

# **YUKON-KUSKOKWIM DELTA Federal Subsistence Regional Advisory Council**



USFWS

Kisaralik River in winter.

**Meeting Materials**  
March 2–4, 2010  
Bethel

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**Yukon-Kuskokwim Delta Subsistence Regional Advisory Council**  
**March 2, 3, and 4, 2010**  
**Moravian Church, Bethel, Alaska**

**DRAFT AGENDA**

Public Comments: Public comments are welcome for each agenda item and for regional concerns not included on the agenda. The Council appreciates hearing your concerns and knowledge. Please fill out a comment form to be recognized by the Council chair. Time limits may be set to provide opportunity for all to testify and keep the meeting on schedule.

Please Note: These are estimated times and the agenda is subject to change. Contact staff for the current schedule. Evening sessions are at the call of the chair.

*Meeting 9:00 a.m. – 5:00 p.m. each day or until meeting concludes.*

1. **Call to Order** (*Lester Wilde, Chair*)
2. **Roll Call and Establish Quorum** (*Robert E. Aloysius Secretary*) .....4
3. **Invocation** (*Local Pastor or an Elder*)
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5. **Welcome Remarks** (*Local community leader*)
6. **Housekeeping Items and Announcements** (*Alex Nick*)
7. **Elect Officers and Committee Members** (*Council*)
  - a. Chair
  - b. Vice Chair
  - c. Secretary
  - d. Yukon-Kuskokwim Delta Coordinating Fisheries Committee (CFC)
    1. Lower Yukon River CFC member appointments
    2. Lower Kuskokwim River CFC member appointments
    3. Lower Kuskokwim Salmon Working Group member appointments
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9. **Regional Advisory Council Concerns and Comments** (*Council*)

**PRESENTATION PROCEDURES FOR PROPOSALS**

- 1. Introduction of proposals and analyses
- 2. Alaska Department of Fish and Game comments
- 3. Federal, State, and Tribal agency comments
- 4. Interagency Staff Committee comments
- 5. Fish and Game Local Advisory Committee comments
- 6. Summary of written public comments
- 7. Public testimony
- 8. Regional Advisory Council deliberations, recommendations and justifications

**10. Review and Make Recommendations on Fisheries Proposals (Councils)**

- a. FP09-12 and FP09-13

**11. Review and Make Recommendations on Wildlife Proposals (Council)**

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\*Crossover between BB/WI/YK

\*\*Crossover between YK/SP

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- 13. Subsistence Wildlife Reports/Issues**
  - a. Large Mammal Subsistence Harvest Survey (*George Weekley*)
- 14. Subsistence Fisheries Reports/Issues**
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- 15. Call for 2011–2013 Fisheries Proposals**
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  - h. Tribal Representatives
  - i. Municipal Government representatives
  - j. ANCSA Village Corporation representatives
  - k. Other agencies/organizations
- 17. Council Closing Comments**
- 18. Adjourn**

**For more information**, contact Alex Nick, Regional Council Coordinator at (907) 543-1037, 1-800-621-5804 ext. 257, by fax at 907-543-4413, or by e-mail at alex\_nick@fws.gov.

**Special accommodation requests for people with disabilities:** Contact the Regional Council Coordinator at least 72 hours prior to the meeting.

**Teleconferencing:** Contact the Office of Subsistence Management at 1-800-478-1456, 907-786-3888, or 907-786-367 at least 72 hours prior to the meeting to receive this service. Please notify the Regional Council Coordinator which agenda topic interests you and whether you wish to testify.

**Thank you for participating** in this meeting of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council.

## REGION 5—Yukon-Kuskokwim Delta Regional Advisory Council

Seat	Yr Apptd <i>Term Expires</i>	Member Name & Village
1	2004 <b>2010</b>	<b>William F. Brown</b> Eek
2	1997 <b>2010</b>	<b>James A. Charles</b> Tuntutuliak
3	2001 <b>2010</b>	<b>Raymond J. Oney</b> Alakanuk
4	2007 <b>2010</b>	<b>Paul Manumik, Sr.</b> Nunam Iqua
5	1993 <b>2011</b>	<b>Harry O. Wilde Sr.</b> Mountain Village
6	<b>2011</b>	<b>Vacant</b>
7	1999 <b>2011</b>	<b>Mary M. Gregory</b> Bethel
8	2008 <b>2010</b>	<b>Elias L. Kelly</b> Pilot Station
9	1996 <b>2011</b>	<b>Lester Wilde Sr.</b> Hooper Bay
10	2009 <b>2012</b>	<b>Aloysius B. Unok</b> Kotlik
11	2003 <b>2012</b>	<b>Greg J. Roczicka</b> Bethel
12	2003 <b>2012</b>	<b>Robert E. Aloysius</b> Kalskag
13	2006 <b>2012</b>	<b>John W. Andrew</b> Kwethluk

**Yukon-Kuskokwim Delta Subsistence Regional Advisory Council  
Minutes from October 2-3, 2009 Meeting**

Long House Bethel Inn  
751 3<sup>rd</sup> Avenue  
Bethel, Alaska

**Call to Order**

Meeting was called to order by Lester Wilde, Chair

**Invocation**

Invocation was given by Mr. James Charles.

**Roll Call and Establish Quorum**

Roll call by Mr. Robert E. Aloysius, Secretary.

*Members present:* Lester Wilde; Robert E. Aloysius; John W. Andrew; William F. Brown; James A. Charles; Mary M. Gregory; Edgar P. Hoelscher; Elias L. Kelly; Joseph P. Mike; Raymond J. Oney; Greg J. Roczicka; Harry O. Wilde, Sr.

*Members absent:*

Paul Manumik, Sr. of Nunam Iqua

*Meeting Participants:* Barbara Armstrong, OSM; Tom Kron, OSM; Pippa Kenner, OSM; Steve Hayes, ADF&G; Gene Sandone, Sandone Consulting; Jeff Estensen, ADF&G; John Gerken, ADF&G; George Pappas, ADF&G; Richard Cannon, OSM; Nancy Swanton, NPS; Patricia Petrivelli, BIA; Lily Ray, ADF&G; Alissa Joseph; James Nicori, Kwethluk IRA; Louie Andrew, Yukon Delta NWR; Jennifer Hooper, AVCP; Phillip Peter, Akiachak IRA; Daniel George, Akiachak IRA; Billy McCann, Bethel;

*Court Reporter:* Tina Hile

**Welcome Remarks and Introductions**

Lester Wilde, Chair provided brief welcome remarks and welcome all to Bethel and Council meeting.

**Review and Adopt Agenda**

*Motion*

Robert E. Aloysius moved, seconded by James Charles to adopt revised agenda.

Motion passed

**Review and Approve February 25-26, 2009 Meeting Minutes**

*Motion*

Greg Roczicka moved, seconded by Harry Wilde to approve minutes from February 25-26, 2009 as written.

Motion passed

**Regional Advisory Council Concerns and Comments**

*Hoelscher:* It's good to see everybody again, especially on a Friday. Thank you.

and others that made Council work easier when support from the research program was provided. That assisted people toward becoming aware of where fish are going and nowadays, it's a lot easier than it used to be in terms of fisheries management.

*H. Wilde:* During local elder's meeting in community of Mountain Village, sometimes elders are unable to look down or up because of there are too many enemies fighting lower Yukon people through submissions of salmon fisheries proposals. He thinks those proposals have to be taken up as soon as possible, but regardless of what the outcome is the Council have to represent the Federal program and at the same time assist Native people on the Yukon-Kuskokwim area, and he thought about how many years he's been sitting on the Council membership, starting from the Federal program committee and then the State advisory committees. He served at least 15 years on the committees and he doesn't know how many years he was involved in other related committees. He hopes to sit back and relax and think about his own wellbeing soon. Thank you.

*Oney:* He thanked the Chairman and he was glad to see everyone again. He stated that his past summer has been like a rough ride for everyone, both on the Yukon and Kuskokwim areas as far as utilizing salmon fisheries resources. It was probably the noisiest time He ever heard of since he started as a member on this Council about salmon fisheries resources, mainly the Chinook salmon, in Yukon area. It seems like it is worse than he ever heard about in all of the time he sat on the Council as a member. The continued salmon fisheries proposals being imposed on the lower Yukon area submitted by the Interior village people causes added hardship for lower Yukon people. As he mentioned, this past summer was one of the worse he saw in the past. He said by working together, putting our thoughts together, he's certain all could work things out in the future.

*Roczicka:* He welcomed everyone and he appreciates members for being here for the meeting. He was wishing that changes were not made regarding scheduled meeting location. When Council originally scheduled its fall meeting they were hoping to have this meeting in community of Mountain or St. Mary's, but it got changed. Overall, he echoes what other members' commented. Council is sitting right at the start of couple of Federal regulatory cycles this fiscal year. This is going to have major impacts on subsistence users down the line both on State and the Federal agencies. Not only in fisheries field, also including wild game field. He received lot of comments from other residents in the area. Those people mentioned fall moose hunt season in the Kuskokwim area. Some people said the 10-day season was not enough time to hunt and others are afraid the moose season has been open too long. The cautionary note he's been given over and over again is the Council just can't think about today on the issue of conservation. Council has to think about the long term and attempt to do their best to assure the subsistence harvest continues into the future and doesn't become some kind of a museum piece. He looks forward to some of the discussions on the meeting agenda, especially the one under the refuge update that they plan to speak about their respective proposals. He understands under the Federal hunt that's being proposed, plan is to reintroduce a community harvest quota concept that first was introduced for the Kilbuck Caribou Herd management a several years back.

*L. Wilde:* He thanked the staff for showing up today and he will be expecting to see them tomorrow since they were responsible for Council having this meeting or since OSM is responsible for Council having this meeting over the weekend. He hopes they will be able to do some good for the cause of subsistence uses during this meeting and he knows Council is going to continue to work on the proposals as proposals are brought in. There isn't anything Council can do about the proposals coming from upriver Yukon River except to fight as Council always has in the past. His train of thought is that they at times put those proposals in just to make sure Councils are able work and get their thoughts in and have the right decisions come out from the

Councils that are responsible for the proposals that do come in front of them. He'd like to thank the Regional Council members for being here this time of the day and this weekend. He knows that Council members are all busy this time of the year doing other things. People are all gathering and getting their subsistence needs met in the last minute, so he thank them all for showing up. He hopes Council continues to have a good meeting.

### **Call for Proposals to Change 2010 – 2012 Federal Wildlife Proposals**

#### *A. Review and Validate Proposed Wildlife Regulations Changes Submitted During the winter of 2009*

Tom Kron informed the Council that this is the time and opportunity to bring forward any Federal wildlife proposals Council wishes to submit this cycle. The opportunity was there last winter when Council met but the Council did not to submit any proposals at that time.

Lester Wilde reminded Council members and audience the Federal wildlife proposal deadline is November 5, 2009.

Greg Roczicka asked if proposals are not in front of the Councils, how people could comment on any of wildlife proposal. One of the proposals was to change the Kuskokwim Moose Moratorium boundary to the west of Johnson River to benefit hunters from Tundra villages.

Pippa Kenner reminded the Council anyone will be able to submit proposals until November 5, 2009 because the deadline has been extended from April 30, 2009 to November 5, 2009.

John Andrew commented last year Kwethluk IRA Council and Kwethluk Incorporated proposed limited moose hunt which was granted by the State from September 1 – 10, however, this Council did not recommend to the Federal Subsistence Board to allow moose season on Federal public lands. A proposal was going to be submitted for extension of moose season from September 1-20, but one of the refuge staff provided misinformation to the village stating that wildlife proposal period already closed.

#### *B. Update on 2010 – 2012 Wildlife Proposals Submitted by the Yukon Delta National Wildlife Refuge*

Robert Sundown provided information on the refuge wildlife proposals of which two are similar proposals.

1. Proposal to change the lowest Yukon River moose harvest boundary which is a line from Cape Romanzof to Kuzilvak Mountain then on to Mountain Village. Refuge is proposing a boundary change to make it easier for moose hunters because current regulation is confusing
2. Proposal to change the current Kuskokwim Moose Moratorium boundary to Johnson River. This also would make it easier for moose hunters to stay within the boundary while hunting moose in the area.
3. Special Action Request from Scammon Bay to increase moose harvest limit to two moose, one in fall and another in winter moose harvest season

There was much discussion on above proposals among the Council members, staff, and refuge staff. After lengthy discussions of proposed changes, the Council heard analysis of Special Action Request WSA08-13.

#### *WSA08-13*

Pete DeMatteo presented online the analysis for WSA08-13. This special action was submitted by Scammon Bay Traditional Council. The Traditional Council requests that the harvest limit in that portion of Unit 18 north and west of the line from Cape Romanzof to Kuzilvak Mountain to

Mountain Village and excluding all Yukon River drainages upriver from Mountain Village be changed to two moose per regulatory year with one allowed in the fall season and one allowed in the winter season. The proponent requests that the Federal Board provide Federally qualified subsistence users the opportunity to harvest one moose in both the fall and winter seasons. This request would effectively span the harvest limit from one to two moose per regulatory year in the affected area. Under this proposal a hunter who harvested one antlered bull in the August 10 through September 30 season would be allowed the opportunity to harvest an additional moose during the December 20 through January 20 season in the affected area. Scammon Bay Traditional Council suggests that management of the Lower Yukon moose population strategy should include the expansion of the harvest limit from one to two animals. This would help to stabilize the population and avoid the cyclical fluctuations that have characterized this population. The proponent claims that the State harvest ticket data suggests a low harvest during the fall season. The proponent states that this low harvest combined with the low density of natural predators in the area has allowed unrestrained growth of the moose population therefore there is no biological reason to limit the harvest to one moose per regulatory year. The proponent further states that the special action is needed to help keep the population in check. The need to limit growth rate to maintain the moose population size, the low predation rates, thus allowing for substantive growth rate and concerns about calves dying in the winter due to starvation. Because of many concerns that arise over a period of years. It was not clear that this request fell within the parameters of special action. However, a full analysis of the request was conducted to examine the merit of these conservation concerns. Furthermore, there is currently a lack of moose browse data and an understanding of the habitat carrying capacity to support the proponent's possible conservation concerns. The OSM preliminary conclusion is to oppose special action WSA08-13.

*Motion*

Greg Roczicka moved, seconded by Robert Aloysius to support WSA08-13.  
Motion passed.

*Justification*

The population of moose in this area can support this change. Subsistence users need the meat. The Scammon Bay request is reasonable and appropriate.

Robert Sundown brought up and reminded the Council about lead shot ban Council supported a couple of years ago and he informed them lead shot ban ended on June 30, 2009 and he said the refuge is in support of the proposal. The Federal Subsistence Board will take action on this proposal during its winter 2010 meeting.

Greg Roczicka asked how the Federal Subsistence Board could take action on this special action proposal under its current criteria for special action requests, because it wasn't an unforeseen circumstance to disapprove other special action proposals like Johnson River boundary change proposal for moose harvest in Unit 18. Yet when something they want to do is on the table it's an unforeseen circumstance.

Elias Kelly commented that in the small communities to be realistic, subsistence hunting and fishing is a big activity. Lead shot box of shells might be the only shells available in certain village and that might be the only option bird hunters may have. When proposals such as this one are submitted to further restrict number of hunters, steel shot shells could be higher than lead shot shells locally. If Federal government is willing to subsidize the cost for box of steel shot shells this would assist local stores in the communities, hunters would purchase steel shot shells for bird hunting.

Robert Sundown presented another wildlife proposal to lift moose harvest restrictions on Federal public lands within the Kuskokwim Moose Moratorium. Refuge staff estimated moose population in the area to be about 1,000 animals. The condition of moratorium was five years or 1,000 moose. Two years ago, refuge surveys indicated approximate number of moose was 700 within moratoria. Once the population of moose is determined by the refuge, there would be community quotas established.

James Charles commented his area would be in support of lifting moose moratorium restrictions on Federal lands because when 10-day moose hunt occurred in the area, there were quite a few moose observed. When moose moratorium was agreed upon, people agreed to five years or 1,000 moose when moose harvest restriction would be lifted. People did not agree that moose population will be 1,000 moose before moratorium is lifted. Five years came first so people agreed to lift moose moratorium restrictions in Kuskokwim. He does not support permit lottery system, he would support how State issued moose harvest permits in fall of 2009.

William Brown said moose hunters lacked adequate space to hunt moose in his area last season. Moose hunt occurred only on the State managed lands. He supports Federal lands to open for moose harvest for that reason. He likes the way the State issued the moose harvest permits in September. He suggested moose harvest season should begin in the middle of September because moose starts to move around during that time. He asked about Federal designated hunter permits how he could obtain one for his spouse. He shared he was involved on the enforcement activities for salmon fisheries in 1970s and how violation citations were issued to fisherman those days. He does not support what he is aware of currently, that is how enforcement personnel issues citations to hunters and fishers. He said there is first offense when a warning should be issued, second offense would allow issuance of violation citations.

John W. Andrew commented some of the drawbacks he witnesses is the permits that are not issued to people that needs to hunt like elderly people and people do not have a job. Those people are who cannot afford to have their own boats and outboard motors so designated hunter program would benefit them. He observed in the past that people were issued a permit but because they could not afford to purchase gasoline and supplies for the hunting trip, those permits would not benefit them. With that in consideration, flexibility to allow designated hunters to hunt for those who cannot hunt on their own would be more appropriate.

*Public comment:* Billy McCann of Bethel commented when moose hunt season opens, law enforcement personnel monitor the hunt. It has been reported law enforcement aircrafts has been observed chasing away big game near hunters who hunts those animals. Hunters are well aware cow moose harvest is illegal. Law enforcement personnel should not harass big game when they drive vehicles or flying an aircraft. If such harassment keeps on occurring, hunters will not have any respect for any law enforcement personnel.

Harry Wilde shared in the lower Yukon River, moose moratorium attempted to increase moose populations in the area with assistance from the State and Federal agencies. Local leaders in the lower Yukon area single handedly imposed lower Yukon Moose Moratorium for the benefit of local people's future because they personally experienced hunger in the past winter seasons. He feels uncomfortable with more law enforcement activities in the area and he has reservations about State Troopers enforcing hunting on the Federal public lands. He experienced what happened to his grandchild who harvested a young bull with tines a year ago. His son-in-law assisted his grandchild haul moose meat at which time he was cited and fined X- amount of dollars for not having in his possession a permit and valid hunting license while he hauled moose

meat from kill site. He thinks this not fair as his grandchild is only 18 years of age and he could not possibly haul all of the moose meat from kill site by himself. He thinks that there is better ways to handle that kind of situation in the field.

*Public comment:* James Nicori of Kwethluk commented that on this proposal which would allow Federal permits allowing moose hunt on federally managed lands what he foresees if adopted, is only limited number of people would receive permits. The limiting number of permits only would lead to more poached harvest of moose in the area. Lottery for hunt permits would make more people criminals. He feels that better harvest reporting system would work. He also commented on the law enforcement personnel going through hunters grub and supplies in the field. He has been told that law enforcement personnel why they brought some dry fish with them and hunters were asked if dry fish are being used for brown bear bait. He feels that law enforcement are monitoring moose hunt, not kind of food hunters are bringing to campsite. He supports moose season on Federal lands because there is limited space in his area on State managed lands.

Mary Gregory commented on Mr. Nicori's comments on law enforcement searching through hunter's grub supplies. She indicated if same thing happens to her, she would file an invasion of privacy lawsuit to make sure all others are treated equally. She said local people need to be respected by enforcement personnel.

*Public comment:* Phillip Peter of Akiachak commented the Kuskokwim Moose Moratorium boundary is confusing to people because it is divided by three land ownerships, State, Federal, and village corporations. His question is why Natives cannot control their own lands, only people from out of state controls Native lands such as staff of Federal and State agencies. Why are local Native people in competition with State and Federal governments within their village corporation locally-owned lands? He does not support the permit hunt system. He asked why can't resource management negotiate and arrive at going back to the old ways of resource management not limiting subsistence harvests of the resources. Limiting resource harvests would lead to disqualification of some subsistence hunters as it is currently done through State Tier I, II, & III hunt system. If one reads instruction on Tier I, II, and III hunt reporting requirements one will know what he means because if harvest reports are not sent back to State agency, following year certain hunters would be disqualified in the area because harvest reports were not sent back after hunt closes.

*Public comment:* Ms. Alissa Joseph wanted to know if moose hunting is allowed on the Federal public lands, where would the rest of the moose go for their refuge. Would animals be pushed back from its habitat beyond where they migrate? If so, then moose moratorium would have to start all over again in Kuskokwim area, five to ten year moratorium would become necessary. Ms. Joseph's concern is the people waited for five years to harvest moose in this area and allow subsistence harvest of moose and what would happen if moose is wiped out again? In consideration of hunters who were given recent citations, would those people who said that they went just for a ride with a hunter and has a witness be reimbursed for the amount they were fined also? To keep moose populations stable, if Federal public lands are open for moose harvest, does the staff know moose populations are not going to be wiped out?

*Public comment:* Mr. Daniel George of Akiachak commented he do not have any problems with Unit 18 boundary if Federal land is open for harvest of moose. Boundaries being proposed by the tundra village should be understood well. There are a lot of complaints about September 1-10 moose season. Fish and Game enforcement aircrafts buzzing and scaring off wildlife hunters are hunting and he didn't know how State and Federal staff works together if they do. He went to

Kiseralik River hunting caribou and he saw herds of caribou there. There was an aircraft flying really low trying to push away caribou herd back into the hills. He shared a picture of moose below the hospital, antlers were removed from its head and head was left there to rot. He suggested the Council should look into this kind of situation. He asked when Kuskokwim Moose Moratorium on Federal land is going to be lifted. He opposes proposal to lift restrictions on the Federal public lands in Kuskokwim area.

### **Fisheries Resource Monitoring Program**

Richard Cannon with OSM Fisheries Resource Monitoring Program presented FRMP briefing. Projects fall into two categories. First is the stock status and trend studies, and addresses abundance, composition, timing, behavior or status of fish populations that sustain subsistence fisheries with linkage to Federal public lands. The budget guideline for this category is the remaining one-third of the available funding. The second type of project is harvest monitoring and traditional ecological knowledge or traditional knowledge. These projects address assessment of subsistence fisheries including harvest and effort, description and assessment of fishing and use patterns. The budget guideline for this category is the remaining one-third of the available funding. Cannon went on and explained the extensive evaluation process, review and recommendations by interagency technical committee and affected regional advisory councils, and guidelines used. In July 2009 technical review committee reviewed eight investigation plans and recommended funding for seven of the eight projects and prioritized them as shown on page 30 of the Council meeting book. There were six stock status and trends, one harvest monitoring/TEK project. After discussions with staff and questions and answers were given by staff, the Council took following actions.

**Support** without modification the funding for Kuskokwim FRMP proposals 10-300, 10-303, 10-304, 10-305, 10-306, 10-307, 10-352, 10-353, and 10-354

Justification. Projects help the Kuskokwim Working Group. These projects help us understand the fish.

#### *Council Action*

**Support** without modification the funding for Yukon FRMP proposals 10-200, 10-202, 10-205, 10-206, 10-207, 10-209, and 10-250

Justification. Projects help management. This helps us learn about the fish and where the fish are.

### **Alaska Board of Fisheries Proposals**

Council also discussed Alaska Board of Fisheries proposals that have an affect on regional subsistence and commercial fisheries. After discussions the Council took the following action.

**Oppose** proposals 88-97.

Justification: These proposals very negatively affect Lower Yukon people, their economy, and their subsistence lifestyle. There are concerns about waste of fish/food (e.g. proposal 93); this is culturally inappropriate to our people and is wrong. There shouldn't be a reallocation from primary subsistence use to expand or create a "new" (roe) fishery for Fairbanks North Star Borough area. These would take from an area of least economic opportunity or alternatives and reallocate to area that already has a large diversity of opportunity/alternative.

**Support number 67.**

Justification: Kings are fully allocated for subsistence and escapement on the Kuskokwim. A directed king salmon commercial fishery on the Kuskokwim is not appropriate.

**Subsistence Fisheries Issues**

Jeff Estensen with the Alaska Department of Fish and Game provided a summary of the Kuskokwim 2009 salmon fisheries postseason update that includes two commercial fisheries in the Kuskokwim Bay W-4 Quinhagak and W-5 Goodnews Bay and his update is preliminary and is subject to change. In '09 the salmon season started without use of the windowed schedules for salmon fishing and subsistence fishing was allowed seven day a week. There were subsistence fishing closures only for commercial fishing and the salmon working group met to discuss salmon fishing issues 15 times over the summer. 6,000 Chinook salmon were commercially harvested which was above 10-year average of 2,437. 76,800 chum salmon were harvested and was above 10-year average of 21,500 and this was largest harvest since 1998. 25,800 sockeye salmon was harvested which was well above 10-year average of 8,700 in District 1. 104,000 Coho salmon was harvested and this was below 10-year average of 189,000.

Mr. Estensen explained that conservation measures had to be taken because run strength was not shaping up in the Yukon River Districts 4 & 5.

**Next Meeting Date**

Ms. Barbara Armstrong referred to page 78 on Council book and informed Council that on February 19, 2010 Northwest Arctic is going to hold its winter meeting. Northwest Arctic will hold its fall meeting on September 1, 2010. Seward Peninsula Subsistence Regional Advisory Council will hold its winter meeting on March 3-4, 2010 and its fall 2010 meeting on October 13-14, 2010. When Yukon-Kuskokwim Delta Subsistence Council schedules its meetings, they should avoid meeting dates chosen by Seward Peninsula Subsistence Regional Advisory Council. Following meeting dates were chosen by Yukon-Kuskokwim Delta Subsistence Regional Advisory Council.

After discussions of the meeting dates with help from its staff, the Council took action to meet in winter and fall 2010 and the dates and locations they chose are as follows.

Winter 2010 Meeting – March 9-10, 2010 meeting location is Saint Mary's, and they choose Emmonak as an alternate location.

Fall 2010 Meeting – September 30 – October 1, 2010 and meeting location is Quinhagak and Bethel as an alternate location.

**Agency/Organization Reports**

*Office of Subsistence Management*

Tom Kron provided OSM updates indicating that in its January 2010 meeting, the Federal Subsistence Board is going to be looking at the Special Action Requests to change regulations. FSB will vote on Fisheries Resource Monitoring Program proposals. Closure issues will not be considered by the Board at this meeting. In winter 2010, regional advisory councils will be reviewing and making their recommendations on the Federal wildlife regulatory change proposals. During winter 2010 regional advisory council meetings they may develop fisheries proposals. The two deferred Yukon fisheries proposals are the Yukon-Kuskokwim Delta, the Seward Peninsula, the Western Interior, and the Eastern Interior Regional Advisory Councils will need to review and make their recommendations to the Federal Subsistence Board. The two deferred fisheries proposals will be on winter 2010 agenda. FSB will meet in April 2010 to consider these deferred fisheries proposals on mesh depth and mesh size of salmon fishing gear.

*Yukon Delta National Wildlife Refuge*

Gene Peltola updated Council on the Yukon Delta National Wildlife Refuge brief summary report. He reported on the migratory bird banding of 1,500 pintails and mallards, 250 cackling Canada Geese and 150 tundra swans. The refuge is process of drafting a Brant Colony Management Plan of the five colonies on the Delta. Two of the colonies which have not had very good productivity last several years. One of those in south of Hooper Bay and other is Kokechik Bay. Part of that management plan may address manipulation of arctic fox populations and or gull population. AVCP representatives, Gene Peltola, and representative from law enforcement division in Alaska, Waterfowl Conservation Committee members, AMBCC representatives, and Migratory Birds representatives attended a meeting in Portland Oregon on April 12, 2009. They met for three days and drafted a new Goose Management Plan for the Delta. AVCP has a copy of the draft goose management plan.

Another project initiated by the refuge is to deal with fall storm surge which causes higher salt content in freshwater ponds. Refuge is in process of purchasing high quality and expensive satellite imagery to target middle cast area between Askinuk and Nelson Island to monitor physical changes and sea level rise. A couple in-house small modeling projects were done to significantly alter coastline and some of the lakes and river systems with as little as one meter increase in sea level rise. More immediate concern is the increase last few years when storm surges that push saltwater inland as far as 25 miles.

The refuge did not conduct moose surveys since last winter. Refuge tries to do moose surveys in the Kuskokwim tributaries but bad weather precluded that. Refuge takes moose management seriously. Refuge spends hundreds of thousands of dollars to address moose in Unit 18. Part of the budget was spent when graduate students were hired to do browse on the tributaries of the Kuskokwim River. With the last three winters, reports of localized die-offs with moose calves and adults on the Yukon River, refuge stepped up and addressed browse quality and quantity work earlier than anticipated. Plots in the Kwethluk River and in the lower Yukon River were established to look at browse status. Mr. Peltola reported on sport hunting and nonresident hunting activities within the refuge.

*Kenai Fisheries*

Mr. Steve Miller updated Council on the Kenai fisheries projects operated out of Yukon Delta National Wildlife Refuge. Some of the Kuskokwim projects are funded by the Office of Subsistence Management Program. Three handouts were distributed to Council of which two projects addressed Kwethluk and Tuluksak River weir projects. These projects were long-term projects and funding cycle for these projects ended in FY2009 and projects reports should be ready next year. Whitefish project is in reporting phase of the projects. He hopes that after strategic plan is there will be funding available to continue the whitefish project in Kuskokwim. Whitefish harvested by tundra villages spawns in Swift River which is great distance from tundra area. Migratory Bird management was quite lengthy discussion with Council members and more information could be found in the transcripts of the meeting.

*Togiak Refuge*

Mr. Perry informed Council members that Togiak Refuge could not send a representative at this time and he dropped off copies of a written 2009 Bulletin and it was distributed to Council members present at the meeting.

*Alaska Department of Fish and Game**1. Wildlife Conservation*

Phillip Perry with ADF&G Wildlife Conservation gave wildlife update. He updated Council briefly on what he calls the hunt area, formerly moose moratorium area. RM615 was

designation of the Kuskokwim moose hunt area. This hunt was a 10-day hunt and daily reporting of any moose harvest was required. Perry went on and reported number of moose harvested, showed cumulative harvest by day. Permits were available only in Bethel and in the villages from August 1, 2009 through August 25<sup>th</sup> and 1200 permits were printed. Hunt participation was very high and 1400 hunters obtained permits and minimum of 1,000 people hunted. 106 moose were harvested by end of the 10-day hunt. 21 moose was harvested below Napakiak, 51 moose was harvest above Napakiak on the main river, then other areas such as in Eek River, Kwethluk River, Kiseralik River, Kasigluk River, Fog river, and Tuluksak River, 26 moose were harvested. This hunt was on State managed lands only that includes corporation and Native allotments.

For the Yukon River, hard data is not available at this time because with general hunt harvest tickets reports starts to come in much later. Hunters in Yukon River were dealing with low water levels and that imposed difficulties to access hunt areas. This information was obtained from Emmonak, St. Mary's and villages further upriver Yukon.

The State attempted to do a caribou photo census and second year in the row, weather and caribou did not cooperate. Next year's one of the high priorities will be to get a population count of the Mulchatna Herd. According to number from last fall, numbers of caribou herd is not expected to grow this year. ADF&G hopes that the herd is not declining. By looking at calf/cow ratio, this herd may be slow in declining and in next year or two major decline of this caribou herd is not expected.

## 2. Subsistence

Ms. Lily Ray with the Alaska Department of Fish and Game Division of Subsistence presented baseline project they are going to be doing in the central Kuskokwim in spring of 2010. Baseline survey is to find out how people use all types of fish and wildlife resources. People will be asked how all fish and wildlife resources are being used when resources are harvested. Family income information will be gathered and subsistence use areas will be mapped. Questions relating to subsistence and traditional knowledge will be asked and this information will be used learn about local concerns. This is being done as it is part of the mission of the Division of Subsistence as comprehensive surveys have not been done. Baseline information is great way to figure out future uses of the resources. Survey will be done in communities of Aniak, Chuathbaluk, Crooked Creek, Kalskag, Lower Kalskag, Red Devil, Sleetmute, and Stony River. These communities will have an option to accept or reject proposal to do surveys in their communities. The research is expected to be done this winter between January and March and the results should have final results by June 2010. Staff will consist of local hire and ADF&G staff to do household surveys. A 90 percent sample is the goal for the community surveys and resource mapping. Survey questions will be similar as that of salmon subsistence harvest survey. The Council thought this was done last year but it was explained subsistence use of wildlife resources was done.

### *Association of Village Council Presidents*

No update.

### **Regional Council Business**

#### A. 2008 Annual Reply

Lester Wilde read the 2008 Annual Reply into record. The Council had no comments on the reply at this time of the meeting.

#### B. 2009 Annual Report Topics

Tom Kron with Office of Subsistence Management informed Council members that this is an opportunity to start thinking about what questions and requests Council would like to include in

its upcoming annual report. At the fall meeting, Council members would bring up annual report topics and in winter it is finalized. Normally there is general discussion about what topics Council would like to see on the annual report.

Mr. Greg Roczicka said regarding issue number 5 in 2008 annual report reply “Proactive Management Strategies of Subsistence Resource Populations”, he is going to keep on pushing forward on this issue because words were chosen in reply to this issue. Council should try to draft this topic again and put it down in a straightforward language and get a response. Mr. Roczicka informed all that in spring of 2008 during Federal Subsistence Board and Chairs meeting in Anchorage, he brought up this issue and other Chairs supported this issue. A report to the Chairs supposed to be made available but he has not seen it yet.

Mr. Tom Kron said that the Board at that meeting committed to work on that issue addressed during April/May 2008 Board meeting. Kron apologized for the lack of timeliness in the response to the Council Chairs on predator management. The new administration hasn’t yet had the opportunity to weigh in on this issue. Kron understood that there is nothing in the U.S. fish and Wildlife Service regulations or ANILCA to prevent predator management on Fish and Wildlife Service lands in Alaska. Currently, the U.S. Fish and Wildlife Service, Region 7, Alaska, the Solicitor’s Office and representative from the Secretary of the Interior in Alaska are working on draft response to the Council Chairs on predator control. The draft response has to be reviewed by the Director of the U.S. Fish and Wildlife Service, the Secretaries of the Interior and Agriculture would have to review the response to the Chairs and the response should be ready in May 2010.

### **Closing Comments**

- Mr. John W. Andrew thanked everyone for showing up at this meeting. He said he was impressed by one of the presenters using a powerpoint presentation format. Mr. Andrew wishes to see more of agency powerpoint presentations in future Council meetings. For public comments, he would like to see written comments as it would assist Council members when copies are provided and seeing written comments in black and white would assist toward better understanding of concerns public has.
- Ms. Mary Gregory’s comments were directed to the Office of Subsistence Management staff. Ms. Gregory felt handicapped because housekeeping items were not announced at the beginning of the meeting as before and she felt that proper procedures were not complied with. Ms. Gregory said that her Church is a potential meeting location because they have a kitchen, large and quiet place to meet, and adequate parking space available for public. She noticed the State and Federal agencies and the council is noticeably starting to work together. She thanked Akiachak representatives and asked that they work with Alex Nick on their proposals and thanked them for attending this meeting.
- Mr. Robert Aloysius said over the years he sat on the council and one that strikes him is the word “subsistence” has been watered down more and more by bureaucracy and that it is scary to see how the system works. They don’t listen to concerns and when they answer questions asked they rubber stamp answers year after year. All of the top leaders are educated to rely on papers and do not have a concept of what it is like to live on the Mother Earth, to rely on its resources, and to be responsible to take care of the Mother Earth. People have to show respect to all life on earth. In a nutshell Yup’ik people would stay with the daily pursuit of food, shelter, clothing, companionship, and comfort while hunting, fishing, trapping, and gathering with respect to all animals. The bureaucracy has not been very kind to people. He begged to hold another meeting in Bethel where it is quiet, where there is no traffic on either side of the road, no noise, and not in very distracting location. He was not pleased how meeting book was arranged and printed and he suggested that future meeting books be done better.

*Minutes*

**Adjourn**

The meeting was adjourned.

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

/S/

\_\_\_\_\_  
Alex Nick, DFO, Council Coordinator  
USFWS Office of Subsistence Management

1/29/2010

Date

/S/

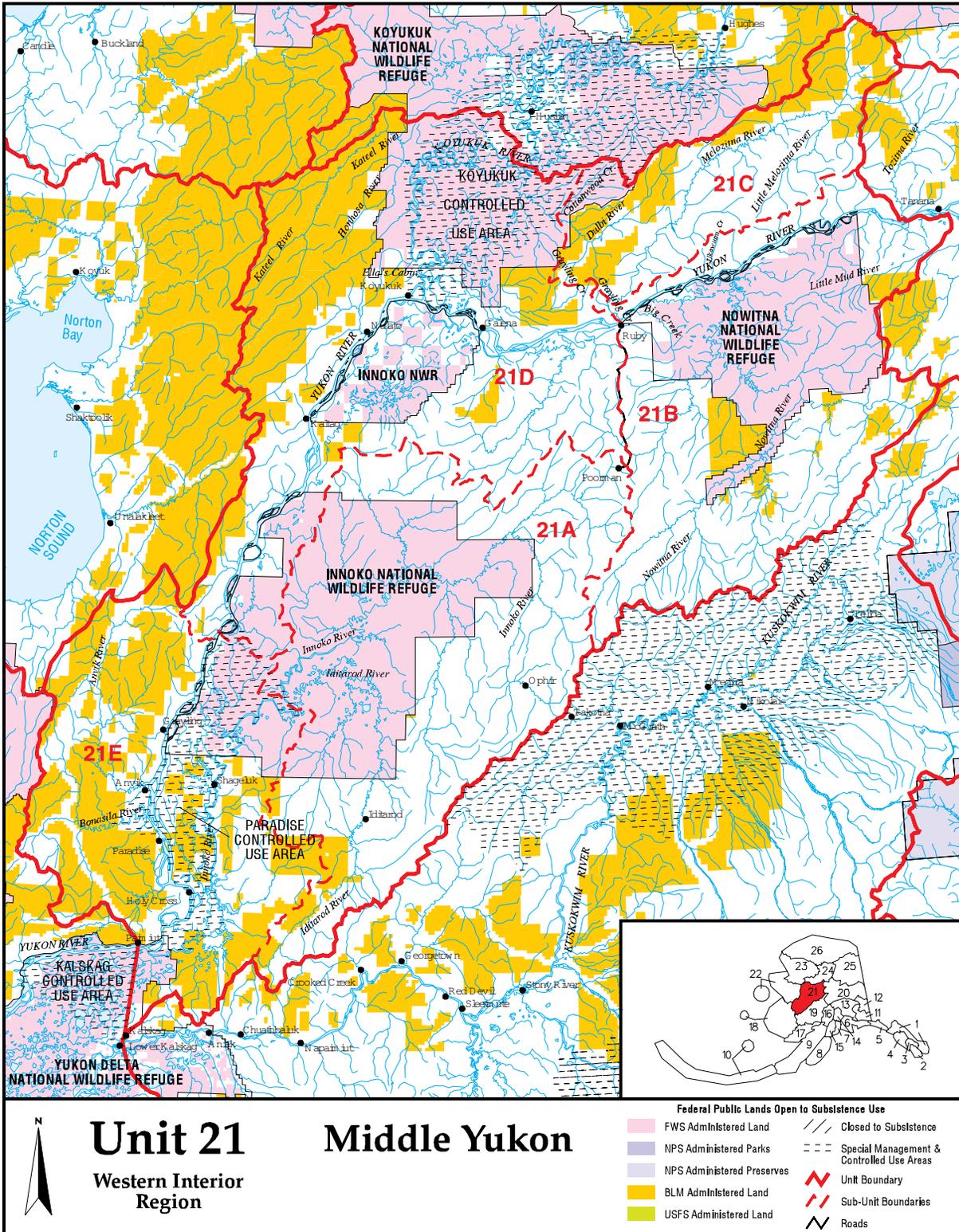
\_\_\_\_\_  
Lester Wilde, Chair  
Yukon-Kuskokwim Delta Subsistence  
Regional Advisory Council

1/29/2010

Date

These minutes will be formally considered by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council at its next meeting, and any corrections or notations will be incorporated in the minutes of that meeting.









<b>WP10-01 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-01 requests the addition of a definition for “drawing permit” to the Federal subsistence management regulations. <i>Submitted by the USFWS, Office of Subsistence Management</i>
<b>Proposed Regulation</b>	<i>Statewide-General Regulations</i>  § __.25(a) Definitions <b>Drawing permit—a permit issued to a limited number of Federally qualified subsistence users selected by means of a lottery held for all Federally qualified subsistence users submitting valid applications for such permits and who agree to abide by the conditions specified for each hunt. Drawing permits are issued based on priorities determined by 36 CFR 242.17 and 50 CFR 100.17.</b>
<b>OSM Preliminary Conclusion</b>	<b>Support</b> Proposal WP10-01 <b>with modification</b> to simplify and clarify the definition.  The modified regulation would read: <i>Statewide-General Regulations</i>  § __.25(a) Definitions <b>Drawing permit—a permit issued to a limited number of Federally qualified subsistence users selected by means of a random drawing.</b>
<b>Southeast Regional Council Recommendation</b>	
<b>Southcentral Regional Council Recommendation</b>	
<b>Kodiak/Aleutians Regional Council Recommendation</b>	
<b>Bristol Bay Regional Council Recommendation</b>	
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Western Interior Regional Council Recommendation</b>	
<b>Seward Peninsula Regional Council Recommendation</b>	
<b>Northwest Arctic Regional Council Recommendation</b>	
<b>Eastern Interior Regional Council Recommendation</b>	

*continued on next page*

<b>WP10-01 Executive Summary (continued)</b>	
<b>North Slope Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-01

### ISSUES

Proposal WP10-01, submitted by the USFWS, Office of Subsistence Management, requests the addition of a definition for “drawing permit” to the Federal subsistence management regulations.

### DISCUSSION

Existing Federal subsistence management regulations do not include a definition for “drawing permit” (§§ \_\_.4 and \_\_.25(a)). However, because this term is used in the hunting regulations (§ \_\_.26(n) (19)), a definition should be provided.

#### Existing Federal Regulation

*Statewide-General Regulations*

§ \_\_.25(a) *Definitions*—No existing definition

#### Proposed Federal Regulation

*Statewide-General Regulations*

§ \_\_.25(a) *Definitions*

***Drawing permit—a permit issued to a limited number of Federally qualified subsistence users selected by means of a lottery held for all Federally qualified subsistence users submitting valid applications for such permits and who agree to abide by the conditions specified for each hunt. Drawing permits are issued based on priorities determined by 36 CFR 242.17 and 50 CFR 100.17.***

#### Existing State Regulation

*Definitions*

*Drawing permit—a permit issued to a limited number of people selected by means of a lottery held for all people submitting valid applications for such permits and who agree to abide by the conditions specified for each hunt.*

#### Extent of Federal Public Lands/Waters

This proposal would apply to the entire state. Federal public lands comprise approximately 65% of Alaska and consist of 23% Bureau of Land Management, 15% National Park Service, 21% U.S. Fish and Wildlife Service, and 6% U.S. Department of Agriculture, U.S. Forest Service lands.

#### Effects of the Proposal

The addition of this definition does not affect fish and wildlife populations, subsistence uses or other uses (i.e., sport/recreational or commercial). The Federal Subsistence Management Program has used drawings as one way to distribute permits among residents of a community that are similarly situated relative to

customary and traditional uses of those wildlife populations. Current hunting regulations use the phrase “drawing permit” to describe the permit for the Unit 19A moose hunt, and there have been other situations where drawings have been used to distribute registration permits among qualified applicants. Proposal WP10-09, submitted by the Southeast Alaska Subsistence Regional Advisory Council, requests a drawing permit hunt. The addition of a definition for “drawing permit” to the Federal regulations would help provide clarity to regulations.

## **OSM PRELIMINARY CONCLUSION**

**Support** Proposal WP10-01 **with modification** to simplify and clarify the definition.

The modified regulation would read:

*Statewide-General Regulations*

*§ \_\_.25(a) Definitions*

***Drawing permit—a permit issued to a limited number of Federally qualified subsistence users selected by means of a random drawing.***

### **Justification**

The definition clarifies a term that is used in the Federal subsistence hunting regulations and does not affect fish and wildlife populations, subsistence uses or other uses. The modified wording simplifies the definition and makes it clear that drawing permits are based on a “random” drawing for all similarly situated Federally qualified subsistence users.

## **STATUS OF WP10-02 (DEFERRED WP08-05)**

Proposal WP10-02 (deferred proposal WP08-05), submitted by the Alaska Department of Fish and Game, requested clarification of the existing Federal Subsistence management regulation governing the use of brown bear claws in handicrafts for sale. The proposal specifically asked for the removal of all unit-specific regulations related to the statewide sale of brown bear handicrafts made of skin, hide, pelt or fur and that sales of brown bear handicrafts made of claws, bones, teeth, sinew, or skulls should occur only between Federally qualified subsistence users.

Proposal WP10-02 was deferred by the Federal Subsistence Board (Board) at its May 2008 meeting at the suggestion of the Alaska Department of Fish and Game, pending formation of a workgroup to address the issue of developing a method of tracking brown bear claws made into handicrafts for sale. The Board voted unanimously to defer the proposal “to allow a work group to address this issue of sale and tracking, specifically whether or not it’s even feasible” (FSB 2008:117). The Board directed that the working group include representatives from all interested Subsistence Regional Advisory Councils (Councils) and State and Federal staff (FSB 2008: 102-119).

An initial scoping meeting between Federal and State staff was held in January 2009; at that meeting a draft charge was developed<sup>1</sup>. A briefing was provided to all Councils during the Winter 2009 meeting cycle on the status of the workgroup, and Councils selected representatives to participate in the workgroup. The workgroup, including representatives from nine Councils, and Federal and State staff met in June 2009. At that meeting, participants from the Councils posed a number of questions directed at whether or not bear claw tracking is a problem for subsistence users, and if regulations needed to be changed. These questions prompted Federal and State staff to conduct further research, and to meet as agency staff to compare notes and to follow up on research questions, which they did twice during summer 2009. The work group attempted to meet again during the summer of 2009, but this was not possible. In the interim, another briefing on the status of the workgroup was provided to the Councils at the Fall 2009 meetings.

### **FUTURE DIRECTION**

The workgroup, including Council members, will meet during spring/summer 2010 to address the questions raised at its first meeting, and to begin working towards resolution of the issues. This will provide ample time for the workgroups’ findings to be presented to each Council for their recommendations during the Fall 2010 meeting cycle, and for a full report to be provided to the Federal Subsistence Board for action at its January 2011 meeting. A report will also be provided to the Alaska Board of Game at an appropriate meeting. Proposal 10-02 (WP08-05) will be deferred until that time.

### **LITERATURE CITED**

FSB. 2008. Transcripts of the Federal Subsistence Board proceedings, April 29, 2008. Office of Subsistence Management, FWS. Anchorage, AK.

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<sup>1</sup> Draft charge for workgroup:

Develop a method(s) to recommend to the Federal Subsistence Board and Board of Game for tracking brown bear claws made into handicrafts that is enforceable and culturally sensitive, commensurate with the need to provide conservation of this wildlife resource.

<b>WP10-03 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-03 requests the addition of a general provision in Federal subsistence management regulations to allow the harvest of fish and wildlife by participants in a cultural or educational program. <i>Submitted by the Office of Subsistence Management</i>
<b>Proposed Regulation</b>	<i>See the analysis for the proposed regulation language.</i>
<b>OSM Preliminary Conclusion</b>	<b>Support</b> Proposal WP10-03 <b>with modification</b> to simplify the proposed regulation.
<b>Southeast Regional Council Recommendation</b>	
<b>Southcentral Regional Council Recommendation</b>	
<b>Kodiak/Aleutians Regional Council Recommendation</b>	
<b>Bristol Bay Regional Council Recommendation</b>	
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Western Interior Regional Council Recommendation</b>	
<b>Seward Peninsula Regional Council Recommendation</b>	
<b>Northwest Arctic Regional Council Recommendation</b>	
<b>Eastern Interior Regional Council Recommendation</b>	
<b>North Slope Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-03

### ISSUES

Proposal WP10-03, submitted by the Office of Subsistence Management, requests the addition of a general provision in Federal subsistence management regulations to allow the harvest of fish and wildlife by participants in a cultural or educational program.

### DISCUSSION

This proposal is a housekeeping measure intended to provide clarity in the guidelines for issuing permits for the harvest of fish and wildlife by cultural and educational programs. Doing so will help to inform the public, fish and wildlife managers, Office of Subsistence Management staff, members of the Interagency Staff Committee, and members of the Federal Subsistence Board (Board) of the guidelines currently in use by Office of Subsistence Management staff with regard to permits to harvest wildlife and fish for cultural and educational programs. Since the Federal program began in 1990, the process for issuing permits has gone through a number of changes. Because some of these changes have not been well documented, there is some confusion over the process. The intent of this regulation then is to provide clarity in Federal subsistence management regulations.

Currently, there is no specific provision allowing for the harvest of wildlife for cultural and educational programs although there is a general allowance that provides for such a practice. A specific provision allows for the harvest of fish for a cultural and educational program.

Most requests speaking to the allowance of fish or wildlife harvests on behalf of a cultural or educational program are on behalf of culture camps sponsored by Native nonprofit organizations. Requests for permits also have been received from a substance abuse rehabilitation program and for college courses. The permits are typically requested both to teach cultural and educational activities associated with harvest, and to provide food for participants in the cultural and educational program. Once a program has been approved for a permit, follow-up requests (referred to as repeat requests in the regulation), may be made annually for up to five years by the same cultural or educational program to harvest the same animal species and amount.

### Existing Federal Regulation

#### Program structure

#### §\_\_\_\_.10(d)

*(5) The Board may implement one or more of the following harvest and harvest reporting or permit systems:*

*(iii) The fish and wildlife is taken by individuals or community representatives permitted (via a Federal Subsistence Registration Permit) a one-time or annual harvest for special purposes including ceremonies and potlatches.*

### **General regulations**

No existing regulation

### **Fish regulations**

#### **§\_\_\_\_.27(e)**

*(2) The U.S. Fish and Wildlife Service Office of Subsistence Management may issue a permit to harvest fish for a qualifying cultural/educational program to an organization that has been granted a Federal subsistence permit for a similar event within the previous 5 years. A qualifying program must have instructors, enrolled students, minimum attendance requirements, and standards for successful completion of the course. Applications must be submitted to the Office of Subsistence Management 60 days prior to the earliest desired date of harvest. Permits will be issued for no more than 25 fish per culture/education camp. Appeal of a rejected request can be made to the Federal Subsistence Board. Application for an initial permit for a qualifying cultural/educational program, for a permit when the circumstances have changed significantly, when no permit has been issued within the previous 5 years, or when there is a request for harvest in excess of that provided in this paragraph (e)(2), will be considered by the Federal Subsistence Board.*

### **Proposed Federal Regulation**

#### **Program structure**

#### **§\_\_\_\_.10(d)**

*(5) The Board may implement one or more of the following harvest and harvest reporting or permit systems:*

*(iii) The fish and wildlife is taken by individuals or community representatives permitted (via a Federal Subsistence Registration Permit) a one-time or annual harvest for special purposes including ceremonies and potlatches.*

#### **General regulations**

#### **§\_\_\_\_.25(g) Cultural/educational program permits**

*(1) A qualifying program must have instructors, enrolled students, minimum attendance requirements, and standards for successful completion of the course. Applications must be submitted to the Federal Subsistence Board through the Office of Subsistence Management 60 days prior to the earliest desired date of harvest. Generally permits will be issued for no more than one large mammal per cultural/educational program, permits will be issued for no more than 25 fish per cultural/educational program, and permits for the harvest of shellfish will be addressed on a case by case basis. Any animals harvested will count against any established Federal harvest quota for the area in which harvested.*

*(2) Application for an initial permit for a qualifying cultural/educational program, for a permit when the circumstances have changed significantly, when no permit has been issued within the previous 5 years, or when there is a request for harvest in excess of that provided in paragraph*

*(g)(1), will be considered by the Federal Subsistence Board. Appeal of a rejected request can be made to the Federal Subsistence Board.*

*(3) A permit to harvest fish, wildlife, or shellfish for a qualifying cultural/educational program which has been granted a Federal subsistence permit for a similar event within the previous 5 years may be issued by the Federal in-season manager (for fisheries) or the Federal local land manager (for wildlife). Requests for follow-up permits must be submitted to the in-season or local land manager 60 days prior to the earliest desired date of harvest.*

*(4) Federal in-season and local land managers will report the re-issue of any cultural/educational program permits and the harvest results to the U.S. Fish and Wildlife Service, Office of Subsistence Management.*

### **Fish regulations**

#### **§ \_\_\_\_ .27(e)**

*(2) The U.S. Fish and Wildlife Service Office of Subsistence Management may issue a permit to harvest fish for a qualifying cultural/educational program to an organization that has been granted a Federal subsistence permit for a similar event within the previous 5 years. A qualifying program must have instructors, enrolled students, minimum attendance requirements, and standards for successful completion of the course. Applications must be submitted to the Office of Subsistence Management 60 days prior to the earliest desired date of harvest. Permits will be issued for no more than 25 fish per culture/education camp. Appeal of a rejected request can be made to the Federal Subsistence Board. Application for an initial permit for a qualifying cultural/educational program, for a permit when the circumstances have changed significantly, when no permit has been issued within the previous 5 years, or when there is a request for harvest in excess of that provided in this paragraph (e)(2), will be considered by the Federal Subsistence Board.*

### **State Regulations**

#### **5 AAC 92.034 Permit to take game for cultural purposes**

*The commissioner may issue a permit for the taking of game for the teaching and preservation of historic or traditional Alaskan cultural practices, knowledge, and values, only under the terms of a permit issued by the department upon application. A permit may not be issued if the taking of the game can be reasonably accommodated under existing regulations. For purposes of this section, "game" includes (1) deer; (2) moose; (3) caribou; (4) black bear; (5) mountain goat; (6) small game; (7) furbearers; and (8) any migratory bird for which a federal permit has been issued.*

### **Regulatory History**

At the inception of the Federal Subsistence Management Program, all requests for permits to allow harvests for special purposes between regulatory cycles were treated as special actions that went directly to the Board. In 2000, the Board adopted a general provision in Federal regulations that delegated authority to Office of Subsistence Management to issue special harvest permits for repeated requests from

cultural and educational camp operators (§\_\_\_\_.25(c)(4)<sup>1</sup>; 66 FR 10148, February 13, 2001). Thus, the initial request went to the Board and any subsequent requests to the Office of Subsistence Management. This regulation included provisions for issuing permits to harvest up to 25 fish and one species of wildlife (deer, moose, caribou, black bear, or mountain goat only). These species were included in the regulation because permits had previously been distributed for these species. At the time of its adoption, the Board expressed the desire to evaluate the effectiveness of the regulation following its implementation (FWS 2004).

Concurrently, in 2000 the Board also adopted regulations to manage fisheries occurring in Federal public waters. As part of this activity, the Board adopted a regulation addressing the subsistence take of fish on behalf of cultural and educational programs (§\_\_\_\_.27(e)(2); 66 FR 33745, June 25, 2001). The regulation adopted by the Board required that initial requests are considered by the Board and repeat requests are considered by Office of Subsistence Management. The Board gave the Office of Subsistence Management the authority to issue repeat permits for the harvest of up to 25 fish per program. It should be noted that this regulation was adopted even though a similar regulation (described in the previous paragraph) already existed in general provisions of Federal regulations, which was probably an oversight.

In November 2003 the Board rescinded the general provisions regulation that delegated authority to the Office of Subsistence Management to issue cultural and educational permits (§\_\_\_\_.25(g) [§\_\_\_\_.25(c)(4)]; 69 FR 40177, July 1, 2004). Instead of a regulation, the Board established guidelines for issuing permits for the harvest fish and wildlife for cultural and educational programs. Additionally, the Board delegated the authority to issue repeat permits to field managers.

When a permit to harvest wildlife by a cultural or educational program is issued, at the same time a letter containing guidelines for delegation is completed by the analyst at the Office of Subsistence Management and sent to the Federal field manager by the policy coordinator at the Office of Subsistence Management. The guidelines require that the field manager become familiar with the management history of the species and with the State and Federal regulations and management plan, and be up-to-date on population and harvest status information. Also, the guidelines direct the field manager to consult with the local ADF&G fish and wildlife managers.

### **Effects of the Proposal**

If this proposal is adopted, the provision in fish regulations for issuing cultural and educational permits should be rescinded. The description of how to apply for a permit to harvest fish or wildlife as part of a cultural or educational program that is in the Federal subsistence regulation booklets published for the public will flow directly from the new regulation requested in this proposal.

If this proposal is not adopted, there will continue to be confusion among the public, fish and wildlife managers, Office of Subsistence Management staff, members of the Interagency Staff Committee, and members of the Federal Subsistence Board concerning the issuing of these permits.

### **OSM PRELIMINARY CONCLUSION**

**Support Proposal WP10-03 with modification** to simplify the proposed regulation.

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<sup>1</sup> The regulation located at §\_\_\_\_.25(c)(4) in Federal regulations was later moved to §\_\_\_\_.25(g) during a reorganization of the Federal regulations (66 FR 33745–33746, June 25, 2001).

The modified regulation should read:

### **General regulations**

#### **§\_\_\_\_.25(g) Cultural/educational program permits**

*(1) A qualifying program must have instructors, enrolled students, minimum attendance requirements, and standards for successful completion of the course. Applications must be submitted to the Federal Subsistence Board through the Office of Subsistence Management and should be submitted 60 days prior to the earliest desired date of harvest. Harvests must be reported and any animals harvested will count against any established Federal harvest quota for the area in which it is harvested.*

*(2) Requests for follow-up permits must be submitted to the in-season or local manager and should be submitted 60 days prior to the earliest desired date of harvest.*

### **Justification**

The harvest of fish and wildlife by participants in cultural and educational programs is generally allowed in the Federal Subsistence Management Program regulations. Proposal WP10-03 will further clarify for fish and wildlife managers, Office of Subsistence Management staff, members of the Interagency Staff Committee, and members of the Federal Subsistence Board the cultural and educational permit regulations.

### **LITERATURE CITED**

FWS. 2004. Staff analysis for Proposal WP04-26. Pages 178–188 in Federal Subsistence Board Meeting Materials May 18–21, 2004. Office of Subsistence Management, FWS. Anchorage, AK. 622 pages.

<b>WP10-04 Executive Summary</b>	
<b>General Description</b>	This proposal would remove Units 6, 12, 20A, 20B, 20C east of the Teklanika River, 20D and 20E from the areas for which the Assistant Regional Director for Subsistence Management has the delegated authority to open, close or adjust Federal subsistence lynx seasons and to set harvest and possession limits. <i>Submitted by the Office of Subsistence Management</i>
<b>Proposed Regulation</b>	<p>§__.26 (f)(3)</p> <p><i>The Assistant Regional Director for Subsistence Management, FWS, is authorized to open, close, or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx in Units <del>6, 7, 11, 12, 13, 14, 15, and 16, 20A, 20B, 20C east of the Teklanika River, 20D, and 20E,</del> with a maximum season of November 1–February 28. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the ADF&amp;G Lynx Harvest Management Strategy, and only after staff analysis of the potential action, consultation with the appropriate Regional Council Chairs, and Interagency Staff Committee concurrence.</i></p>
<b>OSM Preliminary Conclusion</b>	<b>Support</b> proposal WP10-04 <b>with modification</b> to delete the regulatory language found in §__.26 (f)(3), and delegate the authority to open, close, or adjust Federal lynx seasons and to set harvest and possession limits for lynx via a delegation of authority letter only.
<b>Southeast Regional Council Recommendation</b>	
<b>Southcentral Regional Council Recommendation</b>	
<b>Kodiak/Aleutians Regional Council Recommendation</b>	
<b>Bristol Bay Regional Council Recommendation</b>	
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Western Interior Regional Council Recommendation</b>	
<b>Seward Peninsula Regional Council Recommendation</b>	
<b>Northwest Arctic Regional Council Recommendation</b>	

*continued on next page*

<b>WP10-04 Executive Summary (continued)</b>	
<b>Eastern Interior Regional Council Recommendation</b>	
<b>North Slope Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	
<b>Written Public Comments</b>	<b>None</b>

**DRAFT STAFF ANALYSIS  
WP10-04**

**ISSUE**

This proposal, submitted by the Office of Subsistence Management, would remove Units 6, 12, 20A, 20B, 20C east of the Teklanika River, 20D and 20E from the areas for which the Assistant Regional Director for Subsistence Management has the delegated authority to open, close or adjust Federal subsistence lynx seasons and to set harvest and possession limits.

**DISCUSSION**

Lynx trapping seasons are adjusted annually based on recommendations determined using Alaska Department of Fish and Game (ADF&G) Tracking Harvest Strategy for managing lynx (FSB 2001). The Alaska Board of Game removed Units 6, 12, 20A, 20B, 20C east of the Teklanika River, 20D and 20E from the list of units that are managed using the lynx harvest strategy. Based on this action these units should also be eliminated from regulation.

**Existing Federal Regulation**

§\_\_.26 (f)(3)

*The Assistant Regional Director for Subsistence Management, FWS, is authorized to open, close, or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx in Units 6, 7, 11, 12, 13, 14, 15, 16, 20A, 20B, 20C east of the Teklanika River, 20D, and 20E, with a maximum season of November 1–February 28. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the ADF&G Lynx Harvest Management Strategy, and only after staff analysis of the potential action, consultation with the appropriate Regional Council Chairs, and Interagency Staff Committee concurrence.*

**Proposed Federal Regulation**

§\_\_.26 (f)(3)

*The Assistant Regional Director for Subsistence Management, FWS, is authorized to open, close, or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx in Units ~~6, 7, 11, 12, 13, 14, 15, and 16, 20A, 20B, 20C east of the Teklanika River, 20D, and 20E,~~ with a maximum season of November 1–February 28. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the ADF&G Lynx Harvest Management Strategy, and only after staff analysis of the potential action, consultation with the appropriate Regional Council Chairs, and Interagency Staff Committee concurrence.*

**Regulatory History**

In 1987, ADF&G adopted a Tracking Harvest Strategy for managing lynx (ADF&G 1987). This strategy calls for shortening or closing trapping seasons when lynx numbers are low, and lengthening or opening seasons when lynx are abundant. In the spring of 1992, the Alaska Board of Game adopted

maximum possible seasons for a number of management units within the State. Authority to make season adjustments within seasonal windows was delegated to ADF&G by the Alaska Board of Game. The decision to adjust the season is based upon the reported number of lynx harvested and the percentage of kittens within the total harvest.

The Federal Subsistence Board (Board) endorsed the State's strategy for setting seasons on lynx and has regularly made annual adjustments to the Federal seasons to align with the State seasons. In 2001 the Federal Subsistence Board (FSB 2001) added a statewide regulatory provision and issued a Delegation of Authority Letter (**Appendix I**) so that the Office of Subsistence Management could adjust lynx trapping regulations through the use of the ADF&G tracking harvest strategy. This delegated authority requires coordination with ADF&G, consultation with the appropriate Federal land management agencies, and development of a staff analysis to evaluate the effects of the changes to the season and harvest limit and Interagency Staff Committee concurrence.

In March 2008, the Alaska Board of Game eliminated the lynx tracking strategy in the interior game management units and established permanent seasons for Unit 20. Unit 12 was previously removed from the tracking strategy and in March 2009 the Alaska Board of Game eliminated the tracking strategy for Unit 6.

### **Effects of the Proposal**

When the Board first delegated its authority to the Assistant Regional Director for Subsistence Management, Units 6, 7, 11, 12, 13, 14, 15, 16, 20A, 20B, 20C east of the Teklanika River, 20D, and 20E were managed by the State using the lynx strategy. Over time, however, the State has removed a number of units from its lynx tracking strategy. If this proposal is adopted it would align Federal and State regulations regarding lynx management.

There should be no impacts on wildlife populations as season and harvest limits can still be changed through the normal regulatory cycle or through special action if needed. There will be no adverse impacts to subsistence users as season and harvest limits may still be changed. This proposed change only addresses the authority delegated to the Assistant Regional Director for the Office of Subsistence Management.

### **OSM PRELIMINARY CONCLUSION**

**Support** proposal WP10-04 **with modification** to delete the regulatory language found in § \_\_.26 (f)(3), and delegate the authority to open, close, or adjust Federal lynx seasons and to set harvest and possession limits for lynx via a delegation of authority letter only (**Appendix II**).

The regulation would be deleted:

§ \_\_.26 (f)(3) [*Reserved*]

*The Assistant Regional Director for Subsistence Management, FWS, is authorized to open, close, or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx in Units 6, 7, 11, 12, 13, 14, 15, 16, 20A, 20B, 20C east of the Teklanika River, 20D, and 20E, with a maximum season of November 1–February 28. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the ADF&G Lynx Harvest Management Strategy, and only after staff analysis of the potential action, consultation with the appropriate Regional Council Chairs, and Interagency Staff Committee concurrence.*

## **Justification**

There should be no impacts on wildlife populations as season and harvest limits can still be changed via the normal regulatory cycle or via special action if needed. There will be no impacts to subsistence users as season and harvest limits may still be changed. This proposed change is only addressing the authority delegated to the Assistant Regional Director for the Office of Subsistence Management. The current delegation is already done through a letter and the regulatory language in §\_\_.26 (f)(3) is redundant and not needed. The draft letter found in **Appendix II** would update the delegation of authority letter making it more consistent with other delegation letters issued throughout the state by the Board.

## **LITERATURE CITED**

ADF&G, Division of Wildlife Conservation. 1987. Report to the Board of Game on lynx management. 30 pages.

ADF&G, Division of Wildlife Conservation. 2009. Recommendations for the 2008–2009 lynx trapping seasons: Interior Alaska Tracking Harvest Strategy. 2 pages.

FSB. 2001. Transcripts of the Federal Subsistence Board proceedings, May 9, 2001. Anchorage, AK.



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

## Federal Subsistence Board

3601 C Street, Suite 1030  
Anchorage, Alaska 99503-6199



FOREST SERVICE

JUN 15 2001

FWS/OSM/C:/LynxDelegation

Mr. Thomas H. Boyd  
Assistant Regional Director, Subsistence Management  
U.S. Fish and Wildlife Service  
3601 C Street, Suite 1030  
Anchorage, Alaska 99503

Dear Mr. Boyd:

This letter delegates regulatory authority from the Federal Subsistence Board to you as Project Leader of the Office of Subsistence Management to issue special actions when necessary to assure the conservation of healthy lynx populations and to provide for subsistence uses of lynx, consistent with the Alaska Department of Fish and Game Lynx Harvest Management Strategy, on Federal lands subject to ANILCA Title VIII.

### Overview

It is the intent of the Federal Subsistence Board that lynx management by Federal officials be coordinated with the Alaska Department of Fish and Game and involve Regional Advisory Council representatives to conserve healthy lynx populations while providing for subsistence uses. Federal managers are expected to cooperate with State managers and minimize disruption to resource users and existing agency programs, as agreed to under the Interim Memorandum of Agreement for Coordinated Fisheries and Wildlife Management for Subsistence Uses on Federal Public lands in Alaska.

### DELEGATION OF AUTHORITY

- 1. Delegation:** The Project Leader of the Office of Subsistence Management is hereby delegated authority to approve special actions affecting lynx on Federal lands as outlined under **2. Scope of Delegation.**
- 2. Scope of Delegation:** The regulatory authority hereby delegated is limited to authority to open, close, or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the Lynx Harvest Management Strategy, and only after staff analysis of the potential action and Staff Committee concurrence.

Mr. Thomas H. Boyd

2

All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to method or means of take, shall be directed to the Federal Subsistence Board.

The Federal lands subject to this delegated authority are those described in the Subsistence Management Regulations for Public Lands in Alaska. You will coordinate your decisions with all affected Federal land managers and the Alaska Department of Fish and Game.

**3. Effective Period:** This delegation of authority is effective from the date of this letter, and continues until revoked by the Federal Subsistence Board.

**4. Guidelines for Delegation:** You will review special action requests or situations that may require a special action and all supporting information to determine (1) if the request/situation falls within the scope of delegation, (2) if the action would be consistent with the conservation of healthy lynx populations, and (3) what the consequences of taking an action may be on potentially affected subsistence users and non-subsistence users. You will consider the management history of lynx in the affected region, current State and Federal lynx regulations and management plans, and lynx population and harvest status information. Requests not within your delegated authority will be forwarded to the Federal Subsistence Board for consideration. You will keep a record of all special action requests and their disposition.

You will immediately notify the Federal Subsistence Board and notify/consult with appropriate ADF&G managers, Regional Advisory Council members, and other affected Federal conservation unit managers concerning special actions being considered. You will issue timely decisions. Users, affected State and Federal managers, law enforcement personnel, and Regional Advisory Council representatives will be notified before the effective date/time of decisions.

**5. Support Services:** Administrative support for management activities will be provided by the Office of Subsistence Management, U.S. Fish and Wildlife Service, Department of the Interior.

**6. Authority:** This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6).

This delegation of authority will assure conservation of lynx populations through sound management decisions in cooperation with State managers, thereby providing for the long-term needs of the subsistence user.

Sincerely,



Mitch Demientieff, Chair  
Federal Subsistence Board

Attachment: Tracking Harvest Strategy for Lynx

cc: Members of the Federal Subsistence Board

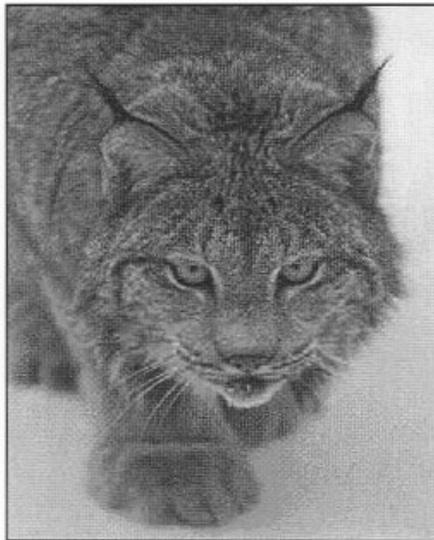
Mr. Stanley Pruszanski, Assistant Regional Director - Law Enforcement

Mr. Walter Soroka, Deputy Assistant Regional Director - Law Enforcement

Mr. Frank Rue, Commissioner, Alaska Department of Fish and Game

## Tracking Harvest Strategy for Lynx

by Howard Golden  
Furbearer Biologist, Southcentral Region

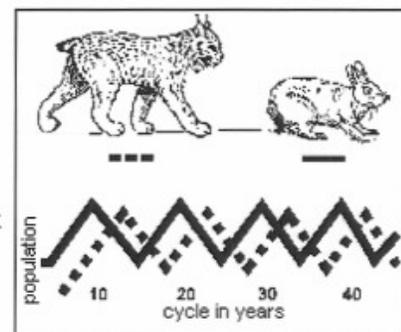


Lynx (*Lynx canadensis*) populations in Alaska and much of Canada fluctuate greatly over a 9-11-year period, responding mainly to the abundance of snowshoe hares (*Lepus americanus*). Lynx population trends are closely tied with those of snowshoe hares even when other prey is available. Lynx respond directly to changes in hare abundance through the number of kittens that are produced and the survival of kittens and adults. This response by lynx follows the hare population cycles, which are remarkably synchronous in northern latitudes.

Managers of lynx harvest in these areas must be able to respond with appropriate harvest regulations to ensure sustainable harvests are maintained. A tracking harvest strategy is one method for managing the harvest of populations in a fluctuating environment. Under a tracking harvest strategy, harvest is increased while a population is growing and is decreased during a population decline. In 1987, the Alaska Department of Fish and Game (ADF&G) and the Board of Game (BOG), which authorizes seasons and bag limits in Alaska, adopted a tracking harvest strategy to allow the dynamic management of lynx based on the ability of populations to support harvest. This was in response to concerns by lynx managers that high lynx-pelt prices would encourage excessive harvest during the declining phase of the lynx cycle.

The tracking harvest strategy applies to the road-connected areas of Interior and Southcentral Alaska that have high trapper use. Several criteria are used to determine if lynx seasons should be changed, including:

1. Percent kittens in the harvest
2. Evidence of increasing or decreasing populations of both lynx and hares
3. Period of pelt primeness
4. Potential negative effects of early seasons' orphaning kittens too young to survive
5. Possible effects of late seasons on higher harvests due to increased movement and greater vulnerability of lynx

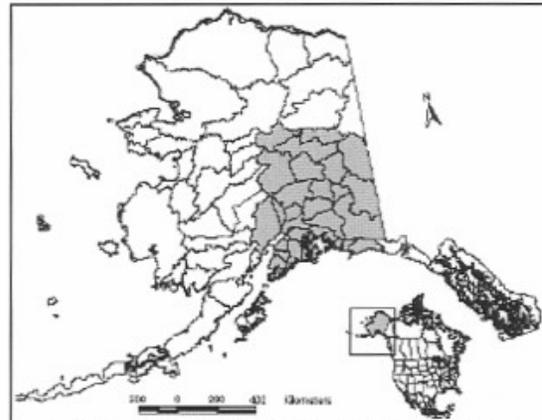


The tracking harvest strategy for lynx was implemented in 1988. The strategy resulted in season closures in some units when lynx populations seemed to be at low levels but later allowed seasons in those units to reopen once lynx populations began to increase. The tracking harvest strategy became difficult to use because of the need to issue emergency orders to change seasons outside the usual regulatory schedule established by the BOG. This problem was resolved in 1992 when the BOG authorized ADF&G to

change season lengths within the broad seasons of 1 November-28 February in Interior game management units and 10 November-28 February in Southcentral units. ADF&G is not authorized to modify bag limits under this plan because that is a BOG allocation prerogative. There is a no-limit bag for lynx trapping throughout most of the state.

Every spring ADF&G biologists analyze data collected over winter during the trapping season to determine the most appropriate lynx seasons for the next winter. Biologists use a variety of tools to make their decisions. These tools include:

1. Track counts in snow to monitor the relative abundance of lynx and snowshoe hares
2. Pelt measurements to estimate the proportion of kittens in the harvest
3. Biological measurements from lynx carcasses purchased from trappers
4. Harvest data to determine where and how many lynx were trapped
5. Reports from trappers to get their on-the-ground observations
6. Other things like weather and snow conditions and pelt prices



Tracking harvest strategy area (shaded) and Game Management Unit boundaries in Alaska.

The new seasons may be long during the high years in a population cycle, closed during a low period, or somewhere in between during the middle years.

#### LynxTrak: A Tool for Lynx Harvest Managers



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Last Modified 08/10/2001 14:02:00

## LynxTrak: A Tool for Lynx Harvest Managers

by Howard Golden  
Furbearer Biologist, Southcentral Region

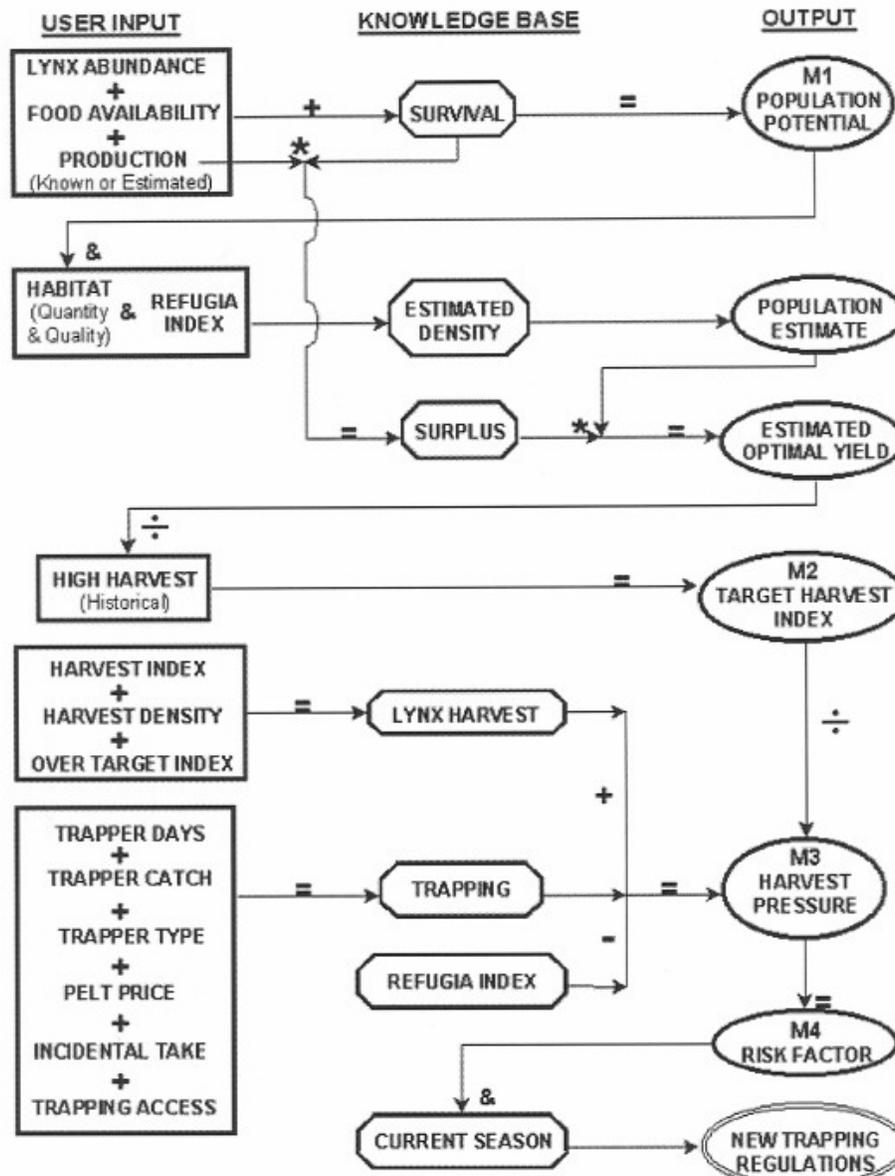


© Brian Slough

To aid lynx managers achieve sustainable harvest objectives under the tracking harvest strategy, I developed a rule-based model, called **LynxTrak**, as a decision-making tool. The advantage of the rule-based model is that it provides a documented, logical structure to the decision-making process that is both intuitive and experiential. Such models can process quantitative data but are most useful when coping with qualitative information to reach decisions. Rule-based models build on what is known using available literature, in-house databases, and the collective knowledge of experts. These types of models have become known as knowledge-based systems or expert systems. Expert systems are now widely used to address many situations in natural resource management, such as management of rangelands and lake systems, prescribed burning, and population modeling. The knowledge base for **LynxTrak** incorporates material from pertinent literature, lynx researchers, managers, and trappers in Alaska and Canada, and from Alaskan

lynx harvest data gathered through pelt sealing.

Expert systems are used with a computer program shell to incorporate the user's experience and available information into a decision tree, which is the foundation of the rule-based model. Designers of a model first establish all potential decisions or goals that could reasonably be made regarding a particular situation. Next, questions using qualitative variables are formulated about the specific conditions or situations that may exist. Finally, a set of rules is devised as if-then scenarios that direct the user toward an informed, logical, and consistent decision. This modeling approach can provide the user with a protocol that, because it is fully documented, ensures accountability. Lynx harvest managers in southcentral Alaska have been using the model for the last few years.



Summary flow diagram of LynxTrak depicted as user input, knowledge base, and output through the 4 modules: population potential (M1), target harvest index (M2), harvest pressure (M3), and risk factor (M4). The user input (rectangles) is the response given to questions (or occasionally variables) which LynxTrak asks as questions. The responses are then used to calculate numerical variables that become the knowledge base (octagons). The output (ovals) consists of the knowledge base variables used in combination to calculate other numerical variables and, finally, the goal of new trapping regulations.

LynxTrak is available in a runtime version that may be downloaded from this web site. The user guide (PDF version – 33K) for the model should be printed to aid installation and running the model. The model is in a self-extracting zip file (668K) that includes all the files needed to run LynxTrak.

Full documentation and technical support for LynxTrak is available from Howard Golden (mailto:20howard\_golden@fishgame.state.ak.us).



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Contact: Howard Golden ([mailto:%20howard\\_golden@fishgame.state.ak.us](mailto:%20howard_golden@fishgame.state.ak.us))

Division Webmaster: <mailto:%20wcweb@fishgame.state.ak.us>

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Last Modified 08/10/2001 14:02:14

Mr. Peter J. Probasco  
Assistant Regional Director, Subsistence Management  
U.S. Fish and Wildlife Service  
1011 East Tudor Road  
Anchorage, Alaska 99503

Dear Mr. Probasco:

This letter delegates regulatory authority from the Federal Subsistence Board to you as Project Leader of the Office of Subsistence Management to take action when necessary to assure the conservation of healthy lynx populations and to provide for subsistence uses of lynx, consistent with the Alaska Department of Fish and Game Lynx Harvest Management Strategy, on Federal lands subject to ANILCA Title VIII. This supersedes and replaces the original delegation letter dated June 15, 2001.

#### Overview

It is the intent of the Federal Subsistence Board that lynx management by Federal officials be coordinated with the Alaska Department of Fish and Game and involve Regional Advisory Council representatives to conserve healthy populations while providing for subsistence uses. Federal managers are expected to cooperate with State managers and minimize disruption to resource users and existing agency programs, as agreed to under the Memorandum of Understanding for Coordinated Fisheries and Wildlife Management for Subsistence Uses on Federal Public lands in Alaska (December 18, 2008).

### **DELEGATION OF AUTHORITY**

**1. Delegation:** The Project Leader of the Office of Subsistence Management is hereby delegated authority to issue special action regulations affecting lynx on Federal lands as outlined under **2. Scope of Delegation.**

**2. Scope of Delegation:** The regulatory authority hereby delegated is limited to authority to open, close or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the Lynx Harvest Management Strategy.

All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to method or means of take, shall be directed to the Federal Subsistence Board.

The Federal lands subject to this delegated authority are those described in the Subsistence Management Regulations for Public Lands in Alaska. You will coordinate your decisions with all affected Federal land managers and the Alaska Department of Fish and Game.

**3. Effective Period:** This delegation of authority is effective from the date of this letter, and continues until revoked by the Federal Subsistence Board.

**4. Guidelines for Delegation:** You will become familiar with the management history of lynx in the region, with the current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will review situations that may require action and all supporting information to determine (1) if the request/situation falls within the scope of authority, (2) if significant conservation problems or subsistence harvest concerns are indicated, and (3) what the consequences of taking an action may be on potentially affected subsistence users and non-subsistence users. Requests not within your delegated authority will be forwarded to the Federal Subsistence Board for consideration. You will keep a record of all special action requests and their disposition.

You will immediately notify the Federal Subsistence Board and notify/consult with local ADF&G managers, Regional Advisory Council members, and other affected Federal conservation unit managers concerning actions being considered. You will issue timely decisions. Users, affected State and Federal managers, law enforcement personnel, and Regional Advisory Council representatives will be notified before the effective date/time of decisions.

**5. Support Services:** Administrative support for management activities will be provided by the Office of Subsistence Management, U.S. Fish & Wildlife Service, Department of the Interior.

**6. Authority:** This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6).

This delegation of authority will assure conservation of lynx populations through sound management decisions in cooperation with State managers, thereby providing for the long-term needs of the subsistence user.

Sincerely,

Michael R. Fleagle, Chair  
Federal Subsistence Board

cc:

Members of the Federal Subsistence Board  
Interagency Staff Committee  
Tina Cunning, ADF&G

<b>WP10-05 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-05 seeks to update, clarify, and simplify the regulations regarding accumulation of harvest limits for both fish and wildlife. <i>Submitted by the Office of Subsistence Management</i>
<b>Proposed Regulation</b>	<p>§ __.25(c) <i>Harvest Limits.</i></p> <p>(1) <i>Harvest limits authorized by this section and harvest limits established in State regulations may not be accumulated, <b>unless specified otherwise in §§ __.26 or __.27 or __.28.</b></i></p> <p>(2) ****</p> <p>(3) <i>A harvest limit <del>may applies</del> apply to the number of fish, wildlife, or shellfish that can be taken daily, seasonally and/or during a regulatory year or held in possession.; however, harvest limits for grouse (in some Units), ptarmigan, and caribou (in some Units), are regulated by the number that may be taken per day. Harvest limits of grouse, and ptarmigan are also regulated and the number that can be held in possession.</i></p>
<b>OSM Preliminary Conclusion</b>	<b>Support</b>
<b>Southeast Regional Council Recommendation</b>	
<b>Southcentral Regional Council Recommendation</b>	
<b>Kodiak/Aleutians Regional Council Recommendation</b>	
<b>Bristol Bay Regional Council Recommendation</b>	
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Western Interior Regional Council Recommendation</b>	
<b>Seward Peninsula Regional Council Recommendation</b>	
<b>Northwest Arctic Regional Council Recommendation</b>	
<b>Eastern Interior Regional Council Recommendation</b>	
<b>North Slope Regional Council Recommendation</b>	

*continued on next page*

**WP10-05 Executive Summary (continued)**

<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	
<b>Written Public Comments</b>	<b>None</b>

**DRAFT STAFF ANALYSIS  
WP10-05**

**ISSUES**

Proposal WP10-05, submitted by the Office of Subsistence Management, seeks to update, clarify, and simplify the regulations regarding accumulation of harvest limits for both fish and wildlife.

**DISCUSSION**

A prohibition against accumulating Federal and State harvest limits has been included in the statewide general Federal subsistence regulations since 1990 (§\_\_.25(c)(1)). Wording in Section \_\_.25(c)(3) dates back to 1994; this section identifies the species for which harvest limits apply. There is a need to update both Sections \_\_.25(c)(1) and (3). While the Board has addressed a number of area specific proposals concerning the accumulation of harvest limits over the years, these two sections of the general regulations have not been updated to reflect changes to the unit and area specific regulations; the current proposal addresses those inconsistencies.

**Existing Federal Regulations**

Statewide – Subsistence taking of fish, wildlife, and shellfish: general regulations

*§\_\_.25(c) Harvest Limits.*

*(1) Harvest limits authorized by this section and harvest limits established in State regulations may not be accumulated.*

*(2)\*\*\*\**

*(3) A harvest limit applies to the number of fish, wildlife, or shellfish that can be taken during a regulatory year; however, harvest limits for grouse, ptarmigan, and caribou (in some Units) are regulated by the number that may be taken per day. Harvest limits of grouse and ptarmigan are also regulated by the number that can be held in possession.*

**Proposed Federal Regulations**

Statewide – Subsistence taking of fish, wildlife, and shellfish: general regulations

*§\_\_.25(c) Harvest Limits.*

*(1) Harvest limits authorized by this section and harvest limits established in State regulations may not be accumulated, **unless specified otherwise in §§\_\_.26 or \_\_.27 or \_\_.28.***

*(2)\*\*\*\**

*(3) A harvest limit **may applies apply** to the number of fish, wildlife, or shellfish that can be taken **daily, seasonally and/or** during a regulatory year **or held in possession.** ~~; however, harvest limits for grouse (in some Units), ptarmigan, and caribou (in some Units), are regulated by the number~~*

*that may be taken per day. Harvest limits of, grouse, and ptarmigan are also regulated and the number that can be held in possession.*

### **Existing State Regulations**

In State hunting regulations a harvest (bag) limit applies to a regulatory year unless otherwise specified, and includes animals taken for any purpose, including for subsistence. State hunting regulations provide daily limits for wolves (all or part of Units 9, 10, 13, 17 and 19); caribou (all or part of Units 21, 22, 23, 24 and 26); coyote (Units 6–17, 19 and 20); grouse (1–7, 9, 11–26); hare (all or part of Units 1–5 and 14) and ptarmigan (Units 1–26).

State regulations do not prohibit the accumulation of harvest limits taken in State sport, personal use, and subsistence fisheries across most of Alaska (Kotzebue, Norton Sound-Port Clarence, Yukon-Northern, Kuskokwim, Bristol Bay, Aleutian Islands, Alaska Peninsula, Chignik, Kodiak, Cook Inlet and Prince William Sound areas). In the Southeast Area, the State prohibits fishers from possessing salmon taken in the sport fishery on the same day as salmon taken in either subsistence or personal use fisheries (5 AAC 01.745(b); 5 AAC 77.682(e)). In the Yakutat Area, the State prohibits possession of personal use-taken and sport-taken salmon on the same day (5 AAC 77.628(f)).

In State subsistence fish regulations, ten areas (Norton Sound-Port Clarence, Yukon-Northern, Bristol Bay, Aleutian Islands, Alaska Peninsula, Chignik, Kodiak, Cook Inlet, Prince William Sound and Southeast (5 AAC 01)) have annual harvest limits for some species of freshwater fish. The annual subsistence harvest limits specified in the Aleutian Islands, Chignik and Kodiak areas are the same as those in Federal subsistence regulations and the subsistence fisheries in these three areas are administered using State permits. There is no State subsistence daily, possession or annual harvest limit regulations for freshwater fisheries in two areas (Kotzebue and Yakutat). Only one area (Southeast Alaska) has a specific State subsistence regulatory daily and possession limit (for one species at one location; 5 AAC 01.760). Most State sport fish harvest regulations are based on daily and possession limits (5 AAC 47-75).

### **Extent of Federal Public Lands and Waters**

This proposal would apply to the entire state. Federal public lands comprise approximately 65% of Alaska and consist of 23% Bureau of Land Management, 15% National Park Service, 21% U.S. Fish and Wildlife Service, and 6% U.S. Department of Agriculture, U.S. Forest Service lands.

### **Regulatory History**

#### Accumulating Federal and State harvest limits

The current wording in Section \_\_.25(c)(1) that addresses the prohibition against accumulating Federal and State harvest limits dates back to 1990. Based on requests from subsistence users, ADF&G, and the review and recommendations of the Southcentral Alaska and Southeast Alaska Subsistence Regional Advisory Councils, the Federal Subsistence Board (Board) supported several exemptions to and clarification of the general prohibition against accumulation of harvest limits in Section \_\_.25(c)(1).

In 2004, the Board authorized accumulation of subsistence harvest limits for salmon in the Copper River drainage upstream from Haley Creek with harvest limits for salmon authorized under State of Alaska sport fishing regulations (27(i)(11)(B)). In 2005, the Board also authorized the accumulation of Federal subsistence fish annual harvest limits with State sport fishing limits for the Southeast Alaska area (27(i)(13)(vii)).

In 2006, the Board allowed accumulation of Federal subsistence fishing harvest limits with State of Alaska sport fishing harvest limits within the Chugach National Forest and in the Copper River drainage downstream from Haley Creek provided that the accumulation of fishing harvest limits would not occur in the same day (27(i)(11)(A)).

In 2009, the Board clarified regulations by stipulating that a subsistence fisher may not accumulate Federal subsistence harvest limits authorized for Southeast Alaska Area with any harvest limits authorized under any State of Alaska fishery with the following exceptions: annual and seasonal Federal subsistence harvest limits may be accumulated with State sport fishing harvest limits provided that accumulation of harvest limits does not occur during the same day (27(i)(13)(vii)). That year, the Board further clarified that fishers may not possess subsistence taken and sport taken fish of a given species on the same day in the Yakutat (27(i)(12)(viii)) and Southeast Alaska (27(i)(13)(xi)) Areas.

Current Federal subsistence management regulations that address applicability for subsistence take of wildlife (§\_\_.26) provide the following clarification concerning accumulation of harvest limits (§\_\_.26(e)(1)):

*Except as specified in paragraphs (e)(2) or (f)(1) of this section, or as otherwise provided, you may not take a species of wildlife in any unit, or portion of a unit, if your total take of that species already obtained anywhere in the State under Federal and State regulations equals or exceeds the harvest limit in that unit.*

Sections \_\_.26(e)(2) and (f)(1) address established community harvest limit allowances and an allowance for accumulating hunting and trapping harvest limits.

The regulations that address applicability for subsistence taking of fish (§\_\_.27) provides the following clarification concerning accumulation of harvest limits:

*(§\_\_.27(a)(2)) The harvest limit specified in this section for a subsistence season for a species and the State harvest limit set for a State season for the same species are not cumulative, except as modified by regulations in §\_\_.27(i). This means that if you have taken the harvest limit for a particular species under a subsistence season specified in this section, you may not, after that, take any additional fish of that species under any other harvest limit specified for a State season.*

The regulations that address applicability for subsistence taking of shellfish (§\_\_.28) provides the following clarification concerning accumulation of harvest limits:

*(§\_\_.28(d)(1)) The harvest limit specified in this section for a subsistence season for a species and the State harvest limit set for a State season for the same species are not cumulative. This means that if you have taken the harvest limit for a particular species under a subsistence season specified in this section, you may not, after that, take any additional shellfish of that species under any other harvest limit specified for a State season.*

### Application of harvest limits

The current wording in Section \_\_.25(c)(3) dates back to 1994 and specifies that harvest limits apply to “regulatory year”, with the exception of ptarmigan, and in some units for grouse and caribou.

Current Federal hunting regulations (§\_\_.26) include daily limits for beaver (Unit 9 and 17), caribou (all or part of Units 21–24 and 26); hare (all or part of Units 1–5 and 14); and wolf (part of Unit 19). There

are daily and possession limits for grouse (all or part of Units 1–7, 9 and 11–25); ptarmigan (Units 1–26); and beaver (all or part of Units 7, 11, 13 and 25).

When Federal subsistence management regulations for fish (§ \_\_.27) were first implemented on October 1, 1999, there were no specified daily or possession limits for fish in Federal regulations except on the Kenai Peninsula. Since that time, the Federal Subsistence Board has established daily and/or possession limits for specific fish species and locations in 5 of 13 fishery management areas. Federal regulatory provisions for daily harvest and/or possession limits for specific species of fish were first established in the Southeast Area in 2001, the Yukon-Northern and Cook Inlet areas in 2002, the Bristol Bay Area in 2003, and the Yakutat Area in 2006.

Current Federal subsistence management regulations include daily and/or possession limits for sockeye and coho salmon, steelhead trout, brook trout, grayling, Dolly Varden, cutthroat trout, and rainbow trout in all or parts of the Southeast Area. Yakutat Area regulations include a daily harvest and possession limit for Dolly Varden and address a daily limit for steelhead trout.

In parts of the Cook Inlet Area there are specific daily harvest and possession limits in Federal regulations for Chinook, sockeye, coho and pink salmon; Dolly Varden/Arctic char; lake trout and rainbow/steelhead trout. In other parts of the Cook Inlet Area, Federal subsistence regulations specify that the daily harvest and possession limits for fish are the same as those in Alaska sport fishing regulations. In a November 24, 2008 letter to OSM, Federal Subsistence Board Chairman Fleagle clarified that the Board's intent was that Federal subsistence and State sport harvest limit for fish not be accumulated for the Kasilof and Kenai river drainages and vicinity.

Federal subsistence management regulations also specify daily and possession limits for rainbow trout in the Bristol Bay Area and daily and possession limits for grayling in a part of the Yukon-Northern Area. There are no Federal daily or possession limits for fish in the Kotzebue, Norton Sound-Port Clarence, Kuskokwim, Aleutian Islands, Alaska Peninsula, Chignik, Kodiak, or Prince William Sound areas. Federal subsistence management regulations specify annual harvest limits for fish species and locations in seven areas (Aleutian Islands, Alaska Peninsula, Chignik, Kodiak, Cook Inlet, Prince William Sound, and Southeast). There are no daily, possession or annual limits for fish under Federal subsistence management regulations in three areas (Kotzebue, Norton Sound-Port Clarence, and Kuskokwim).

Shellfish regulations (§ \_\_.28) include daily and possession limits as well. There are daily limits for shellfish in Bering Sea Area. There are daily and/or possession limits for shellfish in the Cook Inlet, Kodiak, and Alaska Peninsula-Aleutian Islands Areas.

### **Effects of the Proposal**

Proposal WP10-05 does not affect fish and wildlife populations, subsistence uses or other uses (i.e., sport/recreational or commercial). Rather, the proposal seeks to update, clarify, and simplify Sections \_\_.25(c) (1) and (3), all of which reference accumulation of harvest limits. Section \_\_.25(c)(1) dates back to 1990 and Section \_\_.25(c)(3) dates back to 1994. The proposed wording changes retain the general prohibition of accumulation of Federal and State harvest limits, and points to unit and area specific regulations for details and exceptions. Unit and area specific regulations currently provide daily, daily and possession, or possession limits for ptarmigan, grouse, caribou, wolf, hare, beaver, fish and shellfish. This proposal does not change any unit or area specific Federal subsistence regulations concerning accumulation of harvest limits or the timeframe (daily, seasonal or regulatory year) for harvest limits.

## OSM PRELIMINARY CONCLUSION

**Support** Proposal WP09-05.

### **Justification**

The general regulations concerning accumulation of harvest limits need to be updated to reflect Board action over the years. The Board has addressed a number of proposals concerning accumulation of harvest limits; the approved exceptions are reflected within the Federal hunting and trapping (§\_\_.26), fishing (§\_\_.27), and shellfish (§\_\_.28) regulations. The changes to the general regulations proposed herein recognize all of the previously approved exceptions. This proposal does not affect fish and wildlife populations, subsistence users or other users. Given the number of species, areas and units affected, and the changes that may occur in the future, it is appropriate to use more general wording in these general regulations.

<b>WP10-54 Executive Summary</b>	
<b>General Description</b>	<p>Proposal WP10-54 requests establishing community harvest quotas on the Kuskokwim River segment of Unit 18 and a reduction of the pool of Federally qualified users that are eligible to hunt moose in the Kuskokwim drainage portion of Unit 18, hereafter referred to as the moratorium area. <i>Submitted by the Yukon Delta National Wildlife Refuge</i></p>
<b>Proposed Regulation</b>	<p><b>Unit 18—Moose</b></p> <p><i>Unit 18, that portion east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border and north of (and including) the Eek River drainage.</i></p> <p><i>No Federal open season</i></p> <p><i>Federal public lands are closed to the taking of moose except to eligible rural residents.</i></p> <p><b><i>Only residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, and Lower Kalskag may hunt in this area—No individual harvest limit, but a village harvest quota. The harvest quota will be determined by the Yukon Delta National Wildlife Refuge manager.*</i></b></p> <p>*NOTE: The original proposal in the Proposal Book requested: “Establish community harvest quotas on the Kuskokwim segment of Unit 18 moose with language to be determined by FWS staff.” This language in the proposed regulation was developed with Refuge staff after the proposal book was published.</p>
<b>OSM Preliminary Conclusion</b>	<p><b>Support</b> Proposal WP10-54 <b>with modification</b> to add the results of the Section 804 analysis.</p> <p><b>Unit 18—Moose</b></p> <p><i>Unit 18, that portion east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border and north of (and including) the Eek River drainage.</i></p> <p><i>No Federal open season</i></p> <p><i>Federal public lands are closed to the taking of moose except to eligible rural residents.</i></p>

*continued on next page*

<b>WP10-54 Executive Summary (continued)</b>	
	<i>Only residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag may hunt in this area.</i>
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Support with modification.</b> See the State’s comments following the analysis.
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-54

### ISSUES

Proposal WP10-54, submitted by the Yukon Delta National Wildlife Refuge (Refuge), requests establishing community harvest quotas on the Kuskokwim River segment of Unit 18 and a reduction of the pool of Federally qualified users that are eligible to hunt moose in the Kuskokwim drainage portion of Unit 18, hereafter referred to as the moratorium area.

### DISCUSSION

In submitting Proposal WP10-54, the proponent hopes to limit the distribution of Federal permits to harvest moose in the moratorium area due to conservation concerns for the moose population. The proponent does not request an open hunting season for moose, but is anticipating a hunt in the future.

Because this proposal requests that the pool of Federally qualified users be reduced, it requires application of ANILCA Section 804 criteria to establish priority among those with a positive customary and traditional use determination to harvest moose in the moratorium area. The Board closed the moratorium area to non-Federally qualified users in 2004. The proponent anticipates Federal public lands in the moratorium area re-opening to moose hunting at some point in the future. When this occurs, there will be a small number of moose available to harvest relative to the large number of subsistence users with a customary and traditional use determination to harvest moose (42 communities including Bethel). The potential for harvest to exceed the harvestable surplus is considered high. A Section 804 analysis is based on the application of three criteria, including customary and direct dependence upon the populations as the mainstay of livelihood, local residency, and the availability of alternative resources; application of this analysis is necessary to determine the Federally qualified users eligible to harvest moose in the moratorium area.

The moratorium area consists of the area drained by the lower Kuskokwim River and its tributaries in Unit 18, and is defined as that portion of Unit 18 east of a line running from the mouth of the Ishkowiik River to the closest point of Dall Lake, to the easternmost point of Takslesluk Lake along the Kuskokwim River drainage boundary to the Unit 18 border, and then north of and including the Eek River drainage (**Map 1**).<sup>1</sup>

Refuge staff are working with ADF&G in an attempt to coordinate the opening of a future Federal moose season with the existing State moose season in the moratorium area. A major issue that has been identified by the Refuge is the need to limit the distribution of moose permits in the moratorium area due to the small number of moose that are available to harvest. Such steps will be necessary to prevent overharvest. Another major issue is the harvest of moose that occurs outside of the regulatory season that is generally unreported. In recent years, increased law enforcement has been used to stop the illegal harvest. Enforcement officials and Refuge staff have also spoken to residents of the moratorium area about their concerns. While enforcement and education are important and should continue, it has been shown in

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<sup>1</sup> On November 14 the Alaska Board of Game adopted a proposal to change the boundary for the lower Kuskokwim area registration moose hunt. OSM has received a similar proposal and is scheduled to act on that proposal during the current wildlife cycle.



numerous examples in Alaska that community-based management strategies, combined with reasonable enforcement measures, are likely to be more effective than law enforcement alone (ADF&G and ISER 1996; Fall and Shanks 2000). To this end, the Refuge is proposing to continue its support of cooperative efforts with villages and ADF&G that established the moose harvest moratorium in 2004 in the first place.

The overall goal of the Refuge is to partner with ADF&G and local communities to provide a community moose harvest quota and reporting system in the moratorium area, and to identify community-specific hunting areas. The desired outcome is for each eligible community to monitor the moose populations in its area, distribute harvest opportunity to community members, and enforce harvest limits based on a quota established by the Refuge in consultation with ADF&G.

### Existing Federal Regulation

#### Unit 18—Moose

*Unit 18, that portion east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border, and north of (and including) the Eek River drainage.*

*No Federal open season*

*Federal public lands are closed to the taking of moose except to eligible rural residents.*

### Proposed Federal Regulation

#### Unit 18—Moose

*Unit 18, that portion east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border and north of (and including) the Eek River drainage.*

*No Federal open season*

*Federal public lands are closed to the taking of moose except to eligible rural residents.*

***Only residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmaultluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, and Lower Kalskag may hunt in this area—No individual harvest limit, but a village harvest quota. The harvest quota will be determined by the Yukon Delta National Wildlife Refuge manager.\****

\*NOTE: The original proposal in the Proposal Book requested: “Establish community harvest quotas on the Kuskokwim segment of Unit 18 moose with language to be determined by FWS staff.” This language in the proposed regulation was developed with Refuge staff after the proposal book was published.

## Existing State Regulation

### Unit 18—Moose

*Unit 18, that portion easterly of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border, and then north of and including the Eek River drainage.*

**Sept. 1–Sept. 10**

*One antlered bull by permit available in person at ADF&G in Bethel and villages within the hunt area from Aug. 1–Aug. 25.*

## Extent of Federal Public Land

Federal public lands comprise 64% of Unit 18, of which 96% is managed by the U.S. Fish and Wildlife Service and 4% is managed by the Bureau of Land Management. (**Map 1**). The U.S. Fish and Wildlife Service lands are located in the Yukon Delta National Wildlife Refuge. The Kuskokwim River main corridor, within the moratorium area, is comprised primarily of privately-owned, State-managed lands.

## Customary and Traditional Use Determinations

Residents of Unit 18 and Upper Kalskag have a customary and traditional use determination for harvesting moose in Unit 18. In addition, residents of Unit 18, Upper Kalskag, Aniak, and Chuathbaluk have a customary and traditional use determination for harvesting moose in the Kuskokwim drainage upstream of (but excluding) the Tuluksak River drainage.

## Regulatory History

Following a 2003 Alaska Board of Game action that established a five-year moratorium on moose hunting under State regulations for the moratorium area, described in this proposal, Federal Proposal WP04-51 also requested a five-year moratorium on Federal public lands for the moratorium area. Proposal WP04-51 was adopted by the Federal Subsistence Board in April 2004. The moratorium on moose hunting was established to promote colonization of underutilized moose habitat.

The Lower Kuskokwim Fish and Game Advisory Committee worked with the ADF&G, U.S. Fish and Wildlife, and area residents to consider alternative approaches to address moose population issues in the area prior to initiating a moratorium on hunting. The preferred solution, modeled after successful efforts on the Yukon River below Mountain Village, was to close the season for five years, or until the population grew to 1,000 moose. The population objective of 1,000 moose was established for an area that includes only those survey units along the Kuskokwim River corridor. The long-term objective set by the State is to reach 2,000 moose in this survey unit. Once the moose population is established, an initial bull only season would be opened. In order for the moratorium to succeed, it was essential that local

residents understood and were committed to this five-year strategy. Considerable efforts have been made to communicate the growth potential of the affected moose population to the local communities. The moratorium was supported by resolutions made by the majority of the affected communities. A detailed history of Federal and State moose hunting regulations in the moratorium area from 1980 to the present is in **Appendix A**.

State Management Objectives for the Moratorium Area of Unit 18 (Perry 2008):

- Manage the lower Kuskokwim River population to increase above its estimated size of 75-250 moose to at least 2,000 moose.
- Manage to maintain the current age and sex structure with a minimum of 30 bulls:100 cows.
- Conduct seasonal sex and age composition surveys as weather allows.
- Conduct winter censuses and recruitment surveys in the established survey area on a rotation basis.
- Conduct fall and/or winter trend count surveys to determine population trends.
- Conduct hunts consistent with population goals.
- Improve knowledge of and compliance with harvest reporting requirements and hunting regulations through education and incentives.
- Address user conflicts through education and hunter contacts.

#### Recent Events that Prompted this Request

At its March 2009 meeting, the Alaska Board of Game established a registration hunt (RM615) in response to the five-year moratorium that ended on June 30, 2009. The 2009 State season was Sept. 1–Sept. 10 with a one antlered bull harvest limit by registration permit and a total harvest quota of 75 antlered bull moose. At its fall 2009 meeting, the Yukon-Kuskokwim Delta Regional Advisory Council did not opt to submit a proposal to open the moose season on the Federal public lands in the moratorium area, and the Federal public lands in the moratorium area have remained closed to the harvest of moose by non-Federally qualified users.

#### **Biological Background**

Calving data were obtained from collared moose along the Kwethluk River during May and June of 2007 (FWS 2008). Thirty-four out of a possible thirty-nine cows of breeding age gave birth (87%). A total of 52 calves (14 sets of twins, 2 sets of triplets, and 18 singles) were born to the 34 cow moose, the multiple birth rate (twins + triplets) was 47%. Cows with calves were resurveyed in late December 2007 to assess calf survival rate. The six-month calf survival rate for the affected moose population was 62% (FWS 2008). These values indicate the healthy condition of the pregnant cow moose in late spring prior to calving in early May and can be indicative of good habitat, mild winter conditions, and low predation rates.

In November 2007 moose composition counts were conducted along the lower Kuskokwim River from Lower Kalskag to Bethel and along the Kwethluk River from Elbow Mountain to the village of Kwethluk (FWS 2008). These areas had a bull:cow ratio of 98 bulls per 100 cows and calf:cow ratio of 73 calves per 100 cows. These values are indicative of good reproduction and calf survival.

In January 2008, a survey conducted along the lower Kuskokwim drainage survey block by the U.S. Fish and Wildlife Service and ADF&G estimated a population of 668 moose. It was hypothesized by the U.S. Fish and Wildlife Service and ADF&G staff that if lower Kuskokwim drainage tributaries were included with the survey block count that there could be about 1,002 moose along the lower Kuskokwim drainage and its tributaries. In 2009 environmental conditions were not adequate to conduct surveys along lower Kuskokwim drainage tributaries, so an accurate population estimate was not acquired.

Results from January 2008 population surveys revealed that the current annual growth rate is 27%–30% and the estimated population density is 0.5 moose/mi<sup>2</sup>. This is a significant increase from the last survey conducted in 2004 that produced an observed total of less than 70 moose in the moratorium area. It is projected that if the moratorium could be extended (through June 30, 2010), the resulting population density could reach as high as 1.0 moose/mi<sup>2</sup> (Doolittle 2008, pers. comm.). Refuge biologists believe that the moose habitat along the Kuskokwim River drainage, including the Kasaralik, Tuluksak, Kwethluk, and Eek river drainages, is capable of supporting substantially more animals than currently reside in the area (Doolittle 2008, pers. comm.). Standing browse does not appear to be limiting the growth potential of the moose population. Moose browse surveys have not been conducted in past years within the affected area, thus there are no existing habitat data at this time. However, the Yukon Delta National Wildlife Refuge conducted surveys of the willow species along the Kwethluk River in the summer of 2009 (results are pending) and will conduct further surveys in the summer of 2010 (Doolittle 2009, pers. comm.). Browse surveys will facilitate analysis of the impacts this moose population is having on habitat, which could provide some insight into the carrying capacity of the habitat and the nutritional quality of the standing browse.

Based on the actual survey and the tributary drainage estimate, the U.S. Fish and Wildlife Service and ADF&G set a potential harvest goal of 75 moose for the entire closed area, which included Federal public lands (FWS 2008). However, ADF&G chose not to reduce the harvest quota when Federal public lands remained closed to hunting. The 75 moose quota was surpassed and 110 moose were reported harvested during the State September 2009 hunting season (Doolittle 2009, pers. comm.).

### **Section 804 Analysis**

Section 804 of ANILCA mandates that the taking on Federal public lands of fish and wildlife for nonwasteful subsistence uses shall be accorded priority over the taking on such lands of fish and wildlife for other purposes. Section 804 further requires that whenever it is necessary to restrict the taking of populations of fish and wildlife on such lands for subsistence uses in order to protect the continued viability of such populations, or to continue such uses, such a priority shall be implemented through appropriate limitations based on the application of three criteria, including customary and direct dependence upon the populations as the mainstay of livelihood, local residency, and the availability of alternative resources. A Section 804 analysis was developed for this proposal due to the small number of moose anticipated to be available for harvest and the large number of subsistence users with a customary and traditional use determination to harvest moose in the moratorium area of Unit 18.

There are 42 widely dispersed communities, roughly 20,000 people (ADCCED 2009), included in the customary and traditional use determination for moose in the moratorium area (presented in order from the Yukon drainage, the coastal area, and the Kuskokwim drainage): Russian Mission, Marshall, Pilot Station, St. Marys, Pitkas Point, Mountain Village, Kotlik, Emmonak, Alakanuk, Nunam Iqua (formerly Sheldon Point), Scammon Bay, Hooper Bay, Chevak, Newtok, Tununak, Toksook Bay, Nightmute,

Mekoryuk, Cheformak, Kipnuk, Kwigillingok, Kongiganak, Platinum, Goodnews Bay, Quinhagak,<sup>2</sup> Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Bethel, Oscarville, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, Upper Kalskag,<sup>3</sup> Aniak, and Chuathbaluk.

Fourteen of these communities lie within the area that is the focus of this proposal: Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, and Lower Kalskag. The following paragraphs address these criteria as they relate to each of the communities included in the customary and traditional use determination for moose in the moratorium area of Unit 18.

### *1. Customary and Direct Dependence upon the Populations as a Mainstay of Livelihood*

Published subsistence studies of the communities that have a customary and traditional use determination for moose in the moratorium area of Unit 18 include: Andrews 1989, Andrews and Peterson 1983, Brelsford et al. 1987, Charnley 1983, Coffing 1991, Coffing et al. 2001, Krauthoufer and Koster 2007, Pete 1986, Stickney 1983, Wolfe and Ellanna 1983, and Wolfe et al. 1983. Several of these reports focus on communities outside of the moratorium area. Based on available information, which is limited, there is no evidence to suggest that residents of communities not located in the moratorium area except Upper Kalskag regularly travel to the moratorium area to harvest moose.

Another source of information is the ADF&G harvest ticket database. It should be noted that many rural Alaska areas have low compliance with harvest ticket systems (Andersen and Alexander 1992), and western Alaska is no exception. The harvest report rate to ADF&G as compared to estimates from household harvest surveys during the same or similar years ranges from none to 97% (ADF&G 2009b), which means the residents of some communities do not report their moose hunting activities to ADF&G. Because of the potential for underreporting, conventional ADF&G harvest reporting systems do not always reflect the true level of harvest, but they may provide an idea about the relative participation and where hunting occurs by community. First, harvest ticket data for the time period 1983 to 2004 indicate that residents of all communities included in the customary and traditional use determination for moose in the moratorium area have reported hunting or harvesting moose in the moratorium area, except Newtok, Nightmute, Nunam Iqua, Oscarville, Pilot Station, Pitkas Point, and Platinum (ADF&G 2009a; **Table 1**).

According to the ADF&G database, the communities included in the customary and traditional use determination for moose in the moratorium area use not only this area to harvest moose, they also use a range of other units and areas, most commonly in Units 18, 19A, 19B, 19D, 21A, and 21E (ADF&G 2009a). An examination of hunting and harvest by community by unit indicates that between 1983 and 2004, less than 50% of the total number of hunters in 38 of the 42 communities used the moratorium area for hunting moose, while in 4 of the 42 communities, 50% or more of the total number of hunters used the moratorium area for hunting moose. Of these latter four communities, the percentage of hunters using the moratorium area is as follows: Kasigluk (52%), Kwethluk (55%), Nunapitchuk (70%), and Tuluksak (56%). All four of these communities are located within the boundaries of the moratorium area in Unit 18.

Moose harvested from the moratorium area represented between 29% and 44% of the total reported moose harvested by residents of these four communities 1983-2004, the highest of all 42 communities

<sup>2</sup> Quinhagak is also known as Kwinhagak; the former refers to more traditional orthography, and the latter to more contemporary orthography. Orth (1971:788), the standard source for spellings of Alaska Place Names, uses the spelling of Quinhagak, while the Native Village uses Kwinhagak. Both spellings are used in this analysis: Quinhagak used in the text and Kwinhagak on the maps.

<sup>3</sup> For the purpose of this analysis, Kalskag is referred to as Upper Kalskag to distinguish it from Lower Kalskag.

**Table 1.** The reported moose harvest in communities included in the customary and traditional use determination for moose in the moratorium area of Unit 18, cumulative 1983 - 2004 (ADF&G 2009a).

Community	Moratorium Area		Statewide	
	Number of hunters	Number harvested	Number of hunters	Number harvested
<b>Akiachak</b>	159	26	418	93
<b>Akiak</b>	43	6	149	39
<b>Atmautluak</b>	50	8	121	27
<b>Bethel</b>	788	81	4,765	1,941
<b>Eek</b>	111	23	226	105
<b>Kasigluk</b>	113	21	219	72
<b>Kwethluk</b>	283	40	513	130
<b>Lower Kalskag</b>	36	14	211	61
<b>Napakiak</b>	35	3	139	64
<b>Napaskiak</b>	45	12	270	117
<b>Nunapitchuk</b>	253	32	360	72
<b>Oscarville</b>	0	0	3	3
<b>Tuluksak</b>	128	26	228	69
<b>Tuntutuliak</b>	50	13	140	65
Alukanuk	13	4	481	306
Aniak	7	4	1,231	507
Chefornak	3	2	21	13
Chevak	4	1	220	62
Chuathbaluk	2	1	145	76
Emmonak	10	6	617	366
Goodnews Bay	1	0	21	3
Hooper Bay	5	2	318	117
Kipnuk	9	1	45	11
Kongiganak	43	13	130	52
Kotlik	2	1	359	179
Kwigillingok	13	3	58	23
Marshall	4	3	449	208
Mekoryuk	1	0	60	19
Mountain Village	1	1	1,052	597
Newtok	0	0	35	6
Nightmute	0	0	9	4
Nunam Iqua	0	0	0	0
Pilot Station	0	0	347	157
Pitkas Point	0	0	16	6
Platinum	0	0	3	3
Quinhagak	5	0	57	28
Russian Mission	4	1	519	287
Saint Marys	1	1	828	349
Scammon Bay	3	1	159	123
Toksook Bay	4	3	68	25
Tununak	7	1	44	5
Upper Kalskag	18	7	249	96

**Bold** = community located in the moratorium area of Unit 18.

(ADF&G 2009a). The percentage of the total moose harvest represented by the moratorium area moose harvest for each of these communities is as follows: Kasigluk (29%), Kwethluk (31%), Nunapitchuk (44%), and Tuluksak (38%). The relatively low percentages (less than 50%) indicate that even the communities with the highest hunt participation rates in the moratorium area, as revealed through the permit database, harvested the majority of their moose from other areas. The lower harvests from the moratorium area are indicative of the lower number of moose in that area.

Between 1983 and 2004, the residents of the majority of communities in the customary and traditional use determination for moose in the moratorium area reported using the moratorium area to hunt moose less than 30% of the time (ADF&G 2009a). This applies to all of the communities located outside of the moratorium area boundary except Kongiganak, and to some communities located within the moratorium area including Bethel, Lower Kalskag, Napakiak, Napaskiak, and Oscarville.

Additional information from household harvest surveys estimate that in 1998, 58% of Akiachak's moose harvest was taken from the moratorium area; in 2003 Lower Kalskag reported 20%, and Upper Kalskag 9% (ADF&G 2009b). During 1980–1983 Tuluksak hunters used only the moratorium area to hunt moose (Andrews and Peterson 1983:27). In 1983 Nunapitchuk hunters generally went north and east of the village and the moratorium area because moose were not abundant nearer the community (Andrews 1989:327). In 1983 for Kwigillingok, no harvest of moose was mentioned historically or otherwise (Stickney 1983:253).

In summary, two sources of data provide information on community moose harvest levels, the ADF&G permit database and household harvest surveys. The review of these data and ethnographic research, referenced above, suggest that generally communities within the moratorium area rely on the moratorium area to hunt moose at a higher level than other communities.

## *2. Local Residency—Proximity to the Resource*

As mentioned previously, 14 communities are located within the boundary of the moratorium area, from north to south: Lower Kalskag Tuluksak Akiak, Akiachak, Kwethluk, Bethel, Oscarville, Atmautluak, Nunapitchuk, Kasigluk, Napaskiak, Napakiak, Eek, and Tuntutuliak. Another community, Upper Kalskag, is in very close proximity, approximately two miles north of the moratorium area boundary in Unit 19A. Aniak and Chuathbaluk are located approximately 26 miles and 36 miles, respectively, upriver from Upper Kalskag in Unit 19A.

Three communities, Quinhagak, Goodnews Bay, and Platinum, are located near the mouth of the Kuskokwim River in Unit 18. Quinhagak is the closest of these three communities located approximately 20 miles south of the moratorium area boundary.

Kongiganak and Kwigillingok lie at the mouth of the Kuskokwim River on the Bering Sea coast within 25 miles of the moratorium boundary. In addition to Kongiganak and Kwigillingok, six other communities are located along the Bering Sea coast: Toksook Bay, Tununak, Hooper Bay, Scammon Bay, Nunam Iqua, and Alakanuk. Seven communities are located within 20 miles of the Bering Sea coast: Kipnuk, Cheforak, Nightmute, Newtok, Chevak, Emmonak, and Kotlik. The remaining six communities in the customary and traditional use determination for moose in the moratorium area lie along the Yukon River: Mountain Village, Pitkas Point, St. Marys, Pilot Station, Marshall, and Russian Mission.

### 3. Availability of Alternative Resources

All of the communities in the customary and traditional use determination for moose in the moratorium area in Unit 18 have subsistence-based economies. The wild resources used vary according to geographic location of the community and species availability. Caribou has been an important alternative resource to moose, although in recent years the availability of caribou has been in decline.

Residents of Unit 18 generally harvest moose, if available, close to home, and hunting in other areas generally only occurs when visiting relatives. Beginning in 2009, a moose season opened for 10 days in September on the State-managed lands in the moratorium area. The hunt was managed through a 75 bull moose harvest quota (FWS 2008). There are over 2,500 households in the moratorium area, thus, few of the hunters could have been successful (ADCED 2009; **Table 2**).

**Table 2.** The population of communities located within the moratorium area of Unit 18, 1990 and 2000, and number of households, 2000 (ADCED 2009).

Community	1990	2000	2000 Number of Households
Eek	254	280	76
Tuntutuliak	300	370	84
Nunapitchuk	378	466	105
Kasigluk	425	543	101
Atmautluak	258	294	60
Napakiak	318	353	90
Napaskiak	328	390	82
Oscarville	57	61	15
Bethel	4,674	5,471	1,741
Kwethluk	558	713	153
Akiachak	481	585	133
Akiak	285	309	76
Tuluksak	358	428	86
Lower Kalskag	291	267	66
<b>Total</b>	<b>8,965</b>	<b>10,530</b>	<b>2,868</b>

In close proximity to residents of the lower Yukon drainage, and Scammon Bay, Hooper Bay, and Chevak, there are alternatives for harvesting moose outside of the moratorium area. In the lower Yukon drainage there are one- to two-moose harvest limits, and fall and winter hunting seasons. Other communities located in Unit 18 along the Bering Sea coast are in the “remainder” area of Unit 18 and there is a one bull moose harvest limit, and fall and winter hunting seasons, although moose are scarce in most of the

area. In proximity to communities south of the mouth of the Kuskokwim River, including Goodnews Bay and Platinum, there is a small quota of moose available to hunt in the Goodnews River drainage.

Moose hunting in the central Kuskokwim River area (in Unit 19A) is closed to residents of Unit 18 except residents of Tuluksak and Lower Kalskag, and the number of permits is limited. Upper Kalskag, Aniak, and Chuathbaluk are also eligible to hunt in Unit 19A.

For residents within the moratorium area, there are no differences in the availability of alternative resources because of the similarities of the communities and similarities of their subsistence harvests and uses.

#### *Summary of Section 804 Analysis*

While 42 communities are included in the customary and traditional use determination for moose in the moratorium area of Unit 18, the communities that are located in the moratorium area and Upper Kalskag have exhibited the highest level of dependence on and closest proximity to the moose population in the moratorium area. This finding is based on the total statewide hunting effort and harvest of moose in each community and the percentage of the hunting effort and harvest of moose reported in the moratorium area. While the residents of communities that are in the moratorium area have not always reported that the majority of their hunting effort nor the majority of their harvest of moose took place in the moratorium area, their level of use in the moratorium area is highest of all Federally qualified users residing in 42 communities in most cases; the few exceptions are described above. In addition, most of the hunters living outside of the moratorium area have other moose populations available to them, in the lower Yukon drainage area of Unit 18, the remainder area of Unit 18, the Goodnews Bay drainage in Unit 18, and Unit 19A.

The residents of communities located within the boundary of the moratorium area and Upper Kalskag have exhibited the highest levels of reliance on the moose in the area. The distribution of permits to hunt moose on Federal public lands in the moratorium area should be restricted to the residents of the area and Upper Kalskag.

#### *Distribution of Permits*

In general, Federal regulations have not included descriptions of how a limited number of permits will be distributed between communities and individuals within a community; instead, permit distribution has been the responsibility of the land manager in consultation with the communities. For example, in 1995 the Federal muskoxen hunt on the Seward Peninsula had a total allowable harvest of 15 bulls (15 permits) distributed between three hunt areas (Units 22D, 22E, and 23 southwest) and six communities. The National Park Service facilitated a series of meetings with representatives of the communities to determine the distribution of permits amongst communities and then the distribution of permits amongst individuals in each community. Brevig Mission, Teller, Buckland, and Deering supported an equal split. Wales and Shishmaref settled on a proportion based roughly on community size above a minimum base number. In Shishmaref, permits were initially distributed in a drawing. In Buckland permits were distributed based initially on recommendations by a committee of elders, in Teller by the tribal council, and in some on a first come first serve basis after the first year. As the muskoxen population has continued to grow, the permit distribution system has continued to evolve to where today it functions often much like a general registration hunt (Adkisson 2010, pers. comm.). As noted, however, none of this information is on the permit or in regulation.

The U.S. Fish and Wildlife Service, Yukon-Kuskokwim National Wildlife Refuge would be the Federal agency responsible for distributing Federal permits for the moose hunt in the moratorium area. The harvestable surplus is determined utilizing the results of aerial surveys and balancing the sex ratio by using both bull and cow harvests as appropriate. The U.S. Fish and Wildlife Service would consult with ADF&G to determine the number of Federal permits to be distributed each year.

**Effects of Proposal**

This proposal does not include opening the Federal season for harvesting moose on Federal public lands in the moratorium area of Unit 18. If adopted, this proposal would have no effect on the moose population or the subsistence uses of moose until the season is opened. If this proposal is not adopted, there also would be no effects on the moose population or subsistence uses of moose because there is no Federal open season.

In the future, when a Federal season is opened in the moratorium area, the pool of Federally qualified users would most likely be restricted by the application of the three criteria in ANILCA Section 804, due to the small number of moose anticipated to be available for harvest and the large number of subsistence users with a customary and traditional use determination to harvest moose.

**OSM PRELIMINARY CONCLUSION**

**Support Proposal WP10-54 with modification** to add the results of the Section 804 analysis.

The modification should read:

**Unit 18—Moose**

*Unit 18, that portion east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border and north of (and including) the Eek River drainage.*

*No Federal open season*

*Federal public lands are closed to the taking of moose except to eligible rural residents.*

***Only residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag may hunt in this area.***

**Justification**

In the future, when Federal public lands open to moose hunting in the moratorium area of Unit 18, it will be necessary to limit the distribution of Federal permits to harvest moose due to conservation concerns for the moose population. Adoption of this proposal as modified would be necessary to limit the pool of eligible users. Forty-two communities are included in the customary and traditional use determination for moose in the moratorium area. The Section 804 analysis determined that only residents of communities in the moratorium area and Upper Kalskag would be eligible to harvest moose in the moratorium area.

The Yukon Delta National Wildlife Refuge staff would work with residents of the eligible communities to determine how permits would be distributed within the communities.

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## APPENDIX A

### Federal Regulatory History

1990	Unit 18 Remainder, one bull	Sept. 1–Sept. 30 Dec. 20–Dec. 30
1991	Unit 18 Remainder, one antlered moose	Sept. 1–Sept. 30 Winter season to be announced
1992–1993	Unit 18 Remainder, one antlered moose  Federal public lands closed to the taking of moose except to eligible rural residents	Sept. 1–Sept. 30 Winter season to be announced
1994–1995	Unit 18 Remainder, one antlered moose  Unit 18 Remainder, one bull, evidence of sex required. A 10-day hunt will be opened by announcement sometime between Dec. 1 and Fed. 28. Federal public lands closed to the taking of moose except to eligible rural residents.	Aug. 25–Sept. 25 Winter season to be announced
1996–2003	Unit 18 Remainder, one antlered moose  Unit 18 Remainder, one bull, evidence of sex required. A 10-day hunt will be opened by announcement sometime between Dec. 1 and Fed. 28. Federal public lands closed to the taking of moose except to eligible rural residents.	Sept. 1–Sept. 30 Winter season to be announced
2004–2009	Unit 18, lower Kuskokwim Closed Area, easterly of line from the mouth of the Ishkawik River to the closest point of Dall Lake then to easternmost point of Takslesluk Lake then along the Kuskokwim river drainage boundary to the Unit 18 border, and north of (and including) the Eek River drainage. Federal public lands closed to the taking of moose except to eligible rural residents.	No open season

**State Regulatory History—Resident**

1980–1981	18 Remainder, one bull	Sept. 1-Dec. 31
1982–84	18 Remainder, one bull, harvest ticket required	Sept. 1-Sept. 30 Nov. 15-Dec. 31
1985–87	18 Remainder, one bull, harvest ticket required	Sept. 1-Sept. 30 Feb. 1-Feb. 10
1988–92	18 Remainder, one bull, harvest ticket required	Sept. 1-Sept. 30 Dec. 20-Dec. 30
1993–2003	18 Remainder, one bull, harvest ticket required	Sept. 1-Sept. 30  Winter season to be announced
2004–2008	Unit 18, lower Kuskokwim Closed Area, easterly of line from the mouth of the Ishkawik River to the closest point of Dall Lake then to easternmost point of Takslesluk Lake then along the Kuskokwim river drainage boundary to the Unit 18 border, and north of and including the Eek River drainage.	No open season
2009	Unit 18, lower Kuskokwim Closed Area, easterly of line from the mouth of the Ishkawik River to the closest point of Dall Lake then to easternmost point of Takslesluk Lake then along the Kuskokwim river drainage boundary to the Unit 18 border, and north of and including the Eek River drainage.	Sept. 1–Sept. 10
	One antlered bull by permit available in person at ADF&G in Bethel and villages within the hunt area from Aug. 1–Aug. 25.	

Comments WP10-54  
January 29, 2010; Page 1 of 1

**Alaska Department of Fish and Game**  
***Comments to the Regional Advisory Council***

**Wildlife Proposal WP10-54:** This proposal establishes community harvest moose quotas for federal subsistence users within the Lower Kuskokwim hunt area in Unit 18.

**Introduction:** The Lower Kuskokwim hunt area in Unit 18 was closed to hunting for a period of 5 years to allow for population growth as moose expanded into previously unoccupied habitat associated with the Kuskokwim River drainage. During the 2009-2010 regulatory year, the Alaska Board of Game approved a registration permit hunt for residents only with a harvest quota of 75 moose based on population estimates of 1,000 moose in the hunt area. In November 2009, the Alaska Board of Game made no changes to the registration permit hunt based on hunter effort (approximately 1,100 applications) and total harvest (approximately 105 moose) during the first year the hunt was reopened. Continued hunting with low harvest quotas will allow harvest opportunity at the same time allowing herd growth and expansion.

**Impact on Subsistence Users:** Opening a federal subsistence registration permit hunt on federal public lands in the Lower Kuskokwim hunt area in Unit 18 allows federal subsistence users the opportunity to hunt moose in local areas rather than traveling long distances to the Yukon River drainage or the Middle Kuskokwim River. Approximately 1/3 of the moose population in the hunt area is on federal public lands, mostly of the tributaries of the Kuskokwim.

**Opportunity Provided by State:** In Unit 18, the State season in the Lower Kuskokwim River hunt area is September 1 through September 10 by registration permit hunt RM615. The bag limit is 1 antlered bull. Permits are available at Alaska Department of Fish and Game in Bethel and from village license vendors during August 1 through August 25. Harvest quota is based on moose population estimate and will be announced as a hunt condition on permit RM615. In 2009-2010 the harvest quota was 75 bulls.

**Conservation Issues:** Low harvest rates are sustainable based on the current minimum population size of 1,000 moose and will allow for future herd growth and expansion.

**Enforcement Issues:** Emergency closures based on achieving harvest quota make it difficult for federal subsistence hunters in the field to learn of these announcements.

**Other Comments:** Allocation of a community harvest quota by federal delegated officials will require coordination by state and federal managers to ensure that overharvest does not occur.

**Recommendation:** Support, with modification to establish a season on federal public lands that matches the state season with state registration permit and harvest quota: September 1 through September 10 season by registration permit; bag limit of 1 antlered bull; harvest quota based on moose population estimate in the hunt area and announced as a permit hunt condition; hunt reports required within 3 days of harvest to allow quota management. This approach minimizes confusion for hunters and law enforcement and recommends cooperative harvest quota management among state and federal managers. If adopted, this action would be effective in the seventh year since initial closure in the lower Kuskokwim hunt area and fulfills the original strategy supported by both state and federal managers of closing the area for 5 years or reaching 1,000 moose.

<b>WP10-55 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-55 requests a prohibition on the possession or use of shot shells containing size T lead shot or smaller while hunting or trapping in Unit 18. <i>Submitted by the Yukon Delta National Wildlife Refuge</i>
<b>Proposed Regulation</b>	<b>§ __.26(n)(18)(iii)(D) In Unit 18 the possession or use of shot shells containing lead shot size T or smaller, including loose shot in muzzle loading firearms, is prohibited while hunting and trapping game.</b>
<b>OSM Preliminary Conclusion</b>	<p><b>Support</b> Proposal WP10-55 with <b>modification</b> to provide clear, understandable regulatory wording.</p> <p>The modified regulation should read:</p> <p><b>§ __.26(n)(18)(iii)(D) Taking of wildlife in Unit 18 while in possession of lead shot size T, .20 caliber or less in diameter, is prohibited.</b></p>
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Support with modification.</b> See the State’s comments following the analysis.
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-55

### ISSUES

Proposal WP10-55, submitted by the Yukon Delta National Wildlife Refuge, requests a prohibition on the possession or use of shot shells containing size T lead shot or smaller while hunting or trapping in Unit 18.

### DISCUSSION

Two species of eider that inhabit Unit 18, the spectacled and Steller's eider, are listed as threatened under the Endangered Species Act and are directly affected by lead shot in their habitat. In November 2007, at the request of the community of Hooper Bay, the Alaska Board of Game adopted a ban on the use of shot shells containing size T lead shot (this is 0.20 inches in diameter) or smaller for the taking of wildlife when hunting and trapping. The Federal Subsistence Management Program prohibition of the use of lead shot was implemented for Unit 18 for the periods February 27 to June 30, 2009 and November 12 to June 30, 2010 respectively based on Temporary Special Actions WSA 08-03 and WSA09-09.

#### Existing Federal Regulations

The following regulation is currently in place via Temporary Special Action (WSA09-09) through June 30, 2010:

*In Unit 18 the possession or use of shot shells containing lead shot size T or smaller, including loose shot in muzzle loading firearms, is prohibited while hunting and trapping game.*

#### Proposed Federal Regulations

***§ .26(n)(18)(iii)(D) In Unit 18 the possession or use of shot shells containing lead shot size T or smaller, including loose shot in muzzle loading firearms, is prohibited while hunting and trapping game.***

#### Existing State Regulations

The current State of Alaska regulation 5 AAC 92.080 (14) states:

*Taking game in Unit 18 with a shotgun using any shot other than nontoxic material approved by the United States Fish and Wildlife Service, that is size T, 0.20 caliber (inches) or smaller, including loose shot used in muzzleloading firearms, and while in immediate personal possession of lead shot, is prohibited.*

This restriction includes the taking of game under hunting or trapping regulations.

#### Extent of Federal Public Lands/Waters

Federal public lands comprise approximately 64% of the Unit 18 and consist of 96% U.S. Fish and Wildlife Service (Yukon Delta National Wildlife Refuge) and 4% Bureau of Land Management lands.

### **Customary and Traditional Use Determinations**

See the analysis for Temporary Special Action WSA09-09 (Appendix 1).

### **Regulatory History**

See Appendix 1.

### **Current Events Involving Species**

See Appendix 1.

### **Biological Background**

See Appendix 1.

### **Effects of the Proposal**

Adoption of the proposed restriction should provide conservation benefits to threatened spectacled and Steller's eiders and also to other waterfowl species, by reducing the possibility of ingesting lead shot and the resulting exposure to lead shot in the environment and its effects if ingested.

Adoption of the proposed regulatory change would benefit public health by reducing the chances of human consumption of waterfowl with significant lead toxicity levels. Adoption of the proposal would facilitate continued cooperation with the community of Hooper Bay that originally requested the restriction of the Alaska Board of Game.

While steel shot shells are readily available for 12 gauge shotguns, steel shot shells for .410 gauge shotguns are harder to find and relatively expensive. The Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (Council) noted challenges associated with getting .410 gauge steel shotgun shells before unanimously supported Special Action Request WSA09-09 (YKDRAC 2009).

There has been confusion about the current State and Federal regulatory wording. ADF&G wants to clarify that size T shot is .20 caliber to help avoid possible confusion with size TTT shot. ADF&G is submitting a proposal to the Alaska Board of Game to clarify the regulatory language (Cunning 2010, pers. comm.) as follows:

*Possession of shot shells containing lead size T, .20 caliber or less in diameter, is prohibited in Unit 18 while hunting, trapping, or in possession of game.*

While the wording proposed by the State would solve one problem, it would create other problems. Yukon Delta National Wildlife Refuge enforcement officer Robert Sundown and ADF&G Area Biologist Phil Parry pointed out that if a Bethel resident puts frozen muskrats from his trap line in the shed behind his house where he stored lead shot shells for trap shooting, there would be a violation of the law (Sundown 2010, pers. comm.). As such the Yukon Delta National Wildlife Refuge is requesting following wording in Federal and State regulations to provide clear, understandable regulatory wording that does create unintended consequences (Sundown 2010, pers. comm.):

*Taking of wildlife in Unit 18 while in possession of lead shot size T, .20 caliber or less in diameter, is prohibited.*

## OSM PRELIMINARY CONCLUSION

**Support** Proposal WP10-55 **with modification** to provide clear, understandable regulatory wording.

The modified regulation should read:

*§\_\_.26(n)(18)(iii)(D) Taking of wildlife in Unit 18 while in possession of lead shot size T, .20 caliber or less in diameter, is prohibited.*

### Justification

In November 2007, at the request of the community of Hooper Bay, the Alaska Board of Game adopted a ban on the use of shot shells containing size t lead shot (lead shot that is 0.20 inches in diameter) or smaller for the taking of wildlife when hunting or trapping in Unit 18. Based on recommendations from Council, the Federal Subsistence Board prohibited of the use of lead shot for hunting and trapping in Unit 18 during parts of the past two regulatory years.

Two species of eider that inhabit Unit 18, the spectacled and Steller's, are listed as threatened under the Endangered Species Act and are directly affected by lead shot in their habitat. Because eliminating the use of lead shot in spectacled and Steller's eider breeding habitat is a high priority in the recovery efforts of these species, adoption of the ban of lead shot is warranted. The proposed regulation would provide conservation benefits to the threatened spectacled and Steller's eiders and also to other waterfowl species. Adoption of the proposal would also favor prudent and responsible management of Unit 18 waterfowl species, upland habitat, and the species that utilize those habitats. This proposal was not submitted to benefit upland bird or fur animal species in Unit 18; however, eliminating or even reducing the deposition of additional lead shot into the environment would help to reduce the chance of lead exposure for all species. Adoption of the proposed regulatory change would benefit public health by reducing the chances of human consumption of waterfall with significant lead toxicity levels. Rejection of this proposal could adversely affect the wildlife resources in Unit 18 and ultimately adversely affect subsistence users.

This proposal would eliminate multiple sources of lead deposition in Unit 18. The lead shot prohibitions was previously supported by the Council and adopted by the Board (Temporary Special Actions WSA08-03 and WSA09-09). The Yukon Delta National Wildlife Refuge is requesting this modified regulatory language regulations. This is intended to provide clear, understandable regulatory wording.

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Appendix 1



U.S. FISH and WILDLIFE SERVICE  
BUREAU of LAND MANAGEMENT  
NATIONAL PARK SERVICE  
BUREAU of INDIAN AFFAIRS  
FWS/OSMJ9145/GG

**Federal Subsistence Board**  
1011 E. Tudor Rd., MS 121  
Anchorage, Alaska 99503-6199



DEC 7 2009

Eugene Peltola, Manager  
Yukon Delta National Wildlife Refuge  
P.O. Box 346  
Bethel, Alaska 99559

Dear Mr. Peltola:

This letter responds to Special Action request (WSA09-09) submitted by the Yukon Delta National Wildlife Refuge which asks the Federal Subsistence Board (Board) to prohibit the possession or use of lead shot size T or smaller, including loose shot used in muzzle loading firearms, while hunting or trapping game in Unit 18.

The Board approved WSA09-09. In making its decision, the Board considered the staff analysis, the recommendation from the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council, and comments from the Interagency Staff Committee, copies of which are enclosed with this letter. The Board concluded that this action will provide conservation benefits to threatened spectacled and Steller's eiders, and other waterfowl species, by reducing lead toxicity caused by inadvertent ingestion of lead shot deposited in the environment. This prohibition will remain in effect until the end of the current regulatory year, June 30, 2010.

Thank you for bringing this resource matter to the attention of the Federal Subsistence Management Program. If you have any questions, you may contact Mr. Peter I. Probasco, Assistant Regional Director of the Office of Subsistence Management, at (907) 786-3403.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael R. Fleagle".

Michael R. Fleagle  
Chair, Federal Subsistence Board

Enclosures

cc: Federal Subsistence Board  
Interagency Staff Committee  
Chair, Yukon Kuskokwim Delta Subsistence Regional Advisory Council  
Coordinator, Yukon Kuskokwim Delta Subsistence Regional Advisory Council  
Peter I. Probasco, OSM  
Tina Cuning, ADF&G  
Alaska Wildlife Troopers, D Detachment

**STAFF ANALYSIS  
SPECIAL ACTION REQUEST  
WSA09-09**

**ISSUE**

Special Action WSA09-09, submitted by the Yukon Delta National Wildlife Refuge (NWR), requests that there be a prohibition on the possession or use of shot shells containing size T lead shot or smaller for the taking of wildlife in Unit 18.

**DISCUSSION**

The proponent claims that the requested action would accomplish several objectives. The first objective is to help address waterfowl conservation within the NWR and the western Alaska waterfowl flyway. To manage for the decrease of lead toxicity in waterfowl species, the need for reductions in lead shot in the environment has been well documented. Waterfowl and other birds can be exposed to toxic amounts of lead from spent lead shot mistakenly ingested as food or grit. Because of high mortality related to this ingestion, lead shot was banned in Alaska for waterfowl hunting in 1991. In the years since the ban, studies in Alaska document significant lead exposure in waterfowl when compared to studies conducted in the lower 48 states. Two potential reasons for this are: 1) ice underlies much of Alaska's waterfowl nesting habitat which may keep lead shot near the surface and available to waterfowl for many more years when compared to the ice-free sediments further south; and 2) breeding habitat used by waterfowl in the summer is also used by upland species throughout the year; therefore, lead shot used legally to harvest upland bird or fur animal species may end up in waterfowl breeding habitat. Note: "upland bird" species include the following for Unit 18: Sandhill Cranes, grouse, and ptarmigan. "Fur animal" species include the following for Unit 18: beaver, coyote, arctic fox, red fox, marten, mink, weasel, muskrat, river otter, lynx, squirrel, hares, wolves, and wolverine. If the proposed regulatory language were adopted, it would extend the mandatory, non-lead shot use-zone beyond the wetlands and into the upland areas of Unit 18, benefiting waterfowl by helping to decrease the amount of lead shot in the environment. The second objective is to temporarily align Federal regulations with the current State regulations. The third objective is to join the Federal Subsistence Board (Board), the NWR, the State, and local hunters in a joint leadership role in conservation of waterfowl and wetlands in Unit 18. This Special Action Request, combined with support from local subsistence users and the action taken by the Alaska Board of Game and ADF&G in November 2007, can be viewed as a positive step in reducing further deposition of lead into the waterfowl breeding habitat and will contribute to cooperative efforts to recover two threatened eider species. In February 2009 the Board adopted WSA08-03 that temporarily placed the same restriction in Federal regulations as requested in WSA09-09. The proponent of the Special Action Requests has submitted a wildlife proposal to the Board requesting the lead shot restriction be made a regulation. The Board will take action on the proposal at its May 2010 wildlife meeting.

Two species of eider that inhabit Unit 18, the spectacled and Steller's eider, are listed as threatened under the Endangered Species Act and are directly affected by lead shot in their habitat. This request was accepted for consideration by the Board consistent with the "continued viability" language in Special Action regulation § \_\_.19(b): *The Board may open, close, or restrict*

*subsistence uses of a particular fish or wildlife population on public lands to assure the continued viability of a fish or wildlife population.*

### **Existing Federal Regulation**

The proposed lead shot restriction existed up through June 30, 2009, but has since lapsed with the new regulatory year. Therefore, there is currently no Federal regulation addressing the possession or use of lead shot for the purpose of taking upland bird or fur animal species in Unit 18 under hunting or trapping regulations.

### **Proposed Federal Regulation**

*In Unit 18 the possession or use of shot shells containing lead shot size T or smaller, including loose shot used in muzzle loading firearms, is prohibited while hunting or trapping.*

### **Existing State Regulation**

The current State of Alaska regulation 5 AAC 92.080 (14) states:

*Taking game in Unit 18 with a shotgun using any shot other than nontoxic material approved by the United States Fish and Wildlife Service, that is size T, 0.20 caliber (inches) or smaller, including loose shot used in muzzle loading firearms, and while in immediate personal possession of lead shot, is prohibited.*

This restriction includes the taking of game under hunting or trapping regulations.

### **Extent of Federal Public Lands**

Federal public lands comprise approximately 64% of the Unit 18 and consist of 62% FWS (Yukon Delta National Wildlife Refuge) and 2% BLM managed lands.

### **Customary and Traditional Use Determinations**

Except for wolf, there has been no customary and traditional use determination made for fur animal species in Unit 18 either under hunting or trapping regulations, therefore all rural residents are qualified. As the Board does not have jurisdiction over the management of birds, the Board has not addressed customary and traditional use determinations for the bird species addressed by this analysis.

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

### **Regulatory History**

In November 2007, at the request of the community of Hooper Bay, the Alaska Board of Game adopted a ban on the use of shot shells containing size T lead shot (lead shot that is 0.20 inches in diameter) or smaller for the taking of wildlife when hunting or trapping. The FWS and ADF&G also conveyed support for the Hooper Bay proposal to the Alaska Board of Game. The Alaska Board of Game made this change to further protect waterfowl species that inhabit the same areas where upland bird and fur animal species are hunted in Unit 18.

The Board does not have jurisdiction over the management of spectacled eiders, Steller's eiders, or other waterfowl species. These species are managed by the FWS Division of Migratory Bird Management and the ADF&G.

In February 2009 the Board adopted WSA08-03 placing a lead shot restriction in Federal regulations for Unit 18.

### **Biological Background**

This Special Action Request was not submitted to benefit upland bird or fur animal species in Unit 18; however, eliminating or even reducing the deposition of additional lead shot into the environment would help to reduce the chance of lead exposure for all species. The proposed regulatory language was submitted to specifically benefit waterfowl in the unit, especially the threatened spectacled and Steller's eiders. There is little detailed information on the effects of lead shot in the environment on upland bird and fur animal species and there is currently no lead toxicity-related conservation concerns for these species; therefore, the biological background and harvest history sections concentrate on lead toxicity in waterfowl.

The long-term effects of lead toxicity in waterfowl species have been widely documented and support the need to reduce lead pellet consumption in waterfowl. Results from research conducted on the Yukon-Kuskokwim Delta since the 1991 prohibition on lead shot for waterfowl hunting, has shown that ingestion of lead shot by threatened spectacled and Steller's eiders remains a significant problem and may be constraining efforts to support recovery of both species (FWS 2007). Consumption of lead shot deposition by waterfowl and other bird species occurs when the smaller lead pellets, such as lead shot size T and smaller, are mistaken for food such as seeds or are selected for grit. A summary of relevant research findings include the following:

- Based on research on the persistence of lead pellets in Alaskan wetlands where freeze-thaw dynamics or unique attributes trap pellets near the surface, these deposits remain available to waterfowl for many years. Exposure of waterfowl to toxic lead shot will continue for years even after the deposition is terminated (Flint 1998).
- Dead or dying eiders found on the Yukon-Kuskokwim Delta have been diagnosed with acute lead contamination (Flint and Grand 1997).
- X-ray images taken of female spectacled eiders nesting on the Yukon-Kuskokwim Delta showed that 12% contained lead shot pellets in their gizzards (Franson et al. 1998).
- Analyses of blood samples from spectacled eiders, while on the breeding grounds, on the Yukon-Kuskokwim Delta showed that 36% of females and 12% of ducklings had been exposed to lead. Further exposure levels increased over the summer, which is of concern because individuals most important to the population (successful breeding females) remain in breeding habitat longer and therefore increase their exposure to lead (Flint et al. 1997).
- Lead-exposed female spectacled eiders suffer about a 50% reduction in annual survival rates compared to un-exposed females (Grand et al. 1998).

Spectacled eider studies conducted in the lower Kashunuk River drainage on the coastal fringe of the Yukon-Kuskokwim Delta have shown that a large portion of annual mortality in females probably occurs on breeding areas (Flint and Grand 1997). Lead poisoning accounted for 40-60% of observed female mortality and this percentage has probably increased from historic levels (Flint and Grand 1997).

Blood lead concentration studies conducted on spectacled eiders and long-tailed ducks revealed high proportions of these species were exposed to lead contamination based on blood lead concentrations (Flint et al. 1997). However, because only 12% of the sampled nesting hens had spent lead shot in their gizzards, researchers are skeptical that the source of this exposure could be spent lead.

#### *Habitat*

Results from studies conducted in Unit 18 by the U.S. Geological Survey between 1998 and 2007 show a clear trend where lead shot settles into wetland sediment at a rate of approximately 1 cm per year (Flint 2008). Further analysis of sediment core studies revealed that after ten years of exposure the highest percentage of shot was recovered in the 8-10 cm layer, which indicates that the lead pellets are settling down between these layers where they may remain indefinitely. Previous sediment core studies conducted on Unit 18 tundra wetlands revealed no downward movement of pellets after three years of exposure; however, lead shot does settle into tundra wetlands on the Yukon-Kuskokwim Delta given sufficient time (Flint 1998). The overall conclusion from these wetland studies is that most lead shot deposition remains available to feeding waterfowl for an extended period of time (Flint 2008).

#### **Current Events**

At the October 3, 2008 meeting of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (Council) that was held in Bethel, NWR staff presented regulatory language as an alternative to the preliminary staff recommendation stated in this analysis. NWR staff suggested the following regulatory language to the Council.

*"In Unit 18 the possession or use of shot shells containing lead shot size T or smaller, including loose shot used in muzzle loading firearms, is prohibited while hunting or trapping."*

Following its support for a ban on lead shot for Unit 18 that it made at its September 2007 meeting in Marshall, the Council unanimously supported the modified language suggested by NWR staff as its recommendation to the Board.

Comments received from ADF&G support the adoption of WSA09-09; however, the Department suggests that the regulatory language be modified to add ".20 caliber" after lead size T (Pappas 2009 pers. Comm.).

While the existing State regulation differs from its proposed revision, ADF&G will submit a proposal to the Alaska Board of Game to clarify that a person may not be in possession of shot shells containing lead shot less than or equal to .20 inches (caliber) in diameter while taking or in possession of game in Unit 18 (Pappas 2009 pers. Comm.).

At its October 2-3, 2009 meeting the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council recommended support of Special Action Request WSA09-09 and stated that they believe that lead shot contamination in birds is a human health as well as a natural resource conservation

issue. The Council provided testimony that locals classify eiders as “ocean ducks” that do not fly up the rivers to the interior portion of Unit 18, and think that the benefits of the lead shot restriction will be minimal in the coastal areas of Unit 18.

### **Effects of the Special Action**

Adoption of the proposed restriction should provide conservation benefits to threatened spectacled and Steller’s eiders and also to other waterfowl species, by reducing the possibility of ingesting lead shot and the resulting exposure to lead shot in the environment and its effects if ingested.

Despite the widespread concern of existing lead toxicities in Unit 18 aquatic and riparian habitats, no evidence has been provided that substantiates that continued use of lead shot for the taking of upland bird or fur animal species in Unit 18 through June 2010 would be detrimental to these species (Note: July 1, 2010 will be the start of the next regulatory year when regulatory changes are implemented). However, it is logical that by reducing the amount of lead shot available in the environment would result in reduced opportunities for ingestion of lead shot and thus a reduction in lead toxicity in waterfowl.

Because lead shot remains legal for the taking of ptarmigan and other small wildlife species, failure to adopt this request would result in further lead contaminate deposition in the wetlands of the Yukon-Kuskokwim Delta region. Wetland areas used by breeding waterfowl overlap with upland habitats used by other species during the winter where they are harvested by subsistence users. As a result of this overlap, lead shot deposition still occurs in waterfowl breeding habitat – regardless of the 1991 ban on lead shot.

Adoption of the proposed regulation would benefit all wildlife resources in the long term, but could adversely affect subsistence users who may be using lead shot for hunting upland bird and furbearer species in Unit 18. However, the NWR continues to conduct a free exchange of shot shells containing non-lead shot for those with lead shot this fall to reduce the economic impact on subsistence users in the region.

Adoption of the proposed regulatory change would benefit public health by reducing the chances of human consumption of waterfowl with significant lead toxicity levels. Adoption of the Special Action Request would facilitate continued cooperation with the community of Hooper Bay that originally requested the restriction of the Alaska Board of Game.

Adoption of the request would help to reduce confusion for hunters, village stores that sell ammunition, resource managers, and law enforcement personnel.

If this request is adopted it would be the second time the Board has changed a regulation that would affect subsistence users to benefit a species that does not fall under the jurisdiction of the Board. The first time occurred when the Board adopted WSA08-03 which temporarily placed the same lead shot prohibition in place for Unit 18 in February 2009.

### **Literature Cited**

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- Franson, J. C., M.R. Petersen, L.C. Creekmore, P.L. Flint, and M.R. Smith. 1998. Blood lead concentrations of Spectacled Eiders near the Kashunuk River, Yukon Delta National Wildlife Refuge. *Ecotoxicology* 7:1-7.
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- Grand, J.B., P.L. Flint, M.R. Petersen, and T.L. Moran. 1998 Effect of lead poisoning on spectacled eider survival rates. *J. Wildl. Mgt.*: 62:1103-1109.
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Comments WP10-055  
January 29, 2010; Page 1 of 1

**Alaska Department of Fish and Game**  
*Comments to the Regional Advisory Council*

**Wildlife Proposal WP10-55:** This proposal restricts the use of lead shot in GMU 18 for shot shells containing shot size T or smaller on federal public lands.

**Introduction:** In November 2007, the Alaska Board of Game adopted lead shot restrictions in Unit 18 for hunting and trapping. The Federal Subsistence Board enacted similar though temporary restrictions by federal special action (WSA08-03 and WSA09-09). This proposal seeks permanent lead shot restrictions

**Impact on Subsistence Users:** Transition to non-toxic shot may affect hunters due to cost and availability of products through local vendors.

**Opportunity Provided by State:** The state regulation is found in 5 AAC 92.080 (14).

**92.080. Unlawful methods of taking game; exceptions:**

...  
(14) taking game in Unit 18 with a shotgun using any shot other than nontoxic material approved by the United States Fish and Wildlife Service, that is size t, .20 caliber or smaller, including loose shot used in muzzleloading firearms, and while in immediate personal possession of lead shot.

**Conservation Issues:** This regulation conserves wildlife by reducing the impacts to health resulting from ingestion of lead shot. Adoption of this proposal will significantly benefit waterfowl that nest in Unit 18, such as the spectacled eider.

**Enforcement Issues:** Uniform regulation related to the use of nontoxic shot will decrease enforcement problems and risk of enforcement action for subsistence users.

**Recommendation:** Adopt with modification. The Department supports adoption of this proposal but, most importantly, urges that the final federal regulation be modified to match the final regulations adopted by the Alaska Board of Game to reduce differences for subsistence users traversing mixed land ownership. In the interim before Board of Game action, the Department requests modification to clearly indicate:

Possession of shot shells containing lead size T, .20 caliber or less in diameter, is prohibited in Unit 18 while hunting, trapping, or in possession of game.

The Department will likely support the Alaska Board of Game adopting a proposed house keeping measure to clarify that a person may not be in possession of shot shells containing lead shot less than or equal to .20" in diameter, including loose shot used in muzzleloading firearms, while taking or in possession of game in Unit 18.

<b>WP10-56 Executive Summary</b>	
<b>General Description</b>	<p>Proposal WP10-56 requests that the harvest limit in the lower Yukon area of Unit 18 (that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village) be changed to two moose per regulatory year. Hunters would be allowed to harvest one antlered bull in the fall season and one moose in the winter season. Hunters that do not harvest a moose in the fall would be allowed to harvest two moose during the winter season. The proposal also delegates authority to the Yukon Delta National Wildlife Refuge manager to restrict the season, if needed, after consultation with the Alaska Department of Fish and Game.</p> <p><i>Submitted by the Yukon Delta National Wildlife Refuge</i></p>
<b>Proposed Regulation</b>	<p><b>Unit 18 — Moose</b></p> <p><i>Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 antlered bull</i> <span style="float: right;"><i>Aug. 10–Sept. 30</i></span></p> <p><i>Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 moose. <b>A hunter who harvested 1 antlered bull during the fall season in this hunt area may also harvest 1 additional moose during the winter season. A hunter who did not take a moose in the fall season in this hunt area may take 2 moose in the winter season. Hunters may not harvest more than 2 moose in this hunt area per regulatory year. The Yukon Delta National Wildlife Refuge Manager may restrict the harvest in the winter season to only 1 antlered bull bulls or only 1 moose per regulatory year after consultation with the ADF&amp;G.</b></i> <span style="float: right;"><i>Dec. 20–Jan. 20</i></span></p>
<b>OSM Preliminary Conclusion</b>	<b>Support</b> Proposal WP10-56 <b>with modification</b> to extend the winter season.
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-56

### ISSUES

Proposal WP10-56, submitted by the Yukon Delta National Wildlife Refuge, requests that the harvest limit in the lower Yukon area of Unit 18 (that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village) be changed to two moose per regulatory year. Hunters would be allowed to harvest one antlered bull in the fall season and one moose in the winter season. Hunters that do not harvest a moose in the fall would be allowed to harvest two moose during the winter season. The proposal also delegates authority to the Yukon Delta National Wildlife Refuge manager to restrict the season, if needed, after consultation with the Alaska Department of Fish and Game.

### DISCUSSION

The proponent states that there is no biological reason to limit the harvest to one moose per person per regulatory year, and that increasing the limit to two moose per regulatory year would provide Federally qualified subsistence users with additional harvest opportunity. The proponent further states that this regulatory change should help cull the moose population in the lower Yukon area of Unit 18 for which population estimates exceed 3000 moose with an average annual growth rate of 27% (FWS 2009).

#### Existing Federal Regulations

##### Unit 18 — Moose

*Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village – 1 antlered bull* *Aug. 10–Sept. 30*

*Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village – 1 moose. The Yukon Delta National Wildlife Refuge Manager may restrict the harvest to only antlered bulls after consultation with the ADF&G.* *Dec. 20–Jan. 20*

#### Proposed Federal Regulations

##### Unit 18 — Moose

*Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 antlered bull.* *Aug. 10–Sept. 30*

*Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 moose. **A hunter who harvested 1 antlered bull during the fall season in this hunt area may also harvest 1 additional moose during the winter season. A hunter who did not take a moose in the fall season in this hunt area may take 2 moose in the winter season. Hunters may not harvest more than 2 moose in this hunt area per regulatory year. The Yukon Delta National Wildlife Refuge Manager may restrict the harvest in the winter season to only 1 antlered bull bulls or only 1 moose per regulatory year after consultation with the ADF&G.***

Dec. 20–Jan. 20

**Existing State Regulations**

<i>Unit 18 Lower Yukon Area, that portion north and west *of the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of a line from Chakaktolik to Mountain Village and excluding all Yukon River drainages upriver from Mt. Village.</i>	<i>Resident: 1 antlered bull</i>	<i>Harvest</i>	<i>Aug. 10–Sept. 30</i>
	<i>-OR-</i>		
	<i>1 moose</i>	<i>Harvest</i>	<i>Dec. 20–Feb 28*</i>
	<i>Nonresident: One antlered bull</i>	<i>Harvest</i>	<i>Sept. 1–Sept. 30</i>

\*Note: At its November 13–16, 2009 meeting, the Alaska Board of Game adopted new regulation language to move the boundary between the lower Yukon and the remainder areas of Unit 18, south to a more discernible geographic land mark and extend the winter season from January 20 to February 28.

**Extent of Federal Public Lands**

Federal public lands (Yukon Delta National Wildlife Refuge) comprise approximately 60% of the lower Yukon area of Unit 18 (**Map 1**).

**Customary and Traditional Use Determination**

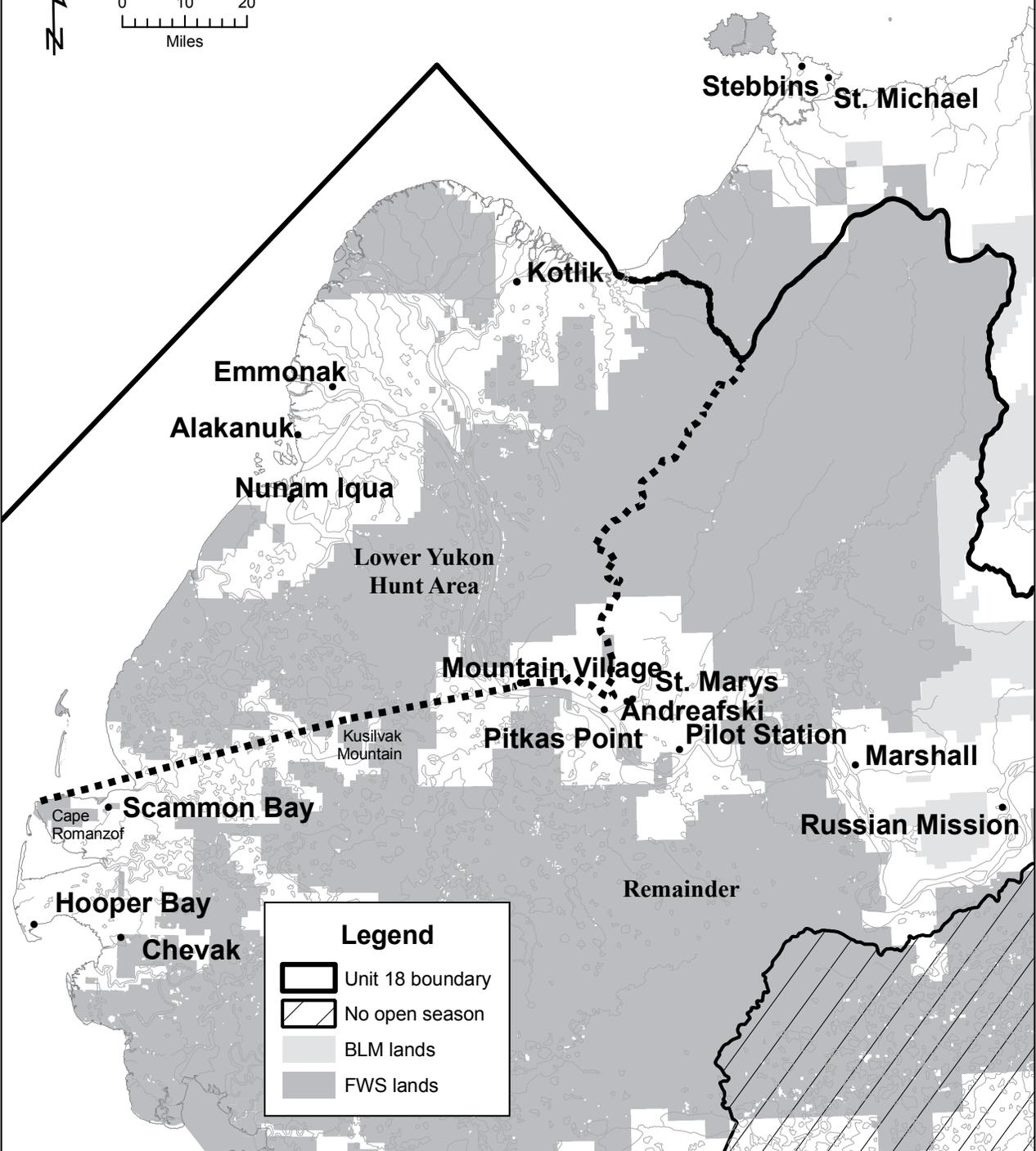
Rural residents of Unit 18, St. Michael, Stebbins, and Upper Kalskag have a positive customary and traditional use determination for moose in the lower Yukon area of Unit 18, which includes this hunt area.

**Regulatory History**

In November 2005, the Alaska Board of Game adopted State Proposal 04, in response to the rapid growth of the lower Yukon moose population. Action taken on the proposal modified the State harvest limit by allowing the harvest of antlered bulls only and established a winter season for antlered bulls and calves. During its November 2007 meeting, the Alaska Board of Game lengthened the fall moose season for the lower Yukon and remainder areas of Unit 18 by 21 days and the winter season in the lower Yukon by 10 days through the adoption of State Proposal 06.

At its March 2009 meeting, the Alaska Board of Game adopted Proposal 228, which liberalized the State harvest limit from antlered bulls to any moose for the Dec. 20–Jan. 20 season in the lower Yukon area of Unit 18. The State believes that the affected moose population has increased to a size that can support the harvest of cows.

# WP10-56 Map 1 Unit 18 - Moose



**Legend**

- Unit 18 boundary
- No open season
- BLM lands
- FWS lands

At its November 12, 2009 work session, the Federal Subsistence Board adopted Special Action WSA08-13, submitted by Scammon Bay Traditional Council, which requested the harvest limit in the lower Yukon area of Unit 18 be increased to two moose per regulatory year, with one allowed in the fall and one in the winter.

The Alaska Board of Game, at its November 13–16, 2009 meeting, adopted new regulations to extend the winter season from January 20 to February 28 and move the boundary between the lower Yukon and the remainder areas, south to a more discernable geographic land mark.

State Management Objectives for Unit 18—Moose (within the affected area):

- Maintain the current age and sex structure for the lower Yukon River population, with a minimum ratio of 30 bulls:100 cows.
- Conduct fall sex and age composition surveys as weather and funding allow. *Ongoing for affected population.*
- Conduct winter censuses and recruitment surveys in the established survey areas on a rotating basis. *Ongoing for affected population.*
- Allow a harvest of bulls without hindering a high rate of population increase. *Achieved for affected population.*
- Improve harvest reporting and compliance with hunting regulations. *Ongoing.*
- Minimize conflicts among user groups interested in moose within and adjacent to Unit 18. *Ongoing.*

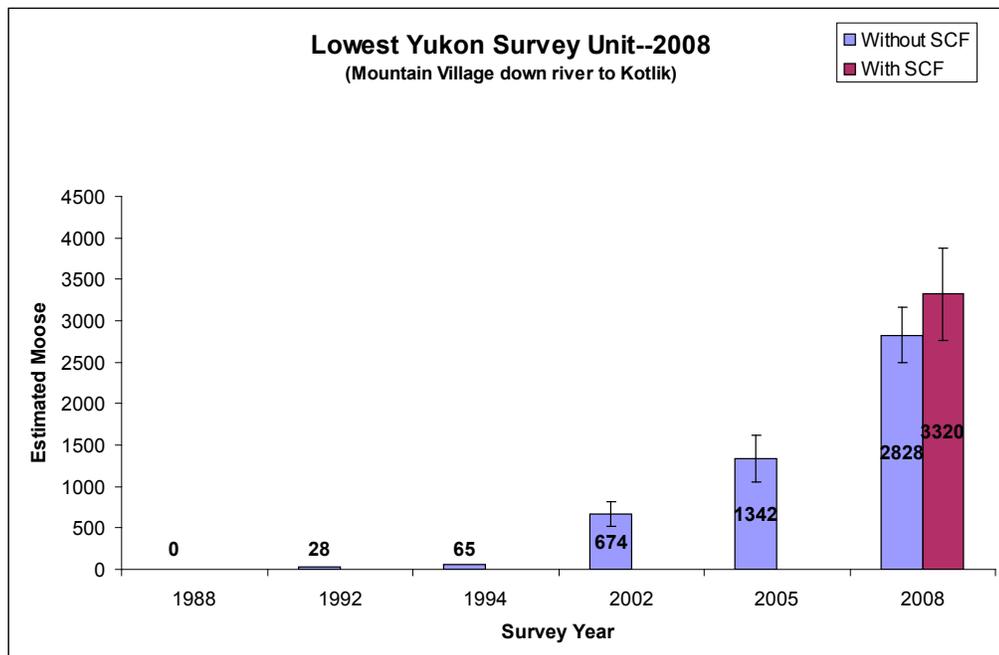
### **Biological Background**

In February 2008, the Yukon Delta National Wildlife Refuge and Alaska Department of Fish and Game conducted cooperative moose surveys in portions of Unit 18, including the furthest down river survey unit along the main stem of the Yukon River corridor from Mountain Village to Kotlik. The mid-point of the moose population estimate for this area was 2,828 moose when using traditional survey methods and 3,320 moose when a Sightability Correction Factor (SCF) was incorporated in the 2008 analysis (FWS 2008). Using the SCF population estimate on the lower Yukon River (from Mountain Village to Emmonak), the resulting moose density estimate was 2.8 moose/mi.<sup>2</sup>. The affected area has experienced rapid population growth since the end of the moratorium in 1994 (**Figure 1**) with an average annual growth rate of 27% for the period of 1994–2008 (**Table 1**). Based on the 2008 survey results, it appears that the affected population could support additional harvest with the current population size, density, and productivity (Doolittle 2009, pers. comm.).

#### *Habitat*

Moose browse surveys have not been conducted within the affected area, thus there are no habitat data. Browse surveys would facilitate analysis of the impacts this moose population is having on its habitat, which could provide some insight into the carrying capacity of the habitat and the nutritional quality of the standing browse. The Yukon Delta National Wildlife Refuge may conduct surveys of the willow species of the affected area in summer of 2010 (Doolittle 2009, pers. comm.).

At the Federal Subsistence Board work session in November 2009, Mr. Gene Peltola, Refuge Manager of Yukon Delta National Wildlife Refuge, testified that if moose density continues to increase in the lower Yukon area of Unit 18, there is a risk that the population will exceed the carrying capacity of the habitat and experience a decline. Mr. Peltola stated that over the last three years there have been reports



**Figure 1.** Moose population survey results for the lowest survey unit along the main stem of the Yukon River, 1988–2008 (FWS 2008).

**Table 1.** Moose population survey results for the lowest survey unit along the main stem of the Yukon River, 1988–2008 (Pappas 2009, pers. comm.).

Survey Year	Total Moose
1988	0
1992	28
1994	65
2002	674
2005	1,342
2008	2,828 (3,320*)

\*Survey total of 2,828 recalculated with use of a Sighting Correction Factor (95% c.i.).

of localized calf and yearling die offs and this past winter reports of dead adult moose on the Yukon main stem. In addition, he stated that the refuge would prefer a proactive management approach because of the significance of the moose population to lower Yukon residents (FSB 2009).

**Harvest History**

Reported harvest totals from the fall (2005-2007) and winter seasons (2005–2009) are provided in **Table 2**. There appears to have been an increase in hunter success for the fall and winter seasons since 2005. From 2007 through 2009, the average annual reported winter moose harvest was 29. Even with the

**Table 2.** Total fall (ADFG 2009) and winter (Doolittle 2009, pers. comm.) moose harvest reported by year for the lower Yukon area of Unit 18, 2005–2009.

Year	Reported fall moose harvest	Reported winter moose harvest
2005	100	6
2006	117	14
2007	152	31
2008	*	29
2009	*	26
Total	369	106

\*Data currently unavailable in database.

“any-moose” harvest limit provided in the 2009 winter season, the total reported winter harvest remains lower than anticipated. It should be noted that harvest information is typically collected through harvest ticket or registration permit reports submitted by users, which may undercount harvest (cf. Andersen and Alexander 1992). However, the reported moose harvest does show an increasing trend.

### Alternatives to Consider

A more aggressive management approach would be to allow a fall “any adult” moose (bull or cow) harvest. Allowing the harvest of cow moose, the production component of the population, could slow the growth of this population. Additionally, the fall and winter season dates could be extended to provide more opportunity. The State has recently extended its winter season from January 20 to February 28 in the lower Yukon area of Unit 18.

If there is concern about potential overharvest, a community harvest reporting system could be used to manage the moose harvest in the lower Yukon area of Unit 18. However, this has not been proposed and would require further analysis to evaluate its utility in this area.

### Other Relevant Proposals

Proposals WP10-57, -58, and -62, request that the boundary between the Unit 18 lower Yukon area and remainder of Unit 18 be redefined to be a natural geographic mid-point between the two areas. If the Federal Subsistence Board adopts any of these proposals, the language in the regulations defining the area of the fall and winter moose hunts in the lower Yukon will need to be rewritten to reflect the change.

Proposal WP10-59 requests that Federal Subsistence users be allowed to hunt moose from a motor boat under low or idle power. Adoption of Proposal WP10-59 and WP10-56 would most likely not create a conservation concern, because the moose population in the affected area is thought to be healthy enough to support any additional harvest.

### Effects of the Proposal

Adoption of Proposal WP10-56 would provide additional opportunity for Federally qualified subsistence users to harvest moose in the lower Yukon area of Unit 18 during the Dec. 20–Jan. 20 season, when access is better by snowmachine. Federally qualified subsistence users would be required to harvest both moose from the lower Yukon area of Unit 18.

Adoption of the proposal would create differences between State and Federal regulations. During the Dec. 20–Jan. 20 season, it would be illegal for Federally qualified subsistence users to harvest an additional moose on State or private lands within or adjacent to Federal boundaries. As a result, a Federal registration permit would be required. A Federal registration permit would provide Federal subsistence users with documentation that they are hunting under Federal regulation and would provide a mechanism to monitor the Federal harvest.

Considering the relatively low level of reported annual harvest, adoption of the proposed harvest limit may not address the high growth rate of the moose population or the conservation concerns of the proponent. Even with the “any moose” winter season harvest limit combined with the proposed opportunity to harvest a second moose, the additional winter harvest is expected to be insignificant, with minimal impacts on the expanding population. However, the requested harvest limit expansion would help to facilitate management of the affected moose population and would provide Federally qualified subsistence users with the opportunity to harvest an additional moose in the winter season.

## OSM PRELIMINARY CONCLUSION

**Support Proposal WP10-56 with modification** to extend the winter season.

### Unit 18 — Moose

*Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 antlered bull*

*Aug. 10–Sept. 30*

*Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 moose. **A hunter who harvested 1 antlered bull during the fall season in this hunt area may also harvest 1 additional moose during the winter season. A hunter who did not take a moose in the fall season in this hunt area may take 2 moose in the winter season. Hunters may not harvest more than 2 moose in this hunt area per regulatory year. A Federal registration permit is required for this hunt. The Yukon Delta National Wildlife Refuge Manager may restrict the harvest in the winter season to only 1 antlered bull bulls or only 1 moose per regulatory year after consultation with the ADF&G.***

*Dec. 20–**Feb. 28** Jan. 20*

### Justification

The Federal Subsistence Board recently adopted Special Action WSA08-13 to increase the opportunity for Federal subsistence users to harvest moose in the lower Yukon area of Unit 18. Adoption of Proposal WP10-56 would continue to provide additional harvest opportunity. Little effect on the moose population is anticipated based on the growth rate of the moose population in the lower Yukon area and the lower than expected reported harvest during the any-moose harvest limit provided during the winter 2009 season. Furthermore, the Yukon Delta National Wildlife Refuge Manager would have the delegated authority to restrict the harvest if a conservation concern arose during the regulatory year. Modifying the proposal to extend the Federal winter season from January 20 to February 28 would align with the State winter season and provide Federal subsistence users with additional opportunity. The proposal must be

modified to include a Federal registration permit requirement because the Federal and State harvest limits would be different for this hunt. If this proposal is adopted and the population growth continues to be a concern, a more aggressive approach could be proposed to allow the harvest of any moose in the fall season.

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Comments WP10-056  
 January 29, 2010; Page 1 of 2

**Alaska Department of Fish and Game**  
**Comments to the Regional Advisory Council**

**Wildlife Proposal WP10-56:** This proposal increases the federal subsistence winter bag limit for moose hunting in the Lower Yukon River hunt area (Unit 18). The winter federal subsistence season bag limit would be 2 moose per year, so a federal subsistence hunter taking a bull in the fall would be eligible to take 1 additional moose in the winter or a hunter with no take in the fall hunt would be eligible to take 2 moose in the winter hunt.

**Introduction:** Moose population in the Lower Yukon River hunt area has increased dramatically in recent years. The population is estimated at about 3,300 moose, has high bull:cow ratios and productivity, which supports fall and winter seasons. This proposal seeks to utilize more of the harvestable surplus by federal subsistence hunters.

**Impact on Subsistence Users:** Increasing the winter bag limit will give federal subsistence users more hunting opportunity.

**Opportunity Provided by State:** In Unit 18, the Lower Yukon River hunt area was modified at the November 2009 Alaska Board of Game meeting. The Board of Game approved changes by emergency order announcement for the 2009-2010 winter season to reflect: 1) change to hunt area boundary, and 2) winter season. The revised state regulation becomes a permanent in 2010-2011, as follows:

**5 AAC 85.045 (a) (16). Hunting seasons and bag limits for moose.**

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
Unit 18 <u>Lower Yukon Area</u> , that portion north and west <u>of the Kashunuk River including                      the north bank from the mouth                      of the river upstream to the old                      village of Chakaktolik, west of a                      line from Chakaktolik to                      Mountain Village,</u> and excluding all Yukon River drainages upriver from Mountain Village.	Aug. 10 - Sept. 30 <b><u>Dec. 20 – Feb 28</u></b>	Sept. 1 - Sept. 30
1 antlered bull; or 1 moose		

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**Conservation Issues:** The Lower Yukon River moose population is growing rapidly and currently is not a conservation concern. If the moose population continues at a high rate of growth, over-browsing may result in future management and conservation considerations.

**Enforcement Issues:** Enforcement problems related to hunt area boundary will be decreased by using the Kashunuk River bank as a boundary because it is an identifiable geographic feature in an area of broad featureless terrain. None the less, difference in federal subsistence and state regulations resulting from adoption of this proposal create enforcement problems in areas of mixed land ownership, especially for annual bag limit accumulation issues. If adopted, a federal subsistence user that harvests a moose in a federal subsistence hunt may not participate in the state moose hunt for the remainder of the hunt season.

**Other Comments:** If adopted, the department requests the Federal Subsistence Board include specific language during deliberations clearly identifying the supporting facts for adopting this proposal. The department has continued concerns regarding past Federal Subsistence Board actions which established liberal bag limits for species during times of peak population conditions and the Board's refusal for reductions in the bag limits once the populations returned to normal levels. The department is cautious of the establishment of an artificially inflated bag limit as the standard definition for meaningful preference for federal subsistence uses when the population returns to normal levels.

**Recommendation:** Oppose. If adopted, modification is needed to clarify that the federal manager must consult with the department to determine when to restrict further harvest.

The department suggests consideration be given to modification of this proposal to establish a community harvest hunt under federal subsistence regulations in cooperation with the State which would establish harvest quotas per community. Developing a community harvest program will provide additional opportunity to take harvestable surplus from the growing moose population to meet the needs of the communities. Additionally, harvest reporting would improve and harvest quotas would be sensitive to biological fluctuations in the population.

<b>WP10-57 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-57 requests a change in a portion of the regulatory boundary description for Unit 18, north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village. This area is referred to as the lower Yukon hunt area. <i>Submitted by the Yukon Delta National Wildlife Refuge</i>
<b>Proposed Regulation</b>	<i>Unit 18, that portion north and west of a line from <del>Cape Romanzof to Kusilvak Mountain</del> <b>the mouth of the Kashunuk River to Chakaktolik following the east bank of the Kashunuk River, then straight</b> to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village.</i>
<b>OSM Preliminary Conclusion</b>	<b>Support</b> Proposal WP10-57 <b>with modification</b> to align with the recently adopted Alaska Board of Game boundary description.  <i>Unit 18, that portion north and west of <del>Cape Romanzof to Kusilvak Mountain</del> <b>the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of line from Chakaktolik to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village.</b></i>
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Support with modification</b> to use the boundary adopted by the Alaska Board of Game so there is uniform hunt area across State and Federal public lands associated with the Lower Yukon hunt area
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-57

### ISSUES

Proposal WP10-57, submitted by the Yukon Delta National Wildlife Refuge, requests a change in a portion of the regulatory boundary description for Unit 18, north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village. This area is referred to as the lower Yukon hunt area.

### DISCUSSION

The proponent states that the current regulatory language specific to the moose hunt boundary is ambiguous and that the existing straight line boundary is not easily identified on the ground, while the proposed boundary change would make it easier for subsistence hunters and law enforcement officers to identify the area.

The proponent also states that the Kusilvak Mountain is actually a mountain range of approximately 10 miles in length, and the straight line description from Cape Romanzof can be interpreted to intersect with Kusilvak Mountain at any number of arbitrary points (Sundown, 2010, pers. comm.; USGS 1952 and 1954).

This proposal would provide a regulatory boundary reflecting easily identified, prominent, natural geographic features found in the affected area, instead of the current straight line description used in the existing regulation (USGS 1953 and 1954).

#### Existing Federal Regulation

##### Unit 18 — Moose

*Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village.*

#### Proposed Federal Regulation

##### Unit 18 — Moose

*Unit 18, that portion north and west of a line from ~~Cape Romanzof to Kusilvak Mountain~~ **the mouth of the Kashunuk River to Chakaktolik following the east bank of the Kashunuk River, then straight** to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village.*

#### Current State Regulation

##### Unit 18 — Moose

*Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village (lower Yukon).*

A proposal to change the southern boundary to the Kashunuk River was adopted by the Alaska Board of Game at its November 2009 meeting. That boundary change will be effective when the State publishes the new regulations booklet. This proposal seeks to align the Federal boundary with the State boundary.

### **Extent of Federal Public Lands**

Federal public lands comprise approximately 64% of Unit 18, and consist of 62% U.S. Fish and Wildlife Service lands and 2% Bureau of Land Management lands. **Map 1** shows the extent of Federal lands in the area, the current boundary, the proposed boundary and is located within Yukon Delta National Wildlife Refuge.

### **Customary and Traditional Use Determinations**

Rural residents of Unit 18, St. Michael, Stebbins, and Upper Kalskag have a positive customary and traditional use determination for moose in that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and all drainages north of the Yukon River downstream from Marshall. The hunt area subject to this proposal lies within the area of that determination. The boundary change would be for the moose hunt.

### **Current Events**

At its November 2009 meeting, the Alaska Board of Game adopted a boundary change that for the most part mirrors the proponent's request (Alaska Board of Game 2009). NWR staff worked with staff from ADF&G to finalize the recommendation to the Alaska Board of Game and had the support of both the Lower Yukon Advisory Committee and the Yukon Delta Regional Advisory Council (Sundown 2010, pers. comm.). The proponent concurs with the adopted State boundary change and believes a simple modification of WP10-57 is acceptable in order to align the regulatory descriptions (Sundown 2010, pers. comm.).

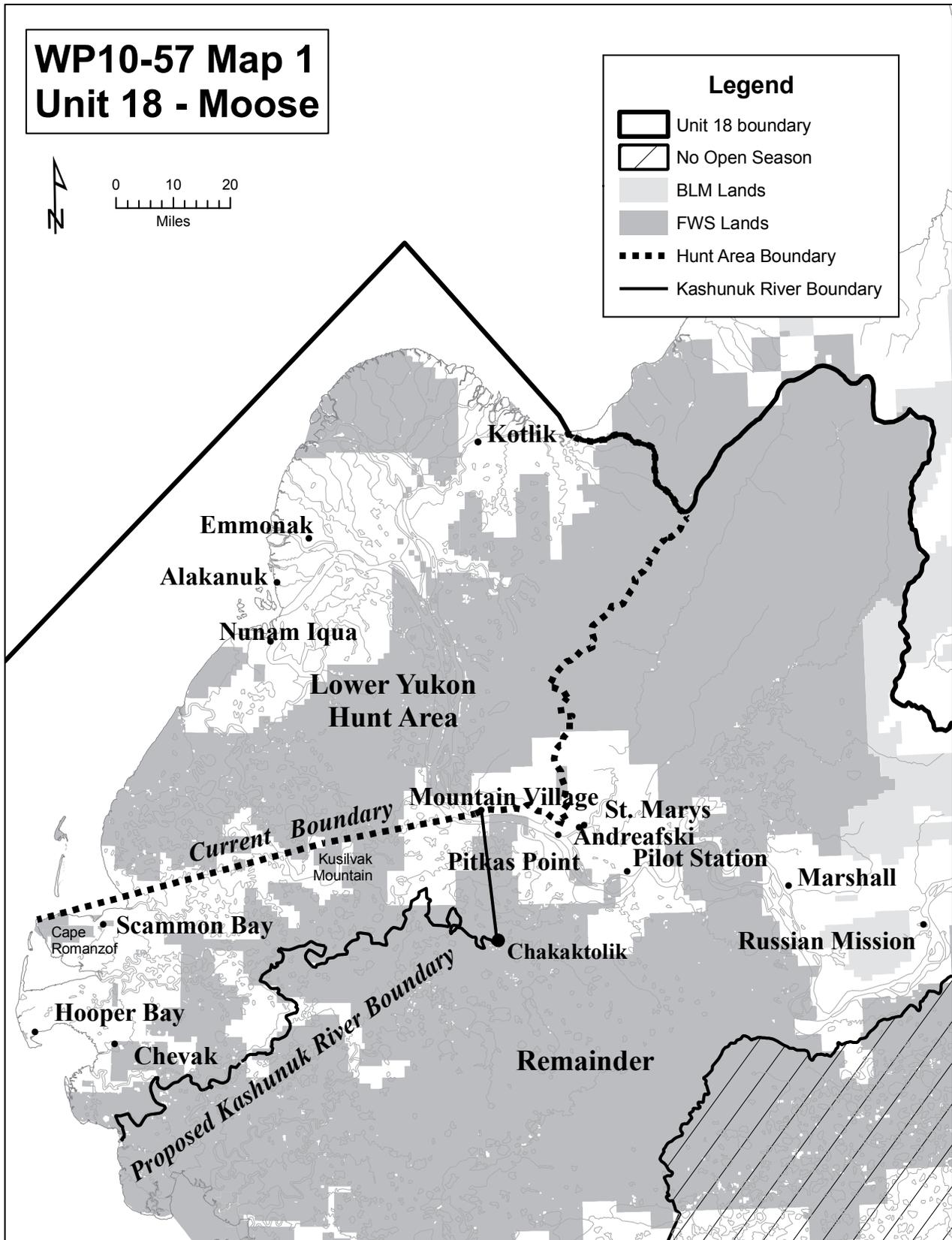
### **Biological Background**

Following the moose hunting moratorium the lower Yukon moose population has been highly productive and growing. The most recent ADF&G moose surveys estimate the population sizes of 3320 in the lower Yukon hunt area and approximately 4000 in Unit 18 remainder (Perry 2009) (**Map 1**). As a result, the Alaska Board of Game has extended winter hunt seasons in this area (Alaska Board of Game 2009).

### **Effects of the Proposal**

This proposal is similar to WP10-58/62 that addresses a boundary change on the lower Kuskokwim River hunt area. Both proposals identify distinctive natural features to help subsistence users and law enforcement officers to determine the boundary between moose hunting areas. Both proposals have interagency and local support to change the current ambiguous boundaries.

Adoption of the proposal would provide Federally qualified subsistence users and law enforcement with a easier identified boundary to separate the Lower Yukon hunt area from the Unit 18 remainder. Seasons and harvest limits are different in Unit 18 remainder and the lower Yukon hunt area. The Unit 18 remainder harvest limit is 1 antlered bull, while the lower Yukon hunt area allows a 1 moose harvest, so a clear, definitive boundary is necessary for subsistence users.



Adoption of the proposal would increase the size of the lower Yukon hunt area thereby increasing the area for subsistence users to harvest the 1 moose limit during the winter season.

## **OSM PRELIMINARY CONCLUSION**

**Support** Proposal WP10-57 **with modification** to align with the recently adopted Alaska Board of Game boundary description.

The modified regulation should read:

### **Unit 18—Moose**

*Unit 18, that portion north and west of ~~Cape Romanzof to Kusilvak Mountain~~ **the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of line from Chakaktolik to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village.***

### **Justification**

The Kashunuk River is an easily identified, natural geographic feature of the lower Yukon area. The current boundary is more difficult to determine for both subsistence users and law enforcement.

Adoption of the proposal with modification will bring the regulatory boundary description in alignment with the recently adopted State boundary description. In addition, it will simplify boundary identification for subsistence users and law enforcement. The proposal has interagency and local support.

The lower Yukon River area has a healthy, growing moose population which can support increased harvest opportunity.

## **LITERATURE CITED**

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USGS 1952. Kwiguk topographic map. 1:250,000 scale. Reston, VA.

USGS 1953. Hooper Bay topographic map. 1:250,000 scale. Reston, VA.

USGS 1954. Marshall topographic map. 1:250,000 scale. Reston, VA

**Alaska Department of Fish and Game**  
**Comments to the Regional Advisory Council**

**Wildlife Proposal WP10-57:** This proposal modifies the hunt area boundary for the Lower Yukon River hunt area in Unit 18. The proponent has since agreed to a modification of this proposal to match the boundary realignment adopted by the Alaska Board of Game in 2009.

**Introduction:** Moose population in the Lower Yukon River hunt area has increased dramatically in recent years. The population is estimated at about 3,300 moose, has high bull:cow ratios and productivity, and supports fall and winter seasons. The current federal subsistence hunt boundary in the vicinity of Kusilvak Mountain creates confusion among hunters, and the proposal attempts to use better geographic landmarks. The proposed language differs from the state hunt area approved at the November 2009 State Board of Game meeting.

**Impact on Subsistence Users:** Improving the federal subsistence hunt area boundary will make it easier for hunters to determine the proper season and bag limit within the Lower Yukon River hunt area and the adjoining Remainder of Unit 18 hunt area.

**Opportunity Provided by State:** In Unit 18, the Lower Yukon River state hunt area was modified at the November 2009 Alaska Board of Game meeting. The Board of Game approved changes by emergency order announcement to reflect: 1) change to state hunt area boundary and 2) state winter season. The revised state regulation applies to the state winter season in 2009-2010 and becomes a permanent regulation in 2010-2011, as follows:

**5 AAC 85.045 (a) (16). Hunting seasons and bag limits for moose.**

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
<p>Unit 18 <u>Lower Yukon Area</u>, that portion north and west <u>of the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of a line from Chakaktolik to Mountain Village</u>, and excluding all Yukon River drainages upriver from Mountain Village.</p>	<p>Aug. 10 - Sept. 30 <b>Dec. 20 – Feb 28</b></p>	<p>Sept. 1 - Sept. 30</p>
<p>1 antlered bull; or 1 moose</p>		

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**Conservation Issues:** The Lower Yukon River moose population is growing rapidly and currently is not a conservation concern. If the moose population continues at a high rate of growth, over-browsing may result in future management and conservation considerations.

**Enforcement Issues:** Enforcement problems related to hunt area boundary will be decreased by using the Kashunuk River bank as a boundary, because it is an identifiable geographic feature in an area of broad featureless terrain.

**Recommendation:** Support with modification to use the boundary adopted by the Alaska Board of Game so there is a uniform hunt area across state and federal public lands associated with the Lower Yukon River hunt area.

<b>WP10-58/62 Executive Summary</b>	
<b>General Description</b>	Proposals WP10-58 and 62 request a change in the existing boundary description that separates Unit 18 Remainder and the Kuskokwim River drainage in Unit 18 relevant to the moose regulations. Proposal 62 clarifies the proposed boundary change listed in Proposal 58. <i>Submitted by the Native Village of Nunapitchuk</i>
<b>Proposed Regulation</b>	<i>Unit 18, that portion east of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, to the easternmost point of Takstestuk Lake to the east bank of the Johnson River at Nunavakanukakslak Lake, continuing upriver to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake then following the south bank east to the border of Unit 18 and north of (and including) the Eek River drainage.</i>
<b>OSM Preliminary Conclusion</b>	<b>Support</b> Proposal WP10-58/62 <b>with modification</b> to align with the recently adopted Alaska Board of Game boundary description.  <i>Unit 18, that portion east of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, to the easternmost point of Takstestuk Lake then to the east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60°59.41' Latitude; W 162°22.14' Longitude), continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake, then following the south bank easterly to the Unit 18 border and north of (and including) the Eek River drainage.</i>
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Support with modification</b> to use the boundary adopted by the Alaska Board of Game so there is a uniform hunt area across Federal and non-Federal lands associated with the Lower Kuskokwim River Federal subsistence hunt area.
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-58/62

### ISSUES

Proposals WP10-58 and 62, submitted by the Native Village of Nunapitchuk, request a change in the existing boundary description that separates Unit 18 Remainder and the Kuskokwim River drainage in Unit 18 relevant to the moose regulations. Proposal 62 clarifies the proposed boundary change listed in Proposal 58.

### DISCUSSION

The proponent states that the Johnson River serves as a locally-known divide between the Yukon and Kuskokwim River drainages in Unit 18. The intent of the proposal is to provide a regulatory boundary reflecting locally-known land features, instead of the current Kuskokwim River drainage boundary used in the existing regulation that is not easily identified on the ground. The Johnson River is the most easily recognizable map feature in contrast to the hydrologic divide between the Yukon and Kuskokwim River drainages (USGS 1954a, 1954b, 1980).

The proponent states that the boundary change should make it easier for subsistence moose hunters to identify Unit 18 Remainder from the Kuskokwim River Drainage. The current boundary is more difficult to determine for both hunters and law enforcement and the proponent has worked with refuge staff to develop this proposal (Sundown 2010, pers. comm.).

The proponent also states that this change will provide more opportunity to harvest Yukon origin moose in the area north and west of the Johnson River. Moose found in the upper Johnson River area are associated with the high density Yukon River moose populations. The lower portion of the Johnson River area is associated with the Kuskokwim moose population and remains in the revised Kuskokwim River drainage hunt area description (Alaska Board of Game 2009).

### Existing Federal Regulation

#### Unit 18—Moose

*Unit 18, that portion east of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border and north of (and including) the Eek River drainage.*

### Proposed Federal Regulation

#### Unit 18—Moose

*Unit 18, that portion east of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, to the easternmost point of Takslesluk Lake to the east bank of the Johnson River at Nunavakanukakslak Lake, continuing upriver to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake then following the south bank east to the border of Unit 18 and north of (and including) the Eek River drainage.*

## **Current State Regulations**

### **Unit 18—Moose**

*Unit 18 Lower Kuskokwim, easterly of a line from the mouth of the Ishkowiik River to the closest point of Dall Lake then to easternmost point of Takslesluk Lake then along the Kuskokwim River drainage boundary to the Unit 18 border, and north of and including the Eek River drainage.*

A proposal to change the southern boundary to the Johnson River was adopted by the Alaska Board of Game at its November 2009 meeting. That boundary change will be effective when the State publishes the new regulations booklet. This proposal seeks to align the Federal boundary with the State boundary.

### **Extent of Federal Public Lands**

Federal public lands comprise approximately 64% of Unit 18, with the majority of these (62% of the unit) consisting of U.S. Fish and Wildlife Service lands and 2% consisting of Bureau of Land Management lands. **Map 1** shows the extent of Federal lands in the area, the current boundary, the proposed boundary and is located within Yukon Delta National Wildlife Refuge.

### **Customary and Traditional Use Determinations**

Rural residents of Unit 18 and Upper Kalskag have a positive customary and traditional use determination for moose in Unit 18 remainder, the area covered by this proposal.

Rural residents of Unit 18, Upper Kalskag, Aniak and Chuathbaluk have a positive customary and traditional use determination for moose in Unit 18, that portion of the Yukon River drainage upstream of Russian Mission and that portion of the Kuskokwim River drainage upstream of (but excluding) the Tuluksak River drainage, the area covered by this proposal.

### **Regulatory History**

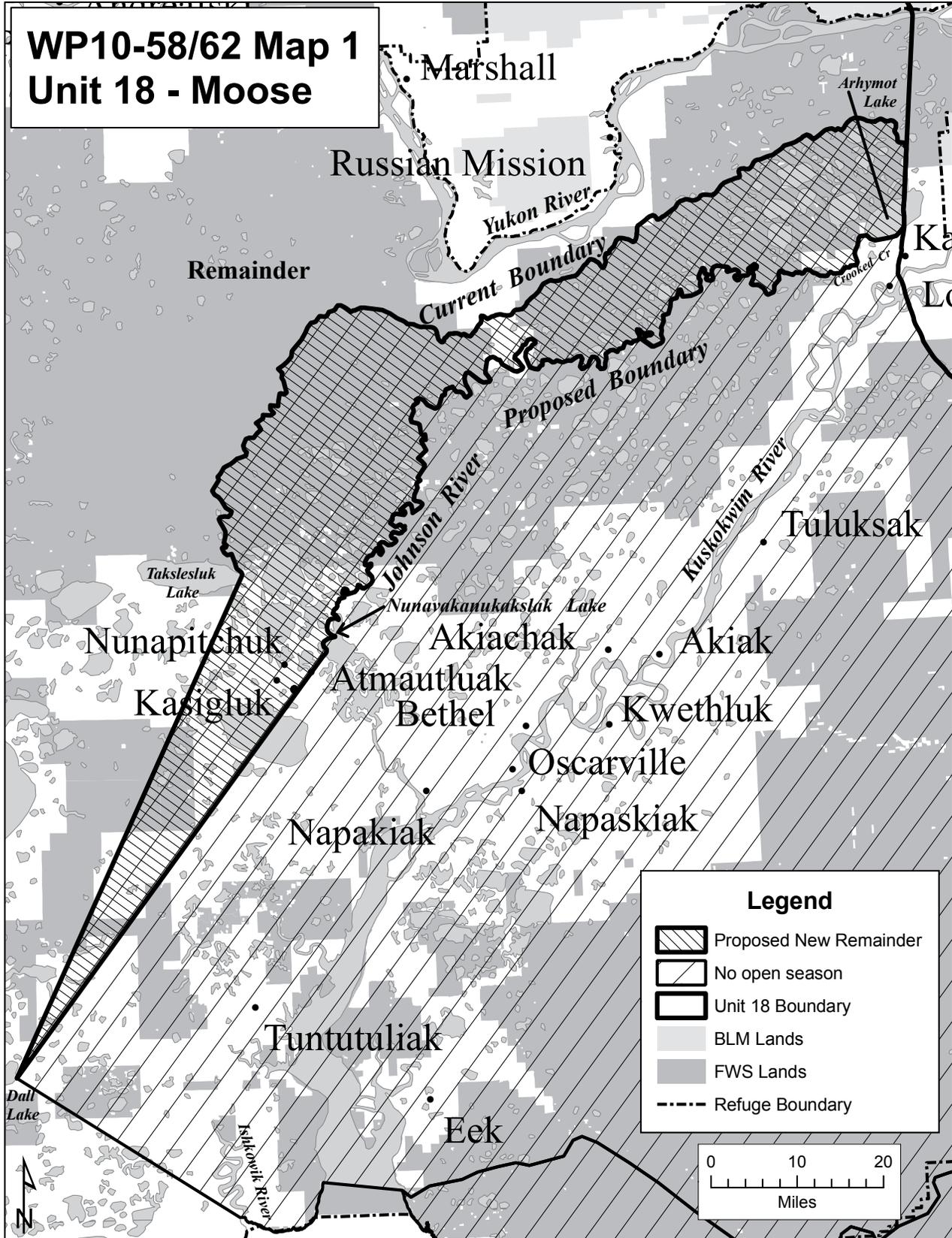
The regulatory boundary between the Unit 18 remainder and the Kuskokwim River drainage portions of Unit 18 was established by the Federal Subsistence Board in April 1995. In March 2004 the Alaska Board of Game adopted the same boundary description to separate the lower Kuskokwim River drainage from the Remainder of Unit 18 in State regulations. The Federal and State boundary descriptions have remained in alignment since the 2004/05 regulatory year.

### **Current Events**

At its November 2009 meeting, the Alaska Board of Game adopted a boundary change that mirrors the proponent's request, but slightly amends the boundary to a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River, Crooked Creek and Arhymot Lake (Alaska Board of Game 2009). Staff from ADF&G proposed the boundary change and worked with Yukon Delta National Wildlife Refuge staff and the Lower Kuskokwim Fish & Game Advisory Committee to finalize the recommendation (Sundown 2010, pers. comm.).

### **Effects of the proposal**

This proposal is similar to WP10-57 that addresses a boundary change on the lower Yukon River hunt area. Both proposals identify distinctive natural features to help subsistence users and law enforcement



officers to determine the boundary between moose hunting areas. Both proposals have interagency and local support to change the current ambiguous boundaries.

Adoption of the proposal would provide Federally qualified subsistence users and law enforcement with a clearer boundary to separate the Kuskokwim River drainage area from the Unit 18 remainder for purposes of moose hunting.

It will allow subsistence users more opportunity to harvest healthy Yukon origin moose stocks by increasing the size of Unit 18 remainder to include the upper Johnson River area. Adoption of the proposal would also give subsistence users greater opportunity to harvest for those who access from the Kuskokwim and Johnson Rivers.

## **OSM PRELIMINARY CONCLUSION**

**Support** Proposal WP10-58/62 **with modification** to align with the recently adopted Alaska Board of Game boundary description.

The modified regulation should read:

### **Unit 18— Moose**

*Unit 18, that portion east of a line from the mouth of the Ishkowiik River to the closest point of Dall Lake, to the easternmost point of Takslestuk Lake then to the east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60°59.41' Latitude; W 162°22.14' Longitude), continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake, then following the south bank easterly to the Unit 18 border and north of (and including) the Eek River drainage.*

### **Justification**

The Johnson River upriver of Nunavakanukakslak Lake is an easily identified, natural geographic mid-point between the Yukon and Kuskokwim Rivers. The current boundary is more difficult to determine for both subsistence users and law enforcement.

Adoption of the proposal with modification will bring the regulatory boundary description in alignment with the recently adopted State boundary description. In addition it will simplify boundary identification for Federally qualified subsistence users and law enforcement.

The upper Johnson River area is generally associated with the healthy Yukon River moose populations. These moose are likely distinct from the Kuskokwim and lower Johnson River populations.

## **LITERATURE CITED**

Alaska Board of Game. 2009. Amended proposal 4a (RC35). Nov. 12, 2009 meeting materials. Nome, AK.

Sundown. 2010. Subsistence Resource Specialist. Personal communication: phone. Yukon Delta National Wildlife Refuge. Bethel, AK.

USGS. 1954a. Baird Inlet topographic map. 1:250,000 scale. Reston, VA.

USGS. 1954b. Marshall topographic map. 1:250,000 scale. Reston, VA.

USGS. 1980. Russian Mission topographic map. 1:250,000 scale. Reston, VA.

Comments WP10-58 and WP10-62  
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**Alaska Department of Fish and Game**  
**Comments to the Regional Advisory Council**

**Wildlife Proposals WP10-58 and WP10-062:** These proposals modify the boundary of the Lower Kuskokwim River federal subsistence hunt area in Unit 18 by using identifiable geographic features in an area with featureless terrain.

**Introduction:** The Lower Kuskokwim hunt federal subsistence hunt area in Unit 18 was closed to all hunting for 5 years to allow for population growth as moose expanded into previously unoccupied habitat associated with the Kuskokwim River drainage. In 2009-2010 regulatory year, the Alaska Board of Game approved a registration permit state hunt for residents only with a harvest quota of 75 moose based on population estimates of 1,000 moose in the hunt area. In November 2009, the Alaska Board of Game changed the hunt area boundary but made no changes to the registration permit season and bag limit based on hunter effort (approximately 1,100 applications) and total harvest (approximately 105 moose) during the first year the hunt was opened. Continued hunting with low harvest quotas will allow harvest opportunity at the same time allowing herd growth and expansion.

**Impact on Subsistence Users:** Improving the hunt area boundary will make it easier for federal subsistence hunters to determine the proper season and bag limit within the Lower Kuskokwim River federal subsistence hunt area and the adjoining Remainder of Unit 18 hunt area.

**Opportunity Provided by State:** In Unit 18, the Lower Kuskokwim River state hunt area was modified at the November 2009 Alaska Board of Game meeting. Department staff proposed the boundary change and worked with the Yukon Delta refuge and Lower Kuskokwim Fish and Game Advisory Committee to finalize the recommendation. The Board of Game approved the hunt area boundary that will be a permanent regulation in 2010-2011, as follows:

**5 AAC 85.045 (a) (16). Hunting seasons and bag limits for moose.**

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
-----------------------------	-------------------------------------------------------------------------	------------------------------------

(16)

Unit 18 **Kuskokwim Area**, that portion easterly of a line from the mouth of the Ishkowiik River to the closest point of Dall Lake, then to the **east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60° 59.41' Latitude; W 162° 22.14' Longitude)**,

Comments WP10-58 and WP10-62  
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**continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake, then following the lake south bank easterly** to the Unit 18 border and north of and including the Eek River drainage.

1 antlered bull by registration permit only

Sept. 1 - Sept. 10

No open season.

**Conservation Issues:** Low harvests rates are sustainable based on the current minimum population size of 1,000 moose and will allow for future herd growth and expansion. The revised boundary identifies and protects the Lower Kuskokwim River moose population for future conservative management.

**Enforcement Issues:** Enforcement problems related to hunt area boundary will be decreased by using a line parallel to the Johnson River along portions of the hunt area to separate the Kuskokwim River drainage area from the Unit 18 Remainder. Other changes to the boundary use identifiable geographic feature in an area of broad featureless terrain.

**Recommendation:** Adopt with modification to use the boundary adopted by the Alaska Board of Game so there is a uniform hunt area across federal and non-federal lands associated with the Lower Kuskokwim River federal subsistence hunt area.

<b>WP10-59 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-59 requests that the Federal Subsistence Board (Board) establish a regulatory provision for the harvest of moose from a motorized boat under low or idle power in the lower Yukon area (that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village) of Unit 18. <i>Submitted by Byran Ulak of Scammon Bay</i>
<b>Proposed Regulation</b>	<p>§ __.26(b) <i>Except for special provisions found at paragraphs (n) (1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:</i></p> <p style="padding-left: 40px;"><i>(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased;</i></p> <p style="padding-left: 40px;"><i>(15) Taking swimming ungulates, bears, wolves, or wolverine;</i></p> <p><b>§ __.26(n)(18)(iii)(D) <i>In that portion of Unit 18, north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village, you may take moose from a boat moving under low or idle power.</i></b></p> <p>§ __.26(n)(25)(iii)(B) <i>You may take caribou and moose from a boat moving under power in Unit 25.</i></p>
<b>OSM Preliminary Conclusion</b>	<b>Support</b> Proposal WP10-59 <b>with modification</b> to remove the words "low or idle."
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-59

### ISSUES

Proposal WP10-59, submitted by Byran Ulak of Scammon Bay, requests that the Federal Subsistence Board (Board) establish a regulatory provision for the harvest of moose from a motorized boat under low or idle power in the lower Yukon area (that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village) of Unit 18.

### DISCUSSION

The proponent states that the proposed change in regulations would help increase hunter success rates by allowing Federally qualified subsistence users to shoot from a motor-driven boat under low or idle power. The proponent believes that the proposed regulatory change may cause moose harvest to increase slightly in the lower Yukon River area of Unit 18.

It is a common practice of subsistence users in the area to hunt moose from a motor-driven boat under slow power in the early morning and evening hours when animals frequent the river banks. A slow speed is used to avoid scaring moose from river banks by keeping motor noise to a minimum. A motor-driven boat under slow power provides a relatively stable platform for shot placement. No accidents have been reported as a result of this activity (Robert Sundown 2009).

While statewide Federal subsistence regulations do not allow the harvest of wildlife from a motor-driven boat under power, exceptions are allowed under special provisions.

#### Existing Federal Regulation

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

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

*(15) Taking swimming ungulates, bears, wolves, or wolverine;*

*§\_\_.26(n)(25)(iii)(B) You may take caribou and moose from a boat moving under power in Unit 25.*

#### Proposed Federal Regulation

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

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

*(15) Taking swimming ungulates, bears, wolves, or wolverine;*

**§\_\_.26(n)(18)(iii)(D) *In that portion of Unit 18, north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village, you may take moose from a boat moving under low or idle power.***

**§\_\_.26(n)(25)(iii)(B) *You may take caribou and moose from a boat moving under power in Unit 25.***

## **Current State Regulation**

### *General Hunting Restrictions*

*You may not take game by:*

*A motor-driven boat or motorized land vehicle, unless the motor has been shut off and the progress from the motor's power has ceased, EXCEPT:*

*A motor-driven boat may be used as follows:*

- in Units 23 and 26 to take caribou;*
- in Unit 22 to position hunters to select individual wolves for harvest*
- under the authority of a permit issued by the department*

## **Extent of Federal Public Lands**

Federal public lands (Yukon Delta National Wildlife Refuge) comprise approximately 60% of the lower Yukon area of Unit 18 (**Map 1**).

## **Customary and Traditional Use Determinations**

Rural residents of Unit 18, St. Michael, Stebbins, and Upper Kalskag have a positive customary and traditional use determination for moose in the lower Yukon area of Unit 18, which includes this hunt area.

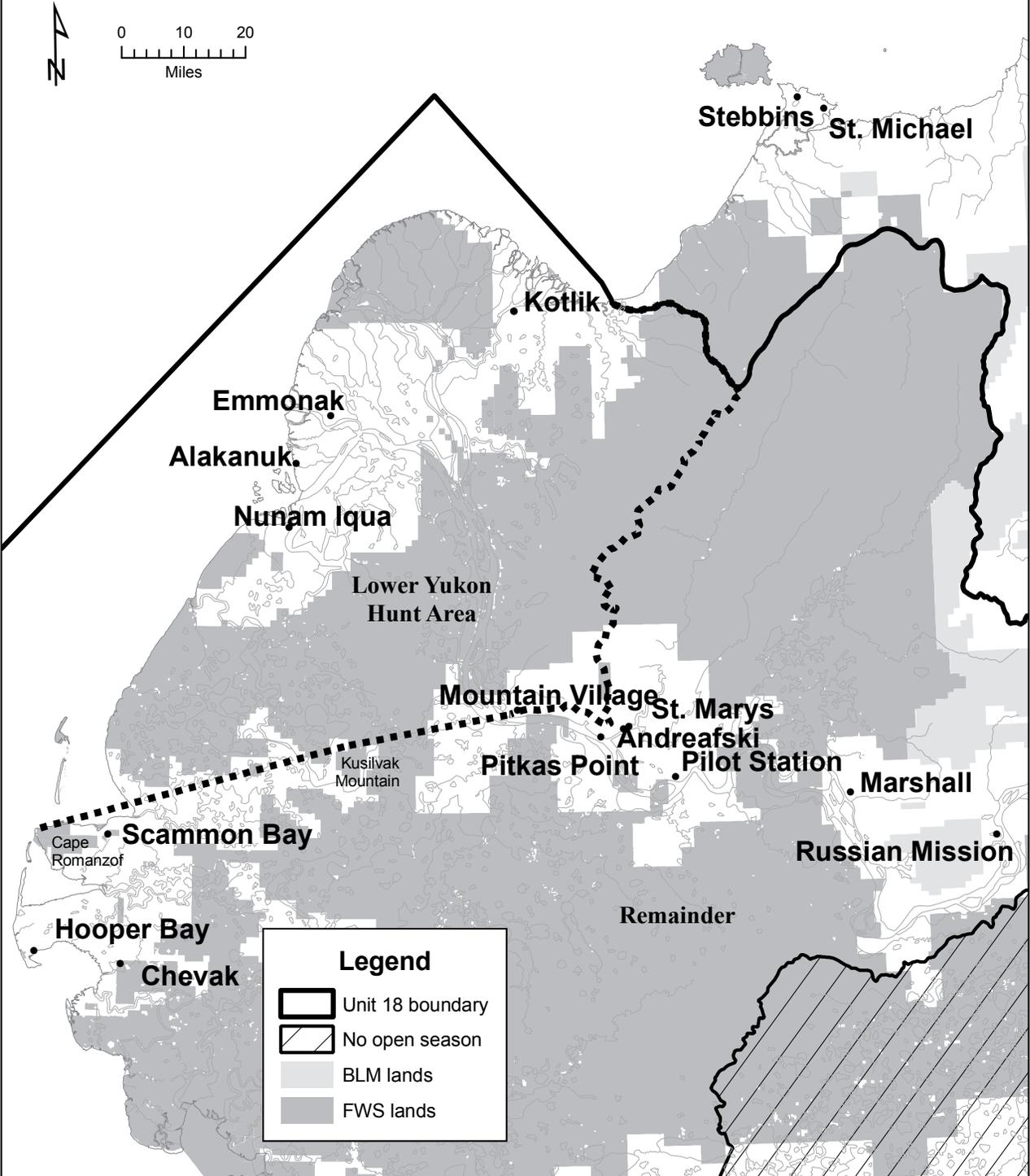
## **Regulatory History**

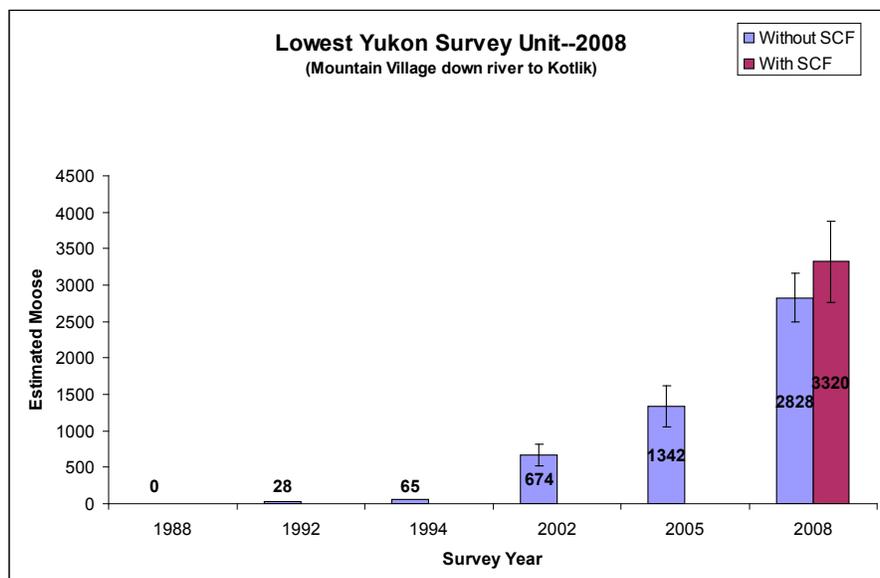
In 1995 the Board adopted Proposal 52 to allow the harvest of caribou and moose from a motor boat under power or a stationary snowmachine in Unit 25 (FSB 1995). The intent of this regulatory proposal was to “enhance and protect subsistence uses for residents of Stevens Village and other villages in Unit 25” (FWS 1995). The Board adopted the proposal as recommended by the Eastern Interior and Southcentral Subsistence Regional Advisory Councils (FSB 1995). The Eastern Interior Council's recommendation stated that the proposal supports subsistence needs and reflects current practices.

## **Biological Background**

In February 2008, the Yukon Delta National Wildlife Refuge and Alaska Department of Fish and Game conducted cooperative moose surveys in portions of Unit 18, including the furthest down river survey unit along the main stem of the Yukon River corridor from Mountain Village to Kotlik. The mid-point of the moose population estimate for this area was 2,828 moose when using traditional survey methods and 3,320 moose when a Sightability Correction Factor (SCF) was incorporated in the 2008 analysis (FWS 2008). Using the SCF population estimate on the lower Yukon River (from Mountain Village to Emmonak), the resulting moose density estimate was 2.8 moose/mi.<sup>2</sup>. The affected area has experienced rapid population growth since the end of the moratorium in 1994 (**Figure 1**) with an average annual

# WP10-59 Map 1 Unit 18 - Moose





**Figure 1.** Moose population estimates for the lowest Yukon River survey unit, 1988–2008 (FWS 2008).

growth rate of 27% for the period of 1994–2008 (**Table 1**). Based on the 2008 survey results, it appears that the affected population could support additional harvest with the current population size, density, and productivity (Doolittle 2009, pers. comm.).

**Table 1.** Moose population survey results for the lowest survey unit along the main stem of the Yukon River, 1988–2008 (Pappas 2009).

Survey Year	Total Moose
1988	0
1992	28
1994	65
2002	674
2005	1,342
2008	2,828 (3,320*)

\* Survey total of 2,828 recalculated with use of a Sightability Correction Factor (95% c.i.).

**Habitat**

Moose browse surveys have not been conducted within the affected area, thus there are no habitat data. Browse surveys would facilitate analysis of the impacts this moose population is having on its habitat, which could provide some insight into the carrying capacity of the habitat and the nutritional quality of the standing browse. The Yukon Delta National Wildlife Refuge may conduct surveys of the willow species of the affected area in summer of 2010 (Doolittle 2009, pers. comm.).

At the Federal Subsistence Board work session in November 2009, Mr. Gene Peltola, Refuge Manager of the Yukon Delta National Wildlife Refuge, testified that if moose density continues to increase in the

lower Yukon area of Unit 18, there is a risk that the population will exceed the carrying capacity of the habitat and experience a decline. Mr. Peltola stated that over the last three years there have been reports of localized calf and yearling die offs, and this past winter, reports of dead adult moose on the Yukon main stem. In addition, he stated that the refuge would prefer a proactive management approach because of the significance of the moose population to lower Yukon residents (FSB 2009).

### Harvest History

Reported harvest totals from the fall 2005-2007 are provided in **Table 2**. The harvest appears to show an increase in hunter success since 2005 during the fall seasons.

**Table 2.** Total fall moose harvest reported by year for the lower Yukon area of Unit 18, 2005–2007 (ADFG 2009).

Year	Reported fall moose harvest
2005	100
2006	117
2007	152
Total	369

### Other Relevant Proposals

Proposals WP10-57, -58, and -62, request that the boundary between the lower Yukon area of Unit 18 and the remainder of Unit 18 be redefined to be a natural geographic mid-point between the two areas. If the Federal Subsistence Board adopts any of these proposals, the regulatory language in Proposal WP10-59 defining the lower Yukon area of Unit 18 will need to be rewritten to reflect the change.

Proposal WP10-56 requests that Federal Subsistence users be allowed to harvest two moose annually in the area affected by Proposal WP10-59. If WP10-56 is adopted, Federally qualified subsistence users would be required to have a Federal registration permit to participate in this moose hunt. Adoption of Proposal WP10-56 and WP10-59 would not likely create a conservation concern, because the moose population in the affected area is thought to be healthy enough to support any additional harvest.

### Effects of the Proposal

Adoption of Proposal WP10-59 would allow Federal subsistence users to harvest moose in the lower Yukon area of Unit 18 from a motor-driven boat under power. The proposed regulation specifies the power setting of “low or idle” which may be open to interpretation and difficult to enforce. The harvest of a swimming moose would remain prohibited by §\_\_.26(b)(15). Based on biological information on moose in the affected area, any additional harvest that could result from adoption of Proposal WP10-59 would not likely create a conservation concern. Adoption of this proposal would result in differences between the State and Federal regulations in the lower Yukon area of Unit 18.

### OSM PRELIMINARY CONCLUSION

Support Proposal WP10-59 with modification to remove the words “low or idle.”

The modified regulation should read:

***§ \_\_.26(n)(18)(iii)(D) In that portion of Unit 18, north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village, you may take moose from a boat moving under power.***

### **Justification**

Adoption of this proposal as modified would support the current practice of subsistence users in the area to harvest moose from a boat under power. Removing the words “low or idle” from the regulation eliminates potential user interpretation and law enforcement issues that could arise from this language, simplifies the regulation, and makes it consistent with what was adopted for Unit 25.

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Comments WP10-59  
January 29, 2010; Page 1 of 1

**Alaska Department of Fish and Game**  
***Comments to the Regional Advisory Council***

**Wildlife Proposal WP10-59:** This proposal modifies federal subsistence methods and means of taking game to allow moose to be taken while under power in a boat being operated within the Lower Yukon River hunt area in Unit 18.

**Introduction:** Under federal regulations § 100.26 (4) and (15), taking swimming wildlife from a moving boat is illegal. Moose population in the Lower Yukon River hunt area has increased dramatically in recent years. The population is estimated at about 3,300 moose, has high bull:cow ratios and productivity which supports fall and winter seasons. Current federal subsistence methods of take prohibit taking a moose while under power in a boat or while moose are swimming. Traditional method of harvesting moose from the Lower Yukon River hunt area has not included pursuit and take of swimming game.

**Opportunity Provided by State:** State regulations prohibit the take of game from boats under power in 5 AAC 92.080 (4), as follows:

**92.080. Unlawful method of taking game; exceptions.** The following methods of taking game are prohibited:

...

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

State regulations prohibit the taking big game while swimming in 5 AAC 92.085 (7), as follows:

**92.085. Unlawful method of taking big game; exceptions.** The following methods and means of taking big game are prohibited in addition to the prohibitions in 5 AAC 92.080:

...

(7) while a big game animal is swimming, except that a swimming caribou may be taken in Unit 23;

**Enforcement Issues:** Changing the federal subsistence method of take to include boats under power would contribute to enforcement issues related to take of big game while swimming and take of other game (e.g., waterfowl hunting). Adopting methods of take regulations that are divergent from the state hunting regulations will increase user confusion and increase enforcement problems.

**Other Comments:** Federal subsistence hunting regulations only apply on federal public lands; federal subsistence hunting regulations do not apply on nonfederal lands and waters (unlike federal subsistence fishing regulations). The boat accessible waters of the Lower Yukon River are state-owned and are not subject to federal subsistence wildlife regulations.

**Recommendation:** Oppose.

<b>WP10-60 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-60 requests that the harvest limit for caribou in Unit 18 be reduced from three to two. <i>Submitted by the Yukon Delta Wildlife Refuge</i>
<b>Proposed Regulation</b>	<b>Unit 18–Caribou</b> <i>3 2 caribou; however, no more than 1 caribou Aug. 1–Mar. 15 may be taken, from Aug. 1–Nov. 30</i>
<b>OSM Preliminary Conclusion</b>	<b>Support</b> Proposal WP10-60 <b>with modification</b> , to include a 1-bull restriction and extend the 1 caribou restriction from Aug. 1–Nov. 30 to Aug. 1–Jan. 31.
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Support with modification</b> to include a 1 bull restriction and extend the 1 caribou restriction dates to August 1 through January 31 or, preferably, adopt WP10-53.
<b>Written Public Comments</b>	<b>None</b>

**DRAFT STAFF ANALYSIS  
WP10-60**

**ISSUES**

Proposal WP10-60, submitted by the Yukon Delta Wildlife Refuge, requests that the harvest limit for caribou in Unit 18 be reduced from three to two.

Note: A similar proposal (WP10-53) requesting a reduction of the harvest limit to two caribou and additional harvest restrictions in Units 9A, 9B, 17B, a portion of 17C, 18, 19A, and 19B is being analyzed separately.

**DISCUSSION**

The proponent states that the decline of the Mulchatna Caribou Herd (MCH) warrants a decrease in the harvest limit. The proposed regulatory change would align the Federal harvest limit with the existing State harvest limit of two caribou for the unit. However, State regulations are more restrictive than the Federal regulations: The State allows for the harvest of two caribou, but no more than one bull; and the State season allows for only one caribou from Aug. 1–Jan. 31 versus the Federal season that currently allows for one caribou from Aug. 1–Nov. 30.

**Existing Federal Regulation**

**Unit 18–Caribou**

*3 caribou; however, no more than 1 caribou may be taken from Aug. 1–Nov. 30*      *Aug. 1–Mar. 15*

**Proposed Federal Regulation**

**Unit 18–Caribou**

*3 2 caribou; however, no more than 1 caribou may be taken, from Aug. 1–Nov. 30*      *Aug. 1–Mar. 15*

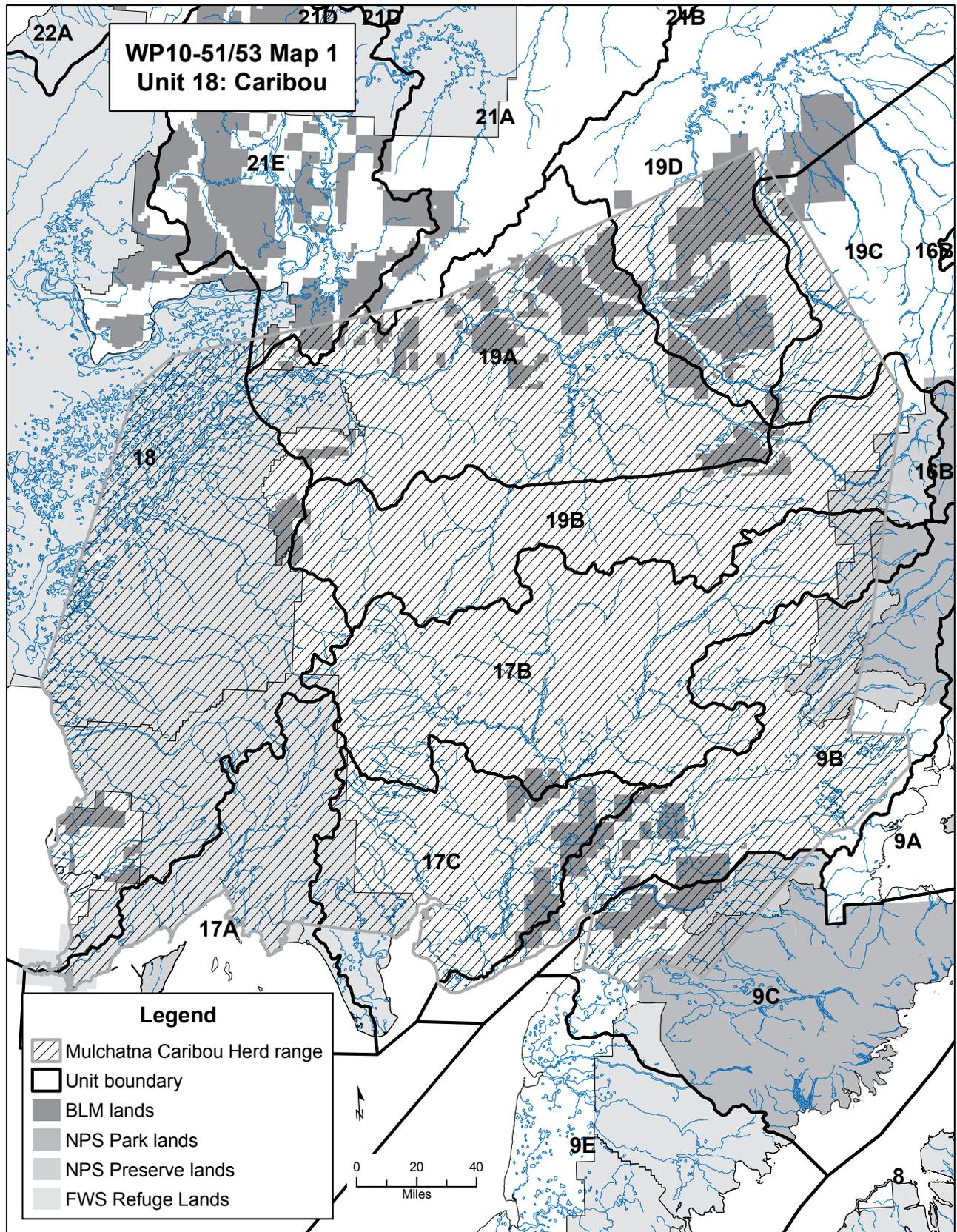
**Existing State Regulations**

**Unit 18–Caribou**

*Resident: Two caribou; no more than one bull may be taken, and only one caribou may be taken from Aug. 1–Jan. 31*      *Aug. 1–Mar. 15*  
*Nonresident*      *No open season*

**Extent of Federal Public Lands**

Federal public lands comprise approximately 64% of Unit 18 and consist of 62% US Fish and Wildlife Service and 2% Bureau of Land Management lands (**Map 1**).



## Customary and Traditional Use Determinations

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

## Regulatory History

State and Federal regulations for the MCH were liberalized during the dramatic population increase that occurred in the 1990s. Numerous modifications were made to the Federal regulations for various units as the MCH population increased and expanded into new range.

In 1997, the Federal Subsistence Board (Board) adopted proposal WP97-52 with modification to increase the harvest limit from one caribou to an “up-to-five caribou” limit and to have a “to-be-announced” season between Aug. 25 and Mar. 31 in Unit 18. Previously, the season dates were Dec. 15–Jan. 9 and Feb. 23–Mar. 15. The proposal was adopted to protect the Kilbuck Caribou Herd (KCH), but also allowed more harvest on the increasing MCH that overlapped the KCH range. In 2002, because the MCH occupied Unit 18 on a more frequent basis, the Board adopted proposal WP02-28 with modification which changed the regulations to allow for a harvest of five caribou during Aug. 1–Mar. 31 with no measures to protect the KCH. The MCH and KCH were believed to have been assimilated into one herd (Hinkes et al. 2005) which is now referred to as the MCH. In 2004, the Board adopted WP04-50, further liberalizing the caribou season from Aug. 1–Mar. 31 to Aug. 1–Apr. 15 for all of Unit 18.

After the population began to dramatically decline, regulations became more restrictive. In March 2006, the Alaska Game Board adopted new State regulations to reduce harvest limits within the range of the MCH from five to two caribou. In March 2007, the Alaska Game Board further restricted caribou harvest to allow no more than one bull to be taken, and no more than one caribou to be taken Aug. 1–Jan. 31. The Federal Subsistence Board followed suit and adopted proposal WP07-23 with modification to reduce the harvest limit from five caribou to three and to reduce the season from Aug. 1–Apr. 15 to Aug. 1–Mar. 15 in Units 9B; a portion of 17A; 17B; a portion of 17C; 18; a portion of 19A; and 19B. In addition, adoption of proposal WP07-23 allowed only one caribou to be taken from Aug. 1–Nov. 30 for Unit 18, which aligned with State regulations. In March 2009, the Alaska Board of Game eliminated nonresident harvest on the MCH due to the harvestable surplus being lower than the amount needed for subsistence.

## Biological Background

The ADF&G’s management objectives for the MCH were to maintain a population of 100,000–150,000 with a minimum bull:cow ratio of 35:100 and to maximize opportunity to hunt caribou (Woolington 2007). However, at the Feb. 27–Mar. 9, 2009 Southcentral/Southeast meeting in Anchorage, the Alaska Board of Game reduced the population objective to 30,000–80,000 caribou, citing that these numbers are more realistic for this herd (ADF&G 2009). The Alaska Board of Game also reduced harvest objectives from 6,000–15,000 to 2,400–8,000 during this meeting (ADF&G 2009). The latest photocensus provided a minimum estimate of 30,000 caribou, near the minimum population objective (Table 1) (Woolington 2009). Since 2001, bull:cow ratios have been estimated at less than 35 bulls:100 cows which is below the management objective for the herd (**Table 1**).

The MCH increased at an average annual rate of 17% between 1981 and 1996 and approximately 28% from 1992–1994. Overall herd size peaked in 1996, at approximately 200,000 animals with a peak bull:cow ratio of 42:100 (Woolington 2007). The dramatic population growth is attributed to mild winters, movements onto new unexploited range, low predation, and an estimated annual harvest of less than 5% of the population since the late 1970s (Woolington 2007). Since 1996, the population, bull:cow ratio,

**Table 1.** Mulchatna caribou herd composition counts and population estimates, 1991-2009 (Woolington 2007, 2009).

Regulatory Year	Bulls:100 Cows	Calves:100 cows	Composition Sample Size	Estimate of Herd Size
1991/92	—	—	—	90,000 <sup>a</sup>
1992/93	—	—	—	115,000 <sup>a</sup>
1993/94	42.1	44.1	5,907	150,000 <sup>a</sup>
1994/95	—	—	---	180,000 <sup>a</sup>
1995/96	—	—	---	190,000 <sup>a</sup>
1996/97	42.4	34.4	1,727	200,000 <sup>a</sup>
1997/98	—	—	—	— <sup>b</sup>
1998/99	40.6	33.6	3,086	— <sup>b</sup>
1999/00	30.3	14.1	4,731	175,000 <sup>c</sup>
2000/01 <sup>e</sup>	37.6	24.3	3,894	— <sup>b</sup>
2001/02	25.2	19.9	5,728	— <sup>b</sup>
2002/03	25.7	28.1	5,734	147,000 <sup>d</sup>
2003/04 <sup>f</sup>	17.4	25.6	7,821	— <sup>b</sup>
2004/05 <sup>g</sup>	21	20	4,608	85,000 <sup>h</sup>
2005/06 <sup>i</sup>	13.9	18.1	5,211	— <sup>b</sup>
2006/07 <sup>j</sup>	14.9	25.5	2,971	45,000 <sup>k</sup>
2007/08 <sup>l</sup>	23	15.8	3,943	— <sup>b</sup>
2008/09 <sup>m</sup>	19.3	23.4	3,728	30,000 <sup>n</sup>

<sup>a</sup> Estimate derived from photo-counts, corrected estimates, subjective estimate of the number of caribou in areas not surveyed, and interpolation between years when aerial photo surveys not conducted.

<sup>b</sup> No current population estimate based on surveys.

<sup>c</sup> Estimate based on photocensus conducted July 8, 1999.

<sup>d</sup> Estimate based on photocensus conducted June 30, 2002.

<sup>e</sup> NOTE: Fall 2000 bull:cow ratio and bull percentages corrected from previous table.

<sup>f</sup> Based on pooling data from surveys conducted 10/11/2003 and 10/14/2003.

<sup>g</sup> Based on pooling data from surveys conducted 10/12/2004 and 10/30/2004.

<sup>h</sup> Estimate based on photocensus conducted July 7, 2004.

<sup>i</sup> Based on pooling data from surveys conducted 10/10/2005 and 10/14/2005.

<sup>j</sup> Based on pooling data from surveys conducted 10/13-14/2006 and 10/22/2006.

<sup>k</sup> Based on photocensus conducted July 11, 2006

<sup>l</sup> Based on pooling data from surveys conducted 10/7-8/2007 and 10/11/2007.

<sup>m</sup> Based on pooling data from surveys conducted 10/7 and 10/8/2008.

<sup>n</sup> Minimum estimate (Woolington 2009)

and calf:cow ratio have significantly declined (Table 1). Possible signs of stress in the MCH include an outbreak of hoof rot in 1998 and low calf:cow ratios in fall 1999 (Woolington 2001).

The MCH ranges across approximately 60,000 square miles, primarily within Units 9B, 9C, 17, 18, and 19 (**Map 1**). Wintering areas during the 1980s and early 1990s were along the north and west side of Iliamna Lake, north of Kvichak River but telemetry data indicated the MCH had been moving to the south and west for wintering (Van Daele and Boudreau 1992 *cited* in Woolington 2007). Starting in the mid-1990s, caribou from the MCH began wintering in Unit 18 south of the Kuskokwim River and southwestern Unit 19B in increasing numbers. During the winter of 2004/05, much of the herd wintered in Unit 18, south of the Kuskokwim River, and another large part of the herd wintered in the middle Mulchatna drainage. During 2005/06, large numbers wintered near the lower Kvichak River.

### Harvest History

Harvest on the MCH continues to decline (Woolington 2007). Total reported MCH harvest was 2,171 in 2005, but had declined to 516 by 2008 (ADF&G 2009). The harvest of males was as high as 86% in 1991/92, but decreased to 48% of the reported harvest in 2005/06 (Woolington 2007).

Most of the harvest occurs in August and September (66% in 2004/05 and 47% in 2005/06) (Woolington 2007). Additionally, March also accounts for a relatively high amount of the harvest: 10% in 2004/05 increasing to 23% in 2005/06. Data indicates an increase in the proportion of caribou taken during late winter when compared to the harvest chronology for previous years (Woolington 2007).

Reported harvest during the other nine months has always been relatively low. Between 1991–2006, harvest in July accounted for  $\leq 0.2\%$  of the total annual harvest; October, November, December, January, and February accounted for  $\leq 6\%$ ; and April accounted for  $\leq 9\%$  (Woolington 2007). It should be noted, however, that these data only account for the reported harvest and some harvest may be occurring that is unreported.

In Unit 18, both resident and nonresident harvest has generally declined since 2003, when the reported harvest for the unit was at the highest (**Table 2**).

**Table 2.** Unit 18 reported caribou harvest by residency, 2000–2008 (ADF&G 2009).

Year	Resident	Nonresident	Other	Total
2000	136	1	1	138
2001	375	5	11	391
2002	200	54	4	258
2003	559	119	29	707
2004	364	96	14	474
2005	447	80	5	532
2006	272	47	5	324
2007	352	19	3	374
2008	196	4	21	221

## Effects of the Proposal

If this proposal is adopted, harvest limits would be reduced to two caribou for Unit 18 from the current harvest limit of three, which may help reduce harvest and stabilize the population.

This proposal will only affect Federally qualified subsistence users through a reduced harvest limit. Non-Federally qualified users will not be affected as harvest limits will remain the same under State regulations.

## OSM PRELIMINARY CONCLUSION

**Support** Proposal WP10-60 **with modification**, to include a 1-bull restriction and extend the 1 caribou restriction from Aug. 1–Nov. 30 to Aug. 1–Jan. 31.

The modified regulation should read:

### Unit 18–Caribou

*Unit 18—3 2 caribou; however, no more than 1 bull may be taken, and no more than 1 caribou may be taken from Aug. 1–Nov. 30–Jan. 31* *Aug. 1–Mar. 15*

## Justification

Based on the declining MCH population, management concerns necessitate a reduction in harvest in order to help elevate conservation concerns for this resource. Adopting the proposal with modification may reduce overall harvest and help the population stabilize. The modification is supported by the Yukon Delta Wildlife Refuge after receiving the 2008 survey data and the OSM support for WP10-60 with modification is the same for WP10-51 and -53 with modification for the harvest limit and season dates.

Restricting harvest to one bull would help to increase the bull:cow ratio. Since 2001, the bull:cow ratios have been below ADF&G's management objective of 35 bulls:100 cows. Reducing the bull harvest should help increase the number of bulls in the herd and ensure that pregnancy rates and calf production is adequate to help increase the population.

Restricting harvest so that no more than one caribou may be taken from Aug. 1–Jan. 31 instead of Aug. 1–Nov. 30 will further reduce harvest, although slightly, and will align the Federal regulations with State regulations. The opportunity to harvest a second caribou would be reduced by approximately two months for hunters that want to harvest more than one caribou in early winter. Harvest would decrease for the hunters that opportunistically harvest more than one caribou in early winter, but do not hunt in late winter. However, opportunity would still exist for subsistence hunters that wish to harvest two caribou after Jan. 31.

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Comments WP10-60  
January 29, 2010; Page 1 of 1

**Alaska Department of Fish and Game**  
***Comments to the Regional Advisory Council***

**Wildlife Proposal WP10-60:** This proposal changes the Unit 18 federal subsistence caribou bag limit to the following: 2 caribou, however, no more than 1 caribou may be taken from August 1 through November 30.

**Introduction:** Recent declines in the Mulchatna herd have resulted in reduced state bag limits through action by the Alaska Board of Game. The state bag limit is: 2 caribou; however, no more than 1 bull may be taken, and no more than 1 caribou may be taken August 1 through January 31. This proposal provides a different federal subsistence bag limit compared to the current state bag limit.

**Impact on Subsistence Users:** If adopted, federal subsistence users harvest limit would be reduced by one caribou.

**Opportunity Provided by State:** In Unit 18, the state hunting season is August 1 through March 15 for residents only with a bag limit of two caribou; however, no more than 1 bull may be taken, and no more than 1 caribou may be taken August 1 through Jan 31. Unit 18 contributes a small portion of the total Mulchatna Caribou Herd annual harvest.

**Conservation Issues:** Reduced harvest in the Mulchatna Caribou Herd is needed to promote herd growth. Limiting take of bulls is needed for herd growth. Limiting take to 1 caribou prior to January 31 is needed as a conservation measure to limit harvest on specific segments of the herd during fall migration period. This proposal does not limit the federal subsistence take of bull caribou. Low bull:cow ratios indicate reduction of bull harvest is needed in future management of the herd. **The department prefers proposal WP10-53 to align caribou bag limits across the range of the Mulchatna Caribou Herd.**

**Enforcement Issues:** Uniform federal subsistence and state bag limits would decrease the potential for enforcement problems across the mixed land ownership patterns in the area. In Unit 18, the proposed federal subsistence bag limit would be different than the state bag limit, creating confusion among hunters.

**Recommendation:** Support with modification to include a 1 bull restriction and extend the 1 caribou restriction dates to August 1 through January 31 or, preferably, adopt WP10-53.

<b>WP10-61 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-61 requests that a moose season be established for that portion of Unit 18 within the Kanektok River drainage and south to and including the Arolik River drainage. The season dates requested are September 1 to 30 with a one antlered bull harvest limit by State registration permit. The proponent also requests that the Board delegate the authority for any needed closures in the affected area to the Togiak National Wildlife Refuge manager after consultation with ADF&G and the Chair of the Yukon-Kuskokwim Subsistence Regional Advisory Council. <i>Submitted by the Native Village of Kwinhagak IRA Council</i>
<b>Proposed Regulation</b>	<p><b>Unit 18 — Moose</b></p> <p><i>No Federal open season</i></p> <p><b>Sept. 1 – Sept. 30</b></p> <p><i>Unit 18 —south of and including the Kanektok River drainages to the Goodnews River drainage. Federal public lands are closed to the taking of moose by all users. Kanektok River drainage, and south to the Arolik River drainage—1 antlered bull by State registration permit. Any needed closures will be announced by the Togiak National Wildlife Refuge Manager after consultation with ADF&amp;G and the Chair of the Yukon-Kuskokwim Subsistence Regional Advisory Council.</i></p>
<b>OSM Preliminary Conclusion</b>	<b>Oppose</b>
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-61

### ISSUES

Proposal WP10-61, submitted by the Native Village of Kwinhagak<sup>1</sup> IRA Council, requests that a moose season be established for that portion of Unit 18 within the Kanektok River drainage and south to and including the Arolik River drainage. The season dates requested are September 1 to 30 with a one antlered bull harvest limit by State registration permit. The proponent also requests that the Board delegate the authority for any needed closures in the affected area to the Togiak National Wildlife Refuge manager after consultation with ADF&G and the Chair of the Yukon-Kuskokwim Subsistence Regional Advisory Council.

### DISCUSSION

The proponent's intent is to establish a moose season on Federal public lands within the affected area. The proponent believes that a season should be established for the affected area because there is already a moose season on state lands and establishing a Federal subsistence moose season that would align with existing State regulations would provide a meaningful opportunity to Federal users consistent with ANILCA. The proponent also states that establishing a Federal moose season would allow hunters to access Federal public land instead of being restricted to "small enclaves of State land such as gravel bars". Finally, the proponent states that more moose will be migrating into the area from other nearby populations that have increased due to recent moratoriums on moose hunting and these moose should be available to Federally qualified users.

#### Existing Federal Regulation

##### Unit 18 — Moose

*Unit 18 south of and including the Kanektok River drainages to the Goodnews River drainage. Federal public lands are closed to the taking of moose by all users.* *No Federal open season*

#### Proposed Federal Regulation

##### Unit 18 — Moose

*Unit 18 south of and including the Kanektok River drainages to the Goodnews River drainage. Federal public lands are closed to the taking of moose by all users. **Kanektok River drainage, and south to the Arolik River drainage—1 antlered bull by State registration permit. Any needed closures will be announced by the Togiak National Wildlife Refuge Manager after consultation with ADF&G and the Chair of the Yukon-Kuskokwim Subsistence Regional Advisory Council.*** *No Federal open season*  
**Sept. 1 – Sept. 30**

<sup>1</sup>Kwinhagak is also known as Quinhagak; the latter refers to more traditional orthography, and the former to more contemporary orthography. Orth (1971:788), the standard source for spellings of Alaska Place Names, uses the spelling of Quinhagak, while the Native Village uses Kwinhagak. Since this proposal was submitted by the Native Village Council, Kwinhagak is the spelling used in this analysis.

## Current State Regulation

### Unit 18 — Moose

*Unit 18 — that portion south of the Eek River drainage and north of the Goodnews River drainage – One antlered bull.* Harvest Sept. 1 – Sept. 30

## Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18 and consist of 61% U.S. Fish and Wildlife Service (USFWS) and 2% Bureau of Land Management (BLM) lands. Federal public lands associated this proposal consist of a portion of the Togiak NWR and limited BLM lands (see **Map 1**). Drainages affected by the proposal include the Kanektok and Arolik River drainages.

## Customary and Traditional Use Determinations

Rural residents of Unit 18 and Upper Kalskag have a positive customary and traditional use determination for moose in the Kanektok and Arolik River drainages of Unit 18.

## Regulatory History

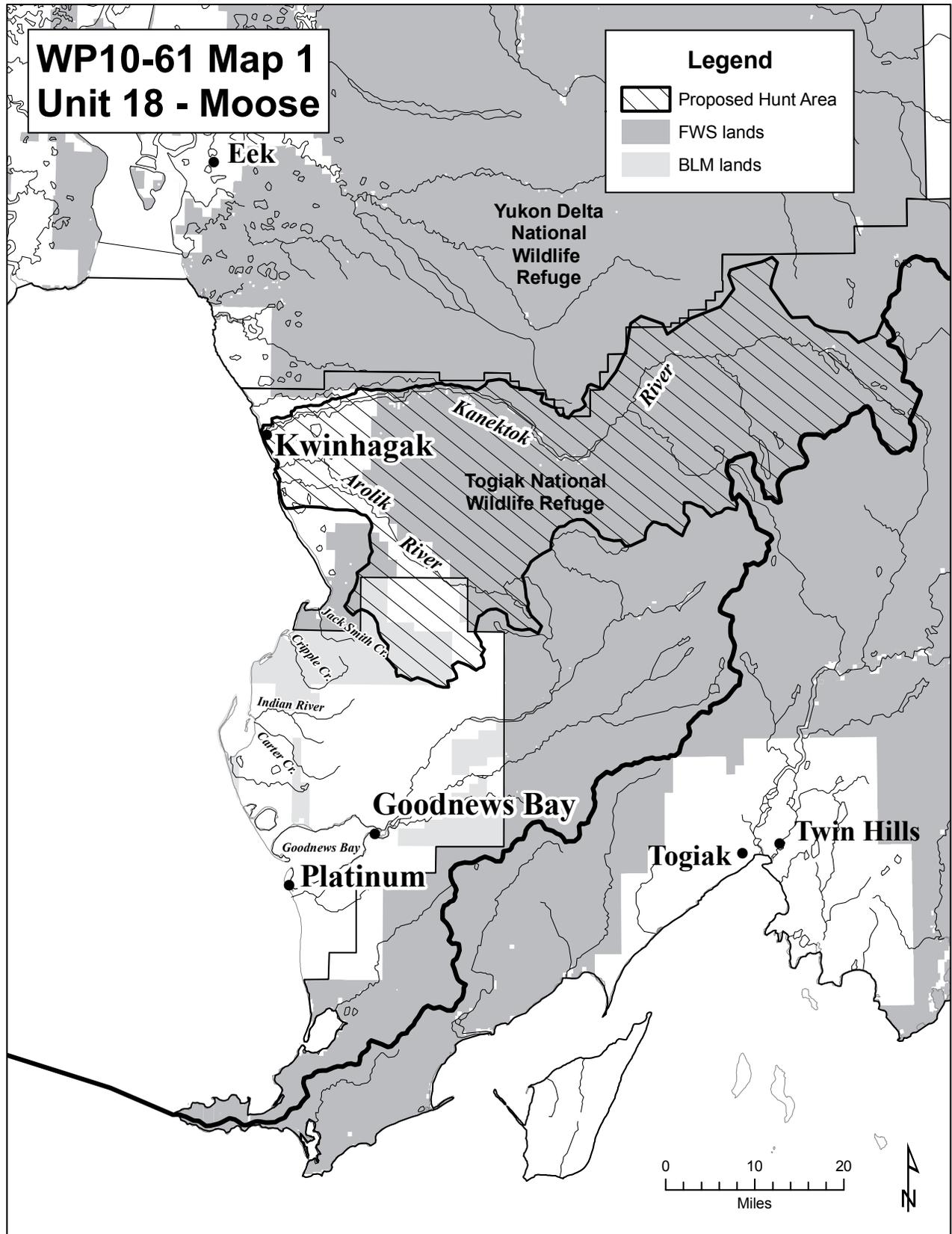
See **Appendix A**

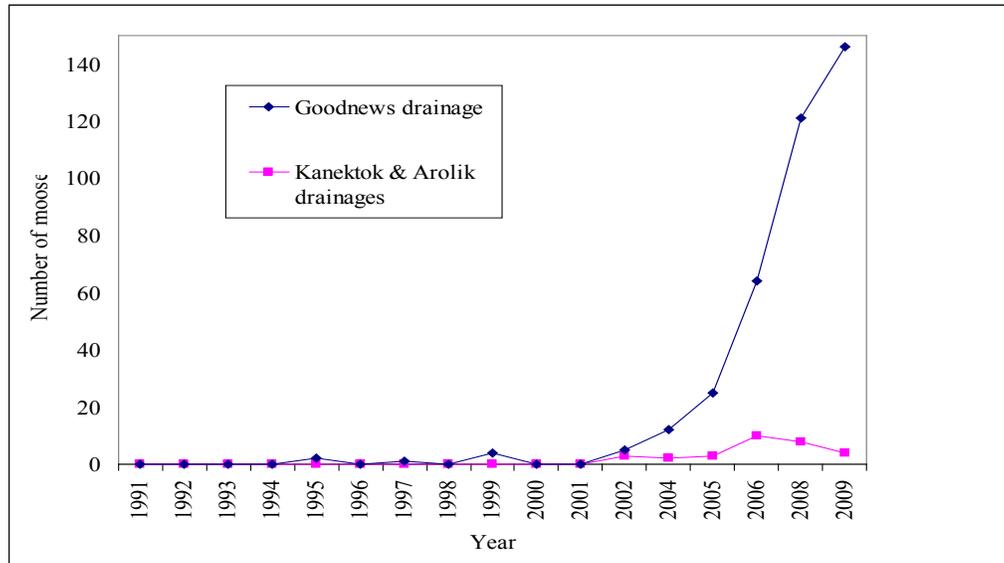
## Biological Background

Moose surveys have been conducted in late winter (February to April) in the Kanektok and Arolik River drainages in 13 of the past 19 years (Aderman 2009, pers. comm.). Annual survey counts have ranged from 0 to 10 moose (**Figure 1**) (Aderman 2009, pers. comm.). During the most recent count (April 2009), a total of 4 moose were observed, although some moose may have been “missed” due to incomplete snow cover (Aderman 2009, pers. comm.). Late winter surveys generally produce numbers lower than those seen in fall surveys due to winter mortality from predation, hunting, starvation, disease, and/or abandonment. There were no surveys conducted during six of the last 19 years due to the lack of adequate snow cover, necessary for conducting aerial moose population surveys (FWS 2008a).

The area encompassed by the Kanektok and Arolik River drainages totals about 1,400 mi<sup>2</sup> (Aderman 2009, pers. comm.). Good quality moose habitat (willows and cottonwood) occurs primarily along the rivers and their tributaries and is estimated to be about 180 mi<sup>2</sup> or 13% of the area (Aderman 2009, pers. comm.). The area could likely support an estimated 180 to 360 moose using an expansion estimate of one to two moose per square mile (Aderman 2009, pers. comm.). Similar habitat in other areas nearby are experiencing similar production levels. The Goodnews River drainage directly to the south, an area with similar habitat, had a moose hunting moratorium in place for four years (2004 to 2007). An agreement maintained a “no open season” under Federal and State regulations for the Goodnews River drainage, until a minimum total of 100 observed moose were observed in the affected area, or until 2009. In 2008 the 100 moose threshold was reached and a moose season was established. **Figure 1** shows late winter survey results for both areas from 1991 to 2009.

Late winter moose surveys should be considered as posthunt or pre-calving counts, and as such, reflect minimum counts of the population near its lowest point during any given year (Aderman 2009, pers. comm.). Thus, the prehunt or post-calving population should be larger than the late winter count, assuming similar calf production and survival rates as those observed in adjacent areas. The prehunt population in the Kanektok and Arolik River drainages has likely been less than 25 moose (Aderman





**Figure 1.** Moose survey counts conducted during late winter (February to April) in the Kanektok, Arolik, and Goodnews River drainages from 1991 to 2009 (Aderman 2009, pers. comm.).

2009, pers. comm.). If population growth is the objective, harvest rates should be sex and age specific and generally be less than 10 to 12 percent of the population (Timmerman and Buss 1998), which would allow no more than 2 animals for harvest in the affected area.

### Harvest History

Quinhagak is located in Uniform Coding Unit (UCU) 1701 which is a subsection within Unit 18 and is situated on the Kanektok River near the Bering Sea coast (**Map 1**). UCU 1701 is the primary area of moose harvest effort for Quinhagak residents (FWS 2008b). ADF&G harvest ticket data indicates there has been an increase in reported effort and harvest by residents of Quinhagak in UCU 1701 between 1983 and 2007. Most years had a reported harvest of zero moose with more recent years of 2005, 2006, and 2007 having reported harvests of 3, 4, and 3 moose respectively (**Table 1**).

Because of the potential for underreporting, conventional ADF&G harvest reporting systems do not always reflect the actual level of harvest, but they may provide an idea about the relative participation and where hunting occurs by community (FWS 2008b).

### Effects of the proposal

Adoption of the proposal would establish a moose season on Federal public lands within the Kanektok and Arolik River drainages using a State registration permit. A State general harvest moose season has been in place in this area since at least 1990. However, Federal public lands have remained closed to moose hunting due to the low moose population and conservation concerns in the affected area. Adoption of the proposal would provide the Togiak NWR manager the authority to close the season if needed after consultation with ADF&G and the Chair of the Yukon-Kuskokwim Subsistence Regional Advisory Council. The moose population in the Kanektok and Arolik River drainages is likely less than 25 animals prior to the hunting season and the reported harvest (under the State season) has been three to six moose annually between 2005 – 2007 (**Table 1**). Even though a few moose may immigrate into the area from

**Table 1.** Reported number of hunters who hunted (harvested) moose in the UCU 1701 portion of Unit 18 from 1983 to 2007 (ADF&G 2009).

<b>Year</b>	<b>Kwinhagak</b>	<b>Other Unit 18 resident</b>	<b>Other Alaska Resident</b>
1983	0 (0)	1 (0)	0 (0)
1986	2 (0)	0 (0)	0 (0)
1992	8 (0)	0 (0)	0 (0)
1993	1 (0)	0 (0)	0 (0)
1994	1 (0)	0 (0)	0 (0)
1995	2 (0)	1 (0)	0 (0)
1996	1 (0)	1 (1)	0 (0)
1998	1 (0)	1 (0)	0 (0)
2000	1 (0)	1 (0)	0 (0)
2002	0 (0)	0 (0)	1 (0)
2003	2 (1)	1 (0)	0 (0)
2004	1 (1)	5 (1)	1 (0)
2005	17 (3)	6 (0)	2 (1)
2006	11 (4)	8 (2)	1 (0)
2007	11 (3)	10 (2)	1 (0)

growing populations in adjacent areas, it appears that a sustainable harvest rate of 10–12% is already being accounted for through the existing State season. Additional harvest that could occur from adoption of this regulation is likely to cause conservation concerns and be detrimental to the longer term harvest opportunities for Federally qualified subsistence users.

The recent moose hunting moratoriums in adjacent areas to the south and north of the Kanektok and Arolik River drainages have led to increased moose populations in these areas. State and Federal managers worked with local residents in those areas prior to establishing these moratoria. They have also met with the residents of Kwinhagak regarding a possible moratorium in the Kanektok and Arolik River drainages and will continue to work with local residents there to help establish a healthy moose population in their area.

## **OSM PRELIMINARY CONCLUSION**

**Oppose** the proposal.

### **Justification**

Adoption of the proposal would likely lead to additional harvest of moose on Federal public lands. It appears that the existing harvest rate of moose in the affected area is already at or possibly exceeding the rate needed to sustain the population. Additional harvest that could occur from adoption of this regulation would likely cause conservation concerns and be detrimental to the longer term harvest opportunities for subsistence users.

State and Federal managers have met with the residents of Kwinhagak regarding a possible moose hunting moratorium in the Kanektok and Arolik River drainages and will continue to work with local residents there to help establish a healthy moose population in their area.

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## APPENDIX A

Regulatory history of moose hunting season and harvest limits for Unit 18 within the Kanektok and Arolik River drainages.

## Federal Regulatory History — Unit 18 Moose

1990/91	Unit 18 remainder — 1 bull	Sept. 1–Sept. 30 Dec. 20–Dec. 30
1991/92– 1992/93	Unit 18 — ...and those portions contained in the...Kanektok and Goodnews drainages.	No open season
	Unit 18 remainder — 1 antlered bull moose. A 10-day hunt falling sometime between Dec. 1 and Feb. 28 shall also be opened by announcement of the Federal Subsistence Board. Federal public lands in Unit 18 are closed to the hunting of moose except by rural Alaska residents of Unit 18 and Upper Kalskag.	Sept. 1–Sept. 30 Winter season to be announced
1993/94	Unit 18 — ...and those portions contained in the... Kanektok and Goodnews drainages.	No open season
	Unit 18 remainder — 1 antlered moose. A 10-day hunt (1 bull, evidence of sex required) will be opened by announcement sometime between Dec. 1 and Feb. 28. Federal public lands in Unit 18 are closed to the hunting of moose except by rural Alaska residents of Unit 18 and Upper Kalskag.	Sept. 1–Sept. 30 Winter season to be announced
1994/95	Unit 18 — Goodnews River and Kanektok River drainages. Unit 18 remainder — 1 antlered moose. A 10-day hunt (1 bull, evidence of sex required) will be opened by announcement sometime between Dec. 1 and Feb. 28. Federal public lands in Unit 18 are closed to the hunting of moose except by rural Alaska residents of Unit 18 and Upper Kalskag.	No open season Aug. 23–Sept. 25 Winter season to be announced
1995/96– 1997/98	Unit 18 — Goodnews River and Kanektok River drainages. Unit 18 remainder — 1 antlered bull. A 10-day hunt (1 bull, evidence of sex required) will be opened by announcement sometime between Dec. 1 and Feb. 28. Federal public lands in Unit 18 are closed to the hunting of moose except by rural Alaska residents of Unit 18 and Upper Kalskag during Federal open seasons.	No open season Sept. 1–Sept. 30 Winter season to be announced
1998/99– 2006/07	Unit 18 — South of and including the Kanektok River drainages. Note: Regulations supporting a three-year moratorium on moose hunting in the Goodnews River drainage were established by the Alaska Board of Game for 2006/07–2008/09 and are included in Federal Subsistence Management Regulations for Harvest of Wildlife 2006/07–2008/09.	No open season
2007/08	Unit 18 — South of and including the Kanektok River drainages.	No open season
2008/09	Unit 18 — South of and including the Kanektok River drainages to the Goodnews River drainage. Federal public lands are closed to the taking of moose by all users.	No open Season

**State Regulatory History — Unit 18 Moose**

		Resident Season
1990/91– 1992/93	Remainder of Unit 18 — One bull.	Sept. 1–Sept. 30
	Evidence of sex is required ..... Harvest	Dec. 20–Dec. 30
1993/94– 1994/95	Remainder of Unit 18 — One bull. Evidence of sex is required ..... Harvest	Sept. 1–Sept. 30
	A ten-day winter season will be announced by Emergency Order during the period Dec. 20–Jan. 20 — One bull, evidence of sex is required..... Harvest	Winter season to be announced
1995/96– 2003/04	Remainder of Unit 18 — One bull. Evidence of sex is required ..... Harvest	Sept. 1–Sept. 30
	A ten-day winter season will be announced — One bull, evidence of sex is require..... Harvest	Winter season to be announced
2004/05	Remainder of Unit 18 — One bull. Evidence of sex is required ..... Harvest	Sept. 1–Sept. 30
	A ten-day winter season will be announced Dec. 1–Feb. 28 — One bull, evidence of sex is required..... Harvest	Winter season to be announced
2005/06	Unit 18 — that portion south of the Eek River drainage and north of the Goodnews River drainage — One bull, evidence of sex is required..... Harvest	Sept. 1–Sept. 30
	Unit 18 — that portion south of and including the Goodnews River drainage.	No open season
2006/07– 2007/08	Unit 18 — that portion south of the Eek River drainage and north of the Goodnews River drainage — One antlered bull, evidence of sex is required ..... Harvest	Sept. 1–Sept. 30
	Unit 18 — ...and that portion south of and including the Goodnews River drainage. Note: A three-year moratorium on moose hunting in the Goodnews River drainage was established by the Alaska Board of Game for 2006/07–2008/09.	No open season
2008/2009	Unit 18 — that portion south of the Eek River drainage and north of the Goodnews River drainage — One antlered bull, evidence of sex is required. .... Harvest	Sept. 1–Sept. 30
	Unit 18 — ...and that portion south of and including the Goodnews River drainage. One antlered bull by State Registration permit — RM 620. Permit available in person in Goodnews Bay Aug. 1–20. Season will be closed by emergency order when 10 bulls are taken.	Aug. 25–Sept. 20

<b>WP10-51/53 Executive Summary</b>	
<b>General Description</b>	<p>Proposals WP10-51 and WP10-53 were submitted by the Bristol Bay Subsistence Regional Advisory Council. Proposal WP10-51 requests that the caribou season in Units 9A, 9B, 17B, a portion of 17C, 18, 19A, and 19B be established as Aug. 1–Mar. 31.</p> <p>Proposal WP10-53, requests that the harvest limit for caribou be consistent at two caribou in Units 9A, 9B, a portion of 9C, 17A, 17B, 17C, 18, 19A, and 19B. It also requests a restriction in harvest so that no more than one bull may be taken, and no more than one caribou can be taken Aug. 1-Jan. 31 in Units 9A, 9B, a portion of 9C, a portion of 17A, 17B, a portion of 17C, 18, 19A, and 19B (excluding Lime Village).</p> <p>Note: A similar proposal (WP10-60) requesting a reduction of the caribou harvest limit to two in Unit 18 is being analyzed separately.</p>
<b>Proposed Regulation</b>	<i>See the analysis for regulation language.</i>
<b>OSM Preliminary Conclusion</b>	<p><b>WP10-51–Support with modification</b>, to make the season ending date Mar. 15 for all units.</p> <p><b>WP10-53–Support</b></p>
<b>Bristol Bay Regional Council Recommendation</b>	
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Western Interior Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Support with modification</b> to amend the closing date to align with State hunting season dates, closing the season on March 15.
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-51 and WP10-53

### ISSUES

Proposals WP10-51 and WP10-53 were submitted by the Bristol Bay Subsistence Regional Advisory Council. Proposal WP10-51 requests that the caribou season in Units 9A, 9B, 17B, a portion of 17C, 18, 19A, and 19B be established as Aug. 1–Mar. 31.

Proposal WP10-53, requests that the harvest limit for caribou be consistent at two caribou in Units 9A, 9B, a portion of 9C, 17A, 17B, 17C, 18, 19A, and 19B. It also requests a restriction in harvest so that no more than one bull may be taken, and no more than one caribou can be taken Aug. 1–Jan. 31 in Units 9A, 9B, a portion of 9C, a portion of 17A, 17B, a portion of 17C, 18, 19A, and 19B (excluding Lime Village).

Note: A similar proposal (WP10-60) requesting a reduction of the caribou harvest limit to two in Unit 18 is being analyzed separately.

### DISCUSSION

The proponent states that the change in the season dates (WP10-53) will provide consistency for managing the Mulchatna Caribou Herd (MCH) on Federal public lands. In changing the harvest limit (WP10-53), the proponent states the changes would also provide consistency for Federal management of the MCH and align the Federal regulations with the State regulations in regards to harvest limits.

#### Existing Federal Regulations

##### **Units 9A, 9B, and 9C—Caribou**

<i>Unit 9A—4 caribou; however, no more than 2 caribou may be taken Aug. 10–Sept. 30 and no more than 1 caribou may be taken Oct. 1–Nov. 30</i>	<i>Aug. 10–Mar. 31</i>
<i>Unit 9B—3 caribou; however, no more than 1 caribou may be taken from July 1–Nov. 30</i>	<i>July 1–Apr. 15</i>
<i>Unit 9C, that portion within the Alagnak River drainage—1 caribou</i>	<i>Aug. 1–Mar. 31</i>
<i>Unit 9C remainder—Federal public lands are closed to the taking of caribou.</i>	<i>No Federal open season</i>
<i>Federal registration permits may be issued in conjunction with the State Tier II hunt. Both Federal and State agencies will decide how many total permits to issue to make sure that the actual harvest will not significantly exceed the harvestable surplus.</i>	

##### **Units 17—Caribou**

<i>Unit 17A, all drainages west of Right Hand Point—3 caribou; however, no more than 1 caribou may be taken from Aug. 1–Nov. 30</i>	<i>Aug. 1–Mar. 31</i>
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*The season may be closed and harvest limit reduced for the drainages between the Togiak River and Right Hand Point by announcement of the Togiak National Wildlife Refuge*

*Units 17A and 17C, that portion of 17A and 17C consisting of the Nushagak Peninsula south of the Igushik River, Tuklung River and Tuklung Hills, west to Tvativak Bay—Up to 2 caribou by Federal registration permit.*

*Aug. 1–Sept. 30  
Dec. 1–Mar. 31*

*The season may be closed by announcement of the Togiak National Wildlife Refuge Manager.*

*Federal public lands are closed to the taking of caribou except by the residents of Togiak, Twin Hills, Manokotak, Aleknagik, Dillingham, Clark’s Point, and Ekuk hunting under these regulations.*

*The harvest objective, harvest limit, and the number of permits available will be announced by the Togiak National Wildlife Refuge Manager after consultation with the ADF&G and the Nushagak Peninsula Caribou Planning Committee. Successful hunters must report their harvest to the Togiak National Wildlife Refuge within 24 hours after returning from the field.*

*Unit 17A remainder and 17C remainder—Selected drainages, a harvest limit of up to 5 caribou will be determined at the time the season is announced.*

*Season, harvest limit, and hunt area to be announced by the Togiak National Wildlife Refuge Manager between Aug. 1–Mar. 31*

*Units 17B and that portion of 17C east of the Wood River and Wood River Lakes—3 caribou; however no more than 1 caribou may be taken from Aug. 1–Nov. 30.*

*Aug. 1–Apr. 15*

**Unit 18—Caribou**

*Unit 18—3 caribou; however, no more than 1 caribou may be taken from Aug. 1–Nov. 30*

*Aug. 1–Mar. 15*

**Unit 19—Caribou**

*Unit 19A north of the Kuskokwim River—1 caribou*

*Aug. 10–Sept. 30  
Nov. 1–Feb. 28*

*Unit 19A south of the Kuskokwim River and 19 B (excluding Lime Village)—3 caribou; however, no more than 1 caribou may be taken from Aug. 1–Nov. 30*

*Aug. 1–Apr. 15*

<i>Unit 19C—1 caribou</i>	<i>Aug. 10–Oct. 10</i>
<i>Unit 19D south and east of the Kuskokwim River and North Fork of the Kuskokwim River—1 caribou</i>	<i>Aug. 10–Sept. 30 Nov. 1–Jan. 31</i>
<i>Unit 19D remainder—1 caribou</i>	<i>Aug. 10–Sept. 30</i>
<i>Unit 19—Rural residents of Lime Village only—no individual harvest limit, but a village harvest quota of 200 caribou; cow and calves may not be taken Apr. 1–Aug. 9. Reporting will be by a community reporting system.</i>	<i>July 1–June 30</i>

**Proposed Federal Regulations**

**Units 9A, 9B, and 9C—Caribou**

<i>Unit 9A—<del>4</del> 2 caribou; however, no more than 2 caribou <b>1 bull</b> may be taken, <del>Aug. 10–Sept. 30</del> and no more than 1 caribou may be taken <del>Oct. 1–Nov. 30</del> <b>Aug. 1–Jan. 31</b></i>	<del><i>Aug. 10–Mar. 31</i></del> <i>Aug. 1–Mar. 31</i>
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<i>Unit 9B—<del>3</del> 2 caribou; however, no more than 1 caribou <b>bull</b> may be taken, <b>and no more than 1 caribou may be taken Aug. 1–Jan. 31 from July 1–Nov. 30</b></i>	<del><i>July 1–Apr. 15</i></del> <i>Aug. 1–Mar. 31</i>
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<i>Unit 9C, that portion within the Alagnak River drainage—<del>2</del> 2 caribou; <b>however no more than 1 bull may be taken, and no more than 1 caribou may be taken Aug. 1–Jan. 31</b></i>	<i>Aug. 1–Mar. 31</i>
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<i>Unit 9C remainder—Federal public lands are closed to the taking of caribou.</i>	<i>No Federal open season</i>
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*Federal registration permits may be issued in conjunction with the State Tier II hunt. Both Federal and State agencies will decide how many total permits to issue to make sure that the actual harvest will not significantly exceed the harvestable surplus.*

**Units 17—Caribou**

<i>Unit 17A, all drainages west of Right Hand Point—<del>3</del> 2 caribou; however, no more than 1 caribou <b>bull</b> may be taken, <b>and no more than 1 caribou may be taken from Aug. 1–Nov. 30 Jan. 31</b></i>	<i>Aug. 1–Mar. 31</i> <i>The season may be closed and harvest limit reduced for the drainages between the Togiak River and Right Hand Point by announcement of the Togiak National Wildlife Refuge</i>
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*Units 17A and 17C, that portion of 17A and 17C consisting of the Nushagak Peninsula south of the Igushik River, Tuklung River and Tuklung Hills, west to Tvativak Bay—Up to 2 caribou by Federal registration permit.*

*Aug. 1–Sept. 30  
Dec. 1–Mar. 31*

*The season may be closed by announcement of the Togiak National Wildlife Refuge Manager.*

*Federal public lands are closed to the taking of caribou except by the residents of Togiak, Twin Hills, Manokotak, Aleknagik, Dillingham, Clark’s Point, and Ekuk hunting under these regulations.*

*The harvest objective, harvest limit, and the number of permits available will be announced by the Togiak National Wildlife Refuge Manager after consultation with the ADF&G and the Nushagak Peninsula Caribou Planning Committee. Successful hunters must report their harvest to the Togiak National Wildlife Refuge within 24 hours after returning from the field.*

*Units 17A remainder and 17C remainder—Selected drainages, a harvest limit of up to 5 2 caribou will be determined at the time the season is announced.*

*Season, harvest limit, and hunt area to be announced by the Togiak National Wildlife Refuge Manager between Aug. 1–Mar. 31*

*Units 17B and that portion of 17C east of the Wood River and Wood River Lakes—3 2 caribou; however no more than 1 bull may be taken, and no more than 1 caribou may be taken from Aug. 1–Nov. 30 Jan. 31*

*Aug. 1–Apr. 15  
Aug. 1–Mar. 31*

**Unit 18—Caribou**

*Unit 18—3 2 caribou; however, no more than 1 caribou bull may be taken, and no more than 1 caribou may be taken from Aug. 1–Nov. 30 Jan. 31*

*Aug. 1–Mar. 15  
Aug. 1–Mar. 31*

**Unit 19—Caribou**

*Unit 19A north of the Kuskokwim River—1 2 caribou; however, no more than 1 bull may be taken, and no more than 1 caribou may be taken Aug. 1–Jan. 31*

*Aug. 10–Sept. 30  
Nov. 1–Feb. 28  
Aug. 1–Mar. 31*

*Units 19A south of the Kuskokwim River and 19B (excluding Lime Village)—3 2 caribou; however, no more than 1 bull may be taken, and no more than 1 caribou may be taken from Aug. 1–Nov. 30 Jan. 31*

*Aug. 1–Apr. 15  
Aug. 1–Mar. 31*

*Unit 19C—1 caribou*

*Aug. 10–Oct. 10*

*Unit 19D south and east of the Kuskokwim River and North Fork of the Kuskokwim River—1 caribou*

*Aug. 10–Sept. 30  
Nov. 1–Jan. 31*

*Unit 19D remainder—1 caribou*

*Aug. 10–Sept. 30*

*Unit 19—Rural residents of Lime Village only—no individual harvest limit, but a village harvest quota of 200 caribou; cow and calves may not be taken Apr. 1–Aug. 9. Reporting will be by a community reporting system.* *July 1–June 30*

**Existing State Regulations**

**Units 9A, 9B, and 9C—Caribou**

*Residents: 2 caribou—no more than one bull may be taken; no more than one caribou may be taken from Aug. 1–Jan. 31* *Aug. 1–Mar 15*  
*Nonresidents:* *No open season*

**Unit 9C that portion north of the Naknek River and south of the Alagnak River drainage—Caribou**

*Resident: 1 caribou by permit available in person in King Salmon if a winter season is announced* *May be announced*

**Unit 17A all drainages east of Right Hand Point—Caribou**

*Resident: 1 caribou* *May be announced*

**Unit 17A remainder**

*Resident: 2 caribou—no more than one bull may be taken, and no more than one caribou may be taken from Aug. 1–Jan. 31* *Aug. 1–Mar. 15*

**Unit 17B Nonresident Closed Area**

*Resident: 2 caribou—no more than one bull may be taken, and no more than one caribou may be taken from Aug. 1–Jan. 31* *Aug. 1–Mar. 15*

**Unit 17B remainder and Unit 17C east of Wood River and Wood River Lakes**

*Resident: 2 caribou—no more than one bull may be taken, and no more than one caribou may be taken from Aug. 1–Jan. 31* *Aug. 1–Mar. 15*

*Nonresident:* *No open season*

**Unit 17C remainder**

*Resident: 1 caribou* *May be announced*

**Unit 18**

*Resident: 2 caribou—no more than one bull may be taken, and no more than one caribou may be taken from Aug. 1–Jan. 31* *Aug. 1–Mar. 15*

*Nonresident:* *No open season*

**Unit 19A and 19B**

*Resident: 2 caribou—no more than one bull may be taken, and no more than one caribou may be taken from Aug. 1–Jan. 31* *Aug. 1–Mar. 15*

*Nonresident:* *No open season*

**Unit 19C**

*Resident: 1 bull* *Aug. 10–Sept. 20*

*Nonresident: 1 bull* *Aug. 10–Sept. 20*

**Unit 19D except the drainages of the Nixon Fork River**

*Resident: 1 bull* *Aug. 10–Sept. 20*  
*Or 1 caribou* *Nov. 1–Jan. 31*

*Nonresident: 1 bull* *Aug. 10–Sept. 20*

**Unit 19D remainder**

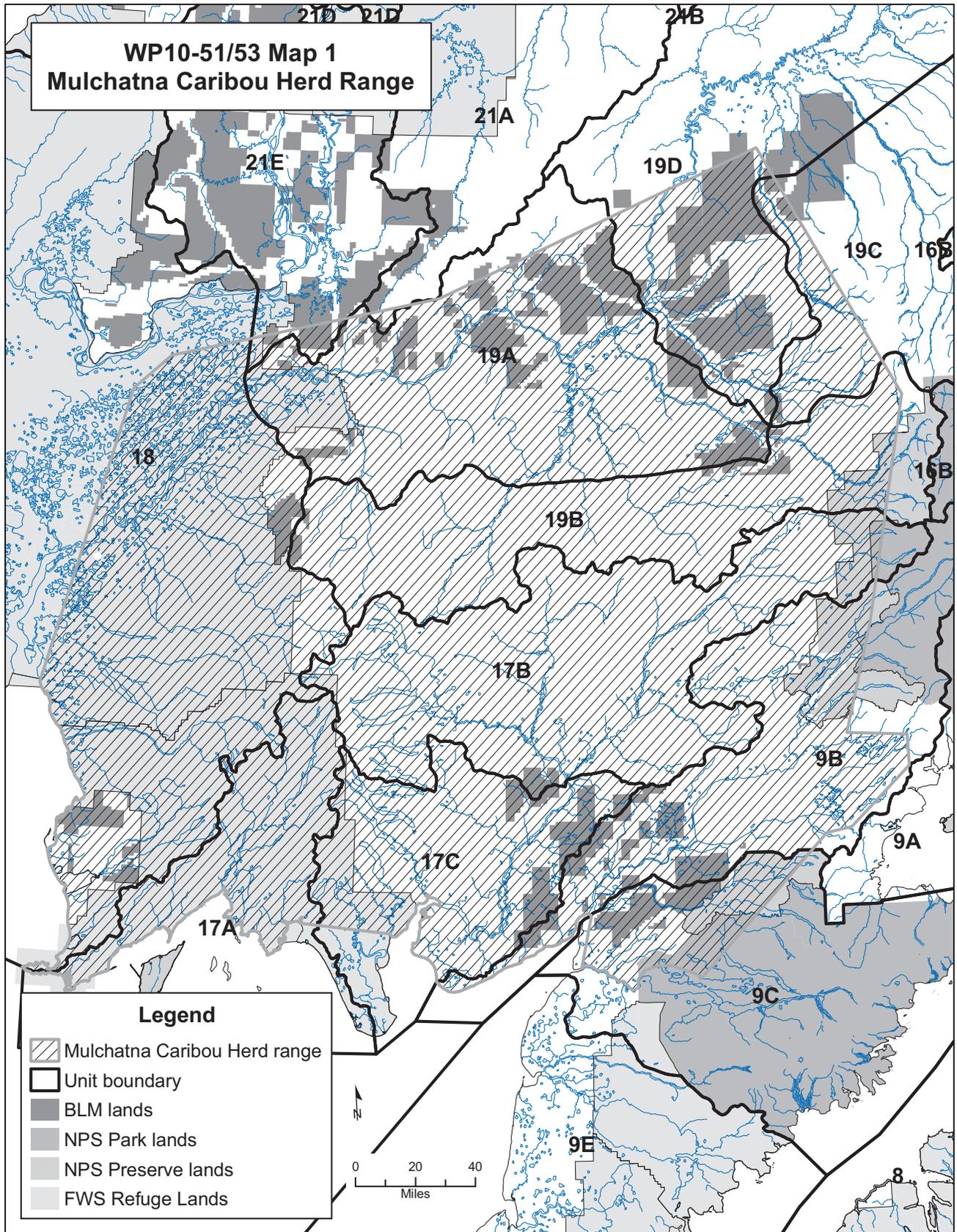
*Resident: 1 bull* *Aug. 10–Sept. 20*

*Nonresident: 1 bull* *Aug. 10–Sept. 20*

**Extent of Federal Public Lands**

The following describes the extent of Federal public lands (**Map 1**):

- Federal public lands comprise approximately 32% of Unit 9A and consists of 32% National Park Service (NPS) and <1% Fish and Wildlife Service (FWS) lands. Unit 9B has 27% Federal public lands that comprise 4% Bureau of Land Management (BLM) and 23% NPS. Unit 9C has 84% Federal public lands that comprise 3% BLM, 3% FWS, and 78% NPS. However, subsistence hunting is not authorized in Katmai National Park, which makes up 70% of Unit 9C.
- Federal public lands comprise approximately 84% of Unit 17A, all of which is FWS. Unit 17B has 7% Federal public lands that comprise 1% BLM, 1% FWS, and 6% NPS. Unit 17C has 24% Federal public lands that comprise 10% BLM and 15% FWS.
- Federal public lands comprise approximately 64% of Unit 18 and consists of 2% BLM and 62% FWS.
- Federal public lands comprise approximately 20% of Unit 19A and consists of 17% BLM and 3% FWS. Unit 19B has 13% Federal public lands that comprise 2% BLM, <1% FWS, and 11% FWS.



### Customary and Traditional Use Determinations

Units	Customary and Traditional Use Determination for Caribou
Units 9A and 9B	Rural residents of Units 9B, 9C and 17
Unit 9C	Rural residents of Units 9B, 9C and 17, and Egegik
Unit 17	Rural residents of Units 9B, 17, Lime Village, and Stony River
Unit 17A, that portion west of the Izavieknik River, Upper Togiak Lake, Togiak Lake, and the main course of the Togiak River	Rural residents of Goodnews Bay, Platinum, Quinhagak, Eek, Tuntutuliak, and Napakiak
Unit 17A, that portion north of Togiak Lake that includes Izavieknik river drainages	Rural residents of Akiak, Akiachak, and Tuluksak
Units 17A and 17B, those portions north and west of a line beginning from the Unit 18 boundary at the northwest end of Nenevok Lake, to the southern point of upper Togiak Lake, and northeast to the northern point of Nuyakuk Lake, northeast to the point where the Unit 17 boundary intersects the Shotgun Hills	Rural residents of Kwethluk
Unit 17B, that portion of Togiak National Wildlife Refuge within Unit 17B	Residents of Bethel, Goodnews Bay, Platinum, Quinhagak, Eek, Akiak, Akiachak, Tuluksak, Tuntutuliak, and Napakiak
Unit 18	Rural residents of Unit 18, St. Michael, Stebbins, Togiak, Twin Hills, Upper Kalskag, and Manokotak
Unit 19A and 19B	Rural residents of Units 19A, 19B, 18 (within the Kuskokwim River drainage upstream from, and including, the Johnson River), St. Marys, Marshall, Pilot Station, and Russian Mission

### Regulatory History

State and Federal regulations for the MCH were liberalized during the dramatic population increase that occurred in the 1990s. These regulations allowed hunters the opportunity to harvest sustainable levels of surplus animals. Numerous modifications were made to the Federal regulations for various units as the MCH population increased and as it expanded into new range. Following the population decline, regulations became more restrictive in 2006 and 2007.

In March 2006, the Alaska Board of Game adopted new state regulations to reduce harvest limits within the range of the MCH from five to two caribou. In March 2007, the Alaska Board of Game further restricted caribou harvest to allow no more than one bull to be taken, and no more than one caribou to

be taken Aug. 1–Jan. 31. In 2007, the Federal Subsistence Board followed suit and adopted proposal WP07-23 with modification to reduce the harvest limits in Unit 9B; portion of Unit 17A; Unit 17B; portion of Unit 17C; Unit 18; portion of Unit 19A; and Unit 19B; from five caribou to three due to a large population decline. In March 2009, the Alaska Board of Game eliminated nonresident harvest on the MCH due to the harvestable surplus being lower than the amount needed for subsistence.

While regulations allowed MCH harvest in many of the units that the MCH inhabit, regulations have also worked to protect other caribou herds that inhabit the same units. The Northern Alaska Peninsula Caribou Herd is found within Unit 9C, the Nushagak Peninsula Herd in 17A and 17C, and the Beaver Mountains Herd and Sunshine Mountains Herd in Unit 19A. Therefore, regulations have portioned these units to accommodate MCH harvest, but restrict harvest on other herds.

The State regulations, however, do not protect the Beaver Mountains Herd and Sunshine Mountains Herd in Unit 19A through portioning the unit as do the current Federal regulations. The habitat in 19A north of the Kuskokwim River has generally been unoccupied by caribou in recent years (Seavoy 2009, pers. comm.).

### **Biological Background**

The Alaska Department of Fish and Game (ADF&G) management objectives for the MCH were to maintain a population of 100,000–150,000 with a minimum bull:cow ratio of 35:100 and to maximize opportunity to hunt caribou (Woolington 2007). However, at the Feb. 27–Mar. 9 2009 Southcentral/Southeast meeting in Anchorage, the Alaska Board of Game reduced the population objective to 30,000–80,000 caribou stating that these numbers are more realistic for this herd (ADF&G 2009). The Alaska Board of Game also reduced harvest objective from 6,000–15,000 to 2,400–8,000 during this meeting (ADF&G 2009).

Results from the July 2006 photocensus conducted in July 2006 provided an estimate of 45,000 caribou (Woolington 2007; **Table 1**). Results from the 2008 photocensus conducted in July 2008 provided a minimum estimate of 30,000 caribou (Woolington 2009). Bull:cow ratios have been estimated at less than 35 bulls:100 cows since 2001 (**Table 1**). These estimates indicate a substantial reduction in herd size and bull:cow ratios and suggests that it is near the minimum population for the ADF&G management objectives.

The MCH increased at an average annual rate of 17% between 1981 and 1996 and near 28% from 1992–1994. Overall herd size peaked at 200,000 with a peak bull:cow ratio of 42:100 in 1996 (Woolington 2007). The dramatic population growth is attributed to mild winters, movements onto new range, low predation, and an estimated annual harvest of less than 5% of the population since the late 1970s (Woolington 2007). Since 1996, the population, bull:cow ratio, and calf:cow ratio have significantly declined (**Table 1**). Possible signs of stress in the MCH include an outbreak of hoof rot in 1998 and low calf:cow ratios in fall 1999 (Woolington 2001).

The MCH ranges across approximately 60,000 square miles and primarily within Units 9B, 9C, 17, 18, and 19 (**Map 1**). Wintering areas during the 1980s and early 1990s was along the north and west side of Iliamna Lake, north of Kvichak River but telemetry data indicated the MCH had been moving to the south and west for wintering (Van Daele and Boudreau 1992 *cited* in Woolington 2007). Starting in the mid-1990s, caribou from the MCH began wintering in Unit 18 south of the Kuskokwim River and southwestern Unit 19B in increasing numbers. During the winter of 2004/05, much of the herd wintered in Unit 18, south of the Kuskokwim River, and another large part of the herd in the middle Mulchatna drainage. During 2005/06, large numbers wintered near the lower Kvichak River.

**Table 1.** Mulchatna caribou herd composition counts and population estimates, 1991–2009 (Woolington 2007, 2009).

Regulatory Year	Bulls:100 Cows	Calves:100 cows	Composition Sample Size	Estimate of Herd Size
1991/92	—	—	—	90,000 <sup>a</sup>
1992/93	—	—	—	115,000 <sup>a</sup>
1993/94	42.1	44.1	5,907	150,000 <sup>a</sup>
1994/95	—	—	—	180,000 <sup>a</sup>
1995/96	—	—	—	190,000 <sup>a</sup>
1996/97	42.4	34.4	1,727	200,000 <sup>a</sup>
1997/98	—	—	—	— <sup>b</sup>
1998/99	40.6	33.6	3,086	— <sup>b</sup>
1999/00	30.3	14.1	4,731	175,000 <sup>c</sup>
2000/01 <sup>e</sup>	37.6	24.3	3,894	— <sup>b</sup>
2001/02	25.2	19.9	5,728	— <sup>b</sup>
2002/03	25.7	28.1	5,734	147,000 <sup>d</sup>
2003/04 <sup>f</sup>	17.4	25.6	7,821	— <sup>b</sup>
2004/05 <sup>g</sup>	21	20	4,608	85,000 <sup>h</sup>
2005/06 <sup>i</sup>	13.9	18.1	5,211	— <sup>b</sup>
2006/07 <sup>j</sup>	14.9	25.5	2,971	45,000 <sup>k</sup>
2007/08 <sup>l</sup>	23	15.8	3,943	— <sup>b</sup>
2008/09 <sup>m</sup>	19.3	23.4	3,728	30,000 <sup>n</sup>

<sup>a</sup> Estimate derived from photo-counts, corrected estimates, subjective estimate of the number of caribou in areas not surveyed, and interpolation between years when aerial photo surveys not conducted.

<sup>b</sup> No current population estimate based on surveys.

<sup>c</sup> Estimate based on photocensus conducted July 8, 1999.

<sup>d</sup> Estimate based on photocensus conducted June 30, 2002.

<sup>e</sup> NOTE: Fall 2000 bull:cow ratio and bull percentages corrected from previous table.

<sup>f</sup> Based on pooling data from surveys conducted 10/11/2003 and 10/14/2003.

<sup>g</sup> Based on pooling data from surveys conducted 10/12/2004 and 10/30/2004.

<sup>h</sup> Estimate based on photocensus conducted July 7, 2004.

<sup>i</sup> Based on pooling data from surveys conducted 10/10/2005 and 10/14/2005.

<sup>j</sup> Based on pooling data from surveys conducted 10/13–14/2006 and 10/22/2006.

<sup>k</sup> Based on photocensus conducted July 11, 2006

<sup>l</sup> Based on pooling data from surveys conducted 10/7–8/2007 and 10/11/2007.

<sup>m</sup> Based on pooling data from surveys conducted 10/7 and 10/8/2008.

<sup>n</sup> Minimum estimate (Woolington 2009)

## Harvest History

Caribou harvest continues to decline (Woolington 2007). Total reported MCH harvest was 2,171 in 2005, but had declined to 516 by 2008 (**Table 2**). Both resident and nonresident harvest has declined. Harvest within each unit has fluctuated and appears to have been highest in Units 9B, 9C, 17B, and 18 since 2005 (**Table 2**). The harvest of males was as high as 86% in 1991/92, but decreased to 48% of the reported harvest in 2005/06 (Woolington 2007).

Most of the harvest occurs in August and September (66% in 2004/05 and 47% in 2005/06) (Woolington 2007). Additionally, March also accounts for a relatively high amount of the harvest: 10% in 2004/05 increasing to 23% in 2005/06. Data indicates an increase in the proportion of caribou taken during late winter when compared to the harvest chronology for previous years (Woolington 2007).

Reported harvest during the other nine months has always been relatively low. Between 1991–2006, harvest in July accounted for  $\leq 0.2\%$  of the total annual harvest; October, November, December, January, and February accounted for  $\leq 6\%$ ; and April accounted for  $\leq 9\%$  (Woolington 2007). It should be noted, however, that these data only account for the reported harvest and some harvest may be occurring that is unreported.

## Effects of the Proposal

### WP10-51

If this proposal is adopted it would lengthen the harvest seasons in Units 9A, 18, and 19A north of Kuskokwim River, while shortening the seasons in Units 9B, 17B, that portion of 17C east of the Wood River and Wood River Lakes, 19A south of the Kuskokwim River, and 19B.

Extending the winter portion of the season, when weather and daylight are more favorable, will likely increase harvest, particularly in units where the season is extended to the end of March. Opening the season earlier will likely have little effect as most harvest occurs after July and the majority of the reported harvest has been in September (Woolington 2007).

This proposal will only affect Federally qualified subsistence users; non-Federally qualified users will not be affected as the season will remain the same under State regulations.

### WP10-53

If this proposal is adopted, harvest limits would be reduced to two caribou for Units 9A, 9B, 17A, 17B, 17C, 18, and 19A south of the Kuskokwim River and 19B, however harvest limits would increase from one to two caribou for Units 9C—that portion in the Alagnak River drainage and 19A—that portion north of the Kuskokwim River. Nonetheless, overall harvest would be expected to decrease because relatively high harvest has occurred within the other units that the MCH inhabits. Reported caribou harvest in Units 9B and 9C have been relatively low in recent years (**Table 2**). Decreasing the harvest limit to a consistent number of animals across the range of the herd should help the population stabilize.

Restricting harvest so that no more than one bull may be taken, and no more than one caribou be taken Aug. 1–Jan. 31 in Units 9A, 9B, a portion of 9C, a portion of 17A, 17B, a portion of 17C, 18, 19A, and 19B (excluding Lime Village) may help reduce harvest overall and reduce harvest on bulls. These restrictions would prohibit the harvest of more than one bull, but would allow the harvest of more than one cow. Reducing bull harvest may help increase the bull:cow ratio. Reducing the harvest limit to one

**Table 2.** Caribou harvest by unit and residency, 2005–2008 (ADF&G 2009).

Year 2008										
	Unit 9A	Unit 9B	Unit 9C	Unit 17A	Unit 17B	Unit 17C	Unit 18	Unit 19A	Unit 19B	Grand total
Resident	0	16	153	16	39	5	196	2	6	-
Nonresident	0	1	0	0	29	1	4	1	16	-
Other	0	0	0	5	2	3	21	0	0	-
Total		17	153	21	70	9	221	3	22	516

Year 2007										
	Unit 9A	Unit 9B	Unit 9C	Unit 17A	Unit 17B	Unit 17C	Unit 18	Unit 19A	Unit 19B	Grand total
Resident	1	13	190	17	62	5	352	14	19	-
Nonresident	0	3	0	0	76	1	19	1	27	-
Other	0	0	0	2	4	0	3	0	0	-
Total	1	16	190	19	142	6	374	15	46	809

Year 2006										
	Unit 9A	Unit 9B	Unit 9C	Unit 17A	Unit 17B	Unit 17C	Unit 18	Unit 19A	Unit 19B	Grand total
Resident	1	158	10	22	96	89	272	13	24	-
Nonresident	0	18	1	0	163	6	47	6	34	-
Other	0	1	0	0	2	1	5	0	0	-
Total	1	177	11	22	261	96	324	19	58	969

Year 2005										
	Unit 9A	Unit 9B	Unit 9C	Unit 17A	Unit 17B	Unit 17C	Unit 18	Unit 19A	Unit 19B	Grand total
Resident	0	287	112	38	378	312	447	35	46	-
Nonresident	0	46	5	3	252	23	80	4	75	-
Other	0	4	0	9	6	4	5	0	0	-
Total	0	337	117	50	636	339	532	39	121	2171

caribou between Aug. 1–Jan. 31 instead of Aug. 1–Nov. 30 will further restrict some caribou harvest and will align with the State regulations.

This proposal will only affect Federally qualified subsistence users through a reduced harvest. Non-Federally qualified users will not be affected as harvest limits will remain the same under State regulations.

**OSM PRELIMINARY CONCLUSIONS**

**WP10-51—Support with modification**, to make the season ending date Mar. 15 for all units.

**WP10-53—Support**

The modified regulations should read:

**Units 9A, 9B, and 9C—Caribou**

*Unit 9A—~~4~~ 2 caribou; however, no more than 2 caribou 1 bull may be taken, ~~Aug. 10–Sept. 30~~ and no more than 1 caribou may be taken ~~Oct. 1–Nov. 30~~ Aug. 1–Jan. 31* ~~Aug. 10–Mar. 31~~  
Aug. 1–Mar. 15

*Unit 9B—3 2 caribou; however, no more than 1 caribou bull may be taken, and no more than 1 caribou may be taken Aug. 1–Jan. 31 from July 1–Nov. 30* ~~July 1–Apr. 15~~  
Aug. 1–Mar. 15

*Unit 9C, that portion within the Alagnak River drainage—~~4~~ 2 caribou; however no more than 1 bull may be taken, and no more than 1 caribou may be taken Aug. 1–Jan. 31* ~~Aug. 1–Mar. 31~~ 15

*Unit 9C remainder—Federal public lands are closed to the taking of caribou.* No Federal open season

*Federal registration permits may be issued in conjunction with the State Tier II hunt. Both Federal and State agencies will decide how many total permits to issue to make sure that the actual harvest will not significantly exceed the harvestable surplus.*

**Units 17—Caribou**

*Unit 17A, all drainages west of Right Hand Point—3 2 caribou; however, no more than 1 caribou bull may be taken, and no more than 1 caribou may be taken from Aug. 1–Nov. 30 Jan. 31* ~~Aug. 1–Mar. 31~~ 15  
  
The season may be closed and harvest limit reduced for the drainages between the Togiak River and Right Hand Point by announcement of the Togiak National Wildlife Refuge

*Units 17A and 17C, that portion of 17A and 17C consisting of the Nushagak Peninsula south of the Igushik River, Tuklung River and Tuklung Hills, west to Tvativak Bay—Up to 2 caribou by Federal registration permit.*

*Aug. 1–Sept. 30  
Dec. 1–Mar. 31*

*The season may be closed by announcement of the Togiak National Wildlife Refuge Manager.*

*Federal public lands are closed to the taking of caribou except by the residents of Togiak, Twin Hills, Manokotak, Aleknagik, Dillingham, Clark’s Point, and Ekuk hunting under these regulations.*

*The harvest objective, harvest limit, and the number of permits available will be announced by the Togiak National Wildlife Refuge Manager after consultation with the ADF&G and the Nushagak Peninsula Caribou Planning Committee. Successful hunters must report their harvest to the Togiak National Wildlife Refuge within 24 hours after returning from the field.*

*Units 17A remainder and 17C remainder—Selected drainages, a harvest limit of up to 5 2 caribou will be determined at the time the season is announced.*

*Season, harvest limit, and hunt area to be announced by the Togiak National Wildlife Refuge Manager between Aug. 1–Mar. 31*

*Units 17B and that portion of 17C east of the Wood River and Wood River Lakes—3 2 caribou; however no more than 1 **bull may be taken, and no more than 1 caribou may be taken from** Aug. 1–Nov. 30 **Jan. 31***

*Aug. 1–Apr. 15  
Aug. 1–Mar. 15*

**Unit 18—Caribou**

*Unit 18—3 2 caribou; however, no more than 1 caribou **bull may be taken, and no more than 1 caribou may be taken from** Aug. 1–Nov. 30 **Jan. 31***

*Aug. 1–Mar. 15*

**Unit 19—Caribou**

*Unit 19A north of the Kuskokwim River—1 2 caribou; **however, no more than 1 bull may be taken, and no more than 1 caribou may be taken Aug. 1–Jan. 31***

*Aug. 10–Sept. 30  
Nov. 1–Feb. 28  
Aug. 1–Mar. 15*

*Units 19A south of the Kuskokwim River and 19B (excluding Lime Village)—3 2 caribou; however, no more than 1 **bull may be taken, and no more than 1 caribou may be taken from** Aug. 1–Nov. 30 **Jan. 31***

*Aug. 1–Apr. 15  
Aug. 1–Mar. 15*

*Unit 19C—1 caribou*

*Aug. 10–Oct. 10*

*Unit 19D south and east of the Kuskokwim River and North Fork of the Kuskokwim River—1 caribou*

*Aug. 10–Sept. 30  
Nov. 1–Jan. 31*

*Unit 19D remainder—1 caribou*

*Aug. 10–Sept. 30*

*Unit 19—Rural residents of Lime Village only—no individual harvest limit, but a village harvest quota of 200 caribou; cow and calves may not be taken Apr. 1–Aug. 9. Reporting will be by a community reporting system.*

*July 1–June 30*

## **Justification**

Based on the declining MCH population, conservation concerns necessitate a reduction in harvest.

### WP10-51

Adopting WP10-51 with modification would reduce season lengths in many units, thus reducing some harvest and providing more consistency within the Federal regulations for MCH harvest. In addition, the Federal season would match the State season.

The only unit that would have the season extended would be in Unit 19A north of Kuskokwim River, where little harvest occurs. Season extensions at the front-end are anticipated to have little or no effect on the overall harvest due to the preference to harvest caribou after July as indicated by the timing of reported harvest.

Season dates for the MCH should be consistent for all units. A season ending date of March 15 is supported over a March 31 date, to reduce harvest. Given that a significant portion of the caribou harvest occurs in March, a season extension in Unit 18 may increase harvest even if harvest limits were to be reduced. In Unit 18, where the majority of harvest has been occurring in recent years, a season ending date of March 31 would extend the season by 16 days and would likely further increase caribou harvest overall. Other benefits of a March 15 deadline over March 31, is less harassment from hunters with snowmachines on caribou during a time when caribou can be nutritionally stressed; and less potential damage to tundra from snowmachines during a time when snow is often scarce.

### WP10-53

Adopting WP10-53 would help reduce overall harvest and provide more consistency within the Federal and State regulations for MCH harvest. However, harvest limits would be increased for Units 9C—that portion in the Alagnak River drainage and 19A—that portion north of the Kuskokwim River by one caribou. A harvest reduction overall will still be expected to reduce overall harvest.

Restricting harvest to one bull is needed to help increase the bull:cow ratio. Since 2001, the bull:cow ratios have been below ADF&G's management objective of 35 bulls:100 cows. Reducing the bull harvest should help increase the number of bulls in the herd and ensure that pregnancy rates and calf production is adequate to help increase the population.

Restricting harvest so that no more than one caribou may be taken from Aug. 1–Jan. 31 instead of Aug. 1–Nov. 30 will further reduce harvest, although slightly. The opportunity to harvest a second caribou would be reduced by approximately two months for hunters that want to harvest more than one caribou in early winter. Harvest would decrease for the hunters that opportunistically harvest more than one caribou in early winter, but do not hunt in late winter. However, opportunity would still exist for subsistence hunters that wish to harvest two caribou after Jan. 31.

It is not necessary to have different caribou regulations in Unit 19A to protect the Beaver Mountains Herd and Sunshine Mountains Herd and still allow MCH harvest. The habitat in 19A north of the Kuskokwim River has generally been unoccupied by caribou in recent years (Seavoy 2009, pers. comm.).

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Comments WP10-51 and WP10-53  
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**Alaska Department of Fish and Game**  
*Comments to the Regional Advisory Council*

**Wildlife Proposal WP10-51: (GMU 9A, 9B, 9C, 17A, 17B, 18, 19A caribou seasons)**

**Wildlife Proposal WP10-53: (GMU 9A, 9B, 9C, 17A, 17B, 17C, 18, 19A caribou bag limit)**

Proposal WP10-51 would align federal subsistence opening and closing dates for caribou hunting on federal public lands throughout most of the range of the Mulchatna Caribou Herd. Proposal 53 would align federal subsistence bag limits for caribou hunting on federal public lands throughout most of the range of the Mulchatna Caribou Herd.

**Introduction:** Declines in the Mulchatna Caribou Herd from its peak population in the mid-1990s necessitated reduced season and bag limits throughout the herd's range as the population changed. Earlier changes in federal subsistence hunting regulations kept pace with changes made by the Alaska Board of Game in response to population changes. Present federal subsistence hunting regulations throughout the range of the Mulchatna Caribou Herd are inconsistent between Game Management Units. Changing the federal subsistence hunting regulations for caribou in the range of the Mulchatna Herd to uniform regulations will reduce confusion for hunters.

**Impact on Subsistence Users:** Proposal WP10-51 would shorten the caribou hunting season in those areas where the federal subsistence hunting season for caribou presently closes after March 31 (Units 9B, 17B, and that portion of 17C east of the Wood River and Wood River lakes, 19A south of the Kuskokwim River, and 19B). This proposal would lengthen the caribou hunting season in those areas where the federal subsistence hunting season for caribou presently closes before March 31 (Units 18 and 19A north of the Kuskokwim River). By establishing consistent federal subsistence opening and closing hunting season dates, confusion by hunters over what federal areas are open will be reduced. Establishing dates that are not aligned with present state hunting season dates will create confusion because of the mixed land ownership patterns throughout the range of the herd. The shorter state season, ending March 15, occurs during a time when travel conditions are poor so would have little impact on federally-qualified subsistence users and reduce risk of enforcement actions.

Proposal 53 would reduce the caribou bag limit in those areas where the federal subsistence bag limit is presently greater than two caribou (Units 9A and B, 17A, B and C, 18, 19A south of the Kuskokwim River, and 19B). This proposal would increase the caribou bag limit in those areas where the federal subsistence bag limit is presently less than two caribou (Units 9C—that portion in the Alagnak River drainage, and 19A—that portion north of the Kuskokwim River). By establishing consistent federal subsistence bag limits, confusion by hunters over how many caribou can be taken on which federal public lands will be reduced. In addition, because of the mixed land ownership patterns throughout the range of the herd, aligning federal subsistence caribou hunting bag limits with present state caribou hunting bag limits will further reduce confusion and risk of enforcement actions.

**Opportunity Provided by State:** Present state hunting season and bag limits throughout most of the range of the Mulchatna Caribou Herd are August 1 through March 15, and 2 caribou (no more than one bull may be taken, of which no more than one caribou may be taken from August

Comments WP10-51 and WP10-53  
January 29, 2010; Page 2 of 2

1 through January 31). The exception to this is the area of eastern Unit 17A and southwestern Unit 17C (that area north of the Nushagak Peninsula) which may be opened by Emergency Order authority with a bag limit of one caribou. Recent action by the Alaska Board of Game closed caribou hunting by nonresidents throughout the range of the herd to assure a subsistence preference for Alaska residents.

**Conservation Issues:** Hunting season dates and bag limit were liberalized as the Mulchatna Caribou Herd grew in size and expanded in range. Similarly, reductions in season and bag limits are necessary to manage declines in this herd. While all the reasons for the herd's growth and subsequent decline are not well understood, reductions in take have been recognized as essential to reduce the rate of decline.

A regulation change at this time that would result in additional caribou taken during late spring (i.e. in Unit 18) would be inconsistent with other management actions undertaken for this herd. There is no need to separate the caribou season north of the Kuskokwim River in Unit 19A since this area is generally unoccupied by caribou.

A regulation change at this time to reduce the number of caribou allowed in those areas with present larger bag limits, as well as to establish uniform bag limits throughout the range of this herd, is warranted.

**Enforcement Issues:** Proposal WP10-51 changes in season dates for federal public lands would open the same but would end two weeks later than the state caribou hunting season. Proposal WP10-53 changes of federal subsistence bag limits for Mulchatna caribou on federal public land would be consistent with present state caribou bag limits. Federal public lands occur throughout a great part of the herd's range and are scattered and not contiguous (especially in Units 9B, 17B and C, and 19A and B). In addition, much of the area around villages in Unit 18 is under state regulations. It may be difficult for federally qualified subsistence users to easily discern land ownership from the ground and be sure they are hunting on federal land.

**Other Comments:** As written, the proposal appears to be a substantial reduction in hunting opportunity (because of the shortened season length from most of the herd's range). However, the realistic effect is that the proposal will likely result in additional harvest because the season would be extended in Unit 18, where the bulk of the reported harvest from the herd has occurred for the past several years under existing season dates.

**Recommendation:** Support with modification to amend the closing date to align with state hunting season dates, closing the season on March 15.

<b>WP10-65 Executive Summary</b>	
<b>General Description</b>	<p>Proposal WP10-65 requests that the winter season dates for moose in Unit 21E be changed from Feb. 1–10 to Feb. 15–Mar. 15. The proponent also requests that the harvest parameters for the winter hunt be announced by the Federal managers (U.S. Fish and Wildlife Service and Bureau of Land Management) after consultation with the ADF&amp;G Area Biologist, the Bureau of Land Management wildlife biologist, and the chairs of the Grayling-Anvik-Shageluk-Holy Cross (GASH) Advisory Committee and the Council. The proponent further requests that a Federal registration permit be required for the winter season, that it be issued by the Innoko National Wildlife Refuge, and that only one permit be allowed per household. <i>Submitted by the Western Interior Subsistence Regional Advisory Council</i></p>
<b>Proposed Regulation</b>	<p><i>1 moose; however, only bulls may be taken from Aug. 20–Sept. 25. <b>The harvest parameters for the winter hunt to be announced by the Federal managers (Fish and Wildlife Service and Bureau of Land Management) after consultation with the ADF&amp;G Area Biologist, the Bureau of Land Management wildlife biologist, and the chairs of the Grayling-Anvik-Shageluk-Holy Cross Advisory Committee and the Western Interior Regional Advisory Council. A Federal registration permit will be issued one per household by the Innoko National Wildlife Refuge. Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the winter Feb. season.</b></i></p> <p style="text-align: right;"><i>Aug. 20–Sept. 25</i> <i>Feb. 15–Feb. 10–Mar. 15</i></p>
<b>OSM Preliminary Conclusion</b>	<p><b>Support</b> proposal WP10-65 with modification to 1) change “harvest parameters” to “permit conditions, 2) provide emergency closure authority to the Innoko National Wildlife Refuge manager, and 3) have the Innoko National Wildlife Refuge Manager announce the permit conditions after consulting with local area Federal and State agencies and local fish and game advisory councils/committees as stipulated in a letter of delegation.</p>
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Western Interior Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	

*continued on next page*

<b>WP10-65 Executive Summary (continued)</b>	
<b>ADF&amp;G Comments</b>	<p><b>Support with modifications</b> to: (1) assure that the harvest quota remains consistent with the YIMMP, (2) due to conservation issues, require reasonable permit reporting in regulation for the winter hunt rather than leaving that as an optional permit condition, and (3) provide emergency closure authority to delegated federal official. The YIMMP needs to be referenced in federal regulation; if not in regulation, the Department requests the Federal Subsistence Board specifically reference the harvest quota and management objectives of the YIMMP in the letter of delegation to the designated official.</p>
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-65

### ISSUE

Proposal WP10-65 was submitted by the Western Interior Subsistence Regional Advisory Council (Council) and requests that the winter season dates for moose in Unit 21E be changed from Feb. 1–10 to Feb. 15–Mar. 15. The proponent also requests that the harvest parameters for the winter hunt be announced by the Federal managers (U.S. Fish and Wildlife Service and Bureau of Land Management) after consultation with the ADF&G Area Biologist, the Bureau of Land Management wildlife biologist, and the chairs of the Grayling-Anvik-Shageluk-Holy Cross (GASH) Advisory Committee and the Council. The proponent further requests that a Federal registration permit be required for the winter season, that it be issued by the Innoko National Wildlife Refuge, and that only one permit be allowed per household.

### DISCUSSION

The proponent suggests that a longer winter season would allow local users to hunt moose when travel conditions are more optimal and may also help spread hunting pressure across a wider area. The proponent believes that a Federal registration permit would provide more accurate harvest data, which it hopes will result in more informed management decisions. The proponent requests that the harvest parameters identified by the Federal managers align with the harvest guidelines of the Yukon-Innoko Moose Management Plan, which would provide flexibility to limit the number of moose harvested or the sex of the moose to be harvested, when needed, for conservation purposes. The provision prohibiting harvest within one half mile of the Innoko and Yukon Rivers during the winter season would not change.

Two other provisions that were discussed by the Council during the development of its proposal but were not included in the proposal as submitted are a provision to provide the Innoko NWR manager emergency closure authority for the winter hunt and a 24-hour reporting requirement (WIRAC 2009). This was most likely an oversight when drafting the proposal.

### Existing Federal Regulation

Unit 21E — Moose

*1 moose; however, only bulls may be taken from Aug. 20–Sept. 25. Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the Feb. season.*

<i>Aug. 20–Sept. 25</i>	<i>Aug. 20–Sept. 25</i>
<i>Feb. 1–Feb. 10</i>	<i>Feb. 1–Feb. 10</i>

## Proposed Federal Regulation

### Unit 21E — Moose

*1 moose; however, only bulls may be taken from Aug. 20–Sept. 25. The harvest parameters for the winter hunt to be announced by the Federal managers (Fish and Wildlife Service and Bureau of Land Management) after consultation with the ADF&G Area Biologist, the Bureau of Land Management wildlife biologist, and the chairs of the Grayling-Anvik-Shageluk-Holy Cross Advisory Committee and the Western Interior Regional Advisory Council. A Federal registration permit will be issued one per household by the Innoko National Wildlife Refuge. Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the winter Feb. season.*

*Aug. 20–Sept. 25*

*Feb. 15–Feb. 10  
Mar. 15*

## Existing State Regulation

### Unit 21E — Moose

<i>Resident: One antlered bull</i>	<i>Harvest</i>	<i>Sept. 5–Sept. 25</i>
<i>Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit.</i>	<i>DM837/839</i>	<i>Sept. 5–Sept. 20</i>

## Extent of Federal Public Lands

Federal public lands comprise approximately 55% of Unit 21E and consist of 44% Bureau of Land Management and 11% U.S. Fish and Wildlife Service lands (**Map 1**).

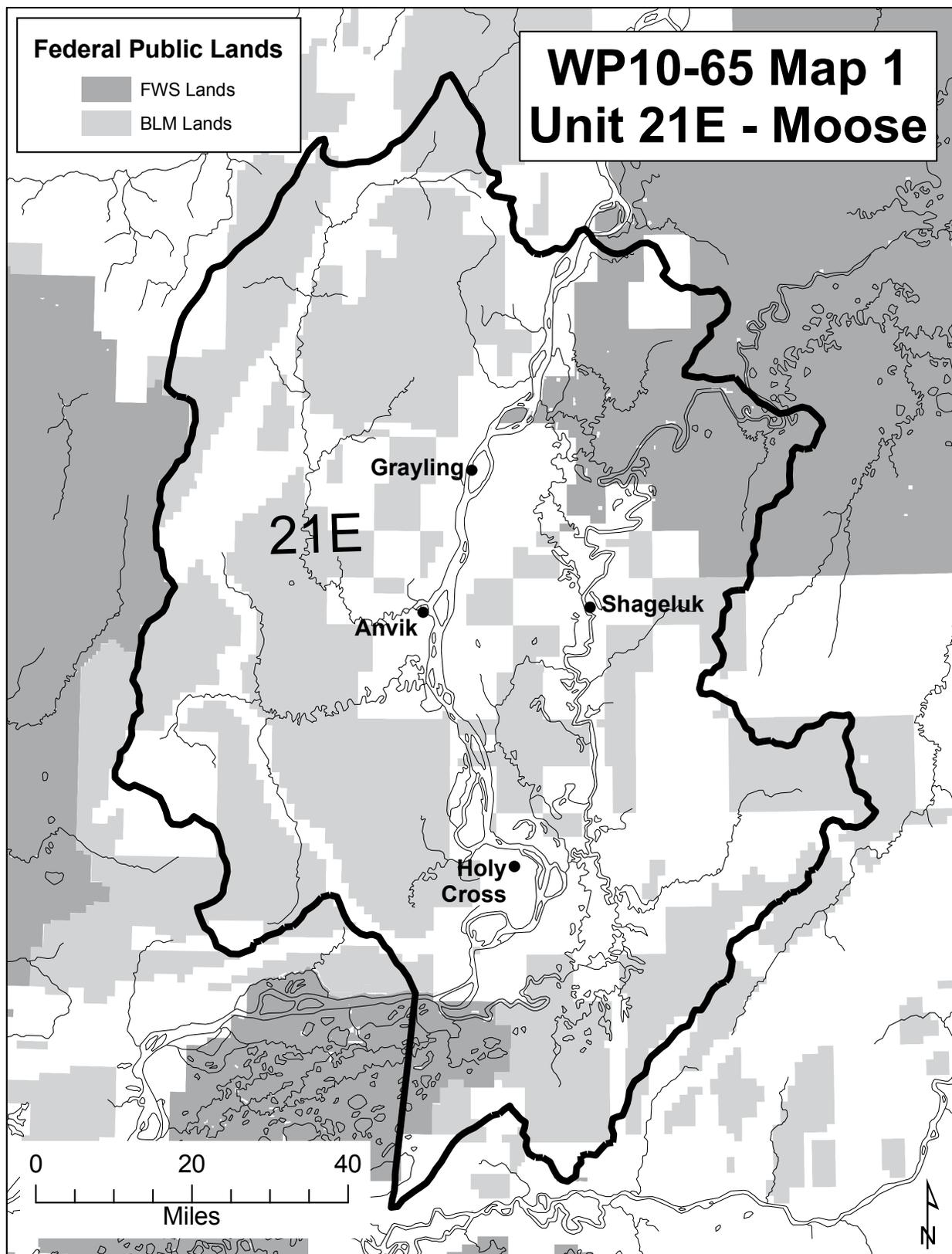
## Customary and Traditional Use Determinations

Residents of Unit 21E and Russian Mission have a positive customary and traditional use determination for moose in Unit 21E.

**Note:** If proposal WP10-69 is adopted, or some modification thereof, then one or more of the communities of Lower Kalskag, Kalskag, Aniak, and/or Chuathbaluk may be added to the existing C&T use determination for moose in Unit 21E.

## Regulatory History

The Paradise Controlled Use Area is almost entirely within Unit 21E and was established in 1978 by the Alaska Board of Game in response to concerns that hunter success rates favored non-rural users and the total harvest of moose in the area was threatening the population. The Paradise Controlled Use Area regulations placed a restriction on fly-in hunting for moose, air transport of hunters and hunting-related equipment, and the air transport of moose meat from the field. The Paradise Controlled Use Area access restrictions and the State’s moose seasons for Unit 21E were adopted by the Federal Subsistence Board in 1990. During the 1990/1991 regulatory year the State and Federal moose seasons were Sept. 5 – 25 and Feb. 1–10 for Unit 21E. The winter season dates have not changed in Federal regulation since



then, although the State eliminated the winter season from its regulations beginning in the 2003/2004 regulatory year.

In 1995 the Federal Subsistence Board provided additional opportunity during the fall season by adding ten days to the early part of the season in Unit 21E with season dates of August 25 to September 25. The Federal subsistence Board subsequently extended the fall season by another five days in 1996 which resulted in season dates of Aug. 20 to Sept. 25. These fall season dates are still in effect today.

In January 2005 a cooperative moose planning effort called the Yukon-Innoko Moose Management Working Group was launched. The goal of the planning effort was to develop a proactive management plan to help maintain the moose population while also providing for high levels of human consumptive uses of moose in Units 21A and 21E (ADF&G 2006). The working group included representatives of the GASH and Lower Yukon Fish and Game Advisory Committees, the Western Interior and Yukon-Kuskokwim Delta Regional Advisory Councils, as well as non-local hunters and representatives who had commercial interests associated with hunting in the area. The result of the planning effort was the Yukon-Innoko Moose Management Plan, which was completed in March 2006. This plan was then endorsed by the Federal Subsistence Board in May 2006 through Resolution 06-01. A few of the key management goals, objectives and recommendations outlined in the plan are:

Goal:

- Manage to achieve an Intensive Management moose population of 9,000 to 11,000 moose in Unit 21E

Objectives:

- Manage harvest conservatively with a harvest rate less than or equal to 4% of the estimated population; harvest should be directed predominantly at bulls
- Manage the moose population toward maintaining a minimum post-hunt bull:cow ratio of 25–30 bull:100 cows.
- Manage the moose population toward maintaining a minimum fall post hunt calf:cow ratio of 30–40 calves:100 cows.
- Manage the moose population toward maintaining a minimum calf overwinter survival of 20% of the total population in late winter.

Recommendations:

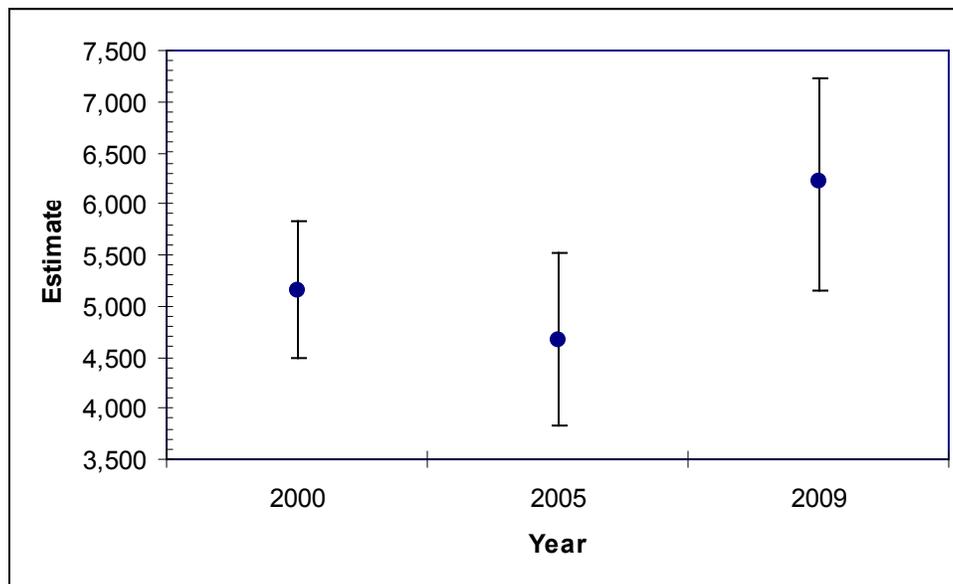
- Provide for the harvest of up to 40 antlerless moose in winter.
- If cow harvest remains greater than 40 (including cows taken in the Federal season and those taken for potlatches etc.), consider the need to recommend closing the Federal winter season

The Working Group also recommended that “*if the Federal customary and traditional subsistence use determination (C&T) for Unit 21E is revised to make a large number of additional communities eligible, the federal winter season should be eliminated*” (ADF&G 2006). Proposal WP10-69 requests a change to the existing C&T determination for moose in Unit 21E.

## Biological Background

### *Unit 21E Moose Geospatial Population Estimator (GSPE) Surveys*

Results from winter surveys using the Geospatial Population Estimate (GSPE) in 2000, 2005, and 2009 appear to show a higher moose population in 2009 compared to the previous surveys (**Figure 1**). However, the 90% confidence intervals all overlap which precludes any conclusive trends in the Unit 21E moose population but the biologists conducting the surveys do believe the population is stable. The 5,070 mi.<sup>2</sup> GSPE survey area included mainly that portion of Unit 21E east of the Yukon River and includes portions of the Innoko and Yukon Delta National Wildlife Refuges as well as BLM lands.



**Figure 1.** Unit 21E population estimates with 90% confidence intervals (ADF&G 2009a and Peirce and Seavoy 2008).

### *Unit 21E Moose Trend Count and Composition Surveys*

Moose composition surveys in Unit 21E in 2007, 2008 and 2009 counted 84, 186, and 153 moose, respectively (**Table 1**). It is important to note that composition surveys flown in Unit 21E do not follow a rigid design for survey intensity or area covered. Therefore, actual numbers of moose observed during any given composition survey are subject to a large number of variables. The 2008 and 2009 survey data suggest that the bull:cow ratios and calf:cow ratios have declined since the 2007 survey (**Table 1**). The most recent calf:cow ratio was 18 in 2009 which is below the management object of 30–40 calves per 100 cows identified in the Yukon-Innoko Moose Management Plan. However, there was a considerable amount of flooding that occurred in 2009 which likely explain the low calf:cow ratio and the biologists conducting the survey reported that they were not able to survey a portion of the area that typically has more bulls which also partially explain the lower bull:cow ratio (Beyersdorf 2010 pers. comm.). There is a moose collaring study planned to begin in the spring of 2010 that should help address some of the moose survey data limitations in Unit 21E.

Similar to fall composition surveys, spring twinning surveys do not follow rigid protocols. Twinning surveys since 2007 show an opposite trend for calves from the fall composition surveys (**Table 2**). While

the data presented in **Tables 1** and **2** cover only a short time period, they appear to indicate that fewer calves are surviving than in previous years.

**Table 1.** Unit 21E moose composition surveys conducted during the fall of 2007, 2008, and 2009 (ADF&G 2007 and ADF&G 2008).

Year	Total					Bulls/100 cows	Calves/100 cows
	Bulls	Yearling Bulls	Cows	Calves	Moose		
2007	26	9	35	27	84	74	66
2008	59	28	95	35	186	62	37
2009	33	21	102	18	153	32	18

**Table 2.** Unit 21E spring moose twinning survey results (Kovach 2009, pers. comm.).

Year	Cows with Calves	Litters with Twins	Twinning Rate
2007	28	7	29
2008	32	15	47
2009	24	12	50

### Harvest History

Reported moose harvests in Unit 21E by residents of Grayling, Anvik, Shageluk, and Holy Cross (GASH) indicate an annual average of 35 successful moose hunters (range = 27–43) from 2000 to 2009 (**Table 2**) (ADF&G 2009b). However, it should be noted that for some parts of Alaska, the ADF&G harvest ticket data do not typically reflect the actual level of harvest, although this data can provide an estimate of harvest trends over time for a particular area. A more accurate reflection of actual harvest for the GASH area communities is available for Unit 21E from two studies that included household surveys of moose harvests for calendar years 2002/2003 and 2003/2004 (Brown et al. 2004; Brown and Koster 2005). Household surveys conducted for 2002/2003 estimated a total harvest by GASH area residents of 133 moose ( $\pm 6\%$  at 95% CI) in Unit 21E with 18 (10 cows) of those moose having been taken during the winter season (Brown et al. 2004). Household surveys conducted for the 2003/2004 calendar year estimated a total harvest by GASH area residents of 118 moose ( $\pm 4\%$  at 95% CI) in Unit 21E with 16 (11 cows) of those moose having been taken during the winter season (Brown and Koster 2005). For these two study years the household survey data suggest that the total annual average moose harvest was 3.3 times higher than the harvest reported in the harvest ticket database. Household surveys were also conducted in 1990/1991 and the total estimated harvest by GASH area residents was 169 moose in Unit 21E (Wheeler 1993).

Information reported in the harvest ticket database does suggest that the GASH area hunter success rates have ranged between 55% and 83%, with a nine-year average of 68% (**Table 3**). Regardless of this relatively high success rate there does seem to be a downward trend in harvest success over the past ten years.

**Table 3.** Reported moose harvest ticket data for residents of the communities of Grayling, Anvik, Shageluk, and Holy Cross in Unit 21E, 2000-2009 and household moose harvest survey data for calendar years 2002/2003 and 2003/2004 (ADF&G 2009b; Brown et al. 2004; Brown and Koster 2005).

<b>Year</b>	<b>Successful hunters</b>	<b>Unsuccessful hunters</b>	<b>Total hunters</b>
	Number (%)	Number (%)	Number
2000			
Reported Harvest Ticket Total	39 (83%)	8 (17%)	47
2001			
Reported Harvest Ticket Total	32 (75%)	8 (25%)	40
2002			
Reported Harvest Ticket Total	39 (75%)	13 (25%)	52
2003			
Reported Harvest Ticket Total	43 (74%)	15 (26%)	58
* HH survey - Winter harvest	18 (10 cows)	na	na
* HH Survey - Total harvest	133 (75%) ± 6% at 95% CI	44 (25%)	177
2004			
Reported Harvest Ticket Total	32 (59%)	22 (41%)	54
* HH survey - Winter harvest	16 (11 cows)	na	na
* HH Survey – Total harvest	118 (67%) ± 6% at 95% CI	58 (33%)	176
2005			
Reported Harvest Ticket Total	40 (75%)	13 (25%)	53
Reported Winter Harvest	8		
2006			
Reported Harvest Ticket Total	39 (56%)	31 (44%)	70
Reported Winter Harvest	4		
2007			
Reported Harvest Ticket Total	34 (60%)	23 (40%)	57
Reported Winter Harvest	5		
2008			
Reported Harvest Ticket Total	27 (55%)	22 (45%)	49
Reported Winter Harvest	4		
2009			
** Reported Harvest Ticket Total	28	na	na
* Household survey data for the communities of Grayling, Anvik, Shageluk, and Holy Cross.			
** Preliminary estimate.			
na = Not available			

## Effects of the Proposal

Adoption of the proposal would provide the residents of Unit 21E and Russian Mission with additional opportunity and more flexibility to harvest moose during the winter season. Federal managers would be required to determine the harvest parameters each year after consulting with ADF&G and the chairs of the Western Interior Regional Council and GASH Fish and Game Advisory Committee. The term “harvest parameters” could be changed to “permit conditions” which would provide more flexibility to the Federal managers to adjust permit conditions, as needed, that may be different than those parameters related only to harvest. The harvest parameters would need to be consistent with the harvest guidelines identified in the Yukon-Innoko Moose Management Plan. The plan provides for flexibility to limit the number of moose harvested or the sex of the moose to be harvested, when needed, for conservation purposes. If adopted, a Federal registration permit would be established and only one permit would be issued per household. This would help to provide more accurate harvest data, which will likely result in more informed management decisions in the future.

Although a timeframe for a reporting requirement was not included in the proposal as submitted, the Council discussed a 24-hour reporting provision at length during its development of this proposal (WIRAC, 2009). If the 24-hour reporting requirement is still desired, it can be added to the permit without stipulating it in regulation.

The proponent also stated their intent to provide the Innoko National Wildlife Refuge manager with emergency closure authority although this provision was also not included in the proposal as submitted. It is likely that this was a mere oversight when drafting the proposal since it is clear in the record that the Council intended to include this provision. This would allow the Federal manager to react more quickly to any needed closures. Without this authority, a special action request would need to be submitted to the Federal Subsistence Board for its action. While Board action on these types of requests can be completed in a few days, they often take a week or more before final action is taken. Thus, providing emergency closure authority to the Refuge Manager may be appropriate.

A portion of the proposed regulation is duplicative by suggesting that the U. S. Fish and Wildlife Service and Bureau of Land Management announce the harvest parameters after consultation with the ADF&G Area Biologist and the Bureau of Land Management wildlife biologist. The details of who is to be consulted can be better described in a letter of delegation to the refuge manager.

It should be noted that the cumulative effects of adopting all three proposals (WP10-65, WP10-66, and WP10-69) could result in an increase in moose harvests to the degree that restrictions may need to be added in the future. Changes in harvest levels and patterns will need to be closely monitored to evaluate the effects of changes that are adopted. An early indication of possible concerns is that the most recent fall calf:cow ratio (18) in 2009 was below the management object of 30–40 calves per 100 cows identified in the Yukon-Innoko Moose Management Plan.

If this proposal is adopted, extensive outreach effort will need to occur to educate and implement these changes. The Innoko National Wildlife Refuge staff has committed to work with the GASH area communities to inform the residents of any changes and to implement a Federal registration permit for this hunt, if adopted. Since the State does not have a comparable winter season in the affected area it would require the use of detailed maps that clearly show the location of Federal public lands.

Until the moose collaring study results are available no conclusive assessments can be made regarding the status of the health of the moose population in Unit 21E, although local users do report a slight decline. Nonetheless, it appears that the population is stable and can continue to support a limited moose harvest

during the winter season. Hunters should be encouraged to harvest bulls as much as possible to favor productivity and yearling bull recruitment.

## OSM PRELIMINARY CONCLUSION

**Support** proposal WP10-65 with modification to 1) change “harvest parameters” to “permit conditions, 2) provide emergency closure authority to the Innoko National Wildlife Refuge manager, and 3) have the Innoko National Wildlife Refuge Manager announce the permit conditions after consulting with local area Federal and State agencies and local fish and game advisory councils/committees as stipulated in a letter of delegation.

The modified regulation should read:

*Unit 21E — 1 moose; however, only bulls may be taken from Aug. 20–Sept. 25.*

*Aug. 20–Sept. 25*

*Feb. 15–Feb. 10–Mar. 15*

***The permit conditions and any needed closures for the winter hunt will be announced by the Innoko NWR Manager after consultation with local area Federal and State land managers and local fish and game advisory councils/committees as stipulated in the letter of delegation. Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the winter ~~Feb.~~ season.***

## Justification

Adoption of the proposal would provide the residents of Unit 21E and Russian Mission with additional opportunity and more flexibility to harvest moose during the winter season. Population data from surveys conducted from 2000–2009 indicate that the affected moose population is stable and can continue to support limited moose harvests during the winter season.

A more streamlined approach that would allow for these same provisions would be to delegate the authority to the Innoko National Wildlife Refuge manager to announce the permit conditions and any needed closures after consulting with the local Federal and State agencies and the local fish and game advisory councils and committees. The details of the delegation of authority conditions would be defined in a letter to the refuge manager.

The details for announcing the permit conditions and who must be consulted prior to authorizing the hunt or any closures can best be accomplished through a letter of delegation to the refuge manager. The 24-hour reporting requirement is a provision that can be added to the permit without stipulating it in regulation. The emergency closure authority would allow the Federal manager to react more quickly.

The term “harvest parameters” should be changed to “permit conditions” to provide more flexibility to the Federal managers to adjust permit conditions that may be different than those parameters related only to harvest. A Federal registration permit would be established and only one permit would be issued per household. This would help to provide more accurate harvest data and would likely lead to more informed management decisions in the future. This could also be stipulated in the delegation of authority letter.

All of these changes will need an extensive outreach effort to educate and implement these changes. The Innoko NWR staff has committed to working with the GASH area communities to inform them of the Federal registration permit requirement for this hunt.

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Comments WP10-65  
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**Alaska Department of Fish and Game**  
***Comments to the Regional Advisory Council***

**Wildlife Proposal WP10-65:** This proposal would change the federal subsistence winter moose hunt in Unit 21E from a February 1 through 10 season with an any moose bag limit to a February 15 through March 15 season by federal registration permit with a quota and a bag limit of one moose per household.

**Introduction:** This proposal was submitted to lengthen and delay the federal subsistence moose hunting winter season in Unit 21. Federal subsistence delegated official would establish a quota in consultation with the Alaska Department of Fish and Game and require one federal subsistence registration hunt permit per household.

**Impact on Subsistence Users:** If adopted federal subsistence moose hunting opportunity will be expanded by 15 days and be moved later in the winter when more sunlight and traveling conditions should improve opportunity for success.

**Opportunity Provided by State:** There is no state winter moose season in Unit 21E due to conservation concerns.

**Conservation Issues:** The Yukon Innoko Moose Management Plan (YIMMP) was endorsed by the Federal Subsistence Board, the Alaska Board of Game, and supported by the Western Interior Regional Advisory Council and the Grayling-Anvik-Shageluk-Holy Cross (GASH) Fish and Game Advisory Committee. The YIMMP included a provision for a harvest of up to 40 cow moose during a winter season, and this proposal is consistent with the YIMMP. If adopted, the requirement of a federal registration permit could improve the quality of federal subsistence harvest data by providing a mechanism for better harvest reporting during the winter moose season. The Alaska Board of Game closed the state winter general season moose hunt in 21E because the moose population could not withstand the substantial interest from Unit 18 hunters.

**Enforcement Issues:** Adoption of this proposal results in only federally qualified users hunting during the winter season and only on federal public lands. Adoption of this proposal could reduce harvest reporting violation citations.

**Recommendation:** Support with modifications to: (1) assure that the harvest quota remains consistent with the YIMMP, (2) due to conservation issues, require reasonable permit reporting in regulation for the winter hunt rather than leaving that as an optional permit condition, and (3) provide emergency closure authority to delegated federal official. The YIMMP needs to be referenced in federal regulation; if not in regulation, the Department requests the Federal Subsistence Board specifically reference the harvest quota and management objectives of the YIMMP in the letter of delegation to the designated official.

<b>WP10-66 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-66 requests that the fall moose season dates in Unit 21E be shifted by five days, from Aug. 20–Sept. 25 to Aug. 25–Sept. 30. <i>Submitted by the Western Interior Subsistence Regional Advisory Council</i>
<b>Proposed Regulation</b>	<p><i>1 moose; however, only bulls may be taken from Aug. 20–25–Sept. 25–30.</i></p> <p><i>Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the Feb. season.</i></p> <p style="text-align: right;"><b>Aug. 20–25–Sept. 25–30</b></p> <p style="text-align: right;"><b>Feb. 1–Feb. 10</b></p>
<b>OSM Preliminary Conclusion</b>	<b>Support</b>
<b>Yukon/Kuskokwim Delta Regional Council Recommendation</b>	
<b>Western Interior Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>No recommendation</b> until the Department evaluates additional information acquired at the Regional Advisory Council meeting.
<b>Written Public Comments</b>	<b>None</b>

**DRAFT STAFF ANALYSIS  
WP10-66**

**ISSUE**

Proposal WP10-66 was submitted by the Western Interior Subsistence Regional Advisory Council (Council) and requests that the fall moose season dates in Unit 21E be shifted by five days, from Aug. 20–Sept. 25 to Aug. 25–Sept. 30.

**DISCUSSION**

The proponent believes that moose are moving around later in the season in recent years, and a five day shift would provide greater opportunity to harvest moose. The Council also believes that recent fall temperatures have been warmer, so a change could help reduce spoilage of meat. The proponent also stated that this season shift could help prevent cow moose from being harvested during the winter season since a successful hunter who takes a bull during the fall season would not be eligible to harvest a cow during the winter season. Another added benefit identified by the Council was that this season shift could reduce competition with non-local hunters, who would be hunting under State regulations with different season dates.

**Existing Federal Regulation**

Unit 21E — Moose

<i>I moose; however, only bulls may be taken from Aug. 20–Sept. 25.</i>	<i>Aug. 20–Sept. 25</i>
<i>Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the Feb. season.</i>	<i>Feb. 1–Feb. 10</i>

**Proposed Federal Regulation**

Unit 21E — Moose

<i>I moose; however, only bulls may be taken from Aug. <del>20</del>25–Sept. <del>25</del>30.</i>	<i>Aug. <del>20</del>25–Sept. <del>25</del>30</i>
<i>Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the Feb. season.</i>	<i>Feb. 1–Feb. 10</i>

**Existing State Regulation**

<i>Unit 21E Resident: One antlered bull</i>	<i>Harvest</i>	<i>Sept. 5–Sept. 25</i>
<i>Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit</i>	<i>DM837/839</i>	<i>Sept. 5–Sept. 20</i>

**Extent of Federal Public Lands**

Federal public lands comprise approximately 55% of Unit 21E and consist of 44% Bureau of Land Management and 11% U.S. Fish and Wildlife Service lands (see **Unit 21 Map**).

### **Customary and Traditional Use Determinations**

Residents of Unit 21E and Russian Mission have a positive customary and traditional use determination for moose in Unit 21E.

**Note:** If proposal WP10-69 is adopted, or some modification thereof, then one or more of the communities of Lower Kalskag, Kalskag, Aniak, and/or Chuathbaluk may be added to the existing C&T use determination for moose in Unit 21E.

### **Regulatory History**

The regulatory history information for this analysis is the same as that presented in proposal WP10-65. Please refer to that analysis.

### **Biological Background**

The biological background information for this analysis is the same as that presented in proposal WP10-65. Please refer to that analysis.

### **Harvest History**

Please refer to WP10-65 for the harvest history information that also pertains to this analysis. Additional harvest history information that pertains to this proposal is that residents of the GASH communities harvested an estimated 4% and 5% of their moose during August of 2003 and 2004 respectively (Brown et al. 2004; Brown and Koster 2005). By contrast, they harvested 80% and 81% of their moose during September of 2003 and 2004, respectively (Brown et al. 2004; Brown and Koster 2005).

### **Effects of the Proposal**

Adoption of the proposal would shift the fall moose hunting season dates in Unit 21E five days later into the fall. Moose will likely be moving along river corridors and thus easier to locate later in September than they are in late August. The foliage along the river corridors has usually dropped by late September, making the moose easier to locate. This proposed change would likely lead to increased hunting success during a later fall season.

The fall season only allows for the harvest of bulls and so any increased harvest during the fall season may help to reduce the potential harvest of cows during the winter season since hunters can only harvest one moose per regulatory year. This could be a benefit to the moose population in the long term depending on how harvest patterns change over time.

Temperatures in late September are usually cooler than they are in late August and this could help reduce the potential for meat spoilage.

However, it should be noted that the cumulative effects of adopting all three proposals (WP10-65, WP10-66, and WP10-69) could result in an increase in moose harvests to the degree that restrictions may need to be added in the future. Changes in harvest levels and patterns will need to be closely monitored to evaluate the effects of changes that are adopted.

## **OSM PRELIMINARY CONCLUSION**

**Support** proposal WP10-66.

### **Justification**

Adoption of the proposal would provide the residents of Unit 21E and Russian Mission with additional opportunity to hunt moose later into September when the majority of the hunting activity occurs.

Even though moose harvest by residents of the GASH communities would likely increase, the population data from surveys conducted from 2000–2009 indicate that the affected moose population can continue to support these harvests.

### **LITERATURE CITED**

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Comments for WP10-66  
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**Alaska Department of Fish and Game**  
***Comments to the Regional Advisory Council***

**Wildlife Proposal WP10-66:** This proposal would delay the federal subsistence fall moose season five days in Unit 21E from August 20 through September 25 to August 25 through September 30.

**Introduction:** The Western Interior Regional Advisory Council submitted this proposal and indicated delaying the federal subsistence moose hunt five days would increase opportunity to harvest bull moose as they become more active as the breeding season approached. The proponent also indicated delaying the season will also reduce spoilage of meat due to cooler weather and possibly will reduce the number of cow moose harvested in the winter because hunters will have increased success rates of fall bull harvests.

**Impact on Subsistence Users:** This regulation would have minimal change on subsistence opportunity.

**Opportunity Provided by State:** The state resident moose hunting season in Unit 21E is September 5 through September 25 with a limit of one antlered bull. The state nonresident moose hunting season in Unit 21E is September 5 through September 25 with a limit of one bull with 50-inch antlers or antlers with four or more brow tines on at least one side.

**Conservation Issues:** If adopted, the number of bull moose harvested by federal subsistence hunters is unlikely to change during most years. Typically, late seasons result in greater success, but late September is also a time when weather can effectively prevent hunting and lower water levels can limit access.

**Recommendation:** No recommendation until the Department evaluates additional information acquired at the Regional Advisory Council meeting.

<b>WP10-69 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-69 requests the recognition of customary and traditional uses of moose in Unit 21E for residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk. The communities of Upper Kalskag, Aniak, and Chuathbaluk are located in Unit 19A; Lower Kalskag is in Unit 18. <i>Submitted by Kuskokwim Native Association</i>
<b>Proposed Regulation</b>	<b>Unit 21E—Moose</b> <i>Rural residents of Unit 21E, Aniak, Chuathbaluk, Kalskag, Lower Kalskag, and Russian Mission.</i>
<b>OSM Preliminary Conclusion</b>	<b>Support</b> Proposal WP10-69 <b>with modification</b> to include the Paimiut Slough area of Unit 21E only, and to exclude Chuathbaluk.  <b>Unit 21E—Moose</b> <i>South of a line beginning at the western boundary of Unit 21E near Tabernacle Mountain, extending easterly to the junction of Paimiut Slough and Innoko Slough, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—Residents of Unit 21E, Aniak, Kalskag, Lower Kalskag, and Russian Mission.</i>  <i>Remainder—Residents of Unit 21E and Russian Mission.</i>
<b>Western Interior Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-69

### ISSUES

Proposal WP10-69, submitted by Kuskokwim Native Association (KNA), requests the recognition of customary and traditional uses of moose in Unit 21E for residents of Lower Kalskag, Upper Kalskag,<sup>1</sup> Aniak, and Chuathbaluk. The communities of Upper Kalskag, Aniak, and Chuathbaluk are located in Unit 19A; Lower Kalskag is in Unit 18.

### DISCUSSION

The proposal is being submitted for all of Unit 21E; however, the proponent states that it is the Paimiut Slough area that is customarily and traditionally used by Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk, and it encourages the Western Interior Regional Advisory Council to consider modifying the proposal to include that area only (see **Map 1**). The proponent further states that this proposal reflects comments received from residents of the communities named in the request, and that historically these communities depended on moose from Unit 21E to feed their families.

In part, this request is being made because of the growing scarcity of moose in Unit 19A and the Kuskokwim River drainage portion of Unit 18 and regulatory restrictions that resulted beginning in 2003. The impetus for KNA to request a modification to the existing customary and traditional use determination for moose in Unit 21E is the closure and then removal of the State-managed winter moose hunt in Unit 21E in 2003/04. Only the Federal winter moose season has remained open, and as a consequence, the winter moose season has been closed to all but the Federally qualified communities of Grayling, Anvik, Shageluk and Holy Cross (collectively known as GASH) and Russian Mission. The GASH communities are in Unit 21E, and Russian Mission is located in Unit 18.

While caribou can be harvested in Unit 21E under Federal subsistence regulations by residents of some communities in Unit 19A—Aniak, Chuathbaluk, and Crooked Creek—currently no community in Unit 19A is included in the customary and traditional use determination for moose in Unit 21E.

### Existing Federal Regulation

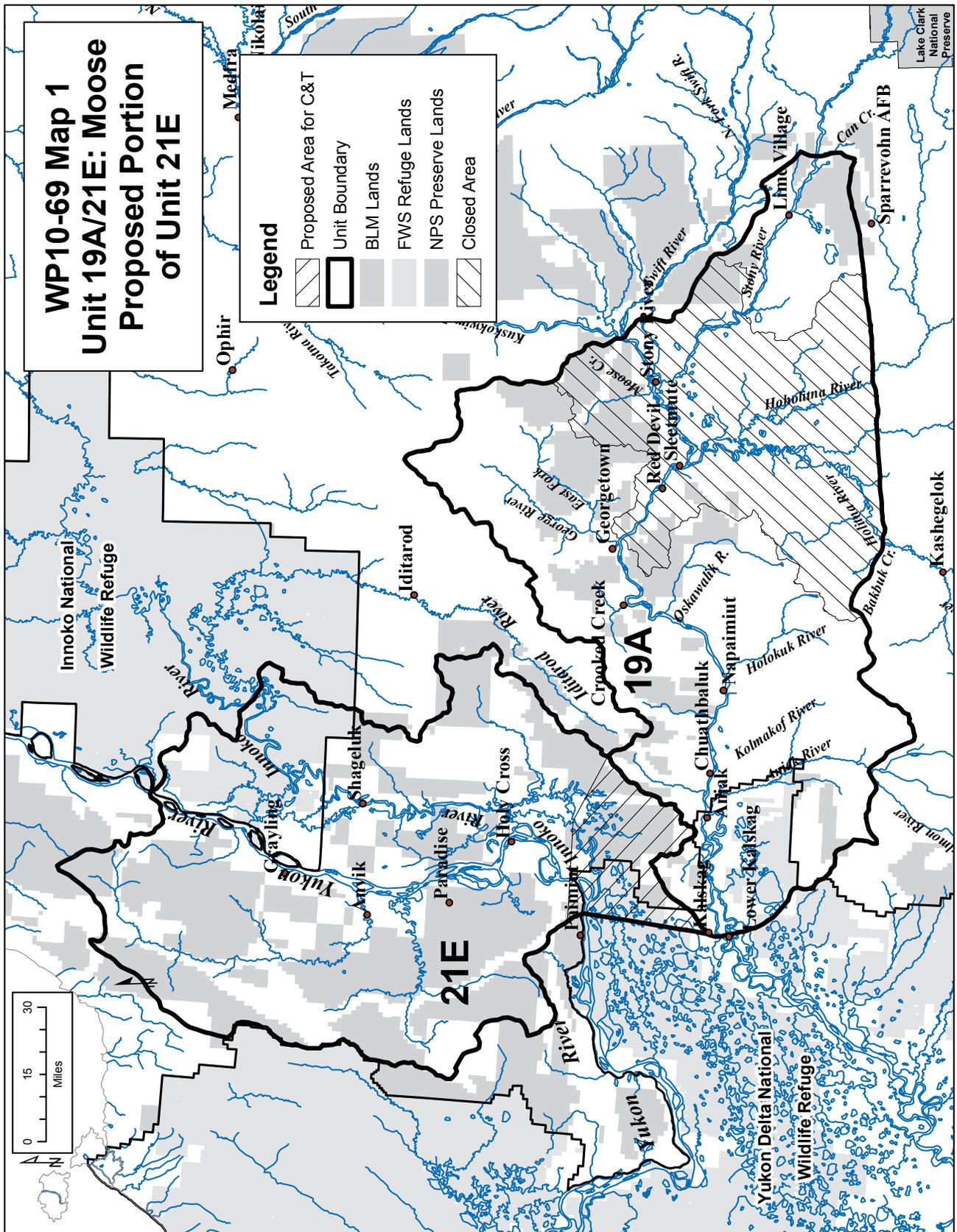
Customary and Traditional Use Determination

#### Unit 21E—Moose

*Rural residents of Unit 21E and Russian Mission.*

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<sup>1</sup> For the purposes of this analysis, Upper Kalskag is designated as “Upper” to clarify the difference between Upper Kalskag and Lower Kalskag.



## **Proposed Federal Regulation**

Customary and Traditional Use Determination

### **Unit 21E—Moose**

*Rural residents of Unit 21E, Aniak, Chuathbaluk, Kalskag, Lower Kalskag, and Russian Mission.*

## **Extent of Federal Public Lands**

Federal public lands comprise approximately 55% of Unit 21E and consist of 79% Bureau of Land Management and 21% U.S. Fish and Wildlife Service lands (**Map 1**).

## **Background**

A similar request was submitted by KNA to the Federal Subsistence Board (Board) in February 2008 in the form of a special action request (WSA08-01). The Board rejected the request in part because of the differences in the Yukon Kuskokwim Delta and Western Interior Councils' recommendations suggesting that additional public participation and discussion was necessary. The Board encouraged KNA to submit a regular-cycle proposal. That regular cycle proposal is the topic of this analysis.

As noted, this request was made in part because of the growing scarcity of moose in Unit 19A. In March 2006, ADF&G and the Board closed the eastern portion of Unit 19A to all moose hunting due to conservation concerns. Subsequently, in September 2006, hunting opportunity in the western portion of Unit 19A was reduced through Tier II and ANILCA Section 804. Initially, this occurred through a special action and emergency order but these restrictions were subsequently passed into regulation in May 2007. This situation has resulted in reduced opportunity and harvest of moose in all of Unit 19A, the primary area used by the proponents for hunting moose. Since the 2006/07 season, a State Tier II permit or a Federal permit has been required to hunt moose in Unit 19A. The Central Kuskokwim Moose Management Plan, published in June 2004, guides moose management in Units 19A and 19B (ADF&G 2004).

For the Kuskokwim River drainage portion of Unit 18, in the fall of 2004 a five-year moratorium on moose hunting, intended to increase moose numbers, went into effect (ADF&G 2006:4). In September 2009, State-managed lands in this area opened for moose hunting with a quota of 75 moose. The hunting season was 10 days and the quota was exceeded by 34 moose.

For Unit 21E, the GASH Fish and Game Advisory Committee and Alaska Board of Game did not support the State winter season for antlerless moose in 2003/04 due to concerns about the possibility of a decline in the moose population (ADF&G 2006:3). The winter season has not opened since that time. State antlerless moose seasons require approval by a majority of the active advisory committees located in, or the majority of whose members reside in, the affected unit or subunit (see 5 AAC 98.005 and AS 16.05.780). The Federal winter moose season has remained open. Regulatory changes in units to the south of Unit 21E have caused increased concern about displaced hunters causing increased hunting pressure in Unit 21E (ADF&G 2006:4). However, in recent years the moose population has grown in the lower Yukon River area in Unit 18, which has resulted in fewer hunters traveling upriver (ADF&G 2006:1).

The Yukon-Innoko Moose Management Plan, published in December 2006, guides management actions in Units 21A and 21E (ADF&G 2006). An Adaptive Plan for Intensive Management of Moose in Unit 21E was completed by ADF&G in 2008 (2008a). The Working Group that drafted the Yukon-

Innoko Moose Management Plan did not identify requests to expand the customary and traditional use determination for moose in Unit 21E as a major issue to be considered in the plan; however, it recommended that “if the federal customary and traditional subsistence use determination (C&T) for Unit 21E is revised to make a large number of additional communities eligible, the federal winter season should be eliminated” (ADF&G 2006:22). The Working Group deferred further comment of customary and traditional use determinations to the Federal subsistence regional advisory councils representing the area (ADF&G 2006:23).

### **Regulatory History**

This proposal is the first to request the expansion of the customary and traditional use determination for moose in Unit 21E to include Unit 19A communities. However, the Board has dealt with a number of proposals requesting the expansion of the customary and traditional use determination for moose in Unit 21E to include communities in Unit 18. The Board deferred those proposals until local users could work out a compromise, which has not been achieved.

The current customary and traditional use determination for moose in Unit 21E, adopted from the State at the inception of the Federal Subsistence Management Program in 1990, is for rural residents of Unit 21E and Russian Mission.

Aniak and Chuathbaluk are included in the the customary and traditional use determination for moose in Unit 19 only. Upper Kalskag is included in the customary and traditional use determination for moose in Unit 18 and Unit 19 only. Lower Kalskag is included in the customary and traditional use determination for Unit 18, Unit 19A, and Unit 19B only. These customary and traditional use determinations were also adopted from the State in 1990.

### **Community Characteristics**

The communities of Upper Kalskag, Aniak, and Chuathbaluk are located along the middle Kuskokwim River in Unit 19A, and Lower Kalskag is located in Unit 18 downriver from the Unit 19A boundary and adjacent to Upper Kalskag. The unit boundary goes between the two villages that are otherwise connected. With the exception of a State-maintained 4.2-mile gravel road connecting Upper and Lower Kalskag, no road connections exist between the other communities (ADCCED 2008). However, boats are used to travel between villages, and trails and the frozen river are used by people on snow machines and ATVs during winter. A trail runs from the Paimiut Portage, linking Upper Kalskag to the now-abandoned village of Paimiut on the Yukon River (see **Map 1**; Burch 1976:1–10).

Before 1900, in the area of the above named communities, people lived in semi-permanent villages, often in semi-subterranean dwellings. Most people moved seasonally to harvest various species of fish and wildlife at sites within 30 miles of each other in a relatively fixed range (Fienup-Riordan 1984:68). Before 1900 many seasonal dwelling places and semi-permanent villages existed between present-day Lower Kalskag and Napaimute, such as Kolmakovski Redoubt, Crow Village, and Ohagamute. Several more permanent communities were established after an epidemic of influenza in 1900 when villages experiencing high death rates re-grouped into fewer villages—Kalskag,<sup>2</sup> Ohagamute, Napaimute, and Crooked Creek. The migration to permanent communities continued to the 1950s at which time most residents were living in permanent communities, traveling seasonally to temporary camps to harvest wild resources (Fienup-Riordan 1984:82–85).

<sup>2</sup> Before the village divided into two villages, Kalskag and Lower Kalskag.

Between 1950 and 1960, another population shift occurred, prompted by the requirement to send children to school imposed by the territorial government (Nick 1984). Some Paimiut residents initially moved to Upper and Lower Kalskag along the Kuskokwim River, and then some of those people again relocated to Russian Mission in the 1960s (Pete 1991:18-19). Descendents of Paimiut residents currently reside in middle Kuskokwim communities, including Lower Kalskag, Upper Kalskag, and Aniak (Pete 1991:19; YKDSRAC 2008:79, 81–82). Mining and trading enterprises also contributed to the movement of people.

Crow Village, an abandoned village that was located near present-day Chuathbaluk, and Paimiut were the farthest inland settlements whose residents spoke only Central Yup'ik (Oswalt and VanStone 1967:1). According to Charnley (1984), in 1983 Upper and Lower Kalskag, and Chuathbaluk were composed primarily of Yup'ik Eskimos. Sleetmute, Stony River, and Crooked Creek included individuals of both Yup'ik and Athabascan descent. Aniak, the regional center, was composed of both non-Native and Yup'ik people. Aniak is located approximately 26 miles upriver from Lower Kalskag, and 11 miles downriver from Chuathbaluk.

In 2000 these four communities consisted of an estimated 1,200 people in 335 households (U.S. Census 2000; **Table 1**).

**Table 1.** Community population 1950 - 2000 and and number of households 2000 (Rollins 1978, U.S. Census 2000).

Community	1950	1960	1970	1980	1990	2000	Number of Households in 2000
Lower Kalskag	88	122	183	246	297	267	66
Upper Kalskag	139	147	122	129	172	230	62
Aniak	142	308	205	341	540	572	174
Chuathbaluk			94	105	97	119	33
Total	369	577	604	821	1,106	1,188	335

### **Eight Factors for Determining Customary and Traditional Uses**

A community or area's customary and traditional use is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to “generally exhibit” the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

A holistic evaluation of eight factors for residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk is described below.

In the late 19th century, moose were not numerous in the Middle Kuskokwim Area, an area generally encompassing the Kuskokwim River drainage from Lower Kalskag to Stony River in Units 18 and 19 (Seavoy 2008); however, caribou were more common (Charnley 1983:5). For example, according to John Kilbuck, a missionary for the Moravian Church who arrived in Bethel in 1885, during a trip upriver, Kilbuck wrote that a man near Napaimute shot four deer [caribou] with five bullets that were all he had. “To get home with the meat, he made a flat boat with two skins, and in this he descended a small creek, up/into the river and then on down” (Fienup-Riordan 1988:187). Additionally, Kilbuck wrote of the people of the Middle Kuskokwim Area:

*The Upper River people were the first to use firearms—from the blunder-buss with its flint and flash pan, whose chief value as a weapon of defense was the deafening report it could make, when fired. —A few of the old people still carry powder marks on their faces from the use of this ancient arm. The blunder-buss was replaced by the musket, and the musket was replaced by the Kentucky rifle. Now the latest improved repeating rifle is the equipment of the modern hunter (Fienup-Riordan 1988:7).*

Moose began entering this area in larger numbers in the early 1900s and populations have increased in size and distribution throughout the area since that time (Charnley 1983:5).

The primary sources of information on resource use by residents of these communities contain observations made over 30 years ago: Brelsford et al.’s research in Aniak (Brelsford et al. 1987), Charnley’s work in Chuathbaluk (Charnley 1983, 1984), and Stickney’s central Kuskokwim food survey (Stickney 1981). All indicate that land mammals and salmon and nonsalmon fish were critical resources for these communities. An attempt to update these observations has been made through Krauthoefer and Koster’s (2006) research; however, the findings focus on the results of household harvest surveys almost entirely and offer little insight into possible changes in moose use patterns of the residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk.

### Harvest and Use Levels

In the area of these communities, as in much of rural Alaska, household surveys tend to provide a more accurate accounting of harvests than do returned harvest tickets (Andersen and Alexander 1992). Consequently, in 2003, 2004, and 2005, three 12-month household surveys were conducted to provide

an accurate estimate of the number of moose taken by residents of these communities (Krauthoefer and Koster 2006) (**Table 2**). With the exception of a household survey at Chuathbaluk in 1983 (Charnley 1983), no other household surveys have been conducted for moose at Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk.

**Table 2.** Summary of household participation in harvest surveys that included moose, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, all study years (ADF&G 2008b).

Community	Study Year	Type of Sample	Total Identified Households	Surveyed Households	Percentage of Total	Estimated Human Population
Aniak	2003	Census	163	82	50%	509
	2004	Census	155	92	59%	492
	2005	Census	168	124	74%	545
Chuathbaluk	1983	Census	29	29	100%	132
	2003	Census	30	17	57%	125
	2004	Census	23	17	74%	108
	2005	Census	42	21	50%	124
Lower Kalskag	2003	Census	72	34	47%	303
	2004	Census	73	59	81%	303
	2005	Census	84	30	36%	336
Upper Kalskag	2003	Census	59	34	58%	243
	2004	Census	52	50	96%	243
	2005	Census	68	34	50%	266

The estimated harvest (from all areas) and use of moose during the four study years—1983, 2003, 2004, and 2005—at Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk are reported in **Table 3** and **Table 4**. The estimated moose harvest ranged from an annual high of 46 moose by Aniak residents in 2005, to a low of one moose by a Chuathbaluk resident in 2004 (**Table 3**). This difference between these two harvest numbers is in part because Aniak's human population was much larger than Chuathbaluk's population of people in the study years (Table 1; U.S. Census 2000).

Krauthoefer and Koster (2006) determined that in 2003, 2004, and 2005 moose were taken from Units 18, 19, and 21 by residents of the communities in the request (**Table 5**). No household from any of the four communities reported taking a moose in Unit 21E in 2003. In 2004 an estimated 6 moose total were taken in Unit 21E by residents of the four communities; and in 2005, an estimated 5 moose total were taken in Unit 21E by residents of the four communities. This is 0%, 9%, and 8%, respectively, of the total moose harvest of all four communities combined in 2003, 2004, and 2005. However, Lower Kalskag and Chuathbaluk had no reported moose harvest in Unit 21E in the any of the three survey years. It is important to note that residents of these communities were not longer eligible to participate in the winter hunt in Unit 21E beginning in 2003/2004.

Another source of information is the ADF&G harvest ticket database. It should be noted that many rural Alaska areas have low compliance with harvest ticket systems (cf. Andersen and Alexander 1992). Because of the potential for underreporting, conventional ADF&G harvest reporting systems do not always reflect the true level of harvest. From 1983 to 2006 a cumulative total of 80 returned permits reported hunting in Unit 21E by residents of the four communities, and a cumulative total of 47 moose harvests were reported in Unit 21E (Table 6). Only Chuathbaluk did not report hunting moose in Unit 21E during this period.

**Table 3.** The use and harvest of moose based on household surveys, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, all study years (ADF&G 2008b).

Community	Study Year	Percentage of Households					Moose Harvest				
		Using Moose (%)	Hunting Moose (%)	Harvesting Moose (%)	Giving Moose (%)	Receiving Moose (%)	Reported (Number)	Expanded to Households Not Surveyed (Number)	Lower Estimate (Number)	Higher Estimate (Number)	95% Confidence Interval (+/- %)
Aniak	2003	85	62	15	16	74	12	24	12	37	53
	2004	80	71	23	24	65	23	38	25	51	33
	2005	80	62	25	22	60	34	46	31	55	19
Chuathbaluk	1983	NA	72	24	NA	NA	16	16	16	16	0
	2003	29	35	18	18	24	3	5	3	10	103
	2004	59	35	6	12	53	1	1	1	1	0
Kalskag	2003	74	62	24	24	62	14	30	14	53	75
	2004	36	41	17	8	24	10	12	10	15	29
	2005	40	30	3	3	37	1	2	1	8	279
Upper Kalskag	2003	74	59	29	26	59	12	21	12	32	51
	2004	72	76	16	14	64	9	9	9	10	14
	2005	59	50	18	15	44	6	12	6	21	78

NA=not asked.

**Table 4.** The harvest of moose by weight per household and per person from harvest surveys, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, all study years (ADF&G 2008b).

Community	Study Year	Percentage of Households					Moose Harvest Levels in Pounds Usable Weight <sup>a</sup>		
		Using Moose (%)	Hunting Moose (%)	Harvesting Moose (%)	Giving Moose (%)	Receiving Moose (%)	Per Household (Pounds)	Per Person (Pounds)	Confidence Interval (+/- %)
Aniak	2003	85	62	15	16	74	79	25	53
	2004	80	71	23	24	65	80	42.5	33
	2005	80	62	25	22	60	109	46	19
Chuathbaluk	1983	NA	72	24	NA	NA	394	87	0
	2003	29	35	18	18	24	95	23	103
	2004	59	35	6	12	53	24	9	0
Lower Kalskag	2003	74	62	24	24	62	222	53	75
	2004	36	41	17	8	24	74	25	29
	2005	40	30	3	3	37	6	5	279
Upper Kalskag	2003	74	59	29	26	59	191	46	51
	2004	72	76	16	14	64	94	26	14
	2005	59	50	18	15	44	48	24	78

NA=not asked.

<sup>a</sup> Conversion factor is 540 lb per moose.

**Table 5.** Estimated harvest of moose by unit from household surveys, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, 2003/04, 2004/05, and 2005/06 (Krauthoefer and Koster 2006).<sup>a</sup>

Unit	Lower Kalskag	Upper Kalskag	Aniak	Chuathbaluk	Total	Percentage
<b>2003/04</b>						
18	13	2	0	0	14	18%
19A	15	10	14	5	44	56%
19B	0	0	2	0	2	3%
19D	0	0	0	0	0	0%
21A	0	0	0	0	0	0%
21E	0	0	0	0	0	0%
Unknown	2	9	8	0	19	24%
Subtotal	30	21	24	5	80	100%
<b>2004/05</b>						
18	1	3	0	0	4	7%
19A	11	4	29	1	45	73%
19B	0	0	0	0	0	0%
19D	0	0	2	0	2	3%
21A	0	0	3	0	3	5%
21E	0	2	3	0	6	9%
Unknown	0	0	2	0	2	3%
Subtotal	12	9	39	1	62	100%
<b>2005/06</b>						
18	0	0	0	0	0	0%
19A	3	8	34	2	47	82%
19B	0	0	1	0	1	2%
19D	0	0	0	0	0	0%
21A	0	0	0	0	0	0%
21E	0	2	3	0	5	8%
Unknown	0	2	0	2	4	7%
Subtotal	3	12	38	4	57	100%

<sup>a</sup> Residents of the four communities were not Federally qualified to participate in the Federal winter hunt in Unit 21E.

**Table 6.** The moose harvest in Unit 1E 1983 - 2006 (ADF&G 2008c and 2008d).

Community	1983-2006 Cumulative Reported Moose Harvest	
	Number of Hunters	Number Harvested
Aniak	50	29
Chuathbulak	0	0
Lower Kalskag	11	9
Upper Kalskag	19	9
<b>TOTAL</b>	<b>80</b>	<b>47</b>

For 2003, 2004, and 2005, survey results document that many households in the communities used moose, ranging from a high of 85% at Aniak in 2003, to a low of 29% at Chuathbaluk in 2003 and 2005 (Table 3). Many households attempted to harvest moose (ranging from 76% at Upper Kalskag in 2004, to 29% at Chuathbaluk in 2005), but few (16% and 0%, respectively) were successful.

The harvests of moose by residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk are shared extensively with other households having kinship and other ties to hunters (Charnley 1983:35; Krauthoefer and Koster 2006). Sharing was documented in 2003, 2004, and 2005, at Lower Kalskag, Upper Kalskag, Aniak and Chuathbaluk. For example, for the three study years in each community, between 24% and 74% of households reported receiving moose from other households (Table 3).

### Chuathbaluk

Charnley's (1983) research offers an in-depth view of the harvest and use of moose in Chuathbaluk. Although over 30 years old, the general use pattern she documented (including seasonality of harvests, work groups, and preferences) is probably being followed today. Some findings of her research, however, are probably less applicable, such as the lack of refrigeration for preserving moose meat. According to Charnley (1983), Chuathbaluk residents hunted moose year-round, however, the intensity of harvest effort was influenced by weather conditions and regulations. Moose were available to hunters July, August, and September in habitats such as willows bordering rivers, creeks, and lakes. Bulls and cows were especially fat during these months (Charnley 1983:9). Bulls entered the rut in late September. In October the better-tasting meat of cows was preferred. In fall, access to moose habitat was possible if and when rivers and creeks were swollen from heavy rain. However, moose were more sedentary in rainy weather and harder to find, and gravel bars, where moose could sometimes be found feeding, became submerged (Charnley 1983:10). Freeze-up along the middle Kuskokwim River usually occurred in November, and it was often unsafe for travel. Warm spells in winter could return rivers and creeks to dangerous conditions for travel by hunters. Deep snow aided hunting by allowing travel by snow machine, and by hampering moose mobility (Charnley 1983:11).

At Chuathbaluk moose hunting was almost always engaged in by the adult and adolescent men (Charnley 1983:17). During September an extended family group that often included the wife, sisters, mother, and daughters of the hunters camped together for up to a week. At this time, generally, women and children gathered berries while men hunted moose and black bear. Sometimes two or three households camped together in one area. The November and February hunts usually involved the male members of a household only, and hunting occurred while checking trap lines and during day or overnight trips from the village. In February, camping was limited by cold weather (Charnley 1983:17).

During house to house interviews residents of Chuathbaluk reported hunting moose in Unit 21E in the area of Paimiut, located in Unit 21E, between 1980 and 1983 (ADF&G 1986:Plate 3). It is important to note that Chuathbaluk was re-established as a village in 1954 for religious purposes by people from other villages, including Aniak, Crooked Creek, Sleetmute, Upper Kalskag, Napaimute, and Crow Village (Charnley 1983:21–22). As a result, and perhaps not surprisingly, moose hunting areas documented by Charnley in 1983 reflected individuals' affiliations to their original villages. These use areas, located in Unit 19, were described as follows, beginning with community of residence: Upper Kalskag—the Whitefish Lake area; Crow Village—Discovery and Swift creeks, and the Aniak River; Aniak—the Aniak River; Napaimute—the Holokuk River; Crooked Creek—the Oskawalik and George rivers; and Sleetmute—the Holitna and Hoholitna rivers.

Chuathbaluk is not located in immediate proximity to a major Kuskokwim tributary that has high natural resource potential (Charnley 1983:22). However, Charnley (1983) noted that since living in Chuathbaluk,

residents had begun to utilize smaller tributaries in the vicinity of the village, all located in Unit 19A, including Veahna Creek, the Kolmakof River, and the Owhat River. During the 1982/83 hunting season hunters traveled as far as McGrath, located in Unit 19D, to hunt moose, as competition increased in their traditional hunting areas (Charnley 1983:26).

Aircraft were seldom used in moose hunting by residents of Chuathbaluk, and moose were typically hunted from boats in the fall. Motors were shut off and boats were allowed to drift downstream, guided by oars. Most moose hunting took place within one mile of either side of the waterway that was being hunted (Charnley 1983:13–15). Snow machines also were used to travel to areas where moose were likely to be found. Fresh tracks were followed on snow machine or foot. Moose were sometimes tracked with snowshoes to beds where they were resting for the day (Charnley 1983:15).

Generally, moose were butchered at the kill site by members of hunting parties, taken back to the village, and further processed (Charnley 1983:18). According to Chuathbaluk residents, in their lifetimes meat was dried and smoked at fall hunting camps. When enough animals had been taken, skin boats were constructed using the animal hides, and the hunters drifted back downstream (Charnley 1983:13).

According to Charnley (1983:13), dry meat was a staple food eaten throughout the summer when families were at fish camp. In 1982 electricity became available in Chuathbaluk, and at that time most residents did not own freezers and did not plan on acquiring one immediately due to the expense (Charnley 1983:31). Most villagers depended on the weather to prevent their meat from spoiling. For this reason, hunting seasons that occurred during months when temperatures had already fallen below freezing were preferred. The hind and front quarters and rump were commonly hung in a salmon smokehouse, or suspended from a rack, wrapped with material such as burlap to protect them from animals (Charnley 1983:32).

During warm months, meat was placed in garbage bags and submerged in creeks to be kept cool. If meat was hung it was also brushed with a brine solution to discourage flies from laying eggs. The large, butchered parts of the animal such as legs, rump, and ribs were smoked to create a hardened outer layer over the meat. This protective layer kept flies off of the meat (Charnley 1983:32).

Preparing moose meat for meals commonly meant boiling it, and less often frying, roasting, and barbecuing. Marrow from the leg bone was considered a delicacy. Moose head soup was a favorite dish, the nose, tongue, cheek meat, and brains being the most desirable parts. The liver, heart, kidneys, part of the stomach muscle, and one of the four stomachs were all eaten. Moose fat was highly valued and was cooked and eaten or rendered into oil (Charnley 1983:34).

### Aniak

At Aniak, Brelsford et al. (1987) studied the period 1964–1986 and reported that:

*Harvest areas employed by the people of Aniak are particularly extensive, ranging along the Kuskokwim River from near Tuluksak to McGrath, and from the Iditarod Flats southward to the Aniak-Chikuminuk Lake complex [including areas located in Unit 21E]. The large number of households at Aniak contributes to make the community pattern especially widespread. This also is influenced by the distinctive pattern of a small number of Aniak households who employ aircraft extensively in their hunting and trapping activities (Brelsford et al. 1987:21; bracketed text inserted by analysis author).*

*The focus of harvest was the lowlands between the Kuskokwim River and the Kilbuck Mountains, on the Aniak River, in an area north of Aniak, in the George River Basin, and throughout the Holitna Basin. However, other areas also were used (Brelsford et al. 1987:21–22, cf. FWS 1996a:Western Interior 27). Brelsford et al. (1987:21) observed that at Aniak in the mid-1980s households used aircraft in their hunting and trapping activities.*

### Upper and Lower Kalskag

According to the Yukon Delta National Wildlife Refuge comprehensive conservation plan (FWS 1988), for Upper and Lower Kalskag,

*Moose hunting occurs in a large area extending up the Kuskokwim River to the refuge boundary and beyond and north of the communities to the Yukon River, particularly in the Paimiut Slough area [located in Unit 21E] during the winter. The Aniak drainage including the Whitefish Lake area is hunted as well (FWS 1988:183; bracketed text inserted by analysis author).*

### Summary

In summary, the communities of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk use only a part of Unit 21E, primarily the area that was used by residents of Paimiut, the Paimiut Slough area, in winter (ADF&G 1986:Plate 3; Brelsford et al. 1987:21; FWS 1988:183). Descendants of Paimiut residents currently reside in middle Kuskokwim communities, including Lower Kalskag, Upper Kalskag, and Aniak (Pete 1991:19; YKDSRAC 2008:79, 81–82). This hunting pattern differs from that of the GASH communities in Unit 21E that are known to hunt moose in areas of the entire 21E subunit (Brown et al. 2004; Brown and Koster 2005; Wheeler 1998).

Additionally, access to Unit 21E by these communities is overland in winter, typically by snow machine or snowshoes. Several factors have been identified that influence the decision to travel to Paimiut Slough to hunt moose (Charnley 1983:44–47). One is a low success rate in the fall season, and second is if favorable travel conditions occur in February. If favorable travel conditions do not exist, hunters are unlikely to travel to the area.

### **Effects of the Proposal**

If this proposal is adopted, residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk would be eligible to harvest moose in Unit 21E under Federal regulations. Conservation concerns are addressed through implementation of seasons and harvest limits and are not part of the consideration in making customary and traditional use determinations. No effects on non-Federally qualified users are anticipated as the February season in the area is currently closed to nonsubsistence uses. If the proposal is not adopted, the communities of Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag would continue to not be able to harvest moose under Federal regulations on Federal public lands in Unit 21E.

### **OSM PRELIMINARY CONCLUSION**

**Support** Proposal WP10-69 **with modification** to include the Paimiut Slough area of Unit 21E only, and to exclude Chuathbaluk.

The modified regulation should read:

Customary and Traditional Use Determination

**Unit 21E—Moose**

***South of a line beginning at the western boundary of Unit 21E near Tabernacle Mountain, extending easterly to the junction of Paimiut Slough and Innoko Slough, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—Residents of Unit 21E, Aniak, Kalskag, Lower Kalskag, and Russian Mission.***

***Remainder—Residents of Unit 21E and Russian Mission.***

**Justification**

Based on a review of the eight factors, residents of Lower Kalskag, Upper Kalskag, and Aniak have demonstrated customary and traditional uses of moose in a wide area accessible to them by boat and snow machine, including the Paimiut Slough area of Unit 21E; however, information to support a recommendation for Chuathbaluk is very sparse. This is based on the data collected during three annual household surveys and reported on harvest tickets to ADF&G since 1983, and the findings of ethnographic studies describing areas used by the communities to harvest moose.

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<b>WP10-72 Executive Summary</b>	
<b>General Description</b>	WP10-72 requests that the closure to harvest coyotes on Federal public lands be rescinded. <i>Submitted by the Seward Peninsula Regional Advisory Council</i>
<b>Proposed Regulation</b>	<p><b>Unit 22 — Coyote Hunting</b>  <i>Federal public lands are closed to the taking of coyotes</i>      <i>No Federal open season</i></p> <p><b>Unit 22 — Coyote Trapping</b>  <i>Coyote, incidentally taken with a trap or snare intended for red fox or wolf, may be used for subsistence purposes</i>      <i>No Federal open season</i></p>
<b>OSM Preliminary Conclusion</b>	<b>Support</b>
<b>Seward Peninsula Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Neutral</b>
<b>Written Public Comments</b>	<b>None</b>

**DRAFT STAFF ANALYSIS  
WP10-72**

**ISSUES**

WP10-72, submitted by the Seward Peninsula Regional Advisory Council, requests that the closure to harvest coyotes on Federal public lands be rescinded.

**DISCUSSION**

The proponent is requesting the Federal harvest season for coyotes be reopened to allow harvest of coyotes on Federal public lands under State regulations. The proponent states that the closure is not needed due to the limited amount of coyotes within Unit 22 and subsequently there not being a Federal harvest season. The proponent states rescinding the closure of Federal public lands to harvesting coyotes will allow individuals to harvest coyotes on Federal public lands under State regulations.

**Existing Federal Regulations**

**Unit 22 — Coyote Hunting**

*Federal public lands are closed to the taking of coyotes* *No Federal open season*

**Unit 22 — Coyote Trapping**

*Coyote, incidentally taken with a trap or snare intended for red fox or wolf, may be used for subsistence purposes* *No Federal open season*

**Proposed Federal Regulations**

**Unit 22 — Coyote Hunting**

*Federal public lands are closed to the taking of coyotes* *No Federal open season*

**Unit 22 — Coyote Trapping**

*Coyote, incidentally taken with a trap or snare intended for red fox or wolf, may be used for subsistence purposes* *No Federal open season*

**Existing State Regulations**

**Unit 22 — Coyote Hunting**

*2 coyotes.* *Sept. 1 – Apr. 30*

**Unit 22 — Coyote Trapping**

*No limit* *Nov. 1 – Apr. 15*

## **Extent of Federal Public Lands**

Federal public lands comprise 32% of Unit 22 and consist of 18% Bureau of Land Management, 12% National Park Service (NPS), and 2% Fish and Wildlife Service (FWS) lands. The NPS managed lands are part of the Bering Land Bridge National Preserve. The FWS lands are managed as a small portion of the Yukon Delta National Wildlife Refuge in Unit 22A (see **Unit 22 Map**).

## **Customary and Traditional Use Determinations**

All rural residents of Unit 22 have a positive customary and traditional use determination for coyote in Unit 22.

## **Regulatory History**

In 1995, Proposal 45 requested the closure of Federal public lands to hunting and trapping coyote in Unit 22 and was subsequently adopted by the Federal Subsistence Board. The Seward Peninsula Regional Council at the time felt that there should not be an open season for a resource that does not exist in the region and that regulations should reflect the reality of the animals that exist in the region (SPSRAC 1995). The Council provided a modification to close Federal public lands to all taking, except incidental take by trapping (FWS 1995).

## **Biological Background**

There is a lack of information regarding coyote in most parts of Alaska and specifically for Unit 22. In 1999, the Alaska Department of Fish and Game (ADF&G) received the first report of coyotes in Unit 22 from a trapper harvesting two coyotes in the Unalakleet River drainage in Unit 22A (Persons, K. 2001). Previously, ADF&G had no recorded account of coyote in Unit 22.

Coyotes have expanded their range in Alaska over the past 50 years and are most prominent in the Kenai Peninsula, Matanuska-Susitna valleys, and Copper River Valley. Populations were first reported in Southeast Alaska and have expanded north into the Tanana Valley (Thurber and Peterson 1991). Potential immigration from areas surrounding Unit 22 contain few records of coyote north of the Yukon River but small populations do occur (ADFG 2009) and occasional coyotes have been harvested in the Goodnews River drainage, the Kwethluk River and the Andreafsky River drainages in Unit 18 (Seavoy 2001). Coyotes also are reported as being rare in Unit 21 and only three coyotes were reported harvested between 1989–2000 from fur acquisition reports and fur export permits (Stout 2001). No coyote harvest has been reported in Unit 23 and trapping questionnaires list coyotes as being not present (Blejwas 2006).

Available food is the major factor in regulating coyote abundance, especially in the winter and influences broad aspects of coyote populations including survival, reproduction, and spatial-use patterns and density (Gese et al. 1996 and Knowlton 1999). Potential prey sources within Unit 22 would determine successful immigration of coyotes from other areas. Coyotes are typically classified as generalist predators, however, research in the Central Alaska Range (CAR) in Unit 20A showed coyotes functioned more as prey selection specialists focusing primarily on snowshoe hares, with alternative prey varying between carrion in the CAR (Prugh 2005), voles in the southwest Yukon (O'Donoghue et al. 1998) and on Dall sheep lambs during periods of deep snow drifts in the winter or during the spring lambing season in the CAR (Arthur 2003). However, the distribution of snowshoe hares is primarily in Interior Alaska as they typically inhabit boreal and mixed spruce forests and brushy areas (Prugh 2005) and therefore would not be a possible prey source for coyotes in the Seward Peninsula except possibly in areas west of Koyuk. Arctic or tundra hares inhabit western coastal Alaska and can be found in upland tundra and rocky slopes

and would potentially be the prey source for immigrating coyotes in Unit 22 (ADFG 2009, Murray 2003) as hare numbers have been high for a number of years (Bente 2008). The population status of tundra voles in Unit 22 is unknown, but may be a possible additional prey source for coyotes seeking to expand their range into Unit 22. Dall sheep inhabit mountain ranges in Alaska and therefore, do not occur in Unit 22 (ADFG 2009). Carrion of large ungulates (caribou and muskoxen) in Unit 22 would be the most likely prey source and would potentially increase coyote populations in Unit 22 if coyote immigration occurred. In northern climates, coyote litter size has been shown to increase with a prevalence of ungulate carcasses from winter mortality because large meat sources are available to ovulating female coyotes (Gese 1996, O'Donahue 1998).

### **Management Direction**

The current ADF&G management objectives for the coyote population in Unit 22 are undefined. ADF&G lists several furbearers, excluding coyote, in Unit 22 and has a management goal to maintain viable numbers of furbearers and monitor harvest through the fur sealing program, annual hunter/trapper questionnaires, and Community-based Harvest Assessments conducted annually in selected Unit 22 villages.

### **Harvest History**

Only 4 species of the 15 defined as furbearers by the Alaska Department Fish and Game are required to be sealed throughout Alaska. Coyote is not required to be sealed and consequently, information on numbers and distribution throughout the state is extremely limited. ADF&G relies upon trapping reports to determine the population status of coyotes within Alaska. However, the most recent furbearer management report by ADF&G (Persons and Gorn 2007) does not list coyote as one of the furbearers found in Unit 22. In the 2007 Furbearer Management Report, trappers listed coyote as the ninth (of 13) most valuable species to trap and listed it as the tenth most valuable in the arctic and western regions of Alaska. Most of the furbearer harvest in Unit 22 is by subsistence and recreational users or is done opportunistically by local residents while engaged in other activities (Persons and Gorn 2007).

Since 1999, limited harvest information has been collected through sporadic household surveys in some communities in Unit 22, however, these surveys focus primarily on big game harvest and the only furbearer data collected in these surveys is on wolves and wolverines (Persons and Gorn 2007). Trapper surveys provide additional information for most furbearers; however coyote has not been included in Unit 22 (Persons and Gorn 2007). The most recently available trapping report (2004–2005) generated by ADF&G lists coyotes as being scarce within Unit 22 with no change in the population trend for the previous four years and recorded eleven coyotes harvested for Unit 22 for this time period (Blejwas 2006).

There is no specific harvest data available for coyotes on Federal lands in any part of Alaska. The Federal database only has trapping records for beaver, lynx, otter, wolf and wolverine.

Fur acquisition and fur export reports are another index to coyote harvest within Alaska. Despite inherent difficulties in this data due to significant under-reporting by trappers keeping coyote furs for self-use or exaggerated harvest for a specific year if trappers eventually sell furs from previous years, it does provide a very broad indicator of coyote harvest over longer periods of time. However, this information is statewide and individual units are not reported.

## Effects of the Proposal

By rescinding the closure and not establishing a Federal season of hunting coyotes on Federal lands, individuals would be able to hunt or trap a coyote opportunistically under State regulations.

## OSM PRELIMINARY CONCLUSION

### Support Proposal WP-72

#### Justification

Most of the furbearer harvest in Unit 22 is by subsistence and recreational users or is done opportunistically by local residents while engaged in other activities (Persons and Gorn 2007). Specifically for coyote, there is a lack of information for most parts of Alaska and specifically for Unit 22 with the only known report of coyote in Unit 22 being from a trapper harvesting two coyote in the Unalakleet drainage in Unit 22A in 1999 (Persons, K. 2001). Potential immigration from areas surrounding Unit 22 contains few records of coyotes in Unit 18, 21, or 23. Coyotes are not required to be sealed and consequently, information on numbers and distribution throughout the state is extremely limited. By rescinding the closure and not establishing a Federal season of hunting coyotes on Federal lands, individuals would be able to hunt or trap a coyote opportunistically under State regulations.

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**Alaska Department of Fish and Game**  
***Comments to the Regional Advisory Council***

**Wildlife Proposal WP10-72:** This proposal allows for federal subsistence use of incidental catch of coyotes taken by federally qualified subsistence users under federal regulations during the federal subsistence trapping season for red fox and wolf in Unit 22.

**Introduction:** Coyotes are expanding their range and abundance throughout much of western Alaska. This proposal allows for federal subsistence use of coyotes accidentally trapped as non-target species in Unit 22. The state allows hunting and trapping of coyotes in Unit 22; however, federal subsistence regulations do not have open seasons for either hunting or trapping.

**Impact on Subsistence Users:** None. Subsistence users can already harvest coyote under state regulations on federal and nonfederal lands. Allowing the use of incidental catch under federal subsistence trapping regulations is not likely to impact the take or subsistence use of coyotes.

**Opportunity Provided by State:** In Unit 22, regulations for coyote are:

Hunting: (Coyotes are classed as ‘Fur Animal’; take requires a state hunting license) the season in September 1 through April 30 with a bag limit of 2 coyotes.

Trapping: (Coyotes are classed as ‘Furbearer’; take requires a state trapping license) the season is November 1 through April 15 with no bag limit.

**Conservation Issues:** Coyotes are expanding their range, and trapping or hunting take is not considered an impediment or conservation concern.

**Recommendation:** Neutral; hunting and trapping of coyotes for subsistence use are already provided on federal public lands under state regulations.

<b>WP10-76 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-76 requests the addition of Unit 22 to the list of areas from which the skin, hide, pelt or fur, including claws, of brown bears harvested under Federal subsistence regulations can be used to make handicrafts for sale. <i>Submitted by the Seward Peninsula Subsistence Regional Advisory Council</i>
<b>Proposed Regulation</b>	§ __.25(j)(7) <i>If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur of a brown bear (including claws) taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park) 25 and 26.</i>
<b>OSM Preliminary Conclusion</b>	<b>Support</b>
<b>Seward Peninsula Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Defer</b> action on this proposal until the work group completes its work on finding solutions to protect subsistence users and the resource.
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-76

### ISSUES

Proposal WP10-76, submitted by the Seward Peninsula Subsistence Regional Advisory Council, requests the addition of Unit 22 to the list of areas from which the skin, hide, pelt or fur, including claws, of brown bears harvested under Federal subsistence regulations can be used to make handicrafts for sale.

### DISCUSSION

The Seward Peninsula Subsistence Regional Advisory Council (Council) stated that it submitted the proposal so that subsistence users may more fully utilize brown bears they harvest under Federal subsistence regulations. The Federal Subsistence Board (Board) and the Subsistence Regional Advisory Councils, statewide, have considered several proposals related to brown bear handicrafts and have repeatedly emphasized the importance of the region-specific approach to bear handicraft regulations (FSB 2004: 209–274). The Council has discussed the sale of bear handicrafts extensively during eight of their meetings since 2002. The addition of Unit 22 to the list of units with brown bear handicraft regulations is consistent with Section 803 of ANILCA, where the term “subsistence uses” means,

*... the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of non-edible byproducts of fish and wildlife resources taken for personal and family consumption; for barter, or sharing for personal or family consumption; and for customary trade.*

#### Existing Federal Regulation: Bear Handicrafts

*§ \_\_.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur of a brown bear (including claws) taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 23, 24B (only that portion within Gates of the Arctic National Park) 25 and 26.*

#### Proposed Federal Regulation: Bear Handicrafts

*§ \_\_.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur of a brown bear (including claws) taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park) 25 and 26.*

#### Extent of Federal Public Lands

Federal public lands comprise approximately 32% of Unit 22 and consist of 18% Bureau of Land Management (BLM) 12% National Park Service (NPS), 2% and U.S. Fish and Wildlife Service (FWS) lands (**Unit 22 map**).

## Customary and Traditional Use Determinations

Rural residents of Unit 22 have a positive customary and traditional use determination for brown bear in Unit 22.

## Regulatory History

The Board has considered numerous proposals regarding the sale of handicrafts made from the nonedible byproducts of black and brown bears harvested under Federal subsistence regulations. The Board has adopted bear handicraft regulations for the regions that have requested them and has acknowledged the importance of region-specific regulations because of cultural differences throughout the state. The Council has discussed handicrafts made from bear parts, in detail, during its 2002, 2004, 2005, 2006, 2007, 2008 winter meetings and at both its winter and fall 2009 meetings (SPSRAC 2009: 96–98; SPSRAC 2008: 100–102; SPSRAC 2007: 24–26; SPSRAC 2006: 40–50; SPSRAC 2005: 25, 28–33; SPSRAC 2004: 23–26; SPSRAC 2002: 53–56 ). They have opposed most proposals to restrict the sale of handicrafts made from bear parts where allowed in other regions of the state.

In 2002, the Board considered a statewide proposal, WP02-01, to classify black and brown bears as furbearers for the purpose of allowing the sale of bear hides and parts. While the Board denied this request, citing conservation concerns, it adopted a regulation allowing the use of black bear fur for handicrafts, seeking to align with the regulation adopted by the State of Alaska in 1998 (FWS 2002: 2). The Council voted to oppose the proposal in deference to diverse beliefs about bears throughout the state and because black bears are not common in their region (SPSRAC 2002:53–56).

In 2004, the Board considered Proposal WP04-01 to allow the sale of handicraft items made from the fur of brown bear. This same proposal was submitted to and adopted by the Alaska Board of Game in spring 2004. After extensive discussion, the Board adopted Federal regulations that allow for the sale of handicrafts made from brown bear fur including claws. Various Regional Advisory Councils held different views of the proposal. The Board adopted the proposal, but only for those three regions whose Regional Advisory Councils considered it appropriate: Eastern Interior, Bristol Bay and Southeast Alaska (Units 1–5, 9A–C, 9E, 12, 17, 20 and 25) (FWS 2004: 16). The Council voted to oppose the proposal because they harvest bears for meat and were concerned about the impact of the sale of bear handicrafts and also in deference to diverse beliefs regarding bears throughout the state (SPSRAC 2004: 23–26).

In 2005, Proposal WP05-01, which asked to clarify the definition of bear handicrafts to include fur and claws and to prevent commercial sale of bear handicrafts, was submitted by the USFWS (FSB 2005: 198). The proposal addressed regulations for the sale of handicrafts made from both black and brown bears. The Board adopted the proposal with modifications. The Council deferred the proposal to those regions that recommended allowed sales of bear handicrafts (SPSRAC 2005: 25, 28–33).

As noted above, Proposal WP05-01 was intended to clarify the definition of bear handicrafts and to prevent commercial sales of bear handicrafts. The Board acted on all elements of that proposal except the language addressing commercial sales. In 2006, Proposal WP06-01 was submitted by the Board to limit commercial sales of bear handicrafts (FWS 2006:8). The Council opposed this proposal because it was concerned about restrictions on customary trade. This proposal was discussed subsequent to the Board's adoption of regulations for customary trade of subsistence harvested fish in January 2003 (FSB 2003). The Council did not want to see future regulation of customary trade of other subsistence resources (SPSRAC 2006: 40–50).

In 2007, Proposal WP07-01 was submitted by the Alaska Department of Fish and Game (ADF&G) and requested that claws be removed from the Federal definition of fur and that sales of handicraft items made from the claws, bones, teeth, sinew, or skulls of black and brown bears to be allowed for sale only between Federally qualified subsistence users statewide (FWS 2007: 10). The Council voted to oppose this proposal because they did not want to limit the ability of subsistence harvesters in other regions to sell bear claw handicrafts (SPSRAC 2007: 24–26).

In 2008, Proposal WP08-05 was submitted by the ADF&G and requested the removal of all unit-specific regulations related to the sale of brown bear handicrafts made of skin, hide, pelt or fur. It also requested that the sales of brown bear handicrafts made of claws, bones, teeth, sinew or skull should occur only between Federally qualified subsistence users (FWS 2008: 183). The Council voted to oppose this proposal in deference to regions that allow for the sale of brown bear handicrafts. At this meeting, the Council decided to consider a proposal to add Unit 22 to the list of regions that allow for the sale of handicrafts made from brown bear parts (SPSRAC 2008: 100–102).

At its spring 2008 meeting, the Board addressed Proposal WP08-05 and, at the request of the ADF&G, deferred action on the proposal pending the formation of a brown bear claw handicraft working group. The working group was charged with developing a method of tracking brown bear claw handicrafts that are sold. The Board directed that the group include representatives from all interested Subsistence Regional Advisory Councils and State and Federal staff (FSB 2008: 102–119). This proposal is still being deferred pending the outcome of the brown bear claw handicraft working group. An update on the workgroup has been provided under the discussion of Proposal WP10-02.

Proposal WP10-76 is the result of discussions at the winter 2009 Council meeting. The Office of Subsistence Management staff presented a briefing on the ADF&G's request for the formation of a brown bear handicraft working group. This briefing prompted a discussion on the practical aspects of the sale of brown bear claw handicrafts. During this meeting, the Council decided to propose the inclusion of Unit 22 to the list of areas from which the skin, hide, pelt or fur, including claws, of brown bears harvested under Federal subsistence regulations can be used to make handicrafts for sale (SPSRAC 2009: 96–98).

### **Effects of the Proposal**

The Federal subsistence harvest limit for brown bear in Unit 22 is one bear per year. This proposal does not change the harvest limit. Therefore, if adopted, it would have little or no effect on bear populations or on other users. Adoption of this proposal will allow for increased utilization of brown bears already harvested under Federal subsistence regulations. Adoption of this proposal may provide subsistence users with a small amount of cash if they opt to make and sell handicrafts from the skin, hide, pelt or fur, including claws, of brown bears harvested for food. As noted, subsistence harvest limits for brown bears are in place and these regulations dictate that edible meat must be salvaged. Thus, the amount of brown bear skin, hide, pelt or fur, including claws, for handicrafts is limited by these regulations.

### **OSM PRELIMINARY CONCLUSION**

**Support** Proposal WP10-76.

### **Justification**

In the past, the Council has supported the sale of brown bear claw handicrafts in other regions. The addition of Unit 22 to the list of areas from which the skin, hide, pelt or fur, including claws, of brown bears harvested under Federal subsistence regulations can be used to make handicrafts for sale is

consistent with Section 803 of ANILCA. Adoption of this proposal will allow for increased utilization of brown bears already harvested under Federal subsistence regulations. Adoption of this proposal may provide subsistence users with a small amount of cash if they opt to make and sell handicrafts from the skin, hide, pelt or fur, including claws, of brown bears harvested for food. As noted, subsistence harvest limits for brown bears are in place and these regulations dictate that edible meat must be salvaged.

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**Alaska Department of Fish and Game**  
***Comments to the Regional Advisory Council***

**Wildlife Proposal WP10-076:** This proposal adds Unit 22 to the list of units where it is legal to sell brown bear handicrafts (including claws) made by federal subsistence users from brown bears harvested under federal subsistence regulations.

**Introduction:** The Seward Peninsula Regional Advisory Council submitted this proposal to reverse their previous decision prohibiting sales of handicrafts made from federal subsistence harvested brown bears in Unit 22. The previous position was based on the Council's conclusion that sale of brown bear handicrafts was not customary and traditional for residents of this region. Existing federal regulations authorize sale of federal subsistence brown bear handicrafts in Units 1-5, 9A-C, 9E, 12, 17, 20, and 25. This proposal requests adding Unit 22 as an authorized area.

State regulations prohibit the buying, selling, or bartering of any part of a black or brown/grizzly bear, except an article of handicraft made from the fur of a bear.

Handicraft is defined as: a finished product in which the shape or appearance of the natural material has been substantially changed by skillful use of hands, such as sewing, carving, etching, scrimshawing, painting, or other means and which has substantially greater monetary and aesthetic value than the unaltered natural material alone.

**Conservation Issues:** Brown bear harvests have increased since incremental liberalization of seasons and bag limits were initiated in 1997. Recent unit-wide harvests are approximately 85% higher than the 5-year average harvest prior to 1997. Providing an economic incentive might further increase brown bear harvests. The state-wide prohibition in state regulations is intended to reduce the take of brown bears for economic purposes. Adopting this proposal as written compounds problems with the international trade of endangered species and contributes to the illegal harvest, overharvest, and waste of bears in Alaska and in other states and countries. With the North American brown and black bears listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and brown bear populations in the 48 conterminous states listed as threatened under the Endangered Species Act, regulations allowing unlimited and untracked sales of bear claws, teeth, bones, and skulls violate sound wildlife management principles.

**Enforcement Issues:** Without uniform regulations applicable to state and federal subsistence harvested brown bears, the sale of handicraft bear claws, as proposed, will create an enforcement problem and increase risk of enforcement action on legitimate subsistence users. Different state and federal subsistence regulations will be difficult to enforce in Unit 22 because of the patchwork of land status and uncertainty of the source of harvested bears that are turned into handicrafts.

**Other Comments:** A brown bear handicraft committee was formed to address some of the State of Alaska's concern, on behalf of the legitimate subsistence user and management of the resources. This workgroup is comprised of Regional Advisory Council members, federal and state biologists, and federal and state enforcement officers. Progress towards finding solutions to

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the state concerns have been made during the work group meeting held in 2009. Further meetings are necessary to complete the task of developing a means to ensure Alaska's brown bear resources, the federal subsistence users, and handicrafts buyers are protected.

**Recommendation:** Defer action on this proposal until the work group completes its work on finding solutions to protect subsistence users and the resource.

<b>WP10-80 Executive Summary</b>	
<b>General Description</b>	WP10-80 requests that the winter moose season in Unit 22A remainder be shifted from January 1–31 to January 15–February 15. The shift in season timing would better allow the communities of Stebbins and St. Michael to meet their subsistence needs. <i>Submitted by the Stebbins Community Association</i>
<b>Proposed Regulation</b>	<p><b>Unit 22A—Moose</b></p> <p><i>Unit 22A remainder—1 bull. However, during the period <del>Dec Jan. 15–Jan.31</del> <b>Feb. 15</b>, only an antlered bull may be taken. Federal public lands are closed to the taking of moose except by residents of Unit 22A hunting under these regulations.</i></p> <p style="text-align: right;"><i>Aug. 1–Sept. 30 <del>Jan. 1–Jan. 31</del> <b>Jan. 15–Feb. 15</b></i></p>
<b>OSM Preliminary Conclusion</b>	<b>Support</b>
<b>Seward Peninsula Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>None</b>

## DRAFT STAFF ANALYSIS WP10-80

### ISSUES

WP10-80, submitted by the Stebbins Community Association, requests that the winter moose season in Unit 22A remainder be shifted from January 1–31 to January 15–February 15. The shift in season timing would better allow the communities of Stebbins and St. Michael to meet their subsistence needs.

### DISCUSSION

The proponent requests the current winter season be shifted from January 1–January 31 to January 15–February 15 due to short daylight and inclement weather making it too difficult to take advantage of the harvest opportunity for moose in Unit 22A remainder. The length of the season would remain the same, but shifting the winter season would more meaningful better opportunity for subsistence hunters.

### Existing Federal Regulation

#### Unit 22A—Moose

*Unit 22A remainder—1 bull. However, during the period* *Aug. 1–Sept. 30*  
*Jan. 1–Jan. 31, only an antlered bull may be taken. Federal public lands*  
*are closed to the taking of moose except by residents of Unit 22A hunting* *Jan. 1–Jan. 31*  
*under these regulations.*

### Proposed Federal Regulation

#### Unit 22A—Moose

*Unit 22A remainder—1 bull. However, during the period* *Aug. 1–Sept. 30*  
~~*Dec Jan. 15–Jan. 31.*~~ ***Feb. 15,*** *only an antlered bull may be taken. Federal public* ~~*Jan. 1–Jan. 31*~~  
*lands are closed to the taking of moose except by residents of Unit 22A* ***Jan. 15–Feb. 15***  
*hunting under these regulations.*

### Existing State Regulation

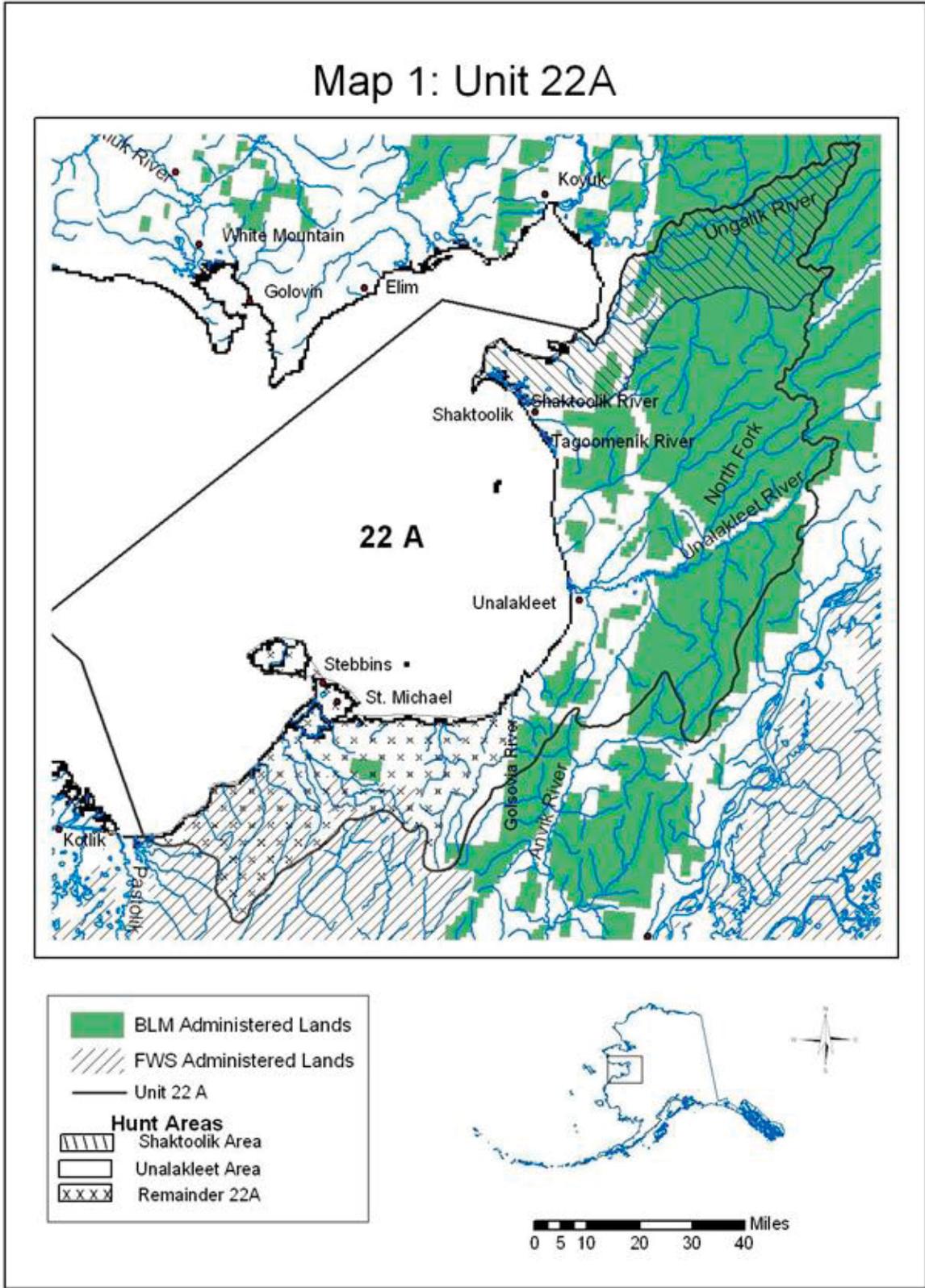
#### Unit 22A—Moose

*1 bull for residents only* *Aug. 1–Sept. 30*  
 OR  
*1 antlered bull for residents only* *Jan. 1–Jan. 31*  
*One bull with 50-inch antlers or antlers with 4 or more brow tines on at* *Sept. 1–Sept. 30*  
*least one side by permit for non-residents.*

### Extent of Federal Public Lands

Federal public lands comprise approximately 60% of Unit 22A. The BLM manages 52 % and the Yukon Delta NWR manages 9% of the Federal public lands in Unit 22A. **(Unit 22A Map).**

# Map 1: Unit 22A



## **Customary and Traditional Use Determinations**

Rural residents of Unit 22 have a customary and traditional use determination for moose in Unit 22A remainder.

## **Regulatory History**

In 2003, the Alaska Board of Game closed the Unalakleet River drainage area for the State nonresident season, shortened the fall resident season by 3 weeks to August 15–September 25 and closed the winter season. Also in 2003, the State issued Emergency Order 05-05-03 shortening the moose season to December 1–December 31 and the harvest limit from one bull to one antlered bull in a portion of Unit 22A in the Golsovia River drainage and south, and closing the winter season north of the Golsovia River drainage.

In 2003, WSA03-14 was adopted by the Federal Subsistence Board (Board) to change the harvest from one bull to one antlered bull and shorten the moose season by 31 days in Unit 22A—remainder (the Golsolvia River drainage and south) and also close the winter season in Unit 22A north of the Golsolvia River drainage.

In 2004, Proposal WP04-70 was adopted with modification by the Board to change 1 antlered moose to 1 bull during the fall season and to shorten the harvest season in Unit 22A, that portion in the Unalakleet River drainage and all drainages flowing into Norton Sound north of the Golsovia River drainage and south of the Tagoomenik and Shaktoolik River drainages by five days, to close September 25th.

In 2005, the Alaska Board of Game passed State Proposal 6, which shifted the resident winter moose season for the remainder of Unit 22A from December 1–December 31 to January 1–January 31 under State regulations. Also in 2005, ADF&G issued Emergency Order 05-08-05, which shifted the resident winter moose season for the remainder of Unit 22A from December 1–December 31 to January 1–January 31.

In 2006, WP06-38 was adopted by the Board to shift the winter moose season in Unit 22A remainder from December 1–December 31 to January 1–January 31. WP06-38 addressed the change of the season made by special action WSA05-12/13 and placed them into permanent regulation.

In 2008, two similar proposals were submitted addressing changes to moose regulations for Unit 22A. Proposal WP08-36, submitted by the Native Village of Unalakleet and adopted with modification by the Board, opened a Federal subsistence moose hunting season in the Unalakleet River drainage in central Unit 22A from August 15–September 14 with a one bull limit. Proposal WP08-37, submitted by the Seward Peninsula Regional Advisory Council and adopted with modification by the Board, had the same request as WP08-36, but added a provision whereby the local Bureau of Land Management (BLM) manager would issue up to 20 Federal permits annually in coordination with the Alaska Department of Fish and Game (ADF&G).

## **Biological Background**

Historically, moose immigrated into the Seward Peninsula in the late 1930s and by the late 1960s became a resident species due to suitable habitat in Unit 22. Moose populations increased during the 1970s and peaked between 7,000 and 10,000 animals during the 1980s (Gorn 2008). Density independent factors were believed to have caused the population to decrease during the early 1990s with several severe winters during that time period (Nelson 1995). Populations within Unit 22 have never recovered to the

peak levels of the 1980s with brown bear predation on moose calves being speculated as the main limiting factor (Gorn 2008). Current population estimates of moose in Unit 22A remains below the management goal of 600–800 animals (Gorn 2008) with recent estimates in 2008 of 339 moose (at 90% C.I. 259–419 moose) (ADF&G 2008). However, the aerial moose census conducted in 2008 showed an increasing trend from a low in 2003 when 75 moose were counted (**Table 1**) (ADF&G 2008).

In addition, there is a State management objective to complete late fall and/or early spring aerial surveys to provide an index of moose population status and trends, sex and age composition, and yearling recruitment. In 2006, a spring survey was completed for the central portion of Unit 22A including the Unalakleet area and classified 137 adults with a recruitment rate of 16% and a ratio of 20 calves:100 adults. In 2007, the spring survey classified 82 adults and found 18:calves:100 adults and 15% recruitment rate. Snow cover was variable between surveys, with the 2006 spring survey having excellent visibility of moose and their tracks due to complete snow cover and the 2007 survey having poor visibility due to lack of snow.

Moose in Alaska typically begin to cast their antlers in late November with most mature males having cast their antlers by early January (Van Ballenberghe 1983). A few small-antlered males may retain their antlers for another 60 or 80 days (Van Ballenberghe 1983).

### **Harvest History**

Although moose have been present in Unit 22 for a relatively short time, they rapidly became an extremely important food source for many Seward Peninsula residents (Persons 2000). Gravel roads and navigable rivers provide easy access to suitable moose habitat in the fall and early winter, and snow machines provide access during the winter season.

The ADF&G harvest ticket database for Unit 22A provides a summary of harvest by nonresident and non-local Alaskans, but local harvest may be underreported. From 2000 through 2008, an average of 13 moose per year were reported taken by residents in Unit 22A via ADF&G moose harvest tickets (ADF&G 2009) (**Table 2**). The southern portion of Unit 22A includes harvests by residents of St. Michael and Stebbins, but much of the moose harvest is not reported on harvest tickets from these areas. However, the most complete moose harvest data from villages is from the large mammal community-based harvest assessments conducted by Kawerak. Since 2000, 62% of the known harvest by residents of Stebbins and St. Michael has occurred in December or January. The preferred time to hunt is during the winter because moose habitat is difficult to access before freeze up.

### **Effects of the Proposal**

Currently, the Federally qualified subsistence user may harvest moose from January 1 to January 31. If the proposal is adopted, the season would be shifted to January 15 to February 15 which allows the same amount of time to harvest a moose, but during a period of the year where more snow coverage is likely. This change is unlikely to have a significant impact on the moose population; therefore, there is no conservation concern at this time. If this proposal is adopted, it would allow the residents of Stebbins and St. Michael to harvest moose when the weather and daylight are more favorable giving more flexibility for Federally qualified subsistence users while having minimal impact on the population. However, most mature bull moose will have cast their antlers by the end of January and therefore, the extension of the harvest season through February 15 may not increase the opportunity for subsistence hunters to harvest an antlered bull. However, immature bulls may cast their antlers later in the spring and could provide an opportunity for harvest.

**Table 1.** Unit 22A moose recruitment surveys in the Unalakleet River drainage (Gorn 2007, Pearsons 2004).

Year	Size of Survey Area	Adults	Calves	Total Moose	Calves: 100 adults	Percent Calves	Estimated Density
1989	1124 mi <sup>2</sup>	273	52	325	19	16	0.29 mi <sup>2</sup>
2003	2000 mi <sup>2</sup>	64	11	75	15	15	0.05 mi <sup>2</sup>
2005	2400 mi <sup>2</sup>	112	10	123	9	8	0.05 mi <sup>2</sup>
2006	2400 mi <sup>2</sup>	137	27	164	20	16	0.05 mi <sup>2</sup>
2008	2400 mi <sup>2</sup>	268	71	339	21	21	0.14 mi <sup>2</sup>
Total	—	854	171	1026	84	66	—
<b>Average</b>	1981 mi <sup>2</sup>	171	34	205	17	15	0.12 mi <sup>2</sup>

**Table 2,** Unit 22A moose harvest reported by residents on moose harvest tickets, 2000-2006 (ADF&G 2009)

Residence	2000	2001	2002	2003	2004	2005	2006	2007	2008
Unalakleet	11	8	13	6	4		2	1	9
St. Michael	1	2	3	2	2	2	3	5	2
Shaktolik		2		2				1	
Stebbins	1	1	4	3		5		4	1
Russian Mission									
Kotlik									
Kaltag		1				1			
Mountain Village					1				
Koyuk							1	2	
Alaknak							1		
Barrow			1						
Fairbanks			1	1				1	
Anchorage		1	1	1		2		1	
Eagle River					1				
Soldotna						1			
Nome									1
<b>Totals</b>	13	15	22	15	8	11	7	15	13

## OSM PRELIMINARY CONCLUSION

### Support Proposal WP10-80

#### Justification

If this proposal is adopted, it will address the interest of the residents of Stebbins and St. Michael to harvest moose in January and February when the weather and daylight are more favorable. However, most mature bull moose will have cast their antlers by the end of January and therefore, the extension of the harvest season through February 15 may not increase the opportunity for subsistence hunters to harvest an antlered bull. However, immature bulls may cast their antlers later in the spring and could provide an opportunity for harvest.

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Comments WP10-80  
January 29, 2010; Page 1 of 1

**Alaska Department of Fish and Game**  
***Comments to the Regional Advisory Council***

**Wildlife Proposal WP10-80:** This proposal changes the federal subsistence winter moose season to January 15 through February 15 in Unit 22A Remainder (described as Unit 22A South in the proposal).

**Introduction:** This proposal requests a two week delay of the winter federal subsistence moose hunt in Unit 22A Remainder. The existing federal subsistence moose hunting winter season dates are January 1 through January 31. The proponent indicates delaying the season by two weeks will potentially increase hunt success.

**Impact on Subsistence Users:** Delaying the winter season opening by 2 weeks later in January will have a slight negative impact on available antlered bulls due to antler-drop during the winter season. Winter travel conditions may improve for hunters with slightly longer day-length.

**Opportunity Provided by State:** In Unit 22A Remainder the following moose hunting regulations were effective in 2009-2010:

One bull by harvest ticket; residents only; season Aug 1-Sept 30;

Or

One antlered bull by harvest ticket; residents only; season Jan 1-Jan 31;

One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket; nonresidents only; season Sept 1- Sept 30.

**Conservation Issues:** Moose populations in Unit 22A Remainder are not censused on a rotational basis by Alaska Department of Fish and Game in Unit 22. However, low hunting effort and probable exchange of moose between local areas and the Yukon River drainage (located easterly of Unit 22A) have provided stable populations that allow state hunting of bulls by harvest ticket for residents and nonresidents. An antlered bull bag limit in the state and federal subsistence winter hunts avoids the take of cows to conserve the population when little is known about bull:cow ratios or total population size. Although data are scant, current harvests are considered to be within sustained yield of the population. Adoption of this proposal will not cause conservation concerns or impede the population objective due to the winter bag limit of antlered bull.

**Enforcement Issues:** No other moose season in Unit 22 goes beyond January 31<sup>st</sup> on federal and non-federal lands due to the lack of available antlered bulls. The number of antlered bulls in February is very few to none, and the department wants to avoid the take of cows.

**Recommendation:** Oppose. The Regional Advisory Council could consider modifying this proposal to pursue establishment of a community harvest hunt under federal subsistence regulations in cooperation with the State which would establish harvest quotas per community. Developing a community harvest program will provide additional opportunity to take harvestable surplus from the growing moose population to meet needs of the communities, improve harvest reporting, and adjust harvest quotas to match biological fluctuations in the population.

<b>WP10-81 Executive Summary</b>	
<b>General Description</b>	Proposal WP10-81 seeks to lower the wolf harvest limit in Unit 22. <i>Submitted by the Alaska Wildlife Alliance</i>
<b>Proposed Regulation</b>	<b>Unit 22—Wolf Hunting</b> <i>No-limit 10 Wolves</i> <span style="float: right;"><i>Nov. 1–April 15</i></span>
<b>OSM Preliminary Conclusion</b>	<b>Oppose</b>
<b>Seward Peninsula Regional Council Recommendation</b>	
<b>Interagency Staff Committee Comments</b>	
<b>ADF&amp;G Comments</b>	<b>Oppose</b>
<b>Written Public Comments</b>	<b>1 Oppose</b>

## DRAFT STAFF ANALYSIS WP10-81

### ISSUES

Proposal WP10-81 was submitted by the Alaska Wildlife Alliance and seeks to lower the wolf harvest limit in Unit 22.

### DISCUSSION

Proposal WP10-81 requests that the harvest limit for wolf hunting in Unit 22 be reduced to 10 wolves. The proponent notes that in Unit 22, wolves are vulnerable to tracking, pursuit and shooting by hunters using snowmachines.

#### Existing Federal Regulation

##### **Unit 22— Wolf Hunting**

*No limit*

*Nov. 1–April 15*

#### Proposed Federal Regulation

##### **Unit 22—Wolf Hunting**

*No limit 10 Wolves*

*Nov. 1–April 15*

#### Existing State Regulation

##### **Unit 22—Wolf Hunting**

*20 Wolves*

*Aug. 1–April 30*

#### Extent of Federal Public Lands

Federal public lands comprise approximately 33% of Unit 22 and consist of 18% Bureau of Land Management (BLM), 11% National Park Service (NPS) and 2% U.S. Fish and Wildlife Service (FWS) lands (see Unit 22 Map).

#### Customary and Traditional Use Determinations

Rural residents of Units 21D (north and west of the Yukon River), 22, 23, and Kotlik have a positive customary and traditional use determination to harvest wolves in Unit 22.

#### Regulatory History

There has been no harvest limit for wolf hunters in Unit 22 since the beginning of the Federal Subsistence Management Program in 1990. Units 25A and 22 are the only units in Alaska that currently have no Federal harvest limit for wolves in the hunting regulations.

The Federal Subsistence Management Program wolf hunting season in Unit 22 extended from August 10–April 30 in 1990. Action taken on a proposal from the Seward Peninsula Subsistence Regional Advisory

Council (Proposal 47) changed the wolf hunting season to November 1–April 15 in regulatory year 1995/96. With a trapping license, during trapping season, a trapper may take free ranging wolves with a firearm on BLM and FWS lands of Unit 22. The Federal Subsistence Management Program wolf trapping season in Unit 22 is from November 1 to April 15 with no harvest limit. Hunters may take wolves under State regulations on FWS, BLM, and Bering Land Bridge Nation Preserve lands in Unit 22.

Defenders of Wildlife submitted a proposal (Proposal 6) to the Alaska Board of Game requesting a November 1–March 31 season and 10 limit for wolf hunters in Unit 22. At its November 2009 meeting, the Alaska Board of Game rejected that proposal noting that the Unit 22 wolf harvest is current low and that there are no conservation concerns for wolves in Unit 22 (Ardizzone 2009, pers. comm.).

### **Biological Background**

Wolves (*Canis lupus*) are found throughout Unit 22 and are well adapted to the mountains, tundra, and river valleys of the unit. Unit 22 contains extensive open habitat. Their main prey is caribou; wolves often move toward areas of high caribou concentrations. Other prey species may be used if caribou are not available; these include reindeer, small mammals, moose, hare, and beaver. Wolves first breed at age two to four and produce pups in dens during the spring. Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Pups constituted about half of the wolf population each August in a central Brooks Range study area, and these young wolves disperse from packs at high rates as yearlings and 2-year-olds (Adams et al. 2008). Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Adams et al. (2008) reported that 7 of 11 dispersing wolves (<36 months old) were subsequently detected 40–430 miles from their initial home range in the Gates of the Arctic National Park and Preserve. Garner and Reynolds (1986) observed that several wolves in northern Arctic National Wildlife Refuge dispersed as far as 500 miles from their home range. Radio collared wolves from other areas of Alaska have been found in Unit 22 (Persons 2006).

The size of the home range is believed to be dependant on prey abundance, the activities of neighboring packs, and each pack's individual habits. As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves (Adams et al. 2008). With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance (Adams et al. 2008).

Since 1960, wolf numbers in Unit 22 have gradually increased and wolves expanded their range westward across the Seward Peninsula (Persons 2006). In 1980 the wolf population was estimated at fewer than 100 wolves (Grauvogel 1980). While there are no recent population estimates, it appears that wolf numbers in Unit 22 have increased based on data from sealing certificates and anecdotal information from observations by staff, reindeer herders, and other local residents (Persons 2006, ADF&G 2009a).

Seasonal movements of the Western Arctic Caribou Herd influences wolf distribution (Ballard et al. 1997, Persons 2006). In some years up to 17% of radio-collared wolf packs followed the migrating Western Arctic Caribou Herd and then returned to their original territory for denning (Ballard et al. 1997). Since 1996, a portion of the Western Arctic Caribou Herd has wintered on the Seward Peninsula, and wolves followed the caribou (Persons 2006). She observed that wolves were most abundant in the southern half of Norton Sound where caribou frequently wintered. The Unit 22 wolf population increased during winter months when caribou were present and wolves were becoming permanent residents of the unit (Persons

2006). Ballard et al. (1997) observed that when caribou densities were low, wolves switched to preying on resident moose.

### Harvest History

The harvest of wolves, and the use, barter, and sale of pelts has long been important for subsistence uses in Unit 22.

State and Federal regulations currently require that wolves harvested in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take and access used. One of ADF&G's management objectives for Unit 22 is to maintain license vendors and fur sealers in all Unit 22 villages (Persons 2006).

From regulatory year 1999/2000 to 2008/09, the reported annual harvest of wolves in Unit 22 ranged from 18 to 66 wolves/year and most were shot (**Table 1**). While ADF&G (ADF&G 2009a) believes that wolf numbers in Unit 22 have increased during recent years, the reported Unit 22 wolf harvest has declined (Table 1). Persons (2006) observed the magnitude of the unreported wolf harvest in Unit 22 is substantial, and fur-sealing data provides a minimum estimate of the harvest. Often hunters and trappers only seal pelts that will be commercially tanned or sold to fur buyers. Many wolf hides are home tanned and used locally, so people see no reason to get them sealed (Persons 2006). Village-based harvest surveys completed in 5 villages in Unit 22 (Stebbins, Unalakleet, St. Michaels, Shaktoolik and Koyuk) in May 2002 and 2003, and June 2004 revealed that only about 1/3 of their wolf harvest was sealed (Persons 2006).

**Table 1.** Reported wolf harvest and method of take for Unit 22 (ADF&G 2009b and 2010).

Regulatory Year	Reported Total Harvest	Method of take for total harvest from Unit 22				
		Trap/snare	(%)	Shot	%	Unk
1999/2000	66	5	8	44	67	17
2000/01	65	4	6	56	86	5
2001/02	41	3	7	38	93	0
2002/03	45	5	11	32	71	8
2003/04	22	1	5	21	95	0
2004/05	39	4	10	34	87	1
2005/06	29	5	17	23	79	1
2006/07	19	3	16	13	68	3
2007/08	18	0	0	18	100	0
2008/09	24	4	17	17	71	3

### Effects of the Proposal

If Proposal WP10-81 is adopted, the Federal wolf hunting harvest limit for Unit 22 would decrease to 10 wolves. This proposal would make the Federal subsistence wolf hunting harvest limit lower than State regulations. Currently, there is no limit on the number of wolves that can be taken by hunters under Federal regulations in Unit 22.

The Unit 22 wolf harvest is not a conservation concern. It appears that wolf numbers in Unit 22 have increased and it is thought that the population is regulated more by natural factors than by the harvest by hunters and trappers (ADF&G 2009a, Persons 2006).

## **OSM PRELIMINARY CONCLUSION**

**Oppose** Proposal WP10-81.

### **Justification**

Wolves have long been an important subsistence resource in Unit 22. The wolf population in Units 22 appears to be increasing and is thought to be regulated more by natural factors than by the harvest by hunters and trappers.

At its November 2009 meeting, the Alaska Board of Game rejected a proposal from the Defenders of Wildlife to shorten hunting season and reduce the harvest limit to 10 wolves in Unit 22.

Even if this proposal were adopted by the Federal Subsistence Board, hunters would still be able to take wolves under State regulations on FWS, BLM, and Bering Land Bridge Nation Preserve lands in Unit 22. As such, adoption of this proposal would not have the effect sought by the proponent.

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Comments WP10-81  
January 29, 2010; Page 1 of 1

**Alaska Department of Fish and Game**  
***Comments to the Regional Advisory Council***

**Wildlife Proposal WP10-81:** This proposal changes the wolf hunting season unlimited bag limit to 10 wolves in Unit 22.

**Introduction:** Wolf populations in Unit 22 are not censused; however, harvest and observation information suggest that populations have increased in recent years. The state bag limit for hunting wolves was set at 20 wolves in 2007 by the Alaska Board of Game. Current season (August 1 through April 30) allows for maximum opportunity within areas that do not have predator management programs. Current harvests approximate 41 wolves per year based on sealing records from 1997-2008 and are considered within sustained yield for the population. Among hunters/trappers taking wolves, no individual has reached the total bag limit of 20 wolves per season. In November 2009, the Alaska Board of Game rejected a proposal to change the hunting season bag limit to 10 wolves (similar proposal to WP10-81).

**Impact on Subsistence Users:** Reducing the bag limit 10 wolves will reduce opportunity for the few federal subsistence users who successfully harvest more than 10 wolves by hunting in Unit 22. Reducing the bag limit to 20 wolves to match the state season would still provide the federal subsistence opportunity but reduce the risk of enforcement due to travel over mixed land ownership.

**Opportunity Provided by State:** In Unit 22 the following wolf hunting regulations were effective in 2009-2010:

Twenty wolves; residents and nonresidents; season August 1 through April 30; tag required for nonresidents; hide must be sealed within 30 days of kill.

**Conservation Issues:** None.

**Enforcement Issues:** Different bag limits for wolves across federal land (approximately 1/3 of the unit) and non-federal lands (2/3 of the unit) will create enforcement problems due to differing land status in Unit 22. Since the customary harvest by individuals is under 20 wolves, which is the state bag limit, a reduction of the bag limit to match the state bag limit would reduce the risk of enforcement actions if individuals are not on federal lands, while continuing to provide the federal opportunity for customary and traditional subsistence by rural residents on federal lands.

**Recommendation:** Oppose as submitted. Support with modification to change the federal subsistence bag limit from “unlimited” to 20 wolves and liberalizing the federal subsistence season to match the state season in order to more closely adopt customary and traditional subsistence use by hunting of wolves and reduce enforcement due to mixed land ownership.

## WRITTEN PUBLIC COMMENTS

**Oppose.** We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

*Alaska Professional Hunters Association*

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council  
c/o U.S. Fish and Wildlife Service, Yukon Delta National Wildlife Refuge  
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Mike Fleagle, Chair  
Federal Subsistence Board  
c/o U.S. Fish and Wildlife Service  
Office of Subsistence Management  
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Anchorage, Alaska 995503

Dear Mr. Fleagle:

The Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (Council) hereby submits its FY 2009 Annual Report, as required under Section 805(a)(3) (D) of the Alaska National Interests Lands Conservation Act (ANILCA) of December 2, 1980. The Council understands and supports the importance of addressing fish and wildlife resource topics annually, expressing its concerns, and addressing long term planning needs that are not addressed through the regulatory cycles during the year. The Council looks forward to your continued guidance and support on the topics listed below.

The harvest of fish and wildlife resources continues to be the single most important need for all rural residents of the Yukon-Kuskokwim Delta for survival and economic dependence. With the continuing drastic governmental budget cuts that rural Alaska areas are facing these days, resulting in financial drawbacks of rural economic support and adverse effects on local economies, dependence on fish and wildlife resources for food is even more important and vital to the residents of Yukon-Kuskokwim Delta. There is growing need to continue hunting and fishing to supplement harvesting food for personal and family needs. The seemingly ever-changing regulations play a big part in restricting harvests of fish and wildlife within the Yukon-Kuskokwim Delta, when it is most needed for food and clothing.

The Council has participated in the deliberations on issues and topics and has recommended regulatory changes for managing the fish and wildlife resources. The Council is very much aware of how these regulatory changes impact the Yukon Delta residents' subsistence activities. Because of its duties and responsibilities, as set forth in the Regional Council Operations Manual, the Council carefully weighs all concerns that are expressed by subsistence stakeholders and other user groups when making its recommendations to the Federal Subsistence Board.

The Council appreciates this opportunity to submit its Fiscal Year 2009 Annual Report. Following are the regional resource concerns of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council.

**Issue 1:** Proactive Management Strategies of Subsistence Resource Populations to Provide and Maintain Adequate Resources to Meet Subsistence Harvest Needs

The Council requests that the Federal Subsistence Board provide guidance to the Federal land managers to develop a strategy or policy guideline to maintain subsistence resources (population of moose herds)

when a subsistence harvest opportunity is restricted or closed due to low wildlife population levels. The management agency of each conservation unit should have in place a management strategy to maintain and rebuild, if necessary, subsistence resources of concern in order to maintain and provide for subsistence harvest opportunities for all Federally qualified users on Federal public lands

**Recommendation:**

The Council encourages the Federal Subsistence Board to proactively manage not only the human aspect of harvest, but to pursue alternatives to ensure that subsistence resources are maintained at a healthy level to sustain subsistence uses. The Council recommends the development of management strategies for each conservation unit. The Yukon-Kuskokwim Delta Subsistence Regional Advisory Council strongly recommends that the Federal Subsistence Board consider this request as a priority item.

**Meetings in FY2009**

On February 25 and 26, 2009, the Council met in Bethel, Alaska and heard changes to the procedures to comment on proposed rules and Federal regulatory change proposals. The Council reviewed documents related to influence of beavers on the Yukon-Kuskokwim Delta because beaver and related issues has been on the Council's annual reports several times over the decade. The Council heard reports from the fisheries resource partners who made presentations on their fisheries programs, whitefish strategic research plan updates from Office of Subsistence Management Program staff, and updates on Bering Sea Chinook Salmon By catch from several agency and organizations staff. The Council also heard updates from the Brown Bear Handicrafts Working Group and joint updates from the Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service on salmon fisheries management on the lower Yukon River and the lower Kuskokwim River regions.

On October 2 and 3, 2009 the Council met in Bethel, Alaska and there were no Federal regulatory change proposals to review. The Council validated proposed wildlife regulatory changes submitted in 2009. The Council heard updates on 2010-2012 wildlife proposals submitted by the Yukon Delta National Wildlife Refuge after the Council met in February 2009. The Council reviewed special action requests to change moose hunt seasons in the lower Yukon River and provided its recommendations to the Federal Subsistence Board. The Council heard reports from fisheries monitoring program staff and provided its recommendations on the draft Yukon region and Kuskokwim region fisheries resource monitoring plan. The Council heard updates on Yukon River and Kuskokwim River salmon post season reports. The Council reviewed Arctic Yukon Kuskokwim region pending State regulatory change proposals that potentially has an effect on regional subsistence fisheries. The Council also heard from other agencies and organization program updates and reports.

Council members were also involved in other fish and wildlife management and related meetings, working group meetings, and fish and wildlife resource workshops throughout the fiscal year.

Thank you for the continued opportunity to assist the Federal Subsistence Management Program in meeting its obligations to protect subsistence uses of fish and wildlife resources on Federal public lands in our region. The Regional Council looks forward to continued discussions about the issues and concerns of subsistence stakeholders of the Yukon-Kuskokwim Delta region.

If you have any questions about this annual report and the past Council involvements, please contact Alex Nick, Regional Council Coordinator at 907-543-1037.

Sincerely,

Lester Wilde, Chair  
Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

cc: Yukon-Kuskokwim Delta Subsistence Regional Advisory Council members  
Regional Team  
Alex Nick  
Pete DeMatteo  
Pippa Kenner  
Don Rivard  
Richard Cannon  
Ann Wilkinson, Council Coordination Division Chief  
Polly Wheeler, Deputy Assistant Regional Director  
Interagency Staff Committee  
Administrative file

## Fall 2010 Regional Advisory Council Meeting Window

*August 30–October 15, 2010 current as of 11/03/09*

Meeting dates and locations are subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Aug. 22	Aug. 23	Aug. 24	Aug. 25	Aug. 26	Aug. 27	Aug. 28
		<b>NS—Barrow</b>				
Aug. 29	Aug. 30 WINDOW OPENS	Aug. 31	Sept. 1 <b>NWA— Kotzebue</b>	Sept. 2	Sept. 3	Sept. 4
Sept. 5	Sept. 6 <b>HOLIDAY</b>	Sept. 7	Sept. 8	Sept. 9	Sept. 10	Sept. 11
Sept. 12	Sept. 13	Sept. 14	Sept. 15	Sept. 16	Sept. 17	Sept. 18
Sept. 19	Sept. 20	Sept. 21	Sept. 22	Sept. 23	Sept. 24	Sept. 25
		<b>KA—TBA</b>	<b>BB—Naknek</b>			
Sept. 26	Sept. 27	Sept. 28	Sept. 29	Sept. 30 <small>END OF FY2010</small>	Oct. 1	Oct. 2
		<b>SE—Sitka</b>			<b>YKD—TBA</b>	
Oct. 3	Oct. 4	Oct. 5	Oct. 6	Oct. 7	Oct. 8	Oct. 9
		<b>WI—McGrath</b>				
Oct. 10	Oct. 11 <b>HOLIDAY</b>	Oct. 12	Oct. 13	Oct. 14	Oct. 15	Oct. 16
			<b>EI—Central</b>		WINDOW CLOSES	
			<b>SC—Cordova</b>			
			<b>SP—Nome</b>			

## Winter 2011 Regional Advisory Council Meeting Window

*February 15–March 24, 2011*

Meeting dates and locations are subject to change.

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

## **OSM UPDATE ON SALMON BYCATCH IN THE BERING SEA/ALEUTIAN ISLANDS POLLOCK FISHERY**

### **Chum Salmon Bycatch Management**

#### *Recent Actions*

- June 2009: The North Pacific Fishery Management Council (Council) started work on the alternatives under consideration for chum salmon bycatch management measures for the Bering Sea/Aleutian Islands Pollock fishery.
- October 2009: The salmon bycatch workgroup, which includes representatives from affected Western Alaska organizations and the commercial fishing industry, met and made recommendations to the Council for further refinements to the chum salmon bycatch alternatives (for the Environmental Impact Statement).
- December 2009: The Council lowered the range of numbers being considered for hard caps (now 50,000 to 353,000; previously 58,000 to 488,000), and lowered the range of numbers being considered for trigger caps (now 25,000 to 200,000). In addition, there were changes made to area closure options for triggered caps and to sector allocations, per the workgroup's recommendations. The Council's full motion can be viewed at: [http://www.fakr.noaa.gov/npfmc/current\\_issues/bycatch/SalmonBycatchMotion1209.pdf](http://www.fakr.noaa.gov/npfmc/current_issues/bycatch/SalmonBycatchMotion1209.pdf)

#### *Upcoming Actions*

- June 2010: In Sitka; Council to finalize alternatives for staff analysis.
- January 2011: Council may review some preliminary data/analysis.
- February-March 2011: Council members and staff plan to attend 5 Federal Subsistence Regional Advisory Council meetings, give presentations on the proposed chum salmon bycatch management measures and solicit public comments.
- June 2011 (tentative): In Nome; selection of the preliminary preferred alternative.
- October 2011 (tentative): In Anchorage; final action on the preferred alternative, which will be provided to the Secretary of Commerce.

### **Chinook Salmon Bycatch Management – Amendment 91**

- December 2009: The Final Bering Sea Chinook Salmon Bycatch Environmental Impact Statement (EIS) released to the public.
- February 2010: Federal Subsistence Board sent a comment letter (see attached) on behalf of the Federal Subsistence Program reiterating previous position (hardcap of 29,323).
- Early 2010: Proposed rule to be published, with public comment period.
- May 2010: Record of Decision

**Chinook Salmon Data Collection**

- December 2009: The Council took final action on economic data collection associated with the April 2009 Chinook salmon management action. The economic data collection program is designed to provide data to allow agency review of the effectiveness of the incentive plans authorized under Amendment 91. The Council's full motion can be viewed at: [http://www.fakr.noaa.gov/npfmc/current\\_issues/bycatch/SalmonBycatchDataCollectionMotion1209.pdf](http://www.fakr.noaa.gov/npfmc/current_issues/bycatch/SalmonBycatchDataCollectionMotion1209.pdf)



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

**Federal Subsistence Board**

1011 E. Tudor Rd., MS 121  
Anchorage, Alaska 99503-6199



U.S. FOREST SERVICE

FEB 4 2010

FWS/OSM 10008/DR

Robert D. Mecum, Acting Administrator  
National Marine Fisheries Service, Alaska Region  
P.O. Box 21668  
Juneau, Alaska 99802

Dear Mr. Mecum:

The Federal Subsistence Management Program appreciates the opportunity to provide its comments and recommendation on the *Final Bering Sea Chinook Salmon Bycatch Management Environmental Impact Statement and Regulatory Impact Review (EIS/RIR)*. The Federal Subsistence Board (Board) and the Bristol Bay, Seward Peninsula, Yukon-Kuskokwim Delta, Western Interior Alaska and Eastern Interior Alaska Subsistence Regional Advisory Councils, which advise the Board, have established a record concerning this issue. This letter brings forward our comments and recommendations for purposes of your final EIS/RIR. These five councils represent Federally-qualified subsistence users of Western Alaska salmon stocks affected by the actions of the Bering Sea/Aleutian Islands commercial Pollock fishing industry. The Board's composition and a description of its responsibilities under Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA) were provided in a February 8, 2008 letter to your agency.

In a letter to you dated February 18, 2009 (commenting on the Draft EIS/RIR), the Board recommended a Chinook salmon bycatch hard cap of 29,323. At the April 2009 meeting of the North Pacific Fishery Management Council in Anchorage, the Board Chair and representatives of the five noted subsistence regional advisory councils all testified and recommended a hard cap of 29,323. With this letter, the Board and the five Councils reiterate their recommendations that a hard cap of 29,323, Alternative 2(viii), be adopted. This alternative would assist in ensuring that enough Chinook salmon return to Western and Interior Alaska rivers to meet spawning escapement requirements and the subsistence uses of over 120 communities representing approximately 60,000 rural residents in the Arctic-Yukon-Kuskokwim and Bristol Bay regions. The EIS/RIR points out that this level of bycatch would have provided the "greatest benefit" in adult equivalent Chinook salmon savings for Western Alaska stocks for the years 2003-2007 at all levels of bycatch. Had this hard cap been in place during those years, an estimated increase in returns of 37,345 Chinook salmon to Western Alaska in the highest bycatch year of 2007 would have been realized. In addition, this level of bycatch comes closest to the stipulation in the U.S./Canada Yukon River Salmon Agreement, signed in 2002, which requires the United States to increase in-river returns of Yukon River origin salmon by reducing marine catches and

Robert D. Mecum, Acting Administrator

2

bycatches of Yukon River salmon. The recommended hard cap of 29,323 represents the five-year average (1997-2001) of Chinook salmon bycatch, just prior to the signing of the U.S./Canada Yukon River Salmon Agreement.

The Board again urges the National Marine Fisheries Service and the North Pacific Fishery Management Council to take actions that significantly reduce the amount of Chinook salmon bycatch in the BSAI Pollock fishery. It is the Board's judgment that neither of the hard cap amounts in the Preferred Alternative (60,000 and 47,591) represents a reduction in Chinook salmon bycatch, but rather is an allowance for higher bycatch. This allowance appears to be in direct conflict with your agency's stated management goal to avoid bycatch of a prohibited species, of which Chinook salmon is one. Therefore, the Preferred Alternative should not be adopted into regulation.

The EIS/RIR acknowledges the failure to meet the Yukon River Chinook salmon escapement goal into Canada for 2007 and 2008. While the EIS/RIR points out that the minimum escapement goal for Canada was exceeded in 2009, it fails to point out that this was accomplished through the imposition of substantial restrictions on subsistence fishing and the prohibition of in-river commercial fishing.

Thank you for the opportunity to comment on the EIS/RIR. Please contact Peter J. Probasco, Assistant Regional Director, Office of Subsistence Management, at (907) 786-3888, if further information is needed. We will continue to monitor developments on this important issue and look forward to the results of your efforts to significantly reduce Chinook salmon bycatch in the BSAI Pollock fishery.

Sincerely,



Michael R. Fleagle  
Chair, Federal Subsistence Board

cc: Federal Subsistence Board members

Pat Pourchot, Special Assistant to Secretary of DOI for Alaska Affairs  
Jack Reakoff, Chair, Western Interior Alaska Subsistence Regional Advisory Council  
Lester Wilde, Chair, Yukon-Kuskokwim Delta Subsistence Regional Advisory Council  
Sue Entsminger, Chair, Eastern Interior Alaska Subsistence Regional Advisory Council  
Ralph Lohse, Chair, Southcentral Alaska Regional Advisory Council  
Speridon Simeonoff, Sr., Chair, Kodiak/Aleutians Regional Advisory Council  
Nancy Lyon, Vice Chair, Bristol Bay Regional Advisory Council  
Weaver Ivanoff, Chair, Seward Peninsula Alaska Regional Advisory Council  
Bert Adams, Chair, Southeast Alaska Regional Advisory Council  
Denby Lloyd, Commissioner, Alaska Department of Fish and Game  
Eric Olson, Chair, North Pacific Fishery Management Council  
David Balton, Deputy Assistant Secretary, Oceans and Fisheries, U.S. Department of State



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Togiak National Wildlife Refuge

P.O. Box 270

Dillingham, Alaska 99576

Phone 907-842-1063

Fax 907-842-5402

INFORMATION BULLETIN

January 2010

***Variation in Salmon Abundance Over the Past 3–5 Centuries*** Contact: Pat Walsh

In 2006 Togiak Refuge and the University of Washington Fisheries Research Institute began a project to investigate changes in salmon abundance within Togiak Refuge watersheds over a time frame that extends far enough back in time to capture the natural variation caused by non-human factors. This project will relate the abundance of salmon to the commercial harvest and other factors. It will also relate changes in salmon abundance to changes in aquatic productivity, and determine how these relationships change across the landscape of the Togiak Refuge. Sediment cores have been collected from 16 lakes. Final analysis and report are underway. A progress report is available by contacting Togiak Refuge.

***Cooperative Salmon Escapement Monitoring Projects*** Contact: Mark Lisac

Togiak Refuge will again provide support to the Native Village of Kwinhagak (NVK) and ADF&G to operate salmon escapement monitoring projects on the Kanektok and Middle Fork Goodnews Rivers.

On the Middle Fork Goodnews River, ADF&G has monitored Chinook, chum and sockeye salmon escapement since 1980. Escapement goals and management of the commercial fishery are based on salmon escapement at the weir. Togiak Refuge has worked with ADF&G since 1992 to include the coho salmon and Dolly Varden runs in the project operation. ADF&G, Togiak Refuge and the Office of Subsistence Management (OSM) fund the project operation. This weir project also uses an underwater video system which allows the weir to be opened to salmon passage more hours a day. By using motion sensors and digital recording video can improve fish counting accuracy, especially during periods of high water and poor visibility.

On the Kanektok River, ADFG, NVK and Togiak Refuge worked cooperatively to monitor salmon and Dolly Varden runs since 2001. This project is currently funded by OSM and Coastal Villages Region Fund. Escapement goal ranges have not been established for the Kanektok River because the weir has not been operational for enough years. This weir is removed by late August so it no longer provides an estimate of coho salmon escapement.

***Dolly Varden Life History Studies*** Contact: Mark Lisac

In 2010 we will continued to work with ADF&G at the Middle Fork Goodnews (MFGRW) and Kanektok weirs to monitor the annual Dolly Varden run. The purposes of this project are to make long term comparisons between annual spawner abundance and monitor the status of the individual populations. Several hundred Dolly Varden are marked at the weir each year. Fishers throughout western Alaska are requested to report any capture of these marked fish. The information from these observations will help to piece together the life history and travels of these unique fish. Reports of the findings from these various

studies are available by contacting the Togiak Refuge office or on the FWS web site <http://alaska.fws.gov/fisheries/fish/reports.htm>.

***Rainbow Trout Population Identification*** Contact: Pat Walsh

Togiak Refuge, ADF&G Sport Fish, and the Conservation Genetics Laboratory are working together to inventory populations and determine the genetic relationships between populations of rainbow trout throughout Togiak Refuge. Archived genetic material collected from previous investigations were inventoried and assessed for suitability in the current study. A collection plan for unsampled populations was completed and new tissue collections began in the Goodnews, Kanektok, Igushik, Snake, and Wood River watersheds in summer 2009. It is anticipated that this project will occur from 2009–2013.

***Kanektok River Rainbow Trout Population Identification*** Contact: Mark Lisac

In 2009 the Refuge, Kenai Fish and Wildlife Field Office and ADFG Sport Fish Division implemented a rainbow trout radio tracking study on the Kanektok River. The purpose of this study is to identify the geographic extent of the population and specifically to document these fishes' overwintering locations, seasonal movements, and to locate potential spawning areas. Between August 3 and 12 radio tags were deployed in 200 rainbow trout from the outlet of Kagati Lake downstream to the village. These fish will be tracked until August 2011. Six aerial tracking flights have occurred to date. Fishers are asked to contact the Refuge office if they recover any radio tags.

***Chinook Salmon Escapement In The Togiak River Watershed Using Radio Telemetry*** Contact: Cheryl Anderson

In 2009 the Anchorage Fish and Wildlife Field Office completed the second year radio of a telemetry study to determine Chinook salmon run timing and distribution in the Togiak River watershed. This study will continue in 2010 with the addition of a weir on the Gechiak River tributary to the Togiak. Chinook salmon will be captured using drift gillnets and implanted with esophageal radio transmitters. Movements and final spawning destinations of radio-tagged Chinook salmon will be documented using a combination of fixed data-logging receiver stations, and aerial or ground-based mobile tracking. The known number of Chinook salmon past the Gechiak River weir will be used to extrapolate an escapement estimate for the entire Togiak drainage. This project is currently funded by OSM until 2012. Fishers are asked to contact the Refuge office if they recover any radio tags.

***Determining Aquatic Habitat Quantity and Quality*** Contact: Mark Lisac

The Refuge is currently working with the UAF School of Fisheries and Ocean Science, and the U.S. Geological Survey developing a project to estimate the quantity and quality of aquatic habitat in the Kulukak River watershed. Satellite and airborne multispectral digital imagery will be used to assess habitat quality and quantity for juvenile salmon in the watershed. Habitat classification will be determined using field-collected data on in-stream physical habitat features, water chemistry, and juvenile salmon abundance and distribution. A juvenile salmon and habitat relationships model will be developed. This model will be used to estimate habitat carrying capacity for salmon and serve as a baseline for monitoring habitat changes within the context of ongoing climate change. This project will result in the completion of MS Fisheries degrees for two UAF graduate students.

***Mulchatna Caribou*** Contact: Andy Aderman

Togiak Refuge assisted ADF&G with telemetry monitoring flights, radiocollar deployment, satellite data acquisition, data entry and database management. Primary calving areas in 2009 were near Lime Village (Unit 19A) and Kemuk Mountain (Unit 17C), similar to the past several years. Caribou did not group up sufficiently after calving to conduct a photocensus. A fall 2009 composition survey estimated 31.0 calves

per 100 cows and 18.5 bulls per 100 cows. The calf to cow ratio is the highest since 1998 while the bull to cow ratio is slightly less than observed in 2008.

***Nushagak Peninsula Caribou*** Contact: Andy Aderman

In March 2009, we conducted a census of the Nushagak Peninsula Caribou herd and counted 547 caribou. This figure is nearly identical to the previous counts of 556 caribou found in January 2008 and 546 caribou found in March 2006. After meeting with the Committee and the village of Manokotak, 10 permits were issued for a hunt during the 2009 winter season and eight caribou were harvested. In May/June, a minimum of 17 of 23 (74%) adult cows and 2 of 9 (22%) 2-year old cows produced calves. The fall 2009 hunt was cancelled due to the population remaining below 600 animals as prescribed by the management plan. A fall 2009 composition survey estimated 34.8 calves per 100 cows and 37.1 bulls per 100 cows. Both ratios are slightly less than the previous ten year averages of 40.7 calves and 44.1 bulls per 100 cows. The Nushagak Peninsula Caribou Planning Committee plans to meet in January to review the biology and management of this herd.

***Wolf Predation on Nushagak Peninsula Caribou*** Contact: Pat Walsh

Using radio telemetry, Togiak Refuge and ADF&G are investigating the seasonality and duration of wolf use of the Nushagak Peninsula, in order to assess whether predation is a likely factor in driving population dynamics of Nushagak Peninsula caribou. In 2007, 2008, and 2009, we placed conventional and GPS radio transmitters on wolves from two packs located within 30 km of the Nushagak Peninsula. Tracking flights have been flown monthly to locate wolves and to download location data from the GPS collars. Preliminary data indicates that one of the two packs used the Nushagak Peninsula approximately 40% of the time during the period March–January, with the majority of time spent there in the fall. Summers were spent primarily off the Nushagak Peninsula, and diet appeared to focus on salmon. Winter and spring was also spent primarily off the Peninsula, and diet appeared to be focused on moose. Little wolf activity occurred on the Peninsula during or soon after caribou calving, which is a time when caribou are more susceptible to wolf predation. We will continue to assess the use of the Nushagak Peninsula by wolves.

***Moose*** Contact: Andy Aderman

During March 2009, Refuge staff counted a minimum of 142 moose in the Goodnews River drainage (southern Game Management Unit 18), an increase from the previous high of 113 counted in February 2008. In April, with less-than-ideal survey conditions, a total of 4 moose were seen in the Kanektok/Arolik River drainages. Along the Kanektok River, 3 moose kill sites (all apparently poached) were observed. In May/June, 18 of 26 radiocollared adult cows produced a minimum of 28 calves (108 calves per 100 cows). Twinning rate was 55.5 percent. Ten of 13 (77%) 2-year-old cows produced single calves. Calf survival to fall was 0.474. Since 1998, calf survival rates to fall have averaged 0.498 and annual adult survival rates have averaged 0.890.

***Walrus*** Contact: Michael Winfree

Refuge staff monitor numbers of walrus that haul out on land at various locations on Togiak Refuge. Peak haulout counts over the past two decades have varied greatly, from less than 100 to over 12,000. Surveys occurred at Cape Peirce, Cape Newenham and Hagemeister Island from October 2008 through December 2010. Observed walrus numbers at Cape Peirce ranged from 0–1,591, Hagemeister Island ranged from 0–2,092, and 0 walrus were observed at Cape Newenham.

***Seals*** Contact: Michael Winfree

In 2009, Togiak Refuge seal haulouts at Nanvak Bay were surveyed 9 times from October 2008–September 2009. The observed seal numbers ranged from 0–400.

***Steller Sea Lions*** Contact: Michael Winfree

Five aerial surveys of the Steller sea lion haulout at Cape Newenham were conducted from October 2008–September 2009, resulting in counts ranging from 0–136 animals.

***Seabirds*** Contact: Michael Swaim

Togiak Refuge monitored the population and productivity of black-legged kittiwakes, common murre, and pelagic cormorants at Cape Peirce for the twenty-fourth consecutive year in 2009. During this time the nesting population of pelagic cormorants remained constant, while black-legged kittiwakes and common murre declined an average of 1.5% and 1.7% respectively per year. Data from Cape Peirce now comprise one of the longest, continuous seabird monitoring datasets in the State of Alaska. This information has thus become increasingly important, not just to monitor seabird populations at the refuge level, but to study changes in these populations at the state and regional levels.

***Eelgrass Monitoring*** Contact: Michael Swaim

In 2009, Togiak Refuge and the USGS Alaska Science Center continued work on the development of new monitoring protocol for eelgrass. Eelgrass is a productive coastal habitat which plays an important role in ecosystem health. Many waterfowl, fish, and invertebrate species depend on eelgrass for their health and productivity.

***Water Temperature Monitoring*** Contact: Michael Swaim

Staff at Togiak Refuge collected water temperature data at 16 sites across the refuge for the eighth consecutive year in 2009. Preliminary analysis of these data was also completed. High levels of variability were seen at all sites, indicating the dynamic nature of these rivers. We found no statistically significant trends, although the maximum range of variability declined at most sites, with summer highs becoming cooler and winter lows warming on average. The refuge intends to continue this monitoring program indefinitely, since it provides useful data for a variety of studies, ranging from the evaluation of fish growth to tracking long-term environmental change.

***Glacier Monitoring*** Contact: Pat Walsh

The Ahklun Mountains, centered at the northeast quadrant of the Togiak National Wildlife Refuge in southwest Alaska, support over 100 individual glaciers. These are the only extant glaciers in western Alaska, and they remain essentially unstudied. These glaciers were originally mapped by USGS using photogrammetry methods based on 1973 aerial photos. We digitized their map into a geographic information system, then surveyed for presence or absence of glaciers by fixed-wing aircraft using a GPS-linked computer mapping application that permitted high precision navigation. Of 116 glaciers originally mapped, 109 were surveyed in September 2006. Ninety-seven were verified as extant and 12 (11%) were determined to have disappeared. Of those still extant, many appear to be small fragments of what were once larger glaciers, suggesting a relatively large decrease in glacial ice. During the fall of 2009, vertical aerial photography was performed on approximately 60% of the glaciers. Weather prevented completion of the photography. The photographs will be geo-rectified, the glaciers delimited, and comparisons will be made with the 1973 glacial extent. A predictive model will be developed to predict the timing of glacial loss into the future, up to the point of disappearance.

***Quantifying River Discharge and Establishing Water Quality Baselines*** Contact: Michael Winfree

Togiak Refuge and the USFWS Water Resources Branch have worked cooperatively since 1999 to acquire baseline hydrologic data of the flow regime (magnitude, duration, timing, frequency, and rate of change) and water quality. A network of stream discharge gauges collected stream flow data from 1999–2005 at 20 locations. A subset of five of these stations continued to collect data through fall 2009, after which three of the five stations were removed. We will continue indefinitely to monitor discharge in the Togiak and Kulukak Rivers. Each gauge is instrumented with pressure sensors that measure and

store water level every 15 minutes. Water quality parameters are documented at all stations, including occurrence and distribution of 4 physical properties (e.g., temperature, pH, conductivity), 6 nutrients (e.g., nitrate, nitrite, dissolved phosphorus), 8 major ions (e.g., calcium, magnesium, alkalinity, sulfate), and 14 trace metals (e.g., aluminum, arsenic, copper, iron). Data analysis is ongoing and report on the initial 10 years of monitoring is expected to be published in 2011.

***Education and Outreach*** Contact: Allen Miller

Togiak Refuge has an active education and outreach program including the Migratory Bird Calendar and Junior Duck Stamp contests; National Wildlife Refuge Week and National Fishing Week activities; career fairs; production of Bristol Bay Field Notes, aired three times weekly on KDLG; and numerous classroom presentations in 12 villages in the Southwest Region, Lower Kuskokwim, and Dillingham City school districts. Field trips with area students in 2009 included bird walks, pond life investigations, bear safety, and plants. The refuge website is also a valuable education tool and is available at <http://togiak.fws.gov>. The refuge partners with others to conduct three environmental education camps described below.

***Southwest Alaska Science Academy*** Contact: Terry Fuller

The Refuge helped with the 8<sup>th</sup> year of a summer camp aimed at teaching middle and high school students about fisheries science and the importance of salmon to our ecosystem. Students were selected from the Bristol Bay region. During the camp students worked in the field alongside fisheries professionals. Cooperators with the refuge on this project included the Bristol Bay Economic Development Corporation, Bristol Bay Science and Research Institute, University of Alaska, University of Washington School of Fisheries, the Dillingham City and Southwest Region school districts, and the Alaska Department of Fish and Game.

***Cape Peirce Marine Science and Yup'ik Culture Camp*** Contact: Terry Fuller

Students who participated at the 17<sup>th</sup> annual Cape Peirce camp learned about marine mammal and seabird biology from field biologists. Students were able to observe seabirds, marine mammals, and learn how field studies are conducted, as well as learning about animal life history and ecological relationships. Students and agency staff also learned—through the instruction of a local village elder—about traditional Yup'ik uses of animals and plants and about Native survival skills. This program helps students gain an understanding of the biological diversity of a marine ecosystem. It also strengthens their sense of stewardship for local natural resources. Traditional councils and school districts from throughout western Bristol Bay are cooperators with this camp.

***Riparian Ecosystem and Outdoor Skills Camp*** Contact: Terry Fuller

Students learned about river ecosystems and how to enjoy them safely and responsibly while taking part in a float trip conducted on a refuge river. Students observed and learned about the many fish, wildlife and plant species found on refuge rivers and streams. Rafting skills, water safety, different angling practices (catch and release), Leave No Trace camping practices and bear safety were topics during the trip. Students also learned—through discussions and a visit to one of the refuge's fish weirs—about the different ways fisheries biologists conduct fish counts. This program helps students understand the biological diversity of riparian ecosystems and the importance of salmon as a nutrient source. Traditional councils and school districts from throughout western Bristol Bay are cooperators with this camp.

***River Ranger Program*** Contact: Allen Miller

The Refuge River Ranger Program was conceived during the public use management planning process and was first implemented in 1991. The program serves many purposes. River Rangers are the main contact source for sport fishermen and local residents. Information distributed to the public includes Service policies, regulations, resource management practices, State sport fish regulations, bear safety,

wilderness ethics, Leave-No-Trace camping, and information about private lands to prevent trespass. Rangers document public use occurring on the river along with the location and timing of activities, conflicts between users, and sport fish catch/harvest per unit effort. Rangers also assist Refuge and ADF&G staff at the Kanektok River and Middle Fork Goodnews River weirs, and assist Refuge staff with biological studies. In addition, Rangers patrol campsites for litter, monitor compliance of sport fishing guides, and offer assistance as needed.

Two River Rangers were stationed in the village of Togiak during summer 2009 and patrolled the Togiak River several times each week. Two River Rangers were also stationed in Quinhagak and patrolled the Kanektok River several times each week. All four rangers were residents of the villages where they were assigned. Two River Rangers stationed out of Dillingham patrolled the north and middle forks of the Goodnews River several times in 2009. Rangers on the Kanektok and Goodnews rivers used inflatable kayaks in addition to motorboats (which have been used since the program started). Use of kayaks allowed rangers to access the entire length of the Kanektok and Goodnews rivers, which are inaccessible to power boats during most water levels.