



WESTERN INTERIOR ALASKA
SUBSISTENCE REGIONAL
ADVISORY COUNCIL
Meeting Materials

*October 8-9, 2019
McGrath*



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Wild berries gathered at Innoko National Wildlife Refuge in Alaska make a colorful display.



USFWS photo

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WESTERN INTERIOR ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

McGrath Native Village Council Community Service Center
McGrath

October 8-9, 2019 | 9:00 a.m. daily

TELECONFERENCE: call the toll free number: **1-866-820-9854**, then when prompted enter the passcode: **4801802**.

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*)

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4. Welcome and Introductions (*Chair*)

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National Park Service

- a. Gates of the Arctic National Park & Preserve Update (*Marcy Okada via telephone*)

Bureau of Land Management

- a. Draft Environmental Impact Statement Ambler Road

Bering Sea-Western Interior Tribal Commission (*Suzanne Little, Pew Charitable Trust*)

Office of Subsistence Management

13. Future Meeting Dates*

Confirm winter 2020 meeting date and location263

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14. Closing Comments

15. Adjourn (*Chair*)

To teleconference into the meeting, call the toll free number: 1-866-820-9854, then when prompted enter the passcode: 4801802.

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 Karen Deatherage, 907-474-2270, karen_deatherage@fws.gov, or 800-877-8339 (TTY), by close of business on October 1, 2019.

REGION 6
Western Interior Alaska Subsistence Regional Advisory Council

Seat	Year Appointed <i>Term Expires</i>	Member Name and Community
1	2016 2019	Shirley J. Clark Grayling
2	2004 2019	Donald V. Honea Jr. Ruby
3	1993 2019	Pollock Simon Sr. Allakaket
4	1993 2020	Raymond L. Collins McGrath
5	1993 2020	Jack L. Reakoff Wiseman Chair
6	2017 2020	Tommy Kriska Koyukuk
7	2008 2020	Timothy P. Gervais Ruby Secretary
8	 2021	VACANT
9	2006 2021	Jenny K. Pelkola Galena Vice-Chair
10	2018 2021	Goodwin G. Semaken Kaltag

WESTERN INTERIOR ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL MEETING

March 26-27, 2019
Fairbanks, Alaska
Meeting Minutes

Call to Order

The meeting was called to order at 9:00 a.m.

Roll Call and Establish Quorum

The following Council members were present: Jack Reakoff, Tim Gervais, Jenny Pelkola, Tommy Kriska, Pollock Simon, Sr., Goodwin Semaken. Telephone: Raymond Collins and Donald Honea. Absent: Shirley Clark (unexcused).

Welcome and Introductions

Karen Deatherage, Office of Subsistence Management (OSM), Fairbanks
Tom Doolittle, OSM, Anchorage
Greg Risdahl, OSM, Anchorage
Pippa Kenner, OSM, Anchorage
Lisa Maas, OSM, Anchorage
Bob Rebarchik, Deputy Refuge Manager, Nowitna, Koyukuk, Innoko National Wildlife Refuge (NWR), Galena
Brandon Bosch, Law Enforcement Officer, Arctic and Kanuti NWR, Fairbanks
Fred Bue, fisheries management, U.S. Fish & Wildlife Service (USFWS), Fairbanks
Jan Conitz, USFWS, Fairbanks
Ben Stevens, Tanana Chiefs Conference (TCC), Fairbanks
Gerald Maschmann, Yukon Fisheries, USFWS
Ray Born, Acting Refuge Manager, Yukon Delta NWR, Bethel
Lisa Stuby, sportfish, Yukon Area Alaska Department of Fish and Game (ADF&G)
Glenn Chen, Bureau of Indian Affairs (BIA)
Vince Mathews, Arctic, Kanuti, Yukon Flats NWRs, Fairbanks
Marcy Okada, Subsistence Coordinator, Gates of the Arctic National Park & Preserve (NPP)
PJ Simon, TCC, Fairbanks
Tina Moran, Deputy Refuge Manager, Kanuti NWR, Fairbanks
Chris Harwood, Wildlife Biologist, Kanuti NWR, Fairbanks
Nicole Reakoff, Wiseman
Sampson Henry, Allakaket
Orville Huntington, TCC, Fairbanks
Caroline Brown, Division of Subsistence, ADF&G, Fairbanks
Bonnie Million, Anchorage Field Manager, Bureau of Land Management (BLM), Anchorage
Glenn Stout, Area Biologist, ADF&G, Galena
Sara Longsum, Assistant Area Biologist, ADF&G, Fairbanks
Chel Ethun, Environmental Planner, BLM, Fairbanks
William Hedman, Assistant Field Manager, BLM, Fairbanks
Brad Scotton, Lead Biologist, Nowitna/Koyukuk/Innoko NWR, Galena
Aaron Moses, Fisheries, Yukon Delta NWR, Bethel
Wayne Jenkins, Director, Yukon River Drainage Fisheries Association (YR DFA), Anchorage

Telephone

Ken Chase, Anvik
Deena Jallen, ADF&G, Anchorage
Mark Burch, ADF&G, Palmer
Carol Damberg, USFWS, Anchorage
Joshua Peirce, ADF&G, Fairbanks
Kyle Joly, National Park Service (NPS), Fairbanks
Jobe Chakuchin, NPS, Anchorage
Dan Sharp, BLM, Anchorage
George Pappas, OSM, Anchorage
Alex Hanson, ADF&G

Review and Adopt Agenda

Deatherage read the request to change the time for BLM presentations to the morning of 3/27 following public testimony. It was also requested under New Business to appoint a Koyukuk representative to the Western Arctic Caribou Herd (WACH) Advisory Committee. Pelkola moved to adopt the agenda as amended, seconded by Simon and carried unanimously. Later in the meeting, the Council voted to amend the agenda again to add OSM/Refuge staffing issues and Council appointments.

Review and Approval of Previous Meeting Minutes

Gervais moved to adopt the minutes from the previous meeting, seconded by Simon and carried unanimously. Reakoff clarified the issue of caribou forage and the need for managers to recognize spring and summer forage. He also discussed how caribou herds are easily overharvested, particularly the Nelchina, Mulchatna, and Forty-mile herds. For example, the Nelchina Herd used to be 70,000 animals. Now it is down to 35,000 with a high annual harvest of five thousand. Reakoff believes caribou are a low reproductive species and cannot sustain this level of harvest.

Election of Officers:

Pelkola moved to nominate Jack Reakoff as Chair. Simon moved to close nominations, seconded by Pelkola. The Council unanimously elected Reakoff to serve as Chair.

Gervais moved to nominate Jenny Pelkola as Vice Chair, seconded by Kriska. Semaken moved to close nominations, seconded by Kriska. The Council unanimously elected Pelkola to serve as Vice-Chair.

Pelkola nominated Tim Gervais as Secretary, seconded by Simon. Gervais nominated Kriska as Secretary, seconded by Pelkola. Semaken moved to close nominations, seconded by Simon. The Council elected Gervais as Secretary on a 6 to 1 vote.

Council Member Reports

Goodwin Semaken

Semaken introduced himself as a new Council member from Kaltag. He stated that lots of snow fell, so there will be a lot of moose lost to wolves. There were three wolves taken so far, but they are best caught on the river. There are a lot of moose on the river, and he is grateful for that.

Tommy Kriska

Kriska is glad to be at the meeting and thanked WIRAC and Deatherage for their work. Community members are having a difficult time with the 5-6 feet of snow and are worried about the animals. Wolves are heavily predating on moose. Kriska would like to see the moose hunt moved back from March to November which is a better time for hunting. We were able to cross the Yukon River in late November last year. Fishing was great last summer but we don't know what to expect this summer. This year will

likely be high water which is bad for fishing. A lot of the locals are thinking about a controlled use area like the Koyukuk Refuge has where there is permitting for non-local hunting. Kriska has been working with the TCC to get more information.

Jenny K. Pelkola

Pelkola thanked the Council members, Deatherage and Hile (court reporter). She stated there was a lot of snow in Galena like other places, bringing moose right into town. Wolf packs are getting bigger and killing off the moose. Galena is going to have high water this year on the Yukon, and likely on the Kuskokwim as well with some flooding. Pelkola discussed a no fly zone for drones which are interfering with moose hunting. She mentioned that the Council appointment letter was late again and wasn't sure where the shortfall was, but believes the Council should look into it. She believes there will be a lot of erosion this year as a result of the water. Last summer, there was good fishing right in Galena. Pelkola mentioned she missed Dennis Thomas and sends her condolences to the family.

Reakoff confirmed that Dennis Thomas passed away this past winter. He also said the Council needed to address the issue of appointments and staffing at the Office of Subsistence Management, particularly leadership. Gervais moved to add OSM staffing and Council member appointments to the agenda under New Business. Seconded by Kriska and carried unanimously.

Raymond Collins Jr.

Collins remarked on the deep snow in McGrath, which means they will be losing moose calves. The snowmachines need to stay on the trails already broken in because otherwise they sink. They can't readily go after wolves because of this. Collins also shared his concerns with the BLM lands near McGrath and Nicolai and how he testified to move the Donlin mine pipeline away from the foothills because that's big game country. Donlin claimed they couldn't move the pipeline down to the black spruce because it was designated wetlands. There is very little water down there, with no nests or waterfowl. It is mostly frozen. When they put in the gas line from Cook Inlet it's going to cross both State and Federal lands so it needs to be closely monitored. Another major concern is the Big River, where a large portion of the Sheefish population in the Kuskokwim go up to spawn. So it's important that if any of those areas are identified as Federal lands they need to be protected from the mining project. Collins is hopeful that BLM will be able to comment on that at this meeting.

Pollock Simon, Sr.

Simon congratulated Reakoff for being the Chair, and Jenny for Vice-Chair and Tim as Secretary. He also thanked Collins for being on the Council since its beginning. There is a lot of snow in Allakaket. The last few years there was only about 2 feet of snow. This past winter there was 5 feet so the community is concerned about a big flood with fast runoff. The State has been taking wolves so there are no wolves in town. I see more moose tracks in the river so they might be coming back. The caribou haven't been back since the Haul Road and pipeline were put into place to Prudhoe Bay. Simon says that tells him that the road destroyed caribou migration routes, and that he has always been opposed to roads and is really opposed to the Ambler Road. He said he's getting older but not weaker. The pipelines and roads provide a lot of jobs and money for a while but then after four to five years people come back to the village and it's like they are starting their lives over. Simon stated people in Allakaket are concerned about the Ambler Road because there is limited fish and wildlife in the area. King Salmon was the main fish diet for the people, but they are not returning. With restrictions on King Salmon, no caribou and few moose it's no wonder people are opposed to the Ambler Road. There is also concern about an oil spill into the rivers and creeks.

Timothy P. Gervais

Gervais congratulated Reakoff on the reappointment as Chair. He remarked that Reakoff's years of experience, along with his work with the Koyukuk Advisory Group and Gates of the Arctic National

Park, makes the job of the Council a lot easier and is a benefit to subsistence users. Gervais also acknowledged the passing of Dennis Thomas. He remarked on the government shutdown and stated he believed the people he worked with were all essential. Gervais then went on to express his concerns regarding large industrial development, citing the Exxon Valdez Oil Spill, and how there are always going to be mistakes. He stressed that the Council needs to be really focused on habitat protection and involved in projects like Donlin Mine and the Ambler Road; otherwise the clean environment is going to disappear. Western Interior Alaska is special because it's rural and roadless with few conflicts. Gervais mentioned the strong winds in the Gulf of Alaska and how that will be good for the fish due to the upwelling of cold water. Gervais talked about the rain event in Ruby and how it's tough on the animals and there are concerns over winter kill. Gervais reported on the Board of Fish (BOF) meeting where the BOF rejected proposals that restricted gillnet depth, fish wheel size and moving the in-river beach seining. He remarked that he was surprised they rejected it, and still believes that King Salmon management should be in a conservation mode to rebuild the stocks.

Chair's Report

Reakoff reported on the 11.5 feet of snow on the south slope of the Brooks Range. Moose are up to their shoulders in snow and calves are dying. He said they were going to lose a significant number of yearlings and a static mortality of adults, older animals and moose that never achieved their optimum potential. There is also concern about losing older breeder bulls. Caribou are grazing animals and need to dig down through the snow. The Porcupine caribou herd came into the Upper Koyukuk for the first time in 50-60 years. They were pushed out by snowmachines and road traffic so the lead cows turned around and went back. Reakoff stated there was very little snow, with bare areas, in Atigun Valley. Caribou in that area are really fat and doing well. Caribou on the south side of the Brooks Range are having hardships. Reakoff reported lots of snowshoe hare though they are starting to decline rapidly due to predation by owls and lynx. The wolves have moved with the caribou out of the valley or they are on top of the mountains hunting sheep. The Central Arctic caribou herd did not come over to the south range, at least in the Upper Koyukuk.

Reakoff reiterated his concerns over Council appointments and OSM staffing delays. He remarked on the fact that the Assistant Regional Director left in July, 2018, and the position was still not filled. The Department of the Interior and U.S. Fish and Wildlife Service need to have a more timely process to appoint Regional Directors to run OSM.

In response to questions regarding sheep, Reakoff responded that south slope sheep were struggling as a result of deep wet snow. Wolves were waiting to pick them off. The North Slope sheep are having an excellent winter. Reakoff concluded that he was very concerned about moose and sheep due to the deep snow and wet conditions. Kriska remarked that he would like to see ADF&G conduct predator control to get rid of large packs of wolves. Collins suggested a registration hunt versus a Tier I or Tier II hunt like they had in McGrath to limit non-local hunters. He also mentioned losing the resource of elders and how OSM should gather some of that information while it's still available. Collins stressed that we are losing traditional hunting knowledge that gives a historic context of game populations and harvest methods. Gervais remarked on bears' response to the current rain event occurring in Ruby. He suspects bears will be out early and have nothing to eat but moose. Last fall bears were thin, perhaps due to a bad berry crop.

Public and Tribal Comments on Non-agenda Items

Orville Huntington, TCC Wildlife and Parks Director addressed the Council. Huntington spent seven years on the BOF and then switched over to the BOG. Gervais asked if the TCC was going to continue funding the Henshaw Creek weir. Huntington responded that it was funded this year but they were looking to expand the program through the Fisheries Resource Monitoring Program (FRMP). TCC is going to hire a new biologist and is trying to get someone from the Loudon Tribe. Deborah Lynn was

hired as a natural resource cultural specialist. Henshaw Creek is a priority. TCC may look at a sonar with ADF&G for the Koyukuk River. Collins inquired about any efforts by TCC to record elders. He also remarked on projects taking place on BLM land and asked if TCC was monitoring impacts to the Bering Sea Cisco spawning areas on the Big River as well as the Yukon River. Huntington was unsure if TCC was involved with Cisco fish but did ask Collins to submit concerns regarding BLM land projects to the TCC Advisory Committee. He mentioned some work being done on the upper Kuskokwim with elders and that work was being done to look at the impacts of the Ambler Road, as well as roads in the Innoko region. Huntington did state that traditional knowledge was captured through all his work. For example, with wolves you don't want to remove all the wolves because if you do the weaker ones will move in and you could have problems. If you don't bother the alphas, you actually do better. Canada has programs that show this. Huntington mentioned he would be going to Whitehorse to work with the Canadians on the issues.

Gervais inquired about what the Canadians thought of the conservation measures being taken on the river for King Salmon on the American side. Huntington responded when there is a good return in Canada it is acknowledged but when there is a bad return it gets political.

Pollock (PJ) Simon, Jr. is from Allakaket and lives in Fairbanks. Simon is concerned about the heavy snow and rain in the Brooks Range. He actively hunts and traps in Gates of the Arctic National Park. The sheep hunt has been going since pre-contact. Simon is worried about sheep and moose calves in the deep snow and hopes there isn't a 30% reduction in sheep like in 2013. The opening of the Bering Sea has created a lot of snow. There is a 70:100 bull/cow ratio in some areas around the traditional hunting region of Allakaket within the State, BLM, USFWS and Gates of the Arctic lands. This Council can use its authority to work with the Kanuti National Wildlife Refuge to use a helicopter for enforcement because everyone wants to hunt in Kanuti. Simon hopes that trapping remains and that anti-trappers don't take away this way of life. We have to use the money. Simon remarked that the Council should keep an eye on the John Sturgeon case ruling as the renewable resources can easily be overhunted. Simon is a registered guide and said there are not very many guides so they look to the Council for support. He stressed the need to sight in rifles and the right caliber because there are too many wounded and lost moose. He said there is a 17% wound ratio in Unit 24. Reakoff remarked that shooting a .223 is inefficient and there is a proposal before the Board of Game to eliminate it. There should be a State education program for communities. Kids in the villages are shooting .223 at moose and it doesn't work. Simon wants to see balance between traditional and western ways.

Simon asked that the Council keep trappers in mind in the upper Koyukuk. The Grayling Tribe has been bringing back the fur industry with the CDQ group with Kwik-Pak which has been buying fur from the Upper Koyukuk. Gervais asked about den hunting for bears in the Allakaket, Alatna, and Hughes areas. Simon stated it was quite common and a power food. Gervais also asked if he had any concerns about the winter trail road going from the Haul Road to Anaktuvuk Pass. Simon said it may be of concern in the future to the caribou herds because of noise, pollution and fugitive dust. He also said that it may also help lower costs for transporting items like trucks. Simon concluded his testimony by remarking on the Henshaw Creek weir as an important asset to the Koyukuk River. Pelkola shared with Simon information on a class for students in Galena every fall to teach about hunting. She recommended getting the schools involved. Simon continued about bear harvests as a bonding mechanism for the Native people when they have bear parties with the elders and youth and share stories. Huntington remarked that there are a lot of medicinal qualities to bear that people don't understand. Bears eat plants that don't work in our body but are processed by bears for us. Kriska expressed his appreciation for the testimony from Simon and Huntington.

Ken Chase of Anvik asked Huntington about the Anvik River which has one of the biggest Chum Salmon spawning areas on the Yukon. The State has a weir on the Anvik but we don't hear too much from them.

It's only a subsistence fishery now. Chase asked if TCC would be able to help the State if it runs out of weir funding. Huntington expressed concerns with the Anvik River because of the lack of snow due to climate change. He stated he could tie in climate change research with Anvik and Venetie. Huntington will look into it and draft up some plans, likely in the fall.

Sam Henry is from Allakaket and wanted to share his opposition to the Ambler Road. He is concerned that the road proposal is going over King Salmon spawning areas in the upper Henshaw Creek. If the spawning areas are messed up the salmon will go elsewhere. Henry is also concerned about the influx of hunters which will be terrible for subsistence hunters. He hasn't had moose meat for about 5-6 years and has to travel from Allakaket to Huslia to see moose. Moose in Allakaket only have 1.5" of fat compared to 3-4" of fat in Huslia. Lakes are drying up taking away their food source of plants. The Ambler Road will take away our way of life for a few dollars. Henry mentioned traditional black bear hunts and what his father taught him about the timing of the hunt. His grandmother would boil the bones for nutrients. He reiterated his opposition to the Ambler Road and his disappointment with the media stories saying caribou are stopping progress. Simon mentioned hunting black bears in the den as a Koyukon practice for thousands of years. There aren't too many black bear now perhaps due to the cold or lack of berries.

Ben Stevens, TCC, thanked the Council for traveling from their homes to navigate complicated issues. He stated he was from Stevens Village and is a Koyukon Athabaskan. His family had a fish camp on the Yukon River above Stevens Village where they harvested mainly Chinook Salmon. Stevens stated he works on a hunting and fishing task force at TCC to advocate for people's hunting and fishing rights. Stevens believes that if people's food is being discussed, then they should be part of the discussion. TCC members are trying to learn the regulatory language because it has been a barrier in the past. TCC is also trying to get potential candidates for the Council. It is challenging to get people from their fish camps and the deep snow and off the river but TCC holds a lot of training and encourages folks to sit on councils, committees and other arenas where their food is being discussed. There is a concern that once a candidate applies for a seat, it goes into a black hole. There were a record number of applicants for the Western and Eastern Interior Councils with only one appointment. Reakoff expressed his frustration with politics entering into the vetting process for the Federal Subsistence Management Program. Reakoff was very surprised that Darryl Vent from Huslia was passed over. Stevens took issue with some of the questions asked of the references and didn't feel they reflected well on the candidate. Reakoff and Pelkola mentioned that the Council really needed someone from the Grayling/Anvik/Shakaluk/Huslia (GASH) area, especially with the loss of Dennis Thomas from Crooked Creek. Deatherage and Doolittle provided an explanation of the process, beginning with OSM and ending with the Whitehouse liaison. Doolittle agreed to explore why the previous allowance for alternates is no longer available.

New Business

a. Wildlife Closure Reviews

Lisa Maas of OSM read the Federal Subsistence Board's (Board) updated Wildlife Closure Review (WCR) Policy, citing review of half of all closures on a staggered four-year cycle with the other half being reviewed the following years; namely, even years for wildlife and odd years for fisheries. The new policy also confirms that the Board take final action on closure review analyses during its wildlife and fishery regulatory meetings. Closure review analysis will be given the same deference to Councils and treated in the same manner as regulatory proposals. Follow-up proposals from the Councils to request that an existing closure be modified or rescinded will no longer be required. Below are the WCRs for this cycle. Closures will be brought back in the fall, 2019 meeting cycle for reconsideration by the Council pending updated biological or socio cultural information.

WCR 18-20

This closure affects Unit 24B remainder in the Kanuti Controlled Use Area for moose. Maas handed out corrected information for the analysis. Honea moved to retain the closure, seconded by Pelkola and carried unanimously. The Council unanimously supported continuing a closure for moose hunting in Unit 24 under WCR18-20. There are still real concerns about this population and harvest is not achieving the needs of subsistence communities. The Council is also concerned about the current high snow season and its impact on local moose populations.

WCR 18-39

This closure affects Unit 19A moose. There is no Federal open season for Unit 19A moose, north of the Kuskokwim River, upstream from (but not excluding) the George River drainage, and south of the Kuskokwim River upstream from (and including) the Downey Creek drainage, not including the Lime Village Management Area. Peirce mentioned that Proposal 127 from the Stoney/Holitna Fish and Game Advisory Committee to open a Tier I registration hunt for moose in Unit 19A east was adopted by the BOG. Pelkola moved to modify WCR18-39 to mirror the State regulation. Seconded by Gervais and carried unanimously. The Council agreed to eliminate the current closure and mirror the State regulation which allows for a Tier I hunt for up to 30 bulls by registration permit only. The permits would be issued locally and would allow for one antlered bull per household.

There was an extensive discussion between the Council, OSM and ADF&G regarding this closure. OSM recommended maintaining the closure because the overall moose population has not increased in this area and the current intensive management program that may be contributing to sustaining this population may not continue. ADF&G remarked on the high number of large bulls, and the 50:100 bull/cow ratio. As a result of the high bull/cow ratio and diversity of bull sizes, the Board of Game opened up a limited hunt of up to 30 animals, based on harvestable surplus of 70 animals, meaning less than half of that would be taken. Given that Federal land comprises about 18% of Unit 19A east, the Council agreed to recommend eliminating the closure and mirror current State regulations allowing for a Tier I permit. The Council's recommendation was clarified to show that this would be a joint Federal/State hunt for a maximum of 30 antlered bulls.

WCR 18-43

This closure affects Unit 19A remainder moose. Federal public lands are closed to the taking of moose except by residents of Tuluksak, Lower Kalskag, Upper Kalskag, Aniak, Chuathbaluk and Crooked Creek. The Yukon Delta Refuge Manager, in cooperation with the BLM Field Office Manager, will close the season when allowable harvest has been reached.

Maas explained that this closure was similar to the previous closure except the area is open to the taking of moose by residents under a Customary and Traditional Use designation per Section 804 of ANILCA. Under State regulations there is a Tier II hunt. Although a large increase of moose were seen when surveyed in 2017, the entire area showed a lower moose density. There is also a low bull/cow ratio of 20 bulls to 100 cows. There is a high calf to cow ratio of 60 calves per 100 cows. The annual reported harvest under the Tier II State harvest is about 100 moose, where the Federal harvest is about 50. The Yukon Kuskokwim Delta Refuge Manager has delegated authority to set the quota on Federal lands. The take falls within the harvestable surplus of 165 moose. Josh Peirce reported that the population is growing but the bull/cow ratio is still very low at 26/100 with over half those bulls on the smaller side. Gervais moved to maintain the current closure on WCR18-43. Seconded by Honea and carried unanimously.

The Council later returned to WCR18-43 to address the Lime Village area. Under current

regulations, it appears that residents of Lime Village are prohibited from hunting on Federal lands in Unit 19A. Collins moved to amend WCR18-43 and eliminate the closure in the southeast portion of Unit 19A. Seconded by Kriska and carried unanimously. Clarifying this will correct an error and allow Lime Village residents to hunt under the State permitting system, reducing confusion. Reakoff asked that OSM review the regulation for the community harvest of 28 moose in the Federal regulation book and report back to the Council at the fall meeting.

b. Call for Wildlife Proposals

No proposals submitted at this time during the meeting.

c. Council Charter Review

Deatherage reviewed the Council Charter up for renewal and informed the Council on areas where members could make recommendations. Council members expressed concerns about vacancies, the need for larger representation due to the size of the region and the need to set a goal to have diverse representation from around the region. Council members also discussed the need to meet in smaller communities but with charter flights to reduce travel time for volunteers. Pelkola recommended allowing Honea to travel in a day earlier due to persistent weather challenges in Ruby.

Honea moved to add one additional member and two alternates to the Council Charter, and to stipulate a goal of having representation from the Northern Koyukuk, Middle Koyukuk, Middle Yukon, Galena/Anvik/Shagaluk/Kuskokwim (GASH) area. Seconded by Kriska and carried unanimously.

d. Approve 2018 Annual Report

Deatherage summarized the draft annual report. The Council proposed the following changes/additions:

- a) Under Item 1, Resource monitoring and evaluation, edit third sentence to read: While lichen provides important carbohydrates, spring and summer vegetation such as cotton grass *and high protein flowers* provide critical nutrition.
- b) Under Item 2, OSM comments to the BOG, Recommendation: End second to last sentence at *rural communities*. ADD this last sentence: The Council would prefer that OSM staff resources be redirected towards assisting Councils with written comments to the State Boards from their respective communities, *and when possible, represent the Councils at the Board of Game meetings*.
- c) ADD Item 7. Pipeline Route for Donlin Mine.
Collins proposed adding the issue of the pipeline route for the Donlin Creek Mine. Currently, the proposed pipeline will be placed along the Alaska Range foothills which are an active wildlife area important to subsistence. Collins remarked that the pipeline should be placed in an area with the least adverse impacts to subsistence. One recommendation is to declassify the black spruce area below the foothills as wetlands so the pipeline can be placed there. Otherwise, every drainage along the river will be open to four-wheelers and other sporthunting ATV traffic. This is also an area where caribou migrate and Sheefish come to spawn in the fall. The Council recommends reclassifying the black spruce area from wetlands to peat bog so the pipeline can be built there. Collins also mentioned that moving the pipeline into the black spruce would make it more accessible to villages that might want to tap into that power source. Ken Chase mentioned that the BLM's Bering Sea Western Interior Resource Management Plan (BSWI) was in development and there would be public hearings in Nulato, McGrath, Chuathbaluk, Unalakleet, Crooked Creek, Aniak, Kalskag, Lower Kalskag, Bethel, Grayling, Holy Cross, Kaltag and Russian Mission in April going into May. The comment deadline for the BSWI is June 13th.

- d) **ADD Item 8: Climate Change.** The Council believes that Interior Alaska's rate of warming is uniquely rapid and causing adverse effects for subsistence users in the region. *Recommendation:* The Council would like for the Board to communicate through the Secretary of the Interior to Secretary of Energy that climate change is threatening subsistence activities in Interior Alaska and that a National energy policy that is more responsive to climate change is needed.

Simon moved to adopt the annual report with the proposed changes and additions. Seconded by Pelkola and carried unanimously.

e. Board of Game Proposals

The Council discussed adjusting the winter hunt in Unit 21D to a starting date of December 1-December 15th versus the current start date in March. Gervais moved to submit a proposal to the Alaska Board of Game establishing a winter hunt in Unit 21D for that portion of the South bank of the Yukon River, downstream of the up-river entrance of Kala Slough and west of Kala Creek for one moose by State registration permit. Some remarked this is the only place on the river where you can get a moose. Harvest of cow moose accompanied by calves is prohibited. The December hunt is to be announced by the area biologist. If the annual harvest quota is not met, then a 15-day season between March 1 and March 31 will be announced by the area biologist.

Council members noted that the current State season is too late in the winter to use the meat before breakup. The meat could also be kept for a longer period of time if harvested in December. Changing the season would also give hunters safer access to the Yukon River and therefore an increased opportunity to get moose. The Council will submit a similar proposal to the Federal Subsistence Board to reduce regulatory confusion.

f. OSM Staffing and Appointment Letters.

Before the Council proceeded with this topic, members wanted to re-appoint Pollock Simon Sr. to the Western Arctic Caribou Herd Advisory Committee (WACH). Pelkola moved to appoint Simon to the WACH, seconded by Kriska and passed unanimously. Simon thanked everyone for their support.

The Council then discussed the lateness of appointments to the Council and the need for the Secretary of the Interior to pay close attention to the statutory requirements of these Councils under Title 805 of ANILCA. Council members also remarked on the delay of staffing at OSM; namely, filling the Assistant Regional Director position which has been vacant since July. It is also important that the Secretary of the Interior recognize that OSM needs proper leadership and staffing. Reakoff mentioned that hiring freezes are delaying the ability of the Councils to work effectively for the resource and resource users under Title 8 of ANILCA. The Council wishes to send these concerns to the Secretary of the Interior in a letter through the Board. Gervais moved to draft and transmit a letter to the Board regarding Council member appointments and OSM staffing, seconded by Pelkola and carried unanimously.

Special Actions

FSA 19-02 submitted by the Native Village of Akiak to close Chinook Salmon fishing in the Yukon Delta National Wildlife Refuge on the Kuskokwim River to non-Federal qualified users. Risdahl introduced FS19-02 and indicated there would be a public hearing in Bethel on March 29th. The special action also requests that a Section 804 analysis be done to limit fishing to those villages with the greatest need and traditional dependence on Chinook Salmon. This special action was implemented a few years ago, and the Village of Akiak is asking that it be reinstated. Kenner explained that the Board did not approve the Section 804 request last year but had done so from 2014-2017. Gervais mentioned that he was not

comfortable taking a position on this special action. Reakoff and Gervais felt that the Board had done a good job and didn't delineate the villages last year because there was a harvestable surplus. Collins mentioned he would be concerned about the villages fishing earlier because it's an intercept fishery. He felt that the fishery was managed well last year. Reakoff asked Kenner to record the comment that the Council would like for the Board to act along the same line of regulation and restraint on the Chinook Salmon run to maintain the same affect that it had in 2018. The Council ultimately decided not to take a position on FSA19-02.

Agency Reports

U.S. Fish and Wildlife Service.

Yukon River Salmon

Gerald Maschmann explained that the 2018 conservation measures for Chinook Salmon were still in place, including reduced window schedules, period closures and various gear restrictions. There is a harvestable surplus of Chum Salmon so subsistence users are encouraged to use that resource. The preliminary numbers for Chum and Coho Salmon showed normal subsistence harvest. Maschmann said they will try to spread out opportunities to harvest Chinook Salmon over the entire run but are encouraging people to take Chum as they will be more abundant. Semaken noted that commercial fishing was really good last year. He stated that they get their Chinook Salmon by drifting but don't get that many. Pelkola said when they get late fall Chum it's wet and rainy and they still close it down from Districts 4B and C but there is really no need to. Deena Jallen from ADF&G stated that they were on a five day a week schedule in the fall but if Pelkola thought they should open it up more, to give the office a call. She also mentioned there was a BOF proposal to open up Districts 5A, B and C to subsistence fishing that Pelkola might wish to initiate for District 4. Gervais stated that managers should minimize catch-and-release for Chinook Salmon with beach seines and dipnets. Jallen mentioned some new requirements in place to minimize mortality in the fishwheel basket. Collins asked if anyone was doing a timing study on the runs so that they could determine the impacts during the fishing periods. Maschmann replied that the run is pretty mixed throughout the season but there are three to four main pulses of Chinook Salmon that pass by.

Kanuti National Wildlife Refuge – Tina Moran, Acting Refuge Manager reported for Kanuti. She stated that Joanna Fox was selected as the new Refuge Manager. Moran stated the refuge was hoping to do a full waterfowl survey and an elodea (invasive weed) survey due to transporters and others landing on the lakes. There should be a moose survey this fall, especially with snow concerns. Reakoff asked if there were more hunters seen outside the Controlled Use Area (CUA) than previous years. Brandon Bosche, the LE said there was more sporthunting on the south fork of the Koyukuk and more aircraft on Bonanza Creek. He expects to see even more this season. Reakoff reported hearing about a significant number of hunters flying over the refuge this year through Allakaket. Moran said the refuge has three transporters and one air taxi permitted to transport hunters onto the refuge and it will likely be the same this season. Moran stated that they are working with TCC again on the Henshaw Weir project but did not have the science camp last summer due to both flooding and the lack of staff.

Regional Office Apology – Migratory Birds

Vince Mathews, Refuge Subsistence Specialist shared an apology letter from the USFWS Alaska Regional Office and ADF&G regarding migratory bird management. Due to commercial hunting, spring hunting was prohibited starting in 1918 with the Migratory Bird Treaty Act. This closure was done without any regard for the indigenous people and the impacts to a crucial spring bird hunt, including egg gathering, forcing many people to hunt illegally. The letter asks Alaska's indigenous people for forgiveness and a continuation of the healing journey.

Koyukuk, Nowitna, Innoko National Wildlife Refuges

Bob Rebarchik, Deputy Refuge Manager informed the Council that Keaton Moos, current Refuge Manager, is leaving shortly to take the deputy position at Togiak National Wildlife Refuge in Dillingham. Rebarchik will be acting until a replacement is found. The refuge has been able to hire a GS-9 Park Ranger in McGrath. Her name is Kellie Peirce. The refuge plans to hire another RIT in Galena and was supposed to get a LE officer but lost the individual to another position. The refuge received applications for five new guides in the Koyukuk, Nowitna and Innoko refuges. Rebarchik mentioned that the refuge supports an earlier hunt in 21D as the animals are in better condition than for a March hunt. He mentioned that up to 30 permits were available but only 11 have been issued.

A refuge employee is working on the migratory bird calendar judging this week and will be supporting spring school events. The refuge is also collaborating with the University of Alaska Fairbanks on an extended ice thickness study. They are gathering both local knowledge and taking measurements to understand what is happening with the global warming process. Kriska and Reakoff mentioned that there were a lot of dead moose under the snow that would show up during breakup.

Kriska brought up the subject of a moose taken along the river where a trooper took the meat because he said the moose was taken illegally below the high water mark. Kriska said there was a lot of confusion over what determines a high water mark. Rebarchik remarked on the reasoning behind giving this hunt to the State; namely because of the checkerboard nature of land ownership in the area. Bosch remarked that the term mean high water can be very subjective depending on where you view the flood level and vegetation.

As a result of this discussion on high water mark, the Council decided to submit a proposal to the Federal Subsistence Board to delineate a definitive and usable definition for a high water mark. The definition should read that a high water mark will be delineated for hunting and fishing regulations as that area with the presence of grass, willows or other vegetation. Pelkola moved to submit the proposal, seconded by Kriska and carried unanimously.

March 27, 2019

Call to order at 9am.

Kuskokwim River Intertribal Fish Commission (Commission)

Dr. Jim Simon, Anthropologist, stated that the Commission is a consortium of 33 Federally-recognized Tribes along the Kuskokwim River who cooperatively manage the river's Chinook Salmon stocks. The Commission has four in-season managers that value both traditional knowledge and Western science for managing Chinook Salmon. Dr. Simon said the escapement goal for the Commission is 110k Chinook Salmon which is higher than the ADF&G escapement goal for the Kuskokwim. The Commission supports 110k escapement due to the declining fish size, the quality of the escapement and the feedback received from headwater Tribes. He went on to explain how traditional knowledge is used to predict run timing. The Commission will continue to hold Monday morning teleconferences starting at 10:00 a.m. throughout the Chinook Salmon fishing season in order for residents to call in and share their concerns and hear the latest information. This is a people, not agenda, driven effort. There are videos of Commission testimony on June 20th before the U.S. Senate Indian Affairs Committee as well as the Senate Commerce Committee chaired by Senator Sullivan that contain a lot of good information. Dr. Simon also mentioned that the Commission is the lead on the Takotna River weir and a partner on the Kwethluk weir.

Gervais asked what the position of the Commission was on FSA19-02. Dr. Simon responded that the Commission works with the issues contained in FSA19-02 but gives deference to the many Tribes and does not try to dictate what member Tribes do. Collins remarked that he would start calling into some of

the Monday morning teleconferences to share information. Dr. Simon concluded that while people were much happier with the harvest in 2018 it's very far from meeting the subsistence needs. Deatherage was asked to send the Council members the information on the teleconferences as well as the links to the videos.

Bureau of Land Management

Central Yukon Resource Management Plan (CYRMP)

Chel Ethun, Environmental Planner, shared an update on the CYRMP, letting the Council know that the BLM was still working on the draft Environmental Impact Statement (EIS) and had recently completed a review for the range of alternatives. Ethun stated there were some new standards set out per Secretarial Order 3355 streamlining the National Environmental Policy Act (NEPA) and requiring review with the Department of the Interior before each critical step is taken in the plan. As of now, the BLM hopes to release the EIS for comment by late June or early July. Ethun acknowledged that this was a difficult time due to the subsistence activities taking place during the summer months. The BLM does plan to set up meetings in affected communities starting in early May. Ethun also stated that the Council's request for an annotated bibliography of the subsistence data used would be fulfilled in the draft EIS. Reakoff expressed concerns over the comment period ending prior to the Council's meeting in October. He remarked that the inability of the Council to make pertinent comments on the CYRMP does not adhere to Title VII or 810 because it has a significant impact on subsistence users. Ethun responded that comment period extensions have been requested but denied.

Reakoff entertained a motion to dispatch a letter to the BLM State Director Chad Padgett stating that the timeline is not adequate for the Federally-recognized Western Interior Alaska Subsistence Regional Advisory Council's ability to make pertinent comments on this resource management plan. Pelkola moved to dispatch the letter, seconded by Kriska and carried unanimously. A request was also made to send a copy of the letter the Board so they could convey these concerns to the Secretary of the Interior.

Ethun provided community output notes stating that Allakaket and Ruby had been actively involved, and there were plans to travel to Huslia and Koyukuk next week. There has been a request for government to government consultation, including from Venetie. As First Chief of Galena, Pelkola requested that BLM reach out to that community.

Ambler Road EIS and the Anaktuvuk Pass Snow Trail Permit

Bill Hedman, Assistant Field Manager for lands and realty reported that BLM was the lead agency for these projects. BLM is working on the Ambler Road EIS with the Environmental Protection Agency, NPS, Army Corp of Engineers, the villages of Allakaket and Alatna and the Northwest Arctic Borough. Hedman outlined the four alternatives and stated there will be workshops to look at potential impacts from road development and mining activities. Reakoff inquired about the preliminary target release date of July or August with a 45 day comment period. He stated that neither the Council nor the SRC would have time to address the issues. Gervais moved to add the Ambler Road timeline to the BLM State Director letter with the same concerns including the SRC. Seconded by Kriska and carried unanimously. Gervais inquired about how significant the impact needed to be to select a no action alternative. Hedman explained the decision was up to the State Director and/or Department of the Interior, but that the intent of the process was to gather as much information as possible. Ethun clarified that the current EIS was not for the construction of the road but rather for the Right of Way. Hedman clarified that the State of Alaska, NPS and Army Corp of Engineers would all be using this EIS for their permitting. Simon Sr. reiterated his opposition to the road based on increased traffic and impacts on subsistence hunting and fishing, including spills into prime spawning areas.

Hedman informed the Council that the BLM issued a five year Right of Way to the North Slope Borough

to have construction crews create a winter snow trail from the vicinity of Galbraith Lake to Anaktuvuk Pass. The route is approximately 100 miles of which 27 miles are on BLM-administered land. Caravans would be escorted across the snow trail. Due to overflow and other conditions, there is uncertainty as to whether a trail will go in this year. The Bettles road also was not put in due to wet snow and overflow. Reakoff stated there was no snow at Galbraith Lake this year and that overflow would be a chronic problem.

Simon Sr. inquired as to whether Federal highway funds will be used for the Ambler Road because it would require opening it up to the public. Reakoff reiterated the importance of extending the comment period so the Council and public can submit mitigations in comments. The Haul Road (Dalton Highway) was going to be closed to the public but had to be opened because of Federal dollars. PJ Simon spoke as past Chief of the Allakaket Tribal Council which has been involved with the Ambler Road process since the beginning. There have been communication issues in the past where the Department of Transportation and others haven't communicated with the Tribes because "it's not your land". The issues with the Ambler Road are access to subsistence resources like Dall's sheep, and the Alatna and Henshaw River spawning areas. There are concerns about lower wildlife populations which won't recover regardless of habitat. There is also concern about noise pollution affecting the caribou and sheep. Miners coming in will create more hunting pressure, as well as fugitive dust and invasive species. The Village of Allakaket has worked well with the guiding and air taxi industries but this road is something new. PJ Simon concluded that the communities would need to ask themselves if they wanted to provide an economic future or maintain a traditional way of life for their children. Kriska remarked that the history of hunting on the Koyukuk is concerning and regulating the road will not happen. The road would be a disaster to the people and their livelihoods. PJ Simon stated that a 45-day comment period is too short for the Tribes. A lot of the elders do not understand the big language and need to voice their concerns through the Tribal councils. PJ Simon concluded that Alternative C of the EIS goes through the Ray Mountains towards Hughes. PJ Simon believes that in 1986 Congress made Lake Todatoten a special interest area of 37,000 acres. There is supposed to be an annual meeting with two representatives from Tanana, Huslia, Hughes, Allakaket, Koyukuk and Evansville. Any activity that goes through that area must go through this standing board.

Bering Sea Western Interior Resource Monitoring Plan (BSWI)

Bonnie Million, Field Manager for the BLM's Anchorage Field office discussed the BSWI plan and stated that the Draft EIS was currently out for a 90-day comment period, beginning March 15th and ending June 13th. Million shared the history of the plan and stated that for each of the community meetings there will be an ANILCA Section 810 hearing due to the impacts on subsistence. Million pointed out the different documents available for the Council's review, including maps. She explained that the USFWS, State of Alaska and Native Village of Chuathbaluk were cooperating agencies. Reakoff stated that the Council would be restricted on providing pertinent comments to this plan due to its timing. Pelkola moved to add the BSWI timeline issue to the letter to the BLM State Director. Seconded by Kriska and carried unanimously.

Gervais inquired about the new streamlining and Million explained it came through Secretarial Order 3355 which stipulated that NEPA documents be shortened and that plans would be completed in a one year timeframe. Gervais moved to send a letter to the Board to rescind or reevaluate Secretarial Order 3355 as it is not meeting our regional requirement for public comment. Reakoff remarked that Secretarial Order 3355 violated the statutory requirement of ANILCA to allow a public forum giving Subsistence Regional Advisory Councils the ability to comment within a reasonable period of time on matters relating to subsistence. Pelkola seconded the motion. Collins remarked that the comment period was difficult due to summer subsistence activities. He explained that Secretarial Order 3355 may work for Tribes in the lower 48 that don't have the same harvest schedule as Alaska and that there should be a distinction. Ethun remarked that Secretarial Order 3355 may have some benefits but that it was silent on specific

Alaska laws, restrictions and requirements. Motion carried unanimously.

Million shared the three action alternatives for BSWI and explained that alternative C is the agency's preferred alternative. The preferred alternative is not the final decision and can be amended or grouped with portions of other alternatives if needed. Million encouraged the Council to feel free to comment on any good points from Alternatives B or D if they felt they would be beneficial.

Donlin Mine

Million explained that the Donlin Mine Right of Way NEPA project by the BLM was complete. There will, however, be a cumulative effects section in the BSWI Draft EIS so the Donlin Mine will be a part of that analysis.

Yukon River Drainage Fisheries Association (YRDFA)

Wayne Jenkins, Director, explained that YRDFA has been working with the Pew Charitable Trust and TCC to assist Tribes with participation in the BSWI and CY resource monitoring plans. Many Tribes have responded with nominations for Areas of Critical Environmental Concern (ACEC), citing traditional use on these lands. Many of the ACECs were rejected so Tribes are requesting cooperative agency status with the BLM. Jenkins explained that the BLM has not adequately responded which has resulted in meetings with the Senior Advisor of Alaska from the Department of the Interior. Jenkins explained that the BLM is understaffed, underfunded and unsupported for working with the Tribes. Jenkins stated that the Tribes were particularly concerned with Alternative C of the BSWI which eliminates decades-old protections under ANSCA 19 (d) (1) on 13.4 million acres of land, eliminates 1.6 million acres of ACECs and denies protections for 9.6 million acres nominated for protection by the Tribes. YRDFA will continue to analyze the draft EIS for BSWI and provide comments. Jenkins agreed with Council member concerns that the timing of this planning effort during critical summer months for subsistence was disrespectful. Honea inquired as to whether communities in the GASH area were given the opportunity to nominate ACECs, and Jenkins responded that they were.

Jenkins then briefed the Council on YRDFA projects in partnership with Tribes from the region, including the in-season teleconferences on fisheries and in-season harvest surveys, both funded under the FRMP program. YRDFA is also conducting in-season harvest interviews with the communities of Alakanuk, Mountain Village, Marshall, Tanana, Russian Mission, Anvik, Huslia, Ruby, Fort Yukon and Eagle. There is also another FRMP project occurring for traditional knowledge of anadromous fish in the Yukon Flats area of the upper Yukon River.

USFWS

Yukon Delta NWR.

Aaron Moses shared his new title as a Subsistence Specialist and the work that is being done to revive the refuge's outreach and education programs. Moses also shared information on "rice breast", a condition where birds have rice-like formations inside making them unpalatable. Moses spoke about a ptarmigan study with ADF&G. Reakoff commented on raven predation impacts on not just ptarmigan but also waterfowl. Moses shared that the Kwethluk weir was going to be run entirely by the Village of Kwethluk with local hiring. Moses also noted the continued work between the refuge and the Kuskokwim Management Salmon Working Group. The run size is predicted at 140k so there should be about 30k Chinook Salmon available for harvest. Moses responded to an inquiry by Gervais regarding Federalization of the river and the authority of the InterTribal Fish Commission to open and close fishing. Gervais inquired about the seabird mortality events in the Gulf of Alaska and how these events were preceded by an 80% drop in the cod population. Moses stated he would provide a report on seabird mortality to Deatherage to distribute to the Council. Reakoff expressed appreciation to Moses for attending the meeting.

NPS

Marcy Okada, Subsistence Coordinator and Kyle Joly, Biologist (telephonic) provided a summary update on Gates of the Arctic National Park (GAAR). The GAAR SRC held its last meeting November 13-14th in Fairbanks, focusing on the Ambler Mining District Road and research projects on human development and environmental change impacts to traditional harvest practices. The next SRC meeting is scheduled for April 16-17 in Anaktuvuk Pass. Simon and Reakoff will be in attendance. The brown bear disease assessment report is complete and shows low indications of exposure to bacterial and viral diseases including canine parvovirus and distemper. Kriska inquired about any wolf studies and Joly responded there hasn't been a study since 1990. Wolves in GAAR have experienced follicular dysplasia where they lose their guard hairs and appear fuzzy. There are also reports of lice. Okada stated there is a Dall's sheep study exploring the impacts of weather and adverse weather events on populations. Okada has a copy of the study available by request. A Dall's sheep survey was conducted between July 2-7 covering areas around Anaktuvuk Pass and the Itkillik Preserve. Estimates are stable, including ewe/lamb ratios except in the Itkillik Preserve where they are potentially low. The 2020 sheep survey will include all of GAAR. Reakoff inquired about snow conditions and scheduling changes, particularly surveying the south slope due to the deep snow.

Okada reported on the NPS environmental and economic analysis (EEA) for the Ambler Mining District Road. This analysis will include impacts to caribou, fish, subsistence, permafrost, hydrology, wetlands, archeology, visitor experience, wildlife and scenic rivers and water quality. Based on testimony at this meeting from PJ Simon, Okada will also take back concerns regarding fugitive dust, invasive species and noise pollution. Okada explained that the EEA would be open for public comment sometime in July for a 60-day period. Reakoff reiterated the Council's opposition to a summer comment period. Gervais moved to include a letter similar to the BLM comment period letter to the NPS State Director. Seconded by Pelkola and carried unanimously (Honea absent). The Council wished to include the same concerns that were included in the BLM letter.

Gervais inquired as to why the NPS could not put forth a no action alternative for the north and south route of the Ambler Road, forcing developers to use non-parklands. Reakoff responded that ANILCA requires the NPS to have route access through the Preserve area. Okada concluded that the Alaska Industrial Development and Export Authority right-of-way application states access to the road would be controlled and primarily limited to mining related uses, though so commercial uses could be approved via permit. Reakoff stated if there is \$1 of Federal funding, it could be open to all types of uses.

Reakoff shared his concerns with Joly regarding the limitations of forage studies for caribou. Joly responded that most studies occur in the winter because they are easier to access. More information, however, on summer forage by the Forty-mile herd is being gathered. Joly remarked that forage studies conducted during the summer months do reveal that caribou are still eating lichen but at a much lower percentage of their diet. During summer months caribou switch to willows, and other forbes and grananodes. Joly stated that a new biologist named Matt Cameron is working on a project to look at factors driving where caribou calve, including the abundance of forage.

Simon thanked GAAR for the sheep study and Reakoff stated that sheep were an important subsistence animal in the north region.

Alaska Department of Fish and Game (ADF&G)

Glenn Stout, Biologist and Sarah Longsum, Assistant Area Biologist gave fish and wildlife updates. Stout discussed the Unit 21D March moose hunt which was set up in response to a rapidly increasing moose population on the Kaiyuh Flats. Sixteen hunters participated with a harvest of seven moose. ADF&G conducted a moose survey in Unit 21D western Galena sub area which produced comparable results to the

2011 survey with the exception of the bull/cow ratio which was lower. Permits for the Koyukuk Controlled Use Area were reduced to 25. A write-up on the Koyukuk Management Area wolf predation control program is nearing completion. The analysis will look at both the biological and harvest responses. The deadline for State BOG proposals is May 1. The State is also looking at issues along the Dalton Highway Corridor Management Area which has a myriad of regulations due to various land ownership issues. The BOG added language to include trapping along the Haul Road Corridor as long as it doesn't conflict with the State statute.

Longsum reported on the Unit 21D wolf survey. The minimum wolf count for 8,752 square miles (about 75% of the unit) is 96 wolves, similar to previous surveys. Conditions were fair due to the persistent snow.

Semaken inquired about bison in the Innoko region but Stout was unable to provide information. He stated that Tim Seaton was the bison researcher for that area. Kriska remarked on the high number of dead and dying moose due to the deep snow. Stout remarked that large fires and the previous four mild winters contributed to the growing moose population. Locals say there is a decline in black bears though the reason is unknown. There are also a lot of wolf harvests by locals. Kriska remarked that heavy snows, rain on snow events and low berry years could have contributed to the lack of bears. Gervais asked to submit a proposal to the BOG to change the dates of the winter hunt from March to December 1-15. Reakoff clarified to have an emergency order to open up the hunt in December, and if needed again in March for both the Federal and State hunts.

Gervais moved to modify the BOG proposal to adjust the language for the Kaiyuh moose hunt with a 15 day season in December followed by a 15 day season in March if the quota has not been met. Seconded by Pelkola. Stout clarified for Collins that taking cows with calves was currently prohibited. Council members stated that the demand for moose meat was higher in December, justifying an earlier winter hunt for those who were unable to harvest a moose in the fall. Rebarchik stated that the refuge was putting forth a proposal to mirror the State's current regulation. Stout clarified the area as "that portion of Unit 21D south of the south bank of the Yukon River downstream of the upriver entrance of Kelly Slough and west of Kelly Creek. Motion carried with one nay.

Reakoff then stated that the Council needs to submit a Federal proposal identical to the BOG proposal. Moved by Gervais, seconded by Honea and carried unanimously. Honea thanked Stout and Longsum for working with the communities and providing important information.

Office of Subsistence Management

Greg Risdahl, the new Fisheries Supervisor for OSM provided a staffing update. Gene Peltola the Assistant Regional Director (ARD) left OSM in July to become the Regional Director for the Bureau of Indian Affairs in Alaska. Peltola will now be a voting member of the Board. Tom Doolittle has been the Acting ARD. The position announcement closed on March 22nd. Reakoff recommended that the selection be heavily weighted towards subsistence experience. Pelkola moved to submit a letter to the Board to stress the importance of the ARD leadership position and that the candidate has subsistence experience in Alaska. The motion was seconded by Semaken. Reakoff added a concern regarding the timing of correspondence and was frustrated with the lengthy review process. The motion carried unanimously.

Risdahl continued by announcing the departure of Carl Johnson from Council Coordination and the addition of Hannah Voorhees to the Anthropology division. Voorhees will handle the Western Interior and Seward Peninsula Councils. Several vacancies are in the process of being announced.

Deatherage announced that Chairman Reakoff had been nominated for the USFWS Partners in Excellence Award.

Fisheries, FRMP and Partners

Pippa Kenner, Anthropologist gave an update on the fisheries programs. Due to the lapse in government funding and rescheduling of the Board meeting, the new fisheries regulations will not go into effect until after the Board takes action at their April meeting. After approval, they will need to be announced in the Federal Register which could take one or more months. Therefore, the Board will implement a series of special actions to cover approved changes in fisheries regulations so that they are in place prior to the upcoming season.

Kenner informed the Council that the notice of funding opportunity for the Partners in Fisheries Program during the 2020-2023 cycle had recently closed. A total of 14 proposals were received from prospective partners and the review committee to evaluate the proposals has met. Notification letters to awardees will be sent out shortly. Kenner then discussed the Fisheries Resource Monitoring Program (FRMP). She stated that proponents were encouraged to meet the Priority Information Needs stipulated by the Regional Councils. It is anticipated that there will be 1.5 million available for the first year of the new projects. The Technical Review Committee will assess the proposals and that review will be presented to the Council at the fall, 2019 meeting.

Reakoff mentioned that he would be unable to attend the April 2019 Federal Subsistence Board meeting but has asked member Gervais to attend on his behalf. The Council provided a vote of confidence for Gervais' participation.

Future Meeting Dates

The Council confirmed October 8-9, 2019 for its fall meeting in McGrath.

The Council selected February 11-12, 2020 for its winter meeting in Fairbanks.

Closing Comments.

Collins stated it was a productive meeting. He would like to have an alternate finish out his term but will serve if that is not possible. Collins thanked the agencies for a good job on salmon management, particularly the closures. Collins concluded by congratulating Reakoff on a well-deserved nomination. Honea commented on Collins' service and also how he missed Dennis Thomas. In Galena, Honea and Thomas had the opportunity to stay together at the B&B and he got to know him well. Honea thanked staff for offering to bring him in a day earlier to meetings due to weather. Gervais thanked Collins and Honea for participating via teleconference. He also thanked Collins for all his work on the Kuskokwim River issues and looks forward to seeing him in the fall in McGrath. Gervais spoke again about the impacts of big projects in Alaska on the lifestyle, particularly in an area as remote as Western Interior. Simon thanked Reakoff for running the meeting and Deatherage for setting it up. Simon is sorry that the Council lost Thomas and hopes to see another representative from that area. Pelkola thanked Collins for his service and Honea for participating via phone. Pelkola also thanked Deatherage, the staff and Hile. Pelkola mentioned she would like to see more women serve on the Council because they have different perspectives. Semaken said he had a lot of homework to do but as very appreciative of having the meeting in Fairbanks where the expertise was available to help the Council with their decisions. Reakoff shared his appreciation for Semaken's participation. Kriska thanked the Council, staff, Deatherage and Hile as well as all the agency representatives who shared important information. Kriska also thanked Collins for all the work he has done and for sitting on the teleconference for so long. Kriska also thanked Reakoff for his leadership and Simon for sitting on the Western Arctic Caribou Herd working group again. Reakoff thanked staff, the NPS, ADF&G, USFWS, OSM. He stated that Deatherage was doing a great job for the Council. Reakoff also appreciates the new staff coming on board, including Risdahl, and looks forward to the leadership and cohesion from a new ARD. Reakoff thanked Honea and Collins for participating via phone, and emphasized his appreciation for Hile and her long time work for the Council.

Reakoff mentioned he was disappointed in the lack of participation by Shirley Clark and hoped that a good representative would come from that area to serve on the Council.

Adjourn

Pelkola moved to adjourn, seconded by Thomas and carried.

####

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

Karen Deatherage, Designated Federal Official, OSM

Date

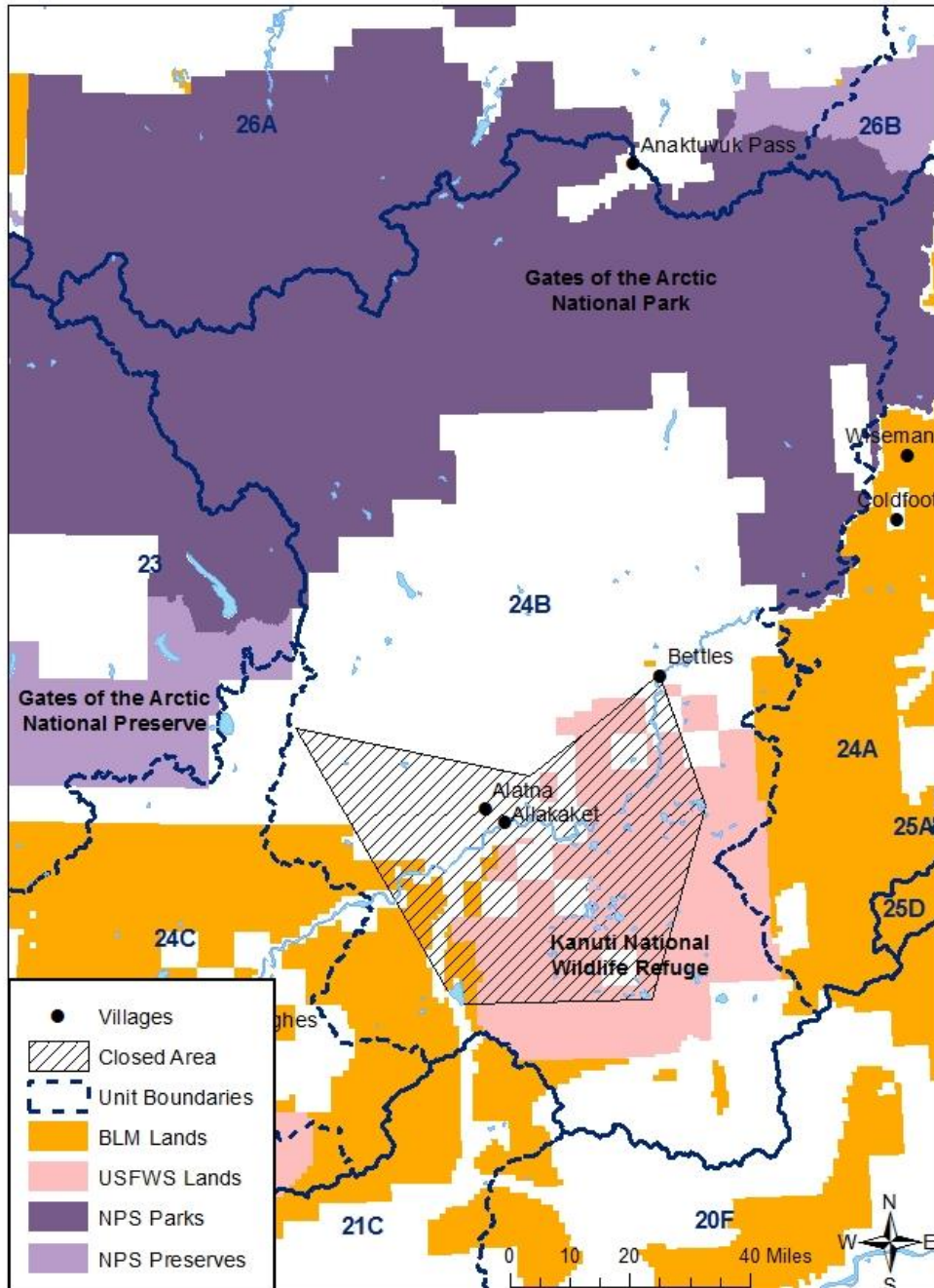
Jack Reakoff, Chair

Date

These minutes will be formally considered by the Western Interior Alaska Subsistence Regional Advisory Council at its fall 2019 public meeting, and any corrections or notations will be incorporated in the minutes of that meeting.

FEDERAL WILDLIFE CLOSURE REVIEW
WCR20-20

Closure Location: Unit 24B remainder, Kanuti Controlled Use Area (**Map 1**) — Moose



Map 1. Federal hunt area closure for moose in Unit 24B remainder, Kanuti Controlled Use Area.

Current Federal Regulation

Unit 24–Moose

Unit 24B, remainder—1 bull by State harvest ticket Aug. 25-Oct. 1.

OR

1 antlered bull by State registration permit Dec. 15-Apr. 15.

Federal public lands in the Kanuti Controlled Use Area, as described in Federal regulations, are closed to taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations

Closure Dates: Year-round

Current State Regulation

Unit 24B–Moose

Residents - One bull HT Sept. 1-Sept. 25

OR

Residents - One antlered bull by permit available online at <http://hunt.alaska.gov> or in person in Hughes, Allakaket, and Fairbanks beginning Dec. 6 RM833 Dec. 15-Apr. 15

Nonresidents – One bull with 50-inch antlers with 4 or more brow tines on at least one side HT Sept. 5-Sept. 25

Regulatory Year Initiated: 1992

Regulatory History

The Kanuti Controlled Use Area (CUA) was created in 1979 under State regulations to address user conflicts and biological concerns and is important in maintaining reasonable opportunity for subsistence uses of moose (ADF&G 2010). In 1990, the Kanuti CUA was adopted into Federal subsistence regulations from State regulations and was part of Unit 24 remainder. The season was Aug. 25-Sept. 25 with a harvest limit of one bull. The Kanuti CUA consists of that portion of Unit 24 bounded by a line from the Bettles Field VOR to the east side of Fish Creek Lake; to Old Dummy Lake; to the south end of Lake Todatonten (including all water of these lakes); to the northernmost headwaters of Siruk Creek; to the highest peak of Double Point Mountain; and then back to the Bettles Field VOR. The Kanuti CUA is

closed during moose hunting seasons to the use of aircraft for hunting moose, including transportation of any moose hunter or moose part.

In 1992, the Tanana Chiefs Conference submitted Proposal P92-115, requesting the Kanuti CUA be closed to moose hunting except by residents of Alatna, Allakaket, Bettles, Evansville, and Hughes because subsistence needs were not being met. The Federal Subsistence Board (Board) adopted Proposal P92-115 with modification, closing the Kanuti CUA to moose hunting except by Federally qualified subsistence users to provide opportunity to all users with a customary and traditional use determination (C&T) for moose in Unit 24. Additionally, harvest met or exceeded the estimated harvestable surplus, recommending limiting harvest to conserve the moose population (FSB 1992).

In 2006, the Board adopted Proposal WP06-34 to change the closing date of the moose season in Unit 24 remainder from Sept. 25 to Oct. 1 and to require a Federal registration permit during the extended Federal season of Sept. 26-Oct. 1. An extended season provided additional opportunity, and survey data indicated the Unit 24 remainder moose population could sustain a modest increase in harvest. The Board also adopted Proposal WP06-36 to divide Unit 24 into four subunits to maintain consistency with State regulations, which subdivided Unit 24 to improve manageability. The Kanuti CUA became part of Unit 24B remainder.

Between 2007 and 2010, the Board approved several special action requests (WSA06-08, WSA07-09, WSA07-10, WSA09-15) for extensions or establishments of winter seasons in Unit 24B because of extreme cold weather and unmet subsistence needs.

In 2010, the Board adopted Proposal WP10-67 with modification to establish Kanuti National Wildlife Refuge (NWR) and BLM lands as a separate hunt area, specify the harvest limit as one antlered bull to discourage inadvertent cow harvest, and add a winter season of Dec. 15-Apr. 15 to provide additional opportunity in an area with low harvest success rates. The Board also stipulated the winter season would sunset on June 30, 2014.

Also in 2010, the Alaska Board of Game (BOG) adopted Proposal 94, which reduced the size of the Kanuti CUA under State regulations to accommodate access to a private cabin. As a result, the boundary of the State CUA has been out of alignment with the Federal CUA boundary since 2010.

In 2012, the Board adopted Proposal WP12-57 to redefine the hunt areas in Unit 24B to reduce user confusion by aligning State and Federal hunt area boundaries (although State and Federal boundaries of the Kanuti CUA were still out of alignment). The Kanuti CUA became part of two hunt areas: Unit 24B, all drainages of the Koyukuk River downstream from and including the Henshaw Creek drainage and Unit 24B remainder. The Henshaw Creek hunt area had a winter season (Dec. 15-Apr. 15) whereas Unit 24B remainder did not. The Board also adopted Proposal WP12-58 with modification to clarify permit requirements by requiring one Federal registration permit for both fall and winter seasons.

In 2014, the Board adopted Proposal WP14-29, making the Dec. 15-Apr. 15 season indefinite to provide additional opportunity. No impacts to the moose population had been observed since the winter season was established in 2010.

In 2016, the Board adopted Proposal WP16-42, establishing a winter season upstream of the Henshaw Creek drainage to provide additional opportunity. This resulted in the Henshaw Creek hunt area and Unit 24B remainder being collapsed into one hunt area, meaning all of the Kanuti CUA was part of Unit 24B remainder again.

In 2018, the Board adopted Proposal WP18-35 to remove “antlered” from the harvest limit for the fall season and to require a State harvest ticket and State registration permit for the fall and winter seasons in Unit 24B remainder, respectively. This eliminated the Federal registration permit requirement, aligning State and Federal reporting requirements.

The Kanuti CUA is comprised of 56% Federal public lands and consist of 49% U.S. Fish and Wildlife Service (USFWS) managed lands and 7% Bureau of Land Management (BLM) managed lands (**Map 1**).

Closure last reviewed: 2012 – WCR12-20

Justification for Original Closure:

In 1992, the Board closed the Kanuti CUA to moose hunting except by Federally qualified subsistence users via adoption of Proposal P92-115 with modification. As harvest met or exceeded the estimated harvestable surplus, the Board supported the closure to conserve the moose population and to provide continued opportunity for all users with C&T for moose in Unit 24.

Section §815(3) of ANILCA states:

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

Council Recommendation for Original Closure:

The Federal Subsistence Regional Advisory Councils were not yet established in 1992. However, the Interior Regional Council took no action on the original closure (Proposal P92-115) due to lack of input from the Koyukuk River Fish and Game Advisory Committee (FSB 1992).

State Recommendation for Original Closure:

The State opposed the original closure, stating the Kanuti CUA already restricted non-local use by prohibiting aircraft. Additionally, the State commented that local residents harvested the majority of moose in the Kanuti CUA, unlike other parts of Unit 24 where non-local harvest was greater (FSB 1992).

Biological Background

The Koyukuk River Moose Hunters’ Working Group in cooperation with the Alaska Department of Fish and Game (ADF&G) developed the Koyukuk River Moose Management Plan (Management Plan) in 2001 to guide moose management in the Koyukuk River drainage in response to concerns about overharvest (ADF&G 2001). The Management Plan made many regulatory recommendations to

conserve the Koyukuk River drainage moose population that were adopted by the BOG and the Board. Goals of the Management Plan include managing the moose population on a sustained yield basis, protecting and enhancing moose habitat, and managing predation on moose (ADF&G 2001). ADF&G has the additional population objectives of 10,000-12,000 moose for all of Unit 24 and 4,000-4,500 moose for Unit 24B, specifically (Stout 2018).

ADF&G, BLM, and the USFWS cooperatively conduct aerial moose surveys in Kanuti NWR during November to estimate moose abundance and composition. Since 1999, the survey methodology (Geospatial Population Estimator technique) and area (Kanuti NWR) has remained the same, allowing direct comparisons between surveys (Julianus and Longson 2018).

Between 1989 and 2017, the moose population in Kanuti NWR ranged from 551 moose to 2,010 moose (**Figure 1**) (Stout 2014, 2018, Julianus and Longson 2018). The highest estimate was in 1993 and cannot be directly compared to later surveys due to changes in survey methodology. Poor survey conditions and low sample size may have influenced the lowest estimate in 2013 (Stout 2014). Since 1999, the highest population estimate was 1,311 moose in 2017. However, population models indicate no trend in the data, suggesting the Kanuti NWR moose population has been stable since 1999 (Julianus and Longson 2018).

Moose density estimates parallel moose population estimates. Between 1989 and 2017, the moose density in Kanuti NWR ranged from a high of 0.76 moose/mi² in 1993 to a low of 0.20 moose/mi² in 2013 (Stout 2014, 2018, Julianus and Longson 2018). Since 1999, the highest density estimate was 0.48 moose/mi² in 2017. These density estimates are typical of Interior Alaska moose populations that are limited by predation and indicate the Kanuti NWR moose population persists at a low-density dynamic equilibrium (Julianus and Longson 2018). Habitat limitations also affect moose densities in the Kanuti CUA. Moose densities in the upper Koyukuk drainage (north of Hughes) are significantly less than densities in the lower Koyukuk drainage where broad areas of riparian habitat are found (ADF&G 2001).

In low density moose populations, a ratio of 30-40 bulls:100 cows may be necessary to ensure adequate breeding as cows are sparsely distributed (ADF&G 2001). Between 1989 and 2017, bull:cow ratios ranged from 51 bulls:100 cows in 2010 to 75 bulls:100 cows in 2017 (**Figure 2**) (Stout 2014, 2018, Julianus and Longson 2018). These high bull:cow ratios indicate sufficient numbers for breeding and that bulls are not being overharvested.

Fall calf:cow ratios of < 20 calves:100 cows, 20-30 calves:100 cows, and > 30-40 calves:100 cows indicate declining, stable, and growing moose populations, respectively (ADF&G 2001). Between 1989 and 2017, fall calf:cow ratios in Kanuti NWR ranged from 17 calves:100 cows in 1989 to 58 calves:100 cows in 2008 (**Figure 2**) (Stout 2014, 2018, Julianus and Longson 2018). Since 2004, calf:cow ratios have exceeded 30 calves:100 cows in all years surveyed and 40 calves:100 cows in 7 out of 9 years surveyed. These high calf:cow ratios suggest adequate productivity for population growth.

Predation by wolves and bears in Unit 24B is likely limiting growth of the moose population (ADF&G 2001, Stout 2014, 2018). The Management Plan lists black bear predation on calves and wolf predation on all moose as significant mortality factors (ADF&G 2001). During Board discussion on Proposal P92-115, 100 moose were estimated to be predated by wolves from the Kanuti CUA each year, decreasing the harvestable surplus from 156 moose/year to 56 moose/year (FSB 1992). While the Kanuti NWR moose population has been statistically stable since 1999, the observed population increase in 2017 may be

partially due to reduction in wolf numbers (Julianus and Longson 2018). From 2012-2018, ADF&G conducted wolf control in Unit 24B, including along the western boundary of Kanuti NWR (ADF&G 2018a, Julianus and Longson 2018). Mild winters since 2009 may also have enhanced overwinter calf survival, increasing recruitment and contributing to population increases (Julianus and Longson 2018).

At the 2019 winter meeting of the Western Interior Alaska Subsistence Regional Advisory Council (Council), the Council Chair stated that 2018/19 was a very high snow year, raising concerns for this moose population. Deep snow increases moose mortality and has negative effects on moose production, survival and recruitment (WIRAC 2019).

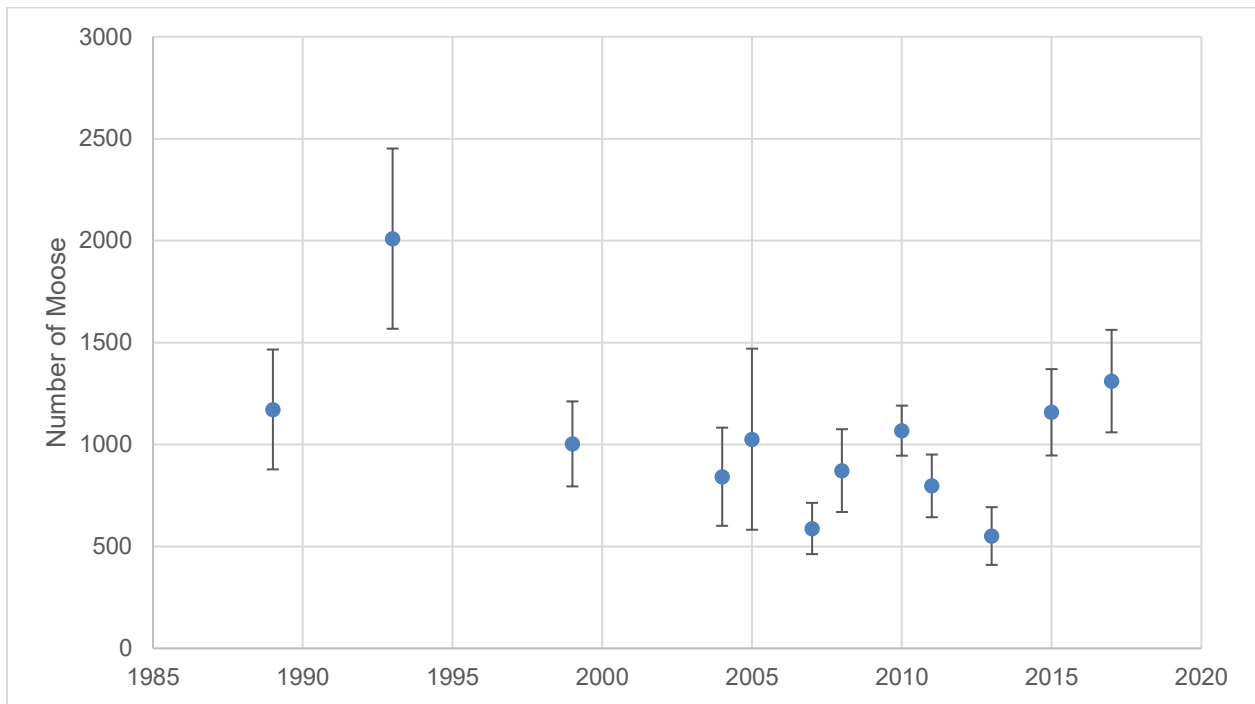


Figure 1. Population estimates for moose in Kanuti National Wildlife Refuge (Stout 2014, 2018, Julianus and Longson 2018).

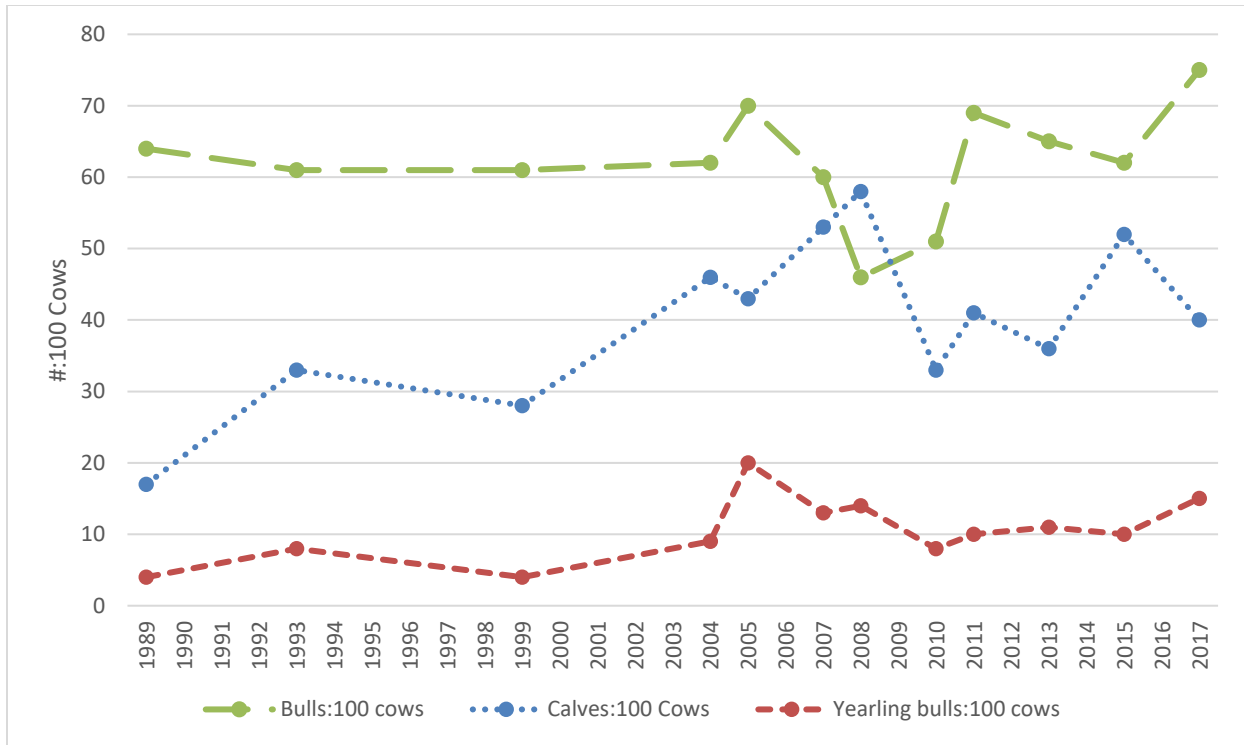


Figure 2. Bull:cow, calf:cow, and yearling bull:cow ratios for Kanuti National Wildlife Refuge (Stout 2014, 2018, Julianus and Longson 2018).

Harvest History

The Management Plan prescribes a maximum annual harvest rate of 5% for the Kanuti CUA moose population (ADF&G 2001). The Management Plan considers this a conservative harvest rate that is necessary due to significant mortality from predation. Given the 2017 population estimate for Kanuti NWR (1,311 moose), the 2017 harvestable surplus for Kanuti NWR was 65 moose.

As Federal public lands in the Kanuti CUA are closed to non-Federally qualified users, all moose harvest occurs under Federal regulations by Federally qualified subsistence users. Users with C&T for moose in the Kanuti CUA include residents of Unit 24, Galena, and Koyukuk. However, the primary harvesters are from Allakaket, Alatna, Bettles, and Evansville (FSB 1992).

In 1992, when the Board closed the Kanuti CUA to moose harvest by non-Federally qualified users, an estimated 50-75 moose were being harvested from the CUA by both subsistence and sport hunters each year, although annual reported harvest was 30 moose. ADF&G and Kanuti NWR staff recommended harvest from the CUA not exceed 50 moose per year (FSB 1992). A representative from the Tanana Chiefs Conference (the proposal’s proponent) testified that harvest pressure on moose was increasing because local people were depending more on moose to meet their subsistence needs given declines in caribou abundance. The Chair of the Interior Regional Council testified that subsistence needs in Allakaket and Alatna were not being met. The ADF&G representative testified that unlike other portions of Unit 24, most of the harvest from the Kanuti CUA was by local residents because of aircraft restrictions (FSB 1992).

Between 2006 (when Unit 24 was divided into subunits) and 2017, moose harvest by Federal registration permit in Unit 24B totaled 14 moose, ranging from 0-2 moose reported harvested per year (OSM 2018). Over the same time period, a total of 71 Federal permits were issued, ranging from 2-14 permits per year (**Figure 3**) (OSM 2018).

Also between 2006 and 2017, annual reported moose harvest under State regulations in Unit 24B ranged from 23 - 49 moose and averaged 34.5 moose (**Figure 4**) (ADF&G 2018b). Non-local hunters accounted for the majority of the reported moose harvest in Unit 24B. Federally qualified subsistence users (those with C&T) only accounted for 28% of the reported moose harvest on average (ADF&G 2018b). Since the closure of the Kanuti CUA in 1992, reported moose harvest, moose hunters, and harvest success rates under State regulations in Unit 24B have all trended downward (**Table 1**) (ADF&G 2018b). Over 95% of reported harvests occur in September (Stout 2018).

Illegal and unreported moose harvest in Unit 24 is significant and hampers management (Stout 2014). Between 2006 and 2015, ADF&G has estimated unreported moose harvest for all of Unit 24 as 135-144 moose per year and that 60-70% of unreported harvests are cows (Stout 2014, 2018). Using community household survey data between 1997 and 2002, Stout (2018) estimated unreported harvest rates for non-local hunters and local residents of Unit 24 as 17.7% and 76%, respectively. Much of the unreported harvest likely occurs between Oct. and Mar. These data are based on intermittent household surveys, historical information, and public interviews (Stout 2014, 2018).

Between 1997 and 2011, annual moose harvest by the communities primarily responsible for moose harvest within the Kanuti CUA (Alatna, Allakaket, Bettles, and Evansville) ranged from 26-55 moose/year according to household survey data and from 3-10 moose/year according to State harvest reports (**Table 2**) (ADF&G 2018b, 2018c). This corresponds to unreported harvest rates of 81%-92% (**Table 2**). The number of moose actually harvested from the Kanuti CUA is unknown. The household survey data does not specify area and the State harvest reports are for all of Unit 24B.

At the 2019 winter Council meeting, the Council Chair stated that recent moose harvest in Allakaket and Alatna has been fairly low. The Koyukuk River Advisory Committee reported that only nine moose had been killed in these communities during the 2018 fall season, one in the Koyukuk CUA and eight locally (WIRAC 2019). Additionally, moose started moving later in the fall due to warmer weather, resulting in local hunters spending a lot of time and fuel searching for moose (WIRAC 2019).

Table 1. Averages of reported harvest, number of hunters, and harvest success rates for moose in Unit 24B according to State harvest reports (ADF&G 2018b).

Years	Moose Harvest	Moose Hunters	Success Rate (%)
1987-1991	59.6	116.2	51.5
1992-2004	45.2	108.4	41.5
2005-2017	34.5	98.0	35.5
1992-2017	39.8	103.2	38.5

Table 2. Community household survey and reported moose harvests (ADF&G 2018b, 2018c, OSM 2019).

	Alatna	Allakaket	Bettles	Evansville	Household Survey Total	Reported Harvest Total	% Unreported
1997	9	43	0	3	55	7	87.3
1998	5	37	7	4	53	10	81.1
1999	6	37	2	2	47	8	83.0
2001	6	35	no data	no data	41	6	85.4
2002	12	35	0	0	47	4	91.5
2011	4	19	2	1	26	6*	76.9

*includes 3 moose reported by Federal permit. (No Federal permit hunts existed before 2006)

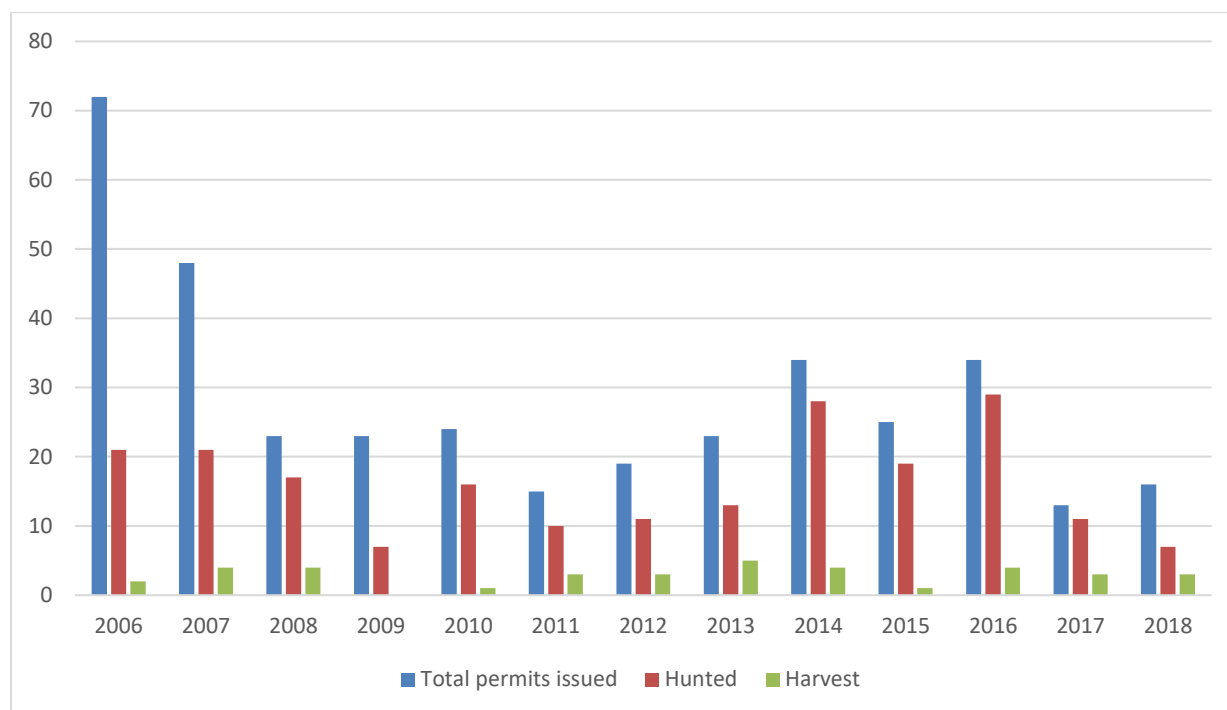


Figure 3. Number of permits issued, hunters attempting harvest, and moose reported harvested for the Federal registration permit moose hunts (FM2401-FM2404) in Unit 24B (OSM 2019). The vast majority of Federal permit holders (95%) lived in Allakaket or Alatna. The remaining 5% of permit holders lived in Bettles.

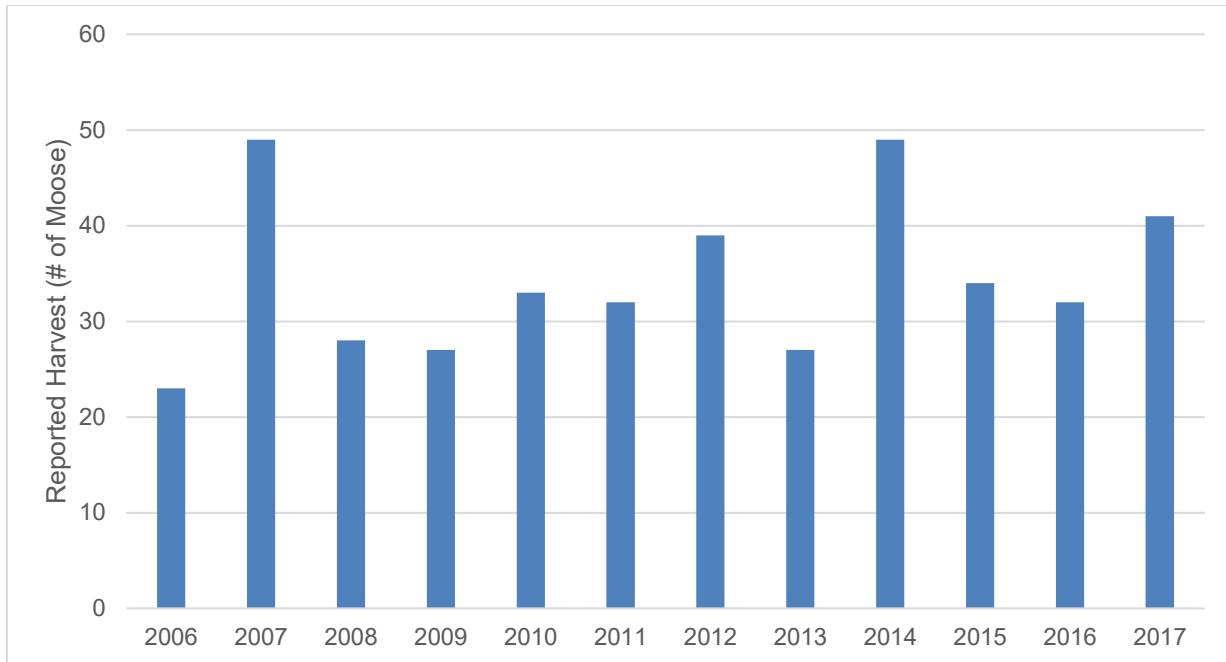


Figure 4. Reported moose harvested under State regulations in Unit 24B (ADF&G 2018b).

OSM Preliminary Conclusion:

- maintain status quo**
- modify or eliminate the closure**

Justification

The Kanuti CUA was closed for biological and continuation of subsistence uses reasons. Biologically, the closure no longer seems warranted, primarily due to very high bull:cow ratios. Consistently high bull:cow ratios suggest there are surplus bulls available for harvest and only bulls can be legally harvested in Unit 24B. While the Kanuti CUA moose population has remained statistically stable since the closure was initiated in 1992, high calf:cow ratios and observed increases in the 2015 and 2017 population estimates indicate the moose population may be growing. Moreover, harvest of mature bulls in a population with high bull:cow ratios should not materially affect population growth.

Prior to the 1992 closure, local hunters harvested most of the moose from the Kanuti CUA due to aircraft restrictions. This contrasts with other portions of Unit 24 (pre-1992 and now) where non-local hunters harvest the majority of the moose. Since 1992, average annual reported harvest from Unit 24B has declined. This suggests opening the Kanuti CUA to non-Federally qualified users may result in only modest increases in reported moose harvests. A rural subsistence priority would be maintained by the longer Federal fall season.

However, whether or not the closure remains warranted for the continuation of subsistence uses is not clear. Extremely high unreported harvest rates and intermittent household surveys preclude accurate harvest information for Federally qualified subsistence users. Whether or not subsistence needs of Federally qualified subsistence users are being met is unknown, although high bull:cow ratios indicate bulls are available for harvest.

A conservative approach would be to recommend opening the Kanuti CUA for a limited time (e.g. 2-4 years) to evaluate any changes in the moose population, bull:cow ratios, and harvest.

ANALYSIS ADDENDUM

OSM Conclusion:

- maintain status quo**
- modify or eliminate the closure**

While the closure in the Kanuti CUA may not be warranted biologically, the Western Interior Council clarified that subsistence needs are not being met in Allakaket and Alatna and that the closure is still warranted for the continuation of subsistence uses. Additionally, 2018/19 was a deep snow year, which may negatively impact the Kanuti CUA moose population.

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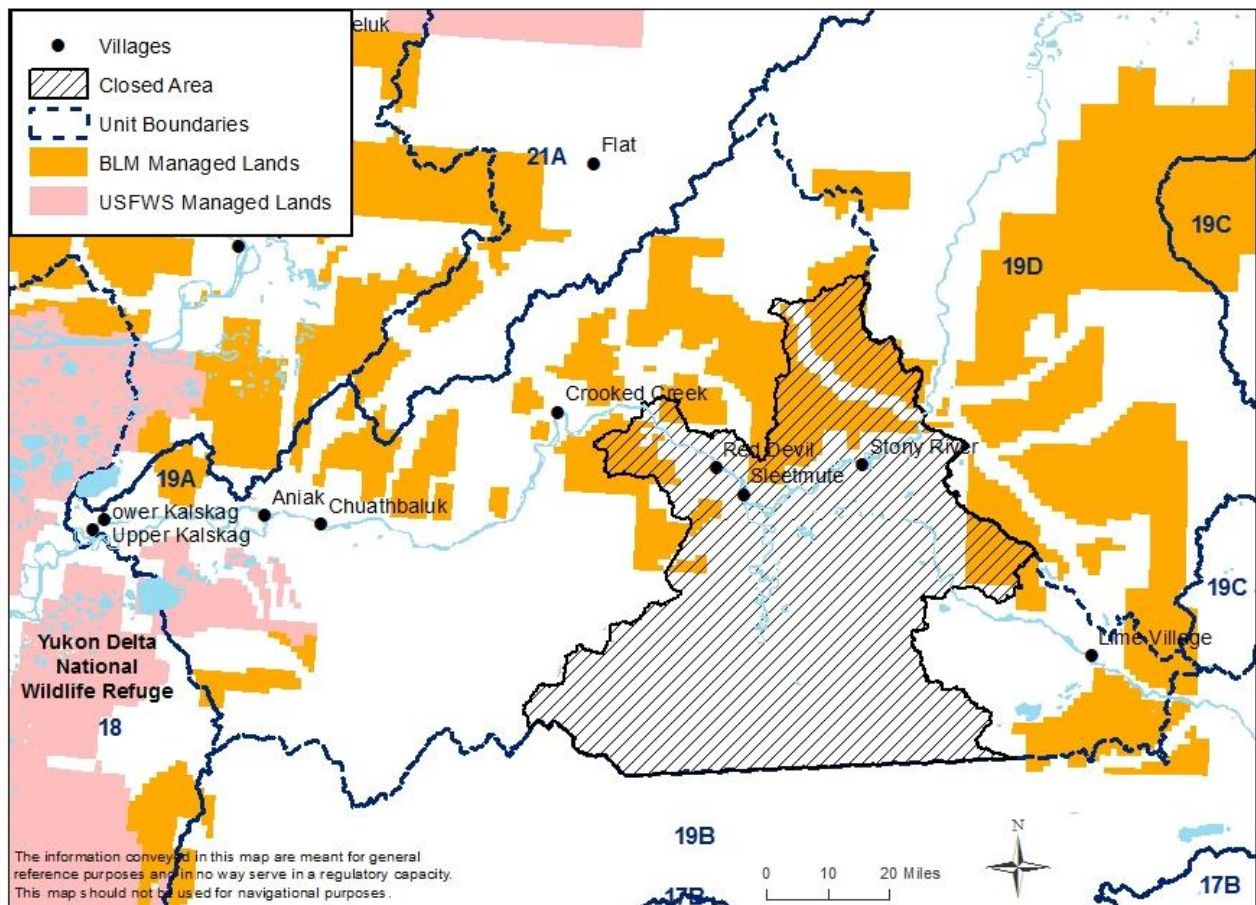
SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Western Interior Alaska Subsistence Regional Advisory Council

Maintain status quo for WCR20-20. The Council unanimously supported continuing a closure for moose hunting in Unit 24 under WCR20-20. The Council has real concerns about this population as harvest is not achieving the needs of subsistence communities. The Council is also concerned about the current high snow year and its likely negative impact on local moose populations.

FEDERAL WILDLIFE CLOSURE REVIEW WCR20-39

Closure Location: Eastern portion of Unit 19A (Map 1) – Moose



Map 1. Federal hunt area closure for moose in Unit 19A, north of the Kuskokwim River, upstream from (but excluding) the George River drainage, and south of the Kuskokwim River upstream from (and including) the Downey Creek drainage, not including the Lime Village Management Area.

Current Federal Regulation

Unit 19A–Moose

Unit 19A, north of the Kuskokwim River, upstream from (but excluding) the George River drainage, and south of the Kuskokwim River upstream from (and including) the Downey Creek drainage, not including the Lime Village Management Area. No Federal open season

Federal public lands are closed to the harvest of moose.

Closure Dates: Year round

Current State Regulation

Unit 19A–Moose

Unit 19A remainder

Residents – One antlered bull by permit available in Sleetmute and RM682 Sept. 1-Sept. 5 Stony River on July 24. Permits issued on a first-come, first-served basis (number of permits to be announced annually).

Nonresidents

No open season

Regulatory Year Initiated: 2007

Regulatory History

In 1990, Federal hunting regulations were adopted from State regulations. The moose season in Unit 19A was Sept. 1-Sept. 20, Nov. 20-Nov. 30, and Feb. 1-Feb. 10. The harvest limit was one moose, although antlerless moose could be taken only from Nov. 20-Nov. 30 and from Feb. 1-Feb. 10.

In 1992, the Federal Subsistence Board (Board) adopted Proposal P92-111 with modification to change the Unit 19A moose season to Sept. 5-Sept. 25, Jan. 1-Jan. 10, and Feb. 1-Feb. 5 to provide harvest opportunity during Russian orthodox holidays in January (FSB 1992). Antlerless moose could only be taken during the winter seasons. The Board rejected Proposal P92-66 to liberalize moose hunting regulations in several units including Unit 19A because moose densities were too low to sustain increased harvests.

In April 1994, the Board deferred Proposal P94-54 to align Unit 19A Federal harvest limits and seasons with State regulations because not all affected Subsistence Regional Advisory Councils (Councils) had considered the proposal. In November 1994, the Board adopted P94-54 with modification, aligning Unit 19A Federal moose regulations with State regulations with the exception of retaining the January season (FSB 1994). Unit 19A was divided into two hunt areas: that portion north of the Kuskokwim River upstream from, but not including the Kolmakof River drainage and south of the Kuskokwim River upstream from, but not including the Holokuk River drainage (Unit 19A east) and Unit 19A remainder. The seasons in both hunt areas were Sept. 1-Sept. 20, Nov. 20-Nov. 30, Jan. 1-Jan. 10, and Feb. 1-Feb. 10. The harvest limit in Unit 19A east was one moose, although antlerless moose could only be taken during the February season. The harvest limit in Unit 19A remainder was one bull.

In 2003, the Board adopted Proposal WP03-31 to shorten the February season in Unit 19A east to Feb. 1-Feb. 5 and eliminate the antlerless moose season because of declines in the Unit 19A moose population.

In 2004, the Board adopted Resolution 04-1 to support the Central Kuskokwim Moose Management Plan (Management Plan) (ADF&G 2004). The Board also adopted Proposal WP04-58 to eliminate the November, January, and February moose seasons in Unit 19A. Additionally, the Board adopted Proposal WP04-59 with modification to combine the Unit 19A hunt areas, require a State registration permit, and change the harvest limit to one antlered bull. These restrictions addressed severe declines in the Unit 19A moose population and complied with the Management Plan.

In 2006, the Alaska Board of Game (BOG) closed moose hunting in Unit 19A remainder (same as Federal hunt area Unit 19A east below) due to conservation concerns (OSM 2006). Subsequently, the Alaska Department of Fish and Game (ADF&G) submitted Special Action WSA06-01b to close moose hunting in Unit 19A, North of the Kuskokwim River, upstream from but excluding the George River drainage, and south of the Kuskokwim River upstream from and including the Downey Creek drainage, not including the Lime Village Management Area (Unit 19A east). (WSA06-01a requested limiting hunter numbers in Unit 19A remainder). The Board approved WSA06-01b to conserve the moose population and align with State regulations.

In 2007, the Board adopted Proposal WP07-35 with modification to close moose hunting in Unit 19A east (the modifications applied to Unit 19A remainder) because of continued conservation concerns for the Unit 19A moose population including low productivity, bull:cow ratios, and density combined with historically high hunting pressure (OSM 2007). The Western Interior Alaska Subsistence Regional Advisory Council (Western Interior Council) submitted and supported the proposal because of conservation concerns over the moose resource. The Yukon-Kuskokwim Council also supported WP07-35 for conservation reasons (OSM 2007).

Moose hunting in Unit 19A east has remained closed under Federal and State regulations since 2007. In 2008, the Board rejected Proposal WP08-35 to establish a moose season in Unit 19A east due to continued conservation concerns. The closure was reviewed in 2011 by WCR10-39 and in 2014 by WCR14-39. The Western Interior Council recommended continuing the closure during both reviews.

In March 2019, the BOG adopted Proposal 127 as amended by the Stoney-Holitna Fish and Game Advisory Committee (Stoney-Holitna AC). Proposal 127 requested opening a Tier I registration hunt for moose in Unit 19A east. (This hunt area is Unit 19A remainder under State regulations). The Stoney-Holitna AC's amendment included establishing a 5 day season from Sept. 1-5, limiting permits to 75 permits per year with only 30 permits issued in 2019/20, issuing permits only within the hunt area during July, not allowing permit holders to hold any other moose permit in the Kuskokwim River drainage, allowing only one permit per household, prohibiting proxy hunting, and requiring successful hunters to report within 15 days of harvest. Additionally, the hunt area will close if the 2-year average bull:cow ratio drops below 35 bulls:100 cows, or if the harvestable surplus drops below the lower range of the State-determined amount necessary for subsistence (ADF&G 2019). These regulations became effective July 1, 2019.

Unit 19A east is comprised of 18% Federal public lands and consist of 18% Bureau of Land Management (BLM) managed lands (**Map 1**).

Closure last reviewed: 2014 – WCR14-39

Justification for Original Closure:

§815(3) of ANILCA states:

Nothing in this title shall be construed as – (3) authorizing a restriction on the taking of fish and wildlife for nonsubsistence uses on public lands (other than national parks and monuments) unless necessary for the conservation of healthy populations of fish and wildlife, for the reasons

set forth in section 816, to continue subsistence uses of such populations, or pursuant to other applicable law...

A portion of §816(b) of ANILCA states:

The Secretary....may temporarily close any public lands (including those within any conservation unit) or any portion thereof, to subsistence uses of a particular fish and wildlife population only if necessary for the reasons of public safety, administration, or to assure the continued viability of such population.

The combination of low moose population densities, low calf production and survival, low bull:cow ratios and high hunting pressure contributed to declines in the Unit 19A moose population. In response to these conservation concerns, the Board closed moose hunting in Unit 19A east in 2007.

Council Recommendation for Original Closure:

The Yukon-Kuskokwim Delta and Western Interior Councils supported the closure to protect the moose resource for future generations.

State Recommendation for Original Closure:

The State supported the closure due to continued conservation concerns for the Unit 19A moose population. The BOG closed State managed lands in Unit 19A remainder (same as the Unit 19A east Federal hunt area) to moose hunting at its March 2006 meeting.

Biological Background

In 2004, ADF&G in cooperation with the Central Kuskokwim Moose Management Planning Committee published the Central Kuskokwim Moose Management Plan (Management Plan) (ADF&G 2004). State management objectives for the composition of the moose population in Unit 19A are the same as those in the Management Plan (Peirce 2018, ADF&G 2004):

- Maintain a minimum fall post hunt bull:cow ratio of 20-30 bulls:100 cows.
- Maintain a minimum fall post hunt calf:cow ratio of 30-40 calves:100 cows.
- Maintain no fewer than 20% calves (short-yearlings) in late winter.

ADF&G has the additional intensive management objectives for both Units 19A and 19B (Peirce 2018, Seavoy 2014):

- Achieve a moose population of 13,500-16,500 moose (7,600-9,300 in Unit 19A) with 750-950 moose available for harvest annually.

Predation by wolves, black bears, and brown bears influences moose abundance in Unit 19 and may be limiting population growth (Peirce 2018, Keech et al. 2011). ADF&G conducts intensive management in Unit 19A to reduce predation on moose. Wolf control has been ongoing in the wolf control focus area since 2006. In 2013 and 2014, black and brown bears were removed from the Bear Control Focus Area

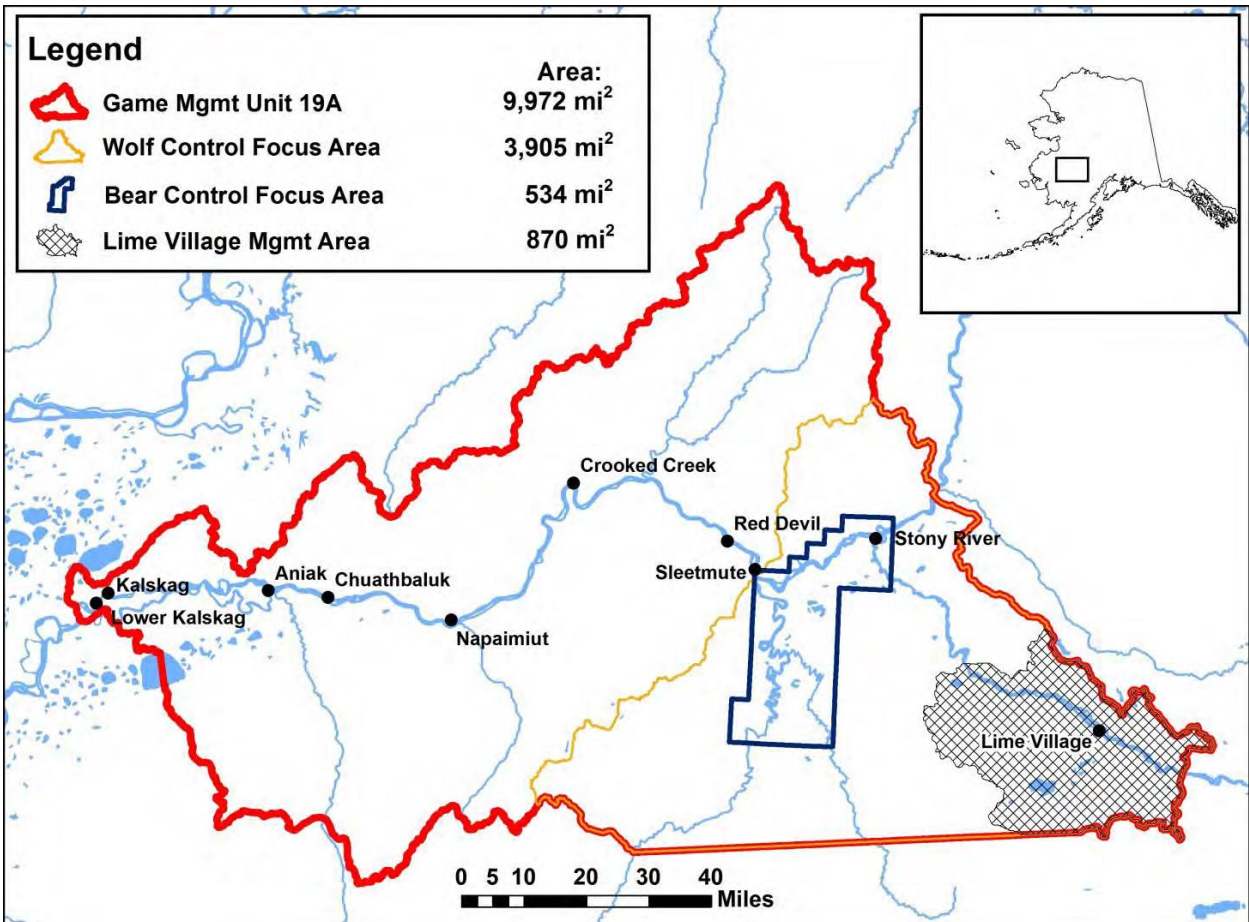
(BCFA) (**Map 2**) (Peirce 2018). ADF&G removed 89 bears (84 black and 5 brown) and 64 bears (54 black and 10 brown) in 2013 and 2014, respectively (ADF&G 2014).

ADF&G conducts aerial surveys in Unit 19A to estimate the moose population in March (**Map 3**) (Peirce 2018, Seavoy 2014). The Federal closed area, Unit 19A east, primarily falls into the Unit 19A east (Holitna) moose survey area (MSA). ADF&G surveys the Holitna MSA every three years and the Aniak MSA opportunistically (Seavoy 2014). Since 2005, the Unit 19A moose population has appeared relatively stable due to overlapping confidence intervals, but remained well below the State's management objective of 7,600 moose (**Figure 1**).

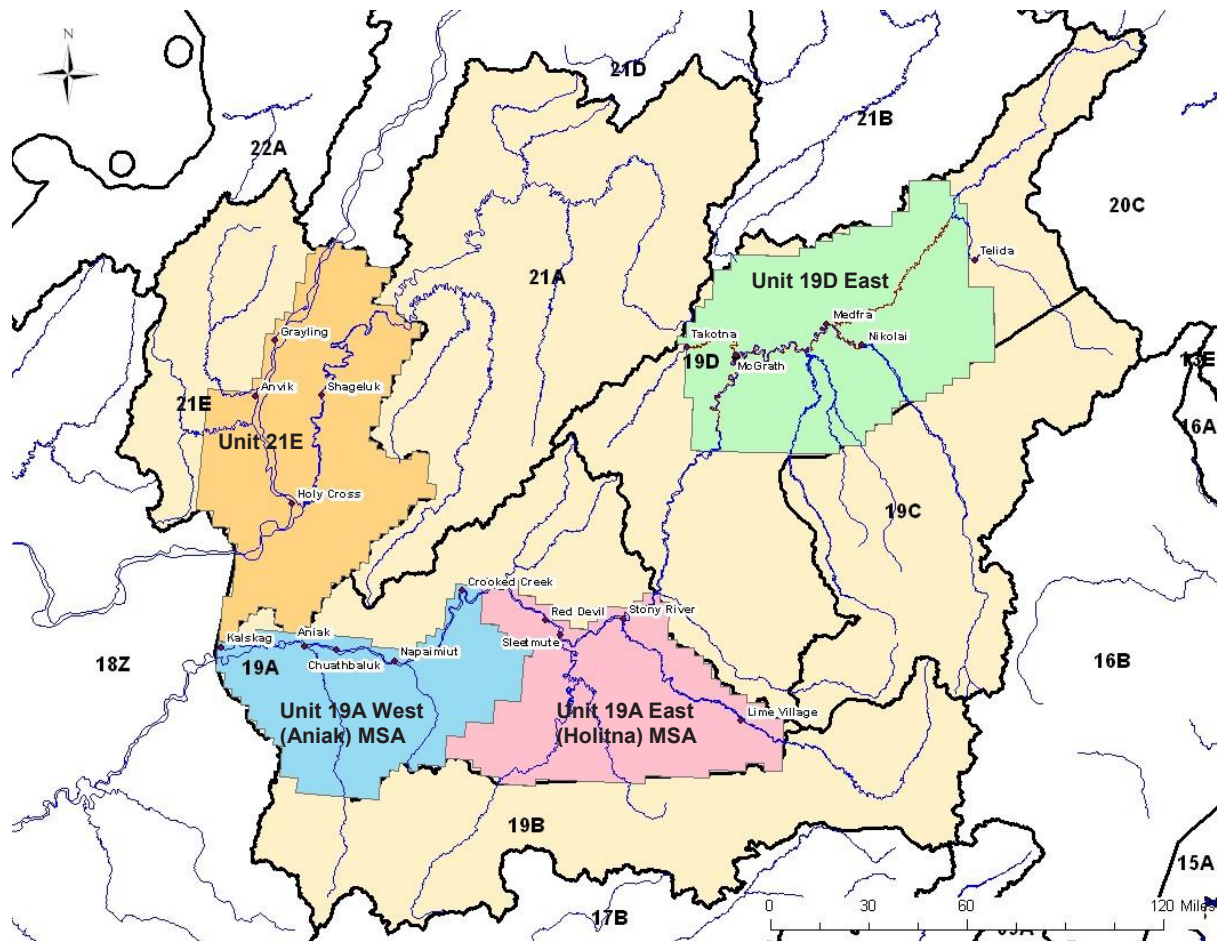
Moose densities of 0.75-0.93 moose/mi² are required to meet State population objectives (Seavoy 2014). Between 1998 and 2017, estimated moose density in Unit 19A ranged from 0.25 moose/mi² to 1.5 moose/mi² (**Table 1**). The highest densities occurred in the BCFA, which comprises only 14% of the Holitna MSA (**Maps 2-3**) (ADF&G 2018a, Peirce 2018). The BCFA estimates are not representative of the entire Holitna MSA or the Federal Unit 19A east hunt area due to the limited survey area and because bear removal likely influenced moose abundance in that area. Additionally, most radio-collared moose in Unit 19A display limited movements (Seavoy 2014).

ADF&G conducts aerial surveys to estimate the composition of the Unit 19A moose population in November (Peirce 2018). Between 1987 and 2018, the bull:cow ratio in the Holitna MSA ranged from 6 bulls:100 cows to 58 bulls:100 cows (**Figure 2**). The lowest bull:cow ratio occurred in 2001, but has exceeded management objectives since 2007. Intense hunting pressure and predation likely contributed to the low bull:cow ratio in 2001 (Boudreau 2004). Over the same time period, the calf:cow ratio in the Holitna MSA ranged from 8 calves:100 cows to 72 calves:100 cows (**Figure 2**). The lowest calf:cow ratio also occurred in 2001. Since 2011, the calf:cow ratio has been within or above management objectives (Peirce 2018, ADF&G 2018a, Seavoy 2014).

Twinning rates indicate nutritional status and habitat quality (Peirce 2018). Twinning rates in the BCFA were 56% and 63% in 2013 and 2014, respectively, suggesting habitat is not limiting the moose population in the BCFA (Peirce 2018).



Map 2. Unit 19A wolf control focus area and bear control focus area (ADF&G 2018a).



Map 3. Units 19, 21A, and 21E showing the 3 scheduled moose survey areas (MSA): Unit 19D East moose survey area, Unit 19A East (Holiitna), and Unit 21E moose survey area. Also shown is the Unit 19A West (Aniak) moose survey area which is surveyed opportunistically. The area south of the Kuskokwim River includes both the Unit 19A East (Holiitna) and Unit 19A West (Aniak) survey areas (Seavoy 2014).

Table 1. Moose density estimates in Unit 19A (moose/mi²). See Maps 2-3 for survey areas (ADF&G 2018a, Peirce 2018, Seavoy 2014, ADF&G 2004).

Year	South of Kuskokwim	Unit 19A West (Aniak)	Unit 19A East (Holiitna)	Bear Control Focus Area
1998			1.25	
2001		0.7		
2005	0.27			
2006		0.39		
2008			0.44	
2010		0.33		
2011			0.25	
2011			0.43 ^a	
2014				1.50 ^a
2017		1.3	0.52 ^a	1.36 ^a

^a Includes a sightability correction factor

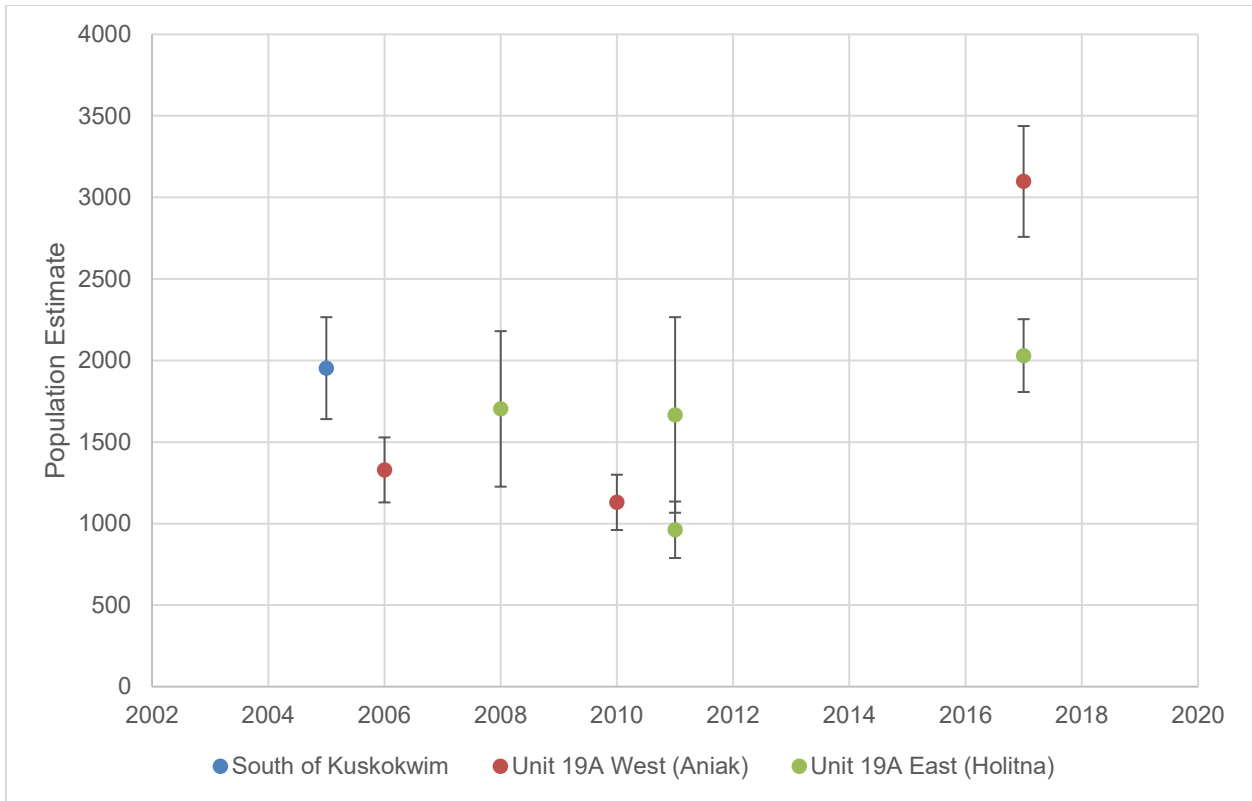


Figure 1. Population estimates for moose in Unit 19A with 90% confidence intervals. The higher estimate in 2011 and the 2017 estimate in the Unit 19A East (Holitna) survey area include sightability correction factors. See Map 3 for survey areas (ADF&G 2018a, Seavoy 2014).

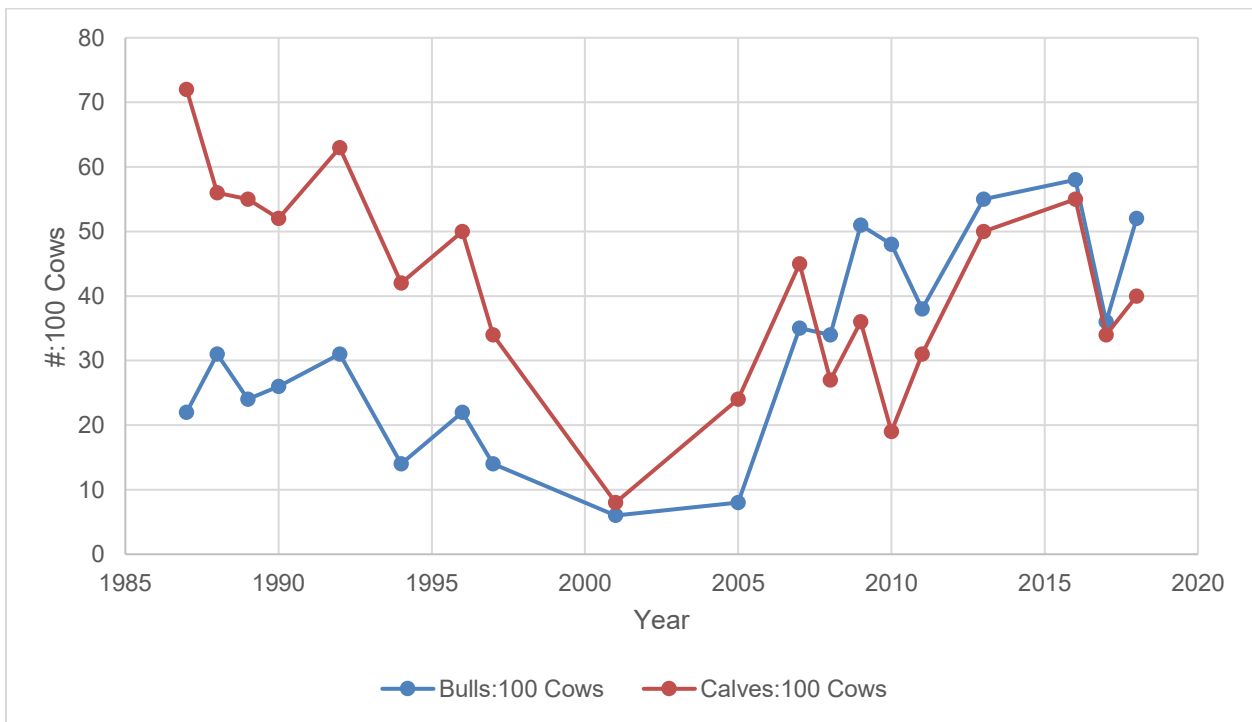


Figure 2. Fall bull:cow and calf:cow ratios for the Unit 19A East (Holitna) moose survey area (Peirce 2018, ADF&G 2018a, Seavoy 2014).

Harvest History

No legal moose harvest has occurred in Unit 19A east since 2006 when the season was closed under both Federal and State regulations. Between 1994 and 2005, reported annual moose harvest in Unit 19A ranged from 67-184 moose and averaged 127 moose (Figure 3). Over the same time period, local residents (defined as residents of Units 19A and 19B) harvested 30% of the total reported harvest on average (ADF&G 2004, 2018b). However, harvest reporting is low in many areas of rural Alaska. ADF&G (2004) estimated actual harvest in rural areas as 50-72% greater than reported harvest, resulting in an estimated 57-66 moose/year being harvested by local residents between 1994 and 2005 in Unit 19A.

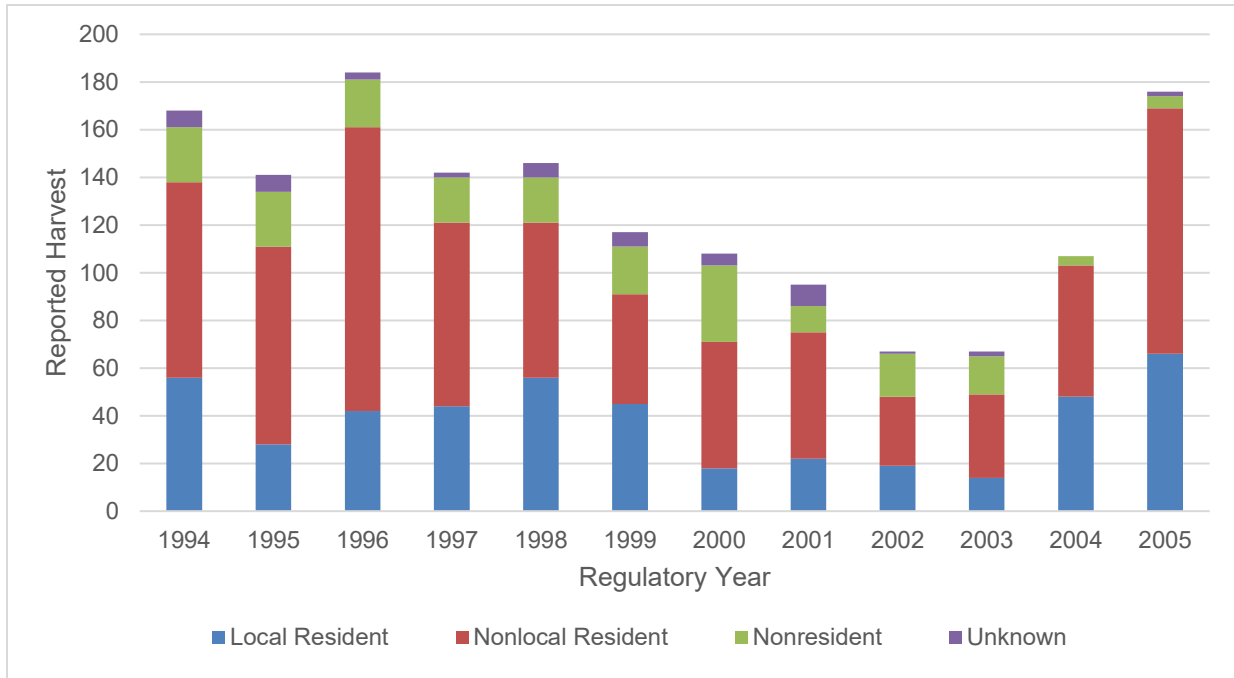


Figure 3. Reported moose harvest in Unit 19A by residency (ADF&G 2004, 2018b). Moose hunting in Unit 19A East was closed in 2006 and has remained closed under State and Federal regulations.

OSM Preliminary Conclusion:

- maintain status quo
- modify or eliminate the closure

Justification

Moose abundance in Unit 19A east has not significantly changed since the hunt area closed in 2007 because of conservation concerns. Therefore, the Federal lands closure in Unit 19A East should be retained.

ANALYSIS ADDENDUM

OSM Conclusion:

- maintain status quo
- modify or eliminate the closure

Eliminate the closure for WCR20-39 to mirror recently adopted State regulations.

The modified regulation should read:

Unit 19A–Moose

*Unit 19A, north of the Kuskokwim River, upstream from (but excluding) the George River drainage, and south of the Kuskokwim River upstream from (and including) the Downey Creek drainage, not including the Lime Village Management Area – **One antlered bull by State registration permit available in Sleetmute and Stony River on July 24. Permits issued on a first-come, first-served basis (number of permits to be announced annually).***

~~No Federal
open season~~

Sept. 1-Sept. 5

~~Federal public lands are closed to the harvest of moose.~~

Justification

The BOG recently established a limited Tier I registration hunt in Unit 19A East. At the 2019 winter meeting of the Western Interior Council, the ADF&G area biologist stated that continuing the Federal closure could have a negative effect on Federally qualified subsistence users from Red Devil, Sleetmute, and Stony River who hoped to hunt on Federal public lands during the State’s new season (WIRAC 2019). Federal public lands comprise 18% of Unit 19A East and are accessible across the Kuskokwim River from the local communities.

The ADF&G area biologist also stated the lower bull:cow ratio in 2017 was likely due to bull distribution during surveys rather than an actual change in bull abundance. Additionally, a large number of large bulls, which are important for breeding, are present in the hunt area due to years of no human harvest (WIRAC 2019). The ADF&G area biologist stated that the harvestable surplus for the Unit 19A moose population is currently 70 moose. As ADF&G will only issue 30 permits during the 2019/20 regulatory year, less than half the harvestable surplus would be used if every permit holder was successful, which is unlikely given the short season (WIRAC 2019).

Establishing a Federal hunt increases harvest opportunity for Federally qualified subsistence users and prevents Federal regulations from being more restrictive than State regulations. The State and Federal hunts are extremely conservative with a short season and limited number of permits available. Additionally, the Unit 19A moose population can sustain a limited harvest due to a sufficient number of large bulls and high bull:cow ratios. The Western Interior Council recommended a joint Federal/State permit. However, just requiring a State registration permit under Federal regulations simplifies regulations while still achieving the Council’s intent of all users hunting under a single permit.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Western Interior Alaska Subsistence Regional Advisory Council

Eliminate the closure for WCR20-39. The Council voted unanimously to eliminate the closure in Unit 19A East and to mirror recently adopted State regulations, which established a Tier I registration permit hunt in the area. The permit would be a joint Federal/State permit that is only available in local communities during July and allow the harvest of one antlered bull per household. The number of available permits will be announced annually.

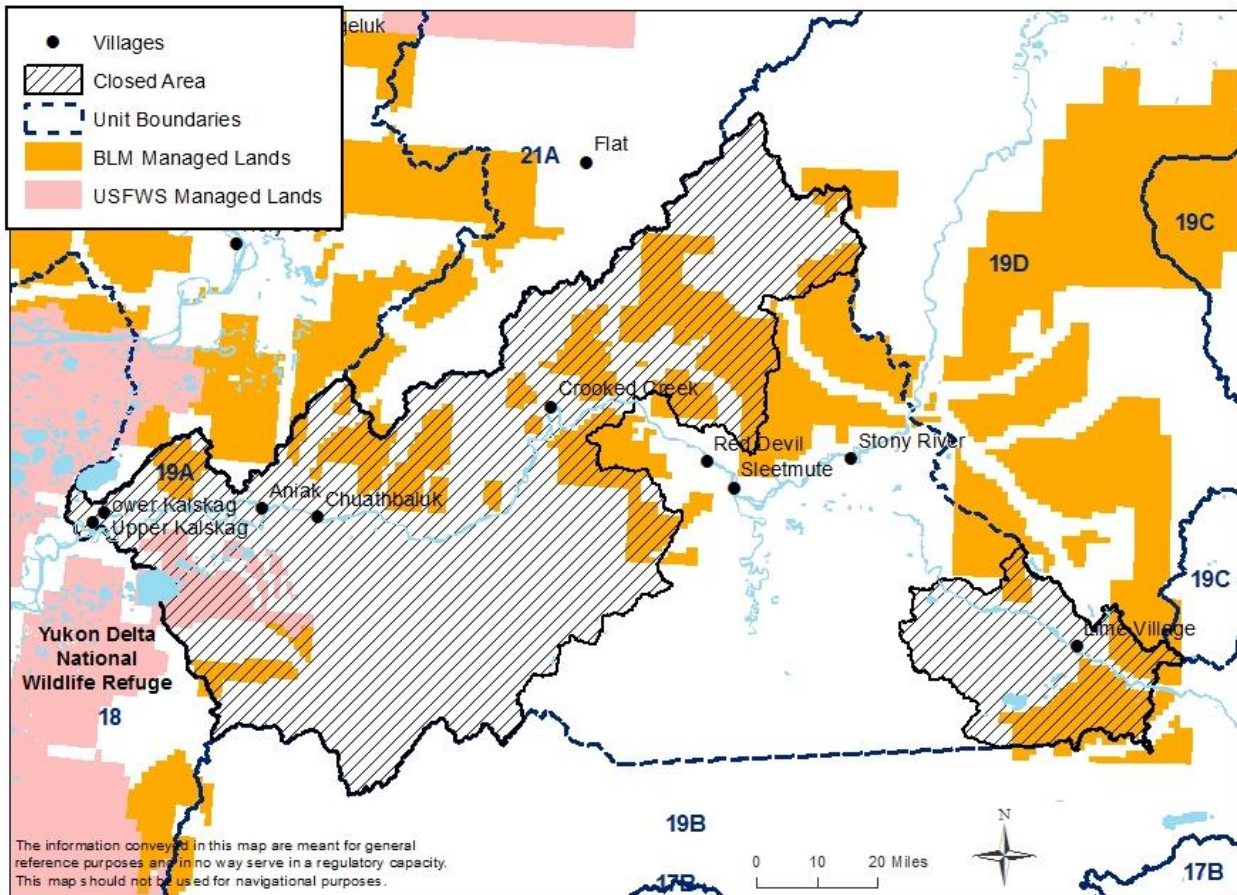
There was extensive discussion between the Council, the Office of Subsistence Management (OSM) and the Alaska Department of Fish and Game (ADF&G) regarding this closure. The Council believes the Unit 19A moose population can support a limited bull harvest due to high bull:cow ratios. The Council commented that only issuing permits in local communities gives local people the first opportunity at obtaining those permits.

Yukon Kuskokwim Delta Subsistence Regional Advisory Council

The Council voted to **defer** to the Western Interior Council. The Council noted that both the Y-K Delta and Western Interior Councils supported the original closure in 2007 as well as continuing the closure in 2014 when it was last reviewed. The Council mentioned that some Unit 18 residents do hunt in this area, and that the Council would be comfortable keeping it closed and maintaining the status quo until they heard the Western Interior Council's decision. The Council hopes to consider this closure again at its Fall 2019 meeting after hearing the Western Interior Council's recommendation.

**FEDERAL WILDLIFE CLOSURE REVIEW
WCR20-43**

Closure Location: Unit 19A remainder (**Map 1**)—Moose



Map 1. Federal hunt area closure for moose in Unit 19A remainder.

Current Federal Regulation

Unit 19A—Moose

Unit 19A, remainder—1 antlered bull by Federal drawing permit or a State permit. Sept. 1-20.

Federal public lands are closed to the taking of moose except by residents of Tuluksak, Lower Kalskag, Upper Kalskag, Aniak, Chuathbaluk, and Crooked Creek hunting under these regulations. The Refuge Manager of the Yukon Delta NWR, in cooperation with the BLM Field Office Manager, will annually establish the harvest quota and number of permits to be issued in coordination with the State Tier I hunt. If the allowable harvest level is reached before the regular season closing date, the Refuge Manager, in consultation with the BLM Field

Office Manager, will announce an early closure of Federal public lands to all moose hunting

Closure Dates: Year round

Current State Regulation

Unit 19A–Moose

*Kuskokwim River drainage downstream from, and including, One antlered bull Sept. 1- 20
the George River drainage, and downstream from and by permit
excluding the Downey Creek drainage*

Regulatory Year Initiated: 2007

Regulatory History

In 1990, Federal hunting regulations were adopted from State regulations. The moose season in Unit 19A was Sept. 1-Sept. 20, Nov. 20-Nov. 30, and Feb. 1-Feb. 10. The harvest limit was one moose, although antlerless moose could be taken only from Nov. 20-Nov. 30 and from Feb. 1-Feb. 10.

In 1992, the Federal Subsistence Board (Board) adopted Proposal P92-111 with modification to change the Unit 19A moose season to Sept. 5-Sept. 25, Jan. 1-Jan. 10, and Feb. 1-Feb. 5 to provide harvest opportunity during Russian orthodox holidays in January (FSB 1992). Antlerless moose could only be taken during the winter seasons. The Board rejected Proposal P92-66 to liberalize moose hunting regulations in several units including Unit 19A because moose densities were too low to sustain increased harvests.

In April 1994, the Board deferred Proposal P94-54 to align Unit 19A Federal harvest limits and seasons with State regulations because not all affected Subsistence Regional Advisory Councils (Councils) had considered the proposal. In November 1994, the Board adopted P94-54 with modification, aligning Unit 19A Federal moose regulations with State regulations with the exception of retaining the January season (FSB 1994). Unit 19A was divided into two hunt areas: that portion north of the Kuskokwim River upstream from, but not including the Kolmakof River drainage and south of the Kuskokwim River upstream from, but not including the Holokuk River drainage (Unit 19A east) and Unit 19A remainder. The seasons in both hunt areas were Sept. 1-Sept. 20, Nov. 20-Nov. 30, Jan. 1-Jan. 10, and Feb. 1-Feb. 10. The harvest limit in Unit 19A east was one moose, although antlerless moose could only be taken during the February season. The harvest limit in Unit 19A remainder was one bull.

In 2003, the Board adopted Proposal WP03-31 to shorten the February season in Unit 19A east to Feb. 1-Feb. 5 and eliminate the antlerless moose season because of declines in the Unit 19A moose population.

In 2004, the Board adopted Resolution 04-1 to support the Central Kuskokwim Moose Management Plan (Management Plan) (ADF&G 2004). The Board also adopted Proposal WP04-58 to eliminate the November, January, and February moose seasons in Unit 19A. Additionally, the Board adopted Proposal WP04-59 with modification to combine the Unit 19A hunt areas, require a State registration permit, and

change the harvest limit to one antlered bull. These restrictions addressed severe declines in the Unit 19A moose population and complied with the Management Plan.

In 2006, the Alaska Board of Game (BOG) established a Tier II only moose hunt in Unit 19A, Kuskokwim River drainage downstream from, and including, the George River drainage, and downstream from and excluding the Downey Creek drainage (same as the Federal Unit 19A remainder hunt area) and eliminated the registration permit hunt to conserve the moose resource (OSM 2006). Subsequently, the Alaska Department of Fish and Game (ADF&G) submitted Special Action WSA06-01a to require a permit in Unit 19A remainder that worked in concert with the State's Tier II hunt (WSA06-01b requested closing moose hunting in eastern Unit 19A). The Board approved WSA06-01a with modification, requiring a Federal drawing or State Tier II permit and closing moose hunting in Unit 19A remainder except by residents of Tuluksak, Lower Kalskag, Upper Kalskag, Aniak, Chuathbaluk, and Crooked Creek (OSM 2007). A limited harvestable surplus required a §804 analysis, which determined these six communities to be the most dependent on the Unit 19A moose population (OSM 2006).

In 2007, the Western Interior Alaska Subsistence Regional Advisory Council (Western Interior Council) submitted Proposal WP07-35, requesting the same changes as WSA16-01. The Board adopted Proposal WP07-35 with modification because of continued conservation concerns for the Unit 19A moose population including low productivity, bull:cow ratios, and density combined with historically high hunting pressure (OSM 2007). The modification was to delegate authority to the Yukon Delta National Wildlife Refuge manager to annually establish the harvest quota and number of available draw permits. The Western Interior and Yukon-Kuskokwim Councils and ADF&G supported the proposal because of conservation concerns over the moose resource (OSM 2007).

Federal regulations for moose in Unit 19A remainder have not changed since 2007. In 2008, the Assistant Regional Director for the Office of Subsistence Management (OSM), with unanimous consent of the Interagency Staff Committee, rejected WSA08-07 to extend the Unit 19A remainder moose season by 10 days, ending Sept. 30 because the request did not meet the criteria in §__.19(b) and (c) of ANILCA for accepting Special Action requests. Specifically, there was not an unusual, significant, or unanticipated change in resource abundance or hunting conditions (OSM 2008).

Unit 19A remainder is comprised of 27% Federal public lands and consist of 23% Bureau of Land Management (BLM) managed lands and 4% U.S. Fish and Wildlife Service (USFWS) managed lands (**Map 1**).

Closure last reviewed: 2007 – WP07-35

Justification for Original Closure:

§815(3) of ANILCA states:

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

The combination of low moose population densities, low calf production and survival, low bull:cow ratios and high hunting pressure contributed to declines in the Unit 19A moose population. In response to these conservation concerns, the Board closed moose hunting in Unit 19A remainder except by residents of Tuluksak, Lower Kalskag, Upper Kalskag, Aniak, Chuathbaluk, and Crooked Creek in 2007.

Council Recommendation for Original Closure:

The Yukon-Kuskokwim Delta and Western Interior Councils supported the closure to protect the moose resource for future generations.

State Recommendation for Original Closure:

The State supported the closure due to continued conservation concerns for the Unit 19A moose population and to better align with State regulations. The State established a Tier II only hunt in a portion of Unit 19A in 2006.

Biological Background

In 2004, ADF&G in cooperation with the Central Kuskokwim Moose Management Planning Committee published the Central Kuskokwim Moose Management Plan (Management Plan) (ADF&G 2004). State management objectives for the composition of the moose population in Unit 19A are the same as those in the Management Plan (Peirce 2018, ADF&G 2004):

- Maintain a minimum fall posthunt bull:cow ratio of 20-30 bulls:100 cows.
- Maintain a minimum fall posthunt calf:cow ratio of 30-40 calves:100 cows.
- Maintain no fewer than 20% calves (short-yearlings) in late winter.

ADF&G has the additional intensive management objectives for both Units 19A and 19B (Peirce 2018, Seavoy 2014):

- Achieve a moose population of 13,500-16,500 moose (7,600-9,300 in Unit 19A) with 750-950 moose available for harvest annually.

ADF&G conducts aerial surveys in Unit 19A to estimate the moose population in March (**Map 2**) (Peirce 2018, Seavoy 2014). The Federal closed area, Unit 19A remainder, primarily falls into the Unit 19A West (Aniak) moose survey area (MSA). ADF&G only surveys the Aniak MSA opportunistically, but surveys eastern Unit 19A every 3 years (**Map 2**) (Seavoy 2014). While the moose population in the Unit 19A West (Aniak) MSA appeared relatively stable between 2006 and 2010, it increased significantly in 2017 (**Figure 1**). ADF&G also surveyed the entire Unit 19A West hunt area (TM680) for the first time in 2017, estimating 4,135 moose (Peirce 2018, pers. comm.). ADF&G plans to conduct another population survey in winter 2020 and anticipates the Unit 19A West population to continue increasing based on the excellent status of adjacent Unit 18 moose populations (WIRAC 2019).

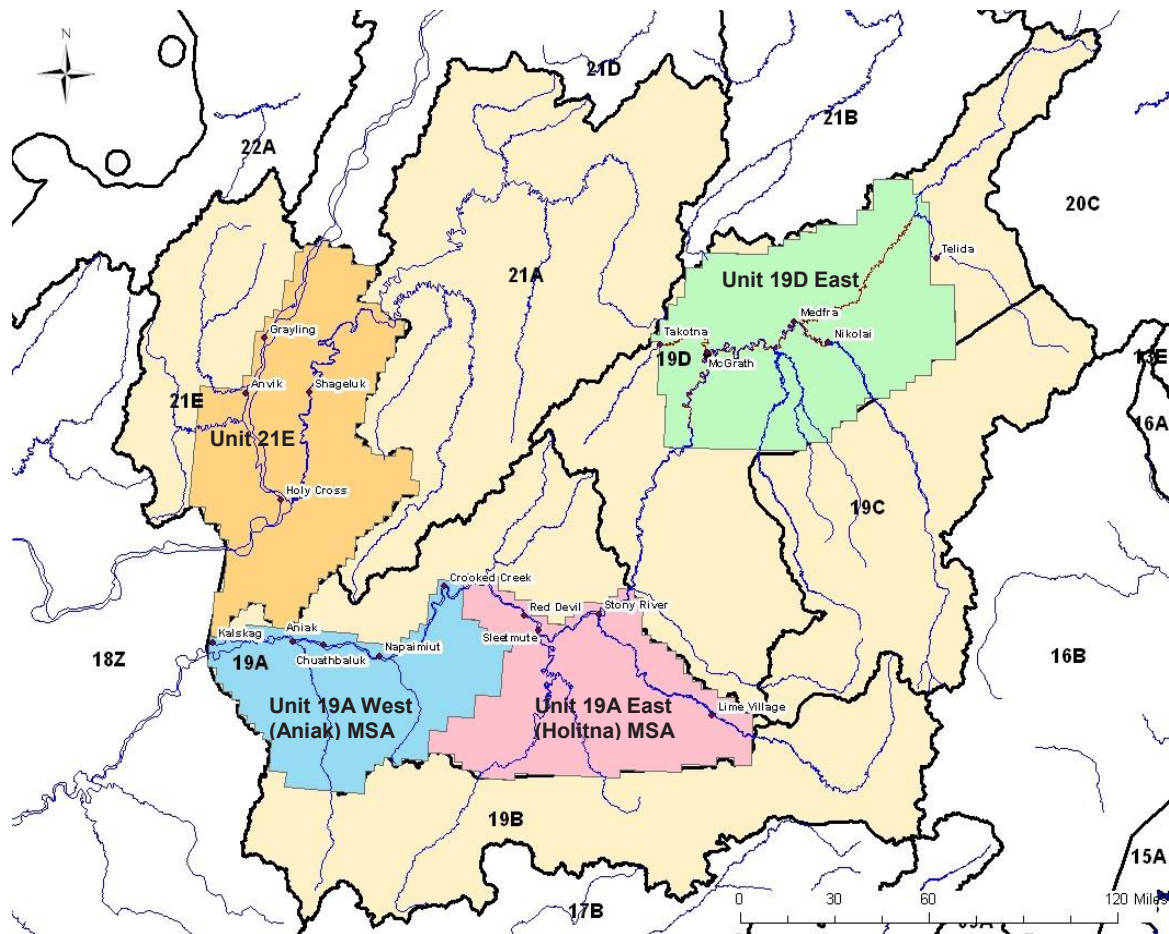
Moose densities of 0.75-0.93 moose/mi² are required to meet State population objectives (Seavoy 2014). Between 1998 and 2017, estimated moose density in Unit 19A ranged from 0.25 moose/mi² to 1.3 moose/mi² (**Table 1**) (ADF&G 2018a, Peirce 2018, Seavoy 2014, ADF&G 2004, Peirce 2018, pers. comm.). While the 2017 density estimate for the Unit 19A West (Aniak) MSA of 1.3 moose/mi² is the highest ever recorded for this area and is well above State population objectives, the 2017 density

estimate for the entire Unit 19A West hunt area is only 0.7 moose/mi², which is just below State management objectives (**Table 1**).

ADF&G conducts aerial surveys to estimate the composition of the Unit 19A moose population in November (Peirce 2018). Between 1987 and 2018, the bull:cow ratio in Unit 19A ranged from 6 bulls:100 cows to 58 bulls:100 cows (**Figure 2**). Between 2004 and 2018, the bull:cow ratio in the Aniak MSA ranged from 20 bulls:100 cows to 42 bulls:100 cows. The lowest bull:cow ratio occurred in 2001, but has met or exceeded management objectives since 2007. However, the 2017 bull:cow ratio in the Aniak MSA just met management objectives (20 bulls:100 cows). While the 2018 bull:cow ratio increased to 26 bull:100 cows, the number of large bulls in the population is fairly low (WIRAC 2019). Intense hunting pressure and predation likely contributed to the low bull:cow ratio in 2001 (Boudreau 2004).

Between 1987 and 2017, the calf:cow ratio in Unit 19A ranged from 8 calves:100 cows to 72 calves:100 cows (**Figure 3**) (Peirce 2018, Seavoy 2014). Between 2004 and 2017, the calf:cow ratio in the Aniak MSA ranged from 23 calves:100 cows to 64 calves:100 cows. The lowest calf:cow ratio also occurred in 2001. Since 2011, the calf:cow ratio has been within or above management objectives. The 2017 calf:cow ratio in the Aniak MSA is the highest ever recorded (Peirce 2018, pers. comm.).

Predation by wolves, black bears, and brown bears influences moose abundance in Unit 19 and may be limiting population growth (Peirce 2018, Keech et al. 2011). ADF&G conducts intensive management in Unit 19A to reduce predation on moose. However, management activities only occur in eastern Unit 19A, although the Lime Village Management Area is included in the wolf control focus area (ADF&G 2018a).



Map 2. Units 19, 21A, and 21E showing the 3 scheduled moose survey areas (MSA): Unit 19D East moose survey area, Unit 19A East (Holitna), and Unit 21E moose survey area. Also shown is the Unit 19A West (Aniak) moose survey area which is surveyed opportunistically. The area south of the Kuskokwim River includes both the Unit 19A East (Holitna) and Unit 19A West (Aniak) survey areas (figure from Seavoy 2014).

Table 1. Moose density estimates in Unit 19A (moose/mi²). See Map 2 for survey areas. The TM680 State hunt area is similar to the Federal Unit 19A remainder hunt area, but does not include the Lime Village Management Area (ADF&G 2018a, Peirce 2018, Seavoy 2014, ADF&G 2004, Peirce 2018, pers. comm.).

Year	South of Kuskokwim River	Unit 19A West (Aniak)	Unit 19A East (Holitna)	Unit 19A West hunt area (TM680)
1998			1.25	
2001		0.7		
2005	0.27			
2006		0.39		
2008			0.44	
2010		0.33		
2011			0.25	
2011			0.43 ^a	
2014				
2017		1.3 ^a	0.52 ^a	0.7 ^a

^a Includes a sightability correction factor

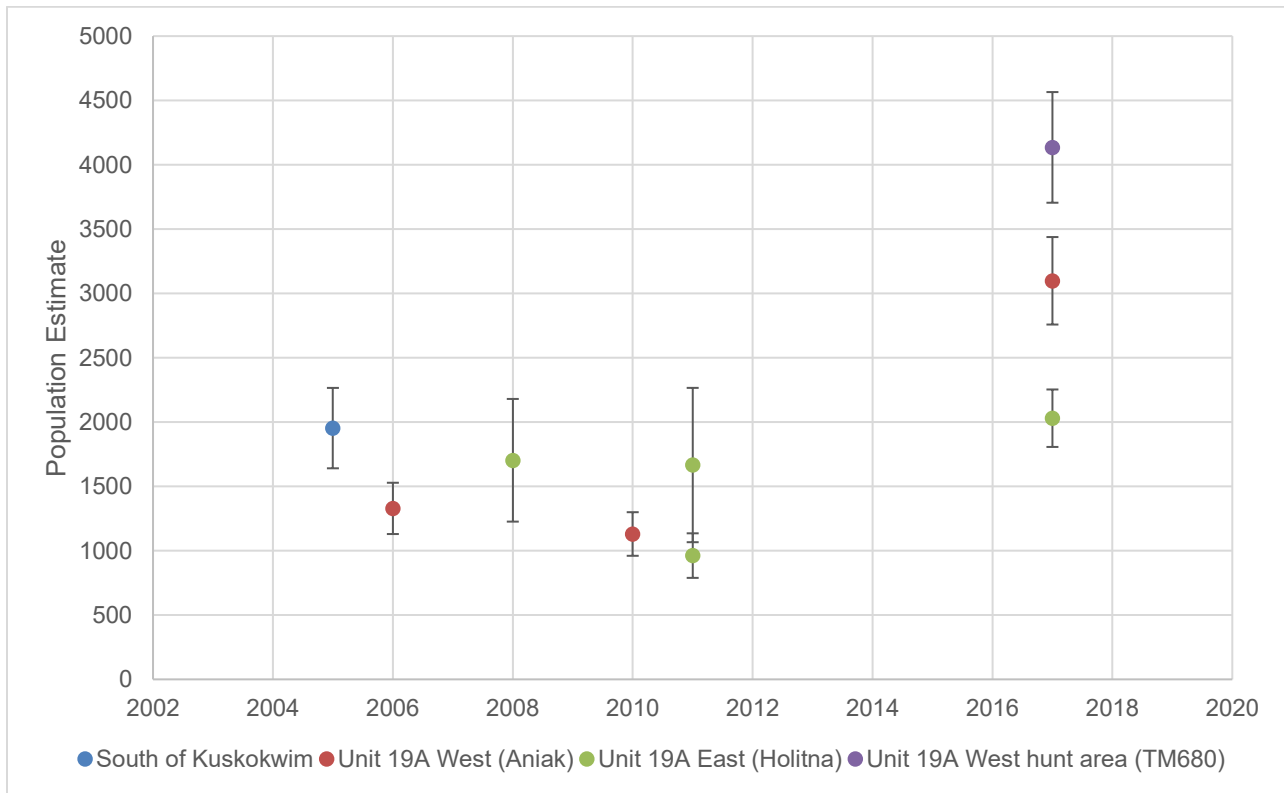


Figure 1. Population estimates for moose in Unit 19A with 90% confidence intervals. The higher estimate in 2011 and the 2017 estimate in the Unit 19A East (Holitna) survey area include sightability correction factors. See Map 2 for survey areas. The TM680 State hunt area is similar to the Federal Unit 19A remainder hunt area, but does not include the Lime Village Management Area (ADF&G 2018a, Seavoy 2014, Peirce 2018, pers. comm.).

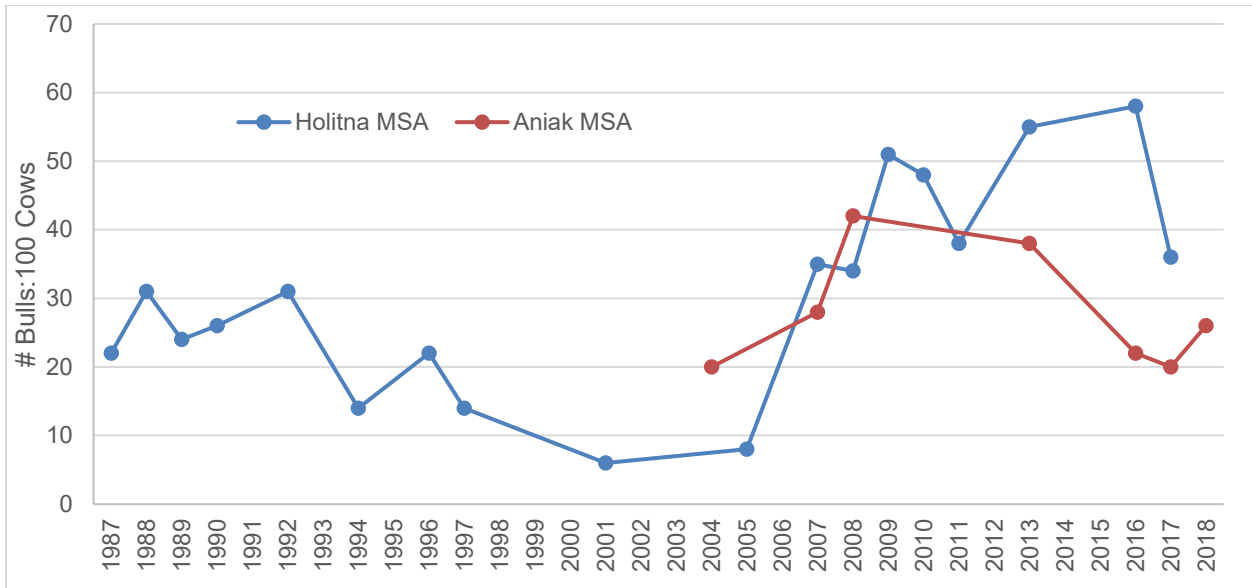


Figure 2. Fall bull:cow ratios for the Unit 19A East (Holitna) and Unit 19A West (Aniak) moose survey areas (Peirce 2018, ADF&G 2018a, Seavoy 2014, Peirce 2018, pers. comm., WIRAC 2019). See Map 2 for survey areas.

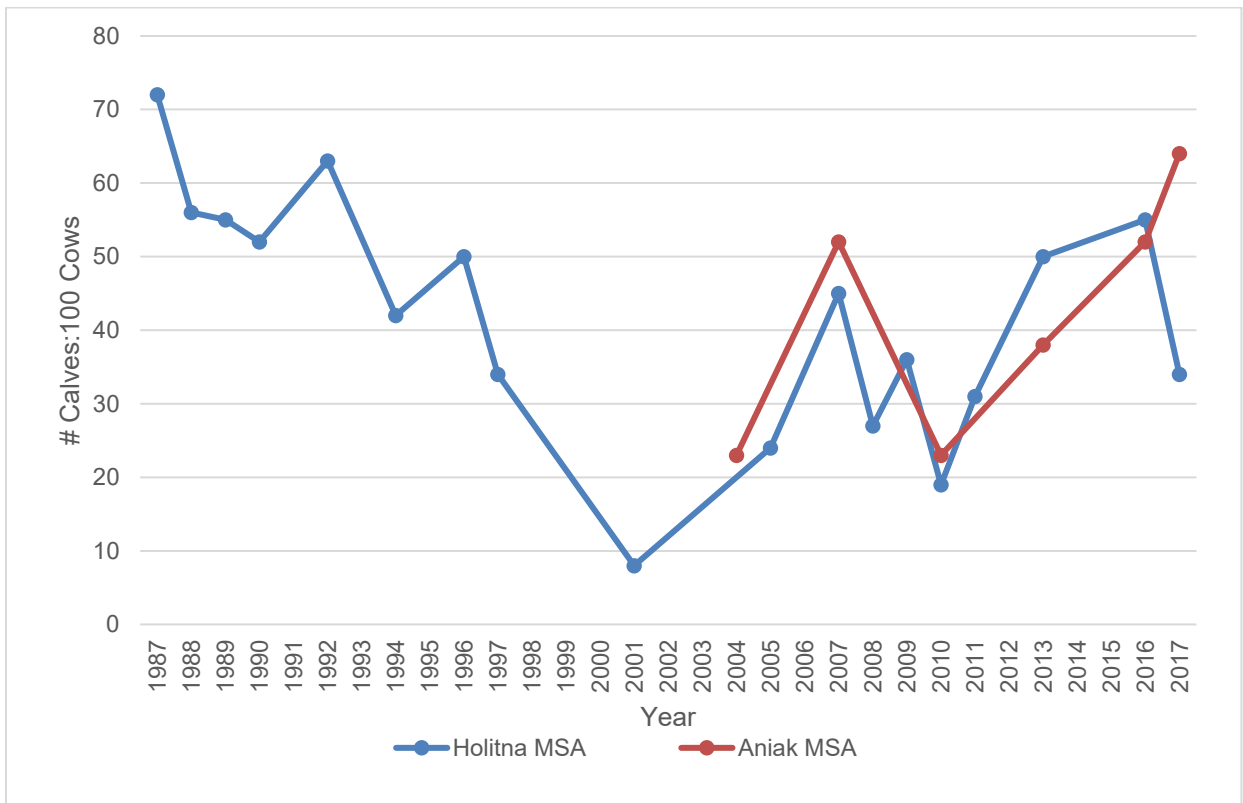


Figure 3. Fall calf:cow ratios for the Unit 19A East (Holitna) and Unit 19A West (Aniak) moose survey areas (Peirce 2018, ADF&G 2018a, Seavoy 2014, Peirce 2018, pers. comm.). See Map 2 for survey areas.

Harvest History

Since 2006, moose harvest in Unit 19A remainder has only occurred under a State Tier II hunt, TM680, and a Federal drawing permit hunt, FM1901. Harvest for both hunts is limited to antlered bulls and restricted to Alaska residents. Harvest on Federal public lands is restricted to residents of Tuluksak, Lower Kalskag, Upper Kalskag, Aniak, Chuathbaluk, and Crooked Creek.

Between 1994 and 2005, prior to any closures, annual reported moose harvest in all of Unit 19A ranged from 67-184 moose and averaged 127 moose (ADF&G 2004, 2018b). Between 2006 and 2017, annual reported moose harvest in Unit 19A remainder averaged 98 moose, ranging from 32-157 moose (**Figure 4**) (ADF&G 2018b, OSM 2018). Over the same time period, annual reported harvest on Federal public lands averaged 22 moose, ranging from 6-45 moose (OSM 2018). On average, 19% of the Unit 19A remainder moose harvest between 2006 and 2017 has occurred on Federal public lands.

In 2006, ADF&G estimated the harvestable surplus of moose as 60 bulls for all of Unit 19A remainder (TM680 hunt area) and as 20 bulls on Federal public lands only (ADF&G 2006, OSM 2007). Most moose harvest on Federal public lands in Unit 19A remainder occurred on Yukon Delta National Wildlife Refuge (NWR) (ADF&G 2006). ADF&G estimated the harvestable surplus of moose for the Yukon Delta NWR portion of Unit 19A remainder as 16 bulls with a few additional harvests from BLM lands (ADF&G 2006).

Between 2006 and 2016, the moose population in the Unit 19A West (Aniak) MSA appeared stable, suggesting the harvestable surplus had not changed (**Figure 1**). Since 2007, annual reported harvest has exceeded 60 bulls, the harvestable surplus. Since 2012, annual reported harvest has exceeded 110 moose (**Figure 4**). On Federal public lands, harvest has exceeded 20 bulls/year since 2014. While the number of available Tier II and Federal drawing permits has not changed substantially, hunter success rates have steadily increased since 2006 (**Table 2**).

The significant increase in the 2017 population estimate for the Unit 19A West (Aniak) MSA suggests a parallel increase in the harvestable surplus. At the 2019 winter meeting of the Western Interior Council, the ADF&G area biologist stated that the harvestable surplus is currently 160-165 moose per year while total reported harvest is roughly 150 moose per year (100 from Tier II permits and 50 from Federal permits) (WIRAC 2019). However, low 2016 and 2017 bull:cow ratios in the Unit 19A West (Aniak) MSA indicate few surplus bulls.

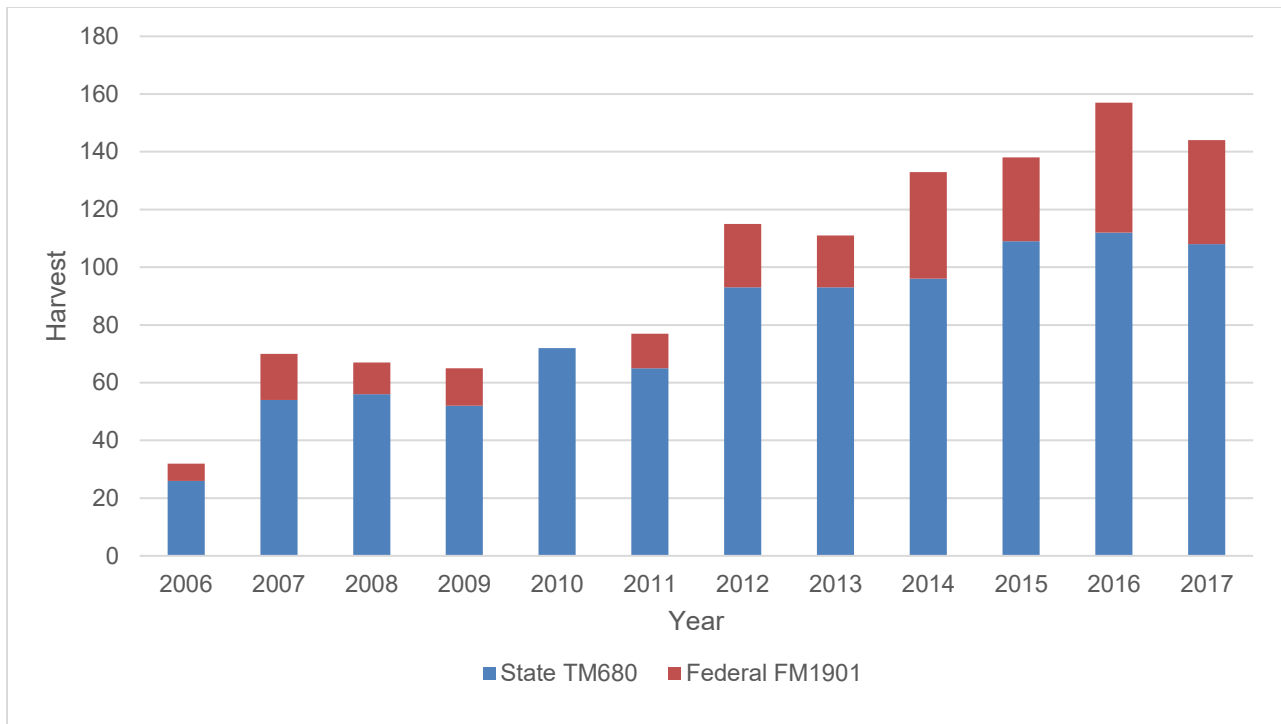


Figure 4. Reported moose harvest in Unit 19A remainder (ADF&G 2018b, OSM 2018).

Table 2. Number of permits issued and success rates for the State Tier II, TM680 hunt and the Federal drawing permit, FM1901 hunt (ADF&G 2018b, OSM 2018).

Year	TM680 Issued	TM680 Success (%)	FM1901 Issued	FM1901 Success (%)
2006	197	13	92	13
2007	227	24	92	25
2008	230	24	97	14
2009	231	23	92	22
2010	200	36	*	*
2011	200	33	72	29
2012	165	47	82	43
2013	222	42	74	32
2014	191	50	92	64
2015	200	55	77	73
2016	197	57	96	65
2017	195	55	96	62

* No data available

OSM Preliminary Conclusion:

- maintain status quo
- modify or eliminate the closure

Justification

No change to the closure is currently recommended. While Federal harvest may have exceeded the harvestable surplus on Federal public lands between 2014 and 2016, harvest can be adjusted by the in-season Federal manager who can set the quota, number of available permits, and close the season when the quota is met. While the 2017 moose density estimate for the Unit 19A West (Aniak) MSA increased significantly and is above State management objectives, the density estimate for the entire Unit 19A West hunt area is much lower and just within State management objectives. Additionally, the 2016 and 2017 bull:cow ratios for the Unit 19A West (Aniak) MSA are low, just meeting State management objectives. As moose harvest in Unit 19A West is restricted to bulls only, a robust bull:cow ratio is recommended before relaxing the closure. For these reasons, no change to the closure is recommended at this time.

While Lime Village Management Area is a separate hunt area under State regulations, it is part of Unit 19A remainder under Federal regulations. The §804 analysis (part of Proposal WP07-35) failed to realize this. Currently, residents of Tuluksak, Lower Kalskag, Upper Kalskag, Aniak, Chuathbaluk, and Crooked Creek (§804 communities) can hunt in the Lime Village Management Area while residents of Lime Village cannot. OSM recommends establishing a new hunt area for the Lime Village Management Area or adding Lime Village to the §804 communities. Submittal of a regulatory proposal is necessary to make these changes.

OSM also recommends removing the regulatory language referring to establishing quotas and permit numbers and delegating authority to a Federal land manager to set quotas and permit numbers via a delegation of authority letter only. Creation of a delegation of authority letter for the Federal in-season manager will serve to simplify regulations and allow for management flexibility through adjustment of in-season winter hunt parameters. Submittal of a regulatory proposal is also necessary to delegate authority.

ANALYSIS ADDENDUM

OSM Conclusion:

- maintain status quo
- modify or eliminate the closure

Modify the closure for WCR20-43 to maintain the closure in the western portion of Unit 19A, eliminate the closure for the Lime Village Management Area, establish seasons, harvest limits, and permit requirements for the Lime Village Management Area hunt area, and remove the regulatory language referring to establishing quotas and permit numbers, and delegate authority to the Yukon Delta NWR manager to set quotas and permit numbers via a delegation of authority letter only (**Appendix 1**).

The modified regulation should read:

Unit 19A—Moose

Lime Village Management Area—2 bulls by State or Federal registration Aug. 10-Sept. 25 permit

Nov. 20-Mar. 31

Unit 19A, remainder—1 antlered bull by Federal drawing permit or a State permit. Sept. 1-Sept. 20.

Federal public lands are closed to the taking of moose except by residents of Tuluksak, Lower Kalskag, Upper Kalskag, Aniak, Chuathbaluk, and Crooked Creek hunting under these regulations.

The Refuge Manager of the Yukon Delta NWR, in cooperation with the BLM Field Office Manager, will annually establish the harvest quota and number of permits to be issued in coordination with the State Tier I hunt. If the allowable harvest level is reached before the regular season closing date, the Refuge Manager, in consultation with the BLM Field Office Manager, will announce an early closure of Federal public lands to all moose hunting

Justification

At the 2019 winter meeting of the Western Interior Council, the ADF&G area biologist stated that ADF&G issues seven Tier II permits within the State's Lime Village Management Area each year. As the harvest limit is two bulls, a maximum of 14 bulls could be harvested each year from this area. However, an average of two bulls per year have been harvested in recent years. He is also not aware of any Lime Village residents utilizing the moose or caribou community harvest system under Federal regulations (WIRAC 2019). However, given the current Federal closure in Unit 19A remainder, residents of Lime Village cannot hunt on Federal public lands within the Lime Village Management Area under the State's Tier II hunt or the Federal community hunt.

The Western Interior Council recommended eliminating the Federal closure for the Lime Village Management Area, but did not specify harvest limits or season dates. The Council did express interest in aligning with State regulations and in maintaining the year-round season and community hunt for Lime Village residents (WIRAC 2019). The proposed harvest limit and seasons for the new Federal hunt area around Lime Village mirror the current State hunting regulations for this area. Additionally, the Lime Village community hunt will not be affected by this modification, except that eliminating the Federal closure will allow moose hunting on Federal public lands within the Lime Village Management Area under both State and Federal regulations.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Western Interior Alaska Subsistence Regional Advisory Council

Modify the closure for WCR20-43. The Council voted unanimously to maintain the current moose hunting closure in the western portion of Unit 19A and to eliminate the closure for the Lime Village Management Area in the southeastern portion of Unit 19A, agreeing with OSM's recommendation. The bull:cow ratio in the western portion of Unit 19A remainder is relatively low, the number of large bulls is fairly depressed, and the harvestable surplus is almost met under the current harvest regime. Thus, the Council supported maintaining the status quo for the closure in this area.

The Council also agreed with OSM's conclusion that including the Lime Village Management Area in the Unit 19A remainder closure was a mistake that should be corrected. The Council expressed interest in aligning Federal regulations with State regulations for the Lime Village Management Area and in maintaining the Lime Village community hunt. Additionally, the Council requested that OSM review the community harvest regulation for Lime Village and report back to the Council at its next meeting.

Yukon Kuskokwim Delta Subsistence Regional Advisory Council

The Council voted to **defer** to the Western Interior Council. The Council hopes to consider this closure again at its Fall 2019 meeting after hearing the Western Interior Council's recommendation.

Appendix 1

Yukon Delta National Wildlife Refuge Manager
U.S. Fish and Wildlife Service
807 Chief Eddie Hoffman Road 346
Bethel, AK 99559

Dear 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) to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 19A remainder for the management of moose on these lands.

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

DELEGATION OF AUTHORITY

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

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

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

- To establish annual harvest quotas and number of permits to be issued in coordination with the State Tier I hunt.

- To close the Federal hunt early if the harvest quota is reached before the regular season closing date.

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

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

The Federal public lands subject to this delegated authority are those within Unit 19A remainder.

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

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

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

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

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

special action is aligned with ANILCA Title VIII, Federal Subsistence regulations and policy, and that the perspectives of the Chair(s) or alternate of the affected Council(s), OSM, and affected State and Federal managers have been fully considered in the review of the proposed special action.

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

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

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

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

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board

Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management

Subsistence Council Coordinator, Office of Subsistence Management
Chair, Western Interior Alaska Subsistence Regional Advisory Council
Chair, Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Special Assistant to the Commissioner, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record



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

Federal Subsistence Board

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



FOREST SERVICE

OSM 19034 KW

JUN 19 2019

Jack Reakoff, Chair
Western Interior Alaska Subsistence Regional Advisory Council
c/o Office of Subsistence Mangement
1011 E. Tudor Road, M/S 121
Anchorage, Alaska 99503-6199

Dear Mr. Reakoff:

The Federal Subsistence Board (Board) met on April 15-18, 2019, regarding proposed changes to subsistence fish and shellfish regulations. This letter and the enclosed report identify action taken on proposals affecting residents of the Western Interior Region.

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

Out of twenty proposals submitted, one was withdrawn by a proponent and the Board accepted the majority recommendations of the Regional Advisory Councils, in whole or with modifications, on 19 of the 20 proposals. Details of these actions and the Boards' deliberations are contained in the meeting transcriptions. Copies of the transcripts may be obtained by calling toll free number, 1-800-478-1456, and are available online at the Federal Subsistence Management Program website, <https://www.doi.gov/subsistence>.

The Board uses a consensus agenda on those proposals where there is agreement among the affected Subsistence Regional Advisory Council(s), a majority of the Interagency Staff Committee, and the Alaska Department of Fish and Game concerning a proposed regulatory

Reakoff

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action. These proposals were deemed non-controversial and did not require a separate discussion. The consensus agenda contained six proposals affecting the Western Interior Region, which the Board deferred to the Western Interior Alaska Subsistence Regional Advisory Council's (Council) recommendation as follows: the Board *adopted with OSM modification* proposal **FP19-05** to remove restrictions requiring fin clipping of subsistence caught Chinook salmon in the Lower Yukon River and adopted with proposal modification **FP19-07** to add dip net as a gear type for subsistence harvest of salmon on the Yukon River. The Board *rejected* proposals **FP19-02** and **FP19-03/04** to modify the closures to subsistence salmon fishing before, during, and after commercial openings in the Yukon River, proposal **FP19-06** to protect the first pulse of Chinook salmon in Federal waters of the Yukon River, and proposal **FP19-08** to specify restrictions to the use of 6 inch or less mesh size gillnets in the Kuskokwim River drainage from June 1 to June 25 only in times of conservation of Chinook Salmon, through rolling closures, implemented by the Federal in-season manager.

The remaining four proposals affecting the Western Interior Region appeared on the non-consensus agenda. For three of the proposals, the Board took action consistent with the Council's recommendations. The Board *adopted* proposal **FP19-01** to allow the use of gillnets and rescind the net depth restrictions in Yukon River sub-districts 4B and 4C and adopted proposal **FP19-10** with a clarified version of the OSM conclusion reading "All tributaries not expressly closed by order of the Federal in-season manager or Federal Subsistence Board remain open to the use of gillnets more than 100 yards upstream from their confluence with the Kuskokwim River". The Board *rejected* proposal **FP17-05** to place Federal subsistence management plans, strategies, fishing schedules, openings, closings and fishing methods under the independent authority of the U.S. Fish and Wildlife Service.

The Board *adopted* proposal **FP19-09** to allow the use of 6 inch or less mesh size gillnets prior to June 1 in the Kuskokwim River drainage to provide for Sheefish harvest opportunity. The Board's action differed from the Council recommendation and is discussed in the enclosed report.

The Federal Subsistence Board appreciates the Western Interior Alaska Council's active involvement in and diligence with the regulatory process. The ten Regional Advisory Councils continue to be the foundation of the Federal Subsistence Management Program, and the stewardship shown by the Regional Advisory Council chairs and their representatives at the Board meeting is very much appreciated.

If you have any questions regarding the summary of the Board's actions, please contact Karen Deatherage, Council Coordinator, at 907-786-3564 or karen_deatherage@fws.gov.

Sincerely,



Anthony Christianson, Chair
Federal Subsistence Board

Enclosure

Reakoff

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cc: Federal Subsistence Board
Western Interior Alaska Subsistence Regional Advisory Council members
Thomas Doolittle, Acting Assistant Regional Director, Office of Subsistence Management
Jennifer Hardin, PhD, Subsistence Policy Coordinator, Office of Subsistence Management
Katerina Wessels, Acting Council Coordination Division Supervisor, Office of Subsistence Management
Karen Deatherage, Council Coordinator, Office of Subsistence Management
Interagency Staff Committee
Administrative Record

FEDERAL SUBSISTENCE BOARD 805(c) REPORT

April 15-18, 2019

Anchorage, Alaska

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

KUSKOKWIM AREA PROPOSALS

Proposal FP19-09: to allow use of 6 inch or less mesh size gillnets prior to June 1 in the Kuskokwim River drainage to provide Sheefish harvest opportunity

DESCRIPTION: Proposal FP19-09 requests that prior to June 1 the use of six-inch or less mesh size gillnets shall not be restricted in the Kuskokwim River drainage. *Submitted by Alissa N. Rogers.*

COUNCIL RECOMMENDATIONS:

Western Interior Alaska Subsistence Regional Advisory Council – **Oppose**
Yukon Kuskokwim Delta Subsistence Regional Advisory Council – **Support**

BOARD ACTION: **Adopt**

JUSTIFICATION: The Board was in agreement with the Yukon Kuskokwim Delta Subsistence Regional Advisory Council and adopted FP19-09. This proposal increases the opportunity for Federally-qualified subsistence users to harvest Sheefish, an important subsistence species, during a period that would likely have little or no impact on Chinook Salmon. Long term data collected at the Bethel test fishery suggests that Chinook Salmon are unlikely to be in that portion of the Kuskokwim River in large numbers prior to June 1. This proposal would not affect the ability of the in-season management stakeholder group or the in-season manager to apply conservation measures for the protection of Chinook Salmon if needed.

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**

WP20–36/37 Executive Summary	
General Description	<p>Wildlife Proposal WP20-36 requests establishing a 15-day March moose season in a portion of Unit 21D, resulting in the creation of a new hunt area, eliminating the March to be announced moose season in Unit 21D remainder, requiring a State registration permit in the Koyukuk Controlled Use Area (Koyukuk CUA), and eliminating the March and April to be announced moose seasons in the Koyukuk CUA. <i>Submitted by: Koyukuk/Nowitna/Innoko National Wildlife Refuge.</i></p> <p>Wildlife Proposal WP20-37 requests establishing a 15-day to-be-announced moose season between Dec. 1-31 and a 15-day may-be-announced season between Mar. 1-31 in a portion of Unit 21D, resulting in the creation of a new hunt area. The March season would be announced if the harvest quota is not met during the December hunt. <i>Submitted by: Western Interior Alaska Subsistence Regional Advisory Council</i></p>
Proposed Regulation	See pages 75 for proposed regulatory language.
OSM Preliminary Conclusion	<p>Support Proposal WP20-36 with modification to clarify regulatory language and to delegate authority to the Koyukuk/Nowitna/Innoko Refuge manager to announce season dates, harvest quotas, and sex restrictions via delegation of authority letter only (Appendix 1) and take no action on WP20-37.</p> <p>See page 91 for modified regulatory language.</p>
Western Interior Alaska Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	None

DRAFT STAFF ANALYSIS WP20-36/37

ISSUES

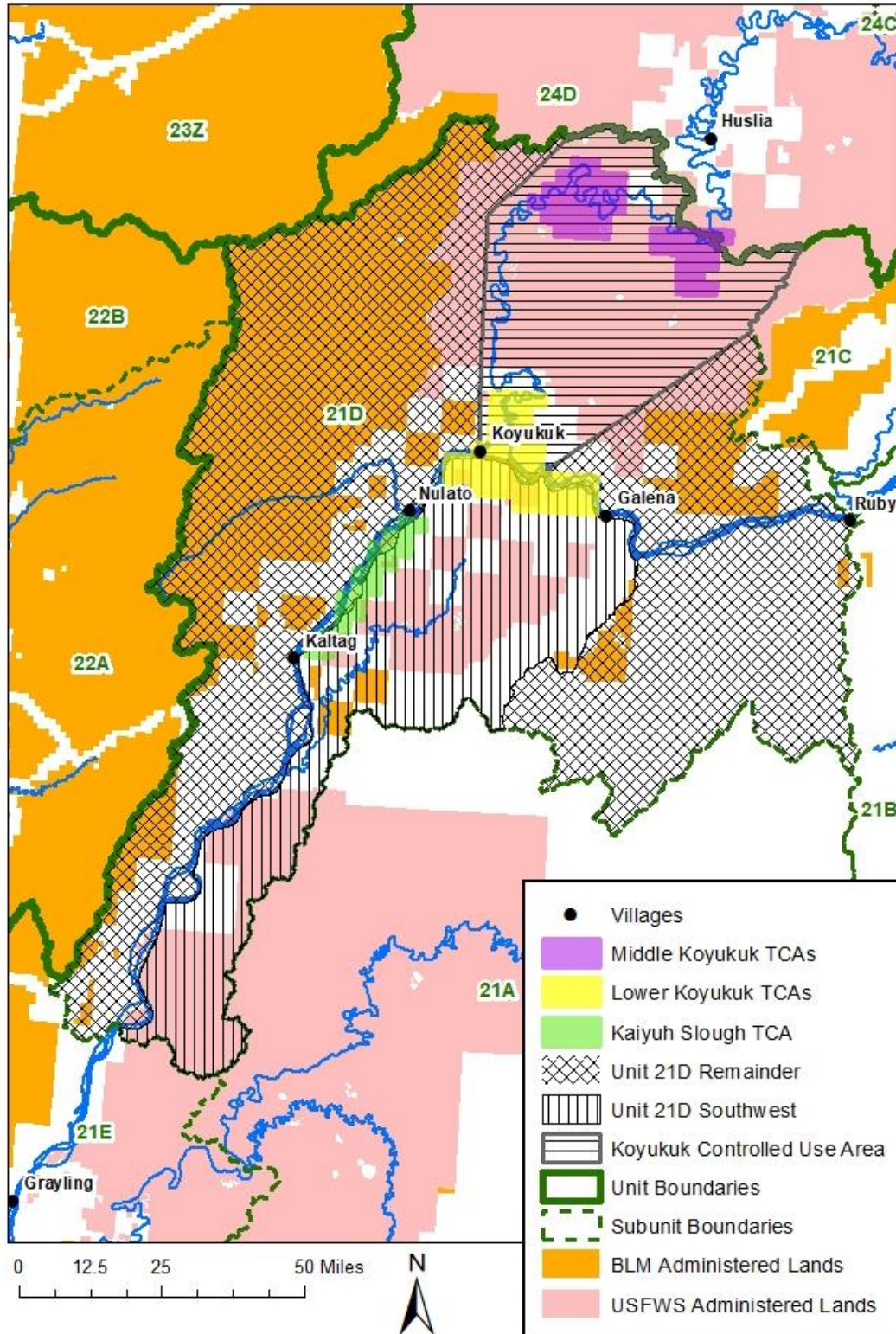
Wildlife Proposal WP20-36, submitted by Koyukuk/Nowitna/Innoko National Wildlife Refuge (Refuge), requests establishing a 15-day March moose season in a portion of Unit 21D, resulting in the creation of a new hunt area, eliminating the March to be announced moose season in Unit 21D remainder, requiring a State registration permit in the Koyukuk Controlled Use Area (Koyukuk CUA), and eliminating the March and April to be announced moose seasons in the Koyukuk CUA.

Wildlife Proposal WP20-37, submitted by the Western Interior Alaska Subsistence Regional Advisory Council (Western Interior Council), requests establishing a 15-day to-be-announced moose season between Dec. 1-31 and a 15-day may-be-announced season between Mar. 1-31 in a portion of Unit 21D, resulting in the creation of a new hunt area. The March season would be announced if the harvest quota is not met during the December hunt.

DISCUSSION

Overall, the Refuge's intent is to align State and Federal regulations in Unit 21D to mitigate regulatory complexity and reduce user confusion. Unit 21D has a checkerboard pattern of land ownership, making it very difficult for users to know whether or not they are on Federal or non-Federal lands. The Alaska Board of Game (BOG) recently established a 15-day winter moose season in Unit 21D, that portion south of the South Bank of the Yukon River, downstream of the up-river entrance of Kala Slough and west of Kala Creek (Unit 21D Southwest) (**Map 1**). The Refuge requests establishing an identical hunt area and to-be-announced winter season to maintain consistency and to provide additional subsistence opportunity under Federal regulations. The Refuge anticipates little competition from non-local residents during this season, as Unit 21D is remote and moose have no trophy value during March. The removal of the to-be-announced seasons in Unit 21D remainder and the Koyukuk CUA is intended to simplify regulations by aligning with the State. These seasons have never been opened since they were established in 2004, because local moose populations have not supported additional harvest opportunities. Similarly, requiring a State registration permit for the Koyukuk CUA simplifies regulations by aligning State and Federal permitting and reporting requirements for harvesting bulls in the fall (a Federal permit would still be required for cow harvest, if authorized by the in-season manager). The Refuge also states that the State registration permit system provides a reliable way for users to obtain permits and report harvests due to the accessibility of village vendors and online resources.

The Western Interior Council states that a 15-day December season in Unit 21D Southwest would provide additional harvest opportunity for Federally qualified subsistence users who did not harvest a moose in the fall. Harvesting a moose in December rather than March would provide valuable meat to families over the winter. The proponent proposes that a harvest quota will be announced annually, and if any harvest quota remains after the December season ends, another season will be announced in March. The proponent submitted a similar proposal to the Alaska Board of Game (BOG).



Map 1. Proposed Federal and current State hunt areas for moose in Unit 21D. Unit 21D Southwest is an abbreviation for Unit 21D, that portion south of the South Bank of the Yukon River, downstream of the up-river entrance of Kala Slough and west of Kala Creek. Moose surveys are conducted annually in the trend count areas (TCAs).

Existing Federal Regulation**Unit 21D—Moose**

Unit 21D—Koyukuk Controlled Use Area—1 bull; 1 antlerless moose by Federal permit if authorized by announcement by the Koyukuk/Nowitna NWR manager. Harvest of cow moose accompanied by calves is prohibited. A harvestable surplus of cows will be determined for a quota Sep. 1-25.
Mar. 1-5 season to be announced.

OR

1 antlered bull by Federal permit, if there is no Mar. 1-5 season and if authorized by announcement by the Koyukuk/Nowitna NWR manager and BLM Central Yukon field office manager. A harvestable surplus of bulls will be determined for a quota. Announcement for the March and April seasons and harvest quotas will be made after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and Middle Yukon and Koyukuk River Fish and Game Advisory Committee. Apr. 10-15 season to be announced.

Unit 21D, remainder—1 moose; however, antlerless moose may be taken only during Sep. 21-25 and the Mar. 1-5 season if authorized jointly by the Koyukuk/Nowitna National Wildlife Refuge Manager and the Central Yukon Field Office Manager, Bureau of Land Management. Harvest of cow moose accompanied by calves is prohibited. During the Aug. 22-31 and Sep. 5-25 seasons, a State registration permit is required. During the Mar. 1-5 season, a Federal registration permit is required. Announcement for the antlerless moose seasons and cow quotas will be made after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and the Middle Yukon Fish and Game Advisory Committee Aug. 22-31.
Sep. 5-25.
Mar. 1-5 season to be announced.

Proposed Federal RegulationWP20-36**Unit 21D—Moose**

*Unit 21D—Koyukuk Controlled Use Area—1 bull **by State registration permit**; 1 antlerless moose by Federal permit if authorized by announcement by the Koyukuk/Nowitna NWR manager. Harvest of cow moose accompanied by calves is prohibited. A harvestable surplus of cows will be determined for a quota* Sep. 1-25.
~~Mar. 1-5 season to be announced.~~

OR

~~1 antlered bull by Federal permit, if there is no Mar. 1-5 season and if authorized by announcement by the Koyukuk/Nowitna NWR manager and BLM Central Yukon field office manager. A harvestable surplus of bulls will be determined for a quota. Announcement for the March and April seasons and harvest quotas will be made after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and Middle Yukon and Koyukuk River Fish and Game Advisory Committee.~~ ~~Apr. 10-15 season to be announced.~~

Unit 21D, that portion south of the South Bank of the Yukon River, downstream of the up-river entrance of Kala Slough and west of Kala Creek – 1 moose; however, antlerless moose may be taken only during Sep. 21-25 season if authorized jointly by the Koyukuk/Nowitna National Wildlife Refuge Manager and the Central Yukon Field Office Manager, Bureau of Land Management. Antlerless moose may also be harvested during the State, to be announced, 15 day March winter registration hunt. Harvest of cow moose accompanied by calves is prohibited. During the Aug. 22-21 and Sep. 5-25, and March to be announced seasons, a State registration permit is required. Announcement for the antlerless moose seasons and cow quotas for the Sep. 21-25 season, will be made after consultations with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and the Middle Yukon Fish and Game Advisory Committee. **Aug. 22-31. Sep. 5-25. March to be announced 15 day season**

~~Unit 21D, remainder—1 moose; however, antlerless moose may be taken only during Sep. 21-25 and the Mar. 1-5 season if authorized jointly by the Koyukuk/Nowitna National Wildlife Refuge Manager and the Central Yukon Field Office Manager, Bureau of Land Management. Harvest of cow moose accompanied by calves is prohibited. During the Aug. 22-31 and Sep. 5-25 seasons, a State registration permit is required. During the Mar. 1-5 season, a Federal registration permit is required. Announcement for the antlerless moose seasons and cow quotas will be made after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and the Middle Yukon Fish and Game Advisory Committee~~ ~~Aug. 22-31. Sep. 5-25. Mar. 1-5 season to be announced.~~

WP20-37**Unit 21D — Moose**

Unit 21D—Koyukuk Controlled Use Area—1 bull; 1 antlerless moose by Federal permit if authorized by announcement by the Koyukuk/Nowitna NWR manager. Harvest of cow moose accompanied by calves is prohibited. A harvestable surplus of cows will be determined for a quota Sep. 1-25.
Mar. 1-5 season to be announced.

OR

1 antlered bull by Federal permit, if there is no Mar. 1-5 season and if authorized by announcement by the Koyukuk/Nowitna NWR manager and BLM Central Yukon field office manager. A harvestable surplus of bulls will be determined for a quota. Announcement for the March and April seasons and harvest quotas will be made after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and Middle Yukon and Koyukuk River Fish and Game Advisory Committee. Apr. 10-15 season to be announced.

Unit 21D, that portion south of the South bank of the Yukon River, downstream of the up-river entrance of Kala Slough and west of Kala Creek – 1 moose by State registration permit. However, antlerless moose may be taken only during Sep. 21-25 and the Dec. and Mar. seasons. Harvest of cow moose accompanied by calves is prohibited. A 15 day season will be announced in Dec. If the harvest quota, which is announced annually is not met, then another 15 day season will be announced in Mar. Aug. 22-31.
Sep. 5-25.
Dec. 1 – Dec. 31, season to be announced

Mar. 1 – Mar. 31 season may be announced.

Unit 21D, remainder—1 moose; however, antlerless moose may be taken only during Sep. 21-25 and the Mar. 1-5 season if authorized jointly by the Koyukuk/Nowitna National Wildlife Refuge Manager and the Central Yukon Field Office Manager, Bureau of Land Management. Harvest of cow moose accompanied by calves is prohibited. During the Aug. 22-31 and Sep. 5-25 seasons, a State registration permit is required. During the Mar. 1-5 season, a Federal registration permit is required. Announcement for the antlerless moose seasons and cow quotas will be made after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and the Middle Yukon Fish and Game Advisory Committee Aug. 22-31.
Sep. 5-25.
Mar. 1-5 season to be announced.

Existing State Regulation

Unit 21D — Moose

Unit 21D, that portion within the Koyukuk Controlled Use Area

Residents – 1 bull by permit, available at a check station established by the department, Huslia or Hughes beginning Aug. 30. Trophy value must be destroyed. RM832 Sep. 1-25

OR

Residents – 1 bull by permit DM828/830 Sep. 5-25

Nonresidents – 1 bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit DM823/825 Sep. 5-25
/827/829

Unit 21D, that portion south of the South bank of the Yukon River, downstream of the up-river entrance of Kala Slough and west of Kala Creek

Residents - 1 moose, by permit available online at <http://hunt.alaska.gov> or in person at ADF&G in Galena and Fairbanks. However, a person may not take a cow accompanied by a calf. RM831 May be announced

Residents – 1 bull by permit available online at <http://hunt.alaska.gov> or in person at license vendors in Units 21V, 21D, 24, and ADF&G in Fairbanks, beginning Aug. 8. Trophy value must be destroyed. RM834 Aug. 22- 31.
Sep. 5- 25.

OR

Residents - 1 bull by permit DM816-818 Sep. 5- 25.

Nonresidents – 1 bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit DM816-818 Sep. 5-25

Unit 21D, remainder

Residents – 1 bull by permit available online at <http://hunt.alaska.gov> or in person at license vendors in Units 21V, 21D, 24, and ADF&G in Fairbanks, beginning Aug. 8. Trophy value must be destroyed. RM834 Aug. 22-31
Sep. 5-25

OR

Residents - 1 bull by permit DM814/816 Sep. 5-25
-818/820

Nonresidents – 1 bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit DM815-820 Sep. 5-25

Extent of Federal Public Lands/Waters

Unit 21D is comprised of 56% of Federal public lands and consists of 29% U.S. Fish and Wildlife Service (USFWS) and 26% Bureau of Land Management (BLM) managed lands.

Customary and Traditional Use Determinations

Residents of Unit 21D, Huslia, and Ruby have a customary and traditional use determination for moose in Unit 21D.

Regulatory History

The Koyukuk CUA was established in 1978 and prohibits the use of aircraft for moose hunting, including transportation of any moose hunter or moose part (Stout 2018). From 1981-1996, the resident State fall moose season in Unit 21D was Sept. 5-25 with a harvest limit of one moose, although cows could only be harvested during the last five days. A winter season ran from Feb. 1-10.

Federal regulations for moose in Unit 21D were adopted from State regulations in 1990. The season was Sept. 5-Sept. 25 and Feb. 1-Feb. 5 with a harvest limit of 1 moose, although antlerless moose could only be taken from Sept. 21-Sept. 25 and Feb. 1-Feb. 5. Moose within one-half mile of the Yukon River could not be taken during the February season.

In 1993, the Federal Subsistence Board (Board) adopted Proposals P93-49 and P93-50 to open the fall moose season 5 days earlier (Sept. 1 v. Sept. 5) in the Koyukuk CUA only as moose numbers indicated the population could support additional harvest. The intent was to provide Federally qualified subsistence users with a rural priority by opening the Federal season earlier than the State season, reducing competition from non-Federally qualified users.

In 1994, the Board adopted Proposal P94-56, changing the opening date in the Koyukuk CUA back to Sept. 5 to align with the State season. The reason was because users could not distinguish between State and Federal lands since the mean high water mark was unidentifiable, rendering the extended Federal season a law enforcement concern.

In 1996, the Board adopted Proposal P96-44 with modification to extend the fall season from Sept. 5-25 to Sept. 1-25 and the winter season from Feb. 1-5 to Feb. 1-10 to provide additional subsistence harvest opportunity and align with State seasons, which had recently changed (FSB 1996). Antlerless moose could only be harvested Sept. 21-25 and Feb. 1-10. The Board also closed Federal public lands in portions of the Koyukuk Controlled Use Area (CUA) to everyone except Federally qualified subsistence users to reduce user conflicts and provide better harvest opportunities for Federally qualified subsistence users.

Subsequently, the State of Alaska submitted a request to reconsider the closure adopted by the Board through WP96-44 (FSB 1996). On August 29, 1996, the Board adopted Request for Reconsideration R96-02 to lift the Federal closure in the Koyukuk CUA, to remove the antlerless moose restriction, and to require a State registration permit during the September season.

In 2000, the Board adopted Proposal P00-47 with modification, which specified that antlerless moose could be taken only from Sept. 21-Sept. 25 and during the February season in Unit 21D. The modification included establishing two new hunt areas: the Koyukuk CUA and Unit 21D remainder. The modification also changed the opening date of the fall season in the new Unit 21D remainder from Sept. 1 to Sept. 5. This was done to reduce user confusion by aligning Federal and State regulations (FWS 2000).

Also in 2000, the Board adopted Proposal P00-46 with modification, which changed the winter season from Feb. 1-Feb. 10 to a to-be-announced season. This was done to benefit Federally qualified subsistence users adversely impacted by inclement weather in early February and to align Federal and State regulations (FWS 2000).

In 2001, the Board adopted Proposal WP01-26 with modification, which allowed possession of the head of a harvested moose to meet the proof of sex requirement for Units 19, 21, and 24. This action accommodated customary and traditional practices that include removing external sex organs before transporting carcasses.

In 2004, the Board adopted Proposal WP04-63, which removed the specification that moose could not be taken within one-half mile of the Yukon River during the February season in all of Unit 21D. This was done to provide hunters with additional opportunity, to reduce the burden of determining jurisdictional boundaries on hunters, and to align with State regulations (FWS 2004a).

Also in 2004, the Board adopted Proposal WP04-65 with modification, which established a Dec. 1-Dec. 10 season and modified the to-be-announced winter season to a Mar. 1-Mar. 5 to-be-announced season in all of Unit 21D. Authority to determine whether or not antlerless moose could be taken from Sept. 21-Sept. 25 and Mar. 1-Mar. 5 and to set cow harvest quotas was delegated jointly to the Koyukuk National Wildlife Refuge (NWR) manager and the BLM Central Yukon (formerly Northern) Field Office Manager. A Federal registration permit was required for the Mar. 1-Mar. 5 season and the take of cows with calves was prohibited. This was done based on biological concerns over a declining moose population and to align State and Federal regulations (FWS 2004b).

Also in 2004, the Board adopted Proposal WP04-64 to modify the boundary and description of the Koyukuk CUA to align with State regulations.

In 2006, the Board adopted Proposal WP06-34 with modification, establishing an Aug. 22-Aug. 31 moose season in Unit 21D remainder and eliminating the Dec. 1-Dec. 10 moose season. This was done

to provide additional harvest opportunity to users early in the season and to align Federal and State regulations.

In 2010, the Board adopted Proposals WP10-63 and WP10-68 with modification to shift the fall moose season in the Koyukuk CUA 5 days later to Sept. 1-25 and to establish an April to-be-announced season within the Koyukuk CUA. The fall season changes aligned State and Federal regulations and the April season provided additional subsistence opportunity. (Proposals WP10-63 and WP10-68 were analyzed together and proposed similar changes to Unit 21D moose regulations. The Board adopted both proposals with modification).

In 2013, the Board approved Emergency Special Action WSA13-06 with modification, changing the closing date of the fall moose season in Unit 21D from Sept. 25 to Oct. 1, extending the season by 6 days. The modification included requiring the use of a Federal registration permit and clarification that only bulls could be harvested during the extended season. This was done to provide communities impacted by the extensive flooding of the Yukon River additional harvest opportunity.

In 2019, the BOG adopted Proposal 151 to create a winter any-moose season for residents in Unit 21D Southwest because the local moose population (Kaiyuh Flats) was rapidly growing, increasing the harvestable surplus. This resulted in the creation of the Unit 21D Southwest hunt area (**Map 1**). The winter season will be announced up to 15 days during March and has a harvest quota that will be adjusted annually depending on population estimates (ADF&G 2019).

Current Events

The Western Interior Council submitted a proposal to the BOG requesting that a 15-day any-moose season be announced in December for Unit 21D Southwest. The proposal stipulates that if any quota remains, then another 15-day any-moose season would be announced in March. The BOG will consider this proposal at its Interior/Northeast Arctic Region meeting in March 2020.

Biological Background

Moose first appeared in Unit 21D during the 1930s and slowly increased in abundance throughout the 1940s. Federal wolf control and aerial shooting in the 1950s reduced wolf populations, allowing rapid expansion of the moose population into the 1960s (Stout 2018). The Unit 21D moose population peaked in the 1970s and then stabilized or slightly declined, depending on area, in response to increased hunting pressure and predation (Federal wolf control ended in 1959 and aerial shooting ended in 1972). Unit 21D moose populations in the lower Koyukuk drainage and along the Yukon River generally increased during the 1980s and into the 1990s. In 1993, the Alaska Department of Fish and Game (ADF&G) estimated the Unit 21D moose population as 9,000-10,000 moose (Stout 2018).

State management objectives for moose in Unit 21D are as follows (Stout 2018):

- Maintain a moose population of 5,200 observable moose in the Kaiyuh Flats and western Galena subareas.
- Maintain 30 bulls:100 cows in the Koyukuk CUA Core-5 TCAs.
- Provide for a harvest of moose not to exceed 700 moose or 7% of the annual moose population estimate each regulatory year.
- Provide for moose hunting opportunity not to exceed 950 hunters per regulatory year.

The USFWS and the ADF&G cooperatively conduct annual aerial moose surveys over Koyukuk and Innoko National Wildlife Refuges (NWRs) to assess population and composition trends. Survey data is collected in late fall (October-December) when at least 12" of snow are on the ground (Stout 2010, Bryant and Scotton 2015). However, in some years, this is not possible due to stochastic weather events (Bryant and Scotton 2015).

The survey areas are called trend count areas (TCAs). Six TCAs are located within Unit 21D in three distinct areas. For the purposes of this analysis, adjacent TCAs are combined, resulting in three separate survey areas within Unit 21D. The Dulbi River Mouth and Three-Day Slough combined TCAs (middle Koyukuk TCAs) are within the Koyukuk CUA (277 mi²). (Note: two of the Core-5 TCAs referred to in the State management objectives are in Unit 24D). The Kaiyuh Slough TCA (126 mi²) is located along the south side of the Yukon River between Nulato and Kaltag within Unit 21D Southwest (**Map 1**). The Koyukuk River Mouth, Pilot Mountain, and Squirrel Creek combined TCAs (lower Koyukuk TCAs, 307 mi²) are located between the villages of Galena and Koyukuk on the south side of the Yukon River with a section on the north side of the Yukon at the mouth of Koyukuk River (Bryant and Scotton 2015). The lower Koyukuk TCAs straddle the Koyukuk CUA, Unit 21D Southwest, and Unit 21D remainder hunt areas (**Map 1**).

In some years, the USFWS and ADF&G conduct geospatial population estimator (GSPE) surveys to estimate the moose population in all or a portion of Unit 21D. The TCAs are contained within the larger GSPE survey areas, and TCA data is used for GSPE surveys (Stout 2015, pers. comm.). In regulatory years 2009/10 and 2011/12, the moose population estimates for all of Unit 21D were 8,103 moose and 8,611 moose, respectively. The moose population estimates for Unit 21D outside of the Koyukuk CUA in 2009/10 and 2011/12 were 4,608 moose and 5,055 moose, respectively (Stout 2010, 2012). The 2018 moose population estimate for all of Unit 21D is 10,478 moose +/- 15%. This estimate is based on population and trend survey data as well as extrapolation to unsurveyed areas (Stout 2019, pers. comm.).

Refuge biologists have periodically conducted GSPE surveys in the Kaiyuh Flats, which comprises most of Unit 21D Southwest. Between 2001 and 2011, the moose population appeared relatively stable, ranging from 1,487-1,897 moose (Bryant and Scotton 2017). Estimates from the next GSPE survey, which was conducted in fall 2017, increased significantly to 4,116 moose or 39-44% of the overall Unit 21D population (Bryant and Scotton 2017, ADF&G 2019). Bryant and Scotton (2017) attribute the

substantial population increase to high productivity, relatively mild winters since 2011, improved forage quality and/or quantity from a 2004 fire, and possibly lower predator abundance.

Trends in moose densities within the three TCA areas differ substantially (**Figure 1**). Between 2001 and 2018, the moose density in the middle Koyukuk TCAs averaged 4.4 moose/mi², ranging between 2.9 and 5.9 moose/mi². Overall, moose densities within these TCAs have fluctuated, but remained at average levels over the last four years. Over the same time period, moose densities in the lower Koyukuk TCAs averaged 4.0 moose/mi², ranging from 3.1 to 6 moose/mi². Overall, moose densities within the lower Koyukuk TCA have increased, especially since 2015. Over the same time period, moose densities in the Kaiyuh Slough TCA averaged 2.0 moose/mi², ranging from 1.1 to 3.8 moose/mi². Overall, moose densities within the Kaiyuh Slough TCA have increased, and are approaching the moose densities of the other two TCA areas within Unit 21D (**Figure 1**) (Bryant and Scotton 2018).

Bull:cow ratios help to assess the effects of harvest on a moose population (Stout 2018). High bull numbers generally indicate less hunting pressure, although unreported cow harvest in Unit 21D may inflate bull ratios (Stout 2010). While Franzmann and Schwartz (2007) state that no data clearly indicates a “threshold bull:cow ratio” at which point pregnancy rates of females are significantly decreased, Stout (2010) provided guideline ratios of 15 bulls:100 cows as sufficient for breeding and ratios of 30-40 bulls:100 cows as sufficient for increased harvest opportunity and trophy hunting. Franzmann and Schwartz (2007) additionally state that low density moose populations may require higher bull:cow ratios than high density populations to ensure adequate reproduction. The Koyukuk River Moose Management Plan suggests managing for ratios of 30 bulls:100 cows in high density populations and 30-40 bulls:100 cows in low density populations (ADF&G 2001).

Trends in bull:cow ratios in the middle and lower Koyukuk TCAs are similar, while ratios in the Kaiyuh Slough TCA have been consistently higher (**Figure 2**). However, ratios in all TCA areas have decreased in the past three years. Between 2001 and 2018, bull:cow ratios in the middle and lower Koyukuk TCAs have averaged 25 bulls:100 cows, ranging from 17-34 bulls:100 cows (Bryant and Scotton 2018). Over the same time period, bull:cow ratios in the Kaiyuh Slough TCA averaged 52 bulls:100 cows, ranging between 38-69 bulls:100 cows (**Figure 2**) (Bryant and Scotton 2018). While bull:cow ratios in the middle and lower Koyukuk TCAs appear sufficient for breeding, they do not support increased harvest opportunity (Stout 2010, ADF&G 2001). Additionally, the 2017 bull:cow ratio in the Pilot Mountain TCA (part of the lower Koyukuk TCAs) was only 10 bulls:100 cows, reflecting heavy harvest pressure due to its accessibility from nearby communities (Bryant and Scotton 2017). Conversely, high bull:cow ratios in the Kaiyuh Slough TCA suggest a harvestable surplus of bulls, although the lowest bull:cow ratio was in 2018 (Stout 2010, ADF&G 2001).

Calf:cow ratios help to assess productivity and recruitment (Stout 2018). While calf:cow ratios can vary widely from year to year, fall ratios of < 20 calves:100 cows, 20-40 calves:100 cows, and > 40 calves:100 cows may indicate declining, stable, and growing moose populations, respectively provided overwinter mortality is either consistent or negligible (Stout 2010, ADF&G 2001, Franzmann and

Schwartz 2007). Stout (2018) estimated that 68% and 83% of calves die in their first five and 17 months, respectively, suggesting average cohort recruitment is 17%.

Calf:cow ratios fluctuated widely within all three of the TCAs within Unit 21D, although ratios in the Kaiyuh Slough TCA fluctuated the most (**Figure 3**). Between 2001 and 2018, calf:cow ratios within the middle Koyukuk TCAs averaged 24 calves:100 cows, ranging from 13-40 calves:100 cows. Ratios in this TCA area have consistently been below 40 calves:100 cows, suggesting this moose population is stable or declining. Over the same time period, calf:cow ratios in the lower Koyukuk TCAs averaged 37 calves:100 cows, ranging from 17-52 calves:100 cows. Since 2014, ratios in this TCA area have exceeded 40 calves:100 cows, contributing to the growth of this moose population. Also between 2001 and 2018, calf:cow ratios in the Kaiyuh Slough TCA averaged 41 calves:100 cows, ranging from 10-69 calves:100 cows (**Figure 3**). The lowest calf:cow ratios for all TCAs occurred in 2009, which may be a reflection of the severe 2008/09 winter (Bryant and Scotton 2018, Stout 2010). However, since 2009, calf:cow ratios in the Kaiyuh Slough TCA have exceeded 40 calves:100 cows in all years except 2018, indicating this moose population is growing.

Moose twinning rates are an indicator of nutritional status, body condition, and productivity (Stout 2018, 2012, Boertje et al. 2007). Between 2010 and 2019, twinning rates from survey areas within Unit 21D suggested above average nutritional status and productivity (Stout 2018, Scotton 2019, pers. comm.).

In summary, the status of the moose population in Unit 21D varies by location. Generally, the moose populations in the middle and lower Koyukuk TCAs are higher density with lower bull:cow ratios, whereas the moose population in the Kaiyuh Slough TCA is lower density with higher bull:cow ratios (**Figures 1, 2**). The middle Koyukuk TCAs warrant concern due to low productivity, low bull:cow ratios, and high hunting pressure (Bryant and Scotton 2018). In contrast, the lower Koyukuk and Kaiyuh Slough TCAs have an increasing moose population and excellent calf production and recruitment. The lower Koyukuk TCAs may support a limited winter cow hunt, although additional bull harvest is not advised due to low bull:cow ratios, while the Kaiyuh moose population can support additional harvest (Bryant and Scotton 2018, Scotton 2019, pers. comm.).

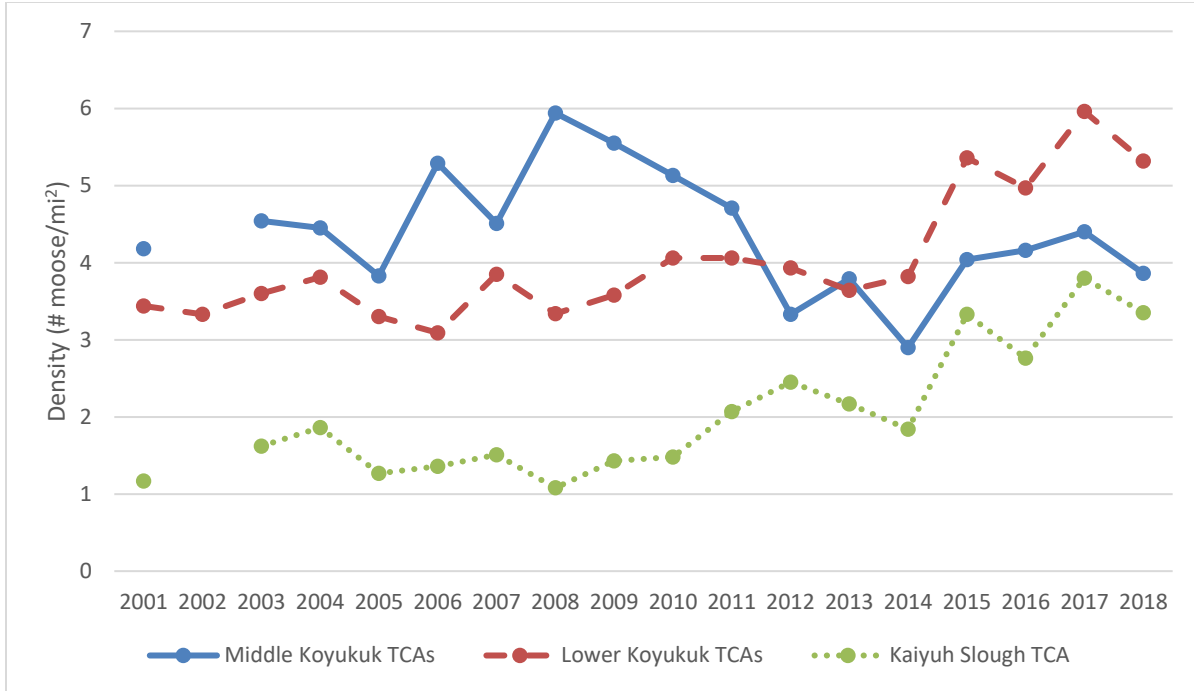


Figure 1. Moose densities within trend count areas in Unit 21D (Bryant and Scotton 2018).

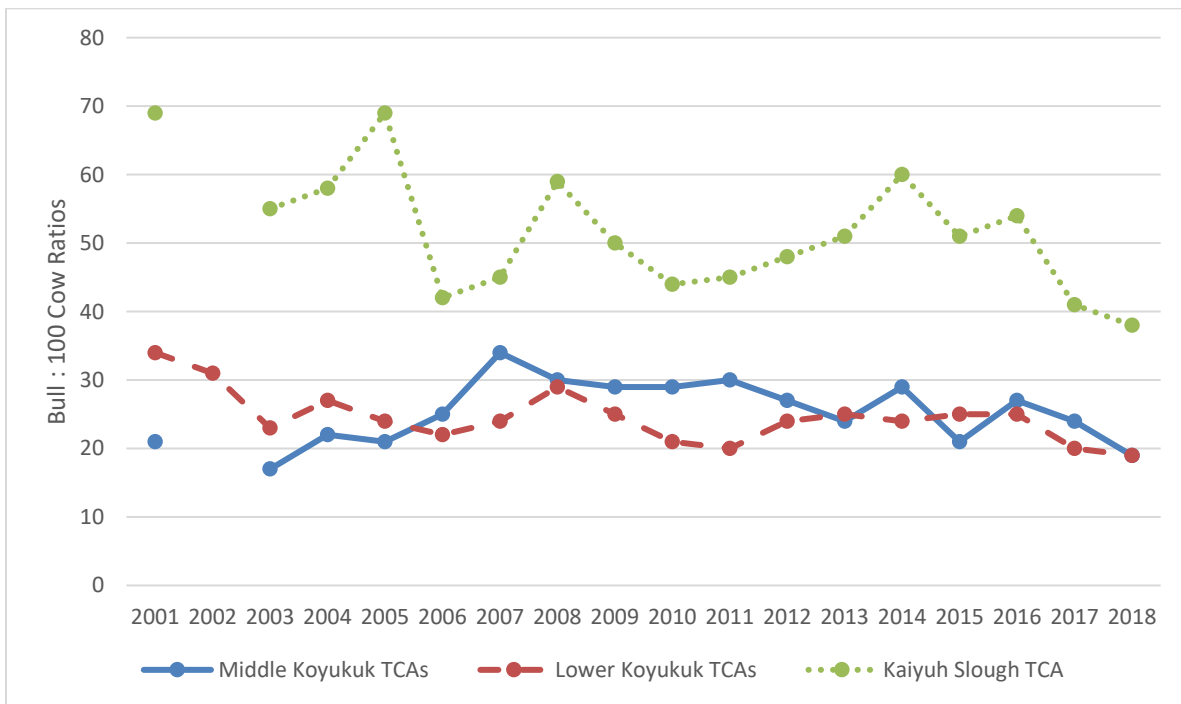


Figure 2. Bull:cow ratios within trend count areas in Unit 21D (Bryant and Scotton 2018).

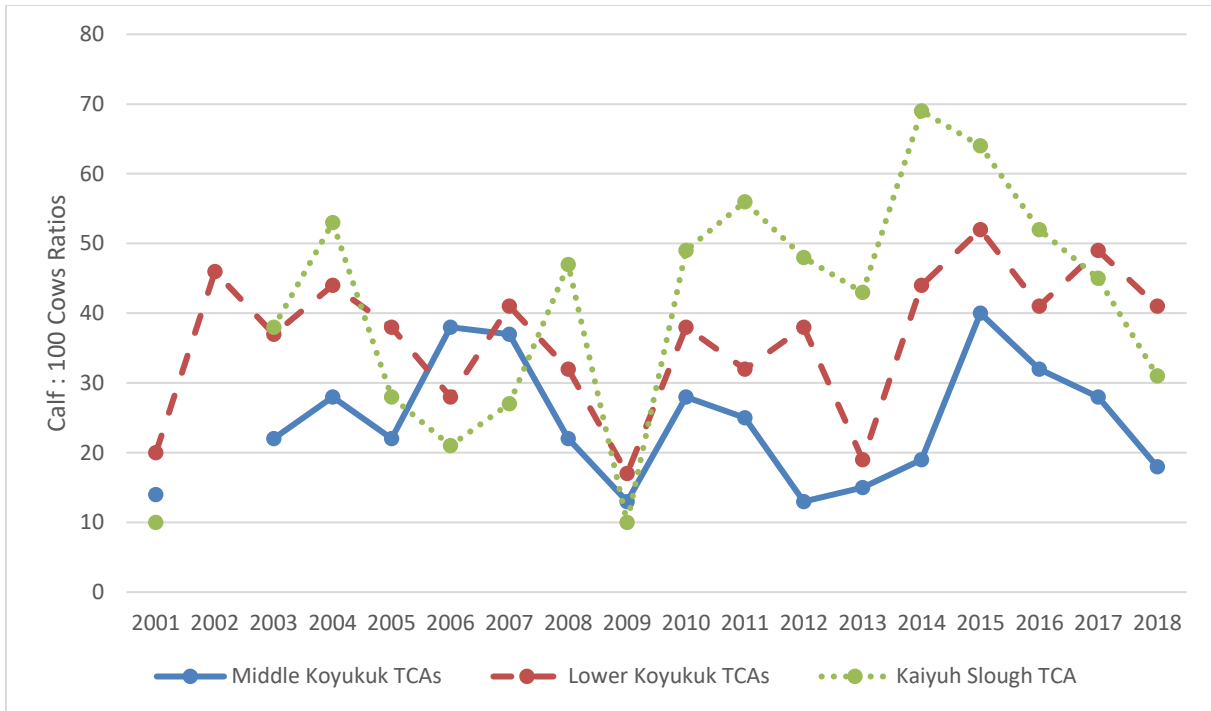


Figure 3. Calf:cow ratios in trend count areas within Unit 21D (Bryant and Scotton 2018).

Harvest History

ADF&G manages moose hunting in Unit 21D through subsistence registration hunts that require antler destruction, limited drawing permit hunts, and a recently (2019) established winter registration permit hunt in Unit 21D Southwest. A conservative harvest strategy for moose in Unit 21D is recommended, due to high unreported harvest rates and infrequent population estimates (Stout 2018). ADF&G monitors moose harvest in Unit 21D through registration and drawing permit hunt reports, subsistence household surveys, and a hunter check station on the Koyukuk River.

Since 1990, hunters accessing the Koyukuk CUA must stop at an ADF&G check station on the Koyukuk River, located 15 miles upstream from the village of Koyukuk (Stout 2018). The check station provides information to hunters on land ownership and local regulations, including licensing and reporting requirements. The check station is also used to collect data on harvested moose and number of hunters (Stout 2018).

Between 1990 and 2018, reported annual moose harvest in Unit 21D averaged 301 moose. Moose harvest peaked in 1997 at 466 moose and then declined to 205 moose in 2007 (WINFONET 2019). Since 2007, reported moose harvest has remained relatively stable, ranging between 244 and 318 moose (Figure 4). Since 2006, reported moose harvest has been evenly split between the Koyukuk CUA and Unit 21D remainder hunt areas as determined by registration permit numbers (Figure 4). Over the same time period, hunter numbers in Unit 21D averaged 634 hunters (Figure 5) (WINFONET 2019).

Between 1990 and 2018, the percentage of moose hunters in Unit 21D who were Federally qualified subsistence users averaged 46%, according to harvest reports (Figure 6) (WINFONET 2019). The

apparent increase in hunter numbers and in the relative number of Federally qualified subsistence users beginning in 1996 is likely due to duplicate permits being issued to individual hunters (Stout 2019, pers. comm.). Between 1990 and 2003, 36% of moose hunters in Unit 21D were Federally qualified subsistence users, whereas 55% of moose hunters were Federally qualified subsistence users between 2004 and 2018 (**Figure 6**). This apparent increase could also reflect improved harvest reporting by Federally qualified subsistence users.

Unreported harvests are estimated from ADF&G-Subsistence Division reports, historical information, and public interviews. Between 1996 and 2002, the estimated unreported harvest rates for Unit 21D residents and other hunters were 56% and 18%, respectively (Stout 2018). Since 2010, ADF&G has estimated the unreported moose harvest for Unit 21D at 125 moose, although any ceremonial or potlatch harvest is subtracted from this estimate (Stout 2018). Most unreported harvest occurs during the winter. Illegal cow harvest, particularly during the winter, is a management concern (Stout 2018).

Residents of Kaltag, Nulato, Koyukuk, Galena, and Ruby have traditional moose hunting areas within Unit 21D, often traveling long distances (100 miles) to access them (Stout 2018). However, high fuel prices in recent years have reduced travel. Nonlocal hunters in Unit 21D mostly concentrate their hunting activities within the Koyukuk River between the Kateel River and Dulbi Slough. Nonlocal hunting pressure may be shifting farther up the Koyukuk River as nonlocal hunters learn the logistics of accessing the area (Stout 2018).

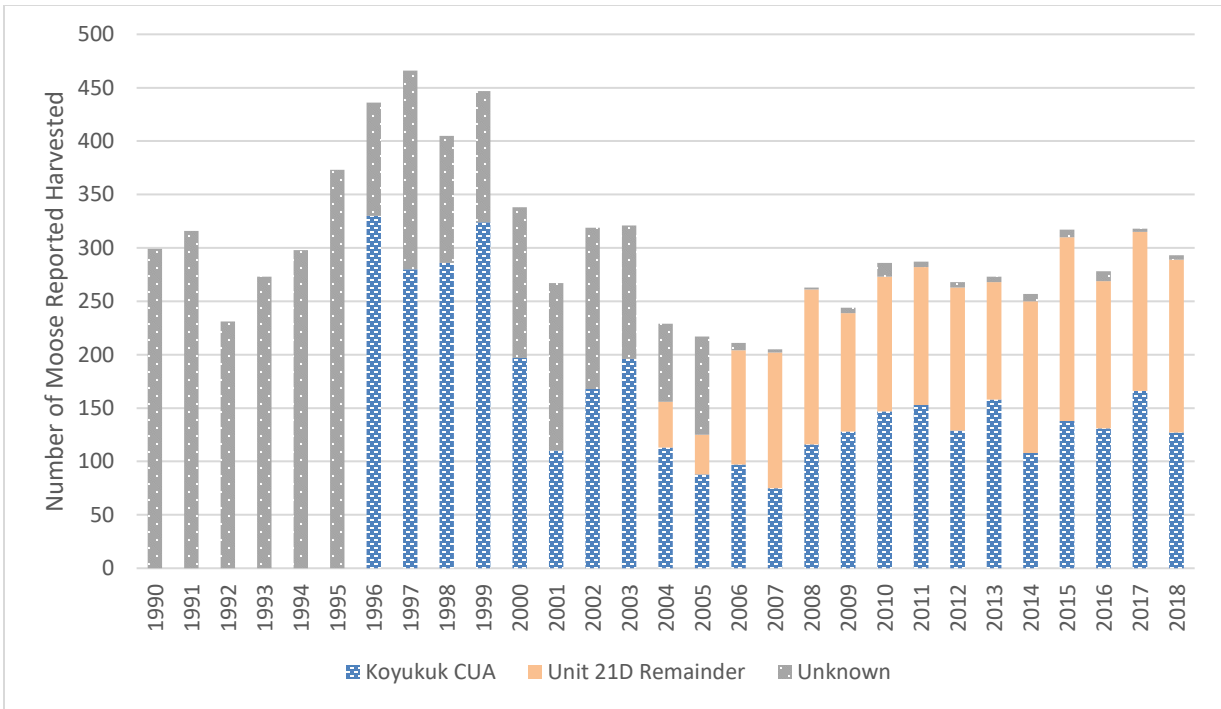


Figure 4. Reported moose harvest in Unit 21D by regulatory year (WINFONET 2019). Prior to 1996, the State managed Unit 21D as a single hunt area under a general hunt (harvest ticket). In 1996, the State divided Unit 21D into the Koyukuk CUA and Unit 21D remainder hunt areas, establishing a registration permit hunt in the Koyukuk CUA. In 2006, the State instituted a registration permit hunt in Unit 21D remainder. Since 2006, the unknown harvests are mostly moose harvested under a general hunt.

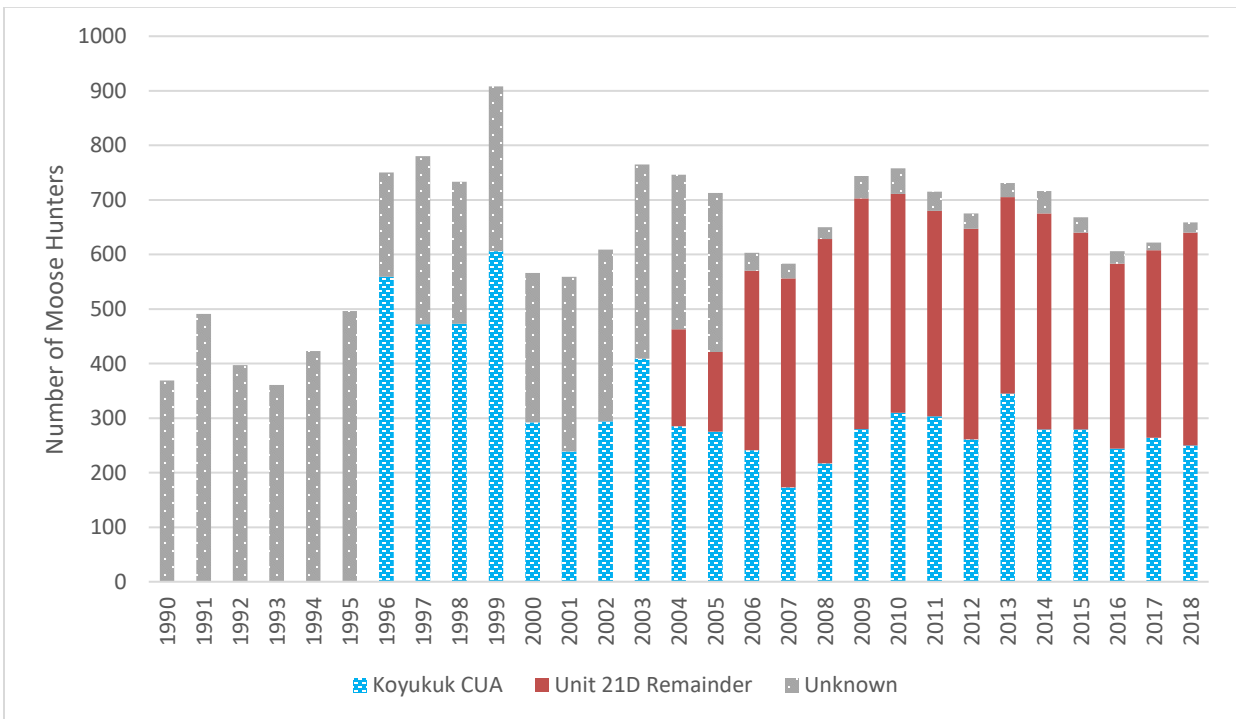


Figure 5. Number of moose hunters in Unit 21D (WINFONET 2019).

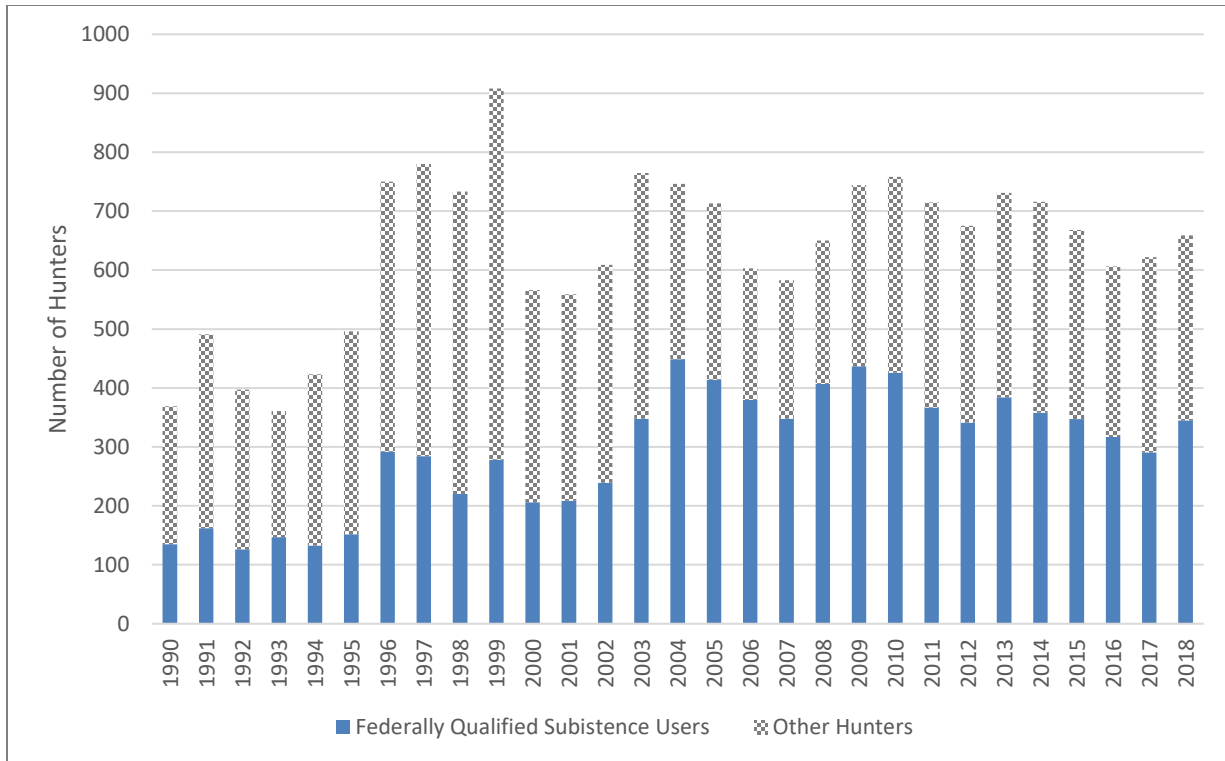


Figure 6. Number of moose hunters in Unit 21D who are Federally qualified subsistence users versus other hunters (WINFONET 2019). Hunters were classified as Federally qualified subsistence users by their reported residency in ADF&G's harvest database. As reported residency may not reflect the location of one's permanent residence, these data should be considered estimates.

Other Alternatives Considered

Establishing a cow-only December hunt was one alternative considered. This would accommodate the proponent's desire for more harvest opportunity as well as address the conservation concerns of harvesting too many bulls in December given the low bull:cow ratio in parts of the hunt area. User confusion over land ownership and misalignment between State and Federal regulations could result from this alternative. Cow quotas would also need to be coordinated with ADF&G. The Council may want to further consider this option.

Effects of the Proposal

If the Board adopted Proposal WP20-36, Federal and State regulations for moose in Unit 21D would be aligned. Specifically, a State registration permit (RM832) would be required to harvest bull moose in the Koyukuk CUA, aligning Federal and State reporting requirements. The State registration permit also requires antler destruction, which could burden Federally qualified subsistence users wishing to use antlers for handicrafts. However, a State registration permit (RM834) with identical, trophy-destruction requirements is already required under Federal regulations for Unit 21D remainder. A Federal registration permit would still be required to harvest cows in the Koyukuk CUA, if authorized by the in-season manager.

Additionally, the winter to-be-announced seasons in the Koyukuk CUA and Unit 21D remainder would be eliminated, while a 15 day to-be-announced March season would be established in Unit 21D Southwest, aligning State and Federal seasons. The Refuge states that, due to conservation concerns, the manager has never announced winter season openings in the Koyukuk CUA or Unit 21D remainder since the hunts were established in 2004. Eliminating those seasons would simplify regulations.

Conversely, additional harvest opportunities are supported in Unit 21D Southwest. The BOG added a 15-day to-be-announced State season for this area in 2019 through approval of Proposal 151. ADF&G announced a season Mar. 1-15, 2019 to provide additional harvest opportunity and slow the growth of the moose population. The Refuge also supported additional harvest in Unit 21D Southwest during March 2019, but did not open a Federal winter season due to the complexity of land ownership issues associated with a Federal hunt and because the State already planned to announce a March season (USFWS 2019). Establishing a 15-day to-be-announced winter season in Unit 21D Southwest would reduce regulatory complexity by aligning State and Federal seasons as well as prevent Federal regulations from being more restrictive than State regulations.

If the Board adopts Proposal WP20-37, a 15-day December to-be-announced season and a 15-day may-be-announced March season would be established for Unit 21D Southwest. The proponent's intention is for the ADF&G area biologist to announce an annual quota for the winter seasons. If the quota is not met during the December season, then a second season opening would be announced in March (WIRAC 2019). ADF&G intends the harvest quota to be 0.9% of the estimated number of cows to slow but not stop population growth. For the 2018/19 season, the harvest quota was 25 moose or no more than 20 cows (ADF&G 2019). The Federal in-season manager would need to announce harvest quotas for the Federal season, but could coordinate with the ADF&G area biologist to ensure Federal and State quotas match. The State also has a two-day reporting requirement, which the Federal in-season manager could also implement.

At their winter 2019 meeting, Western Interior Council members stated a December moose season in Unit 21D Southwest would be more useful to Federally qualified subsistence users than a March season as a moose harvested in December would provide meat over the winter. Council members also stated that a December season would allow time for the Yukon River to freeze, which would provide access to hunting areas across the river (WIRAC 2019).

During the Council's meeting, the ADF&G area biologist explained that Unit 21D had a winter season in March over 15 years ago, so one reason ADF&G proposed a March season to the BOG was simply because that's when a winter season had previously occurred in Unit 21D. Travel conditions also tend to be more reliable in March, as trails have been well established and freeze up has not been occurring until late December in recent years due to warmer falls. The Middle Yukon Fish and Game Advisory Committee (Middle Yukon AC) also unanimously supported a March season. The area biologist also noted that winter seasons should be to-be-announced as severe weather can prohibit meaningful hunting opportunities (WIRAC 2019).

The Refuge biologist expressed biological concerns for a December hunt. As bulls still have antlers in December, hunters may target bulls rather than cows. Given the low bull:cow ratios in the easily accessible and heavily hunted portion of Unit 21D Southwest between Nulato and Galena, additional bull harvest in this hunt area is not advised as it could further depress bull:cow ratios (Scotton 2019, pers. comm.). The intent of a March season is to slow the population growth of the Kaiyuh Flats moose population by harvesting 0.9% of the cow population. A March, rather than December season, would not discourage cow harvest since bulls and cows are difficult to differentiate during this time.

The Council's intent is to establish a December season in Unit 21D Southwest under both State and Federal regulations. Alignment of State and Federal regulations in that hunt area is particularly desirable due to its checkerboard pattern of land ownership (WIRAC 2019). If only the Board and not the BOG adopted a December hunt, users may not be able to effectively utilize the Federal season because of confusion over land ownership and law enforcement concerns. The Refuge, which administers Federal hunts in Unit 21D, states that a Federal-only December season would not benefit Federally qualified subsistence users because Federal public lands in the unit are not easily accessible and identifying land status in the field is impractical. Thus, the Refuge is strongly opposed to a Federal-only December moose season in Unit 21D Southwest (Rebarchik 2019, pers. comm.).

Therefore, BOG action on the State proposal (at the Interior/Northeast Arctic Region meeting in March 2020) may affect the outcome of WP20-37. The Council also stated that obtaining input from the Middle Yukon AC was integral to making a decision on WP20-37 (WIRAC 2019). However, if the December moose season is adopted by the Board but not by the BOG, clarification on permit requirements during the December season will be needed (i.e. can Federally qualified subsistence users hunt with a State registration permit in December or will a Federal permit need to be created).

OSM PRELIMINARY CONCLUSION

Support Proposal WP20-36 **with modification** to clarify regulatory language and to delegate authority to the Koyukuk/Nowitna/Innoko Refuge manager to announce season dates, harvest quotas, and sex restrictions via delegation of authority letter only (**Appendix 1**) and **take no action** on WP20-37.

The modified regulation should read:

Unit 21D—Moose

*Unit 21D—Koyukuk Controlled Use Area—1 bull **by State registration permit**; 1 antlerless moose by Federal permit if authorized by announcement by the Koyukuk/Nowitna/**Innoko** NWR manager.*

Harvest of cow moose accompanied by calves is prohibited. A harvestable surplus of cows will be determined for a quota

OR

*Sep. 1-25.
~~Mar. 1-5~~
season to be
announced.*

~~1 antlered bull by Federal permit, if there is no Mar. 1-5 season and if authorized by announcement by the Koyukuk/Nowitna NWR manager and BLM Central Yukon field office manager. A harvestable surplus of bulls will be determined for a quota. Announcement for the March and April seasons and harvest quotas will be made after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and Middle Yukon and Koyukuk River Fish and Game Advisory Committee.~~ ~~Apr. 10-15 season to be announced.~~

Unit 21D, that portion south of the South bank of the Yukon River, downstream of the up-river entrance of Kala Slough and west of Kala Creek – 1 moose by State registration permit. **Aug. 22-31. Sep. 5-25.**

Antlerless moose may be taken only during Sep. 21-25 season if authorized jointly by the Koyukuk/Nowitna/Innoko NWR Manager and the Central Yukon Field Office Manager, BLM. **Mar. 1 – Mar. 31 season may be announced.**

Antlerless moose may also be harvested during any winter seasons.

Harvest of cow moose accompanied by calves is prohibited.

Unit 21D, remainder—1 moose by State registration permit. **Aug. 22-31. Sep. 5-25. Mar. 1-5 season to be announced.**
~~however, Antlerless moose may be taken only during Sep. 21-25 and the Mar. 1-5 season if authorized jointly by the Koyukuk/Nowitna/Innoko NWR National Wildlife Refuge Manager and the Central Yukon Field Office Manager, BLM Bureau of Land Management.~~

~~Harvest of cow moose accompanied by calves is prohibited. During the Aug. 22-31 and Sep. 5-25 seasons, a State registration permit is required. During the Mar. 1-5 season, a Federal registration permit is required. Announcement for the antlerless moose seasons and cow quotas will be made after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and the Middle Yukon Fish and Game Advisory Committee~~

Justification

Unit 21D Southwest can support increased moose harvest as the population is growing. A March season provides more harvest opportunity for Federally qualified subsistence users and aligns with State regulations, reducing user confusion. However, due to low bull:cow ratios in portions of Unit 21D Southwest, increased bull harvest is not advised. Delegating authority to the in-season manager allows for management flexibility and better coordination with ADF&G and State seasons. Requiring a State

registration permit and eliminating the winter to-be-announced seasons in the Koyukuk CUA and Unit 21D remainder reduce regulatory complexity by aligning State and Federal regulations, which is particularly important in this subunit given its complexity of land ownership.

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Appendix 1

Refuge Manager
Koyukuk/Nowitna/Innoko National Wildlife Refuge
101 Front Street 287
Galena, Alaska 99741

Dear Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the manager of the Koyukuk/Nowitna/Innoko National Wildlife Refuge to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 21D for the management of moose on these lands.

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

DELEGATION OF AUTHORITY

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

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

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

- To announce season dates, harvest quotas, and sex restrictions for moose in Unit 21D.

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

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

The Federal public lands subject to this delegated authority are those within Unit 21D.

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

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

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

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

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

OSM, and affected State and Federal managers have been fully considered in the review of the proposed special action.

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

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

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

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

Sincerely,

Anthony Christianson
Chair

Enclosures

cc: Federal Subsistence Board

Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Policy Coordinator, Office of Subsistence Management
Wildlife Division Supervisor, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management

Chair, Western Interior Alaska Subsistence Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Special Assistant to the Commissioner, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

WP20–27 Executive Summary	
General Description	WP20-27 requests a unit-specific regulation for Unit 17 allowing use of a snowmachine to assist in the taking of a caribou and allowing caribou to be shot from a stationary snowmachine, using the regulatory language adopted by the Alaska Board of Game in February 2018. <i>Submitted by: Bristol Bay Subsistence Regional Advisory Council.</i>
Proposed Regulation	<p>§ ____ .26(n)(17)(iii) Unit 17—Unit-specific regulations</p> <p>...</p> <p>(D) In Unit 17, a snowmachine may be used to assist in the taking of a caribou and caribou may be shot from a stationary snowmachine. "Assist in the taking of a caribou" means a snowmachine may be used to approach within 300 yards of a caribou at speeds under 15 miles per hour, in a manner that does not involve repeated approaches or that causes a caribou to run. A snowmachine may not be used to contact an animal or to pursue a fleeing caribou.</p>
OSM Preliminary Conclusion	Support
Bristol Bay Subsistence Regional Advisory Council Recommendation	
Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	1 Oppose

**DRAFT
STAFF ANALYSIS
WP20-27**

ISSUES

Wildlife Proposal WP20-27, submitted by the Bristol Bay Subsistence Regional Advisory Council, requests a unit-specific regulation for Unit 17 allowing use of a snowmachine to assist in the taking of a caribou and allowing caribou to be shot from a stationary snowmachine, using the regulatory language adopted by the Alaska Board of Game in February 2018.

DISCUSSION

The proponent states that it submitted the proposal using the State’s regulatory language (see 5 AAC 92.080(4)(B)(viii), below) at the recommendation of a working group convened for this purpose. There was consensus among working group members that existing language found in State regulations was a good starting point. The working group consisted of representatives from the public, the Bristol Bay Regional Advisory Council, the Bristol Bay Native Association, the Togiak National Wildlife Refuge, the Alaska Department of Fish and Game, the Office of Subsistence Management, and State and Federal law enforcement offices. The proponent states that keeping State and Federal hunting regulations aligned and simple will be more understandable for all users.

Existing Federal Regulation

§ ____ .4 *Definitions*

Take or taking as used with respect to fish or wildlife, means to pursue, hunt, shoot, trap, net, capture, collect, kill, harm, or attempt to engage in any such conduct.

...

§ ____ .26 *Subsistence taking of wildlife*

...

(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

...

(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased.

(5) Using a motorized vehicle to drive, herd, or molest wildlife.

Proposed Federal Regulation

§____.26 Subsistence taking of wildlife

...

(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

...

(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased.

(5) Using a motorized vehicle to drive, herd, or molest wildlife.

§____.26(n)(17)(iii) Unit 17—Unit-specific regulations

...

(D) In Unit 17, a snowmachine may be used to assist in the taking of a caribou and caribou may be shot from a stationary snowmachine. "Assist in the taking of a caribou" means a snowmachine may be used to approach within 300 yards of a caribou at speeds under 15 miles per hour, in a manner that does not involve repeated approaches or that causes a caribou to run. A snowmachine may not be used to contact an animal or to pursue a fleeing caribou.

Existing State Regulations

AS 16.05.940. Definitions.

...

(34) "take" means taking, pursuing, hunting, fishing, trapping, or in any manner disturbing, capturing, or killing or attempting to take, pursue, hunt, fish, trap, or in any manner capture or kill fish or game.

5 AAC 92.080. Unlawful methods of taking game; exceptions

The following methods of taking game are prohibited:

...

(4) unless otherwise provided in this chapter, from a motor-driven boat or a motorized land vehicle, unless the motor has been completely shut off and the progress from the motor's power has ceased, except that a

...

(B) motorized land vehicle may be used as follows:

...

(viii) in Unit 17, a snowmachine may be used to assist in the taking of a caribou and caribou may be shot from a stationary snowmachine. "Assist in the taking of a caribou" means a snowmachine may be used to approach within 300 yards of a caribou at speeds under 15 miles per hour, in a manner that does not involve repeated approaches or that causes a caribou to run. A snowmachine may not be used to contact an animal or to pursue a fleeing caribou.

(5) except as otherwise specified, with the use of a motorized vehicle to harass game or for the purpose of driving, herding, or molesting game.

5 AAC 92.990. Definitions

(a) In addition to the definitions in AS 16.05.940 , in 5 AAC 84 – 5 AAC 92, unless the context requires otherwise,

...

(70) "harass" means to repeatedly approach an animal in a manner which results in the animal altering its behaviour;

NOTE: The complete text of 5 AAC 92.080(4)(B) is in **Appendix 1**.

Extent of Federal Public Lands

Unit 17 is comprised of approximately 28% Federal public lands and consists of 21% U.S. Fish and Wildlife Service, 4% Bureau of Land Management, and 3% National Park Service managed lands (see **Unit 17 Map**). U.S. Fish and Wildlife Service managed lands are within Togiak National Wildlife Refuge, and National Park Service managed lands are within Lake Clark National Park and Preserve.

Customary and Traditional Use Determination

The customary and traditional use determinations for caribou in Unit 17 are the following:

Residents of Units 9B, 17, Eek, Goodnews Bay, Napakiak, Lime Village, Platinum, Quinhagak, Stony River, and Tuntutuliak have a customary and traditional use determination for caribou in Unit 17A, that portion west of the Izavieknik River, Upper Togiak Lake, Togiak Lake, and the main course of the Togiak River.

Residents of Units 9B, 17, Akiachak, Akiak, Lime Village, Stony River, and Tuluksak have a customary and traditional use determination for caribou in Unit 17A, that portion north of Togiak Lake that includes Izavieknik River drainages.

Residents of Units 9B, 17, Kwethluk, Lime Village and Stony River have a customary and traditional use determination for caribou in Units 17A and 17B, those portions north and west of a line beginning from the Unit 18 boundary at the northwest end of Nenevok Lake, to the southern point of upper Togiak Lake, and northeast to the northern point of Nuyakuk Lake, northeast to the point where the Unit 17 boundary intersects the Shotgun Hills.

Residents of Units 9B, 17, Akiachak, Akiak, Bethel, Eek, Goodnews Bay, Napakiak, Platinum, Quinhagak, Lime Village, Stony River, Tuluksak, and Tuntutuliak have a customary and traditional use determination for caribou in Unit 17B, that portion of Togiak National Wildlife Refuge within Unit 17B.

Residents of Units 9B, 9C, 9E, 17, Lime Village, and Stony River have a customary and traditional use determination for caribou in Unit 17 remainder.

Regulatory History

In 1995, Proposal P95-52 requested that snowmachines and motor-driven boats be allowed for the taking of caribou and moose in Unit 25 during established seasons, except shooting from a snowmachine in motion was prohibited. There was no existing regulation on the use of motorized vehicles in Unit 25 prior to this. The Federal Subsistence Board (Board) adopted the recommendation of the Eastern Interior and Southcentral Alaska Councils who supported the proposal in recognition that methods change over time and because it supported subsistence uses.

In 2000, the Board adopted Proposal P00-53 with modification allowing the use of snowmachines to position a hunter and select individual caribou for harvest in Units 22 and 23. The Board did this to recognize a longstanding customary and traditional practice in the region (FWS 2000). However, the proponent had asked to position a caribou, not a hunter. The Interagency Staff Committee provided a rationale for the modification:

Following the Regional Council winter meetings, the Deputy Regional Director of the U.S. Fish and Wildlife Service (FWS), Alaska Region, met with the Assistant Regional Director for Law Enforcement, the Staff Committee member for FWS, the Refuge Supervisor for Northern Refuges, and the Native Liaison and, after lengthy discussion, agreed to recommend substituting “a hunter” for “caribou” in the proposal language. They agreed that this is consistent with conservation principles and existing agency regulations as long as herding does not occur and shooting from a moving snowmachine is prohibited (FWS 2000:13).

In 2012, Proposal WP12-53 was submitted by the Yukon Delta National Wildlife Refuge, and requested a unit specific regulation prohibiting a hunter in Unit 18 from pursuing with a motorized vehicle an ungulate that is “fleeing.” The Board adopted the proposal with modification and prohibited the pursuit

with a motorized vehicle of an ungulate that was “at or near a full gallop” in Unit 18, providing greater clarity of allowable methods of harvest (FWS 2012).

At its March 2014 meeting, the Alaska Board of Game adopted Proposal 177, which allows a hunter to use a snowmachine in Units 22, 23 and 26A to position a caribou, wolf, or wolverine for harvest, as long as these animals were shot from a stationary snowmachine (see *5 AAC 92.080(4)(B)(i)* at **Appendix 1**). The purpose of the proposal was to allow the use of snowmachines to track these animals.

In 2016, Proposal WP16-48, submitted by the Native Village of Kotzebue, requested that Federally qualified subsistence users be allowed to use snowmachines to position a caribou, wolf, or wolverine for harvest in Unit 23. The Board adopted the proposal with modification to allow this method of harvest only on those lands managed by the Bureau of Land Management. The Board recognized uses of snowmachines to position animals as customary and traditional practice. However, positioning animals by snowmachine is prohibited on National Park Service and U.S. Fish and Wildlife Service lands under agency-specific regulations. Bureau of Land Management regulatory language does not specifically prohibit the use of snowmachines to position animals for hunting and this harvest method is allowed on some State managed lands.

In the spring of 2017, Kenneth Nukwak of Manokotak submitted Proposal WP18-24 requesting that Federally qualified subsistence users be allowed to use a snowmachine to position caribou, wolves, and wolverines for harvest in Unit 17, provided the animals would not shot from a moving vehicle. During the fall 2017 meeting cycle, the Bristol Bay Subsistence Regional Advisory Council voted to oppose Proposal WP18-24, noting a lack of clear definitions for positioning and chasing of an animal.

At its February 2018 meeting in Dillingham, the Alaska Board of Game adopted Proposal 148, also submitted by Kenneth Nukwak of Manokotak, with modification. The original proposal requested that Federally qualified subsistence users be allowed to use a snowmachine to position caribou, wolves, and wolverines for harvest in Unit 17, provided the animals would not be shot from a moving vehicle. The modified regulation was limited to caribou and stated that a snowmachine may be used in Unit 17 to assist in the taking of a caribou, and caribou may be shot from a stationary snowmachine, with further clarification describing exactly how the snowmachine may be used for assistance (see *5 AAC 92.080(4)(B)(viii)* at **Appendix 1**).

At its winter meeting in March of 2018, the Bristol Bay Council voted to request Proposal WP18-24 be removed from the consensus agenda at the next Board meeting in Anchorage the following month. Reasoning for this included providing an opportunity for the Board to deliberate the proposal on record, in light of Board of Game deliberation, modification, and adoption of the same proposal on State lands in Unit 17. During the April 2018 Board meeting, Proposal WP18-24 was taken off the consensus agenda. Some public testimony was received in support of the proposal. The Board deliberated the proposal on record and rejected it.

Biological Background

Two distinct caribou populations are present in Unit 17. The Nushagak Peninsula Caribou Herd (NPCH) primarily occupies the ~425 mi² Nushagak Peninsula, which is the portion of Units 17A and 17C south of the Igushik River, the Tuklung River, and the Tuklung Hills. The Mulchatna Caribou Herd (MCH) ranges across ~60,000 square miles, primarily within Units 9B, 9C, 17A, 17B, 17C, 18, 19A and 19B (Woolington 2013).

NAPCH

The NPCH has experienced significant fluctuations in size. Following reintroduction in 1988, the population grew at a mean annual rate of 38% for the first 6 years. This unusual growth is attributed to the high proportion of females in the original translocation, high calf production and survival, the presence of previously unexploited habitat, and low predation and harvest rates. The population peaked in the late 1990s at approximately 1,300 caribou. Subsequently, calf recruitment and adult female survival decreased and the population fell below 500 caribou by 2006 (Aderman 2015).

Between 2007 and 2015, the population increased due to improved fall calf recruitment and adult female survival (Aderman 2015), reaching over 1,400 caribou. Since 2015, the minimum population size has declined nearly every year. This decline is due in part to the deliberately high harvest in recent years, particularly in RY2016/17. The most recent population survey occurred in July 2019, when the population was estimated to be 822 caribou, with a minimum count of 710. The population currently approximates the Nushagak Peninsula Caribou Management Plan's population objective, which is to maintain a population of 400–900 caribou and an optimum of 750 caribou (Aderman 2015). The most recent composition surveys were conducted in October 2018. These surveys estimated 25 bulls:100 cows, the lowest bull cow ratio since introduction, and 34 calves:100 cows, among the lowest on record (Aderman 2019, pers. comm.).

MCH

Like the NPCH, the MCH has experienced dramatic changes in population size, as well as in distribution. In the early 1980s, the population was estimated to include approximately 20,000 caribou. Its winter range included the north and west side of Iliamna Lake north of the Kvichak River, where it intermingled with the Northern Alaska Peninsula Caribou Herd. By the mid-1990s, the herd had grown to its peak size of approximately 200,000 caribou and had begun wintering in southern Unit 18 and southwestern Unit 19B. Subsequently, the herd began a period of decline that persisted until recently (Barten 2015).

In 2013, population estimate for the MCH was 18,308 caribou, the lowest estimate in over 30 years and well below the State's population objective of 30,000 – 80,000 caribou. Since then, the population appears to have grown. The most recent valid estimate, in 2016, was 27,242 caribou (Barten 2017).

The MCH experienced a steady increase in the bull:cow ratio between 2010 and 2016. In 2016, the ratio was 39 bulls:100 cows, which is the highest estimate since the late 1990s. In 2017, the bull:cow ratio declined to 32 bulls:100 cows, just below the State's management objective of 35 bulls:100 cows.

Calf:cow ratios have been variable, which is typical of caribou herds occupying interior and southwest Alaska. In 2017, the calf:cow ratio was 23 calves:100 cows, within the range of variability observed in recent years (Barten 2017, ADF&G 2018).

Cultural Knowledge and Traditional Practices

During his study years of 1964 and 1965, VanStone (1967:134) documented winter travel along the Nushagak River as occurring almost exclusively by dog team. During the winter months dog teams were used to harvest caribou, access trap lines, and provide for the transportation of supplies and people throughout the region. Hunters used traditional methods to harvest wildlife. These methods included a hunter moving animals towards another hunter's position. At the time of his study, VanStone was only aware of a few Bristol Bay residents that possessed snowmachines. Approximately 10 years later, when the Alaska Department of Fish and Game (ADF&G) first began conducting research on subsistence harvest activities, dog teams were barely mentioned. Instead, reports noted that the communities of Nushagak Bay were using mostly boat, aircraft, and snowmachine to access animals for harvest (Coiley-Kenner et al. 2003; Evans et al. 2013; Fall et al. 1986; Holen et al. 2012; Holen et al. 2005; Kreig et al. 2009; Schinchnes and Chythlook 1988; Seitz 1996; Wolfe et al. 1984; Wright et al. 1985).

In the past, prior to the use of snowmachines, people in the region were more nomadic. Residents of Southwest Alaska practiced an annual round of harvest activities that allowed them to effectively position themselves in proximity to important resources that supported their families through extended travel to seasonal subsistence camps. In a 2003 report, elders describe a harvest year that began at fish camp in the early summer, moved up the river to hunting and trapping camps for the fall and winter, traveled through mountain passes and down rivers to bays and estuaries for the spring harvest of migratory waterfowl and eggs, finally returning to fish camp once again in time for the salmon runs of early summer (La Vine and Lisac 2003). A trip such as this required travel by boat, sled, and foot and took the family hundreds of miles and 12 months to complete. As village life solidified around schools and economic opportunities, technological advances like boats with outboard motors and snowmachines allowed people to travel further over shorter periods of time in order to access the resources they once had to follow over seasons instead of hours.

Similarly, in north western Alaska where caribou harvest is an essential part of the subsistence way of life, Alaska Native people have also transitioned from dog team to snowmachine as a necessary continuance of their subsistence practice (Anderson et al. 1998). Some of the practice described in the following provides greater detail on how hunters might position themselves in order to strategically harvest an animal, but it also describes practices that can be identified as positioning an animal. In winter, there were advantages to using dog teams, and now snowmachines, for hunting caribou. When caribou were not present near a village or hunt camp, hunters needed to be mobile and travel long distances to locate bands of caribou. Sleds and snowmachines are now used together and allow transport of more hunters, gear, meat, and hides.

Discussion from the analysis of Proposal WP16-48 is relevant here, even if it describes characteristics or terms for hunting from more northern communities, as it can be a starting point for potential Council

discussions and public testimony on similar practices within Unit 17. In the context of caribou hunting, the Iñupiaq word *inillak* means “the hunter positions himself close to where the caribou would pass or cross depending on the way the wind is blowing . . . to the Iñupiat, *inillak* is quite different from herding and it is used specifically in caribou hunting. Herding means to gather animals such as reindeer into an enclosed area” (FWS 2000:19). Iñupiaq hunters position both themselves and caribou during a hunt. During the discussions in 2000, Mike Patkotak from the North Slope Subsistence Regional Advisory Council member said, “When you are *positioning caribou*, you’re out in the open; you’re not putting them into an enclosed corral. . . . You’re not trapping them into an enclosed area.” (FWS 2000:19).

Whether using dog team, snowmachine, or stalking, it is customary for “a hunter to go on one side of the herd and *unu* them towards the hunter waiting on the other side. This is also called *unuraq*, driving the caribou. This gives them a better position to be successful in their harvesting of the caribou that they want” (FWS 2000:22). The Iñupiaq word *unu* means to “cooperatively push or move the caribou. One or more hunters wait on one section of the hunting area and young runners go around behind the herd to make them head in the shooters’ direction” (FWS 2000:19). This remains a common practice in Unit 23, and the current preferred method of positioning both hunters and animals in winter is by snowmachine.

In Proposal WP12-53, contemporary practice of snowmachine use in Unit 18 was defined as follows:

Hunters from some lower Yukon River villages described hunting in the Andreafsky Mountains in the 1980s. It was unclear if the group was hunting caribou or reindeer from the nearby herd at Stebbins. Caribou/reindeer roamed in small groups, difficult to approach by snowmachine. Several hunters attempted to herd a group to locations where shots could be taken, such as up a cul-de-sac or toward a heavy bush line. In this description, the high speed chase was considered “a relatively risky, dare-devil technique” (Wolfe and Pete 1984: 9). Kwethluk hunters in the 1980s hunting with snowmachines reported hunting in upper Kwethluk and Kisaralik River valleys. “The high hills and low mountains scattered throughout the area provided lookouts where hunters can watch for caribou” (Coffing 1991:157) (FWS 2012).

Recent testimony from the Bristol Bay Regional Advisory Council and the Federal Subsistence Board described the significance of snowmachine use for the subsistence way of life in Bristol Bay and across the State. During debate on Proposal WP18-24, Council members and their constituents in the Bristol Bay region described historical practices of hunting caribou by “herding” them on foot or from dogsleds, often working in teams to approach caribou from multiple positions at once. Those testifying emphasized that it is fundamentally impossible to hunt for caribou in the open, flat terrain that characterizes much of southwestern Alaska without continually moving and herding caribou, which easily sense humans and do not remain stationary. As described by Kenneth Nukwak of Manokotak at the April 12, 2019 Federal Subsistence Board Meeting:

The caribou are always running off as soon as they see a snowmachine, they see us as predators already. . . that’s within their intrinsic nature, to run off, as soon as they see you within. . . a mile and a half, they see you on a sunny day, the leaders of the herd of caribou are already looking at your direction. If you look at them with your binoculars

they're already looking at you and the first thing they do, never fails, they're running off (FSB 2019:320).

Hunters explained that it is necessary to “nudge” caribou into the right spot so that they can be harvested, but hunters now fear being criminalized for this traditional tactic. Testimony indicated that harvesting caribou has always depended on the most efficient methods available. Use of snowmachines is the most efficient method available to subsistence hunters today and is part of a historical continuum. In the words of one Bristol Bay Council member:

We went from spears and traps to bow and arrows to rifles. From walking to now snowmachines. . . . It's still about harvesting in the most efficient way possible. Now that practice of gathering and moving herd that's past practices. It's been well documented and used. Of course a lot of that was when you were on foot or hunting with dogs. That idea, when viewed from the outside, it looks like we're harassing these animals. To us it's not harassment, it's about harvesting in the most efficient way that we can” (BBSRAC 2019:109).

Harvest History

NPCH

Except for regulatory years 2015/16 – 2017/18, caribou hunting on the Nushagak Peninsula has been limited to Federally qualified subsistence users. Typically, annual harvest of the NPCH has increased as the population has grown and harvest limits have increased. Prior to the 2016 regulatory year, annual reported harvest ranged from none taken when the population was small and harvest was heavily regulated, to over 125 when caribou were abundant and regulations were liberalized. Overall, harvest has averaged 62 caribou annually since 1994, the first year harvest was authorized (Aderman 2015, Aderman 2017, pers. comm.).

Historically, most of the reported harvest has occurred in February and March, due to good hunter access to the herd via snowmachine (Aderman and Lowe 2012). In recent years, total reported harvest has varied significantly due to variable winter weather and travel conditions. For instance, in 2015/16, when the population was at its largest but travel conditions were poor, only 64 caribou were reported harvested. The next year, when travel conditions were good, 378 caribou were reported harvested (Aderman 2017, pers. comm.). Only 14 caribou were reported harvested during the 2018/19 season due to early breakup (Aderman 2019, pers. comm.).

MCH

Like the NPCH, harvest of the MCH is affected by caribou abundance, environmental conditions, and harvest restrictions. Reported harvest of the MCH has decreased significantly since the early 2000s, when the herd was very large. Total reported caribou harvest declined from over 4,000 caribou in 2000 to less than 200 caribou in 2018. Harvest among all user groups declined during this period, but the decline was especially pronounced among non-local residents and nonresidents, owing to reduction of

State harvest limits in 2006 and elimination of the nonresident season in 2009 (ADF&G 2017; Barten 2017, pers. comm.).

Since 2009, harvest has averaged 312 caribou annually, 84% of which were taken by Federally qualified subsistence users. However, underreporting is known to occur and it is likely that reported harvest underestimates total harvest by local users. Among Federally qualified subsistence users, 58% of the total reported harvest was taken Jan. – Mar. and 28% of the total reported harvest was taken in Unit 17 since 2009 (ADF&G 2017, 2019).

Other Relevant Proposals

Proposal WP20-26 was also submitted by the Bristol Bay Council and would allow a hunter on a snowmachine in Unit 17 to position wolves and wolverines for harvest as long as a they were not shot from a moving snow machine.

Effects of the Proposal

If adopted, Proposal WP20-27 will provide regulatory language describing snowmachine use for the purposes of hunting caribou in Unit 17. It will also align state and Federal regulations on snowmachine use while hunting caribou in Unit 17. The proposed regulation is not expected to result in significant population changes for caribou as snowmachines are already extensively used in Unit 17 to access hunting grounds, and harvest numbers will continue to be managed by seasons and limits within regulation.

Adopting Proposal WP20-27 will not alter current prohibitions for snowmachine use on Federal lands. Currently, Federal regulations prohibit hunters taking caribou from a snowmachine in motion (§__.26 (b)(4), above), and Federal regulations prohibit using a snowmachine to pursue (§__.4, above), or drive, herd, or molest wildlife (§__.26 (b)(5), above). The proposed regulation provides clarification on how the hunter may use a snowmachine to assist in the taking of a caribou while remaining in compliance with existing regulations. However, the specificity of the proposed regulatory language could act to constrain use rather than support a traditional practice.

OSM PRELIMINARY CONCLUSION

Support Proposal WP20-27.

Justification

The use of snowmachines for subsistence purposes is a traditional practice in the Bristol Bay area and statewide. Public testimony and discussion at Council and Board meetings affirms the significance of snowmachine use to the subsistence way of life while seeking guidance on issues of compliance. The proposed regulatory language will provide clarity to the hunter on ensuring compliance while using a snowmachine to harvest caribou on Federal lands. Because it mirrors a recent addition to State regulation, it will reduce complexity between Federal and State regulations, and decrease the potential for

inadvertent noncompliance by Federally qualified subsistence users. This approach was agreed upon by a diverse group of stakeholders.

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APPENDIX 1

5 AAC 92.080. Unlawful methods of taking game; exceptions

The following methods of taking game are prohibited:

...

(4) unless otherwise provided in this chapter, from a motor-driven boat or a motorized land vehicle, unless the motor has been completely shut off and the progress from the motor's power has ceased, except that a

...

(B) motorized land vehicle may be used as follows:

i) In Units 22, 23, and 26(A), a snowmachine may be used to position a caribou, wolf, or wolverine, for harvest, and caribou, wolves and wolverines may be shot from a stationary snowmachine.

(ii) notwithstanding any other provision in this section, in the wolf control implementation areas specified in 5 AAC 92.111 - 5 AAC 92.113, 5 AAC 92.118, and 5 AAC 92.121 - 5 AAC 92.124, a snowmachine may be used to position a hunter to select an individual wolf for harvest, and wolves may be shot from a stationary snowmachine;

(iii) notwithstanding any other provision in this section, in Units 9(B), 9(C), 9(E), 17, 18, 19, 21, 22, 24, 25(C) and 25(D), except on any National Park Service or National Wildlife Refuge lands not approved by the federal agencies, a snowmachine may be used to position a hunter to select an individual wolf for harvest, and wolves may be shot from a stationary snowmachine;

(iv) notwithstanding any other provision in this section, in the bear control implementation areas specified in 5 AAC 92.111 - 5 AAC 92.113, 5 AAC 92.118, and 5 AAC 92.121 - 5 AAC 92.124, a snowmachine may be used to position a hunter to select an individual bear for harvest, and bears may be shot from a stationary snowmachine;

(v) notwithstanding any other provision in this section, in Units 9(B), 9(C), 9(E), 17, 22 and 25(C), except on any National Park Service or National Wildlife Refuge lands not approved by the federal agencies, an ATV may be used to position a hunter to select an individual wolf for harvest, and wolves may be shot from a stationary ATV;

(vi) under authority of a permit issued by the department;

(vii) in Unit 18, a snowmachine may be used to position a wolf or wolverine for harvest, and wolves or wolverines may be shot from a stationary snowmachine;

(viii) in Unit 17, a snowmachine may be used to assist in the taking of a caribou and caribou may be shot from a stationary snowmachine. "Assist in the taking of a caribou" means a snowmachine may be used to approach within 300 yards of a caribou at speeds under 15 miles per hour, in a manner that does not involve repeated approaches or that causes a caribou to run. A snowmachine may not be used to contact an animal or to pursue a fleeing caribou.

(5) except as otherwise specified, with the use of a motorized vehicle to harass game or for the purpose of driving, herding, or molesting game;

(6) with the use or aid of a machine gun, set gun, or a shotgun larger than 10 gauge;

(7) with the aid of

(A) a pit;

(B) a fire;

(C) artificial light, except that artificial light may be used.

WP20–43/44/45/46 Executive Summary

<p>General Description</p>	<p>Wildlife Proposal WP20-43 requests a year-round bull season for caribou in Unit 23. <i>Submitted by: Kotzebue Sound Fish and Game Advisory Committee.</i></p> <p>Wildlife Proposal WP20-44, submitted by the Kotzebue Sound AC, requests that calf harvest be permitted for caribou in Unit 23. <i>Submitted by: Kotzebue Sound Fish and Game Advisory Committee.</i></p> <p>Wildlife Proposal WP20-45 requests a year-round bull season for caribou in Unit 23. <i>Submitted by: Northwest Arctic Subsistence Regional Advisory Council.</i></p> <p>Wildlife Proposal WP20-46 requests a year-round bull season and that calf harvest be permitted for caribou in Unit 23. <i>Submitted by: Western Arctic Caribou Herd Working Group.</i></p>
<p>Proposed Regulation</p>	<p><u>WP20-43/45</u></p> <p>Unit 23—Caribou</p> <p><i>Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage</i></p> <p><i>5 caribou per day by State registration permit as follows:</i></p> <p><i>Calves may not be taken.</i></p> <p><i>Bulls may be harvested</i> <i>July 1–Oct. 14</i> <i>Feb. 1–June 30</i></p> <p><i>Cows may be harvested. However, cows accompanied by calves may not be taken July 15–Oct. 14.</i> <i>July 15–Apr. 30</i></p> <p><i>Unit 23, remainder</i></p> <p><i>5 caribou per day by State registration permit as follows:</i></p> <p><i>Calves may not be taken.</i> <i>July 1–Oct. 31</i> <i>Bulls may be harvested</i> <i>Feb. 1–June 30</i></p>

WP20–43/44/45/46 Executive Summary

	<p><i>Cows may be harvested. However, cows accompanied by calves may not be taken July 31–Oct. 14.</i></p> <p><i>Federal public lands within a 10-mile-wide corridor (5 miles either side) along the Noatak River from the western boundary of Noatak National Preserve upstream to the confluence with the Cutler River; within the northern and southern boundaries of the Eli and Agashashok River drainages, respectively; and within the Squirrel River drainage are closed to caribou hunting except by federally qualified subsistence users hunting under these regulations</i></p> <p><u>WP20-44</u></p> <p>Unit 23—Caribou</p> <p><i>Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage</i></p> <p><i>5 caribou per day by State registration permit as follows:</i> <i>Calves may not be taken.</i> <i>Bulls may be harvested</i></p> <p><i>Cows may be harvested. However, cows accompanied by calves may not be taken July 15–Oct. 14.</i></p> <p><i>Unit 23, remainder</i></p> <p><i>5 caribou per day by State registration permit as follows:</i> <i>Calves may not be taken.</i> <i>Bulls may be harvested</i></p>	<p><i>July 31–Mar. 31</i></p> <p><i>July 1–Oct. 14</i> <i>Feb. 1–June 30</i></p> <p><i>July 15–Apr. 30</i></p> <p><i>July 1–Oct. 31</i> <i>Feb. 1–June 30</i></p>
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WP20-43/44/45/46 Executive Summary

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July 31–Mar. 31

~~*July 1–Oct. 14*~~

~~*Feb. 1–June 30*~~

July 15–Apr. 30

~~*July 1–Oct. 31*~~

WP20–43/44/45/46 Executive Summary

	<p><i>Bulls may be harvested</i> <i>Feb. 1–June 30</i></p> <p><i>Cows may be harvested. However, cows accompanied by calves may not be taken July 31–Oct. 14.</i> <i>July 31–Mar. 31</i></p> <p><i>Federal public lands within a 10-mile-wide corridor (5 miles either side) along the Noatak River from the western boundary of Noatak National Preserve upstream to the confluence with the Cutler River; within the northern and southern boundaries of the Eli and Agashashok River drainages, respectively; and within the Squirrel River drainage are closed to caribou hunting except by federally qualified subsistence users hunting under these regulations</i></p>
OSM Preliminary Conclusion	Support Proposal WP20-46 and take no action on Proposals WP20-43, WP20-44, and WP20-45.
Western Interior Alaska Subsistence Regional Advisory Council Recommendation	
Seward Peninsula Subsistence Regional Advisory Council Recommendation	
Northwest Arctic Subsistence Regional Advisory Council Recommendation	
North Slope Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	

WP20–43/44/45/46 Executive Summary	
ADF&G Comments	
Written Public Comments	None

**DRAFT STAFF ANALYSIS
WP20-43/44/45/46**

ISSUES

Wildlife Proposal WP20-43, submitted by the Kotzebue Sound Fish and Game Advisory Committee (Kotzebue Sound AC), requests a year-round bull season for caribou in Unit 23.

Wildlife Proposal WP20-44, submitted by the Kotzebue Sound AC, requests that calf harvest be permitted for caribou in Unit 23.

Wildlife Proposal WP20-45, submitted by the Northwest Arctic Subsistence Regional Advisory Council (Northwest Arctic Council), requests a year-round bull season for caribou in Unit 23.

Wildlife Proposal WP20-46, submitted by the Western Arctic Caribou Herd Working Group (WACH Working Group), requests a year-round bull season and that calf harvest be permitted for caribou in Unit 23.

DISCUSSION

The Kotzebue Sound AC, the proponent for WP20-43, noted that a variety of conservation measures were taken during the recent decline in the WACH population, including closing the bull season during the rut. As local people generally harvest bulls in September and avoid them during rut, little effect on traditional hunting practices was anticipated. However, in recent years, the timing of the Western Arctic Caribou Herd (WACH) migration has occurred later in the year, resulting in the bull season already being closed when caribou pass through accessible areas. This has shifted harvest pressure to cows, which could become a conservation concern. If the bull season remained open year-round, hunters could harvest young bulls that do not stink during rut like older bulls, and conserve cows to help grow the herd. Compliance issues associated with distinguishing between bulls and cows for harvest would also be alleviated.

The Kotzebue Sound AC, the proponent for WP20-44, states that removing the prohibition on calf harvest would allow harvest of orphaned calves that would otherwise succumb to predators. The proponent states that no one targets calves, but in rare circumstances, it makes sense to harvest an abandoned calf for human consumption rather than leaving it for other predators.

The Northwest Arctic Council, the proponent for WP20-45, states that eliminating the bull caribou closure would allow harvest of young bulls, reducing harvest pressure on cows. As the timing of fall caribou migration has shifted later in the year, only the cow season is open when caribou are accessible for harvest. The proponent also states that eliminating the bull closure takes pressure off of Federally qualified subsistence users, who can spend a lot of time and fuel accessing hunting areas, to harvest caribou during a certain timeframe.

The WACH Working Group, the proponent for WP20-46, provided the same rationale for the removal of the bull closure and prohibition on calf harvest as the Kotzebue AC, the proponent for WP20-43/44 (see above).

Existing Federal Regulations

Unit 23—Caribou

Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage

5 caribou per day by State registration permit as follows:

Calves may not be taken.

Bulls may be harvested

July 1–Oct. 14

Feb. 1–June 30

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

July 15–Apr. 30

Unit 23, remainder

5 caribou per day by State registration permit as follows:

Calves may not be taken.

Bulls may be harvested

July 1–Oct. 31

Feb. 1–June 30

Cows may be harvested. However, cows accompanied by calves may not be taken July 31–Oct. 14.

July 31–Mar. 31

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

Proposed Federal Regulations

WP20-43/45

Unit 23—Caribou

Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage

5 caribou per day by State registration permit as follows:

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WP20-44

Unit 23—Caribou

Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage

5 caribou per day by State registration permit as follows:

~~Calves may not be taken.~~

Bulls may be harvested

July 1–Oct. 14

Feb. 1–June 30

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

July 15–Apr. 30

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WP20-46

Unit 23—Caribou

Unit 23—that portion which includes all drainages north and west of, and including, the Singoalik River drainage

5 caribou per day by State registration permit as follows:

~~Calves may not be taken.~~

Bulls may be harvested

~~July 1–Oct. 14~~

~~Feb. 1–June 30~~

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

July 15–Apr. 30

*Unit 23, remainder**5 caribou per day by State registration permit as follows:**~~Calves may not be taken.~~**Bulls may be harvested**~~July 1–Oct. 31~~**~~Feb. 1–June 30~~**Cows may be harvested. However, cows accompanied by calves may not be taken July 31–Oct. 14.**July 31–Mar. 31*

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

Existing State Regulations**Unit 23—Caribou**

<i>23, north of and including Singoalik River drainage</i>	<i>Residents—Five caribou per day; however, calves may not be taken. Permits available online at http://hunt.alaska.gov or in person in Kotzebue, Barrow, and at license vendors in Unit 23 and 26A beginning June 20.</i>	<i>Bulls</i>	<i>RC907</i>	<i>July 1-Oct. 14 Feb. 1-June 30</i>
		<i>Cows</i>	<i>RC907</i>	<i>Jul. 15-Apr. 30</i>
	<i>Nonresidents—One bull; however, calves may not be taken.</i>		<i>HT</i>	<i>Aug. 1-Sept. 30</i>
<i>23 remainder</i>	<i>Residents—Five caribou per day; however, calves may not be taken. Permits available online at http://hunt.alaska.gov or in person in Kotzebue, Barrow, and at license vendors in Unit 23 and 26A beginning June 20.</i>	<i>Bulls</i>	<i>RC907</i>	<i>July 1-Oct. 14 Feb. 1-June 30</i>
		<i>Cows</i>	<i>RC907</i>	<i>Sept. 1-Mar. 31</i>
	<i>Nonresidents—One bull; however, calves may not be taken.</i>		<i>HT</i>	<i>Aug. 1-Sept. 30</i>

Extent of Federal Public Lands

Unit 23 is comprised of 71% Federal public lands and consist of 40% National Park Service (NPS) managed lands, 22% Bureau of Land Management (BLM) managed lands, and 9% U.S. Fish and Wildlife Service (USFWS) managed lands.

Customary and Traditional Use Determinations

Residents of Unit 21D west of the Koyukuk and Yukon Rivers, Galena, 22, 23, 24 including residents of Wiseman but not including other residents of the Dalton Highway Corridor Management Area, and 26A have a customary and traditional use determination for caribou in Unit 23 (**Map 1**).

Regulatory History

In 1990, the caribou hunting season in Unit 23 was open year round with a five caribou per day harvest limit and a restriction on the harvest of cows May 16-June 30.

In 1995, the Federal Subsistence Board (Board) adopted Proposal P95-51 to increase the caribou harvest limit from five to 15 caribou per day so that subsistence hunters could maximize their hunting efforts when caribou were available (FWS 1995a).

In 1997, the Board adopted Proposal P97-66 with modification to provide a customary and traditional use determination for caribou in Unit 23 for rural residents of Unit 21D west of the Koyukuk and Yukon rivers, Galena, Units 22, 23, 24 including residents of Wiseman, but not other residents of the Dalton Highway Corridor Management Area and Unit 26A (**Map 1**, FWS 1995b, 1997).

In 2000, the Board adopted Proposal WP00-53 with modification, allowing the use of snowmachines to position a hunter to select individual caribou for harvest in Units 22 and 23. This was done to recognize a customary and traditional practice in the region (FWS 2000a).

In 2013, an aerial photo census indicated significant declines in the Teshekpuk Caribou herd (TCH), WACH, and possibly the Central Arctic Caribou Herd (CACH) populations (Caribou Trails 2014). In response, the Alaska Board of Game (BOG) adopted modified Proposal 202 (RC76) in March 2015 to reduce harvest opportunities for both Alaska residents and nonresidents within the range of the WACH and the TCH. These regulation changes – which included lowering bag limits for nonresidents from two caribou to one bull, reductions in bull and cow season lengths, the establishment of new hunt areas, and prohibiting calf harvest – were adopted to slow or reverse the population decline. The regulatory changes took effect on July 1, 2015.

In 2015, four special actions, WSA15-03/04/05/06, requesting changes to caribou regulations in Units 23, 24, and 26, were submitted by the North Slope Council and approved with modification by the Board, effective July 1, 2015. Temporary Special Action WSA15-03 requested designation of a new hunt area for caribou in the northwest corner of Unit 23 where the harvest limit would be reduced from 15 to five caribou per day, the harvest season would be shortened for bulls and cows, and the harvest of calves would be

prohibited. The Board did not establish a new hunt area, applying the restrictions to all of Unit 23 and also prohibited the harvest of cows with calves. These State and Federal regulatory changes were the first time that harvest restrictions had been implemented for the WACH in over 30 years.

Five proposals (WP16-37, WP16-48, WP16-49/52, and WP16-61) concerning caribou regulations in Unit 23 were submitted to the Board for the 2016-2018 wildlife regulatory cycle. The Board adopted WP16-48 with modification to allow the positioning of a caribou, wolf, or wolverine for harvest on BLM lands only. Proposal WP16-37 requested that Federal caribou regulations mirror the new State regulations across the ranges of the WACH and TCH (Units 21D, 22, 23, 24, 26A, and 26B). The Board adopted Proposal WP16-37 with modification to reduce the harvest limit to five caribou per day, restrict bull harvest during rut and cow harvest around calving, prohibit the harvest of calves and the harvest of cows with calves before weaning (mid-Oct.), and to create a new hunt area in the northwest corner of Unit 23. The Board took no action on the remaining proposals (WP16-49/52, and WP16-61) due to action taken on WP16-37.

In 2015, the Northwest Arctic Council submitted a temporary special action request (WSA16-01) to close caribou hunting on Federal public lands in Unit 23 to non-Federally qualified users (NFQU) for the 2016/17 regulatory year. The Council stated that their request was necessary for conservation purposes but also needed because nonlocal hunting activities were negatively affecting subsistence harvests. In April 2016, the Board approved WSA16-01, basing its decision on the strong support of the Northwest Arctic and North Slope Councils, public testimony in favor of the request, as well as concerns over conservation and continuation of subsistence uses (FSB 2016).

In June 2016, the State submitted a special action request (WSA16-03) to reopen caribou hunting on Federal public lands in Unit 23 to NFQU, providing new biological information (e.g. calf recruitment, weight, body condition) on the WACH. The State specified that there was no biological reason for the closure and that it could increase user conflicts. In January 2017, the Board rejected WSA16-03 due to the position of all four affected Councils (Northwest Arctic, North Slope, Seward Peninsula, and Western Interior) as well as public testimony and Tribal consultation comments opposing the request. Additionally, the Board found the new information provided by the State to be insufficient to rescind the closure.

In January 2017, the BOG adopted Proposal 2, requiring registration permits for residents hunting caribou within the range of the Western Arctic and Teshekpuk herds in Units 21, 23, 24, and 26 (a similar proposal was passed for Unit 22 in 2016). The Alaska Department of Fish and Game (ADF&G) submitted the proposal in order to better monitor harvest and improve management flexibility. Also in January 2017, the BOG rejected Proposal 45, which proposed requiring big game hunting camps to be spaced at least three miles apart along the Noatak, Agashashok, Eli, and Squirrel Rivers. The proposal failed as it would be difficult to enforce.

In March 2017, the Northwest Arctic Council submitted temporary special action request, WSA17-03 to close caribou hunting on Federal public lands in Unit 23 to non-Federally qualified users for the 2017/18 regulatory year. The Council stated that the intent of the proposed closure was to ensure subsistence use in the 2017/18 regulatory year, to protect declining caribou populations, and to reduce user conflicts. The

Board voted to approve WSA17-03 with modification to close all Federal public lands within a 10 mile wide corridor (5 miles either side) along the Noatak River from the western boundary of Noatak National Preserve upstream to the confluence with the Cutler River; within the northern and southern boundaries of the Eli and Agashashok River drainages, respectively; and within the Squirrel River drainage, to caribou hunting except by Federally qualified subsistence users for the 2017/18 regulatory year. The Board considered the modification a reasonable compromise for all users, and that closure of the specified area was warranted in order to continue subsistence use.

In April 2018, the Board adopted Proposals WP18-46 with modification and WP18-48 (effective July 1, 2018). Proposal WP18-46 requested closing caribou hunting on Federal public lands in Unit 23 to non-Federally qualified users (similar to WSA16-01 and WSA17-03). The Board adopted WP18-46 with the same modification as WSA17-03 (see above) as the Northwest Arctic, Western Interior, and Seward Peninsula Councils as well as the village of Noatak supported this modification and viewed the targeted closure as effectively addressing user conflicts and the continuation of subsistence uses. The Board also adopted WP18-48 to require State registration permits for caribou hunting in Units 22, 23, and 26A to improve harvest reporting and herd management, and to align with State regulations.

Controlled Use Areas

In 1988, the Traditional Council of Noatak submitted a proposal to the BOG to create the Noatak Controlled Use Area (CUA) in order to restrict the use of aircraft in any manner for big game hunting Aug. 15 - Sept. 20 due to user conflicts (Fall 1990:86). The proposed CUA extended five miles on either side of the Noatak River, from the mouth of the Eli River upstream to the mouth of the Nimiuktuk River, including the north side of Kivivik Creek (ADF&G 1988:47). The BOG adopted the proposal with modification to close a much smaller area extending from the Kugururok River to Sapun Creek from Aug. 20-Sept. 20.

The CUA was expanded in 1994 and modified in 2017 (Betchkal 2015, Halas 2015, ADF&G 2017a). From 1994-2016, the Noatak CUA consisted of a 10-mile wide corridor (5 miles either side) along the Noatak River from its mouth to Sapun Creek with approximately 80 miles of the CUA within Noatak National Preserve (NP) (**Map 2**, Betchkal 2015). The closure dates from 1994-2009 were Aug. 25-Sept. 15. In 2009 (effective 2010), the BOG adopted Proposal 22 to expand the closure dates to Aug. 15-Sept. 30 in response to the timing of caribou migration becoming less predictable (ADF&G 2009). During the 2016/17 BOG regulatory cycle, the Noatak/Kivalina & Kotzebue AC proposed (Proposal 44) extending the upriver boundary of the Noatak CUA to the Cutler River, citing increased user conflicts as their rationale (ADF&G 2017b). In January 2017, the BOG approved amended Proposal 44 to shift the boundaries of the Noatak CUA to start at the mouth of the Agashashok River and end at the mouth of the Nimiuktuk River with approximately 105 miles within Noatak NP (**Map 2**, ADF&G 2017a).

In 1990, the Noatak CUA was adopted under Federal regulations. In 1995, the Board adopted Proposal P95-50 to expand the time period and area of the CUA to Aug. 25-Sept. 15 and the mouth of the Noatak River upstream to the mouth of Sapun Creek, respectively, which aligned with current State regulations. In 2008, Proposals WP08-50 and 51 requested modifications to the Noatak CUA dates. These proposals were submitted in response to caribou migration occurring later in the season, to improve caribou harvest

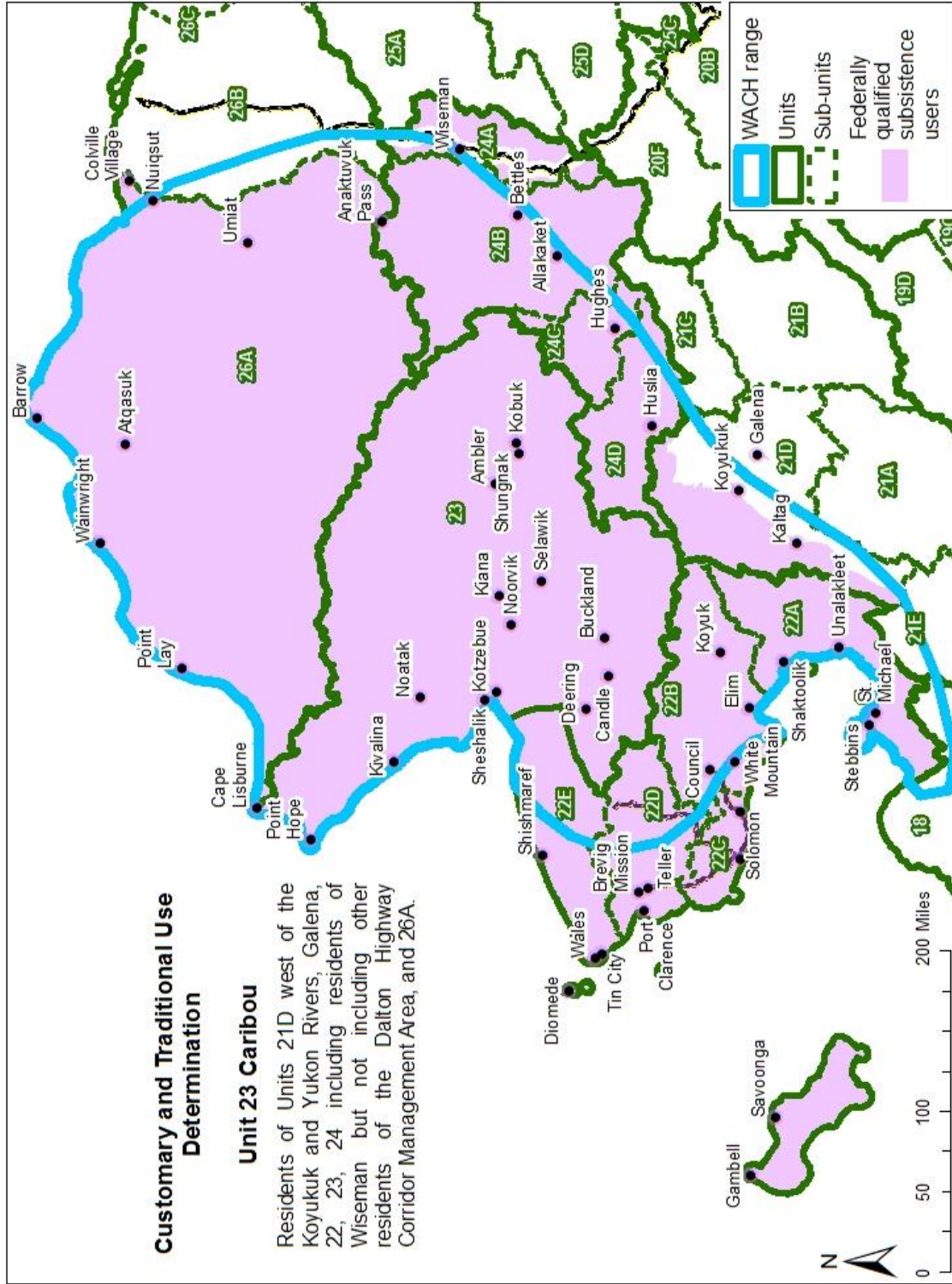
for subsistence users, and to decrease conflicts between local and nonlocal hunters. The Board deferred these proposals to the next regulatory cycle. In 2010, Proposals WP10-82, 83, and 85 requested similar date changes. The Board adopted WP10-85 to expand the time period during which aircraft are restricted in the Noatak CUA to Aug. 15-Sept. 30, which aligned with the current State regulations.

In 2011, Selawik National Wildlife Refuge (NWR) designated refuge lands in the northwest portion of the refuge as closed to big game hunting by commercial guides and transporters through their comprehensive conservation plan (FWS 2011, 2014). These refuge lands are intermingled with private lands near the villages of Noorvik and Selawik (**Map 2**). The purpose of this closure was to minimize trespass on private lands and to reduce user conflicts (FWS 2011).

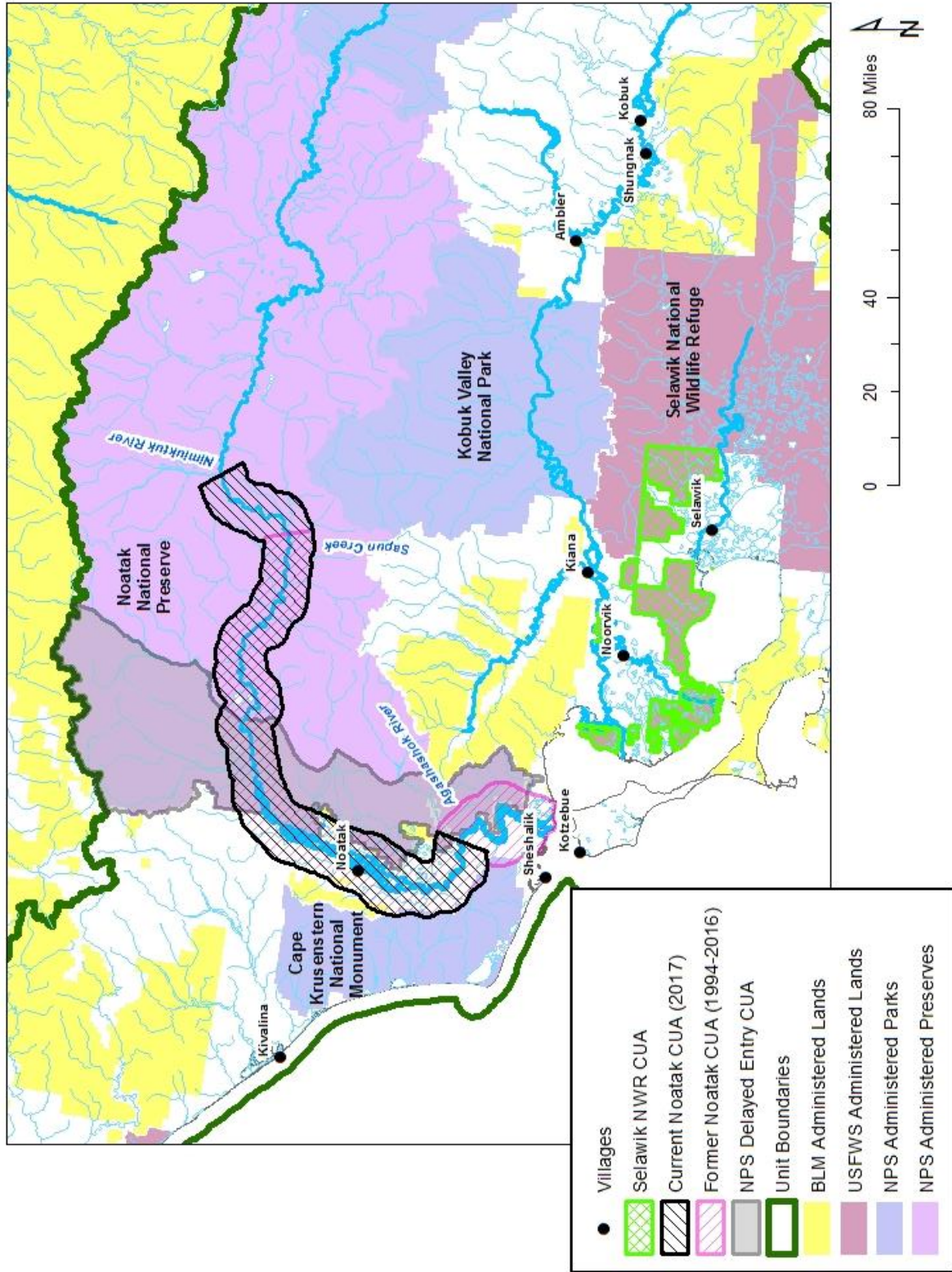
In 2012, the NPS established a Special Commercial Use Area or “delayed entry zone” in the western portion of the Noatak NP (Halas 2015, Fix and Ackerman Fix 2015). Within this zone, transporters can only transport nonlocal caribou hunters after September 15 unless otherwise specified by the Western Arctic Parklands (WEAR) superintendent in consultation with commercial operators, other agencies and local villages (Halas 2015). The purpose of this zone is to allow a sufficient number of caribou to cross the Noatak River and establish migration routes, to limit interactions between local and nonlocal hunters, and to allow local hunters the first opportunity to harvest caribou in that area (**Map 2**, FWS 2014, Halas 2015). To date, the Superintendent has not used his/her authority to alter the closure dates in response to changes in caribou herd migration or to meet the needs of local hunters (Halas 2015).

Current Events

The Kotzebue Sound AC and the WACH Working Group submitted proposals to the BOG that mirror Proposal WP20-43 (eliminate bull closure) and WP20-44 (eliminate prohibition on calves) to maintain alignment of State and Federal regulations and reduce user confusion. The BOG will act on these proposals at its Arctic/Western Region meeting in January 2020.



Map 1. Customary and Traditional (C&T) Use Determination for caribou in Unit 23. C&T Determinations indicate which Alaska rural residents are Federally qualified subsistence users. The range of the WACH is included for context.



Map 2. Federal and State Hunting Management Areas in Unit 23.

Biological Background

Caribou abundance naturally fluctuates over decades (Gunn 2001, WACH Working Group 2011). Gunn (2001) reports the mean doubling rate for Alaskan caribou as 10 ± 2.3 years. Although the underlying mechanisms causing these fluctuations are uncertain, climatic oscillations (i.e. Arctic and Pacific Decadal Oscillations) may play an important role (Gunn 2001, Joly et al. 2011). Climatic oscillations can influence factors such as snow depth, icing, forage quality and growth, wildfire occurrence, insect levels, and predation, which all contribute to caribou population dynamics (Joly et al. 2011). Density-dependent reduction in forage availability, resulting in poorer body condition may exacerbate caribou population fluctuations (Gunn 2001).

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

The TCH, WACH, and CACH have ranges that overlap in Unit 26A (**Map 3**), and there can be considerable mixing of herds during the fall and winter. During the 1970s, there was little overlap between these herds, but the degree of mixing seems to be increasing. Currently, the WACH, TCH, and CACH populations are all declining (Dau 2011, 2015a, Lenart 2011, Parrett 2011, 2015c, 2015d).

The WACH has historically been the largest caribou herd in Alaska and has a home range of approximately 157,000 square miles in northwestern Alaska. In the spring, most mature cows move north to calving grounds in the Utukok Hills, while bulls and immature cows lag behind and move toward summer range in the Wulik Peaks and Lisburne Hills (**Map 4**, Dau 2011, WACH Working Group 2011).

Dau (2013) determined the calving dates for the WACH to be June 9–13. This is based upon long-term movement and distribution data obtained from radio-collared caribou (these are the dates cows ceased movements). After the calving period, cows and calves move west toward the Lisburne Hills where they mix with the bulls and non-maternal cows. During the summer, the herd moves rapidly to the Brooks Range.

In the fall, the herd moves south toward wintering grounds in the northern portion of the Nulato Hills. Rut occurs during fall migration (Dau 2011, WACH Working Group 2011). Dau (2013) determined the WACH rut dates to be October 22–26 based on back-calculations from calving dates using a 230 day gestation period. Since about 2000, the timing of fall migration has been less predictable, often occurring later than in previous decades (Dau 2015a). From 2010-2015, the average date that GPS collared caribou crossed the Noatak River ranged from Sep. 30 – Oct. 23 (Joly and Cameron 2017). The proportion of caribou using certain migration paths varies each year (**Figure 1**, Joly and Cameron 2017). In recent years (2012-2014), the path of fall migration has shifted east (Dau 2015a).

The WACH Working Group developed a WACH Cooperative Management Plan in 2003, and revised it in 2011 (WACH Working Group 2011). The WACH Management Plan identifies seven plan elements:

cooperation, population management, habitat, regulations, reindeer, knowledge, and education as well as associated goals, strategies, and management actions. As part of the population management element, the WACH Working Group developed a guide to herd management determined by population size, population trend, and harvest rate. Population sizes guiding management level determinations were based on recent (since 1970) historical data for the WACH (WACH Working Group 2011). Revisions to recommended harvest levels under liberal and conservative management (+/- 100 - 2,850 caribou) were made in December 2015 (WACH Working Group 2015, **Table 1**). The State of Alaska manages the WACH to protect the population and its habitat, provide for subsistence and other hunting opportunities on a sustained yield basis, and provide for viewing and other uses of caribou (Dau 2011). State management objectives for the WACH are the same as the goals specified in the WACH Management Plan (Dau 2011, WACH Working Group 2011) and include:

- Encourage cooperative management of the WACH among State, Federal, local entities, and all users of the herd.
- Manage for healthy populations using management strategies adapted to fluctuating population levels and trends.
- Assess and protect important habitats.
- Promote consistent and effective State and Federal regulations for the conservation of the WACH.
- Seek to minimize conflict between reindeer herders and the WACH.
- Integrate scientific information, traditional ecological knowledge of Alaska Native users, and knowledge of all users into management of the herd.
- Increase understanding and appreciation of the WACH through the use of scientific information, traditional ecological knowledge of the Alaska Native users, and knowledge of all other users.

The WACH population declined rapidly in the early 1970s, bottoming out at about 75,000 animals in 1976. Aerial photo censuses have been used since 1986 to estimate population size. The WACH population increased throughout the 1980s and 1990s, peaking at 490,000 animals in 2003 (**Figure 2**). Since 2003, the herd has declined at an average annual rate of 7.1% from approximately 490,000 caribou to 200,928 caribou in 2016 (Caribou Trails 2014; Dau 2011, 2014, Parrett 2016a). In 2017, the herd increased to an estimated 259,000 caribou (Parrett 2017a).

Between 1982 and 2011, the WACH population was within the liberal management level prescribed by the WACH Working Group (**Figure 2, Table 1**). In 2013, the herd population estimate fell below the population threshold for liberal management of a decreasing population (265,000), slipping into the conservative management level. ADF&G conducted a successful photocensus of the WACH on July 1, 2016. This census resulted in a minimum count of 194,863 caribou with a point estimate of 200,928 (Standard Error = 4,295), suggesting the WACH was still within the conservative management level, although close to the threshold for preservative management (**Figure 2, Table 1**). Results of this census indicate an average annual decline of 5% per year since 2013, representing a much lower rate than the 15% annual decline between 2011 and 2013. The large cohorts of 2015 and 2016, which currently comprise a substantial proportion of the herd, contributed to the recent decreased rate of decline, but remain vulnerable to difficult winter conditions due to their young age (Parrett 2016a).

ADF&G conducted another photocensus in the summer of 2017 and also transitioned from film to digital cameras, which enhanced their ability to complete a successful and timely census (Parrett 2017a). The 2017 photocensus yielded a minimum count of 239,055 caribou with a point estimate of 259,000 caribou (Standard Error = 29,000) (Parrett 2017a). However, the use of new technology (digital cameras) may have influenced the counts, complicating comparisons between 2017 and past years. At their 2017 meeting, the WACH Working Group voted on the status of the herd, agreeing upon the conservative stable level (WACH WG 2017, **Table 1**). While population numbers alone indicate liberal management, the Working Group supported maintaining conservative management due to the use of new technology and because a large proportion of the herd is currently young caribou that are still vulnerable to harsh winters (WACH WG 2017).

ADF&G attempted another photocensus in 2018, but could not complete one due to weather and insufficient aggregation of the caribou (NWARAC 2019). At their 2018 meeting, the WACH Working Group voted to maintain the herd's status at the conservative stable level since updated population data was not available. ADF&G completed a photocensus in July 2019, and results are currently being analyzed (Hansen 2019, pers. comm.).

Between 1970 and 2017, the bull:cow ratio exceeded critical management levels in all years except 1975, 2001, and 2014 (**Figure 3**). Reduced sampling intensity in 2001 likely biased the 2001 bull:cow ratio low (Dau 2013). Since 1992, the bull:cow ratios has trended downward (Dau 2015a). The average annual number of bulls:100 cows was greater during the period of population growth (54:100 between 1976–2001) than during the recent period of decline (44:100 between 2004–2016). Additionally, Dau (2015a) states that while trends in bull:cow ratios are accurate, actual values should be interpreted with caution due to sexual segregation during sampling and the inability to sample the entire population, which likely account for more annual variability than actual changes in composition.

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

Calf production has likely had little influence on the population trajectory (Dau 2013, 2015a). Between 1990 and 2003, the June calf:cow ratio averaged 66 calves:100 cows/year. Between 2004 and 2016, the June calf:cow ratio averaged 71 calves:100 cows/year (**Figure 5**). In June 2016, 85 calves:100 cows were observed, which approximates the highest parturition level ever recorded for the herd (86 calves:100 cows in 1992) (Dau 2016a).

Decreased calf survival through summer and fall and recruitment into the herd are likely contributing to the current population decline (Dau 2013, 2015a). Fall calf:cow ratios indicate calf survival over summer. Between 1976 and 2017, the fall calf:cow ratio ranged from 35 to 59 calves:100 cows/year, averaging 47 calves:100 cows/year (**Figure 5**). Fall calf:cow ratios declined from an average of 46 calves:100

cows/year between 1990-2003 to an average of 42 calves:100 cows/year between 2004-2016 (Dau 2015a, **Figure 5**). Since 2008, ADF&G has recorded calf weights at Onion Portage as an index of herd nutritional status. In September 2015, calf weights averaged 100 lbs., the highest average ever recorded (Parrett 2015b).

Similarly, the ratio of short yearlings (SY, 10-11 months old caribou) to adults provides a measure of overwintering calf survival and recruitment. Between 1990 and 2003, SY:adult ratios averaged 20 SY:100 adults/year. Since the decline began in 2003 through 2016, SY:adult ratios have averaged 16 SY:100 adults/year (**Figure 5**). However, 23 SY:100 adults were observed during spring 2016 surveys, the highest ratio recorded since 2007 (Dau 2016b). 2017 and 2018 SY:adult ratios were also high at 22 SY:100 adults and 23 SY:100 adults, respectively (NWARAC 2019). The overwinter calf survival for the 2015 cohort (Oct. 2015-Jun. 2016) was 84% (Parrett 2016b). While 2016 indices suggest improvements in recruitment, the overall trend since the early 1980s has been downward (Dau 2015a, 2016b).

Cow mortality affects the trajectory of the herd (Dau 2011, 2013, NWARAC 2019). The annual mortality rate of radio-collared adult cows increased from an average of 15% between 1987 and 2003 to 23% from 2004–2014 (Dau 2011, 2013, 2014, 2015a, **Figure 4**). Mortality rates declined in 2015 and 2016, but then increased sharply in 2017. However, the increased mortality rate in 2017 may be due to a low and aging sample size as few caribou have been collared in the past two years (NWARAC 2019). Estimated mortality includes all causes of death including hunting (Dau 2011). Dau (2015a) states that cow mortality estimates are conservative due to exclusion of unhealthy (i.e. diseased) and yearling cows. Dau (2013) attributed the high mortality rate for 2011–2012 (33%, **Figure 4**) to a winter with deep snows, which weakened caribou and enabled wolves to prey upon them more easily. Prior to 2004, estimated adult cow mortality only exceeded 20% twice, but has exceeded 20% in 7 out of 9 regulatory years between 2004 and 2012 (**Figure 4**). The annual mortality rate was 8% as of April 2016 (Dau 2016b). This may fluctuate substantially throughout the year based on changing local conditions and harvest levels. Dau (2015a) indicates that mortality rates may also change in subsequent management reports as the fate of collared animals is determined, and that these inconsistencies are most pronounced for the previous 1–3 years.

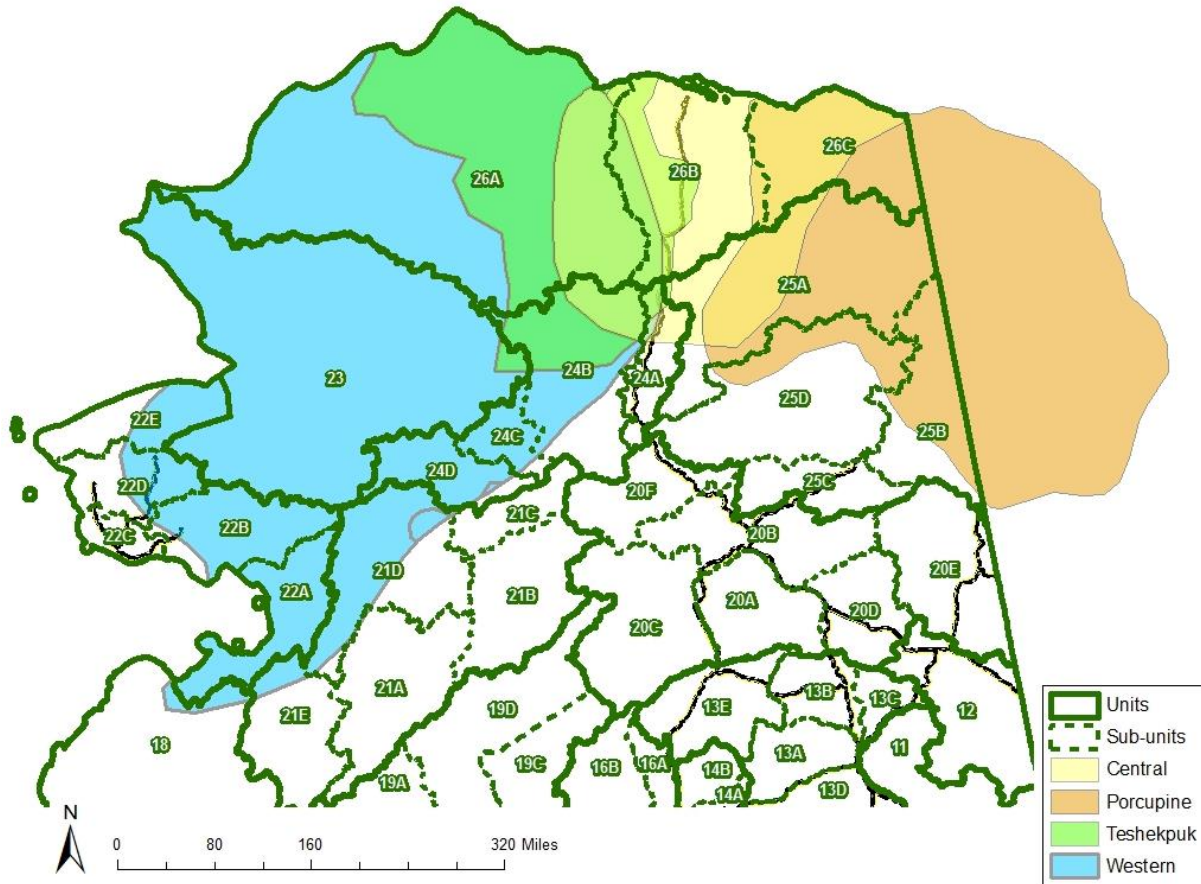
Far more caribou died from natural causes than from hunting between 1992 and 2012 (Dau 2013). Cow mortality remained constant throughout the year, but natural and harvest mortality for bulls spiked during the fall. Predation, particularly by wolves, accounted for the majority of natural mortality (Dau 2013). However as the WACH has declined and estimated harvest has remained relatively stable, the percentage of mortality due to hunting has increased relative to natural mortality. For example, during the period October 1, 2013 to September 30, 2014, estimated hunting mortality was approximately 42% and estimated natural mortality about 56% (Dau 2014). In previous years (1983–2013), the estimated hunting mortality exceeded 30% only once in 1997-1998 (Dau 2013). Additionally, Prichard (2009) and Dau (2015a) suggest that harvest levels and rates of cows can greatly impact population trajectory. If bull:cow ratios continue to decline, harvest of cows may increase, exacerbating the current population decline.

Dau (2015a) cites fall and winter icing events as the primary factor initiating the population decline in 2003. Increased predation, hunting pressure, deteriorating range condition (including habitat loss and fragmentation), climate change, and disease may also be contributing factors (Dau 2015a, 2014). Joly et

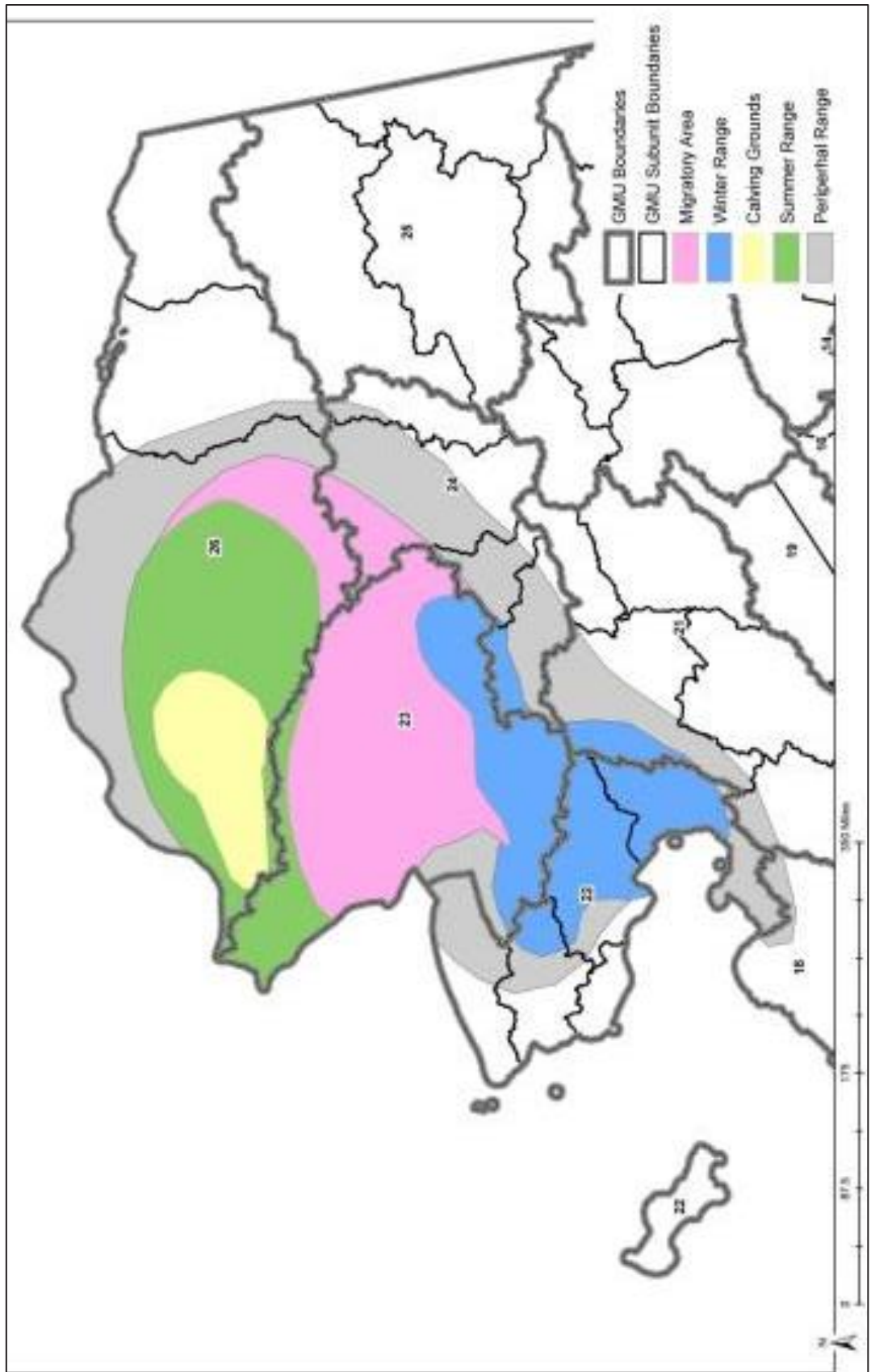
al. (2007) documented a decline in lichen cover in portions of the wintering areas of the WACH. Dau (2011, 2014) reported that degradation in range condition is not thought to be a primary factor in the decline of the herd because animals have generally maintained good body condition since the decline began. Body condition is assessed on a subjective scale from 1-5. The fall body condition of adult females in 2015 was characterized as “fat” (mean= 3.9/5) with no caribou being rated as skinny or very skinny (Parrett 2015b). However, the body condition of the WACH in the spring may be a better indicator of the effects of range condition versus the fall when the body condition of the herd is routinely assessed and when caribou are in prime condition (July 2015, pers. comm.).

Habitat

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



Map 3. Herd overlap and ranges of the WACH, TCH, CACH, and PCH.



Map 4. Range of the WACH.

Table 1. Western Arctic Caribou Herd management levels using herd size, population trend, and harvest rate (WACH Working Group 2011, 2015).

Management and Harvest Level	Population Trend			Harvest Recommendations May Include:
	Declining Low: 6%	Stable Med: 7%	Increasing High: 8%	
Liberal	Pop: 265,000+	Pop: 230,000+	Pop: 200,000+	<ul style="list-style-type: none"> • Reduce harvest of bulls by nonresidents to maintain at least 40 bulls: 100 cows • No restriction of bull harvest by resident hunters unless bull:cow ratios fall below 40 bulls:100 cows
	Harvest: 16,000-22,000	Harvest: 16,000-22,000	Harvest: 16,000-22,000	
Conservative	Pop: 200,000-265,000	Pop: 170,000-230,000	Pop: 150,000-200,000	<ul style="list-style-type: none"> • No harvest of calves • No cow harvest by nonresidents • Restriction of bull harvest by nonresidents • Limit the subsistence harvest of bulls only when necessary to maintain a minimum 40:100 bull:cow ratio
	Harvest: 12,000-16,000	Harvest: 12,000-16,000	Harvest: 12,000-16,000	
Preservative	Pop: 130,000-200,000	Pop: 115,000-170,000	Pop: 100,000-150,000	<ul style="list-style-type: none"> • No harvest of calves • Limit harvest of cows by resident hunters through permit hunts and/or village quotas • Limit the subsistence harvest of bulls to maintain at least 40 bulls:100 cows • Harvest restricted to residents only, according to state and federal law. Closure of some federal public lands to nonqualified users may be necessary
	Harvest: 8,000-12,000	Harvest: 8,000-12,000	Harvest: 8,000-12,000	
Critical Keep Bull: Cow ratio ≥ 40 Bulls:100 Cows	Pop: < 130,000	Pop: < 115,000	Pop: < 100,000	<ul style="list-style-type: none"> • No harvest of calves • Highly restrict the harvest of cows through permit hunts and/or village quotas • Limit the subsistence harvest of bulls to maintain at least 40 bulls:100 cows • Harvest restricted to residents only, according to state and federal law. Closure of some federal public lands to nonqualified users may be necessary
	Harvest: 6,000-8,000	Harvest: 6,000-8,000	Harvest: 6,000-8,000	

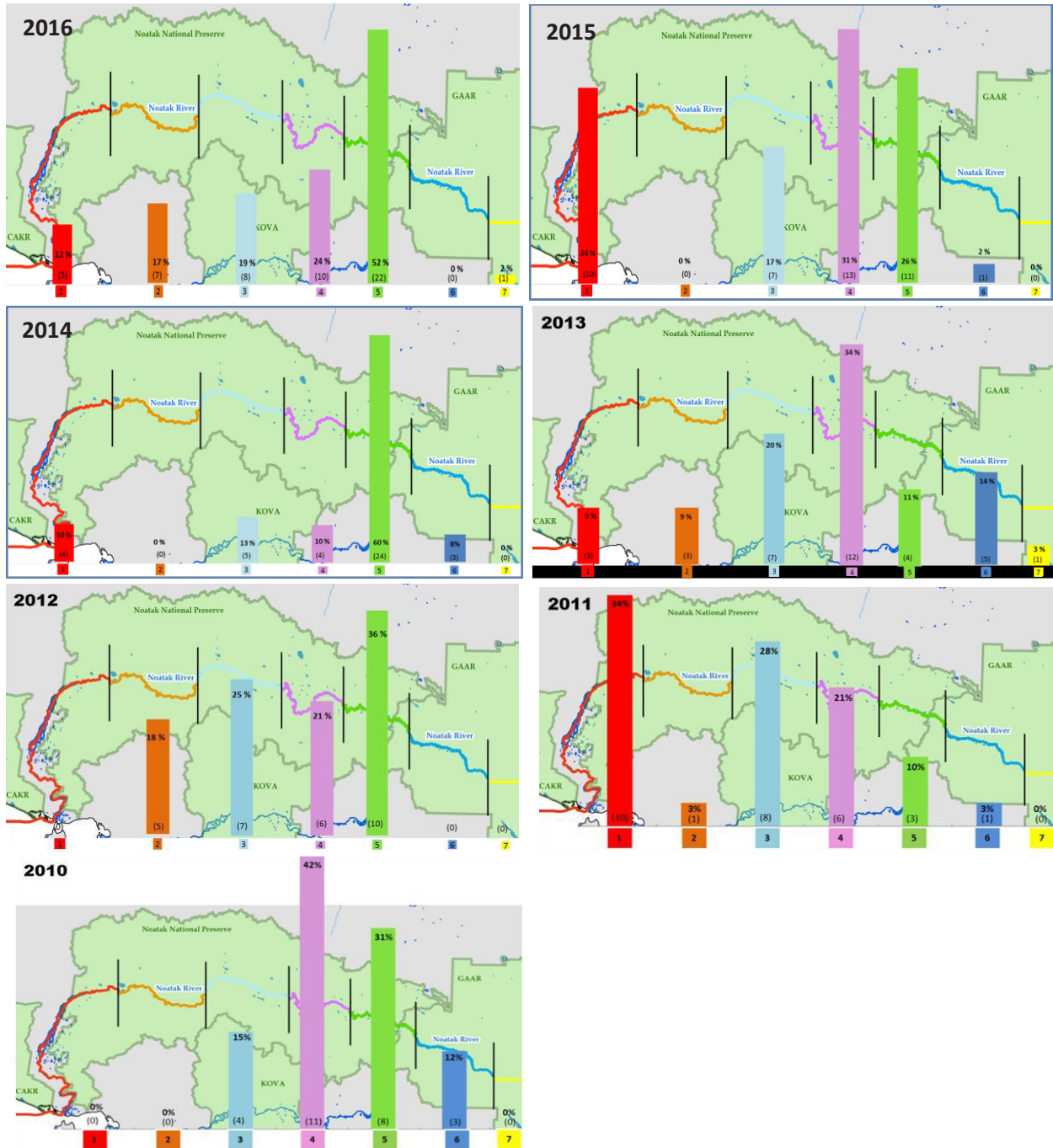


Figure 1. Distribution of caribou crossing the Noatak River during fall. Histograms depict where collared female caribou crossed the Noatak River, generally from north to south, on their fall migration. Relative percentages (top number) and the absolute number (middle number) of caribou are provided. The river is divided into seven (lowest number) color-coded segments which are displayed in the background. The middle five segments are 100 river kilometers long, while the westernmost segment (red) is 200 km (before extending into the Chukchi Sea) and the easternmost (yellow) runs as far east as WAH caribou are known to migrate. The number of caribou with GPS collars ranged from 39-79 caribou/year with later years having more collared caribou than earlier years (Joly and Cameron 2017).

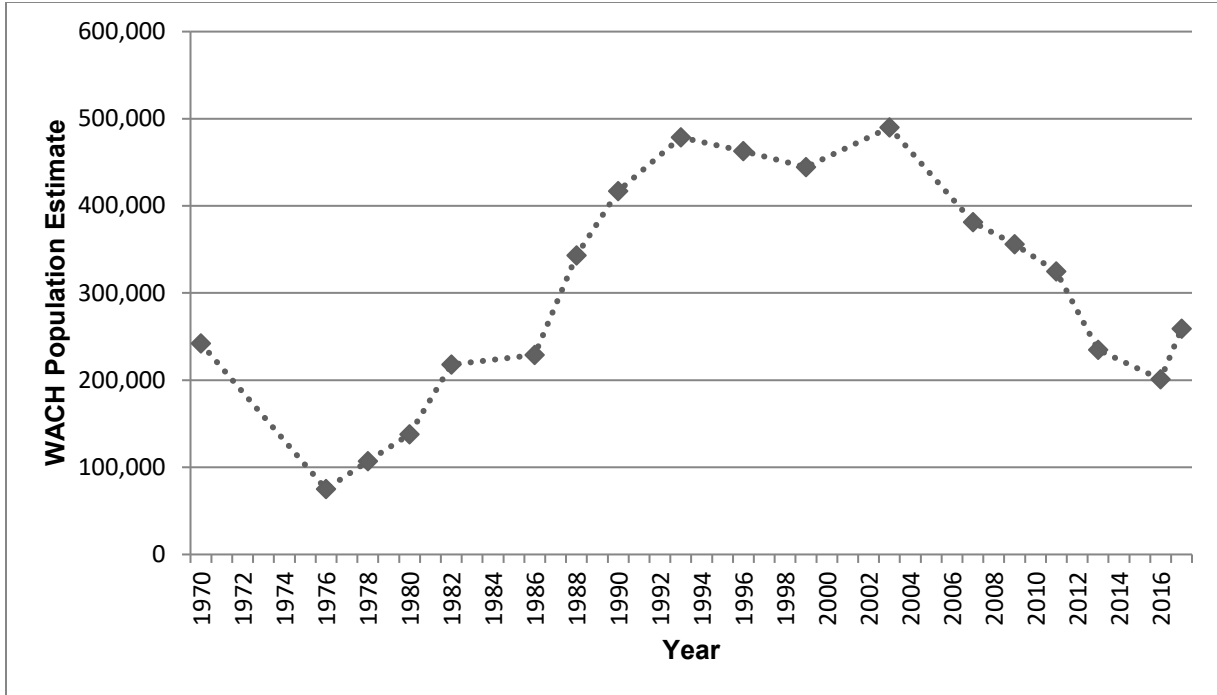


Figure 2. The WACH population estimates from 1970–2017. Population estimates from 1986–2017 are based on aerial photographs of groups of caribou that contained radio-collared animals (Dau 2011, 2013, 2014, Parrett 2016a, Parrett 2017a).

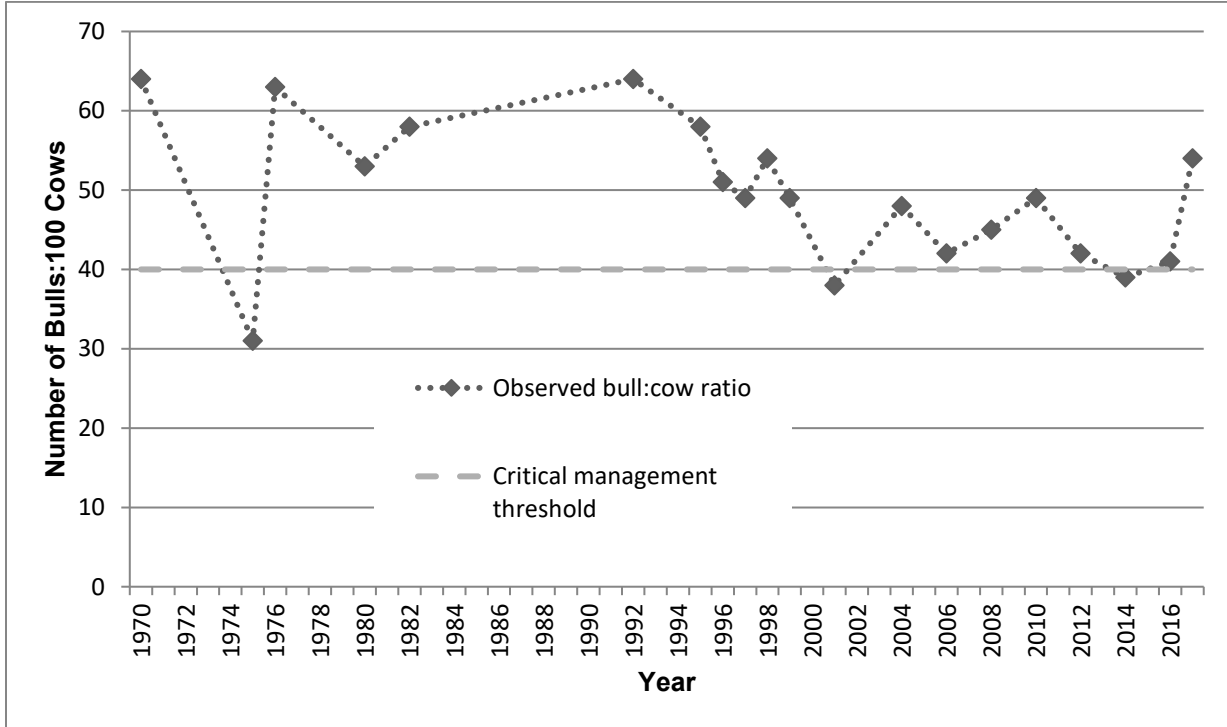


Figure 3. Bull:Cow ratios for the WACH (Dau 2015a, ADF&G 2017c, Parrett 2017a).

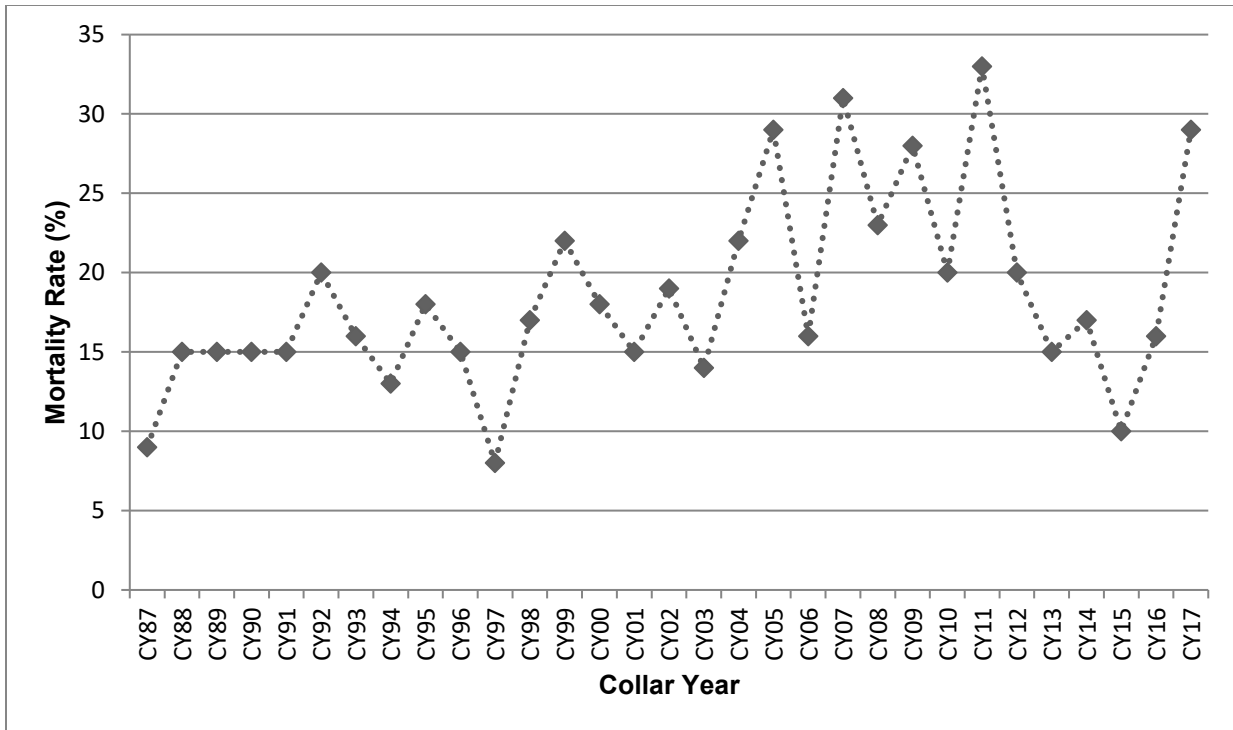


Figure 4. Mortality rate of radio-collared cow caribou in the Western Arctic caribou herd (Dau 2013, 2015a, 2016b, NWARAC 2019). Collar Year = 1 Oct-30 Sept.

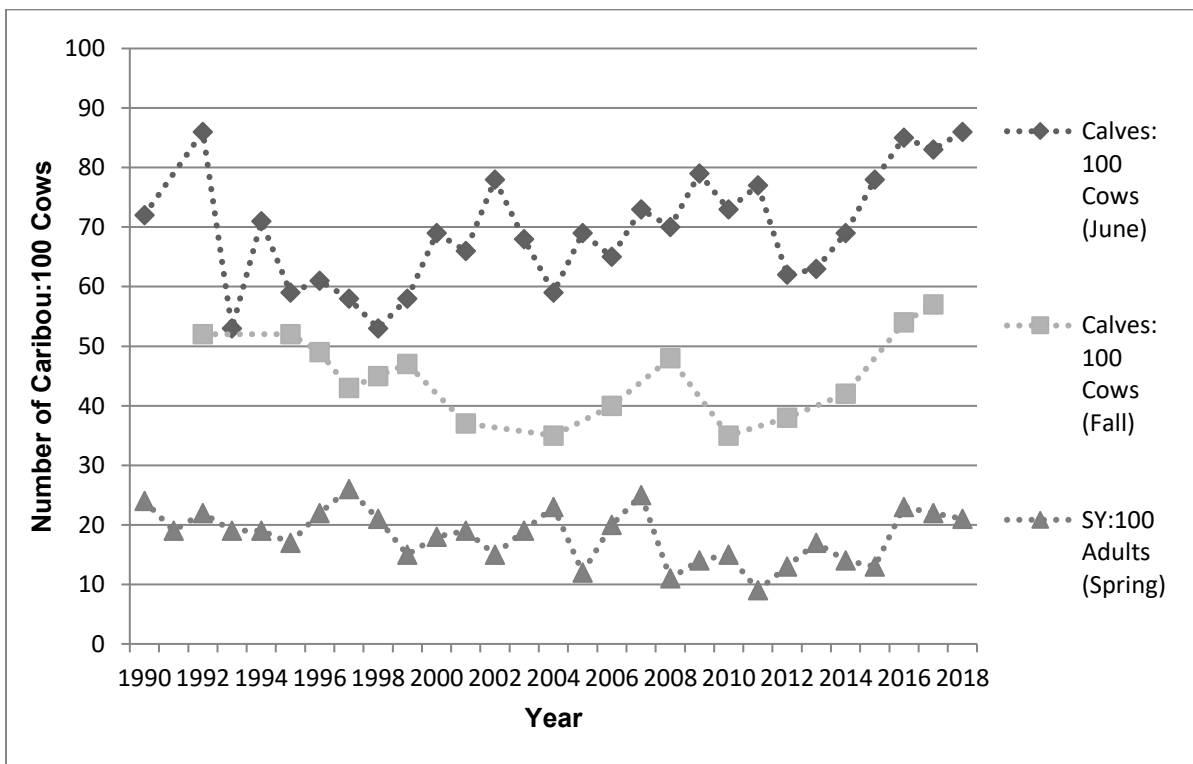


Figure 5. Calf:cow and short yearling (SY):adult ratios for the WACH (Dau 2013, 2015a, 2016a, ADF&G 2017c, Parrett 2017a, NWARAC 2019). Short yearlings are 10-11 months old caribou.

Cultural Knowledge and Traditional Practices

Meeting the nutritional and caloric needs of Arctic communities is vitally important and is the foundation of subsistence activities. However, the meaning of subsistence extends beyond human nutrition for Alaska's native peoples. Holthaus describes subsistence as the base on which Alaska Native cultures establish their identities through "philosophy, ethics, religious belief and practice, art, ritual, ceremony, and celebration" (2013: 70).

Earnest Burch describes the importance of caribou for the people of Northwest Alaska (Burch 1998). Caribou have been a primary resource for the Iñupiat of the Northwest Arctic Region for thousands of years. Caribou bones dating from 8,000 to 10,000 years ago have been excavated from archeological sites on the Kobuk River (ADF&G 1992). Historically, during fall and spring caribou migrations, people built "drive fences" out of cairns, bundles of shrubs, or upright logs. These fences were sometimes several miles long and two to three miles wide. Ideally, the closed end of the fence crossed a river, and caribou were harvested while crossing the river and retrieved later; or the fence would end in a corral where caribou were snared and killed with spears (Burch 2012). Burch notes: "The landscape of Northwest Arctic, especially in hills and mountains, is littered with the remains of drive fences that were in every stage of construction when they were abandoned" (2012:40).

Depending on where they were based, most Northwest Arctic Inupiaq Nations relied upon caribou as a primary food source and for their hides. Hides provided the best clothing material available to the Inupiat. Burch documents a preference for the late summer coats of caribou cows and calves, which were seen as providing both the softness and quality needed for high quality clothing, after the summer shedding and before acquiring a shaggy winter coat. While bulls were targeted for their fat stores and meat, cows and calves were targeted for their hides, which were considered prime during the early part of August (Burch 1998). The summer hunt's primary objective was the acquisition of hides. "It reportedly took two calf skins to make one parka, and every hunter tried to get at least twenty of them" (Burch 1998:163). Not only were the hides necessary to keep a family clothed during the winter; they also served as an important trade good.

The WACH population declined rapidly in the Northwest Arctic beginning in the late 1800s. At its low point, its range had shrunk to less than half its former size. Famine ensued, primarily due to the absence of caribou. In the early 1900s, reindeer were introduced to fill the need for food and hides. The WACH began to rebound in the 1940s. Caribou continue to be the most important land animal consumed in this region (Burch 1998, ADF&G 1992). Foote wrote about caribou hunting in the Noatak region sixty years ago, noting that life would not be possible in Noatak without this source of meat (1959, 1961).

Caribou were traditionally harvested any month of the year they were available in the Northwest Arctic Region. The objective of the summer hunt was to obtain the hides of adult caribou with their new summer coats. The fall hunt was to acquire large quantities of meat to freeze for winter (Burch 1994). Hunt timing changed—and continues to change—from year to year according to the availability of caribou and their migration paths (ADF&G 1991). Ideally, caribou harvesting occurs when the weather is cool enough to prevent spoilage of meat. If not, meat is frozen for later use. Caribou can be harvested in large

numbers, when available, and can be transported back to villages by boat before freeze-up. Hunters search for caribou and attempt to intercept them at known river crossings.

Prior to freeze-up, bulls have traditionally been preferred because they are fatter than cows (Braem et al. 2015, Georgette and Loon 1993). After freeze-up, small groups of caribou that have over-wintered may be harvested by hunters in areas that are accessible by snowmachine. Braem et al. explain, “Hunters harvest cows during the winter because they are fatter than bulls” (2015:141). Today, communities in the southern portion of Unit 23 (Buckland, Deering) harvest caribou in the winter and spring, while the other communities in Unit 23 harvest caribou in the fall, winter, and spring. Kivalina also harvests caribou in July (ADF&G 1992).

The present-day human population in Unit 23 includes 11 regional Inupiaq groups (Burch 1998). Kotzebue is the regional hub of transportation and commerce and is the home to the majority of non-Natives in the region. The population of Unit 23 was approximately 7,500 in 2010, according to the U.S. Census (ADOLWD 2016). Caribou continue to dominate the subsistence harvest of the region. In household harvest surveys conducted between 1964 and 2012, caribou were often the most harvested species, more than any other wild resource, in lbs. of edible weight (**Appendix 1**) (ADF&G 2016a). Based on these surveys, in a typical study year, the harvest of caribou was between 100 and 200 lbs. per person in northwest Alaska (**Appendix 1**) (ADF&G 2016a).

Present-day use of caribou calves appears to be limited, but does occur opportunistically. When calves are harvested, they can provide a special food for elders. At the winter 2019 Northwest Arctic Council meeting, one member from Kotzebue characterized local use of caribou calves: “We do use calves for baby garments, little mukluks and outfits and the meat is good for elders. They don’t like tough food...these are desired food for elderly that is soft and tender, especially those in the long-term care” (NWARAC 2019:185). This member indicated that in cases in which calves are orphaned, they could go to good use by the community.

At the fall 2015 Northwest Arctic Council meeting, in the context of discussing cow closures due to heightened conservation concerns at that time, two members stated that local hunters do not take calves or want to take calves (NWARAC 2015). Elders in the region have participated in efforts to educate hunters to avoid orphaning caribou calves: at the fall 2018 Northwest Arctic meeting, Kotzebue community member Cyrus Harris read guidelines from the Caribou Hunter Safety Group into the record, which included advice to hunters about how to avoid accidentally taking cows with calves:

“Take your time. Observe caribou groups before you approach. Pick out the animals you want to harvest. Look for animals that are fat and in good shape before you shoot...When mature bulls are in the rut, younger bulls and barren cows can still provide good meat. Don't shoot cows with calves. If you want to take a cow, wait to see if it has a calf with it” (NWARAC 2018: 83).

There was discussion at the winter 2019 Northwest Arctic Council meeting regarding whether or not to submit a proposal mirroring WP20-44, which would rescind the ban on calf harvest. Council members explored the value of being able to take calves that have been orphaned, but had concerns about the feasibility of distinguishing between orphaned and merely temporarily separated calves in practice. There was also testimony regarding the possibility that orphaned calves may survive on their own or be adopted by

other cows in the herd, as has been observed by reindeer herders in the region. The member who had initially made a motion to submit a proposal to allow calf harvest withdrew her motion after hearing testimony from other Council members. The motion was still voted upon and failed unanimously.

Harvest History

The State manages the WACH on a sustained yield basis (i.e. managing current harvests to ensure future harvests). The harvestable surplus when the WACH population is stable is calculated as 7% of the estimated population (WACH working group 2011, Parrett 2017b, pers. comm.). In 2017, the WACH harvestable surplus was 18,130 caribou (7% of 259,000 caribou). Assuming the herd remained stable in 2018 and 2019, the harvestable surplus remains 18,130 caribou. This is a substantial increase from the 2016 harvestable surplus of 12,056 caribou when harvest likely exceeded sustainable levels. However, there is substantial uncertainty in harvestable surplus estimates (Parrett 2015a, Dau 2015a). Of particular concern is the overharvest of cows, which has probably occurred since 2010/11 (Dau 2015a). Dau (2015a:14-29) states, “even modest increases in the cow harvest above sustainable levels could have a significant effect on the population trajectory of the WACH.”

Caribou harvest by local hunters is estimated from community harvest surveys, if available, and from models developed by A. Craig with ADF&G’s Division of Wildlife Conservation Region V. These models incorporate factors such as community size, availability of caribou, and per capita harvests for each community, which are based on mean values from multiple community harvest surveys (Dau 2015a). In 2015, Craig’s models replaced models developed by Sutherland (2005), resulting in changes to local caribou harvest estimates from past years. While Craig’s models accurately reflect harvest trends, they do not accurately reflect actual harvest numbers (Dau 2015a). (Note: no model accurately reflects harvest numbers). This analysis only considers the updated harvest estimates using Craig’s new model as cited in Dau (2015a). Caribou harvest by nonlocal residents and nonresidents are based on harvest ticket reports (Dau 2015a). Hunters considered local by ADF&G are functionally identical to Federally qualified subsistence users (e.g. Residents of St. Lawrence Island are technically Federally qualified subsistence users, but do not frequently harvest Western Arctic caribou) (**Map 1**).

From 2000–2014, the average estimated total harvest from the WACH was 11,984 caribou/year, ranging from 10,666–13,537 caribou/year (Dau 2015a, **Figure 6**). These harvest levels are within or below the conservative harvest level specified in the WACH Management Plan (**Table 1**). In 2015 and 2016, total local harvest estimates increased to 14,360 caribou and 14,971 caribou, respectively (Hansen 2019, pers. comm.). While these harvest estimates are below the 2017–2019 harvestable surpluses, they exceed the 2016 harvestable surplus. These are the most recent estimates available for local harvest. Of note, harvest estimates do not include wounding loss, which may be hundreds of caribou (Dau 2015a).

Local hunters account for approximately 95% of the total WACH harvest and residents of Unit 23 account for approximately 58% of the total harvest on average (**Figure 7**, ADF&G 2017c). Comparison of caribou harvest by community from household survey data (**Appendix A**) with **Figure 1** demonstrates that local community harvests parallel WACH availability rather than population trends. For example, Ambler only harvested 325 caribou when the WACH population peaked in 2003, but harvested 685 caribou in 2012

when most of the WACH migrated through eastern Unit 23. Similarly, Noatak only harvested 66 caribou in 2010 when no GPS-collared caribou migrated through western Unit 23. Harvest increased substantially (360 caribou) the following year when 37% of the GPS-collared caribou (and thus, a greater proportion of the WACH) migrated through western Unit 23.

Between 1998 and 2018, annual reported caribou harvest in Unit 23 ranged from 168-676 caribou (**Figure 8**). Over the same time period, reported harvest by non-Federally qualified users ranged from 131-657 caribou. The lowest reported harvest occurred in 2016 when all Federal public lands in Unit 23 were closed to non-Federally qualified users, but before registration permits were required for Federally qualified subsistence users. In 2017, the BOG began requiring registration permits, which is reflected in the greater number of reported caribou harvest by Federally qualified subsistence users (**Figure 8**). On average, 76% of WACH caribou harvested by nonlocals are harvested in Unit 23 (Dau 2015a).

From 1999-2013, 72% of nonlocal hunters on average accessed the WACH by plane. Most nonlocal harvest (85-90%) occurs between Aug. 25 and Oct. 7. In contrast, most local, subsistence hunters harvest WACH caribou whenever they are available using boats, 4-wheelers, and snowmachines (Dau 2015a, Fix and Ackerman 2015). In Unit 23, caribou are generally available during fall migration. In recent years, caribou migration has occurred later in fall, resulting in subsistence harvest also occurring later.

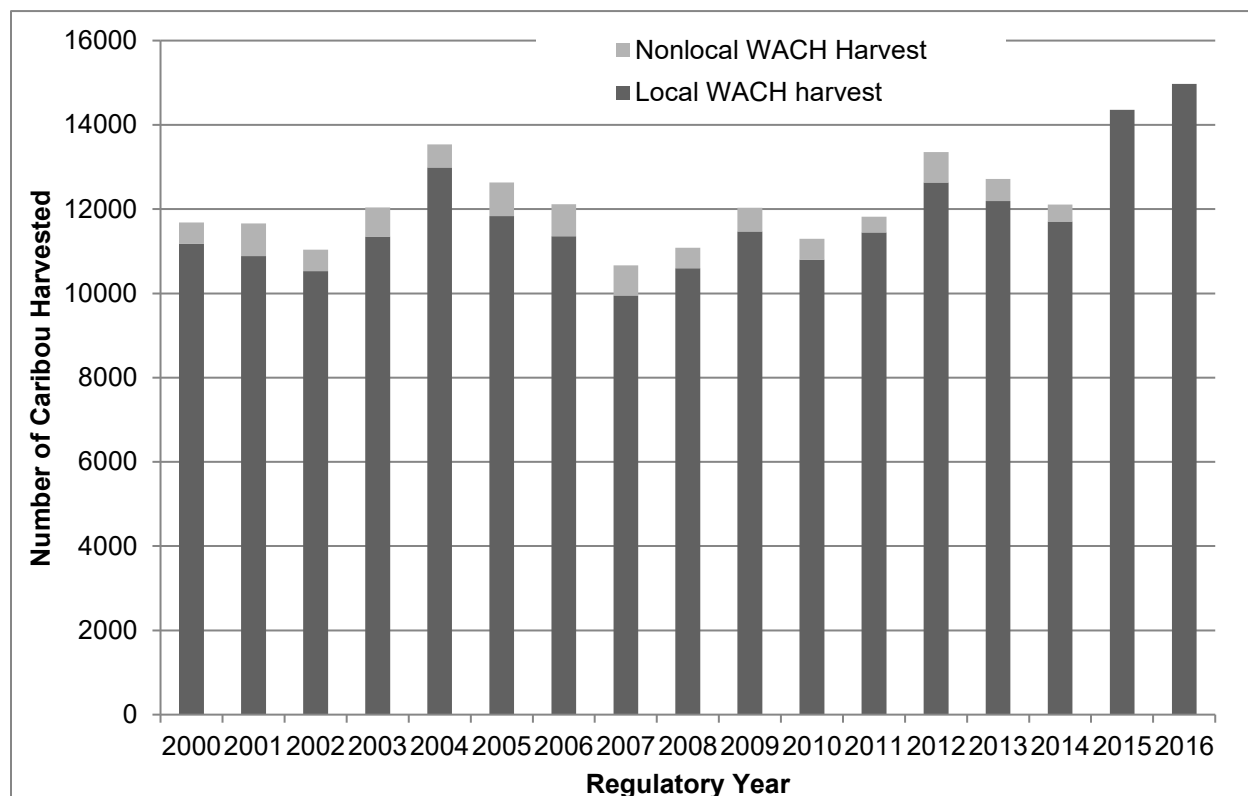


Figure 6. Estimated number of caribou harvested from the WACH by residency (Dau 2015a, Hansen 2019, pers. comm.).

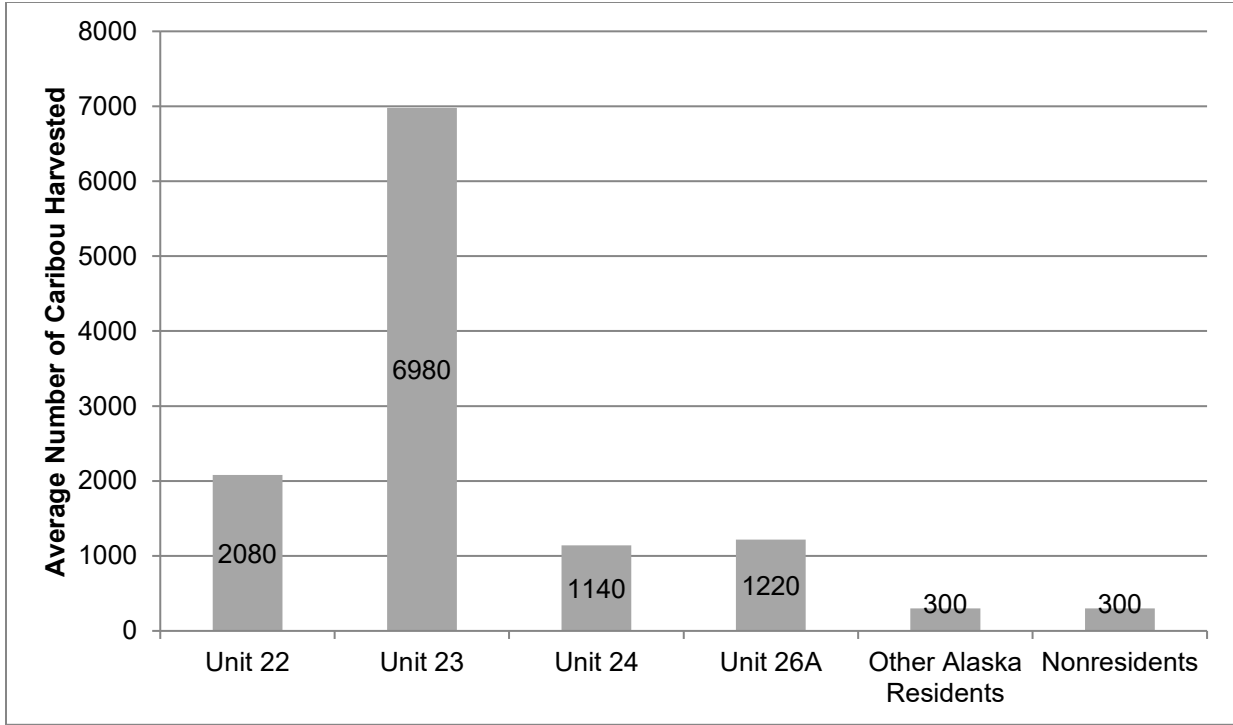


Figure 7. Average number of caribou harvested by unit and residency from 1998-2015 (ADF&G 2017c).

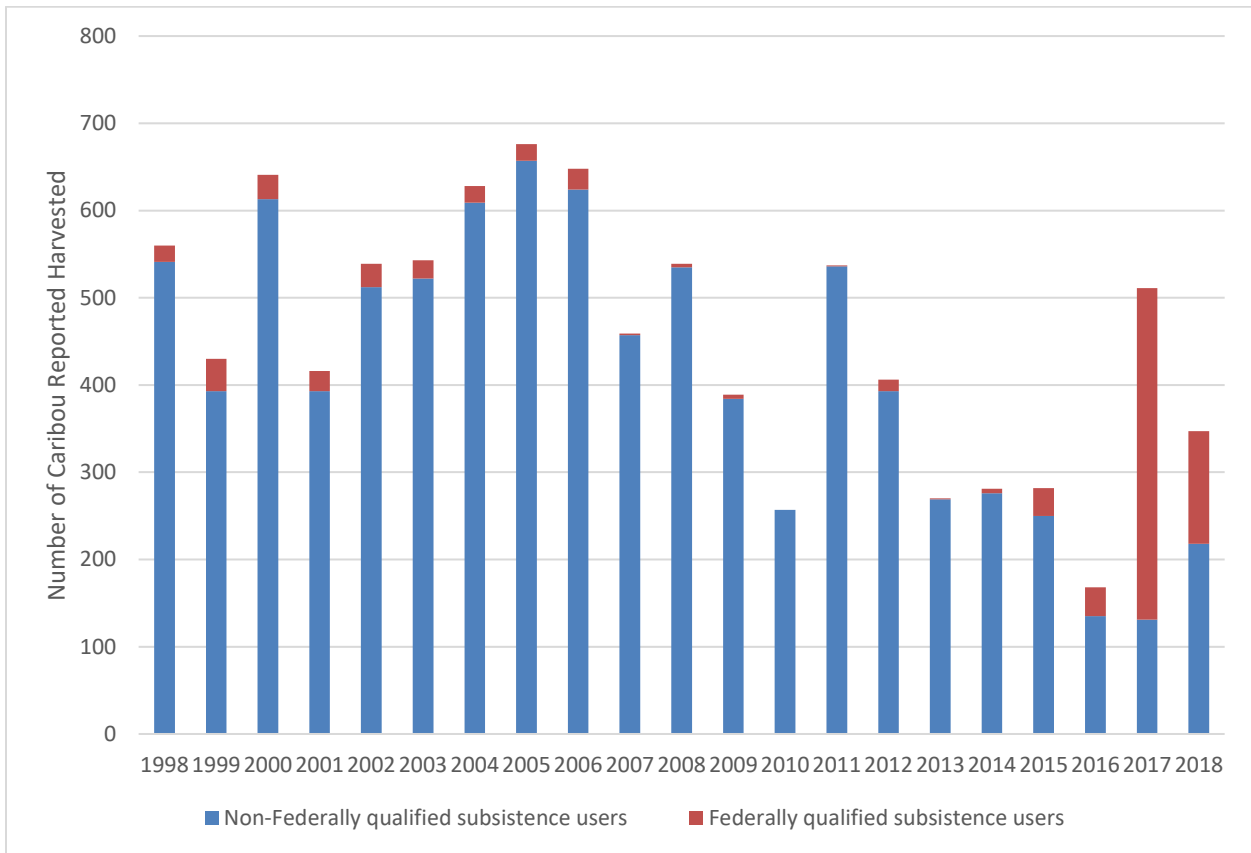


Figure 8. Reported caribou harvest in Unit 23 (WinfoNet 2018, 2019).

Other Alternatives Considered

One alternative considered was to maintain the prohibition on calf harvest. As described in the Cultural Knowledge and Traditional Practices of this analysis, some members and constituents of the Northwest Arctic Council have voiced opposition to the practice of harvesting caribou calves (NWARAC 2015; NWARAC 2018). Supporting calf harvest has the potential to undermine efforts by Kotzebue elders to educate hunters about respectful practices of selecting and hunting caribou that minimize the number of orphaned calves. Those Council members and constituents who have opposed calf harvest on record have indicated that not taking calves is a rule which informs their hunting and which contributes to the core identity of some subsistence hunters in the Northwest Arctic Region.

Under this alternative, the Office of Subsistence Management (OSM) recommends a year-round bull season for caribou but opposes permitting calf harvest in Unit 23. One of the purposes of the Alaska National Interests Land Conservation Act (ANILCA) is "to provide the opportunity for rural residents engaged in a subsistence way of life to do so" (§802(1)). Thus, increased harvest opportunity is supported, but so is practicing subsistence as a way of life, as defined locally. However, it is for the Councils, rather than OSM, to define what constitutes subsistence as a way of life for local constituents. Therefore, OSM considered and rejected this alternative. Traditions of taking or not taking calves may not be generalizable for all residents of the Northwest Arctic region as evidenced by differing opinions between members of the Northwest Arctic Council and the Kotzebue AC and WACH working group. The Northwest Arctic Council will have the opportunity to consider and discuss these proposals at their Fall 2019 meeting, and can choose to oppose or support these proposals on the record at that time.

Effects of the Proposal

If the Board adopts Proposal WP20-43/44/45/46, the bull caribou season would be open year-round and the harvest of calves would be permitted in Unit 23. This would increase harvest opportunity for Federally qualified subsistence users. No conservation concerns exist for allowing bull harvest during rut while calf harvest presents minimal conservation concerns.

Eliminating the bull closure would allow harvest of young bulls, which would reduce harvest pressure on cows, helping to grow the herd. As the timing of fall caribou migration has changed in recent years, it would also provide more harvest flexibility, alleviating pressure on Federally qualified subsistence users to harvest caribou during a particular timeframe (NWARAC 2019). While the risk of harvesting an unpalatable bull in rut exists, Federally qualified subsistence users had been selectively harvesting bulls before the closure was adopted in 2016. Furthermore, targeting younger bulls during rut is a recommended practice. The Native Village of Kotzebue (2018) produced an education flyer about winter caribou hunting, which included a recommendation to harvest younger bulls when mature bulls are in rut. The NANA regional corporation submitted comments to the BOG in 2015 in opposition to the bull closure to allow shareholders to harvest younger caribou for food security (Kramer 2015).

Eliminating the prohibition on calf harvest would allow the harvest of orphaned calves that may otherwise succumb to predation. However, it can be difficult to identify orphaned calves as caribou are scattered

across the landscape, and calves and cows can be separated by substantial distances. Additionally, orphaned calves may survive, especially if they remain with the herd. Russell et al. (1991) found survival rates of orphaned and non-orphaned calves were 63% and 78%, respectively, indicating orphaned calves still have a good chance of survival, although the sample size for orphaned calves was very small. The timing of abandonment also influences survival. Calves orphaned after weaning (October) have greater chances of survival than calves orphaned before weaning (Holand et al. 2012, Joly 2000, Russell et al. 1991, Rughetti and Fest-Bianchet 2014). As caribou migration has been occurring later in the fall, subsistence users are harvesting caribou in November rather than September, which could improve the chances of orphaned calves surviving. Additionally, educational initiatives by Unit 23 Caribou Hunter Success Working Group may help reduce the number of orphaned calves. This group is working to educate hunters on better hunting practices, including taking the time to identify cows with calves (Atkinson 2019, pers. comm.). Finally, a member of the public also testified that other cow caribou will adopt orphaned calves (NWARAC 2019).

Allowing calf harvest may also reduce wanton waste. A Northwest Arctic Council member noted that he has seen dead calves in the field, presumably mistakenly shot and then left since they are illegal to harvest (NWARAC 2019). The ADF&G caribou biologist stated many orphan calves have ended up around Kotzebue during the hunting season, but have been unavailable to harvest. He collared a few of these orphaned calves, all of which died shortly thereafter. He also stated that he receives many reports from hunters of orphaned and wounded calves out in the field that are not legally available for harvest (NWARAC 2019). In regards to the prohibition on the take of cows accompanied by calves, an NPS staff biologist voiced concern that unethical hunters could harvest calves and then harvest its mother, who would no longer be accompanied by a calf (NWARAC 2019).

The Western Arctic and Teshekpuk caribou herds are the only caribou herds in Alaska where calf harvest is prohibited. These restrictions were adopted by the BOG in 2015 and the Board in 2016 as conservation measures when both herds were declining. The WACH management plan also recommends prohibiting calf harvest when the herd is within the conservative management level. However, calves comprise a very small portion of the harvest. In his population model, Prichard (2009) assumed calves comprised only 2% of the total annual WACH harvest, which would not affect the population trajectory of the WACH. As most calves die within their first year and few hunters target calves, calf harvest may be compensatory mortality, although Prichard (2009) assumed all harvest mortality to be additive. While calf recruitment influences herd abundance and population trajectory, Prichard (2009) found adult survival to have the largest impact on WACH population size. Prohibiting cow harvest would have a greater impact on herd conservation than prohibiting calf harvest.

While calves were traditionally harvested for specific purposes, people no longer target calves in the Northwest Arctic region (NWARAC 2015, 2019). The Northwest Arctic Council discussed submitting a proposal to allow calf harvest at their winter 2019 meeting. One member mentioned that calves were traditionally used for garments and as food for elders. However, most members strongly opposed calf harvest due to conservation concerns and personal values, and the Council voted unanimously not to submit a proposal (NWARAC 2019).

§802(1) of ANILCA states, “consistent with sound management principles, and the conservation of healthy populations of fish and wildlife, the utilization of the public lands in Alaska is to cause the least adverse impact possible on rural residents who depend upon subsistence uses of the resources of such lands.”

While increasing harvest opportunity by liberalizing harvest limits and season lengths can certainly lessen adverse impacts on rural residents, OSM recognizes social and cultural concerns also affect the satisfaction of subsistence needs. While allowing calf harvest should not affect the conservation of the WACH and would increase harvest opportunities, maintaining the prohibition on calf harvest may be warranted due to socio-cultural concerns. Northwest Arctic Council members have stated on several occasions that no one hunts calves in the Northwest Arctic region and that hunting calves is wrong and unethical because calves are the future of the herd (NWARAC 2015, 2019). While the Northwest Arctic Council represents interests and concerns of Federally qualified subsistence users to the Board, subsistence users on the Kotzebue AC and the WACH Working Group support allowing calf harvest in the Northwest Arctic to utilize orphaned calves. The Northwest Arctic Council will have another opportunity to comment and vote on this issue at its 2019 fall meeting after considering the full analysis as well as any public and tribal comments.

The BOG will consider similar proposals at its Arctic/Western Region meeting in January 2020. If both the BOG and the Board adopt proposals to eliminate the bull closure and the prohibition on calf harvest, State and Federal regulations would maintain alignment, reducing user confusion. If only the BOG adopts these changes, Federal regulations would be more restrictive than State regulations, contrary to the rural subsistence priority mandated by ANILCA. However, Federally qualified subsistence users would still be able to harvest bulls year-round as well as calves under State regulations, except in National Parks and Monuments and the area closed to non-Federally qualified users around Noatak (see Federal regulation). Alternatively, if only the Board adopts these changes, Federal regulations would provide for a rural subsistence priority on Federal public lands only. Given that gravel bars below the mean high water mark are under State jurisdiction and that caribou are commonly harvested along rivers, lifting these restrictions under Federal regulations only could result in substantial user confusion and law enforcement concerns. Therefore, the BOG’s decision on the bull closure and prohibition on calf harvest could affect the outcome of Proposals WP20-43/44/45/46.

OSM PRELIMINARY CONCLUSION

Support Proposal WP20-46 and **take no action** on Proposals WP20-43, WP20-44, and WP20-45.

Justification

Adopting Proposal WP20-46 increases harvest opportunity for Federally qualified subsistence users. Eliminating the bull closure may help grow the WACH by reducing harvest pressure on cows. As most people do not target calves, calf harvest is expected to be very low and should not affect the conservation of the herd. Additionally, allowing calf harvest may reduce wanton waste by allowing mistakenly shot calves to be legally salvaged, and would permit harvest of orphaned calves.

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Appendix 1

Estimated total caribou harvest by community, per capita caribou harvest by community, and data sources for Unit 23: Western Arctic caribou herd (ADF&G 2015).

Unit 23				
Community	Year/Period	Est Caribou Harv.	# caribou per capita	Source
Ambler	2003	325	1.12	Georgette et al. 2005, unpublished data
	2009	456	1.75	Braem 2012
	2012	685	2.54	Braem et al. 2015
Buckland	2003	637	1.56	Magdanz et al. 2011
	2009	561	1.30	Braem 2012
Deering	1994	142	0.96	Magdanz et al. 2002
	2007-2008	182	1.37	Braem 2011
	2011-2012	237	1.91	Braem 2011
	2013	393	2.85	ADF&G unpublished data
Kiana	1999	488	1.23	ADF&G unpublished data
	2006	306	0.77	Magdanz et al. 2011
	2009	440	1.18	Braem 2012
Kivalina	1982	346	0.48	CSIS
	1983	564	0.78	CSIS
	1992	351	0.49	CSIS
	2007	268	0.67	Magdanz et al. 2010
	2010-2011	86	0.23	Braem et al. 2014
Kobuk	2004-2005	134	1.06	ADF&G unpublished data
	2009	210	1.72	Braem 2012
	2012	119	0.84	Braem et al. 2015
Kotzebue	1986	1917	0.71	Georgette and Loon 1993
	1991	3782	1.04	CSIS
	2001	2376	0.77	Whiting 2003
	2002	1719	0.56	Whiting 2003
	2003	1915	0.61	Whiting 2003
	2012-2013	1804	0.56	CSIS
2013-2014	1629	0.51	ADF&G unpublished data	
Noatak	1994	615	1.62	Magdanz et al. 2002
	1999	683	1.61	Georgette et al 2000., unpubd data
	2002	410	0.90	Georgette et al. 2004, unpubd data
	2007	441	0.90	Magdanz et al. 2010
	2010	66	0.13	Braem et al. 2014
	2011	360	0.66	Mikow et al. 2014
Noorvik	2002	988	1.46	Georgette et al. 2004, unpubd data
	2008	767	1.19	Braem et al. 2012
	2012	851	1.36	CSIS

-continued-

Unit 23, continued

Community	Year/Period	Est Caribou Harv.	# caribou per capita	Source
Point Hope	1994-1995	355	0.49	Bacon et al. 2009, rev. 2011
	2000-2001	219	0.31	Bacon et al. 2009, rev. 2011
Selawik	1999	1289	1.68	CSIS
	2006	934	1.11	CSIS
	2011	683	0.79	Braem et al. 2013
Shungnak	1998	561	2.17	Georgette 1999, unpubd data
	2002	403	1.62	Magdanz et al. 2004
	2008	416	1.53	Braem 2012
	2012	396	1.47	Braem et al. 2015

WP20–08 Executive Summary	
General Description	Proposal WP20–08 requests implementing a statewide requirement that traps and snares be marked with either the trapper’s name or State identification number. <i>Submitted by: East Prince of Wales Advisory Committee.</i>
Proposed Regulation	Statewide— Trapping (General Provisions) <i>Traps or snares must be marked with trapper’s name or state identification number (Alaska driver’s license number or State identification card number).</i>
OSM Preliminary Conclusion	Oppose
Southeast Alaska Subsistence Regional Advisory Council Recommendation	
Southcentral Alaska Subsistence Regional Advisory Council Recommendation	
Kodiak/Aleutians Subsistence Regional Advisory Council Recommendation	
Bristol Bay Subsistence Regional Advisory Council Recommendation	
Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation	
Western Interior Alaska Subsistence Regional Advisory Council Recommendation	
Seward Peninsula Subsistence Regional Advisory Council Recommendation	

WP20-08 Executive Summary	
Northwest Arctic Subsistence Regional Advisory Council Recommendation	
Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation	
North Slope Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	1 Support, 1 Oppose

**DRAFT STAFF ANALYSIS
WP20-08**

ISSUES

Wildlife Proposal WP20-08, submitted by the East Prince of Wales Fish and Game Advisory Committee, requests implementing a statewide requirement that traps and snares be marked with either the trapper's name or State identification number.

DISCUSSION

The proponent believes that current regulations do not allow for accountability if a trapper leaves their traps out and set after the close of the season, or chooses to use illegal baits (i.e., whole chunks of deer meat or whole migratory birds). The proponent believes requiring trap identification (Alaska issued driver's license number or personal identification number) would make enforcement easier and may prevent these issues. Clarification with the proponent indicated that the proposed marking requirement is to apply Statewide.

Existing Federal Regulation

There are no statewide trap marking requirements under Federal regulations.

Proposed Federal Regulation

Statewide— Trapping (General Provisions)

Traps or snares must be marked with trapper's name or state identification number (Alaska driver's license number or State identification card number).

Existing State Regulation

There are no statewide trap marking requirements under State regulations.

Extent of Federal Public Lands/Waters

Alaska is comprised of 65% Federal public lands and consist of 23% Bureau of Land Management (BLM) managed lands, 21% U.S. Fish and Wildlife Service (USFWS) managed lands, 15% National Park Service (NPS) managed lands, and 6% U.S. Forest Service (USFS) managed lands.

Customary and Traditional Use Determinations

Customary and traditional use determinations for specific areas and species are found in subpart C of 50 CFR 100, § ___.24(a)(1) and 36 CFR 242 § ___.24(a)(1).

Regulatory History

The Alaska Board of Game (BOG) adopted a marking requirement for traps and snares in Units 1–5 in 2006. Federal regulations were aligned with the State requirements in Units 1–5 when the Federal Subsistence Board (Board) adopted Proposal WP12-14 in 2012. The rationale of the Board was that the BOG adopted trap marking requirements for Units 1-5 in 2006 in response to concerns by Alaska Wildlife Troopers, the Alaska Department of Fish and Game (ADF&G), and members of the public, that trapping as a whole would benefit from having some way of identifying ownership of traps and snares. This was prompted by incidences of traps being placed in areas where trapping was not allowed, pets being caught in traps, and unattended snares still capable of capturing a passing deer, bear, or wolf, being found following the close of season (FSB 2012).

The Southeast Alaska Subsistence Regional Advisory Council (Council) expressed concern that there was a lack of evidence why traps should be marked in either State or Federal regulations, and stated that regulations should be adopted for a good reason and not because of “*one bear caught in a snare, set by an unknown person for an unknown reason*”. However, the Council supported the proposal, stating the benefit of aligning Federal and State regulations, and reducing the uncertainty about whether current regulations required traps to be marked (SEASRAC 2011).

In 2014, the Board considered Proposal WP14-01, requesting new statewide Federal provisions requiring trapper identification tags on all traps and snares, the establishment of a maximum allowable time limit for checking traps, and establishment of a harvest/trapping report form to collect data on non-target species captured in traps and snares. The proposal analysis indicated statewide application would be unmanageable, would require substantial law enforcement and public education efforts, and could cause subsistence users to avoid the regulation by trapping under State regulations. The proposal was unanimously opposed by all ten Federal Subsistence Regional Advisory Councils, ADF&G, and the public as reflected in written public comments. The Board rejected the proposal as part of its consensus agenda (FSB 2014).

In March 2016, the BOG removed trap marking requirements in response to Proposal 78. The BOG determined that trappers are generally responsible and that the 2006 regulation was not addressing the reasons why it was implemented, noting that marking traps does not prevent illegal trapping activity or prevent dogs from getting trapped.

In 2018, the Board considered Proposal WP18-13, requesting removal of the trap marking requirement in Units 1-5. The proposal was submitted to remove an unnecessary and burdensome requirement on Federally qualified subsistence users and to realign State and Federal regulations. While ADF&G was neutral on the proposal, it was unanimously supported by the Council (SEASRAC 2017). The proposal was adopted by the Board as part of its consensus agenda (FSB 2018).

Current Events Involving the Species

Wildlife proposal WP20-20 has been submitted requesting that trap sites be marked with brightly colored surveyor's tape in plain view on a nearby tree or overhanging branch in Unit 7.

Effects of the Proposal

The proposal will not result in any positive or negative effects to furbearer or other non-furbearer wildlife populations.

If the proposal is adopted, Federally qualified subsistence users trapping under Federal regulations throughout the State will be required to mark traps and snares with identification tags. The proposed requirement could potentially benefit law enforcement by allowing easier identification of traps and snares set in the field. However, differences in land ownership, population concentrations, terrain, and habitats would limit the effectiveness of the proposed statewide regulation. Individual traplines can span across Federal and State managed lands and, therefore, could have different regulatory requirements along the line. Alternatively, Federally qualified subsistence users could simply choose to trap under State regulations and avoid the proposed requirement, as both Federal and State trapping regulations are applicable on most Federal public lands, as long as the State regulations are not inconsistent with or superseded by Federal regulations, or unless Federal lands are closed to non-Federally qualified users.

Within portions of Unit 15, over 60 percent which lies within Kenai National Wildlife Refuge, and those portions of Unit 7 that are contained within Kenai NWR, a trapping permit is required and a stipulation of Kenai NWR's permit includes the marking of traps and snares. Also, under State regulations, all snares within a quarter mile of a public road in Units 12 and 20E are required to be marked. Federally qualified subsistence users trapping on Federal public lands outside of these specific areas would be required to mark traps and snares with identification tags that include the trapper's name and license number. However, Federally qualified subsistence users trapping on Federal public lands would not be required to mark traps and snares under State regulations.

The requirement to mark traps and snares would also result in additional burden and cost for Federally qualified subsistence users trapping under Federal subsistence regulations. Copper tags stamped with a trapper's identification information, including fasteners, cost approximately \$26 per 100 tags (including shipping) or less (approximately \$15–\$20) for "write-your own" tags (FWS 2012). In addition, trappers often trade or borrow equipment from family members or friends, and changes of identification tags on large numbers of traps or snares would require significant effort (FWS 2014).

Re-implementation of a mandatory requirement to mark traps under Federal regulations creates unnecessary divergence of State and Federal regulations, which may create confusion for Federally qualified subsistence users. Although adoption of the proposal could allow law enforcement to more easily identify trappers that have traps deployed outside the open season or have otherwise violated regulations, mandatory trap marking does not necessarily prevent illegal trapping activity or prevent dogs from getting trapped. Also, adoption of this proposal will not affect State regulations, which would allow Federally qualified subsistence users to operate traps under State regulations to avoid this requirement.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP20-08.

Justification

Requiring Federally qualified subsistence users to mark traps is an unnecessary burden, as mandatory marking does not prevent illegal trapping activity. With State regulations being less restrictive, Federally qualified subsistence users could avoid the requirement by trapping under those regulations, essentially rendering a Federal marking requirement unenforceable. There is no anticipated conservation concern to furbearers with opposing this proposal, as there is no established correlation between furbearer harvest levels and trap marking requirements. Adoption of this proposal also creates unnecessary divergence between State and Federal regulations.

LITERATURE CITED

FSB. 2012. Transcripts of Federal Subsistence Board proceedings, January 17-20, 2012. Office of Subsistence Management, USFWS. Anchorage, AK.

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FSB. 2018. Transcripts of Federal Subsistence Board proceedings, April 11-13, 2018. Office of Subsistence Management, USFWS. Anchorage, AK.

FWS. 2012. Staff Analysis WP12-14. Pages 969-976 in Federal Subsistence Board Meeting Materials January 17–2012. Office of Subsistence Management, USFWS. Anchorage, AK. 1,020 pages.

FWS. 2014. Staff Analysis WP14-01. Pages 352-367 in Federal Subsistence Board Meeting Materials April 15-17, 2014. Office of Subsistence Management, USFWS. Anchorage, AK. 628 pages.

SEASRAC. 2011. Transcripts of the Southeast Alaska Subsistence Regional Advisory Council, September 27-29, 2011 in Wrangell, Alaska. Office of Subsistence Management, USFWS. Anchorage, AK.

SEASRAC. 2017. Transcripts of the Southeast Alaska Subsistence Regional Advisory Council, October 31-November 2, 2017 in Juneau, Alaska. Office of Subsistence Management, USFWS. Anchorage, AK.

WRITTEN PUBLIC COMMENTS

**Ketchikan Advisory Committee
June 6th, 2019
ADF&G Conference Room**

- I. **Call to Order:** 5:40pm by Matt Allen, Secretary
- II. **Roll Call:** 8 voting members present, 1 via phone
Members Present: Allen, Crittenden, Dale, James, Westlund, Roth, Shaw, Bezneck, Fox, Scoblic (Phone)
Members Absent (Excused): Doherty, McQuarrie, Skan, Franulovich, Miller
Members Absent (Unexcused):
Number Needed for Quorum on AC: 8
List of User Groups and Public Present: Public, Sportfish Charter, ADFG (Sport Fish, Wildlife)
Motion: Bezneck, motion to make Allen meeting Chair, Roth, second. 9-0 in favor. Allen sits as meeting Chair
- III. **Approval of Agenda:**
Allen, motion to amend agenda to include discussion of Federal Subsistence Proposals 10, 11, 13,14. Westlund seconded. Motion passed unanimously (9-0). Westlund, moved to approve agenda, Dale seconded. Motion passed unanimously (9-0)
- IV. **Approval of Previous Meeting Minutes:**
Previous meeting minutes incomplete at this time
- V. **Fish and Game Staff Present:**
Kelly Reppert, Ross Dorendorf, Tessa Hasbrouck
- VI. **Guests Present:** Jim Moody, Nick Hashagan, Martin Caplan, Tony Azure
- VII. **Chairman Report:** Allen read co-chair letter from Scoblic/Doherty
- VIII. **ADF&G Sportfish Report:** Reppert, report regarding catch and release chinook fishing. Discussion and comment followed report.
- IX. **Old Business:**
Federal Subsistence Proposals 2020-2022, WP20-01-08, WP20-10-15
- X. **New Business:**
Catch and Release of chinook by Charter fishermen
Set next meeting date, September 12th, 2019, 5:30pm ADFG Conference Room

Federal Subsistence Management Program 2020-2022 Wildlife Proposal Comments			
Proposal Number	Proposal Description		
Support, Support as Amended, Oppose, No Action	Number Support	Number Oppose /Abstain	Comments, Discussion (list Pros and Cons), Amendments to Proposal, Voting Notes
WP20-01	Southeast, Moose, Unit 1C, Eliminate Unit 1C – Berners Bay moose hunt		
Support	8	0/1 abstain	A biological concern does not currently exist necessitating a subsistence priority. Majority of traditional use comes from Juneau area. A fair system is currently in place to provide for opportunity
WP20-02	Southeast, Deer, Unit 2, Remove harvest limits to non-federally qualified users		
Support	9	0	We support State managers in their assessment of the deer population and the opportunity it can support.
WP20-03	Southeast, Deer, Unit 2, Eliminate doe harvest		
Oppose	1	8	Though the AC does not agree with doe harvest, we do not support this proposal because it would have minimal impact.
WP20-04	Southeast, Deer, Unit 2, Revise harvest limit		
Oppose	3	6	Some AC members support cessation of doe harvest if only for a short period of time.
WP20-05	Southeast, Deer, Unit 2, Establish a registration permit for does		
Support	7	1/1	AC supports the proposal as it may lead to better data for management.
WP20-06	Southeast, Deer, Unit 2, Revise season		
Support	9	0	AC supports removal of January hunt due to small amount of harvest, reduced quality of meat and difficulty in distinguishing bucks and does.
WP20-07	Southeast, Deer, Unit 2, Revise harvest limit		
Support	9	0	
WP20-08	Statewide, All Trapping Species, Require traps or snares to be marked with name or State Identification number		
Oppose	1	8	Though some type of compromise should be reached in regards to labelling of traps/snares a one size fits all regulation could be overly burdensome in some areas
WP20-09	Southeast, Beaver, Units 1-4, Revise trapping season		
No Action			
WP20-10	Statewide, Black Bear, Units 1-5, Revise Customary and Traditional Use Determination		

Oppose	2	6	Hunting of Black Bear is not customary and traditional in all units residing in Southeast
WP20-11	Statewide, Brown Bear, Units 1-5, Revise Customary and Traditional Use Determination		
	3	4	Hunting of Brown Bear is not customary and traditional in all units residing in Southeast.
WP20-12	Southeast, Deer, Unit 3, Revise hunt areas, season dates, and harvest limits		
WP20-13	Statewide, Elk, Unit 3, Establish Customary and Traditional Use Determination		
	0	9	This is a population introduced by the State in 1986, due to this fact we do not believe this population is traditional and customary for any Unit in Southeast Alaska. The authors of this proposal do not demonstrate how this particular species in this area has been used to meet the definition as customary and traditional.
WP20-14	Statewide, Goat, Unit 1-5, Revise Customary and Traditional Use Determination		
	4	4	Hunting of Mountain Goat is not Customary and Traditional in all Units residing in Southeast.
WP20-15	Statewide, Moose, Unit 1-5, Revise Customary and Traditional Use Determination		
	0	8	Hunting of Moose is not customary and traditional in all units residing in Southeast.
WP20-16	Statewide, Wolf, Unit 2, Eliminate harvest limit/quota and revise sealing requirement		
No Action			
WP20-17	Statewide, Wolf, Unit 2, Eliminate harvest limit/quota and revise sealing requirement		
No Action			

Adjournment:

Minutes Recorded By: _____

Minutes Approved By: _____

Date: _____

June 25, 2019

TO: Federal Board of Subsistence Management, (Att:
Theo Mutskowitz)
FROM: Alaskans FOR Wildlife and any Cooperating
Entities
RE: Comments on Subsistence Proposals

Please consider these comments on numbered proposals. Comments are offered from a public perspective that reflects several major considerations which we earnestly wish you and the board to keep clearly in mind as you make decisions on these and all proposals offered, namely,

- 1) The lands in question are publically owned lands belonging to all US citizens who in theory and in law all have interest in how wildlife on these lands are managed, and
- 2) Article 8 of our Alaska Constitution clearly sets forth that ALL (emphasis) Alaskans are stakeholders, all essentially owners, with respect to its natural resources and how they are managed .

WP-20 Wolf Trapping lifting harvest restrictions and extending sealing time.

OPPOSE

-2-

This proposal leads to spreading unrestricted wolf take everywhere. Given especially the substantial science on the value of apex predators plus the high interest in sustaining wolf populations on American public lands including here in Alaska as essential to maintenance of ecosystem biodiversity, we maintain that enactment of this proposal would result in another chapter in the unscientific overall continued war on wolves. This proposal to lift harvest limits and to extend sealing limits also already excessive in length are not scientifically justified nor justified as a public matter given the overall value of wolves to maintenance of biodiversity. It must not pass.

WP20-17 – Removing harvest quotas and sealing requirements for hunting wolves, OPPOSE.

We oppose this proposal for the same reasons offered to oppose the previous proposal, WP20-16.

The values of wolves as apex predator and its place in American culture must have bearing upon this consideration. No science and no national or even Alaskan public cultural norms can possibly support this permissively reckless proposal to expand wolf take without bounds. It must not pass.

-3-

WP20-26 Permitting the use of snowmachines to “position” wildlife for harvest. OPPOSE

This proposal would expand this practice apparently from other land management units. In essence “positioning” is another term for what in reality will result in chasing, and harassing wildlife to exhaustion, prohibitions in the regulation notwithstanding, due to impossible enforcement limitations. As an example, when asked to explain existing regulations for snowmachine use in trapping and hunting, an Alaska wildlife trooper explained he does not even understand the regulation.

Expanded snowmachine use, “positioning,” will amount to a continued enforcement challenge. Widespread abuse will surely result and will continue to give subsistence the reputation of abuse when it really needs public support: we feel that as we now face mass extinctions of wildlife species; there is new public and growing focus on the crisis. This is an extremely unwise plunge to the bottom and we caution a futuristic consideration.

WP20-08 Proposal to require traps and snares to be marked with name and state identification number.

SUPPORT This proposal is topical, even in urban municipalities of Alaska as conflicts in public use areas resulting in injuries to hikers, pets and other outdoor public land users rise .

Keeping in mind even the use of more remote public lands grows as outdoor users of their lands increase, the potential for conflicts including serious injuries resulting from hidden owner-unidentified traps will increase. Organized trappers have strongly opposed such requirements as proposed here in past requests for change considered by the Alaska Board of Game. We witness the public land users (including of federal lands) would most certainly strongly favor this accountability. We strongly favor this proposal.

In closing, please carefully consider these comments as you go forward with the process over the next year or so. WE thank you for your consideration of these comments.

Sincerely,
Jim Kowalsky,
Chair, Alaskans FOR Wildlife
PO Box 81957
Fairbanks, Alaska 99708
907-488-2434

WP20–26 Executive Summary	
General Description	WP20-26 requests that Federally qualified subsistence users be allowed to use a snowmachine to position wolves, and wolverines for harvest on Bureau of Land Management (BLM) lands in Units 9B, 9C, 17B, and 17C, provided the animals are not shot from a moving snowmachine. <i>Submitted by: Bristol Bay Subsistence Regional Advisory Council.</i>
Proposed Regulation	<p>§ ____ .26(n)(17)(iii) Unit 17—Unit-specific regulations</p> <p>...</p> <p><i>(D) In Units 17B and 17C, on BLM-managed lands only, a snowmachine may be used to position a wolf or wolverine for harvest, provided that the animal is not shot from a moving snowmachine.</i></p>
OSM Preliminary Conclusion	Support
Bristol Bay Subsistence Regional Advisory Council Recommendation	
Yukon-Kuskokwim Delta Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	1 Oppose

**DRAFT
STAFF ANALYSIS
WP20-26**

ISSUES

Proposal WP20-26, submitted by the Bristol Bay Subsistence Regional Advisory Council requests that Federally qualified subsistence users be allowed to use a snowmachine to position wolves, and wolverines for harvest on Bureau of Land Management (BLM) lands in Units 9B, 9C, 17B, and 17C, provided the animals are not shot from a moving snowmachine.

DISCUSSION

The proponent states that the use of snowmachines to position wolves and wolverines is a traditional practice in rural areas, and the proposed regulation will mirror Federal regulations in Unit 23.

Existing Federal Regulation

§ ____ .26 Subsistence taking of wildlife

...

(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

...

(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased.

(5) Using a motorized vehicle to drive, herd, or molest wildlife.

Proposed Federal Regulation

§ ____ .26 Subsistence taking of wildlife

...

(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

...

(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased.

(5) Using a motorized vehicle to drive, herd, or molest wildlife.

§ _____.26(n)(9)(iii) Unit 9—Unit-specific regulations

...

(I) In Units 9B and 9C, on BLM-managed lands only, a snowmachine may be used to position a wolf or wolverine for harvest, provided that the animal is not shot from a moving snowmachine.

...

§ _____.26(n)(17)(iii) Unit 17—Unit-specific regulations

...

(D) In Units 17B and 17C, on BLM-managed lands only, a snowmachine may be used to position a wolf or wolverine for harvest, provided that the animal is not shot from a moving snowmachine.

Existing State Regulations

AS 16.05.940. Definitions.

...

(34) “take” means taking, pursuing, hunting, fishing, trapping, or in any manner disturbing, capturing, or killing or attempting to take, pursue, hunt, fish, trap, or in any manner capture or kill fish or game.

5 AAC 92.080. Unlawful methods of taking game; exceptions

The following methods of taking game are prohibited:

...

(4) unless otherwise provided in this chapter, from a motor-driven boat or a motorized land vehicle, unless the motor has been completely shut off and the progress from the motor’s power has ceased, except that a

...

(B) motorized land vehicle may be used as follows:

(iii) notwithstanding any other provision in this section, in Units 9(B), 9(C), 9(E), 17, 18, 19, 21, 22, 24, 25(C) and 25(D), except on any National Park Service or National Wildlife Refuge lands not approved by the federal agencies, a snowmachine may be used to position a hunter to select an individual wolf for harvest, and wolves may be shot from a stationary snowmachine;

...

(5) except as otherwise specified, with the use of a motorized vehicle to harass game or for the purpose of driving, herding, or molesting game.

5 AAC 92.990. Definitions

(a) In addition to the definitions in AS 16.05.940 , in 5 AAC 84 – 5 AAC 92, unless the context requires otherwise,

...

(70) “harass” means to repeatedly approach an animal in a manner which results in the animal altering its behavior;

NOTE: The complete text for 5 AAC 92.080(4)(B) is in **Appendix 1.**

Relevant Federal Regulations

50 CFR 100.4 and 36 CFR 242.4 Definitions

Take or taking as used with respect to fish or wildlife, means to pursue, hunt, shoot, trap, net, capture, collect, kill, harm, or attempt to engage in any such conduct.

§____.26(n)(23)(iv) Unit 23—Unit-specific regulations

...

(E) A snowmachine may be used to position a hunter to select individual caribou for harvest provided that the animals are not shot from a moving snowmachine. On BLM-managed lands only, a snowmachine may be used to position a caribou, wolf, or wolverine for harvest provided that the animals are not shot from a moving snowmachine.

43 CFR 8341.1 (Bureau of Land Management)

(f.) No person shall operate an off-road vehicle on public lands: ... (4) In a manner causing or likely to cause significant, undue damage to or disturbance of ... wildlife

Extent of Federal Public Lands

Unit 9 is comprised of approximately 53% Federal public lands and consist of 28% National Park Service, 22% U.S. Fish and Wildlife Service, and 3% Bureau of Land Management managed lands. Bureau of Land Management lands comprise 8% of Unit 9B and 4% of Unit 9C.

Unit 17 is comprised of approximately 28% Federal public lands and consist of 21% U.S. Fish and Wildlife Service, 4% Bureau of Land Management, and 3% National Park Service managed lands. Bureau of Land Management lands comprise 1% Unit 17B and 10% of Unit 17C.

Customary and Traditional Use Determination

The Federal Subsistence Board (Board) has not made a customary and traditional use determination for wolverines in Unit 9 or Unit 17. Therefore, all Federally qualified subsistence users may harvest wolverines.

Residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a customary and traditional use determination for wolves in Units 9 and 17.

Regulatory History

In 1995, Proposal P95-52 requested that snowmachines and motor-driven boats be allowed in the taking of caribou and moose in Unit 25 during established seasons, except shooting from a snowmachine in motion was prohibited. There was no existing regulation on the use of motorized vehicles in Unit 25 prior to this. The Federal Subsistence Board (Board) adopted the recommendation of the Eastern Interior Alaska and Southcentral Alaska Subsistence Regional Advisory Councils who supported the proposal in recognition that methods change over time and because it supported subsistence uses.

In 2000, the Board adopted Proposal P00-53 with modification allowing the use of snowmachines to position a hunter and select individual caribou for harvest in Units 22 and 23. The Board did this to recognize a longstanding customary and traditional practice in the region (FWS 2000). However, the proponent had asked to position a caribou, not a hunter. The Interagency Staff Committee provided a rationale for the modification:

Following the Regional Council winter meetings, the Deputy Regional Director of the U.S. Fish and Wildlife Service (FWS), Alaska Region, met with the Assistant Regional Director for Law Enforcement, the Staff Committee member for FWS, the Refuge Supervisor for Northern Refuges, and the Native Liaison and, after lengthy discussion, agreed to recommend substituting “a hunter” for “caribou” in the proposal language. They agreed that this is consistent with conservation principles and existing agency regulations as long as herding does not occur and shooting from a moving snowmachine is prohibited (FWS 2000:13).

In 2012, Proposal WP12-53 was submitted by the Yukon Delta National Wildlife Refuge, and requested unit specific regulation prohibiting a hunter in Unit 18 from pursuing with a motorized vehicle an ungulate that is “fleeing.” The Board adopted the proposal with modification and prohibited the pursuit with a motorized vehicle of an ungulate that was “at or near a full gallop” in Unit 18, providing greater clarity of allowable methods of harvest (FWS 2012).

At its March 2014 meeting, the Alaska Board of Game adopted Proposal 177, which allows a hunter to use a snowmachine in Units 22, 23 and 26A to position a caribou, wolf, or wolverine for harvest, as long as these animals were shot from a stationary snowmachine (see 5 AAC 92.080(4)(B)(i) at **Appendix 1**). The purpose of the proposal was to allow the use of snowmachines to track these animals.

In 2016, Proposal WP16-48, submitted by the Native Village of Kotzebue, requested that Federally qualified subsistence users be allowed to use snowmachines to position a caribou, wolf, or wolverine for harvest in Unit 23. The Board adopted the proposal with modification to allow this method of harvest only on those lands managed by the Bureau of Land Management. The Board recognized uses of snowmachines to position animals as customary and traditional practice. However, positioning animals by snowmachine is prohibited on National Park Service and U.S. Fish and Wildlife Service lands under agency-specific regulations. Bureau of Land Management regulatory language does not specifically prohibit the use of snowmachines to position animals for hunting and this harvest method is allowed on some State managed lands.

In the spring of 2017, Kenneth Nukwak of Manokotak submitted Proposal WP18-24 requesting that Federally qualified subsistence users be allowed to use a snowmachine to position caribou, wolves, and wolverines for harvest in Unit 17, provided the animals would not be shot from a moving vehicle. During the fall 2017 meeting cycle, the Bristol Bay Subsistence Regional Advisory Council voted to oppose Proposal WP18-24, noting a lack of clear definitions for positioning and chasing of an animal.

At its February 2018 meeting in Dillingham, the Alaska Board of Game adopted Proposal 148, also submitted by Kenneth Nukwak of Manokotak, with modification. The original proposal requested that Federally qualified subsistence users be allowed to use a snowmachine to position caribou, wolves, and wolverines for harvest in Unit 17, provided the animals would not be shot from a moving vehicle. The modified regulation was limited to caribou and stated that a snowmachine may be used in Unit 17 to assist in the taking of a caribou, and caribou may be shot from a stationary snowmachine, with further clarification describing exactly how the snowmachine may be used for assistance (see 5 AAC 92.080(4)(B)(viii) at **Appendix 1**).

At its winter meeting in March of 2018, the Bristol Bay Subsistence Regional Advisory Council voted to request Proposal WP18-24 be removed from the consensus agenda at the next Board meeting. Reasoning for this included providing an opportunity for the Board to deliberate the proposal on record, in light of Board of Game deliberation, modification, and adoption of the same proposal on State lands in Unit 17. During the April 2018 Board meeting, Proposal WP18-24 was taken off the consensus agenda. Some public testimony was received in support of the proposal. The Board deliberated the proposal on record and rejected it.

Biological Background

Wolves and wolverines are present throughout Units 9 and 17. As with other furbearers in Alaska, there is scant objective data on abundance of these animals. Rather, relative abundance has typically been estimated using the results of trapper questionnaires, as well as incidental observation by biologists, hunters, trappers, guides and others.

Wolves

Historically, wolf density has varied in response to harvest pressure, prey availability, and disease. In Unit 9, wolf densities were low in the early 1980s following the end of the Federal wolf control program. Abundance appears to have increased during the 1990s. Currently, the population is believed to be relatively stable, and monitoring efforts in Units 9C and 9E indicate that the population is 250 – 550 wolves, or 16-18 wolves/1,000 mi² (Crowley and Peterson 2018). Wolf dynamics in Unit 17 have been similar to those in Unit 9, with abundance increasing during the mid-1980s and early 1990s (Barten 2018) and recent observations suggesting that the population is relatively stable (Spivey 2019).

Wolverines

Compared to other furbearers, wolverines occur at low densities (Copeland and Whitman 2003). Though wolverine abundance remains unquantified due to the impracticality of formal assessment (Crowley 2013), low densities appear to be confirmed by local trappers, who report that wolverines in Units 9 and 17 are scarce but stable (Spivey 2019).

Cultural Knowledge and Traditional Practices

During his study years of 1964 and 1965, VanStone (1967:134) documented winter travel along the Nushagak River as occurring almost exclusively by dog team. During the winter months dog teams were used to harvest caribou, access trap lines, and provide for the transportation of supplies and people throughout the region. Hunters used traditional methods to harvest wildlife. These methods included a hunter moving animals towards another hunter's position (Nelson 1983 [1899] and Oswalt 1990). At the time of his study, VanStone was only aware of a few Bristol Bay residents that possessed snowmachines. Approximately 10 years later, when the Alaska Department of Fish and Game (ADF&G) first began conducting research on subsistence harvest activities, dog teams were barely mentioned. Instead, reports noted that the communities of Nushagak Bay had mostly transitioned to the use of boats, aircrafts, and snowmachines as a preferred means of travel and for accessing animals for harvest (Coiley-Kenner et al. 2003; Evans et al. 2013; Fall et al. 1986; Holen et al. 2012; Holen et al. 2005; Kreig et al. 2009; Schinchnes and Chythlook 1988; Seitz 1996; Wolfe et al. 1984; Wright et al. 1985).

In the past, prior to the use of snowmachines, people in the region were more nomadic. Residents of Southwest Alaska practiced an annual round of harvest activities that allowed them to effectively position themselves in proximity to important resources that supported their families through extended travel to seasonal subsistence camps. In La Vine and Lisac (2003), elders describe a harvest year that began at fish camp in the early summer, moved up the river to hunting and trapping camps for the fall and winter, traveled through mountain passes and down rivers to bays and estuaries for the spring harvest of migratory waterfowl and eggs, finally returning to fish camp once again in early summer (La Vine and Lisac 2003). A trip such as this required travel by boat, sled, and foot and took the family hundreds of miles and 12 months to complete. As village life solidified around schools and economic opportunities, technological advances like boats with outboard motors and snowmachines allowed people to travel further over shorter periods of time in order to access resources they once had to follow over seasons instead of hours.

Wolves and Wolverine

Across Alaska, both wolves and wolverines are highly prized for their fur, which is used to trim locally made parkas and other items of clothing or handicrafts. While not as prominent an activity as in the past, rural residents still participate in trapping as a source of income in the Bristol Bay region, particularly for wolverine, which continues to fetch a high price for quality fur (Woolington 2013). Snowmachines were the primary means of transportation used by hunters and trappers for taking wolves and furbearers in Unit 17 from 2008 through 2012 (Woolington 2012 and 2013). Most wolves were harvested by firearm between the regulatory years of 1992 and 2010, while wolverines were more frequently taken by trap or snare.

The Division of Subsistence at ADF&G conducts household subsistence harvest surveys periodically throughout Alaska. Though this survey data is only available for some communities in some years, it is an additional source for documenting patterns of use in rural Alaska. The most recent surveys conducted in the Bristol Bay region describe the harvest and use of wolves and wolverines as varied between communities and study years (Evans et al. 2013; Holen et al. 2012; Holen et al. 2011; Holen et al. 2005; Kreig et al. 2009). A common pattern described by most reports is that a smaller percentage of households in each community report harvest or attempted harvest and use of furbearers than those reporting harvest and use of salmon or large land mammals like moose and caribou. In most cases only a few households are responsible for the majority of the harvest and use of furbearers, likely in association with keeping a trap line.

Harvest History

Wolves

Harvest of wolves is influenced by weather and travel conditions, which can result in variable harvest from year to year. Alaska Department of Fish and Game sealing records indicate that from 2010 to 2014, the most recent five-year period for which unit-specific sealing data is available, reported harvest ranged from 44 to 142 wolves in Unit 9. On average 64 wolves were harvested annually (Crowley and Peterson 2018).

Reported harvest was also variable in Unit 17, where between 6 and 105 wolves were harvest annually from 2010 to 2014. During that period, annual harvest averaged 47 wolves. In Unit 17, 70% of harvested wolves were shot, 18% were trapped or snared, and 69% of hunters and trappers used snowmachines to harvest wolves (Barten 2018).

Wolverines

Like wolf harvest, wolverine harvest can vary from year to year, reflecting trapper effort that varies with travel conditions. For 2007 – 2016, the most recent ten-year period for which unit-specific sealing data is available, reported harvest ranged from 9 to 36 wolverines in Unit 9. On average, annual reported harvest was 25 wolverines, 89% of which were trapped or snared, and 10% of which were shot.

Snowmachines were used in 28% of wolverine harvest during this period. (Crowley 2013; Rinaldi 2019, pers. comm.).

In Unit 17, sealing records indicate that reported harvest ranged from 8 to 63 wolverines annually during 2007 – 2016, averaging 37 wolverines annually. During this time period, 79% of wolverines were trapped or snared and 17% were shot. Snowmachines were used 46% of the time (Woolington 2013; Rinaldi 2019, pers. comm.).

Other Relevant Proposals

Proposal WP20-27 was also submitted by the Bristol Bay Regional Advisory Council, and it requests a unit-specific regulation for Unit 17 allowing use of a snowmachine to assist in the taking of a caribou and allowing caribou to be shot from a stationary snowmachine, using the regulatory language adopted by the Alaska Board of Game in February 2018.

Effects of the Proposal

If adopted, Proposal WP20-26 would allow hunters to use a snowmachine to position wolves and wolverines for selection and harvest, as long as they were not shot from a moving snowmachine. The most recent available reports suggest that, in the Bristol Bay region, the majority of wolves are harvested by firearm, while the majority of wolverine are harvested by trapping. The proposed regulation may not result in an increase in harvest of wolves and wolverines by trap or snare. However, such regulatory changes could increase the take of wolves and wolverines by firearm, and may result in more opportunistic harvest. Currently the wolf population is believed to be stable. Less is known about the resident wolverine population and this change in regulation could result in increased biological vulnerability.

Bureau of Land Management lands in Units 9B, 9C, 17B, and 17C flank portions of the Nushagak and Kvichak rivers, and if the proposal is adopted, then it may provide most benefit to those communities situated nearest including Koliginnek, New Stuyahok, Ekwok, Igiugig, Levelock, King Salmon, Naknek, and South Naknek. Regulations for the use of snowmachines when harvesting wolves or wolverines would be different on State managed lands, however this is already the case and should the proposal be adopted, it does not add regulatory complexity that does not already exist. Specifically, in State regulations, a snowmachine may be used to position a hunter to select an individual wolf for harvest, and wolves may be shot from a stationary snowmachine; in Federal regulations, a snowmachine could be used to position a wolf or wolverine for harvest, and either could be shot from a stationary snowmachine.

OSM PRELIMINARY CONCLUSION

Support Proposal WP20-26.

Justification

Hunters using snowmachines to position wolves and wolverines for harvest is a traditional practice in the Bristol Bay area. While methods and means for taking wildlife in ethnographic literature describe hunters employing traditional strategies that might affect game behavior, until the 1960s hunters were largely on sled and foot (Nelson 1983 [1899]; Oswalt 1990; VanStone 1967). As means for travel, access, and harvest continue to change over time, hunters persist in using traditional methods purposefully meant to alter the behavior of wildlife in order to position them for harvest because these methods are efficient. Additionally, the Board has adopted a similar regulation in Unit 23, in recognition of the snowmachine as a customary and traditional harvest method. The proposed regulation change might increase opportunity through an enhanced method for the harvest of wolverines and could result in more harvest. Impacts to wolverine populations are unknown at this time and are difficult to track.

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APPENDIX 1

5 AAC 92.080. Unlawful methods of taking game; exceptions

The following methods of taking game are prohibited:

...

(4) unless otherwise provided in this chapter, from a motor-driven boat or a motorized land vehicle, unless the motor has been completely shut off and the progress from the motor's power has ceased, except that a

...

(B) motorized land vehicle may be used as follows:

i) In Units 22, 23, and 26(A), a snowmachine may be used to position a caribou, wolf, or wolverine, for harvest, and caribou, wolves and wolverines may be shot from a stationary snowmachine.

(ii) notwithstanding any other provision in this section, in the wolf control implementation areas specified in 5 AAC 92.111 - 5 AAC 92.113, 5 AAC 92.118, and 5 AAC 92.121 - 5 AAC 92.124, a snowmachine may be used to position a hunter to select an individual wolf for harvest, and wolves may be shot from a stationary snowmachine;

(iii) notwithstanding any other provision in this section, in Units 9(B), 9(C), 9(E), 17, 18, 19, 21, 22, 24, 25(C) and 25(D), except on any National Park Service or National Wildlife Refuge lands not approved by the federal agencies, a snowmachine may be used to position a hunter to select an individual wolf for harvest, and wolves may be shot from a stationary snowmachine;

(iv) notwithstanding any other provision in this section, in the bear control implementation areas specified in 5 AAC 92.111 - 5 AAC 92.113, 5 AAC 92.118, and 5 AAC 92.121 - 5 AAC 92.124, a snowmachine may be used to position a hunter to select an individual bear for harvest, and bears may be shot from a stationary snowmachine;

(v) notwithstanding any other provision in this section, in Units 9(B), 9(C), 9(E), 17, 22 and 25(C), except on any National Park Service or National Wildlife Refuge lands not approved by the federal agencies, an ATV may be used to position a hunter to select an individual wolf for harvest, and wolves may be shot from a stationary ATV;

(vi) under authority of a permit issued by the department;

(vii) in Unit 18, a snowmachine may be used to position a wolf or wolverine for harvest, and wolves or wolverines may be shot from a stationary snowmachine;

(viii) in Unit 17, a snowmachine may be used to assist in the taking of a caribou and caribou may be shot from a stationary snowmachine. "Assist in the taking of a caribou" means a snowmachine may be used to approach within 300 yards of a caribou at speeds under 15 miles per hour, in a manner that does not involve repeated approaches or that causes a caribou to run. A snowmachine may not be used to contact an animal or to pursue a fleeing caribou.

(5) except as otherwise specified, with the use of a motorized vehicle to harass game or for the purpose of driving, herding, or molesting game;

(6) with the use or aid of a machine gun, set gun, or a shotgun larger than 10 gauge;

(7) with the aid of

(A) a pit;

(B) a fire;

(C) artificial light, except that artificial light may be used.

June 25, 2019

TO: Federal Board of Subsistence Management, (Att:
Theo Mutskowitz)

FROM: Alaskans FOR Wildlife and any Cooperating
Entities

RE: Comments on Subsistence Proposals

Please consider these comments on numbered proposals. Comments are offered from a public perspective that reflects several major considerations which we earnestly wish you and the board to keep clearly in mind as you make decisions on these and all proposals offered, namely,

- 1) The lands in question are publically owned lands belonging to all US citizens who in theory and in law all have interest in how wildlife on these lands are managed, and
- 2) Article 8 of our Alaska Constitution clearly sets forth that ALL (emphasis) Alaskans are stakeholders, all essentially owners, with respect to its natural resources and how they are managed .

WP-20 Wolf Trapping lifting harvest restrictions and extending sealing time.

OPPOSE

-2-

This proposal leads to spreading unrestricted wolf take everywhere. Given especially the substantial science on the value of apex predators plus the high interest in sustaining wolf populations on American public lands including here in Alaska as essential to maintenance of ecosystem biodiversity, we maintain that enactment of this proposal would result in another chapter in the unscientific overall continued war on wolves. This proposal to lift harvest limits and to extend sealing limits also already excessive in length are not scientifically justified nor justified as a public matter given the overall value of wolves to maintenance of biodiversity. It must not pass.

WP20-17 – Removing harvest quotas and sealing requirements for hunting wolves, OPPOSE.

We oppose this proposal for the same reasons offered to oppose the previous proposal, WP20-16.

The values of wolves as apex predator and its place in American culture must have bearing upon this consideration. No science and no national or even Alaskan public cultural norms can possibly support this permissively reckless proposal to expand wolf take without bounds. It must not pass.

-3-

WP20-26 Permitting the use of snowmachines to “position” wildlife for harvest. OPPOSE

This proposal would expand this practice apparently from other land management units. In essence “positioning” is another term for what in reality will result in chasing, and harassing wildlife to exhaustion, prohibitions in the regulation notwithstanding, due to impossible enforcement limitations. As an example, when asked to explain existing regulations for snowmachine use in trapping and hunting, an Alaska wildlife trooper explained he does not even understand the regulation.

Expanded snowmachine use, “positioning,” will amount to a continued enforcement challenge. Widespread abuse will surely result and will continue to give subsistence the reputation of abuse when it really needs public support: we feel that as we now face mass extinctions of wildlife species; there is new public and growing focus on the crisis. This is an extremely unwise plunge to the bottom and we caution a futuristic consideration.

WP20-08 Proposal to require traps and snares to be marked with name and state identification number.

-4-

SUPPORT This proposal is topical, even in urban municipalities of Alaska as conflicts in public use areas resulting in injuries to hikers, pets and other outdoor public land users rise .

Keeping in mind even the use of more remote public lands grows as outdoor users of their lands increase, the potential for conflicts including serious injuries resulting from hidden owner-unidentified traps will increase. Organized trappers have strongly opposed such requirements as proposed here in past requests for change considered by the Alaska Board of Game. We witness the public land users (including of federal lands) would most certainly strongly favor this accountability. We strongly favor this proposal.

In closing, please carefully consider these comments as you go forward with the process over the next year or so. WE thank you for your consideration of these comments.

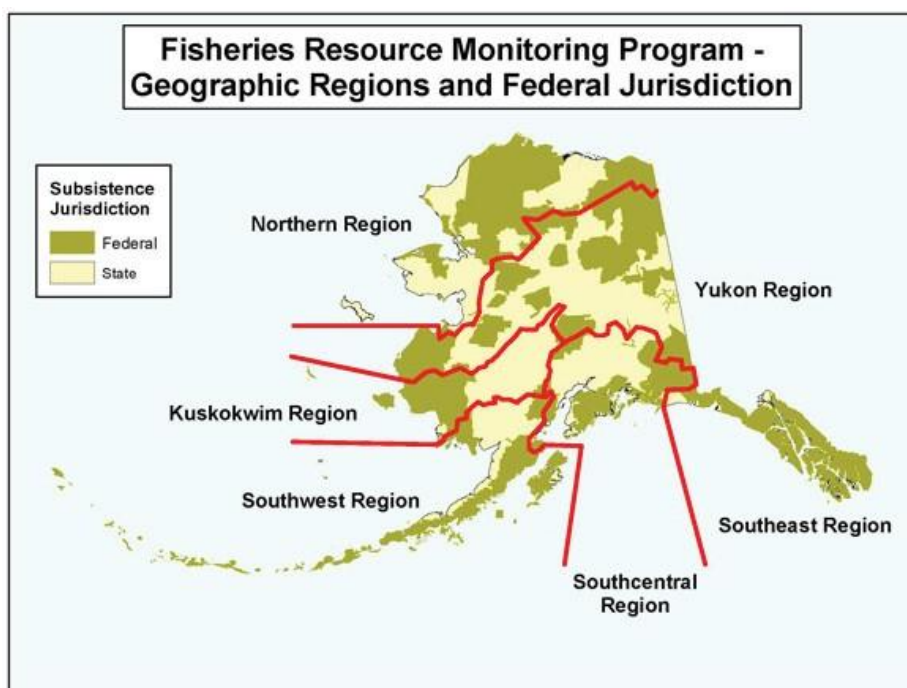
Sincerely,
Jim Kowalsky,
Chair, Alaskans FOR Wildlife
PO Box 81957
Fairbanks, Alaska 99708

FISHERIES RESOURCE MONITORING PROGRAM

BACKGROUND

Section 812 of the Alaska National Interest Lands Conservation Act (ANILCA) directs the Departments of the Interior and Agriculture, cooperating with other Federal agencies, the State of Alaska, and Alaska Native and other rural organizations, to research fish and wildlife subsistence uses on Federal public lands; and to seek data from, consult with, and make use of the knowledge of local residents engaged in subsistence. When the Federal government assumed responsibility for management of subsistence fisheries on Federal public lands and waters in Alaska in 1999, the Secretaries of the Interior and Agriculture made a commitment to increase the quantity and quality of information available to manage subsistence fisheries, to increase quality and quantity of meaningful involvement by Alaska Native and other rural organizations, and to increase collaboration among Federal, State, Alaska Native, and rural organizations. The Fisheries Resource Monitoring Program (Monitoring Program) is a collaborative, interagency, interdisciplinary approach to enhance fisheries research and data in Alaska and effectively communicate information needed for subsistence fisheries management on Federal public lands and waters.

Every two years, the Office of Subsistence Management announces a funding opportunity for investigation plans addressing subsistence fisheries on Federal public lands. The 2020 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 below.



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, and for Yukon and Kuskokwim drainages whitefish (available for viewing at the Monitoring Program webpage at <https://www.doi.gov/subsistence/frmp/plans>). These plans identify prioritized information needs for each major subsistence fishery. Individual copies of plans are available from the Office of Subsistence Management by calling (907) 786-3888 or toll Free: (800) 478-1456 or by email subsistence@fws.gov. An independent strategic plan was completed for the Kuskokwim Region for salmon in 2006 and can be viewed at the Alaska-Yukon-Kuskokwim Sustainable Salmon Initiative website at <https://www.aykssi.org/salmon-research-plans/>.

Investigation plans are reviewed and evaluated by Office of Subsistence Management and U.S. Forest Service staff, and then scored 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 the following five criteria: strategic priority, technical and scientific merit, investigator ability and resources, partnership and capacity building, and cost/benefit.

Project executive summaries are assembled into a draft 2020 Fisheries Resources Monitoring Plan. The draft plan is distributed for public review and comment through Subsistence Regional Advisory Council meetings, beginning in September 2019. The Federal Subsistence Board will review the draft plan and will accept written and oral comments at its January 2020 meeting. The Federal Subsistence Board forwards its comments to the Assistant Regional Director of the Office of Subsistence Management. Final funding approval lies with the Assistant Regional Director of the Office of Subsistence Management. Investigators are subsequently 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 2000, a total of \$117 million has been allocated for the Monitoring Program to fund a total of 452 projects (**Figure 1** and **Figure 2**).

During each two-year 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**). The regional guidelines were developed using six criteria that included level of risk to species, level of threat to conservation units, amount of subsistence needs not being met, amount of information available to support subsistence management, importance of a species to subsistence harvest, and level of user concerns regarding subsistence harvest. Budget guidelines provide an initial target for planning; however, they are not final allocations and are adjusted annually as needed (**Figure 3**).

Figure 1. Monitoring Program Funds Distributed, by Organization Type, Since 2000

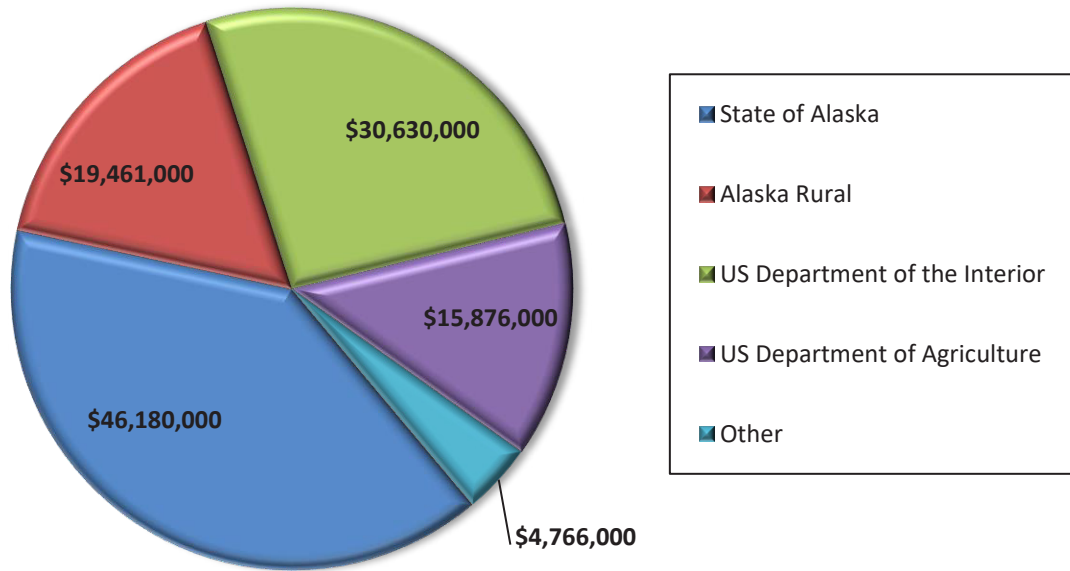


Figure 2. Number of Monitoring Program Projects Funded, by Organization Type, since 2000

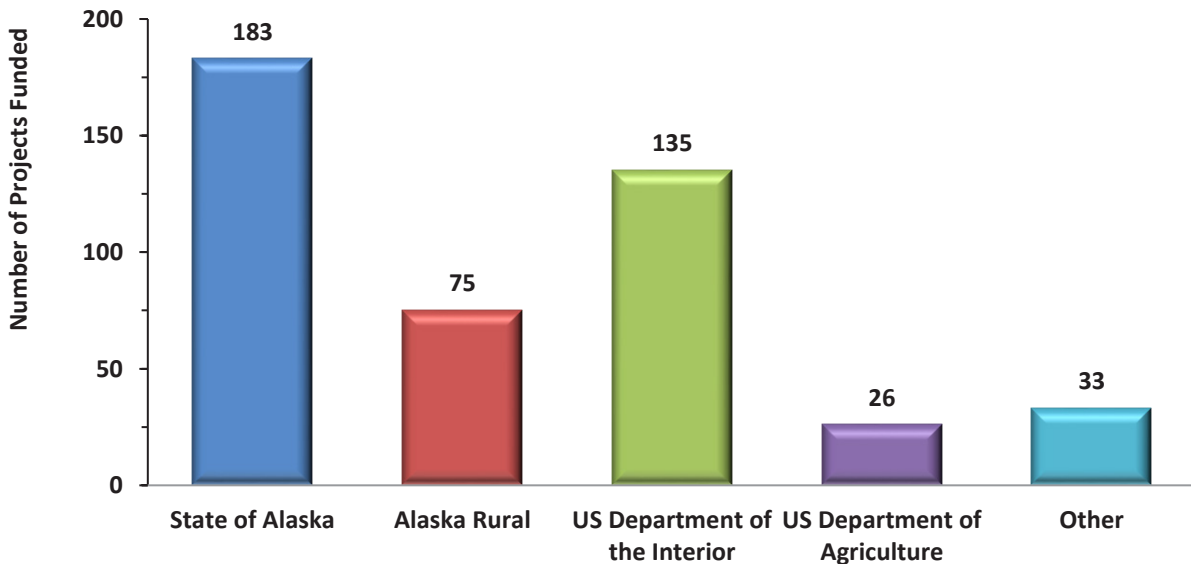
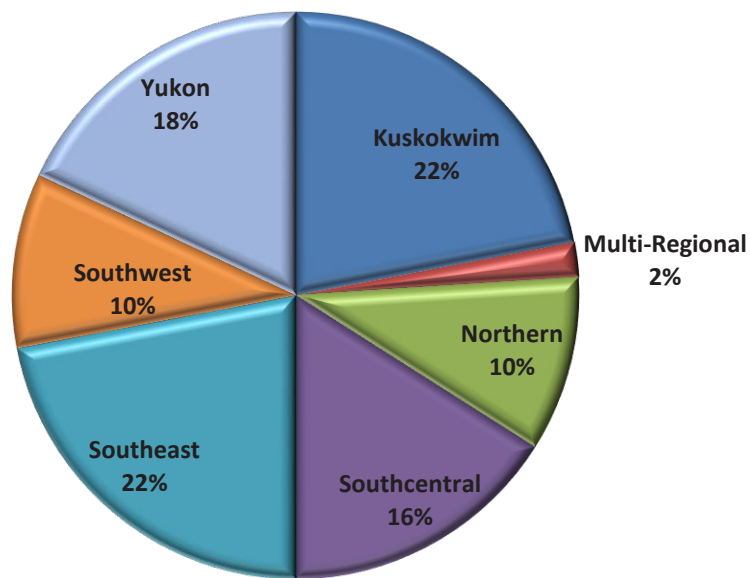


Table 1. Regional allocation guideline for Fisheries Resource Monitoring Program Funds.

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

Figure 3. Percentages of Monitoring Program Funding Distributed to Each Region since 2000



The following three broad categories of information that are solicited for the Monitoring Program: (1) harvest monitoring, (2) traditional ecological knowledge, and (3) stock status and trends. Projects that combine these approaches are encouraged. Definitions of these three categories of information are listed below.

Harvest monitoring studies provide information on numbers and species of fish harvested, locations of harvests, and gear types used. Methods used to gather information on subsistence harvest patterns may

include harvest calendars, mail-in questionnaires, household interviews, subsistence permit reports, and telephone interviews.

Traditional ecological knowledge studies are investigations of local knowledge directed at collecting and analyzing information on a variety of topics, including: the sociocultural aspects of subsistence, fish ecology, species identification, local names, life history, taxonomy, seasonal movements, harvests, spawning and rearing areas, population trends, environmental observations, and traditional management systems. Methods used to document traditional ecological knowledge include ethnographic fieldwork, key respondent interviews with local experts, place name mapping, and open-ended surveys.

Stock status and trends studies provide information on abundance and run timing; age, size, and sex composition; migration and geographic distribution; survival of juveniles or adults; stock production; genetic stock identification; and mixed stock analyses. Methods used to gather information on stock status and trends include aerial and ground surveys, test fishing, towers, weirs, sonar, video, genetics, mark-recapture, and telemetry.

PROJECT EVALUATION PROCESS

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 Management Program, are technically sound, administratively competent, promote partnerships and capacity building, and are cost effective. Projects are evaluated by a panel called the Technical Review Committee. 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 Technical Review Committee reviews, evaluates, and makes recommendations about proposed projects, consistent with the mission of the Monitoring Program. Fisheries and Anthropology staff from the Office of Subsistence Management provide support for the Technical Review Committee. Recommendations from the Technical Review Committee provide the basis for further comments from Subsistence Regional Advisory Councils, the public, the Interagency Staff Committee, and the Federal Subsistence Board, with final approval of the Monitoring Plan by the Assistant Regional Director of the Office of Subsistence Management.

To be considered for funding under the Monitoring Program, a proposed project must have a nexus to Federal subsistence fishery management. Proposed projects must have a direct association to a Federal subsistence fishery, and the subsistence fishery or fish stocks in question must occur in or pass through waters within or adjacent to Federal public lands in Alaska (National Wildlife Refuges, National Forests, National Parks and Preserves, National Conservation Areas, National Wild and Scenic River Systems, National Petroleum Reserves, and National Recreation Areas). A complete project package must be submitted on time and must address the following five specific criteria to be considered a high quality project.

1. **Strategic Priorities**—Studies should be responsive to information needs identified in the 2020 Priority Information Needs available at the Monitoring Program webpage at <https://www.doi.gov/subsistence/frmp/funding>. All projects must have a direct linkage to Federal public lands and/or waters to be eligible for funding under the Monitoring Program. 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—The extent of Federal public waters in or nearby the project area
- Direct subsistence fisheries management implications
- Conservation mandate—Threat or risk to conservation of species and populations that support subsistence fisheries
- Potential impacts on the subsistence priority—Risk that subsistence harvest users' goals will not be met
- Data gaps—Amount of information available to support subsistence management and how a project answers specific questions related to these gaps
- Role of the resource—Contribution of a species to a subsistence harvest (number of villages affected, pounds of fish harvested, miles of river) and qualitative significance (cultural value, unique seasonal role)
- Local concern—Level of user concerns over subsistence harvests (upstream vs. downstream allocation, effects of recreational use, changes in fish abundance and population characteristics)

2. **Technical-Scientific Merit**—Technical quality of the study design must meet accepted standards for information collection, compilation, analysis, and reporting. To demonstrate technical and scientific merit, applicants should describe how projects will:

- Advance science
- Answer immediate subsistence management or conservation concerns
- Have rigorous sampling and/or research designs
- Have specific, measurable, realistic, clearly stated, and achievable (attainable within the proposed project period) objectives
- Incorporate traditional knowledge and methods

Data collection, compilation, analysis, and reporting procedures should be clearly stated. Analytical procedures should be understandable to the non-scientific community. To assist in evaluation of submittals for continuing projects previously funded under the Monitoring

Program, summarize project findings and justify continuation of the project, placing the proposed work in context with the ongoing work being accomplished.

3. **Investigator Ability and Resources**—Investigators must show they are capable of successfully completing the proposed project by providing information on the ability (training, education, experience, and letters of support) and resources (technical and administrative) they possess to conduct the work. Investigators that have received funding in the past, via the Monitoring Program or other sources, are evaluated and scored on their past performance, including fulfillment of meeting deliverable and financial accountability deadlines. A record of failure to submit reports or delinquent submittal of reports will be taken into account when rating investigator ability and resources.
4. **Partnership and Capacity Building**—Investigators must demonstrate that capacity building has already reached the communication or partnership development stage during proposal development and, ideally, include a strategy to develop capacity building to higher levels, recognizing, however, that in some situations higher level involvement may not be desired or feasible by local organizations.

Investigators are requested to include a strategy for integrating local capacity development in their study plans or research designs. Investigators should inform communities and regional organizations in the area where work is to be conducted about their project plans, and should also consult and communicate with local communities to ensure that local knowledge is utilized and concerns are addressed. Investigators and their organizations should demonstrate their ability to maintain effective local relationships and commitment to capacity building. This includes a plan to facilitate and develop partnerships so that investigators, communities, and regional organizations can pursue and achieve the most meaningful level of involvement. Proposals demonstrating multiple, highly collaborative efforts with rural community members or Alaska Native Organizations are encouraged.

Successful capacity building requires developing trust and dialogue among investigators, local communities, and regional organizations. Investigators need to be flexible in modifying their work plan in response to local knowledge, issues, and concerns, and must also understand that capacity building is a reciprocal process in which all participants share and gain valuable knowledge. The reciprocal nature of the capacity building component(s) should be clearly demonstrated in proposals. Investigators are encouraged to develop the highest level of community and regional collaboration that is practical including joining as co-investigators.

Capacity can be built by increasing the technical capabilities of rural communities and Alaska Native organizations. This can be accomplished via several methods, including increased technical experience for individuals and the acquisition of necessary gear and equipment. Increased technical experience would include all areas of project management including logistics, financial accountability, implementation, and administration. Other examples may include internships or providing opportunities within the project for outreach, modeling, sampling design,

or project specific training. Another would be the acquisition of equipment that could be transferred to rural communities and tribal organizations upon the conclusion of the project.

A “meaningful partner” is a partner that is actively engaged in one or more aspects of project design, logistics, implementation and reporting requirements. Someone who simply agrees with the concept or provides a cursory look at the proposal is not a meaningful partner.

5. **Cost/Benefit**—This criterion evaluates the reasonableness (what a prudent person would pay) of the funding requested to provide benefits to the Federal Subsistence Management Program. Benefits could be tangible or intangible. Examples of tangible outcomes include data sets that directly inform management decisions or fill knowledge gaps and opportunities for youth or local resident involvement in monitoring, research and/or resource management efforts. Examples of possible intangible goals and objectives include enhanced relationships and communications between managers and communities, partnerships and collaborations on critical resource issues, and potential for increased capacity within both communities and agencies.

Applicants should be aware that the Government shall perform a “best value analysis” and the selection for award shall be made to the applicant whose proposal is most advantageous to the Government. The Office of Subsistence Management strives to maximize program efficiency by encouraging cost sharing, partnerships, and collaboration.

POLICY AND FUNDING GUIDELINES

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

- Projects of up to four years in duration may be considered
- Proposals requesting Monitoring Program funding that exceeds \$215,000.00 in any one year are not eligible for funding
- Studies must not duplicate existing projects
- Long term projects will be considered on a case by case basis

Activities that are not eligible for funding include:

- Habitat protection, mitigation, restoration, and enhancement
- Hatchery propagation, restoration, enhancement, and supplementation
- Contaminant assessment, evaluation, and monitoring
- Projects where the primary or only objective is outreach and education (for example, science camps, technician training, and intern programs), rather than information collection

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

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

2020 FISHERIES RESOURCE MONITORING PLAN

For 2020, a total of 28 investigation plans were received and all are considered eligible for funding. For 2020, the Department of the Interior, through the U.S. Fish and Wildlife Service, will provide an anticipated \$1.5 million in funding statewide for new projects. The U.S. Department of Agriculture, through the U.S. Forest Service, has historically provided some funding. The amount of U.S. Department of Agriculture funding available for 2020 projects is uncertain.

FISHERIES RESOURCE MONITORING PROGRAM KUSKOKWIM REGION OVERVIEW

Since the inception of the Monitoring Program in 2000, a total of 99 projects have been undertaken in the Kuskokwim Region costing \$20.9 million (**Figure 1**). Of these, the State of Alaska received funds to conduct 59 projects, Alaska rural organizations conducted 16 projects, the U.S. Department of the Interior conducted 21 projects, and other organizations conducted 3 projects (**Figure 2**). See **Appendix 1** for more information on Kuskokwim Region projects completed since 2000.

Figure 1. Monitoring Program Funds Distributed, by Organization Type, in the Kuskokwim Region since 2000

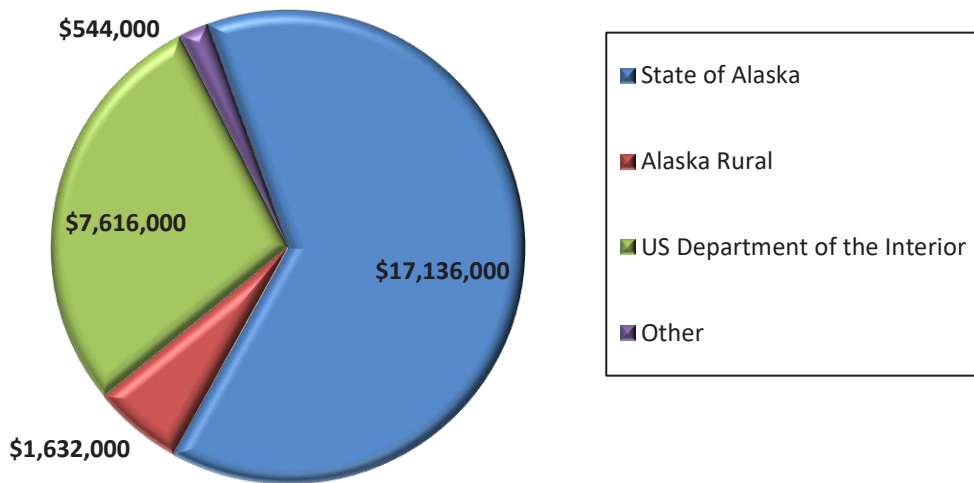
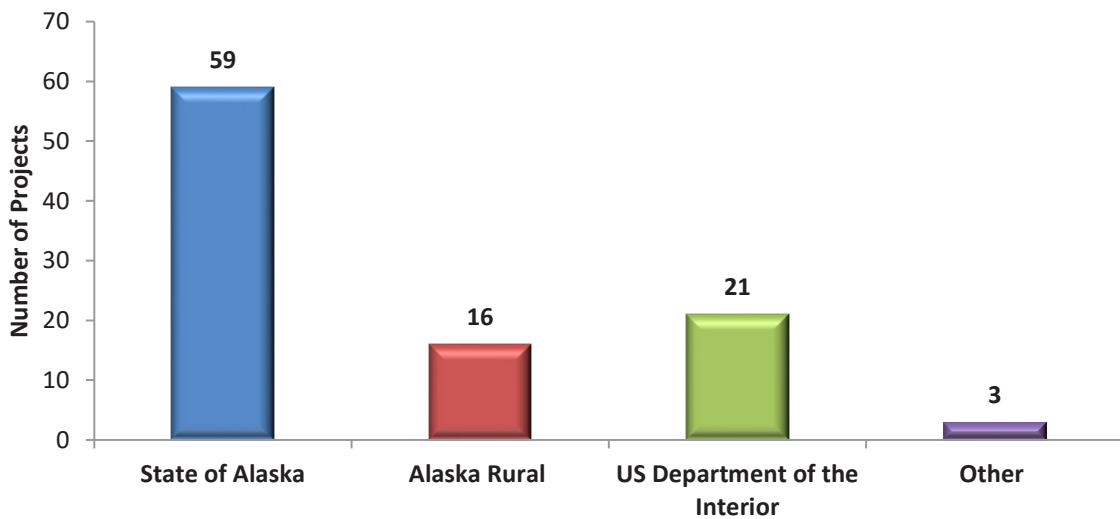


Figure 2. Number of Monitoring Program Projects Funded, by Organization Type, in the Kuskokwim Region since 2000



PRIORITY INFORMATION NEEDS

The 2020 Notice of Funding Opportunity for the Kuskokwim Region identified the following 13 priority information needs:

- Documentation of oral histories describing salmon harvest methods in the Kuskokwim River drainage, specifically the period before the development of the modern commercial fishery.
- Documentation of local knowledge concerning how salmon subsistence harvest restrictions have affected people's uses of fish and other resources in the Kuskokwim River drainage.
- Reliable quantitative and/or qualitative estimates of salmon run size, escapement, and harvest in the Kuskokwim River drainage including Kuskokwim Bay tributaries.
- Estimates of "quality of escapement" measures to help inform salmon stock assessments (potential egg deposition, age, sex, and size composition of spawners, advancing genetic baselines).
- New methods for conducting in-season salmon run assessments in the Kuskokwim River drainage, for example community-based harvest monitoring, sonar, and village test fisheries
- Improved Kuskokwim River drainage-wide and sub-stock specific salmon run size and timing forecasts.
- Distribution, abundance, condition, and survival of juvenile and out-migrating salmon in the Kuskokwim River drainage.
- Improved methods to estimate Chinook Salmon sub-stock specific run abundance, run timing, and harvest in the Kuskokwim River drainage.
- Traditional ecological knowledge of salmon.
- Information sharing between stakeholders and agencies concerning salmon conservation in the Kuskokwim river drainage, for example outreach to villages using the media and other methods.
- A spatially robust indexing method for estimating species-specific whitefish harvests on an annual basis; and/or geographic distribution and abundance of whitefish species.
- Traditional ecological knowledge of whitefish species. Groups of communities might include Kalskag, Lower Kalskag, Aniak, and Chuathbaluk, or Red Devil, Sleetmute, and Stony River.
- The meaning and significance of sharing, barter, and/or customary trade of subsistence foods in the context of the social, cultural, and economic life of people in the lower Kuskokwim drainage.

AVAILABLE FUNDS

Federal Subsistence Board guidelines direct initial distribution of funds among regions. Regional budget guidelines provide an initial target for planning. For 2020, the Department of the Interior, through the U.S. Fish and Wildlife Service, will provide an anticipated \$1.5 million in funding statewide for new projects in 2020. The U.S. Department of Agriculture, through the U.S. Forest Service, has historically provided some funding. The amount of U.S. Department of Agriculture funding available for 2020 projects is uncertain.

ROLE OF THE TECHNICAL REVIEW COMMITTEE

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 to develop the strongest possible funding plan for each region and across the entire state.

For the 2020 Monitoring Program, eight proposals were submitted for the Kuskokwim Region. The Technical Review Committee 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**). These scores remain confidential. An executive summary for each proposal submitted to the 2020 Monitoring Program for the Kuskokwim Region is in **Appendix 2**.

TECHNICAL REVIEW COMMITTEE JUSTIFICATIONS FOR PROPOSAL SCORES

Project Number: 20-301

Project Title: Kuskokwim River Coho Salmon Abundance Estimation and Whitefish Indices Using Sonar

Technical Review Committee Justification: Restrictions placed on subsistence Chinook Salmon harvest in the past has resulted in an increase in the harvest of other salmon species, particularly Coho Salmon. In this funding request, the Alaska Department of Fish and Game proposes to add one month (August) to an existing project (18-305) to more fully and accurately estimate the abundance of Coho Salmon and migrating whitefish in the mainstem of the Kuskokwim River using sonars and gillnet apportionment. If funded, this project would directly address two of the 2020 Kuskokwim Region priority information needs (provide reliable quantitative estimates of salmon run size and escapements and abundance indices of whitefish species). The annual average cost of the project (\$104,000) appears high, considering there is only three to four weeks of work proposed each season. One local hire, selected by the Orutsararmiut Native Council, would gain experience and training in the use of the sonar and apportionment methods, thereby increasing local technical capacity. A robust list of local stakeholders has given their support for this project, indicating considerable communication with nearby communities has occurred. The partnership between the Alaska Department of Fish and Game and the Orutsararmiut Native Council is meaningful and provides the opportunity for building local technical capacity; specifically, by on-site training of a local technician providing experience working the drift-gillnet and learning how to operate

and count fish from a sonar. The technician and the co-investigator will both travel to nearby communities to give presentations on the sonar operation and monitoring results.

Table 1. Projects submitted for the Southwest Alaska Region, 2020 Monitoring Program, including total funds requested and average annual funding requests.

Project Number	Title	Total Project Request	Average Annual Request
20-301	Kuskokwim River coho salmon abundance estimation and whitefish indices using sonar	\$417,750	\$104,437
20-302	Salmon River of the Pitka Fork Chinook Salmon Escapement Monitoring	\$423,257	\$105,814
20-303	Middle Kuskokwim River Chinook and Chum Salmon In-Season Assessment	\$368,988	\$92,247
20-308	Kwethluk River Salmon Run Timing and Abundance	\$726,333	\$181,583
20-350	Community-Based Harvest Monitoring Network for Kuskokwim River Chinook Salmon	\$460,724	\$115,181
20-351	Food Knowledge and Place Name Documentation on the Kuskokwim River: Continuity and Change	\$858,708	\$214,677
20-352	Improving Communication and Outreach in the Kuskokwim River Drainage	\$231,806	\$77,269
20-353	Subsistence Harvest Use, and Local and Traditional Knowledge of Whitefishes in the Middle Kuskokwim River	\$335,396	\$111,799
Total		\$3,822,962	\$1,003,007

Project Number: 20-302

Project Title: Salmon River of the Pitka Fork Chinook Salmon Escapement Monitoring

Technical Review Committee Justification: The proposal directly addresses one of the 2020 priority information needs identified by the Kuskokwim Region Councils (obtain reliable quantitative estimates of salmon escapements and estimates of “quality of escapement” measures (i.e., age, sex, length composition) in the Kuskokwim River drainage) and fulfills the need for an on-the-ground salmon monitoring project in the upper Kuskokwim River drainage. This is in contrast to aerial surveys, which do not capture age, sex, length, or other critical run timing data. Information and data gathered for this project will be directly applied to management of important subsistence fisheries resources and aid in the post-season decisions made by fisheries managers. Even though a majority of the harvest occurs downriver of this weir, this data is still important for fisheries managers to understand how well the harvest opportunity windows worked and if escapement goals were met. The proposed investigation plan is technically sound and the project objectives are clear, measurable, and achievable. The ADF&G investigators and MTNT co-investigators have a successful track record for managing past projects and submitting all deliverables on time. This project identified areas to be more cost efficient and is now one

of the most cost-effective weirs proposed on the Kuskokwim River for the management of Chinook Salmon. Investigators are encouraged to add a detailed justification in future proposals regarding why continued funding support is needed for a long term weir such as the Pitka Fork weir.

Project Number: 20-303

Project Title: Middle Kuskokwim River Chinook and Chum Salmon In-Season Assessment

Technical Review Committee Justification: Through this four-year project, the investigator proposes to provide an index of relative salmon abundance in a stretch of the middle Kuskokwim River using a test fishery at Aniak and a weir on the Salmon River. While the proposal addresses a 2020 Priority Information Need, specific details connecting it directly to fishery management for the region would have strengthened the proposal. Combining two projects into one proposal made it difficult to evaluate the merits of each project. This proposal should be split into two and include a detailed description of each project and separate budgets. A description of project methods was not provided. The proposed project is a collaboration between the Native Village of Napaimute and Alaska Department of Fish and Game staff. Investigators are qualified to conduct the study and the budget request is reasonable.

Project Number: 20-308

Project Title: Kwethluk River Salmon Run Timing and Abundance

Technical Review Committee Justification: Investigators seek four years of funding for the operation of the Kwethluk River weir. Additionally, they seek to increase the role that the Organized Village of Kwethluk has in the project, thereby increasing their capacity to perform such operations in the future. The project has direct linkage to the Federal public waters of the Yukon Delta National Wildlife Refuge and fully addresses one 2020 Priority Information Need, while only marginally addressing a second. Data from the Kwethluk River weir is used to inform the run reconstruction model, which in turn is used to produce the preseason forecast for the next year. In addition, information collected from the weir is used for post season assessment of in-season management actions, but the project has limited value for in-season management. The majority of objectives of this study are clear, measurable, and achievable, although objective five (Build local capacity to plan and operate a community-based stock assessment project and conduct community outreach) is poorly defined. Investigators should lay out duties for year one, with a timeline of increased responsibilities for the Organized Village of Kwethluk in years 2, 3, and 4 of the project. Six letters of support were submitted for this project. Local hires from Kwethluk and the surrounding villages will be hired to serve as the crew leader and fish technicians, with administrative support from the Organized Village of Kwethluk. Investigators plan to support Alaska Native Science and Engineering Program students participating in biological internships, and have identified two meaningful partnerships.

Project Number: 20-350

Project Title: Community-Based Harvest Monitoring Network for Kuskokwim River Chinook Salmon

Technical Review Committee Justification: This four-year interdisciplinary project proposes to implement a community-based harvest monitoring of catch and effort data necessary for in-season

estimation of Chinook Salmon subsistence harvest on the Kuskokwim River. Biological data will also be collected. The project builds upon a two-year community harvest monitoring effort in five Kuskokwim communities. Building upon the knowledge, expertise, and collaborations achieved during the 2017 and 2018 field seasons, investigators will directly involve residents from six villages in the collection of harvest data for integration into in-season fishery management. This project addresses four regional priority information needs, has Federal nexus through the Yukon Delta National Wildlife Refuge, and involves a subsistence resource of primary importance to Kuskokwim River communities, Chinook Salmon. Technical and scientific merit are conditional upon collaboration with others; this is not a stand-alone project, but one component of an in-season harvest assessment program that has a high price tag for data collection only. Investigators have experience conducting and completing similar projects with success. The project proposes to hire and train nine village monitors who will be considerably compensated for their time. There are no representatives from any rural, Alaska Native, or tribal organizations that are serving as co-investigators, however many are participating on the project as partners or consultants. Four letters of support were submitted with this proposal.

Project Number: 20-351

Project Title: Food Knowledge and Place Name Documentation on the Kuskokwim River:
Continuity and Change

Technical Review Committee Justification: This project seeks to document traditional ecological knowledge related to use of food resources generally and salmon in particular in the central Kuskokwim River area. Dr. Fienup-Riordan is a respected investigator in her field. Methodologies include topic-based meetings on local, sub-regional, and regional levels, as well as a multi-disciplinary survey of the central Kuskokwim River with elders and collaborating scientists. Four 2020 Monitoring Program priority information needs fall within the very broad scope of the project. The investigators would use methods for knowledge production that include placing subsistence users and scientists in the field simultaneously to discuss, generate, and document knowledge about interrelated natural, historical, social, and biological systems. The emphasis is on immediate concerns about preserving knowledge that will be lost with the passing of elders, rather than urgency of its application in a limited management problem-solving context; relevance to the Monitoring Program would have been strengthened by a narrower focus on salmon in the context of management applications. This is a large, intricate project with many moving parts, and an equally elaborate budget.

Project Number: 20-352

Project Title: Improving Communication and Sharing of Information Among Subsistence Salmon Fishers, Stakeholder Groups, and Management Agencies in the Kuskokwim River Drainage

Technical Review Committee Justification: This three-year project proposes to address the need for information sharing between subsistence salmon fishers and management agencies regarding salmon conservation in the Kuskokwim River drainage. Investigators propose to do this through a series of public meetings and in-person contacts in eight communities along the Kuskokwim River. This project directly addresses one priority information need, and Federal nexus is provided through the Yukon Delta National

Wildlife Refuge. Both investigators have substantial resources available to them through the Alaska Department of Fish and Game, and both investigators have good track records of leading and completing other Monitoring Program projects in good standing. The technical and scientific merit of the project is challenging. The investigation plan does not clearly indicate the proven utility of the chosen methodologies to achieve technical or demonstrable results and with further discussion they are hard to assess. Much in-season work is attributed to local research assistants but compensation in the budget detail is not adequate for the effort described. Otherwise, the total project budget is reasonable for the work proposed. The principal investigator is the Alaska Department of Fish and Game, no representatives from any rural, Alaska Native, or tribal organizations will serve as project co-investigators. However consultations with local tribal organizations will occur and permissions will be obtained. Eight local research assistants will be hired. No letters of support were submitted with the application materials.

Project Number: 20-353

Project Title: Subsistence Harvest Use, and Local and Traditional Knowledge of Whitefishes in the Middle Kuskokwim River

Technical Review Committee Justification: This three year project proposes to collect local and traditional knowledge related to whitefishes and to assess the harvest and use of whitefishes by residents of eight middle Kuskokwim River area communities. The project would compare the harvest and use of whitefishes in 2020 with the harvest and use of whitefishes documented by previous studies and augment the results with local traditional knowledge of whitefishes and whitefish ecology. The project objectives could be more streamlined but are measureable and achievable. The methods include; participant observation, key respondent interviews, and harvest surveys. All are proven means of ethnographic quantitative and qualitative research. The investigation plan, schedule, budget, and budget narrative do not align in describing the two years of survey administration and the two years of key respondent interviews. The investigation plan describes data collection and reduction processes for the surveys, and a particularly robust 63 key respondent interviews. While participant observation is the first method described in the project design, investigators do not describe how this methodology will be addressed and incorporated into the report. The investigators have the experience, local expertise, and resources to complete the work proposed. There are no partnerships or collaborations proposed for this project. Capacity building is addressed through the hire and training of seven local research assistants in consultation with local tribal and village organizations. The cost is reasonable but perhaps under budget for the work proposed, especially considering extensive time and travel in eight rural Alaskan communities, and two years of field work. No letters of support were submitted with this project.

**APPENDIX 1
PROJECTS FUNDED IN THE KUSKOKWIM REGION SINCE 2000**

Project Number	Project Title	Investigators
Salmon Projects		
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
04-310	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

Project Number	Project Title	Investigators
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
14-302	Tatlawiksuk River Salmon Weir	ADF&G
14-303	George River Salmon Weir	ADF&G

Project Number	Project Title	Investigators
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	Lower Kuskokwim River Subsistence Chinook Salmon Harvest ASL	ADF&G, ONC
16-302 ^b	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
18-304 ^b	George River Salmon Weir	ADF&G
18-350 ^b	Bethel Subsistence Harvest Surveys	ONC, ADF&G
18-351 ^b	Kuskokwim Area Salmon Post Season Subsistence Harvest Surveys	ADF&G, ONC
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 = Final Report in Preparation.

b = On-going projects during 2019.

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 Associates, 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 2 EXECUTIVE SUMMARIES

The following executive summaries were written by principal investigators and were submitted to the Office of Subsistence Management as part of proposal packages. They may not reflect the opinions of the Office of Subsistence Management or the Technical Review Committee. Executive summaries may have been altered for length.

Project Number:	20-301			
Title:	Kuskokwim River Coho Salmon Abundance Estimation and Whitefish Indices Using Sonar			
Geographic Region(s):	Kuskokwim Region			
Data Type:	Stock Status and Trends			
Principal Investigator:	Keegan O. Birchfield, Alaska Department of Fish and Game			
Co-investigators:	Janessa Esquible, Orutsaramiut Native Council Nicholas J. Smith, Alaska Department of Fish and Game Carl T. Pfisterer, Alaska Department of Fish and Game			
Project Cost:	2020: \$101,251	2021: \$102,321	2022: \$105,469	2023: \$108,709
Total Cost:	\$417,750			

Issue: We propose to use sonar and drift gillnet apportionment methods to estimate daily and total abundance of upriver migrating coho salmon (*Oncorhynchus kisutch*) and whitefish species (*Coregonus sp.*) in the Kuskokwim River during the month of August. Our proposal addresses multiple priority information needs identified for the Kuskokwim Region by providing *reliable quantitative estimates of salmon run size and escapements and abundance indices of whitefish species* for the mainstem Kuskokwim River and is consistent with Alaska Department of Fish and Game’s (ADF&G) strategic plan towards integrating a sonar-based 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 in June and July. Coho salmon (*O. kisutch*) enter the Kuskokwim River beginning in late July, after the migration of other salmon 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. Whitefish species including least cisco (*Coregonus sardinella*), Bering cisco (*C. laurettae*), humpback whitefish (*C. pidschian*), broad whitefish (*C. nasus*), and inconnu (sheefish; *Stenodus nelma*) navigate the mainstem from mid-May to late September. Our request would continue annual sonar operation during the month of August to enumerate the annual coho salmon run and provide a first ever mainstem indices of migrating whitefish species. Coho salmon escapement is

easily obtained by incorporating existing harvest estimate programs to sonar-based estimates of abundance. Establishing a baseline estimate of coho salmon abundance and a whitefish abundance index *before* populations suffer a downturn is critical for timely and appropriate management responses. Given the cost and time to establish new management standards for fisheries following declines, proactive assessment would be more effective for responsible management of fisheries resources.

Objectives: The primary goal of the Kuskokwim River sonar extension is to estimate daily and total abundance of upriver migrating adult coho salmon and provide an index of migrating whitefish species near Bethel and provide those estimates to State and Federal fisheries managers inseason to inform sustainable fisheries management. The State of Alaska has already 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:

1. Estimate the daily and total passage of Kuskokwim River coho salmon and whitefish species at rkm 130 between August 1 and August 25, 2020, 2021, 2022, and 2023.

Methods: 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 and whitefish species through August 25, 2020, 2021, 2022, and 2023. Sonar data files will be processed using software developed by ADF&G. A drift gillnet test fishery that overlaps the ensouffled areas will be used to apportion abundance estimates to species. ADF&G/Commercial Fisheries (CF) staff will maintain all physical and electronic data produce tabular and graphical summaries for 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.

Project results are expected to influence inseason management decisions by providing the first ever reliable daily estimates of coho salmon abundance near the dominant fishery and mainstem estimates of migrating whitefish abundance. 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.

Partnerships/Capacity Building: Staff from ADF&G and ONC will conduct this project in partnership. ADF&G is responsible for staff support, logistical support, data processing, reporting, and assisting with outreach opportunities. ONC is responsible for providing staff to assist inseason at the project, logistical guidance and insight, and assist with community outreach. Working in collaboration will provide an avenue to improve community outreach and further engage Kuskokwim River communities in Kuskokwim Area salmon research and management issues. This proposal seeks salary and transportation funds to facilitate this capacity building effort. Starting August 1 each year of operation, an ONC technician will spend several days training and joining ADF&G crews to assist with test fishing and sonar counts. Once their training is complete, they will be incorporated into daily technician shifts to directly contribute to salmon and whitefish estimates of abundance. After the season has concluded, the PI will

assist in creating a presentation ONC technicians to summarize their efforts for community members in Kwethluk, Akiachak, and Bethel as the closest neighbors to sonar operations. Funding requests include salary and transportation for these presentations.

Fish harvested in the sonar test fishery will be donated to local communities. In 2017 and 2018, ADF&G coordinated directly with community members near the test fish site and in the community of Kwethluk and Bethel to distribute fish. We are continuing efforts to support more deliveries to the nearby communities of Akiachak as well.

Project Number:	20-302			
Title:	Salmon River of the Pitka Fork Chinook Salmon Escapement Monitoring			
Geographic Region:	Kuskokwim Region			
Data Type:	Stock Status and Trends			
Principal Investigator:	Bobette R. Dickerson, Alaska Department of Fish and Game, Anchorage			
Co-investigators:	Nicholas Smith, Alaska Department of Fish and Game, Anchorage Michele Christiansen, McGrath Takotna Nikolai Telida (MTNT) Energy LLC Timothy Barnum, MTNT Energy LLC			
Project Cost:	2020: \$139,997	2021: \$103,370	2022: \$106,067	2023: \$73,823
Total Cost:	\$423,257			

Issue: We propose to continue operations of a weir on the Salmon River of the Pitka Fork, hereafter referred to as Salmon (Pitka Fork) River, to index Chinook salmon (*Oncorhynchus tshawytscha*) escapement to the headwaters of the Kuskokwim River, upriver from McGrath. Our proposal is in response to the priority information needs identified in the 2020 FRMP request for proposals to obtain *reliable quantitative estimates of salmon escapements and estimates of “quality of escapement” measures* (i.e., age, sex, length composition) in the Kuskokwim River drainage. The Salmon (Pitka Fork) River weir is currently the only ground-based salmon assessment project operated in the Kuskokwim River that indexes genetically distinct headwaters Chinook salmon. Local and traditional knowledge combined with eight years of intensive mark–recapture studies indicate that the Salmon (Pitka Fork) River is the best location for indexing Chinook salmon escapement to the headwaters.

Goals: To continue operations of a ground-based monitoring project that will adequately index escapement to the headwaters of the Kuskokwim River.

Objectives:

1. Estimate daily and total annual Chinook salmon escapement to the Salmon (Pitka Fork) River using a fixed picket fish weir from 20 June – 15 August;
2. Collect age, sex, length (ASL) data from 250 Chinook salmon in proportion to abundance;
3. Foster local interest in natural resource management, field biology, and expose students to employment possibilities.

Methods: We propose to operate a weir on the Salmon River of the Pitka Fork to index Chinook salmon escapement to the headwaters of the Kuskokwim River from 20 June – 15 August (2020, 2021, 2022, and

2023). Fish will be counted throughout the daytime by trained technicians. Visual counts will take place through a clear plastic viewing window placed on the stream surface. Age, sex, and length data will be collected in proportion to run timing using live fish trap that is integrated into the weir design. The crew will record daily fish passage numbers of each salmon species in field logs and report the information to ADF&G staff in Bethel or Anchorage. We will estimate any missed escapement of Chinook salmon that occurs within the target operational period (generally due to high water or scouring) using hierarchical Bayesian estimation technique. ADF&G staff will be responsible for maintaining the information physically and electronically in tabular and graphical formats for the use of various managers and advisory groups engaged in inseason management. In addition, escapement counts and estimates will be updated daily in the Arctic Yukon Kuskokwim Database Management System and ADF&G Fish Counts Page.

Partnerships/Capacity Building: Staff from ADF&G and MTNT will conduct this project in partnership. ADF&G will be responsible for staff support, logistical support, data processing, reporting, and assisting with outreach opportunities. MTNT will be responsible for providing staff to assist inseason at the project, logistical guidance and insight, and assist with community outreach. Working in collaboration will provide an avenue to improve community outreach and further engage headwaters communities of McGrath, Takotna, Nikolai, and Telida in Kuskokwim Area salmon research and management issues. Planned outreach includes presentations on the purpose and operation of the weir to the schools in McGrath, Nikolai, and Takotna. Ideally, these presentations will be done by one of the previous seasons weir technicians, a local hire. These presentations were first implemented in the winter of 2018-19 and thus far has been very successful, in the opinion of the weir technician, educators, and students.

Project Number:	20-303			
Title:	Middle Kuskokwim River Chinook and Chum Salmon In-Season Assessment			
Geographic Region:	Kuskokwim Region			
Data Type:	Stock Status and Trends			
Principal Investigator:	Dan Gilikin, Native Village of Napaimute, Aniak			
Project Cost:	2020: \$92,247	2021: \$92,247	2022: \$92,247	2023: \$92,247
Total Cost:	\$368,988			

Issue: The Kuskokwim River supports the largest subsistence salmon fishery in the state of Alaska, based on both the number of residents who participate in the fishery and the number of salmon harvested. Customary and traditional use determinations have been made for the 32 communities (comprised of 14,739 people living in 4,266 households) in the Kuskokwim River drainage.

Kuskokwim River Chinook Salmon stocks have been in a period of low productivity since 2007, requiring managers to enact significant fishing restrictions to meet established escapement goals. Both of the proposed projects will provide Fisheries Managers (State and Federal) with timely in-season information for determining the needed to restrict or liberalize harvest opportunity, while providing for the conservation of Chinook and chum salmon.

Objectives: Specific objectives for the Aniak Test Fishery (ATF) are:

1. Calculate a daily catch per unit effort (CPUE) of adult salmon from June 1st until July 15th
2. Calculate cumulative CPUE as an index of run timing of adult salmon species
3. Calculate a daily ratio of each salmon species as an index of relative abundance
4. Build tribal capacity to participate in future fisheries assessment projects

Specific objectives for the Salmon River Weir (SRW) operations are:

1. Operate and maintain an adult salmon counting weir and field camp on the Salmon River from July 1st through August 15th.
2. Estimate daily and total season escapement of salmon into the Salmon River for Chinook and chum salmon.
3. Collect data on the age, sex and length of salmon in the Salmon River
4. Build tribal capacity to participate in future fisheries assessment projects

Specific objectives related to Capacity Building (CAP) are:

1. Recruit, hire and train Tribal Members for the proposed assessment projects
2. Recruit, hire and train at least one Alaska Native Science and Engineering Program Intern
3. Procure necessary supplies identified in the budget to implement the assessment projects
4. Conduct outreach activities related to the projects with local stakeholders

Methods: The Native Village of Napaimute is seeking funding from the FRMP Program to continue operating two critical in-season salmon fisheries assessment projects for the Middle Kuskokwim River Region. In partnership with the Alaska Department of Fish and Game Commercial Fisheries Division Napaimute has been conducting the Aniak Test Fishery, and operating the Salmon River Weir since 2015. The Aniak Test Fishery will provide daily information on relative abundance, species composition and run timing for Chinook and chum Salmon, on the main stem Kuskokwim River at Aniak to Fisheries Managers. The Salmon River Weir will provide information similar to the Test Fishery with the addition of; age-sex-length data, and estimations of Chinook and chum salmon escapement for one of the major tributaries of the Aniak River. Chinook salmon abundance estimates for the Salmon River will also be used postseason as a data point in the Kuskokwim River Basin Wide Chinook Run Reconstruction model which is used to evaluate achievement of the established escapement goal of 60,000 – 120,000 Chinook salmon.

Partnerships/Capacity Building: Capacity building has been identified as a specific component for each of the proposed projects objectives. The Tribe's stated vision for Napaimute is to:

“Capitalize on the strengths of tribal members to develop a sustainable community, through economic & workforce development, seeking opportunities that enhance the assets of Napaimute while respecting land, culture, values and the wisdom of our elders and younger tribal members.”

The Council’s vision places a stronger emphasis on the professional development of tribal members to achieve a sustainable community, while retaining respecting for the land, culture, and core values; accountability, integrity, respect, and responsibility. This proposal has been developed keeping Napaimute’s vision statement in mind with a focus on local workforce development.

Napaimute has identified subsistence issues, with a focus on salmon as a component of its EPA Tribal Environmental Plan. Funding provided by the FRMP program will deliver the necessary tools, training, and career opportunities to assist the Tribe with establishing a sustainable fisheries program at Napaimute and achieving its identified environmental objectives. The Tribe recognizes the critical role subsistence fisheries play in realizing its vision and is therefore committed to taking a more proactive, meaningful role in its management to protect the sustainability of this vital resource for future generations.

Napaimute has been conducting the Aniak Test Fishery, and operating the Salmon River Weir since 2015 in partnership with the Alaska Department of Fish and Game Commercial Fisheries Division. We currently have a cooperative agreement in place with ADF&G to operate both projects as proposed.

Project Number:	20-308			
Title:	Kwethluk River Salmon Run Timing and Abundance			
Geographic Region:	Kuskokwim Region			
Data Type:	Stock Status and Trends			
Principal Investigators:	Aaron Webber, U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Conservation Office, Bethel			
	Senka Guy, Organized Village of Kwethluk, Tribal Administrator, Kwethluk			
	Kevin Whitworth, Kuskokwim River Inter-Tribal Fish Commission/ Bering Sea Fishermen’s Association, McGrath			
	Gary Decossas, US Fish and Wildlife Service, Yukon Delta NWR, Bethel			
Project Cost:	2020: \$185,912	2021: \$184,103	2022: \$176,722	2023: \$179,596
Total Cost:	\$726,333			

Issue: This project focuses on three of the identified priority information needs for the Kuskokwim Region of the 2020 Fisheries Resource Monitoring Plan Priority Information Needs: 1) Reliable qualitative and/or quantitative estimates of salmon run size, escapement, and harvest. In this project we obtain escapement data which is provided to managers to make decisions for subsistence management; 2) Estimates of “quality of escapement” measures to help inform salmon stock assessments (potential egg deposition, age, sex and size composition of spawners, advancing genetic baselines) In this project we collect age, sex, and length data from salmon at the weir which helps us evaluate the “quality of escapement” of the salmon stocks of the Kuskokwim drainage; and 3) Distribution, abundance, condition, and survival of juvenile and out-migrating salmon in the Kuskokwim River drainage. This project follows up on an AYK-SSI project (Assessment of Chinook Salmon freshwater production) by monitoring returning Chinook Salmon that were tagged as smolts on the Kwethluk River and are expected to return

during the duration of this funding cycle to provide survival estimates of juvenile Chinook Salmon. This project also addresses the expressed desire of the Organized Village of Kwethluk (OVK) to assume more responsibility for operations at the Kwethluk River weir. Project partners are committed to work together on a series of actions to strengthen OVK's capacity to meet this goal over the next several years.

Objectives: **1)** Enumerate the daily passage and characterize the run timing of Chinook, Chum and Coho Salmon. **2)** Estimate the weekly sex and age composition of Chinook, Chum, and Coho Salmon such that the simultaneous 95% confidence intervals have a maximum width of 0.2. **3)** Estimate the mean length of Chinook, Chum, and Coho 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. **5)** Build local capacity to plan and operate a community-based stock assessment project and conduct community outreach. **6)** Identify PIT-tagged adult Chinook Salmon returning to the weir.

Methods: The Organized Village of Kwethluk (OVK), Kuskokwim River Inter-Tribal Fish Commission (KRITFC), Bering Sea Fishermen's Association (BSFA), and the United States Fish and Wildlife Service (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 September 10 each year. 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. Tagged salmon from a previous study where juvenile Chinook Salmon were tagged as they migrated downstream between 2015-2018 will pass through a PIT tag antenna array affixed to the weir entrance, which will record them and allow for a survival estimate.

Partnerships/Capacity Building: The OVK, KRITFC, BSFA, and USFWS are committed co-investigators for this project in the development of a robust community capacity building effort to increase local expertise to manage this and future fish monitoring projects. Meetings during February 2019 with all co-investigators were conducted to foster relationships between partners, to develop this joint FRMP proposal, and begin formulating a long-term plan for capacity building. The project partners have agreed to work together over the next five years and beyond to (1) ensure the highest quality data from the weir operations, (2) enhance OVK's capacity to operate the Kwethluk Weir, and (3) strengthen and sustain relationships needed to maintain healthy subsistence fisheries on the Kuskokwim River and its tributaries. This project promotes partnerships and capacity building through direct employment and training opportunities for rural Alaskans working on fisheries monitoring and assessment projects (e.g. weir management) and interactive education opportunities promoting salmon monitoring and the importance of data collection in fisheries management.

The partners will work together to draft an action plan that lays out the specific steps needed to eventually transition weir management to the Organized Village of Kwethluk, including collaboration to develop a Tribal Wildlife Grant Application or other funding sources to help facilitate long-term capacity building. This long-term capacity building plan will establish specific goals that OVK will work toward with

support from the Service, BSFA, and KRITFC. Preliminary discussion of the plan among partners lays out a 5-year process to transfer knowledge to OVK on weir installation and operation with a 2023 goal of OVK as the project lead for installing and operating the weir. During the 2019 and 2020 field seasons, the Service will take the lead role on installation with OVKs assistance and OVK will learn all the necessary elements. Year 2021 will be considered a transition year, where both the Service and OVK work side by side on installation. During the 2022 and 2023 field seasons, OVK will take the lead role on installation and the Service will assist, and the USFWS will provide on-the-job training in post-season scale processing and ageing analysis. Post-season meetings among partners will be conducted after each field season to evaluate plan success and make any needed adjustments.

Another key element of community capacity building is education. To raise awareness of weir operations among communities, the partners propose to have annual tours of the Kwethluk Weir to any who are interested, and will provide direct invitations to elders from OVK to tour the weir. The Service will provide Information Technicians who speak Yupik and transportation for residents to the weir. The tour of the facility will allow residents to take part in Age-Sex-Length (ASL) sampling so they can actively participate in salmon management. The partners want to promote awareness of weirs and weir operations among elders and others in the villages to encourage active involvement by community members in salmon management. Additionally, the partners will coordinate with the Service to provide education opportunities in local schools with the goal of teaching young people about the importance of salmon management and how they can be engaged in managing their resource.

The USFWS is partnering with the Alaska Native Science and Engineering Program (ANSEP) to support students participating in biological internships throughout Alaska. ANSEP strives to increase the number of Alaska Natives employed in the fields of science, technology, engineering and mathematics (STEM) by increasing the number of individuals on career paths to leadership in STEM fields. The Kwethluk River weir provides a meaningful summer internship that exposes Alaska Native and rural students to the field of fisheries management. Special emphasis will be placed on recruiting local students from Western Alaska. This science based resource monitoring and management internship will help students develop the knowledge and skills required to succeed in professional resource management positions.

Additionally, project partners commit to working together to assist OVK in developing administrative capacity essential to assuming a more active role in overall project management, including assistance developing a negotiated indirect cost rate agreement. By doing so, OVK will improve its overall capacity to apply for and receive Federal funds, complete performance reports, and address fisheries or other community needs.

Project Number:	20-350			
Title:	Community-Based Harvest Monitoring Network for Kuskokwim River Chinook Salmon			
Geographic Region:	Kuskokwim Region			
Data Type:	Harvest Monitoring			
Principal Investigator:	Joseph Spaeder, Research Coordinator, Bering Sea Fishermen’s Association, Anchorage			
Project Cost:	2020: \$115,181	2021: \$115,181	2022: \$115,181	2023: \$115,181
Total Cost:	\$460,724			

Issue: Over 18,000 people, primarily Alaska Natives, reside in the Kuskokwim region of Alaska. With some of the lowest per capita monetary income in the state, this region is characterized by a mixed subsistence and cash economy with a high production and cultural dependence on subsistence foods. Salmon represent the single largest category of wild food harvests in most communities, with Chinook salmon being the most important salmon species in most communities due to cultural, nutritional, and logistical factors. Thus, sustainable harvests of salmon, especially Chinook salmon, are critically important to the culture and subsistence economy of the Kuskokwim region.

Recent declines in Chinook salmon have challenged inseason efforts to manage subsistence fishing at a level that provides some subsistence harvests but ensures adequate spawning escapement for stock rebuilding. Currently, there no alternate means of assessing subsistence harvests in lower river communities inseason during the return of Kuskokwim River Chinook salmon. Given the importance of Chinook salmon to Kuskokwim area residents, a mechanism to monitor inseason subsistence harvests of Chinook salmon is a high priority.

Community-based harvest monitoring (CBM) has long been recognized as a process for local stakeholders to build capacity for increased participation in the western science management of natural resources. The proposed project will implement CBM for inseason assessments of subsistence harvests of Chinook salmon in the lower Kuskokwim River.

The overarching goal of the proposed project is to implement CBM for inseason assessments of subsistence harvests of Chinook salmon at six villages located in federal waters on the lower Kuskokwim River. Preliminary efforts in 2017 and 2018 demonstrated the value of community-based harvest monitoring to inseason managers and the proposed project builds on those previous efforts. Annual activities will include: working with tribal and community councils to explain project goals and objectives and identify potential candidates for hire as future harvest monitors; hiring and training of monitors in collaboration partner organizations; preliminary interviews and collection of biological data during restricted mesh subsistence opportunities prior to the arrival of the primary component of the Chinook salmon return; interviews and collection of biological data during the limited restricted mesh openings during the period when most of the Chinook salmon return passes through federal refuge waters of the lower Kuskokwim River; debriefing of monitors after the Chinook salmon returns have largely passed out of federal waters; and, postseason public recognition of monitors in the home villages. This project facilitates the integration of locally-collected data into inseason fishery management, increasing

local ownership and transparency of the management process while directly contributing to capacity building for harvest monitors.

Objectives: Specific project objectives are to:

1. Identify participant villages willing to support community-based monitors in interview sampling; the number of villages participating is expected to increase as the merits of the program continue to be revealed.
2. Train village monitors to respectfully conduct harvest interviews and collect ASL data from harvested fish.
3. Through community monitors, relay information on subsistence fishing opportunities to local community members, and relay local concerns to inseason managers (note – monitors are unequivocally not involved in regulation enforcement).
4. Collect subsistence harvest data from subsistence fishing opportunities during early June to the end of the lower river Chinook salmon run in July, and electronically transfer data within 12 hours of a fishing period closure.
5. Collect biological data (ASL) from fish harvested in subsistence fisheries.
6. Work with other agency and NGO staff to compile, review, and report on inseason harvest summaries as collected from this and related projects including aerial surveys.

Methods: Inseason, monitors are encouraged to achieve at least 10 interviews from each subsistence opportunity. Transferred data are imported into a Microsoft Excel worksheet with the data coordinator working with village monitors to resolve any data issues, such as missing data or formatting problems. Cleaned data are then culled (e.g., the data and time of data transfers are dropped), and data files transferred to the USFWS biometrician for integration with aerial survey and other interview data from other sources to develop harvest estimates. The data coordinator maintains copies of all CBM interview data including the raw original transfers, the cleaned data, and the data transferred to the USFWS biometrician, with all data copied to an external hard drive. Following each subsistence opportunity and harvest estimation by the USFWS biometrician, the CBM data coordinator participates as part of a technical review team to evaluate the data sources and the harvest estimates prior to release of the estimates to fishery managers and the public. The CBM data coordinator also participates in technical review of the postseason report summarizing harvest estimates for the Chinook salmon return.

Partnerships/Capacity Building: This project is strongly linked to rural villages on the Kuskokwim River. This project requires strong relationships with the village councils of Napaskiak, Napakiak, Kwethluk, Aniak, Tututuliak, Nunapitchuk as well as closely working with biologists at Alaska Department of Fish and Game, U.S. Fish and Wildlife Service, Orutsararmiut Native Tribal Council, Kuskokwim River Inter-Tribal Fish Commission, the Kuskokwim River Salmon Management Working Group, and general stakeholders of the Kuskokwim River drainage. During its initial pilot project phase over the past two years, this project has already made significant direct contributions to capacity building through hiring, training and mentoring of young village residents working in fisheries monitoring. Through this project, we will build on these early contributions in a number of ways. Just prior to the Chinook salmon return, local residents will be hired as community-based harvest monitors to conduct

harvest interviews and collect biological data. After individual monitors are identified, hiring protocols are implemented and monitors are brought to Bethel, Alaska, for hands-on training. Through this process, we aim to inspire and help equip these young people to further explore careers in fisheries research and monitoring.

A major project goal through this process remains to involve local individuals that may potentially become links between traditional knowledge and western science, and ultimately become future fisheries leaders in their village and the region.

Project Number:	20-351
Title:	Food Knowledge and Place Name Documentation on the Kuskokwim River: Continuity and Change
Geographic Region:	Kuskokwim Region
Data Type:	Traditional Ecological Knowledge
Principal Investigator:	Ann Fienup-Riordan, Calista Education and Culture Inc., Anchorage
Investigator:	Mark John, Calista Education and Culture Inc., Anchorage
Project Cost:	2020: \$214,962 2021: \$214,747 2022: \$214,611 2023: \$214,388
Total Cost:	\$858,706

Objectives Our primary objective is a holistic documentation of traditional ecological knowledge pertaining to the harvest, processing, sharing, and use of food resources generally and salmon in particular along the Kuskokwim River. These documentation efforts will be carried out through a series of topic-specific gatherings (meetings with elders, youth, and CECI staff). Our gatherings will take place at three levels, including village gatherings in Kuskokwim River communities between Lower Kalskag and Stony River, sub-regional gatherings in Aniak, and regional gatherings and steering committee meetings in Bethel.

Need for Project This project was initiated by central Kuskokwim villages which have asked CECI to work with elders in their communities to document place names and traditional knowledge specific to their area--an area poorly understood and often ignored in southwest Alaska.

A major breakthrough in understanding Yup'ik cultural history was the establishment of the CECI and the placement of heritage preservation efforts in local hands. A community-engaged approach has been the hallmark of CECI research since 2000. Research topics--especially the emphasis on documenting traditional instructions and place names--have been chosen by CECI's board of elders, and subsequently pursued by CECI staff in collaboration with anthropologist Fienup-Riordan.

Elders and other community members are deeply concerned with maintaining their traditional knowledge base, which many feel is at the heart of their survival. CECI gatherings and their resulting publications are viewed as important steps in ensuring that Yup'ik cultural perspectives are not only broadly shared but preserved for future generations.

Project Activities Activities during Year 1 will focus on gatherings with central Kuskokwim elders from Kalskag, Aniak, Chuathbaluk, Crooked Creek, Napaimute, Red Devil, Sleetemute, and Stony River.

Work in central Kuskokwim communities will be expanded upon during Years 2 and 3 by four topic-specific gatherings on specific aspects of food knowledge held at the Yukon Delta National Wildlife Refuge (YDNWR) in Bethel and including selected elder representative from lower as well as central Kuskokwim communities.

Our project will be guided by three regional Steering Committee meetings, which will include representatives from Yukon River and coastal as well as Kuskokwim River communities to allow us to put what we are learning in perspective. These larger regional meetings will also provide an opportunity for non-Native scientists (including USFWS staff) to present findings and obtain feedback from elders. During the project's second year, we will carry out a summer field survey of the central Kuskokwim, traveling from Stony River to Lower Kalskag with elders, youth, and collaborating scientists, including a cultural anthropologist, archeologist, geologist, and fisheries biologist. During the field survey we will focus on documenting elder and younger community member observations of cultural and physical geography on site. To allow residents to share knowledge about the places they know best, the trip will be divided into two five-day segments--the first with 6 participants from Stony River, Sleetmute, Red Devil, Napaimute, and Crooked Creek, and the second with 6 participants from Chuathbaluk, Aniak, and Upper and Lower Kalskag.

Following the trip, two student interns will work with Fienup- Riordan to add place names to the Yup'ik Atlas as well as attach photographs, videos, and stories recorded at sites during the field survey. The understanding students gain of the benefits of collaboration in solving problems and advancing knowledge will be more important than any specific information learned.

Anticipated Outcomes Our project has three anticipated outcomes.

- As with all past CECI research, project results will be published in an English language text as well as a bilingual companion volume focused on food knowledge generally and salmon in particular along the Kuskokwim River.
- We will also share oral narratives in both text and audio format on our Yup'ik Atlas, hosted by ELOKA (Exchange of Local Observation and Knowledge in the Arctic). Launching the Yup'ik Atlas has been important in initiating an innovative and technologically sophisticated means of both sharing and archiving Yup'ik perspectives on their homeland. The Yup'ik Atlas has been incorporated into LKSD's 9th grade curriculum, and we hope that the Kuspuks School District can also make use of this resource.

Our project will be important in terms of capacity building, providing many opportunities for Native and non-Native experts, community members, agency representatives, and youth to work together. The project will leave a legacy of community infrastructure through training and cross-regional, community-agency contacts. Community members and agency scientists working toward common, locally-determined goals will model collaborative practices that offer rich possibilities for future research.

Project Number: 20-352
Title: Improving Communication and Sharing of Information Among Subsistence Salmon Fishers, Stakeholder Groups, and Management Agencies in the Kuskokwim River Drainage
Geographic Region: Kuskokwim Region
Data Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigators: David Runfola, Alaska Department of Fish and Game, Division of Subsistence, Fairbanks
Nicholas Smith, Alaska Department of Fish and Game, Division of Commercial Fisheries, Anchorage

Project Cost: 2020: \$128,124 2021: \$67,799 2022: \$35,883 2023: \$0
Total Cost: \$231,806

Issue: Kuskokwim River Chinook salmon abundance has been below average for at least the last decade, and particularly low run sizes have been observed since 2010. As a result, managers have enacted unprecedented closures to subsistence salmon fishing during the early part of the season when Chinook salmon are present in large numbers. Stakeholders have consistently shared concerns about the status of the subsistence fishery, with many households finding the lack of salmon fishing to be a great source of stress for their families. In hopes of alleviating some of that stress, residents have expressed a desire for less restrictive harvest opportunities, more predictable fishing schedules, and more reliable sources of information about upcoming openings. This study will address the need for improved information-sharing between subsistence salmon fishery stakeholders and management agencies regarding salmon conservation in the Kuskokwim River drainage. During two seasons of fieldwork, this study will develop a program to increase opportunities for Kuskokwim Area subsistence fishing households to share their concerns directly with management agency staff and stakeholder organizations. It will also develop multiple tools to effectively inform the public of management decisions, such as locations, times, and gear restrictions during fishing openings. To obtain fisher input into the management process and to share fishery information, research and management staff will engage directly with fishers and their household members through public meetings in communities throughout the drainage, as well as in-person contacts at fishers' homes, in fish camps, and on the river. Staff will also publish fishery information in multiple electronic, print, and radio formats. The P.I.s will coordinate closely with village tribal governments, the Kuskokwim River Salmon Management Working Group, the Kuskokwim River Inter-Tribal Fisheries Commission, and management and research staff from ADF&G Division of Commercial Fisheries and the U.S. Fish and Wildlife Service.

Objectives:

1. Identify three issues integral to the Kuskokwim Area subsistence salmon fishery and design three educational exercises as foundations for a dialogue between agency staff and subsistence fishing communities.
2. Travel to eight study communities to engage fishers, managers, and researchers in a dialectical forum where management agency staff present educational exercises and subsistence fishers

apply local knowledge and critical assessment to improve agency awareness of community perspectives on the issues.

3. Share and publish educational forum outcomes during the salmon fishing season in management meetings, in public meetings in communities, in social media and other electronic postings, and in written publications and notices.

Methods: The investigators will conduct field work in 8 communities throughout the Kuskokwim River drainage. Prior to each field season, the principal investigators will identify 3 critical issues in Kuskokwim Area salmon management that can be developed into modules for discussion with fishing communities. Collaborating with representative stakeholder groups and fishery managers, P.I.s will share the issues they identify with the research communities in preseason scoping meetings. The P.I.s will review the proposed issues of concern and invite communities to offer their perspectives and opinions on the significance of each management issue. Communities will also be encouraged to offer other possible issues of concern that could be developed into educational modules for further inquiry. The P.I.s and community members will come to a consensus on which issues are most important to each individual community, following which the P.I.s will prepare as many as three educational modules for presentation and discussion with communities inseason.

The P.I.s will travel during the salmon-fishing season to participating communities where they will present educational modules that were selected for investigation in the scoping meetings. Educational exercises will facilitate dialogue among all participants, as opposed to a unidirectional transfer of knowledge from management agency staff to subsistence fishers. Agency staff will particularly focus on being receptive to learning about how fishers understand management issues and concerns. Agency staff will also develop their awareness of how fishers express and communicate their knowledge and experience of the fishery.

Educational module outcomes from inseason dialogues and activities will be recorded and organized into communications materials that will be shared with the general public, agency staff, and stakeholder groups. The P.I.s and community members will collaborate to develop materials that increase the effectiveness of agencies' communication of management decisions. The ADF&G will develop a social media web page for this project where educational module outcomes and other fishery information and updates will be shared with the public. The P.I.s will hold community review meetings following each field season to discuss outcomes. They will also work with participating communities to develop recommendations for improved communication and outreach in the Kuskokwim River subsistence salmon fishery.

Partnerships/Capacity Building: The P.I.s will work with tribal councils in the study communities to hire LRAs to facilitate community meetings and develop communication materials for release to the public. The LRAs will be trained in all project methods where appropriate. The P.I.s will work with LRAs to develop a presentation of study results for community review. This aspect of the study design adds to local involvement and local understanding of critical Kuskokwim River salmon management issues. It will also increase coordination between agencies, tribal entities, and community members. Working together in educational module implementation and public communications increases the effectiveness of

outreach efforts and leads to agency staff's improved understanding of local issues as well as fishers' understanding of techniques of fishery science and management.

Project Number:	20-353
Title:	Subsistence Harvest, Use, and Local and Traditional Knowledge of Whitefishes in the Middle Kuskokwim River
Geographic Region(s):	Kuskokwim Region
Data Type:	Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator(s):	David Runfola M.S., Division of Subsistence, Alaska Department of Fish and Game, Fairbanks David Koster, Division of Subsistence, Alaska Department of Fish and Game, Anchorage

Project Cost:	2020: \$154,138	2021: \$118,288	2022: \$62,970	2023: \$0
Total Cost:	\$335,396			

Issue: Whitefishes and sheefish represent critical subsistence resources throughout rural Alaska; however, the management of these species is not well-informed regarding stock status, harvest levels, or critical life history variables. Contemporary harvest data for nonsalmon fishes, and whitefish species more specifically, is generally lacking throughout rural Alaska. Comprehensive subsistence survey data from harvests in 2009 for eight middle Kuskokwim River communities provide the most recent and useful data on harvest estimates relevant to this study. This proposal is submitted in response to a more recent focus on whitefishes for subsistence use, information needs identified by the USFWS 2019 Fisheries Resource Monitoring Program Priority Information Needs, and the information gaps identified in recent biological and social science studies recommending local and traditional knowledge research on whitefishes in the region. This study proposes to collect local and traditional knowledge related to whitefishes and to assess the harvest of whitefishes utilized by residents of middle Kuskokwim River area communities of Lower Kalskag, Upper Kalskag, Aniak, Chuathbaluk, Crooked Creek, Red Devil, Sleetmute, and Stony River.

Residents of the middle Kuskokwim River rely on a variety of nonsalmon species for subsistence, and harvest occurs within or adjacent to the Yukon Delta National Wildlife Refuge. While salmon compose the largest portion of the total subsistence fish harvest in the eight communities, nonsalmon fishes are vital components of the subsistence harvest. This is especially true for harvests of whitefish species present in the Kuskokwim River drainage. Whitefishes have long been important to local subsistence economies of the middle Kuskokwim region, due in large part to their year-round availability; however, the use of and local perspectives on the ecology of these fishes in the middle Kuskokwim River area is not well understood, and data collection has been limited to single-year efforts as part of subsistence surveys in each community. The area is socially and geographically complex, with a long-term history of subsistence fishing, and distinct environments that provide critical habitats for whitefishes during various stages of their life histories.

Few studies have focused on subsistence fishing by residents of the middle Kuskokwim River. Since the 1980s, some research has indicated the long-term importance of whitefish species to indigenous inhabitants of the area. More recent subsistence harvest surveys conducted in each of the proposed study

communities documented harvests of all extant whitefish species of the region. Multiple years of poor Chinook salmon returns to the Kuskokwim River have also contributed to increased focus on whitefishes. Subsistence restrictions on harvesting Chinook salmon have resulted in low salmon harvests, and ADF&G has actively encouraged fishers to reduce their harvest of Chinook and essentially replace the loss with other salmon and nonsalmon fishes. In light of these data gaps, and because there exists little current and comprehensive harvest information for whitefishes in the middle Kuskokwim River region, it is timely to conduct harvest assessment work.

Objectives: **1)** Document local and traditional knowledge related to historical and contemporary patterns of subsistence whitefish species and harvests in eight communities of the Middle Kuskokwim River. **2)** Estimate subsistence harvest levels and percentages of households using, harvesting, giving away, and receiving resident freshwater and anadromous nonsalmon fishes for the calendar year 2020 by species and season for the eight study communities.

Methods: Ethnographic interviews and participant observations will be conducted in all communities. With assistance from village tribal council staff, key respondents will be selected based on their expertise and experience of whitefish and other nonsalmon fish. Investigators will use a general semi-structured interview guide organized by species and will investigate biological and social topics related to these species. All interviews will be audio-recorded. Subsequent to the interviews, interview data will be transcribed and analyzed for inclusion in the final report.

Harvest data will be collected in face-to-face interviews using a standardized survey form. Respondents will be asked to provide specific information on numbers and species harvested and used during the calendar year prior to the date of the survey. Respondents will also be asked questions to record demographic information, as well as other information related to the harvest and use of nonsalmon. Survey responses will be coded following standardized ADF&G codebook conventions. Survey data will be entered into a database and analyzed using a statistical software package. Data will be analyzed to produce summary information describing all aspects of nonsalmon harvest and use investigated in the surveys.

Researchers will review and analyze all information for discussion in a final project technical report. Participation in surveys and ethnographic interviews will be voluntary and all information recorded will be kept confidential. Communities will have the opportunity to consent to participation in the study prior to staff deployment to the field. Researchers will review all data products with communities before publication in the final technical report.

Partnerships/Capacity Building: Investigators will work with tribal councils in the study communities to hire local project assistants who will assist with survey implementation and ethnographic research. The local assistants will be trained in sampling methods. This adds to local involvement and understanding of the Kuskokwim River whitefish management issues. Investigators will work with local assistants to develop a presentation on study results for community review. It will also increase coordination between agencies, tribal entities, and community members. Working together in data collection increases

communication and leads to better understanding of local issues among researchers, and local understanding of science and management issues.

**FISHERIES RESOURCE MONITORING PROGRAM
YUKON REGION OVERVIEW**

Since the inception of the Monitoring Program in 2000, a total of 114 projects have been undertaken in the Yukon Region costing \$20.6 million (Figure 1). Of these, the State of Alaska received funds to conduct 26 projects, Alaska rural organizations conducted 19 projects, the Department of the Interior conducted 49 projects, and other organizations conducted 20 projects (Figure 2). See Appendix 1 for more information on Yukon Region projects completed since 2000.

Figure 1. Monitoring Program Funds Distributed, by Organization Type, in the Yukon Region since 2000

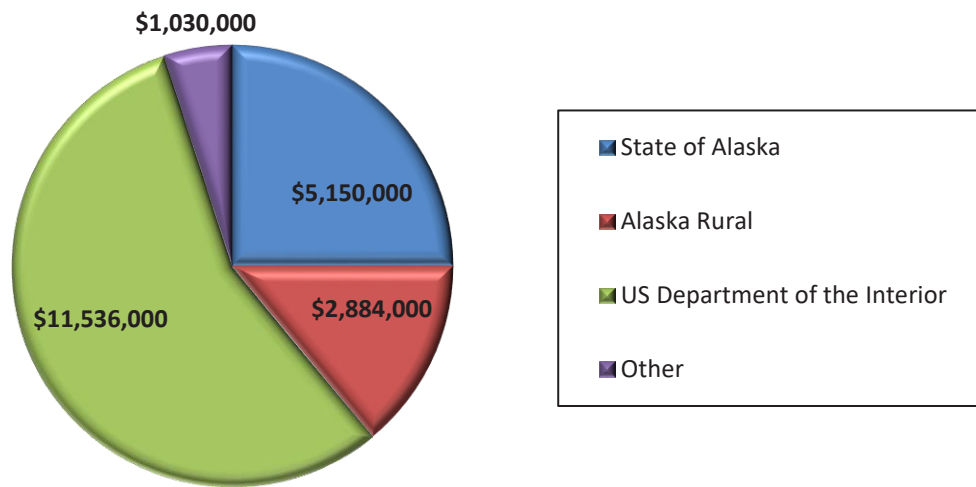
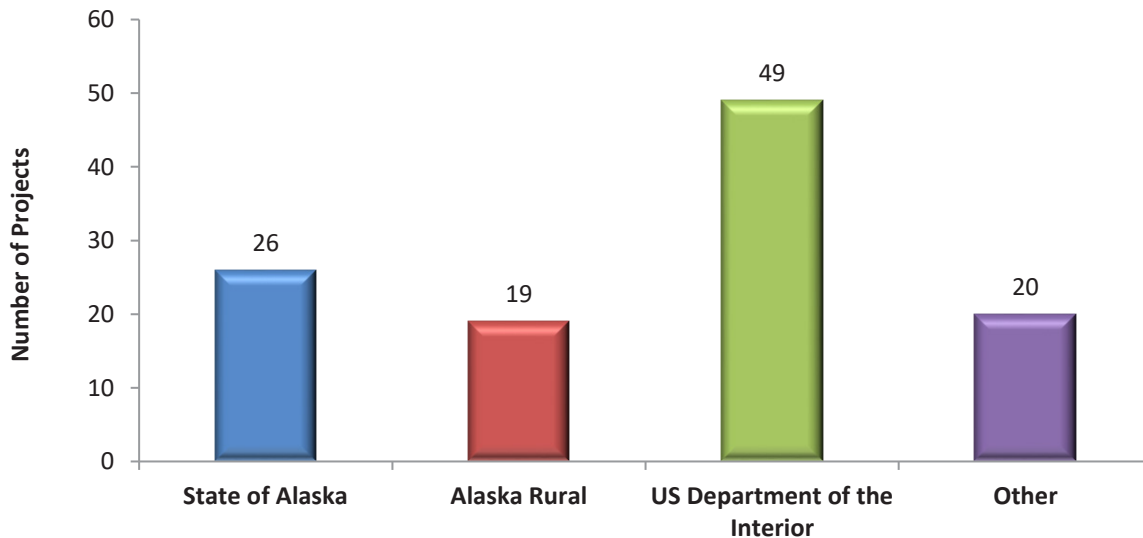


Figure 2. Number of Monitoring Program Projects Funded, by Organization Type, in the Yukon Region since 2000



PRIORITY INFORMATION NEEDS

The 2020 Notice of Funding Opportunity for the Yukon Region identified the following 17 priority information needs:

- Reliable estimates of Chinook, Summer Chum, Fall Chum, and Coho salmon escapements, particularly sub-stocks that are large contributors to the total run.
- In-season estimates of genetic stock composition of Chinook, Summer Chum, and Fall Chum salmon runs and harvests.
- Baseline information about geographic distribution, migration patterns, run timing, genetic structure, and tributary escapements of Yukon River Coho Salmon. Projects might focus on those portions of the Yukon River drainage downriver from and including the Tanana River.
- Reliable assessment of Porcupine River Fall Chum Salmon, for example, migration characteristics, abundance, escapement, and harvest quantities.
- Reliable quantitative and/or qualitative estimates of age-sex-length and genetic composition of salmon harvested in the subsistence fishery. Applicants are encouraged to focus on Chinook and Fall Chum Salmon.
- Advance genetic baselines for Chinook, Summer Chum, and Fall Chum salmon by screening novel genetic markers to improve the accuracy, precision, and scale of stock-composition estimates to inform stock assessment.
- Reliable methods of forecasting Chinook, Summer Chum, Fall Chum, and Coho salmon run abundance.
- Quality of escapement measures for Chinook Salmon, for example, potential egg deposition, age, sex, and size composition of spawners, percentage of females, percentage of jacks, and spawning habitat utilization.
- Bering Cisco population assessment.
- Information sharing between stakeholders and agencies concerning management of subsistence fisheries.
- Baseline information about lamprey populations, migration patterns, and harvest quantities.
- Baseline information about whitefish populations, migration patterns, and harvest, particularly those where habitat and traditional harvest practices could be affected by proposed road and mine development.

- Quantify and qualify the barter and cash exchange of salmon within the context of the social, cultural, and economic life of people in the middle and lower Yukon drainage.
- Assessment of incidental mortality with gillnets, dip nets, and seines, with particular consideration for delayed mortality from entanglement from drop-outs and live release of Chinook Salmon (for example, loss of Chinook Salmon from 6-inch mesh nets during Chum Salmon fisheries and the live release of Chinook Salmon from dip nets and seines).
- Strategic evaluation of existing and needed information concerning Chinook Salmon and Summer Chum Salmon run timing, escapement, and population in the middle and upper Yukon drainage, particularly the Middle Fork Koyukuk River.
- Analysis of recent regulations changes and effects on salmon escapement in the Yukon River drainage.
- Reliable quantitative and/or qualitative estimates of in-season salmon harvest to support management.

AVAILABLE FUNDS

Federal Subsistence Board guidelines direct initial distribution of funds among regions. Regional budget guidelines provide an initial target for planning. For 2020, the Department of the Interior, through the U.S. Fish and Wildlife Service, will provide an anticipated \$1.5 million in funding statewide for new projects in 2020. The U.S. Department of Agriculture, through the U.S. Forest Service, has historically provided some funding. The amount of U.S. Department of Agriculture funding available for 2020 projects is uncertain.

ROLE OF THE TECHNICAL REVIEW COMMITTEE

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

For the 2020 Monitoring Program, eight proposals were submitted for the Yukon Region. The Technical Review Committee 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**). These scores remain confidential. An executive summary for each proposal submitted to the 2020 Monitoring Program for the Yukon Region is in **Appendix 2**.

Table 1. Projects submitted for the Yukon Region, 2020 Monitoring Program, including total funds requested and average annual funding requests.

Project Number	Title	Total Project Request	Average Annual Request
20-200	Yukon River Coho Salmon Radio Telemetry	\$456,219	\$152,073
20-201	Application of mixed-stock analysis for Yukon River chum salmon	\$518,128	\$129,532
20-202	Evaluating dart and telemetry tags in an effort to track run timing and migration patterns of Yukon River Arctic lamprey	\$33,836	\$16,918
20-204	Abundance and Run Timing of Adult Salmon in Henshaw Creek, Kanuti National Wildlife Refuge, Alaska	\$733,256	\$183,314
20-250	Fall Chum Salmon Community Outreach along the Yukon River	\$70,341	\$23,447
20-251	In-season Yukon River Subsistence Salmon Survey Program	\$320,756	\$80,189
20-252	Customary Trade in the Lower Middle Yukon River	\$310,487	\$103,496
20-256	Yukon River In-Season Salmon Management Teleconferences	\$78,854	\$19,713
Total		\$2,521,887	\$708,682

TECHNICAL REVIEW COMMITTEE JUSTIFICATION FOR PROPOSAL SCORES

Project Number: 20-200

Project Title: Yukon River Coho Salmon Radio Telemetry

Technical Review Committee Justification: The investigators seek funding for a three-year project to conduct a Coho Salmon radio telemetry project on the Yukon River and its tributaries. The objectives are to identify migration routes, spawning locations, run timing, migration rates, distribution, and proportional contributions of fish from different spawning stock groups to the overall Yukon River Coho Salmon population. Radio tracking will only occur during the second year of the project, and will not document the inter-annual variability in run timing and stock productivity, increasing the risk of funding a project of this magnitude. This project fully addressed one priority information need. Information from this project will lead investigators to locations to focus on escapement monitoring and sample collection to add to the genetic baseline; however, the proposal does not adequately describe how the project addresses subsistence concerns. The project has objectives that are clear, measurable, and achievable, with well thought out logistics. The investigators have experience with these types of projects, and have successfully performed them in this drainage in the past. However, as in the 2018 project proposal, there is little information on how they determined sample size, or if it will have the resolution to meet objective 3 (Estimate proportional contributions of fish from five drainage groups to the overall Yukon River Coho Salmon population with 95% confidence interval bounds which will be no wider than 7% of the mean). There has been significant partner involvement with the development of this proposal by the Alaska

Department of Fish and Game, Yukon Delta Fishermen's Association, and the U.S. Fish and Wildlife Service. Capacity will be built by training local hires in sampling techniques and data entry. The total projected cost is \$771,251 for the three years of the project. The investigators are asking for a total of \$456,219 from the Fisheries Resource Monitoring Program with an average annual cost to the Monitoring Program of \$152,073. The remainder would come from the Alaska Department of Fish and Game, the United States Fish and Wildlife Service, and Yukon Delta Fishermen's Association.

Project Number: 20-201

Project Title: Application of Mixed-Stock Analysis for Yukon River Chum Salmon

Technical Review Committee Justification: Investigators seek funding to resume in-season mixed stock genetic analysis of Yukon River summer and fall Chum Salmon. The samples, collected in conjunction with the Pilot Station sonar run by the Alaska Department of Fish and Game, are shipped to the U.S. Fish and Wildlife Service Genetics Conservation Lab in Anchorage for analysis, providing stock composition estimates to fisheries managers within 24-48 hours, and supporting the in-season management of Chum Salmon. This project directly addresses one priority information need. The objectives are clear, measurable, and achievable with a sampling design that is rigorous. The investigation plan includes reporting procedures, although the annual reports would not be completed for almost two years after the field season is completed, which may be an excessive delay. No letters of support were submitted with this project and it is suggested that the investigators ask their partners and other entities in the region to submit letters of support in the future. There is very little capacity built with this project, however, some technical capacity will be built by training a local hire in proper sampling techniques. The investigation plan suggests a total project cost of \$628,128 for four years of the project, of which \$110,000 is a match from the U.S. Fish and Wildlife Service Conservation Genetics Lab. The average annual cost to the Monitoring Program is \$129,532. The cost of the proposal is reasonable throughout all agreement periods and is reasonable for the work being proposed.

Project Number: 20-202

Project Title: Evaluating Dart and Telemetry Tags in an Effort to Track Run Timing and Migration Patterns of Yukon River Arctic Lamprey

Technical Review Committee Justification: Investigators propose a two-year project to determine the tag retention and optimal radio transmitter size to mark and track Arctic Lamprey. This project has a direct link to Federal public waters on the Yukon River, however, geographic implications are relatively small. This project fully addresses one priority information need. The proposed project would not have immediate management applications; however, it would give researchers necessary information regarding tag use for mark/recapture or distribution for future studies. The objectives for this project are clear, measurable, and achievable. The science they propose is proven; however, some of the logistics need to be described in more detail. The methods have a rigorous sampling design and have been proven to achieve technical results in previous studies using Pacific Lamprey that will likely transfer over to the slightly smaller Arctic Lamprey. Investigators have substantial resources available to accomplish a project of this nature. The Yukon Delta Fisheries Development Association and the Asa'carsarmiut Tribal Council submitted letters of support for this project proposal. This project has four partners, three of which will be involved in a meaningful way. This project will build very little capacity since the Yukon

Delta Fisheries Development Association has fishermen already sampling most years. The proposal included both the budget justification and budget tables and suggests a total project cost of \$107,940 for 2 years of the project, of which \$74,104 is in-kind services and voluntary uncommitted resources from the U.S. Fish and the Alaska Department of Fish and Game. The average annual cost to the Monitoring Program is \$16,918, with in-kind services and voluntary uncommitted resources equal approximately 69% of the total project cost.

Project Number: 20-204

Project Title: Abundance and Run Timing of Adult Salmon in Henshaw Creek, Kanuti National Wildlife Refuge

Technical Review Committee Justification: The investigation plan is requesting four more years of funding, starting in 2020, to continue operation of the Henshaw Creek weir to monitor salmon escapement. This weir documents daily escapement, run timing, and age, sex, and length composition of adult salmon. Henshaw Creek weir is located within Federal public waters on the Yukon River drainage and contains wide geographic implications. The Henshaw Creek weir is the only upper Koyukuk River drainage escapement project and is valuable for providing stock-specific population demographic information for managing fisheries stocks throughout the drainage, but the value of the weir data for in-season management is limited due to its location in the upper Koyukuk River drainage. The project objectives are clear, measurable and achievable, but do not provide adequate justification for continuing this project given other information needs. The methods used produce technically sound results and the sampling design is rigorous and includes clear procedures for data collection, compilation, analysis and reporting. The investigators have the resources and ability to fully complete this project and have demonstrated their ability in the past. Three letters of support were supplied from the following agencies: Alaska Department of Fish and Game, U.S. Fish and Wildlife Service, Fairbanks Fish and Wildlife Conservation Office, and Kanuti National Wildlife Refuge. Capacity will be built by hiring from local villages and training employees, as has been done in the past. The proposal included a budget table and justification with a total project cost of \$782,056 for the four years of the project, of which \$48,800 is an in-kind match from Tanana Chiefs Conference. The average annual cost to the Monitoring Program is \$183,314, a decrease over the average annual amount of \$212,345 in the 2016 project budget.

Project Number: 20-250

Project Title: Fall Chum Salmon Community Outreach along the Yukon River

Technical Review Committee Justification: This project seeks to address a Monitoring Program 2020 Priority Information Need for the Yukon Region: "Information sharing between stakeholders and agencies concerning management of subsistence fisheries." The investigators plan to facilitate meetings between Alaska Department of Fish and Game managers and communities. Specifically, one staff member from Division of Subsistence and one staff member from Division of Commercial Fisheries would travel to upper Yukon communities of Kaltag, Galena, Tanana, Beaver, Fort Yukon, and Eagle to meet with community members immediately prior to or during the Fall Chum Salmon run and administer a short survey on management concerns. Ms. Trainor has the experience and ability to carry out the proposed work. The Alaska Department of Fish and Game has a demonstrated track record of successfully completing Monitoring Program projects. The project objectives are tangible, but may be

difficult to measure. The proposal could have been strengthened through planning of concrete meetings in early consultation with tribal communities. Letters of support were not included. Inclusion of Federal managers and partnership with prominent rural organizations are missing. As written, the project comes with a relatively large cost in proportion to the short period of interaction between managers and fishing communities.

Project Number: 20-251

Project Title: In-season Yukon River Subsistence Salmon Survey Program

Technical Review Committee Justification: This proposal is to maintain and build upon the existing In-season Yukon River Subsistence Salmon Survey Program. The program hires local surveyors from 10 Yukon River drainage communities to collect in-season salmon harvest information and fishery observations that are shared with communities and managers in real time. This information has been critical to managing the Yukon River salmon fishery and in providing critical information needed to make management and fishing decisions. The proposal directly addresses several 2020 Priority Information Needs in the region. It develops essential partnerships between communities and managers to strengthen the capacity of each in making decisions in support of both conservation and the continuation of subsistence uses. The program provides local employment opportunities and builds capacity through training on both biological and anthropological research methods. Investigator organizations have a long history of providing substantial resources for Monitoring Program projects. Investigators have a proven record of completing Monitoring Program projects and in delivering high quality research products. The costs associated with this program appear reasonable, especially given the scope of data and anticipated impact on this fisheries' management and local participation in the fishery.

Project Number: 20-252

Project Title: Customary Trade in the Lower and Middle Yukon River

Technical Review Committee Justification: This project sets out to address a Monitoring Program 2020 Priority Information Need for the Yukon Region: "Quantify and qualify the barter and cash exchange of salmon within the context of the social, cultural, and economic life of people in the middle and lower Yukon drainage." In 2013, a regulation was adopted that prevents customary trade of salmon between Federally qualified users and non-Federally qualified users. Investigators have planned a study of customary trade combining surveys, participant observation, and semi-structured interviews in the middle and lower Yukon River communities of Mountain Village, Nunam Iqua, Kaltag, and Galena. Ms. Trainor plans to extend the approach used in recent Alaska Department of Fish and Game research on customary trade on the upper Yukon to the lower and middle Yukon River, creating a comparable dataset. The project is technically well-designed and has scientific merit. The investigators recognize and make provisions for the sensitive nature of customary trade. Although costs are high, the budget appears to be reasonable for the work proposed across all periods of the proposed study. No letters of support were provided. The project would increase capacity through training community members in research methods.

Project Number: 20-256

Project Title: Yukon River In-Season Salmon Management Teleconferences

Technical Review Committee Justification: This project hosts weekly teleconferences, bringing people together from remote and rural villages that share salmon resources. The project has operated for 17 years and has become a fixture of in-season salmon management along the Yukon River. Study design is appropriate and builds capacity by involving local subsistence users and providing them a voice to participate in the management of the Chinook Salmon fishery. The budget and project duration are reasonable for the proposed work and to accomplish project objectives. Investigators are highly qualified and fully capable of addressing and achieving the objectives, and reporting results in a timely manner.

**APPENDIX 1
PROJECTS FUNDED IN THE YUKON REGION SINCE 2000**

Project Number	Project Title	Investigators
Salmon Projects		
00-003	Effects of <i>Ichthyophonus</i> 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 <i>Ichthyophonus</i> on Chinook Salmon	USGS
01-211	Upper Yukon, Porcupine, & Black River Salmon TEK	CATG
02-009	Pilot Station Sonar Technician Support	AVCP

Project Number	Project Title	Investigators
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
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
08-202	Anvik River Chum Salmon Sonar Enumeration	ADF&G

Project Number	Project Title	Investigators
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	E Fork Andreafsky Salmon	USFWS
14-203	Gisasa R Salmon	USFWS
14-206	Yukon R Coho Salmon	USFWS
14-207	Yukon R Chum Salmon	USFWS
14-208	Koyukuk R Chum Salmon	USFWS
14-209	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	ADF&G
16-255 ^b	Yukon River In-Season Community Surveyor Program	YRDFA, USFWS
16-256 ^b	In Season Salmon Management Teleconferences	YRDFA
18-201 ^b	East Fork Andreafsky River Chinook and summer Chum Salmon abundance and run timing, Yukon Deltan National Wildlife Refuge	USFWS
18-202 ^b	Gisasa River Chinook and summer Chum Salmon abundance and run timing assessment, Koyukuk National Wildlife Refuge, Alaska	USFWS
18-250 ^b	Documentation of salmon spawning and rearing in the Upper Tanana River Drainage	ADF&G
18-251 ^b	Traditional knowledge of anadromous fish in the Yukon Flats with a focus on the Draanjik Basin	TCC
18-252 ^b	Subsistence salmon networks in Yukon River communities	ADF&G
Nonsalmon Fish 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

Project Number	Project Title	Investigators
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
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	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	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 = Loudon 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 Associates, 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 2 EXECUTIVE SUMMARIES

The following executive summaries were written by principal investigators and were submitted to the Office of Subsistence Management as part of proposal packages. They may not reflect the opinions of the Office of Subsistence Management or the Technical Review Committee. Executive summaries may have been altered for length.

Project Number:	20-200			
Title:	Yukon River Coho Salmon Radio Telemetry			
Geographic Region:	Yukon Region			
Data Type:	Stock Status and Trends			
Principal Investigator:	Bonnie Borba, Fisheries Biologist III, Alaska Department of Fish and Game, Division of Commercial Fisheries			
Co-investigators:	Andrew Padilla, Fisheries Biologist II, Alaska Department of Fish and Game, Division of Commercial Fisheries, Fairbanks Raymond Hander, United States Fish and Wildlife Service, Fairbanks Randy Brown, United States Fish and Wildlife Service, Fairbanks			
Project Cost:	2020: \$212,957	2021: \$214,727	2022: \$28,535	2023: \$0
Total Cost:	\$456,219			

Issue: This is a proposal for a conducting a one-year radiotelemetry study to track coho salmon (*Oncorhynchus kisutch*) in the Yukon River drainage to gain knowledge about their migratory distribution patterns, run timing, and identify spawning areas. Coho salmon occur and are harvested for subsistence throughout the Yukon River drainage including many waters adjacent to or within Federal public lands. Alaska Department of Fish and Game (ADF&G) and U.S. Fish and Wildlife Service (USFWS) have broad overlap in management authority pertaining to coho salmon fisheries within the Yukon River drainage. Coho salmon harvests occur within the federal conservation units beginning in August in the lower river and through ice up well into October in the upper river areas. Currently, there is a deficit of baseline information for coho salmon in the Yukon River drainage and this radiotelemetry project will be informative in many aspects. Information on migratory distribution patterns, run timing, and spawning areas is critical to both habitat protection and sustainability of coho salmon in the Yukon River drainage for subsistence use. The project will address priority needs identified for the Yukon Region by providing baseline information about geographic distribution, migration patterns, run timing, genetic structure, and tributary escapements of Yukon River Coho Salmon. Geographic distribution information will be used to make nominations to the Anadromous Waters Catalog (AWC) to provide habitat protection and direct future genetic baseline sampling.

Objectives:

1. Estimate run timing, migration rate, movement patterns, and distribution of coho salmon based on date/time tags deployed relative to date/time fish passes each successive tower/aerial receiver and detected at final locations.
2. Identify migration routes and spawning areas within the Yukon River drainage and provide nominations to the Anadromous Waters Catalog to directly preserve habitat used by coho salmon.
3. Estimate proportional contributions of fish from five drainage groups to the overall Yukon River coho salmon population with 95% confidence interval bounds which will be no wider than 7% of the mean.

4. Identify areas to add to the genetic baseline.

Methods: 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 radiotracking stations located strategically along the mainstem and main tributaries of the Yukon River. These radiotracking stations will provide information needed to evaluate inriver migration corridors and quantify migration timing and speed. Tracking stations and aerial survey tracking flights will be used in combination to determine the final fate of each tag fish and locate fish within tributaries. 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).

Partnerships/Capacity Building: This project will build capacity and develop partnerships by working with Yukon Drainage Fisheries Development Association, Tanana Chiefs Conference (TCC) and Iqurmit Traditional Council in Russian Mission. ADF&G will work with YDFDA to contract local fishing crews to capture and assist with coho salmon tagging. Training will provide opportunities to learn techniques in capture, handling, tagging, biological sampling, data recording, and release of live fish. Conversely, the local fishermen share their traditional knowledge of fishing techniques and fishing areas that will be necessary to target and capture coho salmon while minimizing the capture of other fish species. Additional partnerships and capacity with TCC will assist with collection of radio tags from subsistence harvested coho salmon. Integrating YDFDA and TCC into this project follows precedent to include rural and Alaska Native organizations into future fisheries research that is directly connected to Federal subsistence fisheries throughout the Yukon River drainage.

Project Number:	20-201			
Title:	Application of mixed-stock analysis for Yukon River chum salmon			
Geographic Region:	Yukon Region			
Data Type:	Stock Status and Trends			
Principal Investigator:	Blair Flannery, Conservation Genetics Laboratory, U.S. Fish and Wildlife Service, Anchorage			
Co-investigators:	John Wenburg, Conservation Genetics Laboratory, U.S. Fish and Wildlife Service, Anchorage			
Project Cost:	2020: \$129,532	2021: \$219,532	2022: \$129,532	2023: \$129,532
Total Cost:	\$518,128			

Issue: This project relates to the following priority information need identified in the 2020 Office of Subsistence Management (OSM) Request for Proposals: In-season estimates of genetic stock composition of summer chum and fall chum salmon runs and 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 allocations.

Objective: The goal is to provide fishery managers with data that will assist them in meeting escapement, passage, and harvest allocations to ensure that the fishery is managed in a sustainable and equitable manner. The following objective will be executed to achieve this goal.

1) Estimate the stock compositions of summer and fall chum salmon sampled from the Pilot Station test fishery each year (June 1 – September 7).

Methods: Genetic samples will be collected from every chum salmon caught in the Pilot Station sonar test fishery from June 1 – September 7, 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.

Partnerships/Collaboration: We have worked with ADFG biologists to coordinate sample collection. We have contracted 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 have consulted, with ADFG, USFWS, and DFOC managers.

Project Number:	20-202			
Title:	Evaluating dart and telemetry tags in an effort to track run timing and migration patterns of Yukon River Arctic lamprey			
Geographic Region:	Yukon Region			
Data Type:	Stock Status and Trends			
Principal Investigator:	Katie Shink, U.S. Fish and Wildlife Service, Fairbanks Fish and Wildlife Conservation Office			
Co-investigators:	Trent Sutton, University of Alaska Fairbanks, College of Fisheries and Ocean Sciences Sabrina Garcia, Alaska Department of Fish and Game, Division of Commercial Fisheries, Anchorage			
Project Cost:	2020: \$20,913	2021: \$12,923	2022: \$0	2023: \$0
Total Cost:	\$33,836			

Issue: Arctic lamprey (*Lethenteron camtschaticum*) are an important subsistence and commercial resource for native Alaskan communities along the lower Yukon River drainage. Despite annual harvests, a lack of basic run timing, relative abundance, and migration data increases the uncertainty of this fishery and complicates quantitative impact estimates of harvests on spawning populations. Within the past three years, subsistence users and local communities have expressed concerns in meeting subsistence needs. As a result, there has been an increased interest in identifying the run timing and migratory patterns of Arctic lamprey through the use of mark-recapture and telemetry methods. Arguably, these data would provide a benchmark from which to begin tracking Arctic lamprey population dynamics. Although mark-recapture

and telemetry methods are widely applied and useful tools in fisheries management, the major assumption of this methodology is that tagged and non-tagged fish exhibit similar behavior, physiological responses, and survival rates. To date, this assumption has not been validated in a controlled laboratory setting for Arctic lamprey. It is critical to assess the effects of tagging on physiology and survival before a basin-wide mark-recapture or telemetry study can be conducted. Without an objective assessment of tag performance under controlled conditions, time-intensive and high-cost mark-recapture and telemetry studies may yield inaccurate representations of migratory behavior or risk little to no data collection due to poor tag retention and/or survival. The deliverable of this project is a determination if external dart tags and surgically implanted radio transmitters can be used as a tool to monitor run-timing, estimate relative abundance, and identify the migration patterns of Yukon River Arctic lamprey to inform management.

Objectives:

1. Assess the retention rate of external and internal tags over a 180-d study period.
2. Evaluate the effects of surgically implanted transmitter size on wound healing.
3. Determine if tag type (external or internal) or size of internal tags affects survival over a 180-d study period.
4. Determine the effects of different tags on short (24-h) and long-term (30-d) swimming performance.

Methods: Arctic lamprey (N = 225) will be captured in fyke nets at test fish sites operated by local contracted fishermen, transported live to the UAF Fish Laboratory, and held in 890-L circular tanks for a one week acclimation period. Before the start of the experiment, lamprey will be tagged with a Passive Integrated Transponder (PIT) tag to track individuals for the duration of the experiment. Lamprey will be assigned to one of six treatment groups: 1) control; 2) sham (surgery but no transmitter); 3) an external plastic-dipped dart tag; 4) a surgically implanted small dummy transmitter; 5) a surgically implanted medium dummy transmitter; and 6) a surgically implanted large dummy transmitter. Tagging and subsequent swim trials will be staggered over a period of three months (November 1 – January 31). A surgical protocol developed for Pacific lamprey (*Entosphenus tridentatus*) by Moser et al. (2002) will be used as a guide for surgically implanted dummy transmitters. External tags will be injected below the left side of the anterior dorsal fin using a Floy pistol-grip implanter. After tagging, a subset of lamprey from each treatment group (n = 20, 120 total across all six treatments) will undergo swimming performance assessment trials to assess the impact of different tags on swimming performance. The first swim trial will occur 24 hours after tagging to assess short-term effects; the second will occur 30 days after tagging to assess long-term effects. Lamprey will be monitored daily for expelled tags and mortalities for the duration of the 180 day study. Every 14 days post-tagging, lamprey will be anesthetized and examined to evaluate wound healing. Wound healing will be scored on a scale of one to six following the criteria described by Wagner et al. (2000). At the end of the experiment (May 31), all lamprey will be given a lethal dose of methanesulfonate (MS-22) and necropsies will be performed.

Partnerships/Capacity Building: This project will be a collaborative effort among federal and state agencies (FFWCO; ADF&G), Alaska Native organizations (Yukon Delta Fisheries Development

Association; YDFDA), and research institutions (UAF) to address (1) a 2020 Priority Information Need identified by the Office of Subsistence Management (OSM) and (2) concerns regarding declining lamprey harvests by local subsistence users. Local YDFDA Community Development Quota (CDQ) fishermen will have a significant role in the project, for they have agreed to lead lamprey collection efforts. These collection efforts will also provide an additional opportunity for ADF&G to monitor run timing and track the location of the lamprey run for subsistence users. Further, both the YDFDA and the Asa'carsarmiut Tribal Council have expressed support for this project. Ultimately, the overarching goal of this project is to ensure a diverse group of stakeholders have the information necessary to select the most efficient and effective monitoring tool(s) to collect baseline information and inform the management of Yukon River Arctic lamprey, a poorly studied subsistence species.

Project Number:	20-204			
Title:	Abundance and Run Timing of Adult Salmon in Henshaw Creek, Kanuti National Wildlife Refuge, Alaska			
Geographic Region:	Yukon Region			
Data Type:	Stock Status and Trends			
Principal Investigator:	Nicole Farnham, Tanana Chiefs Conference, Fairbanks			
Co-investigators:	Brian McKenna, Tanana Chiefs Conference, Fairbanks			
Project Cost:	2020: \$185,813	2021: \$182,481	2022: \$182,481	2022: \$182,481
Total Cost:	\$733,256			

Issue: Management of the Koyukuk River salmon fishery is complex. The Alaska Department of Fish and Game, Division of Commercial Fisheries (ADF&G-DFC) has conducted aerial surveys within this drainage since 1960 (Barton, 1984) but the usefulness and reliability of that information is limited. This project addresses the priority information needs outlined for Yukon River salmon, including maintaining reliable estimates of Chinook and chum salmon escapement over time, and assessment of trends in Chinook age, sex and length.

Both Chinook *Oncorhynchus tshawytscha* and chum *O. keta* salmon from Henshaw Creek contribute to the harvests of subsistence and commercial fisheries occurring in the Yukon River. Information collected at Henshaw Creek weir is important to fisheries managers who have the difficult task in managing the complex mixed stock subsistence and commercial salmon fisheries in the Yukon River. In-season management and post-season evaluations of management actions are enhanced by the data from this project. Further, the Henshaw Creek weir is the only upper Koyukuk River drainage salmon escapement monitoring project and its information can facilitate comparisons with lower drainage escapement projects (Berkbigler and Elkin 2006). In more recent years, subsistence and commercial harvesters have identified a concern with the apparent decrease in the size of Chinook salmon (JTC 2013). The continuation of reliable escapement estimates and the collection of age, sex, and length data at Henshaw Creek will assist in future analyses of trends in Chinook salmon and summer chum salmon run timing, escapements, gender composition, and size and age structure over time. In addition, this project aids the Kanuti National Wildlife Refuge (KNWR) in meeting objectives outlined in the 1993 KNWR Fishery Management Plan, and addresses the priority information needs outlined for Yukon Region salmon by

providing reliable estimates of Chinook and chum escapements. With the Tanana Chiefs Conference (TCC) as the primary investigator and through the hire of local residents, this project will enhance capacity building to allow local communities a continued role in the management of the resources

Objectives:

- Determine daily escapement and run timing of adult salmon;
- Determine age, sex and length (ASL) composition of adult salmon;
- Determine the number of resident fish species passing through the weir;
- Consult with and provide outreach and communication for the village of Allakaket; and
- Serve as an outreach platform for KNWR staff and TCC staff to conduct an on-site science camp.

Methods: A resistance board weir will be installed and operated on Henshaw Creek located 721 km upriver from the mouth of the Koyukuk River in north central Alaska (see Figure 1, Map of Project Area). A live trap, installed near mid-channel, will allow salmon and resident species to move through the weir. Their passage will be enumerated daily and will provide an area where fish will be sampled to collect biological information. The daily counting period will begin at midnight and end at midnight the following day. Sampling will begin at the beginning of each week and will be conducted over a 3-4 day period to collect 160 fish per week for each species. Sample size goals were established so that simultaneous 90% interval estimates of the sex and age composition for each week have maximum widths of 0.20 (Bromaghin 1993). The sample size obtained using this method was increased to account for the expected number of unreadable scales. Lengths of Chinook salmon will be measured to the nearest 1 mm and chum measured to the nearest 5mm from mid-eye to fork of the caudal fin (MEFL). Sex ratios will be determined by visual inspection of secondary sexual characteristics. Scales will be used for aging salmon, with ages being reported using the European technique (Foerster 1968). Three scales will be collected from Chinook salmon and one scale will be collected from summer chum salmon. Scales will be taken from the area located on the left side of the fish, two rows above the lateral line on a diagonal line from the posterior insertion of the dorsal fin to the anterior insertion of the anal fin (Price, ADF&G, personal communication). Once the scales are removed, they will be placed on scale gum cards for later analysis with ADF&G.

The staff at KNWR and TCC will continue to work with the local schools to identify students from each of the four villages, Bettles/Evansville, Allakaket, Alatna, and Hughes to be participants in the Henshaw Creek science camp. Students will be exposed to the operations of a weir and will receive lessons in fisheries management, stream ecology, aquatic invertebrates, fish identifications, natural resources career opportunities, the plants and wildlife in the KNWR, and traditional and cultural knowledge.

Partnerships/Capacity Building: The partnerships TCC has developed with the USFWS, KNWR, ADF&G and local tribal councils presents a great opportunity to build capacity within the TCC and the local communities of the Upper Koyukuk River. The relationships TCC already has with federal and state resource management agencies will continue to be strengthened through the continuation of this project and will be an important asset to the fishery program at TCC. The local communities of the upper Koyukuk River will be strengthened through this project as well. TCC plans to continue to hire weir staff

from within these communities, which will provide much needed employment opportunities and will expose people to the project and different aspects of fishery management. Additionally, the annual science camp will engage local youth with the issues facing fishery resource managers and will provide elders a chance to interact with the students and teach them traditional skills.

Project Number:	20-250			
Title:	Fall Chum Salmon Community Outreach along the Yukon River			
Geographic Region:	Yukon			
Data Type:	Information Sharing and Outreach			
Principal Investigator:	Alida Trainor, Division of subsistence, Alaska Department of Fish and Game, Fairbanks			
Co-investigators:	Jeff Estensen, Division of Commercial Fisheries, Alaska Department of Fish and Game, Fairbanks			
Project Cost:	2020: \$27,760	2021: \$29,347	2022: \$13,234	2023: \$0
Total Cost:	\$70,341			

Issue: Communities located above the confluence with the Tanana River, primarily have access to two types of salmon; Chinook and fall chum. For subsistence fishermen in the upper portions of the Yukon River, the strength of the fall chum run during times of Chinook salmon conservation has created a level of anxiety. At AC meetings and, during public testimony at the Board of Fisheries, round table discussions at the Yukon River Drainage Fisheries Association preseason planning meeting and during discussions at the Yukon River Panel, stakeholders from this region worry that the increased harvest pressure on fall chum during times of Chinook salmon conservation could jeopardize subsistence fishermen’s ability to harvest any salmon if the fall chum begin to decline as well.

While there is no known factors or data that indicates Yukon River fall chum are certain to crash again, it is possible that fall chum might experience a dip in productivity and abundance. Consequently, it is critical that managers preemptively meet with a variety of communities to hear from fishermen and discuss ways to mitigate these impacts if a crash does occur.

Objectives: This three-year project will address the following objectives:

1. Develop and maintain more effective ways to reach Yukon River subsistence fishers throughout the middle and upper portions of the Yukon River drainage in-season so communities in these regions have access to timely and accurate information about fall season management decisions in their district;
2. Facilitate community meetings that will allow managers, research biologists, and Commercial Fisheries staff to interact directly with local stakeholders and provide meaningful opportunities for stakeholder input

Methods: Subsistence Division staff will coordinate community visits with tribal councils and/or city councils prior to the beginning of the fall chum fishing season. Community visits will occur slightly before or at the beginning of the fall chum fishing effort in each community in order to maximize the

opportunity to listen to concerns and provide information about the salmon runs, management actions, and other related issues. Subsistence Division staff will travel with Commercial fisheries managers to help facilitate positive and effective meetings by building off the relationships and knowledge of the local communities that Subsistence Division staff already possess. During community visits/ meetings, staff will:

- Attend a community meeting or otherwise be accessible to community members throughout each two-day visit
- Administer a short survey to meeting attendees to ask about and document local concerns
- Document and answer questions about the fisheries and management issues
- Promote direct contact with fisheries managers by providing their contact information, the toll free 1-800 number and ADF&G Facebook page
- Facilitate discussions to identify local issues and brainstorm possible solutions with managers that could be implemented immediately or in the future depending upon regulatory constraints
- Visit local fishing and/or processing sites to further facilitate discussions of local issues and concerns and to expand managers understanding of the local fishing profile

Partnerships/Capacity Building: The principal investigators will work with tribal councils in the project communities to facilitate community meetings and fishing site visits. Time spent with managers will add to local involvement and local understanding of the Yukon River fall chum salmon management.

Project Number:	20-251			
Title:	In-season Yukon River Subsistence Salmon Survey Program			
Geographic Region:	Yukon Region			
Data Type:	Harvest Monitoring and Traditional Ecological Knowledge			
Principal Investigator:	Catherine Moncrieff, Staff Anthropologist, Yukon River Drainage Fisheries Association			
Co-investigator:	Gerald Maschmann, U.S. Fish and Wildlife Service, Fairbanks Field Office			
Project Cost:	2020: \$77,234	2021: \$81,210	2022: \$80,033	2023: \$82,280
Total Cost:	\$320,756			

Issue/Need: This project addresses the need for inclusive in-season management for Chinook salmon fisheries on the Yukon River. Salmon are a critical resource for subsistence and commercial users in this region, which includes 14 Federal conservation units, and fisheries managers must have a means to gather input, assess harvests, and share information with these fishermen and fisheries stakeholders throughout the fishing season. Through this program, fishers report their concerns, fishery success, observations, and concerns to a locally hired surveyor, weekly, during the Chinook salmon run in their community. This information is shared anonymously by village with state and federal managers in preparation for the weekly in-season management teleconference.

Goal: To contribute local information into fisheries management discussions and build capacity along the Yukon River to participate in fisheries management.

Objectives: **1.** Hire 10 local surveyors in 10 Yukon River drainage villages to work in-season to conduct interviews on an annual basis; **2.** Build capacity of local surveyors in 10 Yukon River villages to participate in in-season fisheries management; **3.** Conduct annual reviews pre-season and post-season to evaluate survey program and design for next season to maximize effectiveness of program

Methods: Methods for this project include communication, outreach, survey instrument, annual trainings, data analysis, and annual evaluations. Participating communities were selected based on the needs and goals of the managers as well as the geographic location and interest of the communities. The local hire surveyors will be selected based on tribal council recommendations, rehire of high performing past surveyors, and other recommendations for quality local hire candidates.

The survey methodology follows the National Academy of Science's Principles for Conduct of Research in the Arctic and will include informed consent for participants, to be conducted prior to the first interview. Privacy and confidentiality will be protected in the reporting. The survey methodology and instrument will be reviewed and revised annually as needed to ensure that the recording and reporting formats and content are useful for managers and fishermen. The project investigators (PI) and co-PI will work with managers prior to each summer season to identify priority information to be collected and shared for the upcoming season and will update data collection forms, surveyor training and protocols, and reporting on the teleconferences. The in-season subsistence salmon survey methodology focuses on interviewing fishers weekly to collect qualitative information to provide managers with a real time assessment of the run. The survey form includes qualitative questions designed in consultation with the managers and aimed at gathering fishers' observations about changes in their subsistence harvest related to species targeted, fishing locations, fish quality, harvest methods and means, and methods of preservation. In addition to collecting information from fishers, surveyors will disseminate relevant information to fishers.

Surveyors will receive focused training at an annual training event to build their capacity and enhance their ability to communicate with local fishers, river-wide fishers, and managers on the teleconferences and through the surveys. The annual training event will cover interview methods, appropriate research ethics, and reporting requirements. Additionally, the training event will focus on enhancing listening and communication skills. As part of capacity building and to maximize the experience of some long-term surveyors, two to three of the top performing surveyors will be trained as "train the trainers." The surveyors will also attend the annual pre-season summer fishery preparation meeting to gain important information to share with fishers in their communities about the pre-season outlook. Surveyors will submit their data weekly and report a summary on the in-season salmon management teleconferences. For the data analysis, at the end of the season the PI will review all the survey forms and compile a MS Excel spreadsheet and produce summary narrative reports.

YRDFA staff will attend two federal regional advisory council meetings in person annually to provide project reports and listen to RAC priorities. Attendance at the other Yukon River RAC meetings will be

accomplished by teleconference or with funds from other programs. Annual pre-season and post-season evaluations of the program will be conducted with the state and federal managers, with the surveyors and with community representatives. This will include the priority information to share and collect and create an adaptive program that will allow maximum communication efforts. YRDFA will evaluate each in-season subsistence salmon surveyor, their participation and effectiveness at sharing and gathering information, and their reliability in delivering a report on the teleconferences as well as their ability to engage in productive fisheries management discussions on the teleconferences.

Partnerships/Capacity Building: This project will build the capability and expertise of rural and Alaska Native individuals and organizations by providing an opportunity to learn about Yukon River fisheries management, participate in local reporting and building their skills through focused annual trainings on communication with local fishers, river-wide fishers, and managers. Surveyors also attend the annual preseason fisheries preparation meeting, increasing their fisheries knowledge and enhancing their ability to participate in the management of federal subsistence fisheries. Partnerships will continue with the state and federal managers, village tribal councils, and individuals working as a part of the project. YRDFA will consult annually with the tribal councils of the 10 communities invited to participate in the in-season harvest interview portion of the project. As part of the consultation the tribal councils are invited to provide suggestions for improvement of the program. All of the communities participating in 2018 have been contacted and their knowledge of, support of, and suggestions for this proposal were discussed. The communities have expressed interest to continue their participation in the project, noting the value they find it for their community. With the decline in Chinook salmon and the need to conserve, the feedback received from both managers and fishers is that the strength of this program is its ability to enhance productive river-wide communication between fishers and managers. Additionally, consistent participation and representation from 10 key villages on the teleconferences was noted as an important contribution and notably missed when the Chinook season ends. There is value in having local surveyors participate in each teleconference and leads to better understanding in those communities and engaging more people prior to the teleconference.

Project Number:	20-252			
Title:	Customary Trade in the Lower and Middle Yukon River			
Geographic Region:	Lower and Middle Regions of the Yukon River			
Data Type:	Harvest Monitoring and Traditional Ecological Knowledge			
Principal Investigator:	Alida Trainor, Division of Subsistence, Alaska Department of Fish and Game, Fairbanks			
Co-investigators:	David Koster, Division of Subsistence, Alaska Department of Fish and Game, Anchorage			
Project Cost:	2020: \$163,558	2021: \$71,549	2022: \$75,380	2023: \$0
Total Cost:	\$310,487			

Issue: In recent years, the Yukon River has seen a significant decline in the number of returning Chinook salmon. These declining salmon returns greatly affect subsistence salmon harvests and uses by community residents and require more conservative management by federal and state agencies. Regional

Advisory Councils and community members remain concerned about these declines and the role of customary trade in changing patterns of salmon use. This study will document traditional and contemporary practices of customary trade in lower and middle Yukon River communities with particular attention to understanding the nature and scope of customary trade and its role in a larger continuum of exchange practices.

The commercial fishing that largely occurs in the lower parts of the river supports subsistence economies by providing much needed cash to buy equipment and supplies that are often reinvested in subsistence activities. Because of this revenue source, residents in the lower river may not consider customary trade a means to support their subsistence activity. Participation in customary trade in the lower river likely will have different justifications than that in the upper river. In the middle river, some residents participate in commercial fishing while others solely subsistence fish. Recent research on customary trade (Fienup-Riordan 1986, Magdanz et. al 2007, Moncrieff 2007) suggests that customary trade plays a long-term and important role in the continuum of exchange that serves to distribute subsistence resources within and between communities. However, the importance of customary trade varies by area (Krieg et al. 2007). Buying or selling fish, is not solely an economic consideration. The presence of a commercial fishery is not a likely predictor of the extent of customary trade in any given community. Conducting this research in the lower and middle river regions will expand our understanding of the social, economic, and cultural factors that drive participation in this practice.

This project seeks to build on earlier research by administering the same methods used in Brown (2017) in the lower and middle Yukon River regions in order to establish comparable data sets across all regions of the Yukon River.

Objectives: This two-year study will develop case studies, addressing the following objectives:

1. Through ethnographic methods, describe how customary trade practices fit within the overall subsistence use of salmon in the lower and middle Yukon area, both historically and in present times of declining salmon.
2. Using a survey on barter and exchange practices, document the scope and local nature of customary trade in four Yukon River communities. Describe exchange networks and transaction in terms of the species and types (e.g. processing) of fish traded. Where possible, quantify transactions.
3. Improve understanding of the role of customary trade within a continuum of exchange practices, including any potential effects on customary trade resulting from declining runs within the context of subsistence management and uses.

Methods: Community-level characterizations of customary trade will be made through the use of a short, confidential survey on barter and trade practices by community households. The survey will be primarily designed to document local views and *prevalence* of different types of exchange involving salmon, in addition to quantifying or estimating the actual extent of those practices on a household or community level. However given the politicized nature of customary trade practices in the present moment, it may be

challenging to quantify exchanges in all of the communities. The survey will include questions about the frequency of different types of exchanges, including sharing (analyzed through forms of reciprocity), barter, and customary trade.

The ethnographic research for this project will include anthropological methods of participant observation and semi-structured interviews. In each study community, individuals will be identified who are active in customary trade and, or barter. Generally, it is well known within a community who is active or skilled in an activity such as fishing or trade (Usher 2000) and these individuals will be identified through a snowball sampling design.

Partnerships/Capacity Building: The principal investigators will work with tribal councils in the study communities to hire local project assistants, to select key respondents, and facilitate community meetings. The local research assistants will be trained in anthropological sampling methods. This adds to local involvement and local understanding of the Yukon River Chinook salmon management issues. This also increases coordination between agencies, Tribal entities, and community members – working together in data collection increases communication and leads to better understanding of local issues and local understanding of science and management issues.

Project Number:	20-256
Title:	Yukon River In-Season Salmon Management Teleconferences
Geographic Region:	Yukon Region
Data Type:	Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator:	Wayne Jenkins, Executive Director, Yukon River Drainage Fisheries Association
Co-investigators:	Catherine Moncrieff, Anthropologist, Yukon River Drainages Fisheries Association
Project Cost:	2020: \$19,713 2021: \$19,713 2022: \$19,713 2023: \$19,713
Total Cost:	\$78,854

An executive summary was not submitted for this project.

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 19059.KW

AUG 22 2019

Jack Reakoff, Chair
Western Interior Alaska Subsistence
Regional Advisory Council
c/o Office of Subsistence Management
1101 East Tudor Road, MS 121
Anchorage, Alaska 99503-6199

Dear Chairman Reakoff:

This letter responds to the Western Interior Alaska Subsistence Regional Advisory Council's (Council) fiscal year 2018 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. Resource Monitoring and Evaluation

The Council is very concerned about resource monitoring and evaluation of caribou in the region. The vast majority of research appears to be focused on winter foraging of lichen, while the caribou summer feeding regime is largely overlooked. While lichen provides important carbohydrates, spring and summer vegetation such as cotton grass and high protein flowers provide critical nutrition.

Observations in the Arctic National Wildlife Refuge show that the tundra is up to 50 percent devoid of snow cover when caribou are calving. Bare tundra renders essential protein resources from grass flowers, forbs, and shrub leaves. Limitations to the caribou calving range by lichen needs to be reevaluated. Sedge blossom, forbs and shrub leaf drive calving range carrying capacity. Lack of lichen on calving ranges has erroneously led managers to call for herd suppression. Caribou herds are limited not by lichen as much as snow depth, spring phenology, and predation. Caribou winter habitat is predominantly lichen, and typically accessed through

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migrations. Many lichen rich areas in North Central Alaska that historically were used by caribou have had little use for decades.

The Council believes this lack of annual forage evaluation deprives State and Federal managers of the information necessary to effectively manage caribou, particularly with respect to the recruitment and health of the animals as they approach winter months. It also does not allow for informed habitat management during critical summer months when caribou are calving and/or acquiring fat reserves for survival.

Recommendation. *The Council asks that the Alaska Department of Fish and Game and Bureau of Land Management, along with other Federal agencies, take a more holistic approach to resource monitoring. This could occur by not limiting research to winter periods and lichen consumption, but rather assess the annual intake of vegetation by caribou, and how the overall habitat and seasons contribute to caribou reproduction and survivability.*

Response:

The Board is in agreement with the Western Interior Alaska Subsistence Regional Advisory Council that Alaska's large caribou populations are deserving of a more comprehensive habitat research and management approach. Such an approach would provide valuable information and meaningful perspectives to annual census surveys and telemetry studies typically employed to assess population health. Habitat research can contribute to a more robust understanding of population dynamics in the face of anticipated resource development and climate change, benefiting both the resource and rural subsistence users. The Bureau of Land Management assured the Board that they will continue to support and promote initiatives that will improve our understanding of caribou populations.

2. Office of Subsistence Management Comments to the Alaska Boards of Fish and Game

In alignment with ANILCA, §805(c) this Council notifies the Federal Subsistence Board of the need for the Office of Subsistence Management (OSM) to cite the authority under which the OSM delivers comments on proposals to the Alaska Boards of Fish and Game. The Council appreciates the Board's response to a similar inquiry presented in its 2017 Annual Report to the Board wherein the Board outlined the protocol by which the OSM comments are reviewed and submitted to the State. The Council does not believe, however, the response addressed concerns when OSM comments are in conflict with Council positions on State board proposals. In addition, there are frequent incidences where the OSM fails to comment on proposals impacting subsistence where the Council has taken a position.

Recommendation: *The Council believes that the OSM is a facilitating organization and therefore should not be submitting comments to the Alaska Boards of Fish or Game outside of the regional advisory councils. As stated earlier, the Council would like the Board to cite the authority and/or*

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policy under which the OSM submits these comments. The Council recognizes that comments to the State boards are critical to ensuring that subsistence resources are available to rural communities. The Council would prefer that OSM staff resources be redirected towards assisting councils with written comments to the State boards from their respective communities, and when possible, represent the Councils at the Board of Game and Board of Fish meetings.

Response:

The OSM, which is housed within the U.S. Fish and Wildlife Service (USFWS), serves as technical and administrative support to the Board, as outlined in 50 CFR 100.10(d)(8). OSM is responsible, among other duties, for reviewing and commenting on proposals before the Alaska Board of Fisheries and Alaska Board of Game on behalf of the Federal Subsistence Management Program.

OSM develops comments on proposals that have the potential to impact Federally qualified subsistence users. However, there are several types of proposals that OSM does not comment on, usually because they involve issues for which the Board does not have regulatory authority. These include issues related to allocation, predator control, most non-resident hunting seasons, and weapons restricted hunts, among others. Councils may have a desire to comment on these types of proposals, and Council positions on other proposals may differ from the programmatic positions of the Federal Subsistence Management Program for any number of reasons. Additionally, comments on the same proposals may differ between affected Councils. Each individual Council should be able to respond as they deem appropriate for their region.

Prior to submission of OSM generated comments to the Board of Fisheries or Board of Game, they are reviewed by the Interagency Staff Committee (ISC). Per Board direction, only comments for which there is unanimous support of the ISC are submitted.

Councils are encouraged to submit their own comments on proposals that affect their regions, and OSM staff can certainly assist Councils in terms of process. Additionally, under the Board's 2004 Council Correspondence Policy, each Council has the authority to submit its own individual comments or proposals directly to the Alaska Board of Fisheries or Board of Game.

3. Regulation Publications Deadline

This Council notifies the Board of its concern over the late release of regulations for the 2018-2020 regulatory wildlife cycle. The final rule for the Federal Subsistence Management Regulations for the Taking of Wildlife on Federal public lands and waters in Alaska was published in the Federal Register (83 FR 50758) on October 9, 2018 – one hundred (100) days after previous regulations had expired on June 30, 2018. Printed copies of the regulation books were not available until after the Council conducted its fall meeting cycle on October 10-11, 2018 in Galena. As a result, subsistence users did not know which regulations had been changed

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at the Board's meeting held April 10-13, 2018. The late delivery of published regulations forced many subsistence users to rely on regulations that were outdated and possibly illegal.

Recommendation: The Council would like the Board to inform the Secretary of the Interior that Federal subsistence fish and wildlife regulations are set in Federal statute by ANILCA to implement a priority for subsistence uses on Federal lands. Subsistence uses on Federal lands in Alaska are not under State authority, and the timely publication of Federal regulations is critical to thousands of subsistence users for the legal take of wild foods.

Response:

Federal Subsistence regulations do not expire. They are amended by the Secretaries or the Board, but there is no expiration date. While the cover of the public regulations booklet appears to have the “effective” dates, the previous regulations are in effect until the new regulations are published in the Federal Register. All subsistence rulemaking documents for the year of 2018 were delayed. While OSM and Federal Subsistence Management Program (FSMP) staff completed their responsibilities in a timely manner, the process of getting these documents cleared through DOI and USDA took an unusually long time. The reasons provided for these delays were that key positions in the review/clearance process were unfilled and some positions that were filled had new appointees who were not familiar with the responsibilities of these positions.

This year the Federal fish regulations will again be late. This is due to the lapse in funding that closed parts of the Federal government. The Board met to address fish proposals after the start of regulatory fish season (the season starts on April 1 and the Board did not meet until April 15). During its April meeting, the Board approved several temporary special actions that allowed to immediately implement most regulatory revisions adopted during this meeting.

Staff made as many adjustments as possible in areas under OSM control to shorten the review process (e.g. reduced the time allowed for review, from two weeks down to one; combined Leadership Team and Interagency Staff Committee reviews into one event; requested expedited reviews in Washington, DC, and provided justification for the time sensitive nature of the request). However, OSM have no control over who or how long reviewing our rulemaking documents in Washington, DC.

All OSM and FSMP staff are aware of the burden placed on subsistence users and continue to strive to have all regulatory changes published according to the specified dates in the regulations (April 1 for fish/shellfish and July 1 for wildlife).

4. National Wildlife Refuge staffing

The Council remains concerned over current National Wildlife Refuge staffing, particularly in

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the Western Interior Alaska region. The past several years have seen a marked decrease in staffing, including the loss of eleven employees when the McGrath office of the Innoko National Wildlife Refuge closed. The Nowitna, Innoko and Koyukuk National Wildlife Refuge complex in Galena is currently down by four to five staff. Hiring freezes and delayed position approvals have reached critical levels at these refuges, resulting in the loss of both long and short term monitoring of fish and wildlife populations, as well as habitat health. The Kanuti and Yukon Delta refuges have also been negatively impacted. Existing staff at all of these refuges are unable to perform the normal function of properly overseeing these Federal lands on behalf of the local communities that rely on them, and the American public.

Recommendation: The Council would appreciate it if the Federal Subsistence Board would continue to stress the need for adequate staffing for National Wildlife Refuges in Alaska, particularly in those field offices where local research plays a critical role in managing subsistence resources for rural communities.

Response:

The Board appreciates the concern expressed by the Council to provide additional staffing for the National Wildlife Refuges in Alaska. Hiring freezes and changes in the position approval processes have affected the speed of filling positions, but, ultimately, budget decreases are a major contributor to decreased staffing. Funding for the entire National Wildlife Refuge System (NWRS) has decreased over the past several years while at the same time NWRs have experienced increased costs for overall operations. The USFWS funding is based on funds appropriated by Congress. With decreased budgets, the USFWS has had to make strategic decisions based on priorities. NWRS continues to meet their required obligations and base all wildlife and habitat management decisions on the best available science. If funding levels are restored in the future, the NWRS is ready to realign their workforce to better meet priorities. As also noted by the Council, changes in hiring practices have caused delays in filling positions. The Department of Interior, which includes the USFWS, recently reorganized their hiring divisions and modified hiring practices. These recent changes should result in more efficient hiring practices in the near future. The USFWS agrees that important positions are currently vacant. As funding permits, the USFWS goal is to efficiently and strategically hire to best meet regional needs.

5. North Pacific Management Fisheries Council National Standards and Fishery Stocks

The Magnuson-Stevens Fishery and Conservation Act mandated that the National Oceanic and Atmospheric Administration (NOAA) Fisheries develop guidelines to ensure that U.S. marine fisheries are scientifically monitored, regionally managed, and legally enforced under a number of requirements, including ten national standards.

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The Council believes that the North Pacific Fisheries Management Council (NPFMC) management of the Bering Sea/Aleutian Island (BSAI) trawl fleet is in violation of National Standard 8 - Communities requiring the following:

Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirement of paragraph (2) [i.e., National Standard 2], in order to (a) provide for the sustained participation of such communities, and (b) to the extent practicable, minimize adverse economic impacts on such communities.

Chinook Salmon populations on the Yukon River have failed for nearly twenty years. Similar runs on the Kuskokwim River have also failed for multiple prolonged periods of time. This Council believes that both the BSAI and NPFMC have grossly underestimated the socioeconomic impacts on the communities in our region that have endured reduced subsistence and zero commercial harvests for Chinook Salmon. Subsistence is in fact an economy and the continual suffering of our communities is evidence that the NPFMC is not upholding National Standard 8.

Recommendation: The Council asks the Federal Subsistence Board to request that the NPFMC take immediate measures to come into compliance with National Standard 8 by recognizing the significant socioeconomic impacts to local communities of poor salmon runs. One way to shift towards compliance is to reduce the allowable bycatch for Chinook Salmon by commercial trawlers.

Communities in Interior Alaska and other regions have been seeking relief for poor salmon runs for at least two decades. It is requested that the NPFMC take urgent action to remedy the conditions and provide respite for communities in the Yukon/Kuskokwim drainages that have been suffering due to the poor management structure for salmon in the marine environment.

Response:

Estimated bycatch of Chinook Salmon has averaged 35,309 per year between 1991 and 2016. Bycatch of Chinook Salmon in the Bering Sea decreased dramatically from a high of 121,770 in 2007 to 17,379 in 2018. The current estimate for 2019 is 19,299, with most fish caught during the Pollock A season, which occurs during the winter. It is important to note that not all of these Chinook Salmon were bound for the Yukon River. In 2016, the estimated Chinook Salmon bycatch in the Bering Sea was 21,917 fish. Approximately 33.8 percent (7,147), 1.4 percent (251), and 1.8 percent (529) fish originated from coastal western Alaska, the middle Yukon River, and the upper Yukon River, respectively. The coastal western Alaska stocks are comprised of stocks from the Kuskokwim, Yukon, and Norton Sound. Results indicate that the Adult Equivalency (relative number of salmon caught annually as bycatch that would otherwise

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be returning to the river system) relative to the region remains low (<2 percent of run size) since the implementation of new management requirements under Amendments 91 and 110 (implemented in 2011 and 2016). Information on the North Pacific Fisheries Management Council is available here: <https://www.npfmc.org/salmon-bycatch/>.

The Board's authority is limited to providing a subsistence priority for the use of fish and wildlife taken from Federal public lands under Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA). However, the Board does encourage Council members to attend North Pacific Fisheries Management Council (NPFMC) meetings to voice their concerns directly to that council. In addition, if members of the Council are interested in serving on the NPFMC, the information to apply can be forwarded once the application process is open again. Membership information can be found here: <https://www.npfmc.org/council-members>.

The NPFMC meets five times each year with three of the meetings held in Anchorage, one in a fishing community in Alaska, and another in Seattle or Portland. The meeting typically last 7 days, and is open to the public except for the occasional closed session. There are 11 voting members and 4 non-voting members. The voting members include seven private citizens who are familiar with the fishing industry and/or marine conservation. These members are appointed by the Secretary of Commerce from lists submitted by the Governors of Alaska and Washington. An overview of the full NPFMC process is available through their website: https://www.npfmc.org/wp-content/PDFdocuments/help/Navigating_NPFMC.pdf

The Board understands your concern in this area and requests that the Council provide recommended language for the Board's consideration if the Council would like the Board to further pursue the National Standard 8 discussion with the NPFMC.

6. Effects of Hatchery Fish on Wild Salmon Stocks

The Council is equally concerned over the potential impact of hatchery fish on wild stocks of Alaska salmon, in both the marine and freshwater environments. Hundreds of millions of Chum and Pink Salmon fry are released into the marine environment from Alaska, British Columbia and Washington State. There appear to be no data to understand the impacts of this competing population or the biological carrying capacity of the marine environment to sustain these numbers. Indigenous fish stocks must compete for food with these hatchery fish, which are released into the oceans well fed and vigorous.

Recommendation: *The Council believes it is critical that the NPFMC and others recognize and manage for the potential impacts of hatchery fish to ensure the conservation and sustainability of wild stocks of salmon in Alaska.*

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Response:

The Board shares your concerns for artificial propagation and its effects on wild stocks of salmon. There is currently one hatchery in the Yukon River Drainage and none in the Kuskokwim River Drainage. The hatchery on the Yukon River is located in Whitehorse, Yukon Territory, providing mitigation for the hydroelectric dam located there. The annual release target is 150,000 Chinook Salmon fry.

As was noted in the response to the topic #5 in your report, the Board's authority is outlined in the Title VIII of ANILCA and is limited to providing for a subsistence priority on Federal public lands. Again, the Board advises Council members to participate in the NPFMC meetings and apply to serve on this council.

Scientific literature indicates that stocking hatchery fish or eggs may result in negative consequences for wild salmon. Hatchery juveniles compete with wild juveniles for food and prime habitat, potentially decreasing growth and survival for the wild fish. Along with the higher densities in prime habitat comes predators, potentially causing higher rates of predation for the wild juveniles. Scientific research indicates that introduction of hatchery fish can also bring pathogens and parasites into a system, or cause higher incidence of disease and mortality in wild fish. In addition, straying domestics can compete with wild fish for prime spawning locations, potentially reducing egg-survival of wild fish. Cross breeding may lead to diluted genetics in the wild stocks, reducing fitness and survival.

One of the most thorough literature reviews on interactions of hatchery and wild salmon in the marine environment is still the May 2012 special issue of the journal *Environmental Biology of Fishes* (Volume 94, Number 1, Ecological Interactions of Hatchery and Wild Salmon). This article published results from numerous studies and reviews presented at a conference organized by the Wild Salmon Center in Portland, Oregon. This publication contains a collection of 22 studies conducted by various university scientists and government agency fisheries researchers that address potential impacts of hatcheries to wild salmon stocks throughout the Pacific Rim in Russia, Japan, Canada and the United States. Most of the articles pertain to hatchery management on other regions but a couple of papers report on investigations of hatchery fish interactions at sea that may be applicable to Western Alaska wild salmon stocks.

The Board would also like to direct the Council to the more recent publication *New Research Quantifies Record-Setting Salmon Abundance in North Pacific Ocean* (<https://fisheries.org/2018/04/new-research-quantifies-record-setting-salmon-abundance-in-north-pacific-ocean/>). The Board highly encourages the Council to invite subject matter experts to speak about the research findings.

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7. Donlin Mine - Location of Natural Gas Pipeline

The Council is currently concerned with the proposed gas pipeline route for the Donlin mine planned for construction along the foothills. This area is prime habitat for fish and wildlife and critical to subsistence hunters in the area. Placing a pipeline in this area would open up every drainage to four-wheelers, camps and outside hunters. A small, but significant herd of caribou come down to these foothills each fall. There is considerable movement of moose that could be impacted. Many of these drainages also support important fish spawning areas.

Recommendation: An alternative route for the gas pipeline could pass through areas of black spruce below the foothills that are not prime fish and wildlife habitat and would incur the least impact to habitat. Areas of black spruce should be declassified as wetlands and reclassified as a peat bog environment, which would allow for the placement of a natural gas pipeline to the mining areas with the least adverse impact.

Response:

The Federal permitting process conducted by the Bureau of Land Management and Army Corp of Engineers for the Donlin Mine pipeline corridor has been completed and, therefore, no further comments for re-routing the pipeline are being accepted. The Joint Record of Decision and Permit Evaluation document is available on line at <https://www.donlingold.com/wp-content/uploads/2018/08/Donlin-Gold-Corps-BLM-Joint-Record-of-Decision.pdf> That said, the Council could consider submitting a request to reassess the corridor based on information regarding impacts to subsistence or sport hunting, so it would become a part of administrative record. This type of request generally requires new information that was not previously analyzed during the original permitting process.

8. Climate Change

The Council believes that Interior Alaska's rate of warming is uniquely rapid and causing adverse effects for subsistence users in the region, most notably affecting access to subsistence resources and changes in phenology and migration patterns for fish, plants, waterfowl and wildlife.

Recommendation: The Council would like the Board to communicate through the Secretary of the Interior to the Secretary of Energy that climate change is threatening subsistence activities in Interior Alaska and that a National energy policy that is more responsive to climate change is needed.

Response:

The Board shares your concern over the disproportionate impact of climate change on vital

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subsistence species and their environment in the Western Interior region and throughout Alaska. Within the last five years, eight of the ten Regional Advisory Councils have raised the issue of climate change and its effects on subsistence resources and activities in their reports to the Board. Regardless, it is beyond the scope of the Board's authority to advocate directly for a more responsive National energy policy. The most effective approach would be for Council members and their constituents to work as individuals or through tribal, regional, and statewide organizations to submit comments and recommendations directly to the Secretary of Energy.

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

Sincerely,



Anthony Christianson
Chair

cc: Federal Subsistence Board

Thomas Doolittle, Acting Assistant Regional Director, Office of Subsistence Management

Thomas Whitford, Acting Deputy Assistant Regional Director

Office of Subsistence Management

Steven Fadden, Acting Council Coordination Division Supervisor,

Office of Subsistence Management

Chris McKee, Wildlife Division Supervisor, Office of Subsistence Management

Greg Risdahl, Fisheries Division Supervisor, Office of Subsistence Management

George Pappas, State Subsistence Liaison, Office of Subsistence Management

Karen Deatherage, Council Coordinator, Office of Subsistence Management

Seward Peninsula Subsistence Regional Advisory Council

Benjamin Mulligan, Deputy Commissioner, Alaska Department of Fish and Game
Interagency Staff Committee

Mark Burch, Special Project Coordinator, Alaska Department of Fish and Game
Administrative Record



YUKON RIVER DRAINAGE FISHERIES ASSOCIATION

YR DFA Ongoing projects: 2018-2019

Pre-Season Fishermen’s Meeting

Purpose: To conduct an annual meeting of active Yukon River fisheries and fishery managers to build an aware public constituency that is motivated to maintain and protect Yukon River salmon stocks and meeting the Yukon River escapement goal with Canada as directed by the Yukon River Agreement..

- All Yukon River Fishing Districts and communities represented

Funding Source: Yukon River Panel: Restoration and Enhancement Fund (R&E)

- Funding through September 30, 2019
- We will be applying for funding from the Yukon River Panel which will be reviewed & decided on in December 2019.

What we have Learned: The Pre-season Fishermen’s meeting continues to be valued by Yukon River fishers as the primary meeting for Yukon River managers and fishers to prepare for the upcoming fishing season and an important opportunity to discuss and plan for the key management goal of meeting escapement targets for Canadian origin Chinook salmon..

Accomplishments: For 10 years the Pre-season meeting has brought Yukon River fishers and community representatives, fishery managers and research scientists and other stakeholders together for a full day of presentations and discussions designed to prepare fishers for the management approaches being considered and to supply insight and guidance to managers from the breadth of the Yukon River. Fishers and managers share that they feel these meetings are key to the relationships built over time for understanding and dealing with the challenges of this complex fishery. The 2019 meeting was held in Fairbanks on April 25th with an attendance of 90 plus fishers and stakeholders and 14 fishery and management staff. Representatives from Yukon River Delta Fishermans Assoc., Yukon River Inter-Tribal Fish Commission, Yukon River Tribal and community members plus two Department of Fisheries & Oceans Canada management staff attended the full day meeting.

Next steps: The 2020 Pre-season meeting proposal is due Oct 1. If funded we will be working with our partners and stakeholders to meet in Anchorage in April or May.

In-season Teleconferences

Purpose: To provide a forum for people from the Yukon River to engage with fisheries managers on sharing information about subsistence harvests during the fishing season.

Funding Source: OSM: Fisheries Resource Monitoring Program (FRMP)

- Funded through March 31, 2020

What we have Learned: We continue to hear from both Yukon River fishers and the managers how much they value the information and conversations shared on the summer fishing calls. The multiple fish species, complex management approaches, ever changing river conditions and over 40 communities who fish make these “real-time” calls during the fishing season an important tool for meeting subsistence, escapement and conservation goal.

Accomplishments: The Teleconferences held every Tuesday, June through August provides the forum and service for continued cooperative management. The need for the calls was very evident this year, one for the record books. Changes in returns of Summer chum and Chinook salmon, high and low water conditions, extreme air and water temperatures combined to challenges and hardships for the fish, fishers and managers as they worked through the details of providing for subsistence harvest and meeting critical escapement goals.

Next steps: *We have submitted a proposal to OSM through the FRMP for continued funding and request that you support it if you believe, as we do, that the Teleconferences are an important communications tool for subsistence fishers on the Yukon and managers tasked with the complex and challenging work of maintaining a sustainable fishery.*

In-Season Subsistence Salmon Survey:

Purpose: Provide an important communication tool that qualitatively informs managers how fishers in key locations throughout the drainage are doing in-season, enabling managers to make timely decisions allowing the maximum number of fishers to meet their subsistence needs. Include local hire of one surveyor in 10 communities which currently are: Alakanuk, Mountain Village, Marshall, Russian Mission, Anvik, Huslia, Ruby, Tanana, Fort Yukon, and Eagle.

Funded by: OSM: Fisheries Resource Monitoring Program (FRMP) through March 31, 2020.

Preliminary summary of 2019 season: Our season began in the spring with outreach to the previous surveyors, tribal councils, community members, and Yukon River managers to gather additional feedback and suggestions for the 2019 season. Key suggestions were incorporated into the survey forms, training protocol and reporting format. Then surveyors were hired in all 10 communities and travel was set for the annual training event and attendance at the Yukon River Pre-Season Planning meeting in Fairbanks. These events are very helpful to the surveyors and program because surveyors are able to educate themselves on current Yukon River fishery issues, network and meet other surveyors and fishers, and refresh or receive training for the in-season survey program.

Surveyors then returned to their communities to prepare for the fishing season. Each surveyor conducted informed consent with local fishers and invited them to participate in the surveys during the appropriate time for their community to capture Chinook salmon fishing observations and results. The table below shows preliminary results of the 2019 season.

Preliminary 2019 In-season Salmon Survey Results:

Community	Surveyor	Years employed	# of Households Interviewed	# of Interviews total	date range
Alakanuk	Pamela Cook	4	29	78	May 30 - July 8
Mountain Village	Nita Stevens	1	10	38	June 6 - July 15
Marshall	Norma Evan	11	14	64	June 6 - July 15
Russian Mission	Basil Larsen	5	21	54	June 6 - July 15
Anvik	Sherry Kruger	3	8	12	June 6 - June 20
Ruby	Rachael Kangas	2	17	26	June 13 - July 15
Huslia	Zoe Ballard-Huffman	1	6	3	July 4 -July 22
Tanana	Ariella Derickson/ Stan Zuray	2 1	8	39	June 13 - July 29

Fort Yukon	Andrew Firmin/ Kara'lisa Tremblay	11 1	23	52	June 20 - July 29
Eagle	Ruby Becker	1	6	11	July 4 - Aug 19

To wrap up the season, the surveyors have a final interview form which asks the fishers if they met their needs this year; how their fishing/harvest compared to last year; if they think opportunity was provided and if they have suggestions; and if they received enough notice of openings. Results show the following:

Alakanuk – Most participants met their needs but it was mixed about comparisons to last year. They all felt they had enough notice of openings.

Mountain Village- About half of participants met their needs for Chinook but all participants said they did have enough notice of openings. They liked being able to use nets instead of dipnets and most said fishing was better than last year for kings but light on chum salmon.

Marshall- Fishers in Marshall reported the fishing was about the same as last year but some thought there were more and bigger Chinook. They were concerned about the dead sea mammals. They also commented about the very hot summer.

Russian Mission- About half of the participants in Russian Mission met their needs according to the survey but those that did not had personal issues that prevented their success. More than half requested to stay on their weekly schedule and reported they did NOT receive enough notice about openings.

Anvik – Surveyor was unable to complete her contract this year.

Ruby - All participants reported meeting their needs this year and most said fishing was the same as last year and two said it was better. They noted the low water, larger Chinook, good quality fish, and parasites.

Huslia – Three fishers participated in the final interview and two of them did NOT meet their needs. One of these two had personal issues and the other said it was poor fishing. The one who met their needs said it was better fishing this year.

Tanana/Rapids – All participants in the final interview said that they met their needs this year and most said fishing was better than last year. There were low water problems for nets and travel issues. They also noted larger Chinook and the slow start to the run. Most are opposed to the use of 7.5” mesh nets until the run is healthy again.

Fort Yukon – Most participants met their needs here and said fishing was good but the fires prevented them from getting more salmon. The only suggestion they have for management was no closures.

Eagle – report to come....

This project, funded by the Fisheries Resource Monitoring Program, is important because it provides a voice for Yukon River fishers to anonymously share their observations, fishing success or challenges, and suggestions for management on a weekly basis to a local contact. This information is shared, anonymously by YRDFA, with Yukon River managers on Mondays. Local surveyors share a summary of their weekly report with the entire river and answer questions on Tuesday through the YRDFA teleconferences.

Traditional Knowledge of Anadromous Fish in the Yukon Flats with a focus on the Draanjik Basin

Purpose: To provide information critical to the management of anadromous fish and the habitat that supports them. This will be accomplished through Traditional Ecological Knowledge (TEK) interviews and mapping activities with knowledgeable fishers and hunters in Chalkyitsik, Fort Yukon, Venetie, and Fairbanks to identify areas in the Yukon Flats and Draanjik basin with salmon and whitefish spawning and rearing areas. This will then be verified by helicopter and river boat field work and finally nominations of new areas will be submitted to the anadromous waters catalog. Partnership with Tanana Chiefs Conference, YR DFA, and communities. Parallel project in coordination with ADF&G in Tanana River drainage.

Funded by: OSM: Fisheries Resource Monitoring Program (FRMP) through March 31, 2021

Accomplishments:

- Fieldwork conducted in Fort Yukon, Venetie, and Chalkyistik August 2018 through February 2019. Twelve interviews and mapping activities conducted. Local research assistants hired in each community.
- Interviews transcribed and draft results summarized.
- Biological fieldwork conducted October 2018- preliminary eDNA results show samples all positive for salmon species.
- 2019 biological field work planned and detailed for all salmon species but postponed due to heavy fire activity in the region.

Next steps include a few more key interview participants and TCC biological team ground truthing locations identified by participants. Biological field work planned for 2019 will be rescheduled due to 2019 fire activity.

Educational Exchange

Purpose: The Yukon River Educational Exchange is a way for people who live and use the Yukon River in the US and Canada to increase their understanding of their neighbor's experiences and challenges relating to supporting and maintaining sustainable salmon runs to the spawning grounds in Canada.

Funding Source: Yukon River Panel: Restoration and Enhancement Fund (R&E)

- Funding through March 31, 2019
- 2020 proposal to be submitted by October 1, 2019, with a decision at the April Yukon River Panel meeting in Anchorage.

What we have Learned: For over a decade the Education Exchange has brought Yukon River fishers, community members, fishery managers and other stakeholders together for information and experience sharing for building understanding with the goal of supporting sustainable care and use of Yukon River salmon runs with an emphasis on Chinook salmon escapement to the critical Canadian spawning grounds. As the YR DFA Pre-season Meeting and Teleconferences are the immediate, real-time communication tools for bringing key constituents together, the Education Exchange provides long-term outreach and support for creating a deeper appreciation between people and communities that share the same resource and the challenge to use it sustainably. Those who have participated in the Yukon River Educational Exchange describe their experience, whether in Alaska or Canadian Yukon, as unforgettable, very informative and deeply meaningful. Meeting people face-to-face, sharing cultures, meals, stories, fears and joys educates and bonds people in very memorable ways. These experiences are

shared when folks return home, rippling outward in small communities and building relationships of deeper understanding about the shared fishery resource belonging to Alaska and Canadian communities. **Accomplishments: Next steps:** The 2019 Education Exchange had challenges of a shorter planning period so attendees could attend the April Yukon River Panel meeting in Whitehorse and the last minute loss of two attendees due to family emergencies. Despite this, the Alaskan and Canadian participants queried felt the trip was very useful for better understanding of the work of the Yukon River Panel, Canadian fishery management, First Nation's culture and relations to fish, and the same issues from the Alaskans perspective. If funded, we look forward to hosting our far upriver friends with visits to lower river villages, monitoring stations, commercial and subsistence fishing observing and shared meals and stories in Alaskan Yukon River communities in 2020.

Building & Maintaining Public Support of Salmon Resource Management

Purpose: Build and maintain public support and meaningful participation in Yukon River salmon resource management by maintaining community capacity to participate, by developing mutual understanding between management agencies and the public for encouraging conservation and stewardship of salmon resources.

Funding Source: USFWS: Restoration and Management Fund (R&M)

- Funding through June 30, 2019
- 2020 proposal to be submitted early January for a decision at April Yukon River Panel meeting.

What we have Learned: This project supports communications and outreach to Yukon River communities through maintaining a collective voice and organization of Yukon River fishers for developing, refining and improving public knowledge, participation and support of Yukon River fisheries management. This approach has developed a cadre of fisherman able to share community level fisheries concerns with managers and inform local fishers on the importance of conservation approaches and other key fisheries management guidance.

Accomplishments: For over a decade YRDFFA has played a key role through this program by convening fishers representing all of the Yukon River fishing districts and agency managers responsible for overseeing the Yukon River fisheries, both commercial and subsistence. Over time a working relationship and better understanding of all sides of fisheries issues have been developed, leading to cooperation and success in conserving declining stocks for meeting escapement, commercial and subsistence harvest goals.

Next steps: The 2019 YRDFFA Board meeting was held April 23 & 24 in Fairbanks. Some key accomplishments were an initial meeting with the new Alaska ADFG Commissioner Douglas Vincent-Lang, in depth discussions about large scale hatcheries and the draft Comprehensive Salmon Plan, the decision to create two young fisher advisor positions on the YRDFFA Board, the passage of eight fishery associated resolutions and more. Board members participated in the Pre-season Planning meeting which followed on April 25th in Fairbanks.

Thank you! YRDFFA Board & staff.

Winter 2020 Regional Advisory Council Meeting Calendar

Due to travel budget limitations placed by Department of the Interior on the U.S. Fish and Wildlife Service and the Office of Subsistence Management, the dates and locations of these meetings will be subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Feb. 2	Feb. 3 <i>Window Opens</i>	Feb. 4 BB — Naknek	Feb. 5	Feb. 6	Feb. 7	Feb. 8
Feb. 9	Feb. 10	Feb. 11 YKD — Bethel WI — Fairbanks	Feb. 12	Feb. 13	Feb. 14	Feb. 15
Feb. 16	Feb. 17 PRESIDENT'S DAY HOLIDAY	Feb. 18	Feb. 19 NS — Utqiagvik	Feb. 20 NWA — Kotzebue	Feb. 21	Feb. 22
Feb. 23	Feb. 24	Feb. 25 SE — Petersburg	Feb. 26	Feb. 27 KA — Kodiak	Feb. 28	Feb. 29
Mar. 1	Mar. 2	Mar. 3 EI — Fairbanks	Mar. 4 SC — Anchorage	Mar. 5	Mar. 6	Mar. 7
Mar. 8	Mar. 9	Mar. 10	Mar. 11 SP — Nome	Mar. 12	Mar. 13 <i>Window Closes</i>	Mar. 14

Fall 2020 Regional Advisory Council Meeting Calendar

Due to travel budget limitations placed by Department of the Interior on the U.S. Fish and Wildlife Service and the Office of Subsistence Management, the dates and locations of these meetings will be subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<i>Aug. 16</i>	<i>Aug. 17</i> <i>Window opens</i>	<i>Aug. 18</i>	<i>Aug. 19</i>	<i>Aug. 20</i>	<i>Aug. 21</i>	<i>Aug. 22</i>
<i>Aug. 23</i>	<i>Aug. 24</i>	<i>Aug. 25</i>	<i>Aug. 26</i>	<i>Aug. 27</i>	<i>Aug. 28</i>	<i>Aug. 29</i>
<i>Aug. 30</i>	<i>Aug. 31</i>	<i>Sep. 1</i>	<i>Sep. 2</i>	<i>Sep. 3</i>	<i>Sep. 4</i>	<i>Sep. 5</i>
<i>Sep. 6</i>	<i>Sep. 7</i> LABOR DAY HOLIDAY	<i>Sep. 8</i>	<i>Sep. 9</i>	<i>Sep. 10</i>	<i>Sep. 11</i>	<i>Sep. 12</i>
<i>Sep. 13</i>	<i>Sep. 14</i>	<i>Sep. 15</i>	<i>Sep. 16</i>	<i>Sep. 17</i>	<i>Sep. 18</i>	<i>Sep. 19</i>
<i>Sep. 20</i>	<i>Sep. 21</i>	<i>Sep. 22</i>	<i>Sep. 23</i>	<i>Sep. 24</i>	<i>Sep. 25</i>	<i>Sep. 26</i>
<i>Sep. 27</i>	<i>Sep. 28</i>	<i>Sep. 29</i>	<i>Sep. 30</i>	<i>Oct. 1</i>	<i>Oct. 2</i>	<i>Oct. 3</i>
<i>Oct. 4</i>	<i>Oct. 5</i>	<i>Oct. 6</i>	<i>Oct. 7</i>	<i>Oct. 8</i>	<i>Oct. 9</i>	<i>Oct. 10</i>
<i>Oct. 11</i>	<i>Oct. 12</i> COLUMBUS DAY HOLIDAY	<i>Oct. 13</i>	<i>Oct. 14</i>	<i>Oct. 15</i>	<i>Oct. 16</i>	<i>Oct. 17</i>
<i>Oct. 18</i>	<i>Oct. 19</i>	<i>Oct. 20</i>	<i>Oct. 21</i>	<i>Oct. 22</i>	<i>Oct. 23</i>	<i>Oct. 24</i>
<i>Oct. 25</i>	<i>Oct. 26</i>	<i>Oct. 27</i>	<i>Oct. 28</i>	<i>Oct. 29</i>	<i>Oct. 30</i>	<i>Oct. 31</i>
<i>Nov. 1</i>	<i>Nov. 2</i>	<i>Nov. 3</i>	<i>Nov. 4</i>	<i>Nov. 5</i>	<i>Nov. 6</i> <i>Window closes</i>	<i>Nov. 7</i>

Subsistence Regional Advisory Council Correspondence Policy

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

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

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

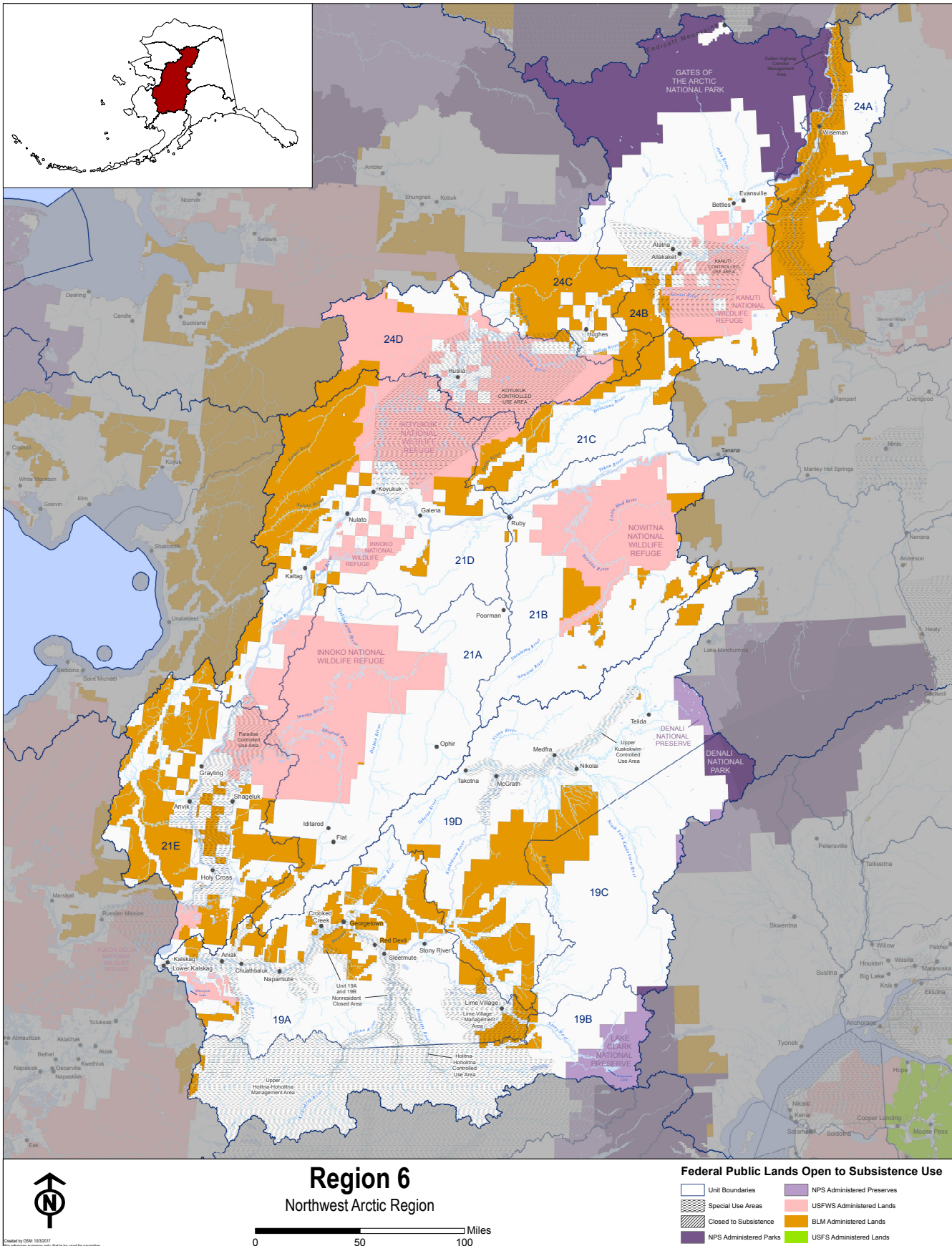
The Secretaries of Interior and Agriculture created the Federal Subsistence Board and delegated to it the responsibility for managing fish and wildlife resources on Federal public lands. The Board was also given the duty of establishing rules and procedures for the operation of the Regional Advisory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

Policy

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

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

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



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

Western Interior Alaska Subsistence Regional Advisory Council

Charter

- 1. Committee's Official Designation.** The Council's official designation is the Western Interior Alaska Subsistence Regional Advisory Council (Council).
- 2. Authority.** The Council is renewed by virtue of the authority set out in the Alaska National Interest Lands Conservation Act (ANILCA) (16 U.S.C. 3115 (1988)), and under the authority of the Secretary of the Interior, in furtherance of 16 U.S.C. 410hh-2. The Council is regulated by the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. Appendix 2.
- 3. Objectives and Scope of Activities.** The objective of the Council is to provide a forum for the residents of the Region with personal knowledge of local conditions and resource requirements to have a meaningful role in the subsistence management of fish and wildlife on Federal lands and waters in the Region.
- 4. Description of Duties.** Council duties and responsibilities, where applicable, are as follows:
 - a. Recommend the initiation 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 decision-making process affecting the taking of fish and wildlife on the public lands within the Region for subsistence uses.
 - d. Prepare an annual report to the Secretary containing the following:
 - (1) An identification of current and anticipated subsistence uses of fish and wildlife populations within the Region.
 - (2) An evaluation of current and anticipated subsistence needs for fish and wildlife populations within the Region.

- (3) A recommended strategy for the management of fish and wildlife populations within the Region to accommodate such subsistence uses and needs.
 - (4) Recommendations concerning policies, standards, guidelines, and regulations to implement the strategy.
- e. Appoint one member to the Gates of the Arctic National Park Subsistence Resource Commission in accordance with Section 808 of ANILCA.
- f. Make recommendations on determinations of customary and traditional use of subsistence resources.
- g. Make recommendations on determinations of rural status.
- h. Provide recommendations on the establishment and membership of Federal local advisory committees.
- i. Provide recommendations for implementation of Secretary's Order 3347: Conservation Stewardship and Outdoor Recreation, and Secretary's Order 3356: Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories. Recommendations shall include, but are not limited to:
 - (1) Assessing and quantifying implementation of the Secretary's Orders, and recommendations to enhance and expand their implementation as identified;
 - (2) Policies and programs that:
 - (a) increase outdoor recreation opportunities for all Americans, with a focus on engaging youth, veterans, minorities, and other communities that traditionally have low participation in outdoor recreation;
 - (b) expand access for hunting and fishing on Bureau of Land Management, U.S. Fish and Wildlife Service, and National Park Service lands in a manner that respects the rights and privacy of the owners of non-public lands;
 - (c) increase energy, transmission, infrastructure, or other relevant projects while avoiding or minimizing potential negative impacts on wildlife; and
 - (d) create greater collaboration with states, tribes, and/or territories.

- j. Provide recommendations for implementation of the regulatory reform initiatives and policies specified in section 2 of Executive Order 13777: Reducing Regulation and Controlling Regulatory Costs; Executive Order 12866: Regulatory Planning and Review, as amended; and section 6 of Executive Order 13563: Improving Regulation and Regulatory Review. Recommendations shall include, but are not limited to:

Identifying regulations for repeal, replacement, or modification considering, at a minimum, those regulations that:

- (1) eliminate jobs, or inhibit job creation;
- (2) are outdated, unnecessary, or ineffective;
- (3) impose costs that exceed benefits;
- (4) create a serious inconsistency or otherwise interfere with regulatory reform initiative and policies;
- (5) rely, in part or in whole, on data or methods that are not publicly available or insufficiently transparent to meet the standard for reproducibility; or
- (6) derive from or implement Executive Orders or other Presidential and Secretarial directives that have been subsequently rescinded or substantially modified.

At the conclusion of each meeting or shortly thereafter, provide a detailed recommendation meeting report, including meeting minutes, to the Designated Federal Officer (DFO).

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 \$180,000, 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:

- (a) Approve or call all of the advisory committee's and subcommittees' meetings;
 - (b) Prepare and approve all meeting agendas;
 - (c) Attend all committee and subcommittee meetings;
 - (d) Adjourn any meeting when the DFO determines adjournment to be in the public interest; and
 - (e) Chair meetings when directed to do so by the official to whom the advisory committee reports.
9. **Estimated Number and Frequency of Meetings.** The Council will meet 1-2 times per year, and at such times as designated by the Federal Subsistence Board Chair or the DFO.
10. **Duration.** Continuing.
11. **Termination.** The Council will be inactive 2 years from the date the Charter is filed, unless, prior to that date, 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:

Ten members who are knowledgeable and experienced in matters relating to subsistence uses of fish and wildlife and who are residents of the Region represented by the Council.

To ensure that each Council represents a diversity of interests, the Federal Subsistence Board in their nomination recommendations to the Secretary will strive to ensure that seven of the members (70 percent) represent subsistence interests within the Region and three of the members (30 percent) represent commercial and sport interests within the Region. The portion of membership representing commercial and sport interests must include, where possible, at least one representative from the sport community and one representative from the commercial community.

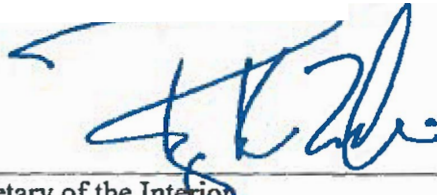
The Secretary of the Interior will appoint members based on the recommendations from the Federal Subsistence Board and with the concurrence of the Secretary of Agriculture.

Members will be appointed for 3-year terms. 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 Council or subcommittee deliberations or votes relating to a specific party matter before the Department or its bureaus and offices including a lease, license, permit, contract, grant, claim, agreement, or litigation in which the member or the entity the member represents has a direct financial interest.
14. **Subcommittees.** Subject to the DFOs 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. 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

DEC 01 2017

Date Signed

DEC 04 2017

Date Filed

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