

STAFF ANALYSIS
TEMPORARY SPECIAL ACTION
WSA19-03

ISSUES

Temporary Special Action Request, WSA19-03, submitted by Paul Rude from Glennallen, requests that the Federal Subsistence Board (Board) close Federal public lands in Unit 13 to the hunting of moose and caribou by non-Federally qualified users for the 2019/2020 season.

DISCUSSION

The proponent requested this Temporary Special Action because of the recent decline in the Nelchina Caribou Herd (NCH) and competition with non-Federally qualified users. The basis of the proponent's assertion is that pressure from hunting by non-Federally qualified users is affecting the health of the caribou and moose populations as well as the use and access by Federally qualified subsistence users to traditional prime hunting areas on Federal public lands in Unit 13. Specifically, he asserts that activities by non-Federally qualified users and non-local Federally qualified subsistence users have resulted in a number of concerns: 1) public safety concerns for Federally qualified subsistence users; 2) difficulty in successfully harvesting moose and caribou from Federal public lands due to excessive competition from the large numbers of non-local hunters pursuing wildlife within the region; 3) displacement of moose and caribou from their customary and traditional migration corridors; and 4) difficulty in passing on traditional hunting knowledge and customary and traditional hunting practices to children due to safety concerns.

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.

Existing Federal Regulation

Unit 13— Caribou

<i>Units 13A and 13B—2 caribou by Federal registration permit only.</i>	<i>Aug. 1 – Sept. 30</i>
<i>The sex of animals that may be taken will be announced by the</i>	<i>Oct. 21 – Mar. 31</i>
<i>Glennallen Field Office Manager of the Bureau of Land Management</i>	
<i>in consultation with the Alaska Department of Fish and Game area</i>	

*biologist and Chairs of the Eastern Interior Regional Advisory Council
and the Southcentral Regional Advisory Council*

Unit 13, remainder – 2 bulls by Federal registration permit only *Aug. 1 – Sept. 30
Oct. 21 – Mar. 31*

Unit 13—Moose

*Unit 13E—1 antlered bull moose by Federal registration permit only; Aug. 1–Sept. 20
only 1 permit will be issued per household.*

*Unit 13, remainder —1 antlered bull moose by Federal registration Aug. 1–Sept. 20
permit only.*

Proposed Federal Regulation

Unit 13— Caribou

*Unit 13A and 13B – 2 caribou by Federal registration permit only. Aug. 1 – Sept. 30
The sex of animals that may be taken will be announced by the Oct. 21 – Mar. 31
Glennallen Field Office Manager of the Bureau of Land Management
in consultation with the Alaska Department of Fish and Game area
biologist and Chairs of the Eastern Interior Regional Advisory Council
and the Southcentral Regional Advisory Council.*

*Unit 13 remainder – 2 bulls by Federal registration permit only Aug. 1 – Sept. 30
Oct. 21 – Mar. 31*

***Federal public lands in Unit 13 are closed to caribou hunting except
by Federally qualified subsistence users.***

Unit 13—Moose

*Unit 13E—1 antlered bull moose by Federal registration Aug. 1–Sept. 20
permit only; only 1 permit per household.*

*Unit 13, remainder —1 antlered bull moose by Federal Aug. 1–Sept. 20
registration permit only.*

Federal public lands in Unit 13 are closed to moose hunting except by Federally qualified subsistence users.

Existing State Regulation

Unit 13- Caribou

<i>Residents – One caribou by permit</i>	<i>YC495</i>	<i>Aug. 1 - Aug. 5</i>
<i>Residents – One caribou by permit per household, available only by application. See Subsistence Permit Hunt Supplement for details</i>	<i>RC561</i>	<i>Aug. 10 – Aug. 31 Oct. 21 – Mar. 31</i>
<i>Or</i>		
<i>Residents – One caribou by permit per household, available only by application. See Subsistence Permit Hunt Supplement for details</i>	<i>RC562</i>	<i>Sept. 1 – Sept. 20 Oct. 21 – Mar. 31</i>
<i>Or</i>		
<i>Residents – One caribou by permit per household, available only by application. See the Subsistence Permit Hunt Supplement for details</i>	<i>CC001</i>	<i>Aug. 10 – Sept. 20 Oct. 21 – Mar. 31</i>
<i>Or</i>		
<i>Residents – One caribou by permit</i>	<i>DC485</i>	<i>Aug. 20 – Sept. 20 Oct. 21 – Mar. 31</i>
<i>Nonresidents</i>		<i>No open season</i>

Unit 13-Moose

<i>Unit 13</i>	<i>Residents: One antlered bull by permit, available only by application. See the Subsistence Permit Hunt Supplement for details.</i>	<i>CM300</i>	<i>Aug. 20–Sept. 20</i>
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OR

Residents: One bull, with spike-fork antlers or 50-inch antlers or antlers with 4 or more brow tines on at least one side; HT Sept. 1–Sept. 20

OR

Residents: One antlerless moose by permit. However, no person may take a calf or cow accompanied by a calf. DM325 Oct. 1–Oct. 31
Mar. 1–Mar. 31

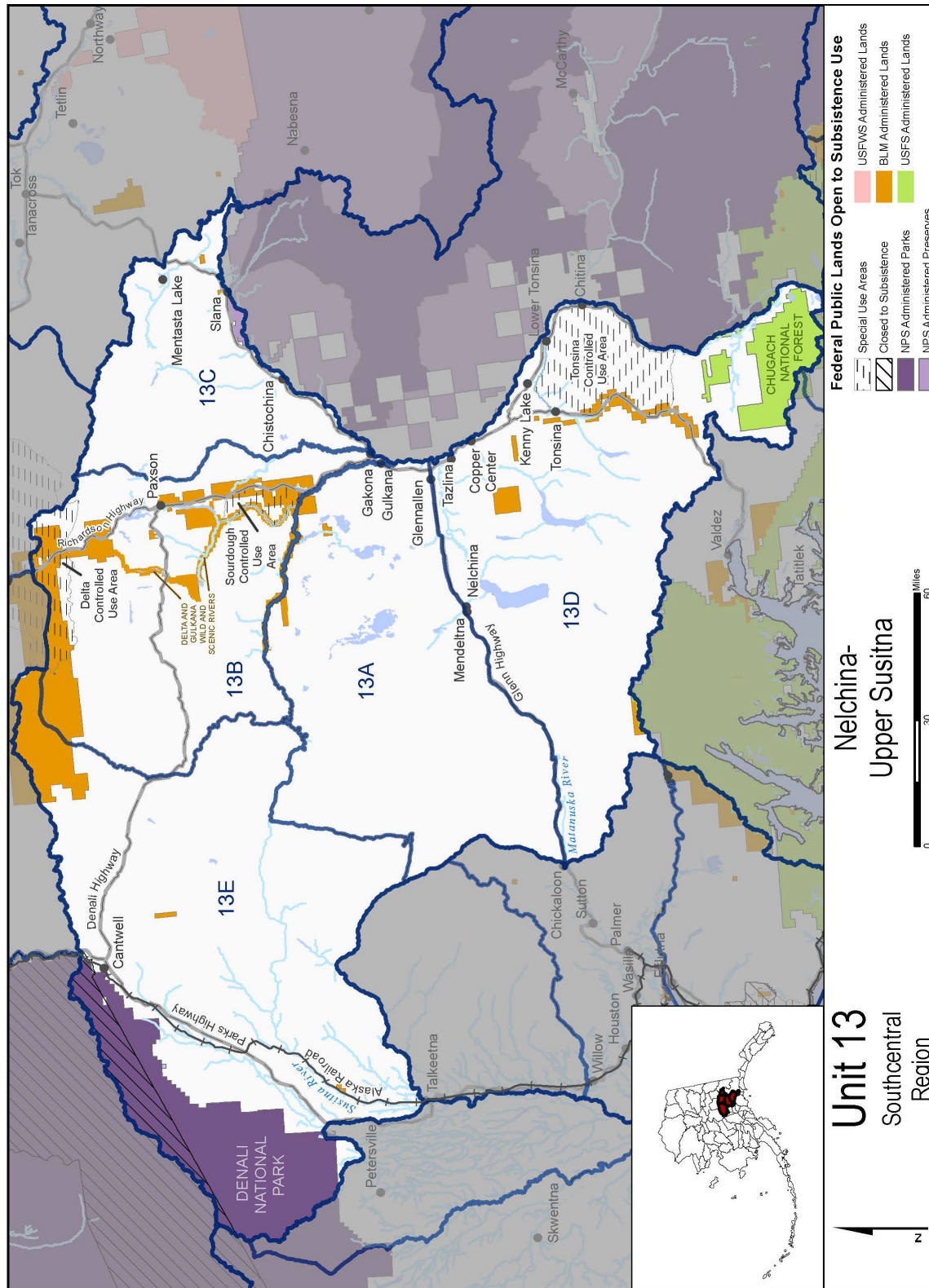
OR

Residents: One bull by permit. DM324 Sept. 1–Sept. 20

Unit 13 *Nonresidents: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.* DM335-DM339 Sept. 1–Sept. 20

Extent of Federal Public Lands

Unit 13 is comprised of approximately 13% Federal public lands and consists of 6% National Park Service (NPS) managed lands, 5% Bureau of Land Management (BLM) managed lands, and 2% U.S. Forest Service (USFS) managed lands. Federal public lands within Denali National Park as it existed prior to the Alaska National Interest Lands Conservation Act (ANILCA) (December 1980) are closed to all hunting and trapping by non-Federally qualified subsistence users. Federal public lands within the ANILCA additions to Denali National Park are closed to hunting BLM manages additional lands within Unit 13 that are selected for conveyance by the State of Alaska, Native Corporations, or Alaska Tribes and are not currently available for Federal subsistence because of the land selection status. If these land selections are relinquished, they would become lands available for Federal subsistence (**See Unit 13 Map**).



Customary and Traditional Use Determinations

Caribou

Residents of Units 11, 12 (along the Nabesna Road and Tok Cutoff Road, mileposts 79-110), 13, 20D (excluding residents of Fort Greely), and Chickaloon have a customary and traditional use determination for caribou in Unit 13B.

Residents of Units 11, 12 (along the Nabesna Road and Tok Cutoff Road, mileposts 79-110), 13, Chickaloon, Dot Lake, and Healy Lake have a customary and traditional use determination to harvest caribou in Unit 13C.

Residents of Units 11, 12 (along the Nabesna Road), 13, and Chickaloon have a customary and traditional use determination to harvest caribou in Unit 13A and 13D.

Residents of Units 11, 12 (along the Nabesna Road), 13, Chickaloon, McKinley Village, and the area along the Parks Highway between mileposts 216-239 (excluding the residents of Denali National Park Headquarters) have a customary and traditional use determination to harvest caribou in Unit 13E.

Moose

Residents of Unit 13, Chickaloon and Slana have a customary and traditional use determination for moose in Units 13A and 13D.

Residents of Units 13 and 20D (excluding residents of Fort Greely) and Chickaloon, and Slana have a customary and traditional use determination for moose in Unit 13B.

Residents of Units 12 and 13, Chickaloon, Healy Lake, Dot Lake, and Slana have a customary and traditional use determination for moose in Unit 13C.

Residents of Unit 13, Chickaloon, McKinley Village, Slana, and the area along the Parks Highway between mileposts 216 and 239 (excluding residents of Denali National Park headquarters) have a customary and traditional use determination for moose in Unit 13E.

Under the guidelines of ANILCA, National Park Service regulations identify qualified local rural subsistence users in National Parks and Monuments by: 1) identifying resident zone communities which include a significant concentration of people who have customarily and traditionally used subsistence resources on park lands; and 2) identifying and issuing subsistence use (13.440) permits to individuals residing outside of the resident zone communities who have a personal or family history of subsistence use. In order to engage in subsistence in the Denali National Park ANILCA additions, the National Park Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent.

Regulatory History

Caribou

The NCH is an important resource for many rural and non-rural users. Its proximity to the Glenn and Richardson highways is a key factor that enhances accessibility of NCH to Anchorage and Fairbanks (Tobey 2003). A State Tier II system for NCH harvest was established in 1990 for Unit 13. A State Tier I permit was added for the 1996/97 and 1997/98 seasons to allow any Alaskan resident to harvest cows or young bulls, in order to reduce the herd to the management objective. In 1998, the Tier I hunt was closed, as the herd was brought within management objectives due to increased harvest and lower calf recruitment.

The two Federal registration hunts in Unit 13 are for residents of Units 11, 12, 13 and 20D that have customary and traditional use for caribou. In 1998, the Board adopted Proposal P98-036 to extend the winter caribou season from Jan. 5–Mar. 31 to Oct. 21–Mar. 31 (OSM 1998a). This gave Federally qualified subsistence users the same opportunity to harvest an animal as those hunting under State regulations. In 1998, the Board adopted Proposal P98-034/35, which opened the Federal registration hunt in Unit 12 to residents of Unit 12, Dot Lake, Healy Lake and Mentasta between November and April when the NCH migrate through Tetlin National Wildlife Refuge (OSM 1998b).

In 2001, the Board adopted Proposal WP01-07, which changed the harvest limit from 2 caribou to 2 bulls by Federal registration permit only, for all of Unit 13 (OSM 2001).

In 2002, the Board rejected Proposal WP02-17, submitted by the Copper River Native Association, requesting that Federal public lands in Units 13A and 13B be closed to the taking of caribou and moose except by Federally qualified subsistence users. The Board rejected this proposal consistent with the recommendations of the Southcentral Alaska Subsistence Regional Advisory Council (Southcentral Council), the Interagency Staff Committee, and the Alaska Department of Fish and Game (ADF&G). All opposed this closure because closing Federal public lands in Units 13A and 13B to non-Federally qualified users would not result in a conservation benefit due to the limited amount of Federal public land in Unit 13, because additional opportunities existed for Federal subsistence users to hunt on Federal public lands after the State closed its season, and because of the more liberal Federal harvest limit and longer season (OSM 2002).

In 2003, the Board adopted Proposal WP03-14, which changed the harvest limit for Units 13A and 13B back to 2 caribou from 2 bulls, with the harvest of bulls being allowed only during the Aug. 10 – Sept. 30 season. For the Oct. 21 – Mar. 31 winter season, the BLM's Glennallen Field Office Manager was delegated authority to determine the sex of animals taken in consultation with the ADF&G area biologist and the Chairs of the Eastern Interior Alaska Subsistence Regional Advisory Council and Southcentral Alaska Subsistence Regional Advisory Council. For the remainder of Unit 13, the harvest limit remained 2 bulls for the Aug. 10 – Sept. 30 and Oct. 21 – Mar. 31 seasons (OSM 2003).

In 2004, the Board adopted two proposals, WP04-25 and WP04-26, allowing for the harvest of moose or caribou for the Hudson Lake Residential Treatment Center and the Ahtna Cultural Camp, respectively (OSM 2004a, OSM 2004b).

In 2005, the Board adopted Proposal WP05-08 for Units 13A and 13B to allow the sex of caribou harvested to be determined for both seasons by the BLM Glennallen Field Office Manager in consultation with the ADF&G area biologist and Chairs of the Eastern Interior and Southcentral Regional Advisory Councils. This was in effect for the entire season (Aug. 10 – Sept. 30 and Oct. 21 – Mar. 31), not just the winter season (OSM 2005).

Emergency Order 02-01-07 closed the remainder of the 2006/2007 State season for the NCH on February 4, 2007 due to high State hunter success in the State Tier II hunt. Likewise, Emergency Order 02-08-07 closed the 2007/2008 Tier II hunt on September 20, 2007 and was scheduled to re-open on October 21, 2007. However, concerns about unreported harvest in the State and Federal hunt resulted in a closure for the remainder of the season.

For the 2009/2010 season, the State Tier II hunt was eliminated. Two hunts were added: a Tier I hunt and a Community Harvest hunt for residents of Gulkana, Cantwell, Chistochina, Gakona, Mentasta, Tazlina, Chitina, and Copper Center. The harvest limit for each was one caribou (sex to be announced annually) with season dates of Aug. 10 – Sept. 20 and Oct. 21 – Mar. 31 with a harvest quota of 300 caribou. A Federally qualified subsistence user could opt into the State community harvest system or use a State registration permit to harvest one caribou and then get a Federal permit to harvest an additional caribou since the Federal harvest limit was two caribou.

In July 2010, the Alaska Superior Court found that elimination of the Tier II hunt was arbitrary and unreasonable (ADF&G 2010a). In response, the Board of Game (BOG) held an emergency teleconference in July 2010, and opened a Tier II hunt from Oct. 21 – Mar. 31, maintained the existing Tier I season, and awarded up to 500 additional Tier I permits (ADF&G 2010a).

Emergency Order 04-1-10 closed the remainder of the winter NCH Tier II season due to harvest reports indicating that approximately 1,404 bulls and 547 cows were harvested and the unreported harvest was expected to raise the total harvest above the harvest objective (ADF&G 2010b, OSM 2012).

In 2012, the Board adopted Proposal WP12-25, which added an additional nine days to the beginning of the fall caribou season to provide more opportunity to Federally qualified subsistence users. The season was extended from Aug. 10–Sept. 30 to Aug. 1 –Sept. 30 (OSM 2012).

In 2016, the Board approved Emergency Special Action Request WSA16-05 requesting that the BLM, Glennallen Field Office Manager, be given delegated authority to open a ten-day caribou season between October 1 and October 21, 2016. This provided additional opportunity for Federally qualified subsistence users to harvest caribou due to the lack of accessibility to caribou by hunters during the regular hunting season as a result of delayed migration (OSM 2016a).

Federal public lands in the Paxson Closed Area were determined to be opened (i.e. no longer State selected) to the taking of big game, which includes moose and caribou, by Federally qualified subsistence users under Federal subsistence regulations. In 2016, the Board rejected Wildlife Proposal WP16-16 which requested that the Federal public lands within the Paxson Closed Area in Unit 13 be closed to Federally qualified subsistence users (OSM 2016b).

In 2016, the Board adopted Proposal WP16-17, which rescinded the restriction prohibiting Federally qualified subsistence users from hunting caribou within the Trans-Alaska Oil Pipeline right-of-way in Unit 13 (OSM 2016c).

In 2016, the Board adopted Proposal WP16-19 with modification to delegate authority to the BLM Glennallen Field Office Manager to issue permits to the Ahtna Heritage Culture Camp directly to address logistical issues and annual changes in the preferred season dates for harvesting moose and caribou for the culture camp (OSM 2016d).

In 2018, Proposal WP18-19 was submitted by the Ahtna Inter-Tribal Resource Commission (AITRC) requesting that AITRC be allowed to distribute Federal registration permits to Ahtna tribal members for the Federal caribou season in Units 13A, 13B, and 13 remainder. In addition, the proponent requested that the Ahtna Advisory Committee be added to the list of agencies and organizations consulted by the BLM, Glennallen Field Office Manager, when announcing the sex of caribou taken in Unit 13A and 13B. The Board voted to defer WP18-19 and instructed staff to develop a framework for a Community Harvest System and report back at its Summer 2018 work session, which was done (OSM 2018a).

In 2018, ADF&G issued four Emergency Orders for the NCH in Unit 13. In response to severe winter conditions in the eastern part of the NCH range, high hunting mortality, and lower than anticipated productivity, the NCH was reduced to approximately 35,700, which is at the lower end of the population objective. Emergency Order 04-02-19-8 reduced the harvest quotas for the two registration hunts, RC561 and RC562, and the drawing permit hunt, DC485, to 500 bulls. In addition, a three-day harvest reporting requirement was implemented. Emergency Order 04-04-18 closed the Tier 1 NCH hunt, RC561, on August 16, 2018 as reported harvest was approaching the harvest quota. Emergency Order 04-05-18 closed drawing hunt DC485 on August 26, 2018 to remain within the quota of 250 bulls set for that hunt. Emergency Order 04-07-18 closed the winter hunting seasons for all of these hunts.

Moose

The existing Federal subsistence regulations, one antlered bull moose by Federal registration permit only from Aug. 1 to Sept. 20 (OSM 1995), have been in place since 1995 when the season starting date was changed from Aug. 25-Aug. 1, thus providing an additional 24 days for Federally qualified subsistence users to harvest moose without interference from State Tier II permit hunters.

In 2004, the Board considered Proposal WP04-27, which requested that the harvest season for moose be shortened by 14 days, reporting of the permit number and exact harvest location be required, and the harvest reporting period be shortened from five days to three days (OSM 2004c). The Board rejected

this proposal because it would have reduced the harvest opportunity by two weeks, and the permit requirements would have done little to curtail illegal harvest.

The State general harvest regulations for moose in Unit 13 were changed in 2000 when the designation of a legal bull went from three or more brow tines or 50-inch antler spread to a four or more brow tines or 50-inch antler spread and have been in effect ever since. The same year, non-resident general moose hunting was eliminated from Unit 13 in the State regulations due to low moose population numbers. In addition, the ADF&G also managed a State Tier II hunt (TM300) for one bull moose by permit Aug. 15 – Aug. 31 between 1995 and 2008.

In 2008, the State Tier II hunt was changed by the BOG to add a community harvest (CM300) and the season was modified to Aug. 10 – Sept. 20 with an upper harvest limit of 10 any-bull moose for Unit 13 and an unlimited number of spike/fork, 50 inch, and four or more brow tine moose. For residents, drawing permit hunts (DM330-334) for one bull moose with a season of Sept. 1-Sept. 20 were added as a new harvest option in select areas where moose numbers had increased. For non-residents, drawing permit hunts (DM 335-339) were established to harvest one bull with 50-inch antlers or antlers with four or more brow tines on at least one side from Sept. 1-Sept. 20. These three hunts were in addition to the State general resident hunt with a harvest limit of one bull moose with spike-fork or 50-inch antlers or antlers with four or more brow tines on at least one side and a season from Sept.1-Sept. 20.

In March 2009, the BOG revised the amount reasonably necessary for subsistence (ANS) findings for moose and caribou in Unit 13, eliminated the Tier II hunts for both populations, and created the Community Subsistence Hunts (CSH) (Robbins 2017). The CSH included an allocation of 100 bulls that did not meet the antler restrictions. The BOG also created antlerless moose drawing hunts for residents and antlered bull moose hunts for nonresidents.

In 2011, the BOG adopted a new regulation for the CSH in 2011/12 to allow any community or group of Alaska residents numbering 25 or more to apply for the hunt between Aug.10 and Sept. 20. Following this change, the number of participants in the CSH hunts increased substantially from 378 to 3,400, most of whom came from outside the immediate area. The BOG decreased the number of bulls that do not meet the antler restrictions from 100 to 70.

In 2013, the BOG increased the number of bulls not required to meet the antler restrictions from 70 back to 100 in response to increased participation in the hunt. A winter registration hunt from Dec.1-Dec.31, which was effective in 2014, was also added to provide additional opportunity for bulls that do not meet the antler restrictions. The hunt was closed after one day due to very high levels of participation and was not resumed.

In 2015, the BOG required participants in the CSH to commit to participation for two consecutive years and to provide an annual group report with the stipulation that if a report is not submitted, the entire group would be ineligible for a permit hunt the next regulatory year. The BOG also created an any bull moose drawing for residents, which was effective in 2016, and shortened the CSH season by 10 days from Aug. 10-Sept. 20 to Aug. 20-Sept. 20 for the 2016/17 regulatory year.

The Paxson Closed Area in Unit 13B was established by the State in 1958 to provide a viewing area adjacent to the junction of the Richardson and Denali Highways. During 1991/92 and 1992/93 regulatory years, Federal public lands within the Paxson Closed Area were closed to the hunting of big game under the Special Provisions section for Unit 13 in the Federal Subsistence Management Regulations for Federal public lands in Alaska. However, the hunting for small game was still allowed in the Paxson Closed Area.

In June 2014, the Glennallen Field Office of BLM became aware of unencumbered Federal public lands within the Paxson Closed Area, and they were subsequently removed from State selection. As a result, Federal public lands in the Paxson Closed Area were determined to be opened (i.e. no longer State selected) to the taking of big game, which includes moose and caribou, by Federally qualified subsistence users under Federal subsistence regulations. In 2016, the Board rejected Wildlife Proposal WP16-16 which requested that the Federal public lands within the Paxson Closed Area in Unit 13 be closed to Federally qualified subsistence users (OSM 2016b).

To address concerns that the communal pattern of use was not providing reasonable opportunity in Unit 13, the BOG adopted amended Proposal 20 (RC25) at a special meeting in Glennallen in March 2017 to retain the CSH moose hunt for resident hunters for the fall (Aug. 20 – Sept. 20) and winter (Dec. 1 - Dec. 31; subsistence hunt only) hunts with the following restrictions: One bull per by community harvest permit only; however, no more than 100 bulls that do not meet antler restrictions may be taken by Tier II permits during the Aug. 20 – Sept. 20 season, up to 350 Tier II permits may be issued, one Tier II permit per household.

In 2018, the Unit 13B harvest limit in the Copper Basin Community Subsistence hunt (CM300) was changed by the BOG from one bull moose to one bull moose with spike-fork antlers, 50 inch antlers, or antlers with four or more brow tines on one side because the quota of 30 bulls without antler restrictions had been reached in Unit 13B.

In 2018, Proposal WP18-18 was submitted by AITRC and requested that the moose season on Federal public lands in Unit 13E and Unit 13-remainder be changed from Aug. 1-Sept. 20 to Aug. 1-Mar. 31. In addition, AITRC requested authorization to distribute Federal registration permits (FM1301) to Federally qualified tribal members only and that the BLM and Denali National Park and Preserve distribute (FM1301) permits to other Federally qualified subsistence hunters. Proposal WP18-18 was withdrawn by the proponent (OSM 2018b).

Current Events

A public hearing was held on June 3, 2019, in Copper Center to provide members of the public an opportunity to comment on Temporary Special Action WSA19-03. Approximately 50 individuals attended the public hearing while another 30 listened to the hearing via teleconference. Twenty six individuals provided testimony in person or via teleconference at the meeting and eight written comments were submitted. Participating communities included residents from Tonsina, Glennallen, Copper Center, Chignik, Gulkana, Gakona, Chitina, Chistochina, Delta Junction, Paxson, Anchorage, Eagle River, Chugiak, Fairbanks, Sourdough, Tazlina, Soldotna, and Kenny Lake. Of those who provided testimony,

11 were opposed and 12 supported the Temporary Special Action. One testifier found reasons to both support and oppose the special action request.

From the testimony, it was evident that local users as well as those from outside the area harvest caribou and moose for subsistence use and would be affected by the proposed closure. In 2018, in an effort to reduce the NCH population, almost twice the normal number of permits were issued by the State, which some testifiers claimed resulted in intense hunting pressure for caribou in Unit 13, unsafe hunting conditions, and increased difficulty for Federally qualified subsistence users to harvest both caribou and moose. Some said that it was difficult for all users to find places to park due to the intense hunting pressure on the Richardson Highway during caribou migration.

The importance of caribou to the cultural identity, subsistence way of life, and subsistence economies of many communities was mentioned numerous times. Local users made it clear that it is difficult to provide for their families because many do not have resources such as Off Road Vehicles (ORVs) and snow machines to access and hunt moose and caribou that are further away from the local community. It was mentioned that many of the hunters from outside Unit 13 have more financial resources available and thus are not as dependent on caribou and moose as are some local residents. In the past, local residents were able to harvest caribou and moose close to their communities and had greater flexibility as to when to harvest caribou and moose (e.g. when there was a need and/or when it was colder). In addition, timing the caribou hunt to the caribou migration through or near the communities is important to harvest success. Many testified that competition with other users has made it difficult for local users to provide for their families. Some explained that competition due to intense hunting pressure includes direct interference with the hunt, deflection of caribou and moose away from locally preferred road corridors, and safety concerns. In 2018, local residents noted NCH caribou migrated across the Richardson Highway two weeks later than normal. Disturbance to the caribou herd and climate change are two factors that some locals say may have contributed to the change in migration pattern in 2018.

Due to safety concerns, some local hunters no longer hunt or have to hunt at a later time when it is less convenient, and there are fewer animals and fewer hunters. Some local hunters wanted to teach their children the hunting skills and pass on traditional knowledge and customary and traditional practices but felt that it was too dangerous to attempt. Local users felt that the closure of the small amount of Federal land (approximately 13%) in Unit 13 to non-Federally qualified users would have a minimal effect on non-Federally qualified users since they have access to the public and private State-managed lands that make up a majority of Unit 13.

Safety concerns were also noted by those that opposed WSA19-03, but many felt that closure of Federal public lands to non-Federally qualified users was not the right solution. Other possible solutions to the overcrowding, public safety issues, and environmental impact on trails and tundra mentioned included restricting shooting within a quarter-mile of the highway and controlling the harvest through quotas, season restrictions, reduction in number of permits issued, increased law enforcement, public education, separate Federal and State seasons, and transportation restrictions. Restricting statewide resident hunters from caribou and moose hunting on the Gulkana River will end many float trips by Alaska residents. Although BLM lands represent 5% of Unit 13, this land represents a unique ecosystem area and is very

attractive to both moose and caribou (Gulkana River/Tangle Lakes/Delta River) while the other portion is readily accessible area (Richardson Highway corridor). In addition, some testified that the Temporary Special Action is not necessary for the conservation of healthy populations of caribou and moose, and that a meaningful preference for Federally qualified users already exists under Federal regulations. For example, Federally qualified users had a longer caribou season, no sex restrictions, and periods when there is no competition with those hunting under the State regulations. One commenter thought there was no biological reason that Federal subsistence hunters could not harvest caribou in 2018/19 season even though the herd size was down somewhat. While State harvest quota was reduced and season cut short for conservation reasons, the Federal quota remained for either sex and stayed open throughout the regularly scheduled season. One individual noted that the numbers of hunters would be less during the fall of 2019 due to fewer permits being issued (population already low) and that the caribou populations would rebound because of increased survival and recruitment following the relatively mild winter in 2018/19.

Others observed that the proposed closure would hamper State management, especially when the NCH exceeds population objectives. However, some felt that Alaska Department of Fish and Game biologists need to find different tools other than increasing the harvest when caribou or moose are in abundance. Increasing hunter numbers alone often leads to too many hunters in the field, disrupting caribou movement and migration, leading to reduced success for all hunters. Numerous individuals mentioned the increase in trash and degradation of the caribou habitat due to so much use.

One commenter noted that if the Special Action is approved, non-Federally qualified users may still cross Federal public lands to access State lands. Negative environmental impacts could result from new trails made by statewide users to access State lands. Thus, even with anticipated reduction of hunting pressure this fall (2019), there still could be hunting disturbance from non-local hunters on Federal public lands in Unit 13. If Federal lands are open only to local residents a new safety concern may develop with statewide residents hunting along the boundary between State and Federal land which could lead to hunters from one group shooting towards hunters of the other group.

The State of Alaska submitted written comments in opposition to WSA19-03 (**Appendix 1**). The NCH increased to high numbers following the relatively mild winters and productive summers during 2014, 2015, and 2016. As a result the harvest limits were increased to reduce the population before the herd exceeded the carrying capacity of its range. The relatively high harvest in 2015-2017 combined with more severe winter conditions in 2017/18 effectively reduced the NCH population to approximately 33,000 animals which is near the State's lower management threshold of 35,000 animals. The State noted that the Federal hunts had longer seasons and that Federally qualified subsistence users were able to hunt bulls and cows while those hunting under the State regulations were limited to bulls. The State noted that Federally qualified subsistence users can and do hunt on State public lands by participating in the general moose hunt (GM000) and the Community Subsistence hunt (CM300) under State regulations. Under State regulations, Federally qualified subsistence users may hunt on both State and Federal lands, whereas those hunting under Federal subsistence regulations may hunt only on Federal public lands. The State provided the number of permits that will be issued for RY19 which totals 7,083, less than half of the permits issued in RY18, 14,605. The State does not believe that the number of State hunters in the field

negatively impacts hunter success for caribou or moose by Federally qualified subsistence users on Federal public lands.

Biological Background

Caribou

The NCH calving grounds and summer range lie within Unit 13. The rut also generally occurs within Unit 13. About 60-95% of the NCH overwinters in Unit 20E, although Nelchina caribou also overwinter in Unit 12 and across northern portions of Units 13 and 11 (Schwanke and Robbins 2013). Nelchina caribou are usually found in Unit 12 remainder over the winter and en route to wintering grounds in Unit 20E. Winter competition with the Fortymile Caribou Herd (FCH) in Unit 20E may be impacting the NCH and range conditions. While use (location and timing) of the NCH calving grounds remains static, use of other seasonal ranges varies with resource availability and snow cover (Schwanke and Robbins 2013).

State management goals and objectives for the NCH are based on the principle of sustained yield and are as follows (Robbins 2014):

- Maintain a fall population of 35,000–40,000 caribou, with a minimum of 40 bulls:100 cows and 40 calves:100 cows.
- Provide for the annual harvest of 3,000–6,000 caribou.

The State manages the NCH for maximum sustained yield, principally by annual adjustments in harvest quotas. The population of the NCH has fluctuated over time, influenced primarily by harvest (Schwanke and Robbins 2013). Between 2001/02 and 2018/19, the NCH population ranged from 31,114 - 48,700 caribou and averaged 36,406 caribou. However, the herd has exceeded State population objectives from 2010-2017 (**Table 1**). Reduced predation resulting from intensive wolf management programs intended to benefit moose in Unit 13 and the FCH in Units 12 and 20 may have contributed to NCH population increases (Schwanke and Robbins 2013, ADF&G 2017a).

Table 1. Population size and composition of the Nelchina caribou herd (Tobey and Kelleyhouse 2007, ADF&G 2008, 2010a, Schwanke 2011, Schwanke and Robbins 2013, Robbins 2015, 2016a, 2016b, Robbins 2017, pers. comm.; Rinaldi 2019, pers. comm.).

Year	Total bulls:100 cows^a	Calves:100 cows^a	Population size^b
2003	31	35	31,114
2004	31	45	38,961
2005	36	41	36,993
2006	24 ^c	48 ^c	-

Year	Total bulls:100 cows ^a	Calves:100 cows ^a	Population size ^b
2007	34	35	33,744
2008	39	40	-
2009	42	29	33,146
2010	64	55	44,954
2011	58	45	40,915
2012	57	31	46,496
2013	30	19	40,121
2014	42	45	-
2015	36	45	48,700
2016	57	48	46,673
2017	35	35	41,411
2018	40	20	33,229
Average	40.2	39.1	36,406
^a Fall Composition Counts			
^b Summer photocensus			
^c Modeled estimate			

Bull:cow and calf:cow ratios have similarly fluctuated over time. Between 2001/02 and 2018/19, the fall bull:cow ratio ranged from 24-64 bulls:100 cows and averaged 40.2 bulls:100 cows. Over the same time period, the fall calf:cow ratio ranged from 19-55 calves:100 cows and averaged 39.1 calves:100 cows (**Table 1**).

From 2008-2012, below average fall calf weights and low parturition rates for 3-year-old cows suggested nutritional stress, raising concern for the health of NCH population (Schwanke and Robbins 2013). Schwanke and Robbins (2013) cautioned that without a timely reduction in the NCH population, range quality and long-term herd stability may be compromised. In fall 2018, the NCH was estimated to be 33,229, which was below the lower population objective. A combination of a liberal hunt, severe winter conditions in the eastern part of range, resulting in greater than expected over-winter mortality, emigration of some animals to the FCH, and lower than anticipated productivity, reduced the NCH from approximately 41,000 the previous year (Rinaldi pers. comm. 2019). The reduction in the NCH is likely to result in decreased hunting pressure due to fewer permits being issued under the State regulation for 2019/20 season.

Moose

In the early 1900s, moose densities in Unit 13 were low but increased gradually until peaking in the mid-1960s. The population then declined due to a combination of factors including overhunting, severe winters, and predation, primarily by brown bears and wolves (Ballard et al. 1987, Schwanke 2012, Robbins 2014). The population reached a low in 1975 and then started to increase by 1978, reaching a second peak in 1987. Between 1988 and 1994, the moose population declined due to a combination of factors, including hunting pressure, deep snow and increasing wolf predation (Robbins 2014). From 1987 to 2001, the moose population declined by an estimated 47% (Tobey and Schwanke 2008, 2010). Moose populations in Unit 13 have grown since 2001 due to a combination of mild winters, predator control, and more conservative hunting regulations (Schwanke 2012, Robbins 2014).

State management objectives for moose populations and human use in Unit 13 are as follows (Robbins 2014):

Population Objectives

- Maintain a combined population of 17,600 to 21,900 moose in Unit 13:
 - 3,500-4,200 moose in Subunit 13A
 - 5,300-6,300 moose in Subunit 13B
 - 2,000-3,000 moose in Subunit 13C
 - 1,200-1,900 moose in Subunit 13D
 - 5,000-6,000 moose in Subunit 13E
- Maintain minimum fall composition ratios:
 - 25–30 calves:100 cows in Subunit 13A
 - 30 calves:100 cows in Subunits 13B, 13C, 13D, and 13E
 - 25 bulls:100 cows in all subunits
 - 10 yearling bulls:100 cows in all subunits

Human Use Objectives

- Maintain a combined annual harvest of 1,050–2,180 moose in Unit 13:
 - 210-420 moose in Subunit 13A
 - 310-620 moose in Subunit 13B
 - 155-350 moose in Subunit 13C
 - 75-190 moose in Subunit 13D
 - 300-600 moose in Subunit 13E

ADF&G conducts fall counts to determine the sex and age composition and population trends in large count areas distributed throughout Unit 13. From 2001–2009, the population estimate for moose in Unit 13 increased from 14,251 in 2002 to 21,090 in 2015 and then dropped to 17,746 in 2017 (**Table 2**). Although the bull:cow and yearling bull:cow ratios increased in Unit 13, along with the population increases between 2001–2018, calf:cow ratios remained below the minimum management objective of 25:100 cows (**Table 2**). In 2018, the calf:cow ratios dropped to 13:100, which was the lowest value

since 2001. In 2012 (Robbins 2014) and 2015 (Del Frate 2017), bull:cow ratios were within the State management objectives for all subunits (**Table 3**). From 2013-2018, bull: cow ratios were generally above the State management objective of 25 bulls:100 cows but dropped significantly in Unit 13B in 2018/19 and in Unit 13C in 2017/18 (**Table 3**). In 2012, the yearling bull:cow and calf:cow ratios were below the State management objectives of 10 yearling bulls:100 cows and 25 calves:100 cows in Unit 13A and 30 calves:100 cows in the remaining units (**Table 3**) (Robbins 2014).

Moose are most abundant along the southern slopes of the Alaska Range in Units 13B (Alphabet Hills) and 13C and in the eastern Talkeetna Mountains in western Unit 13B (**Table 3**). The lowest densities are found in the section of Denali National Park and Preserve located in the western portion of Unit 13E, Lake Louise Flats in eastern portion of Unit 13A, and Unit 13D. Historically, moose numbers in the western portion of Unit 13A, Unit 13B, and Unit 13C tended to fluctuate more than in lower density areas (Tobey and Schwanke 2008, 2010, Robbins 2014).

Moose typically congregate in subalpine habitats during fall rutting and move down to lower elevations as the snow increases (Tobey and Schwanke 2010). Winter distribution depends mainly on snow depth and to a lesser extent wolf distribution (Tobey and Schwanke 2010). Known wintering areas include the southern Alphabet Hills, the upper Susitna River, Tolsona Creek burn, the eastern foothills of the Talkeetna Mountains, and the Copper River floodplain (Robbins 2014). Severe winters with deep snow are known to cause winter mortality by increasing nutritional stress through restriction of movements. Severe winters prevent access to adequate and/or quality food (Coady 1974, Testa 2004, Bubenik 2007, Innes 2010), and increase the risk of predation, primarily by wolves (Bishop and Rausch 1974, Peterson et al. 1984). Snow depths greater than 35 inches represent a critical depth for adults with calves (Coady 1974), older adults (≥ 8 yrs. old), and adult males, which are more susceptible to nutritional stress and death (Coady 1982). In 2004–2005, despite the severe snowpack conditions compared to the previous 11 years (Testa 2004), moose numbers remained fairly stable in Unit 13B (Tobey and Schwanke 2008).

Fluctuations in moose populations in Denali National Park and Preserve were shown to be linked to occasional severe winters. Hunting mortality combined with increased predation during severe winters can severely reduce moose populations (Walters et al. 1981). Prime breeding bulls and cows are particularly vulnerable during the rut, which occurs primarily during the month of September in Denali National Park and Preserve (Miquelle 1991). Consequently, hunting seasons are often scheduled after the peak rut when bulls are extremely wary and much less vulnerable, in order to leave more prime bulls in the population and ensure the successful breeding of cows. During early winter aggregations of bulls and cows, excessive harvests can also occur from hunters using snowmobiles and all-terrain vehicles (Timmerman and Buss 2007). For example in 2017, large aggregations of bull moose were still present in Unit 13 B from Nov. 22-27 during the fall moose composition surveys (Hankins 2017b, pers. comm.). Many subsistence users will avoid taking bull moose during the rut because of the poor quality of the meat.

Table 2. Unit 13 fall aerial moose composition counts in trend count areas (CA) 3, 5, 6, 10, 13, 14, 15, 16,17, 21, 22, 23 (Tobey and Schwanke 2008, 2010, Robbins 2014, Robbins 2015, 2017 pers. comm., Hatcher 2019, pers. comm.).

Year	Bulls:100 cows	Yearling bulls: 100 cows	Calves: 100 cows	% Calves	Adults observed	Total moose observed	Population Estimate	Average Density in Unit 13 moose/mi² (# CAs flown)
2001	22	3	15	11%	4,132	4,647	14,988	0.81 (12)
2002	27	6	23	16%	2,098	2,485	14,251	0.77 (7)
2003	24	8	18	12%	3,902	4,457	17,307	0.94 (9)
2004	28	5	22	15%	3,355	3,932	15,409	0.83 (9)
2005	27	7	18	13%	3,500	4,009	15,380	0.83 (8)
2006	30	8	24	15%	3,499	4,138	15,636	0.85 (9)
2007	30	11	22	14%	3,707	4,334	16,968	0.92 (7)
2008	35	12	19	13%	3,918	4,481	17,040	0.92 (8)
2009	33	10	24	15%	4,550	5,355	18,812	1.02 (11)
2010	31	10	22	15%	4,996	5,847	19,720	1.07 (11)
2011	32	9	23	15%	4,787	5,614	20,350	1.10 (8)
2012	32	7	16	11%	5,764	6,468	20,575	1.11 (9)
2013	34	6	27	17%	5,694	6,837	20,634	1.12 (12)
2014	35	11	16	11%	1,975	2,213	20,492	1.11 (5)
2015	32	7	25	16%	4,665	5,558	21,090	1.14 (8)
2016	32	8	19	13%	3,361	3,848	20,585	1.11 (5) ^a
2017	29	6	20	13%	3,457	3,983	17,746	0.96 (6)
2018	29	5	13	9%	3,596	3,968	18,863	1.01 (4)
^a Two count areas flown comp flights flown in 13B, 13C, and 13E								

Table 3. Population estimates and total harvest (State and Federal), from 2013/14 to 2018/19 for Unit 13 and bull:cow and calf:cow ratios for the Unit 13 subunits (Rinaldi pers. comm.).

	Bull:Cow/Calf:Cow Ratio						
Regulatory Year	13A	13B	13C	13D	13E	Population Estimate	Total Harvest
2013/14	21/31	38/27	44/24	89/12	34/25	20,634	723
2014/15	28/23	38/13	37/10	69/17	41/5	20,492	936
2015/16	25/29	37/26	30/15	58/8	25/31	21,090	1,058
2016/17	19/23	30/21	34/15	89/21	40/15	20,585	1,087
2017/18	27/24	34/19	16/4	-	23/14	17,746	1,003
2018/19	24/16	16/10	-	-	27/15	18,633	790
Average	21/24	32/19	32/14	76/15	32/12	19,818	933

Cultural Knowledge and Traditional Practices

Most of game management Unit 13 was the traditional territory of the Ahtna Athapascans with the northwestern portion of the unit historically being Dena'ina land (ADF&G 2017). Moose, caribou, and Dall Sheep were the primary large game mammals important for subsistence within the region (ADF&G 2017). Rufus Sereberinikoff noted that Ahtna families along the Tazlina River had fresh moose meat when he visited the Copper River Basin in May of 1848 (de Laguna 1981). Moose were traditionally hunted in late summer through late winter, and caribou were hunted in the spring and fall (ADF&G 2017; de Laguna 1981; Simeone 2006). Winter moose hunting took place on foot with the use of snowshoes and the aid of bow and arrow (ADF&G 2017; Haynes & Simeone 2007; Reckord 1983; Simeone 2006). De Laguna (1981) reported that within Ahtna territory, "caribou and moose were caught either in drag-pole snares or in snares set 200-300 feet apart in long brush fences." Caribou were also hunted with the use of spears from skin boats, and later, guns were used for moose hunting (de Laguna 1981; Reckord 1983). The traditional practices of drying and freezing meat, as well as the proper and respectful treatment of harvested resources such as moose and caribou, are described in several ethnographic accounts of the Ahtna and people of the upper Tanana (de Laguna & McClellan 1981; Haynes & Simeone 2007; Reckord 1983; Simeone 2006).

ADF&G's Division of Subsistence conducts household subsistence harvest surveys periodically throughout Alaska. Though this survey data is only available for some communities in some years, it is an additional source for documenting patterns of use in rural Alaska. The most recent surveys conducted in the communities along the upper Copper River drainage note that large land mammal harvest is high and comprised between 21% and 88% of the total community harvests by weight. While bear, sheep, goat and bison were also taken, the majority of the large land mammal harvest was moose and caribou (Holen, et al. 2012; Kukkonen & Zimbleman 2012; La Vine, et al. 2013; La Vine & Zimbleman 2014).

Surveys reported the per capita large land mammal harvest from communities in the Copper River Basin ranged from approximately 11 lbs./person in Mendeltna to 121 lbs./person in Mentasta Pass (La Vine et al. 2013).

The per capita moose harvest from Copper River Basin communities ranged from no harvest in Mendeltna to approximately 113 lbs./person in Tolsona, a community that shares extensively with households in neighboring communities like Mendeltna and Nelchina (Holen et al. 2015). The per capita caribou harvest from Copper River Basin communities ranged from no harvest in Tolsona and Chistochina to approximately 45 lbs./person in Paxson (Holen et al. 2015; Kukkonen et al. 2012). Even in those communities that reported no harvest for their study year, both moose and caribou was widely used, shared, and received. For example, while Mendeltna reported no moose harvest for the study year, 100% of the households reported using moose (Holen et al. 2015). Tolsona reported no caribou harvest for the study year; however, 25% of the households reported using caribou (Holen et al. 2015).

During each study year, communities within the Copper River Basin harvested or hunted for moose and caribou in Units 11, 12, and 13 (Holen et al. 2015; Kukkonen et al. 2012; La Vine et al. 2013; La Vine & Zimpleman 2014). Maps produced during the subsistence surveys describe harvest and search efforts over the course of a calendar year and do not distinguish the season of attempted harvests. Harvest and search areas specific to Unit 13 described a pattern by each community for hunting along local road corridors and locations close to home. Some communities described mostly road hunts while others included harvest and search areas that extended all throughout the basin. Caribou and moose harvest and search areas included locations along the Middle Fork Chulitna River, Tyone River, Copper River, Nenana River, Klutina and Mentasta Lakes, Nabesna Road, and the Denali, Park, Glenn, and Richardson Highways (Holen et al. 2015; Kukkonen et al. 2012; La Vine et al. 2013; La Vine & Zimpleman 2014). Eastern Interior communities with customary and traditional use of moose and caribou in Unit 13 mostly hunted close to home in Units other than 13 (Holen et al. 2012).

User Conflict

User conflict between local and non-local hunters has long been an issue in Unit 13. Recent subsistence research, technical papers, and public testimony at special action hearings, Council meetings, and Board sessions have provided some record of public sentiment on hunting pressure and competition in the area. Recent household surveys documented local comments and concerns about subsistence resources and issues. Almost every community noted some concern over non-local hunters and harvest. Many opined that the majority of meat harvested in Unit 13 was not eaten within the region. Others added that non-local hunters were out-competing locals and driving game away. Many communities surveyed for the 2009 - 2013 calendar years identified better equipped urban hunters, traffic pressure on the roads, and the significant increase in use of off-highway motorized vehicles as both interfering with access and driving game further from road corridors. A Paxson resident provided further explanation:

ATV use is out of control in the Denali Highway area. There is just too much motorized access. Local subsistence hunters cannot compete with those people that come into this area with lots of equipment like motorhomes and 4-wheelers or 6-wheelers. (Holen et al. 2012: 258)

Almost all communities surveyed for the 2011- 2013 calendar years expressed concern over the state run Copper Basin Moose Community Subsistence Harvest Permit Program and felt that the “community hunt” should be available to local residents only (Holen et al. 2012; Holen et al. 2015; Kukkonen et al. 2012; La Vine et al. 2013; La Vine 2014). Some communities described the early hunting opportunity for Federal subsistence users as being challenged by a changing climate and would like to see the hunting season delayed to October due to extended warmer weather.

Public testimony was given on proposal WP16-16, which requested that recently opened Federal lands within the Paxson Closed Area in Unit 13 be closed to hunting big game by Federally qualified subsistence users, during a Southcentral Council meeting in 2016. A local resident and Federally qualified subsistence user argued in favor of the closure for reasons of biological concern, in great part caused by the significant numbers of hunters drawn to the area. He clarified:

Biological is not how many animals you kill. That's not the only thing. What about disrupting a migration pattern because the caribou come through there. Not every year, but many years they come through there. That area, the highway is up here, the caribou come out of the west and they're moving to the east. They've got to cross.

Many years they can't cross Paxson Lake because in October it's starting to ice over. The ice is either on the lake and not safe or it's very cold and they would rather cross on the north end of the lake. So if you're standing there with a rifle or there's 50 people lined up on that two-mile section of road with rifles, are there caribou coming through? Three years ago, 2013 or 2012, we saw most of those caribou turn back and go back over the top of Paxson Mountain because there was a line of hunters down there waiting for them to come across the road.

This is not just a viewing area. This is a migration pattern for caribou and I think the Nelchina Caribou is the most important item we're looking at here (SCRAC 2015: 149).

Others see the popularity of non-local hunting in Unit 13 as a safety issue. Another member of the public provided the following testimony, again in support of WP16-16:

I wanted to specifically talk to the safety issues. I think the best example was just to describe what the 21st of October looked like the first day of Federal subsistence without State hunting. Along the highway along the closed area there was probably 30 to 40 cars parked in the roadway. There was probably 50 people with guns standing in the road. There was dead caribou in the drainage ditch, part of the fixed part of the highway. There was shell casings in the highway and people were just basically shooting across the road (SCSRAC 2015: 154).

Later, during the same meeting, additional public testimony on safety issues Unit-wide was provided:

About the three things, safety. You know, if we're going to say safety is an issue, we might as well close down Unit period. This is not the only place there's an impact and an unsafe area. I mean they're trying to close a little area. They're trying to say there's an impact. There's an impact in Unit 13 everywhere (SCRAC 2015: 170).

Recent testimony on safety concerns for hunting in Unit 13 was provided at the public hearing for WSA19-03 (see **Current Events**).

Harvest History

Caribou

The NCH is a popular herd to hunt and experiences heavy harvest pressure due to its road accessibility and proximity to Fairbanks and Anchorage. Population limits can be controlled solely by human harvest, and harvest quotas are adjusted annually in order to achieve State management objectives (Schwanke and Robbins 2013).

Over 95% of the NCH harvest occurs in Unit 13. Between 2001 and 2018, harvest from the NCH under State regulations ranged from 793-5,785 caribou/year and averaged 2,334 caribou/year (Robbins 2017, pers. comm.). Over the same time period, caribou harvest under Federal regulations in Unit 13 ranged from 237-610 caribou/year and averaged 417 caribou/year (OSM 2019, **Table 4**). During this time period, total NCH harvest from Unit 13 averaged 2,839 caribou/year.

While the long-term average is below State management objectives, the harvest quota and associated harvest has increased in recent years (2010-2017) in response to the increasing NCH population (**Table 2**). In 2016, the initial harvest quota of 4,000 caribou was lifted after population estimates from the summer photocensus showed that the NCH was still growing. No adjusted quota was announced in 2016 (Robbins 2017, pers. comm.). The quota was adjusted to 6,000 caribou—3,000 bulls and 3,000 cows—in 2017 to encourage more harvest and to prevent overgrazing. On August 3, 2018 the State issued Emergency Order 04-02-18 which reduced the quota to 1,400 bull caribou noting that additional federal harvest can be taken sustainably while allowing for modest growth and subsistence opportunity (ADF&G 2018). In 2018, caribou were largely unavailable during the early Federal subsistence hunt (FC1302), and thus, only 59 caribou were harvested. However, during the late season hunt, 63 caribou were harvested in the first two days (Hankins 2019).

Table 4. Nelchina caribou herd State harvest quota, State harvest, and Federal harvest (FC1302) in Unit 13 (Schwanke and Robbins 2013, Tobey and Schwanke 2009, Tobey and Kelleyhouse 2007, OSM 2019, Robbins 2015, 2017, pers. comm., WinfoNet 2019).

Regulatory Year	Harvest Quota	State Harvest	Federal Harvest (FC1302)	Total Unit 13 Harvest
2001		1,479	498	1,977
2002		1,315	337	1,652
2003		995	322	1,317
2004		1,226	335	1,561
2005		2,772	610	3,382
2006		3,043	570	3,613
2007		1,314	385	1,699
2008		1,315	273	1,588
2009		753	349	1,102
2010	2,300	1,899	451	2,350
2011	2,400	2,032	395	2,427

Regulatory Year	Harvest Quota	State Harvest	Federal Harvest (FC1302)	Total Unit 13 Harvest
2012	5,500	3,718	537	4,255
2013	2,500	2,303	279	2,919
2014	3,000	2,712	237	2,582
2015	5,000	3,402	595	3,997
2016	N/A ^a	5,785	491	6,276
2017	6,000 ^b	4,529	354	4,883
2018	1,400 ^c	1,411	362	1,773

^a Initial harvest quota of 4,000 was lifted and no adjusted quota was announced

^b 3,000 bulls and 3,000 cows

^c Harvest quota for the State season was reduced reduced to 1,400 on August 3, 2018 by Emergency Order 04-02-18

Moose

Historically, Unit 13 has been an important area for moose hunting in Alaska due to its proximity to major human population centers within the state. Throughout the 1960s and early 1970s, annual harvests averaged more than 1,200 bulls and 200 cows (Tobey 2004). During this time, harvests occurred in both fall and winter seasons. By the late 1970s, harvests declined to approximately 775 bulls annually, while cow harvests and the winter season were eliminated, bull:cow ratios were low. In response to declining numbers, ADF&G changed the harvest of any bull to a harvest of one bull with an antler spread of at least 36 inches or 3 brow tines on at least one antler in 1980. This harvest regime helps to promote growth of the moose population. Subsequently, harvests increased, peaking in 1998 when 1,259 moose were reported harvested (Tobey 2004). However, since 1990, State harvest regulations have been revised several times in response to low bull:cow ratios, severe winter mortality, and increased predation. Since 2001, moose harvest and population levels have continued to increase throughout Unit 13, although calf:cow ratios have remained below State management objectives (**Table 2**) (Robbins 2014).

Currently, the Federal season in Unit 13 allows for more opportunity for Federally qualified subsistence users than the State season. A majority of the moose harvest in Unit 13 occurs during the State general hunt from Sept. 1 – Sept. 20 (Del Frate 2017). Moose harvest on Federal public lands, which comprise only a small portion of Unit 13, has been approximately 6-8% of the total reported harvest for the last 10 years. From 2006 to 2018, the total annual moose harvest in Unit 13 has ranged from 776-1,131 moose (**Table 5**). During the last two years, the combined annual harvest has exceeded 1,000 bulls, which is close to the minimum State harvest objective of 1,050 moose. A majority of the annual moose harvest on Federal public lands (75% in 2016) occurs in Unit 13B (Robbins 2015 pers. comm.).

Ahtna Athabascans, which are the indigenous people of the Copper River Basin, have expressed concerns that increased competition and abuse of the Community Harvest System has decreased their ability to harvest moose according to customary and traditional practices (Fall 2017). As a result of the numerous proposals submitted to the BOG on issues surrounding the community caribou and moose hunts, a special meeting on Copper River Basin moose and caribou hunting was held March 18-21, 2017, in Glennallen,

Alaska. A summary of information presented at this meeting can be found at: <http://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=03-18-2017&meeting=glennallen>.

A brief history of the Community Subsistence Hunt (CSH) in the Copper River Basin area as it relates to the harvest history follows (ADF&G 2017b):

The BOG noted that residents of communities in the hunt area (Unit 13) typically travelled shorter distances than non-local hunters and have traditionally hunted moose throughout the year. Harvest by local users was traditionally conducted without regard to antler size restrictions as this was the most efficient way to obtain their food. Hunting regulations sometimes specify specific antler configurations, usually in order to protect the most important segment of the breeding population. In addition, restrictions on the season and antler configuration may also reduce the success of local users. In 2009, the BOG established the CSH, with an earlier Aug. 10 starting date versus Aug. 15, to provide a community-based hunt that had been established and used by the Ahtna people.

Beginning in 2011, any community or group of Alaskan hunters numbering 25 or more could apply for the hunt from Aug. 10-Sept. 20. Up to 70 bulls not meeting the general season antler restrictions could be taken.

In 2013, up to 100 bulls not meeting the general season antler restrictions could be taken in CSH hunt area, which included Unit 11, a portion of Unit 12, and Unit 13. In addition, the BOG provided other regulatory options to provide reasonable opportunities for those individuals and families that chose not to organize as a community. These options included a general hunt with a harvest ticket (with antler restrictions), a winter “any bull” moose hunt, and drawing hunts.

Between 2009 and 2016 the number of groups and participants in the CSH increased from 1 to 73 and 378 to 3,023, respectively (**Table 6**) (ADF&G 2017c). Although the number of groups, households, and participants increased, the CSH total moose harvest (approximately 19%) did not increase at the same rate (**Table 6**) (Del Frate 2017). A majority of the hunters currently participating in the CSH are non-local residents.

The moose population in Unit 13 was considered stable based on the 2015 population estimates and composition surveys (Del Frate 2017). ADF&G recommended an increase in the moose hunts in Units 13A, 13B, and 13C. Mild winters since 2000 have increased overwinter survival and productivity as cows have been in better physical condition and have had higher calving rates (Robbins 2018).

Table 5. State and Federal moose harvest in Unit 13 from 2006-2018 (Toby and Schwanke 2008, 2010, Robbins 2014, 2018, FWS 2019, Hankins 2017a, 2019, WinfoNet 2019).

Year	M	F	U	Estimate Unreport ed	Estimate Illegal	Accidental Road/Train	Federal Harvest	State Harvest	Total
2006/07	665	4	0	25	25	55	47	669	821
2007/08	628	4	0	25	25	75	53	632	810
2008/09	710	1	4	25	25	75	57	715	897
2009/10	857	1	2	25	25	26	61	860	997
2010/11	853	1	0	25	25	113	77	854	1,094
2011/12	868	0	0	25	25	78	80	868	1,076
2012/13	653	5	0	25	25	54	59	658	821
2013/14	665	2	0	25	25	60	50	667	827
2014/15	847	4	0	25	25	49	86	851	1,036
2015/16	958	8	0	25	25	-	85	966	1,101 ^a
2016/17	975	7	0	25	25	-	99	982	1,131 ^a
2017/18	891	7	0	25	25	-	90	898	1,038 ^a
2018/19	702	5	0	25	25		61	707	818 ^a

^a Total does not include road/train mortality data

Table 6. Characteristics of the Community Subsistence Hunt for moose and total harvest in Units 11, 13 and portion of Unit 12 from 2009-2016 (ADF&G 2017b, Del Frate, 2017, Robbins 2018).

Regulatory Year	Number of Groups	Number of Communities	Number of Households	Number of Individuals	CSH Harvest	Total Harvest (Unit 13)
2009/2010	1	19	246	378	98	997
2010/2011^a	-	-	-	-	-	1,094
2011/2012	9	31	416	814	86	1,066
2012/2013	19	29	460	969	98	821
2013/2014	45	41	955	2,066	156	776 ^c
2014/2015	43	41	893	1,771	150	982 ^c
2015/2016	43	43	1,039	1,984	170	1,095 ^c
2016/2017^b	73	48	1,527	3,400	201	1,106 ^c

^a A community hunt was not offered in 2010/2011

^b Harvest is not finalized

^c Total does not include road/train mortality data

Effects of the Proposal

As of 2018, moose populations in Unit 13 are stable to slightly increasing. Current moose harvest on Federal lands ranges from 6-8% of the total harvest and averaged 69 animals from 2006-2018 (**Table 5**). The harvest from the NCH on Federal public lands averaged 15% of total reported harvest of 49,353 from 2001 to 2018. Federal public lands comprise only 13% of the lands in Unit 13. However about 6% of the lands with the unit are within Denali National Park, which is already closed to hunting by non-Federally qualified subsistence users. Thus, it is not expected that limiting harvest to Federally qualified users only on Federal public lands in Unit 13 will have any impact on the moose or caribou populations.

If WSA19-03 is approved, Federally qualified subsistence users hunting moose and caribou on Federal public lands would likely experience less competition from non-Federally qualified users along some road corridors, resulting in increased opportunity and possibly increased success in harvesting moose and caribou during the 2019/2020 hunting season. Harvesting caribou and moose and continuing customary and traditional hunting practices by Federally qualified subsistence users in Unit 13 is difficult due to the influx of hunters from outside of the area, which has been an issue for years. In addition, a closure may address some local concerns regarding safety, especially when considering youth access and opportunity. However, closure to Federal public lands will not preclude access across Federal public lands by non-Federally qualified users. Thus the closure may not alleviate concerns by Federally qualified users on disturbance during hunting or deflecting caribou and moose away from the area.

If WSA19-03 is approved, non-Federally qualified users would have to hunt moose on State or private lands under State regulations. For some this would prohibit them from hunting in areas on Federal public lands that they have historically used to harvest caribou and moose. In addition non-Federally qualified users may have to travel further to hunt and pack out moose and caribou as some of the Federal public lands have relatively easy access due to their proximity to the Richardson and Denali highways.

Closure of Federal public lands to non-Federally qualified users in Unit 13 is in accordance with Section 815(3) of ANILCA, which allows restricting take for nonsubsistence uses when necessary for the conservation of healthy populations, for the reasons set forth in Section 816 (which includes public safety), to continue subsistence uses of such populations, or pursuant to other applicable law. It is also consistent with the Board's closure policy, which allows for closures to non-Federally qualified users due to conservation reasons, to allow for continuation of subsistence uses, and for public safety, among others (**Appendix 2**).

OSM CONCLUSION

Support Temporary Special Action WSA19-03.

Justification

Under the Board's closure policy, the Board may adopt closures on Federal public lands if necessary for the conservation of healthy populations of fish and wildlife, to ensure the continuation of subsistence uses by Federally qualified subsistence users, for public safety, for administrative reasons, or pursuant to other applicable law. The high use of Unit 13 for moose and caribou hunting by non-Federally qualified

hunters has made it more difficult for local subsistence users to harvest moose and caribou for subsistence uses. Given that only 13% of the land in Unit 13 consist of Federal public lands, it is unlikely that the proposed closure will affect the abundance or composition of the moose and caribou populations, which are currently stable. If approved, this would help ensure priority access to moose and caribou on Federal public lands in Unit 13 by Federally qualified subsistence users. It might also reduce user conflicts, alleviate some safety concerns, and allow local subsistence users to continue customary and traditional hunting practices.

LITERATURE CITED

ADF&G. 2008. Caribou Annual Survey and Inventory. Federal Aid Annual Performance Report Grant W-33-6, Anchorage, AK.

ADF&G 2010a. Overview of Nelchina Caribou Herd Regulation and Harvest History. Special Publication No. BOG 2010-05.

ADF&G 2010b. Hunting and Trapping Emergency Order No. 04-1-10. ADF&G. Glennallen, AK.

ADF&G. 2017a. Harvest General Reports database.

https://secure.wildlife.alaska.gov/index.cfm?adfg=harvest.main&_ga=1.109733509.1089519111.1465854136, accessed March 6, 2017. Anchorage, AK.

ADF&G. 2017b. Alaska Department of Fish and Game Staff Comments – Updated 3/7/2017; Special Meeting on Copper Basin Area Moose and Caribou Hunting, Alaska Board of Game Meeting, Glennallen, AK. 124 pp.

ADF&G. 2017c. Overview of Use Patterns, Regulations, and Harvest History of Moose in Game Management Unit 13. Alaska Department of Fish and Game Division of Subsistence. Special Publication No. 2017-04. Anchorage, AK.

ADF&G 2018. Hunting and Trapping Emergency Order No. 04-2-18. ADF&G. Glennallen, AK.

Ballard, W.B., J.S. Whitman, and C.L. Gardner. 1987. Ecology of an exploited wolf population in southcentral Alaska. *Wildlife Monographs* 98: 54 pp.

Bishop, R.H. and R.A. Rausch, 1974. Moose population fluctuations in Alaska, 1950-1972. *Le Naturaliste Canadien*. 101:559-593.

Bubenik, A. B. 2007. Behavior. Pages 173-222 in A.W. Franzmann, C.C. Schwartz, R.E. McCabe, editors. *Ecology and management of the North American moose*. 2nd ed. University Press of Colorado, Boulder, CO.

Coady J.W. 1974. Influence of snow on the behavior of moose. *Naturaliste Canadien* 101:417-436.

Coady, J.W. 1982. Moose. Pages 902-922 in J.A. Chapman and G.A. Feldhamer, editors. *Wild Mammals of North America*. Johns Hopkins University Press, Baltimore, MD.

de Laguna, F. and C. McClellan. 1981. Ahtna. Pages 641-663 in J. Helm, ed. *Handbook of North American Indians*. Vol. 6, Subarctic. Smithsonian Institution, Washington DC.

- Del Frate, G. 2017. Management of Moose and Caribou in the Copper Basin Subsistence Hunt Area – power point presentation at the Special Board of Game Meeting on Copper Basin Area Hunting and Subsistence, March 18-21, 2017. Glennallen, AK. 25 pp.
- Fall, J.A. 2017. Overview of Use Patterns, Regulations, and Harvest History of Moose in GMU 13 (Copper Basin) – power point presentation at the Special Board of Game Meeting on Copper Basin Area Hunting and Subsistence, March 18-21, 2017. Glennallen, AK. 25 pp.
- FWS. 2019. Harvest database. Office of Subsistence Management, FWS, Anchorage, AK.
- Hankins, J. 2017a. Bureau of Land Management, Glennallen Field Agency, Report to the South Central Alaska Subsistence Regional Advisory Council, November 6-7, 2017. Glennallen, AK. 2 pp.
- Hankins, J. 2017b. Wildlife Biologist. Personal communication. Phone, email. BLM. Glennallen, AK.
- Hankins, J. 2019. Bureau of Land Management, Glennallen Field Agency, Report to the South Central Alaska Subsistence Regional Advisory Council, March 26-27, 2019. Glennallen, AK. 3 pp.
- Haynes, T.L. and W.E. Simeone. 2007. Upper Tanana Ethnographic Overview and Assessment, Wrangell St. Elias National Park and Preserve. Anchorage: Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 325. Anchorage, AK.
- Hatcher, H. 2019. Wildlife biologist. Personal communication: email. ADF&G. Glennallen, AK.
- Holen, D., S. M. Hazell, and D. S. Koster, editors. 2012. The Harvest and Use of Wild Resources by Communities in the Eastern Interior, Alaska, 2011. Alaska Department of Fish and Game Division of Subsistence. Technical Paper No. 372. Anchorage, AK.
- Holen, D., S. M. Hazell, and G. Zimpelman, editors. 2015. The Harvest and Use of Wild Resources in Selected Communities of the Copper River Basin and East Glenn Highway, Alaska, 2013. Alaska Department of Fish and Game Division of Subsistence. Technical Paper No. 405. Anchorage, AK.
- Innes, R. J. 2010. *Alces americanus* in Fire Effects Information System, (online) U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). <http://www.fs.fed.us/database/feis> retrieved March 11, 2015.
- Kukkonen, M. and G. Zimpelman. 2012. Subsistence Harvests and Uses of Wild Resources in Chistochina, Alaska, 2009. Anchorage: Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 370.
- La Vine, R., M. Kukkonen, B. Jones, and G. Zimpelman, editors. 2013. Subsistence Harvests and Uses of Wild Resources in Copper Center, Slana/Nabesna Road, Mentasta Lake, and Mentasta Pass, Alaska, 2010. Alaska Department of Fish and Game Division of Subsistence. Technical Paper No. 380. Anchorage, AK.
- La Vine, R. and G. Zimpelman, editors. 2014. Subsistence Harvests and Uses of Wild Resources in Kenny Lake/Willow Creek, Gakona, McCarthy, and Chitina, Alaska, 2012. Alaska Department of Fish and Game Division of Subsistence. Technical Paper No. 394. Anchorage, AK.
- Miquelle, D.G. 1991. Are moose mice? The function of scent urination in moose. *American Naturalist* 138:460-477.

OSM. 1995. Staff Analysis P95-14. Pages 85-92 *in* Federal Subsistence Board Wildlife Meeting Materials, April 10-14, 1995. Office of Subsistence Management, USFWS, Anchorage, AK. 488 pp.

OSM. 1998a. Staff analysis P98-36. Pages 201–209 *in* Federal Subsistence Board Meeting Materials May 4–May 8, 1998. Office of Subsistence Management, FWS. Anchorage, AK. 1449 pp.

OSM. 1998b. Staff analysis P998-34/35. Pages 180–200 *in* Federal Subsistence Board Meeting Materials May 4–May 8, 1998. Office of Subsistence Management, FWS. Anchorage, AK. 1449 pp.

OSM. 2001. Staff analysis P01-07. Pages 4–14 *in* Federal Subsistence Board Meeting Materials May 9–May 10, 2001. Office of Subsistence Management, FWS. Anchorage, AK. 610 pp.

OSM. 2002. Staff analysis WP02-17. Pages 168–184 *in* Federal Subsistence Board Meeting Materials May 13–May 15, 2002. Office of Subsistence Management, FWS. Anchorage, AK. 676 pp.

OSM. 2003. Staff analysis WP03-026. Pages 147–166 *in* Federal Subsistence Board Meeting Materials May 20–May 22, 2003. Office of Subsistence Management, FWS. Anchorage, AK. 780 pp.

OSM. 2004a. Staff Analysis WP04-25. Pages 176-186 *in* Federal Subsistence Board Wildlife Meeting Materials, May 18-21, 2004. Office of Subsistence Management. USFWS, Anchorage, AK. 1041 pp.

OSM. 2004b. Staff Analysis WP04-26. Pages 198-207 *in* Federal Subsistence Board Wildlife Meeting Materials, May 18-21, 2004. Office of Subsistence Management. USFWS, Anchorage, AK. 1041 pp.

OSM. 2004c. Staff Analysis WP04-27. Pages 189-198 *in* Federal Subsistence Board Wildlife Meeting Materials, May 18-21, 2004. Office of Subsistence Management. USFWS, Anchorage, AK. 1041 pp.

OSM. 2005. Staff analysis WP05-08. Pages 43–54 *in* Federal Subsistence Board Meeting Materials May 3–May 4, 2005. Office of Subsistence Management, FWS. Anchorage, AK. 368 pp.

OSM. 2012. Staff analysis WP12-25. Pages 589–603 *in* Federal Subsistence Board Meeting Materials April 6–April 10, 2012. Office of Subsistence Management, FWS. Anchorage, AK. 1020 pp.

OSM. 2016a. Staff Analysis WSA16-05. Office of Subsistence Management, USFWS, Anchorage, AK. 948 pp.

OSM. 2016b. Staff Analysis WP16-16. Pages 89-110 *in* Federal Subsistence Board Wildlife Meeting Materials, April 12-14, 2004. Office of Subsistence Management, USFWS, Anchorage, AK. 948 pp.

OSM. 2016c. Staff analysis WP16-17. Pages 111-123 *in* Federal Subsistence Board Meeting Materials April 12-14, 2016. Office of Subsistence Management, FWS. Anchorage, AK. 948pp.

OSM. 2016d. Staff analysis WP16-19. Pages 525-536 *in* Federal Subsistence Board Meeting Materials April 12-14, 2016. Office of Subsistence Management, FWS. Anchorage, AK. 948pp.

OSM. 2018a. Staff analysis WP18-19. Pages 736-802 *in* Federal Subsistence Board Meeting Materials April 10-13, 2018. Office of Subsistence Management, FWS. Anchorage, AK. 1488pp.

OSM. 2018b. Staff analysis WP18-18. Pages 702-735 *in* Federal Subsistence Board Meeting Materials April 10-13, 2018. Office of Subsistence Management, FWS. Anchorage, AK. 1488pp.

OSM. 2019. Federal permits database. Office of Subsistence Management, USFWS. Anchorage, AK. Accessed October 16, 2017.

Peterson, R.O., J.D. Woolington, and T.N. Bailey. 1984. Wolves of the Kenai Peninsula, Alaska. Wildlife Monographs 88. 52 pp.

Reckord, H. 1983. Where raven stood: Cultural resources of the Ahtna region. University of Alaska Fairbanks, Occasional Paper Number 35. Anthropology and Historic Preservation Cooperative Park Studies Unit. Fairbanks, AK.

Rinaldi, T.A. 2019. Wildlife biologist. Personal communication: email. ADF&G. Palmer, AK.

Robbins, W.F. 2014. Unit 13 moose. Chapter 12, Pages 12-1 through 12-14 in P. Harper and L.A. McCarthy, editors. Moose management report of survey and inventory activities. 1 July 2011-30 June 2013. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2014-6, Juneau, AK.

Robbins, F.W. 2015. Wildlife biologist. Personal communication. Phone, email. ADF&G. Glennallen, AK.

Robbins, F.W. 2016a. Wildlife biologist. Personal communication. Phone, email. ADF&G. Glennallen, AK.

Robbins, F.W. 2016b. Wildlife biologist. Personal communication. Phone. ADF&G. Glennallen, AK.

Robbins, F.W. 2017. Wildlife biologist. Personal communication: email. ADF&G. Glennallen, AK.

Robbins, W.F. 2018. Moose management report and plan, Game Management Unit 13: Report period 1 July 2010-30 June 2015, and plan period 1 July 2015-30 June 2020. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2018-47, Juneau, AK.

Schwanke, R.A. 2011. Unit 13 and 14B caribou management report. Pages 90-108 in P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2008 –30 June 2010. ADF&G. Juneau, AK.

Schwanke, R.A. 2012. Unit 13 wolf management report. Pages 92-100 in P. Harper, editor. Wolf management report of survey and inventory activities, 1 July 2008–30 June 2011. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2012-4. ADF&G, Juneau, AK.

Schwanke, R.A. and W.F. Robbins. 2013. Unit 13 and 14B caribou management report. Pages 104-124 in P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2010 –30 June 2012. ADF&G. ADF&G/DWC/SMR-2013-3, Juneau, AK.

SCSRAC. 2015. Transcripts of the Southcentral Subsistence Regional Advisory Council proceedings, October 21, 2015. Copper Center, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

Simeone, W.E. 2006. Some Ethnographic and Historical Information on the Use of Large Land Mammals in the Copper River Basin. National Park Service Resource Report, NPS/AR/CRR-2006-56. Copper Center, AK. 56 pages.

Testa, J.W. 2004. Population dynamics and life history trade-offs of moose (*Alces alces*) in Southcentral Alaska. Ecology 85(5):1439-1452.

- Tobey, B. 2003. Units 13 and 14B caribou management report. Pages 108-124 in C. Healy, editor. Caribou management report of survey and inventory activities 1 July 2000 – 30 June 2002. ADF&G. Juneau, Alaska.
- Tobey, R. W. 2004. Unit 11 moose management report. Pages 121–129 in C. Brown, editor. Moose management report of survey and inventory activities 1 July 2001–30 June 2003. ADF&G. Project 1.0. Juneau, AK.
- Tobey B. and R. Kelleyhouse. 2007. Units 13 and 14B caribou management report. Pages 83-99 in P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2004-30 June 2006. ADF&G. Juneau, AK.
- Tobey, R. W. and R.A. Schwanke. 2008. Unit 13 moose management report. Pages 151-164 in P. Harper, editor. Moose management report of survey and inventory activities 1 July 2005-30 June 2007. ADF&G. Project 1.0. Juneau, AK.
- Tobey, B. and R. Schwanke. 2009. Units 13 and 14B caribou management report. Pages 83-98 in P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2006-30 June 2008. Alaska Department of Fish and Game. Juneau, AK.
- Tobey, R. W. and R.A. Schwanke. 2010. Unit 13 moose management report. Pages 150-164 in P. Harper, editor. Moose management report of survey and inventory activities 1 July 2007-30 June 2009. ADF&G. Project 1.0. Juneau, AK.
- Townsend, J.B. 1981. Tanaina. Pages 623-640 in J. Helm, ed. Handbook of North American Indians. Vol. 6, Subarctic. Smithsonian Institution, Washington DC.
- Walters, C.J., M. Stocker, and G.C. Haber. 1981. Simulation and optimization models for wolf-ungulate system. Pages 317-337 in C.W. Fowler and T.D. Smith eds., Dynamics of large mammal populations, John Wiley and Sons, New York.
- WinfoNet. 2019. Wildlife Information Network (WinfoNet). Alaska Department of Fish and Game. Anchorage, AK. <https://winfonet.alaska.gov/>.
- Zagoskin, L.A. 1967. Lieutenant Zagoskin's Travels in Russian America. 1842-1844. Henry N. Michael. Ed (*Anthropology of the North: Translations from Russian Sources 7*) Toronto: Published for the Arctic Institute of North American by University of Toronto Press.

Appendix 1



THE STATE
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GOVERNOR MICHAEL J. DUNLEAVY

Department of Fish and Game

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MEMORANDUM

TO: Anthony Christensen, Chair,
Federal Subsistence Board

DATE: May 31, 2019

PHONE: 267-2190

FROM: Ben Mulligan *BSM*
Deputy Commissioner

SUBJECT: Wildlife Special Action
Request 19-03

The Alaska Department of Fish and Game (ADF&G) appreciates the opportunity to provide comments on the Special Action request WSA19-03 regarding user access to federal public lands in GMU13 for moose and caribou hunting in regulatory year 2019.

Caribou

ADF&G manages the Nelchina caribou herd with the objective of 35,000–40,000 caribou after the fall hunting season. The strategy behind this objective is to maintain the herd below carrying capacity to prevent overgrazing of summer or winter range and allow for a relatively stable level of harvest annually. Caribou herds typically display cyclical patterns of increasing and declining population abundance. When populations are above management objectives significant numbers of caribou may be harvested, but if population growth is not curbed the populations will inevitably decline after the herd exceeds the carrying capacity of its range. These precipitous declines are often followed by extended periods of little or no harvest to allow a herd to recover to a level where sustainable harvest may be allowed. The current Nelchina caribou herd management strategy has been in place since the mid-1990s with the intent of reducing the extent to which the herd abundance fluctuates. This approach allows for annual harvest and predictability for hunters without prolonged periods of little or no harvest.

The mild winters and productive summers of 2014, 2015, and 2016 resulted in high productivity within the Nelchina herd and population abundance increased steadily. A significant increase in harvest was necessary to stop population growth and reduce caribou abundance to within

population objectives before herd grazing resulted in negative effects on forage nutritional availability on the herd's range.

Fall population estimates are used to predict abundance for the following summer, and the appropriate number of draw permits are issued in February for the following hunting season (regulatory year, July 1-June 30). The department increased the number of draw permits for RY16, which was the only regulatory option to increase caribou harvest for the Nelchina caribou herd at that time. Public outreach efforts were utilized to encourage harvest; overall harvest (state and federal combined) increased from 4,169 caribou in RY15 to 6,296 caribou in RY16. This was a period of overabundance when herd size reduction was desired. This level of harvest should not be expected annually for Nelchina caribou hunters. Despite increased harvest in RY 16 herd abundance remained well above population objectives after both the fall and winter hunts and remained at its previous level in 2017 (the herd was not reduced). The maximum number of draw permits were issued for RY17 and 4,890 caribou were harvested. Following the fall hunt, Nelchina caribou abundance remained above population objectives by more than 1,400 animals. Given this information, the maximum number of draw permits were issued for RY18.

Over the winter of 2017/2018, adult mortality was higher than predicted and calf recruitment was lower than average. Additionally, in the spring of 2018 the Nelchina herd displayed lower parturition rates than it had in previous years. These factors, including the 2018 calf crop being lower than in recent years, resulted in an abundance estimate for the summer of 2018 that was lower but still above the lower end of the population objectives. The reduction in abundance in 2018 was a natural fluctuation that, while not predictable in terms of precise timing, was expected if herd abundance remained above objectives. Had harvest been reduced in RY15, RY16, or RY17, the natural reduction in Nelchina caribou abundance in 2018 may have been much more drastic than observed because of limited forage resources. The herd has returned to a more manageable size within population objectives and permit numbers and harvest levels will return to more typical levels.

With the reduction of the herd in 2018, an overall quota of 5% of the herd (1,800 animals) was set to utilize harvestable surplus while still allowing for herd growth. Predicting a federal harvest of 400 animals and a CC001 harvest of 150 bulls, quotas were set for the remaining hunts as follows (Table 1):

- 500 bulls for RC561
- 500 bulls for RC562
- 250 bulls for DC485

The Unit 13 federal caribou season FC1302 opened on August 1, 2018 with no competition from state hunters. CC001 (838 permits) opened on August 10th and remained open until September 20th. To date, only 376 CC001 hunters have reported hunting in RY18. RC561 opened on August 10th as well, but the quota was achieved, and the hunt was closed by emergency order on August 18th. Less than 1,800 RC561 hunters hunted Unit 13 over this time period. DC485 opened on August 20th; the quota was met, and the hunt was closed by emergency order on August 26th; 1,223 DC485 hunters hunted in Unit 13 over this time period. Only federal hunters and CC001 hunters were in the field from August 27th until September 1st when RC562 opened. The quota for RC562 was reached at the close of the regularly scheduled season on September 20th; 2,080 RC562 hunters hunted Unit 13 over this time period. Only federal hunters remained in the field from September 21st until the fall season closed on September 30th. CC001 was the only state hunt to reopen for the winter season on October 21st when the federal season also reopened. State

hunts, however, were limited to bulls only while the federal hunts remained either sex. Both hunts remained open until March 31st. Caribou migrated across federal lands in Unit 13 in late October and early November in 2018. Only 63 caribou were harvested by CC001 hunters during the winter season. A total of 260 caribou were harvested by non-subsistence users in RY18. Subsistence users took 1,585 caribou, and 19% of the total harvest of Nelchina caribou was taken on FC1302 permits.

Table 1. Unit 13 caribou hunt structure, RY18.

Hunt	Bag Limit	Permits	Quota	Predicted Harvest	Days Open	Hunted	Actual Harvest
RC561	Bull Only	4,586	500	500	9	1,795	530
RC562	Bull Only	4,181	500	500	20	2,080	528
CC001	Bull Only	838	400	150	204	376*	167
DC485	Bull Only	5,000	250	250	7	1,223	260
FC1302	Bull or Cow	3,082	-	400	223	TBD*	360
				17,687	1,800	>5,474	1,845

*Total number of hunters for RY18 has not been finalized; reports as of 5/21/19

For RY19 the federal caribou season will open August 1st and close on September 30th. The new youth caribou hunt (YC495; 200 permits) will also open on August 1st – closing on August 5th. No state hunters will be in the field from August 6th through the 9th, nor from September 21st through September 30th, when only federal hunters will be in the field. On August 10th CC001 will open (810 permits), as well as RC561 (2,790 permits). RC561 will close on August 31st and RC562 will open on September 1st (2,884 permits). DC485 will open on August 29th (399 permits). This hunt structure will result in significantly less caribou hunters in Unit 13 at any given time, compared to the previous seven seasons. Harvestable surplus for RY19 is expected to be similar to the harvestable surplus in RY18, and it is likely that CC001 will be the only state hunt to reopen for the winter season on October 21st.

Moose

Following the standard moose hunt structure for Unit 13, the federal season for RY19 will open on August 1st and will close on September 20th. No other moose hunters will be in the field from August 1st until CM300 opens on August 20th. There are 2,140 CM300 permits for RY19, but in RY18 only 662 CM300 hunters actually hunted out of 2,331 permits issued. On September 1st the state general moose season will open, as will DM324 (5 permits) and DM335–DM339 (115 permits combined). All moose hunts will close on September 20th.

Management Strategies

Federally qualified subsistence hunters wishing to harvest moose and caribou in Unit 13 can and do participate in subsistence and general season hunts for moose and caribou offered by the State of Alaska, which allow these hunters to access wildlife resources on all public lands in Unit 13. Federally qualified subsistence caribou hunters in Unit 13 may choose to hunt state lands in addition to federal lands by participating in Tier I registration hunts (RC561 or RC562) or the

Community Subsistence Harvest opportunity (CC001). Federally qualified subsistence moose hunters in Unit 13 may choose to hunt state lands in addition to federal lands by participating in the general season moose hunt (GM000) or the Community Subsistence Harvest opportunity (CM300).

The Amount Necessary for Subsistence (ANS) for caribou in Unit 13 is 600–1,000 and the ANS for moose in Unit 13 is 300–600. Harvestable surplus and harvest for both caribou and moose in Unit 13 were well above the ANS in RY18 with 1,845 caribou and at least 790 moose harvested. Total moose harvest for RY18 in Unit 13 has not been finalized, as harvest data continues to be coded for GM000. Federal permit holders harvesting caribou in Unit 13 where caribou are available on federal subsistence hunt areas annually harvest 7%–19% of the total Nelchina caribou harvest (most recent five-year average = 11%). Federal permit holders harvesting moose on federal lands in Unit 13 account for 8%–10% of the total moose harvest in Unit 13 (most recent five-year average = 9%).

Federal hunt data does not support the interpretation that the number of state hunters in the field negatively impacts either moose or caribou hunt success on federal permits in Unit 13. In RY10–RY13 the average number of annual state moose hunters in Unit 13 was 4,602 (Table 2). This average increased to 5,190 state moose hunters for RY14–RY17. Federal permit success during those time periods actually increased from a four-year average of 5% to a four-year average of 7%; federal hunt success increased from a four-year average of 10% to 13%; federal catch per unit effort (CPUE 100dy) also increased from a four-year average of 1.53 moose per 100 days of effort to a four-year average of 2.15 moose per 100 days of effort. In RY18 the number of state moose hunters in Unit 13 dropped to 4,553, but for all federal moose permits issued success also dropped to 4%, of those federal permits hunted success dropped to 10%, and federal CPUE dropped to 1.7 moose per 100 days of effort.

Table 2. Unit 13 Federal Moose Harvest and State Moose Hunter Numbers

RY	FM1301 Harvest	FM1301 Permits	FM1301 Hunted	Permit Success	Hunt Success	State Hunters	Total Unit 13 Harvest	% Harvest on FM1301 Permits	FM1301 CPUE (100dy)
2010	77	1,172	669	7%	12%	4,239	777	10%	1.4
2011	80	1,327	680	6%	12%	4,156	826	10%	1.8
2012	59	1,292	645	5%	9%	4,896	625	9%	1.4
2013	50	1,205	535	4%	9%	5,116	624	8%	1.5
2014	86	1,313	656	7%	13%	4,649	845	10%	2.1
2015	85	1,330	699	6%	12%	5,039	966	9%	2
2016	99	1,385	685	7%	14%	5,866	983	10%	2.3
2017	90	1,399	686	6%	13%	5,208	905	10%	2.2
2018	61	1,357	631	4%	10%	4,553*	790*	8%	1.7

*Total number of GM000 hunters and harvest for RY18 in Unit 13 has not been finalized; reports as of 5/21/2019

Similarly, for RY10–RY13 the four-year average for number of state caribou hunters in Unit 13 was 4,849 (Table 3). This four-year average increased to 7,214 state caribou hunters for RY14–RY17. Permit success during those time periods remained stable with four-year averages of 14% for both time periods; hunt success remained stable with four-year averages of 28% for both time periods; catch per unit effort (CPUE 100dy) decreased slightly from a four-year average of 4.80

caribou per 100 days of effort to a four-year average of 4.62 caribou per 100 days of effort. In RY18 the total number of state caribou hunters dropped to roughly 5,474 hunters; while federal reporting is not complete at this time to provide hunt success or CPUE for RY18, the overall permit success actually dropped to 11% with the decrease of state hunters in the field. Federal hunt success for caribou is likely impacted more by the timing of caribou migration across federal lands than by the number of state hunters in the field.

cc: Eddie Grasser, Director, ADF&G, Division of Wildlife Conservation
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Cheryl Brooking, Assistant Attorney General, Department of Law
George Pappas, State Liaison, Office of Subsistence Management

Appendix 2

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

FEDERAL SUBSISTENCE BOARD

Adopted August 29, 2007

PURPOSE

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

INTRODUCTION

Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA) establishes a priority for the taking of fish and wildlife on Federal public lands and waters for non-wasteful subsistence uses over the taking of fish and wildlife on such lands for other purposes (ANILCA Section 804). When necessary for the conservation of healthy populations of fish and wildlife or to continue subsistence uses of such populations, the Federal Subsistence Board is authorized to restrict or to close the taking of fish and wildlife by subsistence and non-subsistence users on Federal public lands and waters (ANILCA Sections 804 and 815(3)). The Board may also close Federal public lands and waters to any taking of fish and wildlife for reasons of public safety, administration or to assure the continued viability of such population (ANILCA Section 816(b)).

BOARD AUTHORITIES

- ANILCA Sections 804, 814.815(3), and 816.
- 50 CFR Part 100 and 36 CFR Part 242, Section .10(d)(4).

POLICY

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

populations, or for public safety or administrative reasons, or ‘pursuant to other applicable law.’ Any individual or organization may propose a closure. Proposed closures of Federal public lands and waters will be analyzed to determine whether such restrictions are necessary to assure conservation of healthy populations of fish and wildlife resources or to provide a meaningful preference for qualified subsistence users. The analysis will identify the availability and effectiveness of other management options that could avoid or minimize the degree of restriction to subsistence and non-subsistence users.

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

Decision Making

The Board will:

- Proceed on a case – by – case basis to address each particular situation regarding closures. In those cases for which conservation of healthy populations of fish and wildlife resources allows, the Board will authorize non-wasteful subsistence taking.
- Follow the statutory standard of "customary and traditional uses." Need is not the standard. Established use of one species may not be diminished solely because another species is available. These established uses have both physical and cultural components, and each is protected against all unnecessary regulatory interference.
- Base its actions on substantial evidence contained within the administrative record, and on the best available information; complete certainty is not required.
- Consider the recommendations of the Regional Advisory Councils, with due deference (ANILCA § 805 (c)).
- Consider comments and recommendations from the State of Alaska and the public (ANILCA § 816(b)).

Conditions for Establishing or Retaining Closures

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

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

- a) When a fish or wildlife population is not sufficient to provide for both Federally qualified subsistence users and other users, use by non-Federally qualified users may be reduced or prohibited, or
 - b) When a fish or wildlife population is insufficient to sustain all subsistence uses, the available resources shall be apportioned among subsistence users according to their:
 - 1) Customary and direct dependence upon the populations as the mainstay of livelihood.
 - 2) Local residency, and
 - 3) Availability of alternative resources, or
 - c) When a fish or wildlife population is insufficient to sustain any use, all uses must be prohibited.
- Closures are necessary to ensure the continuation of subsistence uses by Federally qualified subsistence users.
 - Closures are necessary for public safety.
 - Closures are necessary for administrative reasons.
 - Closures are necessary "pursuant to other applicable law."

Considerations in Deciding on Closures

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

- The biological history (data set) of the fish stock or wildlife population.
- The extent of affected lands and waters necessary to accomplish the objective of the closure.
- The current status and trend of the fish stock or wildlife population in question.
- The current and historical subsistence and non-subsistence harvest, including descriptions of harvest amounts effort levels, user groups, and success levels.
- Pertinent traditional ecological knowledge.
- Information provided by the affected Regional Advisory Councils and Alaska

Department of Fish and Game.

- Relevant State and Federal management plans and their level of success as well as any relationship to other Federal or State laws or programs.
- Other Federal and State regulatory options that would conserve healthy populations and provide a meaningful preference for subsistence, but would be less restrictive than closures.
- The potential adverse and beneficial impacts of any proposed closure on affected fish and wildlife populations and uses of lands and waters both inside and outside the closed area.
- Other issues that influence the effectiveness and impact of any closure.

Reviews of Closures

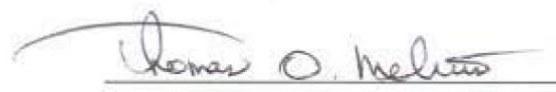
A closure should be removed as soon as practicable when conditions that originally justified the closure have changed to such an extent that the closure is no longer necessary. A Regional Council, a State or Federal agency, or a member of the public may submit, during the normal proposal period, a proposal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

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

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


Chair, Federal Subsistence Board


Board Member, Bureau of Indian Affairs


Board Member, U.S. Fish and Wildlife Service


Board Member, U.S. Forest Service



Board Member, Na

