



NORTHWEST ARCTIC SUBSISTENCE
REGIONAL ADVISORY COUNCIL
Meeting Materials

March 1-2, 2017

Kotzebue, Alaska



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On the cover...

The Western Arctic Caribou Herd spring migration to calving grounds.



NPS photo

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NORTHWEST ARCTIC SUBSISTENCE REGIONAL ADVISORY COUNCIL

Northwest Arctic Heritage Center
Kotzebue

March 2-3, 2017
9:00 a.m. – 5:00 p.m. daily

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. Invocation**
- 2. Call to Order** (*Chair*)
- 3. Roll Call and Establish Quorum** (*Secretary*)..... 3
- 4. Welcome and Introductions** (*Chair*)
- 5. Review and Adopt Agenda*** (*Chair*) 1
- 6. Election of Officers***
 - Chair (DFO)
 - Vice-Chair (New Chair)
 - Secretary (New Chair)
- 7. Review and Approve Previous Meeting Minutes*** (*Chair*) 7
- 8. Reports**
 - Council Member Reports
 - Chair’s Report
- 9. Public and Tribal Comment on Non-Agenda Items** (available each morning)

10. Old Business (Chair)

- a. Revisions to Draft MOU with State of Alaska
- b. Review of draft RAC correspondence letters

11. New Business (Chair)

- a. Call for Federal Wildlife Proposals20
- b. Approve FY2016 Annual Report*23
- c. Special Action WSA 17-02*
- d. U.S. Fish and Wildlife Service Draft Alaska Native Relations Policy Supplemental

12. Agency Reports

(Time limit of 15 minutes unless approved in advance)

- Tribal Governments
- Native Organizations
- USFWS
- NPS
- BLM
- ADF&G
- OSM

13. Future Meeting Dates*

- Confirm Fall 2017 meeting dates and location 116
- Select Winter 2018 meeting dates and location 117

14. Closing Comments

15. 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 Zach Stevenson, 907-786-3674, zachary_stevenson@fws.gov, or 800-877-8339 (TTY), by close of business on February 10, 2017.

REGION 8
Northwest Arctic Subsistence Regional Advisory Council

Seat	Year Appointed Term Expires	Member Name and Community
1	2010 2019	Raymond Stoney Kiana Chair
2	2014 2019	Beverly M. Moto Deering
3	2011 2019	Hannah P. Loon Kotzebue Secretary
4	2010 2019	Michael C. Kramer Kotzebue
5	2008 2017	Percy C. Ballot Sr. Buckland
6	2011 2017	Vern J. Cleveland, Sr. Noorvik
7	2015 2017	Louie A. Commack, Jr. Ambler
8	1999 2018	Enoch A. Shiedt Sr. Kotzebue Vice-Chair
9	2014 2018	Enoch L. Mitchell Noatak
10	2012 2018	Calvin D. Moto, Sr. Deering



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



Forest Service

Federal Subsistence Board News Release

For Immediate Release:

**This provides corrected information to News
Release dated December 9, 2016*

Contact: Caron McKee

(907) 786-3880 or (800) 478-1456
caron_mckee@fws.gov

Secretaries of the Interior and Agriculture appoint members to Federal Subsistence Regional Advisory Councils

Secretary of the Interior Sally Jewell, with the concurrence of Secretary of Agriculture Tom Vilsack, has made appointments to the 10 Federal Subsistence Regional Advisory Councils. The Councils advise the Federal Subsistence Board on subsistence management regulations and policies and serve as a forum for public involvement in Federal subsistence management in Alaska. With these appointments (shown in bold), the current membership of the Councils is:

SOUTHEAST ALASKA

Steve K. Reifenstuhl, Sitka
Frank G. Wright Jr., Hoonah
Patricia A. Phillips, Pelican
Michael A. Douville, Craig
Harvey Kitka, Sitka
Robert Schroeder, Juneau

Albert H. Howard, Angoon
Donald C. Hernandez, Pt. Baker
Kenneth L. Jackson, Kake
Raymond D. Sensmeier, Yakutat
John A. Yeager, Wrangell
Michael D. Bangs, Petersburg
Cathy A. Needham, Juneau

SOUTHCENTRAL ALASKA

Diane A. Selanoff, Valdez
Eleanor Dementi, Cantwell
R. Greg Encelewski, Ninilchik
Daniel E. Stevens, Chitina
Edward H. Holsten, Cooper Landing
Gloria Stickwan, Copper Center

James R. Showalter, Sterling
Michael V. Opheim, Seldovia
Andrew T. McLaughlin, Chenega Bay
Judith C. Caminer, Anchorage
Ingrid Peterson, Homer
Thomas M. Carpenter, Cordova
Ricky J. Gease, Kenai

KODIAK/ALEUTIANS

Antone A. Shelikoff, Akutan
Patrick B. Holmes, Kodiak
Richard Koso, Adak
Samuel I. Rohrer, Kodiak

Thomas L. Schwantes, Kodiak
Coral Chernoff, Kodiak
Rebecca Skinner, Kodiak
Della Trumble, King Cove
Speridon M. Simeonoff Sr., Akhiok
Melissa M. Berns, Old Harbor

BRISTOL BAY

Pete M. Abraham, Togiak
Dennis Andrew, Sr., New Stuyahok
Nanci A. Morris Lyon, King Salmon
Molly B. Chythlook, Dillingham
William J. Maines, Dillingham

Senafont Shugak, Jr., Pedro Bay
Dan O. Dunaway, Dillingham
Lary J. Hill, Iliamna
Victor A. Seybert, Pilot Point
Richard J. Wilson, Naknek

YUKON-KUSKOKWIM DELTA

William F. Brown, Eek
James A. Charles, Tuntutuliak
John W. Andrew, Kwethluk
Michael Peters, Marshall
Lester Wilde Sr., Hooper Bay
Dale T. Smith, Jr., Mekoryuk

Anthony Ulak, Scammon Bay
Annie C. Cleveland, Quinhagak
Dorothy G. Johnson, Mountain Village
Raymond J. Oney, Alakanuk
Greg J. Roczicka, Bethel
Robert E. Aloysius, Kalskag
David A. Bill, Sr., Toksook Bay

WESTERN INTERIOR ALASKA

Shirley J. Clark, Grayling
Donald V. Honea Jr., Ruby
Pollock Simon Sr., Allakaket
Raymond L. Collins, McGrath
Jack L. Reakoff, Wiseman

Darrel M. Vent, Sr., Huslia
Timothy P. Gervais, Ruby
Dennis R. Thomas, Sr., Crooked Creek
Jenny K. Pelkola, Galena
Fred W. Alexie, Kaltag

SEWARD PENINSULA

Theodore Katcheak, Stebbins
Brandon D. Ahmasuk, Nome
Louis H. Green Jr., Nome
Thomas L. Gray, Nome
Leland H. Oyoumick, Unalakleet

Fred D. Eningowuk, Shishmaref
Elmer K. Seetot Jr., Brevig Mission
Charles F. Saccheus, Elim
Ronald D. Kirk, Stebbins

NORTHWEST ARCTIC

Raymond Stoney, Kiana
Beverly M. Moto, Deering
Hannah P. Loon, Kotzebue
Michael C. Kramer, Kotzebue
Enoch Mitchell, Noatak

Verne J. Cleveland Sr., Noorvik
Louie A. Commack, Jr., Ambler
Enoch A. Shiedt Sr., Kotzebue
Percy C. Ballot Sr., Buckland
Calvin D. Moto, Deering

EASTERN INTERIOR ALASKA

Susan L. Entsminger, Tok Cutoff
Andrew P. Firmin, Fort Yukon
Lester C. Erhart, Tanana
William L. Glanz, Central

Andrew W. Bassich, Eagle
Will M. Koehler, Horsfeld
Donald A. Woodruff, Eagle
Virgil L. Umphenour, North Pole

NORTH SLOPE

Ester Hugo, Anaktuvuk Pass
Robert V. Shears, Wainright
Wanda T. Kippi, Atqasuk
Steve Oomituk, Point Hope

Sam Kunaknana, Nuiqsut
James M. Nageak, Anaktuvuk Pass
Gordon R. Brower, Barrow
Lee Kayotuk, Kaktovik
Dorothy A. Aktoosook, Barrow

The Federal Subsistence Board is accepting applications for the 2017 appointment cycle until February 3, 2017. For more information, go to the Federal Subsistence Management Program website at <https://www.doi.gov/subsistence/statewide>.

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

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

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MINUTES OF THE OCTOBER 5-6, 2016 NORTHWEST ARCTIC SUBSISTENCE REGIONAL ADVISORY COUNCIL MEETING

Location of Meeting

Davis-Ramoth Memorial School, Selawik, Alaska

Date and Time of Meeting

October 5-6, 2016 (9:00 a.m. daily)

Call to Order

The fall meeting of the Northwest Arctic Subsistence Regional Advisory Council was called to order on October 5-6, 2016 at 9:00 a.m. AKDT.

Roll Call

There were seven (7) Council Members present. There was one (1) excused absence and two (2) unexcused absences. Participating Council Members included:

Council Member Name, Title
Raymond Stoney, Chair
Vern Cleveland
Enoch Attamuk Shiedt, Vice-Chair
Michael Kramer
Hannah Paniyavluk Loon, Secretary
Enoch Mitchell
Calvin Moto, Sr.

Council Member Percy Ballot was excused from the meeting. Council Members Austin Swan and Louie Commack were unexcused and absent from the meeting.

Additional Participants

There were approximately forty-one (41) additional participants who attended some portion of the Northwest Arctic Subsistence Regional Advisory Council meeting either in person, or by teleconference (indicated with an asterisk “*”). The additional participants included:

Participant Name (Location)	Affiliation
Albert Harris, Sr. (Selawik, AK)	Resident
Bud Cleveland (Selawik, AK)	
Cal Jones, (Selawik, AK)	
Calvin Foster (Selawik, AK)	
Clyde Ramoth (Selawik, AK)	
Conrad Douglas (Selawik, AK)	
Dan Foster (Selawik, AK)	
Joann Foster (Selawik, AK)	
Kali Howarth, Caribou Collaring Crewmember (Selawik, AK)	
Kevin Ballot, Caribou Collaring Crewmember (Selawik, AK)	

Norma Ballot, Davis-Ramoth Memorial School (Selawik, AK)	
Brittany Sweeney, Selawik National Wildlife Refuge (Kotzebue, AK)	USFWS
Clarissa Zeller, Alaska Native Science and Engineering Program/Fisheries Resource Monitoring Program (Anchorage, AK)	
Eva Patton, Office of Subsistence Management (Anchorage, AK)	
Joshua Ream, Office of Subsistence Management (Anchorage, AK)*	
Karen Hyer, Office of Subsistence Management (Anchorage, AK)	
Lisa Maas, Office of Subsistence Management (Anchorage, AK)*	
Orville Lind, Office of Subsistence Management (Anchorage, AK)*	
Penny Crane, Fisheries & Ecological Services Division (Anchorage, AK)	
Pippa Kenner, Office of Subsistence Management (Anchorage, AK)*	
Stewart Cogswell, Office of Subsistence Management (Anchorage, AK)	
Susan Georgette, Selawik National Wildlife Refuge (Kotzebue, AK)	
Trevor Fox, Fisheries & Ecological Services Division (Anchorage, AK)*	
Zach Stevenson, Office of Subsistence Management (Anchorage, AK)	
Alan Bittner, BLM-Alaska (Anchorage, AK)	
Brian Ubalaker, BLM-Alaska (Anchorage, AK)	
Bruce Seppi, BLM-Alaska (Anchorage, AK)	
Dan Sharp, BLM-Alaska (Anchorage, AK)*	
Glenn Chen (Anchorage, AK)	BIA
Hannah Atkinson, Western Arctic National Parklands (Kotzebue, AK)	NPS
Hillary Robison, Western Arctic National Parklands (Kotzebue, AK)	
Ken Adkisson, Inventory & Monitoring (Nome, AK)*	
Kumi Rattenbury, Inventory & Monitoring (Fairbanks, AK)*	
Marci Johnson, Western Arctic National Parklands (Kotzebue, AK)*	
Marcy Okada, Gates of the Arctic Nat'l. Park & Preserve (Fairbanks, AK)	
Brandon Saito, Wildlife Conservation Division (Kotzebue, AK)	ADF&G
Carmen Daggett, Arctic Region Advisory Council Coordinator (Kotzebue, AK)*	
Jill Kline, Commissioner's Office (Juneau, AK)*	
Lincoln Parrett, Wildlife Conservation Division (Fairbanks, AK)	Other
Brad Johnson, Davis-Ramoth Memorial School (Selawik, AK)	
Reid Magdanz (Kotzebue, AK)	

Review and Adopt Agenda

The agenda was modified to address the inclusion of Wildlife Special Action 16-03 (WSA 16-03) and the inclusion of an update on the Fisheries Resource Monitoring Program. A detailed overview of the analysis of WSA 16-03 followed.

Review and Approval of Previous Meeting Minutes

Council Member Cleveland motioned to approve the minutes of the previous meeting. The motion was seconded by Council Member Kramer. The question was called by Council Member Moto. The motion was carried unanimously by the Council.

Council Reports

- Pervasive concern was expressed regarding the ongoing concern regarding the decline of

the Western Arctic Caribou Herd.

Old Business

The following old business was addressed:

- **Draft Nonrural Determination Policy.**
 - This rule revises the list of nonrural areas in Alaska identified by the Federal Subsistence Board (Board). Only residents of areas that are rural are eligible to participate in the Federal Subsistence Management Program on public lands in Alaska. Based on a Secretarial review of the rural determination process, and the subsequent change in the regulations governing this process, the Board is revising the current nonrural determinations to the list that existed prior to 2007. Accordingly, the community of Saxman and the area of Prudhoe Bay will be removed from the nonrural list. The following areas continue to be nonrural, but their boundaries will return to their original borders: the Kenai; the Wasilla/Palmer; Homer; and Ketchikan areas respectively.
 - Questions raised by the Council were addressed regarding potential future changes in population and associated impacts to rural status and the effects of potential future roadbuilding associated with the Ambler Mining District and impacts to rural status.
 - Council Member Shiedt motioned to approve the Draft Nonrural Determination Policy. Council Member Cleveland seconded the motion. The question was called by Council Member Shiedt. The Council moved to unanimously approve the motion.

New Business

The following new business was addressed:

- **Fisheries Resource Monitoring Program (FRMP) Updates**
 - An overview of the Fisheries Resource Monitoring Program was provided. The Fisheries Resource Monitoring Program was established in the year 2000. One of its purposes is to provide information for the management of subsistence fisheries on Federal public lands in Alaska. The program promotes collaboration between tribes, rural organizations, universities and Federal and State agencies. Since 2000 the monitoring program has funded 453 projects statewide.
 - An update on a FRMP project was provided addressing the abundance of Sheefish in the Kobuk River. The update noted differences in results for the Kobuk River, Selawik River, and Hotham Inlet areas respectively. Council Member Cleveland asked whether any impacts from climate change could be seen in the study results. No climate change results effects could be seen.
 - An update on subsistence fisheries genetics was provided, including a report from Clarissa, Zeller, a student associated with the Alaska Native Science and Engineering Program. The genetic studies include research in the North Slope and Kotzebue Sound, Norton Sound and Southwest Alaska. One use of the information collected is to help estimate the stock composition of Dolly Varden in the Wulik River near Kivalina.
- **FRMP Priority Information Needs**
 - In November 2017 a call for subsistence fishery related research proposals in the region will be circulated.
 - Investigators will review the call for proposals and submit proposals for consideration to the OSM.

- A detailed description of the proposal review process, criteria, and regional priorities identified by representatives from the Northwest Arctic Subsistence Regional Advisory Council was provided including understanding the summer dispersal and distribution of Dolly Varden in Northwest Alaska; identifying critical habitat for Dolly Varden or trout in the vicinity of Noatak, Kivalina and the Kobuk River; and better understanding the effects of climate change on subsistence fisheries.
- **Revisions to MOU with the State**
 - OSM Staff work with the Regional Advisory Councils, Federal and State fisheries managers and land managers to ensure the Monitoring Program focuses on the highest priority information needs for management of Federal subsistence fisheries. The Program requests projects every two years. For each of the six regions, OSM Staff works with the Regional Advisory Councils, Federal and State fisheries managers and land managers to ensure the Monitoring Program focuses on the highest priority information needs for management of Federal subsistence fisheries. When the call for proposals is issued, 24 two primary types of research projects are solicited. Harvest monitoring and traditional ecological knowledge projects and stocks, status and trends projects. Selected projects can run from two to four years. A Technical Review Committee evaluates and rates each 29 proposed project based on five criteria.
 - Council Member Stoney motioned to approve the MOU with the State. The motion was seconded by Council Member Cleveland. The question was called by Council Member Stoney. The motion passed unanimously.
- **Identify Issues for the Annual Report.** The following issues were identified for the Annual Report:
 - Perceived benefits to Federally qualified subsistence users resulting from the closure of Federal public lands in Unit 23 to caribou hunting by non-Federally qualified users. The Council recognizes possible benefits to Federally qualified subsistence users resulting from the closure of Federal public lands in Unit 23 to caribou hunting by non-Federally qualified users following the adoption of Wildlife Special Action 16-01 (WSA 16-01) by the Federal Subsistence Board (Board) in April 2016. These benefits include reduced user conflicts and improved caribou harvest by Federally qualified subsistence users in the vicinity of Noatak. Additional endorsements for WSA 16-01 were received by the Council, including four letters of support for the closure, submitted by Herbert Walton, Sr., Tribal Administrator, Native Village of Noatak; Eva Onalik, Treasurer, Native Village of Noatak; Hannah Onalik, Tribal Secretary, Native Village of Noatak; and N. Carol Wesley, Noatak Resident (see enclosed). The Council noted the following additional information pertinent to the closure:
 - ✓ Since the last wildlife regulatory cycle, new information has been gathered regarding the Western Arctic Caribou Herd (WACH) population status and user conflicts. These trends coincide with the anticipated and continued decline of the herd. The Council notes the sharing of this information is relevant to the Board to 1) help conserve this important

subsistence resource; and 2) support landscape level conservation of the resource through coordinated information sharing with effected land managers across the range of the herd in accordance with Title VIII of ANILCA.

- ✓ The WACH declined from 490,000 animals in 2003 to 200,928 animals in 2016. While the population of the WACH places the herd in the Conservative Management Mode under the WACH Cooperative Management Plan, it is nearing the 200,000 animal threshold that would trigger the Preservative Management Mode under that Plan. If population trends continue unchanged, the Preservative Management Mode will be reached in the near future, and likely during the time of the upcoming wildlife regulatory cycle. Given potential error rates in the State's estimates, it is potential that the WACH is at that population level now.
- ✓ Despite the continued decline of the herd, State biologists reported observations of improved herd characteristics in 2016 that include increased animal fitness, increased pregnancy rates, and increased calf survival. It has been acknowledged, however, that survival of the large 2016 cohort of calves through the winter of 2016/2017 is critical to ensuring recruitment into the herd and improving, reducing, or reversing current trends. Addressing potential weather conditions that may adversely impact the WACH, the North Slope Subsistence Regional Advisory Council reported challenging conditions (icing events) at its fall 2016 meeting.
- ✓ Additionally, ongoing user conflicts in the region have been a topic of concern. Since the 1980s, user conflicts between Federally qualified and non-Federally qualified subsistence users have been extensively documented. A recurring theme has been the change in caribou migration routes that are perceived to be due to hunting activities of non-Federally qualified subsistence users primarily that of aircraft landing near or in front of migrating herds. The timing and distribution of the herd migration has shifted, often taking the bulk of animals farther from local communities causing increased hunter burden in obtaining this important subsistence resource.
- ✓ The cultural and ecological effects of the recent regulatory changes and the special action closure on Federal public lands have not been evaluated. Effects of the closure may be ascertained by evaluating changes in hunting patterns and caribou migration patterns through public testimony, Council member observations, and local land manager observations. Definitely tying these effects to regulatory changes, if possible, requires directed research, the funding and mechanisms of which are not currently in place and likely not to be in the foreseeable future. Still, the perceived or actual effects will likely influence future strategies of regulatory proposals.
- ✓ Because of the complexity of this issue, the continued decline of the herd, the likelihood of future regulatory changes and the fact the WACH is a subsistence resource used by four Council regions, ongoing coordination among Councils will be beneficial in providing a framework for

addressing regulations for the WACH into the future in a cohesive way. The Council recommends the Board support these efforts and do whatever is necessary to ensure the continued viability of this vital subsistence resource.

- Need for Federal agencies to exercise precaution when managing the rapidly changing subsistence resources and uses in the Northwest Arctic. The Council emphasizes the increasing need for Federal agencies to exercise precaution when managing the rapidly changing subsistence resources and uses in the Northwest Arctic. The Council notes changes include:
 - ✓ *Proliferation of beaver* – Increase in beaver populations shown by the decline of willows and the damming of creeks extending as far north as Point Hope. These impacts may adversely affect subsistence fisheries, increasingly important to Federally qualified subsistence users given the decline of the region’s caribou.
 - ✓ *Changes in fish size and fish health* – Increase in large, though seemingly healthy, fish containing worms (some a quarter inch in length).
 - ✓ *Preserving customary and traditional use* – Concern that further limits on caribou harvest may result in the unintended consequence of criminalizing customary and traditional subsistence use. The Council wishes to highlight and emphasize customary use of subsistence resources, differing by location and season, including Sheefish and whitefish in Selawik; caribou and trout (Dolly Varden) in Noatak; and sheep.
 - ✓ *Changes in water quality and quantity* – Concerns regarding impacts to Federally qualified subsistence users from changes in water temperature associated with global warming. Council members have noted a drop in river levels near remote communities.
 - ✓ *Impacts from potential road development and mineral extraction* – Concern regarding the potential for adverse impacts to water quality and increased pressure to harvest subsistence resources associated with the potential development of the Ambler Road.
 - ✓ The Council requests that the Board remain engaged with these issues and take whatever actions are necessary and possible to continue conservation of vital subsistence resources.
- Need to reduce caribou harvest bag limits and maintain the closure of Federal public lands in Unit 23 to caribou hunting by non-federally qualified users. The Council emphasizes concern regarding the continued decline of the region’s caribou population, from approximately 231,000 down to approximately 201,000 animals. The Council recommends a reduction in caribou harvest bag limits from 5 caribou per day to 3 caribou per day. The Council also emphasizes the need to maintain the closure of Federal public lands in Unit 23 for more than one regulatory year to caribou hunting by non-Federally qualified users. The Council notes the continuation of the closure is needed to see if the closure is having a positive effect on conservation of the herd and continuation of subsistence opportunity, thus allowing Federally qualified subsistence users to meet their food security needs. The Council underscores the significance of subsistence

resources to feeding families in the Northwest Arctic, noting the high cost of store-bought food throughout the region.

- **Tongass Submerged Lands Proposed Rule**

- The U.S. District Court for Alaska in its October 17, 2011, order in *Peratrovich et al. v. United States and the State of Alaska*, 3:92-cv-0734-HRH (D. Alaska), enjoined the United States “to promptly initiate regulatory proceedings for the purpose of implementing the subsistence provisions in Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA) with respect to submerged public lands within Tongass National Forest” and directed entry of judgment. To comply with the order, the Federal Subsistence Board (Board) must initiate a regulatory proceeding to identify those submerged lands within the Tongass National Forest that did not pass to the State of Alaska at statehood and, therefore, remain Federal public lands subject to the subsistence provisions of ANILCA.
- Following the Court’s decision, the Bureau of Land Management (BLM) and the USDA–Forest Service (USDA–FS) started a review of hundreds of potential pre-statehood (January 3, 1959) withdrawals in the marine waters of the Tongass National Forest. In April and October of 2015, BLM submitted initial lists of submerged public lands to the Board. This proposed rule would add those submerged parcels to the subsistence regulations to ensure compliance with the Court order. Additional listings will be published as BLM and the USDA–FS continue their review of pre-statehood withdrawals. Public comments on the proposed rule were requested from the Council.
- Clarification was provided, noting the Proposed Rule applies to lands that were not included under ANILCA.
- Council Member Shiedt motioned to approve the Proposed Rule as read by Stewart Cogswell. Council Member Cleveland seconded the motion. Council Member Shiedt called the question. The motion passed unanimously.

- **Feedback on the All Council Meeting**

- An overview of the winter 2016 OSM All Council Meeting was provided. The meeting provided a unique learning opportunity for Council Members and State and Federal agency representatives through numerous workshops (e.g. ANILCA section VIII training and Roberts Rules of Order training). The workshops were designed to help Councils operate successfully and effectively. One of the major outputs of that event was a letter that was drafted jointly by all Councils addressing some common needs and priorities; including requests to the Federal Subsistence Board for ongoing meetings where in the future Councils can meet again and share information amongst various RAC members as well as the need for developing an initiative to help support future wildlife research and strengthen some of those needs.

Agency Reports

The following agency reports were delivered:

- **U.S. Fish and Wildlife Service, Office of Subsistence Management (OSM)**

- Review of the Council Charter – An overview of the Council Charter was provided, noting the role of the Council, Council procedures, and Council Member duties. Council Member Shiedt noted the length of time required to process Council Member applications and requested that Council Member terms be extended to five (5) years.
- Council Member Shiedt also requested an increase in the per diem rate.

- Council Member Cleveland noted the recurring unexcused absence of Council Members at meetings. Council Member Cleveland emphasized the need to enforce Council policies regarding unexcused absenteeism.
- Ms. Patton (OSM) acknowledged the significant contributions made by Council Members. Ms. Patton noted the issues regarding the request for extended Council member terms and an increased per diem rate have already been forwarded to the Office of the Secretary. Ms. Patton added that to date, OSM is still waiting on a response to this request. Ms. Patton added the Council has clear policies for conduct and guidelines addressing absenteeism.
- Council Member Loon expressed concern regarding the absence in representation from the Kobuk region. Council Member Loon also asked for clarification on the role of the Subsistence Regional Advisory Council in addressing issues affecting Federal Waters.
- Ms. Patton explained the Council has the delegated authority to advise the Federal Subsistence Board on subsistence resource management affecting Federal public lands and can also make recommendations as a Council on Board of Game and Board of Fish proposals as well in the region.
- Ms. Kenner (OSM) added that for the purposes of fish, the Federal Subsistence Management Program manages fish in waters that are running through and adjacent to Federal public lands. However, for the management of wildlife, the Federal Subsistence Management Program manages wildlife only on Federal public lands.
- Questions were raised regarding the confiscation of per diem a Council Member. Staff noted the Council Members who owe money to federal agencies (e.g. Internal Revenue Service or child support) may have their per diem garnished or confiscated by the U.S. Department of the Treasury. This is the law and non-negotiable.
- Council Member Mitchell made the motion to support and approve the Charter. The motion was seconded by Council Member Cleveland. Council Member Shiedt called the question. The motion passed approving the Charter.
- An OSM staffing update was provided.
- **State Wildlife Proposals**
 - Proposal 44 – Council Member Shiedt addressed Proposal 44 regarding Controlled Use Areas. Council Member Shiedt recommended modifying the area of the Noatak Controlled Use Area in Unit 23 to extend five miles on either side of in the vicinity of the Noatak River; beginning at the mouth of the Noatak River; extending upstream to the mouth of the Cutler River, and continuing to Sapun Creek. Council Member Shiedt noted the area is closed from August 15 to September 30 to the use of aircraft in any manner for big game hunting, including the transportation of big game hunters, their hunting gear or parts of big game. Council Member this prohibition does not apply to the transportation of big game hunters, their hunting gear or parts of big game to and between publicly owned airports. Council Member Shiedt explained this situation results in conflicts between Federal qualified subsistence users and non-Federally qualified subsistence users in the Sapun Creek area. Council Member Shiedt added this

situation adversely impacts the dispersal of caribou and adversely impacts the hunting success of Federally qualified subsistence users in the region. Council Member Shiedt added he would address this issue at the Board of Game Meeting in January.

- Proposal 45 – Council Member Shiedt addressed Proposal 45 regarding conflicts between Federally qualified subsistence users and non-Federally qualified subsistence users and the harvest of caribou from the Western Arctic Caribou Herd (WACH) in the vicinity of the Eli, Aggie and Squirrel Rivers. Council Member Shiedt noted the changing WACH migration route places an economic hardship on Federally qualified subsistence users who must spend more money on gasoline and travel farther to harvest caribou. Council Member Shiedt Council Member noted a density of non-Federally qualified subsistence users in the Eli, Aggie and Squirrel River area. Council Member Shiedt recommended that Proposal 45 be amended to reduce user conflicts by separating Federally qualified subsistence users and non-Federally qualified subsistence users in the vicinity of the Eli, Aggie and Squirrel Rivers.
- Council Member Mitchell called a motion for support of Proposal 44 and support of Proposal 45 as amended. Council Member Loon seconded the motion. The question was called by Council Member Loon. The motion passed unanimously.
- **Native Village of Noatak**
 - Council Member Mitchell emphasized support for Wildlife Special Action 16-01 (WSA 16-01), addressing the hunting of caribou in the vicinity of Noatak and noting ongoing and unresolved conflicts between Federally qualified subsistence users and non-Federally qualified subsistence users in the area. Council Member Mitchell submitted four (4) letters addressing WSA 16-01 provided by the Native Village of Noatak. The four letters address the rationale for and beneficial impacts of the closure of Federal public lands in Unit 23 to caribou hunting by non-Federally qualified subsistence users. The letters note the impacts of the closure include reduced user conflicts; reduced disturbance to caribou migration; and improved hunter success. Council Member Mitchell thanked fellow Council Members for their support on this issue of high concern to the people of Noatak.
- **U.S. Fish and Wildlife Service, Selawik Refuge**
 - A brief update on the operations of the Selawik Refuge was provided. The update noted the location of the Refuge and provided a staffing update. The update included a report on fire, changes in permafrost, and Sheefish research in the Refuge. The update addressed extensive outreach conducted in communities surrounding the Refuge, to share information regarding Wildlife Special Action 16-01. The update addressed the declining moose population in the region and referenced Council Member Kramer’s recommendation to have a cow season that runs right from August to the end of March on Federal public lands. The update suggested the thinking about limiting harvest to bulls or shortening the season and invited further input from the Alaska Department of Fish and Game. The update addressed youth engagement initiatives in the Refuge including a youth conservation corps and the 14th Annual Selawik Science Culture Camp.

Information on guides and transporters in the Refuge is expected in January or February.

- **National Park Service, Western Arctic Parklands**
 - A staffing update was provided noting the hire of Maija Katak Lukin as Superintendent. The update included a report on the Cape Krusenstern Subsistence Resource Commission (SRC) which met on February 9, 2016. The SRC addressed the proposed rule regarding the subsistence collection of horns and antlers. The update mentioned the addition of Hannah Paniyavluk Loon as a new SRC Member. The update noted the Kobuk Valley SRC met on February 11, 2016 and included the appointment of Enoch Mitchell to the Commission. An update was provided on the aerial monitoring of sport hunters in the backcountry of the Western Arctic National Parklands. Appreciation was noted for the assistance provided by Lance Kramer who assisted with ranger activities above the Nimi. A handout was circulated providing an overview of biological surveys in the Western Arctic Parklands. A description of a muskox and brown bear studies in the Western Arctic National Parklands was provided. Questions from the Council were addressed regarding Dall Sheep and loon surveys. Council Member Cleveland addressed new proposals regarding tag limits for brown bears and was directed to review the regulation booklet.
- **National Park Service, Gates of the Arctic National Park & Preserve**
 - An update on the Teshepuk Caribou Herd was provided, noting a delayed migration. An update on field work was provided, noting research on bears. An update on sheep hunting was provided, currently focused on the western portion of the Park. A update on fire activity in the Park was provided. An update on the permitting process for the Amber Mining District was provided, noting a forthcoming environmental assessment and the release of a scientific paper addressing the potential impacts of roads on subsistence users from the Amber Mining District. Additionally an update on a short film called Counting on Caribou was provided. The film was produced by Farthest North Films and the National Park Service. Footage was collected as part of a study documenting traditional ecological knowledge of caribou and perspectives about caribou held by subsistence users in Northwest Alaska. The film was distributed throughout the eleven (11) communities in the region.
- **Bureau of Land Management**
 - An update was provided noting the operating area of the Bureau of Land Management (BLM) in the region. A staffing update was provided. An update was provided for the BLM Planning Process in the region, with a plan expected in January 2017. A range of alternatives is being considered. A topic of potential interest to the Council is the designation of areas of critical environmental concern (ACECs). The planning process includes a revision to the Kobuk Seward Resource Management Plan. An update on commercial hunting permits on BLM lands in the region was provided. An update on mining compliance, cleanup, and mitigation in the region was provided. An update on caribou radio collaring in the

vicinity of Onion Portage was provided, noting the involvement of students from the Davis-Ramoth Memorial School in Selawik. The BLM will be sponsoring the students' travel to the upcoming Western Arctic Caribou Herd Working Group Meeting in Anchorage, where the students will deliver a report on their involvement in caribou radio collaring research.

- **Alaska Department of Fish and Game**

- An update was provided addressing the continued decline the Western Arctic Caribou Herd (WACH), estimated at approximately 200,000 animals. The effect of harsh weather conditions on caribou nutrition and caribou health was addressed. Some favorable results were mentioned showing calf weights are high, calf births are high, calf survival is high and adult survival is also high. The decline has slowed from 15% to 5%. However, as harvest begins to exceed harvestable surplus, Council Members were encouraged to consider management options should the State of Alaska move from conservative to preservative management as recommended by the WACH Management Plan. The update addressed potential reductions in bag limits, consideration of an RM880 registration permit hunt, and questions from Council Members addressing potential harvest limits facing neighboring regions.
- Council Member Kramer recommended a joint meeting of the four (4) Regional Advisory Councils(Northwest Arctic, North Slope, Seward Peninsula, and Western Interior) affected by the decline of the Western Arctic Caribou Herd at the next Council Meeting.
- An update was provided on two OSM-funded subsistence fishery studies including a project traditional knowledge of subsistence fisheries and climate change in eight communities. The other project involves a Chukchi Sea and Norton Sound observation network and includes comprehensive surveys coupled with key respondent interviews. Reports will be circulated soon for review. Studies in the Seward Peninsula will come next.
- A report on moose population numbers was provided. The report noted a 46 percent decline in the moose population between 2011 and 2016 or a 12 percent annual rate of decline in the same period. Efforts are underway to improve moose harvest survey data and improve compliance with RM880.
- Council Member Kramer introduced a motion to submit a Special Action Request to the Federal Subsistence Board for a moose hunting closure on Federal public lands in Unit 23 to non-Federally qualified subsistence users for the 2017/18 regulatory year. Council Member Kramer added that the moose population in Unit 23 decreased significantly. The State of Alaska decreased the moose harvest quota a small percentage every year.
- Ms. Patton requested clarification to address the rationale and justification for this special action request.
- Council Member Kramer added that moose take longer than caribou to repopulate. Conservation measures are needed now to sustain moose as an important subsistence resource for Federally qualified subsistence users. Council Member Kramer emphasized the request for Special Action intends to ensure the

continued viability of the region's moose population, and to ensure the continued subsistence use of this important wildlife resource to Federally qualified subsistence users in the region.

- Council Member Kramer explained the need for this special action is particularly urgent because some Federally qualified subsistence users in the region are now harvesting moose to compensate for the decline in the region's caribou population. This Special Action would help to conserve the moose population and allow time to assess the benefits of a temporary closure to Federally qualified subsistence users. Council Member Kramer added this request for Special Action would also help to minimize user conflicts.
- The motion in support of submitting a special action request to the Federal Subsistence Board requesting the closure of Federal public lands to moose hunting by non-Federally qualified subsistence users for the 2017/18 regulatory year was seconded by Council Member Cleveland. The question was called by Council Member Loon. The motion passed unanimously.

Future Meeting Dates

- Council Member Shiedt called the question for where to hold the winter 2017 Northwest Arctic Subsistence Regional Advisory Council Meeting. Council Member Cleveland moved to hold the winter 2017 meeting on March 1-2, 2017 in Nome, Alaska or Kotzebue, Alaska to include participation from the Seward Peninsula RAC. Council Member Kramer seconded holding the winter 2017 meeting in Kotzebue. Council Member Loon called the question for holding the winter 2017 meeting in Kotzebue. The Council unanimously approved the winter 2017 meeting date and location of March 1-2, 2017 in Kotzebue.
- Council Member Cleveland motioned to hold the fall meeting on October 25-26, 2017 in Shungnak, Alaska. Council Member Moto seconded holding the fall 2017 meeting in Shungnak. Council Member Shiedt called the question. The Council unanimously approved holding the fall 2017 on October 25-26, 2017 in Shungnak.

Closing Comments

- Council Member Moto expressed his appreciation for the effort undertaken to organize the meeting. Council Member Moto expressed his interest, willingness, and ability to share information from the meeting with representatives from the Tribal Council in Deering, Alaska.
- Council Member Cleveland expressed the meeting was well conducted. Council Member Cleveland invited others to attend the Western Arctic Caribou Herd Working Group Meeting in Anchorage scheduled for Dec. 14-15, 2016.
- Council Member Loon thanked the Davis-Ramoth Memorial School for hosting the meeting and the Davis-Ramoth Memorial School Wrestling Team for preparing meals for everyone. Council Member Loon thanked Selawik residents for their participation in the meeting and wished everyone a safe trip home.
- Council Member Stoney thanked the people of Selawik and the Davis-Ramoth Memorial School for their hospitality and hosting the meeting. Council Member Stoney thanked

staff for their role in helping to prepare the meeting. Council Member Stoney thanked fellow RAC members for their involvement and role in accomplishing so much at this meeting.

Follow-up Correspondence

- Council Member Loon requested a letter of appreciation be submitted on behalf of the Council to the Principal of the Davis-Ramoth Memorial School, thanking the Principal for hosting the Council Meeting.
- Council Member Loon also requested a letter of appreciation be submitted on behalf of the Council to Norma Ballot of the Davis-Ramoth Memorial School. Ms. Ballot involved her Iñupiaq Studies class students in the meeting. The students delivered a presentation describing their involvement in a caribou radio collaring project.
- Council Member Kramer thanked everyone for attending. Council Member Kramer emphasized the importance of holding meeting in non-hub communities (like Selawik) where residents are directly affected by subsistence resource management decisions.
- Council Member Shiedt expressed appreciation for holding the meeting in Selawik. Council Member Shiedt emphasized the importance of involving State and Federal agency staff in village-based Subsistence Regional Advisory Council Meetings to familiarize staff with the reality facing local residents.
- Council Member Kramer requested a letter of appreciation be submitted on behalf of the Council to former Federal Subsistence Board Chair Tim Towarak in recognition of his years of service to the people of Alaska and professionalism.

Adjourn

- Council Member Shiedt called the question to adjourn the meeting. The motion to adjourn the meeting was moved by Council Member Loon. The motion was seconded by Council Member Cleveland. The vote was called by Council Member Shiedt. The Council voted unanimously to adjourn the meeting.

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

Zach Stevenson, Designated Federal Official, OSM

Date

Raymond Stoney, Chair

Date

These minutes will be formally considered by the Northwest Arctic Subsistence Regional Advisory Council at its winter 2017 public meeting, and any corrections or notations will be incorporated in the minutes of that meeting.



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

Federal Subsistence Board Informational Flyer



Forest Service

Contact: Theo Matuskowitz
(907) 786-3867 or (800) 478-1456
theo_matuskowitz@fws.gov

How to Submit a Proposal to Change Federal Subsistence Regulations

Alaska residents and subsistence users are an integral part of the Federal regulatory process. Any person or group can submit proposals to change Federal subsistence regulations, comment on proposals, or testify at meetings. By becoming involved in the process, subsistence users assist with effective management of subsistence activities and ensure consideration of traditional and local knowledge in subsistence management decisions. Subsistence users also provide valuable wildlife harvest information.

A call for proposals to change Federal subsistence fishing regulations is issued in January of even-numbered years and odd-numbered years for wildlife. The period during which proposals are accepted is no less than 30 calendar days. Proposals must be submitted in writing within this time frame.

You may propose changes to Federal subsistence season dates, harvest limits, methods and means of harvest, and customary and traditional use determinations.

What your proposal should contain:

There is no form to submit your proposal to change Federal subsistence regulations. Include the following information in your proposal submission (you may submit as many as you like):

- Your name and contact information (address, phone, fax, or E-mail address)
- Your organization (if applicable).
- What regulations you wish to change. Include management unit number and species. Quote the current regulation if known. If you are proposing a new regulation, please state, “new regulation.”
- Write the regulation the way you would like to see it written in the regulations.
- Explain why this regulation change should be made.
- You should provide any additional information that you believe will help the Federal Subsistence Board (Board) in evaluating the proposed change.

You may submit your proposals by:

1. By mail or hand delivery to:
Federal Subsistence Board
Office of Subsistence Management
Attn: Theo Matuskowitz
1011 E. Tudor Rd., MS-121
Anchorage, AK 99503
2. At any Federal Subsistence Regional Advisory Council meeting (A schedule will be published in the Federal Register and be announced statewide, bi-annually, prior to the meeting cycles)
3. On the Web at <http://www.regulations.gov>

Submit a separate proposal for each proposed change; however, do not submit the same proposal by different accepted methods listed above. To cite which regulation(s) you want to change, you may reference [50 CFR 100](#) or [36 CFR 242](#) or the proposed regulations published in the Federal Register: <http://www.gpoaccess.gov/fr/index.html>. All proposals and comments, including personal information, are posted on the Web at <http://www.regulations.gov>.

For the proposal processing timeline and additional information contact the Office of Subsistence Management at (800) 478-1456/ (907) 786-3888 or go to <http://www.doi.gov/subsistence/proposal/submit.cfm>.

How a proposal to change Federal subsistence regulations is processed:

1. Once a proposal to change Federal subsistence regulations is received by the Board, the U.S. Fish and Wildlife Service, Office of Subsistence Management (OSM) validates the proposal, assigns a proposal number and lead analyst.
2. The proposals are compiled into a book for statewide distribution and posted online at the Program website. The proposals are also sent out the applicable Councils and the Alaska Department of Fish and Game (ADF&G) and the Interagency Staff Committee (ISC) for review. The period during which comments are accepted is no less than 45 calendar days. Comments must be submitted within this time frame.
3. The lead analyst works with appropriate agencies and proponents to develop an analysis on the proposal.
4. The analysis is sent to the Councils, ADF&G and the ISC for comments and recommendations to the Board. The public is welcome and encouraged to provide comments directly to the Councils and the Board at their meetings. The final analysis contains all of the comments and recommendations received by interested/affected parties. This packet of information is then presented to the Board for action.
5. The decision to adopt, adopt with modification, defer or reject the proposal is then made by the Board. The public is provided the opportunity to provide comment directly to the Board prior to the Board's final decision.
6. The final rule is published in the Federal Register and a public regulations booklet is created and distributed statewide and on the Program's website.

A step-by-step guide to submitting your proposal on www.regulations.gov:

1. Connect to www.regulations.gov – there is no password or username required.
2. In the white space provided in the large blue box, type in the document number listed in the news release or available on the program webpage, (for example: FWS-R7-SM2014-0062) and select the light blue “Search” button to the right.

3. Search results will populate and may have more than one result. Make sure the Proposed Rule you select is by the U.S. Fish and Wildlife Service (FWS) and **not** by the U.S. Forest Service (FS).
4. Select the proposed rule and in the upper right select the blue box that says, "Comment Now!"
5. Enter your comments in the "Comment" box.
6. Upload your files by selecting "Choose files" (this is optional).
7. Enter your first and last name in the spaces provided.
8. Select the appropriate checkbox stating whether or not you are providing the information directly or submitting on behalf of a third party.
9. Fill out the contact information in the drop down section as requested.
10. Select, "Continue." You will be given an opportunity to review your submission.
11. If everything appears correct, click the box at the bottom that states, "I read and understand the statement above," and select the box, "Submit Comment." A receipt will be provided to you. Keep this as proof of submission.
12. If everything does not appear as you would like it to, select, "Edit" to make any necessary changes and then go through the previous step again to "Submit Comment."

Missing out on the latest Federal subsistence issues? If you'd like to receive emails and notifications on the Federal Subsistence Management Program you may subscribe for regular updates by emailing fws-fsb-subsistence-request@lists.fws.gov. Additional information on the Federal Subsistence Management Program may be found on the web at www.doi.gov/subsistence/index.cfm or by visiting www.facebook.com/subsistencealaska.

Northwest Arctic Subsistence Regional Advisory Council

c/o Office of Subsistence Management
1011 East Tudor Road, MS 121
Anchorage, Alaska 99503

RAC NWA17009.ZS

Mr. Anthony Christianson, Chair
Federal Subsistence Board
c/o Office of Subsistence Management
1011 East Tudor Road, MS 121
Anchorage, Alaska 99503

Dear Chairman Christianson:

The Northwest Arctic Subsistence Regional Advisory Council (Council) submits this FY2016 annual report to the Federal Subsistence Board (Board) under the provisions of Section 805 (a)(3)(D) of the Alaska National Interest Lands Conservation Act (ANILCA). At its public meeting in Selawik on October 5-6, 2016, the Council identified concerns and recommendations for this report, [*approving it at its winter 2017 public meeting in Kotzebue*]. The Council wishes to share information and raise a number of concerns aligned with the implementation of Title VIII of ANILCA and the continuation of subsistence uses in the Northwest Arctic Region.

1. Perceived benefits to Federally qualified subsistence users resulting from the closure of Federal public lands in Unit 23 to caribou hunting by non-Federally qualified users

The Council is noticing possible benefits to Federally qualified subsistence users resulting from the closure of federal public lands in Unit 23 to caribou hunting by non-Federally qualified users following the adoption of Wildlife Special Action 16-01 (WSA 16-01) by the Board in April 2016. These benefits include reduced user conflicts and improved caribou harvest by Federally qualified subsistence users in the vicinity of Noatak, in particular that people were getting enough caribou for the first time in a long while. Council members also noted that there is hope that the closure will aid in restoring traditional migration routes. Additional endorsements for WSA 16-01 were recognized by the Council, including four letters of support for the closure, submitted by Herbert Walton, Sr., Tribal Administrator, Native Village of Noatak; Eva Onalik, Treasurer, Native Village of Noatak; Hannah Onalik, Tribal Secretary, Native Village of Noatak; and N. Carol Wesley, Noatak Resident (see enclosed).

Because of the complexity of this issue, the continued decline of the herd, the likelihood of future regulatory changes and the fact that the WACH is a critical subsistence resource for at least four Council regions, ongoing coordination among Councils will be beneficial in providing a framework for addressing regulations for the WACH into the future in a cohesive way. We

encourage the Board to support these efforts and to do whatever is necessary to ensure the continued viability of this vital subsistence resource.

2. Need for Federal agencies to exercise precaution when managing the rapidly changing subsistence resources and uses in the Northwest Arctic

There is increasing need for Federal agencies to exercise caution when managing the rapidly changing subsistence resources and uses in the Northwest Arctic. These changes include:

Proliferation of beaver – Increase in beaver populations shown by the decline of willows and the damming of creeks extending as far north as Point Hope. These impacts may adversely affect subsistence fisheries, increasingly important to Federally qualified subsistence users given the decline of the region's caribou.

Changes in fish size and fish health – Increase in large, though seemingly healthy, fish containing worms (some a quarter inch in length).

Preserving customary and traditional uses – Concern that further limits on caribou harvest may result in the unintended consequence of criminalizing customary and traditional subsistence uses. The Council wishes to highlight and emphasize customary use of subsistence resources, differing by location and season, including sheefish and whitefish in Selawik, caribou and trout (Dolly Varden) in Noatak, and sheep.

Changes in water quality and quantity – Concerns regarding impacts to Federally qualified subsistence users from changes in water temperature associated with global warming. Council members have noted a drop in river levels near remote communities.

Impacts from potential road development and mineral extraction – Concern regarding the potential for adverse impacts to water quality and increased pressure to harvest subsistence resources associated with the potential development of the Ambler Road.

The Council requests that the Board remain engaged with these issues and take whatever actions are necessary and possible to continue conservation of vital subsistence resources.

3. Need to reduce caribou harvest bag limits and maintain the closure of Federal public lands in Unit 23 to caribou hunting by non-Federally qualified users

The Council is concerned with the continued decline of the region's caribou population, from approximately 231,000 down to just shy of 201,000 animals. The Council recommends a reduction in caribou harvest bag limits from 5 caribou per day to 3 caribou per day. The Council also emphasizes the need to maintain the closure of Federal public lands in Unit 23 for more than one regulatory year to caribou hunting by non-Federally qualified users. The continuation of the closure is needed to see if the closure is having a positive effect on conservation of the herd and

Chairman Christianson

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continuation of subsistence opportunity, thus allowing Federally qualified subsistence users to meet their food security needs. The Council underscores the significance of subsistence resources to feeding families in the Northwest Arctic, noting the high cost of store-bought food throughout the region.

Thank you for the opportunity for this Council to assist the Federal Subsistence Management Program in meeting its charge of protecting subsistence resources and uses of these resources on Federal Public lands and waters. We look forward to continuing discussions with the Northwest Arctic Region.

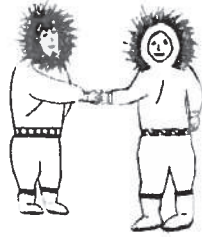
If you have questions about this report, please contact me via Zach Stevenson, Subsistence Council Coordinator, with the Office of Subsistence Management at zachary_stevenson@fws.gov, 1-800-478-1456 or, 907-786-3676.

Sincerely,

Raymond Stoney
Chair

Enclosure

cc: Federal Subsistence Board
Western Interior Alaska Subsistence Regional Advisory Council
Eugene R. Peltola, Jr., Assistant Regional Director, Office of Subsistence Management
Stewart Cogswell, Acting Deputy Assistant Regional Director
Office of Subsistence Management
Carl Johnson, Council Coordination Division Chief, Office of Subsistence Management
Zachary Stevenson, Subsistence Council Coordinator, Office of Subsistence Management
Interagency Staff Committee
Administrative Record



NATIVE VILLAGE OF NOATAK
P.O. BOX 89
NOATAK, ALASKA 99761
PHONE: (907) 485-2173
FAX: (907) 485-2137

October, 4 2016

To: RAC

To the members of RAC, the closure for Non-Rural hunters

on Federal Lands has been successful. It has stopped the conflict totally and people of Noatak has been getting their quota of caribou instead of 2 or 3 at a time. Today WACH is still coming through our area and the closure has been a blessing. It was like a good break from sport hunters scaring the caribou and we hunted in places and got many caribou. The much needed caribou will take us through the winter. Thank you very much.

Noatak Village Council
Noatak Tribal Administrator


Herbert Walton Sr.

Jo: RAC

10/4/16

This is for closer of Nana Lands-

This has helped our community a lot
when we don't see or hear of sport-hunter
up river where our hunters go

hunt - Now today our hunters go home

with LOTS of caribou for the

families/ village - Thank you

Eva Onalik

Treasurer - IRA Council

October 4, 2016

To RAC

This letter is a request to keep the sport hunters closed for longer timing, for our people to have time to hunt & fill our freezers, because we can't afford to pay for 40,+50 dollar steaks that we pay for at the store.

Please consider this letter of support. Thank You Mr. Mitchell.

Thank you
Tribal Secretary
Hannah Oralik

Wesley Household
PO Box 54
Noatak, AK 99761
Phone: 907-485-2220

To Whom It May Concern:

Please accept this letter of appreciation for the passage of WSA 16-01 in Unit 23, closing non-federally qualified hunters, effective July 1, 2016.

This closure really really helped the folks on the Noatak River with their fall harvest of caribou in 2016. First time since 2010 or so, many household in Noatak have caribou to fill their freezers for winter. Prior to that 2010-2015, only a handful, say about 10 household from approximately 110 household got their catch with many people going without caribou for winter, which can cause many hardships ranging from bill-paying, food-buying at the local store to going hungry.

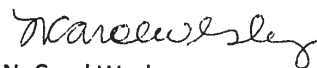
Other household that can afford, went many miles to as far as Ambler river, Buckland area and Kobuk rivers to get their catch for winter in those lean caribou years – 2010 to 2015.

The caribou have been the staple here and our lifeblood of the Inupiaqs that live here as for time immemorial.

Thank you for making the closure available and making local resources go to local folks that live here especially in today's day and age in the rural Alaska where cost of living is so high. For instance, here in Noatak we pay 8.99 to 9.99 per gallon of gas, utility electric billing ranging \$280-640 per month, water & sewer at \$138 per month, etc..


If you should have any questions, please feel free to call.

Sincerely,



N. Carol Wesley,

Noatak Resident

CC: Enoch Mitchell, Rac 



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

Federal Subsistence Board

1011 East Tudor Road, MS 121
Anchorage, Alaska 99503



FOREST SERVICE

OSM 17003.PK

JAN 24 2017

Lem Butler
Assistant Director
Division of Wildlife Conservation
Alaska Department of Fish and Game
PO Box 115526
Juneau, Alaska 99801

Dear Mr. Butler:

This letter responds to your Temporary Special Action Request WSA16-03 requesting the Federal Subsistence Board (Board) open Federal public lands in Unit 23 to the harvest of caribou by non-Federally qualified subsistence users.

The Board has rejected this request. The Board determined that new information provided by the Alaska Department of Fish and Game was not sufficient to rescind the closure to non-Federally qualified subsistence users and open Federal public lands. Additionally, the Board considered public testimony on your request, the recommendations of all four affected Regional Advisory Councils, as well as information provided through Tribal consultation and the Alaska Native Claims Settlement Act (ANSCA) corporation consultation. While the Board did not approve your request to open Federal public lands in Unit 23 to the harvest of caribou by non-Federally qualified subsistence users, it directed Office of Subsistence Management (OSM) staff to initiate interagency discussions about resolving ongoing user conflicts in the area. If you have any questions, please contact Jennifer Hardin, OSM Anthropology Division Chief at (907) 786-3677, or Chris McKee, OSM Wildlife Division Chief at (907) 786-3572.

Sincerely,

Anthony Christianson
Chair

Mr. Lem Butler

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Enclosures

cc: Federal Subsistence Board

Eugene R. Peltola, Jr., Assistant Regional Director, Office of Subsistence Management
Stewart Cogswell, Acting Deputy Assistant Regional Director
Office of Subsistence Management
Jennifer Hardin, Anthropology Division Chief, Office of Subsistence Management
Chris McKee, Wildlife Division Chief, Office of Subsistence Management
Zachary Stevenson, Subsistence Council Coordinator, Office of Subsistence Management
Eva Patton, Subsistence Council Coordinator, Office of Subsistence Management
Karen Deatherage, Subsistence Council Coordinator, Office of Subsistence Management
Raymond Stoney, Chair, Northwest Arctic Subsistence Regional Advisory Council
Rosemary Ahtuanguaruak, Acting Chair, North Slope Subsistence Regional Advisory Council
Louis H. Green, Jr., Chair, Seward Peninsula Subsistence Regional Advisory Council
Jack Reakoff, Chair, Western Interior Subsistence Regional Advisory Council
Bruce Dale, Director of Wildlife Conservation, Alaska Department of Fish and Game
Jill Klein, Special Assistant to the Commissioner, Alaska Department of Fish and Game
Interagency Staff Committee
Administrative Record

**STAFF ANALYSIS
TEMPORARY SPECIAL ACTION
WSA16-03**

ISSUES

Temporary Wildlife Special Action Request WSA16-03 submitted by the State of Alaska through the Alaska Department of Fish and Game (ADF&G), requests that Federal public lands in Unit 23 be reopened to caribou hunting by non-Federally qualified subsistence users for the 2016/17 regulatory year.

DISCUSSION

The proponent requests the Federal Subsistence Board (Board) to open Federal public lands in Unit 23 to the harvest of caribou by all users for the remainder of the July 1, 2016 to June 30, 2017 regulatory year. These lands were closed to the harvest of caribou except by Federally qualified subsistence users for the 2016/2017 regulatory year by Temporary Wildlife Special Action (WSA) 16-01. The proponent states that repealing WSA16-01 is appropriate due to new information concerning the population status of the Western Arctic Caribou Herd (WACH), to provide for subsistence uses by non-Federally qualified subsistence users and former Federally qualified subsistence users, and to remedy the social and economic hardships imposed by the decision on non-Federally qualified subsistence users before the caribou season in Unit 23 opens on July 1, 2016 for residents of Alaska and August 1, 2016 for nonresidents of Alaska. The Board's decision to approve WSA16-01 lacked evidence to support the need for closure to address a conservation concern and was not consistent with harvest management strategies found in the WACH Management Plan, endorsed by the Board during its 2013 meeting. Closing a large portion of Unit 23 will consolidate nonlocal hunters in smaller areas and increase crowding on State lands. The Board did not consider the impact of a closure on people who have already made plans to hunt caribou in Unit 23 in 2016 and have made personal and financial commitments. The proponent stated that the Federal land closure will be detrimental to subsistence use due to increased user conflicts, particularly on the Noatak River, and increased competition for caribou in areas that Federally qualified subsistence hunters can access.

The proponent states that new information indicates improvements in caribou calf production, recruitment, survival, and weight. Adult females exhibited very good body conditions and high pregnancy rates in 2015 and 2016. The newly derived WACH population estimate for fall 2015 is 206,000 caribou, falling within the lower end of the WACH Management Plan's "conservative" harvest management strategy. The proponent states that this new information is sufficient to rescind WSA16-01 and reopen Federal public lands in Unit 23 to the harvest of caribou by all users.

The term Federally qualified subsistence user (FQSU) is used to distinguish rural residents residing in communities with customary and traditional use (C&T) determinations for caribou in Unit 23. This contrasts with non-Federally qualified subsistence users (non-FQSUs) that may be Alaska residents that do not reside in a community with a C&T determination for caribou in Unit 23, or non-residents of Alaska. Other authors that are cited in this analysis frequently use the terms "local" and "nonlocal" without defining the parameters of the terms. Presumably "local" hunters are those that reside within the range of the

Western Arctic Caribou Herd (WACH) and “nonlocal” hunters are those that do not. When definitions were provided they were included in the analysis. Otherwise, the term used is in quotations.

The applicable Federal regulations are found in 36 CFR 242.19(b) and 50 CFR 100.19(b) (Temporary Special Actions) and state that:

. . . After adequate notice and public hearing, the Board may temporarily close or open public lands for the taking of fish and wildlife for subsistence uses, or modify the requirements for subsistence take, or close public lands for the taking of fish and wildlife for nonsubsistence uses, or restrict take for nonsubsistence uses.

In addition, ANILCA Title VIII Section 815.3 authorizes restricting nonsubsistence taking of fish and wildlife on Federal public lands only if necessary for the conservation of healthy fish and wildlife populations, to continue subsistence use, or pursuant to other laws.

Existing Federal Regulations

Unit 23—Caribou

Unit 23, north of and including the Singoalik River drainage 5 caribou per day as follows:

Calves may not be taken

Bulls may be harvested

*July 1–Oct. 14
Feb. 1–June 30.*

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

July 15–Apr. 30

Federal public lands in Unit 23 are closed to caribou hunting except by Federally qualified subsistence users for the 2016/2017 regulatory year.

Unit 23 remainder

5 caribou per day as follows:

Calves may not be taken

Bulls may be harvested

*July 1–Oct. 31
Feb. 1–June 30*

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

July 31–March 31

Federal public lands in Unit 23 are closed to caribou hunting except by Federally qualified subsistence users for the 2016/2017 regulatory year.

Proposed Federal Regulations

Unit 23—Caribou

Unit 23, north of and including the Singoalik River drainage

5 caribou per day as follows:

Calves may not be taken

Bulls may be harvested

*July 1–Oct. 14
Feb. 1–June 30.*

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

July 15–Apr. 30

~~*Federal public lands in Unit 23 to caribou hunting except by Federally qualified subsistence users for the 2016/2017 regulatory year.*~~

Unit 23 remainder

5 caribou per day as follows:

Calves may not be taken

Bulls may be harvested

*July 1–Oct. 31
Feb. 1–June 30*

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

July 31–March 31

~~*Federal public lands in Unit 23 to caribou hunting except by Federally qualified subsistence users for the 2016/2017 regulatory year.*~~

Existing State Regulations

Unit 23—Caribou

<i>Unit 23, north of and including the Singoalik River drainage</i>	<i>Residents—5 caribou per day; however, calves may not be taken.</i>	
	<i>Bulls</i>	<i>July 1–Oct. 14 Feb. 1–June 30</i>
	<i>Cows</i>	<i>Jul. 15–Apr. 30</i>
	<i>Nonresidents—1 bull; however, calves may not be taken</i>	<i>Aug. 1–Sept. 30</i>
 <i>Unit 23 remainder</i>	 <i>Residents—5 caribou per day; however, calves may not be taken.</i>	
	<i>Bulls</i>	<i>July 1–Oct. 14 Feb. 1–June 30</i>
	<i>Cows</i>	<i>Sept. 1–Mar. 31</i>
	<i>Nonresidents—1 bull; however, calves may not be taken</i>	<i>Aug. 1–Sept. 30</i>

Extent of Federal public lands

Federal public lands comprise approximately 69% of Unit 23 and consist of 42% National Park Service (NPS) managed lands, 18% Bureau of Land Management (BLM) managed lands, and 10% U.S. Fish and Wildlife Service (USFWS) managed lands (see **Map 1**).

Customary and Traditional Use Determination

Residents of Unit 21D west of the Koyukuk and Yukon Rivers, Galena, and 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 (see **Table 1**).

Regulatory History

In March of 1988, the Traditional Council of Noatak submitted a proposal to the Alaska Board of Game to establish the Noatak Controlled Use Area. The Board of Game modified the request to include approximately one third of the land area requested by the Traditional Council and unanimously approved

Map 1. The extent and location of Unit 23—Kotzebue Sound.

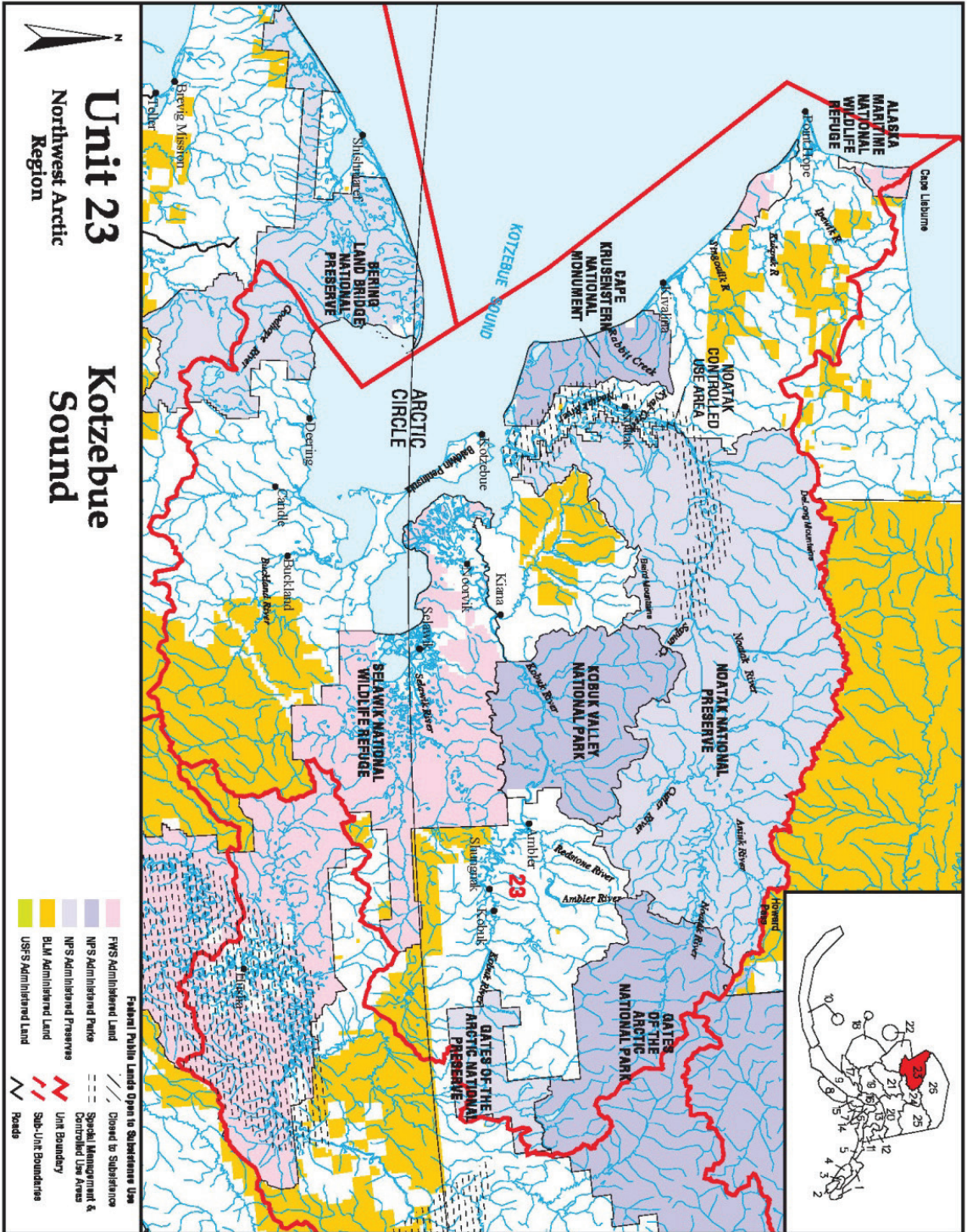


Table 1. Communities in the customary and traditional use determination for caribou in Unit 23.

CUSTOMARY AND TRADITIONAL USE DETERMINATION–UNIT 23 CARIBOU	
Unit of Residence	Community
Unit 21D west of the Koyukon and Yukon Rivers and Galena	Galena, Kaltag, Koyukuk, and Nulato.
Unit 22	Brevig Mission, Council, Elim, Gambell, Golovin, Koyuk, Little Diomed Island, Nome, Saint Michael, Savoonga, Shaktoolik, Shishmaref, Stebbins, Teller, Unalakleet, Wales, and White Mountain.
Unit 23	Ambler, Buckland, Deering, Kiana, Kivalina, Kobuk, Kotzebue, Noatak, Noorvik, Point Hope, Selawik, and Shungnak.
Unit 24 including residents of Wiseman but not including other residents of the Dalton Highway Corridor Management Area.	Alatna, Allakaket, Anaktuvuk Pass, Bettles, Evansville, Hughes, Huslia, Wiseman.
Unit 26A	Atkasuk, Barrow, Nuiqsut, Point Lay, and Wainwright.

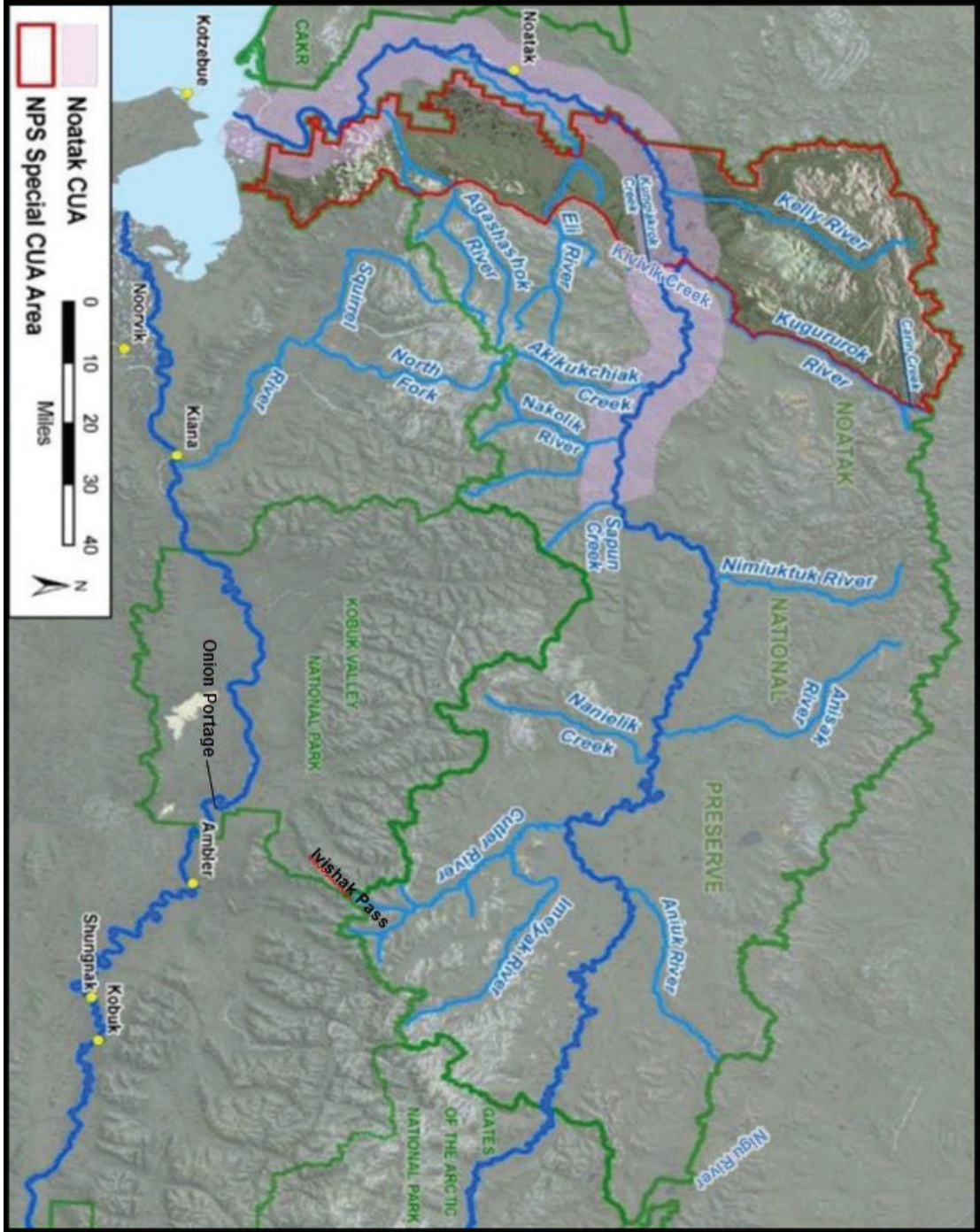
the Noatak Controlled Use Area in 1988 (Fall 1990:87), which was expanded in 1994 (**Map 2**). The Noatak Controlled Use Area consists of a 10-mile wide corridor along the Noatak River from its mouth to Sapun Creek. This area is closed from Aug. 15–Sept. 30 to the use of aircraft in any manner for hunting big game including transportation of big game hunters, their hunting gear, and/or parts of big game. Approximately 80 miles of the Noatak Controlled Use Area are within Noatak National Preserve (Betchkal 2015, Halas 2015). Big game present in Unit 23 are caribou, moose, Dall sheep, muskoxen, black and brown bears, and wolves. These regulations apply on State, private, and Federal public lands.

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

In 1997 the WACH Working Group was established and is “a formal cooperative multi-stakeholder body of user groups to review and provide advice on caribou management policy for the herd. The initial [management plan] was written in 2003, and revised in 2011” (Halas 2015:37). There is a 20-seat members board made up of subsistence hunters, conservationists, an aircraft transporter representative, hunting guide’s representatives, and a member of the Reindeer Herders Association. The working group meets annually. A Technical Committee of biologists and managers advise working group members (Halas 2015, WACH Working Group 2011).

In 2001 and 2002 the Alaska Board of Game considered a proposal to establish a controlled use area along a 25-mile corridor of the Kobuk River upstream of Kobuk, Ambler, and Shungnak from the Mauneluk River to the Selby River. The Board of Game did not adopt this proposal (Braem et al. 2015). To address ongoing user conflict concerns in Unit 23, ADF&G facilitated the establishment of the Unit 23 Working Group in 2008 (Braem et al. 2015).

The Unit 23 Working Group was established in 2008 to address fall hunting related issues and to develop solutions to cooperatively solve conflict (ADF&G 2016d). It is made up of 20 members that include representatives of regional and tribal governments and organizations, land and wildlife management agencies, the Big Game Commercial Services Boards, the Alaska Professional Hunters Association



Map 2. The boundaries of the State of Alaska Noatak Controlled Use Area and the National Park Service Special Commercial Use Area in Unit 23 (Halas 2015).

(including representatives from hunting guide and transport industries), Fish and Game Advisory Committees, the Northwest Arctic Subsistence Regional Advisory Council, the Board of Game, and the Federal Subsistence Board (ADF&G 2016d).

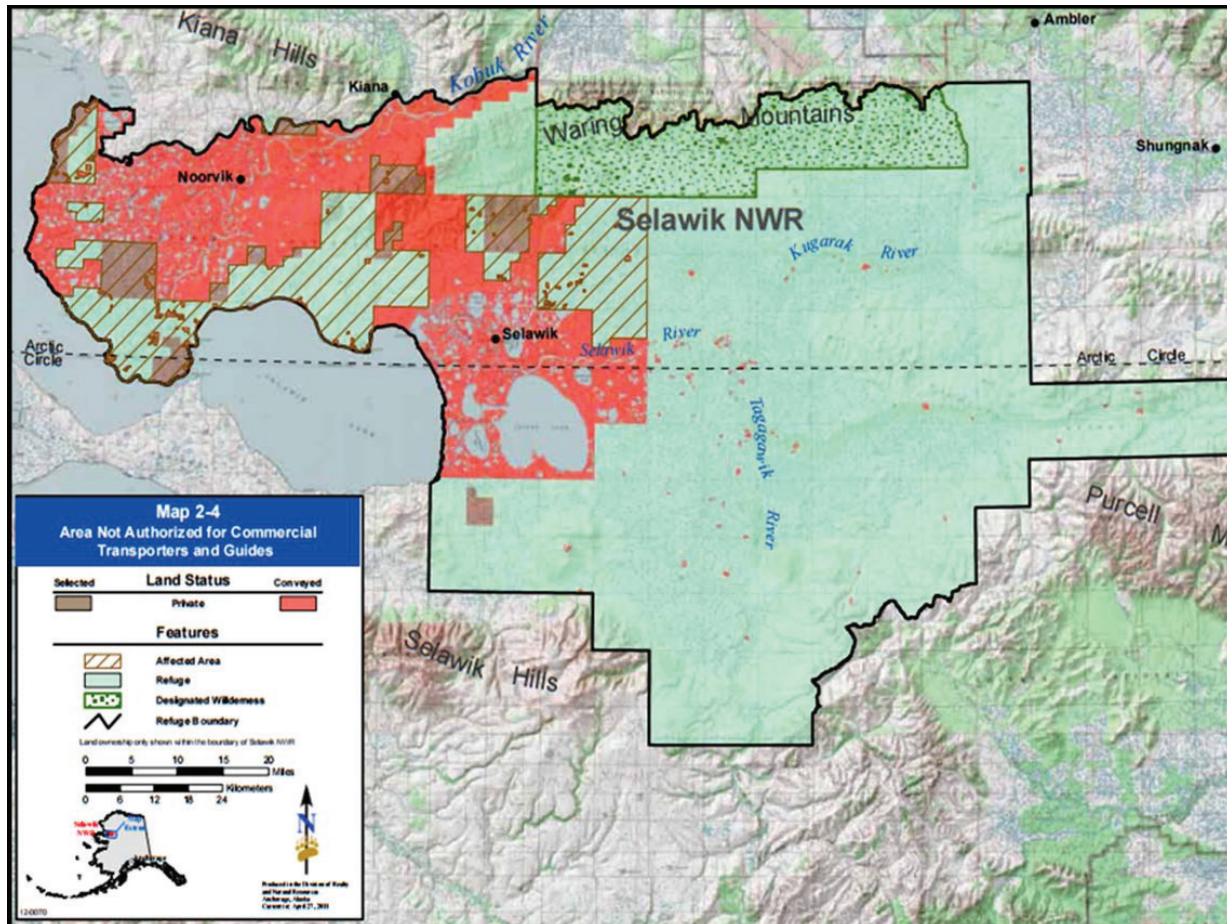
In 2011, the Selawik National Wildlife Refuge revised its comprehensive conservation plan (CCP) to include restrictions on commercial uses in the western portion of the refuge (**Map 3**, FWS 2011). The commercial use restrictions for transporters and guides were implemented in the 2011 CCP as a means of proactively addressing user conflicts in the Selawik National Wildlife Refuge. The northwest portion of the refuge receives high subsistence use from nearby communities and is a mix of Federal public lands, Alaska Native Corporation lands, and numerous allotments. For these reasons, the refuge proposed in its CCP that certain refuge lands in this portion of the refuge not be authorized for commercial guiding and transporting. The CCP explains: “During fall hunting season, the situation in this patchwork area requires managers to take a proactive stance when permitting commercial uses to reduce conflicts among hunters and trespass on private lands. . . . Use by commercial guides and transporters for big game hunting is not authorized by permit stipulation on refuge lands in close proximity to private lands in the northwest portion of the refuge where refuge lands are intermingled in private lands.” Most, if not all, of the commercial guiding and transporting on the refuge took place in the eastern half of the refuge where a high quality hunting experience for non-FQSUs was more readily available. For this reason, commercial guides and transporters were not displaced by this action (Georgette 2016, pers. comm.).

In 2012, NPS established a Special Commercial Use Area that acts as a “delayed entry zone” in the western portion of the Noatak National Preserve (**Map 2**, Fix and Ackerman 2015, Halas 2015). Within the delayed entry zone, commercial transporters can transport caribou hunters only after September 15. The purpose of this zone is to allow a sufficient number of caribou to cross the Noatak River, establish migration routes, and allow “local”¹ hunters the first opportunity to harvest caribou in that area (FWS 2014). Halas (2015:23) stated that “the Superintendent may consult with commercial operators, other agencies, and local villages to offer earlier or delayed caribou hunting access in the area for “nonlocal” hunters, depending on the WAH [Western Arctic Herd] migration in a given year.” To date, the superintendent has not used his/her authority to alter the dates or areas of closures to reflect changes in caribou herd migration and to meet the needs of “local” hunters.

The BLM is in the process of completing the Squirrel River Special Recreation Management Plan, which will address the allocation of Special Recreation Permits (required for guide and transport activities), and will include an analysis under Section 810 of ANILCA (Unit 23 Working Group 2016).

In March 2015, the Alaska Board of Game, in response to declines in the population of the WACH and Teshekpuk Caribou Herds (TCH), adopted Record Copy 76. This included a series of modifications to Proposal 202 that sought to prohibit the harvest of calves in Unit 23 among other changes to State regulations in various wildlife management units. The ADF&G biologist Jim Dau provided the Board of Game with a presentation on the state of the WACH and indicated that action was necessary to curb the ongoing declines (ADF&G 2015a). Among his major points were a continued population decline, a reaching or exceeding of the harvestable surplus, and continued declines in bull:cow ratios. Dau (ADF&G

¹ Halas (2015) does not define this term. Presumably these hunters reside within the natural range of the WACH.



Map 3. The Selawik National Wildlife Refuge showing in brown cross hatch the areas not authorized for transporters and guides (FWS 2011).

2015a) also indicated the herd trajectory was toward the Preservative Management mode and that the population numbers at the time of the meeting could already warrant it. He additionally suggested that the herd could approach the “critical” harvest management level within a few years.

Dau explained the importance of Record Change 76 and the impact on area communities (ADF&G 2015a): “It [proposal 202] wouldn’t have saved many caribou; it wouldn’t have affected many people. The only teeth in this whole thing are in RC 76 and all these teeth come from these advisory committees and different groups All these villages, all these ACs [Advisory Committees] are willing to restrict themselves. As important as caribou are, they’re willing to take the hit.” Dau did not speculate as to the degree of effect that the proposed regulatory changes would have on the WACH. He did acknowledge the hard work of many groups and people in developing a series of changes that he agrees were necessary given the recent and projected decline.

In the portion of Unit 23 north of and including the Singoalik River drainage, the harvest season for bulls was shortened by Record Copy 76 from year round to Jul. 1–Oct. 14 and Feb. 1–Jun. 30, and the harvest season for cows was shortened from Jul. 1–May 15 to Jul. 15–Apr. 30. In Unit 23 remainder, the harvest season for bulls was shortened from year round to Jul. 1–Oct. 14 and Feb. 1–Jun. 30, and the harvest season

for cows was shortened from Jul. 1–May 15 to Sept. 1–Mar. 31. The harvest limit remained five caribou per day. For nonresidents of Alaska hunting in Unit 23, the harvest limit was reduced from 5 caribou per year to 1 bull per year and the harvest season was shortened from Oct. 1–Apr. 30 to Aug. 1–Sept. 30. These new State regulations were effective July 1, 2015 (ADF&G 2016a).

At its winter 2015 meeting, the North Slope Subsistence Regional Advisory Council (Council) submitted WSA15-03/04/05/06 requesting, among other things, establishment of a new hunt area for caribou in the northwest corner of Unit 23 north of and including the Singoalik River drainage. The requests were in response to the recently enacted Board of Game Record Copy 76 (originally proposed as proposal 202) and meant to enact Federal subsistence caribou conservation measures on Federal public lands across the range of the WACH that would take effect at the same time as the new State regulations. In the new hunt area, the harvest limit would be reduced from 15 caribou per day to 5 caribou per day, the harvest season for bulls would be reduced from year round to Jul. 1–Oct. 14 and Feb. 1–Jun. 30, the harvest season for cows would be reduced from Jul. 1–May 15 to Jul. 15–Apr. 30, and the take of calves would be prohibited (FWS 2016a).

The Board approved WSA15-03/04/05/06 with modification. In all of Unit 23, it reduced the Federal subsistence harvest limit to 5 caribou per day, reduced the harvest season for bulls to Jul. 1–Oct. 14 and Feb. 1–Jun. 30, reduced the harvest season for cows to Jul. 1–Mar. 31, prohibited the harvest of calves, and prohibited the harvest of cows with calves. The additional restrictions were deemed necessary to support recovery of the caribou population and because the Alaska Board of Game had recently adopted caribou hunting restrictions starting in the 2015/2016 regulatory year (described above). The Board felt that general alignment of State and Federal regulations would provide for consistency and reduce the regulatory complexity for FQSUs (FWS 2016a). The temporary modifications to existing regulations were effective July 1, 2015 until June 30, 2016.

Also at its Winter 2015 meeting, the North Slope Council submitted Proposals WP16-61/62/63/64, which closely mirrored the above wildlife special action, so that these caribou conservation measures would be enacted into regulation during the regular regulatory cycle, become effective July 1, 2016, and provide ongoing conservation measures for the WACH and TCH on Federal public lands. The Council cited ongoing concerns for the declining herd and support from communities in the region to reduce subsistence harvest in an effort to help the herd's recovery (NSRAC 2015).

At its winter 2015 meeting, the Northwest Arctic Council submitted Wildlife Proposal WP16-49 concerning Unit 23 requesting that the Board shorten the bull harvest season to Jul. 1–Oct 9 and Feb. 1–June 30, shorten the cow harvest season to Jul. 1–May 31, prohibit the harvest of cows with calves Jul. 1–Oct. 10, and reduce the harvest limit to 5 caribou per day. At its winter 2016 meeting, the Northwest Arctic Council recommended the Board adopt the proposal with modification to extend the bull harvest season end date to Oct. 31, move forward the opening date of the cow harvest season to Jul. 31, prohibit the harvest of cows with calves Jul. 31–Oct. 10, and prohibit the take of calves. The North Slope Council recommended the Board adopt the proposal with the Office of Subsistence Management (OSM) modification that would establish a new hunt area in the northwest portion of Unit 23 and change the harvest limit and seasons in Unit 23 to be consistent with State regulations to avoid confusion. The Western Interior and Seward

Peninsula Subsistence Regional Advisory Councils took no action, although residents in their regions have C&T determinations for caribou in Unit 23.

In April 2016, the Board took no action on WP16-49/52/61/62/63/64 because of action it took on WP16-37, which proposed regulatory changes in units throughout the WACH's range. The Board adopted WP16-37 with modification and, among other changes in other wildlife management units, established a new hunt area in the northwest portion of Unit 23, and adopted almost all of the Northwest Arctic Council's recommendations with minor modifications. The Council had recommended prohibiting the harvest of cows with calves Jul. 31–Oct. 10. The Board prohibited the harvest of cows with calves in the new hunt area in Unit 23 from Jul. 15 to Oct. 14 and in the remainder area of Unit 23 from Jul. 31 to Oct. 14. The new regulations were effective July 1, 2016.

At its fall 2015 meeting, the Northwest Arctic Council submitted WSA16-01 requesting that the Board close Federal public lands in Unit 23 to the harvest of caribou except by FQSUs. While many communities reported a successful caribou harvest for the year, concerns regarding the size of the herd, user conflicts, and declining opportunities to harvest were expressed. Several Council members provided testimony attesting to hardships experienced as a result of these issues, often reiterating that subsistence was about more than putting food on the table; it included deeply rooted cultural components that have been informed by intergenerational experiences tied to local landscapes. The Council approved the submission of WSA16-01 because of the uncertainty of how newly approved regulations would impact the herd, along with that State's inability to produce accurate population estimates for the year due to poor light conditions encountered during aerial surveys, and the degradation of meaningful subsistence activities due to user conflicts. Council members acknowledged that the special action would represent a one year trial, the action's effects would be subsequently evaluated, and that the special action was a tool provided to them by Title VIII ANILCA to protect subsistence uses (NWARAC 2015).

March 2016, the Northwest Arctic Council met, in Anchorage. During its meeting, members reported both positive and negative observations of fall caribou harvest and migration (NWARAC 2016). Caribou were reported to have migrated in proximity to both Noorvik and Kotzebue, enabling harvest by residents of those communities. In contrast, members reported that Kobuk did not harvest enough caribou and that there were no caribou observed in the Upper Kobuk River drainage during the winter. Several members indicated that the animals appeared healthy, but the members were concerned about the impacts of a very mild winter on the health of caribou. Some mentioned that the fall herd movements appeared to be occurring later each year. One member indicated that in his area harvest had increased relative to recent years, but the difficulty and expense of harvest remained high, user conflicts remained unresolved, and herd population numbers were unavailable and questionable.

The Northwest Arctic and North Slope Councils held a joint meeting on March 11, 2016, in Anchorage to make a recommendation on WSA16-01 and to hear agency and public comments on the special action request (NWARAC and NSRAC 2016). Both Councils recommended the Board approve WSA16-01 because caribou population estimates were flawed and recent data was lacking, harvest estimates for non-FQSUs were skewed, that FQSUs have better knowledge of local conditions than agency staff, and the Council submitted WSA16-01 to the Board for valid reasons. The State reported opposition while the

NANA Regional Corporation made a statement of support. Both Councils voted to support WSA16-01. The Seward Peninsula Subsistence Regional Advisory Council opposed the action, citing the effectiveness of the WACH Management Plan, that the special action would shift pressure to State land, and that the effect of new regulations had not yet been evaluated. The Western Interior Subsistence Regional Advisory Council abstained from voting on the matter, deferring to the Council where Unit 23 is located (the Northwest Arctic Council).

At its public meeting in April 2016, the Board approved WSA16-01, closing Federal public lands in Unit 23 to non-FQSUs for the Jul. 1, 2016 to Jun. 30, 2017 regulatory year.

The Board determined that there was sufficient evidence indicating that the closure was necessary to allow for the continuation of subsistence uses and for conservation of a healthy caribou population as mandated under ANILCA Section 815. Evidence included public testimony expressed to the Board by residents of the area, the position of two affected Councils (Northwest Arctic and North Slope), and the current status of the herd. The Board concluded that a closure to all but FQSUs was consistent with providing a subsistence priority for use of the resource and assurance that a rural preference was being provided, and recognized the cultural and social aspects of subsistence activities, which may be hampered by direct interaction between local and non-local users. The temporary change to existing regulations was effective July 1, 2016.

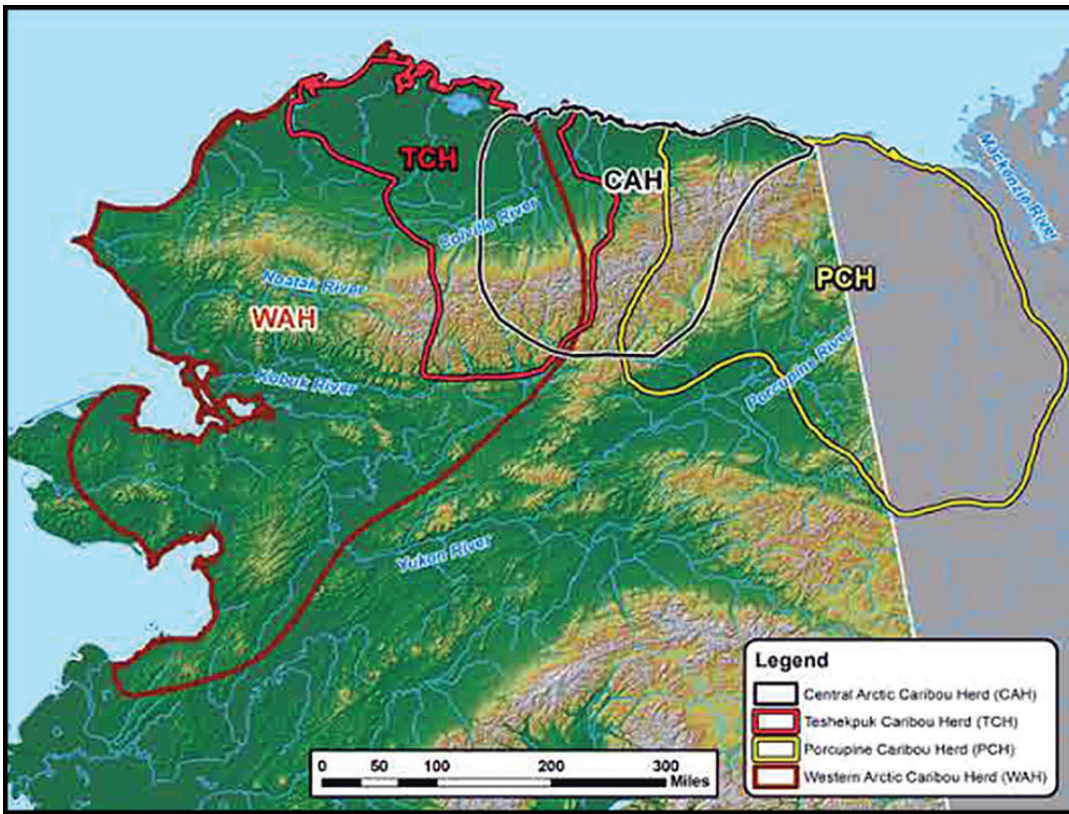
Biological Background

Caribou abundance naturally fluctuates over decades (Gunn 2001, WACH Working Group 2011). Gunn (2001) reports the mean doubling rate for Alaskan caribou as 10 ± 2.3 years. Although the underlying mechanisms causing these fluctuations are uncertain, Gunn (2001) suggests climatic oscillations as the primary factor, exacerbated by predation and density-dependent reduction in forage availability, resulting in poorer body condition.

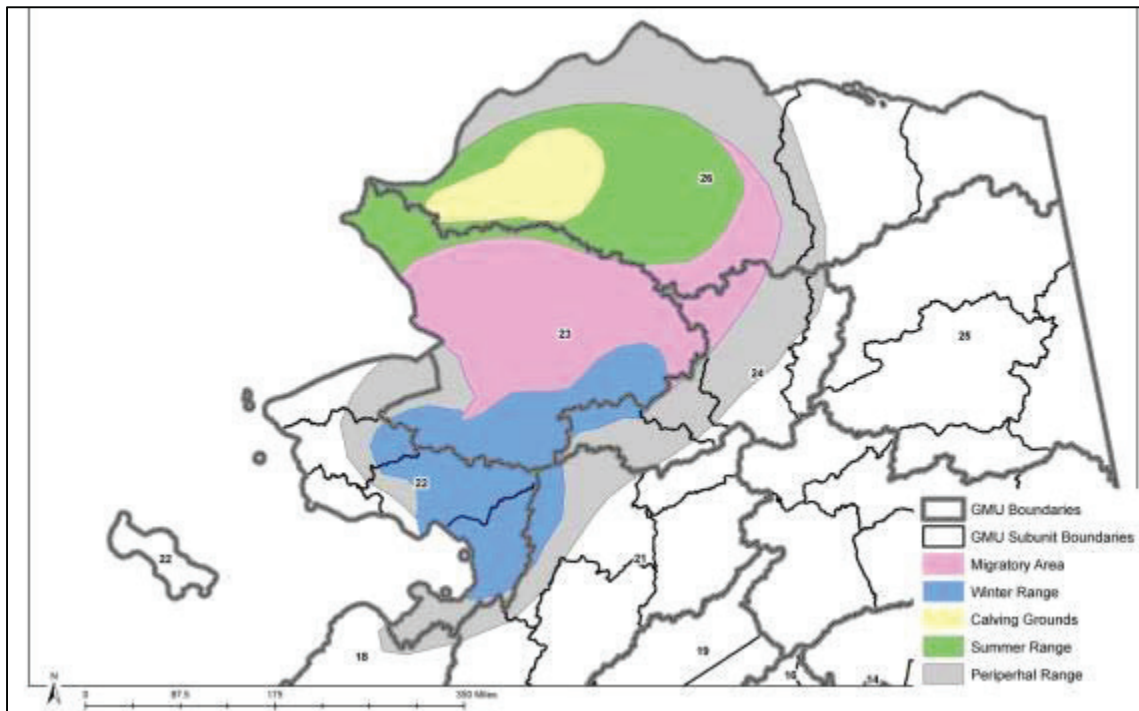
Caribou calving generally occurs from late May to mid-June (Dau 2013). Weaning generally occurs in late October and early November before the breeding season (Taillon et al. 2011). Calves stay with their mothers through their first winter, which improves calves' access to food and body condition (Holand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

The TCH, WACH, and Central Arctic Caribou Herd have ranges that overlap in Unit 26A (**Map 4**), and there can be considerable mixing of herds during the fall and winter. During the early 2000s, the total number of caribou among the various herds 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 (Dau 2011, Lenart 2011, Parrett 2011).

The WACH has historically been the largest caribou herd in Alaska and has a home range of approximately 157,000 square miles in northwestern Alaska. In the spring, most mature cows move north to calving grounds in the Utukok Hills, while bulls and immature cows lag behind and move toward summer range in the Wulik Peaks and Lisburne Hills (**Map 5**, Dau 2011, WACH Working Group 2011).



Map 4. Herd overlap and ranges of the WACH, TCH, CACH, and PCH (Parrett et al. 2014).



Map 5. Range of the WACH.

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 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. Since about 2000, the timing of fall migration has been less predictable, often occurring later than in previous decades (Dau 2015a). In recent years (2012–2014), the path of fall migration has shifted east (Dau 2015a).

The WACH Working Group developed a WACH Cooperative Management Plan in 2003 and revised it in 2011 (WACH Working Group 2011). It identifies seven plan elements: cooperation, population management, habitat, regulations, reindeer, knowledge, and education as well as associated goals, strategies, and management actions. As part of the population management element, the WACH Working Group developed a guide to herd management determined by population size, population trend, and harvest rate. Population sizes guiding management level determinations were based on recent (since 1970) historical data for the WACH (WACH Working Group 2011). The guide was revised in December 2015 (WACH Working Group 2015, **Table 2**). The State of Alaska manages the WACH to protect the population and its habitat, provide for subsistence and other hunting opportunities on a sustained yield basis, and provide for viewing and other uses of caribou (Dau 2011). State management objectives for the WACH are the same as the goals specified in the WACH Management Plan (Dau 2011, WACH Working Group 2011) and include:

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

Table 2. Western Arctic Caribou Herd management levels using herd size, population trend, and harvest rate adopted by the WACH Working Group in 2011 (WACH Working Group 2011, 2015).

Management and Harvest Level	Population Trend ^a			Harvest Recommendations May Include:
	Declining Low: 6%	Stable Med: 7%	Increasing High: 8%	
Liberal	Pop: 265,000+	Pop: 230,000+	Pop: 200,000+	<ul style="list-style-type: none"> • Reduce harvest of bulls by nonresidents to maintain at least 40 bulls: 100 cows • No restriction of bull harvest by resident hunters unless bull:cow ratios fall below 40 bulls:100 cows
	Harvest: 18,550-24,850	Harvest: 16,100-21,700	Harvest: 16,000-21,600	
Conservative	Pop: 200,000-265,000	Pop: 170,000-230,000	Pop: 150,000-200,000	<ul style="list-style-type: none"> • No harvest of calves • No cow harvest by nonresidents • Restriction of bull harvest by nonresidents • Limit the subsistence harvest of bulls only when necessary to maintain a minimum 40:100 bull:cow ratio
	Harvest: 12,000-18,550	Harvest: 11,900-16,100	Harvest: 12,000-16,000	
Preservative	Pop: 130,000-200,000	Pop: 115,000-170,000	Pop: 100,000-150,000	<ul style="list-style-type: none"> • No harvest of calves • Limit harvest of cows by resident hunters through permit hunts and/or village quotas • Limit the subsistence harvest of bulls to maintain at least 40 bulls:100 cows • Harvest restricted to residents only, according to state and federal law. Closure of some federal public lands to nonqualified users may be necessary
	Harvest: 8,000-12,000	Harvest: 8,000-12,000	Harvest: 8,000-12,000	
Critical Keep Bull:Cow ratio ≥ 40 Bulls:100 Cows	Pop: < 130,000	Pop: < 115,000	Pop: < 100,000	<ul style="list-style-type: none"> • No harvest of calves • Highly restrict the harvest of cows through permit hunts and/or village quotas • Limit the subsistence harvest of bulls to maintain at least 40 bulls:100 cows • Harvest restricted to residents only, according to state and federal law. Closure of some federal public lands to nonqualified users may be necessary
	Harvest: 6,000-8,000	Harvest: 6,000-8,000	Harvest: 6,000-8,000	

^a There are indications in a draft summary of the Working Group's December 2015 meeting that the Working Group's Technical Committee proposed changes to the table (Selawik National Wildlife Refuge 2016).

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 population increased throughout the 1980s and 1990s, peaking at 490,000 animals in 2003 (**Figure 1**). Since 2003, the herd has declined at an average annual rate of 7.1% from approximately 490,000 caribou in 2003 to 234,757 caribou in 2013 and a 15% annual decline between 2011 and 2013 (Caribou Trails 2014; Dau 2011, 2014).

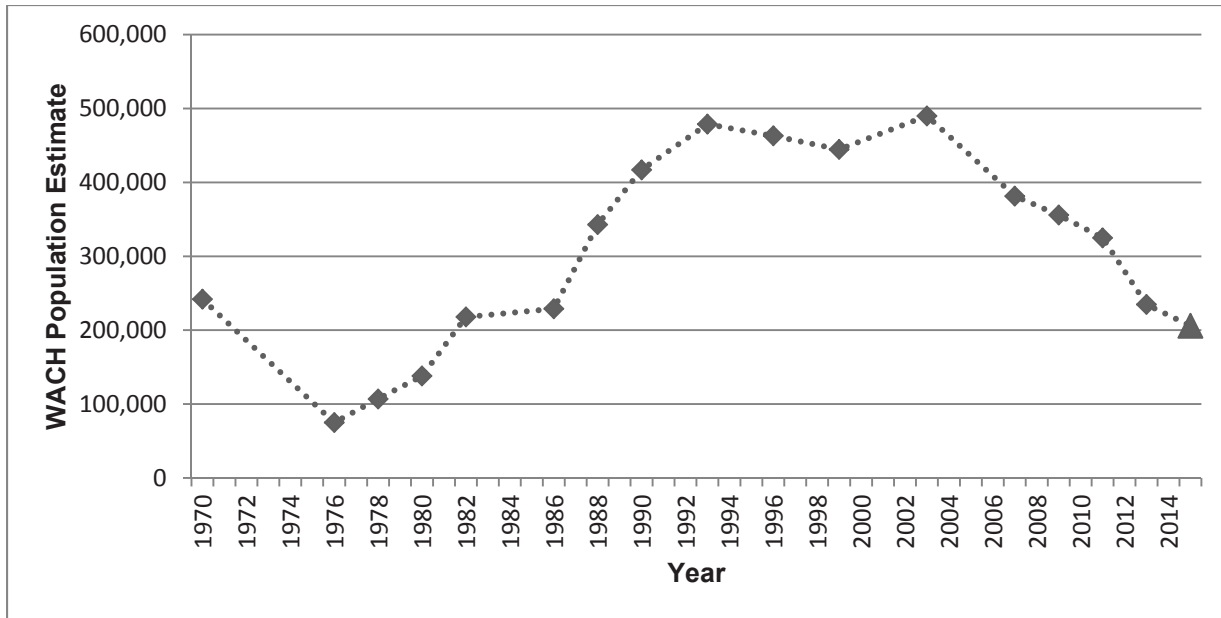


Figure 1. The WACH population estimates from 1970 to 2015. Population estimates from 1986 to 2015 are based on aerial photographs of groups of caribou that contained radio-collared animals (Dau 2011, 2013, 2014; Parrett 2016b).

Between 1982 and 2011, the WACH population was within the liberal management level prescribed by the WACH Working Group (**Table 2**). In 2013, the herd population estimate fell below the population threshold for liberal management of a decreasing population (265,000), slipping into the conservative management level. In July 2015, ADF&G attempted an aerial photo census of the herd. However, the photos taken could not be used due to poor light conditions that obscured unknown portions of the herd (Dau 2015b). ADF&G was able to conduct a successful photocensus of the WACH on July 1, 2016. This census resulted in a minimum count of 194,863 caribou with a point estimate of 200,928 (Standard Error = 4,295), suggesting the WACH is still within the conservative management level, although close to the threshold for preservative management (**Figure 1, Table 2**). Results of this census indicate an average annual decline of 5% per year since 2013, representing a much lower rate than the 15% annual decline between 2011 and 2013. It was also noted that the cohorts of 2015 and 2016 are large and make up a large proportion of the herd currently. Over-winter survival rates of these cohorts should assist managers with determining the potential growth rate of the WACH in coming years (Parrett 2016b). The ADF&G recommends another photocensus survey be conducted in 2017 to verify that the population has not fallen below the conservative/preservative management threshold, as outlined in the WACH Working Group Cooperative Management Plan (**Table 2**).

In its special action request, received in June 2016, the State provided a WACH preliminary population estimate of 206,000 caribou from a population model based on newly acquired population metrics, including calf survival and recruitment data (Dau 2016a, 2016b; Parrett 2015c; Parrett 2016a, pers. comm.). While the model suggests a decreased rate of decline, a downward or leveling trend is still implied. This deterministic spreadsheet model was adapted from a model used for the Mulchatna Caribou Herd and does not incorporate error for each of the population metrics (Parrett 2016a, pers. comm.). This preliminary estimate represents a decline of 12.3% since the last population estimate in 2013.

Between 1970 and 2014, the bull:cow ratio exceeded the management threshold of 40 bulls:100 cows in all years except 1975, 2001, and 2014 (**Figure 2**). Reduced sampling intensity in 2001 likely biased the 2001 bull:cow ratio low (Dau 2013). However, the low bull:cow ratio (39 bulls:100 cows) observed in 2014 is expected to continue declining (Parrett 2015b). Since 1992, annual bull:cow ratios have trended downward (Dau 2015a). The average annual number of bulls:100 cows was greater during the period of population growth (54:100 between 1976 and 2001) than during the recent period of decline (45:100

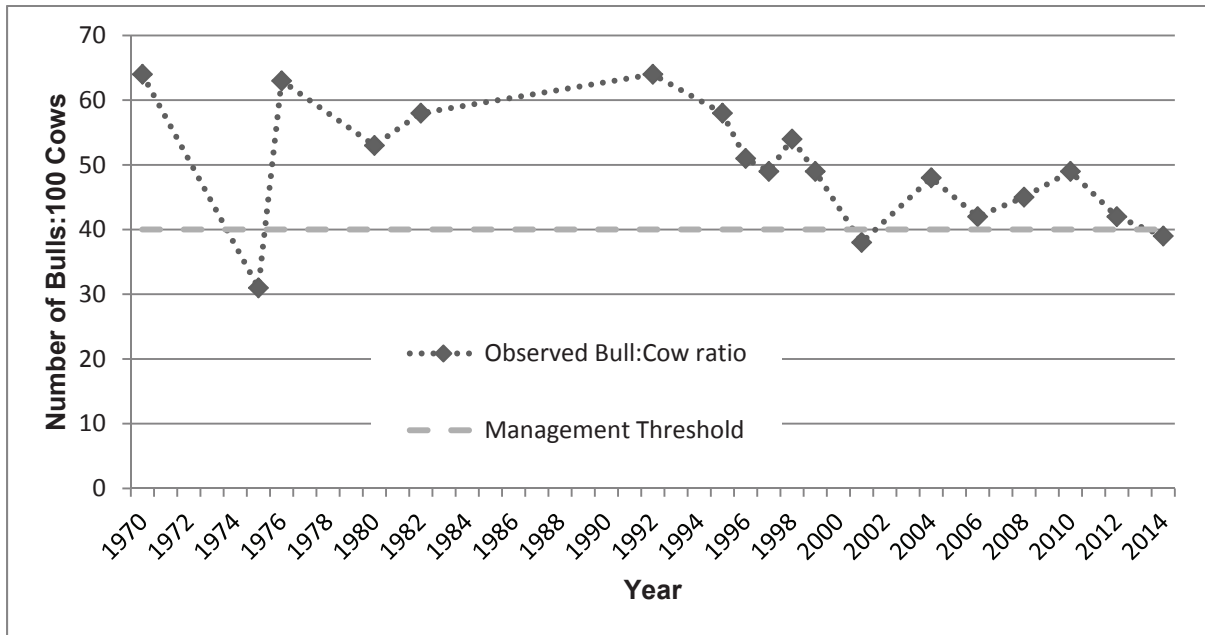


Figure 2. Western Arctic Caribou Herd bull:cow ratios 1970–2015 (Dau 2015a).

between 2004 and 2014). Additionally, Dau (2015a) states that while reported trends in bull:cow ratios were accurate, actual values should be interpreted with caution due to sexual segregation during sampling and the inability to sample the entire population, which likely account for more annual variability than actual changes in composition.

Although factors contributing to the decline are not known with certainty, increased adult cow mortality, and decreased calf recruitment and survival played a role (Dau 2011). Since the mid-1980s, adult mortality has slowly increased while recruitment has slowly decreased (Dau 2013, **Figure 3**). In a population model developed specifically for the WACH, Prichard (2009) found adult survival to have the largest impact on population size.

Calf production has likely had little influence on the population trajectory (Dau 2013, 2015a). Between 1990 and 2003, the June calf:cow ratio averaged 66 calves:100 cows/year. Between 2004 and 2015, the June calf:cow ratio averaged 70 calves:100 cows/year (**Figure 3**). In the State’s special action request, it cited new information that included results of fieldwork conducted in June 2016 when 85 calves:100 cows were observed, which approximates the highest parturition level ever recorded for the herd (86 calves:100 cows in 1992) (Dau 2016a).

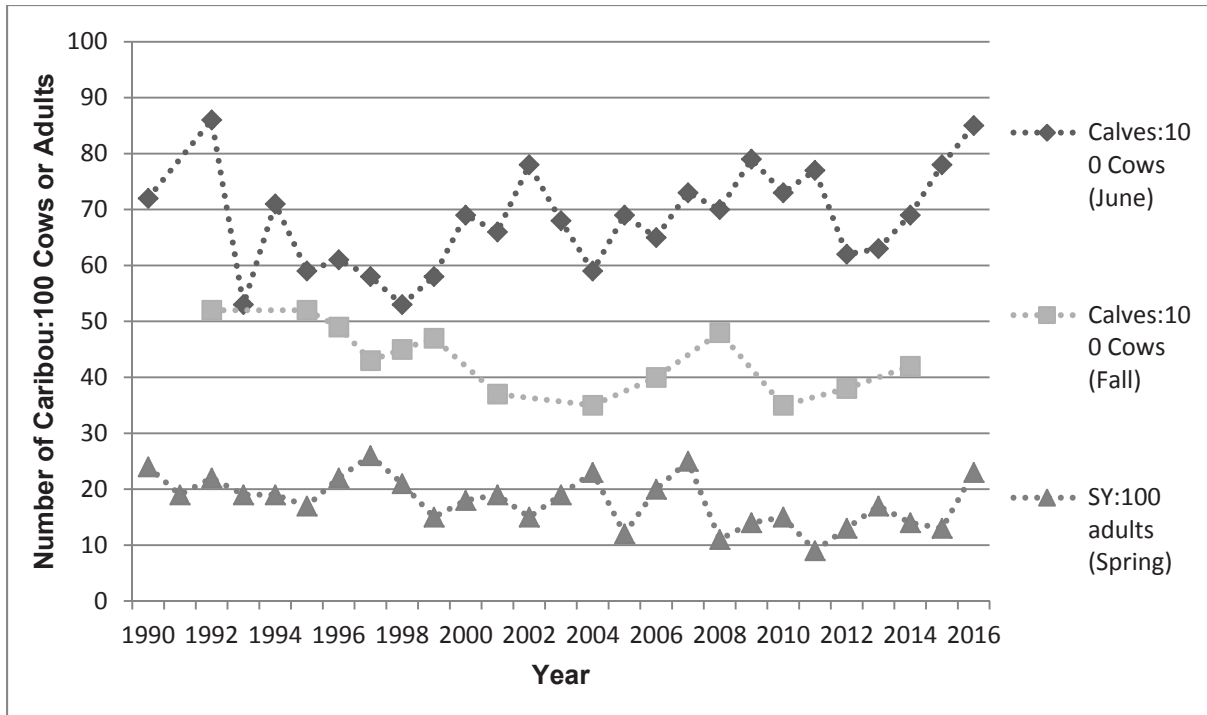


Figure 3. Calf:cow and short yearling (SY):adult ratios for the Western Arctic Caribou Herd (Dau 2013, 2015a, 2016a). Short yearlings are 10–11 month old caribou.

Decreased calf survival through summer and fall and recruitment into the herd are likely contributing to the current population decline (Dau 2013, 2015a). The ratio of short yearlings (SY, 10–11 months old caribou) to adults provides a measure of overwintering calf survival and recruitment. Between 1990 and 2003, SY:adult ratios averaged 20 SY:100 adults/year. Since the decline began in 2003, SY:adult ratios have averaged 16 SY:100 adults/year (2004–2015, **Figure 3**). However, 23 SY:100 adults were observed during spring 2016 surveys, the highest ratio recorded since 2007 (Dau 2016b). In its special action request, the State stated that overwinter calf survival for the 2015 cohort was currently 82%. While 2016 measures suggest improvements in recruitment, the overall trend since the early 1980s has been downward (Dau 2015a).

Similarly, fall calf:cow ratios indicate calf survival over summer. Between 1976 and 2014, the fall calf:cow ratio ranged from 35 to 59 calves:100 cows/year, averaging 46 calves:100 cows/year (**Table 3, Figure 3**). Fall calf:cow ratios declined from an average of 46 calves:100 cows/year between 1990 and 2003 to an average of 40 calves:100 cows/year between 2004 and 2015 (Dau 2015a, **Figure 3**). Since 2008, ADF&G has recorded calf weights at Onion Portage as an index of herd nutritional status. In the State’s special action request, it noted new information that in September 2015, calf weights averaged 100 lbs., the highest average ever recorded (Parrett 2015c).

Increased cow mortality is likely affecting the trajectory of the herd (Dau 2011, 2013). The annual mortality rate of radio-collared adult cows increased from an average of 15% between 1987 and 2003, to 23% from 2004 to 2014 (Dau 2011, 2013, 2014, 2015a, **Figure 4**). Estimated mortality includes all causes of death including hunting (Dau 2011). Dau (2015a) states that cow mortality estimates are conservative

Table 3. Western Arctic Caribou Herd fall composition, 1976–2014 (Dau 2011, 2013, 2014, 2015b).

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
2014/2015	39	42	30	2,384	6,082	2,553	11,019

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

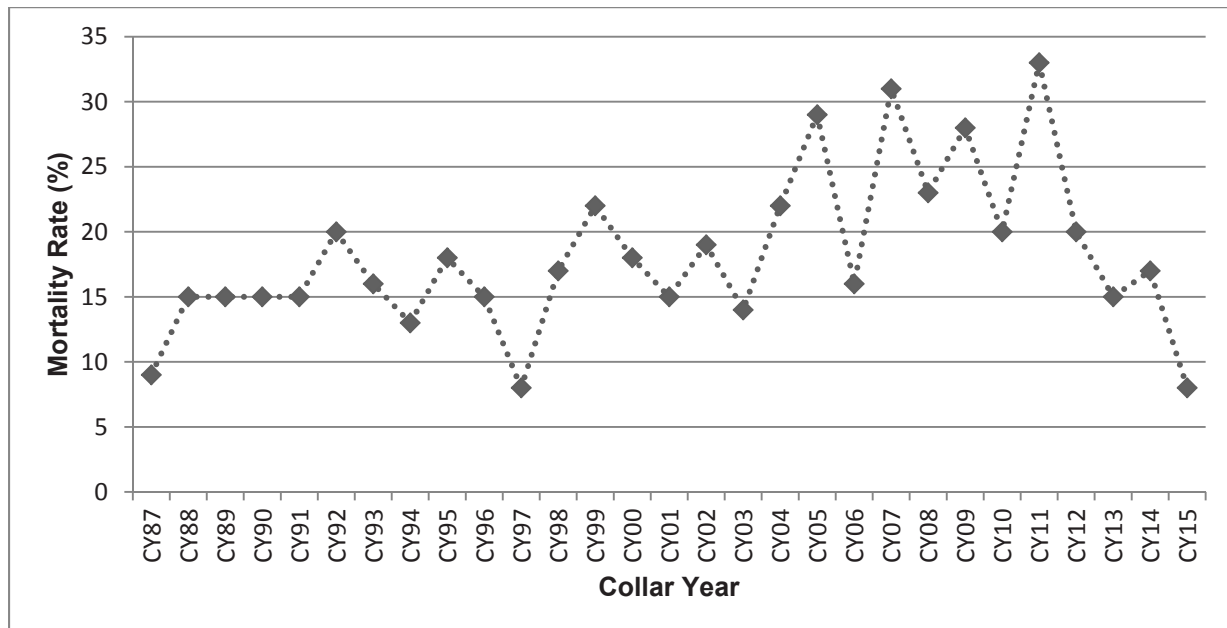


Figure 4. Mortality rate of radio-collared caribou in the WACH (Dau 2013, 2015a, 2016b). Collar year = Oct. 1–Sept. 30, except 2015 collar year = Oct. 2015–Apr. 2016.

due to exclusion of unhealthy (i.e., diseased) and yearling cows. Dau (2013) attributed the high mortality rate for 2011 (33%, **Figure 4**) to a winter with deep snows, which weakened caribou and enabled wolves to prey on them more easily. Prior to 2004, estimated adult cow mortality only exceeded 20% twice, but has exceeded 20% in 7 out of 9 regulatory years between 2004 and 2012 (**Figure 4**). The State's special action request included new information that the annual mortality rate was 8% as of April 2016 (Dau 2016b). This may fluctuate substantially throughout the year based on changing local conditions and harvest levels. Dau (2015a) indicates that mortality rates may also change in subsequent management reports as the fate of collared animals is determined, and that these inconsistencies are most pronounced for the previous 1–3 years.

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

Dau (2015a) cites fall and winter icing events as the primary factor initiating the population decline in 2003. Increased predation, hunting pressure, deteriorating range condition (including habitat loss and fragmentation), climate change, and disease may also be contributing factors (Dau 2015a, 2014). Joly et al. (2007) documented a decline in lichen cover in portions of the wintering areas of the WACH. Dau (2011, 2014) reported that degradation in range condition is not thought to be a primary factor in the decline of the herd because animals have generally maintained good body condition since the decline began. The body condition of adult females in 2015 were characterized as “fat” (mean=3.9/5) with no caribou being rated as skinny or very skinny (Parrett 2015c). However, the body condition of the WACH in the spring may be a better indicator of the effects of range condition versus the fall when the body condition of the herd is routinely assessed and when caribou are in prime condition (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).

Harvest History

Harvest from the Western Arctic Caribou Herd

Western Arctic Herd caribou harvests by Federally qualified subsistence users (FQSU) have been estimated from community harvest surveys because Alaska residents living and hunting caribou north of the Yukon

River were not required to obtain harvest tickets or report their harvests. However, harvest surveys have not been conducted every year (**Appendix 1**). Consequently, staff at the Division of Wildlife Conservation at ADF&G developed a model that used household harvest surveys, community size, and proximity to the herd to estimate annual harvests of caribou by residents of communities situated within the range of the WACH, defined as local hunters in the following discussion (**Table 4**, Sutherland 2005). In 2014 the model had not been updated with additional community harvest data since its development in 2005, and in 2015 a new model was implemented (see Dau 2015a). Dau (2015a) indicates that the model reflects harvest trends reasonably accurately, but not annual harvest levels or harvest levels by unit. Consequently, community harvest levels and harvest by wildlife management units were not reported in Dau (2015a).

Table 4. Communities situated within the range of the WACH and considered local hunters in ADF&G management reports (Dau 2013).

Local Hunters of Western Arctic Caribou Herd	
Unit of Residence	Community
Unit 21D west of the Koyukon and Yukon Rivers and Galena	Galena, Kaltag, Koyukuk, and Nulato.
Unit 22	Brevig Mission, Elim, Golovin, Koyuk, Nome, Saint Michael, Shaktoolik, Shishmaref, Stebbins, Teller, Unalakleet, Wales, and White Mountain.
Unit 23	Ambler, Buckland, Deering, Kiana, Kivalina, Kobuk, Kotzebue, Noatak, Noorvik, Point Hope, Selawik, and Shungnak.
Unit 26A	Atkasuk, Barrow, Nuiqsut, Point Lay, and Wainwright.

Unlike local harvest, harvest by nonlocal hunters, who are other residents of Alaska and nonresidents, are based on harvest reports. Residents of Alaska living south of the Yukon River and all nonresidents are required to report their Unit 23 caribou harvests. Nonlocal residents of Alaska living north of the Yukon River are not required to report their Unit 23 caribou harvests but also have been unlikely to harvest from the WACH.

From 1999 to 2013, the average annual estimated harvest from the WACH was 11,984 caribou, ranging from 10,666 to 13,537 caribou/year (Dau 2015a, **Figure 5**). Harvest data do not reflect wounding loss, which may be hundreds of caribou (Dau 2015a). Available data suggests that harvest levels have been relatively stable between 1990 and 2013.

Additionally, Dau (2013, 2015a) estimates that local hunters have taken roughly 95% of the total harvest from the WACH since the late 1990s while all other hunters (nonlocal residents and nonresidents of Alaska) account for the remainder (**Figure 5**). Based on harvest reports to ADF&G, in 2012 and 2013 regulatory

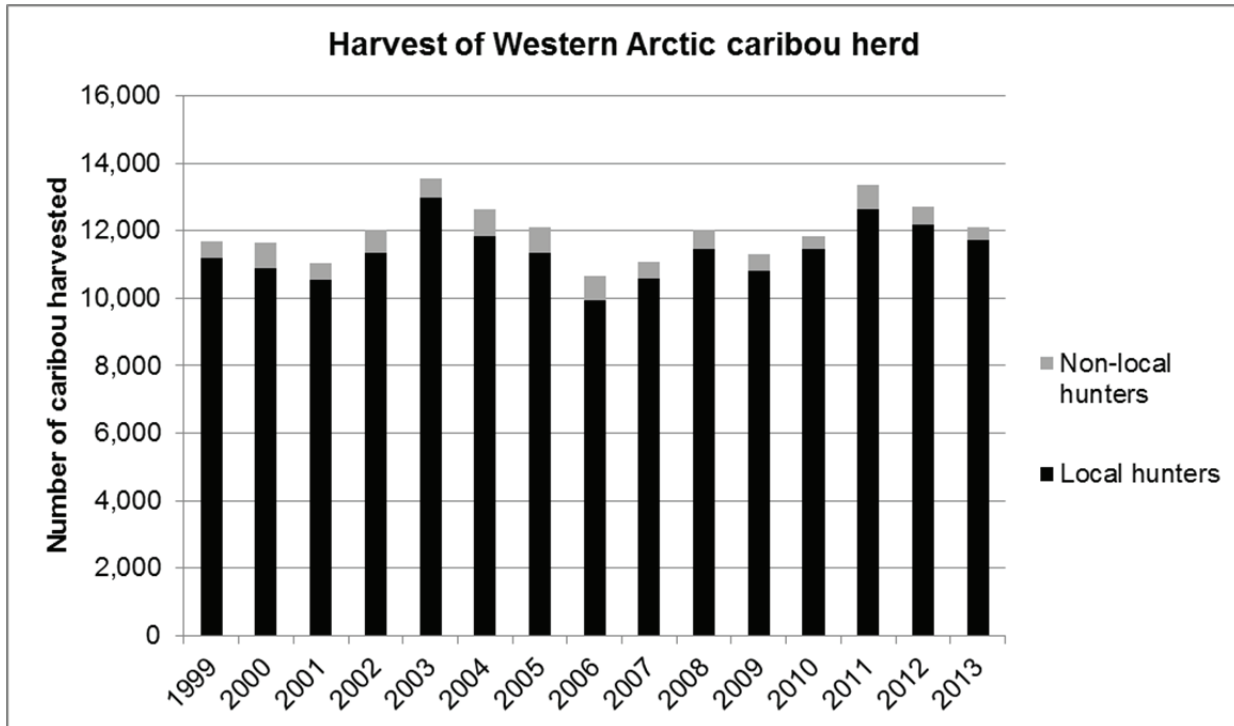


Figure 5. Western Arctic Caribou Herd harvest by residency, 1999–2013 regulatory years (Dau 2015a).

years the reported harvests from the WACH by nonlocal hunters were 520 caribou and 397 caribou, respectively. Dau (2013) described that “85–90% of all [WACH] caribou taken by nonlocal hunters are harvested August 25–October 7. This temporal concentration of nonlocal hunters in Unit 23 combined with intense subsistence hunting during the same period is why conflicts among users have occurred in the unit for many years” (Dau 2013:228).

Dau (2015a) reported that most local hunters living within the range of the WACH access harvest sites using snowmachines during late October–early May and boats or 4-wheelers during the rest of the year, with few using aircraft. In contrast, 76% of nonlocal hunters accessed hunting areas by airplane in each of the 2012 and 2013 regulatory years.

Recent WACH harvest levels are within or below the conservative harvest level (12,900–18,550 caribou) specified in the WACH Management Plan for a herd size of 200,000–265,000 caribou in population decline (see **Table 2**). However, the State manages the WACH on a sustained yield basis. The harvestable surplus of caribou is calculated at 2% of the cows and 15% of the bulls (Parrett 2015b). In recent years, as the herd population has declined, the State-determined total harvestable surplus has also declined (Dau 2015a, Parrett 2015a). In the 2015 regulatory year, the combined TCH and WACH harvestable surplus declined from an estimated 13,250 caribou in 2014 to an estimated 12,400 caribou in 2015. The harvest of caribou from the TCH and WACH combined in 2013 and 2014 was 15,063 caribou and 14,455, respectively (Dau 2015a). While there is substantial uncertainty in the harvestable surplus estimates, the overall trend is decreasing as the population declines (Parrett 2015a). If population projections and harvest estimates are accurate, overharvesting is likely already occurring (Dau 2015a, Parrett 2015b).

The WACH Management Plan recommends harvest strategies at different management and harvest levels. The harvest recommendations under conservative management may include: no harvest of calves, no cow and restricted bull harvest by nonresidents of Alaska, voluntary reduction of cow harvest by residents, and potentially limiting the subsistence bull harvest to maintain a 40:100 bull:cow ratio (WACH Working Group 2011). The recently adopted State regulations for caribou in Unit 23 that went into effect July 1, 2015 addressed the management plan's recommendations for conservative management by prohibiting the take of calves, restricting bull and cow seasons for residents and nonresidents of Alaska, and reducing the nonresident harvest limit from two caribou per year to one bull per year. New Federal regulations that went into effect July 1, 2016 mirror newly adopted State regulations. Should the WACH population decline to the extent that it falls within the preservative management level, one additional recommendation offered in the WACH Management Plan is "2) Harvest restricted to residents only, according to state and federal law. Closure of some federal lands to nonqualified users may be necessary" (WACH Working Group 2011:46-47).

Caribou Harvests in Unit 23 by Non-Federally Qualified Subsistence Users

Dau (2013) reported that the majority of the WACH harvest was taken from Unit 23 (66–88%, 1999–2011 regulatory years). Of the WACH harvest, residents within the range of the WACH account for 95% of the harvest on average, while all nonlocal hunters only account for 5% of the Unit 23 caribou harvest on average (**Figure 5**). In recent years (2012–2014), numbers of nonlocal hunters are slightly lower, partially because transporters have had to travel further to find caribou and thus, could not book as many clients (Dau 2015a). Examination of Appendix 1 shows that caribou harvest by community does not necessarily parallel WACH population trends (i.e. Ambler only harvested 325 caribou when the WACH population peaked in 2003, but harvested 685 caribou in 2012 when the WACH was declining). Of note is Noatak's harvest of 66 caribou in 2010, which declined substantially from a harvest of 442 caribou in 2007.

Since 1998 when data was consistently collected, the number of non-FQSU hunting caribou in Unit 23 has ranged between 248 and 663 hunters (**Table 5** and **Figure 6**). Between the 2004 and 2013 regulatory years, an annual average of 446 non-FQSUs reported hunting for caribou in Unit 23. In 2014, 408 non-FQSUs reported hunting for caribou in Unit 23. The number of hunters was somewhat steady between 1998 and 2004, peaked in 2006, and has since declined (ADF&G 2016c, FWS 2015c).

Commercially licensed guides and commercially licensed transporters assist many non-FQSUs by guiding them in the hunt or transporting them to areas to hunt for big game in Unit 23. The Selawik National Wildlife Refuge and the Noatak National Preserve are areas where Federal in-season managers have limited the participation of commercial guides and transporters (see Regulation History section, above). In Unit 23, an estimated 60% of nonlocal hunters (residing outside the range of WACH) used a transporter, 10% used a guide and about 30% used no commercial service (Unit 23 Working Group 2016). Fix and Ackerman (215:2) in a study from 2010 to 2013 found that "nonlocal" transporter clients entering the Noatak National Preserve consisted primarily of nonresidents of Alaska and residents of central and southern Alaska communities, such as Fairbanks, Anchorage, and those on the Kenai Peninsula (Fix and Ackerman 215:2). This is consistent with ADF&G caribou harvest hunting and harvest reports (ADF&G 2016c and FWS 2016c).

Table 5. The number of non-Federally qualified subsistence users that reported hunting for caribou in Unit 23, 1981-83 and 1998-2014, based on the ADF&G harvest reporting system. No data is available between 1983 and 1998.

Unit 23				
Harvest of caribou by non-Federally qualified subsistence users				
Regulatory year	Nonresidents of Alaska	Non Federally qualified residents of Alaska	Total	
	Number of caribou harvested	Number of caribou harvested	Number of people that hunted	Number of caribou harvested
1981	14	57	72	71
1982	7	157	92	164
1983	26	173	126	199
. . .				
1998	226	321	443	547
1999	194	201	438	395
2000	271	354	503	625
2001	213	186	438	399
2002	225	292	530	517
2003	237	291	482	528
2004	305	304	498	609
2005	380	283	585	663
2006	401	232	662	633
2007	220	240	557	460
2008	215	320	546	535
2009	124	266	443	390
2010	117	131	421	248
2011	275	394	456	669
2012	286	327	469	613
2013	252	234	404	486
2014	240	140	408	380
2004-2013 average	258	273	446	531

Source: ADF&G 2016c and FWS 2016c.

The number of commercial guides and transporters varies within different areas of Unit 23. The number of transported hunters within Selawik National Wildlife Refuge has decreased since 2000 (**Figure 7**, FWS 2016b). Between 1993 and 2014, caribou comprised, on average, 62% of big game harvested annually by transported hunters on Selawik National Wildlife Refuge lands. However, since 2000, the number of caribou harvested by this user group has decreased substantially (**Figure 8**, FWS 2016b). According to the refuge manager (Georgette 2016, pers. comm.), the harvest decline for caribou is “mainly the result of caribou no longer being reliably available on the refuge in September due to delayed migration.”

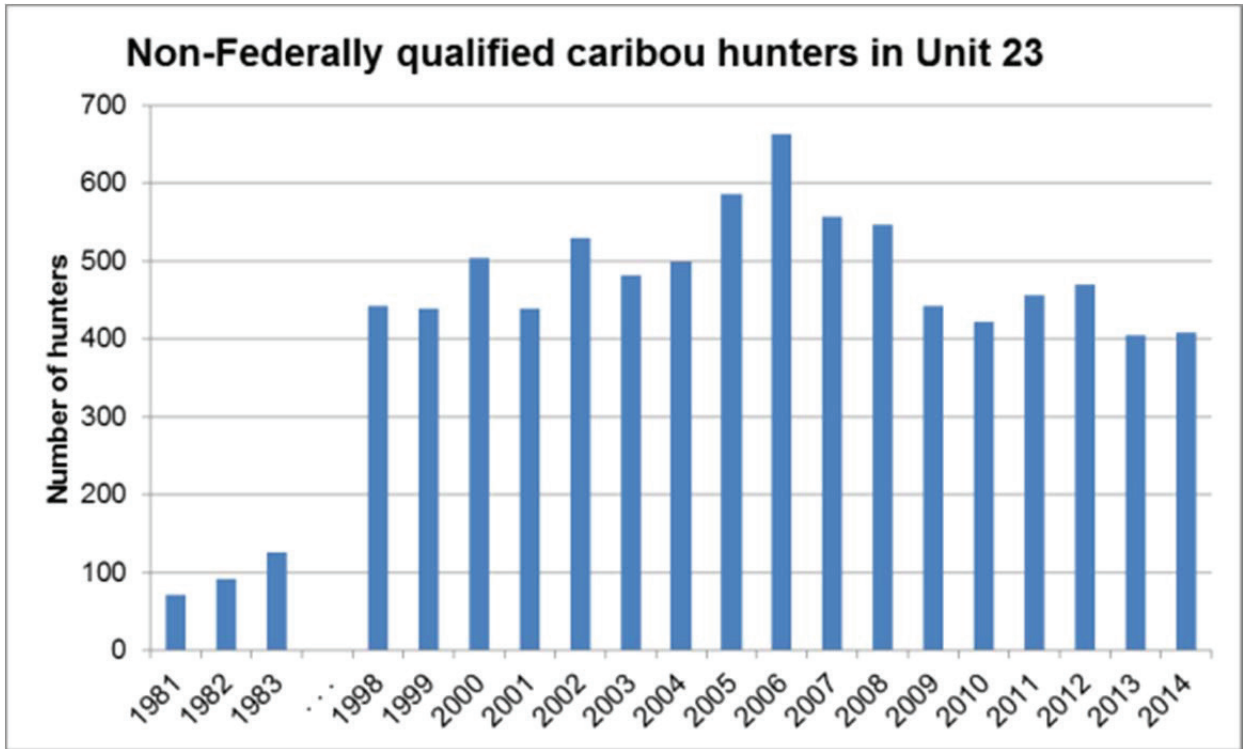


Figure 6. The number of non-Federally qualified subsistence users that reported hunting caribou in Unit 23 based on the ADF&G harvest reporting system. No data is available between 1983 and 1998 (ADF&G 2016c and FWS 2016c).

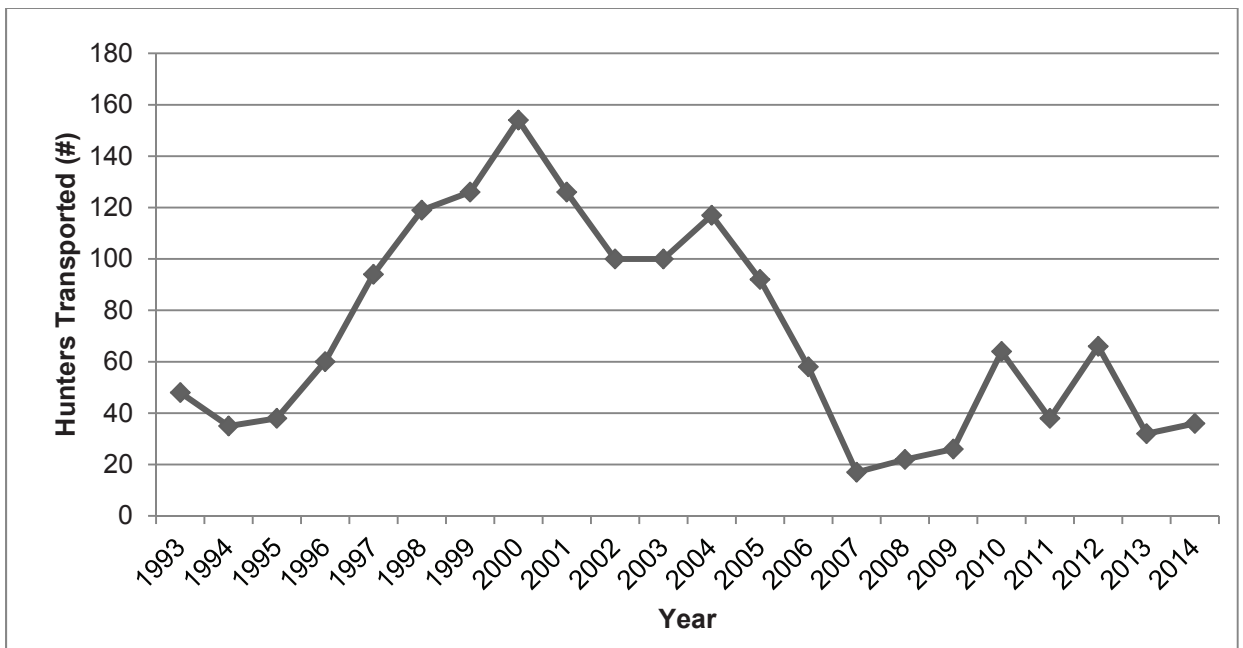


Figure 7. Number of hunters transported by aircraft transporters or using commercial guide services on Selawik National Wildlife Refuge (FWS 2016b).

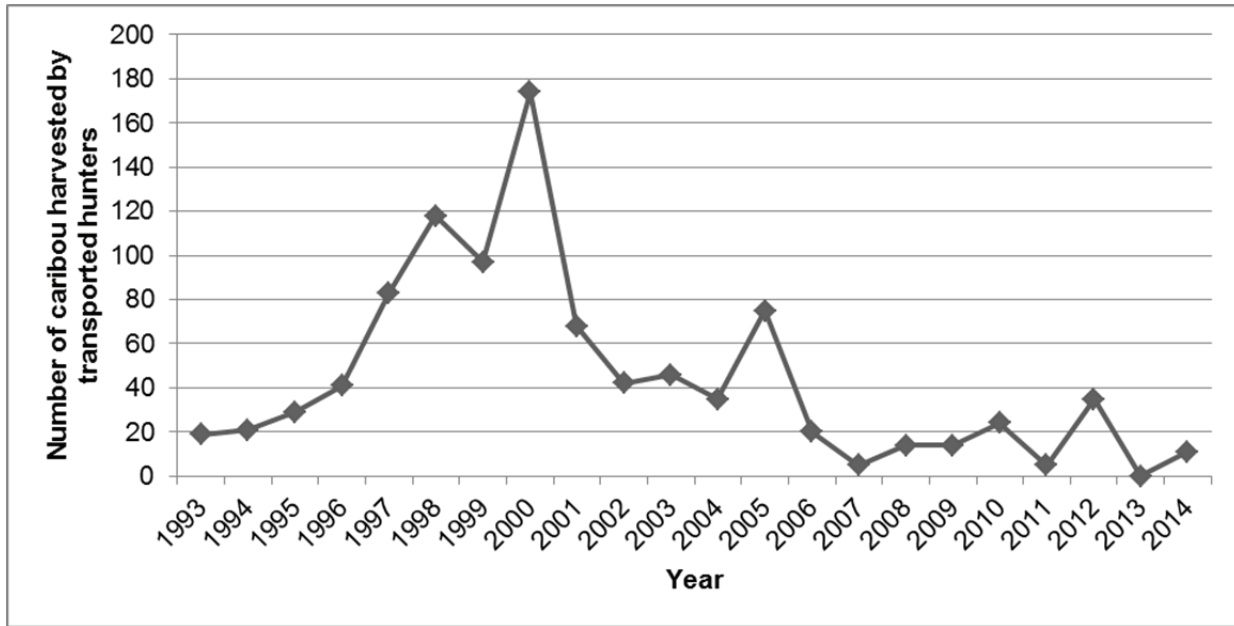


Figure 8. Number of caribou harvested by hunters transported by aircraft transporters or using commercial guide services on the Selawik National Wildlife Refuge (FWS 2016b).

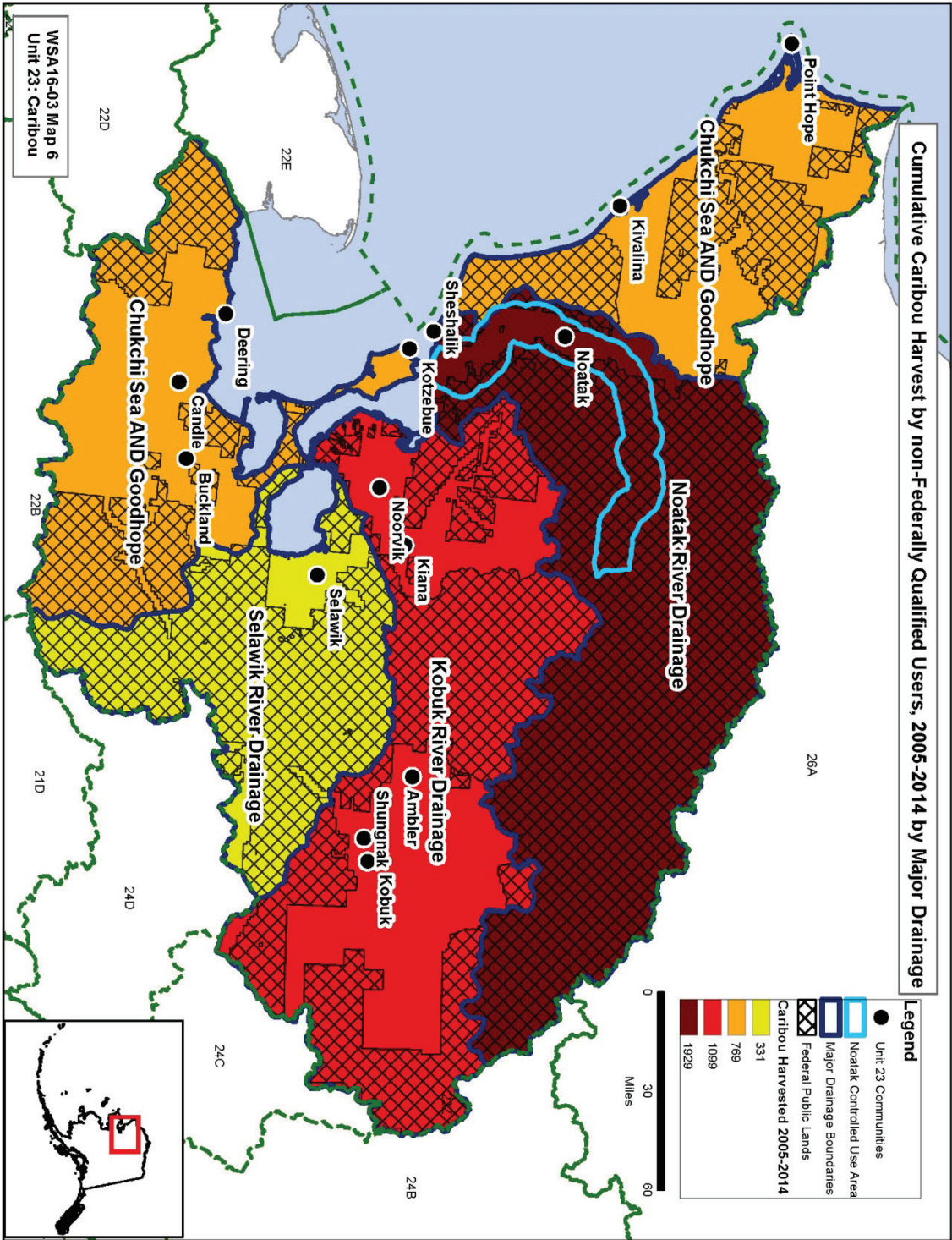
Conversely, the number of transported hunters in the Noatak National Preserve increased from about 300 in 2010 to over 400 in 2014 (Fix and Ackerman 2015). In 2015, approximately 350 hunters (300 “nonlocal” and 50 “local” hunters) were transported into Noatak National Preserve (NPS 2016). In a survey of 372 transported hunters in the Noatak National Preserve between 2010 and 2013, 62% of groups harvested caribou with the average harvest being 1.8 caribou per group member (Fix and Ackerman 2015).

Local hunters have identified aircraft noise as an issue affecting hunting success (Betchkal 2015). During the fall 2014 hunting season, average aircraft noise events within Noatak National Preserve ranged from 3.7 events per day at Kugururok River to 7.8 events per day at Sapun Creek. It is unknown whether the difference in aircraft noise events was due to management areas (i.e., the National Park Service Special Commercial Use Area delayed entry zone or the ADF&G Noatak Controlled Use Area (see **Map 2**), or the recent easterly trend of primary caribou migration routes (Betchkal 2015). However, the recent aircraft noise levels appear comparable to aircraft noise levels documented in the Noatak National Preserve in 1987 by Georgette and Loon (1988) and 1995–1996 by Fix and Ackerman (2015). Nonetheless, comparisons should be interpreted with caution due to different methodologies (i.e., human observations v. continuous acoustic recordings and the establishment of the Noatak National Preserve’s Special Commercial Use Area and delayed entry zone in 2012 (Fix and Ackerman 2015). The ADF&G GMU 23 aircraft use education course, which is mandatory for all pilots transporting big game in Unit 23, suggests that pilots maintain a minimum altitude of 2000 feet in the vicinity of camps (Betchkal 2015).

Intensity of Use of Unit 23 by Non-Federally Qualified Subsistence Users

Intensity of caribou harvest and hunting activity across Unit 23 by non-FQSUs can be spatially represented given data available in harvest reports. The following map (**Map 6**) depicts the intensity of caribou harvest

Map 6. Caribou harvest by non-Federally qualified subsistence users by Major Drainage Unit, 2005-2014 cumulative.



in Unit 23 by non-FQSUs 2005–2014 cumulative, by major river drainages. The data were derived from the ADF&G harvest reporting system and may be best interpreted alongside of local knowledge held by land managers and others to increase precision in spatial interpretation of hunting and harvest intensity over time.

The data was sorted to remove FQSUs.² This resulted in 6,297 caribou harvest records of which 4,415 (70%) reported an actual harvest of a caribou. Among these records, 2,195 animals were harvested by nonresidents of Alaska and 2,220 animals were harvested by Alaska residents. The records were further parsed to include only those records for which the hunting area was identified at the major drainage scale, representing 4,128 records used to create this map. The remaining 287 harvest records (7%) occurred in unidentified locations of Unit 23.

Map 6 provides a broad spatial view of caribou harvest by non-FQSUs in Unit 23 over a 10-year period. Intensity categories were established based on natural breaks in the harvest data. The major drainage with the greatest intensity of harvest at this level of analysis was the Noatak River drainage (1,929 caribou harvested) followed by the Kobuk River drainage (including the Squirrel River drainage) (1,099 caribou), the Chukchi Sea and Good Hope drainages (769 caribou), and the Selawik River Drainage (331 caribou). By percentage of 2005–2014 cumulative harvest, the Noatak River drainage exhibited the highest harvest in Unit 23 (47%), followed by the Kobuk River drainage (27%), Chukchi Sea and Goodhope (19%) and the Selawik River drainage (8%).

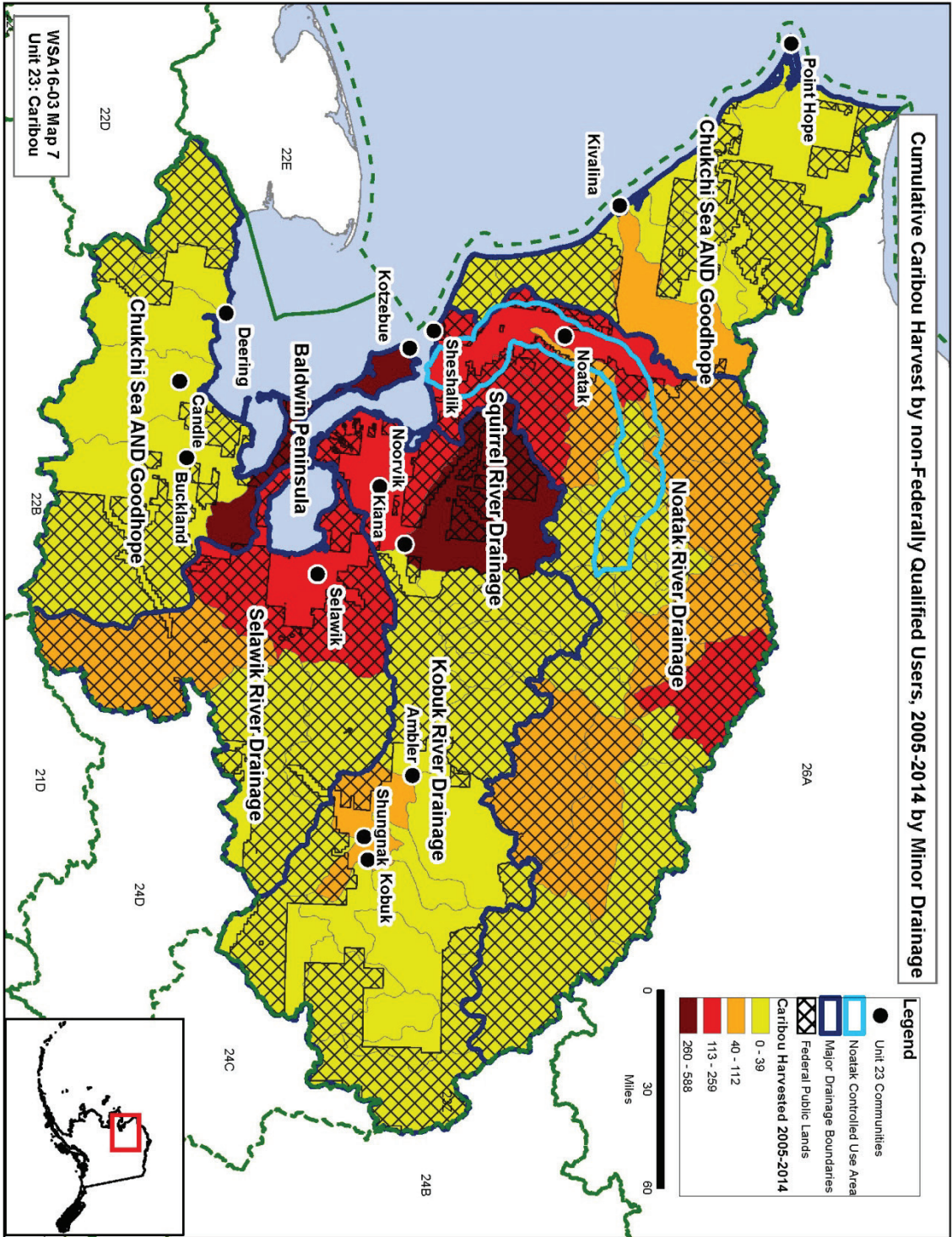
While **Map 6** depicts 10-year cumulative harvest broadly, **Map 7** depicts the harvest by minor drainage. Instead of spreading out the harvest across the larger area, this map identifies harvest intensity at smaller scales. Still, this scale may not provide the Board with the geographic precision necessary for more finely tuned management decisions on small tracks of land³; local land managers could help refine the data by doing outreach in local communities and collecting information concerning user conflicts for a more targeted closure. Of the 4,415 harvest records, 3,185 (72%) were identified to the minor drainage level. The 1,230 harvest records (28%) not identified to the minor drainage level were not included in the map. Intensity was categorized in this map by similar ranges of cumulative caribou harvest distinguished by natural breaks in the dataset.

Map 6 and **Map 7** are also overlaid with boundaries of Federal public lands. The Noatak River drainage is characterized predominantly by Federal public lands and this is also the drainage that exhibits the highest intensity of harvest at the major drainage level during the 10-year period (**Map 6**). At smaller spatial scales (minor drainages) however, the Squirrel River drainage and the Baldwin Peninsula represent the greatest harvest intensity (between 260 and 588 caribou, **Map 6**). Both of these areas are comprised of Federal public lands and State lands.

² Seventy-five caribou harvest records were removed because residency was listed as “unknown” and were therefore not included in the map as they may have included Federally qualified subsistence users.

³ Some data representing harvest and hunting activity to the Uniform Coding Unit (UCU) spatial scale is available through harvest reports but was not utilized due to confidentiality concerns and limitations associated with precision.

Map 7. Caribou harvest by non-Federally qualified subsistence users by Minor Drainage Unit, 2005-2014 cumulative.



Several other minor drainages received moderately intensive harvest (between 113 and 259 caribou) during the 10-year period as depicted on **Map 7**. Three of the four minor drainages with moderate harvest intensity occur within the larger Noatak River drainage and include the Anisak River area, the Agashashok River area, and the Noatak River from Chukchi Sea to Kelly River area. A fourth moderate intensity harvest area is represented in the Kobuk River delta within the Kobuk River drainage.

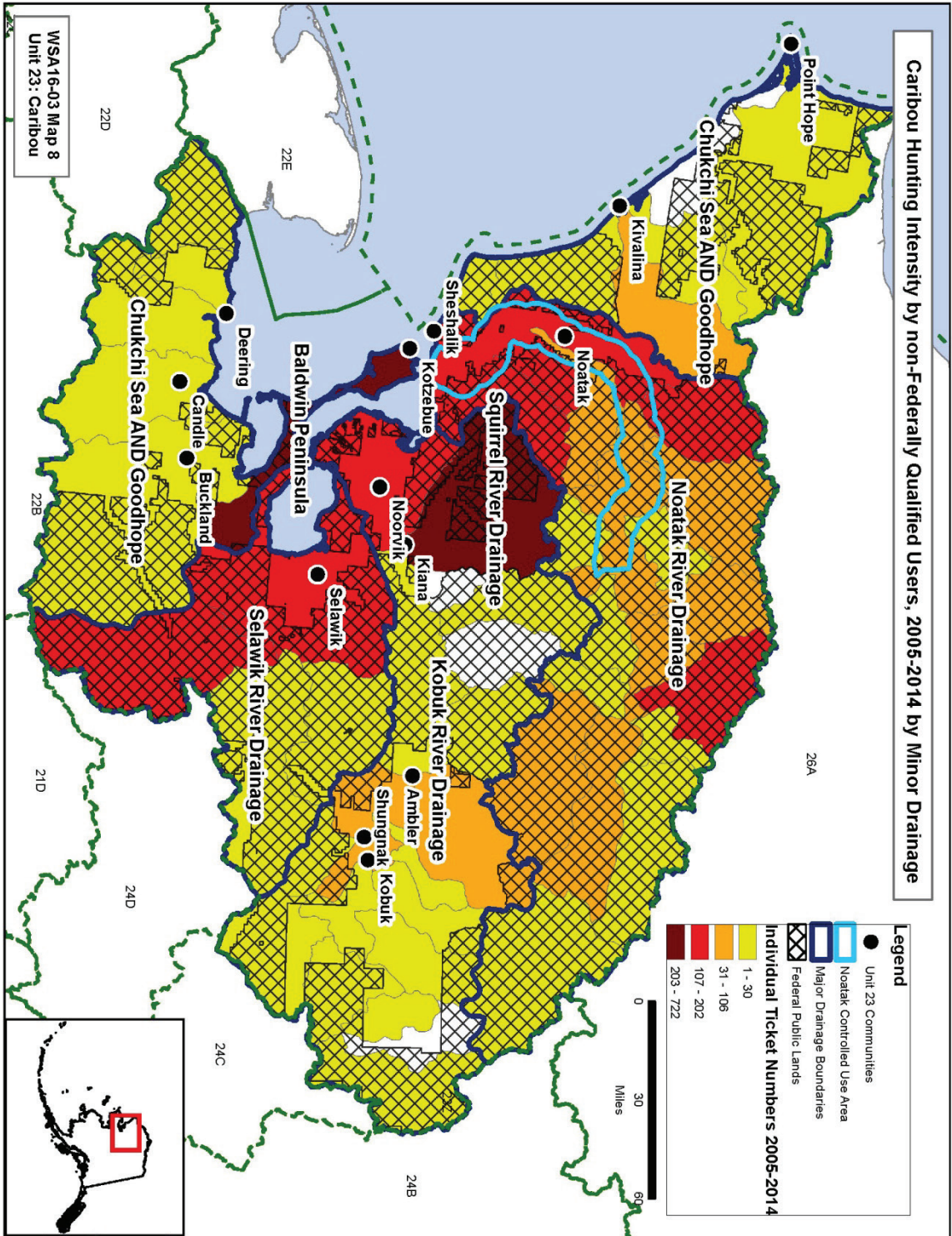
Map 8 represents non-FQSU hunting activity 2005–2014 cumulative by minor river drainage. The purpose of this map is to show intensity of hunting activities by minor drainage and the data include all records for which caribou were sought and not harvested as well as records from successful hunters. A total of 3,554 records are included in the map excluding 1,418 records for which hunting activity was not reported to the minor drainage level.

The hunting activity intensity represented in **Map 8** is similar to the caribou harvest intensity by minor drainage represented on **Map 7** with several exceptions. The minor drainages exhibiting the highest hunting activity were the Squirrel River and Baldwin Peninsula, the same drainages with the highest cumulative harvest. Moderate hunting activity was similar to harvest intensity in that it includes the Anisak River, Agashashok River, Kobuk River delta, and the Noatak River (Chukchi Sea to Kelly River), but also includes the Tagagawik River and Noatak River (Kelly River to Nimiuktuk River) drainages.⁴

For hunters living north of the Yukon River and hunting in Unit 23, caribou harvest tickets and reporting are not required and thus the ability to map harvest and hunt intensity by FQSUs based on the ADF&G harvest reporting system is not possible. In 2016, Satterthwaite-Phillips et al. (2016) published a report documenting subsistence harvest areas in the region. This study documented local harvest areas among 160 hunters residing in the communities of Buckland, Deering, Kivalina, Kotzebue, Noatak, Noorvik, and Selawik (referred to as local harvesters, below). The residents of these communities are FQSUs. The resultant maps were then reviewed by a local advisory group and updated accordingly to their recommendations. **Figure 9** is borrowed from this report and depicts the documented search and harvest areas for caribou by these local harvesters by season.

Figure 9 can be reviewed alongside of **Maps 6, 7, and 8** to compare the spatial extent and intensity of local harvesters (residents of Buckland, Deering, Kivalina, Kotzebue, Noatak, Noorvik, and Selawik) and non-FQSUs in Unit 23. The extent and intensity of local harvester activity roughly aligns in all seasons with that of the greatest intensity of non-FQSU activity and harvest of caribou from 2005 to 2014 cumulative, especially in the vicinity of Noorvik, Selawik, Kotzebue and Noatak. Importantly, Satterthwaite-Phillips et al. (2016) did not conduct interviews with residents of Kiana, Ambler, Shungnak or Kobuk and thus the associated maps do not provide hunt and harvest area insights for those communities. For this reason, **Figure 9** may not show harvest area mapping in the vicinity of those communities even though harvest may be occurring in those areas. For example, Kiana is located at the mouth of the Squirrel River, a drainage that

⁴ According to the Selawik National Wildlife Refuge Manager (Georgette 2016, pers. comm), the majority of hunting activity represented along the Anisak, Tagagawik, and Kelly Rivers was likely by NFQSUs lacking familial ties to the region while those represented along the Baldwin Peninsula and Kobuk Delta were likely composed largely of Non-FQSUs that were former residents of the area or family members of local residents.



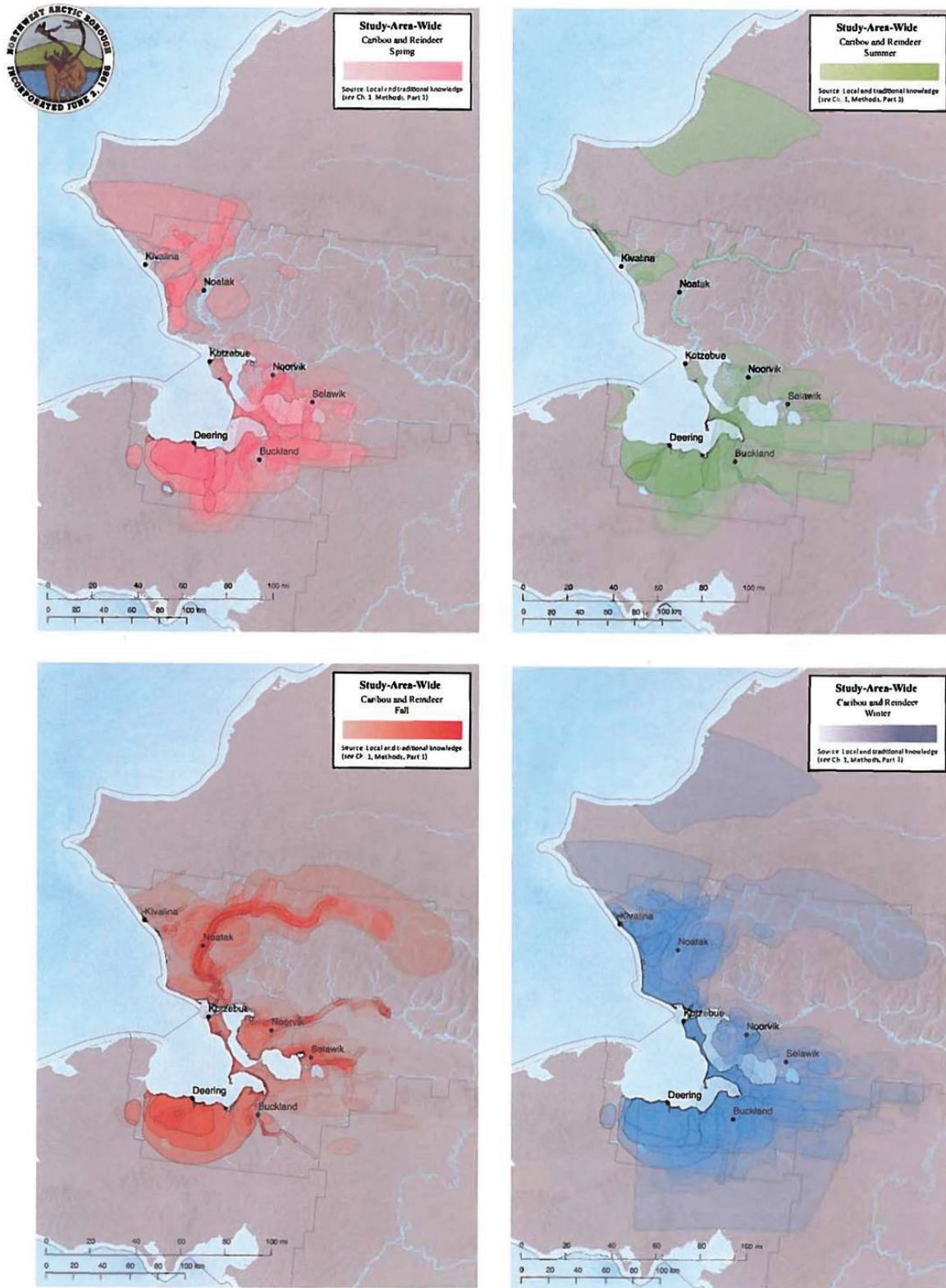


Figure 9. Caribou harvest areas by season as reported by 160 hunters residing in the communities of Buckland, Deering, Kivalina, Kotzebue, Noatak, Noorvik, and Selawik (Satterthwaite-Phillips et al. 2016).

has limited harvest mapping polygons in **Figure 9**, possibly because residents of the nearest community to this drainage, Kiana, were not interviewed.

A one-year spatial snapshot of caribou search and harvest areas for residents of Ambler, Shungnak, and Kobuk is available for 2012 (Braem et al. 2015; included here in **Appendix 2**). It is important to note that this one-year harvest data is not necessarily representative of long-term harvest patterns or the spatial extent of use areas since these tend to fluctuate annually based on local environmental conditions and caribou movements. Still, the data may be helpful in understanding recent areas used by local hunters. While comprehensive subsistence harvest surveys were conducted in Kiana in 2006 (Magdanz et al. 2011), no spatial data was reported. For these reasons, data gaps continue to exist for caribou harvest patterns of Kiana residents; Kiana being the sole community within the Squirrel River watershed.

User conflicts may also arise in areas where “use” does not necessarily overlap. For example, some local hunters (“local” resident subsistence hunters) have reported concerns that sport hunters (“nonlocal” hunters dropped off by transporters) affect caribou migration patterns by deflecting herds with aircraft, hunting camps, and hunting activities (Fix and Ackerman 2015, Halas 2015). Three areas of particular concern were noted at the Northwest Arctic Council meeting in October 2015: the Squirrel River drainage, the Noatak River drainage, and the vicinity of the Baldwin Peninsula (NWARAC 2015). For 2015, the average annual density of “nonlocal” harvesters was highest in the Squirrel River area (2.92 hunters per 100 mi²), the Selawik National Wildlife Refuge (1.93 hunters per 100 mi²), and the Noatak River area (0.95 hunters per 100 mi²; Unit 23 Working Group 2016).

Cultural Knowledge and Traditional Practices

Customary and Traditional Uses

Caribou have been a primary resource for the Inupiat of the Northwest Arctic Region for thousands of years. Caribou bones dating from 8,000 to 10,000 years ago have been excavated from sites on the Kobuk River (ADF&G 1992). Foote (1959, 1961) wrote about caribou hunting in the Noatak region forty years ago, noting that life would not be possible in Noatak without this source of meat. Caribou are a major source of both food and clothing and continues today to be the most important land animal in this region (Burch 1984, 1994, 1995, ADF&G 1992). Uhl and Uhl (1979) indicated that caribou continues to be the main source of red meat for Noatak residents as well as other communities in the region. Betcher (2016) also documents the critical contemporary importance of caribou to people residing throughout the Northwest Arctic.

Traditionally, caribou were harvested any month of the year they were available in the Northwest Arctic Region. The objective of the summer hunt was to obtain the hides of adult caribou with their new summer coats. They provided the best clothing material available to the Inupiat. The fall hunt was to acquire large quantities of meat to freeze for winter (Burch 1994). The timing and routing of migration determined caribou hunting. Hunting seasons change from year to year according to the availability of caribou (ADF&G 1991). The numbers of animals and the duration of their stays varies from one year to the next (Burch 1985) and harvest varies from community to community depending on the availability of caribou. Generally, communities in the southern portion of Unit 23 (Buckland, Deering) take caribou in the winter

and spring, while the other communities in Unit 23 take caribou in the fall, winter, and spring. Kivalina and Point Hope also take caribou in the summer in July (ADF&G 1992) and Selawik residents regularly hunt in the fall (Georgette 2016, pers. comm.).

Currently, caribou hunting by FQSUs in the Northwest Arctic Region is most intensive from September through November. Caribou can be harvested in large numbers, when available, and can be transported back to villages by boat before freeze-up. Hunters search for caribou and attempt to intercept them at known river crossings. Ideally, caribou harvesting occurs when the weather is cool enough to prevent spoilage of meat. If not, meat is frozen for later use. Prior to freeze-up, bulls are preferred because they are fatter than cows (Braem et al. 2015, Georgette and Loon 1993).

Small groups of caribou that have over-wintered may be taken by hunters in areas that are accessible by snowmachine. “Hunters harvest cows during the winter because they are fatter than bulls Caribou harvested during the winter can be aged completely without removing the skin or viscera Then in the spring, the caribou is thawed. Community members cut it into strips to make dried meat, or they package and freeze it” (Braem et al. 2015:141). In spring, caribou start their northward migration. The caribou that are harvested are “lean and good for making dried meat (*paniqtuq*) during the warm, sunny days of late spring” (Georgette and Loon 1993:80).

Historically, during fall and spring caribou migrations, people built “drive fences” out of cairns, bundles of shrubs, or upright logs. These fences were sometimes several miles long and two to three miles wide. Ideally, the closed end of the fence crossed a river, and caribou were harvested while crossing the river and retrieved later; or the fence would end in a corral where caribou were snared and killed with spears (Burch 2012). Burch (2012:40) notes, “The landscape of Northwest Arctic, especially in hills and mountains, is littered with the remains of drive fences that were in every stage of construction when they were abandoned.”

Beginning in the late 1800s in the Northwest Arctic, the WACH population declined rapidly. At its low point, its range had shrunk to less than half its former size. Famine ensued, primarily due to the absence of caribou. In the early 1900s, reindeer were introduced to fill the need for food and hides. The WACH began to rebound in the 1940s. Currently, among large terrestrial mammals, caribou are among the most abundant; however, the population in any specific area is subject to wide fluctuations from year to year as caribou migration routes change (Burch 2012).

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

User Conflicts in Unit 23

User conflicts between “local” and “nonlocal” hunters have been well documented in Unit 23, specifically in the Noatak National Preserve, the Squirrel River area, and along the upper Kobuk River (Georgette and Loon 1988, Jacobson 2009, Harrington and Fix 2009 *in* Fix and Ackerman 2015, Halas 2015, NWARAC 2015, Braem et al. 2015). Local hunters have expressed concerns over aircraft and “nonlocal” hunters disrupting caribou migration by “scaring” caribou away from river crossings, landing and camping along migration routes, and shooting lead caribou (Halas 2015, Fix and Ackerman 2015, NWARAC 2015).

In March of 1988 the Traditional Council of Noatak submitted a proposal to the Board of Game to create the Noatak Controlled Use Area in an effort to restrict aircraft along a portion of the Noatak River from August 15 to September 20 (Fall 1990:86). The area was to include five miles on either side of the Noatak River, beginning on the south at the mouth of the Eli River, and extending northerly along the Noatak River to the mouth of the Nimiuktuk River, including the north side of Kivivik Creek (see **Map 2**, ADF&G 1988:47). Included within their proposal was the following justification (Fall 1990:86, ADF&G 1988:47):

In the Noatak valley, aircraft supported hunters are directly competing with, and displacing subsistence hunters from traditional hunting sites along the Noatak River. The village most affected is Noatak, although families from Kotzebue are also affected. These families are having a great deal of difficulty obtaining their fall meat supply due to heavy aircraft traffic, rude aircraft operators, and displacement from traditional camping and hunting sites.

Aircraft operators have the opportunity to use many other areas than the main Noatak valley, in the vicinity of traditional hunting areas. Good management practices indicate that the two groups of users should be separated.

Experienced hunters from the village of Noatak point out that heavy aircraft traffic in the Noatak valley causes disruption of the fall caribou migration. The caribou are particularly sensitive near river crossings, which is stressful for the animals. Experience and good judgment is required to avoid disruption of the caribou migration. The village hunters’ experience with aircraft supported hunters has been poor. The aircraft supported hunter; lack of experience and commercial interests has led to abuse of the resource. Noatak hunters point out that the normal migration routes of caribou through the Noatak valley in the fall have changed over the last several years of heavy aircraft use. Village hunters have noticed increased levels of waste of caribou and moose by aircraft supported hunters.

In response to the proposal, the Division of Subsistence conducted a study in which they interviewed hunters from 21 caribou hunting households in Noatak, 22 private pilots from Kotzebue, 10 Kotzebue-based air taxi services, two hunting guides, and the Federal Aviation Administration in Kotzebue (Fall 1990:86). This study found that fall caribou hunting in the proposed area was a traditional and meaningful activity for Noatak, that the major source of air traffic in 1987 was from commercial air taxi operators, and that respondents tended to agree that air traffic significantly increased in the 1980s (Fall 1990, Georgette and Loon 1988).

When the Board of Game deliberated on the proposal, members indicated that they were not convinced that aircraft were disrupting subsistence caribou hunting but acknowledged an increase in outfitter operations along the Noatak River (Fall 1990:87). Fall (1990:87) suggests that because the Board of Game failed to support two similar proposals from Noatak previously, and because the current proposal had the support of both the Kotzebue Fish and Game Advisory Council and the Arctic Fish and Game Regional Council, there was pressure on the Board of Game to be responsive to the issue. The Board of Game amended the proposal to include approximately one third of the proposed land area representing locations where most subsistence hunting took place and where caribou were most vulnerable to aircraft; they then accepted the proposal unanimously (Fall 1990:87). In 1994 another amended proposal was passed by the Board of Game which roughly doubled the size of the Controlled Use Area.

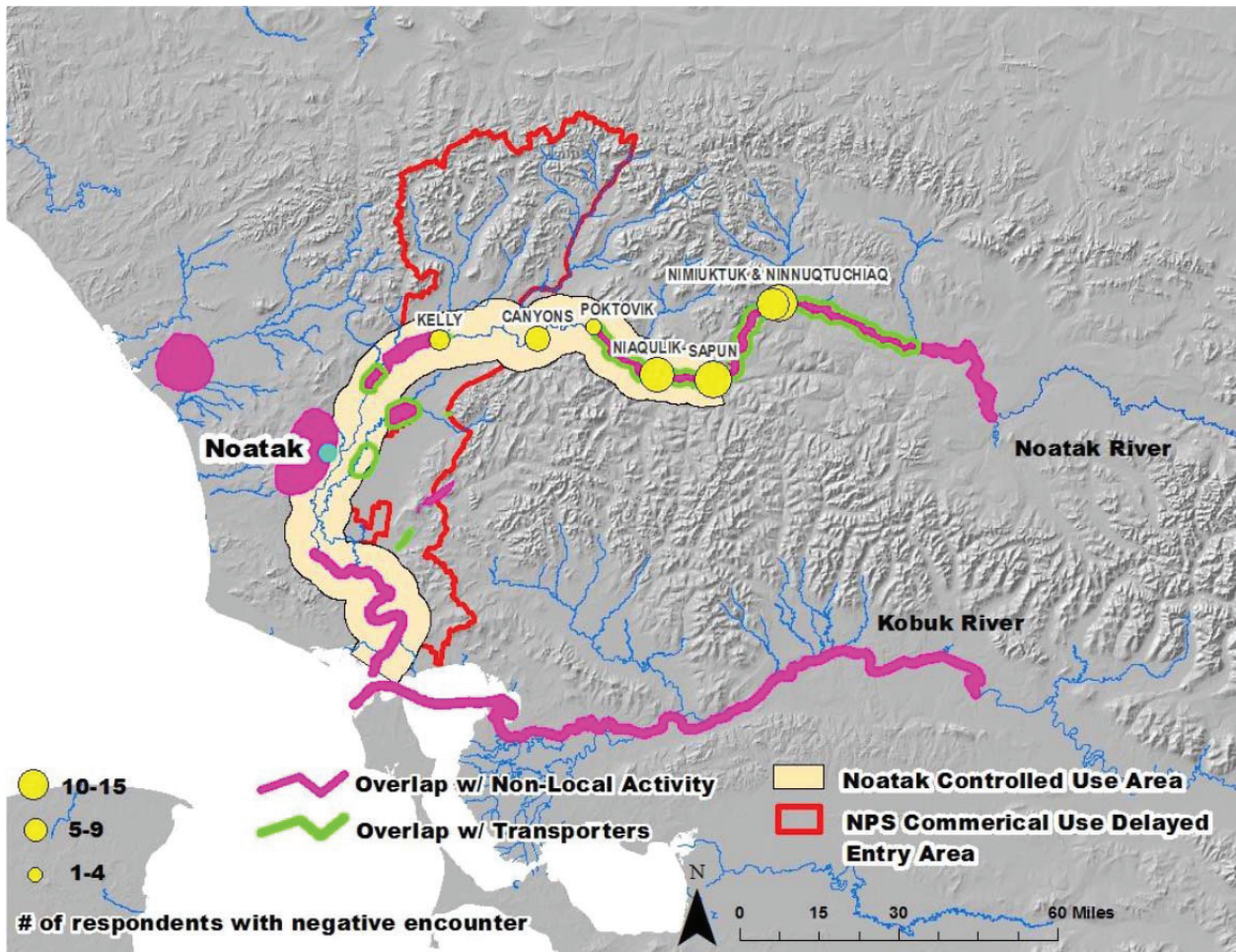
The Board of Game actions in 1988 and 1994 did not fully alleviate user conflicts along the Noatak River as local users continued to report similar observations in subsequent decades. As recently as 2014 Noatak residents have been voicing their concerns on this issue. In a survey of 19 Noatak hunters, 78% and 92% of respondents perceived “nonlocals” and planes to impact caribou migration, respectively. Similarly, 63% and 81% of respondents reported that “nonlocal” hunters and planes reduced hunting success, respectively (Halas 2015). Noatak respondents did differentiate between commercial transporter operators and “nonlocal” hunters, attributing a decrease in harvest success primarily to aircraft transporters (Halas 2015). Negative encounters between “local” and “nonlocal” hunters identified by respondents primarily focused on river crossings of migrating caribou (see **Map 9**, Halas 2015).

A survey of 384 hunters identified as transporter clients in Noatak National Preserve hunting between 2010 and 2013 indicated perceptions of conflict among this group differed from those expressed by “local” hunters (Fix and Ackerman 2015). Less than half of the transporter clients interviewed reported receiving information about issues of concern to “local” hunters. They did indicate that wilderness characteristics were important to them and that the quality of their experience was sensitive to encounters with others. Among encounter types in which the frequency exceeded hunter expectations were propeller planes (30% of respondents), other nonlocal hunters (27%), and hunting camps visible while hunting (25%, Fix and Ackerman 2015). About half of respondents reported observations of low flying aircraft near caribou; among only those that encountered caribou. Sixty percent of respondents who reported encountering caribou also reported observing low flying aircraft near the animals.

Concerns regarding the apparent lack of recent caribou population data, ongoing user conflicts and potential herd deflection by aircraft were discussed at length during the Northwest Arctic Council meeting in October 2015. While some Council members reported caribou harvest success for the year, many also reported ongoing concerns for herd deflection near the Squirrel and Agashashok Rivers in Unit 23, as well as concern for residents of Anaktuvuk Pass in Unit 24 who have been reporting an absence of animals from both the WACH and the TCH.

Halas (2015; **Map 9**), in her case study of Noatak caribou hunters and their interactions with transported hunters, examined the links between caribou behavior and migration, user group interactions, and changes to subsistence caribou hunting. In describing observations by Noatak hunters in 2012 and 2014 she explained that,

Observations of caribou behavior (“spooked” caribou, deflected caribou groups from river crossings) due to aircraft are likely witnessed as a dramatic event not easily forgotten by a waiting Noatak hunter. Whether the aircraft intentionally or unintentionally may be “influencing” caribou movement, observing “scared” caribou can be a powerful experience for hunters (Halas 2015:81).



Map 9. Areas of overlap use between 19 Noatak interview respondents and “nonlocal users.” Green lines and polygons delineate overlap areas with observed transporters. Notes: Pink lines and polygons are nonlocal users observed in the area that overlapped with local hunters. Yellow circles represent the number of respondents who had a negative encounter with “nonlocals” in specified locations. Respondents could identify more than one location (Halas 2015).

“Local” hunters’ observations of airplanes affecting individual or group caribou behavior have been documented, and cumulative observations of this over time could naturally lead an observer to conclusions about herd deflection (Halas 2015). Several studies have also documented negative caribou responses and avoidance behavior toward aircraft, motorized equipment, and development (e.g., Valkenburg and Davis 1983, Wolfe et al. 2000, Vistnes and Nelleman 2007, Calef et al. 1976, Maier et al. 1998). Valkenburg and

Davis (1983) specifically studied the reaction of the WACH to aircraft and compared this with their observations of the Delta Caribou Herd (DCH). They found that aircraft overflights cause WACH caribou to flee more often and to continue running more than DCH animals. Calef et al. (1976) observed panic reactions and strong escape responses in a high percentage caribou, particularly when aircraft flew at altitudes of less than 60 meters. These authors also found that caribou response to small fixed-wing and helicopter overflights was strongest during early calving (late May to early June), post-calving (early June to late June), and winter (Calef et al. 1976).

Valkenburg and Davis (1983) speculated that the higher intensity of WACH response to aircraft was due to insufficient exposure to non-detrimental aircraft activity (those not resulting in immediate hunting activities), the perception of aircraft as a threat, and the association of snowmachine noise with pursuit and a lack of differentiation with the noise of aircraft (Valkenburg and Davis 1983). They observed that WACH caribou ran from 82% of aircraft passes (compared to 35% of passes for DCH animals), and that escaping WACH caribou were more likely to continue running after the aircraft had passed as compared to DCH animals. These authors hypothesized that a greater number of benign or nonthreatening overflights may be necessary to habituate WACH animals and that same-day hunting upon landing had exacerbated the situation (Valkenburg and Davis 1983). In comparison, DCH caribou occurred in areas where much of the aircraft and ground vehicle activity was nonthreatening (Valkenburg and Davis 1983).

Avoidance behavior of caribou to human activity and development has also been documented to have other behavioral and physiological impacts. Some studies have shown that energy costs associated with repeated disturbance (including overflights) may decrease caribou reproduction rates (Luick et al. 1996, Bradshaw et al. 1998, Maier et al. 1998) and calf survival rates (Huntington and Veitch 1992). Studies have also reported reduction in the use of areas within 5 km from infrastructure and human activity (including aircraft) by 50–95% for weeks, months, or years (Vistnes and Nelleman 2007, Flydal et al. 2002).

Dau (2015a) reports that since the early 1980s, perceptions surrounding guides and transporters placing large numbers of nonlocal hunters (living outside of the range of the WACH) in fall caribou migration corridors and deflecting the herds from traditional hunting areas has been an issue of concern for local hunters (living within the range of the WACH) (see Braem 2015 et al. 2015, Dau 2015a:34, Unit 23 Working Group 2016). In addition, the timing of hunting has caused conflicts between user groups because 85–95% of all caribou taken by nonlocal hunters are harvested between August 25 and October 7, the same period as intense subsistence hunting (Dau 2015a:31). While hunt timing often aligns among these user groups, methods of access do not. Most local hunters harvest with snowmachines, boats, and 4-wheelers and few use aircraft. In contrast, 76% of nonlocal hunters accessed hunt areas by plane in regulatory years 2012 and 2013 (Dau 2015a:31). This mode of access can provide nonlocal users with a greater range of access and speed in reaching ideal hunting locations, and also place them in front of a migrating herd.

In recognition of these use conflicts in the area of the lower Noatak River, the Alaska Board of Game expanded the extent and duration of the Noatak Controlled Use Area in 1994 and has since created a mandatory Unit 23 pilot orientation, developed and distributed outreach materials, and established conflict planning processes (see **Map 2**, Dau 2015a). Recently, the Noatak/Kivalina and Kotzebue Sound Fish and Game Advisory Committees submitted two proposals to the Alaska Board of Game to consider at its

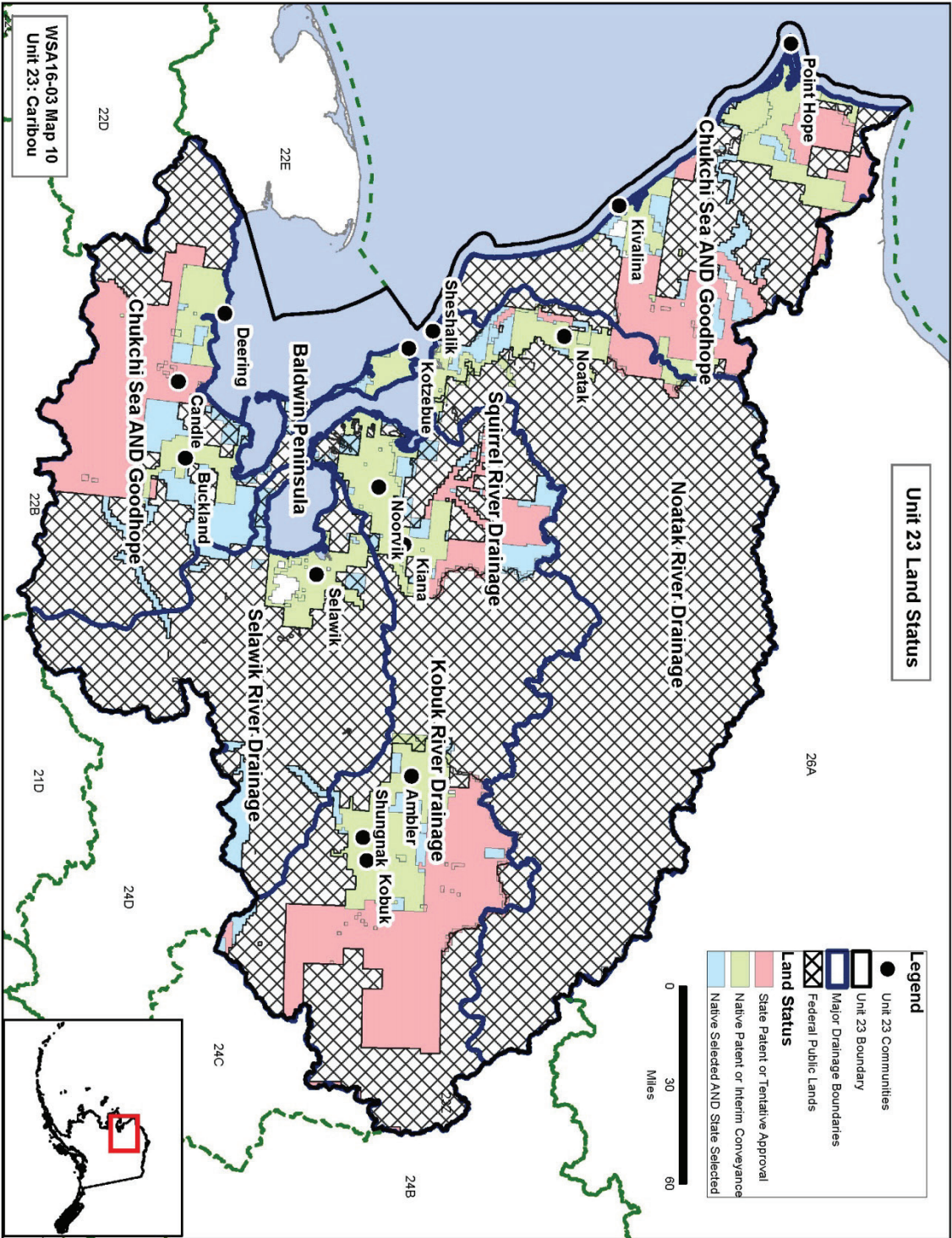
meeting in January 2017 (Unit 23 Working Group 2016). These proposals would extend the boundaries of the Noatak Controlled Use Area to the Cutler River, close the Controlled Use Area from August 15 to September 30 to the use of aircraft in any manner for big game hunting (except between publicly owned airports), and require that big game hunting camps be spaced at least three miles apart in the Controlled Use Area and along the Agashashok (Aggie), Eli, and Squirrel Rivers (Unit 23 Working Group 2016).

In 2012, the National Park Service began prohibiting transporters from dropping caribou hunters in the Kelly, Kugutuk and lower Agashashok river drainages before September 15 of each year (see **Map 2**). This Special Commercial Use Area may have limited effect on the numbers and distribution of “nonlocal” caribou hunters that are transporter clients due to the fact that fewer caribou have been migrating through the affected area since 2011 and transporters generally dropped their clients east of the closed area (Dau 2015a). In addition, the rule applies only to transporters with caribou hunting clients and not to those transporting hunters of other species, fishers, and recreational users. Furthermore, the rule does not apply to personal aircraft that are commonly used for transportation by non-FQSUs to and from the region. Information is not readily available on difference in the degree of impact to caribou by aircraft transporting caribou hunters compared to those flying for other purposes.

Another area of intense user conflict was identified in the eastern portion of Unit 23 along a 25-mile Kobuk River corridor located upstream of Kobuk, Ambler, and Shungnak, from the Mauneluk River to the Selby River (Braem et al. 2015). Much of this area is managed by the State and is among the most accessible areas in the entire drainage for “nonlocal” hunters (see **Map 10**; Braem et al. 2015). In 2001 and 2002, proposals were submitted to the Board of Game to create a controlled use corridor in this area but they were not adopted (Braem et al. 2015). This area may be of particular importance in considering potential shifts in land use due to the closure of Federal public lands to non-FQSUs of caribou in 2016.

Regarding caribou deflection and diversion, the State has suggested that incomplete camp location information has prevented a quantitative assessment of caribou deflection or displacement associated with commercial operators and their hunting clients in the unit (Dau 2015a). The State contends that commercial operations in other areas have not led to herd deflection and displacement (Dau 2015a:14-20): “Despite virtually complete saturation of access points in the Anisak drainage by transporters each year during 2009–2015, caribou from the WAH migrated through this area during each successive year, and in no year did caribou divert away from the Anisak drainage despite persistent hunting and transporter activities.”

Regardless of the causes, the fall migration of WACH failed to follow historic spatial and temporal trends in 2012, 2013, and 2014 (Dau 2015a). In these years, relatively few WACH caribou migrated through the western portion of Unit 23 and instead heavily utilized a narrow east-west corridor through Ivishak Pass to the Purcell Mountains and Nulato Hills (Dau 2015a). This created difficulty for hunters from Noatak, Kivalina, and Kotzebue. As a unit, local WACH harvest has been relatively stable since the 1990s, but residents of some communities have had to “greatly increase their expenditure of money and effort to maintain these harvest levels” (Dau 2015a:14-30). This is due in part to having to travel farther, more frequently, and for longer durations to find caribou (Halas 2015). In addition, many have had to switch from taking bulls to cows because of temporal shifts in access. According to Dau (2015a), some communities such as Unalakleet and Noatak have “not met their subsistence needs in many recent years” (Dau



Map 10. Land status within Unit 23 as per data obtained from the Bureau of Land Management on July 27, 2016.

2015a:14-30). This was also expressed by the Northwest Arctic Council members during their meetings in October 2015 and March 2016 (NWARAC 2015, NWARAC and NSRAC 2016).

Northwest Arctic Council members reported ongoing concerns about extensive user conflicts in Unit 23 (NWARAC 2015). Council members have testified that these conflicts were confounding their ability to successfully harvest caribou for subsistence purposes in some areas, and also that these conflicts were causing degradation to their subsistence lifestyle through landscape modifications (e.g., discarded or abandoned structures and trash; landing strips; ATV trails), herd diversion and positioning (e.g., pushing or scaring with low-flying aircraft for hunting, sightseeing, photography and other purposes; creating camp structures ahead of migratory paths), and hunting of lead caribou that are establishing the migratory route of the herd (including the killing of and diversion of these animals). Aircraft activity was of particular concern and includes operations by transporters, guides, “nonlocal” hunters utilizing personal aircraft, and recreational users. Specifically, aircraft in the vicinity of the Squirrel River was cited as particularly problematic (see **Map 8**; NWARAC 2015).

Concerning “nonlocal” hunting and herd diversion near the Squirrel River, one Northwest Arctic Council member described the situation as follows (NWARAC 2015:217):

We're getting more and more sport hunters. There's 80 percent of sport hunters—pretty much close to 80 percent of all sport hunters goes into Noatak and Squirrel Rivers. That Squirrel River is like a corridor connected to Aggie [Agashashok River] and there's Kiana and the caribou come right through there. Come through the flats, then through the Noatak River. That's when we get in close to the village. We don't have to buy two, three drums of gas, which is worth 10 gallons, 15 gallons gas. That really helps us.

That's what we've been doing for decades, years, centuries. This problem is not natural. Natural probably we can do nothing about, like the weather, climate change, but this problem is manmade. It's on our land. We're hurting. Our subsistence is in jeopardy. Well, I want to depend on these caribou very much. Very much. Too high a density of non-local hunters. That's the problem. That's not natural problem. That's manmade that can be fixed and that's what we're trying to fix. It seems to go right through from ear to ear. What I say here is going to go right out the door again? No. We want something done. We ask that down from the Aggie River and the Eli River to protect our subsistence, to protect our traditional culture.

Another Council member indicated that the Squirrel River area is an area with high user conflict and requested that the Bureau of Land Management (BLM) take additional action to address the issue. According to Bruce Seppi, a wildlife biologist for the BLM, eight guides and outfitters and four transporters received permits to operate on BLM lands in Unit 23 in 2015, primarily in the Squirrel River area, the area between Kotzebue and Kivalina, and south of Kivalina. In 2014, guides and outfitters brought in 22 clients and none harvested caribou (NWARAC 2015:207). Transporters brought in five clients who harvested 13 caribou (NWARAC 2015:207). In 2015, a total of six guides and outfitters were permitted, and a total of five transporters were permitted in the area. Only five post-use reports were received and harvest totals included a single caribou (Seppi 2016, pers. comm.).

While these aircraft may contribute to the perceived modifications in herd movement, private planes of “nonlocal” resident hunters are also thought to exacerbate the problem. According to Chairman Shiedt of the Northwest Arctic Council (NWARAC 2015:210):

I think the majority of the problem now is happening these smaller planes, private-owned planes, are coming to Buckland and Noatak and Kiana and we're all blaming the transporters and outfitters. I'm not favoring them, but the other year too when I was at Kelly they were there from Interior. There were four planes when I was there. So maybe that's the problem we're having here.

Concerns were expressed by residents of Ambler, Shungnak, and Kobuk as well as members of the Northwest Arctic Council that many “nonlocal” hunters did not act in accordance with local hunting traditions such as shooting caribou for trophies or sport instead of food and wasting meat by letting it spoil in the field (Braem et al. 2015, NWARAC 2015). Halas’ survey respondents in Noatak expressed similar concerns (Halas 2015). Additional conflicts between user groups include competition for or overcrowding of campsites, litter, human waste left behind by hunter groups, lack of law enforcement, degradation of the landscape from four-wheelers, and displacement from traditional hunting sites (Braem et al. 2015, Fix and Ackerman 2015, NWARAC 2015).

Concerns by residents of communities within Unit 23 were also recorded in the recently released documentary “Counting on Caribou: Inupiaq Way of Life in Northwest Alaska” (Betcher 2016). Respondents from several communities expressed concern regarding food security as it pertains to caribou herd diversion and changes in migration routes. Several of these indicated that both small and large scale changes to migration routes are linked to “nonlocal” hunting activities, particularly low-flying aircraft. According to Lucy Nordlum of Kotzebue (Betcher 2016):

We have many influences that play into us not getting certain subsistence foods. Hunters from outside to get their trophy caribou or whatever, that has impacted our area of hunting a lot. I would say in the past ten years we don’t have the big migrations that we used to have. They are chased further back into the backcountry. That makes it hard for those of us that don’t have airplanes or can’t afford the gas. The costs are a lot for fuel now and that influences a lot of people getting out there and doing their hunting. A lot of the people go up to Onion Portage from Kotzebue to get their caribou. That’s 500 miles or so away. It is hard with the caribou because that is about the only staple I really have besides fish.

Many of these concerns were substantiated by a mailed survey of “nonlocal” hunters that were transporter clients on the Noatak National Preserve (Fix and Ackerman 2015). Of the 1,127 individuals in this study’s sample, 372 returned surveys resulting in an overall response rate of 34% (Fix and Ackerman 2015). Eighteen percent of hunters reported shooting at the first caribou they saw and less than half of the transporter clients reported receiving information regarding “traditional local subsistence use,” “subsistence areas to avoid,” and “local traditional hunting.” Nonresidents of Alaska also reported that hunting for trophies was more important than hunting for meat while residents of Alaska reported hunting for meat was more important than hunting for trophies. Additionally, 58% of nonlocal caribou hunter

transporter clients reported they were not sure if they salvaged all edible meat. Similar to local hunters, nonlocal hunters reported encounters with other nonlocal hunters and airplanes as the two biggest factors detracting from their trip (Fix and Ackerman 2015).

Some agency actions that have been implemented to mitigate user conflict in Unit 23 include the formation of the Game Management Unit (GMU) 23 Working Group in 2008 (Braem et al. 2015), the delayed entry zone in Noatak National Preserve, the State's Noatak Controlled Use Area along the Noatak River, closure of some areas to commercial use by transporters and guides within Selawik National Wildlife Refuge, and the development of a Squirrel River Management Plan, which will address permitted guide and transporter activities such as camp size, placement, and travel (NWARAC 2015). While the public comment period for the Squirrel River Management Plan ended in December of 2010, a formal plan has still not been established as of July 2016.

The Squirrel River Management Plan Scoping Report issued in September of 2011 includes public commentary specifically in reference to "the impacts of transporters, transported hunters, and commercially-guided hunters on subsistence and general hunting." Meetings held in urban areas (Anchorage and Fairbanks) elicited mixed responses to this question while meetings held in rural areas elicited primarily negative views of "nonlocal" hunter influence on caribou. Commentary between subsistence users and commercial operators were largely conflicting, whereby the former group tended to prefer greater regulatory restrictions on the latter group (BLM 2011).

In discussions about ongoing concerns related to user conflict and possible caribou herd deflection near the Squirrel and Agashashok Rivers in Unit 23, members of the Northwest Arctic Council recommended during their fall 2015 meeting that the BLM take prompt action to address user conflict in the Squirrel River area, as well as a number of specific agency actions aimed at addressing conflict linked to commercial transporter operations (NWARAC 2015).

Knowledgeable hunter interviews in Noatak conducted by Halas (2015) also resulted in suggestions for boundaries and limits to "nonlocal" activity including allowing 1,000 caribou to pass before shooting, closing the Agashashok River corridor, and appropriately spacing "nonlocal" camps. Many of these suggestions cannot be enacted through the Board given the limits of its authority but may be considered by the State and the WACH Working Group.

In addition, the Northwest Arctic Council submitted WSA16-01 to the Board requesting that caribou hunting in Unit 23 be closed to all except FQSUs, noting that such a closure could be a first step in protecting the herd at Squirrel River, Noatak River, Cape Krusenstern National Monument,⁵ and other Federal public lands in the area. The Council indicated that they would revisit the success of the closure after one year and, if new population numbers continue to indicate declines a request for closures on State lands would be a potential next step.

⁵ However, National Parks and National Monuments are already closed to non-Federally qualified subsistence users.

Current Events

The Office of Subsistence Management held public meetings in Barrow, Kotzebue, and Nome in July 2016 and accepted comments to the Board concerning WSA16-03.

Public Meeting in Kotzebue

On July 19, 2016, 49 people testified at the Kotzebue meeting in person or on teleconference, including local residents, nonlocal residents of Alaska, nonresidents of Alaska, guides, transporters, ADF&G, representatives of the Alaska Outdoor Council, and representatives of the organization Resident Hunters of Alaska.

Local residents provided the majority of public comments. Most opposed WSA16-03. These testifiers described the importance of and heavy reliance on caribou by local residents, and described that their cost of living is very high (up to \$22.00 per pound for store-bought meat in Noatak) compared to “non-local” Alaskans. The high cost of living is an added hardship as residents note change in caribou migration patterns. Local comments related to these issues included the following testimony:

- Some “local” residents spoke of the cultural significance of caribou for the people of the northwest arctic. They said traditional ecological knowledge teaches the importance of sharing and how conflict over a resource is disrespectful, often leading to decline. Caribou, they said, is the lifeblood of local villages, more nutritious than store-bought meat, and children’s health depends on it. Someone noted that caribou in northwest Alaska is like whale on the North Slope. Villages strive to keep their traditions alive. The closure protects a way of life and is crucial to local hunters.
- Many local residents testified that they must travel farther and incur more cost before reaching the herd. Participants noted that Noatak hunters now must travel up to 100 miles to harvest caribou that were once available locally. Residents of Shungnak and Point Hope testified that they also must travel farther to reach caribou that once were harvested locally.
- The no-landing zones in the lower Noatak drainage moves transporters to the upper Noatak drainage which is mostly Federal public lands. The closure is necessary to help local residents harvest caribou on traditional hunting grounds upriver. If current conflicts continue, hunting may be shut down for a long time.
- Many “local” residents testified that the timing and migration patterns of the caribou herd had changed. Buckland hunters noted that the herd arrives late and worry caribou will not be available to them or will arrive in rut. A testifier from Deering noted caribou are arriving later. Some local hunters from the most congested areas must purchase more food and gas to access hunting areas in the Upper Kobuk drainage.
- Several individuals testified that the issue is not about population levels but local conflict with non-FQSUs and transporters. They said that non-FQSUs often access hunting areas by aircraft, place hunting camps in front of herd migration, and harvest lead caribou thereby diverting the herd from its natural migration path. These hunters concentrate their efforts where caribou are present in larger numbers, often in the vicinity of villages that are purposefully situated along migration routes.

Residents said the noise made by low flying aircraft stress caribou and affect their behavior and overall health.

- Non-FQSUs practicing wanton waste are also a problem and are observed in winter as well as fall seasons. Some testified that while transporters do distribute caribou meat, some is aging or “rutty” and most goes to Kotzebue and not smaller villages like Kiana and Noorvik. Local residents opposing WSA16-03 also say the WACH population estimate is insufficient to accurately determine how quickly or how much the herd is shrinking. One Kotzebue resident pointed out that recent research of 31 collared caribou from Onion Portage by ADF&G is inadequate to judge overall calf survival rates from a herd of 200,000. Another resident said that recent observations of ADF&G staff of healthy caribou means only that caribou have more browse available to them and does not describe a long term population trend.
- Many local residents shared concerns about State management of WACH, and noted that the State considers economic effects of the closure to transporters, guides, and non-FQSUs and not the impacts of these activities on local hunters. They said the State fails to recognize the higher dependence of local hunters on wild resources and caribou specifically. Local residents share the burden of conservation and comply with lower harvest limits and shorter seasons.
- Participants stated that people with ties to the region living in urban Alaska can hunt for caribou on NANA Corporation, State, and village corporation lands. Concentrating non-FQSUs hunting caribou in Unit 23 on State lands allows better enforcement of State regulations.
- The WACH Management Plan is important and the herd may be at or approaching the 200,000 animal threshold for Preservative Management Level described in the plan. The State should err on the side of caution and implement Preservative Management Level recommendations.
- Some residents stressed that the closure is for one year only and should remain in place.
- An Alaska resident who is a non-FQSUs who cannot hunt caribou in Unit 23 under Federal subsistence regulations opposes the special action request because human settlement in the region is the result of caribou, and any short-term recovery of WACH does not resolve the recurrent problem of the caribou herd being diverted by transporters. This Alaskan resident said that the Board has responsibility to protect subsistence users and recognize rural Alaskans have priority for harvesting fish and wildlife on Federal public lands.

A number of participants who testified at the public meeting either in person or by phone were in support of WSA16-03. Reasons given in support of the special action include:

- The existing closure is an over reach and the Federal government should not be involved.
- Nonlocal Alaskan resident hunters said they support the special action request because they are responsible hunters, respect local residents and their traditions, and provide substantial amounts of meat to villages. Cultural values and experiences of non-FQSUs are equally important to local values and experiences. The burden of conservation of the WACH should be shared by all State residents.

- Nonresidents of Alaska testified in support of WSA16-03 and said the user conflict is the result management decisions, nonlocal hunters are responsible for harvesting 600 caribou, a small percentage of the overall harvest, and nonlocal hunters routinely share caribou meat with local communities.
- Guides and transporters said they are being negatively impacted economically. Federal public lands should be open to all Americans. They said that if the Board does not approve the special action request, it is acting prematurely, targeting a group that accounts for only 5% of WACH harvest, contributing to misunderstandings between users, and impacting human relations in the region. Not supporting the special action concentrates non-FQSUs in Unit 26A that is critical habitat for caribou. Many guides as well as outside hunters stressed respect for the local people and pointed out that nonlocal hunters donate up to two thirds of their caribou meat to village residents.
- A representative of the Alaska Outdoor Council stated that they support the special action request because it supports subsistence uses by all Alaskans. Additionally, when biological staff indicate that there is not a conservation concern, the closure does not meet the criteria of Title VIII of ANILCA.
- Resident Hunters of Alaska said the State nonresident season should close before non-FQSUs who are residents of Alaska are prohibited from harvesting caribou in Unit 23. If the Board does not support the special action request, it is overlooking the recommendation of biologists. The Board should review its protocols for closures.

ADF&G expressed support for its WSA16-03 because the WACH Working Group brings all parties to the table to negotiate caribou management plans for the region. Representatives stated that the WACH Management Plan was endorsed by the Board, and if the Board does not approve the special action request, it is acting independently of the WACH Working Group and jumping ahead of the process outlined in the WACH Management Plan. An ADF&G representative noted that a photo census from early July 2016 is complete, and a revised WACH population estimate is expected in October 2016. Additionally, newly reported research demonstrates that in 2015, calf survival increased by 10%, adult body weight condition is “high,” and the cow pregnancy rate is 85%, the second highest on record, indicating the population seems to be stabilizing. The Board and the Alaska Board of Game have different mandates but they should not deviate from the WACH Management Plan which was agreed on by both.

Public Meeting in Nome

On July 20, 2016, 16 local residents, other residents of Alaska, nonresidents of Alaska; transporters, the group Resident Hunters of Alaska; ADF&G; and Kawarak, Inc., Stebbins Tribe, and Saint Michael Tribe testified in Nome. Local residents were mixed on whether they supported or opposed WSA16-03. The majority of the testimony was in support of WSA16-03. Supportive testimony included:

- The Board’s original decision to support WSA16-01 was premature, contrary to the WACH Management Plan which is a bridge between Federal and State management, and will allocate caribou to one user group at the expense of another which is inappropriate. This fall, non-FQSUs will concentrate their hunting efforts at caribou river crossings, for example, and existing user conflicts will not be mitigated.

- Two transporters testified in support of WSA16-03 because the Board based its decision to close on outdated information; the 400–500 caribou harvested annually in Unit 23 by non-FQSUs will have little effect on the caribou population; and transporters provide many pounds of caribou meat to local residents.
- Nonresidents of Alaska supported WSA16-03 because the Board based its decision to close on anecdotal information rather than scientific data. They said the Board is supposed to follow biological guidelines and the closure to non-FQSUs was not necessary for conservation of the caribou population in Unit 23.
- The group Resident Hunters of Alaska supports WSA16-03 because the WACH population is above the threshold for the Preservative Management Level as described in the WACH Management Plan. In addition they said that all Alaska residents should have a subsistence priority including people with close ties to the region that live elsewhere in Alaska, and nonresidents of Alaska should be excluded first.
- ADF&G submitted and supports WSA16-03 because the recent closure will not affect the caribou population in Unit 23; individual caribou appear healthy; user conflict will likely escalate because hunters' distribution will be restricted to State lands only; the WACH Working Group co-management planning process that the Board endorsed in 2001 is undermined; the Western Arctic Herd population is declining due to its natural cycle, it is likely the herd is reaching a low point, and harvest is not driving the decline; and the effects of new State and Federal regulations will be evaluated before further restrictions are likely to be proposed by ADF&G.

Local residents opposing WSA16-03 gave testimony in opposition to guided hunting. One suggested that instead of a full closure, the caribou harvest limit in Unit 23 should be reduced from five caribou per day to two caribou per day for non-FQSUs who are residents of Alaska. Local hunters observed the Seward Peninsula's Kougarok Road turned the WACH from its natural migration in the late 1990s, and hunting pressure is similarly interfering with the natural migration of the herd in Unit 23. Stebbins and Saint Michael tribes also oppose the special action request.

Public Meeting in Barrow

On July 25, 2016, 9 people testified in Barrow including local residents, nonresidents of Alaska, and ADF&G. Local residents in attendance were generally opposed to WSA16-03 with testimony as follows:

- ADF&G is acting too quickly on biological information recently collected. The WACH and TCH have declined 50%, negatively impacting local subsistence users.
- Concerns for the impact of sport hunting on local subsistence hunters have increased over the last 10 years.
- The combined amounts reasonably necessary for subsistence (ANS) for these two herds is misleading because if the ANS for each herd is separated out, there isn't enough caribou in either herd to support harvest by non-FQSUs.

- Hunts for nonresidents of Alaska are not supportable. Many communities in Unit 23 are highly dependent on caribou for subsistence, and if people don't harvest caribou many people go hungry. Also, the opportunity for meaningful cultural and traditional experiences through quality subsistence activities is very important in passing knowledge from one generation to the next, and supporting and teaching traditional sharing. The State should consider local ordinances and zoning restrictions, described in the North Slope Borough Comprehensive Management Plan, and designate "areas of influence" that local users rely on for obtaining subsistence resources for themselves, family, and community, and manage these areas for subsistence uses primarily.
- Local testifiers that oppose the special action also said that when the herd does not migrate through areas villagers can reach, there is great hardship, and any action that helps local subsistence communities until the herd rebounds is important.
- Caribou are perhaps the most important subsistence food upon which the local communities depend, both nutritionally and culturally. Many communities are experiencing nutritional hardship.
- Those who testified said that local subsistence users take regulations seriously and are concerned about conservation of the herds. They take a grassroots approach to changing regulations to help conserve caribou by reducing subsistence harvest and balancing the need to provide for communities. Local residents want to see if there are benefits for FQSUs from the closure before reconsidering it.
- Residents from Anaktuvuk Pass discussed the importance of teaching young people how to live a traditional life. They said local hunting practices let the lead animals pass by, allowing the remainder of the herd to follow and be available for harvest. People in the Northwest arctic are relatives, and when caribou come through, they work as a community to harvest and share. At Anaktuvuk Pass, people have not had access to caribou for five or six years. There are no spring or fall migrations, and many families go hungry. They said other communities send food but it is still not enough. One resident said, "We have had to rely on food from other villages for our elders. I don't approve of opening the area to non-Federally qualified hunters. This is a short notice request and action. Listen to the local people who have been suffering for so many years. Consider the hardship our people are faced with, and consider the local people that are affected by WP16-03."
- Other opposing testifiers worry that residents of Noatak will not get enough caribou if migration patterns keep changing combined with the decline in population. The 700–900 animals taken by nonresident hunters, mostly adult bulls, which have harems of up to 75 cows, can have a population-level effect. New recent biological numbers do not create a trend, which requires multiple years of data. Participants expressed that the State is overly influenced by economic needs of the big game lobby, and it is irresponsible to make management decisions driven by economics. They said food security is the primary concern.
- Some residents said Anaktuvuk Pass, Shungnak, Selawik, and Ambler have difficulty finding caribou and travel much further to get caribou than in the past. This is a great hardship with the cost of gas at \$10.00 per gallon and freight at \$2.00 per pound. They said there is no economic hardship for sport hunters to fly in, but local residents depend on caribou all year round. The migration through Anaktuvuk Pass used to be four days long and the community hunted and shared caribou, and traded food with coastal families. They asked the Board to consider the hardship of the people.

- Local residents said the North Slope Borough is able to help out their communities more than some of the communities in Unit 23. There are few jobs in many communities in Unit 23 and the primary resources are subsistence resources. In many communities 80–90% of their food is subsistence resources. Conflicts between subsistence users and sport hunters occur in those areas important to subsistence uses. They said that they worked hard to conserve the herd and that other caribou herds can support non-Federally qualified hunters.

A few local residents that testified in support of the special action request. They said that if the Board does not approve the request, it will be out of line with the WACH Management Plan. The WACH Working Group represents diverse groups working hard to guide management and has been instrumental in the adoption of recent State regulations. They said State lands are important to subsistence hunters, and the closure may increase crowding and conflict on these lands. Additionally, only 5% of the harvest is by nonlocal hunters and opposing the special action request will not affect the herd population. They spoke of recent evidence suggesting that the WACH population is declining at a slower rate or stabilizing. Calves are in good condition with more surviving. They heard that this summer ADF&G got a good and accurate count. This information supports leaving caribou hunting in Unit 23 open to all users in order to reduce conflicts between sport hunters, nonlocal subsistence hunters, and local subsistence hunters in the Squirrel and the Noatak drainages.

Nonresidents of Alaska testified in support of WSA16-03 because the impact to the caribou population by non-FQSUs is negligible. They said that nonresidents of Alaska suffer negative economic impacts and that if there is a real problem with the herd, restrictions should first target resident hunting, which comprises most of the harvest.

ADF&G supported WSA16-03 and testified that State biologists' estimate the population of WACH is currently around 205,000, which places the herd in the Conservative Management Level, as described in the WACH Management Plan. A new population estimate will likely be available in October. ADF&G does not consider the WACH a conservation or biological concern. ADF&G contended that if this request is not approved by the Board, the Board's decision will be inconsistent with the WACH Management Plan. ADF&G said that this will be detrimental to subsistence users and in conflict with the Board's closure policy. They also said that recent biological information from surveys in 2015 and 2016, though not available at the April 2016 Board meeting, indicate calf survival and recruitment are improving as well as adult female survival compared to previous years. They cautioned that if the Board does not approve the request, instead of reducing the diversion of the herd and conflict between users, as the Board's actions intended, it will actually create more conflict as all non-Federally qualified hunters will be concentrated on State lands (approximately 20% of Unit 23). ADF&G stressed that rejecting Special Action Request WP16-03 fails to consider the economic consequences for the region, outfitters, guides, transporters and others.

Consultation with Tribes

Consultation between tribes and the Board was held on Thursday August 4, 2016 for WSA16-03 at the USFWS Regional Office in Anchorage in person and by teleconference. Designees of Board members

representing the Bureau of Indian Affairs and National Park Service attended. The Inupiat Community of the Arctic Slope, Maniilaq Corporation, the Native Village of Noatak, the Native Village of Kotzebue, and the Native Village of Kiana attended. Tribal comments were largely in opposition to WSA16-03. Several reasons given for the opposition include:

- The WACH Cooperative Management Plan suggests the Preservative Management Mode when the herd reaches 200,000 animals. Given a lack of definitive population data, preference should be given for a more conservative approach.
- The closure provides an opportunity for the WACH to migrate without interruption, potentially allowing them to migrate closer to unit 23 communities and in turn increasing the opportunity for subsistence harvest by FQSUs.
- Caribou is more than a traditional resource; it is also a spiritual resource. The Board listened to the people and their needs when implementing the closure on Federal public lands.
- Caribou has been very difficult to harvest in last several years. Hunters must travel farther and spend more, with fuel costing approximately \$9.99 a gallon. Alternative commercial goods are too expensive to substitute; reindeer costs around \$19 per pound.
- For several years hunters have had to pool resources to afford hunting trips. In some cases we are purchasing fuel and sending hunters out but they are returning unsuccessful. They are reporting lots of tents and aircraft where caribou should be migrating through.

A tribal representative indicated concern that hunters that are no longer FQSUs would not be permitted to hunt caribou in Unit 23 on Federal public lands.

Comments from ANCSA Corporations

An opportunity for ANCSA corporations to give comments to the Board was also held on Thursday August 4, 2016 for WSA16-03 at the USFWS Regional Office in Anchorage in person and by teleconference. Designees of the Bureau of Indian Affairs and National Park Service Board members attended. Representatives of Kukulget Inc. (in Savoonga) and Sivuqaq Inc. (in Gamble) attended. These representatives indicated that while their communities may have customary and traditional use determinations for caribou in Unit 23, their shareholders do not regularly travel to Unit 23 to harvest the resource because of the expense of doing so. They declined to comment further on WSA16-03.

Federal Subsistence Regional Advisory Council Actions

Western Interior Alaska Subsistence Regional Advisory Council

The Council opposed WSA16-03. The WACH has lost several cohorts of calf recruitment, and the Council emphasized concerns about the effect this might be having on the herd's bull:cow ratio. The Council was especially concerned about removing large bulls from the herd and the effect on reproduction. The Council said caribou breed in a short period of time, younger bulls cannot always keep up with the breeding stress, and young bulls have higher winter mortality than older bulls. The Council cited the Mulchatna caribou

herd as an example, where reducing bull:cow ratios undermined the reproductive capacity of the herd. New bull:cow ratio information for the WACH was not available. The Council was concerned about the declining WACH and preserving the herd for future years, that that caribou have been observed migrating around the Kobuk and Ambler areas and staying more in the mountains possibly because of predation and over-harvesting (WIASRAC: 256–370).

Seward Peninsula Subsistence Regional Advisory Council

The Council opposed WSA16-03. Council members expressed concern over the lack of data regarding the impact of the nonlocal hunt prohibition, as well as the success rate for nonlocal hunters displaced onto State lands. The Council heard from communities that, due to fewer airplanes, there were more caribou sightings by locals. Overall, the Council did not feel comfortable with reopening the hunt until additional information on the impacts of WSA16-01 was provided.

Northwest Arctic Subsistence Regional Advisory Council

The Council opposed WSA16-03. Council members said that WSA16-03 would undermine the special action submitted by the Northwest Arctic Council (WSA16-01). The Council had received reports from communities and letters from tribes in the region that the current closure has helped communities get the caribou they need. Council members heard from Noatak, Kivalina, and Kotzebue residents; they were comforted this fall and felt at peace that they were finally able to fill their freezers with caribou for the year.

The Council had been working to find a workable solution to satisfy the needs of people and wanted to see how the current closure was working. Local people rely heavily on caribou and are concerned about the declines. Council members said that “we are a caribou people” in both culture and diet and want the herd to prosper and stay in balance for the future. The Council and communities in Unit 23 took action to conserve the herd and agreed to reduce their own caribou harvest. It was a tough situation, and the Council worked hard to make a wise decision for the people. The Council felt the situation warranted taking further action to reduce harvest by nonresidents of the area. The intensity of fly-in hunting in these areas had diverted the caribou migration. These areas are also traditional hunting grounds for local communities that rely on caribou for food. The cost of gas is very high for travel to hunt caribou, store bought food is limited and too expensive to replace caribou, and communities pool resources to be able to harvest enough caribou to feed their families. Nonresident hunters have the opportunity to fly somewhere else to hunt.

The Council said that there needs to be more information on the health of the caribou population, and the recent updated count presented by ADF&G is not sufficient to lift the closure or ease any conservation measures for the WACH.

North Slope Subsistence Regional Advisory Council

The Council opposed WSA16-03. The Council responded to new data presented by the proponent and said the Board should err on the side of caution and retain the closure. Another year of data would be needed to identify a trend that the annual decline of the WACH population is becoming less each year. Additionally, the new point estimate for the WACH population was only about 900 caribou over the threshold for “preservative” management identified in the WACH Management Plan (see **Table 2**). The Council said

there is no guarantee or monitoring program to assess if harvest would be within the harvestable surplus if the season was opened. Residents of Alaska hunting the WACH for food should have priority over people hunting for racks. Food security concerns exist in the area. The State has not responded to the needs of local communities; it has been reluctant to use its own process, such as implementing Tier I or II hunts, as the herd declines. The State uses Amounts Necessary for Subsistence (ANS) to manage harvest, and ANS for the TCH and WACH were combined, appearing to support continuation of sport hunting. The Council said hunting in much of the WACH's range should be in Tier I or Tier II. The Federal program is intended to manage harvest for sustained yield and not for ANS. Additionally, the Council said villagers hunt in traditional areas. Others should hunt outside village areas, and all Federal public lands should be closed to nonlocals until there is a willingness to recognize village areas of influence and to provide for a reasonable traditional hunting experience for all communities in Unit 23. The Council has heard reports from Unit 23 residents that more caribou were observed and harvested this fall than in the recent past, and caribou migrated nearby Anaktuvuk Pass for the first time in six or seven years.

The Council said transporting caribou hunters by air has been a growing issue in North Slope as well as Northwest Arctic communities. Enforcement of regulations is minimal to none and some sport hunters are likely hunting in areas where they should not. Sport hunters look for the biggest bulls most of the time; when a dominant bull is killed, calf recruitment from up to 50 cows can be lost. Transporters are pushing sport hunters in front of migrating herds and not follow traditional hunting practices. When large bulls leading the herd are killed, cows and younger bulls become lost. Villagers have knowledge of where their best harvesting opportunities will be. Once guides and transporters figure out where these areas are, they are inundated with nonlocal hunters. Migration routes might have been altered because of nonlocal hunters inundating and interrupting caribou migration (NSSRAC 2016:84–109).

State of Alaska Board of Game Proposals

Currently pending are two proposals submitted to the Alaska Board of Game by the Noatak/Kivalina and Kotzebue Sound Fish and Game Advisory Committees. The proposals to be considered in January of 2017 seek an extension to the boundaries of the Noatak Controlled Use Area to the Cutler River, and a spacing requirement of at least three miles for big game hunting camps located in the Noatak Controlled Use Area, along the Agashashok, Eli, and Squirrel Rivers (Unit 23 Working Group 2016).

Effects of the Proposal

If the Board approves WSA16-03, Federal public lands in Unit 23 will reopen to caribou hunting by non-FQSUs. In its request to the Board in June 2016, the State said that new information indicated improvements in caribou calf production, recruitment, survival, and weight; adult females exhibited very good body conditions and high pregnancy rates in 2015 and 2016; and the newly derived WACH population estimate for fall 2015 was 206,000 caribou, falling within the WACH Management Plan's "conservative" harvest management strategy.

In addressing this new information, first, calf production has likely had little influence on the WACH population decline (Dau 2013, 2015a), and improvement demonstrated in recent research (**Figure 3**, Dau

2016a) is not as relevant as calf survival and recruitment. Second, decreased calf survival through summer and fall and recruitment into the herd are likely contributing to the population decline (Dau 2013, 2015a). Recent research demonstrates that 2015 and 2016 cohorts make up a large proportion of the herd (**Table 3** and **Figure 3**, Dau 2016b). Because of their young age, they remain somewhat vulnerable to difficult winter conditions. Evaluating the over-winter survival rates of the large cohort of 2016 will help to put the demographic potential of this cohort into context (Parrett 2015c, 2016b). Third, increased cow mortality is likely affecting the trajectory of the herd (Dau 2011, 2013), and new data demonstrate decreasing annual cow mortality rates in three of the past four years (**Figure 4**, Dau 2016a). Fourth, the results of a July 1, 2016 photocensus survey resulted in a minimum count of 194,863 caribou with a point estimate of 200,928 (Standard Error=4,295, Parrett 2016b). Results of this census indicate an average annual decline of 5% per year between 2013 and 2015, representing a lower rate than the 15% annual decline between 2011 and 2013 (**Figure 1**). While there is substantial uncertainty in the harvestable surplus estimates, the overall trend is decreasing as the population declines (Parrett 2015a). If population projections and harvest estimates are accurate, overharvesting is likely already occurring (Dau 2015a, Parrett 2015b).

Before going further, it is important to know that Board actions are guided by the objectives of Title VIII of ANILCA that mandate that if a conservation concern or increasing competition among authorized users and uses requires a reduction in harvest, subsistence uses will be prioritized over other consumptive uses on Federal public lands. Federal regulations give the Board the authority to restrict harvest only to subsistence uses on Federal public lands. This is the first step in the Federal subsistence prioritization process. In the event that nonsubsistence uses have been eliminated on Federal public lands or waters but it remains necessary to restrict the taking of fish or wildlife on public lands by rural residents with a C&T determination in order to protect the continued viability of the fish stock or wildlife population or to continue subsistence uses, the Board must take the next step and establish a priority among subsistence users.

In WSA16-01, the Board was asked to take the first step in the ANILCA Title VIII-mandated prioritization process, described above, in order to protect the continued viability of the WACH and to protect the continuation of subsistence uses. Evidence the Board cited included public testimony expressed to the Board by residents of the area, the position of two affected Councils (Northwest Arctic and North Slope), and the status of the herd. The Board concluded that a closure to all but FQSUs was consistent with providing a subsistence priority for use of the resource and assurance that a rural preference was being provided, and recognized the cultural and social aspects of subsistence activities, which may be hampered by direct interaction between local and nonlocal users.

If, in the future, the Board is asked to further reduce subsistence harvest seasons or limits, it may oppose further limitations on subsistence uses until Federal public lands are closed to the taking of caribou by non-FQSUs.

If the Board approves WSA16-03, will user conflict be reduced in the Noatak National Preserve, the Squirrel River area, or along the upper Kobuk River, areas demonstrated to be the focus of user conflict since the 1980s (Georgette and Loon 1988, Jacobson 2009, Harrington and Fix 2009 *in* Fix and Ackerman 2015, Halas 2015, NWARAC 2015, Braem et al. 2015)? It can be assumed that the closure has reduced the

number of non-FQSUs hunting caribou in Unit 23; however, the degree to which this has occurred, or how many more hunters will be present if the closure is rescinded, is not known at this time.

Will user conflict mitigation efforts instituted by the NPS, FWS, and ADF&G effectively reduce user conflict? It is likely that NPS and ADF&G efforts in the lower Noatak drainage may be exacerbating user conflict in the middle and upper Noatak River by pushing non-FQSUs into the path of the main caribou migration in recent years (**Map 2**, Dau 2015a). In light of this, the NPS and FWS may decide to pursue further limitations in order to protect the continuation of subsistence uses.

Some non-FQSUs, guides, and transporters may have already decided to pursue caribou later in the season when hunters can enter the Noatak Controlled Use Area and Noatak National Preserve Special Commercial Use Area (**Map 2**) using aircraft; however, State lands are limited in these areas (**Map 10**). It is likely that the closure moved some hunters to State lands in the Buckland area and upper Kobuk River area, and rescinding the closure may reduce hunting pressure and airplane use in these areas.

If the Board rejects WSA16-03, Federal public lands in Unit 23 will remain closed until June 30, 2017 to the harvest of caribou by non-FQSUs. In the future, the Board may find it necessary to adopt the closure into Federal regulations, further reduce subsistence seasons or harvest limits, and conduct an ANILCA Section 804 subsistence user prioritization to reduce the pool of eligible subsistence users in order to reduce the subsistence harvest. The Board may be compelled to take these actions if the WACH's declining population trajectory and declining harvestable surplus continue (Dau 2015a).

Caribou hunting by non-FQSUs and the presence of aircraft in Unit 23 has likely been reduced since the closure began on July 1, 2016, and will continue at some lower level than in previous years (**Figure 6**), but the degree of change is unknown at this time. It is likely that local hunters will observe fewer aircraft, ORVs, hunting camps, and hunters except near State lands when caribou are present. Local hunters' observations of airplanes and hunters affecting individual or group caribou behavior have been documented (Halas 2015), and several studies have also documented negative caribou responses and avoidance behavior toward aircraft, motorized equipment, and development (Valkenburg and Davis 1983, Wolfe et al. 2000, Vistnes and Nellemann 2007, Calef et al. 1976, Maier et al. 1998), but there have been no studies that document whole herd avoidance. The degree to which caribou have been deflected or the WACH migration path altered due to aircraft and hunter disturbances and how much this may be alleviated by the closure is not clear. However, in recent years the migration path has clearly moved eastward to areas with less documented hunting pressure by non-FQSUs and accompanying aircraft use (**Map 8**, Dau 2015a).

Visitors to the area will continue to use aircraft to access Federal public lands for sightseeing, photography, and other purposes and to hunt moose. It is unknown to what extent other aircraft activities affect caribou; however, an increased ratio of aircraft activity that does not result in mortality may help to habituate the herd to engine noise as was suggested by Valkenburg and Davis (1985).

OSM CONCLUSION

Neutral on Temporary Special Action Request WSA16-03.

Caribou is vital resource for the people of the Northwest Arctic Region and has long been a part of the cultural identity of this area (Burch 1984, 1998, 2012; Foote 1959; Georgette and Loon 1988, 1993; Loon 2007; Magdanz 2011; NWARAC 2015, 2016; NWARAC and NSRAC 2016). While caribou populations naturally fluctuate over decades (Gunn 2001, WACH Working Group 2011), the WACH population has been declining since 2003 (**Figure 1**, Parrett 2016b). Additionally, the continuation of subsistence uses has been jeopardized by effects of longterm nonlocal caribou hunting activity. The State of Alaska submitted to the Board WSA16-03 to open Federal public lands in Unit 23 to non-FQSUs. This action would rescind the closure that resulted from approval of WSA16-01.

This analysis has demonstrated many valid arguments for both supporting and rejecting WSA16-03. However, data gaps also exist that hinder a complete understanding of the complex biological and anthropological components surrounding this issue. Ultimately, the Board's decision will be guided by the objectives of Title VIII of ANILCA to provide a subsistence priority on Federal public lands while protecting the continued viability of fish and wildlife populations and the continuation of subsistence use of these resources. ANILCA Title VIII Section 815.3 as well as the Board's 2007 closure policy authorize restricting nonsubsistence taking of fish and wildlife on Federal public lands if necessary for the conservation of healthy fish and wildlife populations, to continue subsistence uses, or pursuant to other applicable law.

Table 6 and **Table 7** summarize the textual and numerical data offered in support of approval or rejection of WSA16-03 that address the conservation of healthy populations of fish and wildlife. **Table 8** and **Table 9** summarize the textual and numerical data offered in support of approval or rejection of WSA16-03 that address the continuation of subsistence uses. All of the textual and numerical data summarized in the four tables are addressed at length within the body of the analysis and represent summations of data and public testimony.

When considering the data and public testimony presented in this analysis, the Board may also wish to address the need for data that can assess the qualitative or quantitative effects of the current closure, determine the effects caused by other recent regulatory changes, and determine longer-term impacts of the closure for both FQSUs and caribou.

There are three main actions the Board may wish to consider in response to WSA 16-03:

- **Reject** WSA16-03 resulting in the continued closure of Federal public lands in Unit 23 to the harvest of caribou by non-Federally qualified users for the 2016 regulatory year.
- **Approve** WSA16-03 resulting in the opening of Federal public lands in Unit 23 to the harvest of caribou by non-Federally qualified users for the remainder of the 2016 regulatory year.
- **Approve** WSA16-03 **with modification** to maintain the Unit 23 closure to the harvest of caribou by non-Federally qualified users on some Federal public lands while reopening areas to all user groups. The Board may wish to consider options such as those developed in the following section or alternative options not presented in this analysis.

Data and arguments addressing the conservation of healthy populations of fish and wildlife in relation to WSA16-03 have been compiled for Board consideration. These data are summarized in **Table 6** and **Table 7**.

Table 6. Points to consider, affecting the conservation of healthy populations of caribou on Federal public lands in Unit 23, that support opening Federal public lands to the harvest of caribou by all users.

APPROVE WSA16-03
POINTS TO CONSIDER—CONSERVATION OF HEALTHY POPULATIONS
<p>The amount of harvest by non-Federally qualified users (non-FQSU) does not have a meaningful biological impact on the herd.</p> <p><i>(see Regulatory History, Harvest History, Biological Background)</i></p>
<p>The WACH Cooperative Management Plan should be followed because it includes many stakeholder groups and already agreed upon management modes. Management recommendations have been followed for the appropriate herd population estimate. Bull:cow ratios naturally fluctuate and actual values should be interpreted with caution.</p> <p><i>(see Discussion, Biological Background, Current Events)</i></p>
<p>When conservation concerns warrant, nonresidents of Alaska should be restricted from harvest before non-FQSU residents of Alaska. This provides for non-FQSUs that are residents of Alaska to participate in the harvest.</p> <p><i>(see Current Events)</i></p>
<p>Recent observations of improved cow body condition, high calf weights, improved calf recruitment and production, and reduced cow mortality indicate improved herd performance and population models indicate a decreased rate of population decline.</p> <p><i>(see Discussion, Biological Background)</i></p>
<p>Recent observations of improved calf survival are encouraging. The spring 2016 calf (SY):adult ratio was the highest recorded since 2007 and the second highest since 1997. Data from Onion Portage is for calf weight and cow body condition. No mortality data is collected.</p> <p><i>(see Discussion, Biological Background)</i></p>
<p>Recent observations of productivity in 2016 are encouraging. The estimated initial production was 85 calves: 100 cows—among the highest parturition levels recorded for this herd.</p> <p><i>(See Discussion, Biological Background)</i></p>
<p>Observations of calf weights and cow body condition in 2015 are encouraging. The average body condition of adult females was characterized as fat. Average weight of all calves in 2015 was 100 lbs.—the highest average recorded at Onion Portage.</p> <p><i>(see Discussion, Biological Background)</i></p>

Table 6. Points to consider, affecting the conservation of healthy populations of caribou on Federal public lands in Unit 23, that support opening Federal public lands to the harvest of caribou by all users.

APPROVE WSA16-03
POINTS TO CONSIDER—CONSERVATION OF HEALTHY POPULATIONS
<p>A deterministic model that uses vital herd characteristics suggests a population estimate of approximately 206,000 animals; this places the herd within the Conservative Management level.</p> <p><i>(see Biological Background, Current Events)</i></p>
<p>An aerial photocensus in 2016 suggests a population estimate of 200,928 (SE 4,295); this places the herd within the Conservative Management level.</p> <p><i>(see Biological Background, Current Events)</i></p>
<p>There is little empirical evidence to suggest that changes to herd migration routes have been caused by hunting activities associated with non-FQSUs.</p> <p><i>(see Biological Background, Current Events)</i></p>
<p>The vast majority of harvest in Unit 23 is by Federally qualified users (FQSUs) and thus restrictions on these users results in greater biological impact.</p> <p><i>(see Regulatory History, Harvest History - Harvest from WACH & Harvest from Unit 23)</i></p>
<p>Harvest restrictions implemented by the Board of Game in 2015 have not been given sufficient time to yield intended results. Restrictions on harvest, sex of harvested animals, and timing of harvest were implemented in response to the declining herd and should be given a change to work before additional restrictions are put in place.</p> <p><i>(see Harvest History - Harvest from WACH & Harvest from Unit 23, Current Events)</i></p>
<p>Closures on Federal public lands will only serve to concentrate non-FQSUs on State lands. This may still affect herd migration patterns.</p> <p><i>(see Discussion, Regulatory History, Current Events)</i></p>

Table 7. Points to consider, affecting the conservation of healthy populations of caribou on Federal public lands in Unit 23, that reject opening Federal public lands to the harvest of caribou by all users.

REJECT WSA16-03
POINTS TO CONSIDER—CONSERVATION OF HEALTHY POPULATIONS
<p>Additional restrictions on non-FQSU are warranted given the continuing decline in the WACH.</p> <p><i>(see Regulatory History, Biological Background, Harvest History, Cultural Knowledge and Traditional Practices)</i></p>
<p>Available biological data is insufficient to clearly define the appropriate WACH Cooperative Management Plan action. The 2016 population point estimate of 200,928 (SE 4,295) suggests a straddling of the 200,000 threshold between Conservative and Preservative Management levels. Additionally, cow:bull ratios are lower than the recommended 40:100 ratio identified in WACH Management Plan.</p> <p><i>(see Biological Background, Cultural Knowledge and Traditional Practices, Current Events)</i></p>
<p>Unlike the Alaska Board of Game, the Federal Subsistence Board does not have the legal authority to restrict only nonresidents of Alaska. Closure to non-FQSUs is authorized to ensure the Federal subsistence priority on Federal public land.</p> <p><i>(see Current Events)</i></p>
<p>Newly acquired herd performance characteristics are insufficient to characterize the current rate of decline. While a slowed rate of decline in 2016 has been reported, the decline continues. The new, lower rate of decline is not indicative of a long-term trend and thus should not be relied upon exclusively.</p> <p><i>(see Biological Background, Current Events)</i></p>
<p>Too few calves are observed to provide meaningful insight. Calf observations at Onion Portage fail to recognize calf mortality along migration route, prior to reaching this location.</p> <p><i>(see Current Events)</i></p>
<p>Single year productivity does not represent long-term trends for the herd population.</p> <p><i>(see Current Events)</i></p>
<p>Improved body condition may indicate improved quality of forage and access to it, but does not necessarily suggest long-term population trends.</p> <p><i>(see Current Events)</i></p>
<p>The deterministic model is not considered as accurate as a photocensus in estimating population and it does not consider error in each of the vital herd statistics of which it is comprised. Coupled with the 2016 herd population estimate of 200,928 (SE 4,295), the herd may be below the 200,000 animal threshold between Conservative and Preservative management levels.</p> <p><i>(see Biological Background, Current Events)</i></p>

Table 7. Points to consider, affecting the conservation of healthy populations of caribou on Federal public lands in Unit 23, that reject opening Federal public lands to the harvest of caribou by all users.

REJECT WSA16-03
POINTS TO CONSIDER—CONSERVATION OF HEALTHY POPULATIONS
<p>The standard error associated with the 2016 aerial photocensus spans the 200,000 animal threshold for the Conservative / Preservative Management levels. As such, it is possible the herd may be below 200,000, which would place it in the Preservative level set forth in the Management Plan.</p> <p>(see Biological Background, Current Events)</p>
<p>Aircraft activity, concentration of hunting camps, and hunter positioning may be diverting caribou from critical corridors that in turn diverts them away from local communities. Concerns about herd deflection warrant additional investigation but, if occurring, such deflections could have long term detrimental impacts on subsistence opportunity for people that have economic, social and cultural dependence on caribou. Existing literature reports behaviorally and physiologically negative impacts on caribou by aircraft activity.</p> <p>(see <i>Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events</i>)</p>
<p>FQSUs are already subject to substantial harvest restrictions, with reductions of authorized harvest by two-thirds recently in Federal regulations. The percentage of harvest by these users exemplifies the importance of caribou as a subsistence resource.</p> <p>(see <i>Regulatory History, Harvest History - Harvest from Unit 23, Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23</i>)</p>
<p>Harvest restrictions do not go far enough in addressing the need for subsistence opportunity in the face of long-term WACH population decline. Prompt application of all available tools may be necessary to avoid a more precipitous decline that would restrict all subsistence harvest.</p> <p>(see <i>Regulatory History, Current Events</i>)</p>
<p>Concentration of users on State lands may allow the herd to migrate relatively unimpeded along their major migration routes through Federal public lands.</p> <p>(see <i>Current Events</i>)</p>

Data and arguments addressing the continuation of subsistence uses in relation to WSA16-03 have been compiled for Board consideration. These data are summarized in **Table 8** and **Table 9**.

Table 8. Points to consider, affecting the continuation of subsistence uses of caribou on Federal public lands in Unit 23, that support opening Federal public lands to the harvest of caribou by all users.

APPROVE WSA16-03
POINTS TO CONSIDER—CONTINUATION OF SUBSISTENCE USES
<p>The harvest levels of FQSUs has remained relatively constant in recent years. This suggests that they are meeting their subsistence needs and successfully harvesting caribou.</p> <p>(see <i>Harvest History - Harvest from WACH & Harvest from Unit 23</i>)</p>
<p>There is a significant economic hardship on non-FQSUs as a result of the closure. Hunting plans and time commitments must be modified or cancelled in response. This in turn affects transporters and guides that also provide logistical support for these hunters.</p> <p>(see <i>Discussion, Current Events</i>)</p>
<p>Regardless of the duration of the closure, there are no mechanisms in place to evaluate the effectiveness of the closure in meeting its intended objectives. This closure does not provide temporary relief to FQSUs because it will concentrate non-FQSUs on State managed lands, increase tensions between users groups, and negatively affect former FQSUs that have since moved from the area but wish to continue hunting in Unit 23.</p> <p>(see <i>Discussion, Current Events</i>)</p>
<p>A large quantity of meat harvested by non-FQSUs in Unit 23 is distributed within local communities. Non-FQSUs are helping local people meet their caribou subsistence needs.</p> <p>(see <i>Current Events</i>)</p>
<p>Non-FQSUs contribute to the economy of the region. They spend money in transportation, supplies and logistics supporting transporters, guides and others.</p> <p>(see <i>Current Events</i>)</p>
<p>Non-FQSUs take relatively few animals from the region as compared to FQSUs, leaving the vast majority of the harvest for local subsistence uses.</p> <p>(see <i>Harvest History - Harvest from WACH & Harvest from Unit 23</i>)</p>
<p>Closures on Federal public lands will prevent non-FQSUs who previously lived in the area from accessing caribou in Unit 23.</p> <p>(see <i>Discussion, Current Events</i>)</p>
<p>Trash, camp equipment, and ATV use is restricted to prevent habitat degradation. The extent of habitat degradation caused by FQSUs and non-FQSUs is unknown.</p> <p>(see <i>Cultural Knowledge and Traditional Practices, Current Events</i>)</p>

Table 8. Points to consider, affecting the continuation of subsistence uses of caribou on Federal public lands in Unit 23, that support opening Federal public lands to the harvest of caribou by all users.

APPROVE WSA16-03 POINTS TO CONSIDER—CONTINUATION OF SUBSISTENCE USES
User conflicts have been addressed through working groups, outreach campaigns, land management policies, and training requirements. State and Federal agencies are continuing to develop methods that reduce user conflicts in Unit 23. <i>(see Cultural Knowledge and Traditional Practices -User Conflicts in Unit 23, Current Events)</i>
Transporters and guides work closely with local communities to address concerns regarding aircraft activity and its perceived effects on caribou harvest and migration. <i>(see Regulatory History, Current Events)</i>
Aircraft activity will not cease under a closure. Other user groups will still be flying in the area including those hunting other species and accessing lands for recreational purposes, among other uses. <i>(see Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events)</i>
The wildlife resources of Alaska are important to all of its residents, not just those in proximity to a given resource. Many non-FQSUs depend on and value access to caribou. There is also an aspect of cultural identity held by non-FQSUs who have hunted caribou in Unit 23 for years and/or through generations. <i>(see Discussion, Harvest History - Harvest from WACH & Harvest from Unit 23, Current Events)</i>
Federal public lands are owned by all residents of the nation and equal access should be granted. No user group should be given preference. <i>(see Current Events)</i>

Table 9. Points to consider, affecting the continuation of subsistence uses of caribou on Federal public lands in Unit 23, that reject opening Federal public lands to the harvest of caribou by all users.

REJECT WSA16-03
POINTS TO CONSIDER—CONTINUATION OF SUBSISTENCE USES
<p>FQSUs have to make more frequent hunting trips of longer duration and greater distance to achieve harvest levels similar to past harvest levels. Harvest success is variable among communities. Some communities report that user conflicts have negatively affected subsistence opportunity.</p> <p><i>(see Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events)</i></p>
<p>ANILCA Title VIII provides a subsistence priority use on Federal public lands. There is a significant economic hardship experienced by FQSUs who must expend greater time, energy, and money to harvest caribou. Purchase of commercial food products is very expensive in rural Alaska. The temporary closure implemented by WSA16-01 is only for one regulatory year.</p> <p><i>(see Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events)</i></p>
<p>In combination with the State’s regulatory changes, the effects of these restrictions can be evaluated following the relatively short duration of closure and alongside of new population data from a successful photo-census. In addition, this may alleviate some user conflict. The temporary closure implemented by WSA16-01 is effective for one regulatory year. Rescinding the closure prior to its full implementation would remove opportunities for determining the effects of a closure.</p> <p><i>(see Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events)</i></p>
<p>Donated meat is primarily distributed in Kotzebue and not in other Unit 23 communities. It sometimes arrives spoiled or is taken during the rut. Subsistence includes more than caloric intake. It is way of life. The receipt of meat does not provide for a meaningful subsistence experience or address the social and cultural aspects of the subsistence way of life.</p> <p><i>(see Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events)</i></p>
<p>ANILCA Title VIII provides protection for the subsistence way of life and subsistence economies in rural Alaska. Furthermore, FQSUs report that non-FQSUs do not contribute substantially to the mixed cash-subsistence economy of the region as relatively few hunters purchase fuel and supplies from local communities.</p> <p><i>(see Current Events)</i></p>
<p>The percentage of caribou taken by FQSUs suggests the significance of caribou as a locally available subsistence resource. This importance and the resultant impacts on human health that lack of access to caribou would cause are alarming in light of a declining herd. Additionally, the high intensity of activity related to harvest by non-FQSUs causes disruption of subsistence.</p> <p><i>(see Harvest History -Intensity of Use of Unit 23, Harvest History - Harvest from WACH & Harvest from Unit 23, Current Events)</i></p>

Table 9. Points to consider, affecting the continuation of subsistence uses of caribou on Federal public lands in Unit 23, that reject opening Federal public lands to the harvest of caribou by all users.

REJECT WSA16-03
POINTS TO CONSIDER—CONTINUATION OF SUBSISTENCE USES
<p>Non-FQSUs who previously lived in the area may still hunt on State land and, possibly, Native corporation land.</p> <p><i>(see Current Events)</i></p>
<p>Public testimony and recent research (Halas 2015, Fix and Ackerman 2015) suggest that trash, camp equipment, and ATV use by non-FQSUs are contributing to habitat degradation and changes to caribou migration patterns.</p> <p><i>(see Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events)</i></p>
<p>User conflicts between FQSUs and non-FQSUs have been ongoing for several decades without significant relief. Agency actions to date have not resolved user conflict. Ongoing conflicts appear to threaten subsistence opportunity for FQSUs. Harvest areas also continue to overlap, increasing user conflict.</p> <p><i>(see Harvest History - Intensity of Use of Unit 23, Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events)</i></p>
<p>Local residents have reported that transporters and guides frequently fly at low altitudes around caribou herds and land in front of the migrating animals, causing herd diversion and deflection in critical corridors.</p> <p><i>(see Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events)</i></p>
<p>The effects of various aircraft activities are unknown at this time. Other users may not be flying to the same areas, the same habitat types, or at the same altitudes. The existing one regulatory year closure may yield information that speaks to this issue.</p> <p><i>(see Harvest History - Intensity of Use of Unit 23, Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events)</i></p>
<p>Changes in access to caribou may not be uniform in the region. In some areas where caribou harvest is low and other resources are not widely available, people may be going hungry. Non-FQSUs may be better financially situated to expend resources to hunt the animals in other areas. The Federal program under ANILCA Title VIII provides priority for subsistence use by residents residing in rural Alaska communities and possessing customary and traditional use findings for the resource.</p> <p><i>(see Cultural Knowledge and Traditional Practices - User Conflicts in Unit 23, Current Events)</i></p>

Table 9. Points to consider, affecting the continuation of subsistence uses of caribou on Federal public lands in Unit 23, that reject opening Federal public lands to the harvest of caribou by all users.

REJECT WSA16-03
POINTS TO CONSIDER—CONTINUATION OF SUBSISTENCE USES
Title VIII of ANILCA provides for a subsistence priority on Federal public lands in Alaska for FQSUs. It also grants authority to the Board to restrict the taking of fish and wildlife for nonsubsistence uses when certain criteria are met. This includes in situations where closures are necessary for the conservation of healthy populations of fish and wildlife and/or when necessary for the continuation of subsistence uses. (see <i>Current Events</i>)

Additional Options for Board Consideration: Targeted Closures in Unit 23

As described previously, the Board’s closure of Federal public lands to non-FQSUs was based on concerns pertaining to the continued decline of the WACH and to ensure the continuation of subsistence uses, especially in light of ongoing user conflicts and possible herd migration deflection by nonlocal hunters and their associated activities. Even with aerial survey data, population estimates associated with the WACH contain some uncertainty about the most appropriate management actions to follow from the WACH Management Plan. The population estimates derived from the 2016 aerial survey (200,928 animals), ADF&G’s population models, and improved herd characteristics indicate that the population decline may be slowing. However, the herd remains close to the management plan’s threshold for preservative management (see **Table 2**).

Questions remain as to whether restricting non-FQSU annual caribou harvest in Unit 23 will result in measurable advantages for the herd. Discussions about the current closure of caribou hunting in Unit 23 to all but FQSUs should also take into consideration ongoing conflict between user groups in the area and how this may affect the continuation of subsistence uses of caribou in the region, most notably through herd diversion and deflection by nonlocal hunter activities along migration routes, the concentration of nonlocal hunter camps along these routes, and nonlocal hunter positioning in front of migrating caribou.

As is evidenced by **Map 7**, **Map 8**, and **Figure 9**, and through extensive public testimony, the intensity of harvest activity for both FQSUs and non-FQSUs in Unit 23 occurs in the same general area. This area primarily consists of a coastal corridor in the westernmost section of Unit 23, extending along the mainstem of the Noatak River and south to the vicinity of Buckland. Communities located within this area of hunting intensity include Noatak, Sheshalik, Kiana, Noorvik, and Selawik. Other communities in the management unit may be affected by changes to herd migration but are not within this corridor.

The Squirrel River drainage has received considerable attention related to this issue. This drainage was discussed by members of the Northwest Arctic Council as being particularly problematic because of the intensity of use by “nonlocal” hunters and herd diversion at key locations in the upper part of the drainage, including the area between the Squirrel River and the Agashashok River. Members also mentioned

concerns regarding the intensity of hunting along the Baldwin Peninsula. The most intense hunting activities and harvest by “nonlocals” between 2005 and 2014 are within the Squirrel River drainage and the Baldwin Peninsula as is evidenced on **Map 7** and **Map 8**.

Opponents to the closure, including the proponent of WSA 16-03, have cited the large proportion of Unit 23 that includes Federal public lands (69%), the probable concentration of hunters on State land in the unit, and the relatively small percentage of the harvest that is taken annually by non-Federally qualified hunters as reasons for their opposition. Some non-Federally qualified hunters have also testified that the closure may negatively affect the herd by concentrating nonlocal hunters along other migration corridors or critical habitat areas. They have also testified that the closure presents substantial economic hardships for non-FQSUs that are forced to cancel or modify their hunting plans for the 2016 regulatory year. Additionally, some have testified that the closure will intensify user conflicts moving forward.

Map 10 depicts the spatial extent of Federal public lands, State lands, Native Patent or Interim Conveyance Lands, and selected lands within Unit 23. Non-FQSUs are currently allowed to hunt caribou on State patent, tentative approval, and State selected lands which compose approximately 8,888 mi² within the unit.

Native patent/interim/selected conveyance lands (composing approximately 5,095 mi²) and Native allotments (approximately 263 mi²) include more variation on management and access authorities. These lands are primarily considered private lands and require landowner permission for hunting access. Importantly, some private land owners will allow hunting upon payment of a trespass fee and some corporations owning land will allow hunting by their shareholders and other designees. In short, without additional permissions, non-FQSUs may currently hunt on State patent or tentative approval land only.

In order to address subsistence user concerns about conservation and the continuation of subsistence uses in Unit 23 while also potentially mitigating the effects of the closure on non-FQSUs, the Board may wish to consider alternatives to the closure of all of Unit 23. Such alternatives could maintain the closure of Federal public lands in proximity to the high harvest intensity corridor mentioned previously and depicted on **Map 7**, **Map 8**, and **Figure 9**. This approach could potentially open a portion of Federal public lands in Unit 23 to non-Federally qualified hunters while reducing harvest intensity, herd diversion, and conflicts within the high harvest corridor. Local land managers, in collaboration with FQSUs, may be able to provide the Board with additional insight and precision for targeted closures if these are to be considered.

The Office of Subsistence Management has developed three examples that reflect corridors of high harvest activity (**Map 7**, **Map 8**, and **Figure 9**) and public testimony regarding areas of high user conflict. The examples provided below are offered to stimulate discussions about alternative options and represent a limited number of possible partial closure options that may be available. Local and traditional knowledge held by local residents and land managers may provide the additional insight necessary for targeted closures within Unit 23. For example, the Selawik National Wildlife Refuge Manager (Georgette 2016, pers. comm) raised questions about examples two and three because 1) they include areas largely utilized by former FQSUs and those with familial ties to the region and 2) closures in the southern portion of the Unit during the fall hunting season fail to reflect that most caribou are absent from the area at this time of year. It may also be worth noting that any partial re-opening of Unit 23 to non-FQSUs would eliminate the possibility of

evaluating the full impact of the closure on the conservation of the herd and the continuation of subsistence uses.

These examples are depicted in **Maps 11, 12, and 13**, and include:

- Closure within the entire Noatak River drainage in Unit 23 to include Federal public lands in Noatak National Preserve. Additional closures in Selawik National Wildlife Refuge west of a line through 160°W Longitude, Bureau of Land Management lands in the Squirrel River drainage, along the Buckland Peninsula and those in proximity to the communities of Buckland and Candle (**Map 11**).⁶
- Closure of all Federal public lands in Unit 23 to the west of a line through 160°W Longitude within Unit 23. This line runs through the community of Selawik (**Map 12**).
- Closure of all Federal public lands in Unit 23 to the east of a line through 163°W Longitude and west of a line through 160°W Longitude within Unit 23 (**Map 13**).

Each of the above examples includes closures on varying extents of Federal public land in Unit 23 (**Table 10**). A full closure encompasses the greatest percentage of Unit 23 (approximately 68%, followed by Example 1 (34%), Example 2 (28%), and Example 3 (21%).

Table 10. Percentage of land affected by different options.

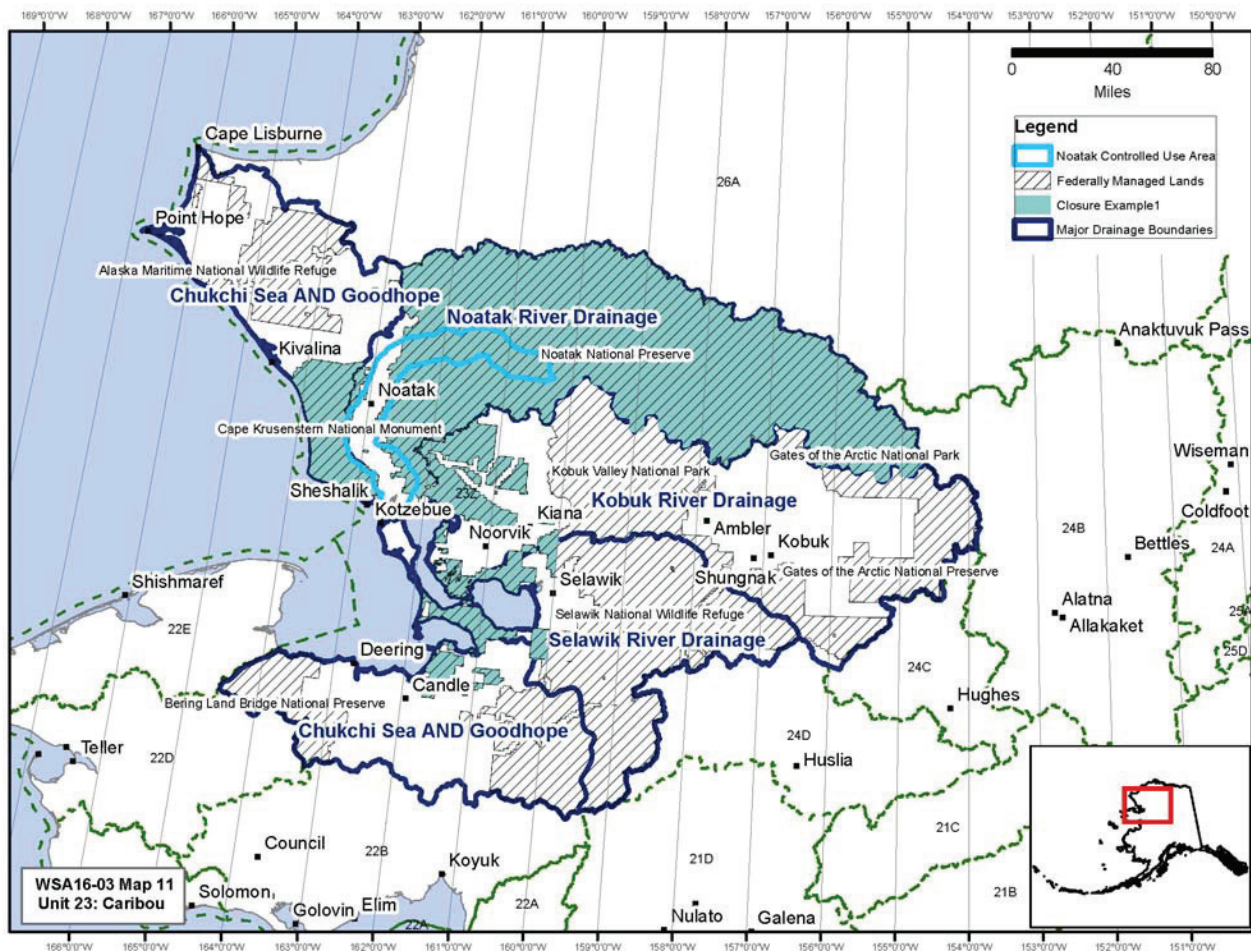
Option	% Unit 23	% Federal public lands	Option Closure Area (mi ²)	Total Unit 23 Area (mi ²)	Total Federal public lands (mi ²)
Full closure	68	100	32,298	43,402	29,412
1	34	46	14,862		
2	28	37	11,980		
3	21	29	9,307		

Considering range maps produced for the WACH Cooperative Management Plan (2011; **Figures 10 and 11**), Examples 1–3 would provide non-Federally qualified hunters with substantial access to the herd in the eastern portion of their migration route. Access to the herd is most restrictive in Example 1 because this option maintains the closure of the entire Noatak River drainage, which may preserve movements of caribou both eastward and westward (toward Anaktuvuk Pass) within the drainage by limiting hunter disturbance. Additionally, the middle and upper Noatak River corridor was originally included in the traditional council of Noatak’s proposal to the Board of Game in March 1988 to create a Controlled Use Area to address user conflicts. The Board of Game amended to the proposal to include an area one third the size of the request, representing those areas where most subsistence hunting took place and where caribou were most vulnerable to “spooking” by aircraft (Fall 1990:1987). This example may therefore address

⁶ National Parks and National Monuments are already closed to non-Federally qualified subsistence users. Therefore, Gates of the Arctic National Park, Kobuk Valley National Park and Cape Krusenstern National Monument are depicted in these examples but do not represent new closures to non-Federally qualified subsistence users on Federal public lands.

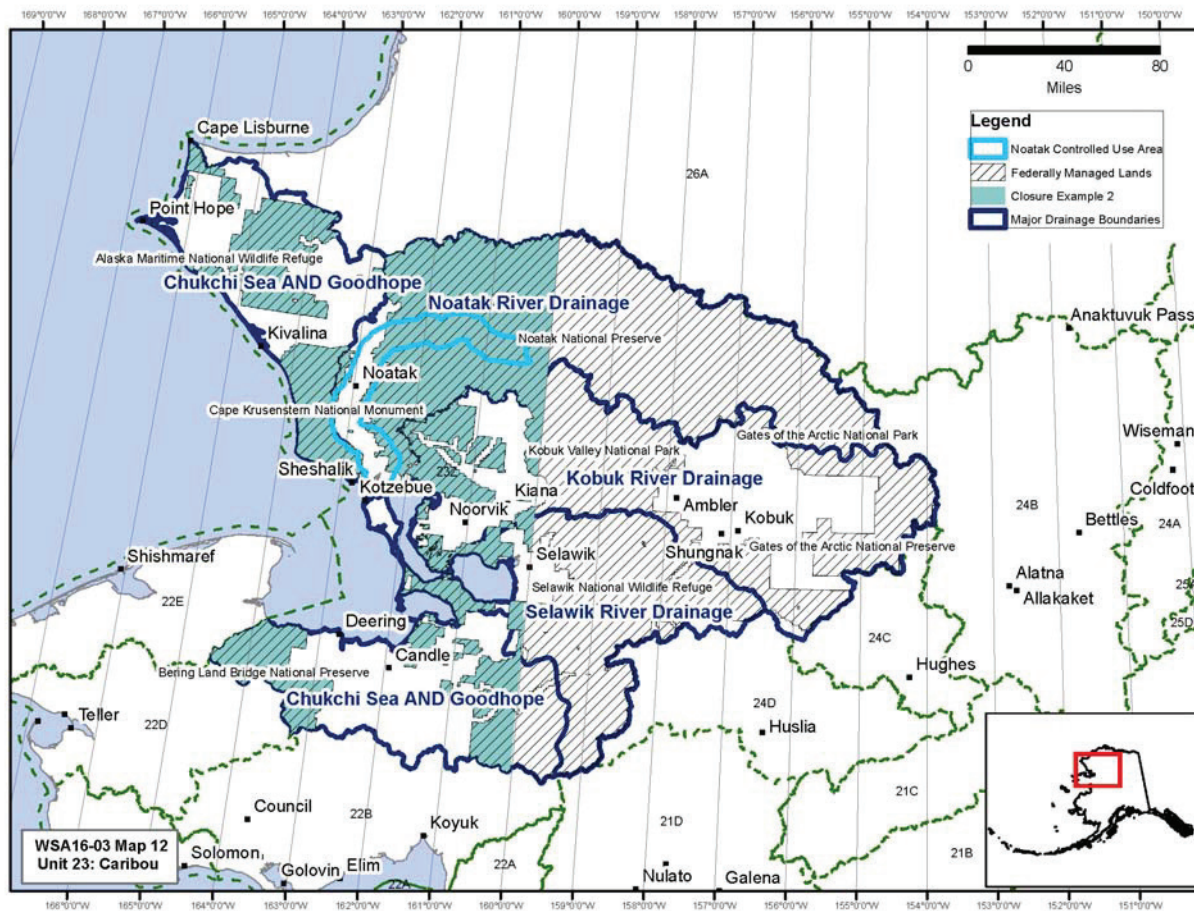
ongoing concerns not fully resolved by the Board of Game in 1988 or by the NPS Special Commercial Use Area created in 2012.

In each of the three examples discussed above, non-FQSUs would maintain access to Federal public lands within the largest fall and spring migration corridors located in the eastern portion of Unit 23 (see **Figure 9** [Part a] and **Figure 9** [Part b]) and hunting disturbances would be limited within the corridor identified as having received the greatest hunting pressure between 2005 and 2014, potentially resulting in improved herd migration to those areas. Southward herd movements in the fall (see **Figure 11** [Part a]) would possibly experience less disturbance by non-FQSUs in western corridors, potentially resulting in increased movements into those areas. Similarly, northward herd movements in the spring (**Figure 11** [Part b]) would receive less non-Federally qualified hunter disturbance in smaller western corridors.



Map 11. Federal public lands that would be closed to non-Federally qualified subsistence users under Example 1.⁷

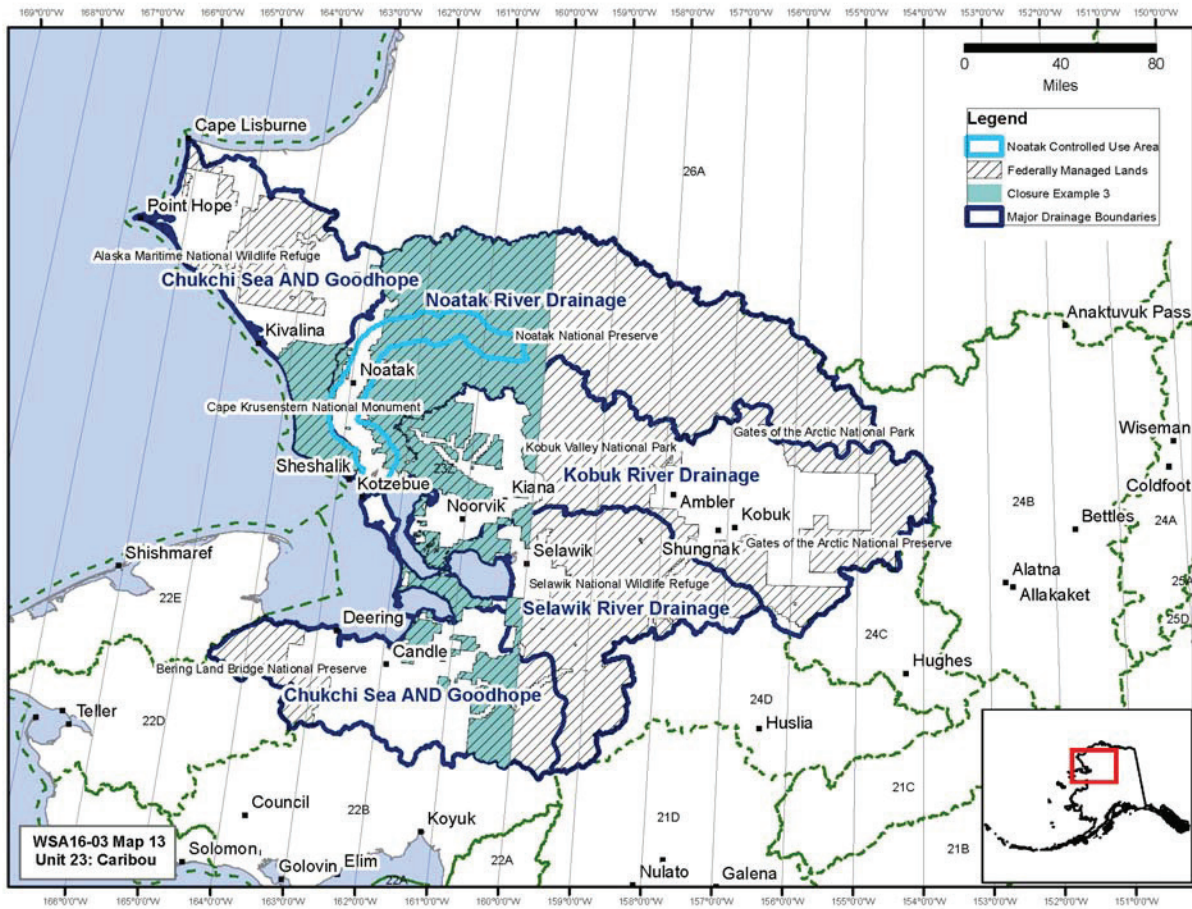
⁷ National Parks and National Monuments are already closed to non-Federally qualified subsistence users. Therefore, Gates of the Arctic National Park, Kobuk Valley National Park and Cape Krusenstern National Monument are de-



Map 12. Federal public lands that would be closed to non-Federally qualified subsistence users under Example 2.⁸

picted in these examples but do not represent new closures to non-Federally qualified subsistence users on Federal public lands.

⁸ National Parks and National Monuments are already closed to non-Federally qualified subsistence users. Therefore, Gates of the Arctic National Park, Kobuk Valley National Park and Cape Krusenstern National Monument are depicted in these examples but do not represent new closures to non-Federally qualified subsistence users on Federal public lands.



Map 13. Federal public lands that would be closed to non-Federally qualified subsistence users under Example 3.⁹

⁹ National Parks and National Monuments are already closed to non-Federally qualified subsistence users. Therefore, Gates of the Arctic National Park, Kobuk Valley National Park and Cape Krusenstern National Monument are depicted in these examples but do not represent new closures to non-Federally qualified subsistence users on Federal public lands.

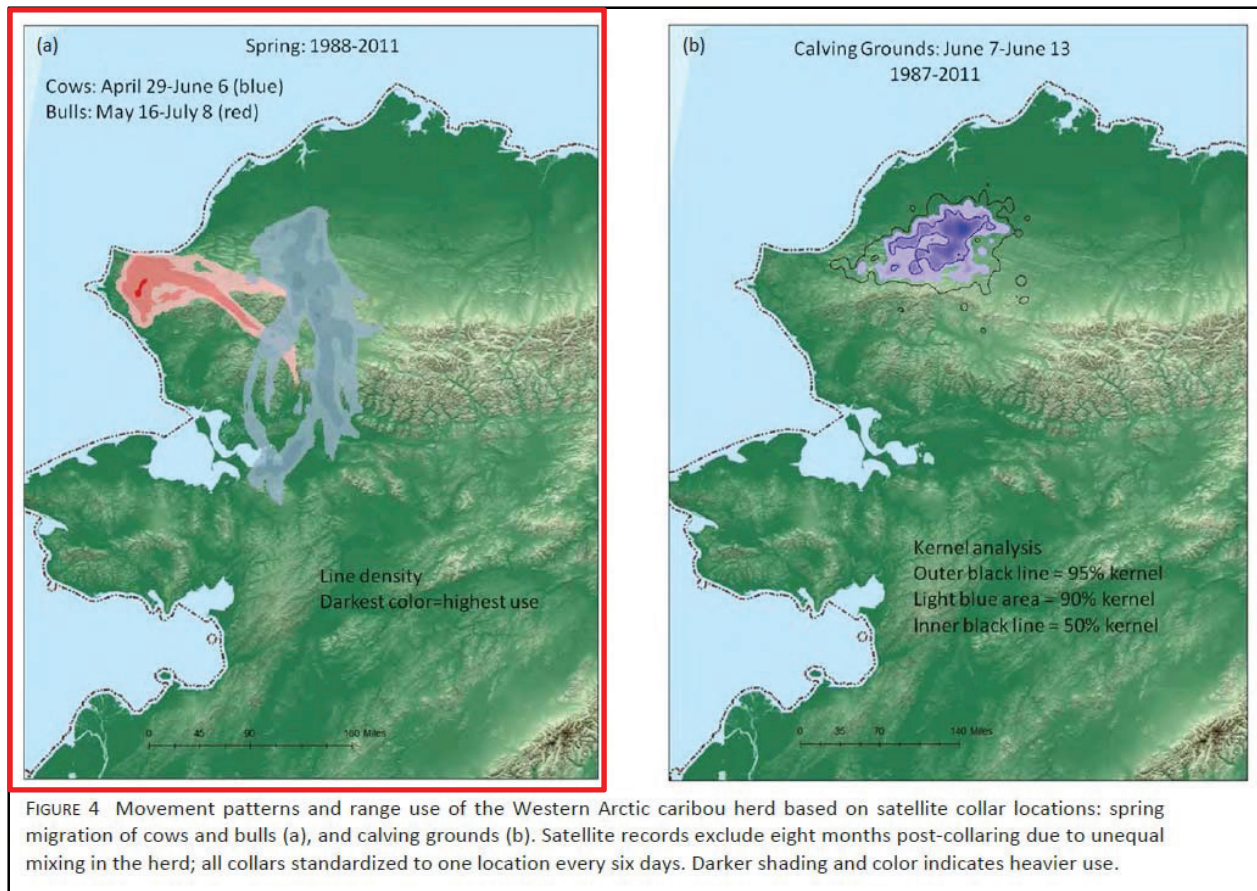


FIGURE 4 Movement patterns and range use of the Western Arctic caribou herd based on satellite collar locations: spring migration of cows and bulls (a), and calving grounds (b). Satellite records exclude eight months post-collaring due to unequal mixing in the herd; all collars standardized to one location every six days. Darker shading and color indicates heavier use.

Figure 10. Area used by WACH in spring 1988–2011 and calving grounds 1987–2011 (borrowed from Western Arctic Herd Cooperative Management Plan, 2011).

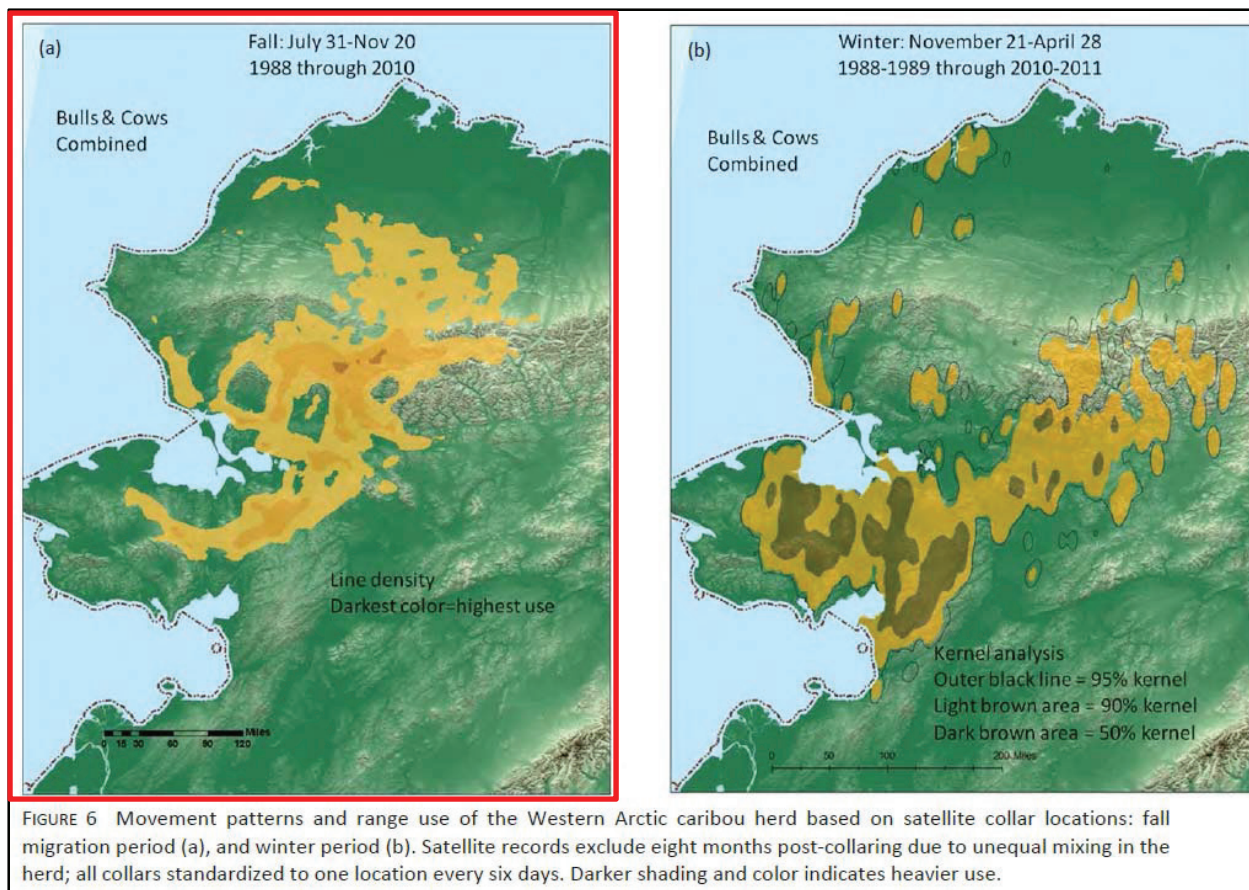


Figure 11. Area used by WACH in fall 1988 through 2010 and winter 1988 through 2010 (borrowed from Western Arctic Herd Cooperative Management Plan, 2011).

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APPENDIX 1

Appendix Table 1-1. The harvest and use of caribou by communities in Unit 23, based on household surveys, by study year.

CARIBOU HARVEST							
HOUSEHOLD HARVEST SURVEYS							
Community	Study year	Percentage of households using caribou	Caribou harvest				
			Estimated Harvest	Lower Estimate	Higher Estimate	Per Person	95% confidence interval
			(caribou)	(caribou)	(caribou)	(lb)	(+/- %)
Ambler	2012	91	685	646	845	330	23
	2009	78	456	380	531	260	17
	2003	95	325	301	361	176	11
Buckland	2009	67	535	448	622	168	16
Deering	2007	87	182	121	243	162	34
	1994	78	142	119	174	131	22
Kiana	2009	77	414	358	471	149	14
	2006	94	306	264	347	109	13
	1999	97	488	393	582	174	19
Kivalina	2010	79	86	52	120	32	40
	2007	93	268	190	347	85	29
	1992	97	351	316	386	138	9
	1983		564			284	
	1982		346			179	
	1965		1,010			830	
	1964		256			209	
Kobuk	2012	93	119	133	139	98	17
	2009	86	210	178	245	194	17
	2004	89	134	134	134	148	0
Kotzebue	2012	82	1,804	1,803	1,804	80	22
	1991	93	3,782	2,520	5,044	141	33
	1986	88	1,917			97	
Noatak	2010	56	66	45	87	16	32
	2007	97	442	373	510	114	15
	2002	91	410	374	446	120	9
	1999	96	683	621	755	224	11
	1994	91	615	550	680	221	10
Noorvik	2012	95	851	609	1,094	198	29
	2008	94	767	692	842	174	10
	2002	95	988	794	1,182	182	20
Selawik	2011	97	683	433	934	109	37
	2006		934	833	1,035	165	10
	1999	97	1,289	1,188	1,390	249	8
Shungnak	2012	93	396	351	509	196	29
	2008	95	406	341	471	218	16
	2002	98	403	381	436	220	8
	1998	100	561	541	596	312	6

Source: ADF&G 2016b. Blank cell=data not available.

APPENDIX 2

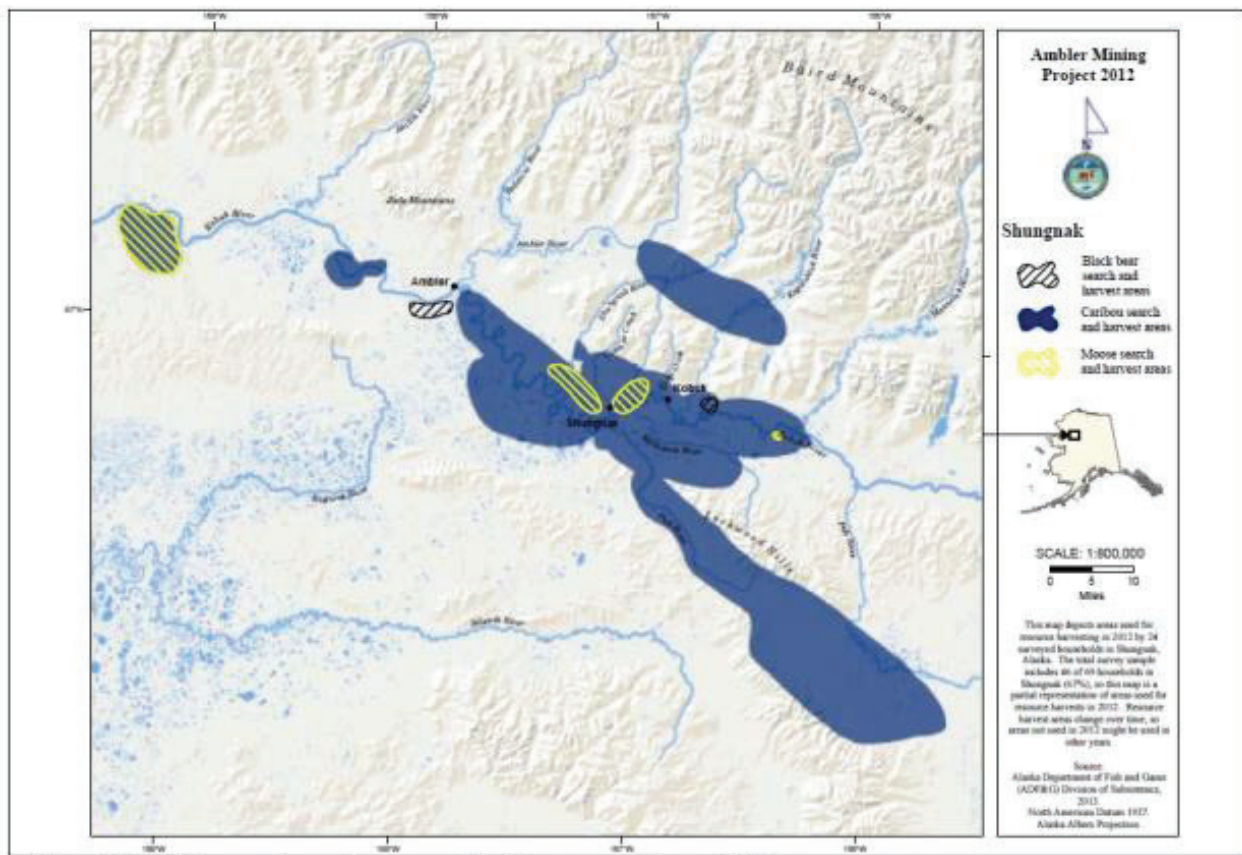


Figure 3-12.—Black bear, caribou, and moose search and harvest areas, Shungnak, 2012.

Appendix Map 2-1. Map depicting caribou, black bear, and moose search and harvest areas by residents of Shungnak in 2012 (Magdanz et al. 2011).

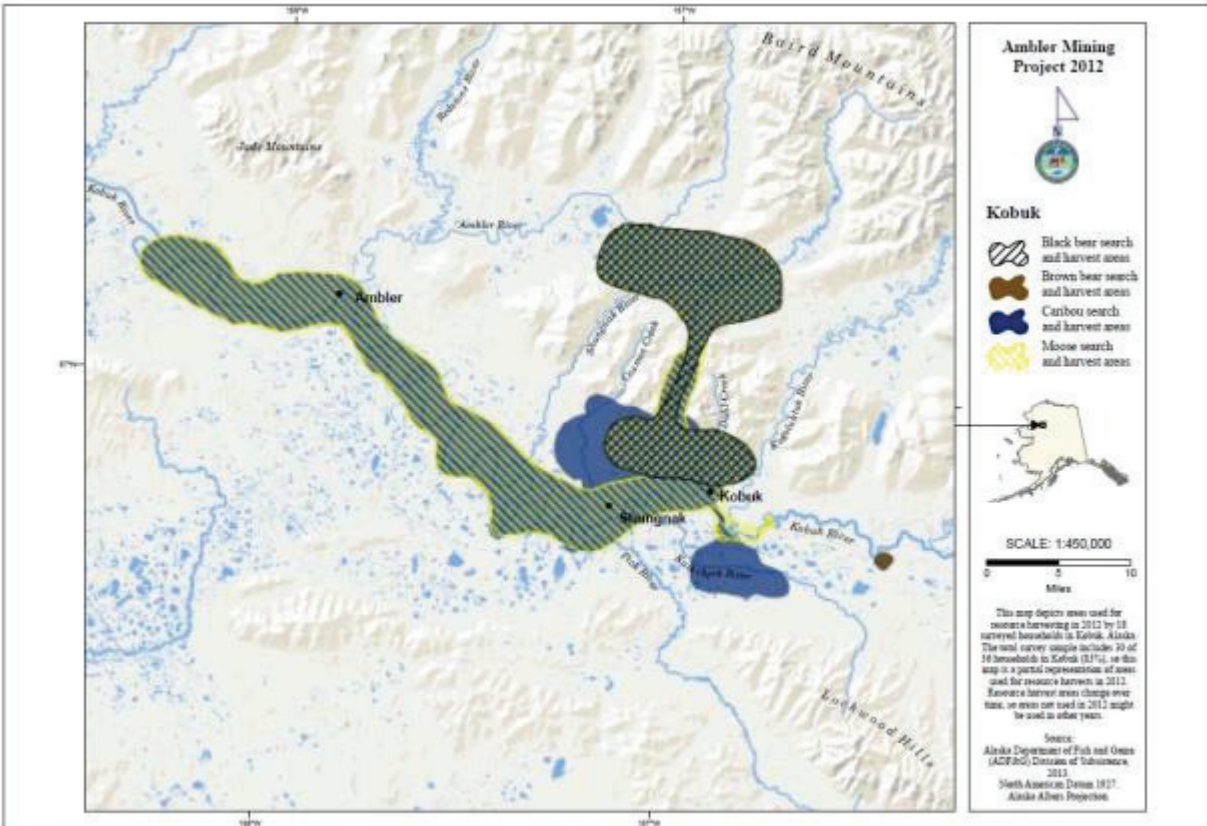


Figure 4-12.—Black bear, brown bear, caribou, and moose search and harvest areas, Kobuk, 2012.

Appendix Map 2-2. Map depicting caribou, black bear, brown bear, and moose search and harvest areas by residents of Kobuk in 2012 (Magdanz et al. 2011).

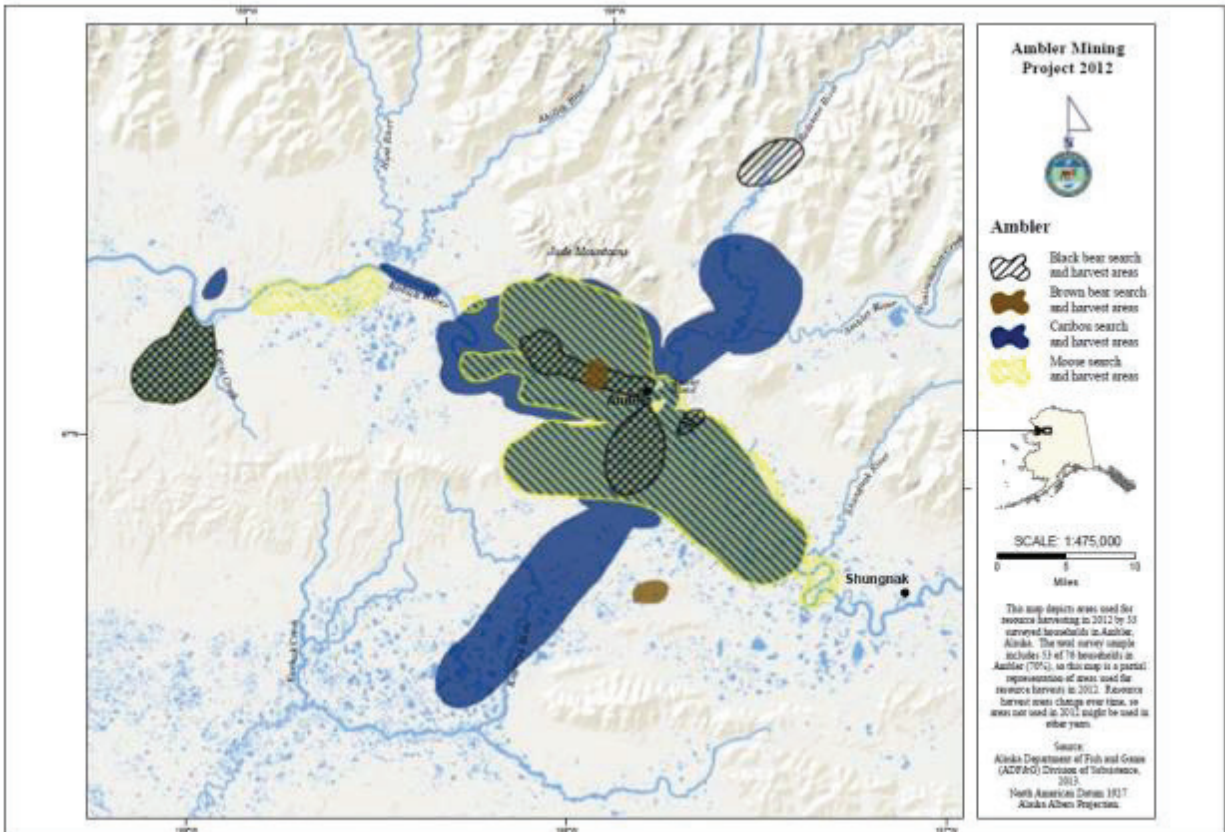


Figure 2-12.—Large land mammal search and harvest areas, Ambler, 2012.

Appendix Map 2-3. Map depicting caribou search and harvest areas by residents of Ambler in 2012 (Magdanz et al. 2011).

**TEMPORARY SPECIAL ACTION
WSA16-03**

INTERAGENCY STAFF COMMITTEE COMMENTS

Temporary Special Action Request WSA16-03 requests lifting the closure to caribou harvest in Unit 23 by nonsubsistence users. Regulations at 36 CFR 242.19(b)(1) and 50 CFR 100.19(b)(1) state that the Board *may reopen public lands to nonsubsistence uses if new information or changed conditions indicate that the closure is no longer warranted.*

In the request, the State stated that new information indicated improvements in caribou calf production, recruitment, survival, and weight; adult females exhibited very good body conditions and high pregnancy rates in 2015 and 2016; and the newly derived WACH population estimate for fall 2105 was 206,000 caribou, falling within the WACH Management Plan's "conservative" harvest management strategy. Subsequent to submitting the special action request, the State also finalized photo census data collected in July 2016, which included a point estimate of 200,928 caribou (Standard Error = 4,295) in the WACH.

The Board should focus its decision on whether the request provides sufficient information to indicate the closure is no longer warranted. While the State provided some encouraging population data, the point estimate and associated error shows that there is still some uncertainty on whether the WACH is at the conservative or preservative level based. Further, the Board's decision to initially close Federal public lands (WSA16-01) was based on impacts to subsistence users, but WSA16-03 does not provide new information or show that conditions related to that aspect of the Board's decision have changed.

Since the population trajectory of the WACH herd suggests it may still be in decline, the ISC would like to encourage efforts to involve as many participants as possible in the discussion of potential future actions. The WACH Management Plan lists the closure of *some* Federal public lands to nonqualified users as a possible recommendation for the preservative management level (emphasis added); thus, closure of specific Federal lands may be an option to minimize impacts to subsistence users. In anticipation of additional special action requests coming from the Unit 23 region, the Board could direct staff to initiate discussions about user conflicts on specific Federal public lands with affected Councils, subsistence resource commissions, the WACH Working Group, Unit 23 Working Group, the State of Alaska, Tribes and ANCSA Corporations, and other users.

Fall 2017 Regional Advisory Council Meeting Calendar

August - November 2017

Meeting dates and locations are subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Aug. 20	Aug. 21 Window Opens	Aug. 22	Aug. 23	Aug. 24 NS — Wainwright	Aug. 25	Aug. 26
Aug. 27	Aug. 28	Aug. 29	Aug. 30	Aug. 31	Sept. 1	Sept. 2
Sept. 3	Sept. 4 LABOR DAY HOLIDAY	Sept. 5	Sept. 6	Sept. 7	Sept. 8	Sept. 9
Sept. 10	Sept. 11	Sept. 12	Sept. 13	Sept. 14	Sept. 15	Sept. 16
Sept. 17	Sept. 18	Sept. 19 K/A - Cold Bay	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 COLUMBUS DAY HOLIDAY	Oct. 10 WI - Galena	Oct. 11 YKD — Bethel	Oct. 12	Oct. 13	Oct. 14
Oct. 15	Oct. 16	Oct. 17	Oct. 18	Oct. 19 AFN - Anchorage	Oct. 20	Oct. 21
Oct. 22	Oct. 23	Oct. 24 SP — Nome	Oct. 25 NW - Shungnak	Oct. 26	Oct. 27	Oct. 28
Oct. 29	Oct. 30	Oct. 31 SE - Juneau	Nov. 1 BB — Dillingham	Nov. 2	Nov. 3	Nov. 4
Nov. 5	Nov. 6 SC — Seldovia/Soldotna	Nov. 7	Nov. 8 EI — Tanana	Nov. 9	Nov. 10 Window Closes VETERANS DAY HOLIDAY	Nov. 11

Winter 2018 Regional Advisory Council Meeting Calendar

February-March 2018

Meeting dates and locations are subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<i>Feb. 4</i>	<i>Feb. 5</i> <i>Window Opens</i>	<i>Feb. 6</i>	<i>Feb. 7</i>	<i>Feb. 8</i>	<i>Feb. 9</i>	<i>Feb. 10</i>
<i>Feb. 11</i>	<i>Feb. 12</i>	<i>Feb. 13</i>	<i>Feb. 14</i>	<i>Feb. 15</i>	<i>Feb. 16</i>	<i>Feb. 17</i>
<i>Feb. 18</i>	<i>Feb. 19</i> PRESIDENT'S DAY HOLIDAY	<i>Feb. 20</i>	<i>Feb. 21</i>	<i>Feb. 22</i>	<i>Feb. 23</i>	<i>Feb. 24</i>
<i>Feb. 25</i>	<i>Feb. 26</i>	<i>Feb. 27</i>	<i>Feb. 28</i>	<i>Mar. 1</i>	<i>Mar. 2</i>	<i>Mar. 3</i>
<i>Mar. 4</i>	<i>Mar. 5</i>	<i>Mar. 6</i>	<i>Mar. 7</i>	<i>Mar. 8</i>	<i>Mar. 9</i>	<i>Mar. 10</i>
<i>Mar. 11</i>	<i>Mar. 12</i>	<i>Mar. 13</i>	<i>Mar. 14</i>	<i>Mar. 15</i>	<i>Mar. 16</i> <i>Window Closes</i>	<i>Mar. 17</i>

**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 renewed by virtue of the authority set out in the Alaska National Interest Lands Conservation Act (16 U.S.C. 3115 (1988)), and under the authority of the Secretary of the Interior, in furtherance of 16 U.S.C. 410hh-2. The Council is regulated by the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. Appendix 2.
3. **Objectives and Scope of Activities.** The objective of the Council is to provide a forum for the residents of the Region with personal knowledge of local conditions and resource requirements to have a meaningful role in the subsistence management of fish and wildlife on Federal lands and waters in the Region.
4. **Description of Duties.** The Council has authority to perform the following duties:
 - a. Recommend the initiation of, review, and evaluate proposals for regulations, policies, management plans, and other matters relating to subsistence uses of fish and wildlife on public lands within the Region.
 - b. Provide a forum for the expression of opinions and recommendations by persons interested in any matter related to the subsistence uses of fish and wildlife on public lands within the Region.
 - c. Encourage local and regional participation in the decisionmaking process affecting the taking of fish and wildlife on the public lands within the Region for subsistence uses.
 - d. Prepare an annual report to the Secretary containing the following:
 - (1) An identification of current and anticipated subsistence uses of fish and wildlife populations within the Region.
 - (2) An evaluation of current and anticipated subsistence needs for fish and wildlife populations within the Region.

- (3) A recommended strategy for the management of fish and wildlife populations within the Region to accommodate such subsistence uses and needs.
 - (4) Recommendations concerning policies, standards, guidelines, and regulations to implement the strategy.
 - e. 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 \$130,000, 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 be inactive 2 years from the date the Charter is filed, unless prior to that date it is renewed in accordance with the provisions of Section 14 of the FACA. The Council will not meet or take any action without a valid current charter.
12. **Membership and Designation.** The Council's membership is composed of representative members as follows:

Ten members who are knowledgeable and experienced in matters relating to subsistence uses of fish and wildlife and who are residents of the Region represented by the Council. To ensure that each Council represents a diversity of interests, the Federal Subsistence Board in their nomination recommendations to the Secretary will strive to ensure that seven of the members (70 percent) represent subsistence interests within the Region and three of the members (30 percent) represent commercial and sport interests within the Region. The portion of membership representing commercial and sport interests must include, where possible, at least one representative from the sport community and one representative from the commercial community.

The Secretary of the Interior will appoint members based on the recommendations from the Federal Subsistence Board and with the concurrence of the Secretary of Agriculture.

Members will be appointed for 3-year terms. A vacancy on the Council will be filled in the same manner in which the original appointment was made. Members serve at the discretion of the Secretary.

Council members will elect a Chair, Vice-Chair, and Secretary for a 1-year term.

Members of the Council will serve without compensation. However, while away from their homes or regular places of business, Council and subcommittee members engaged in Council, or subcommittee business, approved by the DFO, may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in Government service under Section 5703 of Title 5 of the United States Code.

13. **Ethics Responsibilities of Members.** No Council or subcommittee member will participate in any specific party matter in which the member has a direct financial interest in a lease, license, permit, contract, claim, agreement, or related litigation with the Department

14. **Subcommittees.** Subject to the DFO's approval, subcommittees may be formed for the purpose of compiling information and conducting research. However, such subcommittees must act only under the direction of the DFO and must report their recommendations to the full Council for consideration. Subcommittees must not provide advice or work products directly to the Agency. The Council Chair, with the approval of the DFO, will appoint subcommittee members. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

15. **Recordkeeping.** Records of the Council, and formally and informally established subcommittees or other subgroups of the Council, shall be handled in accordance with General Records Schedule 6.2, and other approved Agency records disposition schedule. These records shall be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.



Secretary of the Interior

NOV 20 2015

Date Signed

DEC 03 2015

Date Filed

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