STAFF ANALYSIS
TEMPORARY SPECIAL ACTION
WSA18-03

ISSUES

Temporary Special Action Request WSA18-03, submitted by the Bureau of Land Management (BLM), requests the closure of the Dec. 1–Dec. 31 antlerless moose season in Unit 22D remainder.

DISCUSSION

The proponent is concerned with the harvest of cow moose in Unit 22D remainder due to a declining population trend since 2011. The proponent states that moose population surveys conducted by the Alaska Department of Fish and Game (ADF&G) showed an annual decline of 14% between 2011 and 2014, which resulted in the Alaska Board of Game (BOG) closing antlerless moose hunts in the area in 2015. The proponent claims that continued harvest of cow moose in Unit 22D remainder will lead to further declines in the population before Federal proposals can be submitted to close the antlerless hunt.

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

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

Existing Federal Regulation

Unit 22D—Moose

Unit 22D, remainder – 1 moose; however, no person may take a calf or a cow accompanied by a calf	*Dec. 1 – Dec. 31*

Proposed Federal Regulation

Unit 22D—Moose

*Unit 22D, remainder – 1**antlered bull*** ~~*moose*~~*; ~~however, no person may take a calf or a cow accompanied by a calf~~*	*Dec. 1 – Dec. 31*

Existing State Regulation

Unit 22D—Moose

22D remainder	*Residents: One bull*	*Aug. 10 – Sept. 14*
	OR	
	One bull	*Oct. 1 – Nov. 30*
	OR	
	One antlered bull	*Dec. 1 – Jan. 31*
	Nonresidents	*no open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 23% of Unit 22D and consist of 12% BLM managed lands, and 11% National Park Service (NPS) managed lands (**Figure 1**).

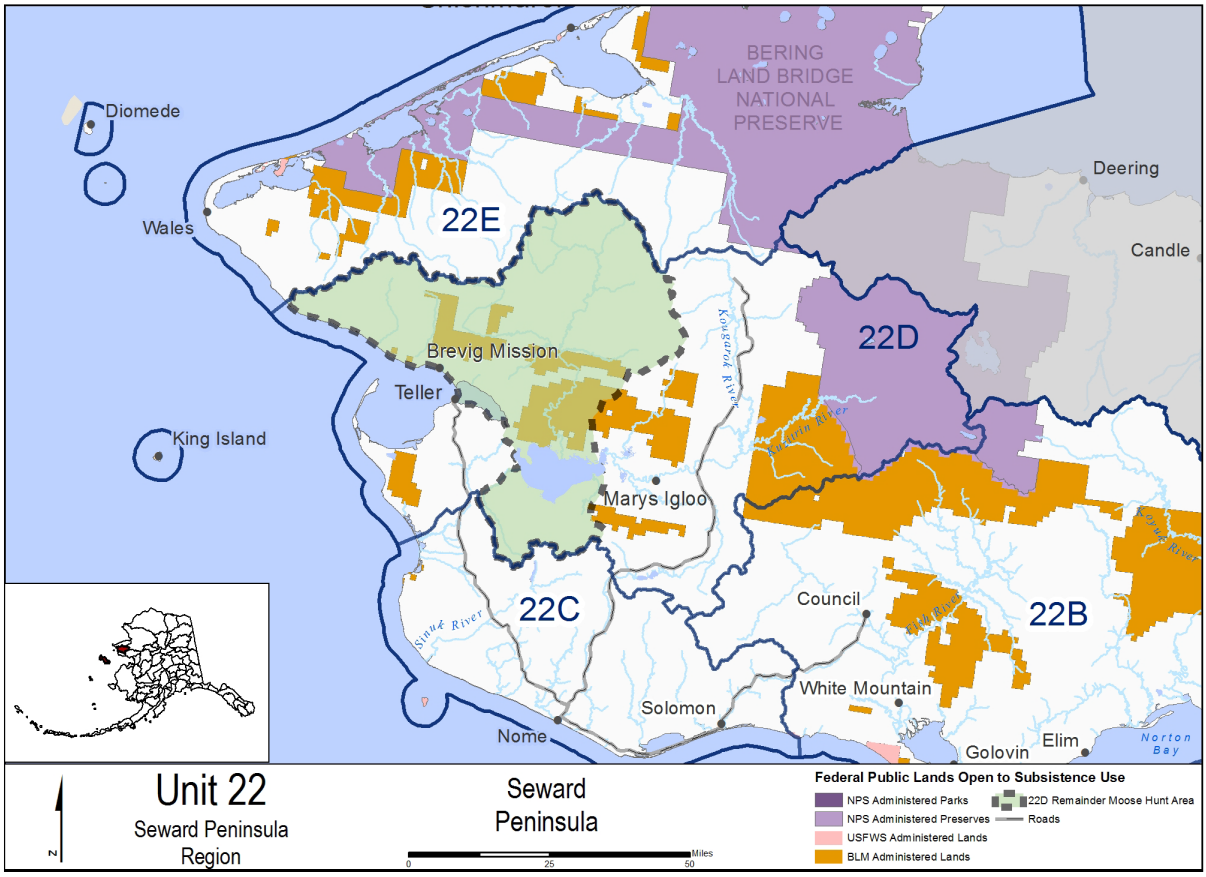

Figure 1. Unit 22D remainder moose hunt area.

Customary and Traditional Use Determinations

Residents of Unit 22 have a customary and traditional use determination for moose in Unit 22.

Regulatory History

In 1998, the Federal Subsistence Board (Board) adopted WP98-087, which placed regulatory restrictions on moose harvest in a portion of Unit 22D just east of Unit 22D remainder, due to a declining local moose population and heavy hunting pressure. As a result of a continuing regional trend in declining moose populations, the Board also restricted the harvest in adjacent Unit 22B in 2000. In 2001, the Board reviewed and adopted with modification two Special Action Requests (WSA01-09 and WSA01-11) to close Federal public lands to the harvest of moose by non-Federally qualified users in Unit 22B west of the Darby Mountains, Unit 22D within the Kuzitrin River drainage and west of the Tisuk River drainage and Canyon Creek, and Unit 22E, and modify the seasons and harvest limits for the 2001 fall and winter

seasons. As a follow-up to these actions, the BOG addressed concerns about declining moose populations in parts of Unit 22 by shortening seasons in portions of Units 22B and 22D, adding registration permit requirements in Unit 22D, dividing Unit 22D into additional hunt areas, and modifying harvest limits and closing nonresident hunts in portions of Units 22B, 22D, and 22E, which went into effect in regulatory year 2002/03. The BOG decided to restrict the season in Unit 22D remainder, despite a relatively healthier moose population. The fall season was closed from Sept. 15–Sept. 30 to match other portions of Unit 22D to prevent focusing hunting efforts on the American and Agiapuk River drainages when all the other areas would have been closed.

In May 2002, the Board adopted Proposal WP02-34 with modification to add State registration permit requirements to the portion of Unit 22B west of the Darby Mountains, the portion of Unit 22D that lies within the Kuzitrin River drainage, and the portion of Unit 22D west of the Tisuk River drainage and to modify harvest limits to bull only hunts in Units 22B, 22D (Kuzitrin River drainage and west of the Tisuk River drainage), and Unit 22E, and shorten seasons in these areas. It also closed Federal public lands in Unit 22D remainder and Unit 22E to the taking of moose except by Federally qualified subsistence users. The Board's justification stated that the closure "would improve rural subsistence harvest opportunities in an area recently deemed necessary by the State to restrict the moose harvest" (OSM 2002: 15).

The ADF&G issued an Emergency Order in 2005, changing the State fall moose hunt in Unit 22D to Sept. 1–Sept. 14. In 2005, the Board approved Special Action Request WSA05-01, which reduced the hunting season for all of Unit 22D from Aug. 20–Sept. 30 to Sept. 1–Sept. 14, in response to conservation concerns from harvests exceeding the joint State/Federal harvest quota for the Kuzitrin River drainage in 2003 and 2004 (OSM 2005). Overharvesting occurred in 2003 and 2004 despite State and Federal efforts to reduce the harvest by closing the seasons early.

Upon consideration of Federal Wildlife Closure Review WCR06-15 in 2006, the Seward Peninsula Subsistence Regional Advisory Council (Council) recommended submitting a proposal to eliminate the closure put in place in 2002 to all non-Federally qualified users. In 2007, the Board adopted Proposal WP07-38, submitted by the Council, which requested eliminating the closure to non-Federally qualified users in Unit 22D remainder, and aligning Federal hunting season dates with State season dates. The Council justified the request by stating that "land closures are no longer necessary to protect the moose population because numbers have increased unit wide and have remained stable for at least ten years; recruitment rates are up; and bull:cow ratios are consistently high despite a five-month Federal season" (OSM 2007: 468).

In 2015, the BOG modified State regulations, transitioning to an all bull moose hunt within Unit 22D remainder. For regulatory years 2015/16 and 2016/17, ADF&G established a three moose harvest quota for nonresident hunters in Unit 22D remainder to prevent excessive harvest. This harvest quota was enacted due to a decline in moose populations since 2011. The ADF&G issued emergency orders in regulatory years 2015/16 and 2016/17 to close this season early due to the quota being met (ADF&G 2016a).

At its March 2016 meeting, the Council submitted Proposal 28 to the BOG requesting elimination of the nonresident moose season in Units 22E and 22D remainder until the relationship between the changing moose population distribution and growth and decline between the subunits was better understood. During discussion of the proposal, ADF&G Area Biologist Tony Gorn was asked for an overview of the moose population in the area. Mr. Gorn brought his concern about the decreasing population numbers in Unit 22D to the attention of the Council, mentioning that moose in Unit 22D were last counted in 2014, and that declines in the population were observed in both of the major survey areas. Additionally, Mr. Gorn noted that some Unit 22D moose may have migrated to Unit 22E. Even with the possible migration taken into consideration, a significant decline in Unit 22D moose was observed during the 2014 survey (SPRAC 2016). This proposal was adopted in Unit 22D remainder by the BOG prior to the 2017/18 regulatory year.

Special Action Request WSA16-07, submitted by BLM and requesting that the December cow season be closed, was presented to the Council on November 2, 2016. The Council supported WSA16-07, stating that hunters had expressed concern about the moose populations in the area. In particular, the Council Chair discussed the need to refrain from harvesting cow moose during population declines and asked the current ADF&G Area Biologist Bill Dunker to explain the current levels of antlerless moose harvest and the potential impacts to the population. Mr. Dunker noted that the average annual harvest of cow moose in Unit 22D over the last ten years totaled one moose per year, but that an antlerless harvest as low as 3% could have a substantial negative impact to the population. The Council Chair emphasized that this Special Action would only close the Federal cow moose hunting season for one month. The Board approved WSA16-07 on November 30, 2016.

In 2017, the same request was submitted as Special Action Request WSA17-06. The proponent, BLM, submitted this request because they believed that continued harvest of cow moose in Unit 22D remainder would lead to further declines in the moose population. The Board approved WSA17-06 with modification to change the harvest limit from one bull to one antlered bull for the harvest season of Dec. 1–Dec. 31, 2017. This modification was approved to prevent the accidental harvest of cows, since most larger bulls would have dropped their antlers by December. An antlered moose hunt was also preferred to reduce mid-winter harassment of non-antlered moose by hunters trying to distinguish the sex of the animal. It was stated that the adoption of this modification would help to assure the long term viability of the moose population in Unit 22D remainder.

Current Events Involving the Species

Tribal and Alaska Native Claims Settlement Act consultations were held on October 2, 2018 in Anchorage via teleconference. Outreach was conducted prior to these teleconferences to inform Tribal and corporation representatives of the upcoming opportunity to provide consultation on this matter. No Tribal or corporation representatives participated in these teleconferences, and therefore no comments were received.

A public hearing to solicit comments on WSA18-03 took place on October 4, 2018 in Nome. Two people participated in person, while seven people participated via teleconference. No comments were received by local or nonlocal users.

On October 5, 2018, ADF&G submitted a letter in support of WSA18-03. The ADF&G supported this Special Action in 2016 (WSA16-07) and in 2017 (WSA17-06) to ensure continued sustainability of the moose population in Unit 22D remainder. The ADF&G stated that this change in Federal regulations would help to ensure the continued sustainability of the moose population in Unit 22D remainder and would also align State and Federal seasons and harvest limits, which would reduce user confusion.

Biological Background

Moose have been present in Unit 22 for a relatively short time, with very few being observed prior to 1930. The moose population on the Seward Peninsula grew and reached its peak in the mid-1980s (Nelson 1995, Gorn and Dunker 2014). This rise in the population was followed by multiple severe winters, which greatly reduced the population and overall moose density due to limited winter browse resources (Nelson 1995). Brown bear predation on calves is now considered the main limiting factor on the Unit 22 moose population; although no formal study has yet been conducted regarding this concept (Gorn and Dunker 2014).

State management goals for moose in Unit 22 include maintaining a unit-wide combined population of 5,100–6,800 moose, and more specifically, maintaining a population of 2,000–2,500 moose in Unit 22D while maintaining a minimum bull:cow ratio of 30:100. The population goal in Unit 22D would provide for an increased and stabilized population following recent declines (Gorn and Dunker 2014).

During a moose population survey conducted in 2014, the population estimate for moose in all of Unit 22D was 1,106 observable moose, which represents a 13% annual rate of decline from 2011 (1,681 observable moose). Specifically in the Agiapuk River drainage, the population estimate was 491 (0.39 moose/mi^2) observable moose (**Figure 2**). This is a 14% annual rate of decline since the 2011 survey (Gorn 2012, Dunker 2016, pers. comm.). Another population survey was planned for March of 2018 in Units 22D and 22E, but due to inclement weather the survey did not take place (Seppi 2018, pers. comm.).

Fall composition surveys indicate a decline in the moose population within Unit 22D remainder. Composition surveys in the Agiapuk River Drainage were conducted in 2011 for the first time since 2003, and found 35 bulls:100 cows, which is within State management goals (Gorn 2012). In 2013, efforts to complete composition surveys were hampered by poor weather conditions. The limited data obtained from these attempts indicated that the bull:cow ratio had likely declined since the 2011 surveys (Dunker 2016, pers. comm.). This was confirmed during the most recent composition survey in this area, which was completed in fall of 2016. Results showed a bull:cow ratio of 23 bulls:100 cows, which is below the State management goal (Dunker 2017, pers. comm.).

Weight measurements were collected on short-yearling (10-month old) moose in Unit 22D from April 2007-2009. Annual average weights ranged from 372-393 pounds. Snowfall was greater than normal levels in both 2008 and 2009, but did not have a significant impact on average short-yearling weights. Consistently-low calf weights may be influenced by competition for browse in high-density areas and research indicates that short-yearling weights less than 385 pounds are considered an indication that moose are resource limited (Gorn and Dunker 2014). A spring recruitment survey was completed by ADF&G in April of 2018, for Unit 22D remainder. This survey provided a 12% estimate of recruitment, which

suggests that recruitment is poor and the population is likely still in need of rebuilding efforts at this time (ADF&G 2018a).

Habitat

There is limited habitat data for Unit 22D. Although winter browse was seen as a limiting factor when moose density/numbers were at their highest, during the mid-1980s, current moose populations have been managed based on what winter browse can easily support throughout Unit 22D. Browse is no longer viewed as a limiting factor to moose in this Unit, and brown bear predation on calves is now seen as the most significant factor influencing moose numbers (Gorn and Dunker 2014).

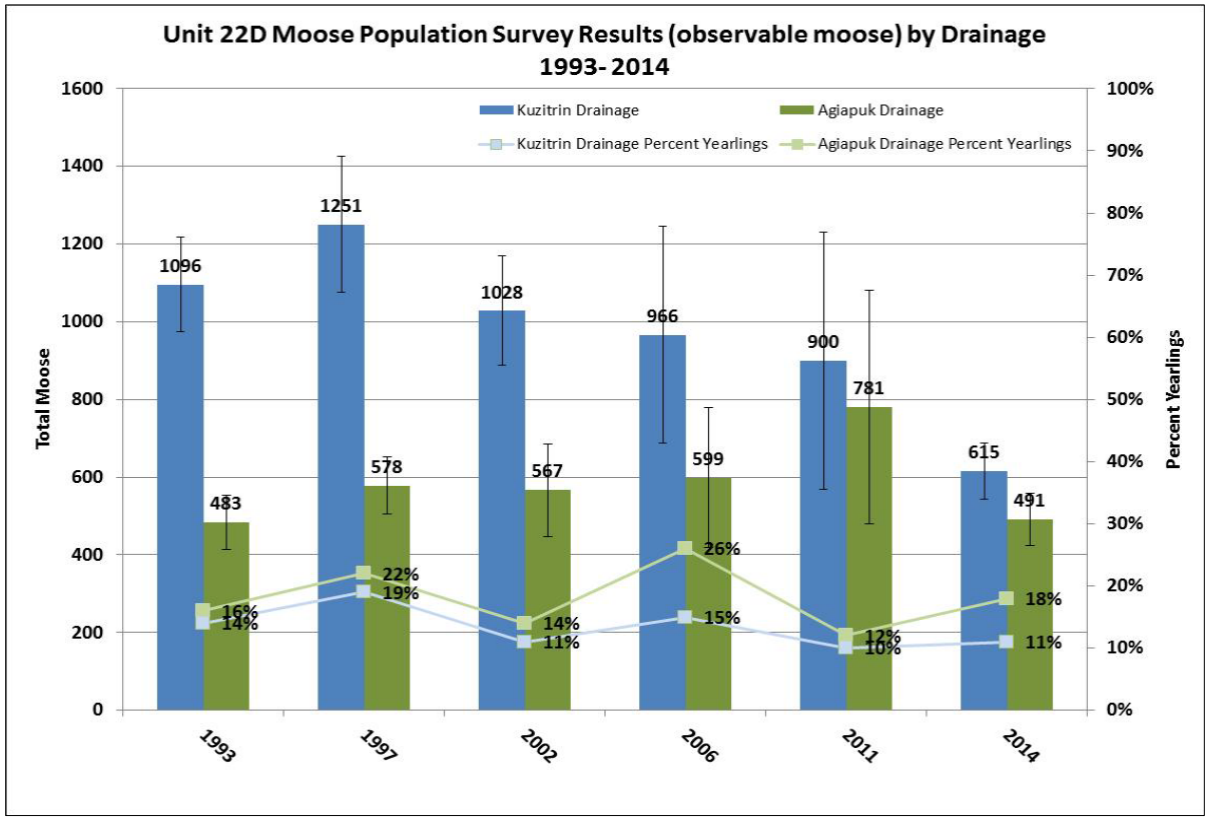

Figure 2. Unit 22D moose population survey results (Dunker 2016, pers. comm.).

Harvest History

Harvest remains well below levels seen in the 1980s, in part, due to more stringent hunting regulations in Unit 22D. According to the ADF&G harvest report website, 178 (133 male, 45 female) moose were harvested throughout Unit 22D in 1986, with 39.9% hunter success throughout the Subunit (ADF&G 2018b). Conversely, 69 moose were harvested in Unit 22D in 2017, with 31% hunter success throughout the Subunit (ADF&G 2018b). Average annual harvest from 2005 to 2017 was 66 moose (**Table 1**). A majority of moose taken over these years have been bulls. Residents of Unit 22 accounted for 73% of the total harvest between 2005 and 2017 (**Table 1**). In Unit 22D remainder, the average annual reported moose harvest by State residents between 2007 and 2017 was 17 moose (Dunker 2018, pers. comm.).

Household community harvest surveys conducted by ADF&G during 2012 in Brevig Mission and Teller showed under-reporting in Unit 22D remainder. It is estimated that average annual harvest (resident and nonresident) for Unit 22D remainder is 35–45 moose (Dunker 2016, pers. comm.). This estimate is greater than the estimated sustainable harvest level of 23–35 moose annually for the area (Dunker 2016, pers. comm.).

Table 1. Reported moose harvest in Unit 22D for 2005-2017. Local resident harvest refers to harvest by residents of Unit 22 (ADF&G 2016b, ADF&G 2017a, ADF&G 2018b).

Year	Species	Local Resident Harvest	Nonlocal Resident Harvest	Total Resident Harvest	Unknown Residency Harvest	Nonresident Harvest	Total Harvest	Male	Female	Unknown Gender
2017	Moose	57	12	69	0	0	69	68	0	1
2016	Moose	52	8	60	0	3	63	63	0	0
2015	Moose	54	12	66	1	5	72	69	0	3
2014	Moose	43	11	54	2	8	64	61	2	1
2013	Moose	45	10	55	1	3	59	58	1	0
2012	Moose	50	12	62	1	6	69	66	2	1
2011	Moose	50	19	69	1	9	79	76	2	1
2010	Moose	39	12	51	3	4	58	55	2	1
2009	Moose	54	15	69	0	7	76	74	1	1
2008	Moose	42	10	52	1	7	60	57	1	2
2007	Moose	52	14	66	1	5	72	70	2	0
2006	Moose	47	11	58	0	8	66	65	1	0
2005	Moose	47	4	51	0	6	57	56	0	1
Average:		**49**	**12**	**60**	**1**	**5**	**66**	**64**	**1**	**1**
Total:		**632**	**150**	**782**	**11**	**71**	**864**	**838**	**14**	**12**

Cultural Knowledge and Traditional Practices

The Iñupiaq people of the Seward Peninsula have a deeply rooted practice of subsistence hunting, fishing, and gathering of wild resources (Ray 1984). Traditionally, food and most of raw materials used in the making of clothing, boats, and tents were obtained from marine mammals and caribou. Historically, during the winter months, people often lived in villages along the coast where they harvested seals, belugas, other marine mammals, fish and small land mammals. During warmer months they established family fish camps near rivers and lakes to harvest fish and plant resources. *Qawiaraq* people traditionally were the main caribou hunters in the Seward Peninsula and their territory overlaps with the remainder area of Unit 22D. Unlike other tribal groups, the primary village of Qawiaraq was not on the coast (Ray 1984, Mac-Lean 2012). The Qawiaraq dialect is spoken in Brevig Mission and Teller today. Many residents of Teller were originally from Diomede, Wales, Mary's Igloo and King Island and moved there for better access to schools and health care (Kawerak Inc. 2016). The present location of Teller was established in 1900 when the Bluestone Placer Mine was established 15 miles to the south. Teller had a population of 5,000 during the boom time of the mine and was a major regional trading center (ADCCED 2016).

Large land mammals were not abundant in the Seward Peninsula during the 1800s. Moose did not start migrating into the Seward Peninsula area until the 1940s. Caribou numbers declined in the 1800s (Dau 2000). Reindeer were brought to the Seward Peninsula from Siberia in 1892 under a Federal program, initiated by Rev. Sheldon Jackson, to provide more meat for the Iñupiat people in the area (Stern et al. 1980). He had observed that local people were not able to get enough meat in their diet, due to declining caribou herds. As moose moved into the region, people hunted moose for subsistence.

The ADF&G Division of Subsistence works with communities to conduct household harvest surveys. The communities of Golovin, Stebbins, Diomede, and Shishmaref each participated in a household harvest survey covering a one-year study period between 2012 and 2014 (Braem et al. 2014, ADF&G 2017b). Estimated community harvests during one-year study periods ranged from a low of 2 moose at Diomede in 2013 to a high of 20 moose at Stebbins in 2013; all animals harvested from these communities during the study years were reportedly male. According to these surveys, most communities harvested more caribou than moose, but moose were still an important part of the subsistence diet for many households (Braem et al. 2014).

Other Alternatives Considered

One alternative that was considered was to support this Special Action Request with modification to extend the closure for the remainder of the regulatory cycle and to additionally close Federal public lands in this hunt area to the harvest of moose except by Federally qualified subsistence users. This alternative was considered due to the low moose population and the significant negative effect that taking even a limited number of cow moose can have on the trajectory of the population. This alternative could provide additional protection for the moose population in Unit 22D remainder by eliminating the antlerless hunt, therefore protecting cow moose in the Unit, and reducing antlered moose harvest on Federal public lands which could benefit the currently low bull:cow ratios and overall moose population. However, this alternative may not lead to a decrease in antlered moose harvest throughout the hunt area if non-Federally qualified users shift their harvest efforts for antlered moose to State lands due to the closure. Due to a lack of current moose population survey data in the Unit, it is uncertain to what extent the moose population in the area continues to decline. If the moose population has begun to stabilize in Unit 22D remainder due to the closure of both State and Federal antlerless moose hunts over the last few years, then the closure of Federal public lands to the harvest of moose except by Federally qualified subsistence users may be unwarranted at this time. Due to these concerns, this alternative was not further considered.

Effects of the Proposal

If this Special Action is approved, it would limit subsistence opportunity for Federally qualified subsistence users in Unit 22D remainder. Due to low moose densities in the area and a declining population that is below State management goals, approval of this Special Action would eliminate cow harvest, which could provide benefits to the moose population in the Unit. Additionally, limiting the harassment of antlerless moose in this hunt area could have a positive impact on the moose population by ensuring that cow moose are not stressed by hunters during the winter months when they are most vulnerable. Typically, from a biological standpoint, antlerless hunts are used to reduce a population that is growing; although from a

cultural perspective, antlerless hunts are often used to provide additional opportunity for a subsistence harvest of important resources.

OSM CONCLUSION

Support Special Action Request WSA18-03 **with modification** to extend the closure for the remainder of the wildlife regulatory cycle (July 1, 2018–June 30, 2020).

Justification

The moose population in Unit 22D remainder is currently below State management goals and has been declining at a rate of 14% annually since 2011. In addition, the current estimated annual harvest is above sustainable levels. Antlerless hunts are typically used to reduce increasing populations that are above sustainable levels. Due to this declining population, the State has removed antlerless hunts from their regulations in Unit 22 and eliminated non-resident harvest opportunity in the area.

Limiting the harvest to antlered bulls only will help prevent accidental harvest or harassment of cows, since most bulls will have dropped their antlers by December, making sexes hard to distinguish in the field. Although eliminating the antlerless moose season may limit short-term subsistence opportunity for Federally qualified subsistence users, it will help to assure the long term viability of this moose population.

Extending this closure through the remainder of the wildlife regulatory cycle (July1, 2018–June 30, 2020) will ensure that antlerless moose in Unit 22D remainder are protected until a proposal can be submitted to modify Federal subsistence regulations.

REGIONAL ADVISORY COUNCIL RECOMMENDATION

The Seward Peninsula Subsistence Regional Advisory Council public meeting took place on October 23-24, 2018 in Unalakleet. The analysis for WSA18-03 was presented at this meeting and the Council voted to support the alternative considered in this analysis to support the Special Action Request with modification to extend the antlerless moose closure for the remainder of the regulatory cycle (July 1, 2018-June 30, 2020) and to additionally close Federal public lands in Unit 22D remainder to the harvest of moose except by Federally qualified subsistence users. The Council stated that they supported this modification to WSA18-03 due to conservation concern for the moose population in Unit 22D remainder. The Council supported this modification to reduce harvest pressure on the population and to provide the moose population the opportunity to rebound in the hunt area, while also providing the opportunity for local people to capitalize on this particular hunt to obtain necessary resources for their families.

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