WP14-53 Executive Summary	
General Description	Proposal WP14-53 requests that the boundary for Unit 26A – that portion west of 156º00' W longitude and excluding the Colville River drainage, be changed. The proponent requests changing the longitude from 156º00'W to 155º00'W longitude to allow for moose hunting in the Alaktak and Chipp river drainages**.** *Submitted by North Slope Subsistence Regional Advisory Council,*
Proposed Regulation	**Unit 26A—Moose** *Unit 26A—that portion west of ~~156º00'W Long.~~ **155º00'W Long.** and excluding the Colville River Drainage—1 moose, however, you may not take a calf or a cow accompanied by a calf.* — *July 1–Sept. 14* *Unit 26A, remainder—1 bull* — *Aug. 1–Sept. 14*
OSM Preliminary Conclusion	**Oppose**
North Slope Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP14-53

ISSUES

Proposal WP14-53, submitted by North Slope Subsistence Regional Advisory Council (Council), requests that the boundary for Unit 26A – that portion west of 156º00' W longitude and excluding the Colville River drainage, be changed. The proponent requests changing the longitude from 156º00'W to 155º00'W longitude to allow for moose hunting in the Alaktak and Chipp river drainages (**Map 1).**

DISCUSSION

The proponent would like to move the boundary east from to 156º00'W longitude to 155º00' W longitude allow for a moose hunt in the Alaktak and Chipp river drainages, which are outside of the current regulatory boundaries. The proponent states that approximately 40 people from Barrow are familiar with and have camps along the Chipp River area that can be accessed by boat. Opening a moose hunt along the Alaktak and Chipp rivers would reduce the expense, time, and distance that hunters currently have to travel to harvest moose.

Existing Federal Regulation

Unit 26A—Moose	
Unit 26A—that portion west of 156º00'W Long. and excluding the Colville River Drainage—1 moose, however, you may not take a calf or a cow accompanied by a calf.	*July 1–Sept. 14*
Unit 26A, remainder—1 bull	*Aug. 1–Sept 14*

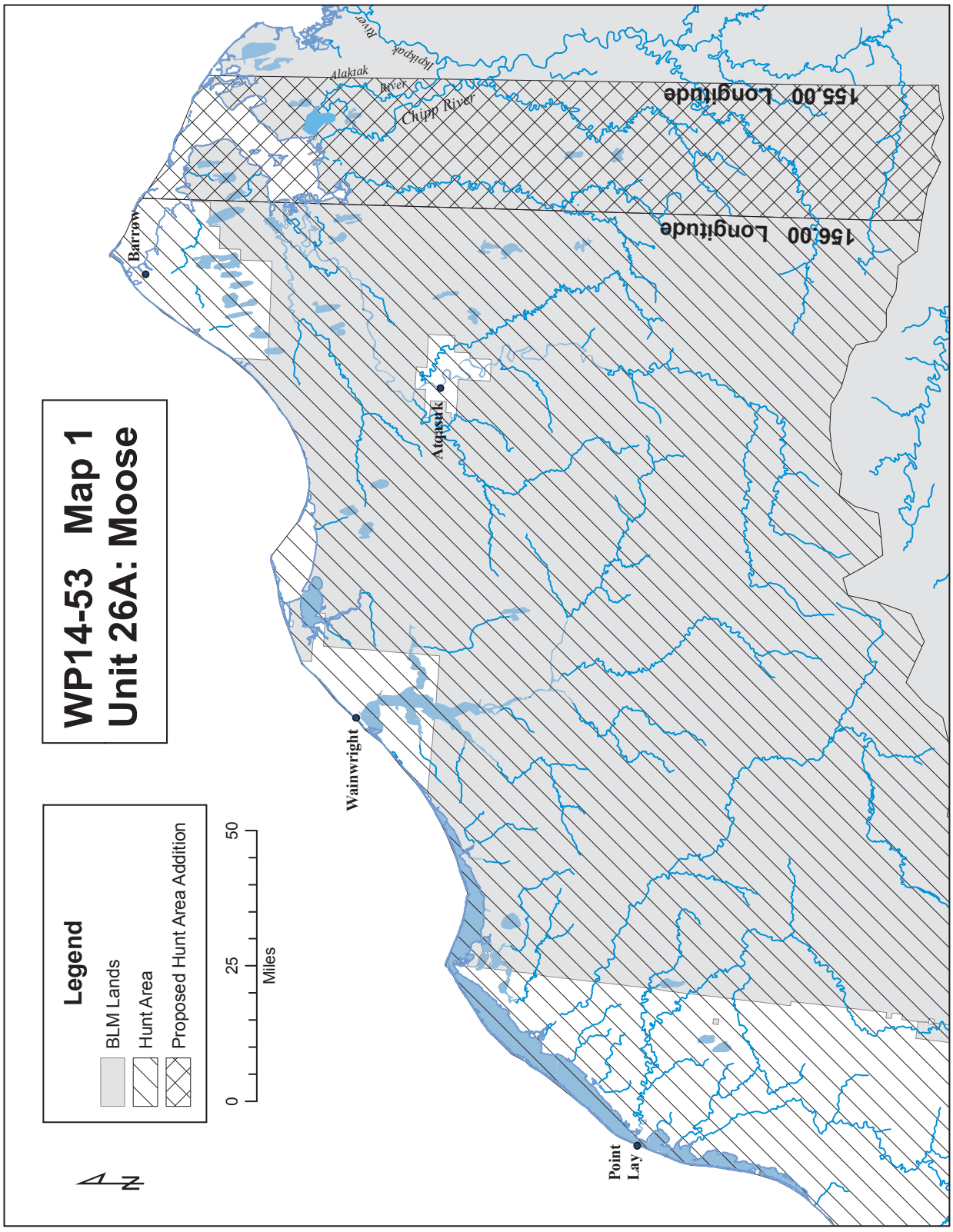
Proposed Federal Regulation

Unit 26A—Moose	
Unit 26A—that portion west of ~~156º00'W Long.~~ ***155º00'W Long.*** *and excluding the Colville River Drainage—1 moose, however, you may not take a calf or a cow accompanied by a calf.*	*July 1–Sept. 14*
Unit 26A, remainder—1 bull	*Aug. 1–Sept. 14*

Existing State Regulation

Unit 26A—Moose

26A west of 156º00'W. longitude excluding the Colville River drainage	*Resident Hunters: One Moose however, a person may not take a calf or a cow accompanied by a calf*	*HT*	*July 1–Sept. 14*
	Nonresident Hunters		*No open season*


WP14-53 Map 1
Unit 26A: Moose
Legend
BLM Lands
Hunt Area
Proposed Hunt Area Addition
0
25
50
Miles
N
Barrow
Atqasuk
Wainwright
Point Lay
Chipp River
Alaktak River
Ikpikpuk River
155.00 Longitude
156.00 Longitude

26A remainder	*Resident Hunters: One bull*	*HT*	*Aug. 1–Sept. 14*

Extent of Federal Public Lands

Approximately 73% of the lands in Unit 26A are comprised of Federal public lands consisting of 66% Bureau of Land Management (BLM) managed lands, 6.6% National Park Service (NPS) managed lands, and 0.1% U.S. Fish and Wildlife Service (USFWS) managed lands (See **Unit 26 Map).** All of the lands that the proponent proposes to open to moose hunting are managed by the BLM**.**

Customary and Traditional Use Determinations

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

Regulatory History

In 1996, the Federal Subsistence Board (Board) adopted regulatory proposal P96-66 that closed moose hunting on all Federal public lands in Unit 26A except in that portion of the Colville River drainage downstream from the mouth of the Anaktuvuk River due to population declines (FWS 1996). At that time, the only segment of the population that was considered stable was the small population of moose downstream from the mouth of Anaktuvuk River. That area remained open only to Federally qualified subsistence users from Aug. 1–Aug. 31, and the harvest was limited to 1 moose per hunter, as long as it was not a cow accompanied by a calf. The Board's justification for adopting the closure to non-Federally qualified users to harvest moose was to address conservation concerns.

In 2002, the Board adopted Proposal WP02-45 that expanded the Federal subsistence moose harvest area in Unit 26A from that portion of the Colville River drainage downstream from the mouth of the Anaktuvuk River to that portion of the Colville River drainage downstream from and including the Chandler River and also extended the season by two weeks, from Aug. 1–Aug. 31 to Aug. 1–Sept. 14. The Board's decision in 2002 was based on: population increases since 1998, especially in the core areas of the Colville River drainage; to spread out the harvest pressure to other areas with higher moose density; align State and Federal regulations; and to provide additional subsistence hunting opportunity later in the fall when the temperatures are colder, which could reduce the chance of meat spoilage.

In 2004, the Board adopted Proposal WP04-85 which established the eastern boundary of the proposed harvest area in Unit 26A to 156º00'W longitude to match the new State regulation and also aligned the season and harvest limits with those made by the State Board of Game. In 2005, the Office of Subsistence Management conducted closure review WCR05-23 and recommended that the closure of that portion of the Colville River drainage downstream from and including the Chandler River to non-Federally qualified moose hunters should continue to remain in effect. However, when WCR05-23 was discussed during the North Slope Regional Advisory Council's (Council) fall 2005 meeting (NSSRAC 2005), new winter moose census information provided by the ADF&G suggested the closure was no longer necessary since the moose population had reached at least 1,000 animals. Although the Council recommended maintaining the closure for non-subsistence uses, the new information indicated such a closure may no longer be needed to conserve a healthy moose population.

In May 2006, the Board adopted Proposal WP06-66 (FWS 2006), which resulted in reopening remaining Federal public lands on that portion of the Colville River drainage downstream from and including the Chandler River to hunting by all Alaska residents.

Biological Background

Prior to the 1950s, moose were scarce along the North Slope. Subsequently, populations expanded along the limited riparian habitat of the major drainages (LeResche et al. 1974) and have become well established in Unit 26A. The northern extent of the moose populations on the North Slope is thought to be limited by habitat availability. The moose in these areas tend to concentrate along riparian corridors where browse is most abundant. Nearly all the moose are confined to the riparian habitat along the large river corridors during the winter but during summer many of the moose disperse north across the coastal plain and south into the foothills of the Brooks Range.

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

- Allow for the recovery of the Unit 26A moose population and maintain a population of over 1,000, with a bull:cow ratio greater than 30:100.

- Maintain a moose population at a level that can sustain subsistence and general hunt needs.

Since the late 1970s, ADF&G has conducted late-winter aerial surveys (1977, 1984, 1991, 1995, 1999, 2002, 2005, 2008, 2011) in all the major drainages of Unit 26A to assess population status and recruitment of short yearlings (10 to 11 months old) (Carroll 2000, Carroll 2010). The moose population reached a high of 1,535 in 1991 and then declined to a low of 326 in 1999, increased again to 1,180 in 2008 (Carroll 2010) and declined to 609 in 2011 (**Table 1).** It should be noted that all the population counts included the Itkillik River, which is part of the Colville River drainage, but is in Unit 26B (Carroll 2010). For example, in 2008, 64 moose, including 4 calves were counted in the Itkillik River (Carroll 2010).

The declines in the population counts from 2008 – 2011 were a result of high adult mortality and poor calf survival which appeared to be the result of a combination of factors such as malnourishment, bacterial diseases, mineral deficiencies, predation by grizzly bears and wolves, severe winter weather, and competition with snowshoe hares (snowshoe hares eating willow bark) (Carroll 1998). Density dependent factors such as over-browsing when populations were high, likely contributed to the following declines (Carroll 2008).

In addition to population counts in Unit 26A (**Table 1**), trend area counts have been conducted yearly (except for 1982) along the Anaktuvuk River from the mouth to Sivugak Bluff, the Chandlar River from the mouth to Table Top Mountain, and the Colville River between the mouths of Anaktuvuk and Killik Rivers from 1974 – 2007. The trend area counts indicated that moose population reached a low in 1996 of 152 and slowly began to recover due to increased adult and calf survival rates to 610 in 2007. The trend area count declined from 559 in 2008 and to 293 in 2012. Based on information from radio telemetry studies the population began to recover in 1996 due to decline in the adult mortality rates to about 7% and an increase in calf survival. Estimates of recruitment of short yearlings into the population ranged from 17% to 26% between 1997 and 2007. Even though the population counts increased slightly from 2005 to 2008, data from the trend counts from 2008 to 2009 indicate that the population declined substantially in 2009. In 2008, the biologists counted 559 moose within the trend count area, including 475 adults and 84 short yearlings (15% recruitment rate) and in 2009 the total dropped to 356 adults, including only 8 calves (2% recruitment rate) (Carroll 2010). In 2010, the population declined to 265 and is currently stable at low numbers (2011 – 282, 2012 – 293, Carroll 2013, pers. com.). Based on trend counts, the decline that started in 1991 lasted five years and the decline that started in 2007 lasted 3 years.

Table 1. Moose observed during aerial censuses conducted in the Unit 26A (Carroll 2010, OSM 2013).

	Moose observed			
Year	**Adults**	**Calves**	**Total[a]**	**% Calves**
1970	911	308	1219	25
1977	991	267	1258	21
1984	1145	302	1447	21
1991	1231	304	1535	20
1995	746	11	757	1
1999	274	52	326	16
2002	502	74	576	13
2005	863	185	1048	18
2008	1023	157	1180	13
2011[b]	545	64	609	10

[a] Includes moose counted on the Ikkillik River which is part of the Colville River drainage, but is in Unit 26B. In 2008, there were 64 moose, including 4 calves on the Itkillik River. (Carroll 2010).
[b] Information provided by Geoff Carroll (pers. comm. 2013)

At the winter 2013 North Slope Council meeting (NSSRAC 2013) Geoff Carroll, biologist with Alaska Department of Fish and Game (ADF&G), stated that the moose population was low and that this proposal would probably not get a lot of support from the State biologist. Mr. Carroll also mentioned that the Chipp River has a small struggling moose population and is one of the reasons why the moose harvest is restricted to one bull east of the boundary line at 156°00'W longitude in Unit 26A (NSSRAC 2013).

Habitat

Moose in Unit 26, which are on the extreme edge of their distribution, are limited by marginal habitat and thus are more vulnerable to environmental variations than populations in more optimal locations and habitat. During the winter the moose in this area are confined to the riparian areas on the coastal plain. During the summer a majority of them will disperse from the river bottoms but usually remain near riparian habitat and during the fall, when the snow begins to accumulate, they move back to the riparian corridors of the large river systems (Carroll 2010).

A habitat study was initiated in April 2008 on the Colville River in areas where moose browsed between the mouth of the Killik River and Umiat to determine the quantity of browse available to moose in the riparian area in the winter. Results indicated a 12% browse removal rate, which was similar to other areas in the State which have moderate browsing and twinning rates. Thus it appears that the poor survival rate of collared animals, low weights of the short-yearlings, and apparent starvation of several moose during the 2008 capture season was not related to the quantity of browse in Unit 26A (Carroll 2010). Quantity and availability (willows covered up by snow drifts), accessibility (effects of deep snow on access), and increased tannins in the willows (in response to snowshoe hares eating the bark) are factors which could

contribute to malnourishment seen in some of the moose. In 2009, samples were taken to assess the quality of the browse but the results are not currently available (Carroll 2010).

Harvest History

Moose harvest in all of Unit 26A averaged 57 per year until 1995, which was several years after the peak estimated abundance of the moose population in 1991 (**Table 1, Table 2).** Although the moose trend counts began to decline in 1992, the harvest remained at the higher levels for several years (Carroll 2010). In 1995, when more restrictive regulations were implemented, the harvest dropped to 14 and then remained low between 1996 and 2004 at an average of 4 per year. One of the most important changes affecting harvest levels in this area was the ban on the use of aircraft from 1996 to 2005. In the fall of 2005, in response to an increasing moose population, the Alaska Board of Game liberalized some of the regulations in Unit 26A including the limited use of aircraft during moose hunts. Between 2005 and 2010 the average harvest was 10 moose per year.

Geoff Carroll expressed concern, at the winter 2013 North Slope Advisory Council meeting, about the current decline in the moose population and small population in the Chipp River drainage but also mentioned that the additional harvest of one or two moose would probably not have a population-level effect (NSSRAC 2013). However, the basis for the original decision to limit the hunt to one bull west of 156°00'W longitude was to protect the very small population of moose that occur in the Chipp River drainage (NSSRAC 2013).

Effects of the Proposal

If this proposal is adopted it would change the hunt area boundary of Unit 26A—that portion west of 156°00'W Long. and excluding the Colville River Drainage and the boundary of Unit 26A remainder from 156°00'W longitude to 155°00' W longitude. Changing the boundary from 156°00'W to 155°00'W would add approximately 3065 mi^2 to Unit 26A and decrease the area available to Federally qualified subsistence users in Unit 26A remainder by the same amount. Additionally, if this proposal is adopted, it is expected that up to 40 people from Barrow, which use the Chipp River area, could potentially benefit from the change in the eastern boundary. Having the Chipp River included in the hunt area would allow hunters to take any moose except a calf or a cow accompanied by a calf from July 1 – Sept 14, when they are at traditional hunting and fishing areas on the Chipp and Alaaktak river drainages.

Increasing the harvest season by a month and allowing the take of any moose versus just a bull moose is likely to increase the moose harvest in Alaaktak and Chipp river drainages. An increase of the harvest could slow the recovery of the moose population that inhabits the Chipp River drainage. Due to the small population in the Chipp and Alaktak River drainage and the current decline in the population, the harvest of even a few moose from the Alaktak and Chipp River drainage could have a significant impact on the moose population in these two drainages. Allowing the take of cows is likely to cause the population to continue to decline or slow the recovery of moose that occur in the Chipp and Alaktak drainages. If this proposal is adopted, Federal and State regulations will be out of alignment, adding to the regulatory complexity for Federally qualified subsistence users.

Table 2. Moose harvest in Unit 26A from 1985-2011 (Carroll 2010, OSM 2013).

Year	Male	Female	Total
1985/1986	50	15	65
1986/1987	46	6	52
1987/1988	49	13	62
1988/1989	51	6	57
1989/1990	41	3	44
1990/1991	60	4	64
1991/1992[a]	59	8	67
1992/1993	52	8	60
1993/1994	53	8	61
1994/1995	36	4	40
1995/1996[b]	14	0	14
1996/1997	0	0	0
1997/1998	2	0	2
1998/1999	5	0	5
1999/2000[c]	2	0	2
2000/2001	0	0	0
2001/2002	4	0	4
2002/2003	11	0	11
2003/2004	5	0	5
2004/2005	4	1	5
2005/2006	9	2	11
2006/2007	8	3	11
2007/2008	11	1	12
2008/2009	12	0	12
2009/2010	10	9	1
2010/2011	12	0	0

[a] Moose population at a high of 1,535
[b] Restrictive regulations implemented
[c] Moose population at a low of 326

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP14-53.

Justification

Expanding the hunt area from 156°00'W to 155°00'W, lengthening the harvest season,and allowing the harvest of cows without a calf is likely to have a significant adverse impact on the relatively small number of moose that occur in the Chipp and Alaktak drainage of Unit 26A, excluding the Colville River drainage and also contribute to the continued decline of the moose population in Unit 26A. The current moose population in Unit 26A is low and thus expansion of the hunt area in Unit 26A is not recommended due to conservation concerns which is consistent with sound management principles for conservation of a healthy moose population.

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