NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL

November 3-4, 2015
Anaktuvuk Pass, Alaska

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Carl Johnson

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NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL

City of Anaktuvuk Pass Community Center
Anaktuvuk Pass
November 3-4, 2015
9:00 a.m. – 5:30 p.m.

TELECONFERENCE: Call the toll free number: 1-866-560-5984, then when prompted enter the passcode: 12960066

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.

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(Time limit of 15 minutes unless approved in advance)

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NPS

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BLM

NPR-A (*Dave Yokel*)

DRAFT

USFWS

Arctic National Wildlife Refuge (*Vince Matthews*)

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14. Closing Comments and confirm FY2015 Annual Report topics

15. Adjourn (*Chair*)

To teleconference into the meeting, call the toll free number: 1-866-560-5984, then when prompted enter the passcode: 12960066

Reasonable Accommodations
The Federal Subsistence Board is committed to providing access to this meeting for all participants. Please direct all requests for sign language interpreting services, closed captioning, or other accommodation needs to Eva Patton, 907-786-3358, eva_patton@fws.gov, or 800-877-8339 (TTY), by close of business on October 26, 2015.

DRAFT

REGION 10
North Slope Subsistence Regional Advisory Council

Seat	Year Apptd *Term Expires*	Member Name and Community
1	2011 ***2017***	**Gordon R. Brower** Barrow
2	2011 ***2016***	**Robert V. Shears** Barrow
3	***2016***	**VACANT**
4	***2016***	**VACANT**
5	1993 ***2016***	**Harry K. Brower Jr.** **Chair** Barrow
6	2014 ***2017***	**Sam Kunaknana** Nuiqsut
7	**2008** **2017**	**James M. Nageak** Anaktuvuk Pass
8	2012 ***2015***	**VACANT**
9	2006 ***2015***	**Lee Kayotuk** **Secretary** Kaktovik
10	2009 ***2015***	**Rosemary Ahtuangaruak** **Vice Chair** Barrow

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

Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
July 29, 2015

Contact: Deborah Coble
(907) 786-3880 or (800) 478-1456
deborah_coble@fws.gov

Federal Subsistence Board work session summary

During its work session held on Tuesday, July 28, 2015 the Federal Subsistence Board (Board) discussed deferred Request for Reconsideration RFR14-01. The motion to accept the State's request for reconsideration failed unanimously with a vote of 0-8. The Red Sheep and Cane Creek drainages will remain closed to non-Federally qualified subsistence users during the Aug 10-Sept. 20 sheep season in the Arctic Village Sheep Management Area of Unit 25. No further public comments were received regarding the issue at this work session.

The Rural Determination Process briefing was divided into three phases. Phase I addressed the Board's recommendation on the current secretarial proposed rule. The Board voted to recommend to the Secretaries to adopt the proposed rule as written. Phase II was determining a starting point for non-rural communities/areas. The Board voted to publish a direct final rule adopting the pre-2007 non-rural determinations. Phase III was direction on future non-rural determinations. The Board voted to direct staff to develop options to determine future non-rural determination for the Board's consideration. All three requests passed unanimously (8-0). OSM staff is expected to have a draft of options for the Board by the January 2016 meeting.

The Ninilchik Traditional Council submitted requests concerning the Kenai River gillnet fishery to the Board. The Board voted 7-1 to direct USFWS to continue working with NTC on an operational plan for the fishery. The request to rescind USFWS in-season manager's delegation of authority failed unanimously in a 0-8 vote. The request to reverse the emergency special action that closed the subsistence fishery for Chinook Salmon on the Kenai River failed in a 4-4 vote. NTC's final request to remove or amend current regulatory language on the Kenai River gillnet fishery was deferred and may be addressed during the next regulatory cycle.

Also discussed today during the work session was the 10 Subsistence Regional Advisory Council's Annual Report Replies. The RAC nominations discussion will occur during a closed executive session today, July 29, 2015 and is not open to the public.

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

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

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Options for Board Recommendation on Current Secretarial Proposed Rule

The Board has four options for consideration:

1. Adopt as written;
2. Reject,
3. Adopt with Modification; or
4. Adopt and include in the preamble, direction for OSM and the ISC to develop a policy to address future nonrural determinations.

Program staff recommend the proposed rule be adopted as written. This action would be in line with the majority of the Regional Advisory Councils recommendations and public comments. It would also provide the shortest timeline and greatest opportunity for the resolution of this issue prior to the May 2017 deadline. If the Board does not take action prior to the deadline, communities that were selected to change from rural to nonrural in the 2007 final rule will become effective.

Options for Board Action to Determine Start-point for Nonrural Communities/Areas

The Board has three options to address rural determinations following action on the proposed rule. *If no action is taken, the 2007 final rule will become effective in May 2017*.

1. Initiate a direct final rule to adopt the pre-2007 rural determinations;
2. Initiate normal rulemaking to adopt an earlier rural determination;
3. Initiate rulemaking that would not address a start point and address each community individually.

Program staff recommend the Board initiate a direct final rule that would adopt the pre-2007 rural determinations. This action would resolve any current issues with communities/areas that were changed to nonrural in the 2007 final rule. If significant negative response from the public occurred, the direct final rule could be withdrawn and normal rulemaking could be undertaken. This option provides the shortest timeline and greatest opportunity for the resolution of this issue prior to the May 2017 deadline.

Options for Board to Direct Future Nonrural Determinations

To address future nonrural determinations, the Board has two options. The Board may direct staff to develop a draft nonrural determinations policy on how future determinations will be made; or, the Board may initiate rulemaking to address future determinations.

Program staff recommend the Board direct a policy to be drafted to address future nonrural determinations. This action will allow the greatest flexibility for Board action and the inclusion of regional variations. This option addresses concerns raised by some of the Councils (what the process of future nonrural determinations will be). Additionally it would require less time and the policy could be revised without formal rulemaking. Potential policy components could address nonrural characteristics with weighting potential that would accommodate regional variation and criteria for initiating a review of a community or area. The rural subcommittee, whose membership consists of program staff and ISC members, would develop the policy with input from the Councils, tribes, and public over the next 18 months with a goal of adoption by the Board in early 2017.

Rural Determination Recommendation Phases July 28, 2015

Phase I

Options for Board Recommendation on Current Secretarial Proposed Rule

Board Option	Pro	Con	Timeline	Notes
1. Adopt as written	- Shortest timeline - Majority of comments support	Lacks guidance on future actions	Publish mid-August 2015 (timeline is based on how long it would take staff to process the final rule; the response time from the Secretaries will be critical in any timeline)	- This option provides the greatest opportunity for the Board to resolve this issue well prior of the May 2017 deadline - Guidance for future actions could be addressed in preamble of final rule
2. Adopt with directive to develop/maintain policy	- Would address some of the public comments - Likely will meet proposed timeline for rule completion	- Would probably add 60 days to the publication date - Secretaries could direct another round of public comments, adding considerable time and possibility that will not meet intended timeline for decision making	Publish October 2015	- This option may not meet the May 2017 deadline if the Board is directed to allow for additional public comment - The preamble could address the Board's policy making plan (if that option is selected)
3. Adopt with substantial modification **(a) RAC deference** **(b) List nonrural criteria**	- Would address some of the public/RAC comments	- Goes against Secretaries' intent to simplify the process - Would likely require additional public comment period - May require additional proposed rule, which could affect ability to meet May 2017 deadline	Publish November 2016	
4. Reject		- 2007 final rule becomes effective on May 7, 2017 - Does not follow Secretarial directive to address rural issue - Does not address the majority of public comments received	No action to be taken	

Rural Determination Recommendation Phases July 28, 2015

Phase II
Options for Board Action to Determine Start-point for Nonrural Communities/Areas

Board Option	Pro	Con	Timeline	Notes
1. Direct final rule adopting the nonrual communities pre-2007 final rule	- Shortest timeline - Provides foundation for nonrural	Possible public disapproval due to lack of current public input	Publish September 2015	Communities that were ruled as nonrural in 2007 final rule would become rural
2. Initiate new formal rulemaking to revert to pre-2007 rural determinations	- Would have RAC and public comment periods	Process could take up to a year to complete	Publish July 2016	
3. Initiate new formal rulemaking with no "start point" and address each nonrural community on a case by case basis.		- Process could take 2+ years to complete - 2007 final rule becomes effective on May 7, 2017	Publish July 2017 or later	Communities selected in 2007 final rule to change status from rural to nonrural become nonrural

Phase III
Options for Board to Direct Future Nonrural Determinations

Board Option	Pro	Con	Timeline	Notes
1. Direct staff to draft policy on nonrural determinations	- Allows greatest flexibility for Board actions and the inclusion of regional variations - Requires less time than formal rulemaking		Would depend on Board's direction for public, RAC and Tribal input	
2. Direct staff to initiate formal rulemaking to address future nonrural determination		Any future revisions would require formal rulemaking	Approximately 1 year	

Federal Subsistence Board

1011 East Tudor Road, MS121
Anchorage, Alaska 99503

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

FOREST SERVICE

SEP 02 2015

FWS/OSM 15054.PM

Mr. Sam Cotten, Commissioner
Alaska Department of Fish and Game
P.O. Box 115526
Juneau, Alaska 99811-5526

Dear Commissioner Cotten:

This letter is to inform you of the action taken by the Federal Subsistence Board (Board) on your request for reconsideration, RFR14-01 dated June 17, 2014, addressing Wildlife Proposal WP14-51. The Alaska Department of Fish and Game requested that the Board reconsider its actions on WP14-51, which requested reopening of the Red Sheep and Cane Creek drainages in the Arctic Village Sheep Management Area of Unit 25A to non-Federally qualified subsistence users August 10 through September 20, while also requiring hunters to complete a State-approved hunter ethics and orientation course.

Under Federal regulation 50 CFR Part 100.20, the Board will accept a request for reconsideration if it is received in a timely manner, is based upon information not previously considered by the Board, and demonstrates that the existing information used by the Board was incorrect, or demonstrates that the Board's interpretation of information, applicable law, or regulation was in error or contrary to existing law.

While the request was received within the time required, the Board has concluded that none of the claims in the request met the criteria to warrant further reconsideration as set forth in 50 CFR Part 100.20, and the request was therefore denied. Enclosed is a copy of the Interagency Staff Committee recommendation and the threshold analysis, which the Board used in reaching its conclusion.

Commissioner Cotten

If you have any questions, please contact Eugene R. Peltola, Assistant Regional Director for the Office of Subsistence Management, at (907)786-3888.

Sincerely,

Tim Towarak
Chair

Enclosures

cc: Federal Subsistence Board
Eugene R. Peltola, Jr., Assistant Regional Director, Office of Subsistence Management
Chuck Ardizzone, Deputy Assistant Regional Director, Office of Subsistence Management
Amee Howard. Policy Coordinator, Office of Subsistence Management
Carl Johnson, Council Coordination Division Chief, Office of Subsistence Management
Council Coordinator, Eastern Interior Alaska Subsistence Regional Advisory Council
Chair, Eastern Interior Alaska Subsistence Regional Advisory Council
Council Coordinator, North Slope Subsistence Regional Advisory Council
Chair, North Slope Subsistence Regional Advisory Council
Drew Crawford, Federal Subsistence Liaison, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

DRAFT THRESHOLD ANALYSIS
REQUEST FOR RECONSIDERATION RFR14-01

ISSUE

In response to a proposal (WP12-76) submitted and supported by the Eastern Interior Alaska Subsistence Regional Advisory Council, and also supported by the North Slope Alaska Subsistence Regional Advisory Council, the Federal Subsistence Board (Board) closed sheep hunting in the Red Sheep Creek and Cane Creek drainages in the Arctic Village Sheep Management Area (AVSMA) to non-Federally qualified users. The AVSMA is within Unit 25A and was closed to non-Federally qualified users for sheep hunting for the entire Aug. 10–Apr. 30 season. The State season would have normally run from Aug.10–Sept. 20. The State of Alaska subsequently submitted a proposal (WP14-51) in which the State sought to lift that closure and require hunters to complete a State-developed hunter ethics and orientation course. The Board rejected the State's proposal at its January 2014 public meeting. There were no specific details about the ethics and orientation course provided to the Board. Subsequently, the Board members considered the proposed alternative solutions and determined they were inadequate to resolve the problem of limited subsistence opportunity (FSB 2014). In a letter dated June 17, 2014, the State submitted a timely request for reconsideration of the Board's action on WP14-51 (also referred to hereafter as "RFR" or "petition").

The Board will accept a request for reconsideration only if the request meets one or more of the following criteria from 36 CFR 242.20(d) and 50 CFR. 100.20(d) (Appendix A.):

- Provides information not previously considered by the Board
- Demonstrates that existing information used by the Board is incorrect
- Demonstrates that the Board's interpretation of information, applicable law, or regulation is in error or contrary to existing law

BACKGROUND

In submitting WP12-76, the Eastern Interior Alaska Subsistence Regional Advisory Council (Eastern Interior Council) stated that the Red Sheep Creek and Cane Creek drainages were important subsistence

and cultural areas for residents of Arctic Village, and that the influx of non-Federally qualified users into these drainages interfered with traditional uses and practices of Arctic Village residents.

The establishment of the AVSMA and the opening and closing of sheep hunting in the Red Sheep Creek and Cane Creek drainages to non-Federally qualified users have been before the Board eleven times since 1991 (see WP12-76 Appendix A for a listing of proposals). Proposals WP12-76 and WP14-51 were the tenth and eleventh time the Board considered issues related to sheep hunting in these drainages, respectively. Over this time, a substantial record has been established (e.g., FSB 1991, 1995, 2006, 2007, 2012, 2014). Residents of Arctic Village have testified repeatedly concerning their use of the Red Sheep Creek and Cane Creek drainages (e.g., EIRAC 2006: 125-135) and have sought to protect their use of the sheep by requesting closures to non-Federally qualified subsistence users. In response, other user and interest groups have been trying to keep these drainages open to non-subsistence users. The issue has been contentious.

In 1995, the AVSMA was closed to sheep hunting to all but Federally qualified subsistence users and was expanded to include the Red Sheep Creek and Cane Creek drainages. The initial closure was established to provide for continued subsistence uses of sheep in the area (FSB 1995). In 2006, the Alaska Department of Fish and Game (ADF&G) submitted proposal WP-06-57, which requested opening the AVSMA to all hunters. The Board rejected the proposal in May 2006, but requested that the Arctic National Wildlife Refuge staff conduct a sheep population survey within the affected area. The Board intended to revisit the issue at its May 2007 meeting, pending the results of the population survey and a revised analysis.

In July 2006, the U.S. Fish and Wildlife Service submitted Wildlife Special Action WSA06-03, which requested that the closure to non-Federally qualified users for harvesting sheep in the Red Sheep and Cane Creek drainages be lifted during the Aug. 10–Sept. 20 portion of the 2006 season. This request followed a commitment by the Board to address the closure to all but Federally qualified subsistence users in the AVSMA following completion of a sheep population survey. The survey revealed that the sheep population in these drainages could support harvest by both subsistence and non-subsistence hunters; therefore, the Board approved the Special Action effective for the 2006 season. Subsequent to this action on Special Action WSA06-03, ADF&G submitted Proposal WP07-56, which requested the Federal closure within the Red Sheep and Cane Creek drainages be lifted permanently. The Board adopted this proposal in May 2007 (FSB 2007:305).

In January 2012, the Board adopted wildlife proposal WP12-76, which closed the Red Sheep and Cane Creek drainages to non-Federally qualified users for sheep hunting. Both the Eastern Interior and the North Slope Regional Advisory Councils supported the closure. Eight Arctic Village residents testified in favor of the closure in person at the Eastern Interior Council meeting and ten residents testified by teleconference; four people testified in favor of the closure at the Board meeting (FSB 2012:191). The Yukon Flats Fish and Game Advisory Committee supported closing the area. One Board member (the Regional Director of the U.S. Fish and Wildlife Service) emphasized at the Board meeting that the Red Sheep and Cane Creek area falls entirely within the Arctic National Wildlife Refuge or Native allotments. He made a motion to support the closure with the following justification: 1) "Pressure from non-local hunting is affecting the use of and access to traditional prime sheep hunting areas and camp area[s]"; 2) the State's proposal to require hunter education and ethics orientation did not "go far enough"; 3) the activities in the area by non-Federally qualified users "have resulted in displacement of sheep, pushing them out of range which has then prevented Federal subsistence hunters from being able to harvest sheep"; and 4) the Arctic National Wildlife Refuge staff supports the closure (FSB 2012:224-226). The Board passed the motion unanimously.

The Board subsequently rejected the State's proposal (WP14-51) to lift the closure and require hunters to complete a State-developed hunter ethics and orientation course, a requirement adopted by the State.[1] The State responded with this request (RFR14-01) to the Board to reconsider its decision.

REGULATORY LANGUAGE REGARDING REQUESTS FOR RECONSIDERATION

The applicable regulatory language associated with requests for reconsideration can be found in **Appendix A**.

PRELIMINARY ASSESSMENT OF REQUESTOR'S CLAIMS

The State bases its request for reconsideration on a number of claims, some of which address the Board's criteria for accepting a request for reconsideration, others of which address other issues. The form of the State's request, however, has made it difficult to relate each of the State's arguments to each specific criterion the Board considers in accepting a request for reconsideration. For instance, the State's petition

[1] 5 AAC 92.003 Hunter education and orientation requirements. (i) Before a person hunts within the Red Sheep Creek/Cane Creek portion of the Arctic Village Sheep Management Area of Unit 25A, that person must possess proof of completion of a department-approved hunter ethics and orientation course, including land status and trespass information. Note that although in State regulation, such a course has not been developed.

refers to "unfounded statements," "egregious" evidentiary failures, "unsubstantiated comments," "buried" evidence, a situation where the Board "leap" to conclusions, "selective and misleading presentation of the evidence," and reliance on "rumors and hearsay," as forming the basis for the Board's decision. While each and every such reference is not necessarily cited herein, the State's general contentions are collectively analyzed when considering whether or not there is information not previously considered by the Board; demonstrates that the existing information used by the Board was incorrect, or the Board's interpretation of information was in error.

Criterion 1. Information previously not considered by the Board

Throughout its petition, the State argues that the Board members either failed to consider or were not given certain relevant information that could have supported a finding that a closure is not necessary to provide a meaningful preference for Federally qualified subsistence users**.**

Claim 1.1

One of the State's specific claims regarding inadequate information is as follows: "Particularly egregious is OSM's [Office of Subsistence Management's] failure even to report to the Board in 2014 the best and most recently available data, which was presented to the Eastern Interior RAC [Regional Advisory Council] but not to the Board" (Petition at 3.).

The information being referred to by the State came from Hollis Twitchell, Arctic National Wildlife Refuge Assistant Refuge Manager. According to the State, Mr. Twitchell informed the Eastern Interior Regional Advisory Council "that in several weeks he spent in the drainages in August and September of 2012 and again in 2013 monitoring use of the area, he *saw no local hunters in the area in 2012 and only one local hunter in 2013*" (emphasis in original; EIRAC 2013:262).

Preliminary assessment of Claim 1.1

The written analysis of WP14-51, which was presented to the Board at its April 18, 2014 public meeting and incorporated into the administrative record, contains the following passage:

> At the Eastern Interior Subsistence Regional Advisory Council in Fairbanks, Alaska in November of 2013, Hollis Twitchell, the Assistant Refuge Manager and Pilot with Arctic National Wildlife

> Refuge, discussed issues related to the Red Sheep and Cane Creek drainages. Mr. Twitchell spent several weeks in the area in August and September of 2012 to conduct law enforcement activities. There was a concern that non-Federally qualified hunters might access the closed area that summer since the State hunting regulations handbook had neglected to include information about the area being closed to sheep hunting for those users. Mr. Twitchell did end up making contact with a group that was actively hunting in the Red Sheep drainage. They did not harvest any sheep and left the area after being informed of the closure. Another party was contacted in relation to a trespass issue on a native allotment in the area. Similar work was carried out during the summer of 2013. Eight to ten parties were dropped off in the area and they hiked up the drainages to access other portions of the refuge. Therefore, the closed area continues to be used by non-Federally qualified users as an access point to other areas (EIRAC 2013: 260-264).

This passage does not address the number of locals (Federally qualified subsistence users) Mr. Twitchell saw over about five to six weeks in August and September, 2012, and over about two weeks in August and September, 2013. The State claims that the number of local hunters Mr. Twitchell did or did not see in the Red Sheep Creek and Cane Creek drainages constitutes "the best and most recently available data" concerning local use of the area. The Eastern Interior Council was clearly unconvinced that this information was sufficient to alter its decision to oppose WP14-51.

Moreover, the State fails to contextualize Mr. Twitchell's observations. Portions of Mr. Twitchell's comments to the Eastern Interior Council provide that context. Speaking of the fall of 2012, Mr. Twitchell noted:

> We had no local individuals hunting up in Red Sheep Creek and Cane Creek that year. Water levels were very, very low and access to Red Sheep Creek was nearly impossible by any water crafts, so the only way to get [there] would have been by air and we didn't have anyone [i.e. local hunters] coming into those particular drainages in the fall hunt. That's not to say they didn't go up there in the wintertime, but in the fall hunt we didn't have anyone present that summer (EIRAC 2013: 262).

Because local hunters typically access Red Sheep Creek and Cane Creek drainages by boat, and not by airplane, their absence in 2012 should not be taken as indicating a general lack of local use of those drainages. To the contrary, the record is replete with testimonial evidence from local residents indicating

that they do, in fact, hunt sheep in the drainages. Arctic Village resident Louie John, for example, noted the following at the 2006 Eastern Interior Regional Advisory Council meeting:

> I forgot to tell you that I hunted that area back in 2004 and we shot two sheep, subsistence wise. The reason why I never report it is I don't pay for license. And I think of it because I am a traditional Native man and I hunt for a living and I don't see why that I should go over there and pay for license, I don't know why. I'm sure that most all of Native Alaskans are that way too. But I hunted that area and I wrote it down and gave it to Joel Tritt to hand over to your department but I don't know if it ever got there (EIRAC 2006:125-126).

At the same Council meeting, a letter from Louie John was read into the record:

> I went solo on sheep hunt up river from Arctic Village to narrow Red Sheep Creek, shot one small ram for my subsistence need. After I pack all the sheep meat back to the camp then I made a wood raft and floated back to Cane Creek to scout the area for any more sheep. I only saw one and it not [sic] went after it. Stayed for about three more days and then went back to the village because I don't want my sheep meat to spoil.
>
> Spent about six days around Red Sheep Creek area and the mouth couple days, at the end of the trees at the creek above Red Sheep Creek, and then spend about three days at the mouth Cane Creek. I also have another plan to hunt sheep past Red Sheep Creek about August 2006, this time with another friend (EIRAC 2006:128-129).

Conclusion: In light of the fact that the information cited by the State was included in the written analysis that was presented to the Board, the provided information is not dispositive because it is contradicted in the record. There does not appear to be merit to this claim.

<u>Claim 1.2</u>

The State asserts that "OSM fails to mention contrary evidence" relating to the history of Arctic Village residents' use of Red Sheep Creek and Cane Creek drainages (Petition at Fn. 2. See also Page 4). The State also takes issue with the "testimony of Dr. David Jenkins, saying exactly the same thing in 2012 as in 2014," to wit, that "the public record supports the fact that Arctic Village residents have a long history of using Red Sheep and Cane Creek drainages and that it continues to be a culturally significant area and

there's public testimony and previous analyses which attest to the significance and the continued use of Red Sheep Creek area for sheep hunting" (Petition at Fn. 2. See also Petition at 4).

As contrary evidence concerning the residents' use or non-use of the drainages, the State points to testimony from a single person, Arctic Village elder Gideon James. In 2012, Mr. James noted to the Board that "Cane Creek and Red Sheep Creek is one of our historical places that our people have traveled to, you know, they don't actually go there every year but, you know, they know that the sheep is there to - for them when they need it" (FSB 2012:201).

Preliminary assessment of Claim 1.2

Mr. James' testimony is not new—it was provided to the Board in 2012. Nor does Mr. James testimony contradict the extensive public record supporting the fact that Arctic Village residents have a long history of using Red Sheep Creek and Cane Creek drainages for subsistence. To the contrary, it supports that statement.

Conclusion: Offering neither new nor contradictory information, there does not appear to be merit to this claim.

Criterion 2. The existing information used by the Board is incorrect

In its petition, the State argues that the administrative record does not provide factual support for the Board's finding that a closure is necessary to provide a meaningful preference for Federally qualified subsistence users (Petition at 2). Specifically, the State makes numerous claims that the Board uses information that is "sparse," "inconclusive," and "without support."

<u>Claim 2.1</u>

The State claims that both OSM and the Board "acknowledged that evidence of subsistence use of sheep in the greater AVSMA including the drainages is "sparse" (Petition at 1, 2.).

Preliminary assessment of Claim 2.1

The State mischaracterizes the Board's position. The Board was aware, from the OSM staff report presented by Chris McKee, that "data on the reported use of the sheep management area by Federally qualified users is sparse and just how many sheep are harvested by Federally qualified subsistence users in the sheep management area is unknown" (FSB 2014:490). The lack of information on reported use reflects local cultural practices, which have been slow to accommodate State and Federal permitting and reporting requirements; the relative absence of bureaucratically-derived information on reported use does not indicate a lack of use.[2]

Contrary to what the State has alleged, the substantial public record developed over more than twenty years indicates the importance and use of the area for local peoples (e.g., EIRAC 2006, 2007, 2011, 2013; FSB 1991, 1995, 2006, 2007, 2012, 2014). This public record was referenced in WP14-51 and in WP12-76 and formed part of the rationale for the Board's closure decision. Far from being "sparse," the public record is extensive and robust, and is further supported by recent Tribal consultations (FSB 2014b,). See below for specific examples.

Conclusion: There does not appear to be merit to this claim.

<u>Claim 2.2</u>

In furtherance of its contention that the information relied upon by the Board is incorrect, the State claims that "[t]he anthropological studies that OSM cites in its staff analysis are equally sparse and inconclusive, are presented without discussion, and as reported do not support closure" (Petition at 2.).

Preliminary assessment of Claim 2.2

The analyses of WP12-76 and WP14-51 cite a small but comprehensive number of anthropological studies, including Caulfield 1983, Dinero 2003, Dinero 2007, and Gustafson 2004. As with the relative lack of subsistence harvest data, the relative paucity of anthropological studies in the area is not indicative of a lack of local use, as the State seems to suggest. Indeed, the relevant studies cited in analyses of WP12-76 and WP14-51 indicate the historical importance of the area to local peoples. The State has

[2] Recent research on harvest tickets (Chapin 2014) indicates widespread underreporting, which may be indicative of a general phenomenon in rural Alaska and not simply one of Arctic Village and other nearby communities. In other words, the reliability of harvest ticket information as useful data must be assessed in conjunction with other sources of information, including household surveys, testimony from local peoples, and Regional Advisory Council meeting transcripts, among other data sources.

provided no evidence, nor any additional anthropological studies, that suggest that the information the Board relied on is factually incorrect.

Richard Caulfield's 1983 report on the history of sheep harvest among Arctic Village residents is worth quoting at length.

> The communities of Arctic Village, Venetie, Chalkyitsik, and Birch Creek have all historically harvested sheep, according to local informants, but in recent decades sheep have been taken almost solely by Arctic Village residents in the Brooks Range. A "longstanding" tradition of sheep hunting exists for Arctic Village (Jakimchuk 1974, Tritt n.d., Peter 1981). Annual harvest for that community in recent years has probably averaged less than 10 animals. Traditionally sheep were taken using bow and arrow and, occasionally, snares. Sheep meat is stored by drying or by freezing, and is prepared as dry meat, by boiling or baking.
>
> Sheep are generally taken near Arctic Village in early fall (late August or early September) or in early winter (November). Residents usually hunt sheep on foot from hunting camps or through the use of snowmachines. Occasionally chartered aircraft are used to reach sheep hunting areas. In early winter sheep are said to be easy to hunt, as they often move down off high rocky slopes into valleys. Sheep hunting requires considerable expenditures of time and energy to obtain a relatively small quantity of meat. In November 1981, for example, two hunters on snowmachines traveled over 100 miles from Arctic Village to obtain one sheep. Hunters returning with sheep meat; however, are afforded considerable prestige because the meat is said to be highly-desirable "Native food," particularly for the elders in the community. In Arctic Village, furthermore, an effort is made to have sheep meat available for the Christmas potlatch.
>
> The continued availability of sheep, according to one Arctic Village resident, provides a sense of security much like "having money in the bank." While large numbers of sheep are not taken, local residents take satisfaction in knowing that a relatively stable and accessible resource is nearby should the need arise. In a culture where "hungry times" are still fresh in the memory of elders, this knowledge is said to be of considerable significance (Caulfield 1983:68-69).

Steven Dinero, in his 2003 study of the mixed economy of Arctic Village, noted that fourteen percent of Arctic Village households pursued the harvest of Dall Sheep (2003:152), and that Dall sheep hunters relied on ATV use, "given the time and distance that one must travel to Red Sheep Mountain (in the lower

Brooks Range) in order to hunt sheep." He also recognized, following Caulfield (1983), that harvesting sheep is highly prestigious, "though difficult to accomplish due to…logistical constraints" (2003:156).

Conclusion: There does not appear to be merit to this claim.

Claim 2.3

As mentioned above, the State contends that the Board 2012 meeting materials and transcripts contain no discussion of or support for the observation that Arctic Village residents have a long history of using Red Sheep Creek and Cane Creek drainages. "Rather, they show OSM staff making the same unsupported and sweeping conclusions in meeting after meeting, repeating themselves and citing their previous unfounded statements until these statements are assumed to be correct" (Petition at 3.).

Preliminary assessment of Claim 2.3

The foundation of staff statements and conclusions includes the extensive public record, personal communications from village residents, personal communications from knowledgeable Federal agency staff members, professional anthropological publications, discussions at relevant Regional Advisory Council meetings, and discussions at Federal Subsistence Board meetings. All of these are referenced in the analyses of WP12-76 and WP14-51.

The 2012 Board meeting materials contain a lengthy discussion of the importance and use of Red Sheep Creek and Cane Creek by Arctic Village residents and their difficulties in meeting their subsistence needs. In addition, there was a summary of information derived from public testimony at the 2011 Eastern Interior Council meeting contained in the analyses. Information documenting the use of sheep by residents of Arctic Village from the analyses of WP12-76 and WP14-51 along with excepted testimony about the long history of harvesting sheep in these areas, the significance of the use, and the difficulties in conducting their customary and traditional use in these areas from both of these meetings are noted below.

> **WP14-51**
>
> **Subsistence Considerations**
>
> Of the five communities with recognized customary and traditional uses of Dall sheep in Unit 25A, the residents of Arctic Village have the strongest tie to the Red Sheep and Cane Creek

drainages (USFWS 1993; see also Reed et al. 2008, Gustafson 2004, Dinero 2003). Sheep hunting is a "longstanding" tradition for Arctic Village residents, most of whom are Gwich'in Athabascan (Caulfield 1983:68, Dinero 2003, Gustafson 2004, EIRAC 2006, 2007, 2011), and the Red Sheep and Cane Creek areas have been a longstanding focus of this activity. Sheep are a prestigious subsistence resource and providing sheep meat to the community is highly respected (cf. Caulfield 1983 and Dinero 2003 for discussion). Sheep are also known as an important "hunger food," that is, a food source that is critical when caribou are unavailable (Caulfield 1983, Dinero 2011 pers. comm., Gilbert 2011 pers. comm.).

Local people report increasing uncertainty of caribou migrations in recent years, declining quality of caribou meat, and increasing difficulty and travel distance to obtain moose in recent years: in light of this, local residents claim that sheep are an increasingly important resource (Gilbert 2011 pers. comm., Swaney 2011 pers. comm.) As noted by one prominent elder, "…when we have no caribou, that's the time we have to go up [to get sheep]" (Gilbert 2011 pers. comm.).

The public record supports the fact that Arctic Village residents have a long history of using the Red Sheep and Cane Creek drainages for sheep hunting, and that it continues to be a culturally significant area to them. Extensive discussion included in previous proposal analyses (cf. Proposal 58 in 1993 and Proposal 54 in 1994) pointed to regular use of these drainages by residents of Arctic Village (USFWS 1993 and 1995). In the final report for a Fisheries Resource Monitoring Program project, Gustafson discusses the importance and continued use of the Red Sheep Creek Area for sheep hunting (Gustafson 2004). Testimony by Arctic Village residents in 2006, 2007, and as recently as 2011 at the Eastern Interior Regional Advisory Council meeting about hunting in the Red Sheep and Cane Creek drainages demonstrates continued (though sporadic) hunting. Discussions with Refuge Information Technicians from Arctic Village, other Arctic National Wildlife Refuge staff, researchers working in the area, and subsistence hunters from Arctic village also confirm continued sheep hunting in the Red Sheep and Cane Creek drainages (Bryant 2011 pers. comm., Dinero 2011 pers. comm., John 2011, pers. comm.).

There is a story about how Red Sheep Creek was named which illustrates the link between subsistence and religious practices and beliefs among the Gwich'in of Arctic Village. It also underscores the importance of this area to local people. The story relates Red Sheep Creek to the Episcopalian Church, a primary influential factor in establishing Arctic Village, and also sheds some light on why Arctic Village residents consider Red Sheep Creek a revered place (Dinero

2007, 2011 pers. comm.). The story begins that people were hungry and one day at the church someone spotted something moving in the brush. People thought they saw caribou, but upon closer inspection the people realized they were sheep. They were not just any sheep, but these sheep had red stripes, or what many say were crosses on their coats. The next day, the people followed the red sheep far into the mountains where they were finally able to harvest them. The hides of the sheep were kept and passed down because of their distinctive markings (Dinero 2011 pers. comm.). It is significant that the story of the red sheep links a prestigious subsistence resource (sheep) to traditional and modern beliefs and practices (i.e., the Church and hunting sheep along Red Sheep Creek). This demonstrates the complementary nature of subsistence to place, tradition, culture, and modern beliefs.

Because of the importance of this area to residents of Arctic Village, they have repeatedly argued that it should remain closed to non-Federally qualified users. They feel strongly that these lands are theirs, and that access should be limited. As one Arctic Village resident stated at a public meeting in 2006, "Those are our traditional lands, our traditional homelands, our traditional hunting grounds that our fathers and forefathers have hunted for generations and generations" (EIRAC 2006:130). Arctic Village residents have also long argued that the presence of non-Federally qualified users has affected their access and reduced their harvest opportunities (EIRAC 2006, 2011a; FSB 1991, 1995, 1995, 2006, and 2007; USFWS 1993, 1995, 1996, 2006, 2007; Swaney 2011 pers. comm., Gilbert 2011 pers. comm., John 2011 pers. comm.). Arctic Village residents have repeatedly told the Board that they believe that plane traffic and use by non-Federally qualified users has interfered with their ability to successfully hunt sheep in the Red Sheep and Cane Creek drainages. Residents reported that plane flyovers "spooked" sheep and that, "older rams can climb to higher elevations, making them more difficult to hunt" (USFWS 1993: 4, Proposal 58; see also USFWS 1994, Proposal 54 for additional discussion). These disturbances have also been related by local residents (Swaney 2011 pers. comm., John 2011 pers. comm., Gilbert 2011 pers. comm.). One study corroborates this type of disruption: Frid (2003) found that fixed wing aircraft disrupted resting or caused fleeing behavior in Dall sheep in the Yukon Territory during overflights. This disruption was of a longer duration during direct flight approaches.

In summary, there are no present conservation concerns to close Red Sheep and Cane Creek to non-Federally qualified users for sheep hunting. In the summer of 2015, Arctic National Wildlife Refuge staff will conduct a sheep survey in the Red Sheep and Cane Creek drainages to update their population status

(Wald 2015 pers. comm.). However, from the perspective of local users, there are cultural reasons to keep the area closed to non-Federally qualified users. Arctic Village residents believe that allowing non-Federally qualified users to harvest sheep in Red Sheep Creek and Cane Creek during the State's August 10 to September 20 season adversely affects their experience in their traditional hunting area, and impairs their ability to successfully harvest sheep (FSB 2012: 45-348).

The Eastern Interior Council met on October 11 and 12, 2011 in Fairbanks. A total of 14 people testified in support of Proposal WP12-76; six called in and eight testified in person (EIRAC 2011b: 18-29, 164-167, 314-368). The testifiers were from Arctic Village or had ties to Arctic Village. One other testifier, a sheep-hunting guide, was neutral on the proposal (EIRAC 2011b: 18-29). The testimony supported the information provided in this analysis in the cultural considerations section; however, there was some new information provided in the testimony. A summary of the new information is as follows:

- Community harvest: Two people testified that they would like to see the sheep hunt be under community harvest provisions (EIRAC 2011b:342 and 348). One person said that "we have asked repeatedly for a community harvest system and the feeling was that the [community harvest system]….would be less threatening" (EIRAC 2011b:348).
- Harvest seasons: An earlier season prior to the State hunt would not solve the problem because it is too warm to hunt sheep during that time period (EIRAC 2011b:349). The preferred time to harvest sheep is after a particular berry turns half red (EIRAC 2011b:349). Sheep meat is only taken in the fall (EIRAC 2011b:338). The Gwich'in name for November means sheep (the name for September means moose, and October means caribou) (EIRAC 2011b:338; 346-347).
- Origin of the name for Red Sheep Creek: The name in Gwich'in for Red Sheep Creek means "my mother's land" (EIRAC 2011b:338-339). There's a red streak in the back of Red Sheep Creek that comes from the red clay, which is high in minerals. The name for Red Sheep Creek comes from the red clay in the area, which the sheep suck. The red rock is used for its medicinal properties. The Gwich'in consider Red Sheep Creek to be special and that it cannot be replaced by anything else. The medicine is sacred to the Gwich'in (EIRAC 2011b: 319 and 343).
- Origin of the respect for sheep: Red Sheep Creek is sacred to the Gwich'in. The Gwich'in have a special respect for any animal that takes a long time to become an adult, like

sheep. Because of this respect, the only time the backdoor of the house is used is when sheep meat is brought into the house (EIRAC 2011b:342).

- Sheep meat is a delicacy reserved for elders: Sheep meat is a delicacy and is only eaten by the elders (EIRAC 2011b:338). One man noted that he was finally old enough to eat sheep, even though he hunted for them many times (EIRAC 2011b:352).
- Uses of sheep: All parts of the sheep are used; there is a "juicy little sack between the big toe and the other toe" that is used like lip gloss and a taste of it can provide energy. The best part of the sheep is the chest. The "skin" is incredibly warm (EIRAC 2011b:344-345).
- Trespassing/ Native allotments: Trespassing and leaving trash on one woman's Native allotment occurred recently (she was there three months prior to the Council meeting) (EIRAC 2011b:337). There are at least three allotments in the Red Sheep Creek area and one airstrip on an allotment (EIRAC 2011b:333 and 342). One man noted that there are three allotments on the map the Refuge provided, but he said there are more than that in the area. Allotments are 160 acres (EIRAC 2011b:343) (FSB 2012: 349-350).

Conclusion: The Board relied on relevant and factual information. There does not appear to be merit to this claim.

<u>Claim 2.4</u>

One of the State's contentions, reiterated in several places, is that "[T]here is no evidence in the record at all that subsistence users have been prevented from or impaired in meeting their subsistence needs by non-subsistence hunting in the area" (Petition at 3. See also Petition at 1, 4, 8-9).

Preliminary assessment of Claim 2.4

Residents of Arctic Village have provided public testimony over many years that non-Federally qualified users hunting sheep in the Red Sheep Creek and Cane Creek drainages impair their subsistence opportunities by displacing sheep to higher elevations.[3] In addition, Arctic Village residents have described being crowded out of the area, as well as a cultural preference and practice of excluding themselves from areas in which non-Federally qualified users have established camps or are hunting. At

[3] See Frid 2003 on the effects of helicopters and fixed wing aircraft on sheep.

the November 2013 Eastern Interior Council meeting, Mr. Firman spoke concerning the conflict with other hunters:

> Like I said, if you are going to go hunting and there's multiple airplanes and 15 people standing there, you probably aren't going to camp here next to you guys, okay. That's just not the way people are going to – well, I'm going somewhere else (EIRAC 2013: 289).

The State cites testimony about the self-exclusion, but misinterprets that testimony as a "desire to exclude outsiders" (Petition at 6-7.). To the contrary, the public testimony quoted by the State shows that the presence of others has caused local peoples to be crowded out from the Red Sheep Creek and Cane Creek drainages (Petition at Fn. 4, quoting testimony by Bob Childers at the 2012 FSB meeting). Public testimony is referenced in the various proposal analyses, is readily available in transcribed form, and provides evidence of impaired subsistence opportunity. In making its determination to keep the drainages closed to non-Federally qualified users, the Board found this public testimony to be credible (FSB 2012; FSB 2014).

OSM wildlife biologist Chris McKee noted the following at the November 20, 2013 Eastern Interior Alaska Regional Advisory Council meeting:

> Arctic Village residents have testified repeatedly that allowing non-Federally qualified users to harvest sheep in Red Sheep Creek and Cane Creek during the State's season dates adversely affects their ability to hunt in their traditional hunting area and impairs their ability to successfully harvest sheep (EIRAC 2013:253).

At the same meeting, Arctic Village resident Edward Sam testified as follows:

> There used to be plenty of sheep that the older people talk to us about, Dall sheep, when there is no animal around or the hunting is scarce, we'll be dependent on [sheep]. When the caribou is not migrating to our community, we have to depend on sheep. Matter of fact there's no caribou this winter in the valley of Arctic Village area. The meat is so scarce and I don't like to hunt from the Native store either when there's sheep that I could hunt. Matter of fact I'm going hunting in two weeks depending on the condition of the ice in the river.
>
> I have hunted sheep for the past 85 [sic] years or seasons. We have to hunt further into the mountain because there have been too many traffics or people hiking through there. You can

> understand the sheep have 10 times more visual power than human beings. They could hear you two miles downdraft or updraft. They can smell you for three miles. So it's kind of hard when you have to go charter a plane and you have to hike into the mountain and sometimes you get nothing. It's kind of sad when you have to travel that far (EIRAC 2013:269).

Edward Sam goes on to emphasize the difficulty of subsistence hunting when others have greater access to the area:

> My understanding is why are there so many landing area[s] in that area north of Red Sheep Creek which we depend on? You know, it's kind of hard when you have to compete with hunters, both hunters. They got more access. We don't (EIRAC 2013:269).

Two years earlier, Arctic Village resident Charlie Swaney also testified to the Eastern Interior Council. He spoke on behalf of the entire village.

> I come here today as I speak for my people. Ever since Red Sheep was opened to hunting, we got nothing. We got no moose and we got no sheep. Nothing. Ever since all the plane activity started, we got nothing.
>
> My uncle is in the back right here. His name is Gideon James. Last year he spent $1500 on gas, just gas alone, so we could go hunt. No, we came back with nothing. Nothing.
>
> Arctic Village is where we live. It's not like we can go down to the store and buy food. No. No. No way. We make very little. You know, last year and this year I made $12,000 annual income. $12,000. This year, too. Can you live off of that? Every one of you. Every one of you. $12,000 annual income. Can you live off of that? That's what I made.
>
> So when we go out there in the woods and we hunt, we hunt for our food. That's our lifestyle. That's our lifestyle. That's our tradition. We make dried meat, everything. When we get moose or we get caribou or we get sheep. That's our lifestyle. That's how we live. We're from there. We're from there. Arctic Village. Arctic Village. We live off the land. I tell you straight up right now, eye-to-eye, all of you. Eye-to-eye, all of you, we live off the land. That's our lifestyle. That's how we live. When I was kid, even my grandkids now, my kids, my grandkids, that's how they live. I tell you, eye-to-eye right now, all of you, that's how we live. That's our lifestyle.

Ever since that Red Sheep Creek is open up, nobody's gotten moose upriver. Nobody's gotten sheep up river. We travel 70 miles by boat as far as we could go, and from there we got to hike 8, 9 miles, try to go up there and get sheep. No, not this year. Nobody. No. Even this fall. Even this fall. How many people went upriver, tried to get moose. No. Nobody succeeded. That's because of all of that plane activity is flying over and chase them out. We live up there. We live up there. That's our life. Our life is up there. That's the way we live. Our life is up there. Come around and jeopardize our living. That's why we're here, because we're not getting nothing. We're not getting nothing. All that plane jeopardize our living. Our living. Our lifestyle. All that plane activity.

I speak for my people, the whole village. That's why they sent me down here, to speak in front of you. They -- I'm out there all the time. I'm out there all the time. That's why they sent me down here. They want me to speak for them. I speaking for my people. I love my people. That's my family. That's my family. All the people of Arctic Village, that's my family. We live off the land, and we want to continue living off the land.

All this plane activity that's going on up there in Red Sheep Creek, no, we can't get no moose. We can't get no sheep. There's nothing. They chase them away. They run away. They run away. We hike 6, 7 miles up there. Nothing. Can you imagine that, any of you? Can you imagine that? Hiking all the way up there, and stay up there 6, 7 days. No, nothing. Nothing. Nothing. That's what's happening right now. That's what's happening right now.

I come to you today. I ask you; close Red Sheep Creek, because Arctic Village, we live in Arctic Village land that's our lifestyle now. We want to go out and continue hunting, and to go out there and get sheep and go out there and get moose, but that's not possible right now. That's not possible right now. After all that plane activity up there, it's not possible.

My uncle, Gideon James, way up here in the back, like I told you, last year he spent $1500 on gas money alone, just gas money. No, came back with nothing. Can all of you imagine that? We're paying $10 a gallon of gas in Arctic Village. $10 a gallon of gas. It's hard.

Red Sheep Creek is open right now and it make it even harder on us. I'm not just speaking for myself. I'm speaking for my people. I'm speaking for my kids, my grandkids, all my

> grandchildren up there. Everybody. They call me Babba (ph). They call me grandpa. All those kids up there, they call me grandpa Babba. Babba. I'm speaking for them. I'm speaking for them.
>
> We've got a life up there. Why does our life have to be jeopardized? Why? Just so somebody can charter a plane, spend $1500, $1600 to go up there and get sheep? Well, here, us, we're spending $10 a gallon of gas and all that, and we go up there and we get nothing.
>
> This is where we're from. This is our village. We go way up there and we get nothing, because all that plane activity chased all that sheep, all that moose away. I can't say any more to it with my kids, my grandkids. That's their future. That's their future. They -- what we're trying to teach them, we're trying to live off our land. (EIRAC 2011:39)

Bob Childers, executive director of the Gwich'in Steering Committee, succinctly noted the sense of displacement felt by Arctic Village residents: "We did a number of interviews with all the families that hunted in Red Sheep Creek and Cane Creek in the early 90s when we were first putting this together. And I was incredibly struck by the similarity of what almost everyone said to me. And it was really this kind of sense of discomfort, that they were sort of displaced from a place that was always there, and they didn't feel comfortable going back" (EIRAC 2011:349).

OSM policy coordinator David Jenkins reflected public testimony with an observation at the April 18, 2014 Board meeting, summarizing the breadth of available information:

> The State argues that the issue is mainly a user conflict and a trespass issue, but a review of the testimony over the last 20 years from the Arctic Village residents and a review of the ethnographic literature and the historical literature indicates that it's not a trespass issue but it's an issue of access that these people have been describing… (FSB 2014:492).

Conclusion: There does not appear to be merit to this claim.

Criterion 3. The Board's interpretation of information, applicable law, or regulation is in error or contrary to existing law

The State correctly cites ANILCA Title VIII Section 815 and the Board's Closure Policy as providing the legal basis for the Board's decision. The Board's authority to act is as follows. Title VIII, § 815(3) of

ANILCA addresses the restriction on the take of fish and wildlife for nonsubsistence uses. The Secretaries have empowered the Board to implement Title VIII of ANILCA. Title § 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 the public lands (other than national parks and park monuments) unless necessary for the conservation of healthy populations of fish and wildlife, for the reasons set forth in §816, to continue subsistence uses of such populations, or pursuant to other applicable law;*

(16 U.S.C. § 3125(3)).

The Board's 2007 closure policy notes the following:

> Proposed closures of Federal public lands and waters will be analyzed to determine whether such restrictions are necessary to assure conservation of healthy populations of fish and wildlife resources or to provide a meaningful preference for qualified subsistence users. The analysis will identify the availability and effectiveness of other management options that could avoid or minimize the degree of restriction to subsistence and non-subsistence users (FSB 2007).

<u>Claim 3.1</u>

"The application of the incorrect legal standards [by the Board] in 2012 flowed through to and tainted the 2014 action, since Board members voted against the State's 2014 proposal because they believed nothing had changed since 2012. The vote was zero in support and eight in opposition (EIRAC 2013:511). Board members' application of incorrect closure standards warrants the Board's reconsideration of its decision" (Petition at 6, citing FSB 2014 at pp. 505-06, 510.). As part of this discussion, the State takes issue with one Board member's verbal discussion of the Board's obligation to give deference to Council recommendations (Id. at 5.).

Preliminary assessment of Claim 3.1

The State's request to the Board is to reconsider WP14-51. The State did not file a timely request to the Board to reconsider WP12-76. It cannot use this request for reconsideration to alter the Board's decision on another proposal.

The key consideration in regard to this claim is whether or not the Board properly relied on the closure authority set forth in ANILCA Section 815(3). A careful review of the record demonstrates that the Board did not rely on incorrect closure standards. To the contrary, the record shows that the Board found that credible public testimony, in conjunction with a number of other sources of information, demonstrated that restrictions on non-Federally qualified users were necessary to continue subsistence uses of those sheep (FSB 2012:347, FSB 2014:504). Moreover, it does not appear from the record that the Council's recommendation was contrary to any of the three criteria set forth in section 805(c) of ANILCA that would have then allowed the Board to decline to follow that recommendation.

Conclusion: For these reasons, there does not appear to be merit to the State's claim that the Board applied incorrect legal standards in its action.

Claim 3.2

A major heading in the State's petition, and a recurring theme throughout, is that "[t]he Board considered irrelevant and unlawful evidence in making its decision" (Petition at 6.).

Preliminary assessment of Claim 3.2

The State argues that the closure was driven by the desire of local residents to exclude others and that "Congress did not intend the Board to consider, and the Board should have been instructed that it cannot consider the desires of local residents and hunters simply to exclude others from the area." The State also contends that the Board should have been instructed to consider, and should have considered, only the actual impacts on subsistence from hunting by non-Federally qualified users" (Id. at 6-8.).

As noted in previous assessments of various State claims, the Board found credible the extensive public testimony of knowledgeable local residents on the negative impacts to subsistence from non-Federally qualified users in the area. Far from being irrelevant, local ecological and cultural knowledge provide the factual basis for many of the Board's decisions. Indeed, Congress created the Regional Advisory Council system for the purpose of enabling local residents with knowledge of local subsistence practices to provide meaningful input into the decision making process (ANILCA Title VIII Section 805).

As there was substantial evidence on the record to support a factual finding by the Board that the presence and practices of non-Federally qualified users were hampering the continuation of subsistence uses by local Federally qualified subsistence users.

Conclusion: There does not appear to be merit to this claim.

Claim 3.3

One of the State's contentions is that "[e]ven if there had been a supportable reason for placing restrictions on non-Federally qualified users, the Board did not consider less restrictive options, including the potential effectiveness of the new State-approved hunter education class in minimizing the real and perceived conflicts with subsistence" (Petition at 8.). Another less restrictive option mentioned by the State would have been to restrict the time of the closures to only the first few days of the season (Id.). This other less restrictive option to restrict the time of closure was considered in 2012 and is not considered in this analysis.

Preliminary assessment of Claim 3.3

At its 2014 public meeting, the Board was presented with limited available information about the State-approved hunter education course. The staff analysis of the State's proposal, as read into the record, noted the following:

> While the efforts of the proponents [of WP14-51] to require hunter education and ethics orientation are recognized as good faith efforts, such efforts do not go far enough to assure [sic] that Arctic Village residents have continued opportunity to harvest sheep in the Red Sheep and Cane Creek drainages and receive the benefits of a subsistence priority.
>
> In addition, adopting this proposal would require Federal[ly] qualified users to take a State approved hunter ethics and orientation course which to-date has not been developed. However, the State intends to work with the affected users to develop this course (FSB 2014:491-92).

Jennifer Yuhas, representing the Alaska Department of Fish and Game, provided the State's perspective on the hunter ethics and orientation course (FSB 2014:499-501). Ms. Yuhas noted that "We want to make a difference here on Red Sheep Creek…" She goes on to say:

> We're hearing about trespass, we're hearing about vandalism, we're hearing about things that aren't okay but what can we do as a Department. Well, the only thing we can manage are the hunters going up there so we came back and said, well, what about an ethics and orientation class…The State adopted this [class]. You've heard some Staff discussion, well, we can vote to oppose this and just keep it close[d] because the State doesn't have a class in place; that's a fairly contrived answer. There's no incentive for the local people to work with us when this is what they want, they want people out, so why would you work with us to reopen an area if the—if the condition is, once the class is in place then it can be reopened, then where's the incentive for that. No agency is going to expend the Staff time or the finances to put a class in place the locals don't want (FSB 2014:500). [4]

Having heard information about a proposed State-approved hunter education course, but no specific details of that course, the Board then had the opportunity to discuss this issue. It chose not to, suggesting that the Board members considered the proposed alternative solutions were inadequate to resolve the problem of limited subsistence opportunity.

The Board heard about various alternatives and then declined to adopt them, thereby inferring that the Board members considered those alternatives to be inadequate and consequently acted within their purview. However, a continued attempt to work with local communities on hunter education and orientation programs should be encouraged to foster positive relationships between all users to protect resources. The conceptual idea of a hunter's education and orientation course by itself was not sufficient to resolve the issue.

Conclusion: There does not appear to be merit to this claim.

SUMMARY

As discussed at some length, the State's various claims appear to be without merit. No new relevant information was presented for the Board's consideration. No information the Board relied on was shown to be factually incorrect. There was no demonstration that the Board's interpretation of information, applicable law, or regulation was in error or contrary to existing law.

[4] At the Eastern Interior Regional Advisory Council meeting, Ms. Yuhas similarly provide the State's perspective: "The details of the full course have not been developed because we're not going to put efforts into the course for an area that's not open" (EIRAC 2013: 256).

OSM PRELIMINARY CONCLUSION

Oppose the request to reconsider WP14-51.

Justification

The State's claims individually and collectively fail to reach the level to trigger a request for reconsideration, as required by the Board's policy.

LITERATURE CITED

Caulfield, R. 1983. Subsistence land use in upper Yukon Porcupine communities, Alaska. Dinjii Nats'aa Nan Kak Adagwaandaii. ADF&G, Div. of Subsistence Tech. Paper No. 16. Fairbanks, AK. 252 pages.

Chaplin 2014 (from Page 8 of analysis)

Bryant, J. 2011. RIT Technician, ANWR, former resident Arctic Village. Personal communication: phone. July 2011.

Dinero, S. 2003. Analysis of a "Mixed Economy" in an Alaskan Native Settlement: The Case of Arctic Village. *The Canadian Journal of Native Studies* XXII, 1:135–164.

Dinero, S. 2007. Globalization and development in a post-nomadic hunter/gatherer Alaskan village: a follow-up assessment. *Polar Record* 43(226): 225–269.

Dinero, S. 2011. PhD. Anthropologist conducting research in Arctic Village. Personal communication: phone. July/August 2011. Philadelphia University, PA.

EIRAC. 2006. Transcripts of the Eastern Interior Regional Advisory Council Meeting. March 21, 2006. Fairbanks, AK. Pages 110–137.

EIRAC. 2007. Transcripts of the Eastern Interior Regional Advisory Council Meeting. March 20, 2007. Arctic Village, AK. Pages 95 ff.

EIRAC. 2011. Transcripts of the Eastern Interior Regional Advisory Council Meeting. March 3, 2011. Fairbanks, AK.

EIRAC. 2013. Transcripts of the Eastern Interior Regional Advisory Council Meeting. February 20-21, 2013. Fairbanks, AK.

Frid, A. 2003. Dall's sheep responses to overflights by helicopter and fixed-wing aircraft. *Biological Conservation* 110: 387–399.

FSB. 1991. Transcripts of the Federal Subsistence Board. June 5, 1991. Anchorage, AK.

FSB. 1995. Transcripts of the Federal Subsistence Board. Volume V. April 14, 1995. Anchorage, AK.

FSB. 2006. Transcripts of the Federal Subsistence Board. September 5, 2006. Anchorage, AK.

FSB. 2007 (see Pages 2, 8, and 12 of analysis)

FSB. 2012. Transcripts of the Federal Subsistence Board. January 19, 2012, Anchorage, AK.

FSB. 2014. Transcripts of Federal Subsistence Board. April 18, 2014. Anchorage, AK.

Gilbert, T. 2011. Elder, resident Arctic Village. Personal communication: phone. August 2011.

Gustafson, J. 2004. Traditional Ecological Knowledge of Subsistence Harvests and Fishes, Old John Lake, Alaska. Final Report No. FIS01-003. USFWS. Anchorage, AK.

Jakimchuk, R.D. 1974. Distribution of Moose, Sheep, Muskox, and Furbearing Mammals in Northeastern Alaska. *In* Arctic Gas Biological Report Series 6. Canadian Arctic Gas Study, Limited, and Alaskan Arctic Gas Company.

John, J. 2011. Arctic Village Council, First Chief, Elder, resident. Personal communication: phone. August 2011.

Peter, K. 1981. Neets'aii Gwiindaff: Living in the Chandalar Country. Fairbanks Alaska Native Language Center, University of Alaska.

Reed, J., C. Villa, and T. Underwood. 2008. Red Sheep Creek airstrip public use monitoring, Arctic National Wildlife Refuge, Alaska, 2006-2007. Report for USFWS Arctic National Wildlife Refuge. Fairbanks, AK.

Schmidt, J.I., Chapin F.S., 2014. Relationship of Community Characteristics to Harvest Reporting: Comparative Study of Household Surveys and Harvest Tickets in Alaska. *Human Dimensions of Wildlife: An International Journal* 19:334-346.

Swaney, C. 2011. Subsistence user, resident Arctic Village. Personal communication: phone. July 2011.

Tritt, A. n.d. The Albert Tritt Collection. Fairbanks: University of Alaska Archives.

USFWS. 1993. Staff Analysis P93-58. Pages 1-9 *in* Federal Subsistence Board Meeting Materials. April 5-8, 1993. Office of Subsistence Management, FWS. Anchorage, AK.

USWS. 1994 (see Page 12 of analysis).

USFWS. 1996. Staff Analysis. P96-55. Pages 'Eastern Interior 2-12' *in* Federal Subsistence Board Meeting Materials. April 14, 1995. Office of Subsistence Management, FWS. Anchorage, AK.

USFWS. 2006. Staff Analysis. Special Action WSA06-03. Pages 1-5 *in* Federal Subsistence Board Meeting Materials. July 18, 2006.

USFWS. 2007. Staff Analysis WP07-56. Pages 529-538 *in* Federal Subsistence Board Meeting Materials April 30-May 2, 2007. Office of Subsistence Management, USFWS. Anchorage, AK. 622 pages.

USFWS. 2010. Federal Closure Review WCR-10-21. Office of Subsistence Management, USFWS. Anchorage, AK.

USFWS. 2011. Harvest database. Microcomputer database. Office of Subsistence Management, USFWS. Anchorage, AK.

Wald, E. 2015.Wildlife Biologist, Arctic National Wildlife Refuge. Personal communication: phone. January 2015.

Appendix A

§100.20 Request for reconsideration.

(a) Regulations in subparts C and D of this part published in the FEDERAL REGISTER are subject to requests for reconsideration.

(b) Any aggrieved person may file a request for reconsideration with the Board.

(c) To file a request for reconsideration, you must notify the Board in writing within sixty (60) days of the effective date or date of publication of the notice, whichever is earlier, for which reconsideration is requested.

(d) It is your responsibility to provide the Board with sufficient narrative evidence and argument to show why the action by the Board should be reconsidered. The Board will accept a request for reconsideration only if it is

based upon information not previously considered by the Board, demonstrates that the existing information used by the Board is incorrect, or demonstrates that the Board's interpretation of information, applicable law, or regulation is in error or contrary to existing law. You must include the following information in your request for reconsideration:

(1) Your name, and mailing address;

(2) The action which you request be reconsidered and the date of FEDERAL REGISTER publication of that action;

(3) A detailed statement of how you are adversely affected by the action;

(4) A detailed statement of the facts of the dispute, the issues raised by the request, and specific references to any law, regulation, or policy that you believe to be violated and your reason for such allegation;

(5) A statement of how you would like the action changed.

(e) Upon receipt of a request for reconsideration, the Board shall transmit a copy of such request to any appropriate Regional Council and the Alaska Department of Fish and Game (ADFG) for review and recommendation. The Board shall consider any Regional Council and ADFG recommendations in making a final decision.

(f) If the request is justified, the Board shall implement a final decision on a request for reconsideration after compliance with 5 U.S.C. 551-559 (APA).

(g) If the request is denied, the decision of the Board represents the final administrative action.

INTERAGENCY STAFF COMMITTEE RECOMMENDATION

Do not support reconsideration of any of the claims in the request for reconsideration RFR14-01.

Justification

The Interagency Staff Committee (ISC) found the threshold analysis for request for reconsideration RFR14-01to be a thorough evaluation of the request and that it provides sufficient information for Federal Subsistence Board action on the request.

According to regulations under Subpart B §____.20 The Board will accept a request for reconsideration only if it is based upon information not previously considered by the Board, demonstrates that the existing information used by the Board is incorrect, or demonstrates that the Board's interpretation of information, applicable law, or regulation is in error or contrary to existing law. Conclusions from the threshold analysis are restated below.

Criterion 1. Offering neither new nor contradictory information, there does not appear to be merit to this claim.

Criterion 2. Contrary to what the State has alleged, the substantial public record, developed over more than twenty years, indicates the importance and use of the area for local peoples. This public record was referenced in WP14-51. The Board relied on relevant and factual information, there does not appear to be merit to this claim.

Criterion 3. The key consideration in regard to this claim is whether or not the Board properly relied on the closure authority set forth in ANILCA Section 815(3). A careful review of the record demonstrates that the Board did not rely on incorrect closure standards. The record shows that the Board found that credible public testimony, in conjunction with a number of other sources of information, demonstrated that restrictions on non-Federally qualified users were necessary to continue subsistence uses of those sheep. Moreover, it does not appear from the record, that the Council's recommendation was contrary to any of the three criteria set forth in section 805(c) of ANILCA that would have then allowed the Board to decline to follow that recommendation. For these reasons, there does not appear to be merit to the claim that the Board applied incorrect legal standards in this action. Additionally, the Board heard about various alternatives and declined to adopt them, thereby inferring that the Board members considered those alternative to be inadequate and consequently acted within their purview.

None of the claims in the RFR meet the threshold for reconsideration.

U.S. Fish & Wildlife Service

July 2015

Alaska Refuges

Possible Statewide Regulatory Changes

Lisa Hupp/USFWS

Kodiak brown bear sow with cub.

National Wildlife Refuges (refuges) in Alaska are mandated to conserve species and habitats in their natural diversity and ensure that the biological integrity, diversity, and environmental health of the National Wildlife Refuge System are maintained for the continuing benefit of present and future generations of Americans. The U.S. Fish and Wildlife Service (USFWS) is proposing changes to the regulations governing Alaska refuges (under 50 CFR 36) to ensure that we are managing those refuges in accordance with our mandates and to increase consistency with other Federal laws, regulations, and policies. In addition, we aim to more effectively engage the public by updating our Public Participation and Closure Procedures to broaden notification and outreach methods, ensure consultation with Tribes and the State, provide for increased transparency in our decision-making, and to allow for additional opportunities for the public to provide input.

We recognize the importance of the fish, wildlife and other natural resources in the lives and cultures of Alaska Native peoples and in the lives of all Alaskans. These proposed regulatory changes would not change Federal subsistence regulations (36 CFR 242 and 50 CFR 100) or restrict taking of fish or wildlife under Federal subsistence regulations. The Alaska National Interest Lands Conservation Act (ANILCA) provides a priority to rural Alaskans for the nonwasteful taking of fish and wildlife for subsistence uses on refuges in Alaska. Under ANILCA all refuges in Alaska (except the Kenai Refuge) also have a purpose to provide the opportunity for continued subsistence use by rural residents, as long as this use is not in conflict with refuge purposes to conserve fish and wildlife populations and habitats in their natural diversity or fulfill international treaty obligations of the United States.

The changes we are considering would:

- Codify existing Federal mandates for conserving the natural diversity, biological integrity, and environmental health on refuges in Alaska in relation to predator harvest. Predator control is not allowed on refuges in Alaska unless it is determined to be necessary to meet refuge purposes, federal laws, or policy and is consistent with our mandates to manage for natural and biological diversity and environmental health. The need for predator control must be based on sound science in response to a significant conserverstation concern. Demands for more wildlife to harvest cannot be the sole or primary basis for predator control on refuge in Alaska.
- Prohibit the following particularly efficient methods and means for non-subsistence (Federal) take of predators on refuges in Alaska due to the potential for cumulative effects to predator populations and the environment that are inconsistent with our mandates to conserve the natural and biological diversity, biological integrity, and environmental health on refuges in Alaska:
    - take of bear cubs or sows with cubs (exception allowed for resident hunters to take black bear cubs or sows with cubs under customary and traditional use activities at a den site October 15 – April 30 in specific game management units in accordance with State law)
    - take of brown bears over bait;
    - take of bears using traps or snares;
    - take of wolves and coyotes during the spring and summer denning season (May 1– August 9); and
    - take of bears from an aircraft or on the same day as air travel has occurred (take of wolves or wolverines from an aircraft or on the same day as air travel is already prohibited under current refuge regulations).
- Update the Public Participation and Closure Procedures. The following table summarizes the current regulations for the Public Participation and Closure Procedures and updates we are considering.

Public Participation and Closure Procedures

Current	Proposed Updates
Authority	
Refuge Manager may close an area or restrict an activity on an emergency, temporary, or permanent basis.	No updates
Criteria (50 CFR 36.42(b))	
Criteria includes: public health and safety, resource protection, protection of cultural or scientific values, subsistence uses, endangered or threatened species conservation, and other management considerations necessary to ensure that the activity or area is being managed in a manner compatible with refuge purposes.	Add conservation of natural and biological diversity, biological integrity, and environmental health to the current list of criteria.
Emergency closures or restrictions (50 CFR 36.42(c))	
Emergency closure may not exceed 30 days. Closure effective upon notice as prescribed in 50 CFR 36.42 (f) (see below for details). Closures related to the taking of fish and wildlife shall be accompanied by notice with a subsequent hearing.	Increase the period from 30 to 60 days, with extensions beyond 60 days being subject to nonemergency closure procedures (i.e. temporary or permanent). Closure effective upon notice as prescribed in 50 CFR 36.42 (f) (see below for details).
Temporary closures or restrictions (50 CFR 36.42(d))	
May extend only for as long as necessary to achieve the purpose of the closure or restriction, not to exceed or be extended beyond 12 months. Closure effective upon notice as prescribed in 50 CFR 36.42 (f) (see below for details). Closures related to the taking of fish and wildlife effective upon notice and hearing in the vicinity of the area(s) affected by such closures or restriction, and other locations as appropriate	Temporary closures or restrictions related to the taking of fish and wildlife may still only extend for so long as necessary to achieve the purpose of the closure or restriction. These closures or restrictions must be re-evaluated as necessary, at a minimum of every 3 years, to determine whether the circumstances necessitating the closure still exist and warrant its continuation. A formal finding will be made in writing that explains the reasoning for the decision. When a closure is no longer needed, action to remove it will be initiated as soon as practicable. The USFWS will maintain a list of refuge closures and publish this list annually for public review and input. Closure will be subject to notice procedures as prescribed in 50 CFR 36.42 (f) (see below for details). For closures related to the taking of fish and wildlife, consultation with the State and affected Tribes and Native Corporations, as well as the opportunity for public comment and a public hearing in the vicinity of the area(s) affected will be required.
Permanent closures or restrictions (50 CFR 36.42(e))	
No time limit. Closure effective after notice and public hearings in the affected vicinity and other locations as appropriate, and after publication in the Federal Register.	No time limit. For closures related to the taking of fish and wildlife, consultation with the State and affected Tribes and Native Corporations, as well as the opportunity for public comment and a public hearing in the vicinity of the area(s) affected will be required. Closures would continue to be published in the Federal Register.
Notice (50 CFR 36.42(f))	
Notice is to be provided through newspapers, signs, and radio.	Add the use of the Internet or other available methods, in addition to continuing to use the more traditional methods of newspapers, signs, and radio.

For more information, please visit:
http://www.fws.gov/alaska/nwr/ak_nwr_pr.htm

Questions and Answers on Regulatory Changes Being Proposed by the U.S. Fish & Wildlife Service for National Wildlife Refuges in Alaska

1. What are the proposed regulatory changes?

National Wildlife Refuges (refuges) in Alaska are mandated to conserve species and habitats in their natural diversity and ensure that the biological integrity, diversity, and environmental health of the National Wildlife Refuge System (Refuge System) are maintained for the continuing benefit of present and future generations of Americans. The U.S. Fish and Wildlife Service (USFWS) is proposing changes to the regulations governing Alaska refuges (under 50 CFR 36) to ensure that we are managing those refuges in accordance with our mandates and to increase consistency with other Federal laws, regulations, and policies. In addition, we aim to more effectively engage the public by updating our Public Participation and Closure Procedures to broaden notification and outreach methods, ensure consultation with Tribes and the State of Alaska (State), provide for increased transparency in our decision-making, and allow for additional opportunities for the public to provide input.

<u>The changes we are proposing would:</u>

- Codify existing Federal mandates for conserving the natural diversity, biological integrity, and environmental health on refuges in Alaska in relation to predator harvest. Predator control is defined as the intention to reduce the populations of predators for the benefit of prey species. Predator control is not allowed on refuges in Alaska, unless it is determined necessary to meet refuge purposes, Federal laws, or policy and is consistent with our mandates to manage for natural and biological diversity, biological integrity, and environmental health. The need for predator control must be based on sound science in response to a significant conservation concern. Demands for more wildlife for human harvest cannot be the sole or primary basis for predator control on refuges in Alaska.

- Prohibit the following particularly efficient methods and means for non-subsistence take of predators on refuges in Alaska due to the potential impacts to predator populations and the environment that are inconsistent with our mandates to conserve the natural and biological diversity, biological integrity, and environmental health on refuges in Alaska:
  - take of bear cubs or sows with cubs *(exception allowed for resident hunters to take black bear cubs or sows with cubs under customary and traditional use activities at a den site October 15 – April 30 in specific game management units in accordance with State regulations*);
  - take of brown bears over bait;
  - take of bears using traps or snares;
  - take of wolves or coyotes from May 1 – August 9; and
  - take of bears from an aircraft or on the same day as air travel has occurred (*same day airborne take of wolves or wolverines is already prohibited under current refuge regulations).*

- Update the Public Participation and Closure Procedures to make them more consistent with other Federal regulations and more effectively engage the public.

<u>Important notes:</u>

- These proposed changes would not apply to the take of fish or wildlife under Federal subsistence regulations or to defense of life and property as defined in State of Alaska (State) regulations (see 5 AAC 92.410).
- Hunting and trapping is considered a priority use of refuges in Alaska and most State of Alaska hunting and trapping regulations, including harvest limits, would still apply.

2. Why is the U.S. Fish & Wildlife Service proposing making these changes?

We are considering these regulatory changes to ensure that the taking of fish and wildlife on National Wildlife Refuges in Alaska is managed consistent with Federal laws, regulations, and USFWS policies. The proposed regulatory changes we are considering would clarify allowable practices for the non-subsistence take of wildlife on refuges in Alaska, as well as update existing Alaska refuge regulations for closures and restrictions.

The mission of the Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. As such, refuges are required to work to conserve species and habitats for the long-term, benefiting not only the present, but also future generations of Americans and in Alaska, this includes the continuation of the subsistence way of life.

The USFWS is required by law to manage refuges "to ensure that . . . biological integrity, biological diversity, and environmental health are maintained" (National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997). The Alaska National Interest Lands Conservation Act (ANILCA) states that the primary purpose of the Act is "to preserve for the benefit, use, education, and inspiration of present and future generations certain lands and waters in the State of Alaska that contain nationally significant natural, scenic, historic, archeological, geological, scientific, wilderness, cultural, recreational, and wildlife values…" The first purpose for all refuges in Alaska under ANILCA is to "conserve fish and wildlife populations and habitats in their natural diversity."

In managing for natural diversity, the USFWS conserves, protects and manages all fish and wildlife populations within a particular wildlife refuge system unit in the natural 'mix,' not to emphasize management activities favoring one species to the detriment of another. The USFWS assures that habitat diversity is maintained through natural means on refuges in Alaska, avoiding artificial developments and habitat manipulation programs, whenever possible. The USFWS fully recognizes and considers that rural residents utilize and are often dependent on refuge resources for subsistence purposes and manages for this use consistent with the conservation of species and habitats in their natural diversity. The terms biological integrity, diversity, and environmental health are defined in the biological integrity policy, which directs the USFWS to maintain the variety of life and its processes; biotic and abiotic compositions, structure, and functioning; and to manage populations for natural densities and levels of variation throughout the Refuge System.

The overarching goal of the USFWS's wildlife-dependent recreation policy is to enhance opportunities and access to quality visitor experiences on refuges and to manage the refuge to conserve fish, wildlife, plants, and their habitats (605 FW 1.6). We consider hunting to be one of many priority uses of the Refuge System (when and where compatible with refuge purposes) that is a healthy, traditional outdoor pastime, deeply rooted in the American heritage (605 FW 2).

These proposed regulatory changes are aimed at ensuring that natural ecological processes and functions are maintained and wildlife populations and habitats are conserved and managed to function in their natural diversity on Alaska refuges.

3. Will the proposed regulatory changes apply to subsistence hunting and trapping on National Wildlife Refuges?

We recognize the importance of fish and wildlife and other natural resources in the lives of all Alaskans and in the lives and cultures of Alaska Native peoples. We take seriously our responsibility to provide the opportunity for continued subsistence use by rural Alaskans on refuges under ANILCA. These proposed regulatory changes will not change Federal subsistence regulations (36 CFR 242 and 50 CFR 100) or restrict taking of fish or wildlife under Federal subsistence regulations.

We recognize there may be some impacts to local communities that result from these changes. We have worked to address concerns that were raised during Tribal consultations and early public scoping in rural communities, and are open to discussing others that arise through the public comment process.

4. What authority does the U. S. Fish & Wildlife Service have to establish hunting and trapping regulations? Isn't it the State's job to manage wildlife in Alaska?

We recognize that the State has obligations to manage wildlife in Alaska according to the directives in the State constitution. The USFWS similarly must ensure that activities on refuges are consistent with Federal laws and USFWS policy and has final authority for managing plants, fish, and wildlife on refuges in Alaska. We prefer to defer to the State on regulation of hunting and trapping on refuges in Alaska; unless, in doing so, we are out of compliance with Federal laws and USFWS policy.

5. What is the process and timeline for making these regulatory changes? Can I participate?

We have been consulting with Alaska Tribes and Alaska Native Claims Settlement Act (ANCSA) Corporations, as well as having discussions with the State and Federal Subsistence Regional Advisory Councils on the changes we are considering. We anticipate publishing a proposed rule (draft regulations) in the Federal Register around mid to late July of 2015, at which time a 90 day public comment period will begin. We have prepared an Environmental Assessment (EA) in accordance with the requirements of the National Environmental Policy Act (NEPA) for these proposed regulatory changes, which will be made available for comment at the same time. Public input is very important to us and in order to allow additional time for folks to provide input, we will be offering a 90 day comment period, as opposed to the traditional duration of 30 days. During the public comment period, we plan to hold meetings and hearings around the state in locations near Alaska refuges and other locations as appropriate. Comments and input we receive will inform the revision and finalization of the proposed rule. Our goal is to have a final rule published sometime in the beginning of 2016.

Local engagement is very important to us and we are committed to providing meaningful opportunities for consultation with the Tribal Governments and ANCSA Corporations in Alaska. We greatly value local knowledge in our work and are committed to strengthening our Tribal-Federal government relations by working closely with the Tribes on conservation issues in Alaska.

We would like to hear from you, whether at a community meeting or via written comment. We welcome public comment during the comment period, and will continue to offer Tribal Consultation to Federally recognized Tribes and ANCSA Corporations through the end of the comment period.

For the most current information, visit http://www.fws.gov/alaska/nwr/ak_nwr_pr.htm.

Federal Subsistence Board

1011 East Tudor Road, MS121
Anchorage, Alaska 99503

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

FOREST SERVICE

SEP 05 2015

FWS/OSM 15049.CJ

Harry Brower, Jr., Chair
North Slope Subsistence
Regional Advisory Council
U.S. Fish and Wildlife Service
Office of Subsistence Management
1011 East Tudor Road, MS 121
Anchorage, Alaska 99503

Dear Chairman Brower:

This letter responds to the North Slope Subsistence Regional Advisory Council's (Council) fiscal year 2014 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. ***The need for a public workshop on ANILCA and specifically ANILCA Section 804 determinations and how customary and traditional use is applied in the Federal Management Program***

The Council would like to more fully understand and be actively engaged in aspects of the Federal Subsistence Management Program policy and functional process of ANILCA in order to better aid subsistence management with local knowledge and affect the outcome of regulatory determinations. The Council would also like more public engagement in the Federal Subsistence Management Program and Regional Advisory Council process. An in-depth workshop organized on ANILCA and the Federal subsistence policy and process would be most beneficial

to the Council. The Council also believes if this workshop were organized as a joint Council/public training opportunity, it would help rural residents understand and become engaged in subsistence management and increase participation at Regional Advisory Council meetings or development of proposals.

Response:

The Board understands that an effective Council is an informed Council, and to this end intends to provide training and workshops at the All-Council meeting planned for winter 2016. The All-Council meeting will include training opportunities and issue-based panel discussions for all members of regional advisory councils to attend over the course of a five day agenda. The sessions responsive to your request include a session on the differences between Customary and Traditional Use determinations and Section 804 analyses, and a session on Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA). Additional training opportunities may include Robert's Rules of Order, dual management, Federal Indian Law (with ANCSA implications), and State and Federal regulatory processes. These sessions are being held in large part at the request of regional advisory councils like yours, and the Board hopes the concerns and needs of your Council will be addressed along with those of the other nine Councils. While the All-Council meeting does not address your request for a joint Council/public training for the benefit of rural residents, it will assist in providing your Council the opportunity to engage with staff on issues off the record and in a less formal format. Additionally, the Office of Subsistence Management's Outreach Coordinator is in the process of creating informational fliers for publication on the Federal Subsistence Management Program's website. The Council is encouraged to work with its Council Coordinator in identifying specific subjects that could be developed into informational fliers. The Board is willing to discuss similar training for the Council and the rural residents you serve during future Council meetings hosted in rural communities.

2. Wildlife Special Action Closures – request for ongoing research and earlier communications on declining animal populations

The Council was taken by surprise on several wildlife Special Action closures this year that had very short public notice. The Council strongly recommends advance communications and ongoing information sharing and networking long before conservation problems arise requiring an emergency or temporary Special Action closure. In particular this year, only 48 hours public notice was provided to affected communities and tribes prior to the closure of sheep hunting in Unit 23 and western Unit 26A.

The Council has representatives from this region that are very knowledgeable about sheep and habitat limitations in the area affected by the Special Action. Tribes also commented on their knowledge of population trends, observations of reproductive success, and environmental

conditions that may affect health and survival and yet were not consulted or communicated with prior to the closure. Communities that hunt in the area could have provided indications of environmental stressors and possible declines in the population prior to reaching the crisis level, since aerial surveys are only able to be conducted under good weather conditions. Both the Council and tribes in the region encourage sharing information on an ongoing basis between biologists, managers, and the communities. This will help create more robust, informed management by combining local knowledge and expertise with scientific data. Ongoing communication and collaboration will also help build trust and communities would have an opportunity to initiate conservation measures themselves which may generate stronger support from the community if they are initiated by elders and community leaders.

Response:

The Board recognizes the importance of maintaining open lines of communications between the Office of Subsistence Management (OSM) and Council members concerning Special Action Requests. Some Special Action Requests are submitted with a very short turnaround time before the affected season begins. Sometimes there are only a few days or a week to develop the analysis and send it through all the required levels of review; however, all Special Action Requests are distributed to the appropriate Council Chairs after they are submitted to OSM. The Special Action request to close the sheep season in Unit 23 and a portion of Unit 26A, due to declines in the local sheep populations, is a good example of a request with a very short turnaround time. Keeping an open dialogue between all affected parties is the goal and OSM will endeavor to do so when time permits. The Council and the public are encouraged to take advantage of some of the information distribution systems utilized by OSM, such as the Federal Subsistence Management Program's Facebook page (www.facebook.com/subsistencealaska) and signing up to receive email notifications with regular updates by emailing fws-fsb-subsistence-request@lists.fws.gov). Both systems are utilized to notify the public when special actions are implemented.

3. Food Security

The Council is concerned about food security for the communities it serves. In just the past year in the North Slope region, there have been several wildlife Special Actions closing subsistence hunts for moose and sheep, as well as ongoing closures for muskox. It also seems increasingly likely that there will be conservation actions required that will affect subsistence harvest of the Western Arctic and Teshekpuk caribou herds. Some communities are experiencing declining catches of whitefish and Dolly Varden char. Subsistence resources managed by other Federal agencies such as walrus are also experiencing decline or shifting migration patterns that pose hardship to many communities. Ongoing industrial development in the National Petroleum Reserve-Alaska and other oil, gas, mining, and roads development in the region also has an impact on subsistence wildlife and fish resources in areas where communities traditionally hunt and gather. Climate change impacts are also being felt by many communities with changes to

lands and waters that support subsistence resources and activities. The Council would like to engage with the Federal Subsistence Management Program to discuss these declines to subsistence resources and begin to work on strategies for possible flexible management actions. The Council is seeking ways to manage so that in times of shortage of one or more subsistence resources, other options might be available that will help support families and communities to meet their subsistence needs.

Response:

The Board appreciates the significance of food security for Alaska Native peoples and other rural residents of the State. Both the Southcentral and North Slope Regional Advisory Councils have raised this concern in their 2014 annual reports.

Last year, the Southcentral Alaska Subsistence Regional Advisory Council shared with the Board a website on food security sponsored by the Inuit Circumpolar Council (http://www.iccalaska.org/servlet/content/Food%20Security.html). We reviewed the summaries found on that site, which were derived from workshops held on food security in the northern regions of Alaska. The Board has learned that food security includes both cultural and environmental systems. The Board has observed that in times of declines in subsistence resources and other conservation concerns, rural residents worry about their food security. This highlights a need for flexible regulatory and management options. The Board is open to further discussions with your Council and other Regional Advisory Councils (Councils) regarding the extent to which food security concepts and issues could become part of the regulatory process. The Board is most interested in engaging the Councils about how to best integrate food security into how the Board and the Councils currently make regulations under Title VIII of the Alaska National Interest Lands Conservation Act.

The Board, working through its staff at the OSM, has learned that the World Food Summit in 2006 defined food security to exist when "all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life." Food security in Alaska is linked to economic opportunity and the availability of affordable and healthy food alternatives inside communities and local markets, should they be available. Moreover, food security in rural Alaska is strongly linked to adequate access to subsistence resources and depends on a healthy network of exchange and sharing within rural communities. Food security in Alaska is impacted by rapid changes in the environment.

The Board is beginning to understand that Alaska Native peoples and other rural residents are discussing food security concepts and issues to help define and articulate how they see current regulations and changing environmental conditions affecting their access to traditional natural foods. Understanding these issues is an important part of Board responsibilities. Food security

as a means of enriching deliberations could help inform Board members of the paramount importance of subsistence resources as ideal and preferable sources of safe and nutritious food options in rural Alaska.

In addition to food security, the Board agrees with your Council that a subsistence way of life is closely linked to health and nutrition and many other important community and individual characteristics. During the review of the rural determination process, some Council members and others from the public recommended that the Board consider food security, health, and nutrition to be important criteria or characteristics for making rural determinations. We recommend that this Council continue to bring these important issues to the attention of the Board, especially as it considers how to improve the rural determination process in the future.

4. The importance of holding Council meetings in villages.

The Council would like to express appreciation for the opportunity to meet in the community of Nuiqsut at the fall 2014 Council meeting. The Council was greatly encouraged by the high level of local participation in the meeting. Council and community members alike expressed just how much they learned from each other and the opportunity to participate directly in subsistence management. The Council would like to reiterate just how important it is to meet in rural communities throughout the region.

Council members are appointed to represent the whole region, not just the communities where they live or where meetings occur. Budget restrictions that have limited the Council to holding meetings only in hub communities – and in this Council's case, only one community – has greatly hindered the ability of the Council to hear from and network directly with the rural communities its members serve. The Federal Subsistence Management Program and the Regional Advisory Councils are established under ANILCA to serve rural communities, and the travel budget needs to be adjusted in order to fulfill that mandate. Additionally, travel related to Council meetings should not be subject to the cap on travel budgets, as Council meetings are mandated by law.

Several communities have requested that the Council conduct a meeting in their village to directly address their subsistence concerns. The Council strongly feels it should meet in each of the communities in the region over time to hear and learn directly from the rural residents there and also facilitate public participation that the Federal Subsistence Management Program and Council meetings are intended to have. At a minimum, the Council requests to be able to hold meetings in a community other than Barrow once a year.

At this time there are several North Slope Region communities that are facing hardship due to declines in subsistence resources and industrial activities that have deflected caribou migration routes further from communities. The Council requests to meet in Kaktovik in the fall of 2015 in order to address management approaches to these issues.

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Response:

The Board is pleased that the Council found the fall 2014 meeting in Nuiqsut to be valuable. Meetings venues are determined on a case-by-case basis, and a number of factors affect he decision, including availability of a meeting location, lodging, food, and travel costs. After weighing all of these factors for all ten Councils, it is not possible for every Council to meet at a non-hub community for each meeting cycle. However, the Board and OSM have been doing more to respond to your request to meet in rural communities. OSM has authorized meetings in non-hub communities and will strive to meet in non-hub communities at least every third meeting cycle, given that costs are not prohibitive and sufficient meeting and lodging facilities are available. While we must follow any applicable government requirements (such as those related to use of charter aircraft, for example), OSM will explore options to determine how to accommodate meetings in rural villages to the extent that budget allows. Unfortunately, reduced budgets affect all aspects of our program including travel – there are no exemptions.

Councils that desire to meet in a non-hub community must always submit a justification for the alternate location along with a cost comparison. Your Council Coordinator will work with you to evaluate opportunities to meet in remote villages when Council agenda issues call for it. Additionally, any assistance that can be offered by Council members and their communities in organizing such meetings would be greatly appreciated. However, under current budget restraints, such requests to meet in non-hub communities will generally only be granted every three to four years if such meetings are more costly than meeting in hub communities.

5. The importance of education and outreach for the subsistence program, including youth involvement

The Council would like to see the Federal Subsistence Management Program engage in more networking and outreach directly with rural communities throughout the region. This overlaps with several other requests the Council has to be more effective and engaged locally. In addition to holding meetings in rural communities, the Council would like to see more solicitation of feedback from communities who have a lot of knowledge and expertise to contribute to the understanding of fish and wildlife management. The Council would also like to see more direct consultation with tribes on subsistence matters that affect them.

The Council suggests public workshops in conjunction with Council meetings. As stated at the beginning of this report, workshops on ANILCA and other foundational aspects of the Federal Subsistence management program would be very beneficial to the Council and public participants alike. Other outreach such as *a booth at the Kivgiq festival to provide subsistence program information and encourage applications to the Council (Kivgiq is the special whaling festival/ "Messenger Feast" held in Barrow where everyone comes across the region to celebrate subsistence). If in-person meetings are not possible, more could be done through utilizing the local radio stations for informational announcements.*

Chairman Brower 7

The Council is particularly interested in active programs in the school system to engage youth in subsistence and would like to develop a Council/student mentorship program to share their experience and to help foster knowledgeable subsistence leaders for the future. The Council would like to see much more community partnerships developed through the Fisheries Resource Monitoring Program (FRMP)with directed youth opportunities and /or biology work (such as summer youth research internships in conjunction with the FRMP).

Response:

Some of the youth outreach described by the Council is accomplished, where applicable, by the Partners for Fisheries Monitoring Program, at least with regard to fisheries management. The Partners program is designed to aid Alaska Native and rural organizations in developing the ability to participate in Federal subsistence fisheries management. But it places an emphasis on capacity to develop programs for youth, through science camps and paid internships. Through its history, the program has mentored over 80 college and 200 high school students.

The Office of Subsistence Management is currently revising and developing a long term subsistence outreach program that addresses needs expressed by the Councils and the public and incorporates new and developing technologies. A communications plan is also being developed, and all comments and suggestions from the Councils and members of the public are welcomed and will be taken under advisement. However, OSM is limited to some extent by staff level, time, and budget.

The subsistence outreach program was established to help all rural Alaskans better understand the Federal Subsistence Management Program, the regulations, and the information that flows both to and from the Program. We agree that face-to-face interaction is one of the best methods for communication. This is especially true if there is a language or cultural barrier that can be overcome by personal interaction. Unfortunately, we are not always able to honor requests for in-person meetings.

That being said, there are many ways to effectively communicate through great distances. Information on the Federal Subsistence Management Program in general as well as specific activities may be found on the web at www.doi.gov/subsistence/index.cfm or by visiting www.facebook.com/subsistencealaska. People can also receive emails and notifications on the Federal Subsistence Management Program by subscribing for regular updates by emailing fws-fsb-subsistence-request@lists.fws.gov.

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6. Establishment of safety cabins for subsistence activities in remote access areas on Federal Lands

The Council addressed this in its annual report two years ago and would like to revisit the request and inquire if the Interagency Staff Committee could research options that exist for public use safety cabins on Federal lands of the agencies they each represent. The Council feels the response in the previous letter was not an adequate effort by the Federal land management representatives to look into the policies and options regarding this request. In the North Slope Region, subsistence activities are conducted across a vast area including Bureau of Land Management, National Wildlife Refuge, and National Park Service lands.

Changing weather conditions in recent years have brought about increasingly frequent and severe storms as well as changing land and water conditions, making travel more hazardous during times when subsistence harvests are occur. Strategic placement of public use safety cabins could assist local hunters in conducting normal seasonal subsistence activities with some opportunity for safety during increasingly unpredictable and inclement weather. The Council also seeks suggestions for possible sources of funding to build such cabins.

Response:

As mentioned in the previous response in 2013, this issue is beyond the authority of the Board. While the Board recognizes that changing weather conditions in recent years has made travel on land, water and ice for subsistence activities more hazardous, the issue falls under the authority of various land owners or land management agencies. The following information provides some general guidelines for establishing safety cabins on Bureau of Land Management (BLM) and U.S. Fish and Wildlife Service (USFWS) managed lands.

There are options available for public use safety cabins on Federal public lands managed by BLM, through the Memorandum of Understanding between the BLM's Northern Field Office and the North Slope Borough concerning the establishment of a subsistence cabin and campsite registry and authorization program for the National Petroleum Reserve-Alaska NPR-A. A copy of that MOU is enclosed with this letter. This MOU has been in place since 2004 and largely empowers the North Slope Borough to maintain a cabin and campsite registry and authorization program for NPR-A, which includes provisions for resolving disputes between cabin users and ensuring cabin and campsite users will have the flexibility to improve, expand or relocate their subsistence cabins to meet changing environmental conditions and the subsistence needs of their families.

For National Wildlife Refuge lands managed by USFWS, a refuge manager may authorize the construction of a new subsistence cabin or other structure for traditional and customary uses in accordance with Alaska Regional Cabin Policy (enclosed), which is consistent with the USFWS

cabin regulations at 50 CFR 36.33 implementing ANILCA Sections 304 and 1303. The USFWS may permit cabins on refuge lands to exercise valid commercial fishing rights (Section 304(d)) or for traditional and customary uses (Section 1303(b)). No cabin may be constructed or occupied for private use on refuge lands except pursuant to a valid special use permit. Any existing cabins which are compatible with refuge purposes, including the Wilderness Act, may be allowed to continue for traditional and customary uses. When found to be compatible, and where the applicant lacks a reasonable off-refuge site, a permit for a new cabin may be issued in accordance with the Cabin Policy; however, these permits will generally be given only to local residents to pursue a legitimate subsistence activity. In deciding whether to issue a permit for the use and occupancy of a cabin, refuge managers must consider the effects of the proposed cabin on subsistence uses and needs in accordance with Section 811 of ANILCA.

Section 1315(d) of ANILCA states that new cabins or shelters may be constructed in Wilderness Areas designated by the Act, if they are necessary for the protection of the public health and safety. Existing cabins in Wilderness Areas may be maintained or replaced subject to restrictions set by the Secretary of the Interior.

If Council members or other Federally qualified subsistence users identify areas where public use safety cabins might be necessary for public health and safety or to continue traditional and cultural uses, the Board encourages them to work directly with the relevant land managers. Federal support staff is available to help direct interested Council members or subsistence users to the appropriate agency personnel.

7. ***The importance of a holistic approach to research, e.g., funding comprehensive ethnographic research – effective means for addressing subsistence information, management and community concerns.***

The Council brought these concerns before the Board in its Annual Report last year and appreciates the Board's response. However, the Council would like to revisit and raise awareness about these concerns and engage in further discussion with the Board on approaches to more effective subsistence management. The Council would like to explore opportunities for pursuing comprehensive ethnographic research that may lead to a more holistic approach to subsistence management.

The Council works diligently to attend to the subsistence issues and concerns of North Slope Region communities. Yet, the Council is greatly challenged in the limited scope of the Federal Subsistence Management Program addressing only fish and wildlife management on Federal public lands. Subsistence foods and the subsistence way of life are holistic and integral to the community and culture of the region. Many Council members are engaged in subsistence management/advisory bodies on many levels in order to encompass all critical subsistence issues.

Chairman Brower 10

While the Council recognizes the limitations of the authority of the Federal Subsistence Board due to the current structure of the Federal and State laws that govern natural resource management, the Council does ask for greater understanding and awareness of the integrated nature of subsistence in the lives of people in the North Slope region. There are several aspects that the Federal Subsistence Management Program can be more engaged in order to better support the concerns of the Council and community:

1) *Better understanding of local culture and communication norms and support to the Council and public in this regard.*

2) *Greater consideration and inclusion of local and traditional knowledge in subsistence management. Council members are appointed based on their expert knowledge of the region and long-term engagement with subsistence, please consider information shared by the Council, tribes, and local public carefully in drafting proposal analyses and in management decision making.*

3) *Understanding and awareness of the interaction of all subsistence foods and activities. For example, while the Federal Subsistence Board cannot directly address marine walrus or whale harvests, when these important subsistence foods are not able to be harvested then there is a greater need for other foods such as caribou and fish to sustain communities for the year. They are interrelated – impacts to one affect the need and subsequent management of another.*

4) *Understanding and awareness of the interaction between industrial development and subsistence activities. While the Federal Subsistence Board does not have direct jurisdiction over development activities on the North Slope, impacts to subsistence foods on Federal lands is a direct concern of the program in that barriers to migratory routes, disturbance that deflects or stresses animals, or contaminants that may impact subsistence foods all have direct bearing on access, harvest, and safe consumption of important subsistence foods that the federal program does manage.*

5) *Awareness and monitoring of climate change impacts to subsistence. The Federal Subsistence Management Program does have a directive to monitor the impacts of climate change. The Council and communities have shared observations and experiences of changes to the North Slope region lands, waters, and weather that are already impacting subsistence activities, safe access, timing, and changes to critical habitat for many important subsistence species managed by the program. The Council asks for awareness on how these changes impact subsistence (e.g. flexible management approaches that can accommodate changing timing of subsistence activities due to storm severity or ice up/break-up or seasonality of harvest due to changing timing of migrations or rut) and greater support and networking to monitor climate change and address research priorities identified by the Council.*

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Response:

The Board appreciates the Council's request for a more holistic approach to both subsistence research and management. The U.S. Fish and Wildlife Service and the Office of Subsistence management understand that subsistence in the North Slope region and most parts of Alaska involves more than food and nutrition and more than fish and wildlife regulations. Subsistence is integral to the cultures, societies, health, and economies of Alaska Native peoples and their rural communities, both materially and spiritually.

The Division of Anthropology at the Office of Subsistence Management is uniquely positioned to direct and coordinate comprehensive ethnographic and other types of social science research in the North Slope Region through cooperative agreements. Some examples of existing agreement programs include the Fisheries Resource Monitoring Program and Cooperative Ecosystem Studies Unit agreements. The Board is interested in discussing opportunities for collaborative research partnerships. Three of the Federal agencies in the Federal Subsistence Management Program are now formal partners with the North Slope Science Initiative. We suggest initiating talks between the North Slope Science Initiative, U.S. Fish and Wildlife Service, National Park Service, and Bureau of Land Management about the possibilities of comprehensive sociocultural research on subsistence as an integrated concept in the North Slope Region.

The Board wholeheartedly supports developing better understandings of local culture and communication norms to facilitate its work with the Council and the rural public. In recent years, the National Wildlife Refuge System in Alaska and the Office of Subsistence Management have been working to find appropriate ways to implement better cross-cultural communication and awareness in their work with rural Alaskans. This effort is informed by recommendations found in three agency-sponsored publications (which were provided to the Council at its winter 2015 meeting):

> Jacobs, M. B., and Brooks, J. J. (2011). Alaska Native peoples and conservation planning: A recipe for meaningful participation. *Native Studies Review* 20(2), 91-135.
>
> Dorantes, M. J., and Brooks, J. J. (2012). *Visiting and listening: Meaningful participation for Alaska Native peoples in conservation projects*. A resource guide for agency employees and partners. Office of External Affairs and Division of Conservation Planning and Policy, National Wildlife Refuge System, U.S. Fish and Wildlife Service, Anchorage, AK.
>
> Bartley, K. A., Brooks, J. J., and Boraas, A. S. (2014). *Understanding and improving collaborative management of fish and wildlife in Western Alaska*. Kenai Peninsula College and University of Alaska, Anchorage, AK.

Chairman Brower 12

Agency employees also have opportunities for training in Alaska Native public relations. We are working to make some of these training opportunities mandatory for agency employees who work in rural Alaska. The Board is willing to discuss with the Council further opportunities to implement this work and other tools for increasing cultural awareness and improving communication for agency staff and managers in the North Slope Region.

The Board supports inclusion and integration of local and traditional knowledge in subsistence management in the North Slope Region. We are willing to discuss with the Council and other partners how to enhance research on and improve integration of local, traditional, and cultural knowledge in subsistence management and regulation.

The Board suggests that we initiate discussions on how to best learn about, document, and use comprehensive sociocultural information about subsistence ways of life. All partners need to learn to think about these important concepts as holistic in nature. Comprehensive ethnographic and other types of social scientific research may indeed be of great value for the Federal Subsistence Management Program as it works with the Council to better understand the complex interactions among all subsistence foods and practices. Although marine mammals are not under the purview of the Board, caribou and fish are within its regulatory reach. Research could help the Board better understand how and when residents of the North Slope shift their subsistence harvest efforts between marine resources and land and river resources in response to resource shortages, industrial developments, and changing climatic conditions. This information may help the Board develop more regulatory flexibility as it implements ANILCA Title VIII in the North Slope Region.

Understanding and addressing the impacts of industrial development in the North Slope is a matter of food security and environmental justice. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Although not directly under the purview of the Federal Subsistence Board, the Board is concerned with any impacts to subsistence resources and harvests that residents of the North Slope have observed and reported. We encourage you to document your observations to the best of your abilities and contact land managers with the Arctic National Wildlife Refuge, National Petroleum Reserve-Alaska, and any other Federal lands and waters that may be affected. As we replied last year, any Federal agency that permits a development project has an obligation to conduct an analysis under Section 810 of the ANILCA to assess the potential impacts to subsistence uses and resources prior to authorizing such a permit and project. As part of the ANILCA Section 810 procedures, the Federal agency must notify the appropriate Regional Advisory Council if the activity would significantly restrict subsistence harvests, and, if so, hold a public hearing in the vicinity of the proposed development project. We also highly encourage you to report your observations of adverse impacts to your way of life caused by industrial development to State and Federal government authorities and elected representatives.

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The Board agrees that it needs to increase its awareness and understandings of impacts of global climate change on rural communities and subsistence resources of the North Slope. One tool for gaining this understanding is the Fisheries Resource Monitoring Program. For 2016, we have requested research on changes to subsistence fisheries resources and harvest related to global climate change. Specific areas of priority include fish movement, fish quality, and harvest and food preservation methods, including implications and recommendations for subsistence management. The Board is interested in environmental changes that may now be impacting subsistence way of life in northern Alaska such as melting permafrost, thaw slumps, increased water temperature, draining of tundra lakes, altered patterns of snow and rain, and changes in timing of freeze-up and break-up.

Local knowledge is an important tool in monitoring the impacts of climate change. The Board is willing to have discussions with the Council regarding possible collaborative research studies on local knowledge of changing conditions and how these affect access to and quality and quantity of subsistence resources. Again, the North Slope Science Initiative has Federal partners that we can contact in this regard.

The Board understands that there may be a need for flexibility in regulation in terms of shifting harvest seasons to allow residents to adapt to these changing conditions. The Board encourages the Council to use the existing regulatory system. For example, if an unusually mild winter has impaired the ability of subsistence harvesters to take moose, the Council may submit a Special Action request to extend the subsistence moose season. OSM staff will help the Council to develop proposals to the Alaska Boards of Game and Fisheries, and coordinate discussions with local State managers regarding State in-season actions. If that pattern persists over time, a proposal could be submitted to lengthen the season in Federal regulation. The Board encourages the Council to communicate appropriate information to the Board through your public meeting process and council coordinator. This will help staff in the Federal Subsistence Management Program better understand changing conditions on the North Slope and enable the Board to work more effectively with the Council to adopt flexible regulations.

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

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Sincerely,

Tim Towarak
Chair

Enclosures

cc: North Slope Subsistence Regional Advisory Council
Federal Subsistence Board
Eugene R. Peltola, Jr., Assistant Regional Director, OSM
Chuck Ardizzone, Deputy Assistant Regional Director, OSM
Carl Johnson, Council Coordination Division Chief, OSM
Eva Patton, Subsistence Council Coordinator, OSM
Interagency Staff Committee
Administrative Record

NOTE: Enclosures have been removed for meeting book due to large number of pages (36).

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.

Unit 23 Caribou Regulations for 2015/2016 Season

Unit 23 – Caribou

5 caribou per day as follows:

Calves may NOT be taken

BULLS may be harvested – July 1 – Oct. 14 &

– Feb. 1 – June 30

COWS may be harvested – July 1 – Mar. 31
However COWS accompanied by calves may NOT be taken July 1–Oct. 10

Changes from previous regulations include the following:

1. A reduction in the harvest limit from 15 to 5 caribou per day.
2. A prohibition on the harvest of calves.
3. A prohibition on the harvest of cows with calves.
4. A shortening of the bull and cow seasons.

Unit 24 Caribou Regulations for 2015/2016 Season

Unit 24—Caribou

Unit 24 – that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti–Kilolitna River drainage, bounded by the southeast bank of the of the Kodosin–Nolitna Creek, then downstream along the east bank of the Kanuti–Kilolitna River to its confluence with the Kanuti River – 1 caribou	***Aug. 10 – Mar. 31***

Unit 24 remainder –

5 caribou per day as follows:

Calves may NOT be taken

BULLS may be harvested – July 1 – Oct. 14 &

– Feb. 1 – June 30

COWS may be harvested – July 15 – Apr. 30
However COWS accompanied by calves may NOT be taken July 15–Oct. 10

Changes from previous regulations include the following:

1. A shortening of the bull and cow seasons.
2. A prohibition on the harvest of calves.
3. A prohibition on the harvest of cows with calves.

Unit 26A Caribou Regulations for 2015/2016 Season

Unit 26A

5 caribou per day as follows:

Calves may NOT be taken

BULLS may be harvested – July 1 – Oct. 14 &

– Dec. 6 – June 30

No more than 3 COWS per day may be harvested – July 16 – Mar. 15
However COWS accompanied by calves may NOT be taken July 16–Oct. 15

You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.

Changes from previous regulations include the following:

1. A reduction in the harvest limit from 10 to 5 caribou per day.
2. A shortening of the bull and cow seasons.
3. A prohibition on the harvest of cows with calves.
4. Allows an additional 3 weeks for the bull season compared to new State regulations.

Unit 26B Caribou Regulations for 2015/2016 Season

Unit 26B – that portion south of 69°30' N. Lat. and west of the Dalton Highway

5 caribou per day as follows:

Calves may NOT be taken

BULLS may be harvested – July 1 – Oct. 14 &

Dec. 10 – June 30

COWS may be harvested – Oct. 1 – Apr. 30

Unit 26B remainder –

5 caribou per day as follows:

Calves may NOT be taken

BULLS may be harvested – July 1 – Apr. 30

COWS may be harvested – Oct. 1 – Apr. 30

You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.

Changes from previous regulations include the following:

1. A reduction in the harvest limit from 10 to 5 caribou per day.
2. A shortening of the bull and cow seasons.
3. A prohibition on the take of calves.

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

Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
July 8, 2015

Contact: Deborah Coble
(907) 786-3880 or (800) 478-1456
deborah_coble@fws.gov

Federal Subsistence Board closes subsistence sheep hunt in portions of Units 23 and 26A

The Federal Subsistence Board (Board) recently approved temporary Wildlife Special Action request WSA 15-07 closing the Federal subsistence sheep hunts in Unit 23, except on that portion of land within Gates of the Arctic National Park and Preserve (GAAR), and in Unit 26A, that portion west of Howard Pass and the Etivluk River. This temporary closure is effective from July 1, 2015 through June 30, 2016.

Since 2011, sheep populations have declined up to 80 percent in the area affected by this temporary special action. In addition to the decline in the overall population, low numbers of rams and a low recruitment rate suggest that any harvest may be detrimental to the population, could prolong or worsen the current decline, and hamper recovery. The State responded to this population concern by closing all resident and nonresident hunting under their regulations for the 2015/2016 regulatory year. Closing the Federal subsistence sheep hunting in Unit 23, except for those lands within the GAAR, and closing the Federal sheep season in Unit 26A west of Howard Pass and the Etivluk River (DeLong Mountains) is necessary to assure the continued viability of the population as mandated under the Alaska National Interest Lands Conservation Act.

In addition to temporarily closing the Federal subsistence sheep hunts, the Board stipulated that establishing new hunt area descriptors within the current Unit 23 remainder (Schwatka Mountains) will separate those lands within GAAR from those outside to help clarify management responsibility. The hunt areas also reflect differences in hunter access and potential hunting pressure on sheep populations within and outside GAAR lands. People residing in the GAAR resident zone communities of Ambler, Kobuk and Shungnak are the only Federally qualified users eligible to hunt sheep in the park under Federal subsistence regulations. This small pool of prospective hunters and the difficulty of accessing sheep hunting areas in the park greatly decrease potential hunting pressure on sheep inside GAAR.

For more information on this action, contact Chris McKee at (907) 786-3572 or (800) 478-1456; paul_mckee@fws.gov.

1011 East Tudor Road MS-121 • Anchorage, Alaska 99503-6199 • subsistence@fws.gov • (800) 478-1456 / (907) 786-3888
This document has been cleared for public release # 1507082015.

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

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

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This document has been cleared for public release # 1507082015.

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

Federal Subsistence Board
News Release

Forest Service

For Immediate Release:
July 8, 2015

Contact: Deborah Coble
(907) 786-3880 or (800) 478-1456
deborah_coble@fws.gov

Federal Subsistence Board closes subsistence Moose hunt for Units 26B Remainder and 26 C

The Federal Subsistence Board recently approved temporary wildlife special action request (WSA 15-08) to close the Federal moose season in Units 26B remainder and 26C. This temporary closure is effective from July 1, 2015 through June 30, 2016.

Surveys conducted in April 2014 by the Arctic National Wildlife Refuge and Alaska Department of Fish and Game indicate that the North Slope moose populations in the affected area have declined by approximately 50 percent since 2011. While harvest opportunities were limited with quotas of three to five moose, the overall decline and low recruitment of moose in Unit 26B remainder and Unit 26C suggest that any harvest could be detrimental to population recovery. The temporary closure to subsistence uses of this moose population is necessary to assure the continued viability of the population as mandated under the Alaska National Interest Lands Conservation Act.

For more information on this action, contact Chris McKee at (907) 786-3572 or (800) 478-1456 paul_mckee@fws.gov.

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

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

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This document has been cleared for public release # 1607082015.

WP16–61/62/63/64 Executive Summary	
General Description	Proposal WP16–61 requests establishment of a new hunt area for caribou in Unit 23 where the harvest limit would be reduced from 15 caribou per day to 5 caribou per day, the harvest season be reduced for bulls and cows, and the take of calves would be prohibited. *Submitted by North Slope Subsistence Regional Advisory Council.* Proposal WP16-62, requests establishment of a new hunt area for caribou in Unit 24 where the harvest seasons for bulls and cows would be shortened, and the take of calves would be prohibited. *Submitted by North Slope Subsistence Regional Advisory Council.* Proposal WP16-63, requests that caribou harvest limit in Unit 26A be reduced from 10 caribou per day to 5 caribou per day, the harvest seasons for bulls and cows be shortened, and the take of calves and calves with cows be prohibited. *Submitted by North Slope Subsistence Regional Advisory Council.* Proposal WP16-64, requests establishment of a new hunt area for caribou in Unit 26B where the harvest limit would be reduced from 10 caribou per day to 5 caribou per day, the harvest season would be shortened, and the take of calves would be prohibited. *Submitted by North Slope Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 23 - Caribou** ***Unit 23 – that portion north of a line from the mouth of the Singoalik River east to the boundary of the Noatak National Preserve, north to the Unit 26A boundary*** — ***5 caribou per day as follows:*** — ~~*July 1 – June 30*~~ ***Up to 5 bulls per day; however, calves may not be taken*** — ***July 1 – Oct. 14*** ***Feb. 1 – June 30*** ***Up to 5 cows per day; however, calves may not be taken*** — ***July 15 – Apr. 30***

WP16–61/62/63/64 Executive Summary			
	Unit 23 ***remainder***	*15 caribou per day; however, cow caribou may not be taken May 16 – June 30*	*July 1 – June 30*
	Unit 24—Caribou		
	Unit 24 – that portion south of the south bank of the Kanuti river, upstream from and including that portion of the Kanuti–Kilolitna River drainage, bounded by the southeast bank of the Kodosin–Nolitna Creek, then downstream along the east bank of the Kanuti–Kilolitna River to its confluence with the Kanuti River – 1 caribou		*Aug. 10 – Mar. 31*
	Unit 24 – that portion north of the south bank of the Kanuti River downstream from the Kanuti -Kilolitna River	***5 caribou per day as follows:***	
		Up to 5 bulls per day; however calves may not be taken	***July 1– Oct. 14*** ***Feb. 1– June 30***
		Up to 5 cows per day; however calves may not be taken	***July 15 – Apr. 30***
	Unit 24 remainder– 5 caribou per day; however, cow caribou may not be taken May16–June 30		*July 1– June 30*

WP16–61/62/63/64 Executive Summary			
	Unit 26A—Caribou		
		Up to 5 caribou per day; however no more than 3 cows per day; calves may not be taken~~10 caribou per day; however, cow caribou may not be taken May 16 – June 30~~	~~*July 1–June 30*~~ ***Dec. 6 – Mar. 15***
		Up to 5 bulls per day; calves may not be taken	***Mar. 16 – July 15***
		Up to 5 caribou per day; however no more than 3 cows per day; cows accompanied by calves may not be taken	***July 16 – Oct. 15***
		Up to 3 cows per day; however calves may not be taken	***Oct. 16 – Dec. 5***
	You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.		
	Unit 26B—Caribou		
	Unit 26B - that portion south of 69°30' N. Lat. and west of the Dalton Highway	***5 caribou per day as follows:***	
		Up to 5 bulls per day; however calves may not be taken	***Dec. 10 – Oct. 14***
		Up to 5 cows per day; however calves may not be taken	***July 15 – Apr. 30***

WP16–61/62/63/64 Executive Summary			
	Unit 26B remainder	*10 caribou per day; however, cow caribou may be taken only from Oct. 1 – Apr. 30*	***July 1 – June 30.***
	You may not transport more than 5 caribou per regulatory year from Unit 26 except t community of Anaktuvuk Pass.		
OSM Preliminary Conclusion	**Support with modification** to the hunt area descriptor changes for Units 23 and 24; decrease the harvest limit in Unit 23 remainder from 15 to 5 caribou per day, as well as shortening the cow and bull seasons and prohibiting the harvest of cows with calves, prohibit the harvest of cows with calves in Unit 24A and 24B north of the Kanuti River, 24C and 24 D; shorten the cow season and prohibit the harvest of cows with calves in Unit 26B; and reduce the harvest limit in Unit 26B remainder from 10 to 5 caribou per day, shorten the season, and prohibit the harvest of calves. The language for the modified regulations was simplified to make it easier for those using the Federal Subsistence regulations.		
	WP16-61 **Unit 23 – Caribou**		
	Unit 23 – ~~*that portion north of a line from the mouth of the Singoalik River east to the boundary of the Noatak National Preserve, north to the Unit 26A boundary*~~ ***that portion north of and including the Singoalik River drainage***	***5 caribou per day as follows: however calves may not be taken*** ~~*15 caribou per day; however, cow caribou may not be taken May 16 – June 30*~~	~~*July 1 – June 30*~~
		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***

WP16–61/62/63/64 Executive Summary			
	Unit 23 remainder	***5 caribou per day as follows: however calves may not be taken***	
		5 bulls per day	***July 1 – Oct. 14*** ***Feb. 1 – June 30***
		5 cows per day; however cows accompanied by calves may not be taken Sept. 1–Oct. 14	***Sept. 1 – Mar. 31***
	WP16-62 **Unit 24—Caribou**		
	Unit 24A–south of the south bank of the Kanuti River - 1 caribou		***Aug. 10 -Mar. 31***
	*Unit 24**B** – that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti–Kilolitna River drainage, bounded by the southeast bank of the of the Kodosin–Nolitna Creek, then downstream along the east bank of the Kanuti–Kilolitna River to its confluence with the Kanuti River – 1 caribou*		*Aug. 10 – Mar. 31*
	Unit 24 —that portion north of (and including) the Kanuti River in Units 24A and 24B and that portion north of Koyukuk River downstream from the confluence with the Kanuti River in Unit 24B to the Unit 24C boundary	***5 caribou per day as follows: however 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***
	Units 24C and 24D	***5 caribou per day as follows: however calves may not be taken***	

WP16–61/62/63/64 Executive Summary			
		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 Sept. 1 -Oct. 14	***Sept. 1 – Mar. 31***
	WP16-63 **Unit 26—Caribou** **Unit 26A—Caribou**		
		Up to 5 caribou per day; however calves may not be taken~~10 caribou per day; however, cow caribou may not be taken May 16 – June 30~~	~~*July 1–June 30*~~
		Bulls may be harvested;	***July 1– Oct. 14*** ***Dec. 6 -June 30***
		Up to 3 cows per day; however cows accompanied by calves may not be taken July 16 -Oct. 15	***July 16–Mar. 15***

WP16–61/62/63/64 Executive Summary	
	WP16-64 **Unit 26B** ***Unit 26B – that portion south of 69°30' N. Lat. and west of the Dalton Highway*** — ***5 caribou per day as follows: however-calves may not be taken*** ***Bulls may be harvested*** — ***July 1 -Oct. 14*** ***Dec. 10–June. 30*** ***Cows may be harvested*** — ***Oct. 14 – Apr. 30 ~~July 1~~*** ***Unit 26B remainder –*** — *5~~10~~ caribou per day* — *July 1 – ~~June 30~~**Apr. 30*** ***Bulls may be harvested*** — ***July 1 -Apr. 30*** ***Cows may be harvested*** — ***Oct. 14 -Apr. 30*** *You may not transport more than 5 caribou per regulatory year from Unit 26 except t the community of Anaktuvuk Pass.*
Western Interior Regional Advisory Council Recommendation	
Northwest Arctic Regional Advisory Council Recommendation	
Eastern Interior Regional Advisory Council Recommendation	

WP16–61/62/63/64 Executive Summary	
North Slope Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**1 Support**

DRAFT STAFF ANALYSIS
WP16-61/62/63/64

ISSUE

The North Slope Subsistence Regional Advisory Council (Council) submitted four Proposals to change caribou hunting regulations in Units 23, 24, and 26.

Proposal WP16-61, requests establishment of a new hunt area for caribou in Unit 23 where the harvest limit would be reduced from 15 caribou per day to 5 caribou per day, the harvest season be reduced for bulls and cows, and the take of calves would be prohibited (**Map 1**).

Proposal WP16-62, requests establishment of a new hunt area for caribou in Unit 24 where the harvest seasons for bulls and cows would be shortened, and the take of calves would be prohibited (**Map 2**).

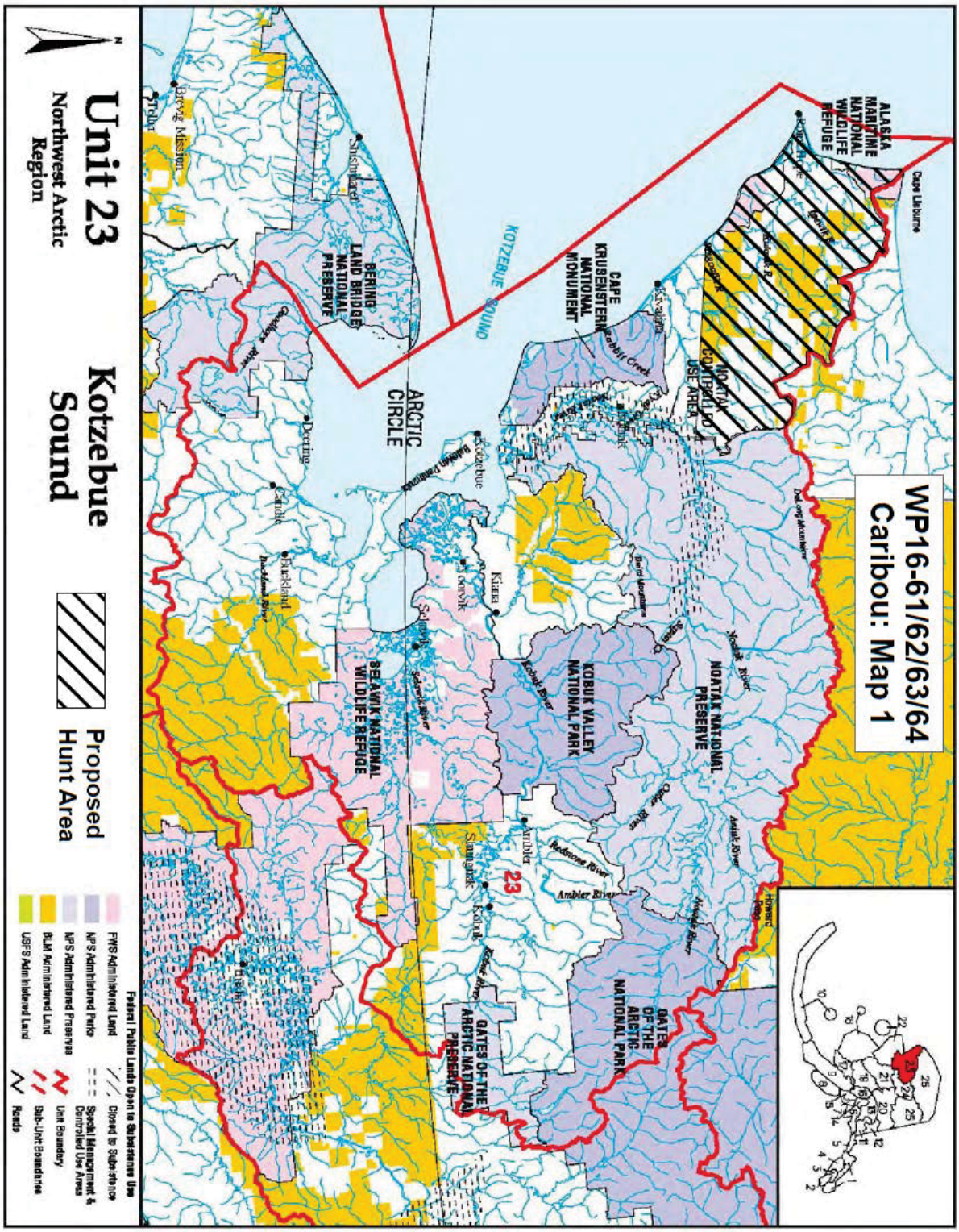
Proposal WP16-63, requests that caribou harvest limit in Unit 26A be reduced from 10 caribou per day to 5 caribou per day, the harvest seasons for bulls and cows be shortened, and the take of calves and calves with cows be prohibited. Compared to the new State caribou regulations it requests 3 additional weeks to the bull harvest season from Dec. 6-31.

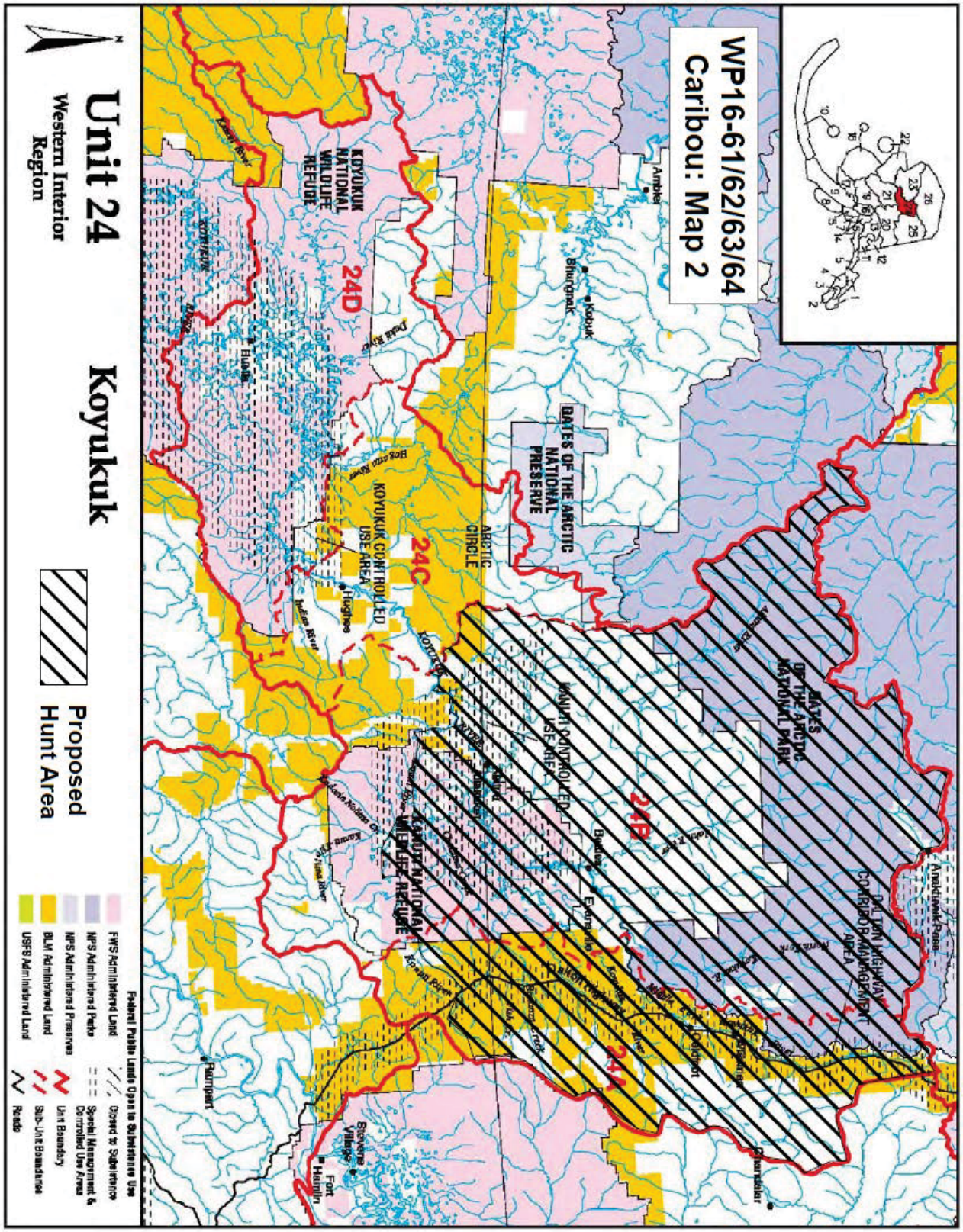
Proposal WP16-64, requests establishment of a new hunt area for caribou in Unit 26B where the harvest limit would be reduced from 10 caribou per day to 5 caribou per day, the harvest season would be shortened, and the take of calves would be prohibited (**Map 3**).

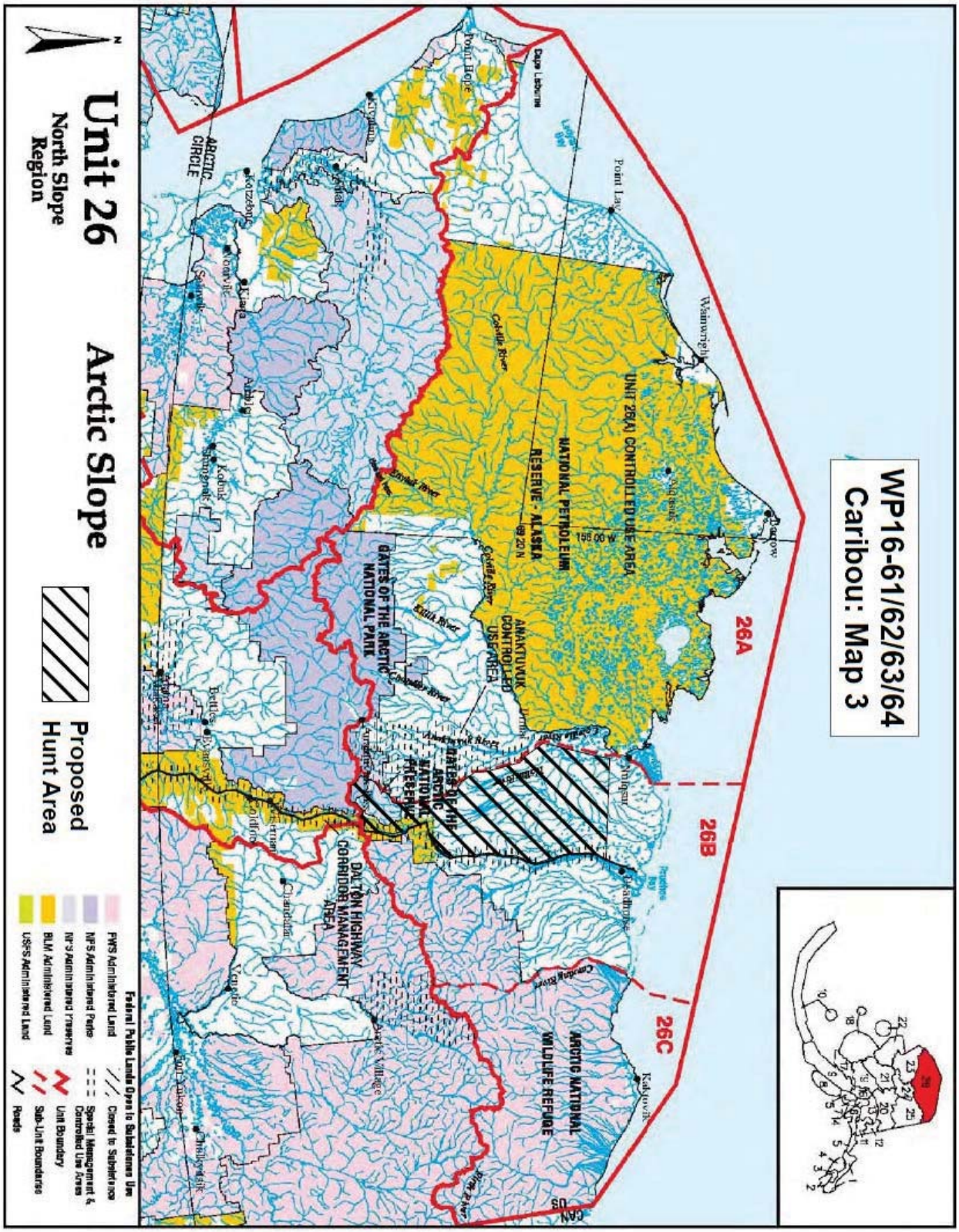
DISCUSSION

The proponent states that changes to harvest regulations are required to reverse or slow the decline in the Western Arctic Caribou Herd (WACH) and the Teshekpuk Caribou Herd (TCH). Both populations have experienced declines of approximately 50% over the last decade. It is the intent of the Council to parallel changes made to State regulations when the Alaska Board of Game adopted modified State Proposal 202 (RC76) at its March 13-17, 2015 meeting.

However, not all the changes requested are consistent with the newly adopted State regulations. For Proposal WP16-63, the proponent requested Oct. 16 to Dec. 31 for the closure of the bull season in Unit 26A to align with the State regulations. However, based on further discussion with the proponent it was determined that the intent of the Council was to allow for the hunting of bulls after Dec. 5th because they are considered edible by then. The season date change would give Federally qualified subsistence users an extra three weeks to harvest bull caribou in Unit 26A.


WP16-61/62/63/64
Caribou: Map 1
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
Cape Lisburne
NOATAK CONTROLLED USE AREA
NOATAK NATIONAL PRESERVE
CAPE KRUSENSTERN NATIONAL MONUMENT
KOBUK VALLEY NATIONAL PARK
GATES OF THE ARCTIC NATIONAL PARK
GATES OF THE ARCTIC NATIONAL PRESERVE
BERING LAND BRIDGE NATIONAL PRESERVE
SEWARD PENINSULA
SELAWIK NATIONAL WILDLIFE REFUGE
KOTZEBUE SOUND
ARCTIC CIRCLE
Kiana
Ambler
Shungnak
Kobuk
Noorvik
Selawik
Deering
Buckland
Shishmaref
Brevig Mission
Teller
Noatak River
Anaktuvuk Pass
Ambler River
Redstone River
Kobuk River
Selawik River
Buckland River
Goodpaster River
Kobuk Valley
23
Unit 23
Northwest Arctic Region
Kotzebue Sound
Proposed Hunt Area
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads


WP16-61/62/63/64
Caribou: Map 2
Unit 24
Western Interior Region
Koyukuk
Proposed Hunt Area
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
24D
24C
24B
Ambler
Shungnak
Kobuk
DATES OF THE ARCTIC NATIONAL PRESERVE
ARCTIC CIRCLE
KOYUKUK NATIONAL WILDLIFE REFUGE
KOYUKUK CONTROLLED USE AREA
KANUTI CONTROLLED USE AREA
DATES OF THE ARCTIC NATIONAL PARK
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
Anaktuvuk Pass
Bettles
Evansville
Allakaket
Alatna
Hughes
Huslia
Koyukuk
Nulato
Kaltag
Galena
Ruby
Tanana
Nenana
Fairbanks
Chandalar
Stevens Village
Fort Hamlin
Rampart
Dalton Highway
Dietrich River
Alatna River
Koyukuk River
Hogatza River
Indian River
Huslia River
Kaltag River
Nulato River
Tanana River
Nenana River
Chandalar River
Sheenjek River
Porcupine River
Yukon River


WP16-61/62/63/64
Caribou: Map 3
26A
26B
26C
UNIT 26A) CONTROLLED USE AREA
NATIONAL PETROLEUM RESERVE - ALASKA
ANAKTUVUK CONTROLLED USE AREA
GATES OF THE ARCTIC NATIONAL PARK
GATES OF THE ARCTIC NATIONAL PRESERVE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
ARCTIC NATIONAL WILDLIFE REFUGE
ARCTIC CIRCLE
Point Hope
Point Lay
Wainwright
Atqasuk
Barrow
Nuiqsut
Anaktuvuk Pass
Kaktovik
Arctic Village
Venetie
Chandalar
Bettles
Allakaket
Alatna
Hughes
Huslia
Kobuk
Shungnak
Ambler
Kiana
Noorvik
Selawik
Kotzebue
Noatak
Kivalina
Deadhorse
Prudhoe Bay
Cape Lisburne
Colville River
Dalton Hwy
Unit 26
Arctic Slope
North Slope Region
Proposed Hunt Area
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads

WP16-61

Existing Federal Regulation

Unit 23—Caribou

15 caribou per day; however, cow caribou may not be taken May 16 – June 30		*July 1–June 30*

Proposed Federal Regulation

Unit 23 - Caribou

Unit 23 – that portion north of a line from the mouth of the Singoalik River east to the boundary of the Noatak National Preserve, north to the Unit 26A boundary	***5 caribou per day as follows:***	~~*July 1 – June 30*~~
	Up to 5 bulls per day; however, calves may not be taken	***July 1 – Oct. 14*** ***Feb. 1 – June 30***
	Up to 5 cows per day; however, calves may not be taken	***July 15 – Apr. 30***
Unit 23 ***remainder***	*15 caribou per day; however, cow caribou may not be taken May 16 – June 30*	*July 1 – June 30*

Existing State Regulation

Unit 23—Caribou

Unit 23, that portion north of and including the Singoalik River drainage	*Resident Hunters: 5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves	*July1 – Oct. 14*

	may not be taken	*Feb. 1 – June 30*
	Up to 5 cows per day; however, calves may not be taken	*July 15 – Apr. 30*
	Nonresident hunters: 1 bull; however, calves may not be taken	*Aug. 1 – Sept.30*
Unit 23–remainder	*Resident Hunters: 5 caribou per day, as follows;*	
	Up to 5 bulls per day; however, calves may not be taken	*July 1 – Oct. 14* *Feb. 1 – June 30*
	Up to 5 cows per day; however, calves may not be taken	*Sept. 1 – Mar. 31*
	Nonresident Hunters: 1bull; however, calves may not be taken	*Aug. 1 – Sept. 30*

WP16-62

Existing Federal Regulation

Unit 24—Caribou

Unit 24 - that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti-Kilolitna River drainage, bounded by the southeast bank of the Kodosin-Nolitna Creek, then downstream along the east bank of the Kanuti-Kilolitna River to its confluence with the Kanuti River - 1 caribou	*Aug. 10 – Mar. 31*
Unit 24, remainder - 5 caribou per day; however, cow caribou many not be	*July 1 - June 30*

taken May 16 -June 30

Proposed Federal Regulation

Unit 24—Caribou

Unit 24 – that portion south of the south bank of the Kanuti river, upstream from and including that portion of the Kanuti–Kilolitna River drainage, bounded by the southeast bank of the Kodosin–Nolitna Creek, then downstream along the east bank of the Kanuti–Kilolitna River to its confluence with the Kanuti River – 1 caribou		*Aug. 10 – Mar. 31*
Unit 24 – that portion north of the south bank of the Kanuti River downstream from the Kanuti -Kilolitna River	***5 caribou per day as follows:***	
	Up to 5 bulls per day; however calves may not be taken	***July 1– Oct. 14*** ***Feb. 1– June 30***
	Up to 5 cows per day; however calves may not be taken	***July 15 – Apr. 30***
Unit 24 remainder– 5 caribou per day; however, cow caribou may not be taken May16–June 30		*July 1– June 30*

Existing State Regulation

Unit 24—Caribou

Unit 24A, south of the south bank of the Kanuti	*Resident Hunters: 1 caribou*	*Aug. 10–Mar. 31*

River	*Nonresident Hunters: 1 caribou*	*Aug. 10–Sept. 30*
Unit 24A remainder, that portion north of the south bank of the Kanuti River	*Resident Hunters: 5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken	*July 1 – Oct. 14* *Feb. 1 – June 30*
	Up to 5 cows per day; however, calves may not be taken	*July 15 – Apr. 30*
	Nonresident Hunters: 1 bull; however, calves may not be taken	*Aug. 1 – Sept.30*
Unit 24B, south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti–Kilolitna River drainage, bounded by the southeast bank of the Kodosin–Nolitna Creek, then downstream along the east bank of the Kanuti–Kilolitna River to its confluence with the Kanuti River	*Resident Hunters: 1 caribou*	*Aug. 10–Mar. 31*
	Nonresident Hunters: 1 caribou	*Aug.10–Sept. 30*
Unit 24B remainder, that portion north of the south bank of the Kanuti River downstream from the Kanuti–Killitna River drainage	*Resident Hunters: 5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, no calves may be taken	*July 1 – Oct. 14* *Feb. 1 – June 30*
	Up to 5 cows per day; however, calves may not be taken	*July 15 – Apr. 30*
	Nonresident Hunters: 1bull; however, calves may not be taken	*Aug. 1 – Sept. 30*

Units 24C and 24D	*Resident Hunters: 5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken	*July 1–Oct. 14* *Feb. 1–June 30*
	Up to 5 cows per day; however, calves may not be taken	*Sept. 1–Mar. 31*
	Nonresident Hunters: 1 bull; however, calves may not be taken	*Aug. 1–Sept. 30*

WP16-63

Existing Federal Regulation

Unit 26A —Caribou

10 caribou per day; however, cow caribou may not be taken May 16 – June 30	*July 1–June 30*
You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.	

Proposed Federal Regulation

Unit 26A—Caribou

Up to 5 caribou per day; however no more than 3 cows per day; calves may not be taken*~~10 caribou per day; however, cow caribou may not be taken May 16 – June 30~~*	~~*July 1–June 30*~~ ***Dec. 6 - Mar. 15***

Up to 5 bulls per day; calves may not be taken	***Mar. 16 - July 15***
Up to 5 caribou per day; however no more than 3 cows per day; cows accompanied by calves may not be taken	***July 16 - Oct. 15***
Up to 3 cows per day; however calves may not be taken	***Oct. 16 - Dec. 5***

You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.

Existing State Regulation

Unit 26A—Caribou

Unit 26A that portion of the Colville River drainage upstream from the Anaktuvuk River, and drainages of the Chukchi Sea south and west of, and including the Utukok River drainage	*Resident Hunters: 5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken	*July 1 – Oct. 14* *Feb. 1 – June 30*
	Up to 5 cows per day; however, calves may not be taken	*July 15 – Apr. 30*
	Nonresident hunters: 1 bull; however, calves may not be taken	*Aug. 1 – Sept.30*
Unit 26A–remainder	*Resident Hunters: 5 bulls per day; however, calves may not be taken*	*July 1 – July 15*
	5 caribou per day; however, no more than 3 cows per day; cows accompanied by calves and calves may not be taken	*July 16 – Oct. 15*

3 cows per day; however, calves may not be taken	*Oct. 16 – Dec. 31*
5 caribou per day; however, no more than 3 cows per day; calves may not be taken	*Jan. 1 – Mar. 15*
5 bulls per day; however, calves may not be taken	*Mar. 16. – June 30*
Nonresident Hunters: 1bull; however, calves may not be taken	*Aug. 1 – Sept. 30*

WP16-64

Existing Federal Regulation

Unit 26B —Caribou

10 caribou per day; however, cow caribou may be taken only from Oct. 1 – Apr. 30	*July 1–June 30*
You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.	

Proposed Federal Regulation

Unit 26B—Caribou

Unit 26B - that portion south of 69°30' N. Lat. and west of the Dalton Highway	***5 caribou per day as follows:***

	Up to 5 bulls per day; however calves may not be taken	***Dec. 10 – Oct. 14***
	Up to 5 cows per day; however calves may not be taken	***July 15 – Apr. 30***
Unit 26B remainder	*10 caribou per day; however, cow caribou may be taken only from Oct. 1 – Apr. 30*	***July 1 – June 30.***

You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.

Existing State Regulation

Unit 26B—Caribou

Unit 26(B), Northwest portion north of the 69º 30' N. lat. and west of the east bank of the Kuparuk River to a point at 70º 10' N. lat., 149º 04' W. long., then following the east bank of the Kalubik River to the Arctic Ocean	*Resident Hunters: 5 caribou per day; however, cow caribou may not be taken May 16–June 30*	*July 1–June 30*
	Nonresident Hunters: 5 caribou	*July 1–Apr. 30*
Unit 26(B), that portion south of 69º30' N.lat.and west of the Dalton Highway	*Resident Hunters: 5 caribou; however, cow caribou may be taken only from July 1–Oct. 10*	*July 1–Oct. 10* *May 16–June 30*
	Nonresident Hunters: 5 caribou; however, cow	*July 1–Oct. 10* *May 16–June 30*

	caribou may be taken only from July 1–Oct. 10	
Unit 26(B), that portion south of 69°30'N. lat. and east of the Dalton Highway	*Resident Hunters: 5 caribou; however, cow caribou may be taken only from July 1–May 15*	*July 1– July 30*
	Nonresident Hunters: 5 caribou; however, cow caribou may be taken only from July 1–May 15	*July 1–June 30*
Remainder of Unit 26(B)	*Resident Hunters: 5 caribou*	*July 1–Apr. 30*
	Nonresident Hunters: 5 caribou	*July 1–Apr. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 69% of Unit 23 and consist of 41.8% National Park Service (NPS) managed lands, 17.5% Bureau of Land Management (BLM) managed lands, and 9.6% U.S. Fish and Wildlife Service (FWS) managed lands (See **Unit 23 Map**).

Federal public lands comprise approximately 67% of Unit 24 and consist of 23 % BLM managed lands, 21.8% FWS managed lands and 21.9% NPS managed lands (See **Unit 24 Map**).

Federal public lands comprise approximately 65% of Unit 26 and consist of 45.2% BLM managed lands, 17.3% FWS managed lands, and 5% NPS managed lands (See **Unit 26 Map**).

Customary and Traditional Use Determinations

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 26A have a customary and traditional use determination for caribou in Unit 23.

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

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

Residents of Unit 26, Anaktuvuk Pass, Point Hope, and Unit 24 within the Dalton Highway Corridor Management Area have a customary and traditional use determination for caribou in Unit 26B.

Regulatory History

In 2013, an aerial photo census indicated significant declines in the TCH (Caribou Trails 2014), WACH (Dau 2011), and possibly the Central Arctic Caribou Herd (CACH) populations. In response, the Alaska Board of Game adopted modified Proposal 202 (RC76) in March 2015 to reduce harvest opportunities for both residents and non-residents within the range of the WACH and the TCH. These regulation changes, which included lower bag limits, changes to harvest seasons, modification to the hunt area descriptors, restrictions on bull and cow harvest and a prohibition on calf harvest, were adopted to slow or reverse the population decline. These regulatory changes take effect on July 1, 2015, and are the result of extensive discussion and compromise among a variety of user groups. State regulatory changes and the proposed changes to Federal regulations represent the first time in over 30 years that harvest restrictions have been implemented for the WACH and TCH. The restrictions proposed by these wildlife proposals for the WACH are also supported by management recommendations outlined in the Western Arctic Herd Management Plan (WACH Working Group 2011).

Unit 23

In 1995, the Federal Subsistence Board (Board) adopted Proposal P95-51 to increase the caribou harvest limit from 5 per day to 15 per day to increase opportunity for subsistence hunters to maximize their hunting when the caribou were available (OSM 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 (OSM 1995b, 1997).

In 2000, the Board adopted Proposal P00-053 with modification allowing the use of snowmachines to position hunters and select individual caribou for harvest in Units 22 and 23. This was done to recognize a customary and traditional practice in the region (OSM 2000a).

Proposal 16-48, which requests to allow Federally qualified subsistence users to use snowmachines to position caribou, wolf, and wolverine was submitted for the 2016-2018 wildlife cycle.

Unit 24

In 2000, the Board adopted Proposal P00-44 to expand the hunting area north of the Kanuti River for caribou to allow Federally qualified subsistence users additional opportunities to harvest from the WACH (OSM 2000). The harvest limit was set at 5 caribou per day with the restriction that cows may not be taken from May 16-June 30 (OSM 2000b).

The Board did not change the harvest limit of one caribou in the southern section of Unit 24B and 24A which was enacted to protect the Ray Mountain Caribou Herd, a small population of about 1,000 animals, on their wintering range (Jandt 1998).

Unit 26A and 26B

In 1995, the Board adopted Proposal P95-64 to increase the harvest limit from 5 caribou per day to 10 caribou per day to increase opportunity for subsistence hunters (OSM 1995c). This harvest limit has remained in effect since then. The Board also adopted Proposal P95-62 which closed the area east of the Killik River and south of the Colville River to non-Federally qualified subsistence users on Federal public lands (OSM 1995b). This closure was enacted to prevent non-Federally qualified subsistence users from harvesting lead animals, which may have caused the migration to move away from the area that local subsistence users hunted in Unit 26A (OSM 1995b).

In 2005, the Alaska Board of Game established a Controlled Use Area for the Anaktuvuk River drainage that prohibited the use of aircraft for caribou hunting from Aug. 15–Oct. 15. The intent of this proposal was to limit access by non-subsistence users, reduce user conflicts, and lessen the impact on caribou migration.

In 2006, the Board adopted Proposal WP06-65 which opened the area east of the Killik River and south of the Colville River to non-Federally qualified subsistence (OSM 2006). The 1995 closure was lifted for several reasons. First, due to changes in land status, lands formerly managed by BLM were transferred to Alaska Native corporations or the State of Alaska pursuant to the Alaska Native Claims Settlement Act or the Statehood Act, respectively. However, only the lands east of Anaktuvuk Pass were affected by the closure, making the closure less effective. Second, the population level was at a point where it could support both subsistence and non–subsistence uses.

The North Slope Subsistence Regional Advisory Council submitted four temporary wildlife special actions (WSA) for Units 23, 24, 26A, and 26B to change the caribou harvest regulations on Federal public lands for the 2015/2016 regulatory year starting on July 1, 2015. The Board approved Temporary Special Actions WSA15-03/04/05/06, which are similar to the changes made to State regulations by the Alaska Board of Game for the 2015/2016 regulatory year in an attempt to reverse or slow the decline of the WACH and TCH. To address two primary factors contributing to the decline, low calf survival and high adult cow mortality, restrictions to protect females with calves, a prohibition on the harvest of calves, a reduction of the harvest limit to 5 caribou per day, and shortening the cow and bull seasons were incorporated in WSA15-03/04/06/06. Some of the requested hunt areas are not included in the Special Action WSA15-03/04/05/06 because there was not sufficient time for the councils to review the proposed changes before the start of the regulatory year.

Current Events

Since Proposals WP16-37, WP16-49 and WP16-52, also requested changes to the caribou hunting regulations in Units 23, 24, and 26 an attempt was made to make the regulations as similar as possible for each Game Management Unit. The Council, as well as the other Councils affected by this proposal, will have the opportunity to review the original proposal, changes to the State caribou regulations, and OSM modifications, at the upcoming fall meeting cycle.

Biological Background

Caribou calving generally occurs during late May and early June. 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. Joly (2000) predicts that calves orphaned later in life have greater chances of surviving. Data from Russell et al (1991) suggests 50% and 75% of the calves orphaned in September and November, respectively, survived the winter (Joly 2000). Indeed, there is little evidence that calves orphaned after weaning experience strongly reduced overwintering survival rates than non-orphaned calves (Rughetti and Festa-Bianchet 2014, Joly 2000, Holand et al. 2012), although Holand et al (2012) found orphaned calves to have greater losses of winter body mass than non-orphaned calves.

The TCH, WACH, and CACH have ranges that overlap in Unit 26A (**Figure 1**) and there can be considerable mixing of herds during the fall and winter. During the early 2000s, the number of caribou wintering on the North Slope peaked at over 700,000 animals (this includes the Porcupine Caribou Herd in northeast Alaska and Northwest Territories, Canada), which may be the highest number since the 1970s. During the 1970s, there was little overlap between these four herds, but the degree of mixing seems to be increasing (Lenart 2011, Dau 2011, Parrett 2011).

Because the proposed regulatory changes for these wildlife proposals were put forward primarily due to the decline of the WACH and TCH, the focus of the biology will be on the WACH and TCH with a brief overview of the current population status of the CACH.

Central Caribou Herd

The current status of the CACH is unclear. The most recent population count, based on aerial photo census in 2013 was over 70,000 caribou, which was similar to the peak count in 2010 (Lenart 2011). However, the presence of 10 collared caribou from the Porcupine Caribou Herd (PCH) detected in the CACH could represent up to 20,000 caribou, which would indicate that the CACH may have declined by about 20% since 2010 (Lenart 2011, Caribou Trails 2014).

Teshekpuk Caribou Herd

The TCH calving and summering areas overlap with the eastern portion of the National Petroleum Reserve–Alaska (NPR–A). Most of the TCH moves toward Teshekpuk Lake in May to calve in early June. The primary calving grounds of the TCH (approximately 1.8 million acres) occur to the east, southeast and northeast of Teshekpuk Lake (Person et al. 2007, Wilson et al. 2012). From late June through July cows and bulls move to the Beaufort Sea coast from Dease Inlet to the mouth of Kogru River (Barrow to the Colville Delta), around the north and south side of the Teshekpuk Lake, and the sand dunes along the Ikpikpuk River to seek relief from insects (Carroll 2007, Parrett 2007). The narrow corridors of land to the east and northwest of the Teshekpuk Lake are important migratory corridors to insect relief areas as well (Yokel et al. 2009). River corridors are also used more during periods of insect harassment. Fall and winter movements are more variable, although most of the TCH winters on the coastal plain around Atqasuk, south of Teshekpuk Lake. However, the TCH has wintered as far south as

the Seward Peninsula, as far east as the Arctic National Wildlife Refuge, and in the foothills and mountains of the Brooks Range (Carroll 2007). In 2008/2009, the TCH used many of these widely disparate areas in a single year (Parrett 2011).

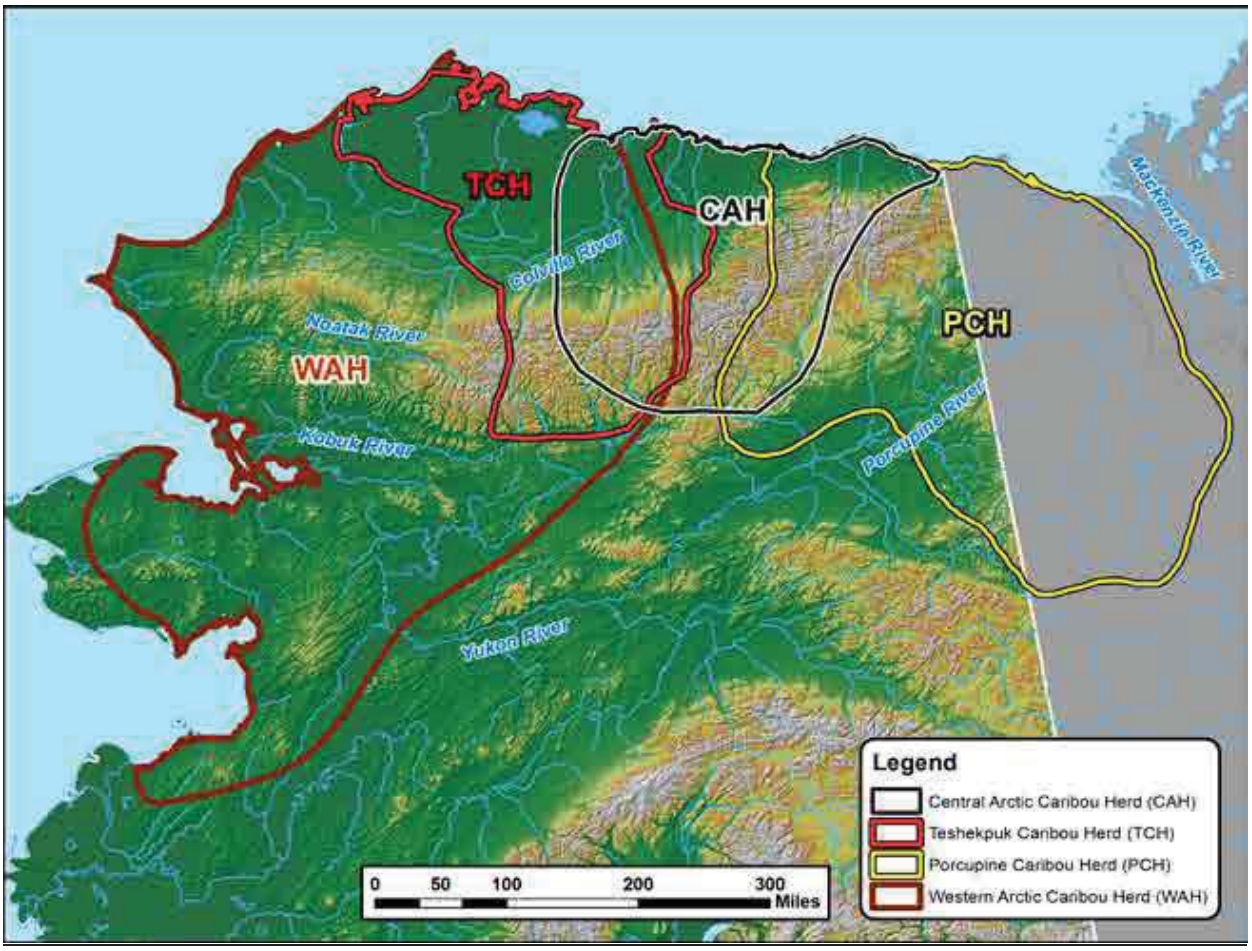


Figure 1. Herd overlap and ranges of the WACH, TCH, CACH and Porcupine caribou herds (WACH 2014).

The State manages the TCH to provide for subsistence and other hunting opportunities on a sustained yield basis, ensure that adequate habitat exists, and provide for viewing and other uses of caribou (Parrett 2011). Specific State management objectives for the TCH are as follows (Parrett 2011):

- Attempt to maintain a minimum population of 15,000 caribou, recognizing that caribou numbers naturally fluctuate.
- Maintain a harvest level of 900–2,800 caribou using strategies adapted to population levels and trends.
- Maintain a population composed of least 30 bulls per 100 cows.

- Monitor herd characteristics and population parameters (on an annual or regular basis).
- Develop a better understanding of the relationships and interactions among North Slope caribou herds.
- Encourage cooperative management of the herd and its habitat among State, Federal, and local entities and all users of the herd.
- Seek to minimize conflicts between resource development and the TCH.

Since 1984, the minimum population of the TCH has been estimated from aerial photo censuses and radio-telemetry data. Population estimates are determined by methods described by Rivest et al. (1998) which account for caribou in groups that do not have a collared animal and for missing collars. Based on these methods the TCH population increased from an estimated 18,292 caribou (minimum estimate 11,822) in 1982 to 68,932 caribou (minimum estimate 64,106) in 2008. From 2008 to 2014 the population declined by almost half to 39,000 caribou (**Figure 2**) (Parrett 2015, pers. comm.). Interpretation of population estimates is difficult due to movements and range overlap among caribou herds which results in both temporary and permanent immigration (Person et al. 2007). For example, following the 2013 census ADF&G made the decision to manage the TCH based on the minimum count because the bulk of the animals that were estimated rather than counted were with the WACH at the time of the photocensus (Parrett 2015, pers, comm).

Based on the fall composition counts in 2009 (Parrett 2011), which was considered a good year for herd separation, calf:cow ratios declined from an average of 62 calves:100 cows (range 39-80 calves:100 cows) for the 7 surveyed years between 1991 and 2000, to 18 calves:100 cows (Parrett 2009). The number of bulls declined during the same time period from 62 bulls:100 cows (range 25-98 bulls:100 cows, Parrett 2009) to 46 bulls:100 cows (Parrett 2011, 2013). In addition, the number of short–yearlings:adults based on spring composition surveys, which is a measure of recruitment, declined from an average of 20 short–yearlings:100 adults between 1999 and 2008 to 14 short–yearlings :100 adults in 2009. In 2010, the number of calves:100 cows increased from 18 in 2009 to 29 and the number of bulls:100 cows remained the same at 46 (Parrett 2013). In 2010 and 2011, the number of short–yearlings:100 adults was 15 and 13, respectively (Parrett 2013).

The annual mortality of adult radio collared females from the TCH has remained close to the long term (1991-2012) average of 14.5% (range 8–25%) (Parrett 2011, Caribou Trails 2014, Parrett 2015, pers. comm.). As the TCH has declined, calf weights declined indicating that poor nutrition may be having a significant effect on this herd (Carroll 2015, pers. comm., Parrett 2015, pers. comm.). In contrast, the body condition of individuals from the WACH which also declined dramatically, has remained relatively good, and indicates caribou are still finding enough food within their range (Caribou Trails 2014, Dau 2014).

Western Arctic Caribou Herd

The WACH, the largest herd in Alaska, has a home range of approximately 157,000 mi^2 in northwestern Alaska (**Figure 1**). In the spring, most mature cows move north to calving grounds in the Utukok Hills,

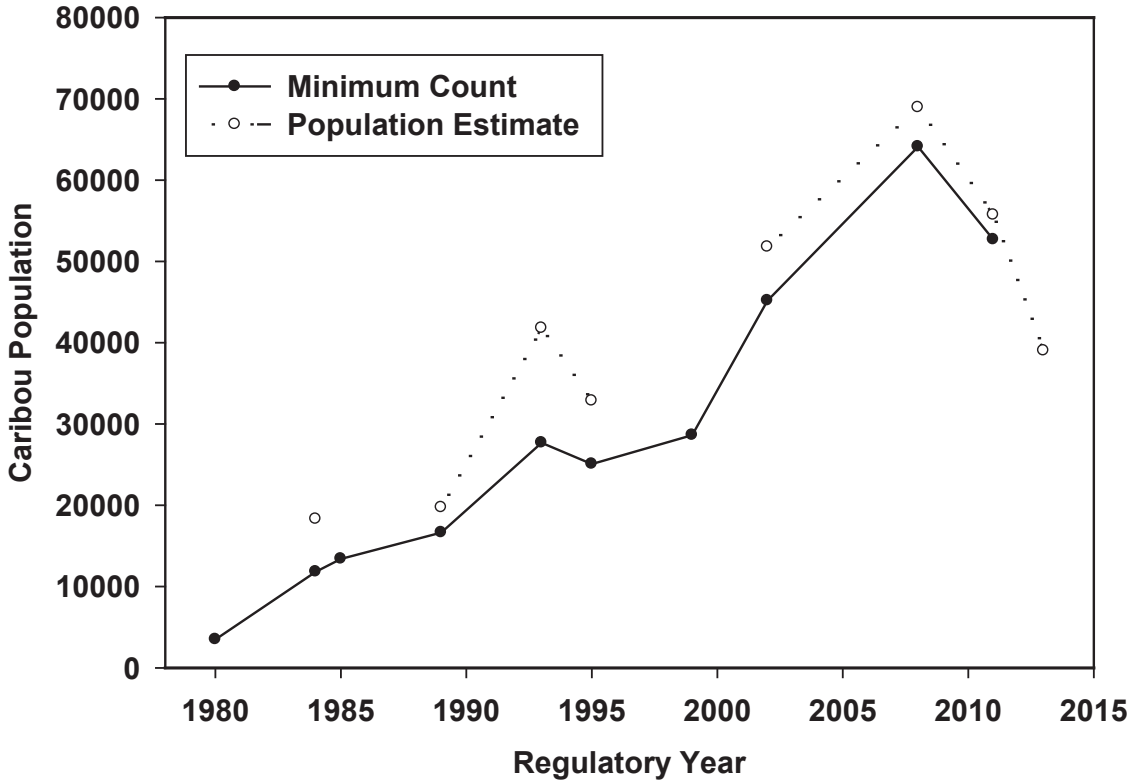


Figure 2. Minimum counts and population estimates of the Teshekpuk Caribou Herd from 1980-2014. Population estimates from 1984-2013 are based on aerial photographs of groups of caribou that contained radio–collared animals (Parrett 2011, 2013, Parrett 2015, pers. comm.).

while bulls and immature cows lag behind and move toward summer range in the Wulik Peaks and Lisburne Hills. After the calving period, cows and calves move west toward the Lisburne Hills where they mix with the remaining bulls and non-maternal cows. During the summer the herd moves rapidly to the Brooks Range. In the fall they move south toward their wintering grounds in the northern portion of the Nulato Hills. The caribou rut occurs during fall migration (Dau 2011, WACH Working Group 2011).

The State 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). Specific State management objectives for the WACH are listed in the 2011 Western Arctic Caribou Cooperative Management Plan (WACH Working Group 2011, Dau 2011) and include:

- Encourage cooperative management of the WACH and 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.

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 (**Table 1**). Potential management actions and harvest recommendations for each management level can be found in Appendix 2 of the Western Arctic Caribou herd Cooperative Management Plan (WACH 2011).

Table 1. Western Arctic caribou herd management levels using herd size, population trend, and harvest rate (WAH Working Group 2011).

	Population Trend		
Management Level and Harvest Level	Declining Low: 6%	Stable Med: 7%	Increasing High: 8%
Liberal	Pop: 265,000+ Harvest: 18,550-24,850	Pop: 230,000+ Harvest: 16,100-21,700	Pop: 200,000+ Harvest: 16,000-21,600
Conservative	Pop: 200,000-265,000 Harvest: 14,000-18,550	Pop: 170,000-230,000 Harvest: 11,900-16,100	Pop: 150,000-200,000 Harvest: 12,000-16,000
Preservative	Pop: 130,000-200,000 Harvest: 8,000-12,000	Pop: 115,000-170,000 Harvest: 8,000-12,000	Pop: 100,000-150,000 Harvest: 8,000-12,000
Critical Keep Bull:Cow ratio ≥ 40 Bulls:100 Cows	Pop: < 130,000 Harvest: 6,000-8,000	Pop: < 115,000 Harvest: 6,000-8,000	Pop: < 100,000 Harvest: 6,000-8,000

The WACH population declined rapidly in the early 1970s and bottomed out at about 75,000 animals in 1976. Aerial photo censuses have been used since 1986 to estimate population size. The WACH declined at an average annual rate of 7.1% from approximately 490,000 in 2003 to 235,000 in 2013 (Dau 2011, 2013, 2014, Caribou Trails 2014,) (**Figure 3**). Between 1982 and 2011, the WAH population was

within the liberal management level prescribed by the WAH Working Group (**Table 1**). In 2013, the WAH population estimate fell below the population threshold for liberal management of a decreasing population (265,000), slipping into the conservative management level. 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). Other contributing factors include weather (particularly fall and winter icing events), predation, hunting pressure, decline in range condition (including habitat loss and fragmentation), climate change, and disease (Dau 2013, 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 WACH because animals in the WACH, unlike the TCH, have generally maintained good body condition since the decline began. 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 WACH is routinely assessed and when caribou are in prime condition (Joly 2015, pers. comm.).

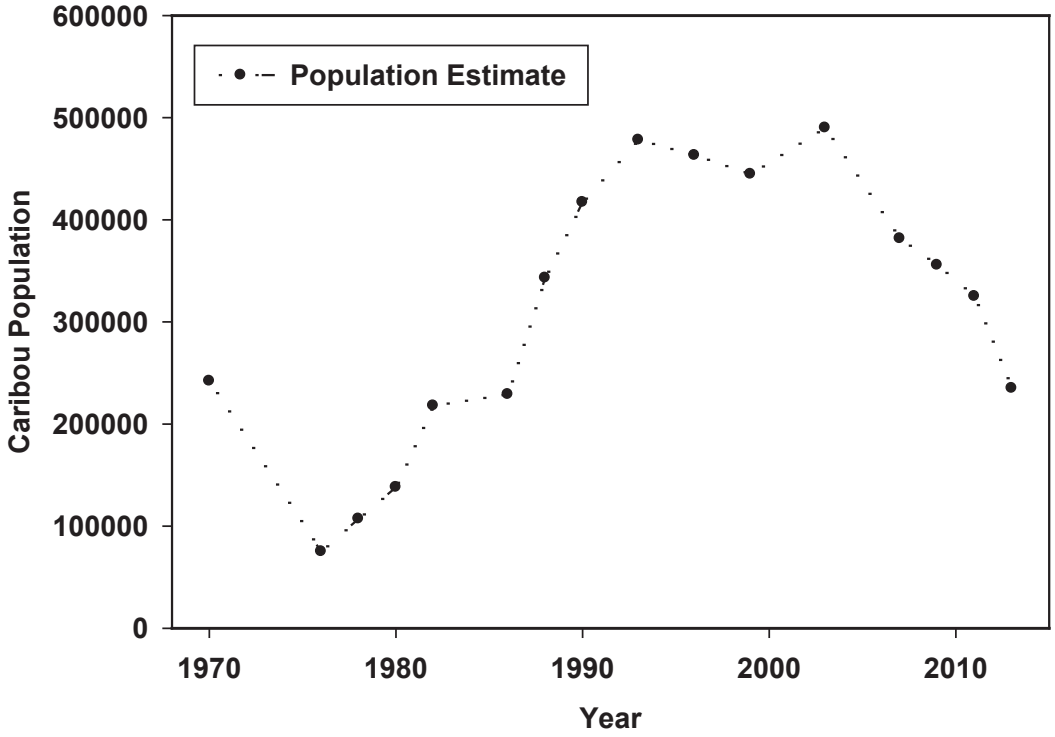


Figure 3. Maximum estimated population estimates of the Western Arctic Caribou Herd from 1970-2013. Population estimates from 1986-2013 are based on aerial photographs of groups of caribou that contained radio–collared animals (Dau 2011, 2013, 2014)

During periods of rapid population growth (1976–1982), fall calf:cow ratios were generally higher than periods of herd decline (1992–2013) (**Table 2**). The 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 (45:100 between 2004-2014) (Dau 2011, 2013, 2014). However, it should be noted that bull:cow ratios may not

accurately reflect the status in the population due to spatial and temporal segregation of cows and bulls, and because not all of the population is sampled (Dau 2011, 2013).

Table 2. Western Arctic Caribou Herd fall composition 1976 – 2014 (Dau 2011, 2013, 2014).

Regulatory Year	Total bulls: 100 cows[a]	Calves: 100 cows	Calves: 100 adults	Bulls	Cows	Calves	Total
1976/1977	63	52	32	273	431	222	926
1980/1981	53	53	34	715	1,354	711	2,780
1982/1983	58	59	37	1,896	3,285	1,923	7,104
1992/1993	64	52	32	1,600	2,498	1,299	5,397
1995/1996	58	52	33	1,176	2,029	1,057	4,262
1996/1997	51	49	33	2,621	5,119	2,525	10,265
1997/1998	49	43	29	2,588	5,229	2,255	10,072
1998/1999	54	45	29	2,298	4,231	1,909	8,438
1999/2000	49	47	31	2,059	4,191	1,960	8,210
2001/2002	38	37	27	1,117	2,943	1,095	5,155
2004/2005	48	35	24	2,916	6,087	2,154	11,157
2006/2007	42	40	28	1,900	4,501	1,811	8,212
2008/2009	45	48	33	2,981	6,618	3,156	12,755
2010/2011	49	35	23	2,419	4,973	1,735	9,127
2011/2012							
2012/2013	42	38	27	2,119	5,082	1,919	9,120
2013/2014							
2014/2015	39[b]						

[a] 40 bulls:100 cows is the minimum level recommended in the WACH Cooperative Management Plan (WACH Working Group 2011)
[b] Estimated from power point presentation presented at the WACH Working Group Meeting December 17-18, 2014 (Dau 2014)

The annual mortality rate of collared adult cows has increased, from an average of 15% from 1987-2003, to 25% from 2004–2012 (Dau 2011, 2013, 2014). Estimated mortality includes all causes of death including hunting (Dau 2011). Dau (2009) reported that rain–on–snow events and winter thaws may have contributed to the relatively high estimated mortality rates of 23% during 2008-2009 and 27% during 2009-2010. Prior to 2004-2005, estimated adult cow mortality only exceeded 20% twice during regulatory years 1992 and 1999, but has exceeded 20% in 5 of the 6 regulatory years between 2004–2010 (2004, 2005, 2007, 2008, and 2009). As the WACH declined, the percentage of mortality due to hunting 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% (estimates from slide 16, Dau 2014). In previous years the estimated hunting mortality exceeded 30% only once (Dau 2011).

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). The importance of high use areas for the TCH at Teshekpuk Lake during the summer has been well documented (Person et al. 2007, Carroll 2007, Parrett 2011, Wilson 2012, Smith et al. 2015). Presumably the importance of areas to the north, south, and east of Teshekpuk Lake during calving is due to the high concentration of sedge-grass meadows (Wilson et al. 2012). The areas around Teshekpuk Lake in the NPR–A are currently protected from oil and gas leasing in recognition of the importance of these areas for caribou, waterfowl and shorebirds (BLM 1998, Cameron et al. 2005, BLM2008, Arthur and Del Vecchio 2009).

Harvest History

From 1999–2014, the average annual harvest from the WACH was approximately 13,600 caribou (9,500-15,800) (Units 21, 22, 23, 24, and 26A) (Dau 2009, 2013, Dau 2014, pers. comm.). Local residents take approximately 94% of the caribou harvest within the range of the WACH, with residents of Unit 23 taking the vast majority of the harvest (**Figure 4**). The State of Alaska manages the WACH to maximize a harvestable surplus of animals. In recent years, as the population declined, the State's total harvestable surplus for the WACH, which is estimated as 2% of the cows and 15% of the bulls, has declined (Dau

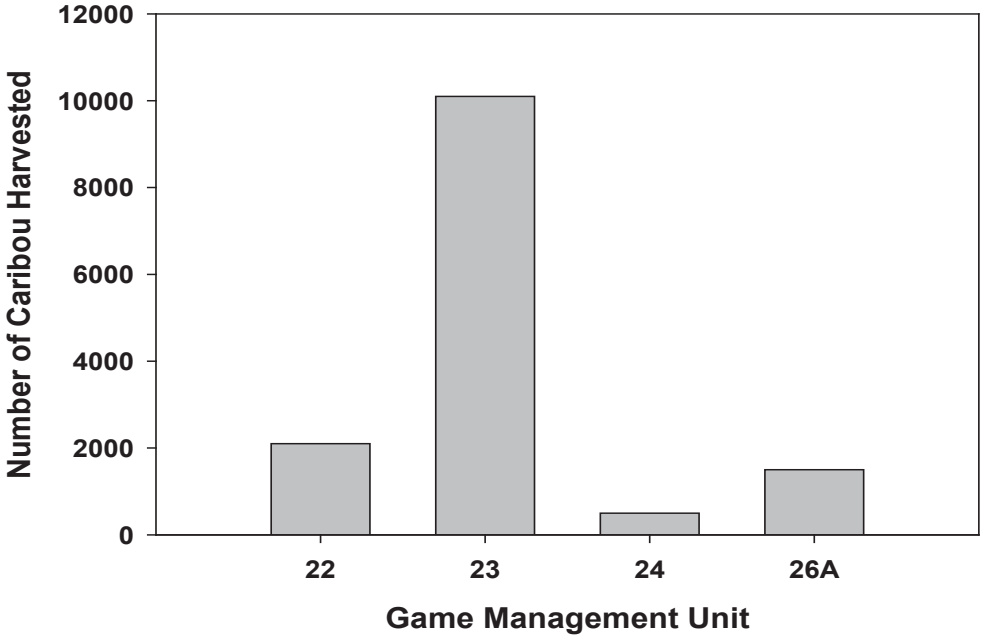


Figure 4. Average annual harvest by residents within the WACH range, RY1998–RY2012 (Dau 2014)

2011, Dau 2014, pers. comm.). Harvest from the WACH, which has remained fairly consistent since one of the factors that prompted the Alaska Board of Game to enact restrictions to WAC and TCH caribou harvest in March 2015.

The TCH supports a large subsistence harvest by Federally qualified subsistence users and a smaller harvest by non-locals and non-residents of 4,000–5,000 caribou per year (**Table 3**) (Parrett 2011, Parrett 2015, pers. comm.). Reliance on caribou from a particular herd varies by community. Weather, distance of caribou from the community, terrain, and high fuel costs are some of the factors that can affect the availability and accessibility of caribou. Residents of Atqasuk, Barrow, Nuiqsut, and Wainwright harvest caribou primarily from the TCH while residents from Anaktuvuk Pass, Point Lay, and Point Hope harvest caribou primarily from the WACH (Dau 2011, Parrett 2011). Residents of Nuiqsut, which is on the northeast corner of Unit 26A, harvest approximately 13% of their caribou from the CACH (Lenart 2011).

Table 3. Estimated caribou harvest of the Teshekpuk, Western Arctic and Central Arctic caribou herds during the 2008/2009 regulatory years by residents within Unit 26A by Federally qualified users (community population size based on 2007 estimates) (Parrett 2011, Dau 2011, Lenart 2011, Sutherland 2005). Note: Due to the mixing of the herds, annual variation in the community harvest surveys and missing data, the percentages for each community do not add up to 100%.

Community	Human population	Per capita caribou harvest[ab]	Approximate total community harvest	Estimated annual TCH harvest (%)	Estimated annual WACH harvest (%)	Estimated annual CACH harvest (%)
Anaktuvuk Pass	298	1.8	524	157 (30)	431 (82)	
Atqasuk	218	0.9	201	197 (98)	6 (2)	
Barrow	4,127	0.5	2,063	2,002 (97)	62 (3)	
Nuiqsut	396	1.1	451	388 (86)	3 (1)	58 (13)
Point Lay	226	1.3	292	58 (20)	210 (40)	
Point Hope	689	0.3	220	0	220 (100)	
Wainwright	547	1.3	695	417 (60)	48 (15)	
Total Harvest				3219	980	58

[a] Citations associated with per-capita caribou harvest assessment by community can be found in Table 5 (Parrett 2011).
[b] Sutherland (2005)

Range overlap between the three caribou herds, frequent changes in the wintering distribution of the TCH and WACH, and annual variation in the community harvest survey effort and location make it difficult to determine the proportion of the TCH, WACH and CACH in the harvest. Knowledge of caribou distribution at the time of the reported harvest is often used to estimate the proportion of the harvest from each herd. Community harvest surveys continue to be the preferred method to estimate harvest by Federally qualified subsistence users, since previous attempts to conduct registration hunts

were not effective (Georgette 1994). However, community surveys are not always reliable due to sampling issues (Braem et al. 2011, Parrett 2011). For communities where harvest surveys are not conducted or are unreliable, harvest estimates are often based on the current population estimate and previous estimates of the per capita harvest. A general overview of the relative utilization based on estimated harvest of each caribou herd for the communities from July 1, 2008 to June 30, 2010, is presented in **Table 3** (Parrett 2011, Dau 2011, and Lenart 2011). The total estimated annual harvest from the TCH during 2010/2011 regulatory year (3387 caribou) (Parrett 2015, pers. comm.) was similar to the 2008/2009 regulatory year. **(Table 3**).

Effects of the Proposal

If these Proposals are adopted, Federally qualified subsistence users would have less opportunity to harvest caribou on Federal public lands in Units 23, 24, 26A, and 26B. The caribou harvest limit in Unit 23 would be reduced from 15 per day to 5 per day and in Units 26A and 26B the harvest limit would be reduced from 10 per day to 5 per day. The reductions in the daily harvest limits and more restricted harvest seasons for bulls and cows could reduce the potential harvest opportunities for Federally qualified subsistence users when caribou are available.

The benefits of these proposed regulations for the conservation of the WACH and TCH vary. The reduction in the harvest of cows with calves as recommended in Unit 26A from Jul. 16 to Oct. 15 is likely to increase calf survival. The prohibition on the take of calves is likely to have little conservation effect because subsistence users rarely target calves. Efforts to reduce harvest of bulls and cows should help reduce the overall caribou harvest for the declining TCH and WACH populations. Since cow mortality is one of the major contributing factors to the decline of WACH and TCH, any efforts to reduce the cow mortality are recommended.

In Unit 23, that portion north of and including the Singoalik River drainage, the bull season does not start until February 1 (current State regulations), which is seven weeks later than the December 6 date recommended by the North Slope Subsistence Rural Advisory Council for the adjacent area in Unit 26A. The longer bull season in Unit 26A provides more opportunity for Federally qualified subsistence users.

Federally qualified subsistence users would have an extended cow season in the proposed hunt area compared to those users in Unit 23 remainder. Thus, Federally qualified subsistence users from locations outside of the hunt area may take advantage of this longer season resulting in increased competition with local subsistence users.

OSM Preliminary Conclusion

Support Proposal WP16-61/62/63/64 **with modification** to the modify hunt area descriptor changes for Units 23 and 24; decrease the harvest limit in Unit 23 remainder from 15 to 5 caribou per day, as well as shortening the cow and bull seasons and prohibiting the harvest of cows with calves, prohibit the harvest of cows with calves in Unit 24A and 24B north of the Kanuti River, 24C and 24 D; shorten the cow season and prohibit the harvest of cows with calves in Unit 26B; and reduce the harvest limit in Unit 26B remainder from 10 to 5 caribou per day, shorten the season, and prohibit the harvest of calves. The

language for the modified regulations was simplified to make it easier for those using the Federal Subsistence regulations.

The modified regulations should read:

WP16-61

Unit 23 – Caribou

Unit 23 – ~~*that portion north of a line from the mouth of the Singoalik River east to the boundary of the Noatak National Preserve, north to the Unit 26A boundary*~~ ***that portion north of and including the Singoalik River drainage***	***5 caribou per day as follows: however calves may not be taken*** ~~*15 caribou per day; however, cow caribou may not be taken May 16 – June 30*~~	~~*July 1 – June 30*~~
	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 as follows: however calves may not be taken***	
	5 bulls per day	***July 1 – Oct. 14*** ***Feb. 1 – June 30***
	5 cows per day; however cows accompanied by calves may not be taken Sept. 1–Oct. 14	***Sept. 1 – Mar. 31***

WP16-62

Unit 24—Caribou

Unit 24A–south of the south bank of the Kanuti River - 1 caribou		***Aug. 10 -Mar. 31***
*Unit 24**B** – that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti–Kilolitna River drainage, bounded by the southeast bank of the of the Kodosin–Nolitna Creek, then downstream along the east bank of the Kanuti–Kilolitna River to its confluence with the Kanuti River – 1 caribou*		*Aug. 10 – Mar. 31*
Unit 24 —that portion north of (and including) the Kanuti River in Units 24A and 24B and that portion north of Koyukuk River downstream from the confluence with the Kanuti River in Unit 24B to the Unit 24C boundary	***5 caribou per day as follows: however 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***
Units 24C and 24D	***5 caribou per day as follows: however 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 Sept. 1 -Oct. 14	***Sept. 1 – Mar. 31***

WP16-63

Unit 26—Caribou

Unit 26A—Caribou

Up to 5 caribou per day; however calves may not be taken~~10 caribou per day; however, cow caribou may not be taken May 16 – June 30~~	***~~July 1–June 30~~***
Bulls may be harvested;	***July 1– Oct. 14*** ***Dec. 6–June 30***
Up to 3 cows per day; however cows accompanied by calves may not be taken July 16–Oct. 15	***July 16–Mar. 15***

WP16-64

Unit 26B

Unit 26B – that portion south of 69°30' N. Lat. and west of the Dalton Highway	***5 caribou per day as follows: however-calves may not be taken***	
	Bulls may be harvested	***July 1–Oct. 14*** ***Dec. 10–June. 30***

	Cows may be harvested	***Oct. 14 – Apr. 30 ~~July 15~~***
Unit 26B remainder –	*5~~10~~ caribou per day*	*July 1 – ~~June 30~~**Apr. 30***
	Bulls may be harvested	***July 1 – Apr. 30***
	Cows may be harvested	***Oct. 14 – Apr. 30***

You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.

Justification

The Teshekpuk and Western Arctic caribou populations in northern and western Alaska have declined approximately 50% since 2008. Low calf survival and recruitment and high adult cow mortality are contributing factors to the overall population decline, with the human harvest now constituting the majority of the adult mortality. If the current harvest rates and allowance for the taking of cows accompanied by calves are allowed to continue, the population decline could be prolonged and could hamper recovery of the populations. The subsistence users and the Federal and State land managers agree that strong measures need to be taken in order to conserve the population. The Alaska Board of Game recently responded to these population concerns by adopting caribou hunting restrictions starting in the 2015/2016 regulatory year. General alignment of the State and Federal regulations will ensure that there is a coordinated conservation effort in place and assist in reducing the regulatory complexity for Federally qualified subsistence users. While these proposals, if adopted, reduce harvest opportunity for Federally qualified subsistence users, they were requested by the Council. The restrictions proposed for the WACH are also supported by management recommendations outlined in the Western Arctic Caribou Herd Management Plan (WACH Working Group 2011).

Two important conservation measures that can be taken to address the declining populations of the WACH and TCH are to increase calf survival and recruitment and reduce adult cow mortality. These proposals and recommended modifications are intended to decrease overall harvest and, more specifically, to increase the survival and recruitment of calves and to reduce adult cow mortality. With the recommended modifications, the harvest limits, shortened cow harvest seasons, and regulations to protect cows with calves during their first six months of life will be more consistent throughout Units 23, 24, 26A, and 26B.

The recommended modifications will provide more consistent regulations throughout the range of the WACH and promote a coordinated conservation effort by the Federal and State managers. Since the majority of harvest of the WACH comes from residents of Unit 23, it is important to ensure that conservation measures are in place to aid in recovery in the most effective manner possible. In addition, the proposed reduction in the harvest limit throughout Unit 23, not just hunt area north of the Singoalik River, mirrors reductions requested by the Northwest Arctic Subsistence Regional Advisory Council in its

Proposal for the 2016-2018 regulatory cycle, including proposed prohibition against taking cow caribou accompanied by calves (WP16-49).

Modification of the hunt area descriptor in Unit 24B, north of the Kanuti river, clarifies which parts of Unit 24B are included in the regulations. The State's hunt area descriptor for Unit 24B is incomplete and leaves that portion north of the Koyukuk River downstream from the confluence with the Kanuti River in an ambiguous management unit.

The modified opening date of Dec. 6 for caribou in Unit 26A was specifically requested by the NSRAC as bull caribou are considered edible by then. This modification provides an additional three weeks of harvest opportunity to Federally qualified subsistence users.

The change in the bull season in Unit 26B from the proposed May 16-Oct. 10 (current State regulations) to the modified Dec. 10-Oct. 14 aligns with the bull season requested by the NSRAC in WP16-64. The proposed season dates (current State regulations) prohibited the take of bulls during late winter and early spring, which is unnecessarily restrictive. The modified bull season dates prohibit the take of bulls during rut when their meat is inedible.

The change in the cow season for Unit 26B, south of 69°30 N. lat. west of the Dalton Highway, from the proposed July 1-Oct. 10 (current State regulations) to the modified Oct. 14-Apr. 30 affords better protection for cows and cows with calves than the newly adopted State regulations. The proposed season allowed the take of cows when calves are still less than 6 months old, which may reduce recruitment and prohibited the take of cows in late winter and early spring, which is unnecessarily restrictive. The change in the harvest limit for Unit 26B from 5 caribou/season (current State regulations) to 5 caribou/day provides more harvest opportunity to Federally qualified subsistence users, aligns with the harvest limit proposed by the NSRAC (WP16-64), and is more consistent with the harvest limits of other units. Reduction of the caribou harvest limit from 10 to 5 caribou per day for Unit 26B remainder reduces regulatory complexity between hunt areas in the subunit.

These proposed caribou harvest regulation changes generally track with the State's regulations but they are not in full alignment. These conservation efforts will provide an opportunity to evaluate the effectiveness of reducing the caribou harvest in slowing down or reversing the population declines in the TCH and WACH.

LITERATURE CITED

Arthur, S.M. and P.A. Del Vecchio. 2009. Effects of oilfield development on calf production and survival in the Central Arctic Caribou Herd. Alaska Department of the Fish and Game, Federal Aid in Wildlife Restoration. Final Research Technical Report. Grants W–27–5, and W–33–1 through W–33–4, Project 3.46. ADF&G, Juneau, AK.

Braem, N.M., S. Pedersen, J. Simon, D. Koster, T. Kaleak, P. Leavitt, J. Paktotak, and p. Neakok. 2011. Monitoring of caribou harvests in the National petroleum Reserve in Alaska: Atqusuk, Barrow, and Nuiqsut, 2003-2007. Alaska Department of the Fish and Game, Division of the Subsistence Technical Paper No 361, ADF&G, Fairbanks, AK

Bureau of Land Management. 1998. Northeast National Petroleum Reserve–Alaska: final integrated activity plan/environmental impact statement. Department of Interior, BLM, Anchorage, AK.

Bureau of Land Management. 2008. Northeast National Petroleum Reserve–Alaska: supplemental integrated activity plan/environmental impact statement. Department of Interior, BLM, Anchorage, AK.

Cameron, R.D., W.T. Smith, R.G. White, B. Griffith. 2005. Central Arctic Caribou and petroleum development: distributional, nutritional, and reproductive implications. Arctic 58:1-9.

Caribou Trails 2014. News from the Western Arctic Caribou Herd Working Goup. Western Arctic Caribou Herd Working Group, Nome, AK. Issue 14. http://www.adfg.alaska.gov/static/home/library/pdfs/wildlife/caribou_trails/caribou_trails_2014.pdf. Retrieved January 20, 2015

Carroll, G. 2007. Unit 26A, Tehekpuk caribou herd. Pages 262-283 in P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2004–30 June 2006. ADF&G, Project 3.0. Juneau, AK.

Carroll, G. M. 2015. Wildlife Biologist. Personal communication. email, in-person. ADF&G. Barrow, AK.

Dau, J. 2009. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A in Caribou survey–inventory management report. Pages 176-239 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2006– June 30, 2008. ADF&G. Juneau, AK

Dau, J. 2011. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 187-250 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2008–30 June 30, 2010. ADF&G. Juneau, AK.

Dau, J. 2013. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 201-280 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2010–30 June 30, 2012. ADF&G. Juneau, AK.

Dau, J. 2014. Wildlife Biologist. Personal communication. Information, including a power point presentation, presented at the Western Arctic Caribou Herd (WACH) Working Group Meeting, December 17-18,2014. Anchorage, Alaska. ADF&G. Nome, AK.

FWS. 1995a. Staff analysis P97–051. Pages 334–339 *in* Federal Subsistence Board Meeting Materials April 10–April 14, 1995. Office of Subsistence Management, FWS. Anchorage, AK. 488 pp.

FWS. 1995b. Staff analysis P95–062. Pages 399–404 *in* Federal Subsistence Board Meeting Materials April 10–April 14, 1995. Office of Subsistence Management, FWS. Anchorage, AK. 488 pp.

FWS. 1995c. Staff analysis P95–064/065. Pages 411–417 *in* Federal Subsistence Board Meeting Materials April 10–April 14, 1995. Office of Subsistence Management, FWS. Anchorage, AK. 488 pp.

FWS. 1997. Staff analysis P97-066. Pages 17–33 *in* Federal Subsistence Board Meeting Materials April 7–April 11, 1997. Office of Subsistence Management, FWS. Anchorage, AK. 1,034 pp.

FWS. 2000a. Staff analysis P00–053. Pages 12–22 *in* Federal Subsistence Board Meeting Materials May 2–May 4,

2000. Office of Subsistence Management, FWS. Anchorage, AK. 661 pp.

FWS. 2000b. Staff analysis P00–044. Pages 29–38 *in* Federal Subsistence Board Meeting Materials May 2–May 4, 2000. Office of Subsistence Management, FWS. Anchorage, AK. 661 pp.

FWS. 2006. Staff analysis WP06-65. Pages 520–528 *in* Federal Subsistence Board Meeting Materials March 16–March 18, 2006. Office of Subsistence Management, FWS. Anchorage, AK. 579 pp.

Georgette, S. 1994. Summary of Western Arctic Caribou Herd overlays (1984-1992) and comparison with harvest data from other sources. Unpublished manuscript. ADF&G, Division of Subsitence, Fairbanks, AK. 26 pp.

Holand, O., R.B. Weladji, A. Mysterud, K. Roed, E. Reimers, M. Nieminen. 2012. Induced orphaning reveals post-weaning maternal care in reindeer. European Journal of Wildlife Research. 58: 589-596.

Jandt. R.R. 1998. Ray Mountain caribou: Distribution, movements, and seasonal use areas, 1994-1997. BLM–Alaska Open File Report 67. Anchorage, AK. 39pp.

Joly, K. 2000. Orphan Caribou, *Rangifer tarandus*, Calves: A re-evaluation of overwinter survival data. The Canadian Field Naturalist. 114: 322-323.

Joly, K. 2015. Wildlife Biologist, Gates of the Arctic National Park and Preserve. Personal communication. email NPS. Fairbanks, AK.

Joly, K., R.R. Jandt, C.R. Meyers, and J.M. Cole. 2007. Changes in vegetative cover on the Western Arctic herd winter range from 1981–2005: potential effects of grazing and climate change. Rangifer Special Issue 17:199-207.

Lenart, E. A. 2011. Units 26B and 26C caribou. Pages 315-345 *in* P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. ADF&G. Project 3.0. Juneau, AK.

Miller, F.L. 2003. Caribou (*Rangifer tarandus*). Pages 965-997 *in* Feldhamer, B.C. Thompson, and J.A. Chapman, *eds.* Wild Mammals of North America- Biology, Management, and Conservation. John Hopkins University Press. Baltimore, Maryland.

Parrett, L.S. 2007. Summer ecology of the Teshekpuk Caribou Herd. M.S. Thesis. University of Alaska, Fairbanks. Fairbanks, AK. 161 pp.

Parrett, L.S. 2009. Unit 26A, Teshekpuk caribou herd. Pages 246-278 in P. Harper, editor. Caribou management report of survey and inventory activities 1July 2006–30 June 2008. ADF&G, Project 3.0 Juneau, AK.

Parrett, L.S. 2011. Units 26A, Teshekpuk caribou herd. Pages 283-314 *in* P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. ADF&G. Project 3.0. Juneau, AK.

Parrett, L.S. 2013. Units 26A, Teshekpuk caribou herd. Pages 314-355 *in* P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2010–30 June 2012. ADF&G. Species Management Report. ADF&G/DWC/SMR-2013-3, Juneau, AK.

Parrett, L.S. 2015. Wildlife Biologist. Personal communication. email ADF&G. Fairbanks, AK.

Person, B.T., A.K. Prichard, G.M. Carroll, D.A. Yokel, R.A. Suydam, and J.C. George. 2007. Distribution and

movements of the Teshekpuk Caribou Herd 1990-2005: Prior to oil and gas development. Arctic 60(3):238-250.

Rivest, L.P., S. Couturier, and H. Crepeau. 1998. Statistical methods for estimating caribou abundance using post–calving aggregations detected by radio telemetry. Biometrics 54:865-876.

Rughetti, M., M. Festa-Bianchet. 2014. Effects of selective harvest of non-lactating females on chamois population dynamics. Journal of Applied Ecology. 51: 1075-1084.

Russell, D.E., S.G. Fancy, K.R. Whitten, and R.G. White. 1991. Overwinter survival of orphan caribou, *Rangifer tarandus*, calves. The Canadian Field Naturalist. 105(1):103-105.

Smith, M, E. Witten, and W. Loya. 2015. http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/alaska/explore/alaska-caribou-herd-analysis.pdf Accessed April 2, 2015.

Sutherland, R. 2005. Harvest estimates of the Western Arctic Caribou Herd, Alaska. Proceedings of the 10th North American Caribou Workshop, May 4-6, 2004. Girdwood, AK. Rangifer Special Issue:16:177-184.

Taillon, J., V. Brodeur, M. Festa-Bianchet, S.D. Cote. 2011. Variation in body condition of migratory caribou at calving and weaning: which measures should we use? Ecoscience. 18(3): 295-303.

Western Arctic Caribou Herd Working Group. 2011. Western Arctic Caribou Herd Cooperative Management Plan – Revised December 2011. Nome, AK 47 pp.

Wilson, R.R., A.K. Prichard, l.S. Parrett, B.T. Person, G.M. Carroll, M.A. Smith, C.L. Rea, and D.A. Yokel. 2012. Summer resource selection and identification of important habitat prior to industrial development for the Teshekpuk Caribou herd in Northern Alaska. PLOS ONE 7(11): e48697.

Yokel, D.A., A.K. Prichard, G. Carroll, L. Parrett, B. Person, C. Rea. 2009. Teshekpuk Caribou Herd movement through narrow corridors around Teshekpuk Lake, Alaska, Alaska Park Science 8(2):64-67.

WRITTEN PUBLIC COMMENTS

Miki & Julie Collins
ALASKAN FREELANCE WRITERS/PHOTOGRAPHERS
P.O. BOX 69
LAKE MINCHUMINA, ALASKA 99757

RECEIVED
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BY Postmark 5/26/2015

Federal Subsistence Board
Office of Subsistence Management
1011 E. Tudor Road, MS-121
Anchorage
AK 99503-6199

May 14, 2015

Hi,

My comments on the 2016-2018 Wildlife Proposals:

Quite a few of the proposals align State and Federal regulations. Unless contraindicated for sound biological reasons, I support al of these. It is incredibly onerous to keep track of what-is-allowed-where-and-how-and-when, and everything you can do to help ease this burden would be appreciated by all of us. I feel very strongly about this. Reg's have become ***much*** too complicated. I support WP 16-41 for a similar reason; it does not mach sense to pay hundreds of dollars in air fare to fly to Fairbanks to get your horns seals. In some cases (e.g. WP 16-57) I only support it if fur remains prime that late in the year.

Just in general I support simplified reg's and more liberal seasons when populations are strong, and also support limiting the take (e.g.WP16-63) when populations are low or stressed in that area. I also in most situations support allowing traditional hunting methods. I am however pretty ambivalent about bear baiting because of the danger it can pose to other hunters bumbling blithely through the area, and the possibility of habituating bears.

Most of the proposals were not specific to my area so I hope you get some input from folks more familiar. Please keep in mind that usually local hunters and trappers know more about the critters and conditions in their areas than you-all do.

Thanks,

Miki Collins

WP16–65 Executive Summary	
General Description	Proposal WP16–65 requests that delegated authority be given to the refuge to announce annual harvest quotas, announce the number of permits to be issued and to open and close the season for moose in Units 26B and 26C. *Submitted by the Arctic National Wildlife Refuge.*
Proposed Regulation	**Units 26B remainder and 26C—Moose** *Units 26B, remainder and 26C—1 moose by Federal registration permit by residents of Kaktovik only. The harvest quota* ***will be announced annually by the Manager of the Arctic National Wildlife Refuge.*** *is ~~5 moose. You may not take a cow accompanied by a calf in Unit 26B. Only 5 Federal registration permits will be issued.~~* — *July 1 – June 30* *Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations.*
OSM Preliminary Conclusion	**Support with modification** create a may–be–announced season; remove regulatory language referencing harvest quotas and delegate authority to determine annual quotas; set opening and closing season dates; and the number of Federal permits to be issued via a delegation of authority letter only (**Appendix 1**). **Units 26B remainder and 26C—Moose** *Units 26B, remainder and 26C—1 moose by Federal registration permit by residents of Kaktovik only.~~ The harvest quota is 5 moose. You may not take a cow accompanied by a calf in Unit 26B. Only 5 Federal registration permits will be issued.~~* — *~~July 1 – June 30~~* ***May be announced*** *Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations*
North Slope Regional Advisory Council Recommendation	

WP16–65 Executive Summary	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP16-65

ISSUE

Proposal WP16-65, submitted by the Arctic National Wildlife Refuge, requests that delegated authority be given to the refuge to announce annual harvest quotas, announce the number of permits to be issued and to open and close the season for moose in Units 26B and 26C.

DISCUSSION

The proponent states that moose surveys conducted in April 2014 by the U.S. Fish and Wildlife Service (FWS) and the Alaska Department of Fish and Game (ADF&G) indicated a 50% reduction in the moose population since 2011 on the coastal plain of Unit 26C and poor recruitment in Units 26B remainder and 26C. In response to declines in population and recruitment, the moose season in Units 26B remainder and 26C was closed under Federal regulations for the 2014/2015 regulatory year. Surveys conducted in April 2015 continued to show low moose numbers. The proponent states that the moose population is no longer able to support existing harvest quota of 5 moose and that it is necessary to close the 2015/2016 season due to conservation concerns.

Existing Federal Regulation

Units 26B remainder and 26C—Moose

Units 26B, remainder and 26C—1 moose by Federal registration permit by residents of Kaktovik only. The harvest quota is 5 moose. You may not take a cow accompanied by a calf in Unit 26B. Only 5 Federal registration permits will be issued.	*July 1–June 30*
Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations	

Proposed Federal Regulation

Units 26B remainder and 26C—Moose

Units 26B, remainder and 26C—1 moose by Federal registration permit by residents of Kaktovik only. The harvest quota ***will be announced annually by the Manager of the Arctic National Wildlife Refuge.*** *~~is 5 moose. You may not take a cow accompanied by a calf in Unit 26B. Only 5 Federal registration permits will be issued.~~*	*July 1 – June 30*
Federal public lands are closed to the taking of moose except by a	

Kaktovik resident holding a Federal registration permit and hunting under these regulations.

Existing State Regulations

Unit 26B—Moose

Unit 26B	*No open season*

Unit 26C—Moose

Unit 26C	*No open season*

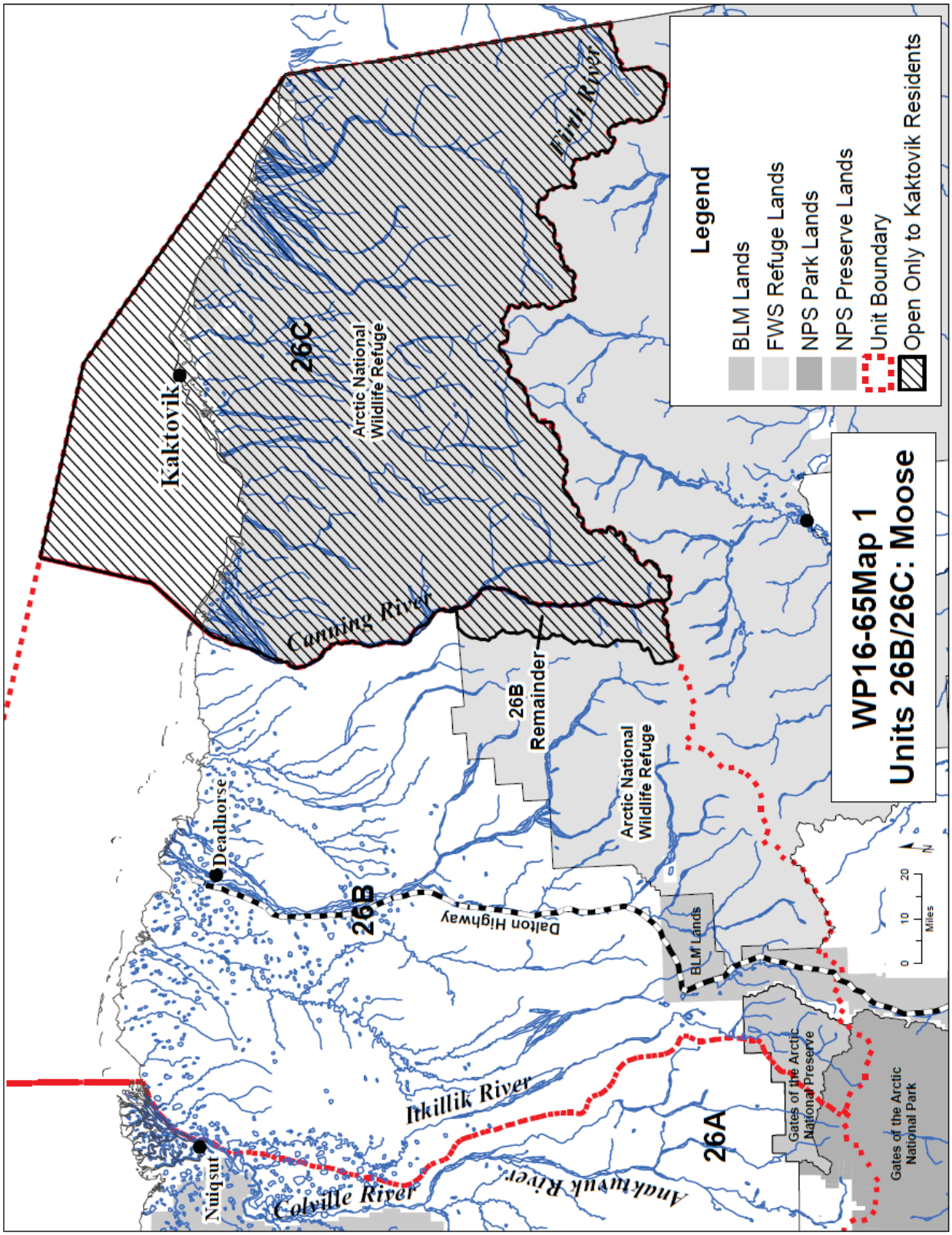
Extent of Federal Public Lands

Federal public lands comprise approximately 98% of Unit 26C and consist of 100% FWS managed lands.

Federal public lands comprise approximately 29% of Unit 26B and consist of 23% FWS managed lands, 4% Bureau of Land Management (BLM) managed lands, and 3% National Park Service (NPS) managed lands (**See Unit 26 Map and Map 1**).

Customary and Traditional Use Determinations

Residents of Unit 26 (except the Prudhoe Bay–Deadhorse Industrial Complex), Anaktuvuk Pass, and Point Hope have a positive customary and traditional use determination for moose in Unit 26. Federal public lands in Unit 26B remainder and Unit 26C were closed to non-Federally qualified users and those with recognized customary and traditional uses except the residents of Kaktovik. The prioritization of Kaktovik residents over other users was established through an Alaska National Interest Lands Conservation Act (ANILCA) Section 804 analysis in Proposal WP04-86.


WP16-65Map 1
Units 26B/26C: Moose
Legend
BLM Lands
FWS Refuge Lands
NPS Park Lands
NPS Preserve Lands
Unit Boundary
Open Only to Kaktovik Residents
Kaktovik
26C
Arctic National Wildlife Refuge
Canning River
Firth River
26B Remainder
Arctic National Wildlife Refuge
Deadhorse
26B
Dalton Highway
BLM Lands
Itkillik River
Nuiqsut
Colville River
Anaktuvuk River
26A
Gates of the Arctic National Preserve
Gates of the Arctic National Park
0 10 20
Miles
N

Regulatory History

Federal and State moose seasons in Units 26B and 26C were closed in 1996 due to a low moose population following declines in the early 1990s (Mauer 1997, Lenart 2010). The declines were probably due to a combination of factors including limited habitat at the northern limits of their range, weather, predation by wolves and brown bears, disease, and possibly insect harassment (Lenart 2008).

The Federal closure was temporarily lifted in 2003, when the Federal Subsistence Board (Board) approved a modification of Special Action WSA03-04 to allow residents of Kaktovik to harvest one moose in the combined Units 26B and 26C for their Thanksgiving feast and one moose for their Christmas feast; however, only one moose could be harvested in Unit 26C (FWS 2003).

In 2004, the Board adopted Proposal WP04-86b with modification to allow a total harvest quota of 3 moose (2 bulls and 1 moose of either sex) in Units 26B and 26C with the restrictions that no more than 2 bulls and no cows could be harvested in Unit 26C. Proposal WP04-86 included an ANILCA Section 804 analysis (WP04-86a) which the Board used to give priority to residents of Kaktovik to harvest moose in Units 26B and 26C (FWS 2004).

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

In 2007, the Board adopted Proposal WP07-63 with modification to lift the closure of Federal public lands to non-Federally qualified subsistence users in the portion of Unit 26B outside of the Canning River drainage based on increasing moose numbers (FSB 2007). The Board retained the closure of Federal public lands in Unit 26C and areas within the Canning River drainage in Unit 26B (now called Unit 26B remainder), except for residents of Kaktovik (FWS 2007).

Proposal WP08-54 requested a modification of the moose harvest quota in Unit 26C to 5 moose (4 bulls and 1 of either sex) with a shorter harvest season from Jul. 1 to Dec. 31 versus July 1 to Mar. 31 for Kaktovik residents in Unit 26C. The proposal also requested lifting the closure of Federal public lands in Unit 26B remainder (FWS 2008). The Board adopted the proposal with modification to keep the closure in place, except for residents of Kaktovik, but changed the harvest quota from 3 moose (2 bulls and 1 of either sex) to 3 moose (2 antlered bulls and 1 of either sex) (FSB 2008). Changing the harvest limit to antlered bulls was done to protect cows from being harvested later in the season when bulls have typically shed their antlers. The restriction of harvesting a cow accompanied by a calf was retained for Units 26B remainder and 26C and no more than two antlered bulls could be taken from Unit 26C.

In March 2012, the Alaska Board of Game adopted Proposal 174A to establish a moose season in a portion of Unit 26C which includes the Firth River, Mancha Creek and the Upper Kongakut River drainages; however, there has been no State hunt because the area consists of Federal public lands that

were closed to the harvest of moose, except by residents of Kaktovik.

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

In March 2013, the Alaska Board of Game, by Emergency Order 03-03-13, authorized a general moose season in Unit 26B, excluding the Canning River drainage, when hunting conditions are favorable for up to 14 days during the period February 15–April 15. It was thought that the population of approximately 500 moose in Unit 26B could sustain a harvest quota of 15 bull moose, including the additional 4 that might be harvested under State regulations during the general hunt through the Emergency Order (ADF&G 2013). In Unit 26B State lands are closer to the village of Kaktovik than Federal public lands in Unit 26B remainder, thus making it easier for Kaktovik residents to harvest additional moose close to the village without having to travel long distances to Federal land.

On April 3, 2013, the Board approved Emergency Special Action WSA12-12 with modification to allow Kaktovik residents to harvest one additional moose in Unit 26B remainder and to extend the season through April 14, 2013.

In April 2014 the Board adopted Proposal WP14-54 which requested an increase to the harvest quota for moose from 3 to 5 moose, to allow for the harvest of cows and cows with calves in Unit 26C, and to lengthen the season in Units 26B remainder and 26C from July 1–Mar. 31to a year-round season (July1 – June 30) (FWS 2014b).

In May 2014, the Alaska Board of Game reduced bag limits and season dates for resident moose hunts in Unit 26A and 26B in response to low population numbers and poor recruitment. An Emergency Order (05-05-14) closed the general season hunt in Unit 26B and closed drawing permits for moose by residents and nonresidents in Unit 26A and 26B for the 2014/2015 regulatory year (ADF&G 2014b). The seasons were closed to allow for population recovery.

Due to the population decline on the North Slope, the moose season in Units 26B remainder and 26C were closed by Temporary Special Action WSA14-02 in 2014/2015 (FWS 2014c).

Current Events

The Board approved Temporary Special Action WSA15-08 to close the moose season in Units 26B remainder and 26C for 2015/2016 regulatory year. This request, submitted by the Arctic National Wildlife Refuge was in response to the continued low moose numbers along the coastal plain of Unit 26C and 26B remainder. Surveys conducted in April 2014 by the Arctic National Wildlife Refuge and the ADF&G indicate that the North Slope moose populations in the affected area have declined by approximately 50% since 2011. The temporary closure to subsistence uses of this moose population is necessary to assure the continued viability of the populations as mandated under Alaska National Interest

Lands Conservation Act.

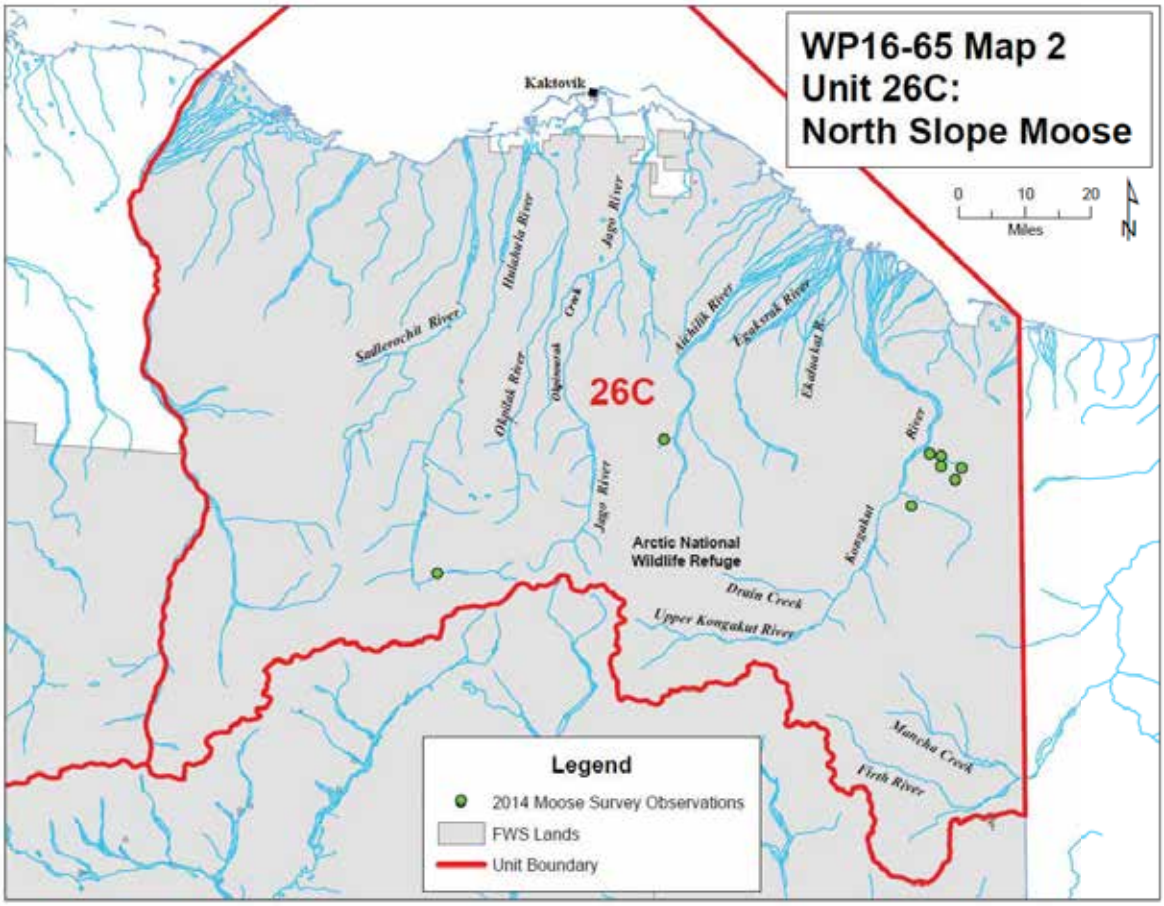
Biological Background

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

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

Data from surveys conducted by ADF&G and the USFWS suggest that a significant decline in moose populations north of the Brooks Range occurred during 2012–2014. Survey results indicated that there has been approximately a 50% reduction of moose since 2011 in Unit 26A and in Unit 26B. The number of moose counted declined from approximately 400 moose in 2013 to 104 in 2015 (ADF&G 2014a, Lenart 2015, pers. comm). Although Unit 26A is west of the area affected by this Special Action request, it documents widespread declines in moose populations throughout the North Slope. In Unit 26B remainder the number of moose counted declined from 176 in 2013 to 57 in 2014 (no short yearlings) (Lenart 2014 pers. comm.).

In April 2014, FWS conducted moose surveys in Unit 26C (**Map 2**) and found 23 adult moose no short yearlings (11 month olds), which is approximately 50% of the 10 year average of moose counted since 2003 (Wald 2014).



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

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

- Unit 26C – maintain a population of at least 150 moose with short yearlings comprising at least 15% (3-year average) of the population.

- Maintain bull:cow ratios of at least 35 bulls:100 cows when hunting seasons are open for Unit 26B and Unit 26C.

A comprehensive moose survey has not been conducted for Units 26B and 26C; however, smaller scale minimum counts have been conducted in areas where moose concentrate to assess population trends. These trend counts account for a large percentage of the moose in the units as habitat is limited in the region (Lenart 2010).

The moose population in the eastern portion of Unit 26B, including the Canning River, rebounded from low levels of approximately 150 in 1998–2000 to 335 moose in 2005 (**Figure 1**). During that period, harvest was limited in Unit 26B due to State and Federal harvest closures enacted in 1996. A limited season for Kaktovik residents was opened under Federal regulations in 2004. The harvest closure on Federal public lands in Unit 26B was lifted in 2007, except for the Canning River drainage which remained open only to Kaktovik residents. The moose population in eastern Unit 26B has subsequently declined following peak counts in 2005–2008 (**Figure 1**). The estimated total population observed in 2014 and 2015 was 109 and 104 moose respectively (Lenart 2014, pers. comm., Lenart 2015, pers. comm.). The composition of short yearlings, which represents a measure of recruitment in the population, averaged 16% from 2005–2008, 9% from 2009 to 2012, 0% in 2014, and 4% in 2015 (Lenart 2015, pers. comm.).

The North Slope population in Unit 26C was surveyed every two years between 2003 and 2014 by Arctic National Wildlife Refuge staff (Wald 2014). This population occurs on the Coastal Plain from the Canadian border to the Canning River and from the Beaufort Sea coast to the foothills of the Brooks Range. Moose are usually concentrated in the drainages of the Sadlerochit, Hulahula, Okpilak, Okpirourak, Jago, Aichilik, Egaksrak, Ekaluakat, and the lower part of the Kongakut rivers (Wald 2014) (**Map 2**). Twenty three adults and no short-yearlings were observed during surveys conducted in April, 2014. In 2015, 36 moose were observed; 28 in the Kongakut drainage, 3 in the Egaksrak drainage, 3 in the Sadlerochit drainage, and 2 in the Hulahula drainage (Wald 2015, pers. comm.). The number of calves increased from 0 in 2014 to 5 in 2015. Based on trend counts between 2003 and 2015, the North Slope population was at low but the numbers were relatively stable until 2011, then declined from 2011–2014 before increasing slightly in 2015 (**Figure 2**).

Harvest History

Harvest quotas for North Slope moose populations are currently determined using a 3% harvest rate (preferably bulls only) (Lenart 2013, pers comm., Wald 2013, pers. comm.). Moose harvest on the affected Federal public lands in Units 26B and 26C has been limited to residents of Kaktovik since 2004, with up to three permits issued annually and a combined harvest quota for Units 26B remainder and 26C of 3 moose. Since 2004, 9 bull moose have been reported harvested, with an average of 1 moose harvested per year (**Table 1**). No additional moose were taken by Kaktovik residents in Unit 26B remainder during the two week extension under Emergency Special Action WSA12-12.

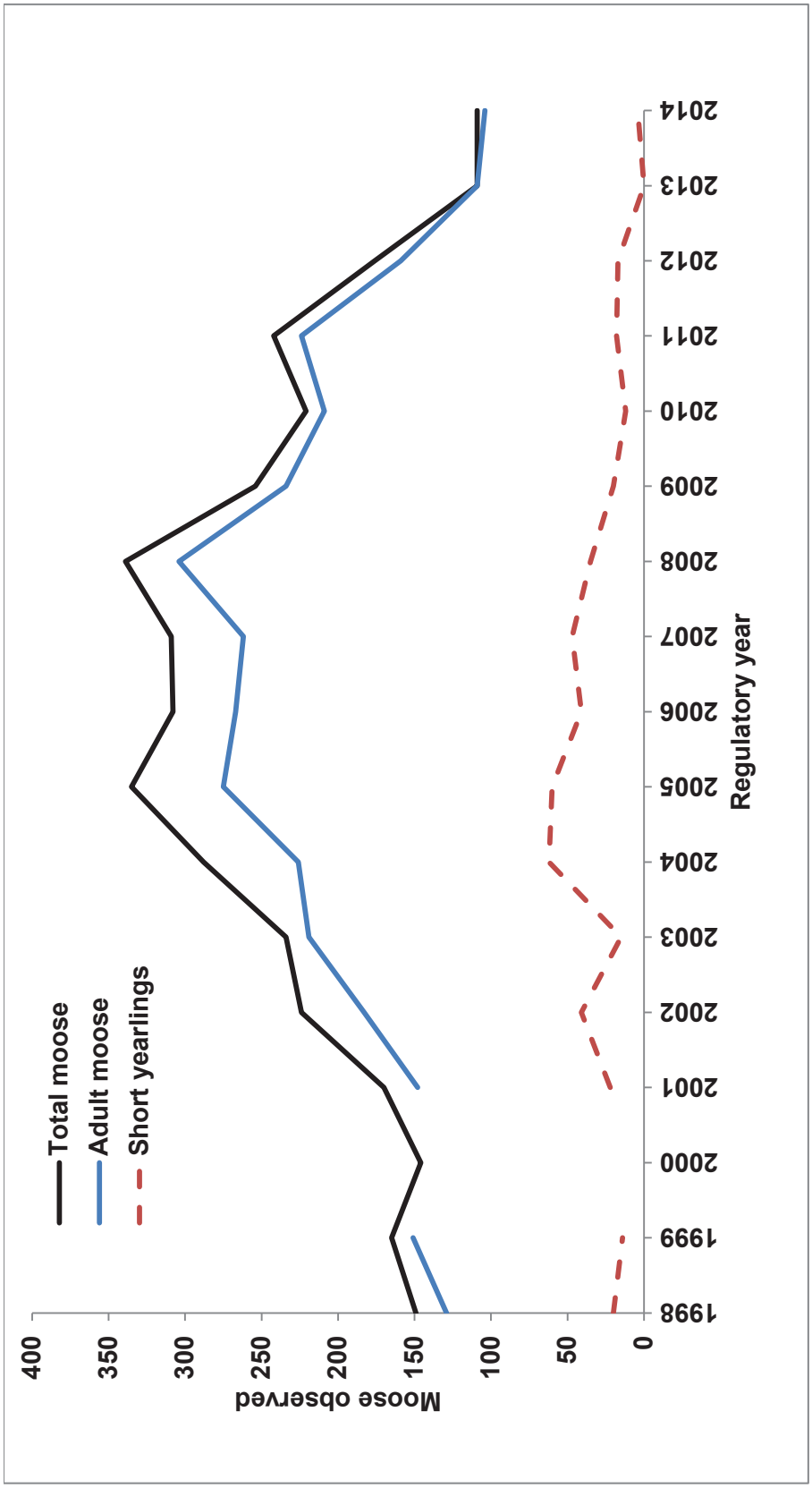


Figure 1. Aerial composition survey counts of moose in Unit 26B, east of the Sagavanirktok River and including the Canning River. Surveys were conducted in regulatory years 1998/1999 to 2013/2014 and moose presented as adults or short yearlings (11–month olds) (Lenart 2014 pers. com.).

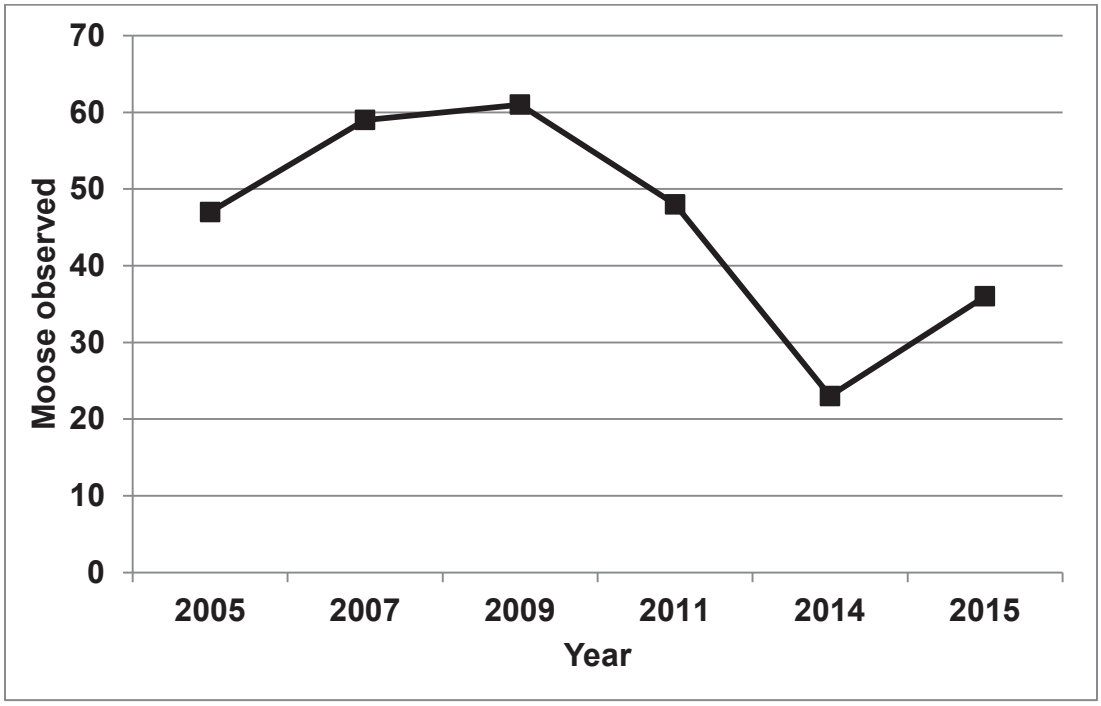


Figure 2. Moose observed during aerial surveys of trend count areas, conducted every other year by the U.S. Fish and Wildlife Service, for the North Slope Population of Unit 26C, 2003–2014 (Wald 2011, 2014).

Table 1. Federal registration permits issued and used by residents of Kaktovik to harvest moose in Units 26B and 26C (OSM 2015, Twitchell 2013, pers. comm.). Federal public lands in Unit 26B remainder and 26C are currently closed to the harvest of moose, except by residents of Kaktovik. Up to three permits are issued annually.

Year	Permits issued	Permits used	Harvest
2004/2005	3	1	1
2005/2006	3	2	2
2006/2007	3	2	2
2007/2008	3	- [a]	- [a]
2008/2009	3	2	1
2009/2010	3	2	- [a]
2010/2011	2	1	1
2011/2012	3	2	0
2012/2013	2	2	2
2013/2014	2	0	0
2014/2015	- [a]	- [a]	- [a]

[a] Data not available for the report.

Effects of the Proposal

If this Proposal is adopted, it would delegate authority to the Arctic National Wildlife Refuge Manager to announce annual harvest quotas, announce the number of permits to be issued and to open and close the Federal season for moose in Units 26B and 26C. Given recent population surveys, it is likely that harvest opportunities will be reduced since the moose population is no longer able to sustain any harvest quota. Giving the Federal manager delegated authority to adjust hunt parameters should help slow or reverse the overall decline in the moose population.

OSM PRELIMINARY CONCLUSION

Support Proposal WP16-65 **with modification** to: create a may–be–announced season; remove regulatory language referencing harvest quotas and delegate authority to determine annual quotas; set opening and closing season dates; and the number of Federal permits to be issued via a delegation of authority letter only (**Appendix 1**).

The modified regulations should read:

Units 26B remainder and 26C—Moose

Units 26B, remainder and 26C—1 moose by Federal registration permit by residents of Kaktovik only.~~The harvest quota is 5 moose. You may not take a cow accompanied by a calf in Unit 26B. Only 5 Federal registration permits will be issued.~~	~~*July 1—June 30*~~ ***May be announced***
Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations	

Justification

Delegating authority to annually announce the harvest quota, set season opening and closing dates, and to determine the number of Federal permits to be issued will give the refuge manager the flexibility needed to manage the moose population in the affected area while also allowing for the possibility of subsistence harvest opportunity at a sustainable level. The moose population in the affected area may take several years before it increases to a level to sustain a harvest. Changing the moose season from a year–round season to a may–be–announced season keeps the harvest season closed and reduces the need for repetitive special actions until the population increases to a level that can sustain a harvest.

Since 2011, North Slope moose populations have declined by approximately 50% in the area affected by this proposal. The overall decline and very low recruitment in Unit 26B remainder and Unit 26C suggest that any harvest at this time could be detrimental to recovery of the population.

LITERATURE CITED

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

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

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

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

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

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

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

FWS. 2003. Staff analysis WSA03-04. Pages 743–757 *in* Federal Subsistence Board Meeting Materials May 20–May 22, 2003. Office of Subsistence Management, FWS. Anchorage, AK. 780 pp.

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

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

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

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

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

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

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

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

Lenart, E.A. 2013. Northeast Alaska Area Wildlife Biologist. Personal communication. ADF&G. Fairbanks, AK.

Lenart, E.A. 2014. Northeast Alaska Area Wildlife Biologist. Personal communication. ADF&G. Fairbanks, AK.

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

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

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

OSM. 2015. Harvest database. Office of Subsistence Management, FWS. Anchorage, AK.

Twitchell, H. 2013. Assistant Refuge Manager. Personal communication. Arctic National Wildlife Refuge, U.S. Fish and Wildlife Service. Fairbanks, AK.

Wald, E. 2011. North Slope Moose Survey, April 2011. Arctic National Wildlife Refuge, U.S. Fish and Wildlife Service. Fairbanks, AK.

Wald, E. 2014. North Slope Moose/Muskoxen Survey, April 2014. Arctic National Wildlife Refuge, U.S. Fish and Wildlife Service. Fairbanks, AK. 13pp.

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

Appendix 1

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

Dear Superintendent:

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

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

DELEGATION OF AUTHORITY

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

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

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

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

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

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

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

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

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

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

You may defer a special action request, otherwise covered by this delegation of authority, to the Federal Subsistence Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time

allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Federal Subsistence Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

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

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

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

WP16–66 Executive Summary	
General Description	Proposal WP16–66 requests closure of the sheep harvest season for the DeLong Mountains in a portion of Unit 26A, removal of regulatory language referencing sheep harvest quotas and to delegate authority to the Superintendent of the Western Area Parklands to determine annual sheep harvest quotas and limits. *Submitted by* Western Arctic National Parklands (WEAR).
Proposed Regulation	**Unit 26— Sheep** *Unit 26A – that portion west of Howard Pass and the Etivluk River (DeLong Mountains) – 1 sheep by Federal registration permit.* ***Harvest quotas will be announced annually by the Superintendent of Western Arctic National Parklands.*** *~~The total allowable harvest of sheep for the Delong Mountains is 8, of which 5 may be rams and 3 may be ewes. If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.~~* ***No open season****~~Aug. 10 – Apr. 30~~*
OSM Preliminary Conclusion	**Support with modification** to create a May-be-announced season, remove regulatory language referencing harvest quotas and delegate authority to determine annual quotas, set opening and closing season dates, the number of permits to be issued, and the method of distribution via a delegation of authority letter (**Appendix 1**). **Unit 26— Sheep** *Unit 26A – that portion west of Howard Pass and the Etivluk River (DeLong Mountains) – 1 sheep by Federal registration permit (FS2607).* ***~~Harvest quotas will be announced annually by the Superintendent of Western Arctic National Parklands~~.*** *~~The total allowable harvest of sheep for the Delong Mountains is 8, of which 5 may be rams and 3 may be ewes.~~* ***Season May be announced~~No open~~*** *~~season Aug. 10 – Apr. 30~~* *~~If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early~~*

WP16–66 Executive Summary	
	~~*closure.*~~
Western Interior Regional Advisory Council Recommendation	
Eastern Interior Regional Advisory Council Recommendation	
North Slope Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP16-66

ISSUES

Proposal WP16-66, submitted by Western Arctic National Parklands (WEAR), requests closure of the sheep harvest season for the DeLong Mountains in a portion of Unit 26A, removal of regulatory language referencing sheep harvest quotas and to delegate authority to the Superintendent of the Western Area Parklands to determine annual sheep harvest quotas and limits.

DISCUSSION

The proponent states that the requested changes are necessary because they address conservation concerns for sheep in the affected unit, reduce hunter confusion between Federal and State regulations, and better reflect the biological realities while allowing for management flexibility as the sheep population recovers.

The proponent believes that the large decline in the overall population, the low numbers of rams in the population, and the very low recruitment rate of lambs all suggest that any harvest could be detrimental to the overall population, could prolong or worsen the current decline, and hamper recovery. The significant declines in lamb recruitment and abundance of all age classes in 2014 resulted in closure of State and Federal seasons in Units 23 and 26A.

Existing Federal Regulation

Unit 26— Sheep

Unit 26A – that portion west of Howard Pass and the Etivluk River (DeLong Mountains) – 1 sheep by Federal registration permit. The total allowable harvest of sheep for the DeLong Mountains is 8, of which 5 may be rams and 3 may be ewes. If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.	*Aug. 10 – Apr. 30*

Proposed Federal Regulation

Unit 26— Sheep

Unit 26A – that portion west of Howard Pass and the Etivluk River (DeLong Mountains) – 1 sheep by Federal registration permit. ***Harvest quotas will be***	***No open season****~~Aug. 10 – Apr. 30~~*

announced annually by the Superintendent of Western Arctic National Parklands. ~~*The total allowable harvest of sheep for the Delong Mountains is 8, of which 5 may be rams and 3 may be ewes. If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.*~~

Existing State Regulation*

Unit 26 - Sheep

Unit 26A – west of Etivluk River (DeLong Mountains)	***Resident Hunters:*** *One sheep by registration permit only*	*No open season*
	Nonresident Hunters:	*No open season*

*** Note:*** *The sheep season in Unit 26A was closed in State regulations by the Alaska Board of Game at their March 13–17, 2015 meeting. These changes will become effective July 1. 2015.*

Extent of Federal Public Lands

Federal public lands comprise approximately 73% of Unit 26A and consists of 66% Bureau of Land Management (BLM) managed lands, 7% National Park Service managed lands, and 0.1% US Fish and Wildlife Service (FWS) managed lands (See **Unit 26 Map**).

Customary and Traditional Use Determinations

All residents of Unit 26, Anaktuvuk Pass, and Point Hope have a positive customary and traditional use determination for sheep in Unit 26A.

Regulatory History

The use of State registration permits for sheep hunting in the Baird and DeLong Mountains was established in 1982. Declining sheep populations during the late 1980's prompted a series of State harvest closures. The initial Federal subsistence hunting regulations in 1991 were established by adopting the existing State regulations of one ram with 7/8 curl in the fall hunt and one sheep with a harvest quota of 30 animals in the winter hunt. However, in 1991, low sheep numbers in the Baird Mountains prompted State emergency hunt closures, which continued through 1997. In 1993, season restrictions (full curl rams only) were enacted by the Alaska Department of Fish and Game (ADF&G) in the DeLong Mountains, with emergency closures following in 1995-1997. In 1991 and 1992, special actions adopted by the Federal Subsistence Board (Board) closed the sheep harvest south and east of the Noatak River (Baird Mountains), which was

repeated by special actions through 1997/98 (FWS 1991, 1992, 1993, 1994). In 1993, the Board shortened the subsistence harvest season in the DeLong Mountains by special action, and subsequently closed the season by special action in 1994, and repeated the closures through 1997/98 (FWS 1993, 1994).

The Alaska Board of Game (BOG) met in November 1997 and the western portion of the range was re-described dividing it into the Baird and Delong Mountain ranges. Subsistence needs were investigated by the State and determined to be 1-9 sheep for the DeLong Mountains and 18-47 sheep for the Baird Mountains. Based on that information and the fact that the surveys showed the first increase in sheep numbers in several years, the BOG preliminarily decided to not close the 1998/99 State season by Emergency Order and proceed with a Tier I harvest of 20 sheep in the Baird Mountains and a combination hunt (9 Tier I and 11 drawing permits) in the DeLong Mountains, with the final decision based on the results of the 1998 sheep surveys. Both hunts had harvest seasons August 10-April 30.

In July 1998, the Board approved a special action adopting the State's sheep harvest zones in Unit 23 (Baird, Delong, and Schwatka Mountains), closing Federal lands to non-Federally qualified users in the Baird and DeLong Mountains, and setting up an August-April season for one full-curl ram (maximum of 20 for each mountain range). The DeLong Mountain harvest quota was divided with ADF&G, providing half for their use through registration permits. In May 1999, the Board adopted the special action changes into regulation (P99-048) with the addition of allowing the Superintendent of the Western Arctic National Parklands to annually announce the harvest quota and divide the harvest into two seasons (fall and winter).

In May 2002, the Board adopted Proposal WP02-39, which implemented regulations for sheep harvest in Units 23 and 26A, including the requirement for trophy destruction sheep horns. This proposal was made at the request of the Northwest Arctic Subsistence Regional Advisory Council.

In 2004, the Board adopted Proposal WP04-72/73 with modification to eliminate the trophy destruction requirement, and adopt a mixed-sex hunt with fixed quotas (OSM 2004).

On August 8, 2014, the State of Alaska issued an Emergency Order closing sheep seasons in Units 23 and 26A for all resident and nonresident hunters. This was done in response to severe declines in sheep numbers in the Delong and Schwatka Mountains. The State initially issued no permits for its drawing hunt (DS384) in 2014 and the hunt was closed by Emergency Order later that year (Saito 2014, pers. comm.)

In 2014, the Board approved Temporary Special Action WSA14-03 which closed the sheep season on Federal public lands in Units 23 and 26A, that portion west of Howard Pass and the Etivluk River (DeLong Mountains) for the 2014/2015 regulatory year. This action was taken in response to declining sheep populations, low numbers of rams, and very low lamb recruitment in 2014.

In 2015, the Alaska Board of Game closed by regulation all State sheep hunting seasons in Unit 26A, west of the Etivluk River (DeLong Mountains), at its March 13-17, 2015 meeting. All sheep seasons will remain closed to residents and nonresidents in Units 23 and 26A west of the Etivluk River drainage from July 1, 2015 to June 30, 2016 (ADF&G 2015). These season closures are intended to allow the sheep population in the DeLong Mountains an opportunity to recover.

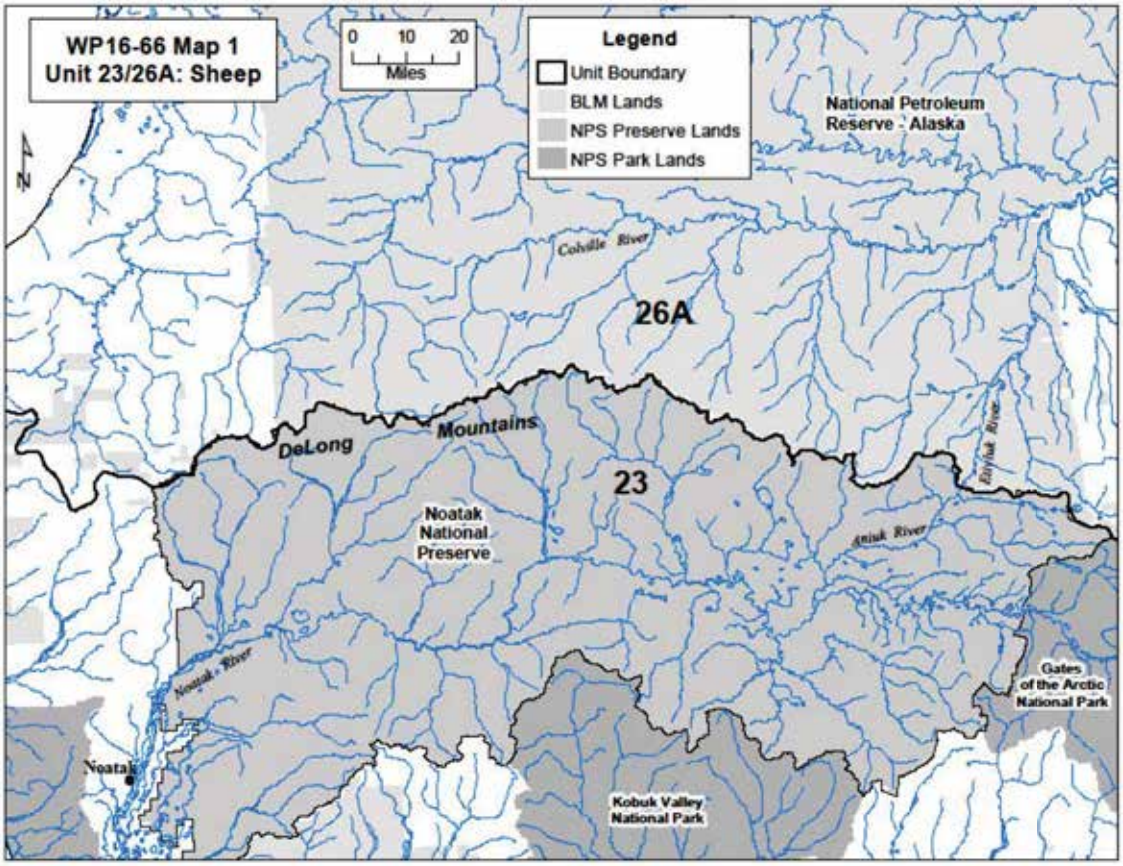
Current Events Involving Species

NPS staff are coordinating survey efforts with ADF&G to monitor the Western Baird Mountains hunt area annually and using it as an index for adjacent areas (**Map 1**). Depending on funding and availability of resources, efforts will also be made to monitor adjacent areas, which include the DeLong Mountains sheep population (Adkisson 2015).

Biological Background

The Dall's sheep in 26A are at the northwestern margin of their range in Alaska and because of this, they are more prone to stochastic weather events affecting their populations than sheep in areas with more abundant habitat and stable range conditions (Shults 2004, Westing 2011). In addition, predation by wolves and the presence of caribou from the large Western Arctic herd and their influence on food availability may also be playing a role in the affected area (Westing 2011).

Sheep densities in Unit 26A are low compared to other areas of the State (Singer 1984). Severe winters in the 1990s resulted in high natural mortality, dramatically reduced sheep numbers in the area, and caused the closure of the general and subsistence hunt between 1991 and 1995 (Shults 2004). Sheep hunting in the Baird Mountains has been administered by the NPS since 1995. The DeLong Mountains sheep population occurs in both Units 23 and 26A (**Map 1**).



ADF&G management objectives for sheep in Unit 26A have been to monitor sheep with the NPS within each area at least once every 3 years to detect changes in population status. In addition, monitoring of harvest through harvest tickets, permits, and community-based harvest surveys and other methods are also used (Westing 2011).

In the past NPS objectives for Dall's sheep included monitoring sheep abundance and sex-age composition across WEAR and Gates of the Arctic National Park and Preserve (GAAR) by conducting surveys every five years across these parklands and every other year in the western Baird Mountains subarea of WEAR and the Itkillik subarea of GAAR every other year (Lawler et al. 2009). In 2015, the NPS decided to monitor the Western Baird Mountains hunt area every year. Adjacent areas, including the DeLong Mountains, will be surveyed periodically depending on funding and weather conditions.

The NPS, in coordination with ADF&G, completed surveys of the sheep population in the affected area (the larger part of WEAR) in July 2014. Estimates indicate a 70% population decline across WEAR from the previous 2011 survey. Specifically, there has been an estimated 82% decline (77% decline in adult sheep) in the DeLong Mountains (southern WEAR) and a 50% decline (40% decline in adult sheep) in the Baird Mountains between 2011 and 2014. In 2011, the estimated sheep population in WEAR as a whole was 2,809 total sheep (95% CI 2,361-3,379) with an estimated 1,946 sheep (95% CI 1,593-2,397) in the DeLong Mountains (Schmidt and Rattenbury 2013). This overall decline is likely greater than when a full State and Federal closure was implemented from 1991-1997 in the DeLong and Baird Mountains following a 50% decline in adult sheep (Shults 2004). Surveys in GAAR, BLM land, and State land in the eastern Brooks Range also show significantly declining numbers in 2014.

Survey results also indicate very low lamb to ewe-like ratios and very low recruitment rates in 2014. The point estimates for lambs per 100 ewe-like sheep are down 90% from 2011 to 2014 (estimates are 3 lambs:100 ewe–like sheep in WEAR as a whole, 4 lambs:100 ewe–like sheep in the DeLong Mountains and 2 lambs:100 ewe–like sheep in the western Baird Mountains) (NPS 2014, unpublished data, Rattenbury 2015). This is consistent with low lamb productivity indicated in surveys in GAAR, BLM land and State land in the eastern Brooks Range, which show low lamb productivity for at least the second year in a row, and where low lamb productivity in 2013 was attributed in part to the long, cold winter of 2012-2013 and record cold temperatures in May 2013 (NPS 2014, unpublished data.).

Large rams (full-curl or greater and double-broomed) have also declined in WEAR between 2011 and 2014 with large ram to ewe-like ratios down 75% across WEAR, 60% in the DeLong Mountains. While the ratios of less than full-curl rams to ewe-like sheep appear to be stable or increasing that inflation is actually due to the loss of ewes. The number of full-curl rams in the WEAR population was on the low end compared with other populations in Alaska's NPS units in 2011, and this decline indicates there are very few to no large rams available for harvest in WEAR (NPS 2014, unpublished data.).

Harvest History

In Unit 26A, there is a State subsistence registration hunt (RS388) and a Federal subsistence registration hunt (FS2607). Between 2004 and 2014, the total average annual sheep harvest in Units 23 and 26A (**Table 1**) under both State and Federal regulations was 23 animals. Harvest ranged from a low of 17 in

2012/2013, to a high of 31 in 2010.

Table 1. State and Federal sheep harvest in Unit 23 and Unit 26A, 2004-2014 (ADF&G 2014, OSM 2014, Johnson 2014, pers. comm.).

Year	State General Harvest	RS388[a]	Total Harvest
2004	4	1	5
2005	1	0	1
2006	6	1	7
2007	4	0	4
2008	2	2	4
2009	4	3	7
2010	5	5	10
2011	5	1	6
2012	4	0	4
2013	0	0	0
2014	N/A		

[a] Closed by emergency order in 2014.
[b] Federal hunt RS2607 has not been utilized since soon after its inception, therefore it is not included in this table (Adkisson 2014, pers. comm.).

Effects of the Proposal

If this proposal is adopted, all sheep hunting under Federal regulations will be closed in Unit 26A, thus limiting harvest opportunities for Federally qualified subsistence users who are hunting under State regulations. Any harvest detrimental to the population at this time due to large declines in the overall population, low numbers of rams available for harvest, and the apparent low recruitment of lambs.

In addition, the season dates and harvest limits would be taken out of regulation. The Federal inseason manager would be given the delegated authority to: determine annual quotas, set opening and closing season dates for the May be announced season, the number of permits to be issues, and the method of distribution. The inseason manager would keep the season closed until the population had reached a level which could sustain some limited harvest in Unit 26A.

OSM PRELIMINARY CONCLUSION

Support Proposal WP16-66 **with modification** to create a May-be-announced season, remove regulatory language referencing harvest quotas and delegate authority to determine annual quotas, set opening and closing season dates, the number of permits to be issued, and the method of distribution via a delegation of authority letter (**Appendix 1**).

The modified regulations should read:

Unit 26— Sheep

Unit 26A – that portion west of Howard Pass and the Etivluk River (DeLong Mountains) – 1 sheep by Federal registration permit (FS2607). ~~***Harvest quotas will be announced annually by the Superintendent of Western Arctic National Parklands.*** *The total allowable harvest of sheep for the Delong Mountains is 8, of which 5 may be rams and 3 may be ewes.*~~	***Season May be announced*** ~~***No open*** *season Aug. 10 – Apr. 30*~~ ~~*If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.*~~

Justification

Since 2011, sheep populations in the Delong Mountains have declined between 50-70% in the area affected by this proposal. In addition to the population decline, low numbers of rams and low recruitment rates suggest that any harvest could be detrimental to the population and could prolong or worsen the current decline, and hamper recovery. The combined effort of Federal and State to close the sheep seasons is required to reduce the hunting pressure on the declining population. The State already responded to this population concern by closing all resident and nonresident hunting seasons under their regulations. Closure of sheep hunting under Federal regulations in Unit 26A is necessary to assure the continued viability of the population. Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA) establishes a priority for the taking of fish and wildlife on Federal public lands and waters for non-wasteful subsistence uses over the taking of fish and wildlife for other purposes (ANILCA Section 804). The Federal Subsistence Board is authorized to restrict or close the taking of fish and wildlife by subsistence and non-subsistence users on Federal public lands and waters (ANILCA Section 804 and 815(3)) when necessary for: 1) the conservation of healthy populations of fish and wildlife; or 2) to continue subsistence users of such populations. In addition, the Board may also close Federal public lands and waters to any taking of fish and wildlife for reasons of public safety, administration, or to assure the continued viability of such population (ANILCA Section 816(b)).

The attached current delegation of authority letter (**Appendix 1**) will serve to clarify regulations and allow for hunt management flexibility through in-season adjustment of hunt parameters.

LITERATURE CITED

ADF&G. 2015. Summary of Regulatory Changes for 2015-2016. http://www.adfg.alaska.gov/index.cfm?adfg=gameboard.main. Retrieved: May 4, 2015.

ADF&G. 2014. Hunt harvest summary. Database accessed 8 August, 2014.

Adkisson, K. 2014. Personal communication: email. Subsistence Specialist. National Park Service. Nome, AK.

Adkisson, K. 2015. WP16-66. Pages 120-121 *in* 2016-2018 Wildlife Hunting and Trapping Proposals, Office of Subsistence Management, FWS, Anchorage AK 134 pp.

FWS. 1991. Special Action 91-01. Administrative record, Office of Subsistence Management, FWS, Anchorage AK.

FWS. 1992. Special Action 92-08. Administrative record, Office of Subsistence Management, FWS, Anchorage AK.

FWS. 1993. Special Action 93-02. Administrative record, Office of Subsistence Management, FWS, Anchorage AK.

FWS. 1994. Special Action 94-06. Administrative record, Office of Subsistence Management, FWS, Anchorage AK.

FWS. 2014. Special Action 14-03. Administrative record, Office of Subsistence Management, FWS. Anchorage, AK

Johnson, M. 2014. Personal communication: email. Biologist. National Park Service. Kotzebue, AK.

Lawler, J. P., S. D. Miller, D. M. Sanzone, J. M. Ver Hoef, and S. B. Young. 2009. Arctic Network vital signs monitoring plan. Natural Resource Report NPS/ARCN/NRR-2009/088. National Park Service, Fort Collins, Colorado, USA. Link, W. A., and R. J. Barker.

National Park Service. 2014. Unpublished data, 2014 sheep surveys in Units 23 and 26A Nome, AK.

Saito, B. 2014. Personal communication: email. Wildlife Biologist. Alaska Department of Fish and Game. Kotzebue, AK.

OSM. 1999. Staff analysis P99-048. Office of Subsistence Management, FWS. Anchorage, AK

OSM. 2002. Staff analysis WP02-39. Office of Subsistence Management, FWS. Anchorage, AK

OSM. 2004. Staff analysis WP04-72/73. Office of Subsistence Management, FWS. Anchorage, AK

OSM. 2014. Alaska Federal Subsistence Program Harvest Database. Office of Subsistence Management. Anchorage, AK.

Rattenbury, K. 2015. Personal communication: email. Biologist. Arctic Network Inventory and Monitoring Program, National Park Service. Fairbanks, AK.

Schmidt, J.S., and K.L. Rattenbury. 2013. Reducing Effort While Improving Inference: Estimating Dall's Sheep Abundance and Composition in Small AreasThe Journal of Wildlife Management 77:1048–1058.

Shults, B. 2004. Abundance survey of Dall's sheep in the western Baird Mountains, Alaska, July 2004. Technical Report NPS/AR/NRTR-2004- 46. U.S. Department of the Interior, National Park Service, Kotzebue, Alaska, USA.
Singer, F.J. 1984. Aerial Dall sheep count, 1982, 1983, and 1984. Gates of the Arctic National Park and Preserve. Natural resources survey and inventory report. AR/84-2. National Park Service. Anchorage, AK.

Westing, C. 2011. Units 23 and 26A Dall sheep management report. Pages 134-147 *in* P. Harper, editor. Dall sheep management report of survey and inventory activities 1 July 2007 – 30 June 2010. ADF&G. Project 6.0. Juneau, AK.

Appendix 1

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

Dear Superintendent:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the National Park Service Superintendent of Western Arctic National Parklands to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of the population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 23 except for that portion of Unit 23 Remainder (Schwatka Mountains) within Gates of the Arctic National Park and Preserve; and that portion of Unit 26A west of Howard Pass and the Etivluk River (DeLong Mountains) for the management of sheep on these lands.

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

DELEGATION OF AUTHORITY

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

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

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

- To set opening and closing dates for the sheep season on Federal public lands in Unit 23 except for that portion of Unit 23 Remainder (Schwatka Mountains) within Gates of the Arctic National Park; and that portion of Unit 26A west of Howard Pass and the Etivluk River (DeLong Mountains).

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

population.

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

The Federal public lands subject to this delegated authority are those within Unit 23 except for that portion of Unit 23 remainder (Schwatka Mountains) within Gates of the Arctic National Park; and that portion of Unit 26A west of Howard Pass and the Etivluk River (DeLong Mountains).

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

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

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

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

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

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Commissioner, Alaska Department of Fish and Game
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Superintendent, Gates of the Arctic National Park and Preserve
Chair, Northwest Arctic Subsistence Regional Advisory Council
Chair, North Slope Subsistence Regional Advisory Council
Manager, BLM Arctic Field Office
Manager, BLM Anchorage Field Office
Federal Subsistence Liaison Team Leader, Alaska Department of Fish and Game
Subsistence Council Coordinator, Office of Subsistence Management
Federal Subsistence Board
Interagency Staff Committee
Administrative Record

WP16–37 Executive Summary	
General Description	Proposal WP16-37 requests changes to caribou harvest regulations in Units 21D, 22, 23, 24, 26A, and 26B, including: reduction in harvest limits; shortening bull and cow seasons; creation of new hunt areas and to be announced seasons; and a prohibition on the take of calves and cows with calves. *Submitted by: Jack Reakoff.*
Proposed Regulation	**Unit 21D—Caribou** *Unit 21D—north of the Yukon River and east of the Koyukuk River—caribou may be taken during a winter season to be announced by the Refuge Manager of the Koyukuk/Nowitna National Wildlife Refuge Manager and the BLM Central Yukon Field Office Manager, in consultation with ADF&G and the Chairs of the Western Interior Subsistence Regional Advisory Council, and the Middle Yukon and Ruby Fish and Game Advisory Committees.* — *Winter season to be announced.* *Unit 21D, remainder—5 caribou per day**, as follows:*** ~~*; however, cow caribou may not be taken May 16–June 30.*~~ — ~~*July 1–June 30.*~~ ***Up to 5 bulls per day; however, calves may not be taken;*** — ***July 1-Oct. 14*** ***Feb. 1-June 30*** ***Up to 5 cows per day; however, calves may not be taken*** — ***Sept. 1 – Mar. 31*** **Unit 22—Caribou** *Unit 22B**, that portion** west of Golovin Bay and west of a line along the west bank of the Fish and Niukluk Rivers **to the mouth of the Libby River,** and excluding **all portions of the Niukluk River drainage upstream from and including** the Libby River drainage—5 caribou per day**, as follows:*** — ~~*Oct. 1–Apr. 30.*~~ ***Up to 5 bulls per day; however, calves may not be taken;*** — ***Oct. 1-Oct. 14*** ***Feb. 1-Apr. 30.*** ***Up to 5 cows per day; however, calves may not be taken.*** — ***Oct. 1-Mar. 31*** ***Up to 5 caribou per day; however, calves may not be taken; cow caribou may not be taken April 1-Aug. 31; bull caribou*** — *May 1–Sept. 30, a season may be opened by*

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	may not be taken Oct. 15-Jan. 31.	*announcement by the Anchorage Field Office Manager of the BLM, in consultation with ADF&G.*
	Units 22A, ***that portion north of the Golsovia River drainage,*** *22B remainder, that portion of Unit 22D in the ~~Kougaruk~~, Kuzitrin* ***River drainage*** *(excluding the Pilgrim River drainage), ~~American,~~ and* ***the*** *Agiapuk River Drainages,* ***including the tributaries,*** *and Unit 22E, that portion east of and including the Sanaguich River drainage—5 caribou per day****, as follows:*** *~~; however, cow caribou may not be taken May 16–June 30.~~*	*~~July 1–June 30.~~*
	Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
	Up to 5 cows per day; however, calves may not be taken.	***Sept. 1-Mar. 31.***
	Unit 22D, that portion in the Pilgrim River Drainage—5 caribou per day as follows:	
	Up to 5 bulls per day; however, calves may not be taken;	***Oct. 1-Oct. 14*** ***Feb. 1-Apr. 30***
	Up to 5 cows per day; however, calves may not be taken.	***Oct. 1-Mar. 31***
	Up to 5 caribou per day; however, calves may not be taken; however, cow caribou may not be taken April 1-Aug. 31.	***May 1 – Sept. 30, season to be announced***
	*Unit 22 remainder****—5 caribou per day; however, calves may not be taken; cow caribou may not be taken Apr. 1-Aug. 31; bull caribou may not be taken Oct. 15-Jan. 31.***	*~~No Federal open season~~* ***Season to be announced***
	Unit 23—Caribou	
	Unit 23, that portion north of and including the Singoalik River drainage—155 *caribou per day* ***as follows:*** *~~; however, cow caribou may not be taken May 16–June 30~~*	*~~July 1–June 30.~~*
	Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
	Up to 5 cows per day; however, calves may not be taken.	***July 15-Apr. 30***

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	Unit 23 remainder—5 caribou per day, as follows:	
	Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
	Up to 5 cows per day; however, calves may not be taken.	***Sept. 1-Mar. 31.***
	Unit 24—Caribou	
	Unit 24A—south of the south bank of the Kanuti River—1 caribou	***Aug. 10-Mar. 31***
	*Unit 24**B**—that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti-Kilolitna River drainage, bounded by the southeast bank of the Kodosin-Nolitna Creek, then downstream along the east bank of the Kanuti-Kilolitna River to its confluence with the Kanuti River—1 caribou.*	*Aug. 10–Mar. 31.*
	*Unit 24**A** **remainder, that portion north of the south bank of the Kanuti River**, **24B** remainder**, that portion north of the south bank of the Kanuti River downstream from the Kanuti-Killitna River drainage**—5 caribou per day **as follows**;* ~~*however, cow caribou may not be taken May 16–June 30*~~	~~*July 1–June 30.*~~
	Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
	Up to 5 cows per day; however, calves may not be taken.	***July 15-Apr. 30***
	Units 24C, 24D—5 caribou per day as follows:	
	Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
	Up to 5 cows per day; however, calves may not be taken.	***Sept. 1-Mar. 31***

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	Unit 26—Caribou	
	Unit 26A, ***that portion of the Colville River drainage upstream from the Anaktuvuk River, and drainages of the Chukchi Sea south and west of, and including the Utukok River drainage*** ~~*10*~~ ***5*** *caribou per day* ***as follows:*** ~~*; however, cow caribou may not be taken May 16–June 30.*~~	*July 1–June 30.*
	Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
	Up to 5 cows per day; however, calves may not be taken.	***July 15-Apr. 30.***
	Unit 26A remainder—5 bulls per day; however, calves may not be taken;	***July 1-July 15***
	5 caribou per day; however, no more than 3 cows per day; cows accompanied by calves and calves may not be taken;	***July 16-Oct. 15***
	3 cows per day; however, calves may not be taken;	***Oct. 16-Dec. 31***
	5 caribou per day; however, no more than 3 cows per day; calves may not be taken;	***Jan. 1-Mar. 15***
	5 bulls per day; however, calves may not be taken	***Mar. 16-June 30.***
	Unit 26B, that portion north of 69° 30'N. lat and west of the east bank of the Kuparuk River to a point at 70° 10' N. lat., 149° 04' W. long, then west approximately 22 miles to 70° 10' N. lat. And 149° 56' W. long., then following the east bank of the Kalubik River to the Arctic Ocean—5 caribou per day; however, cow caribou may not be taken May 16-June 30.	***July 1-June 30***
	Unit 26B, that portion south of 69° 30' N. lat. and west of the Dalton Highway—5 caribou; however, cow caribou may be taken only from July 1-Oct. 10.	***July 1-Oct. 10*** ***May 16-June 30***
	Unit 26B, that portion south of 69° 30' N. lat. and east of the Dalton Highway—5 caribou; however, cow caribou may be taken only from July 1-May 15.	***July 1-June 30***

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	Unit 26B ***remainder****~~—10~~**5** caribou ~~per day~~; however, cow caribou may be taken only from Oct. 1–Apr. 30* — *July 1~~-June 30~~**Apr. 30***
	Unit 26C—10 caribou per day. — *July 1-Apr. 30*
	You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.
OSM Preliminary Conclusion	**Support with modification** to prohibit the harvest of cows with calves in Units 21D, 22, 23, 24, 26A and 26B, prohibit the harvest of calves in Unit 26B, extend the bull season in Units 26A and 26B, modify the cow season in Unit 26B, modify the hunt area descriptor in Unit 24, modify the harvest limit in Unit 26B, simplify and clarify the regulatory language, and delete regulatory language regarding to be announced seasons for Units 21D and 22 and delegate authority to Federal land managers to announce seasons via delegation of authority letters only. The modified regulations should read: **Unit 21D—Caribou** *Unit 21D—north of the Yukon River and east of the Koyukuk River—caribou may be taken during a winter season to be announced ~~by the Refuge Manager of the Koyukuk/Nowitna National Wildlife Refuge Manager and the BLM Central Yukon Field Office Manager, in consultation with ADF&G and the Chairs of the Western Interior Subsistence Regional Advisory Council, and the Middle Yukon and Ruby Fish and Game Advisory Committees.~~* — *Winter season to be announced.* *Unit 21D, remainder—5 caribou per day****, as follows:*** *~~; however, cow caribou may not be taken May 16–June 30.~~* — *~~July 1–June 30.~~* ***However, calves may not be taken*** ***Bulls may be harvested*** — ***July 1-Oct. 14*** ***Feb. 1-June 30*** ***Cows may be harvested*** — ***Sept. 1-Mar. 31.*** ***However, cows accompanied by calves may not be taken Sept. 1-Oct. 15.***

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	Unit 22—Caribou	
	*Unit 22B**, that portion** west of Golovin Bay and west of a line along the west bank of the Fish and Niukluk Rivers **to the mouth of the Libby River,** and excluding **all portions of the Niukluk River drainage upstream from and including** the Libby River drainage—5 caribou per day**, as follows:**	~~*Oct. 1–Apr. 30.*~~
	However, calves may not be taken	
	Bulls may be harvested	***Oct. 1-Oct. 14*** ***Feb. 1-Apr. 30.***
	Cows may be harvested ***However, cows accompanied by calves may not be taken Oct. 1-Oct. 15.***	***Oct. 1-Mar. 31***
	5 caribou per day; however, calves may not be taken; Cows may not be taken April 1-Aug. 31; Bulls may not be taken Oct. 15-Jan. 31.	*May 1–Sept. 30, a season may be* ~~*opened by announcement*~~ ***announced*** ~~*by the Anchorage Field Office Manager of the BLM, in consultation with ADF&G.*~~
	*Units 22A, **that portion north of the Golsovia River drainage,** 22B remainder, that portion of Unit 22D in the* ~~*Kougaruk*~~*, Kuzitrin **River drainage** (excluding the Pilgrim River drainage),* ~~*American,*~~ *and **the** Agiapuk River Drainages, **including the tributaries,** and Unit 22E, that portion east of and including the Sanaguich River drainage—5 caribou per day**, as follows:*** ~~*; however, cow caribou may not be taken May 16–June 30.*~~	~~*July 1–June 30.*~~
	However, calves may not be taken	
	Bulls may be harvested	***July 1-Oct. 14*** ***Feb. 1-June 30***

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	Cows may be harvested ***However, cows accompanied by calves may not be taken Sept. 1-Oct. 15.***	***Sept. 1-Mar. 31.***
	Unit 22D, that portion in the Pilgrim River Drainage—5 caribou per day as follows:	
	However, calves may not be taken	
	Bulls may be harvested	***Oct. 1-Oct. 14*** ***Feb. 1-Apr. 30***
	Cows may be harvested ***However, cows accompanied by calves may not be taken Oct. 1-Oct. 15.***	***Oct. 1-Mar. 31***
	5 caribou per day; however, cows may not be taken April 1-Aug. 31.	***May 1 – Sept. 30*** ***Season may be announced***
	Unit 22 remainder—***5 caribou per day; however, calves may not be taken; cows may not be taken Apr. 1-Aug. 31; cows accompanied by calves may not be taken Sept. 1-Oct. 15; bulls may not be taken Oct. 15-Jan. 31.***	~~*No Federal open season*~~ ***Season may be announced***
	Unit 23—Caribou	
	Unit 23, that portion north of and including the Singoalik River drainage—15**5** *caribou per day* ***as follows:*** ~~*; however, cow caribou may not be taken May 16–June 30*~~	~~*July 1–June 30.*~~
	However, 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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	Unit 23 remainder—5 caribou per day, as follows:	
	However, 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 Sept. 1-Oct. 14.***	***Sept. 1-Mar. 31.***
	Unit 24—Caribou	
	Unit 24A—south of the south bank of the Kanuti River—1 caribou	***Aug. 10-Mar. 31***
	*Unit 24**B**—that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti-Kilolitna River drainage, bounded by the southeast bank of the Kodosin-Nolitna Creek, then downstream along the east bank of the Kanuti-Kilolitna River to its confluence with the Kanuti River—1 caribou.*	*Aug. 10–Mar. 31*
	Unit 24 ***that portion north of (and including) the Kanuti River in Units 24A and 24B and that portion north of the Koyukuk River downstream from the confluence with the Kanuti River in Unit 24B to the Unit 24C boundary.*** *~~remainder~~ —5 caribou per day* ***as follows****;* *~~however, cow caribou may not be taken May 16–June 30~~*	*~~July 1–June 30.~~*
	However, 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***
	Units 24C, 24D—5 caribou per day as follows:	
	However, calves may not be taken	
	Bulls may be harvested	***July 1-Oct. 14*** ***Feb. 1-June 30***

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	Cows may be harvested ***However, cows accompanied by calves may not be taken Sept. 1-Oct. 14.***	***Sept. 1-Mar. 31***
	Unit 26—Caribou	
	Unit 26A, ***that portion of the Colville River drainage upstream from the Anaktuvuk River, and drainages of the Chukchi Sea south and west of, and including the Utukok River drainage*** ~~10~~ ***5*** *caribou per day* ***as follows:*** ~~*; however, cow caribou may not be taken May 16-June 30.*~~	*July 1–June 30.*
	However, 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. 15.***	***July 15-Apr. 30.***
	Unit 26A remainder	
	Calves may not be taken	
	5 Bulls per day may be harvested	***July 1-Oct. 14*** ***Dec. 6-June 30***
	3 cows per day may be harvested ***However, cows accompanied by calves may not be taken July 16-Oct. 15***	***July 16-Mar. 15***
	Unit 26B, Northwest portion: north of 69° 30'N. lat and west of the east bank of the Kuparuk River to a point at 70° 10' N. lat., 149° 04' W. long, then west approximately 22 miles to 70° 10' N. lat. And 149° 56' W. long., then following the east bank of the Kalubik River to the Arctic Ocean—5 caribou per day; however, cows may not be taken May 16-June 30; Cows accompanied by calves may not be taken July 1-Oct. 15; Calves may not be taken.	***July 1-June 30***

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	Unit 26B, that portion south of 69° 30' N. lat. and west of the Dalton Highway—5 caribou per day as follows:	
	However, calves may not be taken	
	Bulls may be harvested	***July 1 -Oct. 14*** ***Dec. 10–June 30***
	Cows may be harvested	***Oct. 14-Apr. 30***
	Unit 26B, that portion south of 69° 30' N. lat. and east of the Dalton Highway—5 caribou per day; however, cows may not be taken from May 16-June 30; Cows accompanied by calves may not be taken July 1-Oct. 15.	***July 1-June 30***
	Unit 26B ***remainder*** *~~—10~~**5** caribou per day;*	
	*However, c**alves may not be taken**~~cow caribou may be taken only from Oct. 1–Apr. 30~~**.***	
	Bulls may be harvested	*July 1-~~June 30~~* ***Apr. 30***
	Cows may be harvested	***Oct. 14-Apr. 30***
	You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.	
Western Interior Alaska Regional Advisory Council Recommendation		
Seward Peninsula Regional		

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Advisory Council Recommendation	
Northwest Arctic Regional Advisory Council Recommendation	
Eastern Interior Regional Advisory Council Recommendation	
North Slope Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP16-37

ISSUES

Proposal WP16-37, submitted by Jack Reakoff, requests changes to caribou harvest regulations in Units 21D, 22, 23, 24, 26A, and 26B, including: reduction in harvest limits; shortening bull and cow seasons; creation of new hunt areas and to be announced seasons; and a prohibition on the take of calves and cows with calves.

DISCUSSION

The proponent requests that Federal caribou regulations be aligned with the recently adopted State regulations in order to reduce regulatory complexity and to aid in conserving the declining Western Arctic (WACH) and Teshekpuk (TCH) caribou herds. Numerous entities, including the Western Interior Alaska (WIRAC), Northwest Arctic (NWARAC), Seward Peninsula (SPRAC), and North Slope (NSRAC) Subsistence Regional Advisory Councils, have invested a lot of work developing conservation strategies for these herds. The proponent believes that the herds' conservation is imperative.

Adoption of this proposal would restrict caribou harvest at certain times of the year and reduce daily harvest limits in order to conserve the WACH and TCH. The proponent states that prohibiting the take of calves increases herd recruitment and that the season and harvest limit restrictions should not prevent subsistence users from meeting their needs.

Related Proposals: Eight other Proposals—WP16-43, WP16-45, WP16-49, WP16-52, WP16-61, WP16-62, WP16-63, WP16-64—concerning caribou regulations in Units 21D, 22, 23, 24, or 26 were submitted for the 2016-2018 regulatory cycle. The outcome of these proposals may affect the outcome of this proposal.

Existing Federal Regulations

Unit 21D—Caribou

Unit 21D—north of the Yukon River and east of the Koyukuk River—caribou may be taken during a winter season to be announced by the Refuge Manager of the Koyukuk/Nowitna National Wildlife Refuge and the BLM Central Yukon Field Office Manager, in consultation with ADF&G and the Chairs of the Western Interior Subsistence Regional Advisory Council, and the Middle Yukon and Ruby Fish and Game Advisory Committees.	*Winter season to be announced.*
Unit 21D, remainder—5 caribou per day; however, cow caribou may	*July 1–June 30.*

not be taken May 16–June 30.

Unit 22—Caribou

Unit 22B west of Golovin Bay and west of a line along the west bank of the Fish and Niukluk Rivers and excluding the Libby River drainage—5 caribou per day.	*Oct. 1–Apr. 30. May 1–Sept. 30, a season may be opened by announcement by the Anchorage Field Office Manager of the BLM, in consultation with ADF&G.*
Units 22A, 22B remainder, that portion of Unit 22D in the Kougaruk, Kuzitrin (excluding the Pilgrim River drainage), American, and Agiapuk River Drainages, and Unit 22E, that portion east of and including the Sanaguich River drainage—5 caribou per day; cow caribou may not be taken May 16–June 30.	*July 1–June 30.*
Unit 22 remainder	*No Federal open season*

Unit 23—Caribou

15 caribou per day; however, cow caribou may not be taken May 16–June 30	*July 1–June 30.*

Unit 24—Caribou

Unit 24—that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti-Kilolitna River drainage, bounded by the southeast bank of the Kodosin-Nolitna Creek, then downstream along the east bank of the Kanuti-Kilolitna River to its confluence with the Kanuti River—1 caribou.	*Aug. 10–Mar. 31.*
Unit 24, remainder—5 caribou per day; however, cow caribou may not be taken May 16–June 30	*July 1–June 30.*

Unit 26—Caribou

Unit 26A—10 caribou per day; however, cow caribou may not be taken May 16–June 30.	*July 1–June 30.*

Unit 26B—10 caribou per day; however, cow caribou may be taken only from Oct. 1–Apr. 30	*July 1-June 30.*
Unit 26C—10 caribou per day.	*July 1-Apr. 30*
You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.	

Proposed Federal Regulations

Unit 21D—Caribou

Unit 21D—north of the Yukon River and east of the Koyukuk River—caribou may be taken during a winter season to be announced by the Refuge Manager of the Koyukuk/Nowitna National Wildlife Refuge Manager and the BLM Central Yukon Field Office Manager, in consultation with ADF&G and the Chairs of the Western Interior Subsistence Regional Advisory Council, and the Middle Yukon and Ruby Fish and Game Advisory Committees.	*Winter season to be announced.*
*Unit 21D, remainder—5 caribou per day**, as follows:** ~~; however, cow caribou may not be taken May 16–June 30.~~*	~~*July 1–June 30.*~~
Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
Up to 5 cows per day; however, calves may not be taken	***Sept. 1 – Mar. 31***

Unit 22—Caribou

*Unit 22B**, that portion** west of Golovin Bay and west of a line along the west bank of the Fish and Niukluk Rivers **to the mouth of the Libby River,** and excluding **all portions of the Niukluk River drainage upstream from and including** the Libby River drainage—5 caribou per day**, as follows:***	~~*Oct. 1–Apr. 30.*~~
Up to 5 bulls per day; however, calves may not be taken;	***Oct. 1-Oct. 14*** ***Feb. 1-Apr. 30.***

Up to 5 cows per day; however, calves may not be taken.	***Oct. 1-Mar. 31***
Up to 5 caribou per day; however, calves may not be taken; cow caribou may not be taken April 1-Aug. 31; bull caribou may not be taken Oct. 15-Jan. 31.	*May 1–Sept. 30, a season may be opened by announcement by the Anchorage Field Office Manager of the BLM, in consultation with ADF&G.*
Units 22A, ***that portion north of the Golsovia River drainage,*** *22B remainder, that portion of Unit 22D in the ~~Kougarok~~, Kuzitrin* ***River drainage*** *(excluding the Pilgrim River drainage), ~~American,~~ and* ***the*** *Agiapuk River Drainages,* ***including the tributaries,*** *and Unit 22E, that portion east of and including the Sanaguich River drainage—5 caribou per day****, as follows:*** *~~; however, cow caribou may not be taken May 16–June 30.~~*	*~~July 1–June 30.~~*
Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
Up to 5 cows per day; however, calves may not be taken.	***Sept. 1-Mar. 31.***
Unit 22D, that portion in the Pilgrim River Drainage—5 caribou per day as follows:	
Up to 5 bulls per day; however, calves may not be taken;	***Oct. 1-Oct. 14*** ***Feb. 1-Apr. 30***
Up to 5 cows per day; however, calves may not be taken.	***Oct. 1-Mar. 31***
Up to 5 caribou per day; however, calves may not be taken; however, cow caribou may not be taken April 1-Aug. 31.	***May 1 – Sept. 30, season to be announced***
*Unit 22 remainder****—5 caribou per day; however, calves may not be taken; cow caribou may not be taken Apr. 1-Aug. 31; bull caribou may not be taken Oct. 15-Jan. 31.***	*~~No Federal open season~~* ***Season to be announced***
Unit 23—Caribou	
Unit 23, that portion north of and including the Singoalik River drainage~~—15~~5 *caribou per day* ***as follows:*** *~~; however, cow caribou may not be taken May 16–June 30~~*	*~~July 1–June 30.~~*
Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
Up to 5 cows per day; however, calves may not be taken.	***July 15-Apr. 30***

Unit 23 remainder—5 caribou per day, as follows:

Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
Up to 5 cows per day; however, calves may not be taken.	***Sept. 1-Mar. 31.***

Unit 24—Caribou

Unit 24A—south of the south bank of the Kanuti River—1 caribou	***Aug. 10-Mar. 31***
*Unit 24**B**—that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti-Kilolitna River drainage, bounded by the southeast bank of the Kodosin-Nolitna Creek, then downstream along the east bank of the Kanuti-Kilolitna River to its confluence with the Kanuti River—1 caribou.*	*Aug. 10–Mar. 31.*
*Unit 24**A*** ***remainder, that portion north of the south bank of the Kanuti River**, 24B* *remainder**, that portion north of the south bank of the Kanuti River downstream from the Kanuti-Killitna River drainage**—5* *caribou per day* ***as follows**; ~~however, cow caribou may not be taken May 16–June 30~~*	~~*July 1–June 30.*~~
Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
Up to 5 cows per day; however, calves may not be taken.	***July 15-Apr. 30***
Units 24C, 24D—5 caribou per day as follows:	
Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14*** ***Feb. 1-June 30***
Up to 5 cows per day; however, calves may not be taken.	***Sept. 1-Mar. 31***

Unit 26—Caribou

*Unit 26A**, that portion of the Colville River drainage upstream from the Anaktuvuk River, and drainages of the Chukchi Sea south and west of, and including the Utukok River drainage*~~—10~~ ***5*** *caribou per day* ***as follows:*** ~~*; however, cow caribou may not be taken May 16–June 30.*~~	*July 1–June 30.*
Up to 5 bulls per day; however, calves may not be taken;	***July 1-Oct. 14***

	Feb. 1-June 30
Up to 5 cows per day; however, calves may not be taken.	***July 15-Apr. 30.***
Unit 26A remainder—5 bulls per day; however, calves may not be taken;	***July 1-July 15***
5 caribou per day; however, no more than 3 cows per day; cows accompanied by calves and calves may not be taken;	***July 16-Oct. 15***
3 cows per day; however, calves may not be taken;	***Oct. 16-Dec. 31***
5 caribou per day; however, no more than 3 cows per day; calves may not be taken;	***Jan. 1-Mar. 15***
5 bulls per day; however, calves may not be taken	***Mar. 16-June 30.***
Unit 26B, that portion north of 69° 30'N. lat and west of the east bank of the Kuparuk River to a point at 70° 10' N. lat., 149° 04' W. long, then west approximately 22 miles to 70° 10' N. lat. And 149° 56' W. long., then following the east bank of the Kalubik River to the Arctic Ocean—5 caribou per day; however, cow caribou may not be taken May 16-June 30.	***July 1-June 30***
Unit 26B, that portion south of 69° 30' N. lat. and west of the Dalton Highway—5 caribou; however, cow caribou may be taken only from July 1-Oct. 10.	***July 1-Oct. 10*** ***May 16-June 30***
Unit 26B, that portion south of 69° 30' N. lat. and east of the Dalton Highway—5 caribou; however, cow caribou may be taken only from July 1-May 15.	***July 1-June 30***
Unit 26B ***remainder*** *~~—10~~**5** caribou ~~per day~~; however, cow caribou may be taken only from Oct. 1–Apr. 30*	*July 1-~~June 30~~**Apr. 30***
Unit 26C—10 caribou per day.	*July 1-Apr. 30*
You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.	

Existing State Regulations

Unit 21D—Caribou

North of the Yukon River and east of the Koyukuk River	*Residents—Two caribou may be taken during winter season*	*May be announced*
21D remainder	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*July 1-Oct. 14* *Feb. 1-June 30.*
	Up to 5 cows per day; however, calves may not be taken	*Sept. 1-Mar. 31.*
	Nonresidents—1 bull; however, calves may not be taken	*Aug. 1-Sept. 30*

Unit 22—Caribou

22A, that portion north of the Golsovia River drainage	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*July 1-Oct. 14* *Feb. 1-June 30.*
	Up to 5 cows per day; however, calves may not be taken	*Sept. 1-Mar. 31.*
	Nonresidents—1 bull; however, calves may not be taken	*Aug. 1-Sept. 30*
Unit 22B, that portion west of Golovnin Bay, and west of a line along the west bank of the Fish and Niukluk rivers to the mouth of the Libby river, and excluding all portions of the Niukluk River drainage upstream from and including the Libby	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*Oct. 1-Oct. 14* *Feb. 1-Apr. 30*
	Up to 5 cows per day; however, calves may not be taken	*Oct. 1-Mar. 31* .
	Up to 5 caribou per day; however, calves may not be taken; during the period May 1-Sept. 30, a season may be announced by emergency order; however, cow caribou	*Season to be announced by emergency order*

River drainage	*may not be taken April 1-Aug. 31; bull caribou may not be taken Oct. 15-Jan. 31*	
	Nonresidents: 1 bull; however, calves may not be taken; during the period Aug. 1-Sept. 30, a season may be announced by emergency order	*Season to be announced by emergency order*
22B Remainder	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*July 1-Oct. 14* *Feb. 1-June 30.*
	Up to 5 cows per day; however, calves may not be taken	*Sept. 1-Mar. 31.*
	Nonresidents—1 bull; however, calves may not be taken	*Aug. 1-Sept. 30*
22C	*Residents—5 caribou per day, however, cows may not be taken May 16-June 30*	*may be announced* .
	Nonresidents—5 caribou total, however, cows may not be taken May 16-June 30.	*may be announced*
22D, that portion in the Pilgrim River drainage	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*Oct. 1-Oct. 14* *Feb. 1-Apr. 30*
	Up to 5 cows per day; however, calves may not be taken	*Oct. 1-Mar. 31* .
	Up to 5 caribou per day; however, calves may not be taken; during the period May 1-Sept. 30, a season may be announced by emergency order; however, cow caribou may not be taken April 1-Aug. 31	*Season to be announced by emergency order*
	Nonresidents: 1 bull; however, calves may not be taken; during the period Aug. 1-Sept. 30, a season may be announced by emergency order	*Season to be announced by emergency order*

22D, that portion in the Kuzitrin River drainage (excluding the Pilgrim River drainage) and the Agiapuk river drainage, including tributaries	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*July 1-Oct. 14* *Feb. 1-June 30.*
	Up to 5 cows per day; however, calves may not be taken	*Sept. 1-Mar. 31.*
	Nonresidents—1 bull; however, calves may not be taken	*Aug. 1-Sept. 30*
22E, that portion east of and including the Sanaguich River drainage	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*July 1-Oct. 14* *Feb. 1-June 30.*
	Up to 5 cows per day; however, calves may not be taken	*Sept. 1-Mar. 31.*
	Nonresidents—1 bull; however, calves may not be taken	*Aug. 1-Sept. 30*
22 Remainder	*Residents—5 caribou per day; however, calves may not be taken; cow caribou may not be taken Apr. 1-Aug. 31; bull caribou may not be taken Oct. 15-Jan. 31*	*Season to be announced by emergency order*
	Nonresidents—1 bull; however, calves may not be taken; during the period Aug. 1-Sept. 30, a season may be announced by emergency order	*Season to be announced by emergency order*

Unit 23—Caribou

23, that portion north of and including the Singoalik River drainage	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*July 1-Oct. 14* *Feb. 1-June 30.*
	Up to 5 cows per day; however, calves may not be taken	*Jul. 15-Apr. 30*
	Nonresidents—1 bull; however, calves may not be taken	*Aug. 1-Sept. 30*

23 remainder	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*July 1-Oct. 14* *Feb. 1-June 30.*
	Up to 5 cows per day; however, calves may not be taken	*Sept. 1-Mar. 31.*
	Nonresidents—1 bull; however, calves may not be taken	*Aug. 1-Sept. 30*

Unit 24—Caribou

24A, south of the south bank of the Kanuti River	*Residents—1 caribou*	*Aug. 10-Mar. 31*
	Nonresidents—1 caribou	*Aug. 10-Sept. 30*
	A portion of this area is within the DHCMA and additional restrictions apply.	
24B, that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti-Kilolitna River drainage, bounded by the southeast bank of the Kodosin-Nolitna Creek, then downstream along the east bank of the Kanuti-Kilolitna River to its confluence with the Kanuti River—1 caribou.	*Residents –1 caribou*	*Aug. 10-Mar. 31*
	Nonresidents—1 caribou	*Aug. 10-Sept. 30*
24A remainder, 24B remainder	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*July 1-Oct. 14* *Feb. 1-June 30.*
	Up to 5 cows per day; however, calves may not be taken	*Jul. 15-Apr. 30*
	Nonresidents—1 bull; however, calves may not be	*Aug. 1-Sept. 30*

	taken	
	A portion of this area is within the DHCMA and additional restrictions apply.	
24C, 24D	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*July 1-Oct. 14* *Feb. 1-June 30.*
	Up to 5 cows per day; however, calves may not be taken	*Sept. 1-Mar. 31.*
	Nonresidents—1 bull; however, calves may not be taken	*Aug. 1-Sept. 30*

Unit 26--Caribou

26A, that portion of the Colville River drainage upstream from the Anaktuvuk River, and drainages of the Chukchi Sea south and west of, and including the Utukok River drainage	*Residents—5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken;	*July 1-Oct. 14* *Feb. 1-June 30.*
	Up to 5 cows per day; however, calves may not be taken	*Jul. 15-Apr. 30*
	Nonresidents—1 bull; however, calves may not be taken	*Aug. 1-Sept. 30*
26A, Remainder	*Residents—5 bulls per day; however, calves may not be taken;*	*July 1-July 15* .
	5 caribou per day; however, no more than 3 cows per day; cows accompanied by calves and calves may not be taken;	*July 16-Oct. 15*
	3 cows per day; however, calves may not be taken;	*Oct. 16-Dec. 31*
	5 caribou per day; however no more than 3 cows per day; calves may not be taken;	*Jan. 1-Mar. 15* *Mar. 16-June 30*
	5 bulls per day; however, calves may not be taken	*Aug. 1-Sept. 30*
	Nonresidents—1 bull; however, calves may not be taken	

26B, that portion north of 69° 30'N. lat and west of the east bank of the Kuparuk River to a point at 70° 10' N. lat., 149° 04' W. long, then west approximately 22 miles to 70° 10' N. lat. And 149° 56' W. long., then following the east bank of the Kalubik River to the Arctic Ocean	*Residents--5 caribou per day; however, cow caribou may not be taken May 16-June 30.*	*July 1-June 30 .*
	Nonresidents—5 caribou	*July 1-Apr. 30*
26B, that portion south of 69° 30' N. lat. and west of the Dalton Highway	*Residents and Nonresidents--5 caribou; however, cow caribou may be taken only from July 1-Oct. 10.*	*July 1-Oct. 10 May 16-June 30*
26B, that portion south of 69° 30' N. lat. and east of the Dalton Highway	*Residents and Nonresidents—5 caribou; however, cow caribou may be taken only from July 1-May 15.*	*July 1-June 30*
26B, Remainder	*Residents—5 caribou*	*July 1-Apr. 30*
	Nonresidents—5 caribou	*July 1-Apr. 30*
26C	*Residents—10 Caribou total; Any caribou*	*July 1-Apr. 30*
	Bull caribou	*June 23-June 30*
	Nonresidents—Two bulls	*Aug. 1-Sept. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 56% of Unit 21D and consist of 29.2.4% U.S. Fish and Wildlife Service (USFWS) managed lands, and 26.6% Bureau of Land Management (BLM) managed lands (see **Unit 21 Map**).

Federal public lands comprise approximately 42.1% of Unit 22 and consist of 27% BLM managed lands, 12.2% National Park Service (NPS) managed lands, and 2.9% USFWS managed lands (see **Unit 22 Map**).

Federal public lands comprise approximately 69% of Unit 23 and consist of 41.8% NPS managed lands, 17.5% BLM managed lands, and 9.6% USFWS managed lands (see **Unit 23 Map**).

Federal public lands comprise approximately 67% of Unit 24 and consist of 23% BLM managed lands, 21.9% NPS managed lands, and 21.8% USFWS managed lands (see **Unit 24 Map**).

Federal public lands comprise approximately 68% of Unit 26 and consist of 45.2% BLM managed lands, 17.3% USFWS managed lands, and 5% NPS managed lands (see **Unit 26 Map**).

Customary and Traditional Use Determinations

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

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

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

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

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

Residents of Unit 26 (except the Prudhoe Bay–Deadhorse Industrial Complex), Anaktuvuk Pass, and Point Hope have a customary and traditional use determination for caribou in Unit 26A and 26C.

Residents of Unit 26, Anaktuvuk Pass, Point Hope, and Unit 24 within the Dalton Highway Corridor Management Area have a customary and traditional use determination for caribou in Unit 26B.

Regulatory History

<u>Unit 21D</u>

In 1991, the Federal Subsistence Board (Board) adopted proposal P91-132 with modification to designate new hunt areas in Unit 21D and establish a to-be-announced winter season with a harvest limit of two caribou (FWS 1991).

In 1992, the Board approved Temporary Special Action S92-06 to open a temporary winter season for caribou in Unit 21D north of the Yukon River and east of the Koyukuk River (FWS 1992).

In 2007, the Board adopted proposal WP07-33, closing Unit 21D north of the Yukon River and east of the Koyukuk River to caribou hunting during the Federal fall season. This was done in order to conserve the declining Galena Mountain Caribou Herd (FWS 2007).

Unit 22

In 1994, the Board adopted Proposal P94-63A with modification to allow snowmachines to be used to take caribou and moose in Unit 22 (FWS 1994).

In 1996, the Board adopted Proposal P96-049 with modification to provide a customary and traditional use determination for caribou in Unit 22 for rural residents of Unit 21D west of the Koyukuk and Yukon rivers, Units 22 (except St. Lawrence Island), 23, 24. The Proposal also provided a customary and traditional use determination for caribou in Unit 22A for residents of Kotlik, Emmonak, Marshall, Mountain Village, Pilot Station, Pitka's Point, Russian Mission, St. Mary's, Sheldon Point, and Alakanuk (FWS 1996).

In 1997, the Board adopted Proposal P97-54 with modification to add residents of Hooper Bay, Scammon Bay, and Chevak to the customary and traditional use determination for caribou in Unit 22A (FWS 1997a).

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 2003, the Board adopted Proposal WP03-40 with modification to establish a harvest season of July 1-June 30 and a 5 caribou per day harvest limit in portions of Units 22D and 22E. This was done because caribou had expanded their range into these subunits and harvest was not expected to impact the caribou or reindeer herds, to provide additional subsistence hunting opportunities, and to align State and Federal regulations (FWS 2003).

In 2006, the Board adopted Proposal WP06-37 with modification, which designated a new hunt area in Unit 22B with an open season of Oct. 1-Apr. 30 and a closed season from May 1-Sept. 30 unless opened by a Federal land manager. This was done to prevent incidental take of privately-owned reindeer and to reduce user conflicts (FWS 2006a).

Unit 23

In 1995, the Board adopted Proposal P95-51 to increase the caribou harvest limit from 5 per day to 15 per day to increase opportunity for subsistence hunters to maximize their hunting when the caribou were available (FWS 1995a).

In 1997, the Board adopted Proposal P97-66 with modification to provide a positive 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 (FWS 1995b, 1997b).

In 2000, Board adopted Proposal WP00-53 with modification allowing the use of snowmachines to position and 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).

Unit 24

In 2000, the Board adopted Proposal P00-44 to expand the hunting area north of the Kanuti River for caribou to allow Federally qualified subsistence users additional opportunities to harvest from the WACH (OSM 2000b). The harvest limit was set at 5 caribou per day with the restriction that cows may not be taken from May 16-June 30 (FWS 2000b).

The Board, however, did not change the harvest limit of one caribou in the southern section of Unit 24B and 24A which was enacted to protect the Ray Mountain Caribou Herd, a small population of about 1,000 animals, on their wintering range (Jandt 1998).

Unit 26A and 26B

In 1995, the Board adopted Proposal P95-64 to increase the harvest limit from 5 caribou per day to 10 caribou per day to increase opportunity for subsistence hunters (FWS 1995c). This harvest limit has remained in effect since then. The Board also adopted Proposal P95-62 which closed the area east of the Killik River and south of the Colville River to non-Federally qualified subsistence users on Federal public lands (OSM 1995b). This closure was enacted to prevent non-Federally qualified subsistence users from harvesting lead animals, which may have caused the migration to move away from the area that local subsistence users hunted in Unit 26A (FWS 1995b).

In 2005, the Alaska Board of Game established a Controlled Use Area for the Anaktuvuk River drainage that prohibited the use of aircraft for caribou hunting from Aug. 15–Oct. 15. The intent of this proposal was to limit access by non-subsistence users, reduce user conflicts, and lessen the impact on caribou migration.

In 2006, the Board adopted Proposal WP06-65, which opened the area east of the Killik River and south of the Colville River to non-Federally qualified subsistence users (FWS 2006b). The 1995 closure was lifted for several reasons. First, due to changes in land status because of lands selected under the Statehood Act and the Alaska Native Claims Settlement Act (ANCSA), lands formerly managed by BLM were transferred to ANCSA corporations or the State of Alaska. Only the lands east of Anaktuvuk Pass were affected by the closure, making it less effective. Second, the population level was at a point where it could support both subsistence and non–subsistence uses.

In 2013, an aerial photo census indicated significant declines in the TCH (Caribou Trails 2014), WACH (Dau 2011), and possibly the Central Arctic Caribou Herd (CACH) populations. In response, the Alaska Board of Game adopted modified Proposal 202 (RC76) in March 2015 to reduce harvest opportunities for both residents and non-residents within the range of the WACH and the TCH. These regulation changes – which included lowering bag limits, changing harvest seasons, modifying the hunt area descriptors, and restricting bull and cow harvest and prohibiting calf harvest – were adopted to slow or reverse the population decline.

These regulatory changes took effect on July 1, 2015, and are the result of extensive discussion and compromise among a variety of stakeholders. State regulatory changes and the proposed changes to

Federal regulations represent the first time in over 30 years that harvest restrictions have been implemented for the WACH and TCH. The restrictions requested in this proposal for the WACH are also supported by management recommendations outlined in the Western Arctic Herd Management Plan (WACH Working Group 2011).

Four Special Actions, WSA15-03/04/05/06, submitted by the North Slope Regional Advisory Council requested changes to caribou regulations in Units 23, 24, and 26 and have recently been approved by the Federal Subsistence Board (Board), effective July 1, 2015. Temporary Special Action WSA15-03, requested designation of a new hunt area for caribou in Unit 23 where the harvest limit would be reduced from 15 caribou per day to 5 caribou per day, the harvest season be reduced for bulls and cows, and the take of calves would be prohibited.

Temporary Special Action WSA15-04, requested designation of a new hunt area for caribou in Unit 24, harvest seasons for bulls and cows to be shortened, and the take of calves to be prohibited.

Temporary Special Action WSA15-05, requested that caribou harvest limit in Unit 26A be reduced from 10 caribou per day to 5 caribou per day, the harvest seasons for bulls and cows be shortened, and the take of calves and cows with calves be prohibited. Compared to the new State caribou regulations, it requested 3 additional weeks to the bull harvest season from Dec. 6-31.

Temporary Special Action WSA15-06, requested designation of a new hunt area for caribou in Unit 26B where the harvest limit would be reduced from 10 caribou per day to 5 caribou per day, the harvest season would be shortened, and the take of calves would be prohibited.

Current Events

Eight additional proposals concerning caribou regulations in Units 21D, 22, 23, 24, or 26 were submitted to the Board for the 2016-2018 regulatory cycle. The outcome of those proposals may affect the outcome of this proposal.

Four proposals: WP16-61, WP16-62, WP16-63, and WP16-64, submitted by the North Slope Subsistence Regional Advisory Council, mirror Temporary Special Actions WSA15-03/04/05/06 described above.

WP16-43, submitted by the Seward Peninsula Subsistence Regional Advisory Council (SPRAC), requests that portions of Unit 22A be closed to caribou hunting unless opened by the Federal in-season manager. The intent of this proposal is to prevent incidental take of privately-owned reindeer.

WP16-45, also submitted by the SPRAC, requests that additional areas be opened to caribou hunting in Unit 22 along with a modification in a hunt area descriptor.

Combined Proposals WP16-49 and WP16-52, submitted by the Northwest Arctic Subsistence Regional Advisory Council and the Upper and Lower Kobuk Advisory Committee request reductions in harvest limits for caribou in Unit 23, restrictions on bull and cow seasons, and a prohibition on the harvest of cows with calves.

Biological Background

Caribou abundance naturally fluctuates over decades (Gunn 2003, WACH Working Group 2011). Gunn (2003) reports the mean doubling rate for Alaskan caribou as 10 ± 2.3 years. Although the underlying mechanisms causing these fluctuations are uncertain, Gunn (2003) suggests climatic oscillations as the primary factor, exacerbated by predation and density-dependent reduction in forage availability, resulting in poorer body condition.

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.

Joly (2000) predicts that calves orphaned later in life have greater chances of surviving. Data from Russell et al (1991) suggests 50% and 75% of the calves orphaned in September and November, respectively, survived the winter (Joly 2000). Indeed, there is little evidence that calves orphaned after weaning experience strongly reduced overwintering survival rates than non-orphaned calves (Rughetti and Festa-Bianchet 2014, Joly 2000, Holand et al. 2012). However, Holand et al. (2012) found orphaned calves to have greater losses of winter body mass than non-orphaned calves, indicating orphaned calves may be more susceptible to severe winters.

The TCH, WACH, and CACH have ranges that overlap in Unit 26A (**Figure 1**) and there can be considerable mixing of herds during the fall and winter. During the early 2000s, the number of caribou wintering on the North Slope peaked at over 700,000 animals (this includes the Porcupine Caribou Herd in northeast Alaska and Northwest Territories, Canada), which may be the highest number since the 1970s. During the 1970s, there was little overlap between these four herds, but the degree of mixing seems to be increasing (Lenart 2011, Dau 2011, Parrett 2011).

Because the proposed regulatory changes for this proposal were put forward primarily due to the decline of the WACH and TCH, the focus of the biology will be on the WACH and TCH with a brief overview of the current population status of the CACH.

<u>Central Caribou Herd</u>

The current status of the CACH is unclear. The most recent population count, based on aerial photo census in 2013, was over 70,000 animals, which was similar to the peak count in 2010. However, the presence of 10 collared caribou from the Porcupine Caribou Herd (PCH) detected in the CACH could represent up to 20,000 caribou, which could indicate that the CACH may have declined by about 20% since 2010 (Caribou Trails 2014, Lenart 2011).

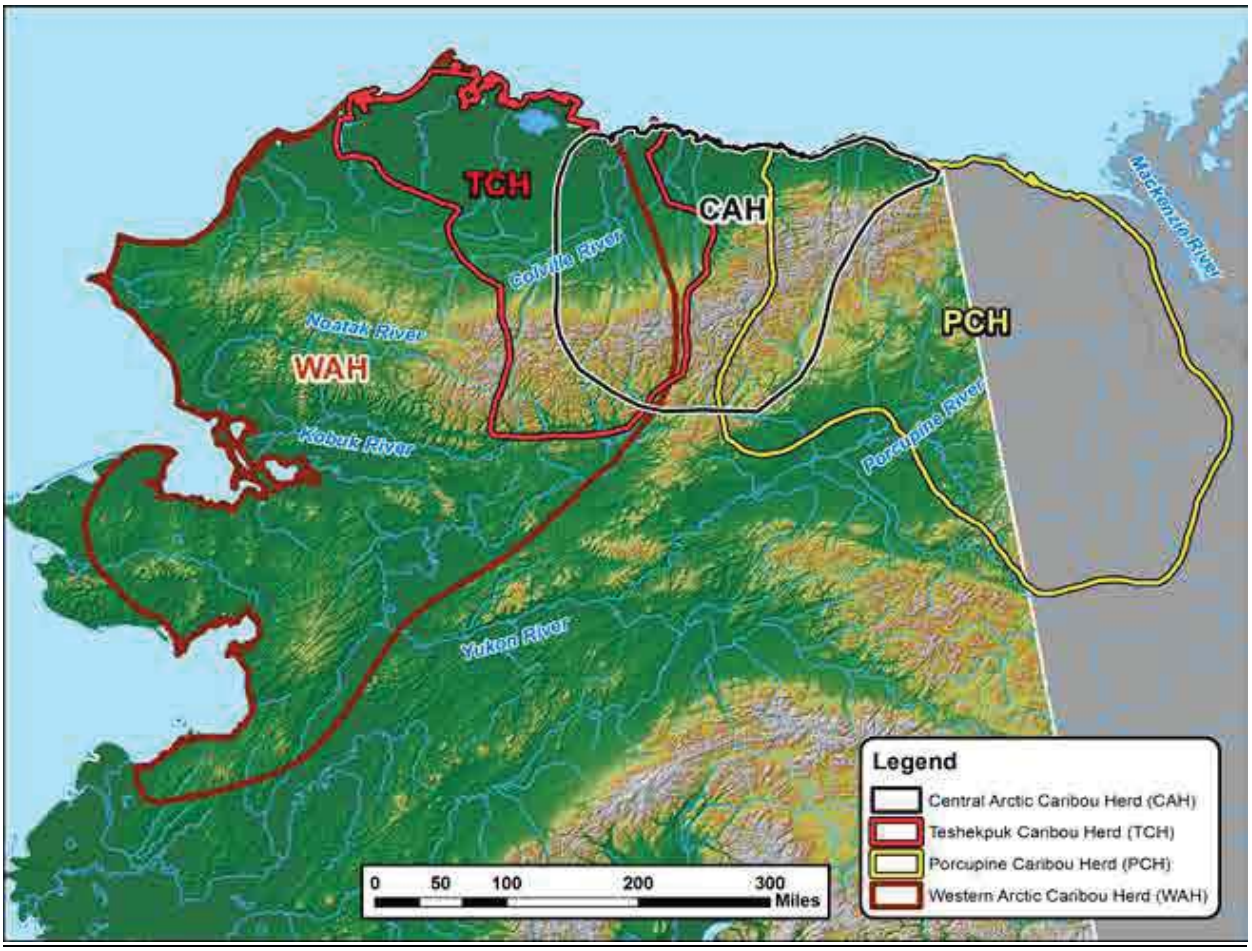

Figure 1. Herd overlap and ranges of the WACH, TCH, CACH and Porcupine caribou herds (WACH 2014).

Teshekpuk Caribou Herd

The TCH calving and summering areas overlap with the eastern portion of the National Petroleum Reserve–Alaska (NPR–A). Most of the TCH moves toward Teshekpuk Lake in May to calve in early June. The primary calving grounds of the TCH (approximately 1.8 million acres) occur to the east, southeast and northeast of Teshekpuk Lake (Person et al. 2007, Wilson et al. 2012).

From late June through July, cows and bulls move to the Beaufort Sea coast from Dease Inlet to the mouth of Kogru River (Barrow to the Colville Delta), around the north and south side of the Teshekpuk Lake, and the sand dunes along the Ikpikpuk River to seek relief from insects (Carroll 2007, Parrett 2007). The narrow corridors of land to the east and northwest of the Teshekpuk Lake are important migratory corridors to insect relief areas as well (Yokel et al. 2009). River corridors are also used more during periods of insect harassment.

Fall and winter movements are more variable, although most of the TCH winters on the coastal plain around Atqasuk, south of Teshekpuk Lake. However, the TCH has wintered as far south as the Seward Peninsula,

as far east as the Arctic National Wildlife Refuge, and in the foothills and mountains of the Brooks Range (Carroll 2007). In 2008/09, the TCH used many of these widely disparate areas in a single year (Parrett 2011).

The State has set management goals for the TCH to provide for subsistence and other hunting opportunities on a sustained yield basis, ensure that adequate habitat exists, and provide for viewing and other uses of caribou (Parrett 2013). Specific State management objectives for the TCH are as follows (Parrett 2013):

- Attempt to maintain a minimum population of 15,000 caribou, recognizing that caribou numbers naturally fluctuate.
- Maintain a harvest level of 900–2,800 caribou using strategies adapted to population levels and trends.
- Maintain a population composed of least 30 bulls:100 cows.
- Monitor herd characteristics and population parameters (on an annual or regular basis).
- Develop a better understanding of the relationships and interactions among North Slope caribou herds.
- Encourage cooperative management of the herd and its habitat among State, Federal, and local entities and all users of the herd.
- Seek to minimize conflicts between resource development and the TCH.

Since 1984, the minimum population of the TCH has been estimated using aerial photo censuses and information from radio-collared individuals. Population estimates are determined by methods described by Rivest et al. (1998) which account for caribou in groups that do not have a collared animal and for missing collars.

The TCH population increased from an estimated 18,292 caribou (minimum estimate 11,822) in 1982 to 68,932 caribou (minimum estimate 64,106) in 2008. From 2008 to 2014 the population declined by almost half to 39,000, which is still well above State management objectives (**Figure 2**, Parrett 2015, pers. comm.).

Interpretation of population estimates is difficult due to movements and range overlap among caribou herds, which results in both temporary and permanent immigration (Person et al. 2007). For example, following the 2013 census, ADF&G decided to manage the TCH based on minimum counts rather than population estimates due to substantial mixing of the TCH and WACH during the photo census, which compromises the reliability of the population estimates (Parrett 2015, pers, comm.).

From 1991-2010, the bull:cow ratio varied widely, ranging from 25-98 bulls:100 cows/year (**Figure 3**). The number of bulls declined during this time period from an average of 62 bulls:100 cows/year (1991-2000) to an average of 46 bulls:100 cows (2001-2010), which is still above State management objectives (**Figure 3,** Parrett 2013).

Between 1998-2011, the fall calf:adult ratio fluctuated widely, ranging from 6-32 calves:100 adults/year, with an average of 22.5 calves:100 adults/year (**Figure 4**). Short yearlings (SY) are 10-11 months old

caribou. SY:adult ratios are determined from spring surveys and indicate overwintering calf survival and recruitment. The SY:adult ratios were closely correlated with fall calf:adult ratios until 2009 (**Figure 4**).

From 1998-2008, the fall calf:adult and spring SY:adult ratios averaged 21 calves:100 adults/year and 20 SY:100 adults/year, respectively, indicating most calves survived the winter. Conversely, from 2009-2011, the fall calf:adult and spring SY:adult ratios averaged 30 calves:100 adults/year and 14 SY:100 adults/year, respectively, indicating much lower overwintering calf survival in recent years (Parrett 2013, **Figure 4**).

The annual mortality of adult radio collared females from the TCH has remained close to the long term (1991-2012) average of 14.5% (range 8–25%) (Parrett 2011, Caribou Trails 2014, Parrett 2015, pers. comm.). The highest cow and bull mortalities occurred in spring and fall, respectively. Female mortalities may be tied to poor nutrition while bull mortalities are likely tied to the rut. Predation is also a proximal cause of mortality. While harvest is included in mortality, it is a small proportion of the mortality for both sexes (Dau 2013).

As the TCH has declined, calf weights have declined, indicating that poor nutrition may be having a significant effect on this herd (Carroll 2015, pers. comm., Parrett 2015, pers. comm.).

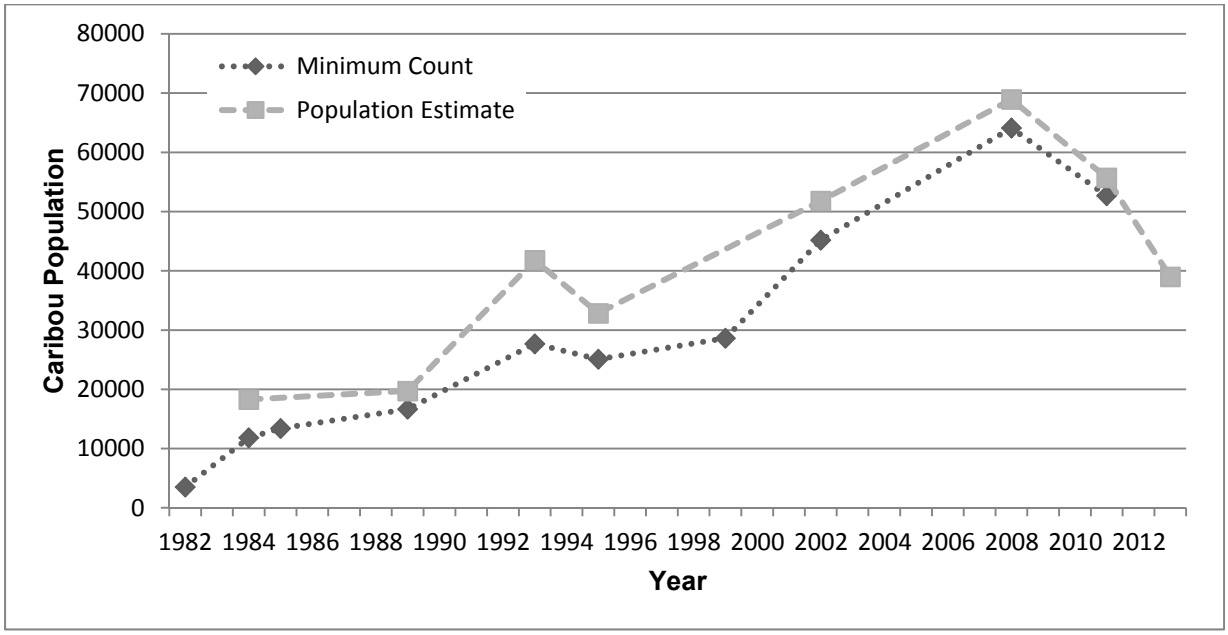

Figure 2. Minimum counts and population estimates of the Teshekpuk Caribou Herd from 1980-2014. Population estimates from 1984-2014 are based on aerial photographs of groups of caribou that contained radio–collared animals (Parrett 2011, 2013, Parrett 2015, pers. comm.).

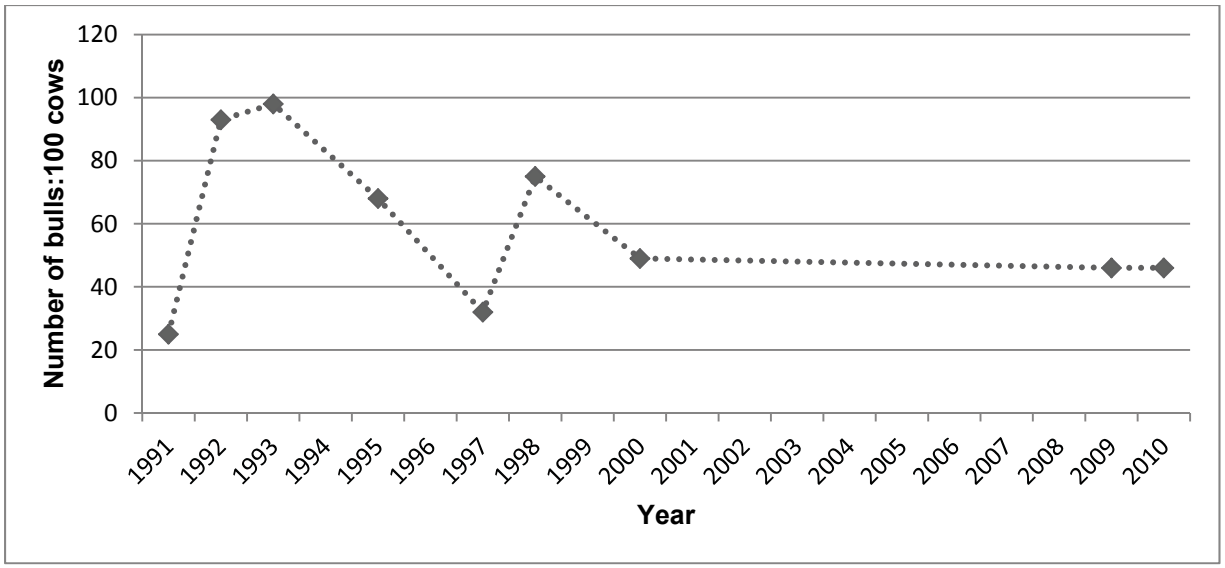

Figure 3. Bull:cow ratios of the Teshekpuk Caribou Herd (Parrett 2013).

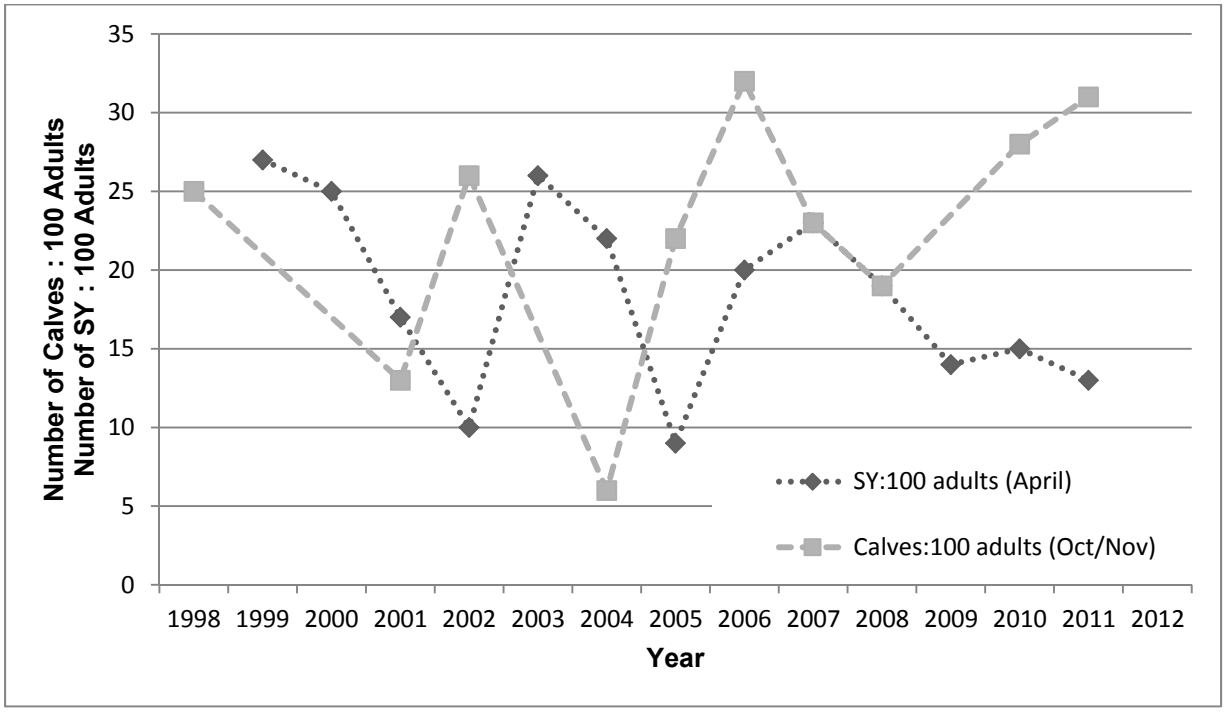

Figure 4. Calf:adult and short yearling (SY):adult ratios for the Teshekpuk Caribou Herd (Parrett 2013). Short yearlings are 10-11 months old caribou.

Western Arctic Caribou Herd

The WACH has historically been the largest caribou herd in Alaska and has a home range of approximately 157,000 mi^2 in northwestern Alaska (**Figure 1**). 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 (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 remaining 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. The caribou rut occurs during fall migration (Dau 2011, WACH Working Group 2011). Dau (2013) determined the WACH rut dates to be October 22-26. This is based on back-calculations from calving dates using a 230 day gestation period.

The Western Arctic Caribou Herd Working Group (WACH WG) formed in 1997 to ensure the long-term conservation and traditional use of the WAH. It is comprised of 20 voting chairs, including subsistence hunters from local villages, sport hunters, hunting guides, reindeer herders, and other stakeholders. The WAH WG developed a Western Arctic Caribou Herd Cooperative Management Plan (WACH Management Plan) in 2003, which was revised in 2011 (WACH Working Group 2011).

The Management Plan identifies seven plan elements: cooperation, population management, habitat, regulations, reindeer, knowledge, and education as well as associated goals, strategies, and management actions.

The State 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 WACH Management Plan (WACH Working Group 2011, Dau 2011) and include:

- Encourage cooperative management of the WACH and 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.

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 (**Table 1**).

The WACH population declined rapidly in the early 1970s and bottomed out at about 75,000 animals in 1976. Aerial photo censuses have been used since 1986 to estimate population size. The WAH popula-

tion increased throughout the 1980s, and 1990s, peaking at 490,000 animals in 2003 (**Figure 5**). Since 2003, the WACH has declined at an average annual rate of 7.1% from approximately 490,000 in 2003 to 234,757 caribou in 2013 (Dau 2011, Caribou Trails 2014, Dau 2014) (**Figure 5**).

Between 1982 and 2011, the WAH population was within the liberal management level prescribed by the WAH Working Group (**Table 1**). In 2013, the WAH population estimate fell below the population threshold for liberal management of a decreasing population (265,000), slipping into the conservative management level (**Table 1, Figure 5**).

Between 1970 and 2012, the bull:cow ratio has exceeded critical management levels (see **Table 1**) in all years, except 1975 and 2001 (**Figure 6**). However, reduced sampling intensity in 2001 likely biased the bull:cow ratio low (Dau 2013). The average annual number of bulls:100 cows were greater during the period of population growth (54:100 between 1976-2001) than during the recent period of decline (45:100 between 2004-2014). Additonally, Dau (2013) states all bull:cow ratios should be interpreted with caution due to sexual segregation during sampling and their inability to sample the entire population.

Table 1. Western Arctic caribou herd management levels using herd size, population trend, and harvest rate (WAH Working Group 2011).

	Population Trend		
Management Level and Harvest Level	Declining Low: 6%	Stable Med: 7%	Increasing High: 8%
Liberal	Pop: 265,000+ Harvest: 18,550-24,850	Pop: 230,000+ Harvest: 16,100-21,700	Pop: 200,000+ Harvest: 16,000-21,600
Conservative	Pop: 200,000-265,000 Harvest: 14,000-18,550	Pop: 170,000-230,000 Harvest: 11,900-16,100	Pop: 150,000-200,000 Harvest: 12,000-16,000
Preservative	Pop: 130,000-200,000 Harvest: 8,000-12,000	Pop: 115,000-170,000 Harvest: 8,000-12,000	Pop: 100,000-150,000 Harvest: 8,000-12,000
Critical Keep Bull:Cow ratio ≥ 40 Bulls:100 Cows	Pop: < 130,000 Harvest: 6,000-8,000	Pop: < 115,000 Harvest: 6,000-8,000	Pop: < 100,000 Harvest: 6,000-8,000

Between 1970 and 2012, the fall calf:cow ratio ranged from 35-59 calves:100 cows/year, averaging 46 calves:100 cows/year (**Table 2, Figure 7**). During periods of rapid population growth (1976–1992), fall calf:cow ratios were generally higher (averaging 54 calves:100 cows/year) than during periods of slow population growth or decline (1993–2013, averaging 43 calves:100 cows/year) (**Table 2, Figure 7**).

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 recruitments has slowly decreased (Dau 2013, **Figures 7, 8**).

Calf production has likely had little influence on the population trajectory (Dau 2013). Between 1990 and 2003, the June calf:cow averaged 66 calves:100 cows/year. Between 2004 and 2012, the June calf:cow ratio averaged 69 calves:100 cows/year (**Figure 7**).

However, decreased calf survival and recruitment are likely contributing to the current population decline (Dau 2013). Short yearlings (SY) are 10-11 months old caribou. SY:adult ratios indicate overwintering calf survival and recruitment. Between 1990 and 2003, SY:adult ratios averaged 20 SY:100 adults/year. Since the decline began in 2003, SY:adult ratios have averaged 16 SY:100 adults/year (2004-2012, **Figure 7**).

Similarly, fall calf:cow ratios indicate calf survival over summer. Fall calf:cow ratios declined from an average of 46 calves:100 cows/year between 1990-2003 to an average of 39 calves:100 cows/year between 2004-2012 (**Figure 7**).

The annual mortality rate of radio-collared adult cows increased, from an average of 15% between 1987 and 2003, to 25% from 2004–2012 (Dau 2011, 2013, 2014, **Figure 8**). Estimated mortality includes all causes of death including hunting (Dau 2011). Dau (2013) states these mortality rates are biased high due to selection of older caribou to radio-collar. Dau (2013) attributed the high mortality rate for 2011-2012 (33%, **Figure 8**) to a winter with deep snows, which weakened caribou and enabled wolves to predate them more easily. Prior to 2004, estimated adult cow mortality only exceeded 20% twice, but has exceeded 20% in 7 of the last 9 regulatory years between 2004 and 2012 (**Figure 8**).

Far more caribou have died from natural causes than from hunting between 1992 and 2012. Cow mortality remained constant throughout the year. However, natural and harvest mortality for bulls spiked during the fall. Predation, particularly by wolves, accounted for the majority of the natural mortality (Dau 2013).

As the WACH declined, the percentage of mortality due to hunting 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% (estimates from slide 16, Dau 2014). In previous years (1983-2013), the estimated hunting mortality exceeded 30% only once in 1997-1998 (Dau 2013).

Other contributing factors that may be contributing to the current population decline include weather (particularly fall and winter icing events), predation, hunting pressure, deteriorating range condition (including habitat loss and fragmentation), climate change, and disease (Dau 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 WACH because animals in the WACH, unlike the TCH, have generally maintained good body condition since the decline began. 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 WACH is routinely assessed and when caribou are in prime condition (Joly 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). The importance of high use areas for the TCH at Teshekpuk Lake during the summer has been well documented (Person et al. 2007, Carroll 2007, Parrett 2011, Wilson 2012, Smith, Witten, and Loya 2015). Presumably the importance of areas to the north, south, and east of Teshekpuk Lake during calving is due to the high concentration of sedge-grass meadows (Wilson et al. 2012). The areas around Teshekpuk Lake in the NPR–A are currently protected from oil and gas leasing in recognition of the importance of these areas for caribou, waterfowl and shorebirds (BLM 1998, 2008).

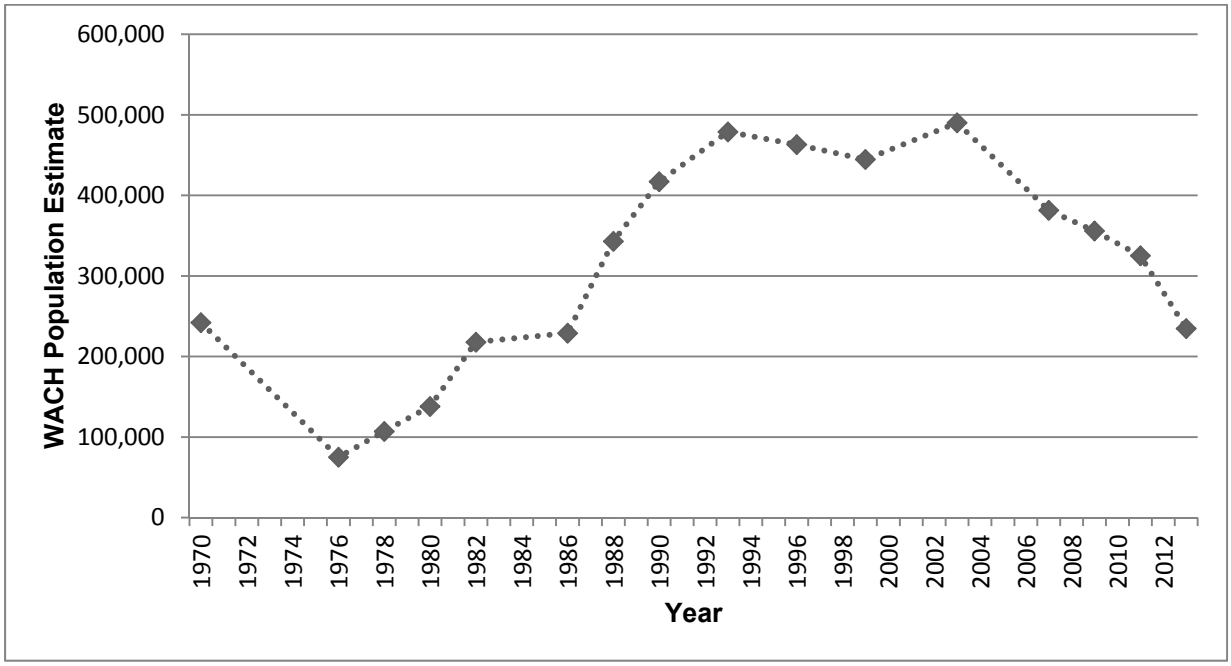

Figure 5. Western Arctic caribou herd population estimates from 1970-2013. Population estimates from 1986-2013 are based on aerial photographs of groups of caribou that contained radio–collared animals (Dau 2011, 2013, 2014).

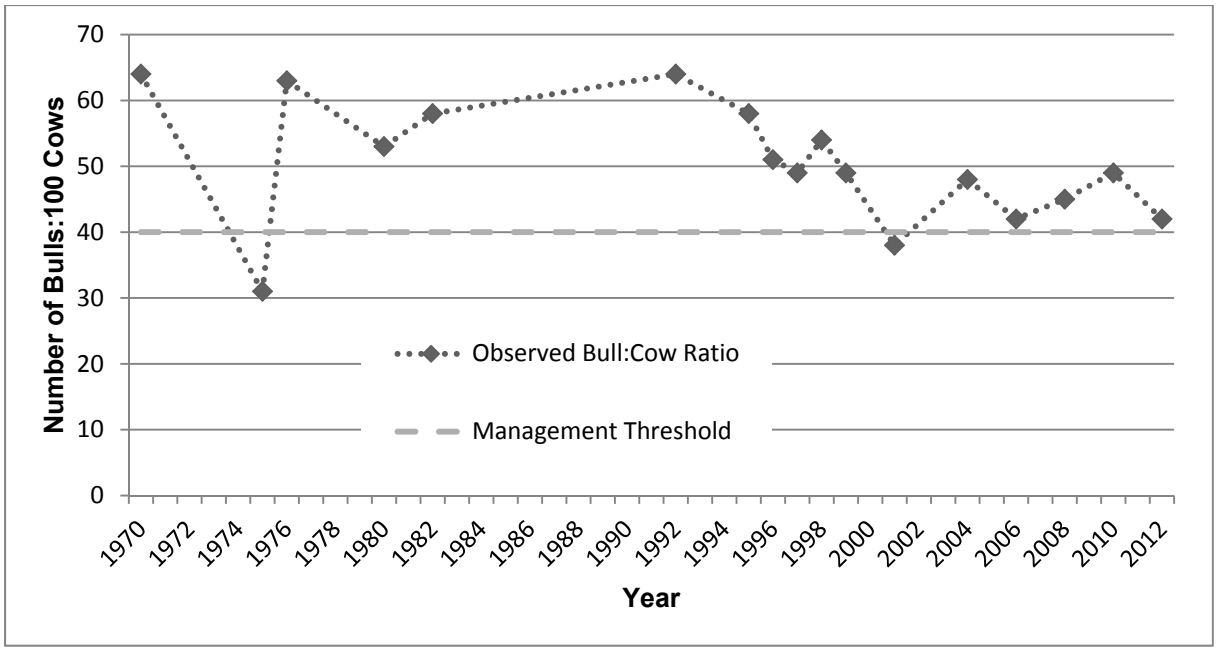

Figure 6. Bull:Cow ratios for the Western Arctic Caribou Herd (Dau 2013).

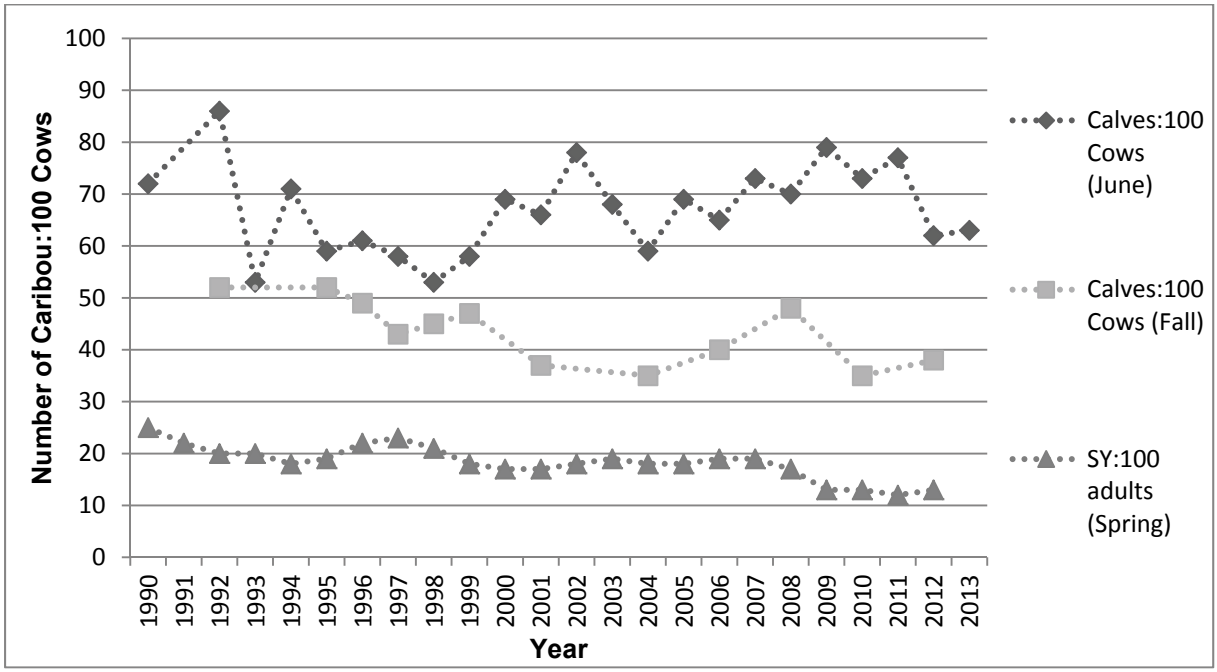

Figure 7. Calf:cow and short yearling (SY):adult ratios for the Western Arctic Caribou Herd (Dau 2013). Short yearlings are 10-11 months old caribou.

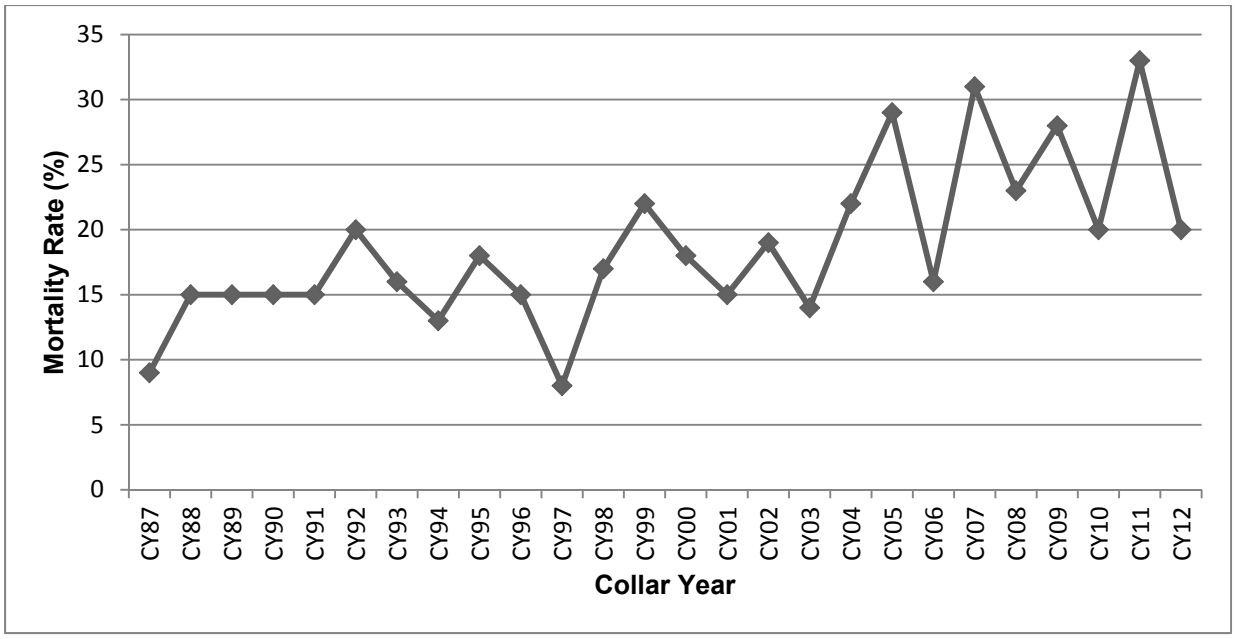

Figure 8. Mortality rate of radio-collared caribou in the Western Arctic caribou herd (Dau 2013). Collar Year = 1 Oct-30 Sept.

Harvest History

Harvest from the TCH is difficult to estimate because of very poor reporting, variation in community survey effort and location, widely varying wintering distribution of the TCH, and mixing of caribou herds. Most of the harvest occurs from July-October by local hunters in Unit 26A. Very low levels of TCH harvest occur in Units 23, 24, and 26B. Non-locals and non-residents account for less than 3% of the TCH harvest (Parrett 2013). Parrett (2013) estimates 3,387 TCH caribou were harvested in Unit 26A by local communities in each of 2010/11 and 2011/12 and that previously reported harvest estimates (Parrett 2009) were biased high due to oversampling (**Table 3**). This estimate is well above State objectives.

From 1999–2014, the average annual estimated harvest from the WACH was 13,600 caribou, ranging from 9,500-15,800 caribou/year (Dau 2009, Dau 2014, pers. comm., **Figure 9**). These harvest levels are within the conservative harvest level specified in the WACH Management Plan (**Table 1**). Local residents take approximately 94% of the caribou harvest within the range of the WACH, with residents of Unit 23 accounting for the vast majority of the harvest. From 1999-2011, 66-88% of all WACH caribou were harvested from Unit 23 by residents and non-residents (Dau 2013, **Figure 9**).

The State of Alaska manages the WACH to maximize a harvestable surplus of animals. In recent years, as the WACH population has declined, the State's total harvestable surplus for the WACH, which is estimated as 2% of the cows and 15% of the bulls, has declined (Dau 2011, Dau 2014, pers. comm.). Harvest from the WACH, which has remained fairly consistent since 1990, now represents a larger proportion of the annual mortality. This is one of the factors that prompted the Alaska Board of Game to enact restrictions to WACH and TCH caribou harvest in March 2015.

Table 2. Western Arctic Caribou Herd fall composition 1976 – 2014 (Dau 2011, 2013, 2014).

Regulatory Year	Total bulls: 100 cows[a]	Calves: 100 cows	Calves: 100 adults	Bulls	Cows	Calves	Total
1976/1977	63	52	32	273	431	222	926
1980/1981	53	53	34	715	1,354	711	2,780
1982/1983	58	59	37	1,896	3,285	1,923	7,104
1992/1993	64	52	32	1,600	2,498	1,299	5,397
1995/1996	58	52	33	1,176	2,029	1,057	4,262
1996/1997	51	49	33	2,621	5,119	2,525	10,265
1997/1998	49	43	29	2,588	5,229	2,255	10,072
1998/1999	54	45	29	2,298	4,231	1,909	8,438
1999/2000	49	47	31	2,059	4,191	1,960	8,210
2001/2002	38	37	27	1,117	2,943	1,095	5,155
2004/2005	48	35	24	2,916	6,087	2,154	11,157
2006/2007	42	40	28	1,900	4,501	1,811	8,212
2008/2009	45	48	33	2,981	6,618	3,156	12,755
2010/2011	49	35	23	2,419	4,973	1,735	9,127
2012/2013	42	38	27	2,119	5,082	1,919	9,120
2013/2014							
2014/2015	39						

[a] 40 bulls:100 cows is the minimum level recommended in the WACH Cooperative Management Plan (WACH Working Group 2011)

Reliance on caribou from a particular herd varies by community. Residents of Atqasuk, Barrow, Nuiqsut, and Wainwright harvest caribou primarily from the TCH while residents from Anaktuvuk Pass, Point Lay, and Point Hope harvest caribou primarily from the WACH (Dau 2011, Parrett 2011, 2013). Weather, distance of caribou from the community, terrain, and high fuel costs are some of the factors that can affect the availability and accessibility of caribou. Residents of Nuiqsut, which is on the northeast corner of Unit 26A, harvest approximately 11% of their caribou from the CACH (**Table 3,** Parrett 2013).

Range overlap between the three caribou herds, frequent changes in the wintering distribution of the TCH and WACH, and annual variation in the community harvest survey effort and location make it difficult to determine the proportion of the TCH, WACH and CACH in the harvest. Knowledge of caribou distribution at the time of the reported harvest is often used to estimate the proportion of the harvest from each herd. Community harvest surveys continue to be the preferred method to estimate harvest by Federally qualified subsistence users, since previous attempts to conduct registration hunts were not effective (Georgette 1994). However, community surveys are not always reliable due to sampling issues (Braem et al. 2011, Parrett 2011).

For communities where harvest surveys are not conducted or are unreliable, harvest estimates are often based on the current population estimate and previous estimates of the per capita harvest. A general overview of the relative utilization based on estimated harvest of each caribou herd by community for regulatory year 2010/11, is presented in **Table 3** (Parrett 2011, Dau 2011, and. Lenart 2011). The percentage of caribou harvested from different herds by community has varied ≤ 2% for all communities between 2008/09, 2009/10, and 2010/11. Total annual estimated caribou harvest by community varied with community population estimates.

The WACH Management Plan recommends harvest strategies at different management and harvest levels (**Table 1**). The harvest recommendations under conservative management include: no harvest of calves, no cow and restricted bull harvest by nonresidents, voluntary reduction of cow harvest by residents, and limiting harvest to maintain a minimum 40:100 bull:cow ratio (WACH Working Group 2011).

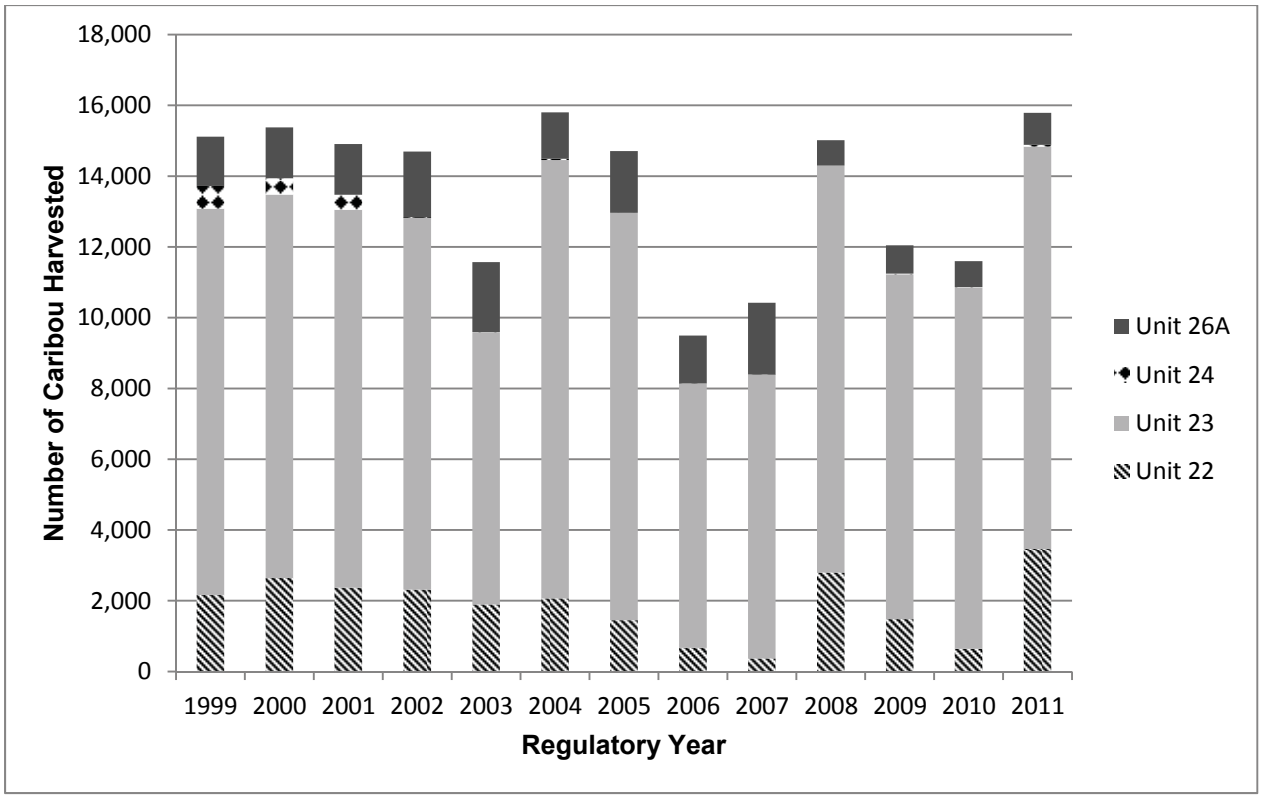

Figure 9. Total (resident and non-resident) estimated annual harvest of Western Arctic caribou by unit (Dau 2009, 2013). Unit 21D not included (average harvest is 0-10 caribou/year).

Other Alternatives Considered

WP16-43 and WP16-45 request changes to hunt area descriptors and areas open to caribou hunting in Unit 22 to mitigate user conflicts and the incidental take of reindeer. One alternative considered was to align the hunt area descriptors proposed in WP16-43 and WP16-45 with this proposal (WP16-37). However, considering the different intents of the proposals and the potential for the exact hunt areas descriptors to change through the review process, it was not deemed prudent at this time to reconcile these proposals. However, integrating the different hunt area descriptors and season dates requested by these proposals will be needed before the Board meets to take action on these proposals.

The North Slope Subsistence Regional Advisory Council (NSRAC) submitted Proposals WP16-63 and WP16-64 concerning caribou in Units 26A and 26B, respectively. The hunt areas identified by the NSRAC in Unit 26 do not align with the hunt areas requested by this proposal (WP16-37). Another alternative considered was to align the hunt areas between WP16-63, WP16-64, and WP16-37. However, alignment of hunt areas between the respective proposals is more appropriate after the affected Councils have had an opportunity to review and comment on proposals.

Table 3. Estimated caribou harvest of the Teshekpuk, Western Arctic and Central Arctic caribou herds during the 2010/2011 regulatory years in Unit 26A by federally qualified users (Parrett 2013, Dau 2013). Note: Due to the mixing or the herds, annual variation in the community harvest surveys and missing data, the percentages for each community do not add up to 100%.

Community	Human population[a]	Per capita caribou harvest[bc]	Approximate total community harvest	Estimated annual TCH harvest (%)	Estimated annual WACH harvest (%)	Estimated annual CACH harvest (%)
Anaktuvuk Pass	331	1.8	582	174 (30)	431 (80)	
Atqasuk	234	0.9	215	210 (98)	6 (2)	
Barrow	4,290	0.5	2,145	2,123 (97)	62 (3)	
Nuiqsut	411	1.1	468	403 (86)	3 (1)	36 (11)
Point Lay	191	1.3	247	49 (20)	120 (40)	
Point Hope	704		894	0	894 (100)	
Wainwright	559	1.3	710	426 (60)	48 (15)	
Total Harvest				3,387	1564	36

[a] Population estimates averaged from the 2010 U.S. Census and 2012 Alaska Department of Commerce, Division of Community and Regional Affairs data

[b] Citations associated with per-capita caribou harvest assessment by community can be found in Table 5 (Parrett 2011).

[c] Sutherland (2005)

Effects of the Proposal

If this proposal is adopted, Federally qualified subsistence users would have less opportunity to harvest caribou on Federal public lands in Units 21D, 22, 23, 24, 26A, and 26B. The caribou harvest limit in Unit 23 would be reduced from 15 per day to 5 per day and in Units 26A and 26B the harvest limit would be reduced from 10 per day to 5 per day. The reductions in the daily harvest limits and more restrictive harvest seasons for bulls and cows could reduce the potential harvest opportunities for Federally qualified subsistence users when caribou are available. The reduction on the take of calves is unlikely to have much effect on Federally qualified subsistence users since they rarely target calves.

Adopting this proposal would align State and Federal regulations, reducing regulatory complexity for users. Minimizing confusion among State and Federal regulations is desirable given the large and overlapping ranges of the WACH and TCH.

The benefits of these proposed regulations for the conservation of the WACH and TCH vary. The reduction in the harvest of cows with calves as recommended in Unit 26A from Jul. 16 to Oct. 15 is likely to increase calf survival. The restriction on the take of calves is likely to have little conservation effect because subsistence users rarely target calves. Efforts to reduce harvest of bulls and cows should help

reduce the overall caribou harvest for the declining TCH and WACH populations. Since cow mortality is one of the major contributing factors to the decline of WACH and TCH, any efforts to reduce cow mortality are recommended.

In Unit 23, that portion north of and including the Singoalik River drainage, the cow season is much longer (July 15-Apr. 30) than the cow season in Unit 23 remainder (Sept. 1-Mar. 31). Federally qualified subsistence users from locations outside of the hunt area may take advantage of this longer season resulting in increased competition for Point Hope subsistence users and disproportionate impacts to the caribou in that area.

OSM PRELIMINARY CONCLUSION

Support Proposal WP16-37 **with modification** to prohibit the harvest of cows with calves in Units 21D, 22, 23, 24, 26A and 26B, prohibit the harvest of calves in Unit 26B, extend the bull season in Units 26A and 26B, modify the cow season in Unit 26B, modify the hunt area descriptor in Unit 24, modify the harvest limit in Unit 26B, simplify and clarify the regulatory language, and delete regulatory language regarding to be announced seasons for Units 21D and 22 and delegate authority to Federal land managers to announce seasons via delegation of authority letters only (**Appendices 1-4**).

The modified regulations should read:

Unit 21D—Caribou

Unit 21D—north of the Yukon River and east of the Koyukuk River—caribou may be taken during a winter season to be announced ~~by the Refuge Manager of the Koyukuk/Nowitna National Wildlife Refuge Manager and the BLM Central Yukon Field Office Manager, in consultation with ADF&G and the Chairs of the Western Interior Subsistence Regional Advisory Council, and the Middle Yukon and Ruby Fish and Game Advisory Committees.~~	*Winter season to be announced.*
*Unit 21D, remainder—5 caribou per day**, as follows:** ~~; however, cow caribou may not be taken May 16–June 30.~~*	~~*July 1–June 30.*~~
However, 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 Sept. 1-Oct. 15.***	***Sept. 1-Mar. 31.***

Unit 22—Caribou

*Unit 22B**, that portion** west of Golovin Bay and west of a line along the west bank of the Fish and Niukluk Rivers **to the mouth of the Libby River,** and excluding **all portions of the Niukluk River drainage upstream from and including** the Libby River drainage—5 caribou per day**, as follows:**	~~*Oct. 1–Apr. 30.*~~
However, calves may not be taken	
Bulls may be harvested	***Oct. 1-Oct. 14*** ***Feb. 1-Apr. 30.***
Cows may be harvested ***However, cows accompanied by calves may not be taken Oct. 1-Oct. 15.***	***Oct. 1-Mar. 31***
5 caribou per day; however, calves may not be taken; Cows may not be taken April 1-Aug. 31; Bulls may not be taken Oct. 15-Jan. 31*.*	*May 1–Sept. 30, a season may be* ~~*opened by announcement*~~ ***announced*** ~~*by the Anchorage Field Office Manager of the BLM, in consultation with ADF&G.*~~
Units 22A, ***that portion north of the Golsovia River drainage,*** *22B remainder, that portion of Unit 22D in the* ~~*Kougaruk*~~*, Kuzitrin* ***River drainage*** *(excluding the Pilgrim River drainage),* ~~*American,*~~ *and* ***the*** *Agiapuk River Drainages,* ***including the tributaries,*** *and Unit 22E, that portion east of and including the Sanaguich River drainage—5 caribou per day****, as follows:*** ~~*; however, cow caribou may not be taken May 16–June 30.*~~	~~*July 1–June 30.*~~
However, 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 Sept. 1-Oct. 15.***	***Sept. 1-Mar. 31.***
Unit 22D, that portion in the Pilgrim River Drainage—5 caribou per	

day as follows:	
However, calves may not be taken	
Bulls may be harvested	***Oct. 1-Oct. 14*** ***Feb. 1-Apr. 30***
Cows may be harvested ***However, cows accompanied by calves may not be taken Oct. 1-Oct. 15.***	***Oct. 1-Mar. 31***
5 caribou per day; however, cows may not be taken April 1-Aug. 31.	***May 1 – Sept. 30*** ***Season may be announced***
Unit 22 remainder—***5 caribou per day; however, calves may not be taken; cows may not be taken Apr. 1-Aug. 31; cows accompanied by calves may not be taken Sept. 1-Oct. 15; bulls may not be taken Oct. 15-Jan. 31.***	~~*No Federal open season*~~ ***Season may be announced***

Unit 23—Caribou

Unit 23, that portion north of and including the Singoalik River drainage ~~*—15*~~***5*** *caribou per day* ***as follows:*** ~~*; however, cow caribou may not be taken May 16–June 30*~~	~~*July 1–June 30.*~~
However, 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, as follows:	
However, 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 Sept. 1-Oct. 14.***	***Sept. 1-Mar. 31.***

Unit 24—Caribou

Unit 24A—south of the south bank of the Kanuti River—1 caribou	***Aug. 10-Mar. 31***
*Unit 24**B**—that portion south of the south bank of the Kanuti River, upstream from and including that portion of the Kanuti-Kilolitna River drainage, bounded by the southeast bank of the Kodosin-Nolitna Creek, then downstream along the east bank of the Kanuti-Kilolitna River to its confluence with the Kanuti River—1 caribou.*	*Aug. 10–Mar. 31.*
Unit 24 ***that portion north of (and including) the Kanuti River in Units 24A and 24B and that portion north of the Koyukuk River downstream from the confluence with the Kanuti River in Unit 24B to the Unit 24C boundary.*** *~~remainder~~—5 caribou per day* ***as follows****; ~~however, cow caribou may not be taken May 16–June 30~~*	*~~July 1–June 30.~~*
However, 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***
Units 24C, 24D—5 caribou per day as follows:	
However, 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 Sept. 1-Oct. 14.***	***Sept. 1-Mar. 31***

Unit 26—Caribou

*Unit 26A****, that portion of the Colville River drainage upstream from the Anaktuvuk River, and drainages of the Chukchi Sea south and west of, and including the Utukok River drainage****~~—10~~* ***5*** *caribou per day* ***as follows:*** *~~; however, cow caribou may not be taken May 16–June 30.~~*	*July 1–June 30.*
However, 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. 15.***	***July 15-Apr. 30.***
Unit 26A remainder	
Calves may not be taken	
5 Bulls per day may be harvested	***July 1-Oct. 14*** ***Dec. 6-June 30***
3 cows per day may be harvested ***However, cows accompanied by calves may not be taken July 16-Oct. 15***	***July 16-Mar. 15***
Unit 26B, Northwest portion: north of 69° 30'N. lat and west of the east bank of the Kuparuk River to a point at 70° 10' N. lat., 149° 04' W. long, then west approximately 22 miles to 70° 10' N. lat. And 149° 56' W. long., then following the east bank of the Kalubik River to the Arctic Ocean—5 caribou per day; however, cows may not be taken May 16-June 30; Cows accompanied by calves may not be taken July 1-Oct. 15; Calves may not be taken.	***July 1-June 30***
Unit 26B, that portion south of 69° 30' N. lat. and west of the Dalton Highway—5 caribou per day as follows:	
However, calves may not be taken	
Bulls may be harvested	***July 1 -Oct. 14*** ***Dec. 10–June 30***
Cows may be harvested	***Oct. 14-Apr. 30***
Unit 26B, that portion south of 69° 30' N. lat. and east of the Dalton Highway—5 caribou per day; however, cows may not be taken from May 16-June 30; Cows accompanied by calves may not be taken July 1-Oct. 15.	***July 1-June 30***

Unit 26B ***remainder*** ~~*10*~~***5*** *caribou per day;*

*However, c****alves may not be taken*** ~~*cow caribou may be taken only from Oct. 1–Apr. 30*~~***.***

Bulls may be harvested *July 1*~~*-June 30*~~ ***Apr. 30***

Cows may be harvested ***Oct. 14-Apr. 30***

You may not transport more than 5 caribou per regulatory year from Unit 26 except to the community of Anaktuvuk Pass.

Justification

The precipitous decline of the caribou herds in northern and western Alaska warrant strong measures to ensure the conservation of these populations. Since 2008, the Teshekpuk and Western Arctic caribou populations have declined approximately 50%. Low calf survival and recruitment combined with increasing adult mortality are contributing factors to the overall population decline. In addition, current harvest rates including the taking of cows accompanied by calves, if allowed to continue, could prolong or worsen the current decline, and hamper recovery.

The Alaska Board of Game recently responded to these population concerns by passing restrictions to caribou hunting under their regulations for the 2015 regulatory year. General alignment of the State and Federal regulations will provide for a consistent management approach to conservation of these populations. Additionally, it will reduce the regulatory complexity for Federally qualified subsistence users. Minimizing confusion among State and Federal regulations is desirable given the large and overlapping ranges of the WACH and TCH. Overall, coordination of State and Federal conservation efforts will provide an opportunity to evaluate the effectiveness of reducing the caribou harvest in slowing down or reversing the population declines in the TCH and WACH. The restrictions proposed by this proposal for the WACH are also supported by management recommendations outlined in the Western Arctic Herd Management Plan (WACH Working Group 2011).

Two important conservation measures that can be taken to address the declining populations of the WACH and TCH are to increase calf survival and recruitment and reduce adult cow mortality. To address these conservation measures, cow harvest seasons have been shortened and regulations to protect cows with calves during their first six months have been incorporated into this proposal for Units 21D, 22, 23, 24, 26A, and 26B. These measures protect cows with calves while the calves are still nursing as orphaning calves before weaning decreases their chances of survival (Rughetti and Festa-Bianchet 2014, Joly 2000, Holand et al. 2012). Additionally, over summer calf survival in the WACH has decreased since 2003, ultimately leading to decreased recruitment into the herd. Prohibiting the take of cows with calves during the summer may improve over summer calf survival.

Modification of the hunt area descriptor in Unit 24B clarifies which parts of Unit 24B are included in the

regulations. The State's hunt area descriptor for Unit 24B is incomplete and leaves that portion north of the Koyukuk River downstream from the confluence with the Kanuti River in an ambiguous management unit.

The modified opening date of Dec. 6 for caribou in Unit 26A was specifically requested by the NSRAC as bull caribou are considered edible by then. This modification provides an additional three weeks of harvest opportunity to Federally qualified subsistence users.

The change in the bull season in Unit 26B from the proposed May 16-Oct. 10 (current State regulations) to the modified Dec. 10-Oct. 14 aligns with the bull season requested by the NSRAC in WP16-64. The proposed season dates (current State regulations) prohibited the take of bulls during late winter and early spring, which is unnecessarily restrictive. The modified bull season dates prohibit the take of bulls during rut when their meat is inedible.

The change in the cow season in Unit 26B from the proposed July 1-Oct. 10 (current State regulations) to the modified Oct. 14-Apr. 30 affords better protection for cows and cows with calves than the newly adopted State regulations. The proposed season allowed the take of cows when calves are still less than 6 months old, which may reduce recruitment and prohibited the take of cows in late winter and early spring, which is unnecessarily restrictive.

The change in the harvest limit for portions of Unit 26B from 5 caribou/season (current State regulations) to 5 caribou/day affords more harvest opportunity to Federally qualified subsistence users, aligns with the harvest limit proposed by the NSRAC (WP16-64), and is more consistent with the harvest limits of other units.

Simplifying the regulatory language reduces confusion for users. Creation of a delegation of authority letter for the Federal land manager will simplify regulations and allow for management flexibility through adjustment of in-season hunt parameters.

LITERATURE CITED

Braem, N.M., S. Pedersen, J. Simon, D. Koster, T. Kaleak, P. Leavitt, J. Paktotak, and p. Neakok. 2011. Monitoring of caribou harvests in the National petroleum Reserve in Alaska: Atqusuk, Barrow, and Nuiqsut, 2003-2007. Alaska Department of the Fish and Game, Division of the Subsistence Technical Paper No 361, ADF&G, Fairbanks, AK

Bureau of Land Management. 1998. Northeast National Petroleum Reserve–Alaska: final integrated activity plan/environmental impact statement. Department of Interior, BLM, Anchorage, AK.

Bureau of Land Management. 2008. Northeast National Petroleum Reserve–Alaska: supplemental integrated activity plan/environmental impact statement. Department of Interior, BLM, Anchorage, AK.

Caribou Trails 2014. News from the Western Arctic Caribou Herd Working Goup. Western Arctic Caribou Herd Working Group, Nome, AK. Issue 14.
http://westernarcticcaribou.org/wp-content/uploads/2014/07/CT2014_FINAL_lowres.pdf. Retrieved: June 23, 2015.

Carroll, G. 2007. Unit 26A, Teshekpuk caribou herd. Pages 262-283 in P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2004–30 June 2006. Alaska Department of Fish and Game. Project 3.0. Juneau, AK.

Carroll, G. M. 2015. Wildlife Biologist. Personal communication. email, in-person. ADF&G. Barrow, AK.

Dau, J. 2009. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A in Caribou survey–inventory management report. Pages 176-239 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2006– June 30, 2008. ADF&G. Juneau, AK

Dau, J. 2011. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 187-250 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2008–30 June 30, 2010. ADF&G. Juneau, AK.

Dau, J. 2013. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 201-280 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2010–30 June 30, 2012. ADF&G. Juneau, AK.

Dau, J. 2014. Wildlife Biologist. Personal communication. Information, including a power point presentation, presented at the Western Arctic Caribou Herd (WACH) Working Group Meeting, December 17-18, 2014. Anchorage, Alaska. ADF&G. Nome, AK.

FWS. 1991. Staff analysis P91-132. Pages 67-68 *in* Federal Subsistence Board Meeting materials March 4-8, 1991. Office of Subsistence Management, USFWS. Anchorage, AK. 246pp.

FWS. 1992. Staff analysis S92-06. Office of Subsistence Management, USFWS. Anchorage, AK. 246pp.

FWS. 1994. Staff analysis P94-63A. Pages 519-523 *in* Federal Subsistence Board Meeting materials April 1994. Office of Subsistence Management, USFWS. Anchorage, AK. 726pp.

FWS. 1995a. Staff analysis P97–051. Pages 334-339 *in* Federal Subsistence Board Meeting materials April 10-14, 1995. Office of Subsistence Management, USFWS. Anchorage, AK. 398pp.

FWS. 1995b. Staff analysis P95–062. Pages 399-404 *in* Federal Subsistence Board Meeting materials April 10-14, 1995. Office of Subsistence Management, USFWS. Anchorage, AK. 488pp.

FWS. 1995c. Staff analysis P95–064/065. Pages 411-417 *in* Federal Subsistence Board Meeting materials April 10-14, 1995. Office of Subsistence Management, USFWS. Anchorage, AK. 488pp.

FWS. 1996. Staff analysis P96-049. Pages 602-615 *in* Federal Subsistence Board Meeting materials April 29-May 3, 1996. Office of Subsistence Management, USFWS. Anchorage, AK. 784pp.

FWS. 1997a. Staff analysis P97–054. Pages 745-754 *in* Federal Subsistence Board Meeting materials April 7-11, 1997. Office of Subsistence Management, USFWS. Anchorage, AK. 1034pp.

FWS. 1997b. Staff analysis P97–066. Pages 879-895 *in* Federal Subsistence Board Meeting materials April 7-11, 1997. Office of Subsistence Management, USFWS. Anchorage, AK. 1034pp.

FWS. 2000a. Staff analysis P00–053. Pages 563-573 *in* Federal Subsistence Board Meeting materials May 2-4, 2000. Office of Subsistence Management, USFWS. Anchorage, AK. 661pp.

FWS. 2000b. Staff analysis P00–044. Pages 466-475 *in* Federal Subsistence Board Meeting materials May 2-4, 2000. Office of Subsistence Management, USFWS. Anchorage, AK. 661pp.

FWS. 2003. Staff analysis P03–040. Pages 106-115 *in* Federal Subsistence Board Meeting materials May 20-22, 2003. Office of Subsistence Management, USFWS. Anchorage, AK. 765pp.

FWS. 2006a. Staff analysis WP06-37. Pages 368-376 *in* Federal Subsistence Board Meeting materials May 16-18, 2006. Office of Subsistence Management, USFWS. Anchorage, AK. 579 pp.

FWS. 2006b. Staff analysis WP06-65. Pages 520-528 *in* Federal Subsistence Board Meeting materials May 16-18, 2006. Office of Subsistence Management, USFWS. Anchorage, AK. 579 pp.

FWS. 2007. Staff analysis WP07-33. Pages 363-375 *in* Federal Subsistence Board Meeting materials April 30-May 2, 2007. Office of Subsistence Management, USFWS. Anchorage, AK. 643 pp.

Georgette, S. 1994. Summary of Western Arctic Caribou Herd overlays (1984-1992) and comparison with harvest data from other sources. Unpublished manuscript. Alaska Department of Fish and Game, Division of Subsitence, Fairbanks, AK. 26 pp.

Gunn, A. 2001. Voles, lemmings and caribou – population cycles revisted? Rangifer, Special Issue. 14: 105-111.

Holand, O., R.B. Weladji, A. Mysterud, K. Roed, E. Reimers, M. Nieminen. 2012. Induced orphaning reveals post-weaning maternal care in reindeer. European Journal of Wildlife Research. 58: 589-596.

Jandt. R.R. 1998. Ray Mountain caribou: Distribution , movements, and seasonal use areas, 1994-1997. BLM–Alaska Open File Report 67. Anchorage, AK. 39pp.

Joly, K. 2000. Orphan Caribou, *Rangifer tarandus*, Calves: A re-evaluation of overwinter survival data. The Canadian Field Naturalist. 114: 322-323.

Joly, K., R.R. Jandt, C.R. Meyers, and J.M. Cole. 2007. Changes in vegetative cover on the Wesrtern Arctic herd winter range from 1981–2005: potential effects of grazing and climate change. Rangifer Special Issue 17:199-207.

Joly, K. 2015. Wildlife Biologist, Gates of the Arctic National Park and Preserve. Personal communication. email NPS. Fairbanks, AK.

Lenart, E. A. 2011. Units 26B and 26C caribou. Pages 315-345 *in* P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. ADF&G. Project 3.0. Juneau, AK.

Miller, F.L. 2003. Caribou (*Rangifer tarandus*). Pages 965-997 *in* Feldhamer, B.C. Thompson, and J.A. Chapman, *eds.* Wild Mammals of North America- Biology, Management, and Conservation. John Hopkins University Press. Baltimore, Maryland.

Parrett, L.S. 2007. Summer ecology of the Teshekpuk Caribou Herd. M.S. Thesis. University of Alaska, Fairbanks. Fairbanks, AK. 161 pp.

Parrett, L.S. 2009. Unit 26A, Teshekpuk caribou herd. Pages 246-278 in P. Harper, editor. Caribou management report of survey and inventory activities 1July 2006–30 June 2008. Alaska Department of Fish and Game, Project 3.0 Juneau, AK.

Parrett, L.S. 2011. Units 26A, Teshekpuk caribou herd. Pages 283-314 *in* P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. Alaska Department of Fish and Game. Project 3.0. Juneau, AK.

Parrett, L.S. 2013. Unit 26A, Teshekpuk caribou herd. Pages 314-355 in P. Harper, editor. Caribou management report of survey and inventory activities 1July 2006–30 June 2008. Alaska Department of Fish and Game, species management report. ADF&G/DWC/SMR-2013-3, Juneau, AK.

Parrett, L.S. 2015. Wildlife Biologist. Personal communication. email ADF&G. Fairbanks, AK.

Person, B.T., A.K. Prichard, G.M. Carroll, D.A. Yokel, R.A. Suydam, and J.C. George. 2007. Distribution and movements of the Teshekpuk Caribou Herd 1990-2005: Prior to oil and gas development. Arctic 60(3):238-250.

Rivest, L.P., S. Couturier, and H. Crepeau. 1998. Statistical methods for estimating caribou abundance using post–calving aggreagations detected by radio telemetry. Biometrics 54:865-876.

Russell, D.E., S.G. Fancy, K.R. Whitten, R.G. White. 1991. Overwinter survival of orphan caribou, *Rangifer tarandus*, calves. Canadian Field Naturalist. 105: 103-105.

Rughetti, M., M. Festa-Bianchet. 2014. Effects of selective harvest of non-lactating females on chamois population dynamics. Journal of Applied Ecology. 51: 1075-1084.

Smith, M, E. Witten, and W. Loya. 2015. http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/alaska/explore/alaska-caribou-herd-analysis.pdf Accessed April 2, 2015.

Sutherland, R. 2005. Harvest estimates of the Western Arctic caribou hers, Alaska. Proceedings of the 10th North American Caribou Workshop, May 4-6, 2004. Girdwood, AK. Rangifer Special Issue:16:177-184.

Taillon, J., V. Brodeur, M. Festa-Bianchet, S.D. Cote. 2011. Variation in body condition of migratory caribou at calving and weaning: which measures should we use? Ecoscience. 18(3): 295-303.

Western Arctic Caribou Herd Working Group. 2011. Western Arctic Caribou Herd Cooperative Management Plan – Revised December 2011. Nome, AK 47 pp.

Wilson, R.R., A.K. Prichard, l.S. Parrett, B.T. Person, G.M. Carroll, M.A. Smith, C.L. Rea, and D.A. Yokel. 2012. Summer resource selection and identification of important habitat prior to industrial development for the Teshekpuk Caribou herd in Northern Alaska. PLOS ONE 7(11): e48697.

Yokel, D.A., A.K. Prichard, G. Carroll, L. Parrett, B. Person, C. Rea. 2009. Teshekpuk Caribou Herd movement through narrow corridors around Teshekpuk Lake, Alaska, Alaska Park Science 8(2):64-67.

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 Innoko National Wildlife Refuge Manager to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Land Conservation Act (ANILCA) Title VIII jurisdiction within Unit 21D north of the Yukon River and east of the Koyukuk River as it applies to caribou on these lands.

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

DELEGATION OF AUTHORITY

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

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

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

- Announce season dates for the winter season for caribou on Federal public lands in Unit 21D north of the Yukon River and east of the Koyukuk River in consultation with ADF&G and the Chairs of the Western Interior Subsistence Regional Advisory Council, and the Middle Yukon and Ruby Fish and Game Advisory Committees.

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

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

The Federal public lands subject to this delegated authority are those within Unit 21D north of the Yukon River and east of the Koyukuk River.

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

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

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

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

special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

5. <u>Support Services:</u> Administrative support for regulatory actions will be provided by the Office of Subsistence Management, U.S. Fish & Wildlife Service, Department of the Interior.

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Western Interior Alaska Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Federal Subsistence Liaison Team Leader, Alaska Department of Fish and Game
Federal Subsistence Board
Interagency Staff Committee
Administrative Record

Appendix 2

Field Office Manager
BLM Anchorage Field Office
470 BLM Rd.
Anchorage, Alaska 99507

Dear Field Office Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the BLM Anchorage Field Office Manager to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of a wildlife population. This delegation only applies to the Federal public lands subject to Alaska National Interest Land Conservation Act (ANILCA) Title VIII jurisdiction within Unit 22B west of Golovin Bay and west of a line along the west bank of the Fish and Niukluk Rivers to the mouth of the Libby River, and excluding all portions of the Niukluk River drainage upstream from and including the Libby River drainage as it applies to caribou on these lands.

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

DELEGATION OF AUTHORITY

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

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

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

- You may open a season between May 1 and Sept. 3 for caribou on Federal public lands in Unit 22B west of Golovin Bay and west of a line along the west bank of the Fish and Niukluk Rivers to the mouth of the Libby River, and excluding all portions of the Niukluk

River drainage upstream from and including the Libby River drainage in consultation with ADF&G.

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

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

The Federal public lands subject to this delegated authority are those within Unit 22B west of Golovin Bay and west of a line along the west bank of the Fish and Niukluk Rivers to the mouth of the Libby River, and excluding all portions of the Niukluk River drainage upstream from and including the Libby River drainage.

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

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

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

You may defer a special action request, otherwise covered by this delegation of authority, to the Federal Subsistence Board in instances when the proposed management action will have a

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

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

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Seward Peninsula Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Federal Subsistence Liaison Team Leader, Alaska Department of Fish and Game
Federal Subsistence Board
Interagency Staff Committee
Administrative Record

Appendix 3

Field Office Manager
BLM Anchorage Field Office
470 BLM Rd.
Anchorage, Alaska 99507

Dear Field Office Manager:

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

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

DELEGATION OF AUTHORITY

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

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

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

- You may announce a season between the dates of May 1 – Sept. 30 for caribou on Federal public lands in Unit 22D in the Pilgrim River Drainage.

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

population.

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

The Federal public lands subject to this delegated authority are those within Unit 22D in the Pilgrim River Drainage.

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

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

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

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

5. <u>Support Services:</u> Administrative support for regulatory actions will be provided by the Office of Subsistence Management, U.S. Fish & Wildlife Service, Department of the Interior.

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Seward Peninsula Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Federal Subsistence Liaison Team Leader, Alaska Department of Fish and Game
Federal Subsistence Board
Interagency Staff Committee
Administrative Record

Appendix 4

Field Office Manager
BLM Anchorage Field Office
470 BLM Rd.
Anchorage, Alaska 99507

Dear Field Office Manager:

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

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

DELEGATION OF AUTHORITY

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

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

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

- You may announce season dates for caribou on Federal public lands in Unit 22 remainder.

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

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

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

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

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

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

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

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

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Subsistence Council Coordinator, Office of Subsistence Management
Chair, Seward Peninsula Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Federal Subsistence Liaison Team Leader, Alaska Department of Fish and Game
Federal Subsistence Board
Interagency Staff Committee
Administrative Record

WP16-48 Executive Summary	
General Description	**Proposal WP16-48** requests to allow a Federally qualified subsistence user to use a snowmachine to position a caribou, wolf, or wolverine for harvest so long as the hunter does not shoot these animals from a moving snowmachine. **S***ubmitted by the Native Village of Kotzebue.*
Proposed Regulation	**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 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)(23)(iv) Unit 23—Unit-specific regulations** **. . .** *(E) A snowmachine may be used to position a ~~hunter to select individual~~ caribou, **wolf, or wolverine** for harvest provided that the animals are not shot from a moving snowmachine.*
OSM Conclusion	**Support**
Seward Peninsula Subsistence Regional Advisory Council	
Northwest Arctic Subsistence Regional Advisory Council	

North Slope Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**1 support**

DRAFT STAFF ANALYSIS
WP16-48

ISSUES

Proposal WP16-48, submitted by the Native Village of Kotzebue, requests modification of the unit-specific provision regulating how a hunter may use a snowmachine to harvest caribou, wolves, and wolverines in Unit 23.

DISCUSSION

In Unit 23, Federally qualified subsistence users may legally use a snowmachine to position a hunter to select and harvest a caribou so long as the hunter does not take the animal from a moving snowmachine. The proponent asks the Federal Subsistence Board (Board) to allow a Federally qualified subsistence user to use a snowmachine to position a caribou, wolf, or wolverine for harvest so long as the hunter does not shoot these animals from a moving snowmachine.

The proposed regulation is consistent with the State regulation that went into effect July 1, 2014, on lands in Unit 23. The proponent stated that there was public and tribal support for the new State regulation, and local fish and game advisory committees and the Western Arctic Caribou Herd Working Group supported the new State regulation (Alaska Board of Game 2014).

The proponent believes the proposed regulatory change allows for consistency across unmarked and immediately adjacent State-Federal boundaries, avoids confusion by subsistence hunters on the land and unintentional violations, and benefits law enforcement officers by eliminating opposing rules.

The proponent states that harvesting these animals in the manner proposed is an integral part of local tradition and way of life for many residents of the region. The proponent states that using a snowmachine to pursue these animals is the only practical way to hunt them during winter in most parts of Unit 23. The proponent believes the proposed change rectifies a longstanding conflict between regulatory prohibitions and common local practices.

Existing Federal Regulation

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 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)(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.

Proposed Federal Regulation

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 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)(23)(iv) Unit 23—Unit-specific regulations

. . .

*(E) A snowmachine may be used to position a ~~hunter to select individual~~ caribou**, wolf, or wolverine** for harvest, provided that the animals are not shot from a moving snowmachine.*

Existing State Regulation

Sec. 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:

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.

(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 full text of 5 AAC 92.080(4)(B), above, is in **Appendix A**.

Relevant Regulation

There may be a conflict between the proposed regulation and agency-specific regulations. Agency-specific regulations are the following:

50 CFR 36.12 (Alaska National Wildlife Refuges) Use of snowmobiles, motorboats, dog teams and other means of surface transportation traditionally employed by local rural residents engaged in subsistence uses

(a) Notwithstanding any other provision of subchapter C of title 50 CFR the use of snowmobiles, motorboats, dog teams and other means of surface transportation traditionally employed by local rural residents engaged in subsistence uses is permitted within Alaska National Wildlife Refuges except at those times and in those areas restricted or closed by the Refuge Manager.

. . .

(d) Snowmobiles, motorboats, dog teams and other means of surface transportation traditionally employed by local rural residents engaged in subsistence uses shall be operated (1) in compliance with applicable State and Federal law, (2) in such a manner as to prevent waste or damage to the refuge, and (3) in such a manner as to prevent the herding, harassment, hazing or driving of wildlife for hunting or other purposes.

36 CFR 13.460 (Alaska National Park System) Use of snowmobiles, motorboats, dog teams, and other means of surface transportation traditionally employed by local rural residents engaged in subsistence uses.

(a) Notwithstanding any other provision of this chapter, the use of snowmobiles, motorboats, dog teams, and other means of surface transportation traditionally employed by local rural residents engaged in subsistence uses is permitted within park areas except at those times and in those areas restricted or closed by the Superintendent.

…

(d) Motorboats, snowmobiles, dog teams, and other means of surface transportation traditionally employed by local rural residents engaged in subsistence uses shall be operated:

(1) In compliance with applicable State and Federal law;

(2) In such a manner as to prevent waste or damage to the park areas; and

(3) In such a manner as to prevent the herding, harassment, hazing or driving of wildlife for hunting or other purposes.

Extent of Federal Public Lands

Federal public lands comprise approximately 69% of Unit 23 and consist of 42% National Park Service (NPS) managed lands, 17% Bureau of Land Management (BLM) managed lands, and 10% U.S. Fish and Wildlife Service (USFWS) managed lands (**Unit 23 map**).

Customary and Traditional Use Determinations

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

Residents of Units 6, 9, 10 (Unimak Island only), 11–13, Chickaloon, and Units 16–26 have a customary and traditional use determination for wolf in Unit 23.

The Board has not made a customary and traditional use determination for wolverine in Unit 23; therefore, all rural residents may harvest wolverines in Unit 23.

Regulatory History

In 2000, the Board adopted Proposal 00-53 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). In Proposal 00-53, the proponent asked to position a caribou, not a hunter. The Board 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, the Board adopted proposal WP12-53 with modification and prohibited the pursuit with a motorized vehicle of an ungulate that was at or near a full gallop in Unit 18 (FWS 2012).

At its March 2014 meeting, the Alaska Board of Game adopted Proposal 177, which allowed a hunter to use a snowmachine to position a caribou, wolf, or wolverine for harvest, so long as these animals were shot from a stationary snowmachine. The purpose of the proposal was to change hunting restrictions to allow the use of snowmachines to track and pursue these animals so that the prohibition against driving, herding, harassing, or molesting game with a snowmachine will not apply in Unit 23 while hunting these species (see **Appendix B**).

Cultural Knowledge and Traditional Practices

<u>Caribou</u>

Before the introduction of snowmachines in the 1960s, people in Unit 23 travelled either on foot or by dog team to hunt caribou during winter months (Anderson et al. 1998). 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.

Anderson et al. (1998:203) clearly described winter caribou hunts with dog teams:

> The usual technique was to drive across open, wind-packed areas and stop on rises to scan the terrain. If trees, brush, or large rocks were within a half mile of caribou, the hunter usually took his [dog] team there, secured it, and stalked the animals on foot. . . . Occasionally, circumstances did not allow tethering the dogs or stalking on foot, so the man drove his team directly at the herd, hoping to come close enough for firing. Some teams ran to within 150 yards of a herd. Just before the animals started to run, the hunter would stop his dogs, anchor the sled, and fire a few shots. As the caribou ran away, he pulled up the sled anchor and gave chase. Caribou can easily outdistance a dog team. However, they tend to run away at an angle and will stop once or twice to look back, so the hunter could guide his team to intersect their path of flight. . . . when the caribou paused, the driver would again stop his team and fire.

Anderson et al. (1998:209) clearly described winter caribou hunts using snowmachines:

> Today, well over 90 percent of all winter caribou hunting . . . is done with snowmachines. Whereas in the past this was largely an individualistic affair, men now prefer to travel in pairs or small groups. . . . Under most circumstances, using two or more machines will greatly increase the chances of success in a hunt. In open areas, hunters generally spread out as they travel but keep each other in view, so they can survey the greatest area possible. When game is spotted the drivers come together and decide the best approach. If the terrain, number of caribou, and number of machines warrants it, one group of hunters circles behind the caribou while the other group moves ahead. Usually this maneuver causes the caribou to run directly across the path of the forward hunters. Another way to hunt most effectively is by having two men on each machine, so the driver can concentrate on maneuvering close to the caribou while the other (who usually rides behind on the sled) can shoot as soon as the machine stops.

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 Regional Advisory Council 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.

Wolves

Wolves are highly prized for making ruffs for locally made parkas and other items of clothing and handicrafts. Wolf pelts are sold locally to help acquire cash used to defray the high cost of gasoline. Taking a wolf is a sign of prestige for a hunter. Local hunters are revered for taking both wolves and wolverines; this serves as an important social aspect of taking wolves that is insensitive to the price of fur or wolf availability (Westing 2011).

During winter months, wolves are hunted in Unit 23 by snowmachine (Westing 2011). Most wolves are shot in Unit 23 rather than trapped (Westing 2011). Some local hunters are quite skilled at tracking wolves using a snowmachine and predicting the behavior of wolves during pursuit, which enables them to approach wolves close enough for accurate shooting (Anderson et al. 1998).

Wolverines

Wolverine is a highly valued, prestigious subsistence resource in Unit 23 (Westing 2009). Most wolverine taken in the Kobuk River drainage are used locally or traded to people on the coast; wolverine fur is valuable as trim material for parkas, boots, and mittens (Westing 2009; Anderson 1998:226).

As in past years, snowmachines were the primary form of transportation used by hunters and trappers for taking furbearers in Unit 23 during 2008 through 2011 (Westing 2009). Most local residents shoot wolverines rather than trap them because much of the region is open tundra and is conducive to tracking and ground shooting using snowmachines and rifles (Westing 2009).

Biological Background

Caribou

The Western Arctic Caribou Herd, in recent years, has been the largest caribou herd in Alaska with a home range of approximately 157,000 mi^2 in northwestern Alaska (FWS 2015). In the spring, most mature cows move north to calving grounds in the Utukok Hills, while bulls and immature cows stay behind and move toward summer range in the Wulik Peaks and Lisburne Hills. After calving, cows and calves move west toward the Lisburne Hills where they mix with the remaining bulls and non-maternal cows. During the summer, the herd moves rapidly into the Brooks Range. In the fall, they move south toward their wintering grounds in the northern portion of the Nulato Hills. The caribou rut occurs during fall migration (Dau 2011, WACH Working Group 2011).

The State manages the Western Alaska caribou herd to protect the population and its habitat, provide for subsistence and other hunting opportunities on the basis of sustained yield, and provide for other uses of

caribou (Dau 2011). Specific State management objectives for the herd include (WACH Working Group 2011):

1. Encourage cooperative management of the western Alaska caribou herd and among State, Federal, local entities, and all stakeholders of the herd.

2. Manage for healthy populations using management strategies adapted to fluctuating population levels and trends.

3. Promote consistent and effective State and Federal regulations for the conservation of the herd.

4. Integrate scientific information, traditional ecological knowledge of Alaska Native users, and knowledge of all users into management of the herd.

5. Increase understanding and appreciation of the western Alaska caribou herd through the use of scientific information, traditional ecological knowledge of Alaska Native peoples, and knowledge of other stakeholders.

The western Alaska caribou herd population declined rapidly in the early 1970s to a low of about 75,000 animals in 1976. Managers and biologists have observed a 50% decline in the herd population since 2003 (Dau 2014, pers. comm.). Although factors contributing to the decline are not known with certainty, increased adult cow mortality and decreased calf recruitment and survival most likely played a substantial role (Dau 2011). Other contributing factors include fall and winter icing events, predation, harvest, climate change, and diseases (Dau 2014, pers. comm.). Degradation in range conditions is not thought to be a primary factor in the decline because animals in the herd have generally maintained good body condition since the decline began (Dau 2011; 2014, pers. comm.).

During periods of rapid population growth (1976–1982), fall calf:cow ratios were generally higher than during periods of herd decline (1992–2013) (FWS 2015). The number of bulls:100 cows were greater during the period of population growth (49:100 between 1976–2001) than during the recent period of decline (44:100 between 2004–2014).

The annual mortality rate of collared adult cows increased from an average of 15% between 1987 and 2003, to 25% from 2004–2009 (Dau 2011; 2014, pers. comm.). Estimated mortality includes all causes of death including hunting. Dau (2009) reported that rain–on–snow events and winter thaws may have contributed to the relatively high estimated mortality rates of 23% during 2008–2009 and 27% during 2009–2010. Prior to 2004–2005, estimated adult cow mortality only exceeded 20% twice during regulatory years 1992 and 1999, but has exceeded 20% in 2004, 2005, 2007, 2008, and 2009. As the western Alaska caribou herd declined, the percentage of mortality due to hunting 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, pers. comm.).

Research on winter recreation and hunting has documented evidence of both positive and negative biological effects in ungulates related to snowmachine use in their habitats (Harris et al. 2014; Webster

1997). Results of these studies and similar recreational use studies may not be directly relevant to winter caribou hunting in Unit 23 because Federally qualified subsistence hunters do not operate snowmachines in the same manner as recreational users or sport hunters during subsistence hunts for caribou.

Wolves

Wolves occur throughout Unit 23. Local residents report that the abundance, movements, and distribution of wolves depend to some degree on caribou during winter months (Westing 2011). The Alaska Department of Fish and Game has no data to determine the wolf population in Unit 23 (Westing 2011).

Wolverines

In 2006 through 2009, opportunistic sightings by staff and reports from residents suggested the number of wolverines in Unit 23 were low (Westing 2009). The majority of sealed wolverines were male for the regulatory period 2006–2009 (Westing 2009).

Harvest History

Caribou

From 1999–2014 the average annual harvest from the western Alaska caribou herd was approximately 13,600 caribou (9500–15,800) (Units 21, 22, 23, 24, and 26A) (Dau 2009; 2014, pers. comm.). Local residents take approximately 94% of the caribou harvest within the range of the herd, with residents of Unit 23 taking the vast majority of the harvest (FWS 2015). The State of Alaska manages the herd to maximize a harvestable surplus of animals. In recent years, as the population has declined, the State's total harvestable surplus for the herd, which is estimated as 2% of the cows and 15% of the bulls, has declined (Dau 2011; 2014, pers. comm). Harvest from the herd, which has remained fairly consistent since 1990, now represents a larger proportion of the annual mortality. This is one of the factors that prompted the Alaska Board of Game to enact harvest restrictions for the herd in March 2015.

Wolves

Most wolves are harvested by snowmachine between December and April in Unit 23. For regulatory years 2005 through 2010, a total of 291 wolves were harvested in Unit 23 (Westing 2011). Wolf harvest levels have decreased from those recorded in earlier periods. For example, in regulatory years 1991 through 1996, a total of 374 wolves were harvested (Westing 2011).

Wolverines

Most wolverines are harvested by snowmachine between January and March in Unit 23. More than 50% of sealed wolverines were harvested in the Kobuk River drainage (Westing 2009). For regulatory years 1999 through 2004, a total of 170 wolverines were harvested. Hunters and trappers harvested a total of 73 wolverines in Unit 23 in regulatory years 2005 through 2009 (Westing 2009).

Alternative Considered

Because conflicts may exist between the proposed regulation and existing agency-specific regulations, staff considered recommending that the Board defer taking any action on the proposal until a later date. Deferring action on the proposal would allow agencies to discuss with the proponent and Regional Advisory Councils possible modifications to existing regulations that may conflict with the proposal. This alternative was dismissed because all available evidence supports the hunting practice proposed by the proponent. Additionally, potential regulatory conflicts can be discussed further with Regional Advisory Councils during their fall 2015 meetings.

Effects of the Proposal

If adopted, Proposal WP16-48 would accommodate local hunting practices that have been used since snowmachines were first introduced in Unit 23 (Native Village of Kotzebue 2015; WACH Working Group 2015). The proposed change will rectify a longstanding conflict between regulatory prohibitions and common local practices. This will demonstrate to local people that the Federal Subsistence Management Program is responsive to their customs and traditional hunting practices.

This proposal will address the need for Federally qualified subsistence users to be able to use the most efficient and effective methods to take wild resources important for their livelihood, particularly with consideration to the high price of food and fuel in Northwest Alaska (WACH Working Group 2015).

The proposed regulation change will parallel the State of Alaska regulations that went into effect July 1, 2014 in Unit 23.

If the proposal is adopted, hunter behavior is not anticipated to change. The proposed changes are not expected to result in population changes for caribou, wolves, or wolverines as they will merely accommodate longstanding traditional hunting methods that are already in practice by Federally qualified subsistence users in Unit 23. Harvest rates are not expected to increase with these proposed changes for caribou, wolves, or wolverines.

The biological effects of winter hunting with snowmachines on these species in Unit 23 are largely unknown. Any biological effects, positive or negative, that may occur in these species related to traditional, winter hunting practices are anticipated to remain constant if this proposal is adopted.

OSM PRELIMINARY CONCLUSION

Support Proposal WP16-48.

Justification

The proposed regulatory changes would align Federal regulations with the customary and traditional practice of using snowmachines as a means to efficiently and effectively harvest caribou, wolves, and wolverines during winter months in Unit 23. This proposal will parallel State regulations regarding this practice. The proposed changes will have little to no effect on current hunting behavior, and no changes in

the population status of caribou, wolves, and wolverines are anticipated. Supporting customary and traditional practices that provide for continued subsistence opportunities will benefit Federally qualified subsistence users.

LITERATURE CITED

Anderson, D. B., Anderson, W. W., Bane, R., Nelson, R. K., and Sheldon Towarak, N. 1998. Kuuvaŋmuit subsistence: Traditional Eskimo life in the latter twentieth century. National Park Service, Kotzebue, AK. 329 pp.

Dau, J. 2009. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A in Caribou survey–inventory management report. Pages 176–239 in P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2006– June 30, 2008. ADF&G. Juneau, AK

Dau, J. 2011. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 187–250 in P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2008–30 June 30, 2010. ADF&G. Juneau, AK.

Dau, J. 2014. Wildlife Biologist. Personal communication. Information, including a power point presentation, presented at the Western Arctic Caribou Herd (WACH) Working Group Meeting, December 17–18, 2014. Anchorage, Alaska. ADF&G. Nome, AK.

FSB. 2012. Transcripts of Federal Subsistence Board proceedings, January 18, 2012. Office of Subsistence Mangaement, FWS. Anchorage, AK.

Harris, G., Neilson, R. M., Rinaldi, T, and Lohuis, T. 2014. Effects of winter recreation on northern ungulates with focus on moose (*Alces alces*) and snowmobiles. European Journal of Wildlife Research 60:45–58.

Native Village of Kotzebue. 2015. A resolution in support of the Federal subsistence regulation proposal to change the Unit 23 special provision to allow the use of snowmachines to track and pursue caribou, wolves, and wolverines. Resolution 15-8. Resolution passed January 27, 2015. Kotzebue, AK. 1 pp.

FWS. 2000. Staff analysis Proposal 00–053. Office of Subsistence Management, FWS. Anchorage, AK.

FWS. 2012. Staff analysis Proposal WP12-53. Office of Subsistence Management, FWS. Anchorage, AK.

FWS. 2015. Staff analysis Temporary Special Action WSA15-03/04/05/06. Office of Subsistence Management, FWS. Anchorage, AK.

Nelson, E.W. 1983 [1899]. The Eskimo about Bering Strait. Smithsonian Institution Press, Washington, DC.

Oswalt, W.H. 1990. Bashful no longer: An Alaskan Eskimo ethnohistory, 1778–1988. University of Oklahoma Press. Norman and London.

State Board of Game. 2014. On-time public comment index. Statewide meeting of the Alaska Board of Game, March 14-18, 2014. 161 pp.

Webster, L. 1997. The effects of human related harassment on caribou (*Rangifer tarandus*). Report to the Ministry of Environment, British Columbia, Williams Lake, BC. Internet:

http://www.env.gov.bc.ca/cariboo/env_stewardship/wildlife/inventory/caribou/mtncar/harass/impacts.pdf. 28 pp. Retrieved: May 15, 2015.

Western Arctic Caribou Herd Working Group. 2011. Western Arctic Caribou Herd Cooperative Management Plan, Revised December 2011. Nome, AK. 47 pp.

Western Arctic Caribou Herd Working Group. 2015. Public comment in support of proposal WP16-48. Letter dated May 27, 2015. Nome, AK. 1 pp.

Westing, C. 2010. Unit 23 wolf management report. Pages 307–317 in P. Harper, editor. Furbearer management report of survey and inventory activities 1 July 2006–30 June 2009. Alaska Department of Fish and Game. Project 7.0. Juneau, AK.

Westing, C. 2012. Unit 23 wolf management report. Pages 231–239 in P. Harper, editor. Wolfe management report of survey and inventory activities 1 July 2008–30 June 2011. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2012-4, Juneau, AK.

APPENDIX A

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;

APPENDIX B

During the 2014 Arctic/Western Region meeting, the Board of Game requested this proposal be scheduled for the 2014 Statewide Regulations meeting.

PROPOSAL 177 - 5 AAC 92.080(4) & (5). Unlawful methods of taking game; exceptions, and 92.990 (70) Definitions. Modify the restriction for using snow machines for taking wolves and wolverine.

Change the general hunting restriction to allow the use of snow machines to track and pursue caribou, wolves and wolverines so that the prohibition against driving, herding, harassing, or molesting game with a snow machine will not apply in Unit 23, or other units as determined by the board, while hunting these species.

WHAT IS THE ISSUE YOU WOULD LIKE THE BOARD TO ADDRESS AND WHY? During the Arctic/Western Region Board of Game (board) meeting in January 2014, the board listened to comments from the public concerning the use of snow machines in remote areas for taking wolves, wolverine, and caribou. Currently, hunters can use snow machines to position themselves for taking caribou in Units 22 and 23, and wolves in Units 9, 17, 18, 19, 21, 22, 24, 25C and 25D excluding some federal lands. It is

currently illegal to drive, herd, harass, or molest game with any motorized vehicle including snow machines.

In response to the testimony, the Board of Game requested that local users draft language the board could use to address the issue. In response, the Kotzebue Sound Advisory Committee submitted the following language which the board will use as a board generated proposal, scheduled for consideration at its Statewide Regulations meeting in March 2014.

"Currently, the restrictions against driving, herding, harassing, or molesting game, in addition to the absence of Unit 23 in the excepted allowance for the use of snow machines to position hunters to select individual wolves, and the absence of wolverines in the excepted allowance for snow machine positioning, conflicts with the long standing local caribou, wolf, wolverine hunting practices which is the only practical way to hunt caribou, wolves, and wolverines in Unit 23 during the winter. Also, the allowance for snow machine use to position a hunter does not satisfactorily address this issue, as it does not clarify whether this includes actually tracking down caribou, wolves, or wolverine, including pursuing fleeing animals, until close enough to shoot. Since it is clear from a recent example in Unit 23 that wildlife protection officers intend to enforce the restrictions against driving, herding, harassing, or molesting game, then it is in incumbent upon changes intended to allow for pursuit of fleeing animals to be clearly elucidated in the regulations to prevent any confusion by all parties about what is allowable.

If the board does not change the regulation, local people hunting these species with snow machines will continue to live with the threat of prosecution for hunting with snow machines in the only way practical, making people feel like criminals and interfering with the ability to freely pursue these animals for critical and irreplaceable food and fur products. These animals are critical to the local economy and way of life and enforcement of current regulations will be viewed as a direct attack on the culture, economy and food security in the region.

Allowing a hunter to use a snow machines to get within range of fleeing caribou, wolves, and wolverines will allow the precise shot placement (head shot) which will minimize unnecessary waste of meat and fur and is the most humane method of killing an animal with a rifle. Wildlife enforcement officers will also have a clear understanding of the intent to allow for the pursuit of these species, reducing unnecessary conflicts and increasing the cooperation of the people on the other enforcement issues where local cooperation is necessary to the mission to protect all species in the areas.

The local people will appreciate the Board of Game and the Department of Fish and Game being responsive to the needs of the people and by correcting this issue will put integrity back in the system by getting rid of a longstanding conflict between regulatory prohibitions and common local practices that are the only practical way to pursue these species in the winter. In addition, the future cooperative management strategies and goals will be more likely to succeed as the people will have increased faith that the system takes their needs into account and is responsive to them."

PROPOSED BY: Board of Game at the request of the Kotzebue Advisory Committee

(HQ-SW14-01)
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WRITTEN PUBLIC COMMENTS

Western Arctic Caribou Herd Working Group

Goal: To work together to ensure the long-term conservation of the Western Arctic Caribou Herd and the ecosystem on which it depends, to maintain traditional and other uses for the benefit of all people now and in the future.

Chair: Vern Cleveland, Sr. Vice-Chair: Cyrus Harris

P.O. Box 175, Nome, AK 99762

May 27, 2015

Office of Subsistence Management
Attn: Regulations Specialist
1011 East Tudor Road, Mail Stop 121
Anchorage, AK 99503
Via email: subsistence@fws.gov

SUBJECT: WP16-48 (2016-2018 Wildlife Proposal, Northwest Arctic)

To the Federal Subsistence Board:

On behalf of the Western Arctic Caribou Herd Working Group, the group's Executive Committee is submitting a **comment in support of the Proposal WP16-48** to allow the use of snow machines to position a caribou, wolf, or wolverine for harvest, provided that the animals are not shot from a moving snow machine. This proposed regulation change would be consistent with the State of Alaska Game Regulation that went into effect as of July 1, 2014, on State managed lands (5 AAC 92.080(40(B)(i)).

The Working Group does not believe that this regulation change would affect the abundance or population trend of the Western Arctic Caribou Herd. This change would accommodate local hunting practices that have been used since snow machines first arrived in Game Management Unit 23, and addresses the need for rural subsistence users to be able to use the most efficient methods to take wild resources important for their livelihood, particularly with consideration to the high price of food and fuel in northwest Alaska.

Thank you for this opportunity to comment.

On behalf of the Western Arctic Caribou Herd Working Group,

Vern Cleveland Sr.

Vern Cleveland, Sr., Chair

WP16–49/52 Executive Summary	
General Description	Proposal WP16–49 requests that in Unit 23 the caribou harvest limit be reduced from 15 to 5 per day, lengthening the closure on cow harvest, prohibiting harvest of cows with calves from July 1 to Oct. 10, and closing of bull harvest from Oct. 10 to Jan. 31. *Submitted by Northwest Arctic Subsistence Regional Advisory Council.* Proposal WP16-52 requests that in Unit 23 the caribou harvest limit be reduced from 15 to 7 per day. *Submitted by Upper and Lower Kobuk Fish and Game Advisory Committee.*
Proposed Regulation	WP16-49 **Unit 23—Caribou** *~~15~~**5** caribou per day; however, cow caribou may not be taken ~~May 16~~**April 1** – June 30* ***and no harvesting of cows with calves July1-Oct. 10. No harvesting of bulls Oct. 10-Jan. 31.*** *July 1–June 30* WP16-52 **Unit 23—Caribou** *~~15~~7 caribou per day; however, cow caribou may not be taken May 16 – June 30* *July 1–June 30*
OSM Preliminary Conclusion	**Support with modification** to add the Singoalik River drainage hunt area, prohibit the harvest of calves, align with State season dates and simplify regulatory language; and **Oppose** Proposal WP16-52. The modified regulation should read: **Unit 23—Caribou** ***Unit 23, that portion north of and including the Singoalik River drainage~~—15~~5*** *caribou per day* ***as follows:*** *~~; however, cow caribou may not be taken May 16–June 30~~* *~~July 1–June 30.~~* ***However, calves may not be taken***

WP16–49/52 Executive Summary		
	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, as follows:	
	However, calves may not be taken	***July 1-Oct. 14***
	Bulls may be harvested	***Feb. 1-June 30***
	Cows may be harvested ***However, cows accompanied by calves may not be taken Sept. 1-Oct. 14.***	***Sept. 1-Mar. 31.***
Western Interior Regional Advisory Council Recommendation		
Seward Peninsula Regional Advisory Council Recommendation		
Northwest Arctic Regional Advisory Council Recommendation		
North Slope Regional Advisory Council Recommendation		
Interagency Staff Committee Comments		
ADF&G Comments		
Written Public Comments	**None**	

DRAFT STAFF ANALYSIS
WP16-49/52

ISSUES

Proposal WP16-49, submitted by the Northwest Arctic Subsistence Regional Advisory Council (Council), requests changes to the Unit 23 caribou regulations that includes reducing the harvest limit from 15 to 5 caribou per day, lengthening the closure on cow harvest, prohibiting harvest of cows with calves from Jul. 1 to Oct. 10, and closing of bull harvest from Oct. 10 to Jan. 31.

Proposal WP16-52, submitted by the Upper and Lower Kobuk Advisory Committee, asks for a reduction of the harvest limit from 15 to 7 caribou per day in Unit 23.

DISCUSSION

The Council believes that conservation measures must be taken to protect the Western Arctic Caribou Herd (WACH) for future sustainability and that reducing the daily harvest limit from 15 to 5 caribou per day will help assist in this effort. They also think great care should be taken to protect pregnant cows and cows with calves to improve calf survival. The Council believes that after Jul. 1, the ability to harvest a cow without a calf provides an opportunity to harvest meat while engaging in other subsistence activities such as berry picking. The Council states that bulls should not be taken as trophies during the rut since the meat is not salvageable as food.

The Upper and Lower Kobuk Advisory Committee states that the decline in the WACH is due to a number of factors, including some within their control, such as reducing the daily harvest limit. They believe this harvest reduction will help to improve caribou population numbers and avoid a potential crisis for a resource that is of the utmost importance to the survival of the region's people. They also state that this harvest limit reduction will bring closer alignment to the recently enacted State caribou regulations in Unit 23.

Similar caribou proposals are presented in WP16-37 and WP16-61.

Existing Federal Regulation

Unit 23—Caribou

15 caribou per day; however, *cow caribou may not be taken* *May 16 – June 30*	*July 1–June 30*

Proposed Federal Regulation_

WP16-49

Unit 23—Caribou

*~~15~~**5** caribou per day; however, cow caribou may not be taken ~~May 16~~**April 1** – June 30* ***and no harvesting of cows with calves July1-Oct. 10. No harvesting of bulls Oct. 10-Jan. 31.***	*July 1–June 30*

WP16-52

Unit 23 - Caribou

~~15~~7 caribou per day; however, cow caribou may not be taken May 16 – June 30	*July 1–June 30*

Existing State Regulation

Unit 23—Caribou

Unit 23, that portion north of and including the Singoalik River drainage	*Resident Hunters: 5 caribou per day, as follows:*	
	Up to 5 bulls per day; however, calves may not be taken	*July1 – Oct. 14* *Feb. 1 – June 30*
	Up to 5 cows per day; however, calves may not be taken	*July 15 – Apr. 30*
	Nonresident hunters: 1 bull; however, calves may not be taken	*Aug. 1 – Sept.30*
Unit 23–remainder	*Resident Hunters: 5 caribou per day, as follows;*	
	Up to 5 bulls per day; however, calves may not be taken	*July 1 – Oct. 14* *Feb. 1 – June 30*
	Up to 5 cows per day; however, calves may not be taken	*Sept. 1 – Mar. 31*

Nonresident Hunters: 1bull; however, calves may not be taken	*Aug. 1 – Sept. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 69% of Unit 23 and consist of 41.8% National Park Service (NPS) managed lands, 17.5% Bureau of Land Management (BLM) managed lands, and 9.6% U.S. Fish and Wildlife Service (FWS) managed lands (See **Unit 23 Map**).

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.

Regulatory History

In 1995, the Federal Subsistence Board (Board) adopted Proposal P95-51 to increase the caribou harvest limit from 5 per day to 15 per day to increase opportunity for subsistence hunters to maximize their hunting when the caribou were available (OSM 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 (OSM 1995b, 1997).

In 2000, the Board adopted Proposal P00-53 with modification allowing the use of snowmachines to position and select individual caribou for harvest in Units 22 and 23. This was done to recognize a customary and traditional practice in the region (OSM 2000a).

Temporary Special Action WSA15-03, submitted by the North Slope Subsistence Regional Advisory Council, requested designation of a new hunt area for caribou in Unit 23, a reduction in the harvest limit from 15 caribou per day to 5 caribou per day, a shortening of the season for bulls and cows, and a prohibition on the take of calves. The Board adopted the Special Action with modification in response to the declining WACH population. The Board approved the harvest limit reduction of 15 caribou to 5 caribou per day, prohibition on taking of calves, protection of cows with calves, and reduction of the length of the bull and cow seasons, but did not approve the designation of a new hunt area in Unit 23.

Current Events Involving Species

Proposals WP16-37 and WP16-61 are multi-region crossover proposals that address the declining WACH population and affect Unit 23 regulations. Since Proposals WP16-37, WP16-49 and WP16-52, also

requested changes to the caribou hunting regulations in Units 23, 24, and 26 an attempt was made to make the regulations as similar as possible for each Game Management Unit. These proposals also request changes to harvest limits and other conservation measures, and will be presented to all affected Subsistence Regional Advisory Councils at their fall meetings.

In 2013 an aerial photo census indicated significant declines in the WACH populations (Dau 2011). In response, the Alaska Board of Game adopted modified Proposal 202 (RC76) in March 2015 to reduce harvest opportunities for both residents and non-residents within the range of the WACH. These regulation changes, which included lower bag limits, changes to harvest seasons, modification to the hunt area descriptors, restrictions on bull and cow harvest and a prohibition on calf harvest, were adopted to slow or reverse the population decline. These regulatory changes take effect on July 1, 2015, and are the result of extensive discussion and compromise among a variety of user groups. State regulatory changes and the proposed changes to Federal regulations represent the first time in over 30 years that harvest restrictions have been implemented for the WACH. The restrictions proposed by these Special Actions and proposals for the WACH are also supported by management recommendations outlined in the Western Arctic Herd Management Plan (WACH Working Group 2011).

Biological Background

Caribou calving generally occurs during late May and early June. 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.

Joly (2000) predicts that calves orphaned later in life have greater chances of surviving. Data from Russell et al (1991) suggests 50% and 75% of the calves orphaned in September and November, respectively, survived the winter (Joly 2000). Indeed, there is little evidence that calves orphaned after weaning experience strongly reduced overwintering survival rates than non-orphaned calves (Rughetti and Festa-Bianchet 2014, Joly 2000, Holand et al. 2012), although Holand et al (2012) found orphaned calves to have greater losses of winter body mass than non-orphaned calves.

The Western Arctic, Teshekpuk, and Central Arctic Caribou Herds have ranges that overlap in Unit 26A (**Figure 1**) and there can be considerable mixing of herds during the fall and winter. During the early 2000s, the number of caribou wintering on the North Slope peaked at over 700,000 animals (this includes the Porcupine Caribou Herd in northeast Alaska and Northwest Territories, Canada), which may be the highest number since the 1970s. During the 1970s, there was little overlap between these four herds, but the degree of mixing seems to be increasing (Lenart 2011, Dau 2011, Parrett 2011).

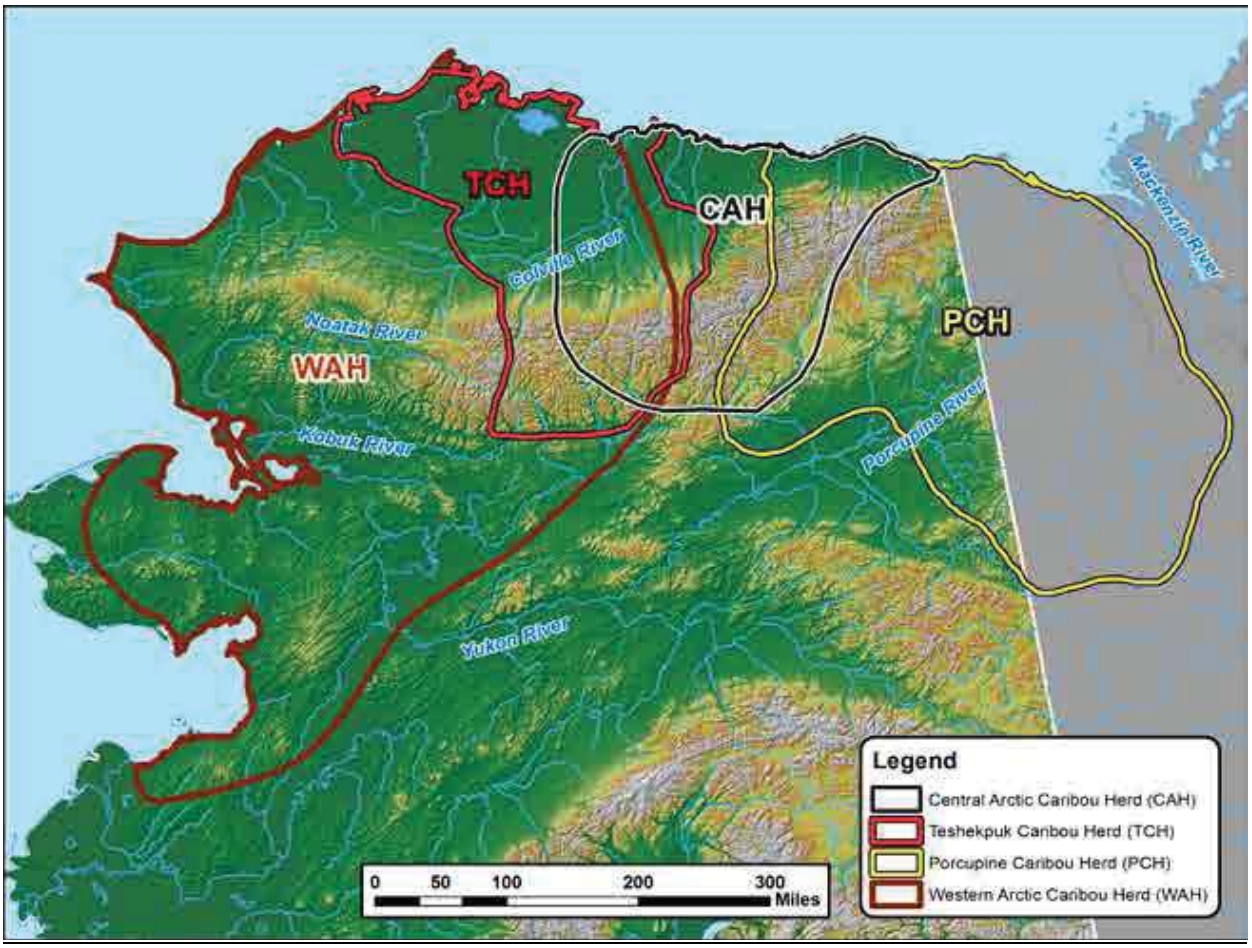


Figure 1. Herd overlap and ranges of the WACH, TCH, CACH and Porcupine caribou herds (WACH 2014).

The WACH, the largest herd in Alaska, has a home range of approximately 157,000 mi^2 in northwestern Alaska (**Figure 1**). 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. After the calving period, cows and calves move west toward the Lisburne Hills where they mix with the remaining bulls and non-maternal cows. During the summer the herd moves rapidly to the Brooks Range. In the fall they move south toward their wintering grounds in the northern portion of the Nulato Hills. The caribou rut occurs during fall migration (Dau 2011, WACH Working Group 2011).

The State 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). Specific State management objectives for the WACH are presented in the 2011 Western Arctic Caribou Cooperative Management Plan (WACH Working Group 2011, Dau 2011) and include:

- Encourage cooperative management of the WACH and 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 and bottomed out at about 75,000 animals in 1976. Aerial photo censuses have been used since 1986 to estimate population size. The WACH declined at an average annual rate of 4.7% from approximately 490,000 in 2003 to 235,000 in 2013 (Dau 2011, Caribou Trails 2014, Dau 2014) (**Figure 2**). 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). Other contributing factors include weather (particularly fall and winter icing events), predation, hunting pressure, declining range condition (including habitat loss and fragmentation), climate change, and disease (Dau 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 WACH because animals in the WACH, unlike the TCH, have generally maintained good body condition since the decline began. 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 WACH is routinely assessed and when caribou are in prime condition (Joly 2015, pers. comm).

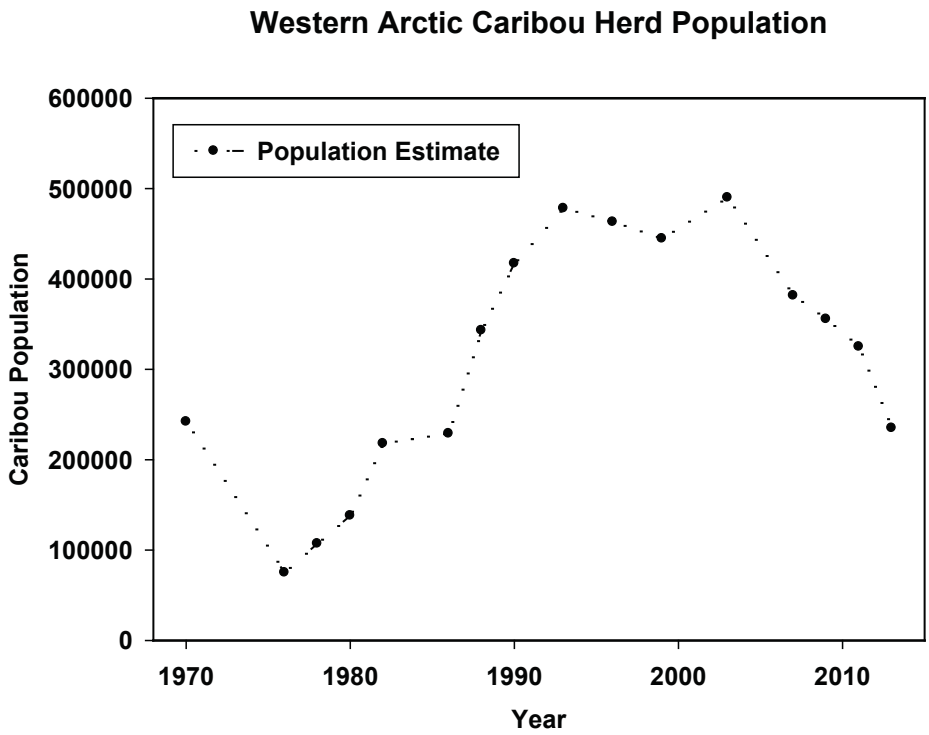


Figure 2. Maximum estimated population estimates of the Western Arctic Caribou Herd from 1970-2013. Population estimates from 1986-2013 are based on aerial photographs of groups of caribou that contained radio–collared animals (Dau 2011, 2014)

During periods of rapid population growth (1976–1982), fall calf:cow ratios were generally higher than during periods of herd decline (1992–2013) (**Table 1**). However, it should be noted that calf:cow ratios may not accurately reflect the status in the population due to spatial and temporal segregation of cows and bulls, and because not all of the population is sampled. The number of bulls:100 cows were greater during the period of population growth (49:100 between 1976-2001) than during the recent period of decline (44:100 between 2004-2014).

The annual mortality rate of collared adult cows has increased, from an average of 15% between 1987 and 2003, increased to 25% from 2004–2009 (Dau 2011, 2014). Estimated mortality includes all causes of death including hunting (Dau 2011). Dau (2009) reported that rain–on–snow events and winter thaws may have contributed to the relatively high estimated mortality rates of 23% during 2008-2009 and 27% during 2009-2010. Prior to 2004-2005, estimated adult cow mortality only exceeded 20% twice during regulatory years 1992 and 1999, but more recently has exceeded 20% in 5 of the 6 regulatory years between 2004–2010 (2004, 2005, 2007, 2008, and 2009). As the WACH declined, the percentage of mortality due to

hunting 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% (estimates from slide 16 Dau 2014). In previous years the estimated hunting mortality exceeded 30% only once.

Table 1. Western Arctic Caribou Herd fall composition 1976 – 2014 (Dau 2011, 2013, 2014).

Regulatory Year	Total bulls: 100 cows[a]	Calves: 100 cows	Calves: 100 adults	Bulls	Cows	Calves	Total
1976/1977	63	52	32	273	431	222	926
1980/1981	53	53	34	715	1,354	711	2,780
1982/1983	58	59	37	1,896	3,285	1,923	7,104
1992/1993	64	52	32	1,600	2,498	1,299	5,397
1995/1996	58	52	33	1,176	2,029	1,057	4,262
1996/1997	51	49	33	2,621	5,119	2,525	10,265
1997/1998	49	43	29	2,588	5,229	2,255	10,072
1998/1999	54	45	29	2,298	4,231	1,909	8,438
1999/2000	49	47	31	2,059	4,191	1,960	8,210
2001/2002	38	37	27	1,117	2,943	1,095	5,155
2004/2005	48	35	24	2,916	6,087	2,154	11,157
2006/2007	42	40	28	1,900	4,501	1,811	8,212
2008/2009	45	48	33	2,981	6,618	3,156	12,755
2010/2011	49	35	23	2,419	4,973	1,735	9,127
2011/2012							
2012/2013	42	38	27	2,119	5,082	1,919	9,120
2013/2014							
2014/2015	39[b]						

[a] 40 bulls:100 cows is the minimum level recommended in the WACH Cooperative Management Plan (WACH Working Group 2011)
[b] Estimated from power point presentation presented at the WACH Working Group Meeting December 17-18, 2014 (Dau 2014)

Harvest History

From 1999–2014 the average annual harvest from the WACH was approximately 13,600 caribou (9500-15,800) (Units 21, 22, 23, 24, and 26A) (Dau 2009; Dau 2014, pers. comm.). Local residents take approximately 94% of the caribou harvest within the range of the WACH, with residents of Unit 23 taking the vast majority of the harvest (**Figure 3**). The State of Alaska manages the WACH to maximize a harvestable surplus of animals. In recent years, as the population declined, the State's total harvestable

surplus for the WACH, which is estimated as 2% of the cows and 15% of the bulls, has declined (Dau 2011, Dau 2014, pers. comm.). Harvest from the WACH, which has remained fairly consistent since 1990, now represents a larger proportion of the annual mortality due to the population decline. This is one of the factors that prompted the Alaska Board of Game to enact restrictions to Western Arctic caribou harvest in March 2015.

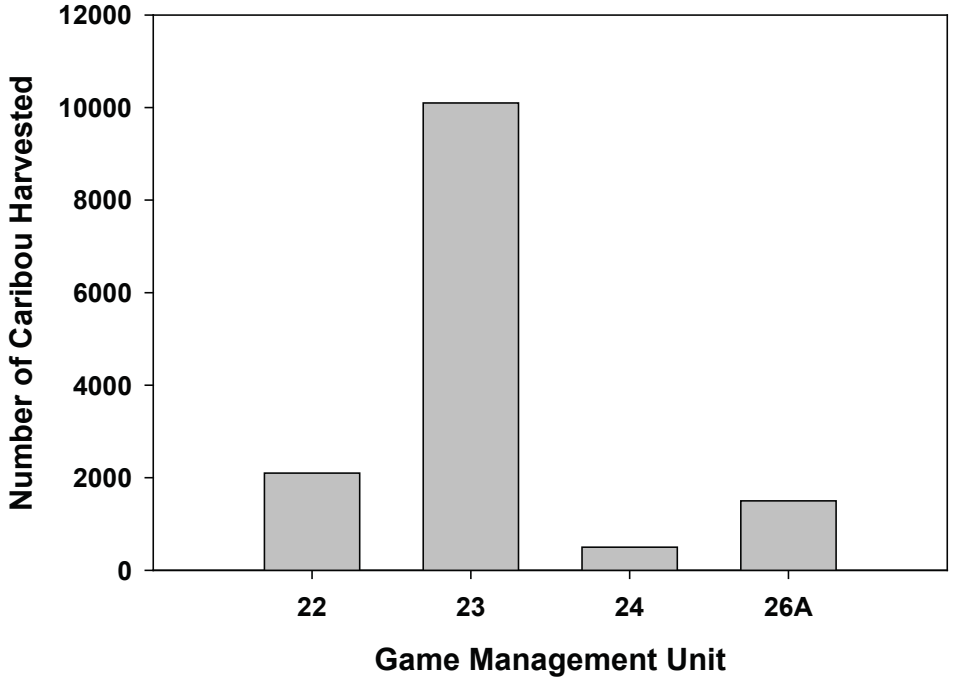


Figure 3. Average annual harvest by residents within the WACH range, RY1998-RY2012 (Dau 2014).

Effects of the Proposal

If these proposals are adopted, Federally qualified subsistence users would have less opportunity to harvest caribou on Federal public lands in Unit 23 as both proposals would reduce harvest limits for Federally qualified subsistence users. If Proposal WP16-49 was adopted, it would reduce the daily harvest limit and establish more restrictive harvest seasons for bulls and cows.. The Council submitted this proposal in an effort to balance the need to slow or reverse the decline of the WACH population with the reduced opportunities for Federally qualified subsistence users.

The reduction in the harvest of cows with calves from July 1 to Oct. 10 will likely increase calf survival. The restriction on the take of cows from April 1-June 30 will have some conservation effect by stopping harvest of late-term pregnant cows. Reduction of the daily harvest limit for bulls and cows should help reduce the overall caribou harvest for the declining WACH population. Since cow mortality is one of the major contributing factors in the decline of the WACH, any efforts to reduce the cow mortality are

recommended. Reduced bull harvest during the rut may help to increase the bull:cow ratio closer to rates seen during the period of population growth. These proposed restrictions are also supported by management recommendations outlined in the Western Arctic Herd Management Plan (WACH Working Group 2011). Adopting Proposal WP16-49 would also reduce regulatory complexity for Federally qualified subsistence users by aligning with newly adopted harvest reductions by the State.

OSM PRELIMINARY CONCLUSION

Support Proposal WP16-49 **with modification** to add the Singoalik River drainage hunt area, prohibit the harvest of calves, align with State season dates and simplify regulatory language; and **Oppose** Proposal WP16-52.

The modified regulation should read:

Unit 23—Caribou

Unit 23, that portion north of and including the Singoalik River drainage—15 *caribou per day* ***as follows:*** ~~*; however, cow caribou may not be taken May 16–June 30*~~	~~*July 1–June 30.*~~
However, 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, as follows:	
However, 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 Sept. 1-Oct. 14.***	***Sept. 1-Mar. 31.***

Justification

Since 2008, the Western Arctic caribou population has declined approximately 50%. Low calf survival and recruitment combined with increased adult mortality are contributing factors to the overall population decline. If the current harvest rates and allowance for the taking of cows accompanied by calves are allowed to continue, the population decline could be prolonged and could hamper recovery of the populations. The subsistence users and the Federal and State land managers agree that strong measures

need to be taken in order to conserve the population. The Alaska Board of Game recently responded to these population concerns by adopting caribou hunting restrictions starting in the 2015/2016 regulatory year. General alignment of the State and Federal regulations will ensure that there is a coordinated conservation effort in place and assist in reducing the regulatory complexity for Federally qualified subsistence users. While these proposals, if adopted, reduce harvest opportunity for Federally qualified subsistence users, they were requested by the Council. The restrictions proposed for the WACH are also supported by management recommendations outlined in the Western Arctic Caribou Herd Management Plan (WACH Working Group 2011).

Two important conservation measures need to be taken to address the declining population of the WACH 1) increase calf survival and recruitment and 2) reduce adult cow mortality. Proposal WP16-49 and recommended modifications are intended to decrease overall harvest and, more specifically, to increase the survival and recruitment of calves and to reduce adult cow mortality. With the recommended modifications, the harvest limits, shortened cow harvest seasons, and regulations to protect cows with calves during their first six months of life will be more consistent throughout Unit 23. Proposal WP16-52 requests reduced daily harvest limit from 15 to 7 caribou and should be opposed because that will not provide enough conservation protection for the WACH.

The recommended modifications will provide more consistent regulations throughout the range of the WACH and promote a coordinated conservation effort by the Federal and State managers. Since the majority of harvest of the WACH comes from residents of Unit 23, it is important to ensure that conservation measures are in place to aid in recovery in the most effective manner possible. Although the Council did not request it, the modification to add the Unit 23 hunt area north of the Singoalik River, mirrors the request in Proposal WP16-37 for the 2016-2018 regulatory cycle, aligns with recently adopted State regulations and provides regulatory clarity to Federally qualified subsistence users.

Reducing the harvest limit to 5 caribou per day in Unit 23 will reduce regulatory complexity between State and Federal regulations and promote conservation efforts for WACH. Since the majority of harvest of the WACH comes from residents of Unit 23, it is important to ensure that conservation measures are in place to aid in recovery in the most effective manner possible.

These conservation efforts will provide an opportunity to evaluate the effectiveness of reducing the caribou harvest in slowing down or reversing the population declines in the WACH.

LITERATURE CITED

Caribou Trails 2014. News from the Western Arctic Caribou Herd Working Group. Western Arctic Caribou Herd Working Group, Nome, AK. Issue 14.

Dau, J. 2009. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A in Caribou survey–inventory management report. Pages 176-239 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2006– June 30, 2008. ADF&G. Juneau, AK

Dau, J. 2011. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 187-250

in P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2008–30 June 30, 2010. ADF&G. Juneau, AK.

Dau, J. 2013. Units 21D, 22A, 22B, 22C, 22D, 22E, 23, 24, and 26A caribou management report. Pages 201-280 *in* P. Harper, editor. Caribou management report of survey and inventory activities July 1, 2010–30 June 30, 2012. ADF&G. Juneau, AK.

Dau, J. 2014. Wildlife Biologist. Personal communication. Information, including a power point presentation, presented at the Western Arctic Caribou Herd (WACH) Working Group Meeting, December 17-18,2014. Anchorage, Alaska. ADF&G. Nome, AK.

Holand, O., R.B. Weladji, A. Mysterud, K. Roed, E. Reimers, M. Nieminen. 2012. Induced orphaning reveals post-weaning maternal care in reindeer. European Journal of Wildlife Research. 58: 589-596.

Joly, K. 2000. Orphan Caribou, *Rangifer tarandus*, Calves: A re-evaluation of overwinter survival data. The Canadian Field Naturalist. 114: 322-323.

Joly, K., R.R. Jandt, C.R. Meyers, and J.M. Cole. 2007. Changes in vegetative cover on the Western Arctic herd winter range from 1981–2005: potential effects of grazing and climate change. Rangifer Special Issue 17:199-207.

Joly, K. 2015. Wildlife Biologist, Gates of the Arctic National Park and Preserve. Personal communication. email NPS. Fairbanks, AK.

Lenart, E. A. 2011. Units 26B and 26C caribou. Pages 315-345 *in* P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. ADF&G. Project 3.0. Juneau, AK.

OSM. 1995a. Staff analysis P97–051. Office of Subsistence Management, FWS. Anchorage, AK.

OSM. 1995b. Staff analysis P95–062. Office of Subsistence Management, FWS. Anchorage, AK.

OSM. 1995c. Staff analysis P95–064/065. Office of Subsistence Management, FWS. Anchorage, AK.

OSM. 1997. Staff analysis P97–066. Office of Subsistence Management, FWS. Anchorage, AK.

OSM. 2000a. Staff analysis P00–053. Office of Subsistence Management, FWS. Anchorage, AK.

OSM. 2000b. Staff analysis P00–044. Office of Subsistence Management, FWS. Anchorage, AK.

OSM. 2006. Staff analysis WP06-65. Office of Subsistence Management, FWS. Anchorage, AK.

Parrett, L.S. 2011. Units 26A, Teshekpuk caribou herd. Pages 283-314 *in* P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2008–30 June 2010. ADF&G. Project 3.0. Juneau, AK.

Rughetti, M., M. Festa-Bianchet. 2014. Effects of selective harvest of non-lactating females on chamois population dynamics. Journal of Applied Ecology. 51: 1075-1084.

Russell, D.E., S.,G. Fancy, K.R. Whitten, and R.G. White. 1991. Overwinter survival of orphan caribou, *Rangifer tarandus*, calves. The Canadian Field Naturalist. 105(1):103-105.

Taillon, J., V. Brodeur, M. Festa-Bianchet, S.D. Cote. 2011. Variation in body condition of migratory caribou at calving and weaning: which measures should we use? Ecoscience. 18(3): 295-303.

Western Arctic Caribou Herd Working Group. 2011. Western Arctic Caribou Herd Cooperative Management Plan – Revised December 2011. Nome, AK 47 pp.

WP16–53/54 Executive Summary	
General Description	Proposal WP16–53 requests a revision of the harvest limits and closure of the Federal subsistence season for sheep in the Baird and DeLong hunt areas of Unit 23. Proposal WP16-54 requests that the Federal subsistence season for sheep within Unit 23 remainder (Schwatka Mountains), be split into two areas by establishing a new hunt area. A revision of harvest limits and seasons is also requested. *Submitted by National Park Service.*
Proposed Regulation	WP16-53 **Unit 23—Sheep** *Units 23- south of Rabbit Creek, Kiyak Creek and the Noatak River, and west of the Cutler and Redstone Rivers (Baird Mountains)* ***Harvest quotas will be announced annually by the Superintendent of Western Arctic National Parklands.*** *~~1 sheep by Federal registration permit . The total allowable harvest of sheep is 21, of which 15 may be rams and 6 may be ewes.~~* *Federal public lands are closed to the taking of sheep except by Federally qualified subsistence users.* ***No Federal open season****~~Aug. 10 – Apr. 30~~* *~~If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.~~* *Units 23- north of Rabbit Creek, Kiyak Creek and the Noatak River, and west of the Aniuk River (DeLong Mountains)* ***Harvest quotas will be announced annually by the Superintendent of Western Arctic National Parklands.*** *~~1 sheep by Federal registration permit. The total allowable harvest of sheep for the DeLong Mountains is 8, of which 5 may be rams and 3 may be ewes.~~* ***No Federal open season****~~Aug. 10 – Apr. 30~~* *~~If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.~~*

WP16–53/54 Executive Summary	
	WP16-54 **Unit 23—Sheep** *Unit 23, remainder (Schwatka Mountains)**, that portion within Gates of the Arctic National Park** – 1 ram with 7/8 curl or larger horn* — *Aug. 10 – Sept. 20* *Unit 23, remainder (Schwatka Mountains)**, that portion within Gates of the Arctic National Park** – 1 sheep* — *Oct. 1 – Apr. 30* ***Unit 23, remainder (Schwatka Mountains) except for that portion within Gates of the Arctic National Park – 1 sheep by Federal registration permit. Annual harvest quotas will be announced by the Superintendent of Western Arctic National Parklands*** — ***No Federal open season***
OSM Preliminary Conclusion	**Support with modification** to establish a May-be-announced season, remove regulatory language referencing harvest quotas and delegate authority to open and close the season, and determine annual harvest quotas and limits, via a delegation of authority letter. The modified regulation should read: **Unit 23—Sheep** *Units 23 south of Rabbit Creek, Kiyak Creek and the Noatak River, and west of the Cutler and Redstone Rivers (Baird Mountains)* ~~*— 1 sheep by Federal registration permit . The total allowable harvest of sheep is 21, of which 15 may be rams and 6 may be ewes.*~~ — ***May be announced***~~***No Federal open season***~~*Aug. 10 – Apr. 30* *Federal public lands are closed to the taking of sheep except by Federally qualified subsistence users.* — ~~*If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will*~~

WP16–53/54 Executive Summary		
		~~*announce early closure.*~~
	Units 23 north of Rabbit Creek, Kiyak Creek and the Noatak River, and west of the Aniuk River (DeLong Mountains) ~~*— 1 sheep by Federal registration permit . The total allowable harvest of sheep for the DeLong Mountains is 8, of which 5 may be rams and 3 may be ewes.*~~	***May be announced***~~***No Federal open season***~~*Aug. 10 – Apr. 30* ~~*If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.*~~
	Unit 23 remainder (Schwatka Mountains) ***except for those lands within Gates of the Arctic National Park and Preserve - – 1 sheep by Federal permit.*** ~~***Annual harvest quotas will be announced by the Superintendent of Western Arctic National Parklands.***~~*1 ram with 7/8 curl horn or larger*	***May be announced***~~***No Federal open season***~~*Aug. 10 – Sept. 20*
	Unit 23 remainder (Schwatka Mountains) ***– those lands within Gates of the Arctic National Park and Preserve –*** *1 ram with 7/8 curl horn or larger*	*Aug. 10 – Sept. 20*
	Unit 23 remainder (Schwatka Mountains) – ***those lands within Gates of the Arctic National Park and Preserve –*** *1 sheep*	*Oct. 1 – Apr. 30*
Northwest Arctic Regional Advisory Council		

WP16–53/54 Executive Summary	
Recommendation	
North Slope Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP16-53/54

ISSUES

Proposal WP16-53, submitted by the National Park Service (NPS), requests a revision of the harvest limits and closure of the Federal subsistence season for sheep in the Baird and DeLong hunt areas of Unit 23.

Proposal WP16-54, submitted by the National Park Service, requests that the Federal subsistence season for sheep within Unit 23 remainder (Schwatka Mountains), be split into two areas by establishing a new hunt area. A revision of harvest limits and seasons is also requested.

DISCUSSION

The proponent states that the proposed changes are necessary due to conservation concerns for sheep across all of Unit 23. Severe weather and snow conditions over the last several years have resulted in population declines of 50% in the Baird Mountains and 82% in the DeLong Mountains since 2011. Similar declines are suspected in the Schwatka Mountains, though surveys were not conducted there recently. The proponent feels that the severe declines in sheep abundance across all age classes, in addition to very low lamb recruitment, make the proposed changes necessary in order to aid in the recovery of the sheep population. In addition, the proponent states that the changes proposed in Unit 23 remainder will improve management by addressing complex biological and jurisdictional issues in the Schwatka Mountains hunt area. These proposals are a follow-up from Wildlife Special Action WSA15-07 and are also related to Proposal WP16-66 concerning sheep in Unit 26A.

Existing Federal Regulation

<u>WP16-53</u>

Unit 23— Sheep

Unit 23 - south of Rabbit Creek, Kiyak Creek and the Noatak River, and west of the Cutler and Redstone Rivers (Baird Mountains) —1 sheep by Federal registration permit. The total allowable harvest of sheep is 21, of which 15 may be rams and 6 may be ewes. *Federal public lands are closed to the taking of sheep except by Federally qualified subsistence users.*	*Aug. 10 – Apr. 30* *If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce an early closure.*
Units 23- north of Rabbit Creek, Kiyak Creek and the Noatak River, and west of the Aniuk River (DeLong Mountains) —1 sheep by Federal registration permit.	*Aug. 10 – Apr. 30* *If the allowable harvest*

The total allowable harvest of sheep for the DeLong Mountains is 8, of which 5 may be rams and 3 may be ewes.	*levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce an early closure.*

Proposed Federal Regulation

Unit 23— Sheep

Units 23- south of Rabbit Creek, Kiyak Creek and the Noatak River, and west of the Cutler and Redstone Rivers (Baird Mountains) ***Harvest quotas will be announced annually by the Superintendent of Western Arctic National Parklands.*** *~~1 sheep by Federal registration permit . The total allowable harvest of sheep is 21, of which 15 may be rams and 6 may be ewes.~~*	***No Federal open season****~~Aug. 10 – Apr. 30~~* *~~If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.~~*
Federal public lands are closed to the taking of sheep except by Federally qualified subsistence users.	
Units 23- north of Rabbit Creek, Kiyak Creek and the Noatak River, and west of the Aniuk River (DeLong Mountains) ***Harvest quotas will be announced annually by the Superintendent of Western Arctic National Parklands.*** *~~1 sheep by Federal registration permit . The total allowable harvest of sheep for the DeLong Mountains is 8, of which 5 may be rams and 3 may be ewes.~~*	***No Federal open season****~~Aug. 10 – Apr. 30~~* *~~If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.~~*

Existing State Regulation

Unit 23 – Sheep

Unit 23 – north of Rabbit Creek, Kiyak Creek and the Noatak River, and west of Aniuk River (DeLong Mountains)	*Resident Hunters: One sheep by permit, available in person at license vendors within Unit 23 or ADF&G in Barrow. No aircraft use allowed*	*RS388*	*No open season*
	Nonresident Hunters		*No open season*
Unit 23 – south of Rabbit Creek, Kiyak Creek and Noatak River, and west of Cutler and Redstone Rivers (Baird Mountains)	*Resident and Nonresident Hunters*		*No open season*

Existing Federal Regulation

<u>WP16-54</u>

Unit 23 - Sheep

Unit 23, remainder (Schwatka Mountains) – 1 ram with 7/8 curl or larger horn	*Aug. 10 – Sept. 20*
Unit 23, remainder (Schwatka Mountains) – 1 sheep	*Oct. 1 – Apr. 30*

Proposed Federal Regulation

Unit 23 - Sheep

*Unit 23, remainder (Schwatka Mountains)**, that portion within Gates of the Arctic National Park** – 1 ram with 7/8 curl or larger horn*	*Aug. 10 – Sept. 20*
*Unit 23, remainder (Schwatka Mountains)**, that portion within Gates of the Arctic National***	*Oct. 1 – Apr. 30*

***Park** – 1 sheep*

Unit 23, remainder (Schwatka Mountains) except for that portion within Gates of the Arctic National Park – 1 sheep by Federal registration permit. Annual harvest quotas will be announced by the Superintendent of Western Arctic National Parklands	***No Federal open season***

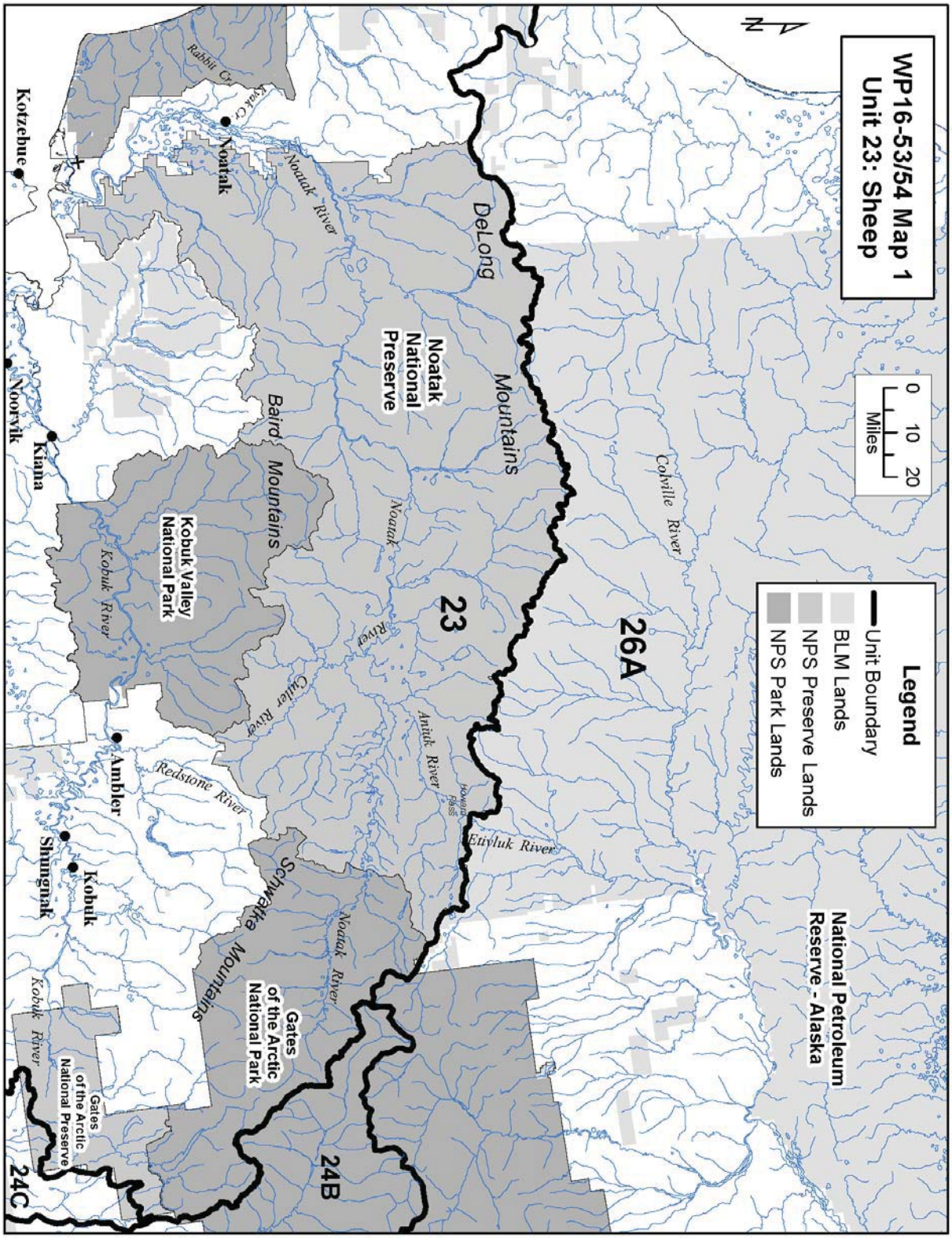
Existing State Regulation

Unit 23 - Sheep

Unit 23 – remainder (Schwatka Mountains)	*Resident Hunters: Three sheep by permit, available in person at license vendors in Unit 23 or ADF&G in Barrow. No aircraft use allowed.*	*RS389*	*No open season*
	Or		
	One ram with full-curl horn or larger	*Harvest Ticket*	*No open season*
	***Nonresident Hunters:** One ram with full-curl horn or larger*	*Harvest Ticket*	*No open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 69% of Unit 23 and consists of 42% NPS managed lands, 18% Bureau of Land Management (BLM) managed lands, and 9% US Fish and Wildlife Service managed lands (**Map 1**).


WP16-53/54 Map 1
Unit 23: Sheep
N
0 10 20
Miles
Legend
Unit Boundary
BLM Lands
NPS Preserve Lands
NPS Park Lands
National Petroleum Reserve - Alaska
26A
Colville River
DeLong Mountains
Noatak National Preserve
23
Noatak River
Noatak
Rabbit Cr.
Kyak Cr.
Baird Mountains
Kobuk Valley National Park
Kobuk River
Cutler River
Anituk River
Howard Pass
Etivluk River
Redstone River
Ambler
Schwatka Mountains
Gates of the Arctic National Park
Gates of the Arctic National Preserve
24B
24C
Kobuk
Shungnak
Kiana
Noorvik
Kotzebue

Customary and Traditional Use Determinations

Residents of Point Lay and Unit 23 north of the Arctic Circle have a positive customary and traditional use determination for sheep in Unit 23.

Regulatory History

The use of State registration permits for sheep hunting in the Baird and DeLong Mountains was established in 1982. Declining sheep populations during the late 1980s prompted a series of State harvest closures. The initial Federal subsistence hunting regulations in 1991 were established by adopting the existing State harvest limit of one ram with 7/8 curl in the fall hunt and one sheep with a harvest quota of 30 animals in the winter hunt. However, in 1991, low sheep numbers in the Baird Mountains prompted State emergency hunt closures, which continued through 1997. In 1993, season restrictions (full curl rams only) were enacted by the Alaska Department of Fish and Game (ADF&G) in the DeLong Mountains, with emergency closures following in 1995-1997. In 1991 and 1992, Special Actions adopted by the Federal Subsistence Board (Board) closed the sheep harvest south and east of the Noatak River (Baird Mountains), which was repeated by Special Actions through 1997/98 (FWS 1991, 1992, 1993, 1994). In 1993, the Board shortened the subsistence harvest season in the DeLong Mountains by special action, and subsequently closed the season by Special Action in 1994, and repeated the closures through 1997/98 (FWS 1993, 1994).

The Alaska Board of Game met in November 1997, revisiting the sheep issue in Unit 23. The western portion was re-described dividing it into the Baird and Delong Mountain ranges. Subsistence needs were investigated by the State and determined to be 1-9 sheep for the DeLong Mountains and 18-47 sheep for the Baird Mountains. Based on that information and the fact that the surveys showed the first increase in sheep numbers in several years, the Alaska Board of Game preliminarily decided to not close the 1998/99 State season by Emergency Order and proceed with a Tier I harvest of 20 sheep in the Baird Mountains and a combination hunt (9 Tier I and 11 drawing permits) in the DeLong Mountains, with the final decision based on the results of the 1998 sheep surveys. Both State seasons were scheduled to run August 10-April 30.

In July 1998, the Board approved a Special Action adopting the State's sheep harvest zones in Unit 23 (Baird, Delong, and Schwatka Mountains), closing Federal public lands to non-Federally qualified sheep hunters in the Baird and DeLong Mountains, and setting up an August-April season for one full-curl ram (maximum of 20 for each mountain range). The DeLong Mountain harvest quota was divided with ADF&G, providing half for their use through registration permits. In May 1999, the Board adopted the Special Action changes into the permanent regulations with the addition of allowing the Superintendent of the Western Arctic National Parklands to annually announce the harvest quota and divide the harvest into two seasons (fall and winter).

In May 2002, the Board adopted ProposalWP02-39, which implemented regulations for sheep harvest in Units 23 and 26A, including the requirement for trophy destruction of the harvested sheep horns. This proposal for trophy destruction was made at the request of the Northwest Arctic Regional Advisory Council permits.

In 2004, the Board adopted Proposal WP04-72/73 with modification to eliminate the trophy destruction requirement, and adopt a mixed-sex hunt with fixed quotas.

On August 8, 2014, the State of Alaska issued an Emergency Order closing sheep seasons in Units 23 and 26A for all resident and nonresident hunters. This was done in response to severe declines in sheep numbers in the Delong and Schwatka Mountains. The State initially issued no permits for its drawing hunt (DS384) in 2014 and the hunt was closed by Emergency Order later that year (Saito 2014, pers. comm.).

On August 25, 2014, the Board approved Temporary Special Action WSA14-03, which closed the sheep season on Federal public lands in Unit 23 and Unit 26A, that portion west of Howard Pass and the Etivluk River for the 2014/2015 season. This was done due to the same conservation concerns detailed in the State's Emergency Order.

In March of 2015, the Alaska Board of Game adopted Proposal 203, which closed all sheep seasons in Unit 23 and Unit 26A west of Howard Pass and the Etivluk River in response to the drastic population declines in the area. Hunt areas and hunt types were retained so that similar hunt regimes could be restored once the population recovered.

Designated Hunter Permit System

The Board adopted Proposal 48, which instituted a designated hunter permit system in 1995. At the March 1999 meeting of the Northwest Arctic Council in Kiana, the Council requested that Proposal 48 be modified to also include a designated hunter provision. The Board adopted the designated hunter provision for sheep in the Baird and Delong Mountains in Unit 23 in May 1999. In 2002, Proposal WP02-38, submitted by the Northwest Arctic Subsistence Regional Advisory Council, requested that the designated hunter permit system be discontinued. The Board denied this request and chose instead to implement the destruction of the horns for trophy value as a way to address the problems of one hunter taking too many of the sheep. The Board felt that removing the designated hunter permit system would have a detrimental effect on subsistence users.

Designated hunter permits are distributed by the NPS in their Kotzebue office to anyone who qualifies. To qualify, the person must be a rural resident of Unit 23 from any of the communities north of the Arctic Circle (all communities in Unit 23 except Deering and Buckland). In addition, the person must have a hunting license and a permit to hunt sheep. There is no limit to the number of sheep permits distributed. The hunt is closed once the quota has been reached.

Current Events Involving Species

Special Action WSA15-07, was submitted by NPS to close sheep seasons for the 2015/2016 regulatory year in the remainder portion of Unit 23, outside of Gates of the Arctic National Park and Preserve (GAAR), and in Unit 26A and was necessary to assure the continued viability of the population. The NPS also requested creation of new hunt area descriptors within the current Unit 23 remainder (Schwatka Mountains) will separate those lands within and outside of GAAR to help clarify management responsibility. The hunt areas also reflect differences in hunter access and potential hunting pressure on sheep populations within

and outside GAAR lands. People residing in the GAAR resident zone communities of Ambler, Kobuk and Shungnak are the only people eligible to hunt sheep in the park under Federal subsistence regulations. This small pool of prospective hunters and the difficulty of accessing sheep hunting areas in the park greatly reduce potential hunting pressure on sheep inside GAAR.

Proposal WP16-66, submitted by Western Arctic National Parklands (WEAR), requests removal of regulatory language referencing harvest quotas, closure of the harvest season for the DeLong Mountains in a portion of Unit 26A, and to delegate authority to the Superintendent of the Western Area Parklands to determine annual harvest quotas and limits. The proposal is in response to the severely declining sheep population in the DeLong Mountains.

Biological Background

Sheep in the DeLong Mountains populate both Unit 23 and Unit 26A (**Map 1**). The Dall's sheep in Units 23 and 26A are at the northwestern margin of their range in Alaska and because of this, they are more prone to stochastic weather events affecting their populations than sheep in areas with more abundant habitat and stable range conditions (Shults 2004, Westing 2011). In addition, the declining presence of caribou from the large Western Arctic herd and their availability as prey may also be playing a role in the affected area by shifting more wolf predation to sheep.

Sheep densities in Units 23 and 26A are low compared to other areas of the State (Singer 1984). Severe winters in the 1990s resulted in high natural mortality, dramatically reduced sheep numbers in the area, and caused the closure of the general and subsistence hunts between 1991 and 1995 (Shults 2004). Sheep hunting in the Baird Mountains has been administered by the NPS since 1995.

ADF&G management objectives for sheep in Units 23 and 26A have been to monitor sheep with the NPS within each area at least once every 3 years to detect changes in population status. In addition, monitoring of harvest through harvest tickets, permits, and community-based harvest surveys and other methods are also used (Westing 2011).

NPS management objectives for Dall's sheep include monitoring sheep abundance and sex-age composition across WEAR and Gates of the Arctic National Park and Preserve (GAAR) by conducting surveys every five years across these parklands and every other year in the western Baird Mountains subarea of WEAR and the Itkillik subarea of GAAR every other year (Lawler et al. 2009). The Park Service now intends to try and monitor sheep on an annual basis, when funding and weather conditions allow.

The NPS, in coordination with ADF&G, completed surveys of the sheep population in the affected area (the larger part of WEAR) in July of 2014. Preliminary estimates indicate a 70% population decline across WEAR from the previous survey (2011). Specifically, there has been an estimated 80% decline in the DeLong Mountains (southern WEAR) between 2011 and 2014. In 2011, the estimated sheep population in WEAR as a whole was 2,809 total sheep (95% CI 2361-3379) with an estimated 1946 sheep (95% CI 1,593-2,397) in the DeLong Mountains and 587 sheep (95% CI 457-762) in the western Baird Mountains (Schmidt and Rattenbury 2013). Sheep abundance in the western Baird Mountains was already in decline

in 2011, dropping 30% between 2009 and 2011. This overall decline is likely greater than when a full State and Federal closure was implemented from 1991-1997 in the DeLong and Baird Mountains following a 50% decline in adult sheep (Shults 2004). Surveys in Gates of the Arctic National Park and Preserve, BLM land, and State land in the eastern Brooks Range also show significantly declining numbers in 2014.

Preliminary survey results also indicate very low lamb to ewe-like ratios and very low recruitment rates in 2014. The point estimates for lambs per 100 ewe-like sheep are down 90% from 2011 to 2014 (estimates are 3 lambs:100 ewe-like sheep in WEAR as a whole, 4 lambs:100 ewe-like sheep in the DeLong Mountains and 2 lambs:100 ewe-like sheep in the western Baird Mountains) (National Park Service 2014, unpublished data.). This is consistent with low lamb productivity indicated in surveys in Gates of the Arctic National Park and Preserve, BLM land and State land in the eastern Brooks Range, which show low lamb productivity for at least the second year in a row, and where low lamb productivity in 2013 was attributed in part to the long and cold 2012-2013 winter and record cold temperatures in May 2013, among other factors (NPS 2014, unpublished data.).

Large rams (full-curl or greater and double-broomed) have also declined in WEAR between 2011 and 2014 with large ram to ewe-like ratios down 75% across WEAR, 60% in the DeLong Mountains and 65% in the western Baird Mountains. While the ratios of less than full-curl rams to ewe-like sheep appear to be stable or increasing that inflation is actually due to the loss of ewes. The number of full-curl rams in the population in WEAR was on the low end compared with other populations in Alaska's NPS units in 2011, and this decline indicates there are very few to no large rams available for harvest in WEAR (NPS 2014, unpublished data.).

Harvest History

Currently, the sheep harvest in Unit 23 is divided into a drawing hunt (DS384 – DeLong Mountains), two subsistence registration hunts (RS388 – DeLong Mountains and RS389 – Schwatka Mountains) under State regulations and registration hunts (FS2301 – Baird Mountains and FS2304 – DeLong Mountains) under Federal subsistence regulations. There is no State hunt in the Baird Mountains. Between 2004 and 2014, the average annual sheep harvest was 23 animals in Units 23 and 26A (**Table 1**) under both State hunting and Federal subsistence regulations. Harvest ranged from a low of 17 in 2012/2013, to a high of 31 in 2010. The majority of harvest came from Federal subsistence registration hunts FS2301 and FS2304 in Unit 23.

Table 1. State and Federal sheep harvest in Unit 23 and Unit 26A, 2004-2014 (ADF&G 2014, OSM 2014, Johnson 2014, pers. comm.).

Year	State General Harvest	DS384*	RS388*	RS389*	FS2301* and FS2304*	Total Harvest
2004	4	8	1	0	15	28
2005	1	3	0	2	14	20
2006	6	4	1	0	8	19
2007	4	8	0	0	8	20
2008	2	10	2	0	8	22
2009	4	6	3	0	12	25
2010	5	5	5	0	16	31
2011	5	3	1		17	26
2012	4	3			10	17
2013	0	2			15	17
2014	-	-	-	-	-	-
2015***	-	-	-	-	-	-

*Closed by emergency order in 2014 and in regulation by the Alaska Board of Game in March of 2015.

***All State and Federal hunts were closed in August of 2014 for the 2014/2015 season.

Effects of the Proposal

If these Proposals are adopted, all sheep hunting under Federal subsistence regulations will be closed in Unit 23, except for those portions within Gates of the Arctic National Park and Preserve. This would limit harvest opportunities for Federally qualified users. Currently, the State resident and nonresident seasons are closed. If these proposals are adopted, sheep hunting will be closed to all users until sheep populations recover to levels that can support a harvest.

Recent drastic declines in sheep numbers in the affected area by as much as 80% necessitate the closure proposed in these Proposals. Large declines in the overall population, the low numbers of rams available for harvest and an apparent low recruitment of lambs would make any harvest detrimental to the population.

OSM PRELIMINARY CONCLUSION

Support Proposal WP16-53/54 **with modification** to establish a May-be-announced season rather than the closure language, remove regulatory language referencing harvest quotas and delegate authority to open and close the season, and determine annual harvest quotas and limits, via a delegation of authority letter (**Appendix 1**).

The modified regulation should read:

Unit 23— Sheep

Units 23 south of Rabbit Creek, Kiyak Creek and the Noatak River, and west of the Cutler and Redstone Rivers (Baird Mountains) ~~— 1 sheep by Federal registration permit . The total allowable harvest of sheep is 21, of which 15 may be rams and 6 may be ewes. —~~ *Federal public lands are closed to the taking of sheep except by Federally qualified subsistence users.*	***May be announced~~No Federal open season~~****Aug. 10 – Apr. 30* *~~If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.~~*
Units 23 north of Rabbit Creek, Kiyak Creek and the Noatak River, and west of the Aniuk River (DeLong Mountains) ~~— 1 sheep by Federal registration permit . The total allowable harvest of sheep for the DeLong Mountains is 8, of which 5 may be rams and 3 may be ewes.~~	***May be announced~~No Federal open season~~****Aug. 10 – Apr. 30* *~~If the allowable harvest levels are reached before the regular season closing date, the Superintendent of the Western Arctic National Parklands will announce early closure.~~*
Unit 23 remainder (Schwatka Mountains) ***except for those lands within Gates of the Arctic National Park and Preserve - – 1 sheep by Federal permit.~~Annual harvest quotas will be announced by the Superintendent of Western Arctic National Parklands.~~****~~*1 ram with 7/8 curl horn or larger*~~*	***May be announced~~No Federal open season~~****Aug. 10 – Sept. 20*
Unit 23 remainder (Schwatka Mountains) ***– those lands within Gates of the Arctic National Park and Preserve*** *– 1 ram with 7/8 curl horn or larger*	*Aug. 10 – Sept. 20*
Unit 23 remainder (Schwatka Mountains) – ***those lands within Gates of the Arctic National Park and Preserve*** *– 1 sheep*	*Oct. 1 – Apr. 30*

Justification

Since 2011, sheep populations have declined between 50-80% in the area affected by Proposal WP16-53/54. In addition to the decline in the overall population, low numbers of rams, and the apparent very low recruitment rate suggest that any harvest could be detrimental to the population, could prolong or worsen the current decline, and hamper recovery. The State responded to this population concern by closing all resident and nonresident hunting under their regulations for the 2015/2016 season. Closure of sheep hunting under Federal regulations in Unit 23 and Unit 23 remainder is necessary to assure the continued viability of the population. Establishing a May-be-announced season and delegating authority to determine quotas and harvest limits will provide the Federal land manager the flexibility to adjust hunt parameters once the sheep population in the affected areas recovers to the point that harvest is possible. Having a May-be-announced season will preclude the need in the future for the Board to take action to authorize opening a hunt area that is closed by regulation.

LITERATURE CITED

ADF&G. 2014. Hunt harvest summary. Database accessed 8 August, 2014.

Adkisson, K. 2014. Personal communication: email. Subsistence Specialist. National Park Service. Nome, AK.

FWS. 1991. Special Action 91-01 administrative record. Office of Subsistence Management, FWS, Anchorage AK.

FWS. 1992. Special Action 92-08 administrative record. Office of Subsistence Management, FWS, Anchorage AK.

FWS. 1993. Special Action 93-02 administrative record. Office of Subsistence Management, FWS, Anchorage AK.

FWS. 1994. Special Action 94-06 administrative record. Office of Subsistence Management, FWS, Anchorage AK.

Johnson, M. 2014. Personal communication: email. Biologist. National Park Service. Kotzebue, AK.

Lawler, J. P., S. D. Miller, D. M. Sanzone, J. M. Ver Hoef, and S. B. Young. 2009. Arctic Network vital signs monitoring plan. Natural Resource Report NPS/ARCN/NRR-2009/088. National Park Service, Fort Collins, Colorado, USA. Link, W. A., and R. J. Barker.

OSM. 2014. Alaska Federal Subsistence Program Harvest Database. Office of Subsistence Management.

NPS. 2014. Unpublished data, 2014 sheep surveys in Units 23 and 26A Nome, AK.

Saito, B. 2014. Personal communication: email. Wildlife Biologist. Alaska Department of Fish and Game. Kotzebue, AK.

Schmidt, J.S., and K.L. Rattenbury. 2013. Reducing Effort While Improving Inference: Estimating Dall's Sheep Abundance and Composition in Small Areas. The Journal of Wildlife Management 77:1048–1058.

Shults, B. 2004. Abundance survey of Dall's sheep in the western Baird Mountains, Alaska, July 2004. Technical Report NPS/AR/NRTR-2004- 46. U.S. Department of the Interior, National Park Service, Kotzebue, Alaska, USA.

Singer, F.J. 1984. Aerial Dall sheep count, 1982, 1983, and 1984. Gates of the Arctic National Park and Preserve. Natural resources survey and inventory report. AR/84-2. National Park Service. Anchorage, AK.

Westing, C. 2011. Units 23 and 26A Dall sheep management report. Pages 134-147 *in* P. Harper, editor. Dall sheep management report of survey and inventory activities 1 July 2007 – 30 June 2010. ADF&G. Project 6.0. Juneau, AK.

Appendix 1

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

Dear Superintendent:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the National Park Service Superintendent of Western Arctic National Parklands to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of the population. This delegation only applies to the Federal public lands subject to Alaska National Interest Lands Conservation Act (ANILCA) Title VIII jurisdiction within Unit 23 and Unit 23 remainder, except for that portion of Unit 23 remainder (Schwatka Mountains) within Gates of the Arctic National Park and Preserve for the management of sheep on these lands.

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

DELEGATION OF AUTHORITY

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

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

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

- To set opening and closing dates for the sheep season on Federal public lands in Unit 23 and Unit 23 remainder, except for that portion of Unit 23 remainder (Schwatka Mountains) within Gates of the Arctic National Park and Preserve.

- As needed, set or adjust the annual harvest quotas and limits for sheep on Federal public lands in Unit 23 and Unit 23 remainder, except for that portion of Unit 23 remainder (Schwatka Mountains) within Gates of the Arctic National Park; and that portion of Unit 26A west of Howard Pass and the Etivluk River (DeLong Mountains). This delegation may be exercised only when it is necessary to conserve the sheep population, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the population.

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

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

The Federal public lands subject to this delegated authority are those within Unit 23 and Unit 23 remainder, except for that portion of Unit 23 remainder (Schwatka Mountains) within Gates of the Arctic National Park.

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

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

You will notify OSM and coordinate with local ADF&G managers, the National Park Service (Superintendent, Gates of the Arctic National Park and Preserve, the BLM Arctic Field Office, the BLM Anchorage field Office, the Chair of the Northwest Arctic Subsistence Regional Advisory Council, and the Chair of the North Slope Subsistence Regional Advisory Council regarding special actions under consideration. You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, OSM, affected

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

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

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

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Commissioner, Alaska Department of Fish and Game
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Superintendent, Gates of the Arctic National Park and Preserve
Chair, Northwest Arctic Subsistence Regional Advisory Council
Chair, North Slope Subsistence Regional Advisory Council
Manager, BLM Arctic Field Office
Manager, BLM Anchorage Field Office
Federal Subsistence Liaison Team Leader, Alaska Department of Fish and Game
Subsistence Council Coordinators, Office of Subsistence Management
Federal Subsistence Board
Interagency Staff Committee
Administrative Record

FISHERIES RESOURCE MONITORING PROGRAM

BACKGROUND

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

Biennially, the Office of Subsistence Management announces a funding opportunity for investigation plans addressing subsistence fisheries on Federal public lands. The 2016 Notice of Funding Availability focused on priority information needs developed either by strategic planning efforts or subject matter specialist input, followed by review and comment by the Subsistence Regional Advisory Councils. The Monitoring Program is administered through regions, which were developed to match subsistence management regulations, as well as stock, harvest, and community issues common to a geographic area. The six Monitoring Program regions are shown in **Figure 1**.

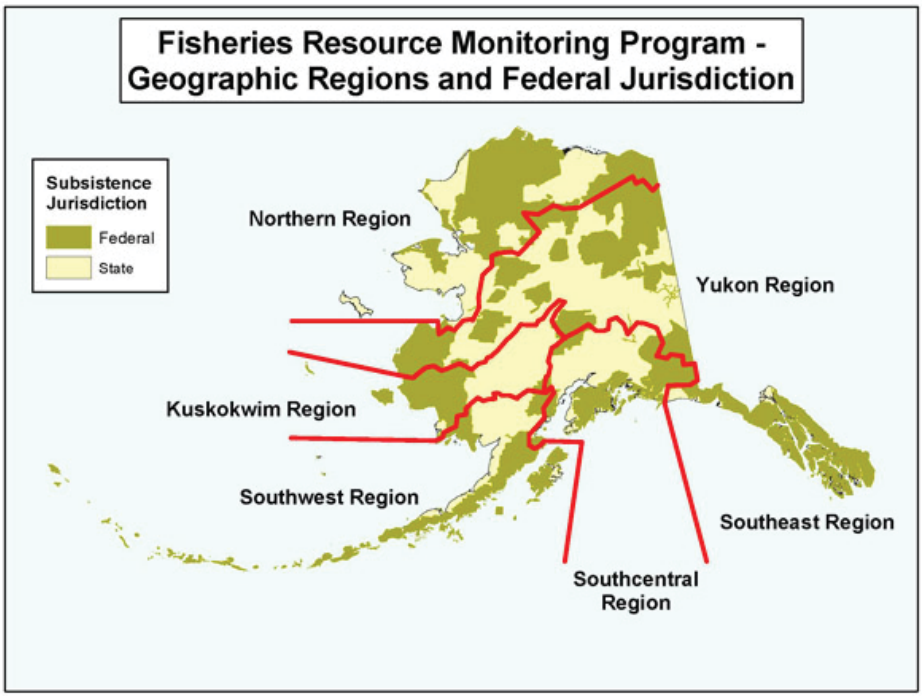


Figure 1. Geographic Regions for the Fisheries Resource Monitoring Program.

To implement the Monitoring Program, a collaborative approach is utilized in which five Federal agencies (U.S. Fish and Wildlife Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and U.S. Forest Service) work with the Alaska Department of Fish and Game, Regional Advisory Councils, Alaska Native Organizations, and other organizations. An interagency Technical Review Committee provides scientific evaluation of investigation plans submitted for funding consideration. The Regional Advisory Councils provide review and recommendations, and public comment is invited. The Interagency Staff Committee also provides recommendations. The Federal Subsistence Board takes into consideration recommendations and comments from the process, and forwards a Monitoring Plan to the Assistant Regional Director of OSM for final approval.

Strategic plans sponsored by the Monitoring Program have been developed by workgroups of fisheries managers, researchers, Federal Subsistence Regional Advisory Councils, and by other stakeholders for three of the six regions: Southeast, Southcentral (excluding Cook Inlet Area), and Southwest Alaska. These plans identify prioritized information needs for each major subsistence fishery and are available for viewing on the Federal Subsistence Management, Fisheries Resource Monitoring Program website (http://www.doi.gov/subsistence/index.cfm). Individual copies of plans are available by placing a request to the Office of Subsistence Management. Independent strategic plans were completed for the Yukon and Kuskokwim regions for salmon in 2005. For the Northern Region and the Cook Inlet Area, assessments of priority information needs were developed from experts on the Regional Advisory Councils, the Technical Review Committee, Federal and State managers, and staff from the Office of Subsistence Management. Finally, a strategic plan specifically for research on whitefish species in the Yukon and Kuskokwim River drainages was completed in spring 2011 as a result of efforts supported through Monitoring Program project 08-206 (Yukon and Kuskokwim Coregonid Strategic Plan). Currently, all regional strategic plans need to be updated. The OSM, in collaboration with Regional Advisory Councils and agency partners, will be exploring methods to update these plans, develop a schedule into the future and ensure they are current and represent the most up-to-date information about subsistence needs and concerns throughout the state.

HISTORICAL OVERVIEW

The Monitoring Program was first implemented in 2000, with an initial allocation of $5 million. Since 2001, a total of $103.6 million has been allocated for the Monitoring Program to fund a total of 431 projects (**Figure 2; Figure 3**).

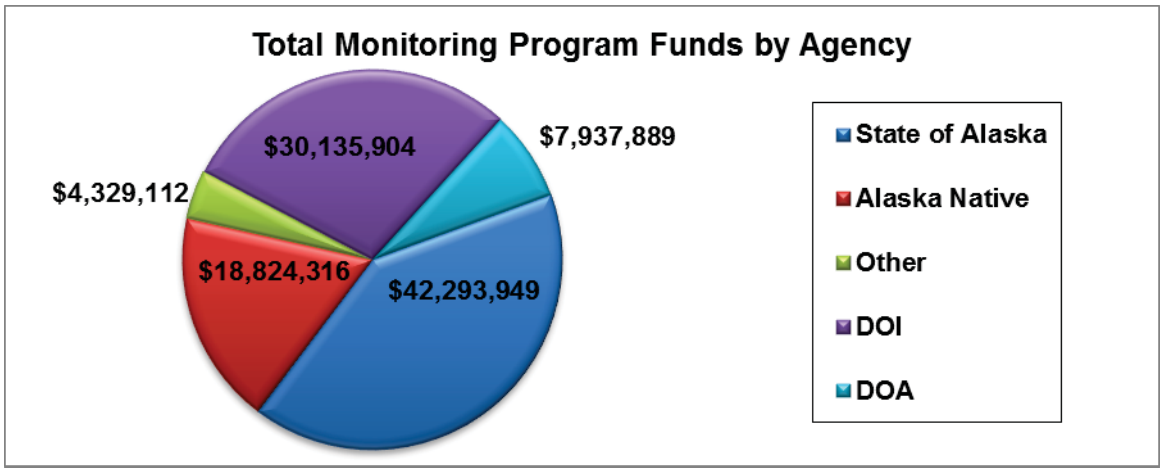


Figure 2. Total Project funds through the Monitoring Program from 2000 through 2014 listed by the organization of the Principal Investigator for projects funded. The funds listed are the total approved funds from 2000 to 2014. DOI = Department of Interior and DOA = Department of Agriculture.

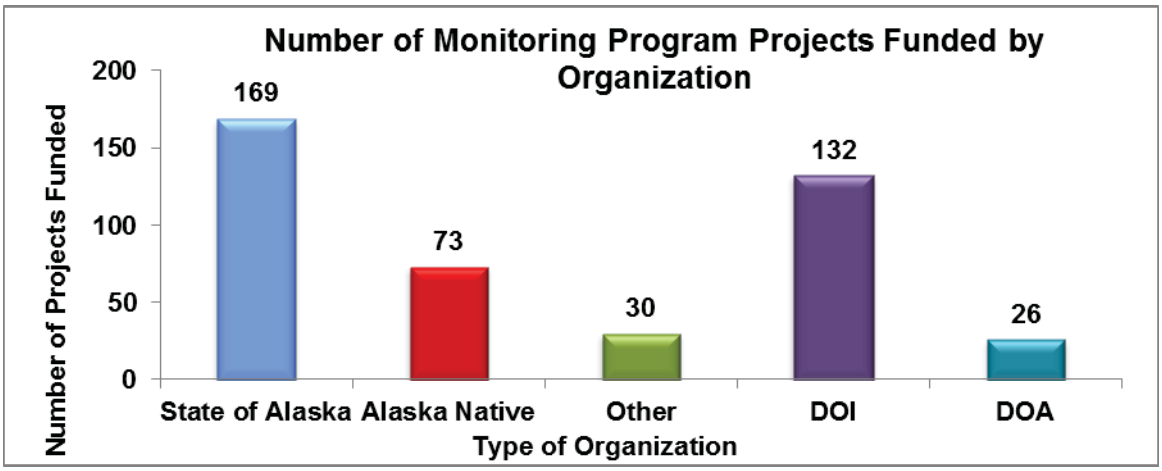


Figure 3. The total number of projects funded through the Monitoring Program from 2000 through 2014 listed by the organization of Principal Investigator. DOI = Department of Interior and DOA = Department of Agriculture.

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

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

Region	Department of Interior Funds	Department of Agriculture Funds
Northern	17%	0%
Yukon	29%	0%
Kuskokwim	29%	0%
Southwest	15%	0%
Southcentral	5%	33%
Southeast	0%	67%
Inter-regional	5%	0%

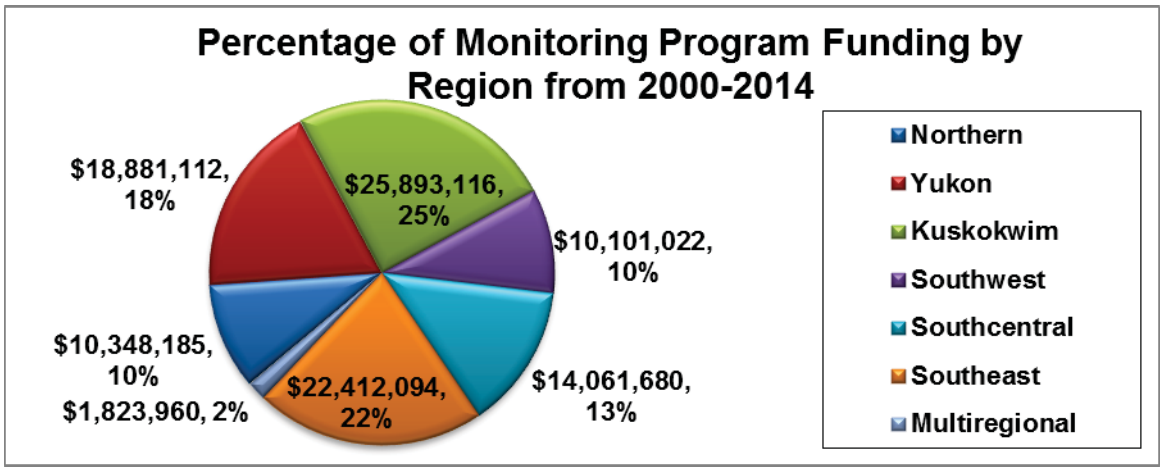


Figure 4. Total Project funding by Geographic Region from 2000 through 2014.

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

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

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

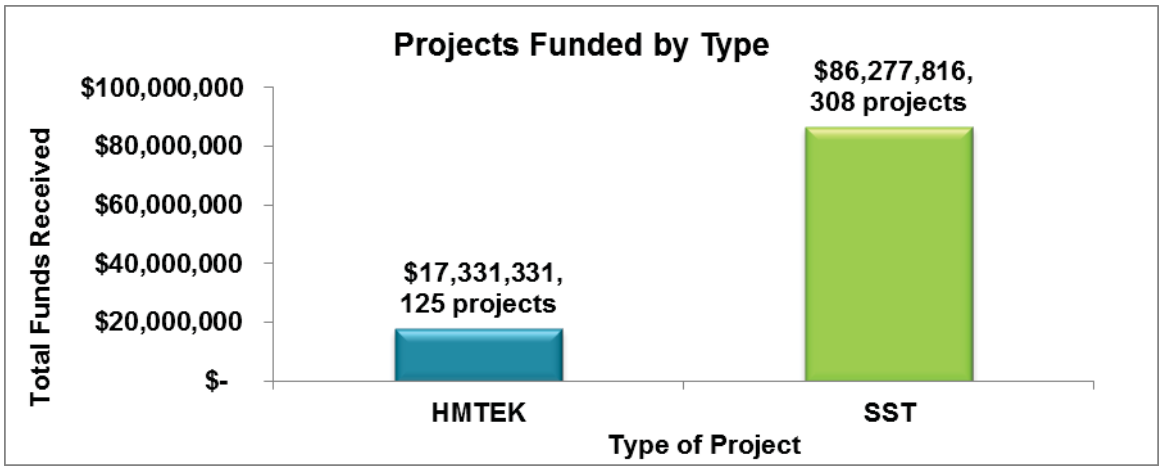


Figure 5. Total Project funding by type from 2000 through 2014. HMTEK = Harvest Monitoring/Traditional Ecological Knowledge and SST = Stock, Status and Trends.

PROJECT EVALUATION PROCESS

In the current climate of increasing conservation concerns and subsistence needs, it is imperative that the Monitoring Program prioritizes high quality projects that address critical subsistence questions. Several changes were implemented in the 2016 Monitoring Program to address the challenges facing Federal subsistence users across the state. These changes will enhance the Monitoring Program by increasing overall program transparency, identifying and funding high quality and high priority research projects and maximizing funding opportunities. This will allow the Monitoring Program to make substantial contributions to Federal subsistence users and to the Federal Subsistence Management Program.

Projects are selected for funding through an evaluation and review process that is designed to advance projects that are strategically important for the Federal Subsistence Program, technically sound, administratively competent, promote partnerships and capacity building, and are cost effective. Projects are evaluated by a panel called the Technical Review Committee (TRC). This committee is a standing interagency committee of senior technical experts that is foundational to the credibility and scientific integrity of the evaluation process for projects funded by the Monitoring Program. The TRC reviews, evaluates, and make recommendations about proposed projects, consistent with the mission of the Monitoring Program. Fisheries and Anthropology staff from the OSM provide support for the TRC. Recommendations from the TRC provide the basis for further comments from Councils, the public, the Interagency Staff Committee (ISC), and the Federal Subsistence Board, with final approval of the Monitoring Plan by the Assistant Regional Director of OSM.

The 2016 Monitoring Program changes involve how projects are submitted and also how they are reviewed. To be considered for funding under the Monitoring Program, a proposed project must have a linkage to Federal subsistence fishery management. This means that a proposed project must have a direct association to a Federal subsistence fishery, and that either the subsistence fishery or fish stocks in question must occur in or pass through waters within or adjacent to Federal public lands. Complete project packages need to be submitted on time and must address five specific criteria (see below) in order to be considered a high quality project. Addressing only some of the criteria will not guarantee a

successful project submission. Additionally, project review has been changed to aid transparency and consistency throughout the process. Key modifications include specific guidelines for assessing how and whether a proposed project has addressed each of the five criteria, receiving a single consolidated review from each participating agency, and requiring that agencies recuse themselves from providing reviews for projects involving their agency.
Five criteria are used to evaluate project proposals:

1. **Strategic Priority -** Studies must be responsive to identified issues and priority information needs. 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 include a synthesis of project findings in their investigation plans. This synthesis should clearly and concisely document project performance, key findings, and uses of collected information for Federal subsistence management.

    a. *Federal linkage* – Study must have a direct association to a subsistence fishery within Federal Subsistence Management Program jurisdiction. That is, the subsistence fishery or stocks in question must occur in waters within or adjacent to Federal public lands (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).

    b. *Conservation Mandate* – Risk to the conservation of species and populations that support subsistence fisheries and risk to public lands purposes.

    c. *Allocation Priority* – Risk of failure to provide for Federal subsistence uses.

    d. *Data Gaps* – Amount of information available to support Federal subsistence management. A higher priority is given where a lack of information exists.

    e. *Management Application* – The application of proposed project data must be clearly explained and linked to current Federal management strategies and needs.

    f. *Role of Resource* – Importance of a species or a population to a Federal subsistence harvest (e.g. number of subsistence users affected, quantity of subsistence harvest), and qualitative significance (e.g. cultural value, unique seasonal role).

    g. *Local Concern* – Level of user concern over Federal subsistence harvests (e.g., allocation, competing uses, changes in populations).

2. **Technical-Scientific Merit -** Technical quality of the study design must meet accepted standards for information collection, compilation, analysis, and reporting. Studies must have clear

objectives, appropriate sampling design, correct analytical procedures, and specified progress, annual and final reports.

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

4. **Partnership-Capacity Building -** Partnerships and capacity building are priorities of the Monitoring Program. ANILCA mandates that rural residents be afforded a meaningful role in the management of Federal subsistence fisheries, and the Monitoring Program offers opportunities for partnerships and participation to local residents in monitoring and research. Investigators are requested to include a strategy for integrating local capacity development in their investigation plans. Investigators must not only inform communities and regional organizations in the area where work is to be conducted about their project plans, but must also consult and communicate with local communities to ensure that local knowledge is utilized and concerns are addressed. Letters of support from local organizations add to the strength of a proposal. 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.

   Investigators are encouraged to develop the highest level of tribal, community and regional involvement that is practical. Investigators must demonstrate that capacity building has already reached the communication or partnership development stage during proposal development. Ideally, a strategy to increase capacity to higher levels will be provided in the project proposal, recognizing, however, that in some situations sustainable or higher level involvement may not be desired or feasible by the local organizations. Successful capacity building requires developing trust and dialogue among investigators, tribes, 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 should emphasize reciprocity and sharing of knowledge and information.

5. **Cost Benefit**

   Cost/Price Factors – Applicant's cost/price proposal will be evaluated for reasonableness. For a price to be reasonable, it must represent a price to the government that a prudent person would pay when consideration is given to prices in the market. Normally, price reasonableness is

established through adequate price competition, but may also be determined through cost and price analysis techniques.

Selection for Award – Applicant should be aware that the government shall perform a "best value analysis" and the selection for award shall be made to the Applicant whose proposal is most advantageous to the government, taking into consideration the technical factors listed above and the total proposed price across all agreement periods. Matching funds will be factored into the review process based on overall value to the government.

POLICY AND FUNDING GUIDELINES

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

1. Projects of up to four years duration may be considered in any year's monitoring plan.
2. Studies must not duplicate existing projects.
3. A majority of Monitoring Program funding will be dedicated to non-Federal agencies.
4. Long term projects will be considered on a case by case basis.
5. Activities that are not eligible for funding include:
   a) habitat protection, mitigation, restoration, and enhancement;
   b) hatchery propagation, restoration, enhancement, and supplementation;
   c) contaminant assessment, evaluation, and monitoring; and
   d) projects where the primary or only objective is outreach and education (for example, science camps, technician training, and intern programs), rather than information collection, are not eligible for funding under the Monitoring Program.

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.

2016 FISHERIES RESOURCE MONITORING PLAN

For 2016, a total of 46 investigation plans were received and 45 are considered eligible for funding (**Table 1**). One project was not eligible for funding because the project falls under habitat mitigation, restoration, and enhancement. Of the projects that are considered for funding, 33 are SST projects and 13 are HMTEK projects.

In 2016, the Department of the Interior, through the U.S. Fish and Wildlife Service, will provide up to $2.0 million in funding and up to $2.7 million for ongoing projects that were initially funded in 2014. The Department of Agriculture, through the U.S. Forest Service, has historically provided $1.8 million annually, but the amount of 2016 funds available projects is uncertain. If the Department of Agriculture funding is not provided, none of the proposed projects submitted for the Southeast Region will be funded.

FISHERIES RESOURCE MONITORING PROGRAM
NORTHERN REGION OVERVIEW

Since the inception of the Monitoring Program in 2000, 42 projects have been undertaken in the Northern Region for a total of $10.3 million (**Figure 1**). Of these, the State of Alaska conducted 21 projects, the Department of Interior conducted 13 projects, 5 projects have been conducted by Alaska Native Organizations, and other organizations conducted 3 projects (**Figure 2**). Of these projects 27 projects were Stock, Status, and Trends (SST), and 15 projects were Harvest Monitoring and Traditional Ecological Knowledge (HMTEK).

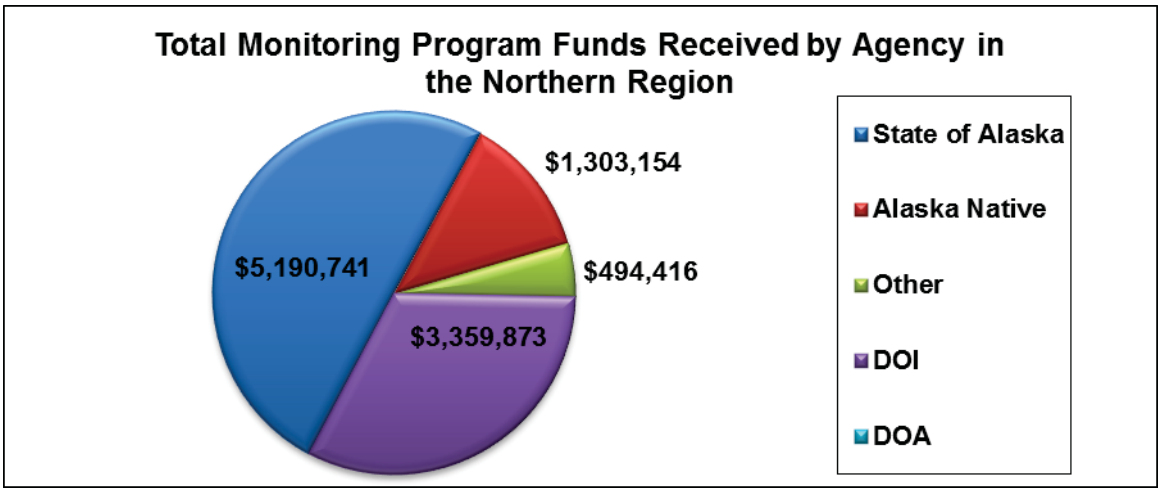


Figure 1. Monitoring Program funds received by agencies for projects in the Northern Region. The funds listed are the total approved funds from 2000 to 2014. DOI = Department of Interior and DOA = Department of Agriculture.

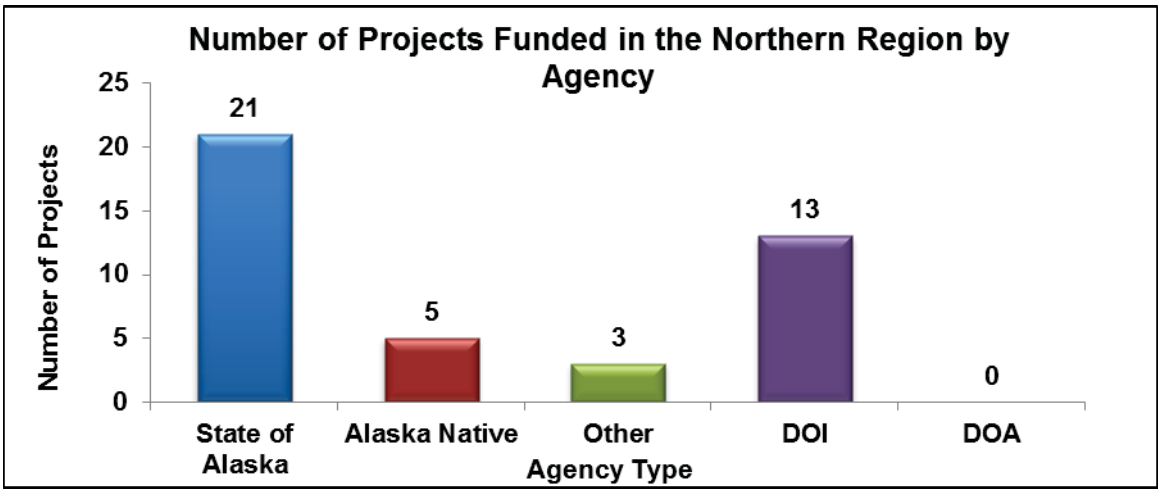


Figure 2. Total number of Monitoring Program projects funded, by agency, in the Northern Region from 2000 to 2014. DOI = Department of Interior and DOA = Department of Agriculture.

2016 DRAFT NORTHERN REGION FISHERIES RESOURCE MONITORING PLAN

OVERVIEW

Priority Information needs

The 2016 Notice of Funding Opportunity for the Northern Region identified 12 priority information needs:

- Understanding differences in cultural knowledge, beliefs, and perceptions of subsistence resources between fishery managers and subsistence users in Northwestern Alaska.
- Document rural residents' beliefs, attitudes, and knowledge about beavers and perceptions of changes to fish habitat related to beavers.
- Spawning locations for broad whitefish in the Northwest Arctic Region.
- Traditional/local knowledge of subsistence fish. Include application to Federal subsistence management, such as identifying critical habitat, refining range maps, and shedding light on ecological relationships.
    - Whitefish on the northern Seward Peninsula in the communities of Buckland, Deering, and the north coast in the community of Kivalina.
    - Dolly Varden in the communities of Noatak, Kobuk, and Kivalina
- Selawik River Clams (freshwater mussels) traditional harvest and use, abundance and life history.
- Description and analysis of sharing networks and customary trade of salmon in villages in northern Alaska.
- Documentation of longevity, age of maturity, and the abundance of fish of a given size range or maturity status for lake trout in the upper Anaktuvuk River.
- Description of temporal changes in subsistence harvest patterns and resource availability of broad whitefish, Arctic cisco and burbot in the Niglik River.
- Description of changes in harvests and relative abundance of broad and round whitefish observed by subsistence fishers in the context of climate change on the Meade River.
- Description of environment conditions leading to increased expression of Saprolegnia fungus in broad whitefish in the Colville River drainage.
- Identification of overwintering areas for Dolly Varden in the Hulahula River including demographic qualities of overwintering fish and estimating overwintering fidelity of fish.
- Reliable estimates of Chinook salmon escapement in the Unalakleet River drainage.

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not final allocations. Prior commitments to the 2014 Monitoring Program are up to $2.7 million. The anticipated funding available for the 2016 Monitoring Program is up to $2.0 million.

Technical Review Committee Proposal Ranking

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary 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 2016 Monitoring Program, 10 proposals were submitted for the Northern Region. The Technical Review Committee evaluated and scored each proposal for Strategic Priority, Technical and Scientific Merit, Investigator Ability and Resources, Partnership and Capacity Building, and Cost/Benefit. The final score determined the ranking of each proposal within the region (**Table 1**). Projects that rate higher comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and promote cooperative partnerships and capacity building. The projects listed are currently being considered for Funding in the 2016 Fisheries Resource Monitoring Program. Projects which were not eligible due to the nature of the activity are not included. For more information on projects submitted to the 2016 Fisheries Resource Monitoring Program please see the Executive Summaries in **Appendix A**.

Table 1. Technical Review Committee (TRC) ranking for projects in the Northern Region. Projects are listed by TRC ranking and include the total matching funds, total funds requested, and the average annual request for each project submitted to the 2016 Monitoring Program within the Northern Region. The projects listed are currently being considered for Funding in the 2016 Fisheries Resource Monitoring Program. Projects which were not eligible due to the nature of the activity are not included.

TRC Ranking	Project Number	Title	Total Matching Funds	Total Project Request	Average Annual Request
1	16-105	Kobuk River Sheefish abundance	$93,000	$183,592	$61,197
2	16-106	North Slope Overwintering Aerial Monitoring Dolly Varden	$117,900	$229,302	$57,325
3	16-107	Chandler Lake Spawning aggregations of Lake Trout	$152,380	$245,686	$81,895
4	16-152	Mead River Changes in Subsistence Fisheries	$0	$329,495	$82,373.75
5	16-151	Northwest TEK Whitefish, Cisco, and Beavers	$0	$225,418	$75,139
6	16-103	Kobuk River Dolly Varden Genetics	$10,500	$21,500	$21,500
7	16-101	Arctic Dolly Varden Telemetry	$0	$105,400	$26,350
8	16-104	Selawik Inconnu Age Abundance	$30,000	$390,560	$130,187
9	16-108	Changing Conditions in Colville River Leading to Increased Mold on Whitefish	$93,000	$185,575	$61,858.33
10	16-102	Colville Grayling Habitat and Migrations	$145,300	$236,160	$78,720
		Total	**$642,080**	**$2,152,688**	**$676,545**

2016 PROJECT SUMMARY AND TRC JUSTIFICATION FOR PROJECT RANKING

TRC Ranking: 1
Project Number: 16-105
Project Title: Spawning abundance of Kobuk River sheefish

Project Summary: The investigators seek funding to monitoring Kobuk River outmigration of post-spawning sheefish from the Kobuk River as a tool to provide managers with an index of the entire Kobuk River stock. A dual-frequency identification sonar (DIDSON) system would be used to produce this estimate. This work builds on abundance estimate work completed by the Alaska Department of Fish and Game and U.S. Fish and Wildlife Service in 1995-1997 and 2008-2010 (project 08-103).

Project Justification: This project will build upon Monitoring Program project 08-103 by allowing continue monitoring of sheefish in the Kobuk River. Sheefish are an important subsistence resource in northwest Alaska and can be harvested year-round throughout the Kobuk and Selawik River drainages. The largest subsistence harvest occurs in Hotham Inlet and Selawik Lake. These sheefish fisheries are a mixed stock group comprised of two spawning population s. The investigators propose ongoing monitoring of this stock to ensure long-term population stability. The project would be part of an ANSEP intern program that Alaska Department of Fish and Game wants to develop in Northern Alaska with the goal of developing professional biologist. The investigator has successfully completed a pilot study addressing the feasibility of using DIDSON sonar. The cost of this project is low and the investigator has a significant match covering 30% of the project.

TRC Ranking: 2
Project Number: 16-106
Project Title: Aerial monitoring of Dolly Varden overwintering abundance in the Anaktuvuk, Ivishak, Canning, Hulahula, and Kongakut rivers

Project Summary: Dolly Varden populations are utilized by subsistence fisheries in Eastern North Slope communities. These populations depend on a relatively small amount of overwintering habitat, most of this over wintering habitat is thought to be located in upwelling areas near the headwaters of major river systems in the region. The investigators propose conducting a series of aerial surveys to monitor overwintering populations of Dolly Varden in five northern Alaska rivers. This project will build upon information collect in 06-108 Aerial Monitoring of Dolly Varden overwintering abundance in the Anaktuvuk, Ivishak, Canning, Hulahula, and Kongakut rivers.

Project Justification: The proposal addresses a need for ongoing monitoring of potentially very vulnerable overwintering Dolly Varden stocks concentrations in the Arctic National Wildlife Refuge. This project specifically addresses the priority information need for identification of overwintering areas for Dolly Varden in the Hulahula River. The project has well defined and achievable objects. The investigators have a strong track record with successful completion of Monitoring Projects. The proposed project has a well-developed capacity building component that involves both an intern program for ANSEP students and training local borough biologist. Information from this project will help address any potential stock declines based on overwintering survey results.

TRC Ranking: 3
Project Number: 16-107
Project Title: Estimation of yield potential, identification and sampling of lake trout spawning aggregations, and abundance estimation of lake trout in Chandler Lake

Project Summary: The last assessment of Chandler Lake occurred from 1987-1989 when the goal was to determine sustainable yield and various metrics were examined including estimated population size, relative abundance, fecundity, growth, age composition, and length-weight relationships. Ultimately, an annual yield 0.14 kg/hectare was recommended, as well as continued efforts to monitor the population and harvests. Currently, comprehensive data on subsistence use for lake trout and freshwater fishes in Chandler Lake is limited to a single reporting year. In 2011, 504 lake trout were harvested by subsistence fishers, primarily from Chandler Lake, and when combined with sport fish harvests (~21 fish), equates to ~656 kg/yr and approaches the upper threshold of even the LA model (695 kg/yr), which is nearly 5 times the amount recommended during 1989.

Project Justification: This project addresses a 2016 Priority Information Need and a concern of the North Slope Regional Advisory Council. Subsistence users have expressed concern over the sustainability of Lake trout near the community of Anaktuvuk Pass . The investigators propose assessing the Lake trout population in Chandler Lake. The project would be part of an ANSEP intern program that Alaska Department of Fish and Game wants to develop in Northern Alaska with the goal of developing professional biologist. The investigator has successfully completed a pilot study addressing the feasibility of using DIDSON sonar. The cost of this project is low and the investigator has a significant match covering 38% of the project.

TRC Ranking: 4
Project Number: 16-152
Project Title: Meade River subsistence fisheries: Evaluating changes in harvests and abundance of broad whitefish, other non-salmon species, and salmon

Project Summary: The research would be conducted with subsistence fishers living in Barrow

and Atqasuk and who fish in the Meade River. The investigation plan focuses on two research questions:

1. Based on the analysis of updated quantitative and qualitative data, how are subsistence harvests and uses of broad whitefish and other fish species changing over time?
2. Are changes occurring in the abundance of broad whitefish and other fishes taken for subsistence; what are their causes?

Three methods of data collection are proposed to meet the study objectives: a harvest survey, key respondent interviews, and participant-observation. Three objectives are proposed:

1. Estimate annual harvest and use patterns of whitefishes, char, Arctic grayling, and other species of fish used by residents of Atqasuk for three years. Assess whether subsistence needs for these species are being met and impacts to households when needs are not being met.
2. In Atqasuk and with a subset of Barrow households that fish on the Meade River, document traditional and local knowledge about whitefishes, Arctic grayling, char, burbot, and other fishes with particular attention to temporal changes in run timing, abundance, locations, and links to other species. Document how environmental and other changes are affecting harvest methods, species targeted, how fishing is socially organized, fishing locations, preservation techniques, and harvest timing.
3. Compare data collected to previously collected information; interpret changes and trends in the subsistence harvest and use of whitefishes, Arctic grayling, burbot, and other fish species.

Project Justification: The investigator has proposed to conduct research in Atqasuk and Barrow with Federally-qualified residents who fish for subsistence in the Meade River. The project would have potential implications for this portion of the National Petroleum Reserve. The proposed study would allow managers to learn more about whitefishes, Arctic grayling, char, burbot, and other non-salmon and salmon species. These subsistence fisheries are likely to become more important to rural residents in the future as the Western Arctic Caribou herd declines.

There is potential to obtain baseline subsistence harvest information for the Meade River that is needed both for established State and Federal management processes and for planning and impact assessment efforts. Existing data are 10 years old and would be updated.

The investigator proposed to addresses one priority information need for the Northern Region described in the 2016 notice of funding availability. The objectives are clearly written, measurable, and achievable. The proposed methods are well established in the Alaskan context. The sampling strategy is sound and achievable. The investigation plan describes how each objective would be achieved and when reports would be delivered.

The principle investigator has a demonstrated track record of successful completion of similar projects and reports. There are no co-investigators or research partnerships described. We

recommend adding 1-2 co-investigators from local governmental agencies or tribes, the State, Bureau of Land Management, and/or the Office of Subsistence Management to help ensure project success and meaningful insights for managers.

No letters of support were submitted with the investigation plan. The investigator has initiated consultations with both tribal councils to obtain their permission to work in their communities and shared the investigation plan with each tribe. The project would build some technical capacity and provide temporary employment through local hire and training. The local tribal government would provide logistical help with the research.

The annual average cost of this project to the Office of Subsistence Management would be $82,374. The cost of this project would seem to be reasonable for the amount of work and deliverables being proposed and the potential benefits to management of subsistence fisheries.

TRC Ranking: 5
Project Number: 16-151
Project Title: Traditional ecological knowledge of subsistence whitefish and cisco and attitudes/perceptions of beaver to subsistence fishing in Southern Kotzebue Sound

Project Summary: The investigators propose to examine subsistence harvest and use of whitefish and cisco in Buckland and Deering. The investigators propose to collect traditional ecological knowledge for these subsistence fisheries, including harvest locations and timing over the last twenty years to document temporal changes in harvest and use.

To address public concern about range expansion of beavers in the region, the investigators propose to examine residents' attitudes, beliefs, and perceptions about the effects of beavers on subsistence fishing in Buckland, Deering, and Selawik. The investigators propose an ethno-ecological approach to collect traditional ecological knowledge followed by comparison and integration with existing scientific knowledge and data. The proposed research goals include:

1. Collect qualitative ethnographic data on subsistence harvesting and processing, using interviews, participant-observation, and mapping of harvest locations.
2. Collect qualitative and quantitative ethnographic data on beliefs and attitudes toward beavers in terms of their impacts on subsistence fishing practices, using free-listing and pile sort methods.

The investigators propose a design and approach to provide Federal managers and scientists with comparative data and a framework for meaningfully integrating expert knowledge and Alaska Native knowledge of whitefish harvest and uses. The investigators propose to recommend strategies for mangers to use in communicating about effects of beavers on subsistence fisheries.

Project Justification: The investigation plan directly addresses two priority information needs for the northern region. The proposed research has a clear nexus to Federal public lands and waters managed by three Federal agencies. The investigation plan covers five species of fish important for subsistence and addresses long-term, continuous public concern about beavers and subsistence fishing in the region. This information would have important implications for how Federal agencies communicate with subsistence fishers in the region regarding beavers and whitefish.

The conceptual framework and study design are grounded in well-established and sound approaches used in applied social science. The research goals are straightforward, and the study objectives are clearly written and achievable. The methodology is technically sound and meets up-to-date standards in applied social science. We recommend the investigators provide more detail and clarification on how the pile sort data would be analyzed in the final Investigation plan.

The project would contribute essential comparative data for Federal subsistence managers and identify and richly describe new areas for continued research. The proposed research has good potential to provide a framework for meaningfully integrating expert knowledge and observations and Alaska Native knowledge and observations.

The proposed project clearly describes a plan for partnering with rural community leaders, training residents of the region to conduct research, and sharing results and data. The data would augment local heritage preservation and local interest in and engagement with documenting local subsistence practices.

The proposed research process and results would further encourage local stakeholders to partner with Federal managers and fisheries biologists in future harvest monitoring and related fisheries management and research. The study would build the capacity of rural residents and Alaska Native Organizations to conduct their own research on subsistence fisheries and more effectively collaborate and partner with Federal agency staff and programs.

The annual average cost of this project to the Office of Subsistence Management would be $75,139. The investigation plan outlines a research project that is cost effective.

TRC Ranking: 6
Project Number: 16-103
Project Title: Genetic diversity of Dolly Varden populations in Kobuk River

Project Summary: The investigator is requesting funding for two trips to the Kobuk River to collect genetic samples and for lab time to process the samples. The results of the analysis would add to the genetic baseline for Dolly Varden in Northwestern Alaska. Dolly Varden spend summers in the ocean feeding and return to fresh water to overwinter. Spawning Dolly Varden return to their natal streams, while non-spawning Dolly Varden typically overwinter in large

mixed-stock aggregations in non-natal streams. The Wulik River is thought to be one of the largest overwintering populations in Northwestern Alaska. Fish natal to the Noatak, Kivalina, Wulik, Kobuk, and Pilgrim rivers have all used the Wulik River as an overwintering site. However, the relative proportions of the contribution stocks are not completely known.

Project Justification: This project addresses an important subsistence Dolly Varden fishery resource in Northwest Alaska. Information from this project will assist fishery managers in in identifying the portion of Dolly Varden harvested in the Wulik River subsistence fishery that originates in the Kobuk River. The investigators plan to collect and analyze genetic samples from the Kobuk River Dolly Varden population. While this project addresses an important subsistence resource it does not address a 2016 Priority Information Need identified for the Monitoring Program.

TRC Ranking: 7
Project Number: 16-101
Project Title: A radio telemetry investigation of overwintering habitats of Dolly Varden in the Canning River

Project Summary: The investigator is requesting funding for the six aerial surveys and analysis time in support of an on-going radio-telemetry project for Canning River Dolly Varden. Work on the project was initiated in 2014 with the goal of describing the overwintering distribution and fidelity rate of Dolly Varden in the Canning River drainage and any inter-drainage exchange that might occur. Dolly Varden populations are utilized by subsistence fisheries in Eastern North Slope communities. These populations depend on a relatively small amount of overwintering habitat. Most of the habitat is thought to be located in upwelling areas near the headwaters of major river systems in the region. The tagging component of this project will be paid for with other funds and completed in 2015. The requested funds are for aerial surveys to locate the deployed tags and one month per year of time for analysis and reporting on the aerial survey data. Aerial surveys will be completed from spring 2016 through 2018.

Project Justification: This project represents the aerial survey component of an on-going radio-tagging project in the Canning River to study overwintering Dolly Varden habitat. Results from this work will describe run timing and spawning location of Dolly Varden, giving fishery managers the context for better understanding important habitat. This project is technically sound and addresses an important subsistence resource associated with the Arctic National Wildlife Refuge. The investigator has the expertise needed to successfully conduct this ongoing project. He has worked on several successful Monitoring Program projects. This project presents an excellent opportunity to leverage Monitoring Plan dollars against other funding sources to address a priority information need in Northern Alaska.

TRC Ranking: 8
Project Number: 16-104

Project Title: Selawik River sheefish age structure evaluation and spawning population abundance

Project Summary: A permafrost slump located about 40 km upstream from the sheefish spawning area in the Selawik River began emitting large amounts of sediment into the river in 2004. The Selawik River below the slump has become turbid during the summer months transporting huge quantities of sediment downstream, potentially having a negative effect on the habitat for stream-spawning fish. In 2010 and 2011, prior to Monitoring Program funding, a pilot study was implemented to assess a site for a dual-frequency identification sonar (DIDSON) system and evaluate its potential success at enumerating migrating Selawik River sheefish. In 2012, the Monitoring Program began funding 12-100 Selawik River Sheefish Age Structure Evaluation and Spawning Population Abundance. This funding was renewed in 2014, with project 14-104 Selawik River Sheefish Age Structure Evaluation and Spawning Population Abundance. The investigators are estimating the annual abundance and age structure of the Selawik River sheefish spawning population over time to determine if the sediment emitted from the permafrost slump resulted in an identifiable impact to the sheefish population. Changes in the Selawik River sheefish spawning population age structure will be compared to the Kobuk River sheefish spawning population to ensure any detected change is unique to the Selawik River. Given the sheefish live-cycle any changes reducing production in the Sheefish population would be expected staring in 2014.

Project Justification: This investigation plan requests continued funding for Monitoring Program project 12-100/14-104 to study the effect of a permafrost slump located about 40 km upstream from the sheefish spawning area in the Selawik River. In 2004, the permafrost slump began emitting large amounts of sediment into the river. In 2010, the investigators began monitor the annual abundance and age structure of the Selawik River sheefish spawning population to determine if the sediment emitted from the permafrost slump resulted in an identifiable impact to the sheefish population over time. The proposed work is technically sound and addresses an important subsistence sheefish fishery associated with Selawik National Wildlife Refuge. This project builds upon several Monitoring Plan projects (02-020, 02-040, 03-016 and 04-101). Investigators have successfully completed 6 years of work funded through Monitoring Plan. Investigators have collected age structure data for both the Selawik and Kobuk river sheefish populations for a comparison over time. Currently, the investigators are funded to collect data through 2016. Funding the project through 2019 will allow for conclusion of the project and an opportunity to understand the effects of the permafrost slum on sheefish spawning success.

TRC Ranking: 9
Project Number: 16-108
Project Title: Environmental conditions in the Colville River drainage potentially leading to increased expression of freshwater mold

Project Summary: In early October 2013, a freshwater mold was found on some broad

whitefish near the community of Nuiqsut. Concurrently, traditional ecological knowledge and western science note that this mold had not been recorded in the area except on one occasion in 1980. Saprolegnia spp. was found on one broad whitefish on the Inaru River. While there may be many factors leading to the onset of Saprolegnia on broad whitefish in the Colville River drainage, the investigator will examine environmental conditions such as temperature, in the spawning waters. One environmental factor that has been documented in increasing the efficiency of colonization of this mold on fish is abrupt change in water temperature and /or low water temperatures during spawning.

Project Justification: The results of the work would describe the environmental factors of water temperature and water level that occurring during the presence of the freshwater mold *Saprolegnia parasitica* on broad whitefish in the Colville River drainage. By obtaining environmental data and specimens (mold and fish) from local, subsistence fishermen whose fishery is being impacted, this work will describe the presence of this mold but will not establish causation. In addition, application to management is unclear. This was identified as a 2016 Priority Information Need. The *Saprolegnia parasitica* outbreak has been a concern for both the local subsistence users and the North Slope Regional Advisory Council.

TRC Ranking: 10
Project Number: 16-102
Project Title: Seasonal habitats and migrations of Arctic grayling within the Nuiqsut subsistence fishery of the lower Colville River

Project Summary: Arctic grayling are an important component of subsistence fisheries of the Colville River drainage. Unfortunately, very little is known about the population of the Colville River, and although the river and drainage are large, the available winter habitat may be quite limiting. During winter, river discharge reaches annual lows and some streambeds go dry while others freeze to the bottom. To avoid these areas, Arctic grayling of northern Alaska vacate small tributaries and upper portions of the drainage during autumn. Arctic grayling are most vulnerable to declines in water quality and quantity during late winter. Identification of overwinter habitats and timing of migrations to and from all seasonal habitats is needed to avoid or greatly reduce impacts associated with development and narrowly directed fisheries at vulnerable times and places.

Project Justification: While this project addresses a general concern of the North Slope Regional Advisory Council it does not address a 2016 Priority Information Need. The investigator proposes assessing the Colville River Arctic Grayling population to describe winter habitat. Currently, it is thought that winter habitat is a limiting factor in Arctic grayling population growth. This project is technically sound and addresses an important subsistence resource associated with the National Petroleum Reserve. The investigator has the expertise needed to successfully conduct this ongoing project. He has worked on several successful Monitoring Program projects.

APPENDIX A

The following Executive Summaries were written by the Principle Investigators and submitted to the Office of Subsistence Management as part of the proposal package. The statements and information contained in the Executive Summaries were not altered and they may not reflect the opinions of the Office of Subsistence Management or the Technical Review Committee. The Executive Summaries listed are for projects that are currently being considered for Funding the 2016 Fisheries Resource Monitoring Program. Projects which were not considered for funding were not eligible due to the nature of the activity and are not included in this appendix.

Project Number: 16-101
Title: A radio telemetry investigation of overwintering habitats of Dolly Varden in the Canning River
Geographic Region: Arctic
Data Type: Stock Status and Trends
Principle Investigator: Randy J. Brown, U.S. Fish and Wildlife Service

Project Cost:	**2016:** $35,000	**2017:** $35,000	**2018:** $24,600	**2019:** $10,800

Total Cost: $105,400

Issue Addressed: Activities associated with hydrocarbon development in Arctic environments require large volumes of water for drilling as well as for the construction of ice roads. On the North Slope of Alaska, water for industrial purposes is typically withdrawn from lakes, which are present at greater densities west of the Sagavanirktok River than east. It has been suggested that water could be withdrawn from rivers in the east if it did not prevent fish passage or measurably degrade aquatic habitat. However, the volume of winter water from lakes and rivers of the eastern Arctic region of Alaska is not considered to be sufficient to support hydrocarbon development. Despite the low volume of water potentially available for industrial use, discussions over hydrocarbon development on the coastal plain of the Arctic NWR continue, and if development is eventually approved, water use will become a significant issue.

Dolly Varden *Salvelinus malma* is a common anadromous species in the Alaskan Arctic and the most important subsistence fishery resource for residents in the eastern Arctic region. After rearing for two or more years in their natal streams, anadromous Dolly Varden follow an annual pattern of migration to marine environments each spring to feed and return to freshwater environments by fall for both spawning and overwintering. Conventional anchor tagging and genetics studies have shown that Dolly Varden from all the northern populations migrate widely along the Beaufort Sea coast during summer feeding periods making them available for harvest in subsistence fisheries throughout the region. Overwintering habitat in eastern North Slope drainages is essential for anadromous Dolly Varden populations in northern Alaska and is limited to a relatively small number of perennial springs that maintain flow throughout the winter.

The Canning River flows north for about 225 km from its headwaters in the Philip Smith Mountains in the eastern Brooks Range, across the North Slope of Alaska to its mouth at the Beaufort Sea. The west bank of the Canning River delineates the western boundary of the Arctic NWR across the coastal plain. The 1002 Area lies to the east of this boundary and Alaska State land lies to the west. Hydrocarbon leases have been sold and development is currently taking place on State land immediately west of the Canning River but development is not permitted at this time in the 1002 Area to the east. If the U.S. Congress eventually permits hydrocarbon development in the 1002 Area, the Canning River will be the first drainage in the Arctic NWR to experience environmental impacts, which may involve water withdrawal.
Like several other eastern Arctic rivers in Alaska, the Canning River supports a population of anadromous Dolly Varden that depends on perennial springs in the drainage for spawning and overwintering habitat. Our understanding of the proportional distribution of overwintering Dolly Varden among spring systems, however, is poor. This information will be important for judging the environmental consequences of allocating winter water from the Canning River drainage for industrial purposes in the future. For example, the farthest downstream perennial spring system known to support overwintering fish originates at Shublik Spring and extends downstream under ice into the 1002 Area. The consequences of allocating winter water from this spring system for industrial purposes would be very different if a small fraction of the Dolly Varden population utilized it than if a large fraction utilized it. This 4-year radio telemetry project is designed primarily to estimate the proportional distribution of Dolly Varden among major overwintering regions of the Canning River, which would inform water use decisions in the future.

Objectives:

1. Estimate overwintering distribution of Dolly Varden among three major regions of the Canning River;
2. Estimate the overwintering site fidelity rate for Dolly Varden that return to the Canning River one or more years following tagging;
3. Estimate overwinter survival of Dolly Varden in the Canning River;
4. If data allow, estimate spawning distribution of Dolly Varden among three major regions of the Canning River;
5. If data allow, estimate the rate of inter-drainage exchange of Canning River Dolly Varden.

Methods: We propose to conduct a radio telemetry investigation with mature, anadromous Dolly Varden returning to the Canning River from the sea during each of two fall seasons. We will deploy a total of 210 radio tags. Transmitters are designed to last for more than 2.5 years and provide overwintering location data for three winters. Our primary objective is to estimate the proportional distribution of overwintering Dolly Varden among three major regions of the Canning River, one of which includes the lower drainage springs that extend into the 1002 Area. We will estimate overwintering site fidelity rates for fish that overwinter more than once in the Canning River. If we are able to identify and tag pre-spawning individuals, their spawning distribution among the three major regions of the Canning River will be estimated. Secondary objectives include estimating overwintering survival and the rate of inter-drainage exchange a

year following tagging. These data will provide information necessary to guide water and habitat management decisions to minimize impacts to Dolly Varden in the Canning River if development occurs, and will improve our understanding of Dolly Varden population dynamics in northern Alaska.

Overwintering distribution of Dolly Varden within the three major regions of the Canning River drainage will be estimated for each deployment year with associated confidence intervals determined using multinomial probability functions. We will compare overwintering distributions of Dolly Varden from the 2014 and 2015 deployment events with Chi-squared tests for differences in probabilities. If it is possible to know overwintering locations during spawning and non-spawning years for tagged Dolly Varden, we will test the null hypothesis that proportional overwintering distributions are the same for both demographic groups. We will estimate overwinter survival of Dolly Varden as the proportion of radio tagged fish known to be alive in fall that migrate to sea or elsewhere in the drainage after the winter season. The rate of inter-drainage exchange will be estimated as the proportion of all tagged Dolly Varden returning to fresh water a year following tagging that are located in rivers other than the Canning River.

Partnerships and Capacity Building: We reached out to a number of entities and individuals with an offer of inclusion in the initial field component of the project in 2014. Included in the final crew were two individuals from the Alaska Department of Fish and Game, a representative from the USFWS Conservation Genetics Laboratory, a fish biologist with surgical experience from the Anchorage FWFO, and a new biologist with the USFWS Barrow Field Office, Uiññiq Ahgeak. Ms. Ahgeak recently earned a degree in fish biology from the University of Alaska Fairbanks and it is my understanding that our 2014 field project on the Canning River was her first fisheries field project. We are still working on the staff composition for the 2015 field crew but Ms. Ahgeak will be offered a position. We have commonly presented the results of our projects to interested parties, local communities, and Regional Advisory Councils as appropriate, and it is our intention to do so in this case as well.

Project Number: 16-102
Title: Seasonal habitats and migrations of Arctic grayling within the Nuiqsut subsistence fishery of the lower Colville River
Principle Investigator: Andrew Gryska, Alaska Department of Fish and Game, Sport Fish Division
Geographic Region: Northern Alaska Region (Colville River).
Federal Conservation: National Petroleum Reserve in Alaska (BLM); Gates of the
System Units Arctic National Park and Preserve (USNPS).
Information Type: Stock Status and Trends (SST)

Project Cost	**2016:** $147,570	**2017:** $59,120	**2018:** $17,300	**2019:** $0

Total Cost: $236, 160

Issues Addressed: Arctic grayling *Thymallus arcticus* are an important component of subsistence fisheries of the Colville River drainage (Fall and Utermohle 1993; Holen et al. 2012). Unfortunately, very little is known about the population of the Colville River, and although the river and drainage are large, the available winter habitat may be quite limiting. During winter, river discharge reaches annual lows and some streambeds go dry while others freeze to the bottom. To avoid these areas, Arctic grayling of northern Alaska vacate small tributaries and upper portions of a drainage during autumn. For the winter, Arctic grayling seek out habitat that minimizes energy expenditure (e.g. low velocity water), has physiochemically suitable water (e.g. adequate depth, oxygen, and no frazzle ice), and provides cover from predators (e.g. overhead ice; Cunjak 1996). These habitat requirements may be found in a limited number of areas, and, in conjunction with reduced metabolism (i.e. less feeding and competition for food and space), large congregations of fish can occur among normally competitive fish (Cunjak 1996; Gryska *In prep*). During winter, some of these locations may also become isolated refugia from which fish cannot migrate. For these reasons, Arctic grayling, as well other fishes, are most vulnerable to declines in water quality and quantity during late winter. Identification of overwinter habitats and timing of migrations to and from all seasonal habitats is needed to avoid or greatly reduce impacts associated with development and narrowly directed fisheries at vulnerable times and places. In addition, alterations of the hydrologic regime (e.g. droughts limiting migration corridors) due to climate change may impact the population.

Objective: The objective of this project is to use radiotelemetry to describe the seasonal movements and locations of Arctic grayling ≥ 330 mm FL that inhabit the lower Colville River drainage between Umiat and Nuiqsut during August 2016 over the subsequent 16-month period.

Methods: Radiotelemetry techniques will be used to collect location and movement data that will describe seasonal locations and migrations of Arctic grayling that occupy the lower 100 miles of the Colville River drainage (Figure 1), including such tributaries as the Itikillik, Anaktuvuk, Chandler and other smaller rivers and creeks . Radio tags will be surgically implanted in 150 Arctic grayling ≥ 330 mm FL. Radio tags will be distributed throughout the study area

systematically (i.e. each sample reach will be allocated a proportion of the radio tags; Table 1). Because radio tags cannot be allocated by abundance and size composition of Arctic grayling in each sample reach, unbiased total population inferences cannot be estimated. However, the systematic distribution of the tags through the drainage will serve to maximize identification of seasonal habitats and migratory behavior for the majority of the population for the period from August 2016 through December 2017.

Nearly all sample reaches are extremely remote and will be reached using small helicopter transport to rivers and streams within an approximate 65 mile radius of Umiat. All Arctic grayling will be captured by hook and line, and only Arctic grayling ≥330 mm FL that appear to be healthy, will be surgically implanted with a radio tag. The radio tags will be model MST-930 manufactured by Lotek™, which are small (9.5 mm x 26 mm), lightweight (4 g), and have at least a 15-month operational life. Each tag will emit an individual code for each fish on a particular radio frequency (149.xxx MHz). The radio tags will be programmed to operate 10 hours per day, which will enable them to have a 15 month operational life.

Locations of radiotagged Arctic grayling will be determined using periodic flights in a fixed wing aircraft. Tracking flights will utilize a Lotek SRX 600 receiver with an internal GPS that will record time and location data. Flights will occur during a 16-month period primarily to determine locations of winter refuge, pre-spawning, spawning, and subsequent summer feeding habitats. The periodicity of flights will vary between weekly and multi-monthly dependent upon typical Arctic grayling behavior (e.g. greater intensity of flights before, during, and after spawning).
To facilitate data analysis, all radiotagged Arctic grayling will be assigned a "fate" during each tracking survey. Fates (e.g. tagging mortality, post-tagging mortality, alive, and at-large) will be assigned based on a combination of information collected from the tracking station, aerial surveys, the use of motion sensors, and harvested fish for which tags were returned. Following fate assignment and description, seasonal locations and migratory periods will be described and depicted on maps.

Partnerships and Capacity Development: Local knowledge and involvement of residents of Nuiqsut in the study is essential for the project's success. Letters of support are being solicited, but will not be final by March 11. A teleconference is scheduled for the third week of March with Karen Hyer and the members of the NW and North Slope RAC's. Informing RAC, tribal entities and local residents about the project well before the field work will continue. A college intern will be hired from the Alaska Native Science and Engineering Program to assist in sampling.

The BLM has conducted research from Umiat and their experience relative to logistics and sampling will prove beneficial. Progress reports will be presented and distributed to fisheries managers, researchers, local community groups and other interested parties. A presentation of the study finding will be presented in Nuiqsut at the completion of the field work.

Project Number: 16-103
Title: Genetic diversity of Dolly Varden populations in Kobuk River
Geographic Region: Northern Alaska Region
Data Type: Stock Status and Trends
Principle Investigator: James Savereide, Alaska Department of Fish and Game, Sport Fish Division
Co-Investigators: Penelope Crane, U. S. Fish and Wildlife Service, Conservation Genetics Laboratory

Project Cost	**2016:** $0	**2017:** $21,500	**2018:** $0	**2019:** $0

Total Cost: $21,500

Issues: The Dolly Varden charr *Salvelinus malma* population that overwinters in the Wulik River is the most important subsistence resource for the residents of Kivalina, Alaska (Burch 1985). The Wulik River is likely the largest and most important overwintering site for Dolly Varden in northwestern Alaska (Seitz et al. 2014), and fish natal to the Noatak, Kivalina, Wulik, Kobuk, and Pilgrim rivers have all used the Wulik River as an overwintering site (Scanlon 2011). However, the relative proportions of the contributing stocks to this overwintering aggregation are not completely known. A previous genetic study found that the level and pattern of genetic differences detected among the stocks surveyed in their study provided a powerful and cost effective method for estimating the relative contribution of stocks to the Wulik River overwintering aggregation (Crane et al. 2004). However, they concluded that representative samples from all the geographic regions contributing to the Wulik River aggregate are desirable, which includes the Kobuk River. This project addresses the priority need to improve the method developed by Crane et al. (2004) that identifies the origin of Dolly Varden harvested in the Wulik River subsistence fishery so managers can assess the impacts on the Dolly Varden stocks represented in this overwintering aggregation. Adding three known Dolly Varden spawning stocks in the Kobuk River, the Hunt, Salmon, and Tutuksuk River stocks, to the established baseline will improve the mixed-stock analysis of this important subsistence fishery.

Objectives: The objective of this project will be to:

1. Collect and genetically analyze fin clips taken juvenile Dolly Varden from three known spawning streams in the Kobuk River drainage, to add to the Northwest Alaska genetic baseline for mixed-stock subsistence harvest analysis.

Methods: The Kobuk River Dolly Varden spawning areas are located in the Hunt, Salmon, and Tutuksuk rivers, upstream from the village of Kiana. Site visits to these three rivers to capture and collect Dolly Varden juveniles will be made from mid to late July 2016. Juvenile Dolly Varden will be susceptible to baited minnow traps at this time because of their size and voracious appetite. The objective is to capture and collect the sample size needed to determine genetic differences or lack thereof between the three Kobuk River stocks and include them in the established genetic baseline for mixed-stock analysis of the Wulik River subsistence harvest. Two biologists will visit each river in July 2016 and spend three days at each site deploying 50 baited G40-type minnow traps. The traps will be deployed and checked each day for a minimum of 48 hours of fishing time. Traps will be placed in multiple areas within each river to

avoid any family effects from sampling juveniles (Hansen et al. 1997). All species of fish will be identified and juvenile Dolly Varden will be sampled for genetic analysis. If catch rates are good and the desired sample size will be easily achieved, samples will be taken systematically from the minnow traps to further avoid any family genetic effects. All Dolly Varden samples will be sent to Penny Crane at the USFWS Conservation Genetics Lab for analysis. The methods and statistical analysis used to analyze tissue samples have been established by the lab and were recently used on Dolly Varden from Southwestern Alaska (Crane et al. 2014). The same approach will be used for the Kobuk River stocks that are sampled during this study.

Partnerships/Capacity Building: An ANSEP internship, up to three weeks in duration in August 2016, will be available in the CGL. The student would work in conjunction with a laboratory technician to isolate DNA from the samples collected in this study. The student would also job shadow staff in the laboratory to observe the remaining steps in data analysis, and gain an understanding of their application in fishery management.

The principle investigator will provide project updates to the Regional Advisory Council as well as the local communities. He is actively seeking letters of support from RAC and local community members, but they were unavailable before the deadline. However, they will be submitted to OSM as soon as they become available. He will work closely with local communities to learn about the rivers to be sampled and gain any insight from their knowledge of fish in those areas. In past years the project biologist has found that local knowledge has been invaluable to the success of sheefish projects conducted in the area. The boat to be used for this study is stored by a local family in Kobuk that has worked on sheefish projects in the past. The project biologist also contracts the local community occasionally for logistic support such as boat rides and field camp set-up and take-down. He will also look into other avenues for capacity development with river residents such as giving school presentations and radio updates. The biologist will also coordinate logistics such as storage, etc. with ADF&G Kotzebue as well as the Selawik National Wildlife Refuge.

The USFWS Conservation Genetics Lab supports this project and will be used to analyze the samples to include in the Dolly Varden genetic baseline they developed.

Project Number: 16-104
Title: Selawik River inconnu spawning population abundance and age structure evaluation
Geographic Region: Northwest Alaska
Data Type: Stock Status and Trends
Principle Investigator: William K. Carter III, U.S. Fish and Wildlife Service
Co-Investigators: Randy J. Brown, USFWS, Raymond Hander, USFWS

Project Cost:	**2016:** $0	**2017:** $145,587	**2018:** $145,548	**2019:** $99,425

Total Cost: $390,560

Issue Addressed: The Selawik National Wildlife Refuge (Refuge) has a congressional mandate through ANILCA to conserve Inconnu (sheefish) *Stenodus leucichthys* populations. This project is a continuance of priority issues identified for the Northern Region in the Fisheries Resource Monitoring Program (FRMP): 2012 "Spawning distribution, timing, and stock structure of Selawik River whitefish species"; 2014 "Identify and characterize critical factors affecting population dynamics of Selawik River Inconnu"; and 2016 "Changes in subsistence fishery resources, in the context of climate change, including but not limited to fish movement and barriers including permafrost slump, water quality and temperature, draining of tundra lakes, changing patterns of precipitation both snow and rain, changing freeze-up and break-up." This project benefits from information provided by FRMP projects 12-100 (in progress and transitioning to FRMP 14-104), 04-101, 03-016, 02-040, and 00-020.

There are two known populations of Inconnu in Northwest Alaska, one that spawns in the upper Selawik River within the Refuge and the other in the upper Kobuk River outside of the Refuge. Both populations are subject to intensive fisheries throughout the region. A large permafrost thaw slump (slump) located about 40 km upstream from the Inconnu spawning area on the Selawik River began releasing large amounts of sediment into the river in 2004. Since then the normally clear Selawik River has flowed extraordinarily turbid during the summer months transporting huge quantities of sediment downstream, potentially negatively affecting the habitat for stream-spawning fish. Similar slumps in the upper Yukon River drainage have been emitting sediment into the Stewart River for over 40 years so we assume that the Selawik River slump will continue for the foreseeable future. However, no assessment of the effects on fish has been conducted on the Yukon River slumps . Habitat qualities of the Inconnu spawning area in the Selawik River have undoubtedly changed because of the dramatically increased sediment exposure. These changes may reduce the proportion of fertilized eggs that develop successfully and produce young. If production is reduced but not eliminated the Inconnu population would be expected to decline over time. If production is eliminated the population would be expected to become extinct as existing fish gradually die off, or possibly to become established in another suitable location. The increased sediment in the upper Selawik River is an environmental factor that may have a profound effect on the Inconnu population that spawns there as well as the subsistence fishers that depend on them.

Objectives:

2. Collect Inconnu age structure data from male Inconnu from the Selawik and Kobuk River spawning populations in 2016, 2017, and 2018;
3. Identify possible recruitment events based on a series of non-parametric statistical tests of annual age distribution samples;
4. Determine the spawning population abundance of Selawik River Inconnu in 2016, 2017, and 2018; and
5. Determine whether age structure and spawning population abundance data support the null hypothesis that sediment deposition from the slump has not affected Inconnu recruitment.

***Project Design based on FRMP 12-100 preliminary findings*:** This project will involve three distinct components that together will reveal whether the Selawik River thaw slump is affecting recruitment of the inconnu population in the drainage. The first component will be a series of annual age distribution profiles of spawning male inconnu collected from the Selawik River spawning area. We have chosen to focus on males because they will provide the recruitment data we are seeking without reducing the number of fertilized eggs on the spawning grounds each year. These pre-slump age distribution profiles will serve as baselines for comparison with later profiles. The second component will be a series of annual age distribution profiles of spawning male and female inconnu from the Kobuk River population. The Alaska Department of Fish and Game operates an annual chum salmon *Oncorhynchus keta* test fishery on the Kobuk River near the community of Kiana during July and August. They have agreed to sample the inconnu they capture during that test fishery and provide those biological data and age structures for this project. We initially thought that if recruitment failure was observed in both sample collections, it would indicate an effect in their shared rearing environment and not necessarily in the Selawik River spawning area. And, if recruitment failure is observed only in the Selawik River sample collection it would indicate an effect from the Selawik River spawning area. However, given the age distributions observed for both populations in 2011–2014, in which both populations appear to have experienced several years of poor recruitment, we modified our statement to read; if recruitment success is observed in both sample collections it would indicate no negative slump effect on spawning success. And if recruitment success is observed only in the Kobuk River sample it would indicate a negative slump effect on spawning success the Selawik River spawning area. The third component of the project will be a series of annual spawning population abundance estimates for the Selawik River inconnu population. Age distribution data are proportional to abundance so one could see identical profiles from a population at radically different spawner abundance levels. The age distribution profiles from the Kobuk and Selawik rivers show a dominance of older inconnu with fewer younger age recruits. A significant increase in recruitment to the spawning population should eventually be reflected in an increase in abundance. The combination of spawner abundance and age structure data provides a robust means of assessing changes in spawning population dynamics.

Partnerships and Capacity Building: Residents of Selawik will continue to be sought for assistance with local knowledge, collecting otoliths, overseeing inconnu carcass processing, and transportation and logistical support. Specific training to address project specific sampling procedures and protocols will be conducted for individuals prior to initiating sampling. In the 2011 pilot study year and 2012–2014 there

were five to seven Selawik residents plus the Native Village of Selawik that interacted with the project to help make it a success. The FFWFO has worked with Selawik residents or the NVOS organization for about 28 years.

Project Number: 16-105
Title: Spawning abundance of Kobuk River Sheefish
Geographic Region: Northern Alaska Region
Data Type: Stock Status and Trends
Principle Investigator: James Savereide, Alaska Department of Fish and Game, Sport Fish Division

Project Cost	**2016: $0**	**2017:** $65,364	**2018:** $54,364	**2019:** $63,864

Total Cost: $183,592

Issues: The Kobuk River sheefish or inconnu *Stenodus leucichthys* population supports substantial inriver subsistence and sport fisheries along with winter subsistence and commercial fisheries that occur in Hotham Inlet and Selawik Lake. This project primarily addresses the need for baseline harvest assessment and monitoring subsistence fisheries. The subsistence and sport fisheries take place throughout Hotham Inlet and Selawik Lake, which are bordered by the Selawik National Wildlife Refuge, around the mouth of the Kobuk River also in the Selawik National Wildlife Refuge, around summer feeding areas in Kobuk Valley National Park, and throughout the spawning grounds in Gates of the Arctic National Park & Preserve. Federal management of these fisheries is mandated through ANILCA to conserve sheefish stocks (USFWS 1993).

The majority of sheefish harvested in the Selawik National Wildlife Refuge are a mixed-stock comprised of the only two known spawning stocks in the region, the Selawik and Kobuk River stocks (Alt 1987). To effectively manage these fisheries an understanding of harvest (numbers and composition) and stock abundance is necessary to describe the population dynamics of these stocks and identify sustainable harvest levels. Unfortunately, the sheer size of this region coupled with stock differences in seasonal movements and timing (Smith 2013) make deriving estimates of stock abundance from typical mark-recapture experiments unfeasible. It is feasible to obtain estimates of spawning stock abundance but because sheefish are iteroparous (spawn more than once) and known to skip a year or more after spawning (Nikolskii 1954, Scott and Crossman 1973, Savereide 2014), estimates of spawning frequency would be needed to derive estimates of total mature stock size. A current study (Savereide *In prep*.) is attempting to derive these estimates of spawning frequency; however, if the estimates are too erratic to expand spawning abundance estimates, then a reliable index of the whole stock would be required to effectively manage this resource. Total annual estimates of the spawning stock abundance would provide this index. This project will use sonar methodology to enumerate the outmigration of post-spawning sheefish from the Kobuk River and provide managers with an accurate index of the entire Kobuk River stock.

A dual-frequency identification sonar (DIDSON produced by Sound Metrics Corp.) feasibility study conducted in 2014 (Savereide *In prep.*) found that enumerating migrating sheefish is possible over the course of their outmigration. Two DIDSON sonar units were used to ensonify the majority of the river and sheefish were primarily located in thalweg, which is the deep part of the channel with relatively fast flowing water. We also found that nearly the whole outmigration was complete before ice filled the river.

Objectives: The objective of this project will be to annually (2016-2018):

1. Enumerate the post-spawning outmigration of sheefish in the Kobuk River using sonar methodology.

Methods: To estimate the spawning abundance of Kobuk River sheefish, one or two DIDSON sonar units will be used to enumerate post-spawning sheefish as they migrate downriver to overwintering areas. The objective is to position the sonar so it can record images from the entire river, 24 hours a day, 7 days a week. The DIDSON will be deployed over the course of the outmigration from 15 September to 15 October (Savereide 2014), or until ice fills the river and eliminates our ability to use sonar techniques. Due to the considerable size disparity between sheefish and other whitefish species that are migrating at that time, sonar counts will only consider fish > 650 mm, which will exclude virtually all the humpback whitefish in addition to the much smaller round whitefish. Periodically, a number of beach seine hauls throughout the outmigration will be conducted near the study area to ensure all fish being counted are sheefish. Two technicians will ensure the sonar is running 24 hours a day, 7 days a week. During the season daily estimates will be determined by tallying the number of sheefish migrating downstream from the top of every hour to 20 minutes past. This count will be multiplied by three to estimate the number of sheefish by hour. The total count for the day will be the sum of the hourly estimates. The variance will not be calculated inseason because a census of spawning abundance will be completed postseason by counting the total number of sheefish over the entire outmigration.

Partnerships/Capacity Building: ADF&G, Division of Sport Fish-Region III has submitted 8 proposals each requiring 2-4 weeks of a college intern during various times of the summer. Our preference is to hire 1-3 ANSEP student(s) and to create a full-time intern position. During and voids between OSM projects, we would integrate them into existing projects conducted by Region III.
The project biologist has discussed this sheefish project and previous results with numerous people who live on the Kobuk River, including Kiana, Kobuk, Shungnak, and Ambler villages. The project biologist will visit the Kobuk School and talk to the high school class as well as have the class process some sonar files. The project biologist hired local technicians from Kobuk during previous telemetry and abundance work. The boat to be used for this study is stored by a local family in Kobuk that has worked on sheefish projects in the past. The project biologist also contracts the local community occasionally for logistic support such as boat rides and field camp set-up and take-down. All knowledge gathered from this project will be shared with local and agency representatives.

The project biologist will provide project updates to the Regional Advisory Council as well as the local communities. He is actively seeking letters of support from RAC and local community members, but they were unavailable before the deadline. However, they will be submitted to OSM as soon as they become available. He will work closely with ANSEP and/or local communities to hire college interns and/or local hires and will encourage local participation from Kobuk River villages. In past years he has found that local knowledge has been invaluable to the success of sheefish projects. He will also coordinate logistics such as storage, etc. with ADF&G Kotzebue as well as the Selawik National Wildlife Refuge.

Project Number: 16-106
Title: Aerial monitoring of Dolly Varden overwintering abundance in the Anaktuvuk, Ivishak, Canning, Hulahula, and Kongakut rivers.
Investigator: Brendan Scanlon, Alaska Department of Fish and Game (ADF&G) Sport Fish Division
Investigator: Tim Viavant, Alaska Department of Fish and Game (ADF&G) Sport Fish Division
Co-Investigator: Randy Brown, U.S. Fish and Wildlife Service (USFWS), Fairbanks Field Office
Geographic Region: Northern Alaska Region.
Federal Conservation: Arctic National Wildlife Refuge, Gates of the Arctic National Park,
System Units National Petroleum Reserve Alaska.
Information Type: Stock Status and Trends

Project Cost	**2016:** $56,966	**2017:** $56,742	**2018:** $57,226	**2019:** $58,368

Total Cost: $229,302

Issues Addressed: This proposed study will partially address the Northern Alaska Region Subsistence Fisheries Monitoring Issues, Priority Information Need: Identification of overwintering areas for Dolly Varden in the Hulahula River including demographic qualities of overwintering fish, and estimating overwintering fidelity of fish as identified in the January 2015 OSM document: Priority Information Needs - Federal Subsistence Fisheries. However, some of this information specific to the Hulahula River has been collected and published in 2007; therefore we propose broaden our scope to collect information on overwintering areas and abundance of overwintering fish in not only the Hulahula River but also the Canning, Anaktuvuk, Ivishak, and Kongakut rivers, all of which contribute to subsistence harvests.

Objectives: This project is being proposed as a 4-year (2016-2019) study. The objective of the project for each of the 4 years is to conduct a single aerial index count of the mid-September overwintering abundance of Dolly Varden char within established index areas in the Anaktuvuk, Ivishak, Canning, Hulahula, and Kongakut rivers. An additional objective of the first year is to identify Dolly Varden overwintering index areas in the Canning, Hulahula, and Kongakut rivers. An overall goal of this project is also to familiarize staff of the North Slope Borough Fish and Wildlife Department with the methods and index areas used in this assessment to enhance the capacity of a local organization to conduct future monitoring.

Methods: In all drainages, surveys will be conducted from a helicopter by two observers, each counting only the fish present on one side of the river. Surveys will be flown from upstream to downstream at an altitude of approximately 50 m, and a ground speed of approximately 40 km/hr. Surveys will be flown (when practical) around solar noon (1 – 2:30 PM). In areas of multiple channels, the channel with the most flow will be counted. For each survey conducted, survey conditions (light level, water clarity, and wind conditions) will be rated as poor, fair, good, or excellent.

Whenever possible, a third observer (preferably from the North Slope Borough Fish and Wildlife Department) will participate in the survey, and conduct a count on their side of the helicopter for comparison with an experienced observer. Observers will tally counts on individual digital voice recorders. To eliminate conscious or unconscious bias during counts, surveyors will wear headsets while counting to eliminate the ability to hear each other's counts. Counts of the two experienced observers and the third observer will not be known by any of the observers until all counts within a given year are completed.

Surveys of the Ivishak, Anaktuvuk, and Kongakut rivers will be conducted within the boundaries of the index areas established during previous aerial index counts (Bendock 1980; Viavant 2005, 2009). Surveys of other drainages will be conducted each year within boundaries of index areas established during the first year of the project. These index areas will be established based on the distribution of fish during the initial survey of the drainage combined with local knowledge of fish distribution within the drainage. Local knowledge of fish distribution within drainages will be solicited from subsistence users in cooperation with the North Slope Regional Advisory Council, the Arctic National Wildlife Refuge and North Slope Borough Wildlife Department. Boundaries of index areas will be recorded as GPS waypoints.

During each year of the project, surveys in each drainage will be conducted as near to the same date as practical. All surveys will be conducted between September 15 - 25. If possible within the restraints of budget and weather, surveys will only be conducted when survey conditions are rated as fair or better.

Partnerships and Capacity Development: ADF&G, Division of Sport Fish-Region III has submitted 8 proposals each requiring 2-4 weeks of a college intern during various times of the summer. Our preference is to hire 1-3 ANSEP student(s) and to create a full-time intern position. During and voids between OSM projects, we would integrate them into existing projects conducted by Region III. Local hires will be employed in the event no ANSEP student is available, such as in the fall. In addition, the North Slope Borough Wildlife Department has been invited to provide an observer to accompany project biologists during some or all of the surveys conducted in order to familiarize a staff member in the techniques used for conducting these surveys. It is the intent of this project to train and familiarize staff of a local organization (local government agency, village or regional corporation, or tribal organization) with this survey methodology, so that a local organization would have the capacity to continue stock monitoring into the future.

Project Number: 16-107
Title: Estimation of yield potential, identification and sampling of lake trout spawning aggregations, and abundance estimation of lake trout in Chandler Lake, Alaska
Principle Investigator: Klaus Wuttig, Alaska Department of Fish and Game, Sport Fish Division
Geographic Region: Northern Alaska Region.
Federal Conservation System Units: Gates of the Arctic National Park and Preserve.
Information Type: Stock Status and Trends

Project Cost:	**2016:** $0	**2017:** $95,553	**2018:** $135,841	**2019:** $14,292

Total Cost: $245,686

Issues Addressed: This study proposes to collect information on the lake trout *Salvelinus namaycush* population in the Chandler Lake system in Gates of the Arctic National Park and to provide a long-term cost effective approach for evaluating sustainability. Lake trout in the Chandler Lake system were last assessed from 1987-1989 and more current information is needed to evaluate sustainability relative to past and future changes in environmental variables and harvest patterns. Of immediate concern is that subsistence harvests alone may be exceeding the lakes productivity.

Chandler Lake system provides an important subsistence fishery for lake trout primarily by residents of Anaktuvuk Pass. The last assessment of Chandler Lake occurred from 1987-1989 when the goal was to determine sustainable yield and various metrics were examined including estimated population size, relative abundance, fecundity, growth, age composition, and length-weight relationships. Ultimately, an annual yield 0.14 kg/hectare was recommended, as well as continued efforts to monitor the population and harvests.

The difficulty and cost of lake specific stock assessments, like what was conducted on Chandler Lake, has led to the use of the lake-area (LA) model to establish recommended harvest guidelines for many Alaskan lakes. The LA model provides an estimate of sustained yield in terms of biomass (kg/yr). However, the LA model is based on lakes across Ontario at a lower latitude than Alaska and its potential yields are therefore treated as a threshold that should not be exceeded rather than a target level of exploitation. Chandler Lake, on the northern side of the Brooks Range, represents an even more severe climate and greater caution may be warranted.

Comprehensive data on subsistence use for lake trout and freshwater fishes is limited to a single reporting year. In 2011, 504 lake trout were harvested by subsistence fishers, primarily from Chandler Lake, and when combined with sport fish harvests (~21 fish), equates to ~656 kg/yr and approaches the upper threshold of even the LA model (695 kg/yr), which is nearly 5 times the amount recommended during 1989.

Objectives: The objectives of this project will be to:

1. Identify spawning areas that account for >80% of the spawning population of lake trout at Chandler and Little Chandler Lake with 95% confidence using radiotelemetry;
2. Use radiotagged lake trout to determine movement of tagged fish between spawning sites and lakes;
3. Update and estimate the yield potential, in numbers of lake trout, from Chandler Lake and/or Little Chandler Lake (based on results of objective 2); and,
4. Estimate the abundance of mature sized lake trout in Chandler and Little Chandler lakes such that the estimate is within 25 percentage points of the actual value 95% of the time.

Methods: This study will use radiotelemetry to determine the number and locations of major lake trout spawning areas within Chandler and Little Chandler lakes, and contingent upon these results, conduct a mark-recapture experiment to estimate abundance. Lake trout will be captured and radiotagged during summer 2017. Radiotagged lake trout will then be tracked to spawning areas during fall 2017, and an attempt will be made to capture lake trout off the spawning grounds. These fish will be marked and this event will be used as the first sample event of a Petersen two-event mark-recapture experiment. The second event would occur the following summer (2018) and each captured fish will be inspected for evidence of being previously captured. Using fall-to-summer events has proven to provide complete mixing and unbiased and cost-effective estimate of abundance. Weights of captured lake trout will also be used to update lake trout yield potential based on the LA model.

In the event that fall sampling in 2017 is incomplete due to inclement weather or our inability adequately locate and sample all spawning areas, the mark-recapture experiment would be abandoned and a second attempt would be made to thoroughly document all spawning locations in the fall of 2018 for use in future assessments.

Tracking radiotagged fish will include a single aerial survey from fixed-wing aircraft (Fall 2017), tracking from boats, and fixed radiotracking stations placed at strategic locations to record movement between lakes.

Partnerships and Capacity Development: Local knowledge and involving residents of Anaktuvuk Pass in the study is essential for the project's success. Letters of support are being solicited, but will not be final by March 11. A teleconference is scheduled for the third week of March with Karen Hyer and the members of the NW and North Slope RAC's. Informing RAC, tribal entities and local residents about the project well before the field work will continue. Locals will be interviewed prior to field work about their ideas on sampling techniques and changes in the population. A college intern will be hired from the Alaska Native Science and Engineering Program to assist in sampling. If not feasible then a local from Anaktuvik Pass will be recruited.

The NPS has conducted research on Chandler Lake and their experience relative to logistics and sampling will prove beneficial. ADF&G will collect samples from the Chandler under the direction of John O'Donnell for the Arctic Inventory and Monitoring program - Large Lake Vital Sign Project. Tissue collections will also be submitted for contaminate investigations.

Progress reports will be presented and distributed to fisheries managers, researchers, local community groups and other interested parties. A presentation of the study finding will be presented in Anaktuvuk Pass at the completion of the field work.

Project Number: 16-108
Title: Environmental conditions in the Colville River drainage potentially leading to increased expression of the freshwater mold *Saprolegnia parasitica* on broad whitefish *Coregonus nasus*
Geographic Region: Northern Alaska Region
Location: Colville River Drainage, Nuiqsut, Alaska
Data Type: Monitoring (environmental conditions and fish) and Traditional Ecological Knowledge
Principle Investigator: Todd Sformo, PhD, North Slope Borough-Department of Wildlife Management

Project Cost	**2016:** $ 69,975	**2017:** $ 57,800	**2018:** $ 57,800	**2019:** $0

Total Cost: $185,575

Need for Project: Broad whitefish is an invaluable subsistence resource on the North Slope of Alaska in general and in the Nuiqsut area in particular. In Nuiqsut, for instance, in 1994-95, broad whitefish were the second most popular fish taken for subsistence (over 3,000) in a village of 83 households (99% survey rate) (Brower Jr. and Opie 1997; Braund 2010). Between 1994 - 2003, total large whitefish catch (broad, humpback, and unidentified large whitefish) among all North Slope villages was approximately 18,629 but is considered a minimum (Bacon et al. 2009). Earlier studies indicate an average harvest of 20,000 broad whitefish per year at Barrow alone for the years 1987-1989 (Braund 1993). In early October 2013, a freshwater mold was found on some broad whitefish in the Nuiqsut region (Appendix: Map). Concurrently, traditional ecological knowledge and western science note that this mold has not been recorded in the area except on one occasion in 1980. *Saprolegnia* spp. was found on one broad whitefish on the Inaru River (Appendix: 1981-094). While there may be many factors leading to the onset of Saprolegniosis on broad whitefish in the Colville River drainage, we will examine a known cause, namely environmental conditions such as temperature, in the spawning waters. One environmental factor that has been documented in increasing the efficiency of colonization of this mold on fish is abrupt change in water temperature (Bly et al. 1992; Van den Berg et al. 2013) and /or low water temperatures during spawning (Meyers et al. 2008).

Goals: Determine whether the environmental factors of water temperature and water level are correlated to the presence of the freshwater mold *Saprolegnia parasitica* on broad whitefish *Coregonusnasus* in the Colville River drainage in relation to spawning and subsistence fishing.

Objectives: 1. Deploy data loggers to measure water temperature and level at fishing sites.
2. Record catch (species, mass, fork length, presence of mold, other TEK) at nets.
3. Necropsy broad whitefish or other species with mold and genetic analysis of mold.
4. Deploy loggers in potential broad whitefish spawning waters.

Project Number: 16-151
Title: Traditional ecological knowledge of subsistence whitefish and cisco and attitudes/perceptions of beaver to subsistence fishing in southern Kotzebue Sound
Principle Investigators: George Weekley and Ross Smith **,** SWCA Environmental Consultants
Co-Investigator(s): Susan Georgette, USFW Selawik Refuge; Leyla Arsan, SWCA Environmental Consultants; Brian Brettschneider, SWCA Environmental Consultants
Geographic Area: Northwest Arctic/Seward Peninsula (Management Unit 23)
Federal Conservation System Units: Selawik National Wildlife Refuge, Bering Land Bridge National Preserve, and Bureau of Land Management lands
Information Type: Harvest Monitoring/Traditional Ecological Knowledge (HM-TEK)

Project Cost	**2016:** $108736	**2017**: $104,971	2018: $11,711	**2019**: $0

Total Cost: $ 225,418

Issue: The project intends to examine whitefish and cisco harvest and use in the communities of Buckland and Deering. This project will document traditional Inupiaq knowledge of whitefish and cisco resources to inform federal fisheries management. Our study will build upon the whitefish traditional ecological knowledge (TEK) study by Georgette and Shiedt (2005) by collecting TEK whitefish harvest data in Buckland and Deering, two communities that were not examined by that project. The study will gather TEK subsistence harvest and uses data on species including broad whitefish (*Coregonus nasus*), round whitefish (*Prosopium cylindraceum*), humpack whitefish (*Coregonus pidschian*), Bering cisco, (*Coregonus laurettae*) and least cisco (*Coregonus sardinella*), hereafter collectively referred to as whitefish. Whitefish are an important and reliable subsistence resource for consumption throughout Kotzebue Sound. TEK whitefish harvest and use data will help federal fishery managers better understand harvest and use of whitefish in these communities and better understand how fishery proposals to the Federal Subsistence Board may affect subsistence harvesting practices, locations, and uses in the communities. It will provide a more comprehensive picture of whitefish use in the region

In addition, the study will examine resident attitudes, beliefs, and perceptions about negative effects to subsistence fishing from beaver (*Castor canadensis*) in the communities of Buckland, Deering, and Selawik. Anecdotal information from residents in these communities suggest that there are widespread beliefs and attitudes that beavers negatively affect subsistence fisheries and residents have expressed great concern as beavers become more prevalent in the area. For the beaver portion of the study, negative attitudes and beliefs have made it difficult for fisheries managers to address other management issues, as residents feel that the beaver issue is their greatest concern. The study will explore those attitudes and beliefs in depth so that federal fishery managers can better understand local concerns. In addition, the study will also evaluate ways that residents and federal fishery managers can better communicate perceived positive and negative effects to subsistence fisheries from beaver.

Objectives:

1. Gather traditional knowledge of whitefish ecology, including traditional taxonomy, life histories, seasonal patterns of movement, long term abundance trends, as well as their interactions with beavers.
2. Identify traditional subsistence harvest locations of whitefish for each community.
3. Document place names for traditional whitefish harvest locations for each community.
4. Document timing of subsistence harvest and duration of use at various harvest locations for whitefish for each community.
5. Document subsistence harvest methods and traditional conservation practices
6. Map community subsistence whitefish harvest locations using subsistence mapping techniques.
7. Provide experience to community residents in the collection of TEK information.
8. Convert TEK information into a useable computer-searchable database.
9. Train Maniilaq Association staff and community tribal staff in the use of the database.
10. Identify perceived potential reasons for changes (if any) to subsistence harvest locations and timing of subsistence harvest for whitefish resulting from beavers.
11. Evaluate potential strategies to improve communications between fishery managers and local residents on beaver and fisheries concerns.

Methods: To attain the objectives above, data will be collected by a combination of conversational interview, subsistence mapping, and participant observation. Conversational interviews will typically start with structured questions, flexibly followed by other questions based on participant response. The interviewer will use a digital voice recorder and take notes as back-up, to clarify information in digital recordings, and to document information from participants who may not want to be recorded. Areas identified by study participants as historic and/or contemporary subsistence harvesting locations will be documented on paper maps through subsistence mapping techniques. The interviewer will use GIS-generated aerial photography maps showing known topographical identification points. Participants will be asked to circle locations where harvesting of the target subsistence resources occurs and to identify specific species harvested at those locations. Maps showing subsistence harvest locations will then be digitized for GIS use. Catch data including harvest species documentation will be collected through participant observation of knowledgeable individuals identified during the conversational interviews. At the end of the analysis, SWCA will produce a report that outlines in text and graphics the data that were gathered from the study and an interpretation of these data in the results.

Partnerships/Capacity Building: SWCA will team with community leaders within the Northwest Arctic Borough (NWAB), including representatives of the communities of Selawik, Buckland and Deering. SWCA will work with them to help improve their local capacity for conducting research projects involving qualitative research methods. The project would contribute to NWAB identified mission, goals, issues and objectives defined in the NWAB Comprehensive Plan.

Deliverables/Products: The study will have three deliverables:

1. A report outlining the study findings based on the study objectives
2. GIS shapefiles identifying historic and contemporary harvest locations and place names
3. A searchable database of information collected for the project categorized by study objectives.

Project Number: 16-152
Title: Meade River subsistence fisheries: evaluating changes in harvests and abundance of broad whitefish, other nonsalmon species, and salmon
Geographic Region: Northern Alaska
Information Type: Harvest monitoring/traditional ecological knowledge
Investigator: Nicole M. Braem, Division of Subsistence, Alaska Department of Fish and Game

Project Cost	**2016**: $79,539	**2017:**$80,952	**2018:** $83,696	**2019**: $85,308

Total Cost: $329,495

Issue Addressed: A growing body of research documents local observations of environmental changes in Arctic Alaska including: warmer temperatures that lead to earlier spring breakup and later fall freeze-ups, thawing permafrost, reduced thickness in sea ice, the spread of brushy vegetation, drying tundra lakes, and erratic weather patterns (Carothers et al. 2014; Herman-Mercer et al. 2011; Hinzman et al. 2005; Huntington and Fox 2005; Huntington et al. 2007; Gregory, Failing and Leiserowitz 2006; Kruse 2011; McBeath and Shepro 2007; McNeeley 2009; Moerlein and Carothers 2012).

Changes in the environment have implications for subsistence on multiple scales, potentially impacting fish, wildlife, plants, access (travel), and traditional food processing and storage techniques. These changes also threaten local adaptions to the environment — for example, the fit between harvest approaches, weather conditions and species migration and run timing. Fall fisheries, many of which depend on ice, are particularly vulnerable to changes in the timing of freeze-up and erratic weather patterns. The mismatch between when river ice is thick enough for human use and the run timing of various fish species has meant that fishers who use nets set under the ice on the Upper Kobuk river have in some years "missed" prized broad whitefish laden with eggs as they moved upriver to spawn.[1] At Noatak, a different sort of mismatch has occurred in some years, where Dolly Varden have run in the fall *after* ice has formed, preventing local fishers from using beach seines.[2] Much as subsistence activities are uniquely patterned to local conditions, the impacts of climate change will play out in unique ways upon each community's subsistence patterns.

While commonly held perceptions of subsistence fishing invoke images of summer caught salmon drying on racks or in smokehouses, in many communities salmon are not abundant or the most important fish species, nor is summer the most important season. In these communities, a variety of other species such as whitefishes, Arctic grayling, northern pike, and Dolly Varden play a more significant role in local diets; fall fishing efforts may provide the bulk of fish caught and consumed in a year.
Such is the case in Atqasuk, a small predominately Inupiat community of 229,[3] located on the Meade River about 60 miles southwest of Barrow. Numerous prehistoric and contemporary fishing sites have been documented along the main river and its tributaries. Fishers from the Barrow have also traditionally

[1] From fieldnotes from the ongoing OSM Project 12-153, Key Northwest Subsistence Fisheries. See also Braem et al. 2015.
[2] Ibid.
[3] ADLWD, http://laborstats.alaska.gov/pop/popest.htm. Accessed on 2/27/15.

used the Meade River for subsistence fishing (Alaska Consultants et al. 1984; Stephen Braund and Associates (SRB&A) 1993, 2010, and 2011; Schneider et. 1980).

The primary objective of this project is to document changes in harvests of broad whitefish and other fishes important to subsistence fishers who use the Meade River. A second objective is to gather local observations on changes in abundance of broad whitefish and other species, as well as other related changes relevant to subsistence fisheries. While harvest surveys, repeated over time, provide a means to evaluate changes in harvests, key respondent interviews and participant observation can provide information that harvest surveys do not easily collect, such as observations on changes in abundance, size, fisher effort, methods and location of harvests, as well as a suite of related subjects such as river ecology, the current seasonal round, weather patterns, food processing and storage techniques, and the social organization of fishing. They will also provide needed context for the quantitative information collected. Baseline subsistence harvest information, collected systematically over time, is needed both for established state and federal management processes and for planning and impact assessment efforts. Impact assessment efforts, particularly in the development of project alternatives and mitigative measures, need to have an understanding of subsistence fisheries beyond merely the number of fish caught. Existing information is more than 10 years old and needs to be updated.

Objectives: This project has the following objectives:

1. Estimate annual harvest and use patterns of whitefishes, char, Arctic grayling and other species of fish used by residents of Atqasuk for 2016, 2017, and 2018. Assess whether subsistence needs for these species are being met and impacts to households when needs are not being met.
2. In Atqasuk and with a subset of Barrow households that fish on the Meade River, document traditional and local knowledge about whitefishes, Arctic grayling, char, burbot and other fishes with particular attention to observed changes over time. These may include run timing, abundance, locations, and links to other species. Document how environmental and other changes are affecting harvest methods, species targeted, the organization of fishing, fishing locations, preservation techniques, and harvest timing.
3. Compare data collected to previously collected information; interpret changes and trends in the subsistence harvest and use of whitefishes, Arctic grayling, burbot and other fish species.

Methods: Three methods of data collection will be used in order to meet the objectives of this study: an adapted harvest survey, key respondent interviews, and participant-observation.

- Of an estimated 64 total Atqasuk households (based on 2014 Alaska Department of Labor estimates)), we estimate that about 58 (90%) will be surveyed each year in January 2017, 2018, and 2019. These will result in estimates of subsistence fish harvests in Atqasuk for the calendar years 2016, 2017, and 2018.10-20 key respondent interviews will be conducted each year (5-10 in Atqasuk and 5-10 in Barrow) with knowledgeable subsistence fishers and processors identified in collaboration with the Atqasuk tribal council and the North Slope Borough Wildlife Department. A snowball sample will be used in Barrow, in order to identify those households who use the Meade River for subsistence fishing.

- Investigators will make two trips to Atqasuk and Barrow each year for the purpose of participant observation. Trips will be time to coincide with an important fish harvest period, i.e. setting nets in times of open water, jigging through the ice, or during periods when under ice nets are used.

Partnerships and Capacity Building: Consultation with the Native Village of Atqasuk and the North Slope Borough Wildlife Department has been initiated. Both organizations have been provided a copy of the draft investigation plan for review. It is the intention of PI Braem to work with both entities in the refining the design of the project and conduct data collection through cooperative agreements. To continue capacity building at the community level, project partners will hire and train local residents to conduct surveys within their communities. Through cooperative agreement, local project partners will provide payment to local research assistants for training, completed surveys, and quality assurance/quality control of surveys, and honoraria to key respondent.

APPENDIX B

Table 1. Fisheries Resource Monitoring Program projects funded in the Northern Region from 2000 to 2014.

Project Number	Project Title	Investigators
	North Slope	
00-002	Eastern NS Dolly Varden Spawning and Over-wintering Assessment	ADF&G, USFWS
01-113	Eastern NS Dolly Varden Genetic Stock ID Stock Assessment	ADF&G, USFWS
01-101	Eastern NS (Kaktovik) Subsistence Fish Harvest Assessment	AD&FG, KIC
02-050	NS (Anaktuvuk Pass) Subsistence Fish Harvest Assessment	ADF&G, NSB, AKP
03-012	SST of Arctic Cisco and Dolly Varden in Kaktovik Lagoons	USFWS
04-103	North Slope Dolly Varden Sonar Feasibility	USFWS
06-108	North Slope Dolly Varden Aerial Monitoring	ADF&G
07-105[a]	North Slope Dolly Varden Genetic Baseline Completion	USFWS
07-107[a]	Hulahula River Dolly Varden Sonar Enumeration	USFWS
12-155	Climate Change and Traditional Ecological Knowledge of Subsistence Whitefish and Cisco on the North Slope of Alaska	SWCA
14-103[b]	Beaufort Sea Dolly Varden Dispersal Pattersn	UAF
	Northwest Arctic	
00-001	Northwestern Dolly Varden and Arctic Char Stock Identification	ADF&G, USFWS
00-020	Hotham Inlet Kotzebue Winter Subsistence Sheefish Harvest	ADF&G
01-136	Northwestern Alaska Dolly Varden Genetic Diversity	ADF&G, USFWS
01-137	Northwestern Alaska Dolly Varden Spawning Stock Assessment	ADF&G
02-023	Qaluich Nigingnaqtuat: Fish That We Eat	AJ
02-040	Kotzebue Sound Whitefish Traditional Knowledge	ADF&G, MQ
03-016	Selawik River Harvest ID, Spring and Fall Subsistence Fisheries	USFWS
04-101	Selawik River Inconnu Spawning Abundance	USFWS
04-102[a]	Selawik Refuge Whitefish Migration and Habitat Use	USFWS
04-109[a]	Wulik River Dolly Varden Wintering Stocks	USFWS, ADF&G
04-157	Exploring Approaches to Sustainable Fisheries Harvest Assessment	ADF&G, MQ
07-151	Northwest Alaska Subsistence Fish Harvest Patterns and Trends	ADF&G, MQ
	Northwest Arctic (continued)	
08-103	Kobuk River Sheefish Spawning and Run Timing	ADF&G, USFWS
10-100[a]	Selawik Drainage Sheefish Winter Movement Patterns	UAF, USGS, USFWS, NVK
10-102[a]	Unalakleet River Chinook Salmon Abundance Estimate	ADF&G, NPS, BLM

Continued on next page

Table 1 continued

Project Number	Project Title	Investigators
	Northwest Arctic (continued)	
10-104	Hotham Inlet Kotzebue Winter Subsistence Sheefish Harvest	USFWS
10-152	Climate Change and Subsistence Fisheries in Northwest Alaska	UAF
10-152	Climate Change and Subsistence Fisheries in Northwest Alaska	UAF
12-100[a]	Selawik River Sheefish Spawning Abundance and Age Structure	USFWS
12-103[a]	Kobuk River Sheefish Spawning Frequency, Location, and Run Timing	ADF&G, USFWS
12-104[a]	Noatak River Dolly Varden Evaluation of Overwintering Populations	ADF&G, NPS
12-153[a]	NW Ak Key Subsistence Fisheries Harvest Monitoring Program	ADF&G, MQ
14-101[b]	Unalakleet R Chinook Salmon Escapement Assessment	ADF&G, NPS, BLM
14-104[b]	Selawik R Inconnu Spawning Population Abundance	USFWS
	Seward Peninsula	
01-224	Nome Sub-district Subsistence Salmon Survey	ADF&G, KI
02-020	Pikmiktalik River Salmon Site Surveys and Enumeration	USFWS, NPS, STB, KI
04-105	Pikmiktalik River Chum and Coho Salmon Enumeration	KI
04-151	Customary Trade of Fish in the Seward Peninsula Area	ADF&G, KI
05-101	Unalakleet River Coho Salmon Distribution and Abundance	ADF&G, NVU
06-101	Pikmiktalik River Chum and Coho Salmon Enumeration	KI
10-151	Local Ecological Knowledge of Non-Salmon Fish in the Bering Strait	KI
12-154[a]	North Slope Salmon Fishery HMTEK	ADF&G

[a] = Final Report in Preparation.
[b] = On-going projects during 2016.
Abbreviations used for investigators are: **ADF&G** = Alaska Department of Fish and Game, **AJ** = Anore Jones, **AKP** = City of Anaktuvuk Pass, **KI** = Kawarek Inc., **KIC** = Kaktovik Inupiat Corp., **MQ** = Maniilaq, **NPS** = National Park Service, **NVK** = Native Village of Kotzebue, **NVU** = Native Village of Unalakleet, **NSB** = North Slope Borough, **STB** = Stebbins IRA, **SWCA** = SWCA Environmental Consultants, **UAF** = University Alaska Fairbanks, **USFWS** = U.S. Fish and Wildlife Service, and **USGS** = U.S. Geological Survey.

Office of Subsistence Management

Fall 2015 Regional Advisory Council Report

Staffing Update

Robbin La Vine joined the Office of Subsistence Management (OSM) in October 2014. She is an anthropologist with extensive experience conducting subsistence research and building collaborative partnerships with Alaska Tribal, State, and Federal entities since 2002. Before joining OSM, she worked as a researcher for the Togiak National Wildlife Refuge, served as Social Scientist for the Bristol Bay Native Association Partners Program in Dillingham, and was a Subsistence Resource Specialist for the Alaska Department of Fish and Game, Division of Subsistence. Robbin is delighted to serve rural Alaskans while strengthening partnerships to ensure the continuation of the subsistence way of life.

Amee Howard joined OSM as the new Subsistence Policy Coordinator in July 2015. Prior to OSM, she worked as an Environmental Protection Specialist for the Pacific West Region of the National Park Service in Boulder City, Nevada. Previously, she worked for the Alaska Department of Fish and Game, Division of Commercial Fisheries, as a Fish and Game Program Technician in Sitka. Amee also spent time working as the Coastal Monitoring Coordinator for the Sitka Tribe of Alaska. She earned her Bachelors of Science in Natural Sciences, with minors in Environmental Studies and Geology, from the University of Alaska, Anchorage. Amee possesses a well-rounded background gained from previous work experience and is a valuable addition to the OSM team.

Efforts are currently underway to hire the following positions: Council Coordinator, Anthropologist, Anthropologist (Pathways), Fisheries Biometrician, Fisheries Biologist (2), Fisheries (Pathways) Grants Management Specialist, IT Specialist, and Administrative Assistant.

The North Pacific Fishery Management Council adopts measures to reduce Chinook Salmon bycatch in the Bering Sea Pollock fishery

At its April 2015 meeting in Anchorage, the North Pacific Fishery Management Council (NPFMC) took action to reduce bycatch of both Chinook and Chum Salmon in the Bering Sea commercial Pollock fishery. Recognizing the precarious state of Western Alaska's Chinook Salmon stocks, the NPFMC took a combination of actions which lower the caps in times of low abundance, combine Chinook and Chum Salmon bycatch management, place additional requirements on industry incentive plans and reapportion the Pollock catch between seasons. Taken together, these actions are anticipated to reduce bycatch of both Chinook and Chum Salmon, and ensure that additional measures, including lower caps, are in place in years of low Chinook Salmon abundance.

Much of the attention from stakeholders from both Western Alaska and the Pollock fishery focused on the option of lowering the Chinook Salmon bycatch hard cap and the performance standard, currently 60,000 and 47,591 fish, respectively. Western Alaskan stakeholders asked for a 60% reduction in both the hard cap and performance standard during testimony at the meeting and in several hundred letters and resolutions submitted prior to the meeting. The

Pollock industry advocated that no reductions be enacted. The State of Alaska led the effort to provide protections for Western Alaska Salmon stocks. Newly-appointed Alaska Department of Fish and Game Commissioner Sam Cotten introduced a motion calling for a 35% reduction in the performance standard and a 33% reduction in the hard cap. Commissioner Cotten's motion was amended by the Bill Tweit, NPFMC representative from Washington State, to a 25% reduction in the hard cap and a 30% reduction in the performance standard. This lesser reduction was passed by the NPFMC unanimously (10-0).

The results of the NPFMC action are as follows: In years of low Chinook Salmon abundance (defined as years in which the cumulative total Chinook Salmon runs of the Kuskokwim, Upper Yukon and Unalakleet Rivers is at or below 250,000 fish), the hard cap will be 45,000 and the performance standard will be 33,318 Chinook Salmon. The Pollock fishery manages to the performance standard, so the reduction in this number is important. The Council also made it very clear that they expect bycatch to remain well below the caps, and would take additional action if warranted. It should be noted that, in recent years, bycatch has averaged around 15,000 Chinook Salmon.

In addition to the reductions in the cap levels, the NPFMC's action contains several other, important measures. The other pieces of the motion apply in all years – not just when Salmon abundance is low. Alternative 2 combines Chinook and Chum Salmon bycatch management programs, ensuring a coordinated approach. It also requires information sharing with Western Alaska groups. Alternative 3 adds five new requirements for the industry Incentive Plan Agreements (IPA) to meet, including requiring Salmon excluders, restrictions on bycatch rates in October (a time of historically high bycatch) and significant penalties (no fishing) for boats with repeatedly bad bycatch performance. The options the Council selected under Alternative 4 provide the Pollock fishery with the flexibility to catch more of its harvest in the late A season, potentially shifting harvest effort away from the high bycatch times later in the year.

In summary, the NPFMC's action puts in place measures to further reduce bycatch in all times of abundance, and to ensure that in periods of low Chinook Salmon abundance the Pollock fishery would be limited to a lower level of bycatch.

Bridging the Gap between Native Communities, Conservation, and Natural Resource Management: Grant Update

The U.S. Fish and Wildlife Service and the Alaska Native Science and Engineering Program (ANSEP) were awarded a National Fish and Wildlife Foundation grant to help re-establish a lost connection between Federal resource managers and rural communities in the Yukon-Kuskokwim and Doyon Regions. Members of these communities rely on subsistence resources within six National Wildlife Refuges for both cultural and nutritional needs. Continued resource declines in both the Yukon and Kuskokwim River drainages have led to immense hardships for local residents as well as numerous challenges for resource managers to provide sufficient subsistence harvest opportunities, while ensuring adequate conservation efforts.

Funds from this grant are used to increase outreach opportunities and foster collaborative solutions by expanding the Refuge Information Technician (RIT) Program. Outreach and education contribute significantly to the overall success of resource management. Language barriers and cultural obstacles often stand in the way of achieving effective communication. The RIT program employs Alaska Native residents to serve as liaisons between the Yukon Delta National Wildlife Refuge and local communities. The RITs' regional experience, traditional ecological knowledge, Yup'ik language skills, and cultural sensitivity enhance their role as intermediaries. Expanding the capabilities of the RIT program will significantly increase and improve important connections between the Yukon Delta National Wildlife Refuge and local communities. These relationships are fundamental for local residents to become more involved in the management and conservation of the resources on which they depend.

Funds from this grant are also supporting ANSEP students participating in biological internships within the Yukon-Kuskokwim and Doyon Regions. 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 a career path to leadership in STEM fields. The U.S. Fish and Wildlife Service is partnering with ANSEP to provide meaningful summer internships that expose students to careers in resources management. These internships provide an opportunity for students to experience resource monitoring and management while developing knowledge and skills allowing them to succeed in professional resource management positions.

Changes to Council Member Appointment Process

The Office of Subsistence Management has submitted requests to the Secretary of the Interior to make the following changes to the Council member appointment process: shift from 3-year to 4-year appointment terms, allow for appointment of alternates, and provide for a 120-day carryover term for incumbents in the event that appointment letters are not timely issued. Dan Ashe, Director, U.S. Fish and Wildlife Service, has provided his support of these changes. As of the writing of this report, OSM is waiting to hear back from the Secretary's office to initiate the direct final rule making that would be necessary to change the appointment terms to 4 years. The new Senior Advisor for Alaska Affairs, Michael Johnson, will be assisting in moving this through the Secretary's office. OSM is moving ahead with plans to implement all changes for the current appointment cycle.

In order to switch from 3-year to 4-year appointment terms, as well as switch from having one-third of Council seats up for appointment each year to one-fourth of the seats being up for appointment, appointment terms will be staggered in order to complete the transition by the 2019 appointment cycle. This means that some Council members, even incumbents, may receive 2, 3 or 4-year appointments in the next few years. By 2019, however, all Council appointments will be for 4-year terms. If you have any questions, contact Carl Johnson, Council Coordination Division Chief, at (907) 786-3676 or carl_johnson@fws.gov.

All-Council Meeting

Anchorage, Alaska – Egan Center
March 7-11, 2016

Meeting Committee: RAC Chairs, Council Coordinators, Orville Lind (Native Liaison), Deborah Coble (Subsistence Outreach Specialist)

Joint Session

Monday, March 7, 2015
Invocation
Keynote Speaker:

Joint Agenda Items: Common issues from annual reports (i.e., bycatch, budget, other agency actions that impact subsistence, food security, climate change)

Concurrent Sessions

One full day for each of the Councils to address their regional issues

Tuesday – three Councils
Wednesday – three Councils
Thursday – three Councils
Friday – one Council

Training

Sessions repeat throughout the week to allow all Council members opportunity to attend.

- Title VIII of ANILCA
- Robert's Rules of Order
- Federal Indian Law (with ANCSA implications)
- Cross-Cultural communication
- C&T versus 804
- Regulatory Process (State and Federal)

Reports and Panels

- Western Arctic Caribou Herd
- Yukon River salmon
- Kuskokwim River salmon
- Public Processes for Fish & Wildlife Management (RAC, SRC, AC, AMBCC)
- Holistic management – discussion and explanation of how agencies manage resources (BLM, USFWS, NPS, USFS)
- Tribal Consultation
- Different Federal Subsistence Programs (Migratory Birds, Marine Mammals, Halibut)
- Understanding Dual Management

Important to note: this one meeting will encompass the entire meeting cycle for winter 2016

JOINT FEDERAL SUBSISTENCE REGIONAL ADVISORY COUNCILS

Egan Center
Anchorage, Alaska
March 7, 2016
8:30 a.m.

TELECONFERENCE: call the toll free number: 1-866-[number], then when prompted enter the passcode: [number]

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. **Keynote Address**
3. **Roll Call and Establish Quorum** *(Council Coordination Division Chief)*.....
4. **Call to Order** *(Chair)*
5. **Welcome and Introductions** (*Chair*)
6. **Review and Adopt Agenda*** (*Chair)* .....
7. **Regional Reports**
8. **Business** *(Chair)*
   - a. Climate Change .....
   - b. Food Security .....
   - c. Federal Subsistence Budget.....
   - d. Revisions to FRMP .....
   - e. Hunter Education.....
   - f. Youth Engagement.....
9. **Agency Reports**

DRAFT

a. **NPFMC** – Pollock Bycatch Update.....

b. Status on Magnuson-Stevens Act Renewal.....

c. Fisheries Management Overview .....

d. **OSM** – Processes .....

Closing Comments

10. Adjourn (*Chair*)

To teleconference into the meeting, call the toll free number: 1-866-[number], then when prompted enter the passcode: [number]

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 [name], 907-786-XXXX, [email], or 800-877-8339 (TTY), by close of business on [date].

DRAFT

All-Council Meeting Schedule

	Monday 3/7	Tuesday 3/8	Wednesday 3/9	Thursday 3/10	Friday 3/11
Main Room	All day Joint Session of the Councils	Morning Training: Title VIII of ANILCA Afternoon Training: Cross-cultural communication	Morning Training: Regulatory Process Afternoon: Training: Federal Indian Law	Morning Report: Yukon River Salmon Afternoon Panel: Tribal Consultation	Morning Training: Robert's Rules of Order Afternoon Panel: Understanding Dual Management
Small Room 1		All day RAC 1 – Concurrent Session YKDRAC	All day RAC 4 – Concurrent Session EIRAC	All day RAC 7 – Concurrent Session SERAC	All day RAC 10 – Concurrent Session KARAC
Small Room 2		All day RAC 2 – Concurrent Session WIRAC	All day RAC 5 – Concurrent Session SCRAC	All day RAC 8 – Concurrent Session BBRAC	Morning Afternoon Panel: Tribal Consultation
Small Room 3		All day RAC 3 – Concurrent Session SPRAC	All day RAC 6 – Concurrent Session NWARAC	All day RAC 9 – Concurrent Session NSRAC	All day SERAC Day 2 (if needed)
Small Room 4		Morning Training: Robert's Rules of Order Afternoon Panel: Public Processes for Fish & Wildlife Management	Morning Training: C&T versus Section 804 Afternoon Training: Cross-Cultural Communication	Morning Panel: Understanding Dual Management Afternoon Training: C&T versus Section 804	Morning Training: C&T versus Section 804 Afternoon Panel: Public Processes for Fish & Wildlife Management
Small Room 5		Morning Afternoon Panel: Holistic management	Morning Training: Title VIII of ANILCA Afternoon Panel: Public Processes for Fish & Wildlife Management	Morning Training: Cross-Cultural Communication Afternoon Panel: Holistic management	Morning Report: WACH Afternoon Training: Title VIII of ANILCA
Small Room 6		Morning Training: Regulatory Process Afternoon Panel: Different Federal Subsistence Programs	Morning Training: Robert's Rules of Order Afternoon Panel: Different Federal Subsistence Programs	Morning Training: Federal Indian Law Afternoon Report: Kuskokwim Salmon	Morning Training: Regulatory Process Afternoon

TRAINING	PANELS	REPORTS (ONCE EACH)
Title VIII of ANILCA (x3) *Provide an overview of Title VIII and key provisions that govern Federal subsistence management.*	**Public Process for Fish & Wildlife Management (AC, RAC, SRC, AMBCC)** (x3) *Panel consisting of one member of an AC, RAC, SRC and AMBCC to explain how each of their processes work and how public can participate.*	**Western Arctic Caribou Herd** *Report from State and Federal managers on status of herd and current management objectives and approaches.*
Cross-Cultural Communication (x3) *Training to help State and Federal staff improve communication with Alaska Natives.*	**Holistic Management** (x2) *Conceptual panel to discuss how fish and wildlife among various agencies can be managed in a more holistic way.*	**Yukon Salmon** *Report from State and Federal managers on status of salmon stocks and current management objectives and approaches.*
Robert's Rules of Order (x3) *Training to benefit RAC members in the conduct of their meetings under Robert's Rules.*	**Tribal Consultation** (x2) *Panel consisting of Native Liaisons from R7 and OSM and Tribal leaders to discuss current consultation process and how it should work. Emphasis on what consultation means from Tribal perspective.*	**Kuskokwim Salmon** *Report from State and Federal managers on status of salmon stocks and current management objectives and approaches.*
Regulatory Process (x3) *Explain the regulatory process under both State and Federal systems and provide information on how to submit proposals.*	**Different Federal Subsistence Programs (Halibut, Marine Mammals, Mig Birds, OSM)** (x2) *Panel consisting of representatives from the various Federal programs that regulate certain subsistence activities to discuss their jurisdiction, legal authority, and approach to management.*	
Federal Indian Law (x2) *Basic principles of Federal Indian law including how it is affected by the Alaska Native Claims Settlement Act and related case law in State and Federal courts.*	**Understanding Dual Management** (x2) *State and Federal managers explain their jurisdictional role in managing fish and wildlife resources, how the two sometimes work together and sometimes separately.*	
C&T versus Section 804 (x3) *Provide instruction on how C&T determinations and Section 804 determinations are made, how applied, where they differ.*		

Winter 2016 Regional Advisory Council Meeting Calendar

March 2016 current as of 3/24/2015

Meeting dates and locations are subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Feb. 7	*Feb. 8* *Window Opens*	*Feb. 9*	*Feb. 10*	*Feb. 11*	*Feb. 12*	*Feb. 13*
Feb. 14	*Feb. 15* ***PRESIDENT'S DAY*** ***HOLIDAY***	*Feb. 16*	*Feb. 17*	*Feb. 18*	*Feb. 19*	*Feb. 20*
Feb. 21	*Feb. 22*	*Feb. 23*	*Feb. 24*	*Feb. 25*	*Feb. 26*	*Feb. 27*
Feb. 28	*Feb. 29*	*Mar. 1*	*Mar. 2*	*Mar. 3*	*Mar. 4*	*Mar. 5*
Mar. 6	*Mar. 7*	*Mar. 8*	*Mar. 9*	*Mar. 10*	*Mar. 11*	*Mar. 12*
	All Council Meeting - Anchorage					
Mar. 13	*Mar. 14*	*Mar. 15*	*Mar. 16*	*Mar. 17*	*Mar. 18* *Window Closes*	*Mar. 20*

Fall 2016 Regional Advisory Council Meeting Calendar

August–November 2016

Meeting dates and locations are subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Aug. 21	Aug. 22 **WINDOW OPENS**	Aug. 23	Aug. 24	Aug. 25	Aug. 26	Aug. 27
Aug. 28	Aug. 29	Aug. 30	Aug. 31	Sept. 1	Sept. 2	Sept. 3
Sept. 4	Sept. 5 **HOLIDAY**	Sept. 6	Sept. 7	Sept. 8	Sept. 9	Sept. 10
Sept. 11	Sept. 12	Sept. 13	Sept. 14	Sept. 15	Sept. 16	Sept. 17
Sept. 18	Sept. 19	Sept. 20	Sept. 21	Sept. 22	Sept. 23	Sept. 24
Sept. 25	Sept. 26	Sept. 27	Sept. 28	Sept. 29	Sept. 30	Oct. 1
Oct.2	Oct. 3	Oct. 4	Oct. 5	Oct. 6	Oct. 7	Oct. 8
Oct. 9	Oct. 10	Oct. 11	Oct. 12	Oct. 13	Oct. 14	Oct. 15
Oct. 16	Oct. 17	Oct. 18	Oct. 19	Oct. 20	Oct. 21	Oct. 22
Oct. 23	Oct. 24	Oct. 25	Oct. 26	Oct. 27	Oct. 28	Oct. 29
Oct. 30	Oct. 31	Nov. 1	Nov. 2	Nov. 3	Nov. 4 **WINDOW CLOSES**	Nov. 5

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

North Slope Subsistence Regional Advisory Council

Charter

1. **Committee's Official Designation.** The Council's official designation is the North Slope Subsistence Regional Advisory (Council).

2. **Authority.** The Council is reestablished by virtue of the authority set out in the Alaska National Interest Lands Conservation Act (16 U.S.C. 3115 (1988)) Title VIII, and under the authority of the Secretary of the Interior, in furtherance of 16 U.S.C. 410hh-2. The Council is established in accordance with the provisions of the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. Appendix 2.

3. **Objectives and Scope of Activities.** The objective of the Council is to provide a forum for the residents of the Region with personal knowledge of local conditions and resource requirements to have a meaningful role in the subsistence management of fish and wildlife on Federal lands and waters in the Region.

4. **Description of Duties.** The Council possesses the authority to perform the following duties:

   a. Recommend the initiation of, review, and evaluate proposals for regulations, policies, management plans, and other matters relating to subsistence uses of fish and wildlife on public lands within the Region.

   b. Provide a forum for the expression of opinions and recommendations by persons interested in any matter related to the subsistence uses of fish and wildlife on public lands within the Region.

   c. Encourage local and regional participation in the decisionmaking process affecting the taking of fish and wildlife on the public lands within the Region for subsistence uses.

   d. Prepare an annual report to the Secretary containing the following:

      (1) An identification of current and anticipated subsistence uses of fish and wildlife populations within the Region.

      (2) An evaluation of current and anticipated subsistence needs for fish and wildlife populations within the Region.

(3) A recommended strategy for the management of fish and wildlife populations within the Region to accommodate such subsistence uses and needs.

(4) Recommendations concerning policies, standards, guidelines, and regulations to implement the strategy.

e. Appoint one member to the Gates of the Arctic National Park Subsistence Resource Commission in accordance with Section 808 of the Alaska National Interest Lands Conservation Act (ANILCA).

f. Make recommendations on determinations of customary and traditional use of subsistence resources.

g. Make recommendations on determinations of rural status.

h. Provide recommendations on the establishment and membership of Federal local advisory committees.

5. **Agency or Official to Whom the Council Reports.** The Council reports to the Federal Subsistence Board Chair, who is appointed by the Secretary of the Interior with the concurrence of the Secretary of Agriculture.

6. **Support.** The U.S. Fish and Wildlife Service will provide administrative support for the activities of the Council through the Office of Subsistence Management.

7. **Estimated Annual Operating Costs and Staff Years**. The annual operating costs associated with supporting the Council's functions are estimated to be $120,000, including all direct and indirect expenses and 0.9 staff years.

8. **Designated Federal Officer**. The DFO is the Subsistence Council Coordinator for the Region or such other Federal employee as may be designated by the Assistant Regional Director – Subsistence, Region 7, U.S. Fish and Wildlife Service. The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO will:

- Approve or call all of the advisory committee's and subcommittees' meetings,
- Prepare and approve all meeting agendas,
- Attend all committee and subcommittee meetings,
- Adjourn any meeting when the DFO determines adjournment to be in the public interest, and
- Chair meetings when directed to do so by the official to whom the advisory committee reports.

9. **Estimated Number and Frequency of Meetings.** The Council will meet 1-2 times per year, and at such times as designated by the Federal Subsistence Board Chair or the DFO.

10. **Duration.** Continuing.

11. **Termination.** The Council will terminate 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, a Vice-Chair, and a Secretary for a 1-year term.

    Members of the Council will serve without compensation. However, while away from their homes or regular places of business, Council and subcommittee members engaged in Council, or subcommittee business, approved by the DFO, may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in Government service under Section 5703 of Title 5 of the United States Code.

13. **Ethics Responsibilities of Members.** No Council or subcommittee member will participate in any specific party matter in which the member has a direct financial interest in a lease, license, permit, contract, claim, agreement, or related litigation with the Department.

14. **Subcommittees.** Subject to the DFO's approval, subcommittees may be formed for the purpose of compiling information and conducting research. However, such subcommittees must act only under the direction of the DFO and must report their recommendations to the full Council for consideration. Subcommittees must not provide advice or work products directly to the Agency. The Council Chair, with the approval of the DFO, will appoint subcommittee members. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

15. **Recordkeeping.** Records of the Council, and formally and informally established subcommittees or other subgroups of the Council, shall be handled in accordance with General Records Schedule 26, Item 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.

Sally Jewell

Secretary of the Interior

NOV 25 2013

Date Signed

DEC 03 2013

Date Filed

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