NORTHWEST ARCTIC SUBSISTENCE REGIONAL ADVISORY COUNCIL

October 6-7, 2015
Buckland, Alaska

What's Inside

Page

1 Agenda

4 Roster

5 Winter 2015 Draft Meeting Minutes

10 Rural Determination Materials

15 Alaska National Wildlife Refuge System Proposed Rule

21 Wildlife Proposal WP16-48

40 Wildlife Proposal WP16-49/52

55 Wildlife Proposal WP16-50

67 Wildlife Proposal WP16-51

77 Wildlife Proposal WP16-53/54

97 Wildlife Proposal WP16-37

161 Wildlife Proposal WP16-43

179 Wildlife Proposal WP16-45

192 Wildlife Proposal WP16-61

234 Fisheries Resource Monitoring Program Briefing

278 Annual Report Briefing

280 FY2014 Annual Report Reply

287 Office of Subsistence Management Fall 2015 Report

Continued on next page...

On the cover...
The Northwest Arctic Subsistence Regional Advisory Council members and their Council Coordinator, Melinda Burke, in Kiana, Fall 2014.

Carl Johnson/USFWS

What's Inside

290 All-Council Meeting Information

295 2016 Meeting Calendar

297 Council Charter

NORTHWEST ARCTIC SUBSISTENCE REGIONAL ADVISORY COUNCIL

October 6-7, 2015
8:30 a.m. daily
Community Hall
Buckland, Alaska

TELECONFERENCE: call the toll free number: 1-877-638-8165, then when prompted enter the passcode: 9060609

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. **Roll Call and Establish Quorum** *(Secretary)*.....4
2. **Invocation**
3. **Call to Order** *(Chair)*
4. **Welcome and Introductions** (*Chair*)
5. **Review and Adopt Agenda*** (*Chair)* 1
6. **Review and Approve Previous Meeting Minutes*** *(Chair*) 5
7. **Reports**
   - Council Member Reports
   - Chair's Report
8. **Public and Tribal Comment on Non-Agenda Items** (available each morning)
9. **Old Business** *(Chair)*
   - a. Rural Determination Process Update (*OSM LT*)..... 10
   - b. Refuges Proposed Rule on Hunting*.....15
10. **New Business** *(Chair)*
   - a. Wildlife Proposals*

Regional Proposals

1. WP16-48: Allow use of snowmachine to position animals (Unit 23).....21

2. WP16-49/52:Change harvest limits, change the bull and cow seasons for caribou (Unit 23) 39

3. WP16-50: Change in resident zone community eligibility for muskox (Unit 23).....54

4. WP16-51: Establish season for muskox in portion of unit (Unit 23).....66

5. WP16-53/54: Change hunt area and name, provide delegated authority for Dall's sheep (Unit 23) 77

Crossover Proposals

6. WP16-37: Change in harvest limit and season for caribou (Units 21D, 22, 23, 24, 25, 26A, 26B).....97

7. WP16-43: Change hunt area description and closure for caribou (Units 18, 22A) ...161

8. WP16-45: Change hunt area description for caribou (Unit 22E).....179

9. WP16-61/62/63/64: Change in harvest limits, seasons, hunt area descriptions for caribou (Units 23, 24B, 26A, 26B, 26B remainder, 26C) 192

b. 2016 Fisheries Resource Monitoring Program* (*OSM Fisheries/Anthropology*) 234

c. Identify Issues for FY2015 Annual Report* (*Council Coordinator*).....278

11. Agency Reports

(Time limit of 15 minutes unless approved in advance)

Tribal Governments

Buckland Tribal Council

Native Organizations

Special Actions

Wildlife Special Actions WSA15-03/03/05/06: Western Arctic Caribou Herd

Wildlife Special Action WSA15-07: Dall's sheep in Units 23, 26A

USFWS

Selawik National Wildlife Refuge Update (*Susan Georgette*)

NPS

1. Western Arctic Parklands Update (*Ken Adkisson*)

Kobuk Valley SRC Comment Letter to Northwest Arctic RAC

2. Gates of the Arctic National Park Update (*Marcy Okada*)

ADF&G

DRAFT

Update (*Staff*)

OSM

Fall 2015 Report.....287

12. Future Meeting Dates*

Winter 2016 All-Council Meeting Update (*Meeting Committee*).....290

Fall 2016 date and location.....295

13. Closing Comments

14. Adjourn (*Chair*)

To teleconference into the meeting, call the toll free number: 1-877-638-8165, then when prompted enter the passcode: 9060609

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 Melinda Burke 907-786-3885, melinda_burke@fws.gov or 800-877-8339 (TTY), by close of business on October 23, 2015.

DRAFT

REGION 8
Northwest Arctic Subsistence Regional Advisory Council

Seat	Year Apptd *Term Expires*	Member Name and Community
1	2010 ***2016***	**Raymond Stoney** Kiana
2	2014 ***2016***	**Austin Swan** Kivalina
3	2011 ***2016***	**Hannah Loon** Selawik
4	2010 ***2016***	**Michael C. Kramer** Kotzebue
5	2008 ***2017***	**Percy C. Ballot Sr.** Buckland
6	2011 ***2017***	**Verne J. Cleveland Sr.** Noorvik
7		**VACANT**
8	1999 ***2015***	**Enoch A. Shiedt, Sr.** **Chair** Kotzebue
9	2014 ***2016***	**Enoch L. Mitchell** Noatak
10	2012 ***2015***	**Calvin D. Moto** Deering

MEETING MINUTES
Northwest Arctic Alaska Subsistence Regional Advisory Council
March 9-10, 2015
Northwest Arctic Borough Council Chambers
Kotzebue, Alaska

Call to Order

Meeting called to order by Chair Enoch Attamuk Shiedt at 11:20 a.m.

Welcome and Introductions

Chair Shiedt welcomed guests and staff members.

Roll Call and Establish Quorum

Council members present: Percy Ballot Sr. (via teleconference), Hannah Loon, Enoch Shiedt Sr., Raymond Stoney, Verne Cleveland, Michael Kramer, Enoch Mitchell, Calvin Moto, Raymond Stoney
Excused: Austin Swan Sr.

The following personnel and members of the public were in attendance:

Agency Staff:

Jeff Brooks	OSM
Melinda Burke	OSM
Karen Hyer	OSM (via teleconference)
Orville Lind	OSM
Chris McKee	OSM
George Pappas	OSM
Glenn Chen	BIA
Dan Sharp	BLM (via teleconference)
Doug Ballou	BLM
Ken Adkisson	NPS
Joel Hard	NPS (FSB Representative)
Marcy Okada	NPS (via teleconference)
Bud Rice	NPS (via teleconference)
Bill Carter	USFWS
Heather Thomlinson	USFWS (via teleconference)
Brittany Sweeney	USFWS
Drew Crawford	ADF&G (via teleconference)
Brendan Scanlon	ADF&G

NGOs/Public

Cyrus Harris	Kotzebue

DRAFT

Lance Kramer	NANA
Fred Smith	Northwest Arctic Borough

Review of Agenda & Previous Meeting Minutes

Amendments to the agenda:

- Correction of Brendan Scanlon name spelling
- Hold discussion of Rural until the 10th so RAC members can hear the evening presentation; add Jim Dau caribou presentation

Council unanimously approved agenda as modified and the minutes of the meeting held on October 8-9, 2014.

Election of Officers

Enoch Shiedt Sr. was elected Chair, Raymond Stoney, vice-Chair, Hannah Loon , Secretary

Review of Council Charter

The Council unanimously approved the charter revisions as presented.

Council Reports

Verne Cleveland (Noorvik): Reported warm weather and abundant, healthy caribou in the Noorvik area as a result of the mild weather.

Enoch Mitchell (Noatak): Reported many wolves in the Noatak area, including in the village, and difficulty hunting by local hunters due to rough trail conditions. No WACH caribou were available for harvest for local residents for the third consecutive year near the community. Local people believe this is due to non-local hunters blocking the caribou migration at the Squirrel River.

Raymond Stoney (Kiana): Expressed appreciation to the individuals who were able to attend the last meeting in Kiana. A lot of concern from local people in Kiana about hunters leaving caribou heads in hunting areas and how it is not good etiquette. Quite a few wolves that appear to be tame have been coming right into the village. Caribou hunting last year was very successful.

Hannah Loon (Selawik): Reported that whitefish fishing was very in the fall. There have been no caribou around Selawik until recently (late January). Wants to see some kind of predator control on bears and echoed concerns regarding hunters leaving caribou heads and legs at the kill site and how important and valuable those parts are to local people.

Calvin Moto (Deering): Reported a low number of caribou in the Deering area but those that are present are fat and healthy. Warm weather and rain has been a concern for hunters lately. There have been a lot

of wolves in the area and bears have been seen during the times they would normally be hibernating due to the warm winter weather. The bears have been killing muskox and leaving them mostly uneaten; want to see more Federal harvest of bears. Late snows have kept hunters from traveling out to harvest wildlife.

Percy Ballot (Buckland): Reported little to no snow in his area.

Enoch Attamuk Shiedt Sr. (Kotzebue): The caribou arrived late in the area but the animals are fat and healthy. Echoed other reports about the abundance of predators. He would also like to see a bounty on wolves and bears. Fishing has been good; Northwest Alaska is one of the few areas left in the state where fish and wildlife resources are still abundant and they need to be preserved before a crisis occurs. There is a need for culture camps to educate the young about proper methods of harvest. scary bears

Public/Tribal Comments

Lance Kramer (NANA) discussed National Park Service proposal suggestion to move corridor further East; not beneficial last year due to location of the caribou. Red Dog Mine and predators are affecting the herds.

Jeffrey Brooks provided an overview of C&T

Wildlife Closure Review and Call for Federal Proposals

Chris McKee provided the wildlife closure review briefing and an overview of WCR 14-27, which the Council unanimously supported until a sustainable population exists.

Chris and Melinda worked with the RAC on a companion Federal proposal to BOG Proposal 202. The RAC came up with the following (for Unit 23 only):

- Dates for taking of cows: No taking of cows from April 1-June 30; **no harvesting of cows with calves** starting July 1-October 10
- Close taking of bulls: October 10-Jan. 31; to open Feb.1
- Reduction of our take from 15 to 5 per day

The Council also developed two more proposals:

1. Proposal to modify wildlife closure WCR14-27 (muskox): Modify the closure to expand the pool of federally eligible users, including the Noatak area while maintaining the closure to non-Federally qualified users.

2. Unit 23 Remainder (muskox): Change the hunt area descriptor to be that portion north and west of the Kobuk River drainage (same descriptor as in State regulation). Open a Federal season of one bull by Federal registration permit with a harvest limit of one bull with a season of 8/1 – 3/15.

Annual Report:

Melinda Burke reviewed the annual report topics. The Council reviewed and approved items added from the Kiana meeting and those brought up in the last two days. Annual Report Items:

1) Beavers
2) Transporters
3) Core Sampling: mining activities
4) Observations from hunting season: safety and education needed!
5) Always have a FSB member present at meetings.

Rural Determination Review Process

Jeffrey Brooks provided an overview of the Rural Determination Review process, with the Council unanimously supporting the proposed rule

Presentations and Reports

Carmen Daggett (BOG support staff) gave the RAC a brief overview of the process for changing State hunting and fishing regulations.

Jeff Brooks briefed the Council on the Customary and Traditional Use Determination Process.

Brittany Sweeny (Selawik Refuge) and Heather Tonneson briefed the Council on the Refuges Proposed Rule on Hunting. The Council commented that the next presentation should be summarized, easily understandable, and made clear that the Selawik Refuge is the only affected area.

Ken Adkisson provided an overview of the NPS proposed rule on collections and uses of shed or discarded animal parts and plants from park areas in Alaska. The Council asked about who would be eligible to collect these items under the proposed rule.

Jim Dau provided an overview of Western Arctic Caribou Herd biological and population update as well as reviewing State proposal 202.

Brendan Scanlon provided an overview of two potential fisheries projects in the region. The Council unanimously approved and supported the studies, also adding that trout decline is a concern in the villages and that issue should also be researched due to the reliance on the resource by subsistence users.

Chris McKee covered OSM staffing updates.

Future Meeting Dates

Fall 2015: Buckland, Oct 6-7,

Winter 2015: All Council meeting in Anchorage.

The meeting adjourned at 1730

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

_____
Melinda Burke, Designated Federal Officer
USFWS Office of Subsistence Management

_____
Enoch Attamuk Shiedt Sr., Chair

Northwest Arctic Subsistence Regional Advisory Council

These minutes will be formally considered by the Northwest Arctic Subsistence Regional Advisory Council at its next public meeting, and any corrections or notations will be incorporated into the minutes of that meeting.

DRAFT

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.

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 # 1807292015.

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

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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	

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.

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

. . .

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. . .

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(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.

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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)
****

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* *July 1–June 30* ***and no harvesting of cows with calves July1-Oct. 10. No harvesting of bulls Oct. 10-Jan. 31.*** 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** 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~~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***

WP16–49/52 Executive Summary	
	Cows may be harvested ***July 15-Apr. 30*** ***However, cows accompanied by calves may not be taken July 15-Oct. 14.*** ***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*** ***Sept. 1-Mar. 31.*** ***However, cows accompanied by calves may not be taken Sept. 1-Oct. 14.***
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

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*

WP16-49

Proposed Federal Regulation

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

Proposed Federal Regulation

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).

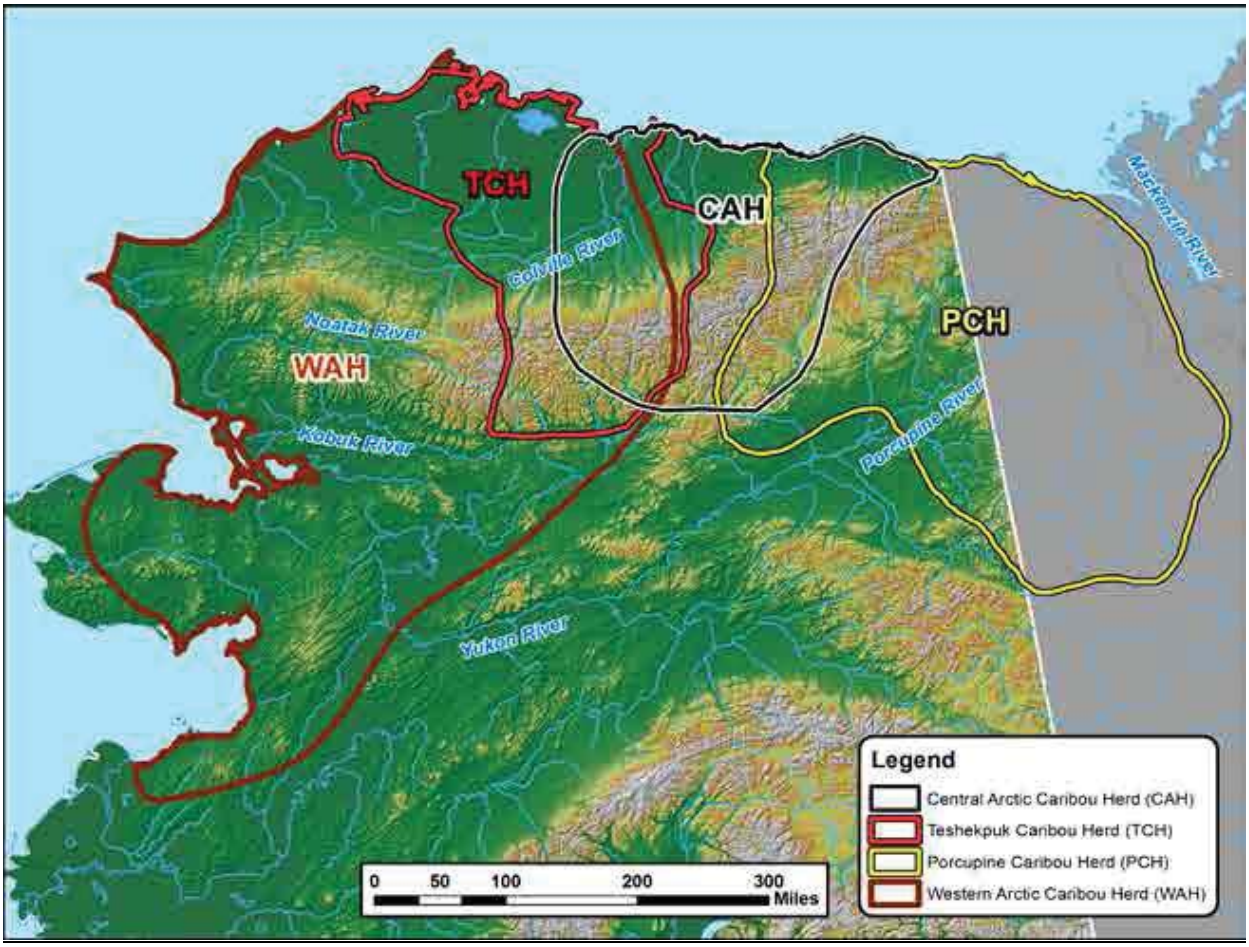

Figure 1. Herd overlap and ranges of the WACH, TCH, CACH and Porcupine caribou herds (WACH 2014).

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).

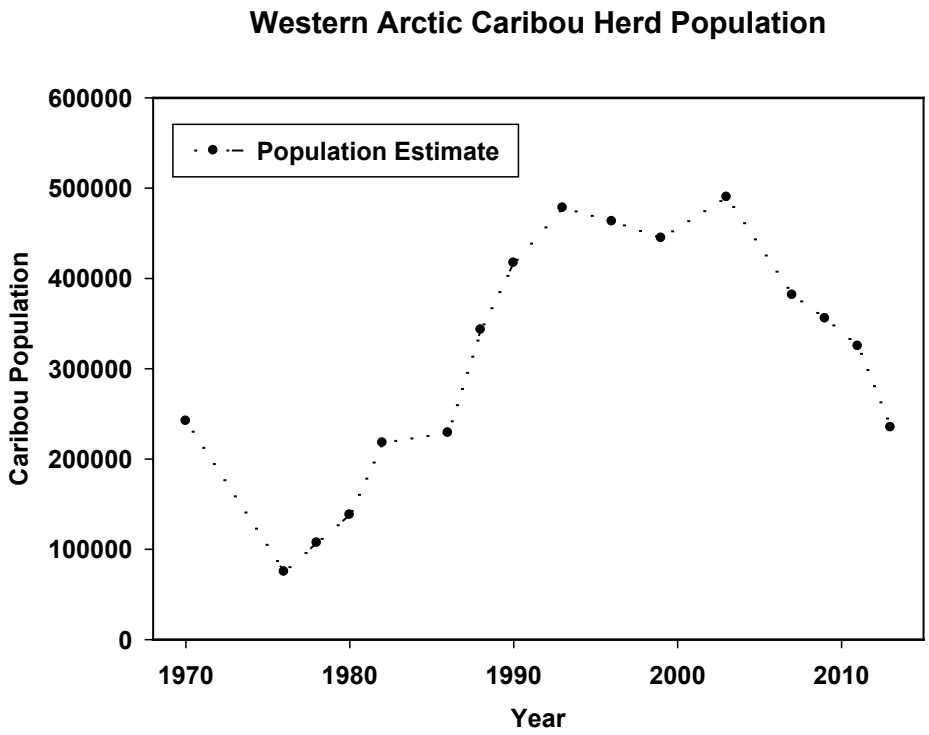

Figure 2. Maximum estimated population estimates of the Western Arctic Caribou Herd from 1970-2013. Population estimates from 1986-2013 are based on aerial photographs of groups of caribou that contained radio–collared animals (Dau 2011, 2014)

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 Sep-

tember 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.

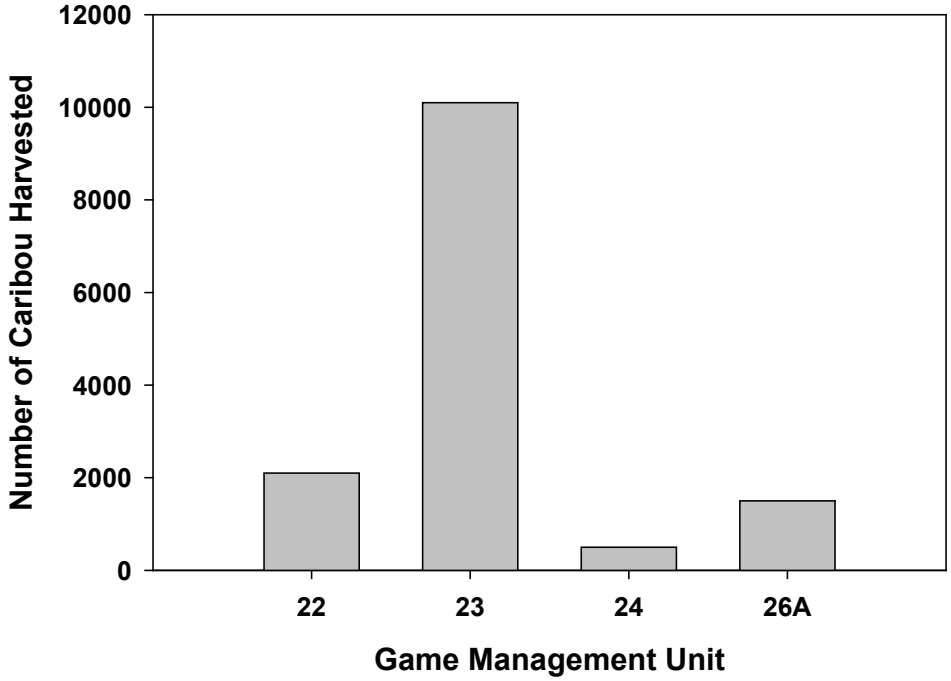

Figure 3. Average annual harvest by residents within the WACH range, RY1998-RY2012 (Dau 2014).

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.

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WP16–50 Executive Summary	
General Description	Proposal WP16-50 requests a change that would expand the pool of Federally qualified subsistence users allowed to harvest muskox in Cape Krusenstern National Monument in Unit 23. *Submitted by the Northwest Arctic Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 23-Muskox** *Unit 23—Cape Krusenstern National Monument—1bull by Federal permit. Annual harvest quotas and any needed closures will be announced by the Superintendent of Western Arctic National Parklands. Cape Krusenstern National Monument is closed to the taking of musk oxen except by resident zone community members ~~with permanent residence within the Monument or the immediately adjacent Napaktuktuk Mountain area, south of latitude 67°05' N and west of longitude 162°30' W hunting under these regulations~~.* — *Aug. 1- March 15*
OSM Preliminary Conclusion	**Support with modification** to include resident zone community members living east and north of the Buckland River drainage; remove regulatory language referencing harvest quotas and closures; delegate authority to the NPS to close the season and determine annual quotas via a delegation of authority letter only (**Appendix 1**). The modified regulation should read: **Unit 23—Muskox** *Unit 23—Cape Krusenstern National Monument—1bull by Federal permit. ~~Annual harvest quotas and any needed closures will be announced by the Superintendent of~~* — *Aug. 1 – March 15*

WP16–50 Executive Summary	
	~~Western Arctic National Parklands.~~ Cape Krusenstern National Monument is closed to the taking of musk oxen except by resident zone community members ***living east and north of the Buckland River drainage*** *~~with permanent residence within the Monument or the immediately adjacent Napaktuktuk Mountain area, south of latitude 67°05' N and west of longitude 162°30' W hunting under these regulations~~.*
Northwest Arctic Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP16-50

ISSUES

Proposal WP16-50 was submitted by the Northwest Arctic Subsistence Regional Advisory Council. The proponent requests a change that would expand the pool of Federally qualified subsistence users allowed to harvest muskox in Cape Krusenstern National Monument in Unit 23.

DISCUSSION

The proponent wishes to increase the number of Federally qualified subsistence users in Unit 23 who may hunt muskox by Federal permit in Cape Krusenstern National Monument (CAKR). This proposal would make the opportunity to harvest one bull muskox under Federal regulations in CAKR available to substantially more residents of Unit 23.

The proponent does not wish to change the harvest limit or the timing of the season for muskox in CAKR. The total allowable harvest would remain at 2 bull muskoxen by Federal permit unless changed by the Superintendent of the Western Arctic National Parklands.

This proposal would remove the restriction put in place by an Alaska National Interest Lands Conservation Act (ANILCA) Section 804 determination made by the Federal Subsistence Board (Board) in 2005 when it supported with modification regulatory proposal WP05-19.

Existing Federal Regulation

Unit 23—Muskox

Unit 23—Cape Krusenstern National Monument—1bull by Federal permit. Annual harvest quotas and any needed closures will be announced by the Superintendent of Western Arctic National Parklands. Cape Krusenstern National Monument is closed to the taking of musk oxen except by resident zone community members with permanent residence within the Monument or the immediately adjacent Napaktuktuk Mountain area, south of latitude 67°05' N and west of longitude 162°30' W hunting under these regulations.	*Aug. 1 - March 15*

Proposed Federal Regulation

Unit 23—Muskox

Unit 23—Cape Krusenstern National Monument—1bull by Federal permit. Annual harvest quotas and any needed closures will be announced by the Superintendent of Western Arctic National	*Aug. 1- March 15*

Parklands. Cape Krusenstern National Monument is closed to the taking of musk oxen except by resident zone community members ~~with permanent residence within the Monument or the immediately adjacent Napaktuktuk Mountain area, south of latitude 67°05' N and west of longitude 162°30' W hunting under these regulations~~.

Existing State Regulation

Unit 23 – Muskox

Unit 23 – Seward Peninsula west of and including the Buckland River drainage	*Residents: One bull by permit*	*TX 106*	*Aug. 1 – Mar. 15*
Unit 23 – that portion north and west of Kobuk River drainage	*Residents: One bull by permit*	*TX 107*	*Aug. 1 – Mar. 15*
Unit 23 remainder	*Residents and Nonresidents*		*No open season*

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**).

The proposed regulation would only apply to Cape Krusenstern National Monument administered by the National Park Service. This national monument consists of 659,807 acres in the northwestern coastal area of Unit 23 (NPS 2003).

Customary and Traditional Use Determinations

Residents of Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage have a customary and traditional use determination for muskox in Unit 23 (FWS 1995). The Federal Subsistence Board (Board) has not made a customary and traditional use determination for muskoxen for Buckland and Deering in the northwestern portion of Unit 23 where CAKR is located.

Residents of Unit 23 east and north of the Buckland River drainage have a customary and traditional use determination for muskox in Unit 23 remainder (FWS 1997). These communities include Kotzebue, Selawik, Noorvik, Kiana, Shungnak, Ambler, Kobuk, Noatak, Kivalina, and Port Hope. All of these communities except Point Hope are in the resident zone for CAKR (NPS 2003).

Regulatory History

In 2003, the NPS prepared an Environmental Assessment under the National Environmental Policy Act, and its Regional Director signed a Finding of No Significant Impact, designating all lands within the Northwest Alaska Native Association (NANA) Region as the resident zone for CAKR (36 C.F.R. § 13.802 [2015]). With this 2003 decision, the current resident zone communities are Kotzebue, Selawik, Noorvik, Kiana, Shungnak, Ambler, Kobuk, Noatak, Kivalina, Buckland, and Deering.

In 2005, the Board made an ANILCA Section 804 determination to limit the pool of Federally qualified subsistence users for muskox in CAKR (FWS 2005). The number of rural residents eligible to hunt muskox in CAKR under Federal regulations was reduced to only those permanently residing in CAKR or the immediately adjacent Napaktuktuk Mountains south of latitude 67°05' N and west of longitude 162°30' W.

Proposal WP05-19, submitted by the Cape Krusenstern Subsistence Resource Commission and the NPS, requested the establishment of a season and an allocation for muskox in Unit 23 (FWS 2005). The intent of the proposal was to provide subsistence opportunity for a small number of families with permanent residence within or adjacent to CAKR to harvest muskox. This pool of eligible hunters represented a substantially smaller subset of those living in the resident zone for CAKR. The proposal was adopted with modification by the Board to delegate authority to the NPS to create annual quotas, determine the number of permits, and announce any needed closures of the muskox hunting season (FWS 2005).

Cultural Knowledge and Traditional Practice

The subsistence way of life in Northwest Alaska is a holistic and versatile phenomenon characterized by adaptation to changing conditions and sophisticated social networks. It involves sharing and other types of customary and traditional exchanges and harvesting practices, including mobility on the part of hunters and other residents of the region and free and open access to the land. Ethnographic research published by the National Park Service recorded, "contemporary villagers clearly feel that everybody living within a given region should have equal access to the land's resources" (Anderson et al. 1998:265).

Residents of the NANA Region practice subsistence hunting, fishing, and gathering throughout the region when necessary. Federally qualified subsistence users in Unit 23 are accustomed to moving with migrating wildlife such as caribou and can be quite mobile at times (Anderson et al. 1998). Some people living in the NANA Region move around and travel great distances to harvest subsistence resources, especially when resources are scarce or absent in their home territories (OSM 2015c). Having multiple opportunities available to subsistence harvesters outside their home territories allows for adaptations in times of resource shortages or other environmental changes.

Biological Background

The Alaska Department of Fish and Game (ADF&G) translocated 36 muskoxen near Cape Thompson in 1970, with an additional 34 animals released in the same area in 1977 (Westing 2011). This restored

population of muskoxen has occupied CAKR since at least 1979. These animals occupy habitat from the mouth of the Noatak River north to Cape Lisburn (NPS 2014).

Between 2004 and 2010, over half the estimated total muskoxen of the Cape Thompson population were located within CAKR (OSM 2015a). Muskox in the Cape Thompson area appear to occupy relatively discrete, core areas separate from the muskox population on the Seward Peninsula, although muskox are also widely scattered throughout the remainder of Unit 23 in groups of 1-4 individuals (Westing 2011).

Aerial surveys in the core count area within CAKR indicated the population of muskoxen had declined between the mid-2000s and early 2010s. The total population, including the core area, the Noatak River drainage, and portions of Unit 26A was estimated to be approximately 500 animals (NPS 2014). Composition data collected between 2004 and 2014 indicated that bull to cow ratios have declined (NPS 2014).

The ADF&G manages muskoxen in Unit 23 to meet certain objectives (Westing 2011):

1. Survey the Cape Thompson population at least once every 3 years.
2. Provide for subsistence hunting and eventually a general hunting season for muskox on a sustained yield basis.
3. Provide for non-harvest values of muskox (e.g., viewing and photography).

The NPS manages muskoxen to meet various objectives, including:

1. Maintain a viable population of muskoxen in CAKR and Noatak National Preserve in perpetuity (NPS 2014).
2. Provide subsistence opportunity for harvesting muskoxen when sustainable (NPS 2014).

Harvest History

Since 2005 when this Federal hunting opportunity was first made available to a limited number of Federally qualified subsistence users, the NPS has issued 6 permits, and 3 residents have hunted for muskox in CAKR. Three bull muskoxen have been harvested. No harvest has been reported since 2010 (OSM 2015b).

Effects of the Proposal

If this proposal is adopted, more Federally qualified subsistence users would become eligible to obtain a Federal permit to harvest muskox in CAKR. In addition to those living relatively near the monument, residents of the region who do not live near the monument would be eligible for a Federal permit thereby increasing their harvest opportunities for muskoxen. With a decline in the Western Arctic Caribou Herd and pending restrictions on take of caribou in the region, muskoxen may become more desirable and critical in the near future for some residents of Unit 23.

If this proposal is adopted, there would most likely be an increase in applications for the two existing Federal permits. For economic and practical reasons, many eligible hunters would likely not apply or likely not travel to CAKR to hunt muskox due to distance if they received a permit. However, for those hunters and others in the region, knowing that this subsistence opportunity legitimately and legally exists would align with contemporary beliefs that all people living in the region should have equal access and opportunity to harvest resources on the land (Anderson et al. 1998).

Expanding the pool of eligible harvesters in the region and providing more subsistence opportunity would align with the Board's customary and traditional use determination for these communities' uses of muskoxen and Title VIII of ANILCA.

Reopening this Federal hunt to the entire resident zone would internally align National Park Service regulations and be consistent with the agency's intent in 2003 when it signed a Finding of No Significant Impact and changed the resident zone to all lands in the NANA region.

There has been no reported harvest in this Federal hunt since 2010. The total allowed harvest is 2 bull muskoxen and most likely would not be increased in the near future. If this proposal became regulation, harvest limits and the season would not change. There would most likely be little or no biological effects or immediate conservation concerns, since the Federal manager has delegated authority to set the quota.

OSM PRELIMINARY CONCLUSION

Support Proposal WP16-50 **with modification** to include resident zone community members living east and north of the Buckland River drainage; remove regulatory language referencing harvest quotas and closures; delegate authority to the NPS to close the season and determine annual quotas via a delegation of authority letter only (**Appendix 1**).

The modified regulation should read:

Unit 23—Muskox

Unit 23—Cape Krusenstern National Monument—1bull by Federal permit. ~~Annual harvest quotas and any needed closures will be announced by the Superintendent of Western Arctic National Parklands.~~ Cape Krusenstern National Monument is closed to the taking of musk oxen except by resident zone community members ***living east and north of the Buckland River drainage*** *~~with permanent residence within the Monument or the immediately adjacent Napaktuktuk Mountain area, south of latitude 67°05' N and west of longitude 162°30' W hunting under these regulations~~.*	*Aug. 1 – March 15*

Justification

The proposed regulatory change would provide more opportunity for Federally qualified subsistence users to harvest muskox, which is consistent with ANILCA Title VIII and the National Park Service's management objective to provide subsistence opportunity for harvesting the species when sustainable. With a decline in the Western Arctic Caribou Herd and pending restrictions on take of caribou, muskoxen may become more important for maintaining a subsistence way of life in Unit 23.

The proposed change is consistent with the Board's positive customary and traditional use determination for these communities. Reopening this Federal hunt to most residents in Unit 23 is consistent with the NPS's decision in 2003 to change the resident zone to all lands in the NANA region.

Little or no biological effects or conservation concerns are anticipated to result from this proposed change.

People have in the past and continue to move from place to place in the region for various reasons, including hunting. The proposed regulation is consistent with their traditional and cultural practices of being mobile on the land for purposes of subsistence harvest when necessary.

The modification is necessary because only residents of Unit 23 living east and north of the Buckland River drainage have a customary and traditional use determination for muskoxen in the hunt area. Creation of a delegation of authority letter for the Superintendent of the Western Arctic National Parklands will clarify regulations and allow for flexible hunt management through in-season adjustment of hunt parameters.

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Appendix 1

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

Dear Superintendent:

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

It is the intent of the Board that actions related to management of muskox by designated Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), the National Park Service (NPS) Regional Office, and the Chair of the Northwest Arctic Subsistence Regional Advisory Council (Council). Federal managers are expected to work with managers from the State and other Federal agencies, the Council Chair, and applicable members of the Council to minimize disruption to Federally qualified subsistence users and existing agency programs and in a manner consistent with the need for special action.

DELEGATION OF AUTHORITY

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

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

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

- To set closing dates for the muskox season in CAKR.
- As needed, set or adjust the annual harvest quotas for muskox for the Federal hunt in CAKR.

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

All other proposed changes to codified regulations, such as customary and traditional use determinations, shall be directed to the Federal Subsistence Board.
The Federal public lands subject to this delegated authority are those in Cape Krusenstern National Monument.

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

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will 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, and the Chair of the Northwest Arctic 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 immediately notify the proponent of the request. A summary of special action requests and your resultant actions must be provided to the coordinator of the Northwest Arctic Subsistence Regional Advisory Council at the end of each calendar year for presentation to the Council.

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. 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.

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

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, Northwest Arctic Regional Advisory Council
Chair, Cape Krusenstern National Monument Subsistence Resource Commission
Subsistence Manager, Cape Krusenstern National Monument
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

WP16–51 Executive Summary	
General Description	Proposal WP16-51 requests that the portion of Unit 23 north and west of the Kobuk River drainage be opened to the harvest of 1 bull muskox, Aug. 1 – Mar. 15. *Submitted by the Northwest Arctic Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 23—Muskox** ***Unit 23—that portion north and west of the Kobuk River drainage — 1 bull by Federal registration permit*** — ***Aug. 1 – Mar. 15*** *Unit 23, remainder* — *No open season*
OSM Preliminary Conclusion	**Support with modification** to specify that harvest would be by State or Federal permit and to delegate authority to NPS to close the season, determine annual harvest quotas, and determine the number of Federal permits to be issued, by delegation of authority letter only. **Unit 23—Muskox** ***Unit 23—that portion north and west of the Kobuk River drainage —1 bull by State or Federal registration permit*** — ***Aug. 1 – Mar. 15*** *Unit 23, remainder* — *No open season*
Northwest Arctic Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	

WP16–51 Executive Summary	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP16-51

ISSUES

Proposal WP16-51, submitted by the Northwest Arctic Subsistence Regional Advisory Council, requests that the portion of Unit 23remainder occurring north and west of the Kobuk River drainage be opened to the harvest of 1 bull muskox, Aug. 1 – Mar. 15.

DISCUSSION

Currently, the portion of Unit 23 north and west of the Kobuk River drainage is closed to muskox harvest under Federal regulation, although harvest is allowed by a State Tier II permit. The proponent states that adoption of this proposal will provide additional harvest opportunities to Federally qualified subsistence users. The proponent also states that the proposed changes will reduce regulatory complexity and improve management by creating parallel Federal and State seasons and harvest limits for muskox.

Existing Federal Regulation

Unit 23—Muskox

Unit 23, remainder	*No open season*

Proposed Federal Regulation

Unit 23—Muskox

Unit 23—that portion north and west of the Kobuk River drainage — 1 bull by Federal registration permit	***Aug. 1 – Mar. 15***
Unit 23, remainder	*No open season*

Existing State Regulation

Unit 23—Muskox

Unit 23, that portion north and west of the Kobuk River drainage—1 bull by permit	*Aug. 1 – Mar. 15*
Unit 23, remainder	*No open season*

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 managed lands, and 10% U.S. Fish and Wildlife Service managed lands. The NPS manages 65% of the new proposed hunt area. See **Map 1**.

Customary and Traditional Use Determinations

Residents south of Kotzebue Sound and west of and including the Buckland River drainage have a positive customary and traditional use determination for muskox in the portion of Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage.

Residents of Unit 23 east and north of the Buckland River drainage have a positive customary and traditional use determination for muskox in Unit 23 remainder.

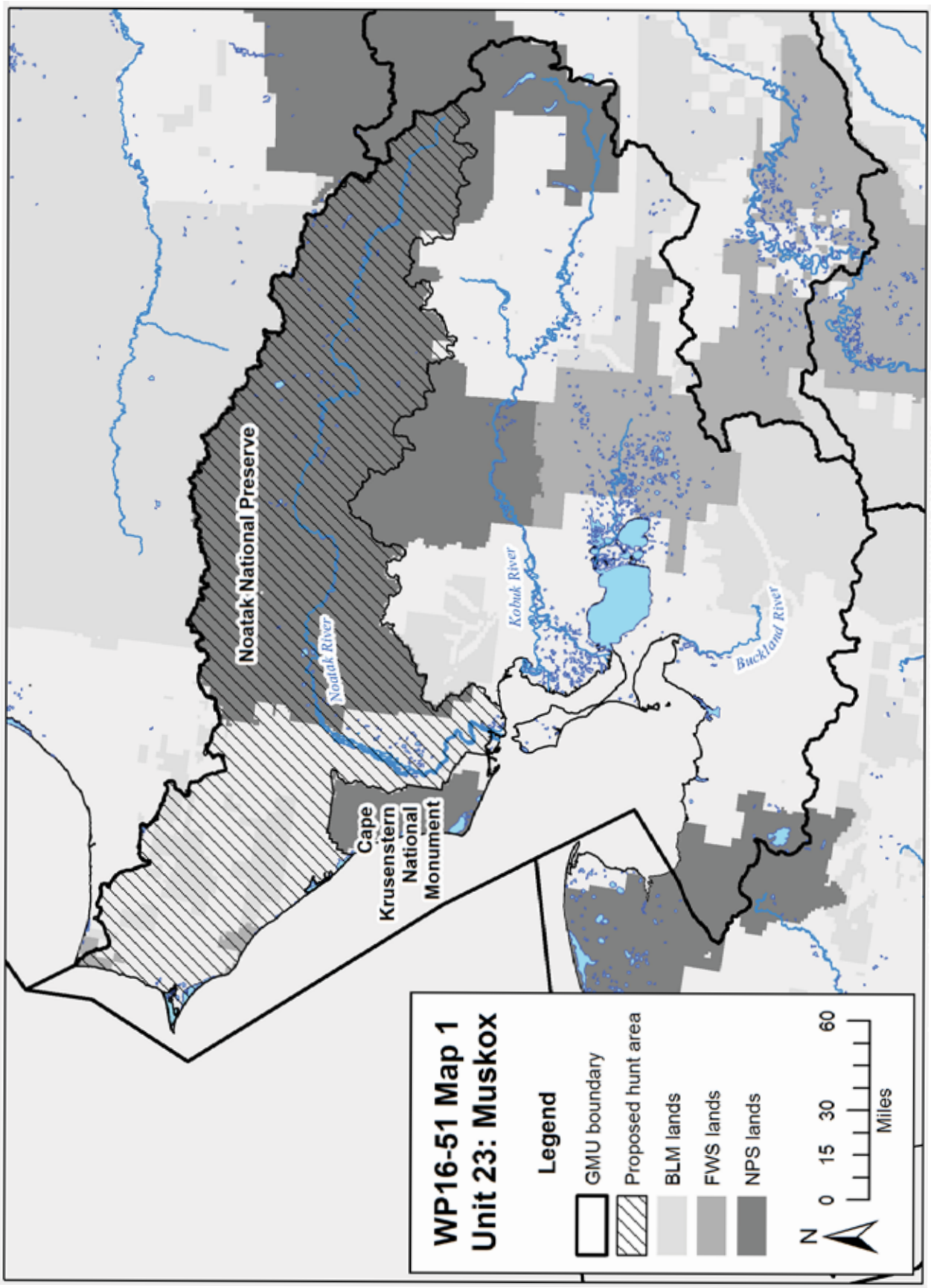
Regulatory History

There have been few changes in the Federal regulations for muskox in Unit 23 north of Buckland drainage. In 2005, the Federal Subsistence Board approved Proposal WP05-19, which limited muskox harvest in the Cape Krusenstern National Monument to resident zone community members with permanent residence within the Monument or the immediately adjacent Napaktuktuk Mountain area (FWS 2005).

State regulations for muskox harvest in this region have not changed since a Tier II hunt was established in 2000 (Westing 2013).

Biological Background

Although muskoxen are native to northwest Alaska, the current muskox populations in Unit 23 are the result of several translocations that occurred in the 1970s. These translocations, which occurred near Teller and Cape Thompson, have resulted in two distinct populations in the region. The portion of Unit 23 south and west of the Buckland drainage is inhabited by muskox belonging to the Seward Peninsula


WP16-51 Map 1
Unit 23: Muskox
Legend
GMU boundary
Proposed hunt area
BLM lands
FWS lands
NPS lands
N
0 15 30 60
Miles
Noatak National Preserve
Noatak River
Kobuk River
Buckland River
Cape Krusenstern National Monument

population. These animals are managed with Unit 22 muskoxen, where the harvest quota is jointly managed by State and Federal agencies (Gorn and Dunker 2013). The Cape Thompson population primarily inhabits the portion of Units 23 and 26A between the mouth of the Noatak River and Corwin Bluff. This population has grown more modestly than the Seward Peninsula population. In addition to these two distinct populations that occupy core ranges, smaller groups of muskox occur throughout Unit 23 (Westing 2013).

Surveys to estimate minimum size of the Cape Thompson population occurred between 1987 and 2010. These surveys focused on the core range, the area within approximately 12 mi of shore, between the mouth of the Noatak River and Corwin Bluff (Westing 2013). As a result of increased incidental observation of muskoxen outside the core range, along with survey results suggesting a population decline within the core range, extensive surveys of the known range and other potential habitat were initiated in 2011. Based on 2012 survey results, there are estimated to be 244-355 muskoxen (95% CI) in Unit 23 remainder (Westing 2013). Due to the changes in animal distribution and survey methodologies, it is difficult to ascertain the population trend. However, it is believed to be relatively stable (Adkisson 2015, pers. comm.).

There is considerable annual variation in calf production and yearling survival in the Cape Thompson population. In general, calf production is low, typically below 15%. Fall 2012 composition surveys revealed 20 calves:100 cows (≥2 years old). Between 2010 and 2012, the number of yearlings per 100 cows fell from 39 to 8, the lowest number of yearlings recorded since 2004. Bull:cow ratios differ between spring and fall surveys, due to differential bull sightability between seasons. Based on spring surveys, the bull:cow ratio declined between 2010 and 2012. In 2012 there were 32 bulls, including 19 mature bulls, per 100 cows (Westing 2013).

State management goals for muskox in Unit 23 are to 1) allow for growth and expansion of muskoxen into historic ranges, 2) provide for subsistence hunting and eventually for recreational hunting of muskoxen on a sustained yield basis, and 3) provide for nonconsumptive uses of muskoxen (Westing 2013).

Harvest History

Currently, the annual harvest quota for Cape Thompson muskox in Unit 23 remainder is eight bulls. Two permits are allocated to residents of Cape Krusenstern National Monument by Federal permit. Harvest of muskox in the remaining portion of Unit 23 north and west of the Kobuk drainage is allowable with a State Tier II permit (Adkisson 2015, pers. comm.), with up to six permits issued annually since harvest began in 2000. Through 2003, muskoxen harvested under Tier II permits were taken exclusively by residents of Point Hope, Kivalina and Noatak. Since 2004, Tier II permits have increasingly been issued to residents of Kotzebue. As a result, all recent harvest has occurred in a small area between the Noatak River and Cape Krusenstern National Monument (Westing 2013). Because the Tier II permitting process favors users with a history of consistent and successful hunts, it is difficult for new users to have an opportunity to harvest muskox in Unit 23 under the State system (Westing 2013, Adkisson 2015, pers. comm.).

Most muskoxen are harvested Aug. – Sep. and Dec. – Mar. Nearly all muskox harvested in Unit 23 remainder since 2000 have been bulls. Only two animals have been harvested from the Cape Krusenstern National Monument under Federal regulation since 2000 (Westing 2013). The remainder have been

harvested under a State Tier II permit (**Figure 1**). Since 2000, harvest has averaged three animals per year. However, since 2006, at least four of the six Tier II permit holders have had successful hunts (**Figure 1**). This level of harvest is considered appropriate for this population, as it provides harvest opportunity for subsistence users without jeopardizing the population (Westing 2013).

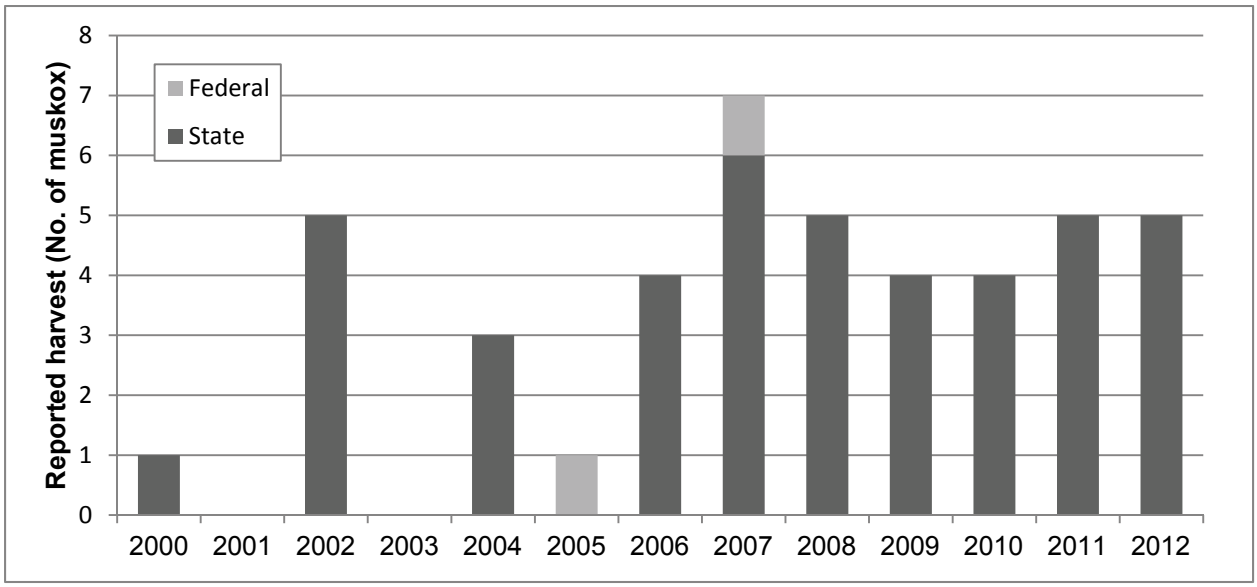


Figure 1. Annual reported harvest of muskoxen in Unit 23 remainder, 2000-2012, under State (Tier II) and Federal regulation. Federal harvest is limited to Cape Krusenstern National Monument, by residents of the Monument. (Hughes 2013; ADF&G 2015; Adkisson 2015, pers. comm.)

Effects of the Proposal

This proposal would establish a Federal subsistence season and harvest limit for muskox in the portion of Unit 23 north and west of the Kobuk River drainage. Currently, harvest in this area is allowed by State Tier II permit. Opening a Federal season where a State season already exists would require collaborative establishment of harvest quotas by State and Federal managers, as occurs in Unit 22 and the in southern portion of Unit 23. As a result of the quota, the impacts on the muskox population are expected to be negligible. Adoption of this proposal would likely result in more equitable distribution of harvest permits, since the Tier II system favors previously successful hunters and limits participation by users who do not apply or hunt consistently.

OSM PRELIMINARY CONCLUSION

Support Proposal WP16-51 **with modification** to specify that harvest would be by State or Federal permit and to delegate authority to NPS to close the season, determine annual harvest quotas, and determine the number of Federal permits to be issued, by delegation of authority letter only (**Appendix A**).

The modified regulation should read:

Unit 23—Muskox

Unit 23—that portion north and west of the Kobuk River drainage —1 bull by State or Federal registration permit	***Aug. 1 – Mar. 15***
Unit 23, remainder	*No open season*

Justification

The Cape Thompson muskox population has exhibited modest growth relative to the Seward Peninsula population and is not currently believed to be growing. However, current levels of harvest are believed to be sustainable, and the harvest quota will continue to be managed based on the most recent biological data. Consequently, adoption of this proposal doesn't present any conservation concerns. Allowing harvest by State or Federal permit will provide additional opportunities for Federally qualified subsistence users, as Federal permits have fewer restrictions than the State's Tier II permits. This approach would likely result in a more equitable distribution of permits, and is consistent with other muskox regulations in Units 22 and 23. Delegation of Authority to the Superintendent of the Western Arctic National Parklands will serve to clarify regulations and allow for hunt management flexibility through in-season adjustment of hunt parameters.

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Gorn, T. and W.R. Dunker. 2013. Unit 22 muskox. Pages 17-51 *in* P. Harper, editor. Muskox management report of survey and inventory activities 1 July 2010 – 30 June 2012. Alaska Department of Fish and Game, Species Management Reports ADF&G?DWC?SMR-2013-2, Juneau, AK.

Westing, C. 2013. Unit 23 muskox. Pages 52-74 *in* P. Harper, editor. Muskox management report of survey and inventory activities 1 July 2010 – 30 June 2012. Alaska Department of Fish and Game, Species Management Reports ADF&G?DWC?SMR-2013-2, Juneau, AK.

APPENDIX A

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

Dear Superintendent:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Superintendent of the Western Arctic National Parklands to issue emergency or temporary special actions if necessary to ensure the conservation of a healthy wildlife population, to continue subsistence uses of wildlife, for reasons of public safety, or to assure the continued viability of 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 north and west of the Kobuk River drainage for the management of muskox on these lands.

It is the intent of the Board that actions related to management of muskox by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), the Bureau of Land Management, and the Chair of the Northwest Arctic Subsistence Regional Advisory Council (Council) to the extent possible. Federal managers are expected to work with State managers, 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 the Western Arctic National Parklands is hereby delegated authority to issue emergency or temporary special actions affecting muskox on Federal lands as outlined under **Scope of Delegation** 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 closing dates for the muskox season on Federal public lands in Unit 23 north and west of the Kobuk River drainage as it applies to muskox on these lands.

- As needed, set or adjust annual harvest quotas and the number of Federal registration

permits to be issued annually for muskox on Federal public lands in Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage.

This delegation may be exercised only when it is necessary to conserve muskox populations, to continue subsistence uses, for reasons of public safety, or to assure the continued viability of the 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 north and west of the Kobuk River drainage.

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

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will 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-subsistence 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 Bureau of Land Management (Anchorage Field Office) and the Chair of the Northwest Arctic 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 members. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, the 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. <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: Commissioner, Alaska Department of Fish and Game
Assistant Regional Director, Office of Subsistence Management
Deputy Assistant Regional Director, Office of Subsistence Management
Field Manager, Bureau of Land Management Anchorage Field Office
Chair, Northwest Arctic Subsistence Regional Advisory Council
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

WP16–53/54 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** Proposal WP16-53/54 **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 announce early closure.~~*

WP16–53/54 Executive Summary		
	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 Recommendation		
North Slope Regional Advisory Council Recommendation		

WP16–53/54 Executive Summary	
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***

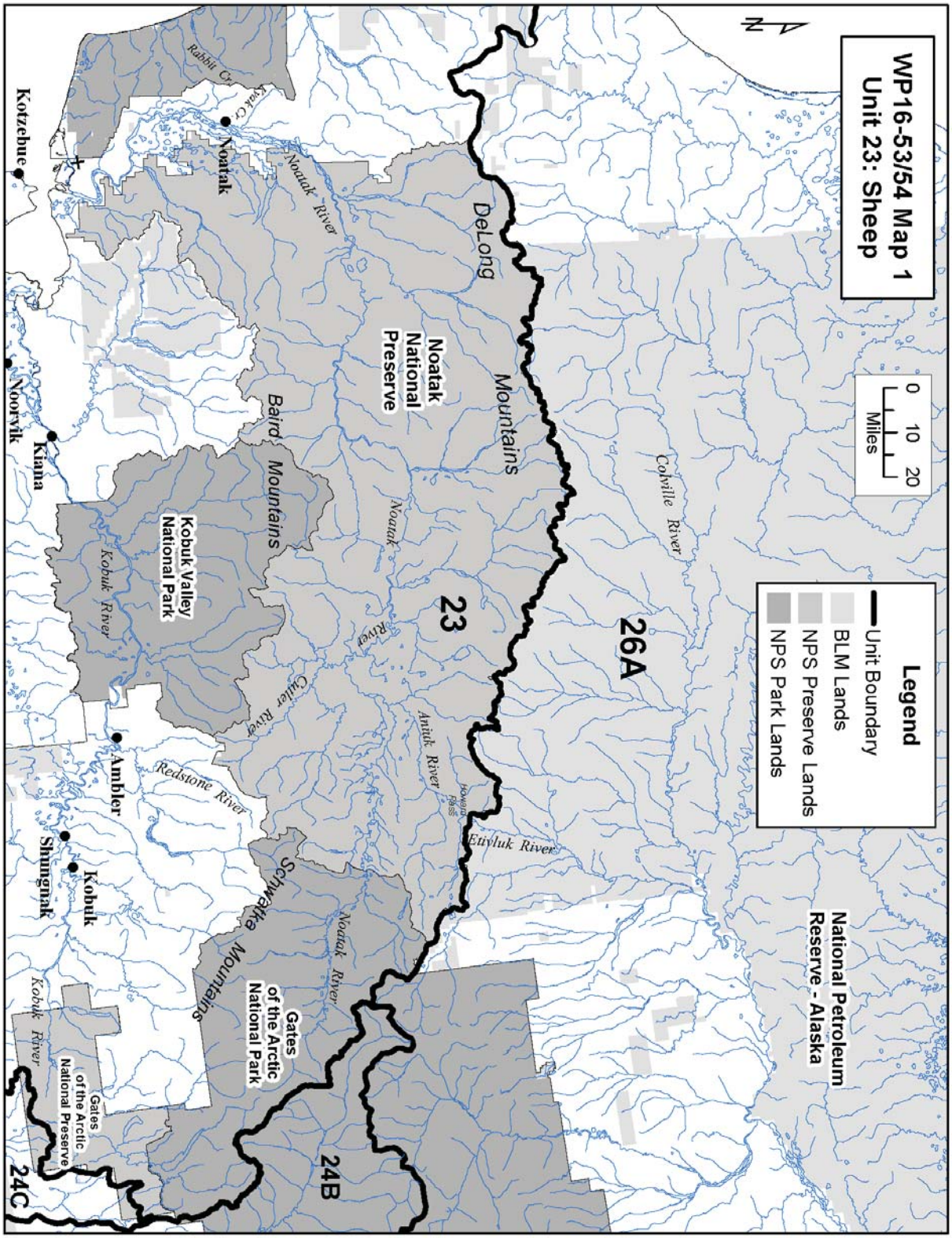
Existing State Regulation

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
Colville River
26A
23
24B
24C
DeLong Mountains
Noatak National Preserve
Baird Mountains
Kobuk Valley National Park
Schwatka Mountains
Gates of the Arctic National Park
Gates of the Arctic National Preserve
Noatak River
Kobuk River
Cutler River
Redstone River
Anitak River
Etivluk River
Noatak
Kobuk
Ambler
Shungnak
Kiana
Noorvik
Kotzebue
Rabbit Cr.
Kyak Cr.

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 1980's 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 8th, 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 25th, 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 objectives for Dall's sheep include monitoring Dall's 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 3:100 in WEAR as a whole, 4:100 in the DeLong Mountains and 2:100 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, 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*~~	***May be announced****~~No Federal open season~~Aug. 10 – Apr. 30*

~~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.*	*~~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.

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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

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*

WP16–37 Executive Summary		
	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***

WP16–37 Executive Summary		
	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***

WP16–37 Executive Summary		
	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***

WP16–37 Executive Summary	
	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** 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. 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.***

WP16–37 Executive Summary		
	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***

WP16–37 Executive Summary		
	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~~—155~~ *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***

WP16–37 Executive Summary		
	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***

WP16–37 Executive Summary		
	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***

WP16–37 Executive Summary		
	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		

WP16–37 Executive Summary	
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 adopted 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 Federal Subsistence Board (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 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 (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, Federal Subsistence Board (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 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 (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 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 in-season Federal land 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, 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 would indicate that the CACH may have declined by about 20% since 2010 (Caribou Trails 2014, Lenart 2011).

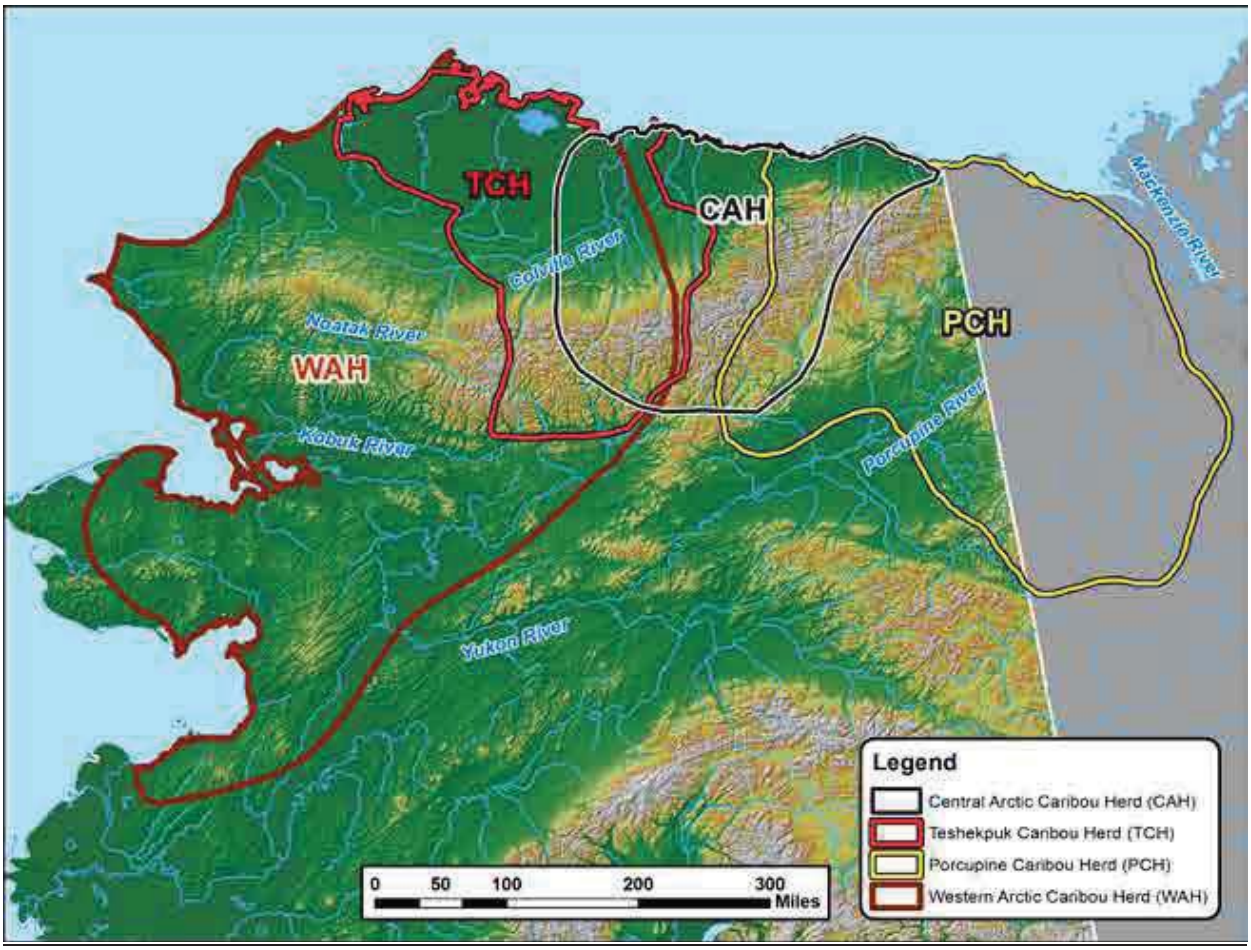

Figure 1. Herd overlap and ranges of the WACH, TCH, CACH and Porcupine caribou herds (WACH 2014).

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 2008/2009 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 from aerial photo censuses. 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 (minimum estimate 11,822) in 1982 to 68,932 (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.).

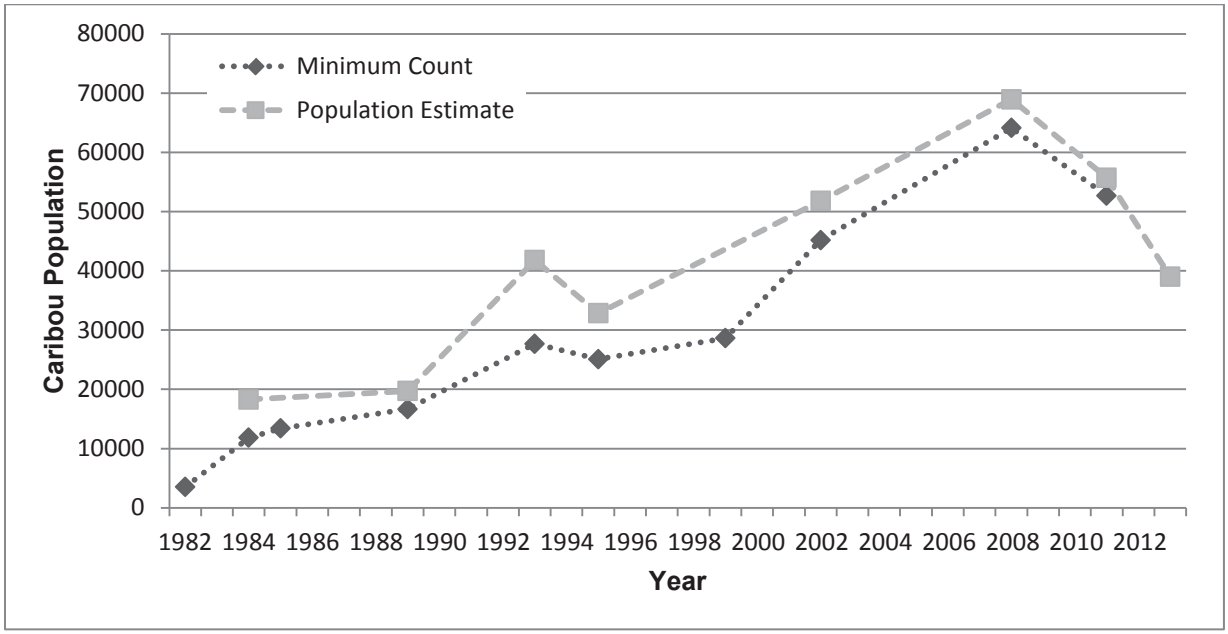

Figure 2. Minimum counts and population estimates of the Teshekpuk Caribou Herd from 1980-2014. Population estimates from 1984-2014 are based on aerial photographs of groups of caribou that contained radio–collared animals (Parrett 2011, 2013, Parrett 2015, pers. comm.).

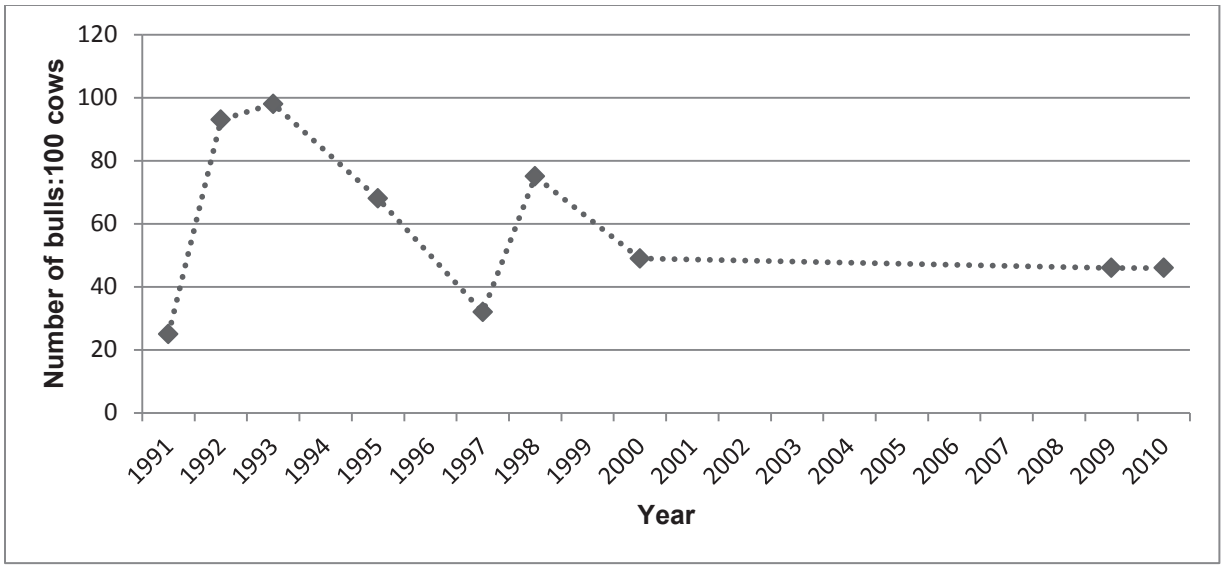

Figure 3. Bull:cow ratios of the Teshekpuk Caribou Herd (Parrett 2013).

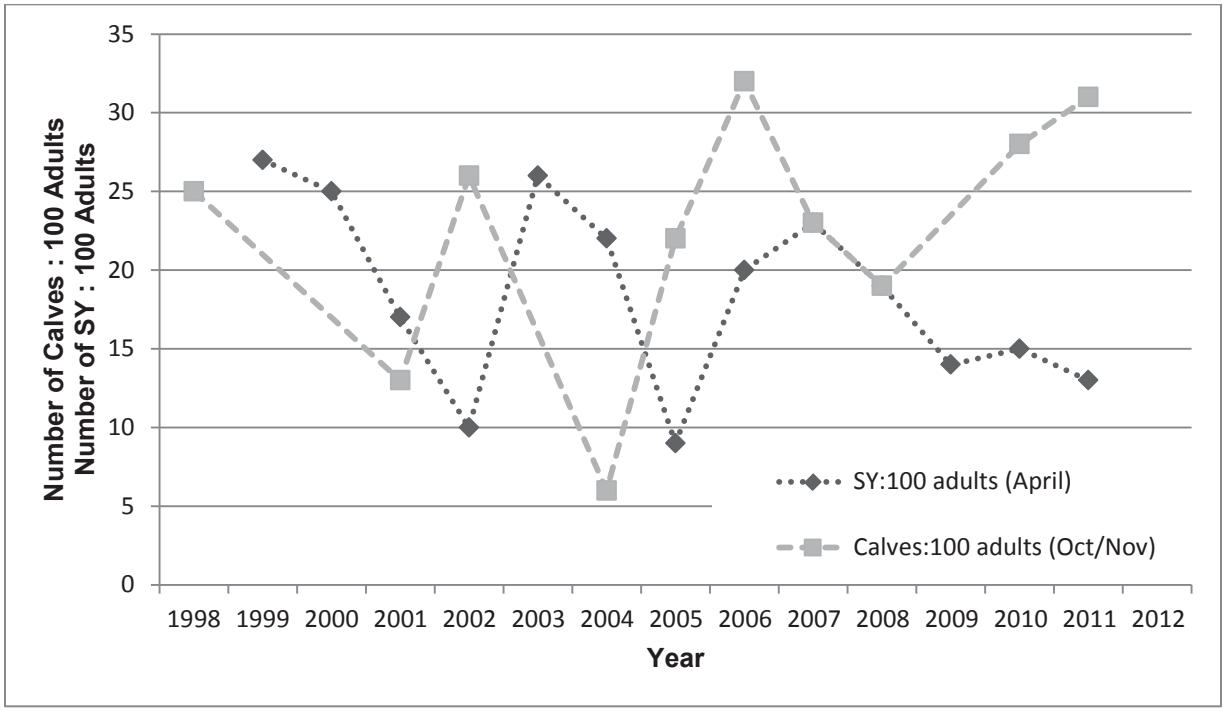

Figure 4. Calf:adult and short yearling (SY):adult ratios for the Teshekpuk Caribou Herd (Parrett 2013). Short yearlings are 10-11 months old caribou.

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).

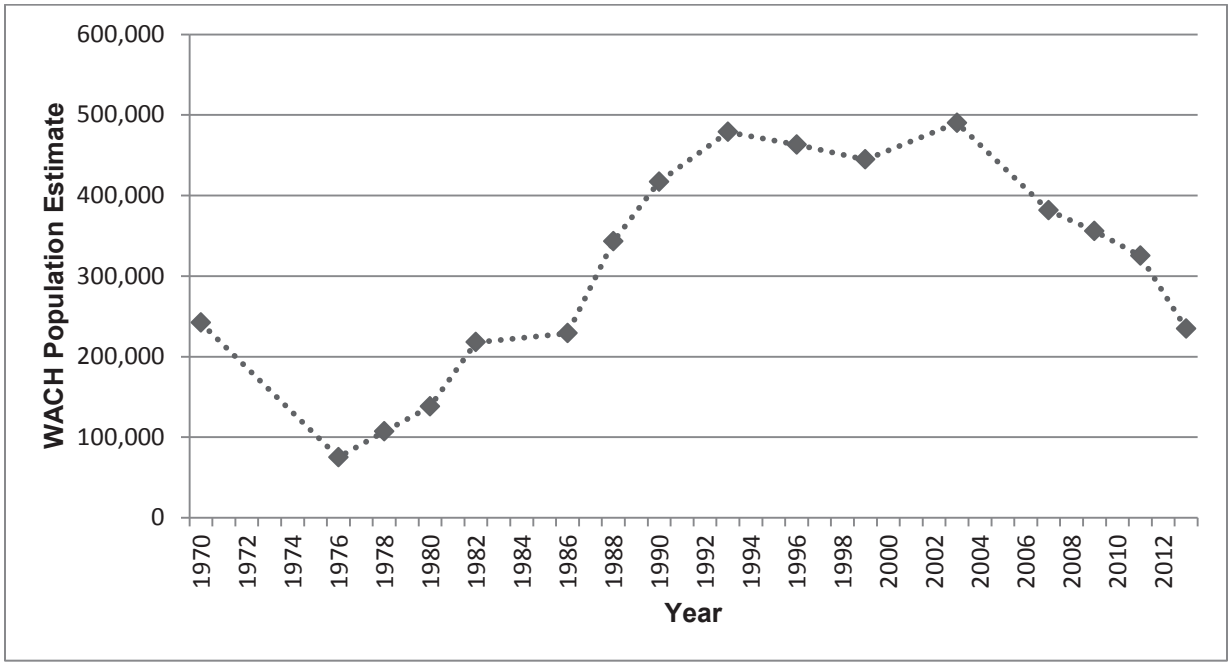

Figure 5. Western Arctic caribou herd population estimates from 1970-2013. Population estimates from 1986-2013 are based on aerial photographs of groups of caribou that contained radio–collared animals (Dau 2011, 2013, 2014).

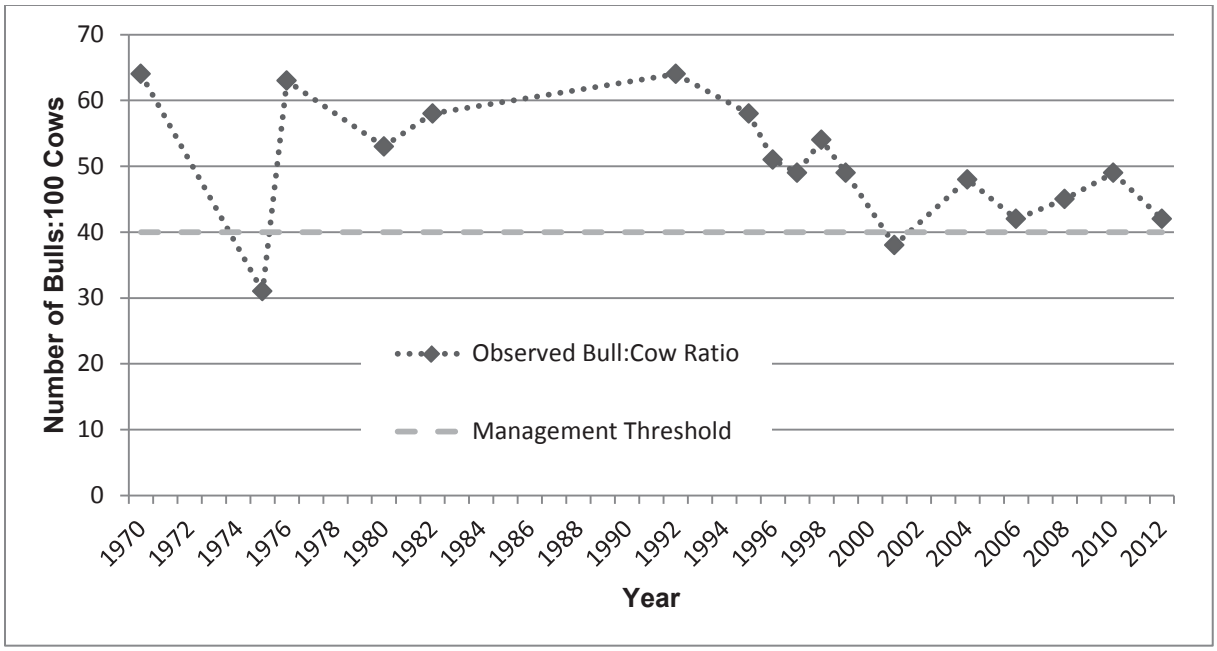

Figure 6. Bull:Cow ratios for the Western Arctic Caribou Herd (Dau 2013).

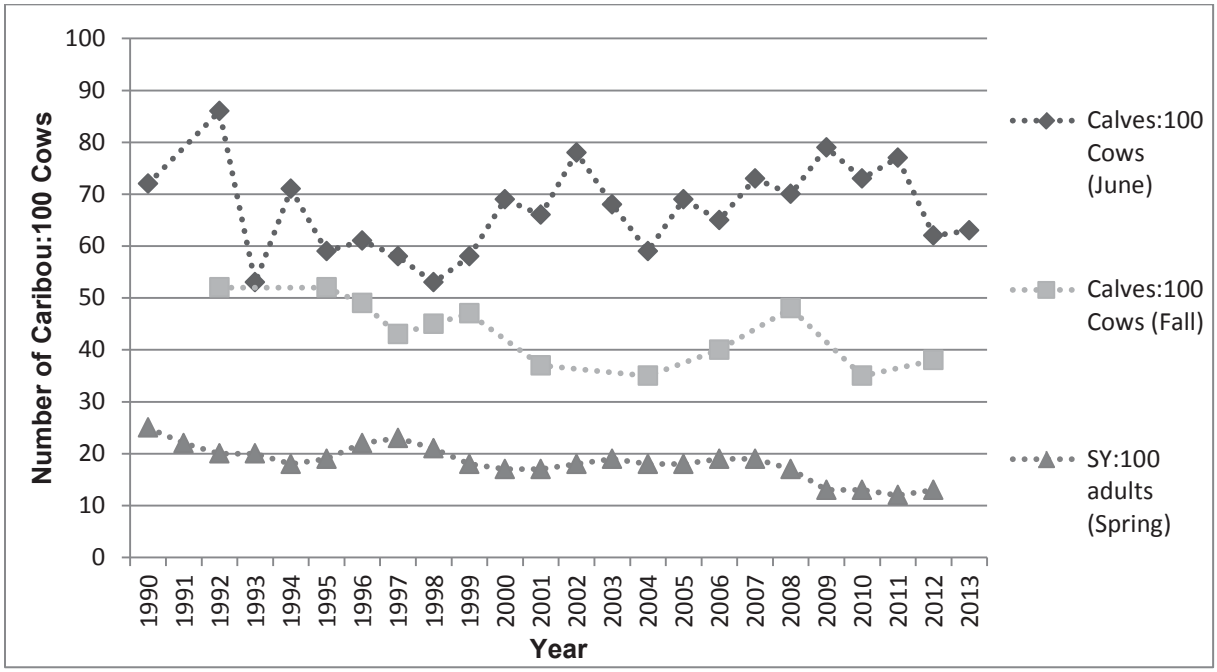

Figure 7. Calf:cow and short yearling (SY):adult ratios for the Western Arctic Caribou Herd (Dau 2013). Short yearlings are 10-11 months old caribou.

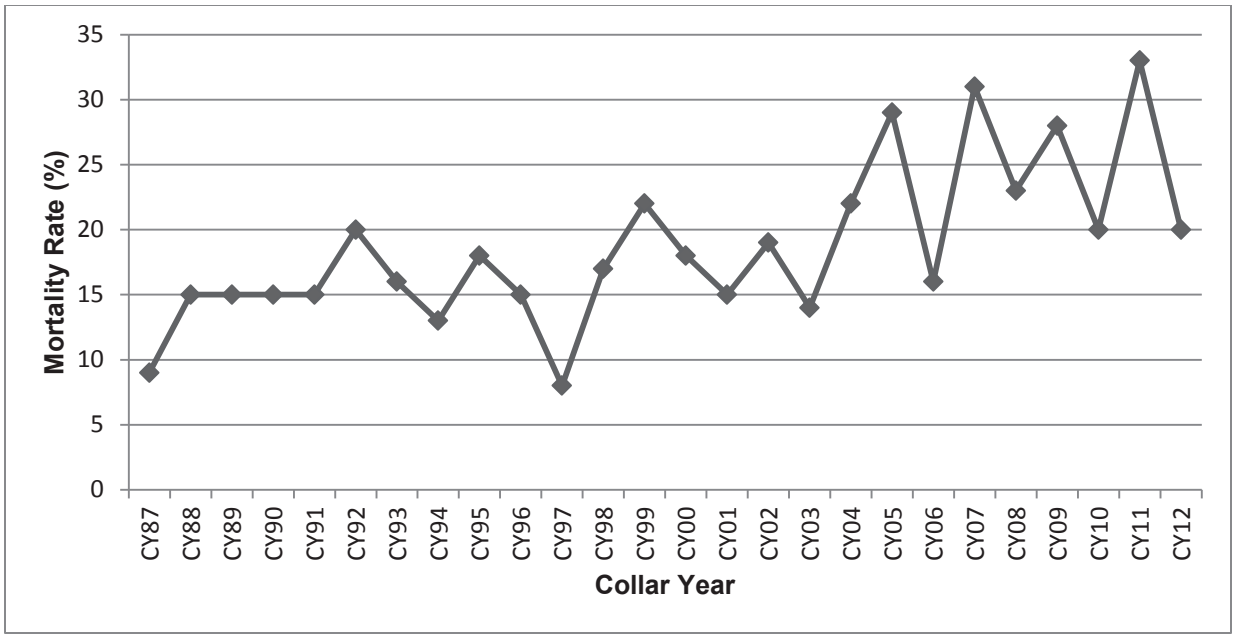

Figure 8. Mortality rate of radio-collared caribou in the Western Arctic caribou herd (Dau 2013). Collar Year = 1 Oct-30 Sept.

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 RY10 and RY11 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 (RY) 2010, 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 RY08, RY09, and RY10. 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).

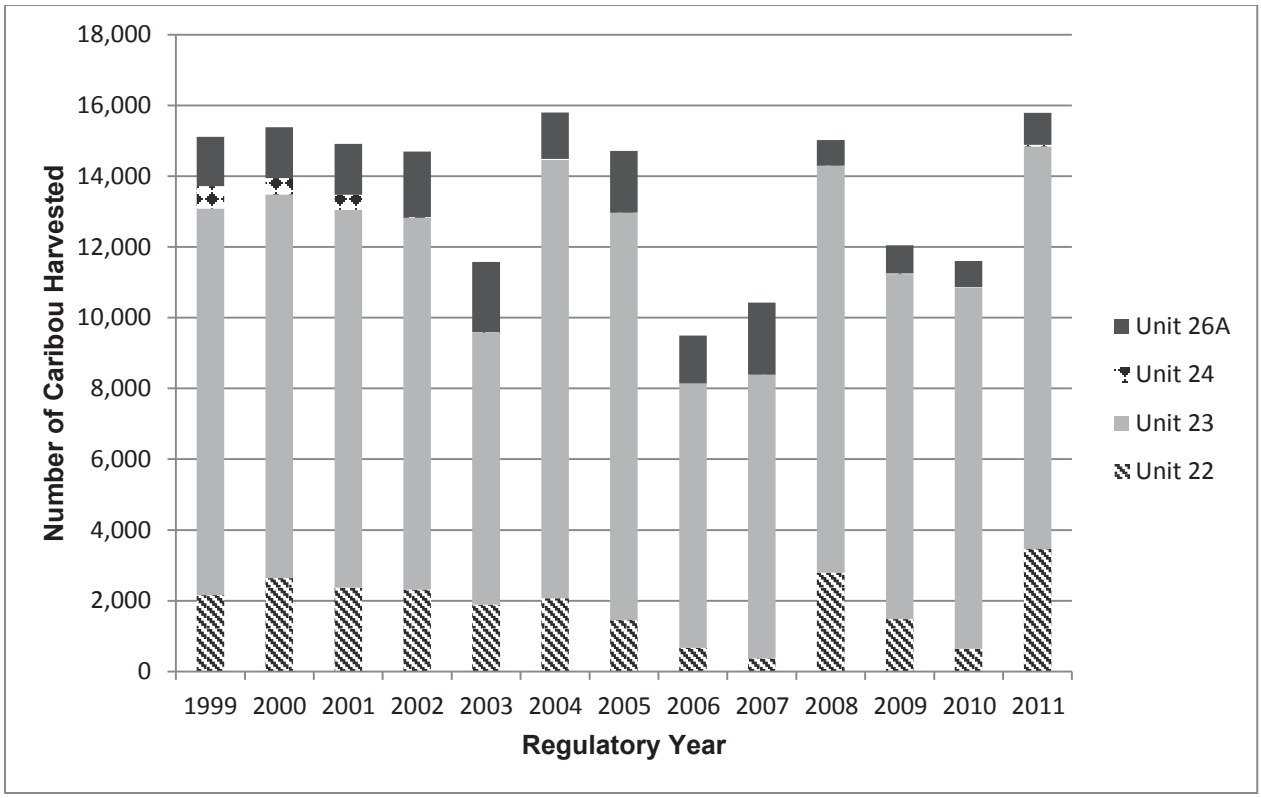

Figure 9. Total (resident and non-resident) estimated annual harvest of Western Arctic caribou by unit (Dau 2009, 2013). Unit 21D not included (average harvest is 0-10 caribou/year).

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 Federal Subsistence Board (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 *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.

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Appendix 1

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

Dear Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the 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

WP16–43 Executive Summary	
General Description	Proposal WP16-43 requests closure of Federal public lands to caribou harvest in the Upper Adreafsky drainages in Unit 18 and in the portion of Unit 22 south of the Unalakleet River to prevent incidental harvest of reindeer. *Submitted by the Seward Peninsula Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 18—Caribou** *Unit 18—that portion to the east and south of the Kuskokwim River—2 caribou by State registration permit* — *Aug. 1 – Mar. 15* ***Unit 18, that portion that includes all upper drainages of the Andreafsky River—Federal public lands are closed to the taking of caribou, but can be opened by the in-season manager if caribou are present*** *Unit 18 remainder—2 caribou by State registration permit* — *Aug. 1 – Mar. 15* **Unit 22—Caribou** *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.* — *Jul. 1 – Jun. 30* ***Unit 22A, that portion south of the Unalakleet River—Federal public lands are closed to the hunting of caribou, but can be opened by the in-season manager if caribou are present***
OSM Preliminary Conclusion	**Oppose**

WP16–43 Executive Summary	
Yukon-Kuskokwim Delta Regional Advisory Council Recommendation	
Western Interior Regional Advisory Council Recommendation	
Seward Peninsula Regional Advisory Council Recommendation	
Northwest Arctic Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**1 Support**

DRAFT STAFF ANALYSIS
WP16-43

ISSUES

Proposal WP16-43, submitted by the Seward Peninsula Subsistence Regional Advisory Council, requests closure of Federal public lands to caribou harvest in portions of Units 18 and 22 to prevent incidental harvest of reindeer.

DISCUSSION

This proposal was submitted in the interest of protecting privately owned reindeer. The proponent asserts that there have been no caribou present in the area for 15-20 years. However, since caribou harvest is allowed, incidental harvest of reindeer occurs at the expense of reindeer herders. The proponent believes that this proposal will affect neither Federally qualified subsistence users, nor nonsubsistence users, since there are no caribou currently present in the area and reindeer harvest is illegal.

Existing Federal Regulation

Unit 18—Caribou

Unit 18—that portion to the east and south of the Kuskokwim River—2 caribou by State registration permit	*Aug. 1 – Mar. 15*
Unit 18 remainder—2 caribou by State registration permit	*Aug. 1 – Mar. 15*

Unit 22—Caribou

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.	*Jul. 1 – Jun. 30*

Proposed Federal Regulation

Unit 18—Caribou

Unit 18—that portion to the east and south of the Kuskokwim River—2 caribou by State registration permit	*Aug. 1 – Mar. 15*

Unit 18, that portion that includes all upper drainages of the Andreafsky River—Federal public lands are closed to the taking of caribou, but can be opened by the in-season manager if caribou are present

Unit 18 remainder—2 caribou by State registration permit	*Aug. 1 – Mar. 15*

Unit 22—Caribou

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.	*Jul. 1 – Jun. 30*

Unit 22A, that portion south of the Unalakleet River—Federal public lands are closed to the hunting of caribou, but can be opened by the in-season manager if caribou are present

Existing State Regulation

Unit 18—Caribou

Two caribou by permit available online at http://hunt.alaska.gov and in person in Anchorage, Bethel, Dillingham, Fairbanks, Homer, King Salmon, McGrath, Palmer, Soldotna and at local license vendors beginning July 17. No more than one bull may be taken; no more than one caribou may be taken from Aug. 1 – Jan. 31	*Aug.1 – Mar. 15*

Unit 22—Caribou

Unit 22, remainder

Resident hunters: 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*
Nonresident hunters: 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*

Extent of Federal Public Lands

Unit 18 is comprised of approximately 66% Federal public lands, and consists of 63% U.S. Fish and Wildlife Service (FWS) managed lands and 3% Bureau of Land Management (BLM) managed lands.

Unit 22A is comprised of approximately 68% Federal public lands, and consists of 56% BLM managed lands and 12% FWS managed lands. See Unit Map.

Customary and Traditional Use Determinations

Residents of Unit 18, Manokotak, St. Michael, Stebbins, Togiak, Twin Hills, and Upper Kalskag have a positive customary and traditional use determination for caribou in Unit 18.

Residents of Units 21D (west of the Koyukuk and Yukon rivers), 22 (except 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 positive customary and traditional use determination for caribou in Unit 22A.

Regulatory History

There have been several changes in State and Federal caribou regulations for Unit 22 in the past 20 years. Many of these changes address customary and traditional use. The remainder responded to changing caribou distributions, with an eye toward reducing potential conflicts between reindeer and caribou.

In 1996, the Federal Subsistence Board (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, and 24. This 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 (OSM 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 determinations for caribou in Unit 22A (OSM 1997).

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

In 2002, the Alaska Board of Game issued two emergency orders addressing caribou/reindeer conflicts. The first, EO 05-03-02, closed the portion of Unit 22D within the Pilgrim River drainage south of the Pilgrim River bridge to caribou hunting between Aug. 31, 2002 and June 30, 2003. The purpose of this action was to prevent the harvest of reindeer, since no caribou were present in the area during this time. The second, EO 05-04-02, opened this same area to the harvest of caribou from Oct. 17, 2002 through Jun. 30, 2003. This emergency order provided harvest opportunity after caribou had moved into the area (Dau 2005).

In 2003, the Board adopted Proposal WP03-40 with modification to establish a season of Jul. 1 – Jun. 30 with a harvest limit of 5 caribou per day in portions of Units 22D and 22E. This action was in response to the recent range expansion of caribou into these subunits, and provided additional subsistence harvest opportunities, with the expectation that neither caribou nor reindeer herds would be impacted. It also resulted in alignment of State and Federal regulations (OSM 2003).

In 2005, the Alaska Board of Game adopted a proposal creating two new hunt areas for caribou in Units 22B and 22D. This proposal also changed the season for these newly described areas to Oct. 1 – Apr. 15 (OSM 2006).

In 2006, the Board adopted Proposal WP06-37 with modification to designate a new hunt area in Unit 22B with a season of Oct. 1 – Apr. 30 and a may-be-announced season of May 1 – Sep. 30. The intent of this proposal was to provide continued subsistence opportunity when caribou were present, while minimizing incidental take of privately-owned reindeer and reducing user conflict when caribou were not present (OSM 2006).

In 2007, the Board adopted a policy on closures to hunting, trapping, and fishing on Federal public lands and waters in Alaska (Appendix A). The intent of the closure policy was to summarize and clarify the circumstances under which the Board has the authority to restrict or close Federal public lands to the harvest of fish and wildlife under existing statutes and regulations. This policy allows establishment or retention of closures primarily for the conservation of subsistence resources or to ensure continued use of these resources by subsistence users.

In the past 20 years, there have been numerous changes in the State and Federal regulations for caribou harvest in Unit 18. These changes, which have affected seasons, allowable harvest limits, permitting requirements, salvage requirements and methods and means, have responded exclusively to changes in abundance and distribution of the Mulchatna caribou herd. As such, they have little bearing on this proposal and will not be detailed here.

Current Events

In 2013, an aerial photo census indicated significant declines in the Western Arctic Caribou Herd (WACH; Dau 2014). In response to this decline, as well as declines in the Teshekpuk (TCH) and Central Arctic caribou populations, 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 regulatory changes took effect on July 1, 2015, and were the result of extensive discussion and compromise among a variety of user groups. In Unit 22A, these regulatory changes included defining a new hunt area in the portion north of the Golsovia River drainage. Changes also include adjustments to harvest seasons, restrictions on bull and cow harvest, and a prohibition on calf harvest.

Proposal WP16-37, which is concurrently under consideration, requests changes to Federal subsistence caribou harvest throughout the ranges of the WACH and TCH. In Unit 22, WP16-37 requests that Unit 22A hunt areas reflect the new State hunt areas, using the Golsovia River drainage as the boundary. It also

proposes new harvest seasons and limits. Reconciling the different hunt area descriptors, seasons and limits proposed by these two proposals will be necessary if both proposal are adopted.

Biological Background

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, west of the trans-Alaska pipeline. The caribou rut occurs during fall as the herd migrates south toward their wintering grounds in the northern portion of the Nulato Hills (Dau 2011, WACH Working Group 2011). Satellite collar data show that caribou occur at very low density in the Nulato hills area (no more than 2 caribou/mi^2 between 2002 and 2010) and occur exclusively in the northernmost portion of this region (Dau 2011). These data are consistent with the Seward Peninsula Subsistence Regional Advisory Council's assertion that caribou have not been present in the southern Nulato Hills, the area addressed by this proposal.

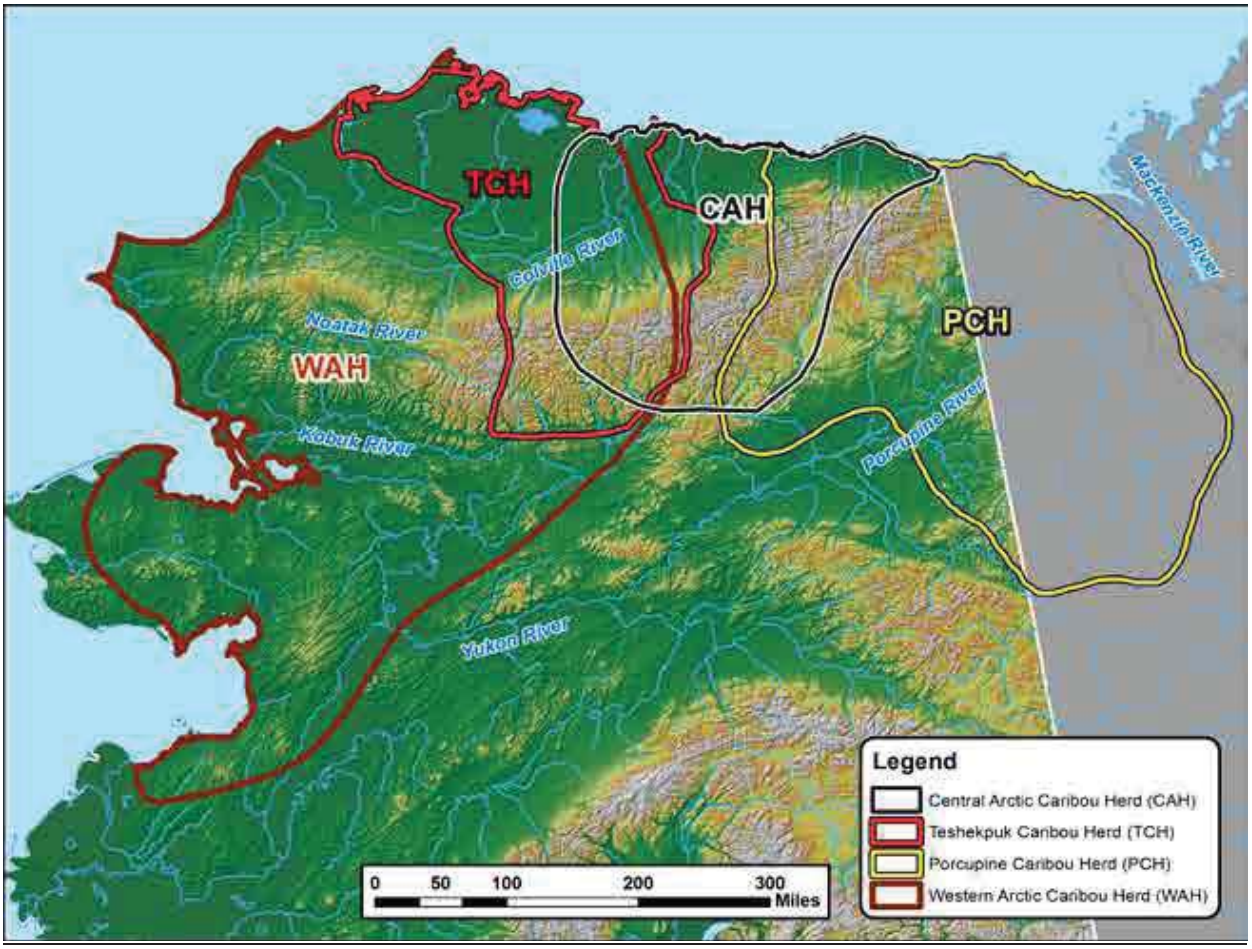

Figure 1. Herd overlap and ranges of the WACH, TCH, CACH and Porcupine caribou herds (WACH 2014).

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, decline in 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 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).

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 increased from an average of 15% between 1987 and 2003, 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 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.

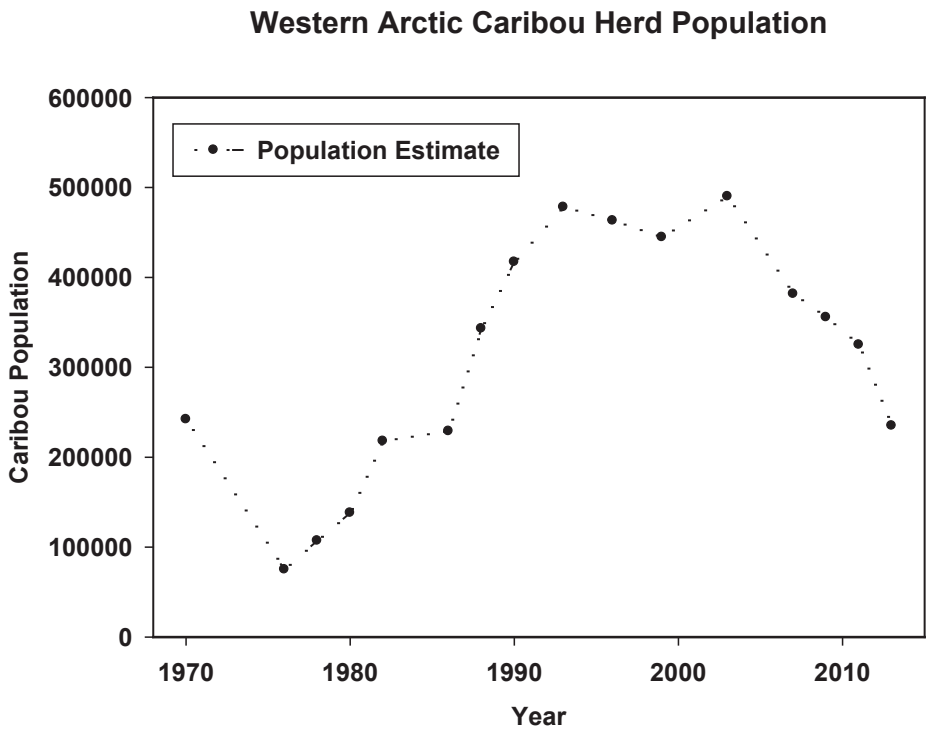

Figure 2. Maximum estimated population estimates of the Western Arctic Caribou Herd from 1970-2013. Population estimates from 1986-2013 are based on aerial photographs of groups of caribou that contained radio–collared animals (Dau 2011, 2014)

Reindeer

Reindeer, originally introduced to Alaska from Siberia in the late 1800s, were once distributed in small herds throughout western Alaska (Stern et al. 1980). More recently, the reindeer industry has been centered in the vicinity of the Seward Peninsula, where there are approximately 15 grazing allotments. Expansion of the WACH onto the Seward Peninsula resulted in the extirpation of many herds, beginning in the 1990s (Finstad et al. 2002). However, a few herds remain outside of the WACH current range, including a herd composed of animals owned by the Stebbins and St. Michael village corporations and by a private individual. This herd was estimated at 2,500 – 3,000 reindeer in 2013 (Blodgett 2015, pers. comm.). The herd currently grazes the areas surrounding the communities of Stebbins and St. Michael, including Stuart Island, though herd managers have expressed an interest in securing grazing permits on State and Federal land south and east of the current grazing area (Sonnen 2015, pers. comm., Thorpe 2015, pers. comm.).

Throughout areas occupied by both reindeer and caribou, there is concern that hunters may harvest reindeer while caribou hunting (Dau 2000). Both the Federal Subsistence Board and the Alaska Board of Game have been responsive to this concern and have periodically modified seasons and hunt areas to prevent intentional or unintentional harvest of reindeer (OSM 2003; Dau 2005; OSM 2006).

Table 1. Western Arctic Caribou Herd fall composition 1976 – 2014 (Dau 2011, 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[b]						
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)
[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, which includes harvest from 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**). Residents of Unit 22A, which includes the communities of St. Michael, Shaktoolik, Stebbins and Unalakleet, are responsible for less than 0.5% of the total WACH harvest (**Table 2**). There is no reported harvest from Unit 18 (Dau 2011).

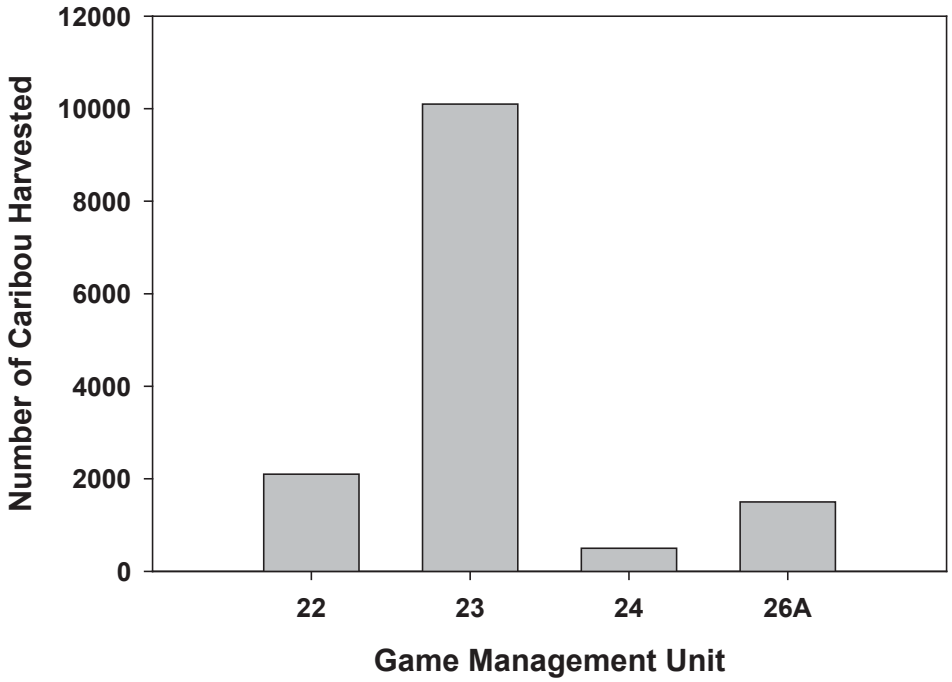

Figure 3. Average annual harvest by residents within the WACH range, RY1998-RY2012 (Dau 2014).

Table 2. Unit 22 caribou harvest by community and subunit. Adapted from Table 10, Dau 2011.

Game Management Unit	Community	Human Population	Relative Distance to Caribou	Estimated Harvest
22A	Saint Michael	444	Far	16
22A	Shaktoolik	214	Far	16
22A	Stebbins	598	Far	16
22A	Unalakleet	724	Far	15
22B	Elim	309	Average	131
22B	White Mountain	215	Average	80
22B	Golovin	167	Average	54
22B	Koyuk	347	Far	16
22C	Nome	3,495	Average	111
22D	Brevig Mission	328	Average	141
22D	Teller	256	Average	102
22E	Shishmaref	608	Average	293
22E	Wales	136	Far	16

Effects of the Proposal

If adopted, this proposal would close Federal public lands to caribou hunting in the upper drainages of the Adreafsky River, located in Unit 18, and the portion of Unit 22 south of the Unalakleet River. Because there have been no caribou in this area for many years, this action would have no effect on the caribou population or on Federally qualified subsistence users or other hunters. It would likely benefit reindeer herders, because it would help prevent the inadvertent harvest of reindeer in the area. The stipulation that the area may be opened by the Federal manager would ensure the opportunity for Federal subsistence harvest if caribou were present in the area.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP16-43

Justification

Although closing portions of Units 18 and 22A to caribou harvest would have no detrimental effect on subsistence resources or on subsistence users, closures intended solely to protect private property are not allowed by the Board's closure policy. This policy allows establishment or retention of closures primarily for the conservation of subsistence resources or to ensure continued use of these resources by subsistence users. While the Board has a history of considering proposals aimed at minimizing reindeer/caribou conflicts, past proposals have sought changes in seasons, harvest limits, and hunt areas, with the goal of maximizing subsistence opportunity while minimizing risk to reindeer. They have not requested closures of Federal public lands. This proposal is contrary to the Board's closure policy and thus cannot be supported.

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POLICY ON CLOSURES TO HUNTING, TRAPPING AND FISHING ON FEDERAL PUBLIC LANDS AND WATERS IN ALASKA

FEDERAL SUBSISTENCE BOARD

Adopted August 29, 2007

PURPOSE

This policy clarifies the internal management of the Federal Subsistence Board (Board) and provides transparency to the public regarding the process for addressing Federal closures (closures) to hunting, trapping, and fishing on Federal public lands and waters in Alaska. It also provides a process for periodic review of regulatory closures. This policy recognizes the unique status of the Regional Advisory Councils and does not diminish their role in any way. This policy is intended only to clarify existing practices under the current statute and regulations: it does not create any right or benefit, substantive or procedural, enforceable at law or in equity, against the United States, its agencies, officers, or employees, or any other person.

INTRODUCTION

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 on such lands for other purposes (ANILCA Section 804). When necessary for the conservation of healthy populations of fish and wildlife or to continue subsistence uses of such populations, the Federal Subsistence Board is authorized to restrict or to close the taking of fish and wildlife by subsistence and non-subsistence users on Federal public lands and waters (ANILCA Sections 804 and 815(3)). 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)).

BOARD AUTHORITIES

- ANILCA Sections 804, 814, 815(3), and 816.
- 50 CFR Part 100 and 36 CFR Part 242, Section .10(d)(4).

POLICY

The decision to close Federal public lands or waters to Federally qualified or non-Federally qualified subsistence users is an important decision that will be made as set forth in Title VIII of ANILCA. The Board will not restrict the taking of fish and wildlife by users on Federal public lands (other than national parks and park monuments) unless necessary for the conservation of healthy populations of fish and wildlife resources, or to continue subsistence uses of those populations, or for public safety or administrative reasons, or "pursuant to other applicable law." Any individual or organization may propose a closure. 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.

Like other Board decisions, closure actions are subject to change during the yearly regulatory cycle. In addition, closures will be periodically re-evaluated to determine whether the circumstances necessitating the original closure still exist and warrant continuation of the restriction. When a closure is no longer needed, actions to remove it will be initiated as soon as practicable. The Office of Subsistence Management will maintain a list of all closures.

Decision Making

The Board will:

- Proceed on a case - by - case basis to address each particular situation regarding closures. In those cases for which conservation of healthy populations of fish and wildlife resources allows, the Board will authorize non-wasteful subsistence taking.

- Follow the statutory standard of "customary and traditional uses." Need is not the standard. Established use of one species may not be diminished solely because another species is available. These established uses have both physical and cultural components, and each is protected against all unnecessary regulatory interference.

- Base its actions on substantial evidence contained within the administrative record, and on the best available information; complete certainty is not required.

- Consider the recommendations of the Regional Advisory Councils, with due deference (ANILCA § 805 (c)).

- Consider comments and recommendations from the State of Alaska and the public (ANILCA § 816 (b)).

Conditions for Establishing or Retaining Closures

The Board will adopt closures to hunting, trapping or fishing by non-Federally qualified users or Federally qualified subsistence users when one or more of the following conditions are met:

- Closures are necessary for the conservation of healthy populations of fish and wildlife:

    a) When a fish or wildlife population is not sufficient to provide for both Federally qualified subsistence users and other users, use by non-Federally qualified users may be reduced or prohibited, or

    b) When a fish or wildlife population is insufficient to sustain all subsistence uses, the available resources shall be apportioned among subsistence users according to their:

1) Customary and direct dependence upon the populations as the mainstay of livelihood,

2) Local residency, and

3) Availability of alternative resources, or

c) When a fish or wildlife population is insufficient to sustain any use, all uses must be prohibited.

- Closures are necessary to ensure the continuation of subsistence uses by Federally qualified subsistence users.
- Closures are necessary for public safety.
- Closures are necessary for administrative reasons.
- Closures are necessary "pursuant to other applicable law."

Considerations in Deciding on Closures

When acting upon proposals recommending closure of Federal public lands and waters to hunting, trapping, or fishing, the Board may take the following into consideration to the extent feasible:

- The biological history (data set) of the fish stock or wildlife population.
- The extent of affected lands and waters necessary to accomplish the objective of the closure.
- The current status and trend of the fish stock or wildlife population in question.
- The current and historical subsistence and non-subsistence harvest, including descriptions of harvest amounts, effort levels, user groups, and success levels.
- Pertinent traditional ecological knowledge.
- Information provided by the affected Regional Advisory Councils and Alaska Department of Fish and Game.
- Relevant State and Federal management plans and their level of success as well as any relationship to other Federal or State laws or programs.
- Other Federal and State regulatory options that would conserve healthy populations and provide a meaningful preference for subsistence, but would be less restrictive than closures.

- The potential adverse and beneficial impacts of any proposed closure on affected fish and wildlife populations and uses of lands and waters both inside and outside the closed area.

- Other issues that influence the effectiveness and impact of any closure.

Reviews of Closures

A closure should be removed as soon as practicable when conditions that originally justified the closure have changed to such an extent that the closure is no longer necessary. A Regional Council, a State or Federal agency, or a member of the public may submit, during the normal proposal period, a proposal requesting the opening or closing of an area. A closure may also be implemented, adjusted, or lifted based on a Special Action request according to the criteria in 50 CFR 100.19 and 36 CFR 242.19.

To ensure that closures do not remain in place longer than necessary, all future closures will be reviewed by the Federal Subsistence Board no more than three years from the establishment of the closure and at least every three years thereafter. Existing closures in place at the time this policy is implemented will be reviewed on a three-year rotational schedule, with at least one - third of the closures reviewed each year.

Closure reviews will consist of a written summary of the history and original justification for the closure and a current evaluation of the relevant considerations listed above. Except in some situations which may require immediate action through the Special Action process, closure review analyses will be presented to the affected Regional Council(s) during the normal regulatory proposal process in the form of proposals to retain, modify or rescind individual closures.

Chair, Federal Subsistence Board

Board Member, U.S. Fish and Wildlife Service

Board Member, Bureau of Indian Affairs

Board Member, U.S. Forest Service

Board Member, National Park Service

Board Member, Bureau of Land Management

WRITTEN PUBLIC COMMENTS

May 28,2015

Federal Subsistence Board
ATTN: Theo Matuskowitz
Office of Subsistence Management
U.S. Fish & Wildlife Service
1011 E. Tudor Road, MS 121
Anchorage, AK 99503

Dear Federal Subsistence Board:

Kawerak, Inc. is the regional non-profit tribal consortium of the Bering Strait Region. Kawerak's Board of Directors is comprised of the Presidents of the 20 tribes of the Bering Strait Region. Kawerak offers numerous programs and services to the 16 communities in the region. Kawerak, Inc. promotes economic development that is both responsible and sustainable.

We are offering suggestions for Federal Wildlife Proposals that are up for your review.

We are in support of Federal Wildlife Proposal WP16-43 to open caribou hunting by Emergency Order on Federal Public Lands when the caribou are present in Game Management Unit (GMU) 18 and the southern portion of Game Management Unit 22A; however we request the following amendment. Instead of GMU 22A "South of the Unalakleet River" we recommend that it be changed to GM U 22A "South of the Golsovia River". In doing so this will align both the Federal and State boundary lines and hopefully this will eliminate any confusion as to what area is open and what area is closed. The Alaska Department of Fish & Game (ADF&G) data indicates that the Western Arctic Caribou Herd has not migrated south of the Unalakleet River in 15-20 years. Another issue of concern in northern portion of GMU 18 and the southern portion of GMU 22A is that individuals mistaking privately owned reindeer for caribou because the season for caribou is open in both Units. This causes immense hardship on the reindeer herd owners by having to take time to go out into the field to confirm what has happened then report to Law Enforcement on theft of privately owned reindeer.

Please contact Subsistence Resources Program Director Brandon Ahmasuk to obtain details and more information at 1-907-443-4265. Thank you for your consideration.

Sincerely,

Kawerak, Inc.
Melanie Bahnke, President

WP16–45 Executive Summary	
General Description	Proposal WP16-45 requests shifting the western boundary of the Unit 22E Federal subsistence hunt area for caribou from the Sanaguich River drainage to the Tin Creek drainage. S*ubmitted by the Seward Peninsula Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 22—Caribou** *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~~* ***Tin Creek drainage up to the west headwaters at Ear Mountain****—5 caribou per day; cow caribou may not be taken May 16–June 30.* — *Jul. 1 – Jun. 30*
OSM Preliminary Conclusion	**Support**
Western Interior Regional Advisory Council Recommendation	
Seward Peninsula Regional Advisory Council Recommendation	
Northwest Arctic Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**1 Support**

DRAFT STAFF ANALYSIS
WP16-45

ISSUES

Proposal WP16-45, submitted by the Seward Peninsula Subsistence Regional Advisory Council (Council), requests a change in the hunt area for caribou in Unit 22E.

DISCUSSION

This proposal seeks to shift the western boundary of the Unit 22E Federal subsistence hunt area for caribou from the Sanaguich River drainage to the Tin Creek drainage. Currently, there is no Federal open season for caribou in Unit 22E west of the Sanaguich River drainage. The proponent believes that the proposed boundary change will increase opportunities for subsistence harvest of caribou. As the Western Arctic Caribou Herd (WACH) continues to push westward on the Seward Peninsula, allowing harvest farther west will give Federally qualified subsistence users better access to caribou as they engage in other subsistence activities.

When this proposal was brought forth at the Council's February 19, 2015 meeting, there was considerable discussion about whether Tin Creek was an appropriate boundary. One suggestion was to use the Nuluk River drainage as the western boundary for the hunt area. However, there were concerns about conflicts with reindeer herding (SPSRAC 2015). While the proponent indicates that Clifford Weyiouanna, who holds reindeer grazing permits east of the Nuluk River (Reindeer Research Program, 2015) was consulted and does not object to the proposed boundary changes, there is concern that the Ongtowasruk herd, which grazes the area west of the Nuluk River, may be impacted by this proposal. Overall, the Council expressed the desire to avoid conflict with reindeer herders and welcomed input from the Reindeer Herder's Association.

Existing Federal Regulation

Unit 22—Caribou

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.	*Jul. 1 – Jun. 30*

Proposed Federal Regulation

Unit 22—Caribou

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~~ ***Tin Creek drainage up to the west headwaters at Ear Mountain****—5 caribou per day; cow caribou may not be taken May 16–June 30.*	*Jul. 1 – Jun. 30*

Existing State Regulation

Unit 22E—Caribou

Unit 22E, that portion east of and including the Sanaguich River drainage

Resident hunters: 5 caribou per day, as follows:

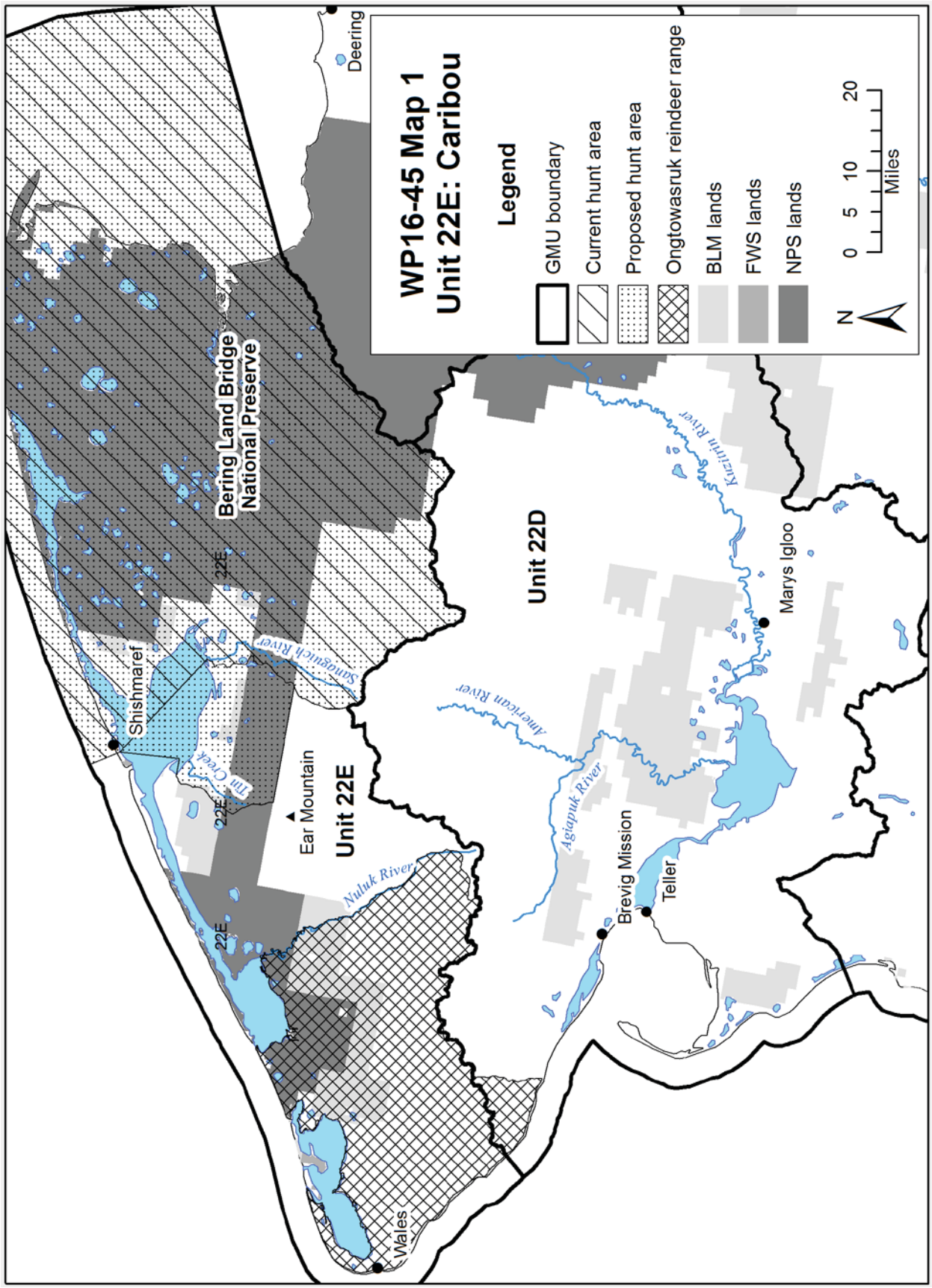
Up to 5 bulls per day; however, calves may not be taken	*Jul. 1 – Oct. 14* *Feb. 1 – Jun. 30*
Up to 5 cows per day; however, calves may not be taken	*Sept. 1 – Mar. 31*
Nonresident hunters: 1 bull; however, calves may not be taken	*Aug. 1 – Sept. 30*

Unit 22, remainder

Resident hunters: 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*
Nonresident hunters: 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*

Extent of Federal Public Lands

Unit 22E is comprised of approximately 60% Federal public lands, and consists of 54% National Park Service managed lands and 6% Bureau of Land Management managed lands. See **Map 1**.


WP16-45 Map 1
Unit 22E: Caribou
Legend
GMU boundary
Current hunt area
Proposed hunt area
Ongtowasruk reindeer range
BLM lands
FWS lands
NPS lands
N
0 5 10 20
Miles
Deering
Bering Land Bridge National Preserve
Shishmaref
Ear Mountain
Unit 22E
Unit 22D
Sinuguich River
Tin Creek
Nuluk River
Agiapuk River
American River
Kuzitrin River
Marys Igloo
Brevig Mission
Teller
Wales
22E

Customary and Traditional Use Determinations

Residents of Units 21D (west of the Koyukuk and Yukon rivers), 22 (except St. Lawrence Island), 23, and 24 have a positive customary and traditional use determination for caribou in Units 22B, 22C, 22D, and 22E.

Regulatory History

In 1996 and 1997, the Federal Subsistence Board (Board) considered several proposals that addressed customary and traditional use determinations for caribou in Unit 22. 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. This 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 (OSM 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 (OSM 1997).

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

In 2002, the Alaska Department of Fish and Game issued two emergency orders addressing caribou/reindeer conflicts. The first, EO 05-03-02, closed the portion of Unit 22D within the Pilgrim River drainage south of the Pilgrim River bridge to caribou hunting between Aug. 31, 2002 and Jun. 30, 2003. The purpose of this action was to prevent the harvest of reindeer, since no caribou were present in the area during this time. The second, EO 05-04-02, opened this same area to the harvest of caribou from Oct. 17, 2002 through Jun. 30, 2003. This emergency order provided harvest opportunity after caribou had moved into the area (Dau 2005).

In 2003, the Board adopted Proposal WP03-40 with modification to establish a season of Jul. 1 – Jun. 30 with a harvest limit of 5 caribou per day in portions of Units 22D and 22E. This action was in response to the recent range expansion of caribou into these subunits, and provided additional subsistence harvest opportunities with the expectation that neither caribou nor reindeer herds would be impacted. It also resulted in alignment of State and Federal regulations (OSM 2003).

In 2005, the Alaska Board of Game adopted a proposal creating two new hunt areas for caribou in Units 22B and 22D. This proposal also changed the season for these newly described areas to Oct. 1 – Apr. 15 (OSM2006).

In 2006, the Board adopted Proposal WP06-37 with modification to designate a new hunt area in Unit 22B with a season of Oct. 1 – Apr. 30 and a may-be-announced season of May 1 – Sept. 30. The intent of this proposal was to provide continued subsistence opportunity when caribou were present, while minimizing

incidental take of privately-owned reindeer and reducing user conflict when caribou were not present (OSM 2006).

Current Events

In 2013, an aerial photo census indicated significant declines in the Western Arctic Caribou Herd (WACH) (Dau 2014). In response to this decline, as well as declines in the Teshekpuk (TCH) and Central Arctic caribou populations, 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 regulatory changes took effect on July 1, 2015, and are the result of extensive discussion and compromise among a variety of user groups. In Unit 22E, these regulatory changes include adjustments to harvest seasons, restrictions on bull and cow harvest, a prohibition on calf harvest, and seasonal restrictions for same-day aerial hunting.

Proposal WP16-37, which is concurrently under consideration, requests changes to Federal subsistence caribou harvest throughout the ranges of the Western Arctic and Teshekpuk caribou herds, including Unit 22. It suggests that the Unit 22E hunt area reflect the State hunt area, which uses the Sanaguich River drainage as the boundary. It also proposes new harvest seasons and limits. Reconciling the different hunt area descriptors, seasons and limits proposed by these two proposals will be required if both proposals are adopted.

Biological Background

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 into the Brooks Range, west of the trans-Alaska pipeline. 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.

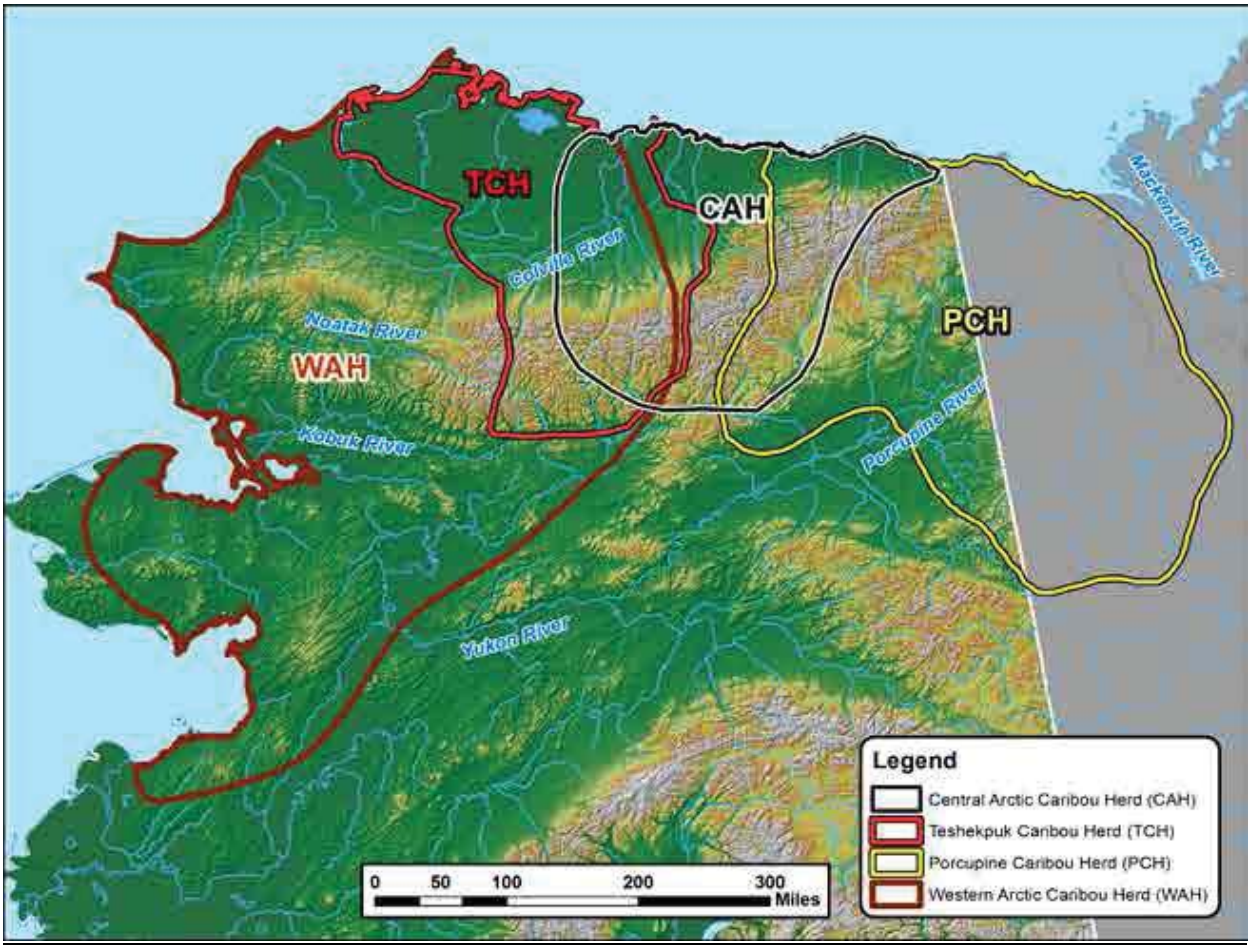


Figure 1. Herd overlap and ranges of the Western Arctic, Teshekpuk, Central Arctic and Porcupine caribou herds (WACH 2014).

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, decline in 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 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).

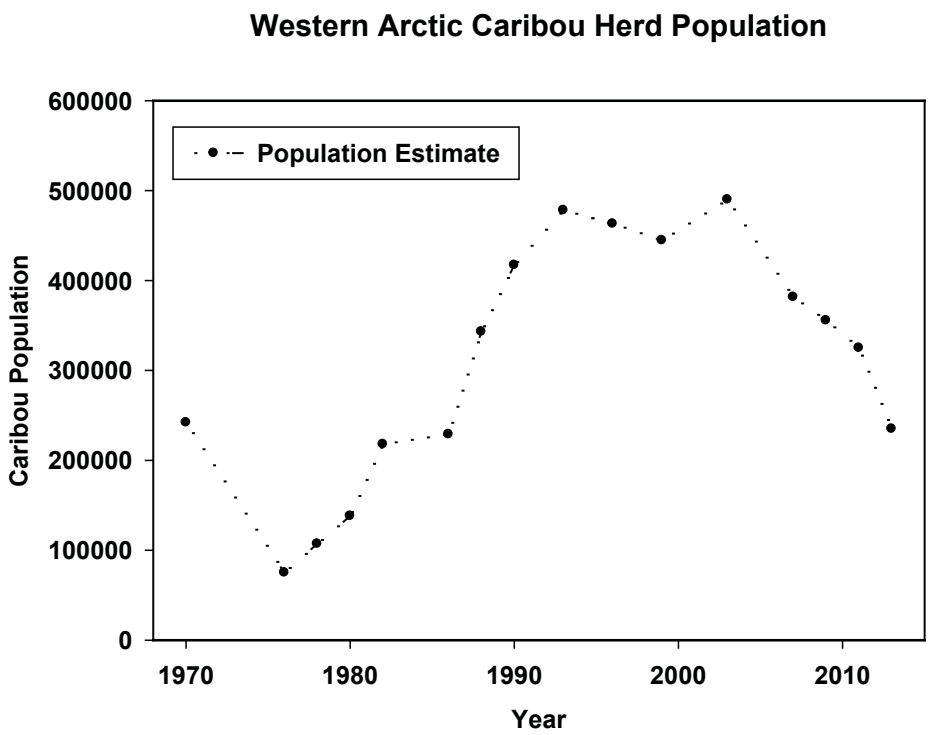


Figure 2. Maximum estimated population estimates of the Western Arctic Caribou Herd from 1970-2013. Population estimates from 1986-2013 are based on aerial photographs of groups of caribou that contained radio–collared animals (Dau 2011, 2014)

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 was 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). Estimated mortality encompasses 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.

Table 1. Western Arctic Caribou Herd fall composition 1976 – 2014 (Dau 2011, 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[b]						
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)
[b] Estimated from power point presentation presented at the WACH Working Group Meeting December 17-18, 2014 (Dau 2014)

Harvest History

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. 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.

From 1999–2014 the average annual harvest from the WACH was approximately 13,600 caribou, which includes harvest from 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**).

Residents of Unit 22E, which includes the communities of Wales and Shishmaref, are responsible for approximately 2% of the total harvest of the WACH. The disparity in harvest rates between these two communities is almost certainly due to proximity to the resource (**Table 2**).

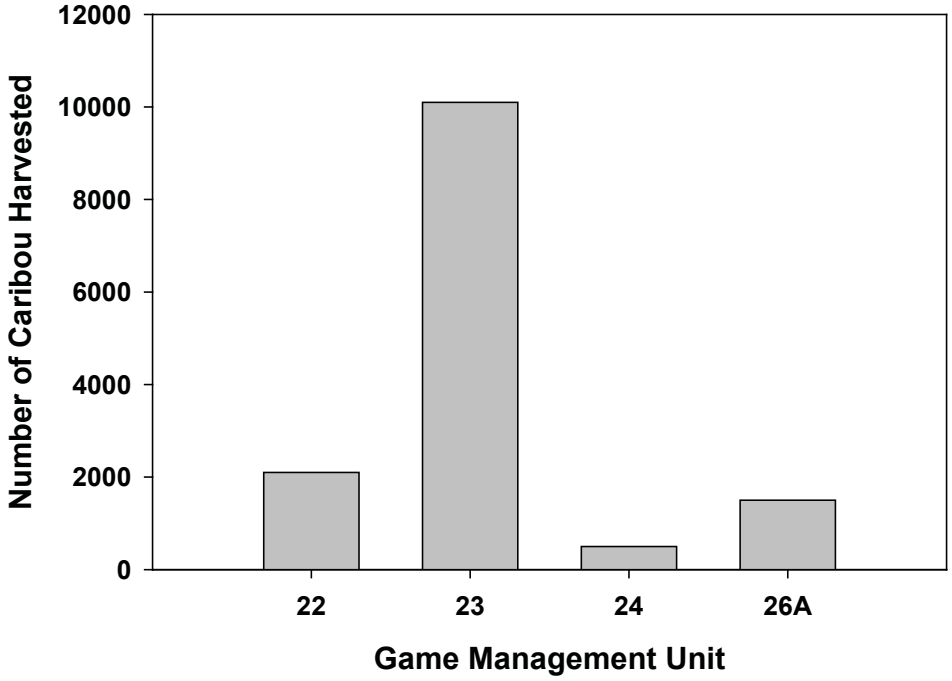


Figure 3. Average annual harvest by residents within the WACH range, RY1998-RY2012 (Dau 2014).

Other Alternatives Considered

Designating the Nuluk River, rather than Tin Creek, as the western boundary for the hunt area was considered. This drainage represents a clear and unambiguous boundary. However, this alternative increases the potential for conflicts with reindeer. The Ongtowasruk reindeer herd, which is permitted to graze the area west of the Nuluk River, is one of the few remaining herds on the Seward Peninsula. Because the grazing allotments are large, remote and fenceless, it is not unusual for animals to wander beyond their designated range without the herders' knowledge. Opening the area east of the Nuluk River to caribou harvest increases the potential that reindeer will be harvested, either intentionally or unknowingly. Given the Council's sensitivity to reindeer/caribou conflicts and the Western Arctic Caribou Cooperative Management Plan's objective to minimize conflict with reindeer, this alternative was rejected.

Table 2. Unit 22 caribou harvest by community and subunit. Adapted from Table 10 Dau 2011.

Game Management Unit	Community	Human Population	Relative Distance to Caribou	Estimated Harvest
22A	Saint Michael	444	Far	16
22A	Shaktoolik	214	Far	16
22A	Stebbins	598	Far	16
22A	Unalakleet	724	Far	15
22B	Elim	309	Average	131
22B	White Mountain	215	Average	80
22B	Golovin	167	Average	54
22B	Koyuk	347	Far	16
22C	Nome	3495	Average	111
22D	Brevig Mission	328	Average	141
22D	Teller	256	Average	102
22E	Shishmaref	608	Average	293
22E	Wales	136	Far	16

Effects of the Proposal

If adopted, this proposal would shift the hunt area boundary west, opening an additional portion of Bering Land Bridge National Preserve to caribou harvest. Expanding the hunt area will increase harvest opportunity for Federally qualified subsistence users by opening lands currently closed to caribou harvest. Given the small proportion of total WACH harvest attributed to residents of this area, this proposal would likely have little impact on the caribou population. Total harvest in this area is not expected to increase appreciably. As a result, this proposal does not present any conservation concerns.

OSM PRELIMINARY CONCLUSION

Support Proposal WP16-45.

Justification

As the WACH expands its range westward on the Seward Peninsula, associated shifts in the areas open to caribou harvest will create additional opportunities for Federally qualified subsistence users. Although conservation of the WACH is a concern throughout its range, a relatively small proportion of the total harvest is attributable to hunters in Unit 22E. As a result, adoption of this proposal is not expected to result in an appreciable increase in harvest and is not expected to affect the herd overall. It will, however, result in additional opportunities for Federally qualified subsistence users in the area.

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WRITTEN PUBLIC COMMENTS

May 28,2015

Federal Subsistence Board
ATTN: Theo Matuskowitz
Office of Subsistence Management
U.S. Fish & Wildlife Service
1011 E. Tudor Road, MS 121
Anchorage, AK 99503

Dear Federal Subsistence Board:

Kawerak, Inc. is the regional non-profit tribal consortium of the Bering Strait Region. Kawerak's Board of Directors is comprised of the Presidents of the 20 tribes of the Bering Strait Region. Kawerak offers numerous programs and services to the 16 communities in the region. Kawerak, Inc. promotes economic development that is both responsible and sustainable.

We are offering suggestions for Federal Wildlife Proposals that are up for your review.

Regarding WP16-45 we support expanding the boundary line in GMU 22E for caribou by deleting the Sanaguich River boundary and adding the Tin Creek Drainage up to the west headwaters to Ear Mountain.

Please contact Subsistence Resources Program Director Brandon Ahmasuk to obtain details and more information at 1-907-443-4265. Thank you for your consideration.

Sincerely,

Kawerak, Inc.
Melanie Bahnke, President

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** Proposal WP16-61/62/63/64 **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	
Eastern Interior Regional Advisory Council Recommendation	
North Slope Regional Advisory Council Recommendation	

WP16–61/62/63/64 Executive Summary	
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**).

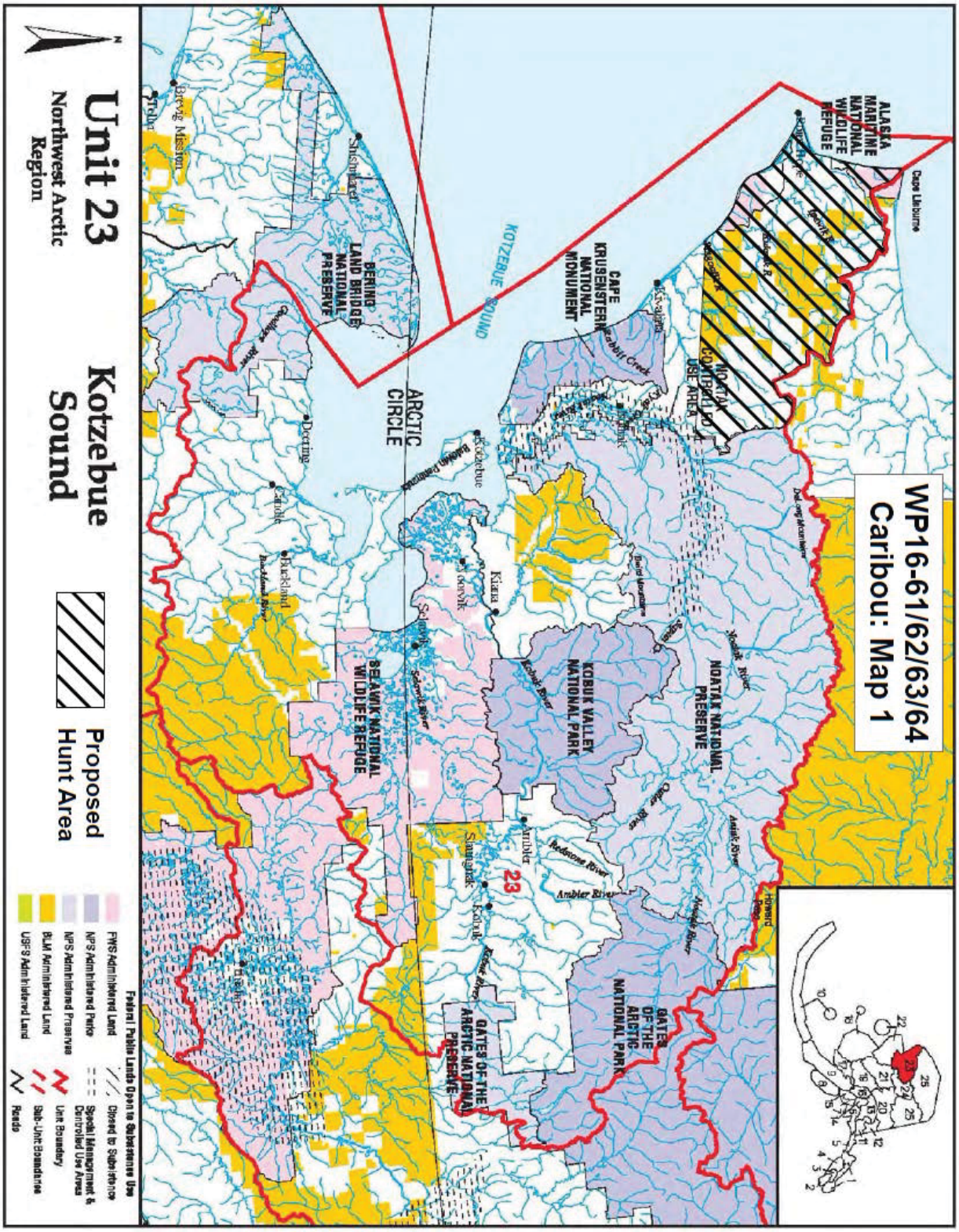
Proposal WP16-63, requests that caribou harvest limit in Unit 26A be reduced from 10 caribou per day to 5 caribou per day, the harvest seasons for bulls and cows be shortened, and the take of calves and calves with cows be prohibited. Compared to the new State caribou regulations it requests 3 additional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

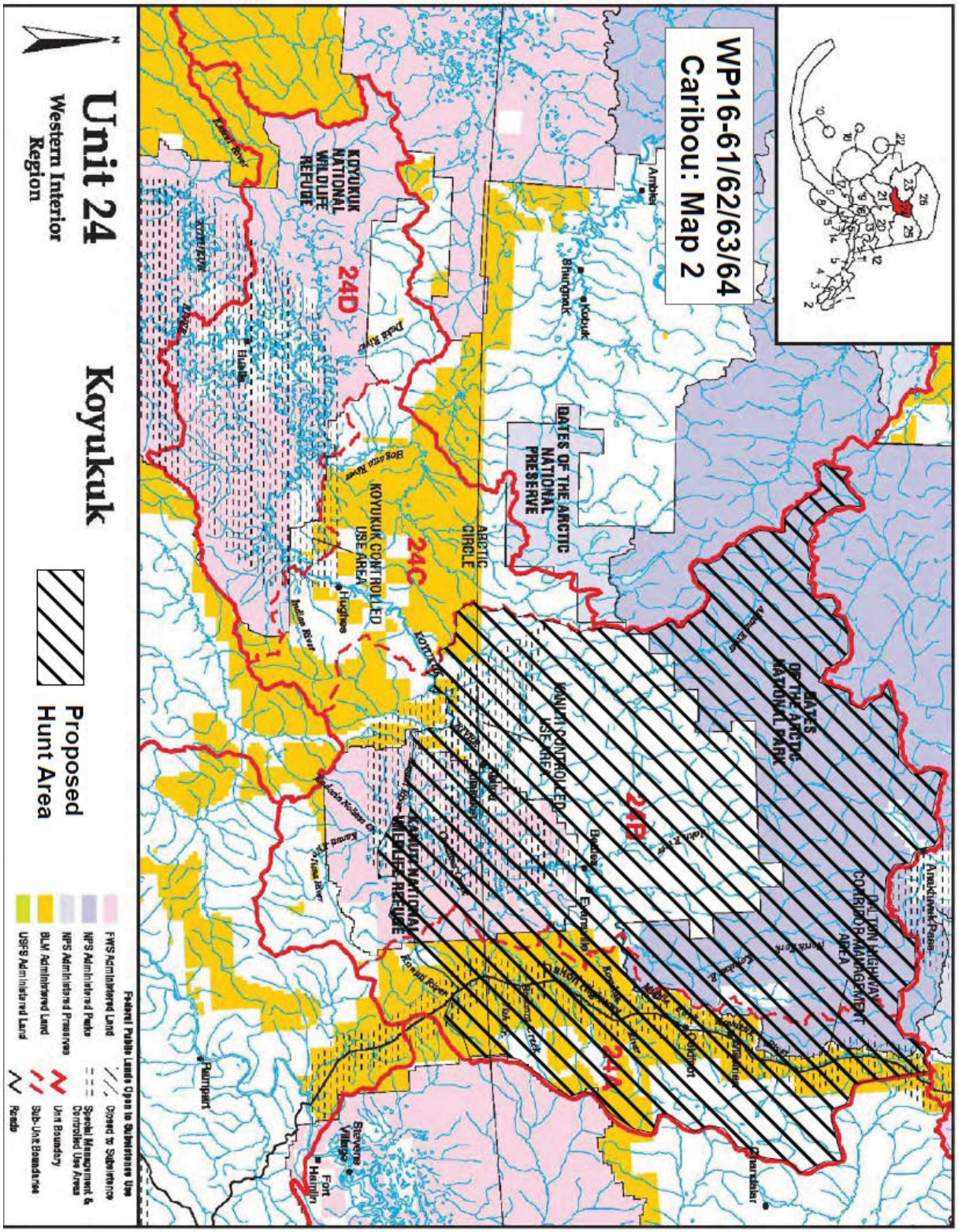
Proposal WP16-64, requests establishment of a new hunt area for caribou in Unit 26B where the harvest limit would be reduced from 10 caribou per day to 5 caribou per day, the harvest season would be shortened, and the take of calves would be prohibited (**Map 3**).

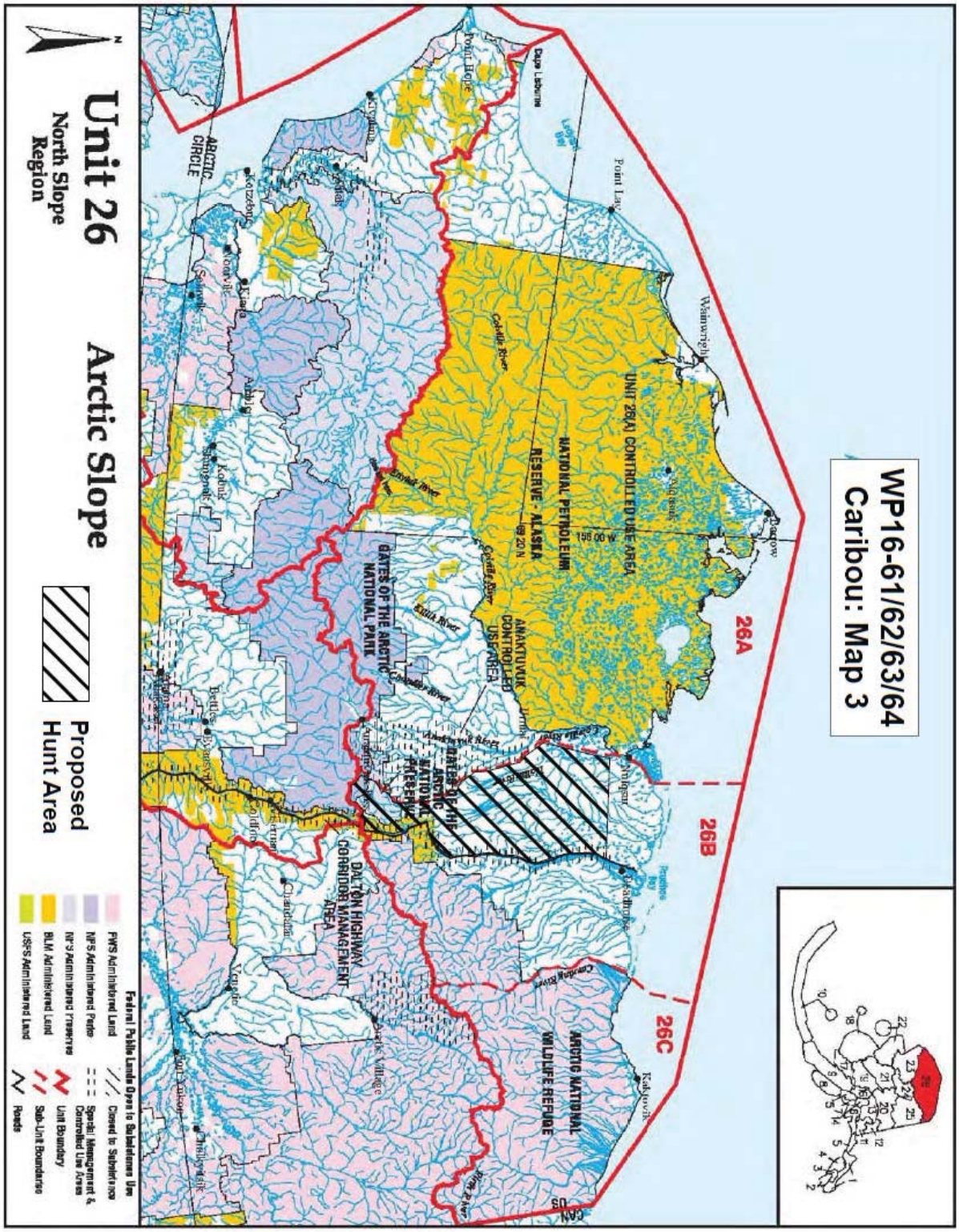
DISCUSSION

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
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
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
Cape Lisburne
Point Hope
CAPE KRUSENSTERN NATIONAL MONUMENT
NOATAK CONTROLLED USE AREA
NOATAK NATIONAL PRESERVE
GATES OF THE ARCTIC NATIONAL PARK
KOBUK VALLEY NATIONAL PARK
GATES OF THE ARCTIC NATIONAL PRESERVE
BERING LAND BRIDGE NATIONAL PRESERVE
SELAWIK NATIONAL WILDLIFE REFUGE
KOTZEBUE SOUND
ARCTIC CIRCLE
Shishmaref
Brevig Mission
Teller
Deering
Candle
Buckland
Kiana
Ambler
Shungnak
Kobuk
Noatak River
Anaktuvuk River
Redstone River
Ambler River
Kobuk River
Selawik River
Buckland River
Kugruk River
Kuzitrin River
Cape Krusenstern
Kivalina
Kotzebue
Selawik
Noorvik
Shungnak
Kobuk
Ambler
Noatak
23


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
24A
KOYUKUK NATIONAL WILDLIFE REFUGE
KOYUKUK CONTROLLED USE AREA
GATES OF THE ARCTIC NATIONAL PRESERVE
ARCTIC CIRCLE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
GATES OF THE ARCTIC NATIONAL PARK
Ambler
Shungnak
Kobuk
Bettles
Evansville
Allakaket
Alatna
Hughes
Huslia
Koyukuk
Nulato
Galena
Kaltag
Stevens Village
Fort Hamlin
Ruby
Tanana
Tolovana
Dalton Highway
Dietrich River
Alatna River
Koyukuk River
Hogatza River
Indian River
Dakli River
Hogatza River
Tozitna River
Yukon River
Tanana River
Chandalar
Anaktuvuk Pass


WP16-61/62/63/64
Caribou: Map 3
26A
26B
26C
UNIT 26(A) CONTROLLED USE AREA
NATIONAL PETROLEUM RESERVE - ALASKA
AMAKTUVUK 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
Barrow
Atqasuk
Nuiqsut
Anaktuvuk Pass
Bettles
Coldfoot
Wiseman
Chandalar
Arctic Village
Venetie
Fort Yukon
Kaktovik
Deadhorse
Prudhoe Bay
Kotzebue
Noorvik
Selawik
Kiana
Ambler
Shungnak
Kobuk
Allakaket
Hughes
Alatna
Anaktuvuk River
Chandalar River
Colville River
Dietrich River
Canada
Unit 26
North Slope Region
Arctic Slope
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).

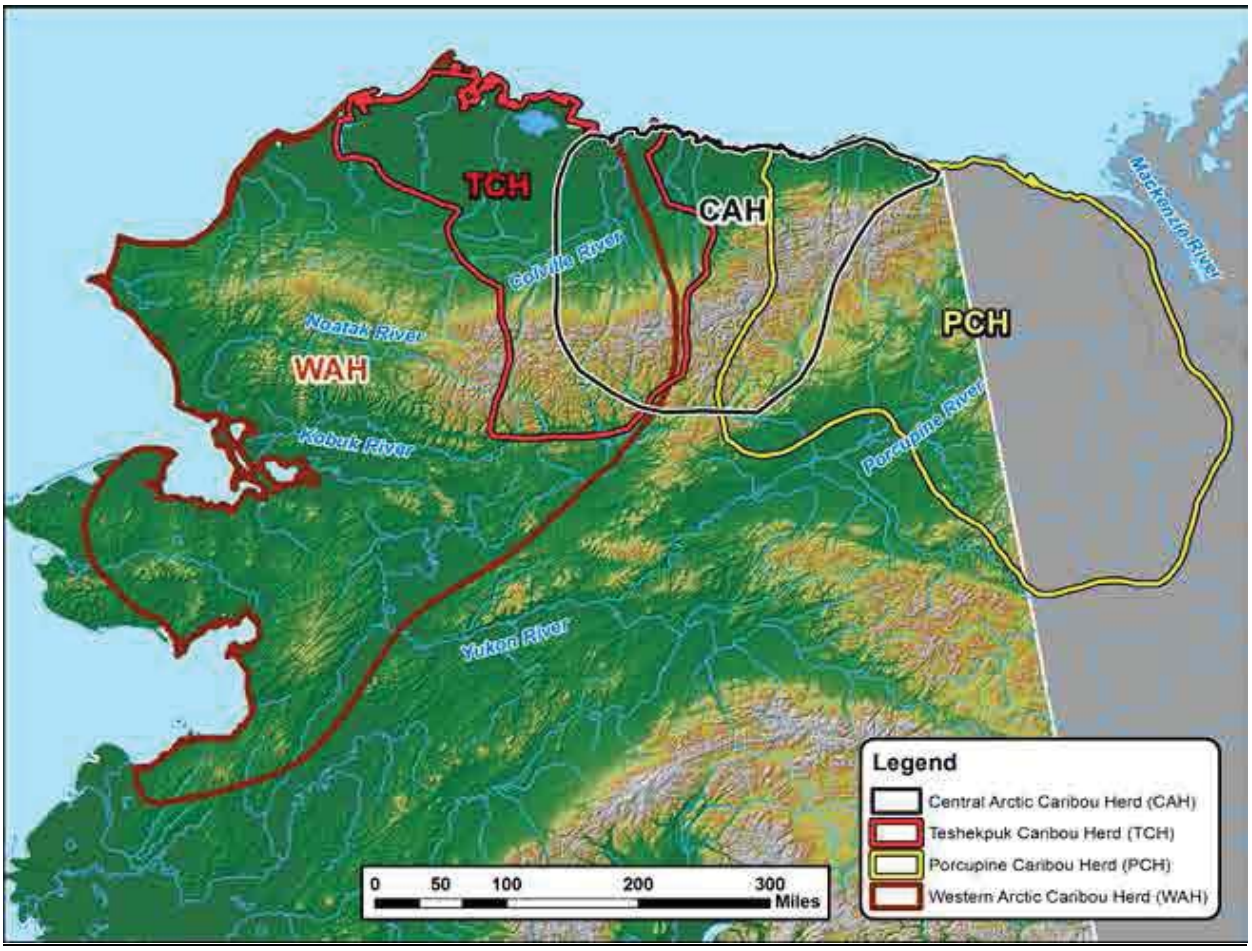


Figure 1. Herd overlap and ranges of the WACH, TCH, CACH and Porcupine caribou herds (WACH 2014).

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,

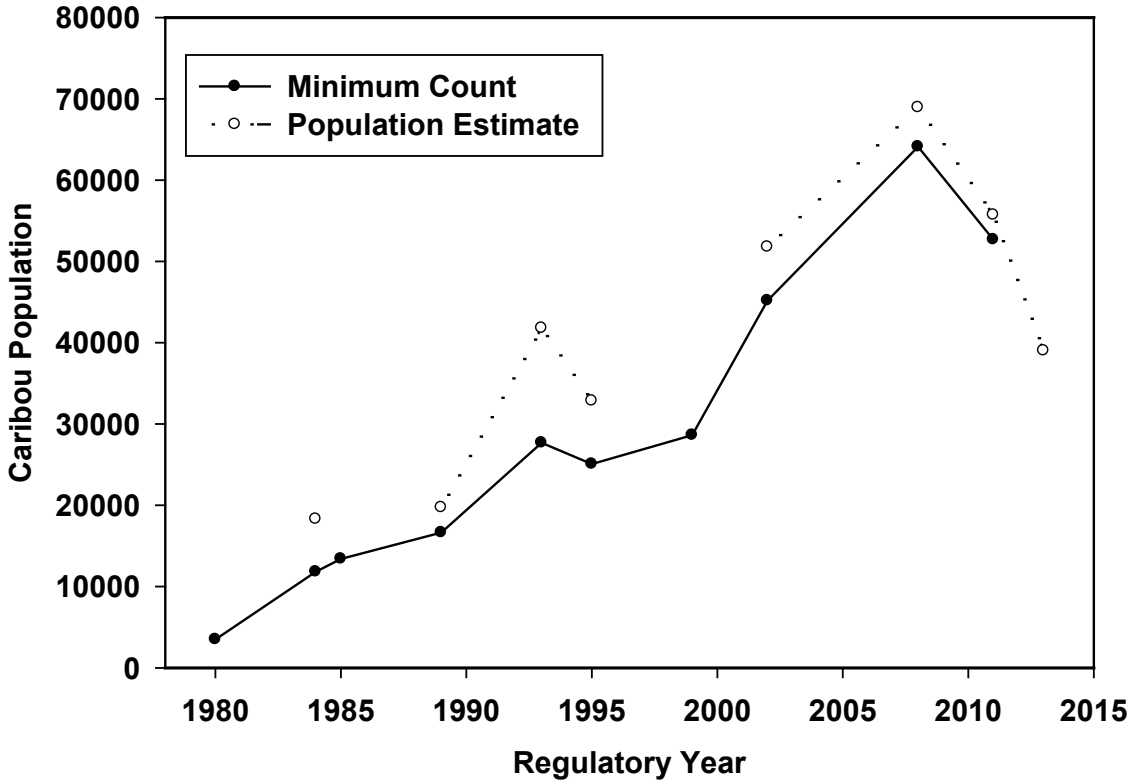


Figure 2. Minimum counts and population estimates of the Teshekpuk Caribou Herd from 1980-2014. Population estimates from 1984-2013 are based on aerial photographs of groups of caribou that contained radio–collared animals (Parrett 2011, 2013, Parrett 2015, pers. comm.).

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.).

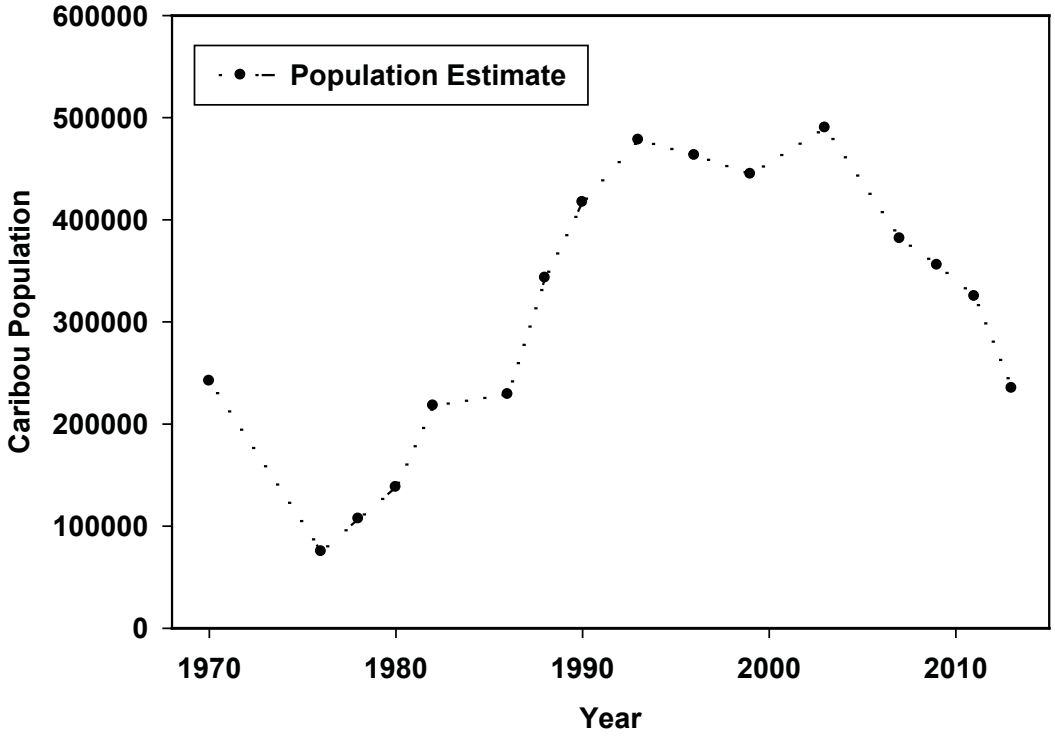


Figure 3. Maximum estimated population estimates of the Western Arctic Caribou Herd from 1970-2013. Population estimates from 1986-2013 are based on aerial photographs of groups of caribou that contained radio–collared animals (Dau 2011, 2013, 2014)

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

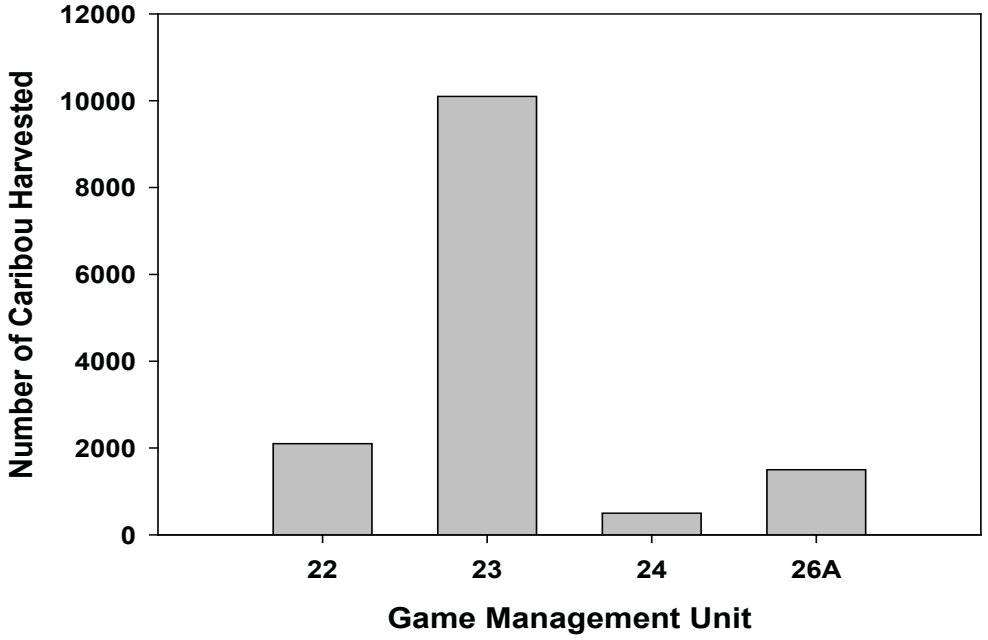


Figure 4. Average annual harvest by residents within the WACH range, RY1998–RY2012 (Dau 2014)

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.

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WRITTEN PUBLIC COMMENTS

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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

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**.

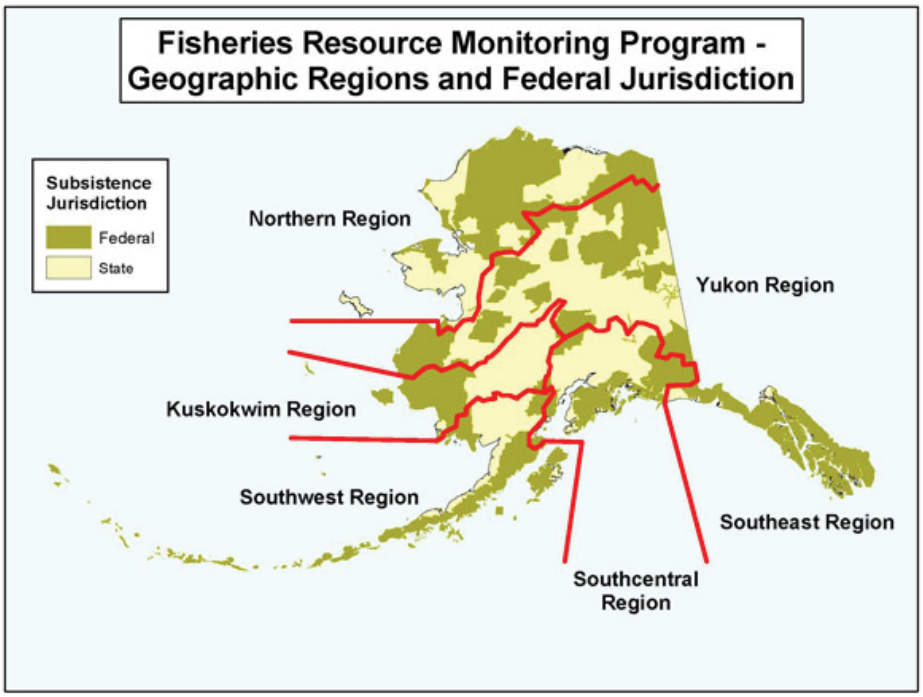

Figure 1. Geographic Regions for the Fisheries Resource Monitoring Program.

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**).

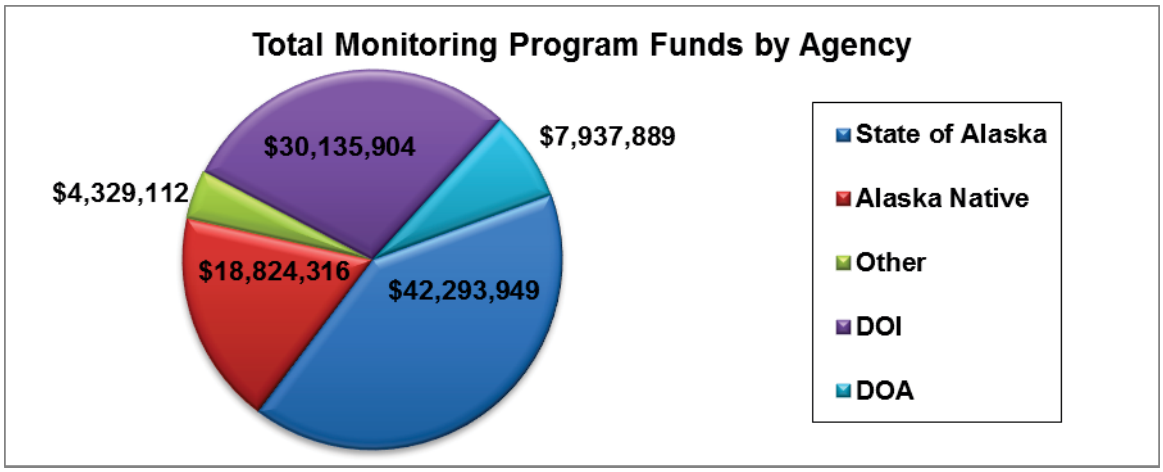

Figure 2. Total Project funds through the Monitoring Program from 2000 through 2014 listed by the organization of the Principal Investigator for projects funded. The funds listed are the total approved funds from 2000 to 2014. DOI = Department of Interior and DOA = Department of Agriculture.

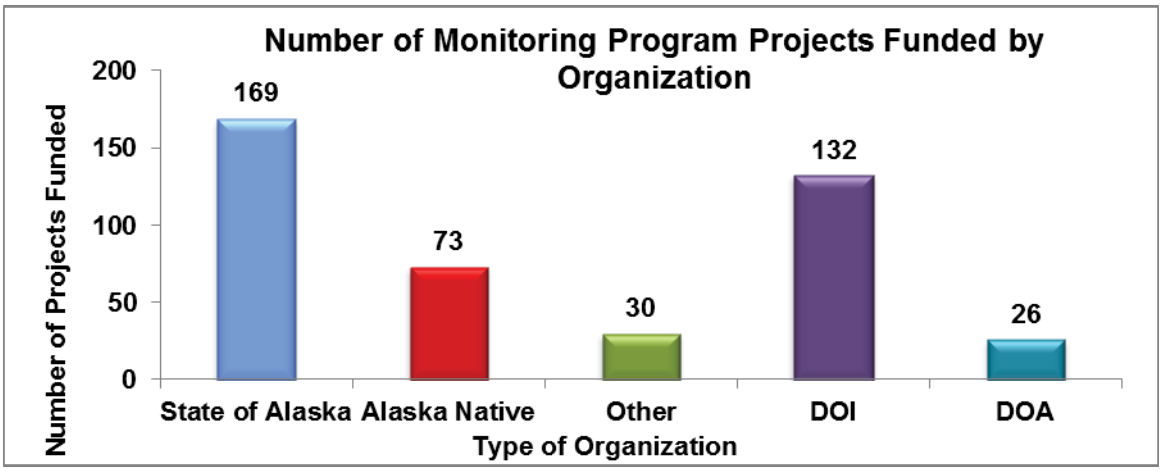

Figure 3. The total number of projects funded through the Monitoring Program from 2000 through 2014 listed by the organization of Principal Investigator. DOI = Department of Interior and DOA = Department of Agriculture.

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%

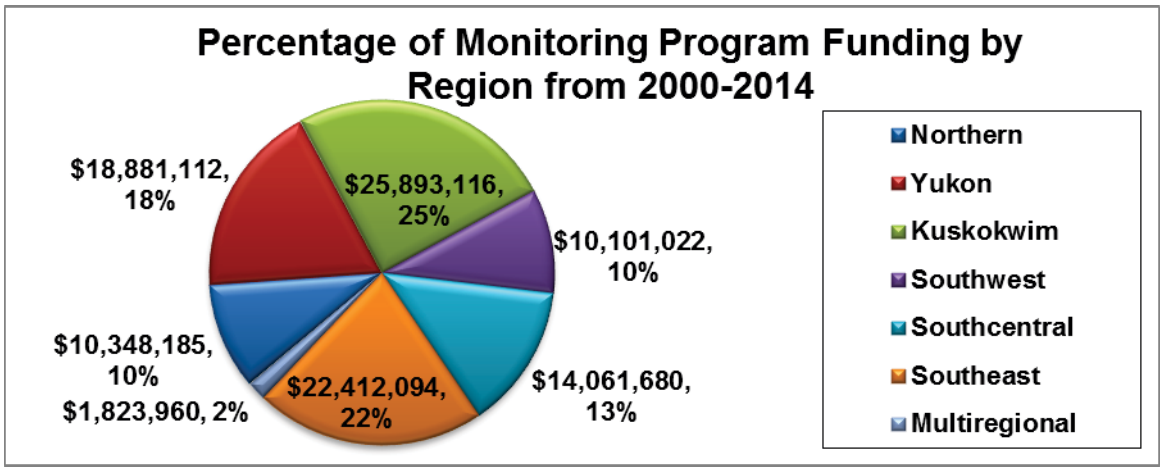

Figure 4. Total Project funding by Geographic Region from 2000 through 2014.

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.

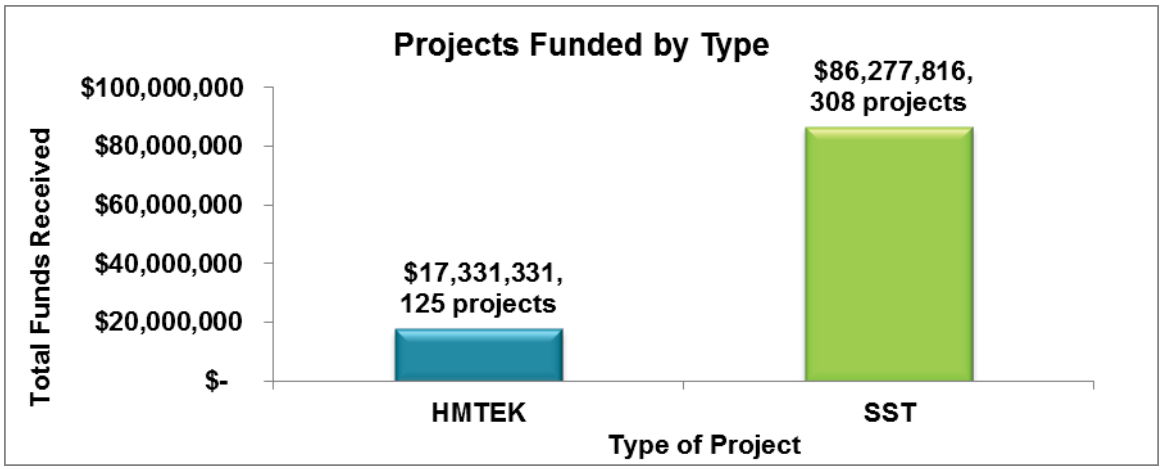

Figure 5. Total Project funding by type from 2000 through 2014. HMTEK = Harvest Monitoring/Traditional Ecological Knowledge and SST = Stock, Status and Trends.

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).

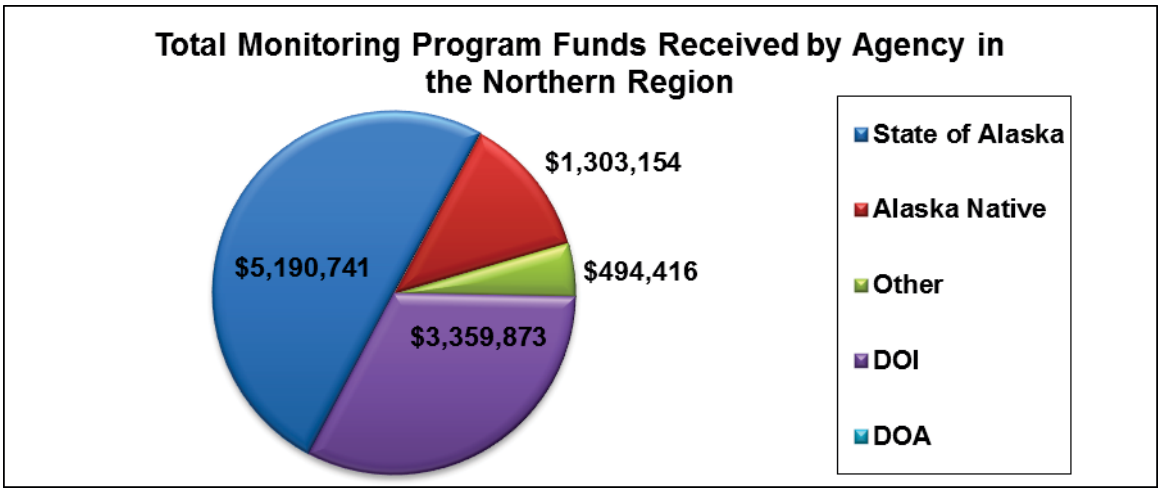

Figure 1. Monitoring Program funds received by agencies for projects in the Northern Region. The funds listed are the total approved funds from 2000 to 2014. DOI = Department of Interior and DOA = Department of Agriculture.

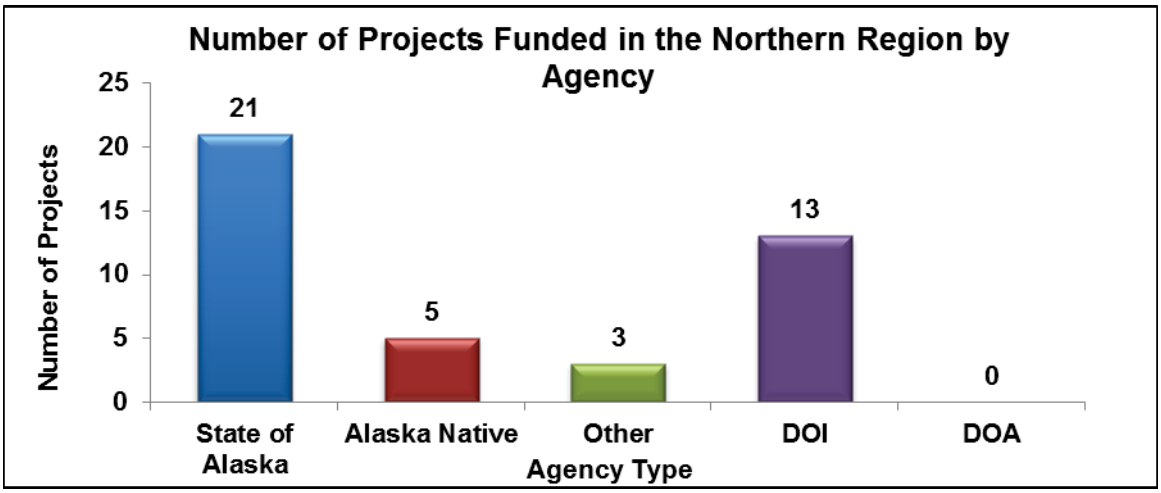

Figure 2. Total number of Monitoring Program projects funded, by agency, in the Northern Region from 2000 to 2014. DOI = Department of Interior and DOA = Department of Agriculture.

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: System Units National Petroleum Reserve in Alaska (BLM); Gates of the 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.

ANNUAL REPORTS

Background

ANILCA established the Annual Reports as the way to bring regional subsistence uses and needs to the Secretaries' attention. The Secretaries delegated this responsibility to the Board. Section 805(c) deference includes matters brought forward in the Annual Report.

The Annual Report provides the Councils an opportunity to address the directors of each of the four Department of Interior agencies and the Department of Agriculture Forest Service in their capacity as members of the Federal Subsistence Board. The Board is required to discuss and reply to each issue in every Annual Report and to take action when within the Board's authority. In many cases, if the issue is outside of the Board's authority, the Board will provide information to the Council on how to contact personnel at the correct agency. As agency directors, the Board members have authority to implement most of the actions which would effect the changes recommended by the Councils, even those not covered in Section 805(c). The Councils are strongly encouraged to take advantage of this opportunity.

Report Content

Both Title VIII Section 805 and 50 CFR §100.11 (Subpart B of the regulations) describe what may be contained in an Annual Report from the councils to the Board. This description includes issues that are not generally addressed by the normal regulatory process:

- an identification of current and anticipated subsistence uses of fish and wildlife populations within the region;
- an evaluation of current and anticipated subsistence needs for fish and wildlife populations from the public lands within the region;
- a recommended strategy for the management of fish and wildlife populations within the region to accommodate such subsistence uses and needs related to the public lands; and
- recommendations concerning policies, standards, guidelines, and regulations to implement the strategy.

Please avoid filler or fluff language that does not specifically raise an issue of concern or information to the Board.

Report Clarity

In order for the Board to adequately respond to each Council's annual report, it is important for the annual report itself to state issues clearly.

- If addressing an existing Board policy, Councils should please state whether there is something unclear about the policy, if there is uncertainty about the reason for the policy, or if the Council needs information on how the policy is applied.
- Council members should discuss in detail at Council meetings the issues for the annual report and assist the Council Coordinator in understanding and stating the issues clearly.

- Council Coordinators and OSM staff should assist the Council members during the meeting in ensuring that the issue is stated clearly.

Thus, if the Councils can be clear about their issues of concern and ensure that the Council Coordinator is relaying them sufficiently, then the Board and OSM staff will endeavor to provide as concise and responsive of a reply as is possible.

Report Format

While no particular format is necessary for the Annual Reports, the report must clearly state the following for each item the Council wants the Board to address:

1. Numbering of the issues,
2. A description of each issue,
3. Whether the Council seeks Board action on the matter and, if so, what action the Council recommends, and
4. As much evidence or explanation as necessary to support the Council's request or statements relating to the item of interest.

Federal Subsistence Board

1011 East Tudor Road, MS121
Anchorage, Alaska 99503

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

FOREST SERVICE

FWS/OSM 15047.CJ

Enoch Shiedt, Chair
Northwest Arctic Subsistence
Regional Advisory Council
Office of Subsistence Management
U.S. Fish and Wildlife Service
1011 East Tudor Road, MS 121
Anchorage, Alaska 99503

Dear Chairman Shiedt:

This letter responds to the Northwest Arctic 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. Beavers

Beavers have been having an impact on fisheries in the region for quite some time and numbers continue to increase. Spawning areas for fish are being dammed up, particularly in systems where harvest of whitefish has been consistent in the past. Information needs exist, and there is room for partnerships between agencies to explore how these resources relate to each other. Research is needed in the Selawik and Kobuk areas to study the direct impacts, both positive and negative, to other resources and on local resident harvest patterns and opportunities. This Council believes that a bounty should be placed on beavers in the region because of their negative impacts on other subsistence resources. This has the potential to be a positive economic revenue source as well as protecting spawning salmon and other resident species.

Chairman Shiedt 2

Response:

The Board appreciates being reminded by the Council about concerns in the Northwest Arctic Region over an expanding population of beavers. For some rural residents, beavers may be viewed as a useful subsistence resource, especially if they have traditionally harvested them for fur or meat and if there is a profitable market for beaver pelts and handicrafts. However, this is not the case for all rural residents who share the land with beavers.

The Board recognizes there are differing views about the beaver issue, which is a potential barrier to effective communication. The Board has come to understand that for many people in your region, beavers are viewed as a potentially harmful species that is expanding its distribution into northwestern Alaska. Concerns have been raised about impacts to water quality, such as giardia or "beaver fever," and adverse impacts to fish passage and spawning. On the other hand, many biologists and federal land managers often talk about the beaver issue as a natural population expansion. Many managers may also see beavers as a healthy addition to some drainages and waterways. The Board recognizes these differing views as a potential barrier to effective communication about the beaver issue.

The Board feels that it is time to more formally investigate how people in the Northwest Arctic Region feel about beavers and why, so that we may communicate more effectively about this issue at public meetings. The Federal Subsistence Management Program runs a fisheries research program, and staff at the Office of Subsistence Management (OSM) has worked closely with the Council and the Selawik National Wildlife Refuge to develop priority research information needs for the 2016 Fisheries Resource Monitoring Program. One of those priorities for Northern Alaska reads: "Document rural residents' beliefs, attitudes, and knowledge about beavers and perceptions of changes to fish habitat related to beavers." An investigation plan titled *Traditional Ecological Knowledge of Subsistence Whitefish and Cisco and Attitudes/Perceptions of Beaver to Subsistence Fishing in Southern Kotzebue Sound* was submitted by George Weekly and Ross Smith of SWCA Environmental Consultants for the 2016 funding cycle. The objectives stated in the investigation plan included collecting traditional knowledge of whitefish, identifying perceived reasons for changes to subsistence harvest of cisco and whitefish resulting from beaver and evaluating strategies to improve communications between fishery managers and local residents concerning beavers. The Council will have an opportunity to discuss this project at its fall 2015 meeting. The Board wants to continue discussions with the Council about how to best study and address your concerns about beavers in the Northwest Arctic Region.

Finally, the Board must note that it lacks the authority to provide a bounty for beavers; it can only regulate the harvest of beaver for direct personal or family consumption. There is currently a year-round trapping season in Unit 23 and Unit 23 remainder for beaver, with a harvest limit of 50 and 30 respectively. There is also a year-round hunting season for beaver in Unit 23 with no limit.

Chairman Shiedt 3

2. Transporters

The Council continues to be concerned about the practices of area transporters, their clients, and the continued effects it has on our communities and populations of our wildlife resources. Caribou are being taken before the lead animals have the opportunity to cross rivers and establish their natural route. Transporters should have camps and hunting areas spaced out to allow for caribou crossing, and avoid camping in direct migration routes and corridors.

A certain number of caribou should be allowed to pass and local residents dependent on the resource should be allowed harvest opportunity prior to any sport hunting taking place. Further, the Council recommends local resident transporters be given priority to operate during these times of resource decline. We encourage appropriate agency staff and leadership to work more closely with Tribes, communities, and appropriate advisory bodies to achieve best management practices and strategies that can be implemented if harvest restrictions become necessary.

Response:

The practices of area transporters and their clients are outside of the Board's authority to regulate the take of fish and wildlife on Federal public lands in Alaska. Transporter permits are managed by individual land management agencies, and any provisions or specific conditions addressing timing of transporter services and location of camps would be under the authority of local land managers. For example, Selawik National Wildlife Refuge has designated certain refuge lands near villages and high subsistence use areas as closed to commercial use by transporters and guides. The Board encourages agency staff to work with local subsistence users to identify similar situations where transporter permit conditions could be used to protect subsistence harvest opportunities.

As for the Council's recommendation to provide a local resident priority for transporter permits during times of resource declines, Section 1307(b) of ANILCA provides for a preference to local area residents when selecting persons to provide any type of visitor service for any conservation system unit, *except* sport fishing and hunting guiding activities.

The Board also submitted your concern to the National Park Service, which provided the following response:

> The National Park Service (NPS)/ Western Arctic National Parklands (WEAR) continues to work on trying to address many of the areas of concern for the Northwest Arctic RAC regarding management and big game transporter services in the region. Examples include:

- Continuing for 2015 the delayed entry stipulations on Commercial Use Authorizations (CUAs) for transporters within the NPS special management Area of the western portion of the Noatak National Preserve. These stipulations allow CUA holders to transport non-federally qualified caribou hunters into the western Noatak National Preserve only after September 15th or earlier once the caribou migration has been well established through the area. The purpose of the delayed entry is to allow time for a sufficient number of caribou to cross the river thus securely establishing the migration route while at the same time providing local hunters with a first opportunity to harvest those animals. The NPS maintains regular communications with the CUA holders during the caribou hunting season; and the Commercial Transporter Visitor Services providers have been very cooperative in helping the NPS to implement the delayed entry stipulation.

- The CUAs contain stipulations that 1) prohibit CUA holders from establishing permanent or semi-permanent camps and require them to remove camp improvements after each client; and 2) to place clients a minimum of five miles from their other clients and to attempt to stay five miles from other transporter camps. This is intended to reduce client crowding as well as reduce possible interference with the migrating caribou.

- Working with the University of Alaska, Fairbanks to research sports hunter use in the Noatak National Preserve and Traditional Ecological Knowledge in the community of Noatak. Results from the research might possibly lead to modifications in the CUA stipulations as early as 2016.

- Working with the Unit 23 Working Group and the Federal Aviation Administration to help provide pilot education about the Unit 23 user conflicts.

- Recently hired a part time village liaison in the community of Noatak to help aid in communications with the village.

3. Impact of Exploratory Mining Activities on Caribou

Area residents have expressed concern regarding core sampling/mining activity near the community of Deering. The Council requests information regarding the ownership status (State, Federal, etc.) where these activities are taking place and any scientific study regarding effects of these activities on caribou and caribou migration patterns.

Chairman Shiedt 5

Response:

There are currently no exploratory mining activities taking place on Federal public lands in your area. A review of the Western Arctic Caribou Working Group's 2013 "Caribou Trails" newsletter shows some mining activities taking place near the community of Deering. These include the Anugi Mine-NANA Corporation prospect for zinc, lead, and silver and the Kugruk Mine-Tintina Gold prospect for copper, iron, and gold. These exploratory efforts are generally conducted on either State or private lands.

However, if the planned activities involve any Federal permits (like a wetlands permit from the U.S. Army Corps of Engineers), then certain Federal reviews would be involved. Any Federal agency that is the permitting lead for a project is required to conduct an analysis under Section 810 of ANILCA to assess the potential impacts to subsistence uses and resources prior to authorizing certain activities on Federal public lands. As part of the ANILCA Section 810 procedures, the Federal agency must notify the Regional Advisory Council if the activity "would significantly restrict subsistence uses," and, if so, hold a public hearing in the vicinity of the proposed activity. There would also be Federal agency examination of potential environmental impacts, and opportunity for public participation, as part of a review under the National Environmental Policy Act (NEPA).

In 2011, the Alaska Department of Fish and Game (ADF&G), U.S. Fish and Wildlife Service (USFWS), National Park Service (NPS), and the Bureau of Land Management (BLM) had several radio-collared caribou that came within 30 miles of the Red Dog Mine road. Eighty-six percent of those animals either changed their direction of travel, or stopped migrating as they approached. Many of these caribou approached the road several times before crossing it, and their rate of travel after crossing the road increased until they reached their winter range. Therefore, for these animals, the road substantially changed their movements.

There are several peer-reviewed studies that have looked at the effects of mining activity on caribou. One 2012 study looked at the effects of diamond mining in the Canadian arctic. This study found that caribou responded to industrial mining activity at greater distances than expected, possibly in response to the deposition of fine dust from mining activities on open, tundra habitats. A study in 2007 found that there was a need for large areas of intact habitat at large distances from human landscape disturbances like mines and roads in order to assure long-term stability of caribou herds in northern Ontario, Canada. Another 2007 study looked at the effects of mining development on Woodland Caribou in southwestern Newfoundland, Canada. This study showed that, following developing of mining activities, caribou abundance increased with distance from mining activities in all seasons and that animals avoided areas within 4 kilometers of these activities.

Chairman Shiedt 6

4. 2014 Hunting Season Observations

The Council would like the board to be aware of some concerning observations from the 2014 caribou hunt. There were extremely dangerous practices observed as well as instances of hunters using inappropriate ammunition for hunting caribou. There needs to be safety educational and training materials for local and non-local users.

Response:

The Board shares your concerns regarding unsafe hunting practices in your area and agrees with the need for hunter safety training. In your area, the Unit 23 Working Group is a cooperative multi-agency body that works to address user conflicts. This would be an important resource the Council could use to make its concerns known to land managers in your area. Additionally, the State currently operates a Hunter Information and Training Program, which administers certification courses on basic hunting, bow hunting, and muzzleloader hunting with the assistance of 400 volunteer instructors statewide. The State also provides resources to educators to teach at culture camps, with youth groups, or with outdoor conservation organizations. Finally, any issues related to safety or hunting practices should also be forwarded to the appropriate State and Federal law enforcement officials, so they can directly address these issues with users in the field.

The issue of appropriate caliber of ammunition has been discussed with the Western Arctic Caribou Herd Working Group. It is possible that a proposal could be submitted under State or Federal regulations to address concerns about use of inappropriate ammunition. For example, under the unit-specific regulations for Unit 23, the take of swimming caribou with rimfire cartridges is permitted. *See* 50 CFR 100.26(n)(23)(iv)(B); 36 CFR 242.26(n)(23)(iv)(B). Should the Council desire to submit a proposal, OSM staff such as your Council Coordinator or wildlife biologists can assist you in preparing and submitting the proposal.

5. FSB Presence at Council Meetings

The Council wishes to extend its thanks and appreciation for the attendance of Federal Subsistence Board members/designees and other important staff presence at our meetings, such as the Office of Subsistence Management Assistant Regional Director. It is extremely important for us to have these kinds of staff at our meetings to make connections and bring regional issues into perspective for OSM and the FSB. We request at least one FSB or designee at each of our meetings.

Chairman Shiedt 6

Response:

The Board is pleased that the Council finds the presence of Board members or other key staff as beneficial to the conduct of its meetings and business. The Board will endeavor to have a Board member or designee in attendance at as many Council meetings as are possible. As you can appreciate, scheduling and budget may be limiting factors; however, it is worth noting that there is always at least one member of the Interagency Staff Committee (ISC) at each meeting. The members of the ISC are liaisons for the Board.

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 Northwest Arctic Region are well represented through your work.

Sincerely,

Tim Towarak
Chair

cc: Northwest Arctic Subsistence Regional Advisory Council
Federal Subsistence Board
Eugene R. Peltola, Jr., Assistant Regional Director, OSM
Chuck Ardizzone, Deputy Assistant Regional Director, OSM
Amee Howard, Policy Coordinator, OSM
Carl Johnson, Council Coordination Division Chief, OSM
Melinda Burke, Subsistence Council Coordinator, OSM
Interagency Staff Committee
Administrative Record

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 Appointment Process

The Office of Subsistence Management has submitted requests to the Secretary of the Interior to make the following changes to the 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 – Location TBD
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

Venue TBD
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

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

Northwest Arctic Subsistence Regional Advisory Council

Charter

1. **Committee's Official Designation.** The Council's official designation is the Northwest Arctic 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 three members to each of the Cape Krusenstern National Monument and the Kobuk Valley National Park Subsistence Resource Commissions and one member to the Gates of the Arctic National Park Subsistence Resource Commission in accordance with Section 808 of ANILCA.

f. Make recommendations on determinations of customary and traditional use of subsistence resources.

g. Make recommendations on determinations of rural status.

h. Provide recommendations on the establishment and membership of Federal local advisory committees.

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 $140,000, 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

- 4 -

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