, too. Currently, conservation management for Chinook Salmon has started with all subsistence fishing closed in the spring until Chinook Salmon passage is determined to be sufficient to meet escapement goals. The Council is supportive of Chinook Salmon conservation measures; however, there could be a subsistence opportunity for a sheefish harvest opening right after river ice breakup timed ahead of the first pulse of Chinook Salmon on the Kuskokwim. This would provide for an important early subsistence fishing opportunity for sheefish in advance of the fishing closures for conservation of Chinook Salmon.

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Response:

The Board recognizes that Sheefish is an important subsistence resource for Kuskokwim River residents, especially before the start of the Chinook Salmon run.

Since 2010, Chinook Salmon runs in the Kuskokwim River have been low, with 2013 being the smallest run on record. However since 2014, the Chinook Salmon runs have increased in a steady fashion, but the runs are still below the historical average. Given the small Chinook Salmon run sizes, the Board of Fisheries passed a regulation in January of 2016 that closed the Kuskokwim River Chinook Salmon subsistence fishery annually through June 11 (5 AAC 0.7365 - Kuskokwim River Salmon Management Plan). The intent of the regulation was to reduce harvest on early migrating Chinook Salmon that are believed to be bound for upriver spawning tributaries. The outcome anticipated by the regulation change was decreased exploitation on headwater sub-stocks by lower river subsistence users, increased harvest opportunity for upper river subsistence users, and increased Chinook Salmon escapement to headwater tributaries.

Prior to 2015, State subsistence regulations provided for the use of 4 inch or smaller mesh gillnets to harvest non-salmon species during times of Chinook Salmon conservation; however, in 2016, due to the regulatory change described above, the Alaska Department of Fish and Game did not allow the use of 4 inch or less mesh gillnets to harvest non-salmon species during the early Chinook Salmon subsistence fishery closure. The Alaska Department of Fish and Game (ADF&G) did not allow for an early-season non-salmon harvest opportunity with this gear type because the department had expectations of directed Chinook Salmon using this gear type.

The lack of opportunity to harvest non-salmon species with 4 inch or smaller mesh gillnets in 2016 caused growing concerns from local subsistence users, which led them to recommend that the ADF&G provide harvest opportunities for non-salmon species before the early season Chinook Salmon closure. To address this issue, the Alaska Board of Fisheries adopted regulations in February 2017 that clarified the use of 4-inch or less mesh gillnets during the early season Chinook Salmon subsistence fishery closure (RC 279 with amended language found in RC 218). These new regulations will be enacted for the 2017 fishing season. The new regulations are summarized below:

1.) If the projected escapement of Chinook Salmon is within the drainage-wide escapement goal range, the new regulation states that:

> "*the commissioner shall, by emergency order, open at least one fishing period per week with four inch or small mesh gillnets; the gillnets may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high water mark.*"

2.) If the projected Chinook Salmon escapement exceeds the drainage-wide escapement goal range, then the new regulations state:

> "*the commissioner shall, by emergency order, open fishing with four inch or smaller gillnets seven days a week; the gillnet may only be operated as a set gillnet and no part of the set gillnet may be more than 100 feet from the ordinary high water mark.*"

The Board of Fisheries felt that the regulation change gave local subsistence users dedicated harvest opportunities for non-salmon species during times of Chinook Salmon conservation, while also allowing for flexibility in fisheries management.

Given the new State regulation changes, Federal subsistence regulations for salmon in the Kuskokwim area will match any State-issued emergency orders related to early season fishing schedules, openings, and fishing methods, unless superseded by Federal Special Actions.

5. Tribal Consultation and reporting to the Regional Advisory Council.

The Council appreciates the Federal Subsistence Board commitment to Tribal consultation on regulatory proposals and other matters affecting subsistence. We look forward to the opportunity to hear feedback and recommendations from the many Tribes in our region. The Council would like for the Tribal consultation process to occur within the Federal subsistence regulatory cycle timing such that there can be a report back at the Regional Advisory Council meetings. This would assist the Council in hearing from Tribes and communities throughout the Yukon-Kuskokwim Delta region and opportunity to consider their feedback in the Councils deliberation and recommendations to the Federal Subsistence Board.

Response:

The Board appreciates the Council's concerns for the consultation process to happen within the Federal subsistence regulatory cycle timing in a manner that provides tribes have the opportunity for feedback and recommendations to the Regional Advisory Council before their scheduled meetings. This would assist the Council in hearing from tribes in their region for the opportunity to consider their feedback during deliberation and while making recommendations to the Board. This is how the process is described in the *Implementation Guidelines for the Federal Subsistence Board Government-to-Government Tribal Consultation Policy*, in the section "Regulatory Cycle Timeline and Roles and Responsibilities."

In some cases, however, the timing related to when proposals or special actions are received presents challenges in successfully contacting affected tribes or corporations and finding dates that will work for consultations. This can result in a shorter time period within which to work. Additionally, there are times when the consultation can only be held after the Regional Advisory Council meeting, when contact is made and an alternate date is agreed upon. The Native Liaison, along with other Office of Subsistence Management (OSM) staff, put considerable effort into reaching people in the affected regions. Despite the effort, sometimes only a few contacts are confirmed.

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As the OSM Native Liaison continues working with tribes, corporations, Council Coordinators, and Refuge Information Technicians (RITs) in each region, with their local knowledge and involvement, we can expect to have greater success with our outreach efforts. Together we can strengthen the process and move forward to conduct more effective and meaningful consultations.

6. Increased shipping traffic in the Bering Sea and potential impacts to subsistence communities in the Yukon-Kuskokwim Delta.

In recent years, the Council has seen increased shipping barges and large oil tankers in the vicinity of coastal and island communities of the Yukon-Kuskokwim Delta. This past summer a large oil tanker ran aground on the reef near Nunivak Island and Etolin Strait. The village of Mekoryuk was fortunate that this grounding did not cause a major oil spill but were very distressed to learn from the Coast Guard that the nearest oil response equipment is located in the Bristol Bay region. The communities of Hooper Bay, Scammon Bay, and Chevak have expressed concerns with large oil tankers offloading to smaller fuel barges right offshore of these villages. Any spills near the Yukon-Kuskokwim Delta coastline would be very detrimental to many subsistence resources that our communities rely upon including seals, walrus, birds, and numerous species of marine and anadromous fish. Lack of any emergency support options in the region to respond quickly the event of marine shipping accident is very concerning. Many of our subsistence resources and way of life are in increasing jeopardy as shipping traffic continues to expand.

The Council would like to help our coastal communities find a solution for prevention of oil spills and mitigation plans if another accident were to occur. The Council recognizes that marine waters and shipping activities are beyond the authority of the Federal Subsistence Board; however, due to the potential for an oil spill having direct impacts to Federal subsistence fisheries such as the critically important Yukon and Kuskokwim salmon runs, as well as other subsistence resources, we feel it is important the Board is aware of this this lack of any emergency response options in the region. The marine waters are not isolated; there is ongoing interaction between the marine environment and the Federal lands and waters of the Yukon Delta National Wildlife Refuge, as well as interrelated subsistence activities. Whatever happens in the Bering Sea not only affects the coast, it affects the Yukon and Kuskokwim Rivers and the food chain including juvenile salmon feeding at sea which would have impacts all the way to the headwaters. A shipping accident resulting in a spill in this region would be catastrophic to our subsistence way of life. The Council would appreciate any support from the Board or the Federal Subsistence Management Program in forwarding these concerns to the relevant agencies and assist us in seeking potential solutions in order to prevent marine shipping accidents near our communities or at least be prepared for with emergency response systems in place in the event of a spill.

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Response:

Shipping is expected to increase in the future due to shrinking sea ice extent during the summer months. Transpolar or Trans-Arctic shipping routes have been increasing as more predictable navigation is possible each year. Because this new navigation route reduces the mileage of shipments, shippers are looking to take advantage of this new route. As the Trans-Arctic routes begin to see more activity, it is expected that new alternatives to dealing with accidents will be needed to advert any possible environmental disasters, such as oil spills. Possible catastrophes could be further exacerbated by the remoteness of this route. Response times to accidents could be slowed, which prompts the need for a plan of action when these types of events occur.

As the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council has suggested, the Federal Subsistence Board is not responsible for the shipping activities and spill response plan that is needed. However, the Federal Subsistence Board recognizes that the impact of a large scale contamination disaster could indeed harm or change the immediate environment, which in turn could have lasting impacts to the subsistence resources. Increased shipping traffic also could have the effect of changing the behavior of marine mammals, such as seals or walrus, which could inadvertently impact the subsistence user with the animals not acting naturally due to nearby disturbances. This is a valid concern and needs to be assessed critically to better understand how to minimize the possibilities for accidents and also be prepared for an accident with response teams that are well equipped and nearby. The Board will forward the Council's concerns to the appropriate agencies.

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

Sincerely,

Anthony Christianson
Chair

cc. Federal Subsistence Board
Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
Eugene R. Peltola, Jr., Assistant Regional Director, Office of Subsistence Management
Thomas Doolittle, Deputy Assistant Regional Director, Office of Subsistence Management
Carl Johnson, Council Coordination Supervisor, Office of Subsistence Management
Eva Patton, Subsistence Council Coordinator, Office of Subsistence Management
Jill Klein, Special Assistant to the Commissioner, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

Federal Subsistence Board

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

FOREST SERVICE

OSM 17058.JH

Refuge Manager
U.S. Fish and Wildlife Service
Yukon Delta National Wildlife Refuge
P.O. Box 346
Bethel, Alaska 99559

Dear Yukon Delta National Wildlife Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Manager of the Yukon Delta National Wildlife Refuge (Refuge Manager) to issue emergency special actions when necessary to ensure the conservation of a healthy fish population, to continue subsistence uses of fish, for the continued viability of a fish population, or for public safety reasons. This delegation only applies to Federal public waters subject to the Alaska National Interest Lands Conservation Act (ANILCA) Title VIII in the Kuskokwim Area, including the Goodnews and Kanektok Rivers.

It is the intent of the Board that Federal subsistence fisheries management by Federal officials be coordinated, prior to implementation, with the representatives from Regional Advisory Councils (Councils), the Kuskokwim River Inter-tribal Fish Commission (KRITFC), the Kuskokwim River Salmon Management Working Group (KRSMWG), the Office of Subsistence Management (OSM), and the Alaska Department of Fish and Game (ADF&G), to the extent possible. The OSM will be used by managers to facilitate communication of actions and ensure proposed actions are technically and administratively aligned with legal mandates and policies. Federal managers are expected to cooperate with managers from the State and other Federal agencies, the Council Chair(s), and applicable Council members to minimize disruption to subsistence resource users and existing agency programs, consistent with the need for emergency special action.

Comment [A1]: New language – Associated with changes stemming from FP17-05

DELEGATION OF AUTHORITY

1. Delegation: The Refuge Manager is hereby delegated authority to issue emergency special actions affecting fisheries in Federal public waters as outlined under the **Scope of Delegation** below. Although a public hearing is not required for emergency special actions, if deemed necessary by you, then a public hearing on the emergency special action is recommended. Special actions are governed by regulation at 36 CFR 242.19 and 50 CFR 100.19.

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

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the issuance of emergency special actions as defined by 36 CFR 242.19(a) and 50 CFR 100.19(a). Such an emergency action may not exceed 60 days, and may not be extended.

This delegation permits you to open or close Federal subsistence fishing periods or areas provided under codified regulations. It also permits you to specify methods and means; to specify permit requirements; and to set harvest and possession limits for Federal subsistence fisheries.

This delegation also permits you to close and re-open Federal public waters to nonsubsistence fishing, but does not permit you to specify methods and means, permit requirements, or harvest and possession limits for State-managed fisheries. This delegation may be exercised only when it is necessary to conserve healthy populations of fish or to ensure continuation of subsistence uses.

All other proposed changes to codified regulations, such as customary and traditional use determinations or requests for special actions greater than 60 days, shall be directed to the Board.

The Federal public waters subject to this delegated authority are those within the Kuskokwim Area (as described in the Subsistence Management Regulations for the Harvest of Fish and Shellfish on Federal Public Lands and Waters in Alaska). You will coordinate all local fishery decisions with all affected Federal land managers.

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

5. Guidelines for Review of Proposed Special Actions: You will use the following guidelines to determine the appropriate course of action when reviewing proposed special actions.

a) Does the proposed special action fall within the geographic and regulatory scope of delegation?

b) Have you communicated with the OSM to ensure the emergency special action is aligned with Federal subsistence regulations and policy?

c) Does the proposed action need to be implemented immediately as an emergency special action, or can the desired conservation or subsistence use goal be addressed by deferring the issue to the next regulatory cycle?

d) Does the supporting information in the proposed special action substantiate the need for the action?

e) Are the assertions in the proposed special action confirmed by available current biological information and/or by affected subsistence users?

f) Is the proposed special action supported in the context of available historical information on stock status and harvests by affected users?

g) Is the proposed special action likely to achieve the expected results?

h) Have the perspectives of the Chair or alternate of the affected Council(s), the KRITFC, the KRSMWG, OSM, and affected State and Federal managers been fully considered in the review of the proposed special action?

Comment [A2]: New Language – Associated with FP17-05.

i) Have the potential impacts of the proposed special action on all affected subsistence users and non-Federally qualified users within the drainage been considered?

j) Can public announcement of the proposed special action be made in a timely manner to accomplish the management objective?

k) After evaluating all information and weighing the merits of the special action against other actions, including no action, is the proposed emergency special action reasonable, rational, and responsible?

6. Guidelines for Delegation: You will become familiar with the management history of the fisheries in the region, with the current State and Federal regulations and management plans, and be up-to-date on stock and harvest status information.

You will provide subsistence users in the region a local point of contact about Federal subsistence fishery issues and regulations and facilitate a local liaison with State managers and other user groups. For in-season management decisions and special actions, consultation is not always possible, but to the extent practicable, two-way communication will take place before decisions are implemented. You will also establish meaningful and timely opportunities for government-to-government consultation related to pre-season and post-season management actions as established in the Board's Government to Government Tribal Consultation Policy (Federal Subsistence Board Government to Government Tribal Consultation Policy 2012).

By [INSERT DATE] of each year, you will convene a meeting of representatives from the Yukon Delta NWR, the Kuskokwim River Intertribal Fish Commission, and other Federally sanctioned entities to determine, in consultation with the OSM and ADF&G, if conditions warrant Federal management of subsistence fisheries on the Kuskokwim River.

Comment [A3]: Request input on this section from YKD and WI Councils, KRITFC, and in-season manager

In addition to any guidelines collaboratively established for issuing emergency special actions via this delegated authority, you will review emergency special action requests or situations that may require an emergency special action and all supporting information to determine (1) consistency with 36 CFR 242.19 and 50 CFR 100.19, (2) if the request/situation falls within the scope of your delegated authority, (3) if significant conservation problems or subsistence harvest concerns are

Comment [A4]: New language – Associated with FP17-05

indicated, and (4) what the consequences of taking an action may be on potentially affected subsistence uses and nonsubsistence uses. Requests not within your delegated authority will be forwarded to the Board for consideration.

You will maintain a record of all special action requests and justification of your decisions. A copy of this record will be provided to the Administrative Records Specialist at OSM no later than sixty days after development of the document.

You will immediately notify the Board through the Assistant Regional Director for the OSM, and coordinate with the Chair or alternate of the affected Council(s), the KRITFC, the KRSMWG, local ADF&G managers, and other affected Federal conservation unit managers concerning emergency special actions being considered.

Comment [A5]: New language – Associated with changes stemming from FP17-05

If the timing of a regularly scheduled meeting of the affected Council(s) permits without incurring undue delay, you may seek Council recommendations on the proposed emergency special action.

You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify Council representatives, the KRITFC, the KRSMWG, the public, OSM, affected State and Federal managers, and law enforcement personnel. If an action is to supersede a State action not yet in effect, the decision will be communicated to Council representatives, the KRITFC, the KRSMWG, the public, OSM, and State and Federal managers at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponents of the request immediately.

Comment [A6]: New language – Associated with changes stemming from FP17-05

Comment [A7]: New language – Associated with changes stemming from FP17-05

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

7. Reporting: If pre-season meetings result in the need for Federal management of the fishery, you will submit a written report to the Board by [INSERT DATE] of each year documenting the outcome of this determination process, as well as outlining the in-season collaborative decision making process adopted by the group to include input from the KRITFC, the KRSMWG, the OSM, and ADF&G, proposed strategies for in-season management, and agreed upon guidelines for issuing emergency special actions via delegated authority.

Comment [A8]: Request input on this section from YKD and WI Councils, KRITFC, and in-season manager

You must provide to the Board, through the Assistant Regional Director for the OSM, a report describing the pre-season coordination efforts, local fisheries management decisions, and post-season evaluation activities for the previous fishing season by November 15. A summary of emergency special action requests and your resultant actions must be provided to the coordinator of the appropriate Council(s) at the end of the calendar year for presentation during regularly scheduled Councils meetings.

Yukon Delta National Wildlife Refuge Manager 5

8. <u>Support Services</u>: Administrative support for your local Federal subsistence fisheries management activities will be provided by the Office of Subsistence Management, U.S. Fish and Wildlife Service, Department of the interior

Should you have any questions about this delegation of authority, please feel free to contact the Assistant Regional Director for the OSM, U.S. Fish and Wildlife Service, at toll-free 1-800-478-1456 or (907) 786-3888.

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board
Chair, Yukon-Kuskokwim Delta Subsistence Regional Advisory
Chair, Western Interior Subsistence Regional Advisory Council
Superintendent, Lake Clark/Katmai National Parks and Preserve
Superintendent, Denali National Park and Preserve
Manager, Togiak National Wildlife Refuge
Manager, Alaska Maritime National Wildlife Refuge
Assistant Regional Director, Law Enforcement, U.S. Fish and Wildlife Service
Commissioner, Alaska Department of Fish and Game
Assistant Regional Director, Office of Subsistence Management
Administrative Record

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

Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
April 06, 2017

Contact: Jennifer Hardin
(907) 786-3677 or (800) 478-1456
jennifer_hardin@fws.gov

Public Hearing announced for Federal Subsistence Management of Salmon Fisheries in the Kuskokwim River Drainage

A public hearing is scheduled for 6:00–8:00 p.m., April 18, 2017, at the Yupiit Piciryarait Cultural Center in Bethel to receive testimony on two temporary special action requests received by the Federal Subsistence Board (Board). Ken Stahlnecker, Manager, Yukon Delta National Wildlife Refuge, will be available following the hearing (8:00–9:00 p.m.) to answer general questions concerning salmon management within the drainage.

Temporary Special Action Request FSA17-03, submitted by the Kuskokwim River Inter-Tribal Fish Commission, requests that the Board approve a management strategy that would close Federal public waters in the Kuskokwim River drainage to the harvest of Chinook Salmon except by Federally qualified subsistence users if the forecasted run size is below a specific target level.

Temporary Special Action Request FSA17-04, submitted by the Akiak Native Community, requests the following from the Board:

- Close Federal public waters of the Kuskokwim River drainage to the harvest of salmon except by Federally qualified subsistence users;
- Reduce the pool of eligible harvesters based on the Alaska National Interest Lands Conservation Act (ANILCA) Section 804 Subsistence User Prioritization that was implemented in 2016; and
- Implement an allocation strategy among eligible users, similar to the one implemented in 2015.

The public is welcome and encouraged to attend this hearing in person or by calling the telephone number provided below. When prompted, enter the passcode. Comments will be forwarded to the Board for consideration on the temporary special action requests. For more information about these special action requests, go to https://www.doi.gov/subsistence/special_actions.

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 #10204062017.

Public Hearing information is as follows:

Bethel

6:00–8:00 p.m., April 18, 2017
Yupiit Piciryarait Cultural Center
420 Chief Eddie Hoffman Highway
Teleconference: TOLL FREE 1 (888) 455-5897
Passcode: 3344290

The Board is committed to providing access to this public meeting for all participants. Please direct requests for sign language interpreting services or other accommodation needs to the Office of Subsistence Management at 1 (800) 478-1456 or 1 (907) 786-3888 or by e-mail subsistence@fws.gov by close of business on April 10, 2017.

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

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

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Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
May 22, 2017

Contact: Caron McKee
(907) 786-3880 or (800) 478-1456
caron_mckee@fws.gov

Federal Subsistence Board Approves New Regulations for Kuskokwim River Drainage Chinook Salmon Fishery

On May 19, 2017, the Federal Subsistence Board (Board) met via teleconference and in a subsequent email poll on May 22, 2017, which was executed to clarify the intent of Board action. The Board has approved Temporary Special Action Requests FSA17-03 and FSA17-04 with modification. Beginning on June 12, 2017, Federal public waters of the Kuskokwim River drainage will be closed to the harvest of Chinook Salmon except by Federally qualified subsistence users identified in a Section 804 Subsistence Users Prioritization analysis. The Board determined there is a need to restrict the harvest of Chinook Salmon for the conservation of healthy populations and to protect the continuation of subsistence uses as mandated under Alaska National Interest Lands Conservation Act (ANILCA) Section 815. Those eligible to harvest Chinook Salmon under Federal regulations are the following: Federally qualified subsistence users residing in the Kuskokwim River drainage and the coastal communities of Chefornak, Kongiganek, Kipnuk, and Kwigillingok. This Board action supersedes all previous special actions issued by the Federal in-season manager.

The Manager of the Yukon Delta National Wildlife Refuge, who is the Federal in-season manager, beginning June 12, may provide harvest opportunity for Chinook Salmon subsistence fisheries using openings, closures, and gear restrictions developed in consultation with the Kuskokwim River Inter-Tribal Fish Commission pursuant to the Memorandum of Understanding between the U.S. Fish and Wildlife Service and the Commission.

These Temporary Special Actions will expire when the Federal in-season manager re-opens Federal public waters of the Kuskokwim River drainage to the harvest of Chinook Salmon by non-Federally qualified users, or when they are superseded by subsequent special actions, or at the end of the regulatory year on March 31, 2018, whichever comes first.

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

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

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This document has been cleared for public release #11405222017.

To: Anthony Christianson, Chairman July 6, 2017
Federal Subsistence Board

From: Dave Cannon, Aniak

Subject: Federal Special Action Request for Consideration by the Federal Subsistence Board Regarding Kuskokwim River Salmon Management

Dear Mr. Christianson:

I am a longtime resident of the Kuskokwim, a fisheries biologist, and a Kuskokwim River Salmon Management Working Group member. As a concerned and informed individual, I feel I have an obligation to future generations of subsistence users - and to the Chinook salmon themselves - to make this special action request (SAR) to the Federal Subsistence Board (FSB) to correct what I see as violations of sound management policies…particularly federal policy. I have consistently expressed my conservation concerns for Chinook salmon at Working Group meetings and to both the State and Federal In-Season Managers in Bethel with no resolution.

My SAR requests FSB take three immediate actions:

1. That the FSB rescind the In-Season Fisheries Management Authority of the Yukon Delta National Wildlife Refuge (YDNWR) Manager for the remainder of the 2017 fishing season.

2. That the FSB take over In-Season Management of the fishery based on conservation principles of Chinook stocks as identified in sections 815(1) & 816(b) in Title VIII of ANILCA.

3. That FSA 3-KS-01-17 be extended beyond August 10, 2017 to include management of the chum, sockeye, and coho salmon fishery.

Justification for SAR:

For the first SAR - rescinding the in-season management authority of the YDNWR Manager: The current management situation between the Kuskokwim River Intertribal Fisheries Commission (KRITFC) and the FWS is not representative of the wishes of many people that share my conservation concerns. Meetings between the two groups are not open to the public while analyses and deliberations are not shared; subsequently, management decisions are being made without opportunity for full public input. Additionally, the management decisions to date appear to have been based more on social concerns rather than sound conservation principles.

During several Working Group meetings, the federal in-season manager was asked to justify allowing the harvest of several thousand Chinook salmon despite stating that the FWS's own analyses suggested the lower end of the SEG (65,000) wouldn't be met (something which could potentially jeopardize the viability of the Chinook salmon population). However, he provided no firm evidence or analysis to support his contention that it would not do harm to the run.

On June 28th the Working Group passed a motion to not have any subsistence openings until July 3rd – this was in regards to the acknowledgement by both the FWS and ADF&G that the minimum drainage-wide escapement goal of 65,000 kings would likely not be met. Yet on June 30th, the Refuge Manager announced openings for July 1st **and** 3rd. A partial river harvest estimate from the mouth to Akiak by YDNWR staff for those two days totaled 1,700 Chinook salmon.

Looking at ADF&G's sonar counts as of July 4 - the estimated total passage of Chinook past Bethel ranges from between 24,500 to 44,300. ADF&G estimates that if the run timing were normal that 91% of the Chinook would have passed the sonar site. However, the Department believes that the run timing is later than originally thought. If that is the case, using 80% as a liberal approximation, along with the most optimistic end of the range - total escapement above Bethel will only be 55,000 (44,300/.8).

As my own evidence, I submit that the FSB review the OSM staff analysis found on page 23 of FSA17-03 discussing the uncertainty associated with Kuskokwim Chinook population dynamics and stock recruitment relationships. Additionally, the preseason forecast appears to have overestimated this year's run size and the run timing model now appears incorrect. I realize that these types of "modeling" exercises have a great deal of uncertainty associated with them. However, from the start, the Refuge Manager has put too much weight in them despite overwhelming in-season assessment data to the contrary.

In the Federal Fisheries Delegation of Authority memo under section 6. *Guidelines for Delegation*, subsection 5. *"…the Federal Subsistence Board may determine that a special action request should not be handled by the delegated official but by the Board itself (i.e. rescind the delegated authority for that specific action only)."*, it's clear that the FSB has the authority to directly manage the Kuskokwim fishery - if you so choose.

The second SAR - to manage the Chinook salmon fishery for conservation first and foremost: This is clearly identified in section 815(1), Title VIII of ANILCA:

> ***"****(1) granting any property right in any fish or wildlife or other resource of the public lands or as permitting the level of subsistence uses of fish and wildlife within a conservation system unit to be inconsistent with the conservation of healthy populations, and within a national park or monument to be inconsistent with the conservation of natural and healthy populations, of fish and wildlife. No privilege which may be granted by the State to any individual with respect to subsistence uses may be assigned to any other individual;"*
>
> And in section 816(b), Title VIII of ANILCA:
>
> *"…If the Secretary determines that an emergency situation exists and that extraordinary measures must be taken for public safety or to assure the continued viability of a particular fish or wildlife population, the Secretary may immediately close the public lands, or any portion thereof, to the subsistence uses of such population and shall publish the reasons justifying the closure in the Federal Register…"*

Both directives make it clear that nothing in Title VIII of ANILCA is to be construed as permitting any level of subsistence use that is inconsistent with the conservation of healthy populations of fish and wildlife.

This, in a very real sense, is the focus of the issue at hand - precisely how many fish are enough for maintaining a "healthy" or "viable" Chinook salmon population in the Kuskokwim River. I don't know the answer to that for sure myself; however, I do know that we're looking at one of the weakest runs on record, one that is well below the historic average. Confounding the issue is that this year's abundance and run timing appear to be anomalous. Potentially unfavorable in-river environmental conditions (i.e. low, warm, clear water), if they persist, could affect migration and spawning thereby posing serious concerns about spawner/recruit relationships; something that has been raised by other qualified scientists, including OSM staff, and underscores the need for precautionary management.

The third SAR - extending Federal management to the entire fishery beyond August 10, 2017: This is intended primarily for two reasons: first, to allow for conservation measures to remain in place later in the season since managers now believe the Chinook run timing is slightly late, and second, to provide opportunity for federally qualified users to harvest sufficient numbers of coho salmon to meet unfilled needs due to earlier management actions. ADF&G recently announced that a commercial processor has expressed an intention of operating on the Kuskokwim for "mostly" the coho fishery, yet many fishers have expressly indicated they intend to focus more on coho salmon to avoid incidental Chinook harvest or restrictive fishing schedules.

In summary, my heart is heavy not only over the concerns I've expressed above, but the implications of the need for people of the region to provide for themselves and families by harvesting a normally renewable resource…the cultural significance of which does not need to be elaborated to you. I know that my actions may appear extreme to many, but try as I might to work within the process available to me, I feel I have to make one final effort for the conservation and future of our Chinook salmon…something that will ultimately benefit the people of the region.

Thank you for your valuable time and consideration, sincerely:

Signature: Dave Cannon Date: 7/6/2017

Dave Cannon
Cell #: 907-676-0012 E-mail: dcannon4fish@earthlink.net

CC: Gene Peltola - Assistant Regional Director, Office of Subsistence Management, USFWS
Ken Stahlnecker - Refuge Manager, Yukon Delta National Wildlife Refuge
Mary Peltola - Interim Director, Kuskokwim River Inter-Tribal Fish Commission
Aaron Tiernan - Acting Area Manager, Commercial Fisheries: Kuskokwim Area

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Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
July 20, 2017

Contact: Caron McKee
(907) 786-3880 or (800) 478-1456
caron_mckee@fws.gov

Federal Subsistence Board holds summer work session, rejects proposed Kuskokwim Emergency Special Action

The Federal Subsistence Board (Board) held a work session on July 17-18, 2017. During the July 17 portion of the meeting in Anchorage, the Board approved, with minor modifications, Regional Advisory Council Annual Report Replies, and accepted revisions to United States and Canada border river delegated authority letters to in-season managers that address subsistence fishing closures for treaty obligations. The Board heard presentations on the Federal Subsistence Management Program's budget, and a proposed hunter ethics education program for the Eastern Interior Region. Additionally, during a closed executive session, the Board discussed Regional Advisory Council nominations and recommendations to the Secretaries of the Interior and Agriculture for their appointments.

The Board discussed and rejected Emergency Special Action Request FSA17-05, which requested that the Board take three actions: (1) rescind the in-season fisheries management authority of the Yukon Delta National Wildlife Refuge (Refuge) Manager for the remainder of the 2017 fishing season; (2) close Refuge waters of the Kuskokwim River mainstem and salmon-bearing tributaries to the harvest of Chinook Salmon as necessary to ensure healthy populations and the viability of Chinook Salmon populations in the Kuskokwim River drainage; and (3) close Refuge waters to the harvest of Coho Salmon except by Federally qualified subsistence users to ensure the continuation of subsistence uses of Coho Salmon. In rejecting FSA17-05, the Board emphasized its continued support for the collaborative Federal subsistence in-season management process that has been carried out on the Kuskokwim River to date. Refuge waters of the Kuskokwim River mainstem will remain open to the harvest of all salmon for all consumptive uses under current State regulations. Fishing with gillnets will remain closed on salmon-bearing tributaries specified in Alaska Department of Fish and Game's Emergency Order 3-S-WR-01-17.

On July 18, the Board visited the Kenai River community gillnet fishery established for residents of Ninilchik to observe and discuss issues with fishers and managers.

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

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Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
May 3, 2017

Contact: Ken Stahlnecker
(907) 543-3151 or (800) 621-5804
Ken_Stahlnecker@fws.gov

Federal Public Waters Closed to Gillnet Fishing by All Users Beginning June 12
Action taken to conserve Kuskokwim River Chinook Salmon

In consultation with the Kuskokwim River Inter-Tribal Fish Commission (KRITFC) and the Alaska Department of Fish & Game (ADFG) , the Federal In-season Manager has closed Federal public waters of the Kuskokwim River main-stem and salmon tributaries within the Yukon Delta National Wildlife Refuge boundary to the use of gillnets by all users beginning on June 12, 2017. Salmon tributaries are the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak within the boundaries of the refuge. This includes branch rivers of the Lower Kuskokwim on the East bank that lead to the Eek river.

Non-salmon tributaries 100 yards upstream of their confluence with the Kuskokwim River remain open to all users by means and methods outlined in permanent regulation by the ADFG and the Federal Subsistence Management Program (FSMP). Salmon harvested by gillnets in non-salmon tributaries may be kept. Targeting species other than Chinook salmon using means and methods other than gillnets remain open to all users under permanent regulation by the ADFG and the FSMP; however, all Chinook Salmon caught must be immediately released.

This closure is based on the need to conserve a lower than average Chinook salmon run. The Federal in-season manager may open Federal public waters of the Kuskokwim River drainage to the harvest of salmon by Federally qualified subsistence users. Opportunities for gillnet fishing will be announced in advance of an opening.

This closure has been implemented by Federal Emergency Special Action (**3-KS-01-17**) under the delegated authority of the Federal Subsistence Board.

Access up-to-date information on fishing opportunities by calling 907-543-1037 or visit the Yukon Delta National Wildlife Refuge Facebook page or website. **Questions?** call the Refuge at (907) 543-3151 or at (800) 621-5804.

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

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U.S. Fish and Wildlife Service
Bureau of Land Management
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Federal Subsistence Board
1101 E Tudor Rd, MS 121
Anchorage Alaska 99503

Forest Service

SUBSISTENCE FISHING

SPECIAL ACTION

Under Authority of	**50 CFR Part 100.10 and .19** **36 CFR Part 242.10 and .19**		
Special Action No.:	3-KS-01-17	Issued at:	Bethel, Alaska May 3, 2017
Effective Date:	June 12, 2017 12:01 a.m.		
Expiration Date:	August 10, 2017 11:59 p.m., unless superseded by subsequent Special Action		

EXPLANATION:

Waters under Federal subsistence fisheries jurisdiction of the Kuskokwim River main stem and salmon tributaries including the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers will be closed to the use of all gillnets by all users to provide for escapement of Chinook salmon. Non salmon tributaries remain open to all users 100 yards upstream of their confluence to means and methods outlined in permanent regulation by the Alaska Department of Fish and Game (ADFG) and the Federal Subsistence Management Program (FSMP). Fishing using gear other than gillnets remains open to all users under permanent regulations, however, all Chinook salmon caught must be immediately released. Fishing openings and closings using gillnets for Federally qualified subsistence users will be announced by subsequent special action, after consultation and coordination with the Kuskokwim River Inter-Tribal Fish Commission and the ADFG. Targeting species other than Chinook salmon using means and methods other than gillnets remain legal to all users under permanent regulation by the ADFG and the FSMP.

REGULATION
50 CFR 100.27(e)(4)(ii) is amended to read:

> ***Unless re-opened by the Yukon Delta National Refuge Manager, Federal public waters in that main stem portion of the Kuskokwim River and its salmon tributaries, within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge are closed to fishing with gillnets. Salmon tributaries are the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak and Aniak and their tributaries.***

1101 E Tudor Road, MS 121 Anchorage, Alaska 99503 (907) 786-3888/(800) 478-1456 Fax (907) 786-3898

Targeting Chinook salmon is prohibited with all other means and methods. All Chinook salmon harvested using other means and methods must be immediately released. In non-salmon tributaries 100 yards upstream of their confluence with the Kuskokwim, salmon harvested incidentally with gillnets may be kept. Targeting non Chinook species using means and methods other than gillnets in all waters, and all species with all means and methods in non-salmon tributaries remain under permanent and emergency regulation by the Alaska Department of Fish and Game and permanent regulation of the Federal Subsistence Management Program.

Based on observed run strength and in consideration of conservation concerns and escapement goals, the Yukon Delta National Wildlife Refuge Manager may open Federal public waters of the Kuskokwim River to the harvest of Chinook salmon by Federally qualified subsistence users.

JUSTIFICATION

The closure to the use of all gillnets on Federal public waters of the Kuskokwim River was issued to manage for continued viability of populations of Chinook salmon and to provide for the continuation of future subsistence uses of those populations. The Federal in-season manager will assess the run of Chinook salmon and provide harvest opportunity with subsequent special actions. The decision to reopen Federal public waters to Federally qualified subsistence users will be made in consultation with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game, and the Yukon Kuskokwim Delta Subsistence Regional Advisory Council. This action is necessary to assure the continued viability of Chinook salmon, including the allowance of adequate escapement to portions of the drainage upstream of Federal public waters, and to provide future harvest opportunities to Federally qualified subsistence users.

State regulations are in place to close the commercial, sport, and subsistence Chinook salmon fishery through June 11 and to limit the use of 4" mesh set nets to one opportunity per week during this state closure to target non-salmon species. This action provides necessary protection for Chinook salmon conservation while providing rural users of the Kuskokwim drainage with opportunity to target non-salmon species. Support for this state action has been articulated by the many groups representing rural subsistence users in the Kuskokwim River drainage and assimilation of this closure conforms to the federal mandate and is necessary for reasons of administration of future federal restrictions that will be implemented to provide for continued viability of the Chinook salmon resource.

Since 2010, the Kuskokwim River has experienced poor runs of Chinook salmon, and 2013 was the lowest run on record. In 2015, the total run was estimated at 172,000 Chinook salmon with an estimated subsistence harvest of 16,000 Chinook salmon. The drainage-wide escapement for 2016 was estimated at 172,000 Chinook salmon with an estimated subsistence harvest of 30,600. If the 2017 return is within the forecast of 132,000 to 222,000, there will be enough fish to meet escapement goals and provide for limited Chinook salmon subsistence harvest. However, a subsistence harvest at the level of the long-term average of 87,000 Chinook salmon would not be sustained at the lower end of the projected run. Thus, some harvest restrictions are warranted during 2017 to meet biological requirements while providing limited subsistence harvest

opportunity once the run has been assessed and the early portion of the run has been allowed to reach the middle and upper sections of the drainage.

The closure of salmon-bearing tributaries is due to the low Chinook salmon returns to Kuskokwim River tributaries over the last several years. While escapement goals were met or exceeded for the majority of weir projects in 2016, conservation measures are warranted in the 2017 season to aid in the recovery of these stocks. Chinook salmon returns in the Kwethluk River have fallen below the lower bound of the escapement goal in six of the last eight years, and escapement in the Aniak, Kisaralik and Tuluksak rivers has been far below average. The Eek River is closed as a salmon spawning stream to conserve salmon going upstream to spawn. Even a very limited subsistence harvest could impact the likelihood of achieving sufficient escapement; therefore, the tributary-specific restrictions are necessary for the conservation of healthy populations of Chinook salmon.

FEDERAL SUBSISTENCE BOARD

By delegation to: Ken Stahlnecker

Ken Stahlnecker, Refuge Manager
Yukon Delta National Wildlife Refuge

DISTRIBUTION:

Anthony Christianson, Chair, Federal Subsistence Board
Members, Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
Eugene R. Peltola, Jr., Assistant Regional Director, Office of Subsistence Management, USFWS
Ryan Noel, Special Agent in Charge, LE Division, USFWS
Vivian Korthius, Executive Director, Association of Village Council Presidents
Sam Cotten, Commissioner, Alaska Department of Fish & Game
Sgt. Mark Cloward, Alaska Bureau of Wildlife Investigation
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U.S. Fish and Wildlife Service
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Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
May 24, 2017

Contact: Ken Stahlnecker
(907) 543-3151 or (800) 621-5804
kenneth_Stahlnecker@fws.gov

Federal Public Waters Closed to Chinook Salmon Fishing by Federally Qualified Subsistence Users Beginning June 12
Action taken to conserve Kuskokwim River Chinook Salmon

In consultation with the Kuskokwim River Inter-Tribal Fish Commission (KRITFC) and the Alaska Department of Fish & Game (ADFG), the Federal In-season Manager has closed Federal public waters of the Kuskokwim River main-stem and salmon-bearing tributaries within the Yukon Delta National Wildlife Refuge boundary to the harvest of Chinook salmon by Federally qualified subsistence users beginning 12:01 a.m., June 12, 2017. Salmon tributaries are the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak within the boundaries of the refuge. This closure is based on the need to conserve a lower than average Chinook salmon run. The Federal Subsistence Board closed these Federal public waters to the harvest of Chinook salmon by non- Federally qualified subsistence users via special action issued on May 22, 2017.

Non-salmon tributaries 100 yards upstream of their confluence with the Kuskokwim River remain open to all users by means and methods outlined in permanent regulation by the ADFG and the Federal Subsistence Management Program (FSMP).

The Federal In-season Manager will announce Chinook salmon fishing opportunities for Federally qualified users in future news releases.

This closure has been implemented by Federal Emergency Special Action (**3-KS-02-17**) under the delegated authority of the Federal Subsistence Board.

Access up-to-date information on fishing opportunities by calling 907-543-1037 or visit the Yukon Delta National Wildlife Refuge Facebook page or www.fws.gov/refuge/yukon_delta/. **Questions?** call the Refuge at (907) 543-3151 or at (800) 621-5804.

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

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Federal Subsistence Board
1101 E Tudor Rd, MS 121
Anchorage Alaska 99503

Forest Service

SUBSISTENCE FISHING

SPECIAL ACTION

Under Authority of **50 CFR Part 100.10 and .19**
36 CFR Part 242.10 and .19

Special Action No.: 3-KS-02-17 Issued at: Bethel, Alaska
May 24, 2017

Effective Date: June 12, 2017 12:01 a.m.
Expiration Date: August 10, 2017 11:59 p.m., unless superseded by subsequent Special Action

EXPLANATION:

Waters under Federal subsistence fisheries jurisdiction of the Kuskokwim River main stem and salmon tributaries including the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers will be closed to the harvest of Chinook salmon by all Federally qualified subsistence users. Fishing openings and closings for Federally qualified subsistence users identified under an ANILCA Section 804 analysis, which includes residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek will be announced by subsequent special action, after consultation and coordination with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game. Fishing for species other than Chinook salmon remains legal under permanent and emergency regulation by the ADFG and the Federal Subsistence Management Program.

REGULATION
50 CFR 100.27(e)(4)(ii) is amended to read:

Unless re-opened by the Yukon Delta National Wildlife Refuge Manager, Federal public waters in that portion of the Kuskokwim River drainage and its salmon tributaries, within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge, are closed to the harvest of Chinook salmon by Federally qualified subsistence users. Salmon tributaries are the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak and Aniak and their tributaries. Based on observed run strength and in consideration of conservation concerns and escapement goals, the Yukon Delta National Wildlife Refuge Manager may open Federal public waters of the Kuskokwim River to the harvest of Chinook salmon by Federally qualified subsistence

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users identified under a ANILCA Section 804 analysis, which includes residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.

JUSTIFICATION

The closure to the harvest of Chinook salmon to Federally qualified subsistence users on the Federal public waters of the Kuskokwim River was issued to assure the continued viability of populations of Chinook salmon, including the allowance of adequate escapement to portions of the drainage upstream of Federal public waters. The Federal in-season manager will assess the run of Chinook salmon and provide harvest opportunity with subsequent special actions. The decision to reopen Federal public waters to Federally qualified subsistence users identified under a ANILCA Section 804 analysis, which includes residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek, will be made in consultation with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game. This action is necessary to assure the continued viability of Chinook salmon.

Since 2010, the Kuskokwim River has experienced poor runs of Chinook salmon, and 2013 was the lowest run on record. In 2015, the total run was estimated at 172,000 Chinook salmon with an estimated subsistence harvest of 16,000 Chinook salmon. The 2016 total run was estimated at 177,000 Chinook salmon with an estimated subsistence harvest of 30,600. If the 2017 return is within the forecast of 132,000 to 222,000, there will be enough fish to meet escapement goals and provide for limited Chinook salmon subsistence harvest. However, a subsistence harvest at the level of the long-term average of 87,000 Chinook salmon would not be sustained at the lower end of the projected run. Thus, some harvest restrictions are warranted during 2017 to meet biological requirements while providing limited subsistence harvest opportunity once the run has been assessed and the early portion of the run has been allowed to reach the middle and upper sections of the drainage.

The closure of salmon-bearing tributaries is due to the low Chinook salmon returns to Kuskokwim River tributaries over the last several years. While escapement goals were met or exceeded for the majority of weir projects in 2016, conservation measures are warranted in the 2017 season to aid in the recovery of these stocks. Chinook salmon returns in the Kwethluk River have fallen below the lower bound of the escapement goal in six of the last eight years, and escapement in the Aniak, Kisaralik and Tuluksak rivers has been far below average. The Eek River is closed to the harvest of Chinook salmon as a salmon spawning stream to conserve salmon going upstream to spawn. Even a very limited subsistence harvest could impact the likelihood of achieving sufficient escapement; therefore, the tributary-specific restrictions are necessary for the conservation of healthy populations of Chinook salmon.

FEDERAL SUBSISTENCE BOARD

By delegation to: Ken Stahlnecker

Ken Stahlnecker, Refuge Manager
Yukon Delta National Wildlife Refuge

DISTRIBUTION:

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Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
May 30, 2017

Contact: Ken Stahlnecker
(907) 543-3151 or (800) 621-5804
kenneth_stahlnecker@fws.gov

Federal public waters of the Kuskokwim River will be opened June 12 at Noon to the Harvest of Chinook Salmon by Federally Qualified Subsistence Users

In consultation with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game, the Federal In-season Manager announces the opening of the Federal public waters of the Kuskokwim River main-stem within the Yukon Delta National Wildlife Refuge boundary, to the harvest of Chinook Salmon, by Federally qualified subsistence users identified in the Section 804 analysis, which includes residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek, for 12 hours effective June 12, 2017 from 12:01 p.m. (noon) until 11:59 p.m. (midnight).

Salmon tributaries of the Kuskokwim within the boundaries of the Refuge, including the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers will remain closed to fishing for Chinook Salmon, as will the Old Kuskokuak where the Kisaralik and Kasigluk drain and the Kuskokuak between the lower confluence with the Kuskokwim River and the upper confluence with the Kwethluk River. This is to protect Chinook bound for the Kwethluk, Kasigluk and Kisaralik Rivers.

When using gillnets, the following restrictions apply:

- 6-inch or less mesh;
- May not exceed 45 meshes in depth;
- May not exceed 25 fathoms (150 feet) in length above the Johnson River to the boundary of the Yukon Delta National Wildlife Refuge at Aniak;
- May not exceed 50 fathoms (300 feet) in length below the Johnson River to the mouth of the Kuskokwim River.

This harvest opportunity is to provide for the continuation of subsistence uses of Chinook Salmon that are critical to cultural and traditional needs. While the Chinook run is expected to be smaller than average, it is strong enough to allow this limited opportunity for the first directed Chinook Salmon harvest for Federally qualified subsistence users.

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This document has been cleared for public release #4403172016 .

This limited opportunity has been implemented by Federal Emergency Special Action (**3-KS-03-17**) under the delegated authority of the Federal Subsistence Board.

Access up-to-date information on fishing opportunities by calling 907-543-1037 or visit the Yukon Delta National Wildlife Refuge Facebook page or www.fws.gov/refuge/yukon_delta/. **Questions?** call the Refuge at (907) 543-3151 or at (800) 621-5804.

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

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

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This document has been cleared for public release # 4403172016.

U.S. Fish and Wildlife Service
Bureau of Land Management
National Park Service
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Federal Subsistence Board

1101 E Tudor Rd, MS 121
Anchorage Alaska 99503

Forest Service

SUBSISTENCE FISHING

SPECIAL ACTION

Under Authority of	**50 CFR Part 100.10 and .19** **36 CFR Part 242.10 and .19**		
Special Action No.:	3-KS-03-17	Issued at:	Bethel, Alaska May 30, 2017
Effective Date:	June 12, 2017 12:01 p.m., noon		
Expiration Date:	June 12, 2017 11:59 p.m., midnight unless superseded by subsequent Special Action		

EXPLANATION:

This emergency special action opens a 12-hour opportunity for Federally qualified subsistence users identified in the Section 804 analysis, which includes residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek, to harvest Chinook Salmon on Federal public waters of the Kuskokwim River on June 12, 2017. During this opportunity, Federally qualified subsistence users may fish on June 12 from 12:01 p.m. (noon), until 11:59 p.m. (midnight) in Federal public waters of the main stem Kuskokwim River. All drift or set gillnets are limited to 6-inch or less mesh and may not exceed 45 meshes in depth. Nets from the Yukon Delta National Wildlife Refuge (Refuge) boundary at the Kuskokwim River mouth to the Johnson River cannot exceed 50 fathoms (300 feet) in length. Nets up river from the Johnson River to the Refuge boundary at Aniak cannot exceed 25 fathoms (150 feet) in length.

Salmon tributaries of the Kuskokwim within the boundaries of the Refuge, which include the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers, will remain closed to the harvest of Chinook Salmon, as will the Old Kuskokuak where the Kisaralik and Kasigluk drain and the Kuskokuak between the lower confluence with the Kuskokwim River and the upper confluence with the Kwethluk River. This is to protect Chinook bound for the Kwethluk, Kasigluk and Kisaralik Rivers. Non salmon tributaries remain open 100 yards upstream of their confluence with the Kuskokwim to gear outlined in permanent regulation.

Once this emergency special action expires on June 12, 2017 at midnight, Federal public waters of the Kuskokwim River will remain closed to the harvest of Chinook Salmon by Federally

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qualified subsistence users using all gear types based on Federal Special Action 3-KS-02-17, which was issued on May 24, 2017.

This action was made after consultation with the Inter-Tribal Fish Commission (KRITFC) and the Alaska Department of Fish and Game (ADFG). Further Chinook Salmon fishing openings, closings, and fishing methods for Federally qualified subsistence users will be announced by subsequent special action, after consultation and coordination with the KRITFC and the Alaska Department of Fish and Game ADFG.

REGULATION

50 CFR 100.27(e)(4)(ii) is temporarily amended to read:

Unless re-opened by the Yukon Delta National Wildlife Refuge Manager, Federal public waters in that portion of the Kuskokwim River drainage and its salmon tributaries, within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge, are closed to the harvest of Chinook salmon by Federally qualified subsistence users. Salmon tributaries are the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak and Aniak and their tributaries. Based on observed run strength and in consideration of conservation concerns and escapement goals, the Yukon Delta National Wildlife Refuge Manager may open Federal public waters of the Kuskokwim River to the harvest of Chinook salmon by Federally qualified subsistence users identified under a ANILCA Section 804 analysis, which includes residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.

Federally qualified subsistence users as identified under the ANILCA Section 804 analysis can harvest Chinook Salmon in Federal public waters of the Kuskokwim River from June 12, 2017 at 12:01 p.m. (noon) until June 12, 2017 at 11:59 p.m. (midnight). Gillnets are restricted to 6-inch or less mesh and may not exceed 45 meshes in depth and 50 fathoms (300-feet) in length below the Johnson River and 25 fathoms (150 feet) in length above the Johnson River. All fish caught during this opening are legal and may be retained.

JUSTIFICATION

Subsistence

Salmon, particularly Chinook, are critical to the cultural and traditional needs of people residing in the Kuskokwim River drainage. Harvest by local residents has been severely restricted or eliminated in recent years in an effort to provide stock conservation. This targeted, but limited, subsistence fishing opportunity will provide local residents with an opportunity to continue subsistence uses of Chinook Salmon through the intents of ANILCA Section 815. Chinook Salmon are critical to the subsistence way of life.

The subsistence harvest of salmon has been restricted for several years to conserve Chinook Salmon. The subsistence gillnet fishery was closed beginning May 20 through Alaska Department of Fish and Game (ADFG) Emergency Order with one fishing opportunity per week through June 11, 2017 per state regulation. Given the closure, people are hungry for fish and it is anticipated that a substantial harvest effort will occur with an initial subsistence fishing opportunity. Many of the Kuskokwim River Inter-Tribal Fish Commission (KRITFC) members

have expressed subsistence shortfalls for their families and way of life. The need for a Chinook Salmon harvest opportunity on June 12th has been discussed with the KRITFC during the weekly meetings. The recommendation of the KRITFC In-season Management Committee to conserve the run and provide for some subsistence harvest is to have a 12-hour opening on the main stem of the Kuskokwim River within the Refuge starting at noon, 12:01 pm, Monday, June 12 to get harvest information and minimize the risk of overharvesting. The 12-hour opening also allows for fishing on the tides and for everyone to have an opportunity to harvest Chinook Salmon. Drift and set gillnets will be limited to 6-inch or less mesh and may not exceed 25 fathoms in length above the Johnson River or 50 fathoms in length below the Johnson River.

Biological

Since 2010, the Kuskokwim River has experienced poor runs of Chinook Salmon, and 2013 was the lowest run on record. In 2015, the total run was estimated at 172,000 Chinook Salmon with an estimated subsistence harvest of 16,000 Chinook Salmon. The 2016 total run was estimated at 177,000 Chinook Salmon with an estimated subsistence harvest of 30,600. If the 2017 return is within the forecast of 132,000 to 222,000, there will be enough fish to meet escapement goals and provide for limited Chinook Salmon subsistence harvest. However, a subsistence harvest at the level of the long-term average of 87,000 Chinook Salmon would not be possible at the lower end of the forecasted run. Thus, some harvest restrictions are warranted during 2017 to meet biological requirements while providing limited subsistence harvest opportunity once the run has been assessed and the early portion of the run has been allowed to reach the middle and upper sections of the drainage.

The Federal in-season manager supports managing the fishery based on a risk-averse forecast and a conservative escapement objective for 2017. Given the uncertainty in the estimated 2016 Chinook Salmon run which is used to forecast the 2017 run size, management will initially anticipate a 2017 Chinook run size of 150,000. This anticipated run size was determined by averaging the 2016 drainage-wide run size estimates from the ADF&G run reconstruction (177,000 fish) and the mark-recapture models (128,800 fish). The resulting average, which equally weights these two information sources, is 152,900 (rounded to 150,000) Chinook Salmon. Given the poor returns in recent years, corresponding fisheries restrictions, and an interest in facilitating stock rebuilding, the KRITFC has expressed an interest in targeting 90% of the top end of the drainage-wide escapement goal range of 65,000 to 120,000 Chinook Salmon for the Kuskokwim River. Ninety percent of the top end of the established goal range represents a target of approximately 110,000 Chinook Salmon. The difference between the 2017 anticipated run size and the escapement target suggests a conservative harvest objective of 40,000 Chinook Salmon.

The harvest objective is well below the long-term average subsistence harvest of approximately 87,000 Chinook Salmon annually in the Kuskokwim River drainage. Thus, harvest restrictions are necessary for the continued viability of Chinook Salmon and to ensure the continuation of subsistence uses. The Federal in-season manager supports providing limited, controlled fishing opportunities to target 40,000 Chinook Salmon in 2017.

The initial limited, controlled fishing opportunity will consist of a 12-hours opening for Federally qualified subsistence users to target Chinook Salmon on Federal public waters of the

Kuskokwim River. The 12-hour opening opportunity will improve assessment of run strength while furthering stock conservation by limiting the duration of the subsistence fishing opportunity. Based on actual harvests, catch rates, and continuing indices of run strength and run timing, future subsistence opportunities will be considered to reach the subsistence harvest target of 40,000 Chinook Salmon.

FEDERAL SUBSISTENCE BOARD

By delegation to: Ken Stahlnecker /
Ken Stahlnecker, Refuge Manager
Yukon Delta National Wildlife Refuge

DISTRIBUTION:

Anthony Christianson, Chair, Federal Subsistence Board
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Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
June 23, 2017

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Federal public waters of the Kuskokwim River will be opened to gillnet fishing June 24, 2017 from Noon to Midnight

In consultation with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game, the Federal In-season Manager announces a 12-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon on Federal public waters of the mainstem of the Kuskokwim River. During this opportunity, Federally qualified subsistence users may fish from 12:01 p.m. (noon) June 24, 2017, until 11:59 p.m. (midnight) June 24, 2017 using set or drift gillnets with 6 inch or less stretched mesh and not exceeding 45 mesh in depth. Nets cannot exceed 25 fathoms (150 feet) in length. Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization may retain Chinook Salmon incidentally harvested in gillnets.

The waters of the Kuskokwim River from the Yukon Delta NWR boundary at Aniak downstream to a line formed from the northwest corner of the runway (latitude 61° 35’ 16” N, longitude 159° 33’ 28” W), due north to a point on the southeast corner of the sandbar (latitude 61° 35’ 37” N, longitude 159° 33’ 16” W) are closed to subsistence gillnet fishing.

Subsistence fishing with dip nets, beach seines, fish wheels, and rod and reel may also be used during this opportunity. Fish wheels are required to have a live box with no less than 45 cubic feet of water and must be checked at least every 6 hours. Fish wheels must be equipped with a chute and must be closely attended while in operation. All authorized gear types, except gillnets, must return Chinook Salmon to the water alive.

This limited opportunity has been implemented by Federal Emergency Special Action (**3-KS- 04-17**) under the delegated authority of the Federal Subsistence Board.

Access up-to-date information on fishing opportunities visiting the Yukon Delta National Wildlife Refuge Facebook page or www.fws.gov/refuge/yukon_delta/. **Questions?** call the Refuge at (907) 543-3151 or at (800) 621-5804.

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

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Federal Subsistence Board
1101 E Tudor Rd, MS 121
Anchorage Alaska 99503

Forest Service

SUBSISTENCE FISHING

SPECIAL ACTION

Under Authority of	**50 CFR Part 100.10 and .19** **36 CFR Part 242.10 and .19**		
Special Action No.:	3-KS-04-17	Issued at:	Bethel, Alaska June 23, 2016
Effective Date:	June 24, 2017 12:01 p.m. (noon)		
Expiration Date:	June 24, 2017 11:59 p.m. (midnight), unless superseded by subsequent Special Action		

EXPLANATION:

This emergency special action announces a 12-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon on Federal public waters of the mainstem of the Kuskokwim River. During this opportunity, Federally qualified subsistence users may fish from 12:01 p.m. (noon) June 24, 2017, until 11:59 p.m. (midnight) June 24, 2017 using set or drift gillnets with 6 inch or less stretched mesh and not exceeding 45 mesh in depth. Nets cannot exceed 25 fathoms (150 feet) in length. Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization may retain Chinook Salmon incidentally harvested in gillnets.

The waters of the Kuskokwim River from the Yukon Delta NWR boundary at Aniak downstream to a line formed from the northwest corner of the runway (latitude 61° 35' 16" N, longitude 159° 33' 28" W), due north to a point on the southeast corner of the sandbar (latitude 61° 35' 37" N, longitude 159° 33' 16" W) are closed to subsistence gillnet fishing.

Subsistence fishing with dip nets, beach seines, fish wheels, and rod and reel may also be used during this opportunity. Fish wheels are required to have a live box with no less than 45 cubic feet of water and must be checked at least every 6 hours. Fish wheels must be equipped with a chute and must be closely attended while in operation. All authorized gear types, except gillnets, must return Chinook Salmon to the water alive.

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REGULATION

In accordance with 50 CFR 100.19, 50 CFR 100.27(e)(4) is temporarily modified to include:

Unless re-opened by the Yukon Delta National Wildlife Refuge Manager, Federal public waters in that portion of the Kuskokwim River drainage and its salmon tributaries, within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge, are closed to the harvest of Chinook salmon by Federally qualified subsistence users. Salmon tributaries are the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak and Aniak and their tributaries. Based on observed run strength and in consideration of conservation concerns and escapement goals, the Yukon Delta National Wildlife Refuge Manager may open Federal public waters of the Kuskokwim River to the harvest of Chinook salmon by Federally qualified subsistence users identified under a ANILCA Section 804 analysis, which includes residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.

Federally qualified subsistence users can use set or drift gillnets to harvest fish other than Chinook Salmon in Federal public waters of the main-stem of the Kuskokwim River from June 24, 2017 at 12:01 pm (noon) until 11:59 p.m. (midnight) June 24, 2017. Gillnets are restricted to 6 inches or less stretched mesh and may not exceed 45 mesh in depth and 150 feet in length (25 fathoms).

The waters of the Kuskokwim River from the Yukon Delta NWR boundary at Aniak downstream to a line formed from the northwest corner of the runway (latitude 61° 35' 16" N, longitude 159° 33' 28" W), due north to a point on the southeast corner of the sandbar (latitude 61° 35' 37" N, longitude 159° 33' 16" W) are closed to subsistence gillnet fishing.

Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization may retain Chinook Salmon incidentally harvested in gillnets. Additional authorized gear for use by Federally qualified subsistence users are rod and reel, dip net, beach seines, and fish wheel. All authorized gear types, except gillnets, must return Chinook Salmon to the water alive.

JUSTIFICATION

The prohibition of gillnets for subsistence fishing has severely restricted Federally qualified subsistence users from harvesting fish other than Chinook Salmon. State actions between May 20 and June 12 closed the river and salmon producing tributaries to the use of gillnets, and only dipnets, beach seines, fish wheels, and rod and reel have been allowed so that Chinook Salmon

could be live released. Additionally, the State of Alaska provided a few short periods of opportunity for the use of 4 inch or less mesh size gillnets between May 20 and June 12. On June 12, the Federal in-season manager provided one 12-hour fishing opportunity with 6-inch mesh drift gillnets where approximately 5,500 salmon were harvested. However, the river and salmon producing tributaries have been closed to the use of gillnets since that time.

The limited opportunities have prevented Federally qualified subsistence users from harvesting Chum and Sockeye Salmon in large enough numbers to fill smokehouses in June when good drying weather is most likely to occur, as is their custom, or using gillnets to harvest non-salmon fishes such as whitefish, that have been traditionally harvested during summer and in large quantities. Currently there are no conservation concerns for fish other than Chinook Salmon, however, the continuation of subsistence uses of fish other than Chinook Salmon has been severely restricted. Additional opportunity to harvest Chum and Sockeye Salmon and non-salmon fish species is warranted to protect the continuation of subsistence uses of these fish species and ensures the Federal subsistence priority as required by ANILCA Title VIII, Section 804. The Federal manager is maintaining authority on Federal public waters for Chinook Salmon until it is clear that Federal management is no longer necessary for conservation purposes. Allowing limited use of this gear type will provide subsistence opportunity for Chum Salmon, Sockeye salmon and other fish species. While Federally qualified subsistence users will be allowed to retain Chinook Salmon caught in gillnets during this period, time and gear restrictions are being implemented in order to minimize the number of Chinook Salmon incidentally harvested on Federal public waters.

Currently, the Chum and Sockeye Salmon CPUE at the BTF are at or slightly above average for this date, indicating that increased harvest of these species will not negatively affect their escapement. Provided the Chum/Sockeye to Chinook ratio remains favorable, the Federal in-season manager may be able to provide additional opportunity to harvest these species, after consulting with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game, while minimizing the harvest of Chinook Salmon.

FEDERAL SUBSISTENCE BOARD

By delegation to: Ken Stalnecker

Ken Stalnecker, Acting Refuge Manager
Yukon Delta National Wildlife Refuge

DISTRIBUTION:

Anthony Christianson, Chair, Federal Subsistence Board
Chairman, Kuskokwim River Inter-Tribal Fish Commission
Executive Director, Kuskokwim River Inter-Tribal Fish Commission
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Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
June 30, 2017

Contact: Ken Stahlnecker
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kenneth_stahlnecker@fws.gov

The Kuskokwim River from its Mouth to 10 Miles above Upper Kalskag will be opened to Gillnet Fishing July 1, 2017 from 3:00 PM to 9:00 PM

In consultation with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game, the Federal In-season Manager announces the opening of the Federal public waters of the Kuskokwim River main-stem from the mouth of the river to a line approximately 10 miles upriver from Upper Kalskag, beginning at the downriver end of Luke's/Dave Norrs Island on the north side of the Kuskokwim River, due south to the upriver end of the Old River on the south side of the Kuskokwim River, to a 6-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon. During this opportunity, Federally qualified subsistence users may fish from 3:00 p.m. July 1, 2017, until 9:00 p.m. July 1, 2017 using set or drift gillnets with 6 inch or less stretched mesh and not exceeding 45 mesh in depth. Nets cannot exceed 25 fathoms (150 feet) in length. The closure above the Old River is in place to eliminate harvest of Chinook Salmon in the upper portion of the river where Chum and Sockeye to Chinook Salmon ratios are lower than in the lower portion of the river. Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization may retain Chinook Salmon incidentally harvested in gillnets.

Salmon tributaries of the Kuskokwim within the boundaries of the Refuge, including the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers will remain closed to fishing for Chinook Salmon, as will the Old Kuskokuak where the Kisaralik and Kasigluk drain and the Kuskokuak between the lower confluence with the Kuskokwim River and the upper confluence with the Kwethluk River. This is to protect Chinook bound for the Kwethluk, Kasigluk and Kisaralik Rivers.

Subsistence fishing with dip nets, beach seines, fish wheels, and rod and reel may also be used during this opportunity. Fish wheels are required to have a live box with no less than 45 cubic feet of water and must be checked at least every 6 hours. Fish wheels must be equipped with a chute and must be closely attended while in operation. All authorized gear types, except gillnets, must return Chinook Salmon to the water alive.

This limited opportunity has been implemented by Federal Emergency Special Action (**3-KS-05-17**) under the delegated authority of the Federal Subsistence Board.

Access up-to-date information on fishing opportunities visiting the Yukon Delta National Wildlife Refuge Facebook page or www.fws.gov/refuge/yukon_delta/. **Questions?** call the

Refuge at (907) 543-3151 or at (800) 621-5804.

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

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

Federal Subsistence Board
1101 E Tudor Rd, MS 121
Anchorage Alaska 99503

Forest Service

SUBSISTENCE FISHING

SPECIAL ACTION

Under Authority of **50 CFR Part 100.10 and .19**
36 CFR Part 242.10 and .19

Special Action No.: 3-KS-05-17 Issued at: Bethel, Alaska
June 30, 2017

Effective Date: July 1, 2017 3:00 p.m.
Expiration Date: July 1, 2017 9:00 p.m., unless superseded by subsequent Special Action

EXPLANATION:

This emergency special action announces a 6-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon on Federal public waters of the main-stem of the Kuskokwim River from the mouth of the river to a line approximately 10 miles upriver from Upper Kalskag, beginning at the downriver end of Luke's/Dave Norrs Island on the north side of the Kuskokwim River, to the upriver end of the Old River on the south side of the Kuskokwim River. During this opportunity, Federally qualified subsistence users may fish from 3:00 p.m. until 9:00 p.m. Saturday, July 1, 2017 using set or drift gillnets with 6 inch or less stretched mesh and not exceeding 45 mesh in depth. Nets cannot exceed 25 fathoms (150 feet) in length. Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization may retain Chinook Salmon incidentally harvested in gillnets.

Salmon tributaries of the Kuskokwim within the boundaries of the Refuge, which include the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers, will remain closed to the harvest of Chinook Salmon, as will the Old Kuskokuak Slough where the Kisaralik and Kasigluk drain and the Kuskokuak Slough between the lower confluence with the Kuskokwim River and the upper confluence with the Kwethluk River. This is to protect Chinook Salmon bound for the Kwethluk, Kasigluk, and Kisaralik Rivers. Non salmon tributaries remain open 100 yards upstream of their confluence with the Kuskokwim to gear outlined in permanent regulation.

Subsistence fishing with dip nets, beach seines, fish wheels, and rod and reel may also be used during this opportunity. Fish wheels are required to have a live box with no less than 45 cubic

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feet of water and must be checked at least every 6 hours. Fish wheels must be equipped with a chute and must be closely attended while in operation. All authorized gear types, except gillnets, must return Chinook Salmon to the water alive.

This action was made after consultation with the Inter-Tribal Fish Commission (KRITFC) and the Alaska Department of Fish and Game (ADFG). Future Chinook Salmon fishing openings, closings, and fishing methods for Federally qualified subsistence users will be announced by subsequent special action, after consultation and coordination with the KRITFC and the ADFG.

REGULATION

In accordance with 50 CFR 100.19, 50 CFR 100.27(e)(4) is temporarily modified to include:

> *Unless re-opened by the Yukon Delta National Wildlife Refuge Manager, Federal public waters in that portion of the Kuskokwim River drainage and its salmon tributaries, within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge, are closed to the harvest of Chinook salmon by Federally qualified subsistence users. Salmon tributaries are the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak and Aniak and their tributaries. Based on observed run strength and in consideration of conservation concerns and escapement goals, the Yukon Delta National Wildlife Refuge Manager may open Federal public waters of the Kuskokwim River to the harvest of Chinook salmon by Federally qualified subsistence users identified under a ANILCA Section 804 analysis, which includes residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.*
>
> ***Federally qualified subsistence users can use set or drift gillnets to harvest fish other than Chinook Salmon in Federal public waters of the main-stem of the Kuskokwim River from the mouth of the river to a line approximately 10 miles upriver from Upper Kalskag, beginning at the downriver end of Luke's/Dave Norrs Island on the north side of the Kuskokwim River (latitude 61° 33' 29" longitude 160° 01' 29"), due south to the upriver end of the Old River on the south side of the Kuskokwim River (latitude 61° 32' 55" longitude 160° 01' 29"), from July 1, 2017 at 3:00 pm until 9:00 p.m. July 1, 2017. Gillnets are restricted to 6 inches or less stretched mesh and may not exceed 45 mesh in depth and 150 feet in length (25 fathoms).***
>
> ***Salmon tributaries of the Kuskokwim within the boundaries of the Refuge, which include the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers, will remain closed to the harvest of Chinook Salmon, as will the Old Kuskokuak Slough where the Kisaralik and Kasigluk drain and the Kuskokuak Slough between the lower confluence with the Kuskokwim River and the upper confluence with the Kwethluk River. Non salmon tributaries remain open 100 yards upstream of their confluence with the Kuskokwim to gear outlined in permanent regulation.***

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Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization may retain Chinook Salmon incidentally harvested in gillnets. Additional authorized gear for use by Federally qualified subsistence users are rod and reel, dip net, beach seines, and fish wheel. All authorized gear types, except gillnets, must return Chinook Salmon to the water alive.

JUSTIFICATION

The lack of continued opportunity for subsistence fishing during a period of Chinook Salmon conservation has severely restricted Federally qualified subsistence users from harvesting fish other than Chinook Salmon in this mixed stock fishery. State actions between May 20 and June 12 closed the river and salmon producing tributaries to the use of gillnets, and only dipnets, beach seines, fish wheels, and rod and reel have been allowed so that Chinook Salmon could be live released. Additionally, the State of Alaska provided three periods of opportunity for the use of 4 inch or less mesh size gillnets between May 20 and June 12. On June 12, the Federal in-season manager provided one 12-hour fishing opportunity with 6-inch mesh drift gillnets where approximately 5,500 salmon were harvested, of which 2,360 Chinook Salmon were caught. On June 24, the Federal in-season manager provided a second 12-hour fishing opportunity with 6-inch mesh drift gillnets where approximately 33,500 salmon were harvested, of which 4,560 Chinook Salmon were incidentally caught. This opportunity will be limited to the portion of the main stem of the Kuskokwim River below a line approximately 10 miles upriver from Upper Kalskag in order to eliminate harvest of Chinook Salmon in the upper portion of the river where Chum and Sockeye to Chinook Salmon ratios are lower than in the lower portion of the river. In addition, the river and salmon producing tributaries have been closed to the use of gillnets since June 24 as a measure to conserve Chinook Salmon.

The limited subsistence fishing opportunities have prevented Federally qualified subsistence users from harvesting Chum and Sockeye Salmon in large enough numbers to fill smokehouses in June when good drying weather is most likely to occur, as is their custom, or using gillnets to harvest non-salmon fishes such as whitefish, that have been traditionally harvested during summer and in large quantities. Currently there are no conservation concerns for fish other than Chinook Salmon, however, the continuation of subsistence uses of fish other than Chinook Salmon has been substantially restricted. Additional opportunity to harvest Chum and Sockeye Salmon and non-salmon fish species is warranted to protect the continuation of subsistence uses of these fish species and ensures the Federal subsistence priority as required by ANILCA Title VIII, Section 804. Allowing limited use of this gear type will provide subsistence opportunity for Chum Salmon, Sockeye Salmon and other fish species. While Federally qualified subsistence users identified in the ANILCA Section 804 determination will be allowed to retain Chinook Salmon caught in gillnets during this period, time and gear restrictions are being

implemented in order to minimize the number of Chinook Salmon incidentally harvested on Federal public waters.

Currently, the Chum and Sockeye Salmon CPUE at the BTF are at or slightly above average for this date, indicating that increased harvest of these species will not negatively affect their escapement. Provided the Chum/Sockeye to Chinook Salmon ratio remains favorable, the Federal in-season manager may be able to provide additional opportunity to harvest these species, after consulting with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game, while minimizing the harvest of Chinook Salmon.

FEDERAL SUBSISTENCE BOARD

By delegation to: Ken Stahlnecker

Ken Stahlnecker, Refuge Manager
Yukon Delta National Wildlife Refuge

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Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
June 30, 2017

Contact: Ken Stahlnecker
(907) 543-3151 or (800) 621-5804
kenneth_stahlnecker@fws.gov

Federal public waters of the Kuskokwim River will be opened to gillnet fishing July 3, 2017 from Noon to Midnight

In consultation with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game, the Federal In-season Manager announces the opening of the Federal public waters of the Kuskokwim River main-stem within the Yukon Delta National Wildlife Refuge boundary, to a 12-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon. During this opportunity, Federally qualified subsistence users may fish from 12:01 p.m. (noon) July 3, 2017, until 11:59 p.m. (midnight) July 3, 2017 using set or drift gillnets with 6 inch or less stretched mesh and not exceeding 45 mesh in depth. Nets cannot exceed 25 fathoms (150 feet) in length. Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization may retain Chinook Salmon incidentally harvested in gillnets.

Salmon tributaries of the Kuskokwim within the boundaries of the Refuge, including the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers will remain closed to fishing for Chinook Salmon, as will the Old Kuskokuak where the Kisaralik and Kasigluk drain and the Kuskokuak between the lower confluence with the Kuskokwim River and the upper confluence with the Kwethluk River. This is to protect Chinook bound for the Kwethluk, Kasigluk and Kisaralik Rivers.

The waters of the Kuskokwim River from the Yukon Delta NWR boundary at Aniak downstream to a line formed from the northwest corner of the runway (latitude 61° 35’ 16” N, longitude 159° 33’ 28” W), due north to a point on the southeast corner of the sandbar (latitude 61° 35’ 37” N, longitude 159° 33’ 16” W) are closed to subsistence gillnet fishing.

Subsistence fishing with dip nets, beach seines, fish wheels, and rod and reel may also be used during this opportunity. Fish wheels are required to have a live box with no less than 45 cubic feet of water and must be checked at least every 6 hours. Fish wheels must be equipped with a chute and must be closely attended while in operation. All authorized gear types, except gillnets, must return Chinook Salmon to the water alive.

This limited opportunity has been implemented by Federal Emergency Special Action (**3-KS-06-17**) under the delegated authority of the Federal Subsistence Board.

Access up-to-date information on fishing opportunities visiting the Yukon Delta National Wildlife Refuge Facebook page or www.fws.gov/refuge/yukon_delta/. **Questions?** call the

Refuge at (907) 543-3151 or at (800) 621-5804.

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

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Bureau of Land Management
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Federal Subsistence Board
1101 E Tudor Rd, MS 121
Anchorage Alaska 99503

USDA Forest Service

SUBSISTENCE FISHING

SPECIAL ACTION

Under Authority of	**50 CFR Part 100.10 and .19** **36 CFR Part 242.10 and .19**		
Special Action No.:	3-KS-06-17	Issued at:	Bethel, Alaska June 30, 2017
Effective Date:	July 3, 2017 12:01 p.m. (noon)		
Expiration Date:	July 3, 2017 11:59 p.m. (midnight), unless superseded by subsequent Special Action		

EXPLANATION:

This emergency special action announces a 12-hour gillnet opportunity for Federally qualified subsistence users to harvest fish other than Chinook Salmon on Federal public waters of the main-stem of the Kuskokwim River. During this opportunity, Federally qualified subsistence users may fish from 12:01 p.m. (noon) July 3, 2017, until 11:59 p.m. (midnight) July 3, 2017 using set or drift gillnets with 6 inch or less stretched mesh and not exceeding 45 mesh in depth. Nets cannot exceed 25 fathoms (150 feet) in length. Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization may retain Chinook Salmon incidentally harvested in gillnets.

Salmon tributaries of the Kuskokwim within the boundaries of the Refuge, which include the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers, will remain closed to the harvest of Chinook Salmon, as will the Old Kuskokuak Slough where the Kisaralik and Kasigluk drain and the Kuskokuak Slough between the lower confluence with the Kuskokwim River and the upper confluence with the Kwethluk River. This is to protect Chinook Salmon bound for the Kwethluk, Kasigluk, and Kisaralik Rivers. Non salmon tributaries remain open 100 yards upstream of their confluence with the Kuskokwim to gear outlined in permanent regulation.

The waters of the Kuskokwim River from the Yukon Delta NWR boundary at Aniak downstream to a line formed from the northwest corner of the runway (latitude 61° 35' 16" N,

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longitude 159° 33' 28" W), due north to a point on the southeast corner of the sandbar (latitude 61° 35' 37" N, longitude 159° 33' 16" W) are closed to subsistence gillnet fishing.

Subsistence fishing with dip nets, beach seines, fish wheels, and rod and reel may also be used during this opportunity. Fish wheels are required to have a live box with no less than 45 cubic feet of water and must be checked at least every 6 hours. Fish wheels must be equipped with a chute and must be closely attended while in operation. All authorized gear types, except gillnets, must return Chinook Salmon to the water alive.

This action was made after consultation with the Inter-Tribal Fish Commission (KRITFC) and the Alaska Department of Fish and Game (ADFG). Future Chinook Salmon fishing openings, closings, and fishing methods for Federally qualified subsistence users will be announced by subsequent special action, after consultation and coordination with the KRITFC and the ADFG.

REGULATION

In accordance with 50 CFR 100.19, 50 CFR 100.27(e)(4) is temporarily modified to include:

Unless re-opened by the Yukon Delta National Wildlife Refuge Manager, Federal public waters in that portion of the Kuskokwim River drainage and its salmon tributaries, within and adjacent to the exterior boundaries of the Yukon Delta National Wildlife Refuge, are closed to the harvest of Chinook salmon by Federally qualified subsistence users. Salmon tributaries are the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak and Aniak and their tributaries. Based on observed run strength and in consideration of conservation concerns and escapement goals, the Yukon Delta National Wildlife Refuge Manager may open Federal public waters of the Kuskokwim River to the harvest of Chinook salmon by Federally qualified subsistence users identified under a ANILCA Section 804 analysis, which includes residents of the Kuskokwim River drainage and the villages of Chefornak, Kipnuk, Kwigillingok, and Kongiganek.

Federally qualified subsistence users can use set or drift gillnets to harvest fish other than Chinook Salmon in Federal public waters of the main-stem of the Kuskokwim River from July 3, 2017 at 12:01 pm (noon) until 11:59 p.m. (midnight) July 3, 2017. Gillnets are restricted to 6 inches or less stretched mesh and may not exceed 45 mesh in depth and 150 feet in length (25 fathoms).

Salmon tributaries of the Kuskokwim within the boundaries of the Refuge, which include the Eek, Kwethluk, Kasigluk, Kisaralik, Tuluksak, and Aniak rivers, will remain closed to the harvest of Chinook Salmon, as will the Old Kuskokuak Slough where the Kisaralik and Kasigluk drain and the Kuskokuak Slough between the lower confluence with the Kuskokwim River and the upper confluence with the Kwethluk

River. Non salmon tributaries remain open 100 yards upstream of their confluence with the Kuskokwim to gear outlined in permanent regulation.

The waters of the Kuskokwim River from the Yukon Delta NWR boundary at Aniak downstream to a line formed from the northwest corner of the runway (latitude 61° 35' 16" N, longitude 159° 33' 28" W), due north to a point on the southeast corner of the sandbar (latitude 61° 35' 37" N, longitude 159° 33' 16" W) are closed to subsistence gillnet fishing.

Federally qualified subsistence users identified in the ANILCA Section 804 subsistence user prioritization may retain Chinook Salmon incidentally harvested in gillnets. Additional authorized gear for use by Federally qualified subsistence users are rod and reel, dip net, beach seines, and fish wheel. All authorized gear types, except gillnets, must return Chinook Salmon to the water alive.

JUSTIFICATION

The lack of continued opportunity for subsistence fishing during a period of Chinook Salmon conservation has severely restricted Federally qualified subsistence users from harvesting fish other than Chinook Salmon in this mixed stock fishery. State actions between May 20 and June 12 closed the river and salmon producing tributaries to the use of gillnets, and only dipnets, beach seines, fish wheels, and rod and reel have been allowed so that Chinook Salmon could be live released. Additionally, the State of Alaska provided three periods of opportunity for the use of 4 inch or less mesh size gillnets between May 20 and June 12. On June 12, the Federal in-season manager provided one 12-hour fishing opportunity with 6-inch mesh drift gillnets where approximately 5,500 salmon were harvested, of which 2,360 Chinook Salmon were caught. On June 24, the Federal in-season manager provided a second 12-hour fishing opportunity with 6-inch mesh drift gillnets where approximately 33,500 salmon were harvested, of which 4,560 Chinook Salmon were incidentally caught. A 6-hour fishing opportunity will be provided on July 1, during which 22,500 total salmon are predicted to be harvested, 1,100 of which are predicted to be Chinook Salmon. In addition, the Chum and Sockeye to Chinook Salmon ratio is expected to stay high to provide further conservation to Chinook Salmon.

The limited subsistence fishing opportunities have prevented Federally qualified subsistence users from harvesting Chum and Sockeye Salmon in large enough numbers to fill smokehouses in June when good drying weather is most likely to occur, as is their custom, or using gillnets to harvest non-salmon fishes such as whitefish, that have been traditionally harvested during summer and in large quantities. Currently there are no conservation concerns for fish other than Chinook Salmon, however, the continuation of subsistence uses of fish other than Chinook Salmon has been substantially restricted. Additional opportunity to harvest Chum and Sockeye Salmon and non-salmon fish species is warranted to protect the continuation of subsistence uses

of these fish species and ensures the Federal subsistence priority as required by ANILCA Title VIII, Section 804. Allowing limited use of this gear type will provide subsistence opportunity for Chum Salmon, Sockeye Salmon and other fish species. While Federally qualified subsistence users identified in the ANILCA Section 804 determination will be allowed to retain Chinook Salmon caught in gillnets during this period, time and gear restrictions are being implemented in order to minimize the number of Chinook Salmon incidentally harvested on Federal public waters.

Currently, the Chum and Sockeye Salmon CPUE at the BTF are at or slightly above average for this date, indicating that increased harvest of these species will not negatively affect their escapement. Provided the Chum/Sockeye to Chinook Salmon ratio remains favorable, the Federal in-season manager may be able to provide additional opportunity to harvest these species, after consulting with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game, while minimizing the harvest of Chinook Salmon.

FEDERAL SUBSISTENCE BOARD

By delegation to: Ken Stahlnecker

Ken Stahlnecker, Refuge Manager
Yukon Delta National Wildlife Refuge

DISTRIBUTION:

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Chairman, Kuskokwim River Inter-Tribal Fish Commission
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Bureau of Land Management
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Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
July 6, 2017

Contact: Ken Stahlnecker
(907) 543-3151 or (800)621-5804
kenneth_stahlnecker @fws.gov

Federal Closure to the Harvest of Chinook Salmon in Yukon Delta National Wildlife Refuge Waters Rescinded

In consultation with the Kuskokwim River Inter-Tribal Fish Commission and the Alaska Department of Fish and Game, the Federal In-season Manager is rescinding previously issued special actions concerning the harvest of Chinook Salmon within Yukon Delta National Wildlife Refuge waters. The Alaska Department of Fish and Game will manage fishing openings, closings, and fishing methods.

The ratio of Chum and Sockeye Salmon to Chinook Salmon at the Bethel Test Fishery has averaged 29:1 over the past ten days, demonstrating that the salmon fishery has transitioned from a Chinook Salmon fishery to a Chum and Sockeye Salmon fishery and subsequent subsistence fishing opportunity will not greatly diminish the final number of Chinook Salmon escaping to spawning grounds. This action follows the conservation strategy discussed with the Kuskokwim River Inter-tribal Fish Commission and Alaska Department of Fish and Game.

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

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This document has been cleared for public release #4403172016 .

U.S. Fish and Wildlife Service
Bureau of Land Management
National Park Service
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Federal Subsistence Board
1101 E Tudor Rd, MS 121
Anchorage Alaska 99503

Forest Service

SUBSISTENCE FISHING

SPECIAL ACTION

Under Authority of **50 CFR 100.10 and .19**
36 CFR 242.10 and .19

Special Action No.: 3-KS-07-17 Issued at: Bethel, Alaska
July 7, 2017

Effective Date: July 7, 2017 12:01 A.M.
Unless superseded by subsequent Special Action

EXPLANATION:

This emergency special action rescinds all previously issued special actions regarding the management of Chinook Salmon in the Kuskokwim River drainage, and Yukon Delta National Wildlife Refuge (Refuge) waters will open to the harvest of Chinook Salmon by non-Federally qualified subsistence users. The ratio of Chum and Sockeye Salmon to Chinook Salmon at the Bethel Test Fishery (BTF) has averaged 29:1 over the past ten days, demonstrating that the salmon fishery has transitioned from a Chinook Salmon fishery to a Chum and Sockeye Salmon fishery and subsequent subsistence fishing opportunity will not greatly diminish the final number of Chinook Salmon escaping to spawning grounds. Therefore the Federal in-season manager has determined that there are no additional reasonable measures to conserve Chinook Salmon within Refuge waters.

This action was made after consultation with the Inter-Tribal Fish Commission (KRITFC) and the Alaska Department of Fish and Game (ADF&G). The subsistence salmon fishery will be managed by the ADF&G through Emergency Orders in consultation with the Kuskokwim River Salmon Management Working Group (KRSMWG), KRITFC, and the U.S. Fish and Wildlife Service.

The Alaska Department of Fish Game will manage fishing openings, closings and fishing methods. Under Emergency Order 3-S-WR-01-17, subsistence fishing with gillnets is closed in the Kuskokwim River mainstem and the following salmon-bearing tributaries:

- The Kwethluk River drainage including its confluence with Kuskokuak Slough and downstream to ADF&G regulatory markers located at the downstream mouth of the slough.
- The Kasigluk and Kisaralik River drainages including Old Kuskokuak Slough to ADF&G regulatory markers at the confluence of Old Kuskokuak Slough with Kuskokuak Slough.
- The Tuluksak River drainage including its confluence with the Kuskokwim River and downstream approximately 1-mile to ADF&G regulatory markers.

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- The Aniak River drainage to ADF&G regulatory markers at its confluence with the Kuskokwim River.

Additionally, subsistence fishing with hook and line for Chinook Salmon is closed. Any Chinook Salmon caught must be returned alive to the water.

Fish wheels are required to have a live box with no less than 45 cubic feet of water and must be checked at least every 6 hours. Fish wheels may be equipped with a chute and must be closely attended while in operation. All Chinook Salmon must be returned alive to the water.

Subsistence fishing with dip nets and beach seines is open. Any Chinook Salmon caught in a dip net or beach seine must be returned immediately to the water alive.

REGULATION

50 CFR 100.27(e)(4)(ii) is modified to read:

For the Kuskokwim area, 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), unless superseded by a Federal Special Action.

JUSTIFICATION

Subsistence

Salmon are critical to the cultural and traditional needs of people residing in the Kuskokwim River drainage. Chinook Salmon harvest by local residents has been severely restricted or eliminated in recent years in an effort to provide stock conservation. State actions between May 20 and June 12 closed the river and salmon producing tributaries to the use of gillnets, and only dipnets, beach seines, fish wheels, and rod and reel have been allowed so that Chinook Salmon could be live released. Additionally, the State of Alaska provided three opportunities for the use of 4 inch or less mesh size gillnets between May 20 and June 12. On June 12, the Federal in-season manager provided one 12-hour fishing opportunity for Federally-qualified users with 6-inch mesh drift gillnets where an estimated 5,500 salmon were harvested between Tuntutuliak and Akiak (i.e., that portion of the Refuge where a large majority of subsistence harvest occurs), of which 2,360 were Chinook Salmon. On June 24, the Federal in-season manager provided a second 12-hour fishing opportunity for Federally-qualified users where an estimated 33,500 salmon were harvested between Tuntutuliak and Akiak, of which 4,560 were Chinook Salmon. A 6-hour fishing opportunity was provided on July 1, where an estimated 30,190 total salmon were harvested between Tuntutuliak and Akiak, of which 990 were Chinook Salmon, and on July 3, an additional 12-hour opportunity was provided when an estimated 17,950 total salmon were harvested between Tuntutuliak and Akiak, of which 690 were Chinook Salmon. During the June 12 opener, a total of 523 drift boat trips were estimated to have participated. During subsequent openers, this number decreased continuously with only 250 drift boat trips estimated to have participated during the July 3 opener. The observed 50% decline in user participation, coupled with exclusive access by Federally qualified users during the four opportunities provided, demonstrates that a priority for Federally qualified users has been afforded.

This year's estimated harvest to date and future management options were discussed with the KRITFC In-season Management Committee on June 16, 20, 23, 30, and July 6, 2017. The consensus from the July 6 meeting was that it was appropriate to rescind the Federal closure to the harvest of Chinook Salmon by non-Federally qualified subsistence users. The Alaska Department of Fish Game will manage fishing openings, closings and fishing methods.

Biological

Harvest management of Federal public waters will transition to a State-managed fishery because increased abundance of Chum and Sockeye Salmon in the Kuskokwim River greatly reduces the likelihood of

harvesting significant numbers of Chinook Salmon and a large portion of the 2017 Chinook Salmon run has moved upriver of the Yukon Delta National Wildlife Refuge.

Chum and Sockeye Salmon runs begin later than the Chinook Salmon run and this year their combined total has exceeded the number of Chinook Salmon at the BTF every day since June 12, 2017. For the past ten days, the ratio of Chum and Sockeye Salmon to Chinook Salmon at the BTF has averaged 29:1, demonstrating that the salmon fishery has transitioned from a Chinook Salmon fishery to a Chum and Sockeye Salmon fishery. The Federal in-season manager has determined that future subsistence fishing harvests will be largely comprised of species other than Chinook Salmon and that subsequent subsistence fishing opportunity will not greatly diminish the final number of Chinook Salmon escaping to spawning grounds.

The U.S. Fish and Wildlife Service, KRITFC, ADF&G, and KRSMWG have agreed to continue to work together to prescribe harvest management for salmon in a manner that will minimize exploitation of Chinook Salmon. These factors provide suitable protection for Chinook Salmon conservation while providing subsistence users of the Kuskokwim River drainage with opportunity to target salmon species other than Chinook Salmon. As a result, salmon management within Federal public waters will transition to a State-managed fishery.

FEDERAL SUBSISTENCE BOARD

By delegation to: Ken Stahlnecker

Ken Stahlnecker, Refuge Manager
Yukon Delta National Wildlife Refuge

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Togiak National Wildlife Refuge
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INFORMATION BULLETIN - August 2017

Cooperative Salmon Escapement Monitoring Projects. Contact: Pat Walsh
ADF&G has monitored Chinook, chum and sockeye salmon escapement on the Middle Fork Goodnews River since 1980. Togiak Refuge has worked with ADF&G since 1992 to assist in staffing the weir until the present year, during which reduced Refuge funding prevented providing staff assistance.

On the Kanektok River, ADF&G, Native Village of Kwinhagak, Coastal Villages and Togiak Refuge have worked cooperatively to monitor salmon and Dolly Varden runs since 2001. However, this project has been cancelled for the past two years (2016-2017) due to lack of funding.

Mulchatna Caribou Contact: Andy Aderman
Togiak Refuge assisted ADF&G with telemetry monitoring flights, radiocollar deployment, satellite data acquisition, data entry and database management. No photocensus was conducted during 2017 due to short windows of warm, calm, and "buggy" weather needed to get the caribou into larger groups for photographing (Neil Barten, ADF&G, personal communication).

Nushagak Peninsula Caribou Contact: Andy Aderman
Reported harvest for the 2016-2017 hunt was 373 caribou (189 bulls, 184 cows), of which 350 were taken under the federal FC1702 permit and 23 under the state RC501 permit. A photocensus conducted on June 29, 2017 found a minimum of 786 caribou, a 36% decrease from the 1,230 caribou observed in 2016. The large decrease in population was due to the increased harvest. The Nushagak Peninsula Caribou Planning Committee met July 25 and reviewed the previous hunt and current herd status. For the 2017-2018 hunt, Refuge Manager Henry set the harvest objective at 300 caribou and an initial harvest limit of 3 caribou per hunter. The area immediately north of the federal hunt was opened August 1-March 31 with a bag limit of 2 caribou by state RC501 permit. As of August 16, 2017, a total of 5 caribou bulls have been reported harvested (3 by Federal permit and 2 by State permit).

Moose Contact: Andy Aderman
Togiak Refuge has been engaged in developing a moose survey method that does not rely on complete snow cover, and preliminary results suggest that 1) the method is succeeding, and 2) that the Togiak Refuge moose population has continued the growth we have documented over the past 20 years. The results that follow should be considered tentative, pending a statistical peer review currently underway by ADF&G.

A Refuge-wide survey conducted in October 2016 with no snow cover estimated 2,590 (±504 at 80% confidence) moose. Sightability trials involving radio-collared moose indicated 72.7% detection which equates to a sightability correction factor (SCF) of 1.375. Applying the correction increases the estimate to 3,561 moose. A similar effort in March 2017 with complete snow cover estimated 3,071 (±503 at 80% CI) moose. Sightability improved to 83.3% (or a SCF of 1.2) resulting in a Refuge-wide estimate of 3,685 moose. An October 2017 Refuge-wide moose surveyed is planned.

In May 2017, 24 of 37 (64.9%) radio-collared adult cows produced 43 calves suggesting a production rate of 116.2 calves per 100 adult cows which is similar to the previous 5 years. The twinning rate was 79.2% which was higher than the long term average. Thus, reproductive performance remains relatively high, and is consistent with the preliminary results of significant population growth.

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. We will use existing population estimates for brown bears, and through the use of radio telemetry, we will estimate the number and composition of wolf packs on the Refuge. We will model wolf and bear predation on moose based on the quantity of wolves and bears and diet composition of both species determined through analysis of carbon and nitrogen isotopes occurring in bear and wolf hair. Hair is being collected from wolves when captured during radio collaring operations, and has been collected from brown bears using break-away hair snares. So far, we have captured and radioed 27 wolves from seven packs. During summers 2014-2016, we deployed over 400 snares, and collected over 200 brown bear hair samples. Laboratory analyses have been completed for bear and most wolf samples to date, and data are being reviewed to determine where sampling gaps exist.

Walrus Contact: Doug Holt
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 (2010-2017). Overall, walrus numbers have declined, with the greatest declines at Cape Peirce and Cape Newenham. Peak counts in the most current year when every day was counted (2015) were 722 at Cape Peirce, 682 on Hagemeister Island, and 437 at Cape Newenham. Walrus using haul-outs in Bristol Bay are typically recorded from late spring to late

fall but have been observed at Cape Newenham every month except one since cameras were deployed in fall of 2014.

Seabirds Contact: Kara Hilwig
The abundance and reproductive success of black-legged kittiwakes, common murres, and pelagic cormorants has been monitored annually at Cape Peirce from 1990-2014, and intermittently at Cape Newenham from 1990-2009. Seabird studies were resumed at Cape Peirce in 2016 and continued in 2017. In 2015 and 2016, large seabird mortality events were observed along North America's west coast. Population counts and reproductive success of kittiwakes, murres, and cormorants at Cape Peirce in 2016 and 2017 were among the lowest recorded since the initiation of the monitoring.

Water Temperature Monitoring Contact: Doug Holt
Stream temperature was monitored at 18 river sites on Togiak Refuge between 2001 and 2017. Temperature was recorded hourly and the data were successfully recovered from the field ~75% of the time. Maximum daily mean temperature readings varied from ~11.5 - >20° C across sites, with the Kukaktlim Lake outlet site being the warmest and the Weary River the coldest. There was evidence for a trend of cooler water temperatures from 2001-2012. Since 2013 the trend has been one of increasing temperatures.

Temperature was monitored at 2 lakes with temperature loggers equally spaced from surface to lake bottom and temperature recorded every hour. Both lakes exhibited similar patterns of turnover and surface freezing in winter beginning near the end of November and thawing near the end of April each year. Data from each lake showed evidence of multiple freeze/thaw events during the winter of 2015-2016.

Quantifying River Discharge Contact: Pat Walsh
Togiak Refuge and the USFWS Water Resources Branch have worked cooperatively since 1999 to acquire baseline hydrologic data of the flow regime (magnitude, duration, timing, frequency, and rate of change) and water quality. 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 will monitor discharge in the Togiak and Kulukak Rivers indefinitely. Each gage is instrumented with pressure sensors that measure water level every 15 minutes. On-grounds discharge measurements are made 3 to 6 times a year. In 2014, satellite transmitters were added to the stream gages that allow remote monitoring of the equipment.

Education and Outreach Contact: Amanda Cochran
Togiak Refuge has an active education and outreach program including the Migratory Bird Calendar; National Wildlife Refuge Week; career fairs; production of Bristol Bay Field Notes (a new episode airs each week on KDLG); and numerous teacher requested classroom presentations in 12 villages in the Southwest Region, Lower Kuskokwim, Dillingham City school districts and the Dillingham 7th Day Adventist School. Field trips with area students for the 2016-2017 school year included bird walks, animal tracks and ID, archery, salmon life cycles, aquatic resources and bear safety. The refuge website is also an education tool and is available at http://togiak.fws.gov.

Togiak Refuge has a very active Facebook page which disseminates information on a daily basis to a rapidly growing global audience.

In 2017 the refuge also hosted a Student Conservation Association (SCA) Career Discovery Intern, Antonio Hornstein, who engaged local elementary age youth around the Dillingham community. The refuge partnered with Alaska 4H, Alaska State Parks, UW Fisheries Research Institute, and the Dillingham Library to host more than 15 summer programs for ages 3-17. The programs promoted conservation of the area's natural resources and traditional/subsistence way of life.

Also, the refuge partners with others to conduct three environmental education camps described below:

Cape Peirce Marine Science and Yup'ik Culture Camp Contact: Terry Fuller
In July 2017 an enthusiastic group of seven area junior high students representing three villages traveled to Cape Peirce for this camp. Students experienced outstanding and stunningly sunny weather and were able to observe seabirds, marine mammals, learn how field work is conducted, as well as learning about food webs and ecological relationships. Students and agency staff 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. RIT John Mark of Quinhagak was on hand to speak with students about traditional uses, biologist Doug Holt discussed walrus biology, and Artist-in-Residence Shawna Pickenpaugh of Wyoming led students through a number of art activities. Traditional councils and school districts from throughout western Bristol Bay are cooperators with this camp.

Southwest Alaska Science Academy (Salmon Camp) Contact: Terry Fuller
This past June and July (2017), Togiak Refuge helped with the 16th 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. This year Togiak Staff were able to share with camp students about the following: identifying the different species of Pacific salmon at various stages in their development, the salmon life cycle, jobs associated with the fishing industry, salmon in art (fish taxidermy) and archery.

Summer Outdoor Skills and River Ecology Float Camp Contact: Terry Fuller
The 2017 Float Camp took place on the Ongivinuk River. At this camp, nine high school students (three from Anchorage, two from Quinhagak, one from Manokotak and three from Dillingham) learned about river ecosystems and how to enjoy them safely and responsibly while taking part in a float trip conducted on a refuge river. Students observed and learned about the

many fish, wildlife and plant species found on the Ongivinuk. 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 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.

River Ranger Program Contact: Amanda McCutcheon Cochran
The Refuge River Ranger Program was conceived during the public use management planning process and was first implemented in 1991. The program serves many purposes. River Rangers are the main contact source for sport fishermen and local residents. Information distributed to the public includes Service policies, regulations, resource management practices, State sport fish regulations, bear safety, wilderness ethics, Leave-No-Trace camping and information about private lands to prevent trespass. Rangers document public use occurring on the river along with the location and timing of activities, conflicts between users, and sport fish catch/harvest per unit effort. Rangers also assist Refuge staff with biological studies. In addition, Rangers patrol campsites for litter, monitor compliance of sport fishing guides and offer assistance as needed. In recent years, continuing into 2017 the RITS and River Rangers have also recruited local volunteers to assist them in river patrols. This helps build capacity and partnership within the villages. River Ranger volunteers donated nearly 100 hours of their time over the 2017 summer.

Staff Update
Fisheries Biologist Mark Lisac retired in January 2017 after 34 years of service at Togiak Refuge. His position remains unfilled due to lack of funding. Refuge Information Technician Pete Abraham retired December 31, 2016 and was replaced by RIT Keemuel Kenrud. Pilot/Law Enforcement Officer Jeff Hicks transferred to Kodiak National Wildlife Refuge in mid-December. We hired Federal Wildlife Officer Derek Thompson, who is expected to report to duty in mid-August. In mid-December, Administrative Officer Debbie Reiswig transferred to the National Park Service and currently serves as Supervisory Permits Coordinator for the Talkeetna Ranger District at Denali National Park. Debbie's position remains vacant because of a lack of funding.

YUKON RIVER DRAINAGE FISHERIES ASSOCIATION

Report to the YK Delta, Western Interior & Eastern Interior Regional Advisory Councils; Fall 2017

Introduction

The Yukon River Drainage Fisheries Association (YRDFA) would like to take this opportunity to share a bit of information about our present programs. As an association of Yukon River subsistence and commercial fishers with the mission of protecting and promoting all healthy fisheries and cultures along the Yukon River we wish to share our great appreciation for the funders that support our efforts.

Staff:
Wayne Jenkins-Director
Catherine Moncrieff-Anthropologist
Danielle Stickman-Communications & Outreach Director

Wayne's Reports

Building & Maintaining Public Support of Salmon Resource Management
Funded by US Fish and Wildlife Service through the Yukon River Panel's Resource Management (R&M) Fund-Wayne Jenkins

This project, in its ninth year, has the goal to maintain and improve public support and participation in management of Yukon River salmon within the Alaska portion of the Yukon River basin. Through our annual Board member meeting, which represents and communicates with member's home communities and fishing families the full length of the river, we foster two-way communications and information sharing with state and federal managers and fisheries researchers. Through communications and outreach efforts this program supports better understanding of Yukon River fishery biology, management challenges and objectives, differing river conditions and challenges to meeting subsistence needs and encourages fishing approaches that support meeting escapement goals in the face of the historical decline in Chinook salmon. We are especially focused on meeting our escapement agreements with Canada as these stocks comprise a critical 50% of the spawning population. Using mailings, surveys, our website and Facebook page and individual phone calls and our annual teleconferences and pre-season management planning meetings we strive to keep Yukon River communities informed and connected to build support for fisheries management and the rebuilding of the critically important Chinook salmon stock for subsistence harvest.

This year's Chinook salmon runs for Yukon River were the best seen since 2005 and, from the reports on the YRDFA Teleconferences, almost all Alaskan Yukon River communities have met

their subsistence needs with higher proportions of King salmon along with other species. This is a very different picture than the very low 2014 subsistence harvest levels but the sacrifices that have been previously made, which support meeting the escapement goals in Canada and in Alaska likely could not be achieved without fishers understanding and making conservation sacrifices.

Also, we wish to extend gratitude to the fisheries managers for their hard work across a vast geography, during challenging budgetary times, and working with a multi-species complex fishery. It is also evident they have a deep sensitivity to the fishery needs of Yukon River fishing communities. For the fourth year, the important escapement goal for Canadian bound Chinook salmon was exceeded while also meeting subsistence needs! The unfolding story on the Yukon River is one of many different people with the same desire, working together to bring Chinook salmon back to a thriving population. We still have a long way to go, but, we have hope that this year's improved runs may be evidence that we are headed in the right direction.

Pre-season Salmon Fishery Preparation Meeting

Funded by the Yukon River Panel through the Restoration and Enhancement (R&E) Fund- Wayne Jenkins

The YRDFA Pre-Season Salmon Fishery Preparation meetings have been hosted by YRDFA for the past seven years and have become an integral and important part of the annual management planning cycle for the subsistence and commercial fisheries on the Yukon River. Following the day after the YRDFA Board meeting with an expanded attendance of invitees selected from local communities the full length of the river, fishers, managers, researchers and other stakeholders came together for a full day designed to prepare everyone for the fishing season ahead. The 2017 meeting in Fairbanks hosted 88 Yukon River fishers and community representatives and 16 fishery managers and staff.

After review of last year's fishing season and discussion on projections for the runs of summer chum, Chinook salmon, fall chum and Coho, this year's meeting focused on manager's views on best fishing approaches in response to a Chinook run expected to be as strong or stronger than 2016. In the case of a weaker run fishers were reminded that we were still in a conservation position for Chinook salmon and that past approaches of limited openings and time periods, 6" mesh nets, use of dip nets and beach seines when the run coincided with commercial summer chum efforts and other conservative management approaches would be in place. But, indicating some confidence in the coming King season, indepth discussion around the use of "King gear", that is 7.5" mesh nets for more efficient subsistence harvest, was a main topic of discussion. It was clear that fishers from some areas welcomed this approach, if the run size warranted it, and that others had strong concerns which centered around potential damage to the overall strength and recovery of the King runs after so many years of sacrifice. Fishery managers emphasized that decisions around subsistence Chinook harvest would be guided by meeting agreed upon escapement goals but that agencies were hopeful for an improved situation this year.

A post meeting evaluation indicated that, overall, participants were pleased (satisfied or very satisfied) with overall quality of the event (95%), the meeting's value in increasing their understanding of the issues (88%), the scope and usefulness of the information presented (95%), the venue (65%), and food provided (65%). A majority (72%) felt that there was a good balance of time spent listening to presentations and for discussions and networking.

The aim of this year's collaborative efforts by fishers and fishery managers on the Yukon River was to insure the meeting of escapement goals and if possible provide opportunities for some harvest of Chinook salmon if the run size supported a less restrained approach. Indeed, this is what happened with Canadian escapement goals being surpassed. Nearly all Alaskan communities were successful in meeting their subsistence needs and overall, reports from the river communities reflect much gratitude for increased opportunity to harvest Kings this year, filling drying racks and freezers for the winter to come.

In-season Yukon River Salmon Teleconferences
Funded by the Office of Subsistence Management, Fisheries Resource Monitoring Program (FRMP) -Wayne Jenkins

Since its inception in 2000, the In-season Salmon Management Teleconference Program (Teleconferences) has provided a practical and useful method for fishers, processors, managers, and other stakeholders in Yukon River salmon fisheries to discuss the complexities of salmon management and gain immediate real-time information across the more than 2,000 mile expanse of the Yukon River. Facilitated by YRDFA, the teleconferences have enabled local users to provide valuable insight to fisheries managers on in-season salmon subsistence needs, river conditions, and abundance and quality of salmon available. Information from the fishers allows managers to adjust timing and gear types for meeting their management goals. Additionally, subsistence users gain a better understanding of the different research projects and management tools the state and federal managers are utilizing and the status of fishing conditions in other areas of the drainage. Members of the public, Yukon River fishers and community members, state and federal agencies, tribal Governments and tribal consortia, fish processors and others have participated in in-season salmon management teleconferences since they have been initiated. The Fisheries Resources Monitoring Program (FRMP) funds this important program. As the program has evolved it has become a regular fixture of in-season salmon management, with calls occurring every Tuesday at 1pm from early June through August.

There is great practical value in having a public forum that is accessible to the people of the Yukon River to call in to hear first-hand about the status of the salmon fisheries. and to be able to share what they are seeing and experiencing during the fishing season. The 2017 calls, though not concluded at the time of this report, had lower attendance, apparently due to the increased opportunity to harvest King salmon for subsistence and the very strong chum salmon runs, mostly utilized in the lower river for commercial harvest but in other areas for subsistence use. It was clear from the calls that there was some concerns about using larger mesh gill-nets for Kings but the strength of the Chinook runs, for the first time in many years proved more than adequate to meet Canadian and most Alaskan escapement goals while providing the substantial subsistence harvest of Chinook salmon. Fishers from almost all areas of the river voiced their deep appreciation to management for the opportunity and commented repeatedly on the fine quality of the fish.

YRDFA Yukon River Community Engagement Support for BLM Resource Management Planning
Funded by PEW Charitable Trusts-Wayne Jenkins & Danielle Stickman

In July of 2014 YRDFA began assisting Yukon River communities with engagement in the Bureau of Land Management's (BLM) Resource Management Planning process (RMP). All federal land management agencies are directed by Congress by the Federal Land Policy Management Act

(FLPMA) of 1976 to create Resource Management Plans for guiding management decisions, usually over the next 15-20 years. The planning process is public and seeks through direct engagement to gain input on issues and concerns and any and all information pertinent to the management of the public's lands the agency is responsible for. In the US, BLM, which is within the Department of Interior, administers over 247 million acres; over 72 million acres are in Alaska within eight planning regions. Three of these include portions of the Yukon River and are in active planning mode; the Eastern Interior, the Central Yukon and the Bering Sea-Western Interior regions.

YRDFA's community support work is focused on the Central Yukon and Bering Sea-Western Interior RMP regions and is useful as the process is complicated and full of difficult to comprehend jargon, BLM is short on staff and local capacity to understand and bring important issues forward are challenged due to the many existing issues and responsibilities at the village level. Early on, tribal councils and communities, after coming to better understand the BLM planning process, made it clear that their main concerns were access to and protection of traditional use areas necessary for continuing their way of life.

BLM has a management designation called Areas of Critical Environmental Concern or ACEC's. Establishing an **Area of Critical Environmental Concern** is a way to provide special management for fish and wildlife resources or other important values on public lands. They are also created to conserve or prevent damage to important historic, cultural, or to protect fragile landscapes and sensitive ecosystems. PEW Charitable Trusts and YRDFA felt this designation was a good fit for the critically important areas that local communities had depended upon for thousands of years, presently use and are necessary for carrying their culture forward.

Requests were made to individual Native communities with one million or more acres of BLM lands within fifty miles for meeting with tribal councils and community members for discussing further protection of traditional use areas. These areas were mapped by use and watershed. Sometimes maps already existed in studies done by ADFG in collaboration with the tribe and community, which were very helpful. ADFG traditional land use mapping included maps for large mammals-bear and moose, small mammals, salmon and non-salmon fish species, birds and waterfowl and greens and berries. We added to this list, areas important for drinking water, fish spawning areas and wood gathering areas. Once the watersheds were identified they were overlaid on BLM managed lands and these areas were nominated by the tribal councils for ACEC designation.

The communities on the Yukon River which have made ACEC nominations are Marshall, Holy Cross, Koyukuk and Ohogamiut thus nominating a collective total of 6.5 million acres in the Bering Sea-Western Interior BLM planning region. Louden, Ruby and Huslia tribal councils have nominated 3.7 million acres so far with the village of Hughes nomination in process in the Central Yukon BLM planning region. It should be noted that some of these nominated areas overlap. Also the Yukon River villages of Anvik, Grayling and Nulato have nominated ACEC's working with Suzanne Little, PEW's Alaska Field Officer.

The desire of the tribal governments and their communities in making ACEC nominations is to increase BLM's understanding of the importance of these areas, request their protection through the Resource Management Planning and ACEC process and as a way to address the federal government's trust responsibility with tribal nations. We are interested in working with other Yukon and Kuskokwim River communities for improved engagement with BLM in the planning regions mentioned. Contact Wayne Jenkins at YRDFA for details. Also see our Facebook page, Our Land, Our Voice, Our Future.

Since the last series of Yukon River RAC meetings the Central Yukon planning region has conducted outreach to a number of individual village communities on the Yukon and Koyukuk Rivers, explaining the RMP process and hearing from local leaders and community members about their concerns, needs and desires for land management in their area. More specifically and unanimously across the region people desire to continue to have access to and habitat of subsistence and traditional areas used for hunting, fishing, trapping and harvest of berries and other natural resources, available and protected. Native culture and survival in the remote villages of the interior require it.

Danielle Stickman, YRDFA's Communications and Outreach Director joined this project in April 2017 and started with outreach to Edzeno (Nikolai) Tribal Council. Edzeno Tribal Council drafted up a resolution to support an existing ACEC in their area and shared valuable data that will be added to their supporting resolution and possibly to the nominated Sheefish ACEC. Telida Tribal Council was also contacted and updated with BSWI draft plans. 50 mile-radius maps were provided to both Edzeno and Telida Tribal Councils. Due to the subsistence and traditional use areas already being in the Sheefish ACEC nomination; Edzeno would like to support that nomination with some additional data; Telida is yet to be determined. A second outreach effort was done with the Iqurmiut Traditional Council in Russian Mission in May 2017; no formal ACEC nomination or resolution has been written, but follow-up visits are being planned. We continue to work with and reach out to communities in the BSWI and CY BLM planning areas.

Danielle's Reports

<u>Yukon River Education and Outreach</u>
Funded by the National Fish and Wildlife Foundation (NFWF)
One of the NFWF project outcomes is to develop educational workshops along the Yukon River. Due to the abundant amount of information sharing and networking at the YRDFA annual Pre-season meeting the YRDFA team decided to hold a young fishers workshop in Fairbanks on April 19, 2017. Six young fishers, ages 18-40 years old, who have not been involved in fisheries management or regulatory meetings before were chosen to participate. The fishers were from Fort Yukon, Beaver, Tanana, Ruby, Anvik, and Emmonak; they attended the pre-season meeting and a 3-hour Yukon River fisheries workshop. These young fishers were suggested by either a YRDFA Board member, Tribal chief, Tribal Council, or agency partner who works closely with Yukon River communities. One of the participants applied through our Facebook page. The workshop provided educational materials on salmon biology, regulatory processes, health of the runs, management processes, and much more. The workshop structure was a talking circle with several Yukon River fisheries managers from ADF&G and USFWS present to share their knowledge and was facilitated by Danielle Stickman. This was an excellent opportunity for the young fishers and managers to talk freely and to answer questions either party may have of the other. The young fishers provided a lot of insight, knowledge, and background to where their views are coming from. They provided great recommendations for improving methods of information sharing. They also identified gaps of data that are often left out (i.e. different methods of fishing gear and types of salmon), which makes it difficult for newcomers to management meetings and information understand and participate. New methods of communication are being implemented; like a young Yukon River fishers Facebook group, and we're taking steps to integrate young fishers into our organizational meetings. YRDFA will be applying for a grant extension that would go into early spring 2018 for continuing to build our relationships, outreach efforts, and communication methods to all key fisheries associated people along the Yukon river.

Salmon Know No Borders: 2017 Yukon River Exchange

Funded by the Yukon River Panel through the Restoration and Enhancement (R&E) Fund

Five participants from Alaska went to Canada for the 2017 Educational Exchange from July 30th to August 6, 2017. Sven Paukan (St. Mary's), Peter Tyson (St. Mary's), Katlyn Zuray (Tanana), Fred West (Anchorage ADF&G), and Danielle Stickman (YRDFA C&O Director) flew to Whitehorse on July 30th and met with Jesse Trerice, Director of the Yukon Salmon Sub-Committee. The first day of the exchange the Alaska group visited the *Chinook Salmon Restoration Project at Fox Creek* and drove up to Dawson, stopping at different sites along the Yukon River. They ended the evening with a talking circle and dinner with the Tr'ondek Hwech'in Territory First Nation community members. Day two and three were full of local tours by Tr'ondek Hwech'in residents in Dawson. Everyone on the exchange participated in the YRDFA Tuesday Teleconference call and the Department of Fisheries and Oceans Canada (DFO) Wednesday call. Selkirk First Nation employees gave an educational presentation on their *Pelly River Salmon Management Plan* and provided the participants with delicious moose stew and bannocks. The Selkirk First Nation's community-based management plan focuses on conservation, looking at various stock restoration projects, actively monitoring rivers and streams, as well as managing harvests according to pre-season forecasts. The group stopped at Tatchun Creek and Carmacks on the way back to Whitehorse; visiting a 98 year-old woman's fish camp where she continues to cut her own fish. This was a great experience for the lower river participants to see how First Nations' process fish and manage their fish camps.

The group took a *Fish Ladder Tour at the Whitehorse Dam* as well as a hatchery tour. They met with DFO employees and had lunch and watched a presentation on Canadian-Origin Yukon River Salmon. They did a site visit to *Deadman Creek* where a *Juvenile Restoration Project* just finished it's second year. The last few days of the exchange were spent in Teslin connecting and learning from the Teslin Tlingit First Nation community. The 2017 exchange was a success and is an important continuing approach to solving some of the large Yukon River fisheries challenges by building understanding and relationships through sharing stories, experiences, and ways of life that revolve around salmon.

Building and Maintaining Public Support of Salmon Resource Management: YRDFA Newsletters

Funded by US Fish and Wildlife Service through the Yukon River Panel's Resource Management (R&M) Fund

YRDFA received funding from the R&M fund to build and maintain public support and meaningful participation in salmon resource management. This project will also increase awareness and participation in management and conservation of Yukon River salmon stocks by reviving the much appreciated YRDFA newsletter, the "Yukon Fisheries News". Many Yukon River residents have shared how much they miss the newsletters and that they are very useful for keeping up-to-date on their complex and evolving fishery. The newsletter outreach and design is intended to be a two-way communications approach for informing Yukon River stakeholders about management measures, fisheries monitoring and research etc. and for eliciting Traditional and local knowledge, issues, and concerns from river communities and fishers. Three newsletters are scheduled to be sent out in the next 15-month period. The first newsletter is underway and will be mailed to Tribal Councils and life-long YRDFA members along the Yukon River and shared widely at fisheries meetings and with Non-Government Organizations (NGO's) and other stakeholders. There will also be electronic copies on the YRDFA website and Facebook page. The content will have an emphasis on the need for Alaskan Yukon

fishers to support and work toward meeting the Canadian escapement goals as defined by the Yukon River Salmon agreement, fisheries management articles and information shared and other pertinent articles provided by Yukon River fishers. This fall 2017 edition will have articles on the 2017 summer fishing season, the Educational Exchange to Yukon Territory, an Elder's Gathering, the Summer Survey program, and much more. Please keep an eye out for the upcoming newsletter on the website and let us know how you like it and how to make it better!

Catherine's reports

Yukon River In-Season Salmon Harvest Survey
Funded by the Office of Subsistence Management, Fisheries Resource Monitoring Program (FRMP)-Catherine Moncrieff

For the 2017 summer fishing season, we hired 10 community surveyors to participate in our In-Season Salmon Survey Program in the following communities: Alakanuk, Mountain Village, Marshall, Russian Mission, Anvik, Ruby, Huslia, Tanana, Fort Yukon and Eagle.

To kick off the season, our surveyors traveled to Fairbanks in April to attend the Yukon River Pre-Season Salmon Preparedness meeting and the Surveyor Training event. In addition to the training, they each received a binder with all the materials necessary for the work. A full evening was spent reviewing the materials, answering questions, and practicing conducting the survey.

Nine of our community surveyors were able to successfully interview fishers in their communities for 6 weeks during the Chinook salmon season and call in to the In-Season Salmon Management Teleconferences weekly with reports. There were new local hires in Mountain Village, Anvik, Ruby, and Tanana but no new communities added this year. In one community, Ruby, the surveyor attended the training event but ended up being unable to do the surveys. We plan to work with the Ruby tribe and community next year to improve this.

During the fishing season we were able to interview 155 households in 455 interviews between May 30 and July 31. We had a goal to interview more fishermen this year and we met this goal as our numbers of interviews and household are up from last year when we interviewed 100 households in 375 interviews. The following table summarizes the number of households that participated in each community and the total number of interviews per community for 2016 and 2017.

Yukon River Drainage Fisheries Association 2017 In-Season Salmon Survey					
Village	**# of households interviewed**		**# of interviews total**		**date range**
	2016	**2017**	**2016**	**2017**	**2017**
Alakanuk	12	41	65	126	May 30-July 17
Mountain Village	2	9	2	40	June 5 - July 17
Marshall	15	18	85	78	June 5- July 10

Russian Mission	20	21	35	34	June 5 -July 10
Anvik	8	12	12	32	June 12-July 17
Ruby	9	0	36	0	----
Huslia	5	20	29	40	June 19- July 24
Tanana	7	5	31	37	June 19-July 31
Fort Yukon	18	23	52	42	June 26-July 31
Eagle	4	6	28	26	June 19-July 24
Totals	**100**	**155**	**375**	**455**	**May 30 - July 31**

This season the surveyors reported that in most communities the fishermen were very happy with the fishing opportunities, the chance to use 7 ½ in nets, and, in most communities, the fishermen were able to meet their subsistence harvest needs.

We are still conducting the annual evaluation of the program and will likely have additional information to share at your upcoming meeting.

Customary Trade in the Upper Yukon River
Funded by the Office of Subsistence Management, Fisheries Resource Monitoring Program (FRMP) - Catherine Moncrieff

Both partner organizations, YRDFA and Alaska Dept. of Fish & Game (ADFG) Subsistence Division are actively working on writing our draft report for this project . This will include chapters on each participating community of Manley Hot Springs, Fort Yukon, and Venetie where we conducted ethnographic interviews and a survey on barter and trade. This fall, our research team will be traveling to each study-community to present our draft findings and to gather their feedback. This project ends in December of this year and we will be publishing a technical paper through the ADFG and distributing the report to Yukon River communities and other interested individuals and agencies.

How People of the Yukon River Value Salmon: A case study in the lower, middle, and upper portions of the Yukon River.
Funded by the North Pacific Research Board- Catherine Moncrieff

As an update on this project documenting how people of the Yukon River value salmon, Catherine traveled to Russian Mission in the spring of 2017 to present a draft summary of the Russian Mission chapter at a workshop with 6 representatives selected by the Traditional Council. As in Fort Yukon and Nenana, community members had the opportunity to provide feedback and their comments will be incorporated into the final draft.

Additionally, Catherine presented on this project at the Alaska Chapter of the American Fisheries Society annual conference, held in Fairbanks March 21-23, 2017. She also presented on this project at the YRDFA board meeting held in April also in Fairbanks.

To wrap up this project by the end of 2017, Ms. Moncrieff will be completing the final report and sharing the results widely.

Yukon River Salmon Declines: Learning from Tradition– workshop
Funded by National Science Foundation. - Catherine Moncrieff

In January and early February of 2017, YRDFA brought six Elders from the lower Yukon to Anchorage to speak in Yup'ik about king (Chinook) salmon for 3 days. This project is modeled after the very successful Yup'ik Environmental Knowledge Project carried out by our partners, Calista Education and Culture. The focus of the workshop was Elder knowledge of salmon and salmon fishing; discussing the history, changes, traditional place names, harvest patterns, diet and food preparation, traditional fishing practices, weather, river conditions, other animal and plant communities related to these practices, as well as other relevant topics.

Since the workshop, we have been working on transcribing and translating the many taped recordings of the discussions. We expect that this will be completed later this fall and, at that time, we will turn the discussions into a summary document to be shared widely with communities, managers, scientists, and other interested parties. Other results from this workshop will be forthcoming.

The YRDFA Board and Staff would like to thank the Dept. of Interior's Office of Subsistence Management for their support of our projects through the Fisheries Resource Monitoring Program we have shared reports for and also the entities that support our other Yukon River fisheries focused projects.

Thanks!

Wayne Jenkins: Director
Yukon River Drainage Fisheries Assoc. Director

PO Box 2898 Palmer, AK 99645
Tel: 907-272-3141
Toll free: 877-999-8566
Mobile: 706-273-6049
Fax: 907-272-3142
Website: www.yukonsalmon.org
Face Book: https://www.facebook.com/pages/Yukon-River-Drainage-Fisheries-Association/204306533264

United States Department of the Interior

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

MAR 02 2017

In Reply Refer To:
1610 (AKA010)

Mr. Lester Wilde, Sr.
Chair, Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
c/o Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
Office of Subsistence Management
1011 E. Tudor Rd. MS 121
Anchorage, AK 99503

Dear Mr. Wilde:

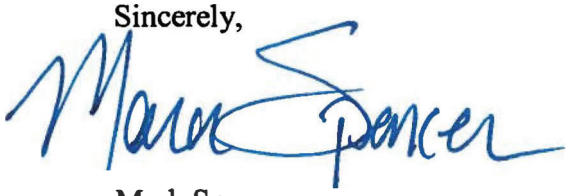
On February 13, 2017 the Bureau of Land Management (BLM) received your letter on behalf of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (Council) supporting nomination of the Ohogamiut Area of Critical Environmental Concern (ACEC). This ACEC was nominated to the BLM by the Ohogamiut Traditional Council and Native Village of Marshall Traditional Council on March 22, 2016. The BLM acknowledged the receipt of the Ohogamiut ACEC nomination in a letter dated June 17, 2016, and stated that we would evaluate the nominated Ohogamiut ACEC in an updated 2016 ACEC Report.

In a letter dated October 12, 2016, the BLM explained to the councils that the Ohogamiut ACEC did not meet the relevance and importance criteria and would be removed from consideration in the Bering Sea Western Interior Draft Resource Management Plan and Draft Environmental Impact Statement (BSWI DRMP / DEIS). In an enclosure with the letter, the BLM included a printed copy of the entire 2016 ACEC Report that contained the full evaluation of the Ohogamiut ACEC. We've also included a hard copy of the 2016 ACEC Report with this letter for your reference.

While the Ohogamiut ACEC did not meet the relevance and importance criteria, the BLM recognizes the importance of the subsistence way of life to the Native Village of Marshall Traditional Council and the Ohogamiut Traditional Council. Alaska Native communities and related subsistence issues are important considerations for the Bering Sea Western Interior Resource Management Plan and are being considered in alternatives development.

Thank you for taking the time to provide comment and for your continued engagement with the BSWI RMP. If you have questions about the BSWI planning process or ACECs, you may contact Project Manager Jorjena Barringer at jbarringer@blm.gov or (907) 267-1246 or Bonnie Million, Anchorage Field Manager at bmillion@blm.gov or (907) 267-1285.

Sincerely,



Mark Spencer
District Manager

Enclosure

Winter 2018 Regional Advisory Council Meeting Calendar

February-March 2018

Meeting dates and locations are subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Feb. 4	*Feb. 5* *Window Opens*	*Feb. 6*	*Feb. 7*	*Feb. 8*	*Feb. 9*	*Feb. 10*
Feb. 11	*Feb. 12*	*Feb. 13*	*Feb. 14*	*Feb. 15*	*Feb. 16*	*Feb. 17*
Feb. 18	*Feb. 19* ***PRESIDENT'S DAY*** ***HOLIDAY***	*Feb. 20*	*Feb. 21*	*Feb. 22*	*Feb. 23*	*Feb. 24*
Feb. 25	*Feb. 26*	*Feb. 27*	*Feb. 28*	*Mar. 1*	*Mar. 2*	*Mar. 3*
Mar. 4	*Mar. 5*	*Mar. 6*	*Mar. 7*	*Mar. 8*	*Mar. 9*	*Mar. 10*
Mar. 11	*Mar. 12*	*Mar. 13*	*Mar. 14*	*Mar. 15*	*Mar. 16* *Window Closes*	*Mar. 17*

EI — Fairbanks

SE — Wrangell

NS — Utqiaġvik

KA — Kodiak

WI — Anchorage

BB — Naknek (1st opt.)

NWA — Kotzebue

SC — Anchorage

SP — Nome

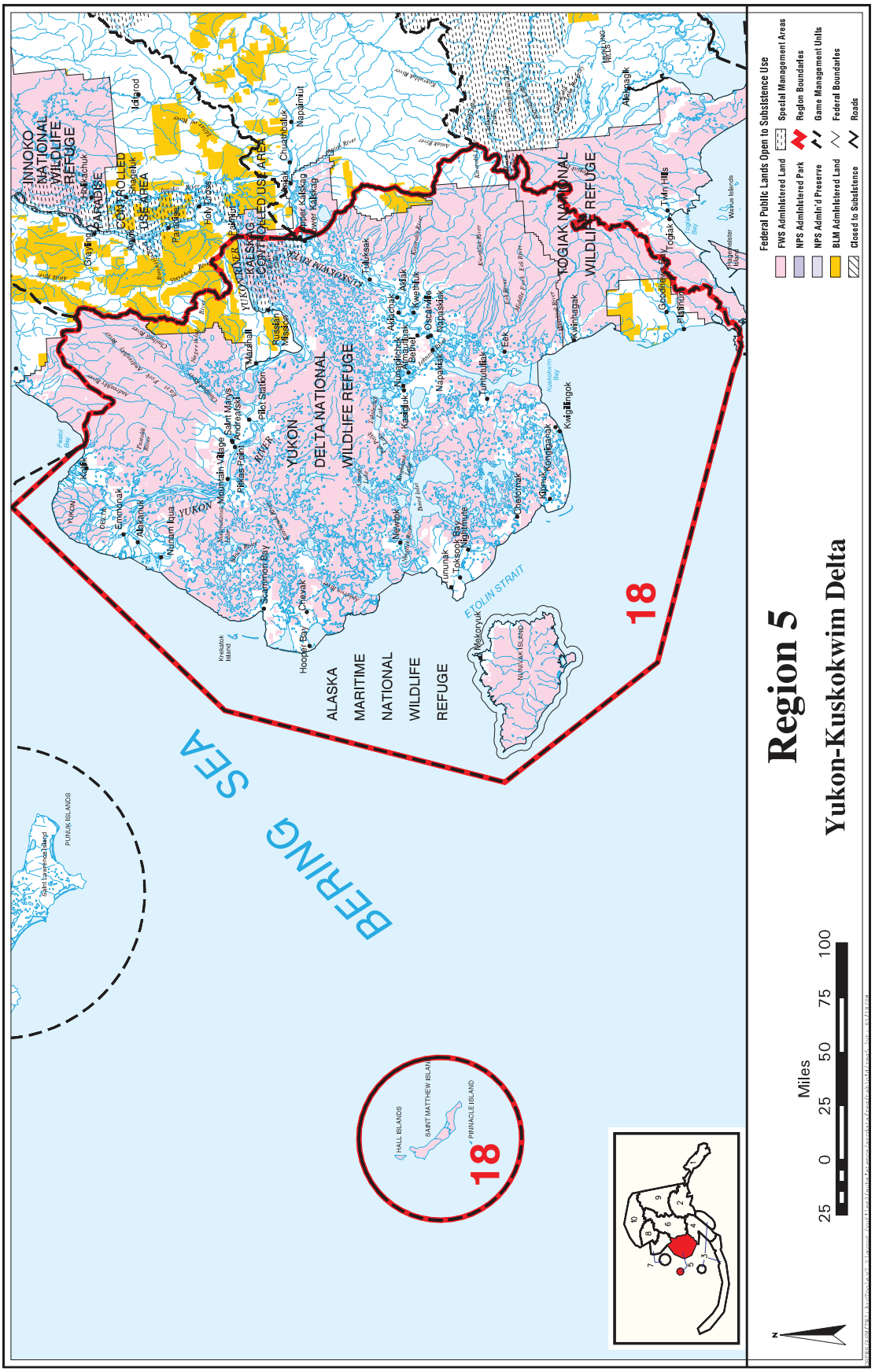
YKD — Bethel

BB — Naknek (2nd opt.)

Fall 2018 Regional Advisory Council Meeting Calendar

Meeting dates and locations are subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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*	*Sept. 1*
Sept. 2	*Sept. 3* ***LABOR DAY HOLIDAY***	*Sept. 4*	*Sept. 5*	*Sept. 6*	*Sept. 7*	*Sept. 8*
Sept. 9	*Sept. 10*	*Sept. 11*	*Sept. 12*	*Sept. 13*	*Sept. 14*	*Sept. 15*
Sept. 16	*Sept. 17*	*Sept. 18*	*Sept. 19*	*Sept. 20*	*Sept. 21*	*Sept. 22*
Sept. 23	*Sept. 24*	*Sept. 25*	*Sept. 26*	*Sept. 27*	*Sept. 28*	*Sept. 29*
Sept. 30	*Oct. 1*	*Oct. 2*	*Oct. 3*	*Oct. 4*	*Oct. 5*	*Oct. 6*
Oct. 7	*Oct. 8* ***COLUMBUS DAY HOLIDAY***	*Oct. 9* **SE — TBD**	*Oct. 10*	*Oct. 11*	*Oct. 12*	*Oct. 13*
Oct. 14	*Oct. 15*	*Oct. 16*	*Oct. 17*	*Oct. 18* **AFN — Anchorage**	*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*
Nov. 4	*Nov. 5*	*Nov. 6*	*Nov. 7*	*Nov. 8*	*Nov. 9*	*Nov. 10*


Region 5
Yukon-Kuskokwim Delta
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Park
NPS Admin'd Preserve
BLM Administered Land
Special Management Areas
Region Boundaries
Game Management Units
Federal Boundaries
Roads
Closed to Subsistence
Miles
25 0 25 50 75 100
N
BERING SEA
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
YUKON DELTA NATIONAL WILDLIFE REFUGE
TOGIAK NATIONAL WILDLIFE REFUGE
INNOKO NATIONAL WILDLIFE REFUGE
YUKON-KUSKOKWIM CONTROLLED USE AREA
KALSKAG CONTROLLED USE AREA
PARADISE CONTROLLED USE AREA
ETOLIN STRAIT
HALL ISLANDS
SAINT MATTHEW ISLAND
PINNACLE ISLAND
PUNUK ISLANDS
NUNIVAK ISLAND
18

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).

2. **Authority.** The Council is renewed by virtue of the authority set out in the Alaska National Interest Lands Conservation Act (16 U.S.C. 3115 (1988)), 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.** The Council has authority to perform the following duties:

   a. Recommend the initiation of, review, and evaluate 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 decisionmaking 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.

(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 $175,000, including all direct and indirect expenses and 1.15 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 7, U.S. Fish and Wildlife Service. The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO will:

- Approve or call all of the advisory committee's and subcommittees' meetings,
- Prepare and approve all meeting agendas,
- Attend all committee and subcommittee meetings,
- Adjourn any meeting when the DFO determines adjournment to be in the public interest, and
- Chair meetings when directed to do so by the official to whom the advisory committee reports.

9. **Estimated Number and Frequency of Meetings.** The Council will meet 1-2 times per year, and at such times as designated by the Federal Subsistence Board Chair or the DFO.

10. **Duration.** Continuing.

11. **Termination.** The Council will be inactive 2 years from the date the Charter is filed, unless prior to that date it is renewed in accordance with the 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 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. A vacancy on the Council will be filled in the same manner in which the original appointment was made. Members serve at the discretion of the Secretary.

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 specific party matter in which the member has a direct financial interest in a lease, license, permit, contract, claim, agreement, or related litigation with the Department.

14. **Subcommittees.** Subject to the DFO's approval, subcommittees may be formed for the purpose of compiling information and 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. The Council Chair, with the approval of the DFO, will appoint subcommittee members. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

15. **Recordkeeping.** Records of the Council, and formally and informally established subcommittees or other subgroups of the Council, shall be handled in accordance with General Records Schedule 6.2, and other approved Agency records disposition schedule. These records shall be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

Secretary of the Interior

NOV 20 2015
Date Signed

DEC 03 2015
Date Filed

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