WP26–64 Executive Summary	
General Description	Wildlife Proposal WP26-64 requests to extend the Seward Peninsula Federal muskox season closing date in Units 22 and 23, south of Kotzebue Sound and west of and including the Buckland River drainage from March 15 to March 31. *Submitted by the Seward Peninsula Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 22—Muskox** *Unit 22B—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the taking of musk ox except by federally qualified subsistence users hunting under these regulations* — *Aug. 1-Mar. ~~15~~ **30*** *Unit 22D, that portion west of the Tisuk River drainage and Canyon Creek—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the harvest of musk ox except by residents of Nome and Teller hunting under these regulations* — *Sep. 1-Mar. ~~15~~ **30*** *Unit 22D, that portion within the Kuzitrin River drainages—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the taking of musk ox except for residents of Council, Golovin, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations* — *Aug. 1-Mar. ~~15~~ **30*** *Unit 22D, remainder—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the taking of musk ox except by residents of Elim, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations* — *Aug. 1-Mar. ~~15~~ **30*** *Unit 22E—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the harvest of musk ox except by federally qualified subsistence users hunting under these regulations* — *Aug. 1-Mar. ~~15~~ **30*** **Unit 23—Muskox** *Unit 23, south of Kotzebue Sound and west of and including the Buckland River drainage—1 bull by Federal drawing permit or State permit.* — *Aug. 1-Mar. ~~15~~ **30***
OSM Preliminary Conclusion	**Support** Proposal WP26-64

WP26–64 Executive Summary	
Seward Peninsula Subsistence Regional Advisory Council Recommendation	
Northwest Arctic Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None.**

Draft Wildlife Analysis
WP26-64

ISSUE

Wildlife Proposal WP26-64, submitted by the Seward Peninsula Subsistence Regional Advisory Council (Council), requests to extend the Seward Peninsula Federal muskox season closing date in Units 22 and 23, south of Kotzebue Sound and west of and including the Buckland River drainage (Unit 23 SW) from March 15 to March 31. This season extension will affect six muskox hunts: five in Unit 22 and one in Unit 23 SW.

PROPONENT STATEMENT

The proponent states this regulatory year, the Seward Peninsula saw minimal to no snowpack, rain which created icy conditions and bare ground, as well as some of the highest December temperatures on record, all of which impacted hunting opportunities and safe travel conditions for 3 months. While historically, late February and early March provided favorable travel conditions, it has become the norm for multiple winter storms to impact the Seward Peninsula during this time, impeding travel and subsistence hunting.

The majority of subsistence muskox hunters want to harvest a bull muskox in the winter when they are not in the rut, and when the hide is in full qiviut so the entire animal can be utilized. The purpose of this proposal is to allow for the continuation of subsistence muskox hunting opportunities while ensuring the best management practices for the Seward Peninsula muskox population.

There will be no biological impact or increased disturbance to muskoxen with this requested 2-week extension. Cow muskoxen, specifically pregnant cow muskox, will not be affected any more than they were with the season ending March 15. Cows may start to give birth in late April, but the majority of calves are successfully born in May. Additionally, only 14 Federal muskox permits have been collectively awarded across these 6 hunt areas, so few hunters are expected to hunt and disturb the same muskox groups.

Extending the Seward Peninsula federal muskox seasons by 2 weeks will provide additional opportunity for federally qualified subsistence users to harvest a bull muskox due to access issues caused by these now recurring catastrophic winter weather events and new environmental conditions.

Current Federal Regulations

Unit 22—Muskox

Unit 22B—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the taking of musk ox except by federally qualified subsistence users hunting under these regulations	*Aug. 1-Mar. 15.*
Unit 22D, that portion west of the Tisuk River drainage and Canyon Creek—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the harvest of musk ox except by residents of Nome and Teller hunting under these regulations	*Sep. 1-Mar. 15.*
Unit 22D, that portion within the Kuzitrin River drainages—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the taking of musk ox except for residents of Council, Golovin, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations	*Aug. 1-Mar. 15.*
Unit 22D, remainder—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the taking of musk ox except by residents of Elim, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations	*Aug. 1-Mar. 15.*
Unit 22E—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the harvest of musk ox except by federally qualified subsistence users hunting under these regulations	*Aug. 1-Mar. 15.*
Unit 22, remainder	*No Federal open season*

Unit 23—Muskox

Unit 23, south of Kotzebue Sound and west of and including the Buckland River drainage—1 bull by Federal drawing permit or State permit.	*Aug. 1-Mar. 15.*

Proposed Federal Regulations

Unit 22—Muskox

Unit 22B—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the taking of musk ox except by federally qualified subsistence users hunting under these regulations	*Aug. 1-Mar. ~~15~~ **30***
Unit 22D, that portion west of the Tisuk River drainage and Canyon Creek—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the harvest of musk ox except by residents of Nome and Teller hunting under these regulations	*Sep. 1-Mar. ~~15~~ **30***
Unit 22D, that portion within the Kuzitrin River drainages—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the taking of musk ox except for residents of Council, Golovin, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations	*Aug. 1-Mar. ~~15~~ **30***
Unit 22D, remainder—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the taking of musk ox except by residents of Elim, White Mountain, Nome, Teller, and Brevig Mission hunting under these regulations	*Aug. 1-Mar. ~~15~~ **30***
Unit 22E—1 bull by Federal drawing permit or State permit. Federal public lands are closed to the harvest of musk ox except by federally qualified subsistence users hunting under these regulations	*Aug. 1-Mar. ~~15~~ **30***

Unit 23—Muskox

Unit 23, south of Kotzebue Sound and west of and including the Buckland River drainage—1 bull by Federal drawing permit or State permit.	*Aug. 1-Mar. ~~15~~ **30***

Current State Regulations

Unit 22−Muskox

22B, east of the Darby Mtns., including drainages of Kwiniuk, Tubutulik, Koyuk and Inglutalik rivers.	*One bull by permit*	*TX105*	*Aug 1- Mar 15*
22B, remainder	*One bull by permit*	*TX105*	*Jan 1–Mar 15*
Unit 22D, that portion west of the Tisuk River drainage, west of the west bank of the unnamed creek originating at the unit boundary opposite the headwaters of McAdam's Creek and west of the west bank of Canyon Creek to its confluence with Tuksuk Channel	*One bull by permit*	*TX103*	*Jan 1–Mar 15*
22D, Kuzitrin River drainage (includes Kougarok and Pilgrim rivers)	*One bull by permit*	*TX102*	*Jan 1–Mar 15*
22D, remainder	*One bull by permit*	*TX102*	*Aug 1–Mar 15*
22E	*One bull by permit*	*TX104*	*Aug 1–Mar 15*

Unit 23−Muskox

23, Seward Peninsula west of and including the Buckland River drainage	*One bull by permit*	*TX106*	*Aug 1–Mar 15*

Extent of Federal Public Select Land or Water

Unit 22 is comprised of 43% Federal public lands and consists of 28% Bureau of Land Management (BLM), 12% National Park Service (NPS), and 3% U.S. Fish and Wildlife Service (USFWS) managed lands.

Unit 23 is comprised of 69% Federal public lands and consists of 42% NPS, 18% BLM, and 9% USFWS managed lands.

Customary and Traditional Use Determination

Residents of Units 22B and 22C have a customary and traditional use determination (C&T) for muskoxen in Unit 22B, west of the Darby Mountains.

Residents of Unit 22B have a C&T for muskoxen in Unit 22B, remainder.

Residents of Unit 22C have C&T for muskoxen in Unit 22C.

Residents of Unit 22B, 22C, 22D, and 22E (excluding St. Lawrence Island) have a C&T for muskoxen in Unit 22D.

Residents of Unit 22E (excluding Little Diomede Island) have a C&T for muskoxen in Unit 22E.

Residents of Unit 23 SW have a C&T for muskoxen in Unit 23 SW.

Regulatory History

This is an abbreviated history of muskox regulations on the Seward Peninsula. A full history can be found in the analysis for Wildlife Closure Review WCR24-28.

A cooperative muskox management effort for the Seward Peninsula was begun in 1993 with the creation of the Seward Peninsula Muskox Cooperators Group (Cooperators). Muskox management efforts were guided by recommendations from this group, and the Seward Peninsula Cooperative Muskox Management Plan (1994) established the guiding management goals for muskoxen in this region. However, the Cooperators have not met since 2008 (Braem 2022, pers. comm.)

In 1995, The Federal Subsistence Board (Board) adopted Proposal P95-44 with modification to establish the first Federal muskox hunt on the Seward Peninsula because the muskox population could withstand a harvest of 15 bulls as recommended by the Seward Peninsula Cooperative Muskox Management Plan (OSM 1995a). The Board established a season of Sep. 1–Jan. 31 for Units 22D, 22E, and 23 west of and including the Buckland River drainage (Unit 23 SW), with a harvest limit of one bull by Federal permit and a quota of 3% of the population within each subunit from the most recent census and closed Federal public lands to the harvest of muskoxen except by Federally qualified subsistence user (FSB 1995).

Also in 1995, the Board adopted Proposal P95-43 with modification, recognizing the C&T of muskoxen in Unit 22D by residents of Unit 22D (Teller and Brevig Mission), in Unit 22E by residents of Unit 22E (Shishmaref and Wales), excluding Little Diomede Island, and in Unit 23 SW by residents of Unit 23 South of Kotzebue Sound and west of and including the Buckland River drainage (Deering and Buckland) (OSM 1995b).

In 1998, the Board adopted Proposal P98-89 with modification to extend the muskox season to Aug. 1–Mar. 15 in Units 22D, 22E, and 23 SW. This modification was made due to biological concerns that hunting in late March could stress cows shortly before the calving season.

A shared Federal and State quota for muskox on the Seward Peninsula was supported by the Seward Peninsula and Northwest Arctic Councils and adopted by the Board in 1998 (FSB 1998). Six affected villages (Brevig Mission, Buckland, Deering, Shishmaref, Teller, and Wales) considered allowing State harvest to increase harvest opportunities. The Alaska Board of Game (BOG) approved a Tier II subsistence muskox hunt for the Seward Peninsula with the assumption that this would be part of a combined Federal/State harvest program.

In 1999, adoption of Proposal WP99-46 codified the shared Federal/State permit system for muskox on the Seward Peninsula. Due to the long traveling distances needed to reach Federal lands and the poor travel/snow conditions during that time, the six affected villages supported the combination of the State and Federal harvest systems to create more harvest opportunities due to declining hunter success rates under the Federal subsistence hunt. The cooperative management dispersed hunting pressure over an entire area regardless of land ownership to create a more biologically sound management approach (OSM 2001).

In 2001, the Board adopted Proposal WP01-35, changing the Units 22 and 23 SW harvest limit from one bull to one muskox. However, cows could only be taken from Jan. 1–Mar. 15 and no more than 8 cows could be harvested. Total harvest could not exceed 13 muskoxen. The Cooperators unanimously supported submitting the proposal to provide more subsistence opportunity, to better coordinate between State and Federal hunts, and because there were no conservation concerns (OSM 2001). The BOG adopted similar regulations.

Also in 2001, the Board adopted WP01-35, establishing a muskox season in Unit 22B. The season was open Aug. 1–Mar. 15 throughout the unit, harvest was limited to one bull by Federal or State permit, and Federal public lands were closed except by Federally qualified subsistence users. There was a harvest quota set at 8 bulls. The BOG established a State season in Unit 22B during the same year. At that time, the harvest of one bull was allowed by Tier II permit (TX105).

In 2002, the Board adopted Proposal WP02-37 with modification to delegate authority to a Federal in-season manager to announce harvest quotas and any needed closures for muskox in Units 22B, 22D, and 22E, resulting in more efficient management of the Seward Peninsula muskox population.

In 2004, Proposal WP04-71 requested C&T for muskoxen in Units 22B and 22D be extended to all residents of Unit 22, except those from St. Lawrence Island. Previously, only residents of Unit 22B had C&T in Unit 22B and only residents of Unit 22D, excluding residents of St. Lawrence Island, had C&T in Unit 22D. The Board adopted the proposal with modification, as recommend by the Seward Peninsula Council, to 1) add residents of Unit 22C to the C&T determination in the portion of Unit 22B west of the Darby Mountains and 2) add residents of Unit 22C and White Mountain to the C&T determination in the portion of Unit 22D in the Kougarok, Kuzitrin and Pilgrim River drainages.

In 2005, the BOG established a Tier I subsistence registration hunt, previously a Tier II hunt, in Unit 22E as proposed by the Cooperators. This was expected to help users reach the harvest quota in an area where the harvestable surplus was greater than the number of permit applicants.

In 2006, Proposal WP06-41 and -55 established the use of a designated hunter permit for muskoxen in Unit 22 and 23SW, respectively, by federally qualified subsistence users.

In 2008, the BOG made several regulatory changes affecting muskox in Unit 22B, 22D and 23 SW by adopting Proposal 77 with modification. Notably, registration permits were required for residents, rather than Tier II hunts, with permit distribution limited to vendors in Unit 22. This also opened a nonresident season via draw permit in Units 22D southwest, 22D remainder and 23 Southwest (Gorn 2011; Hughes 2018, pers. comm.) Trophy destruction was required for all skulls removed from Units 22 and 23 SW (Osburne 2025, pers. comm.).

In 2010, the Board adopted WP10-73 with modification, expanding C&T for muskoxen in Unit 22D. This combined Unit 22D within the Kougarok, Kuzitrin, and Pilgrim River drainages customary and traditional use area with the Unit 22D remainder area. This also added residents of Unit 22B (White Mountain, Golovin, Elim, Council, and Koyuk) and Unit 22E (Wales and Shishmaref) to the C&T for all of Unit 22D. They also adopted Proposal WP10-84 with modification, requiring a Federal or State Tier I permit (instead of Tier II) to harvest muskox in Unit 23 SW. The Board revised permit requirements to maintain consistency with recent changes under State regulations.

Also in 2010, Proposal WP10-74 requested rescinding the closure of Federal public lands to the harvest of muskoxen in Unit 22E, except by Federally qualified subsistence users, and was adopted by the Board. Harvest quotas were rarely met in Unit 22E, indicating harvest should be allowed on Federal public lands under both Federal and State regulations. Conservation concerns were minimal due to harvest quotas. At the same time, the Board adopted WP10-75, which requested the harvest of cow muskoxen be allowed for the entire Aug. 1–Mar. 15 season in Unit 22E, rather than restricting it to Jan. 1–Mar. 15.

In 2011, the BOG adopted Proposal 23, making the muskox hunting regulations in Unit 22 part of a threshold-based hunt regime conditioned on the relationship between the Amount Necessary for Subsistence (ANS) and the available harvestable portion for the Seward Peninsula muskox population, which includes all of Unit 22 and Unit 23 SW (Dunker 2018, pers. comm.). This change would allow ADF&G to determine which type of permit would be required annually based on results from population surveys without having to request the BOG to make the change. The regulatory thresholds defined conditions for Tier II hunts (harvestable portion below the ANS), Tier I registration hunts (harvestable portion within the ANS range) and registration/drawing hunts (harvestable portion above ANS). This change was in response to significant muskox population declines, low bull:cow ratios, and high harvest of mature bulls documented by ADF&G. (Dunker 2018, pers. comm.).

In 2014, the Board adopted Proposals WP14-33, -35, -36, -38, and -41 to eliminate cow harvest in Units 22D, 22E, and 23 SW. The proposals also provided the in-season managers with authority to limit the respective number of Federal registration permits issued each season. Each proposal closed Federal public land in their respective units to the harvest of muskoxen except by eligible residents as determined by an §804 analysis. These restrictions were enacted due to significant declines in the

muskox population, low harvestable surplus, and concerns over sustainable harvests and maintaining rural subsistence priority.

In 2020, the BOG considered Proposal 31 at their Western Region meeting. This proposal requested to establish a muskox season in Units 22A, 21D, and 24D. The BOG deferred the proposal to their Interior and Eastern Arctic Region meeting since this proposal spanned two separate regions. The BOG amended Proposal 31 to affect only Unit 22A, require a Tier II permit, and to match season dates with what was already established on the Seward Peninsula. The Board shortened the requested season to match those already in existence to protect calves and calving cows.

In 2020, Wildlife Closure Reviews WCR20-10, -19, -28, -29, -30 and -44 reviewed the Federal public lands closure in Units 22B, 23 SW, 22D SW, 22D remainder, 22E and 22D Kuzitrin, respectively. The Board recommended to retain the status quo for all of these closures. Low muskox population numbers, poor population metrics and high harvest rates prompted this decision. The small amount of Federal harvest allowed still provided for a Federal subsistence priority.

In 2022, Temporary Wildlife Special Action WSA22-01a was approved by the Board for the 2022-2024 seasons. This special action changed the Federal muskox permit system for all six of the Seward Peninsula muskox hunt areas from a Federal registration permit to a Federal drawing permit (WSA22-01b addressed the Cape Thompson muskox population). Language in the Delegation of Authority letters (DALs) to the BLM and NPS in-season managers was standardized and clarified. Permits had been being distributed via a draw system for years, and unclear language in the DALs had been misinterpreted. The Board adopted the request to allow for effective and flexible hunt management and to ensure the sustainable harvest of muskoxen and equitable distribution of Federal permits.

In 2024, the Board adopted Proposal WP24-27, codifying the changes approved by WSA22-01. Also in 2024, Wildlife Closure Reviews WCR20-10, -19, -28, -29, -30 and -44 reviewed the Federal public lands closure in Units 22B, 23 SW, 22D SW, 22D remainder, 22E and 22D Kuzitrin, respectively. The Board recommended to retain the status quo for all of these closures, except in Unit 23 SW where the closure was rescinded in deference to the Northwest Arctic Council's recommendation.

Current Events

Proposal WP26-01 requests to move authority to manage Federal hunts currently delegated to Federal in-season managers through Delegation of Authority Letters (DALs) into unit-specific regulations for many hunts across Alaska and to rescind the associated DALs. The delegated authority to the Federal in-season managers for Units 22 and 23 muskoxen is included in this proposal.

Proposal WP26-63 requests to combine two muskox hunt areas and permit requirements in Unit 22D: Unit 22D Kuzitrin and Unit 22D, remainder.

Biological Background

<u>Seward Peninsula Muskox Population</u>

Muskoxen are adapted for survival in arctic habitats. Their large body size, thick undercoat and long guard hairs allow muskoxen to stay warm in arctic climates and conserve energy (Klein 1992). However, their thick fur does not allow them to regulate their body temperature, especially following high exertion activities, such as running. Their lower chest height and smaller hooves make travelling through deep snow difficult (Klein 1992; Ihl and Klein 2001); therefore, they tend towards wind swept areas with reduced snow depth (Dau 2005). These adaptations limit suitable habitat and lead muskox groups to remain localized during winter months (Klein 1992). Therefore, disturbance to muskox groups during the winter by hunters or predators could decrease survival through increased energetic requirements and movement to unsuitable habitat (Nelson 1994; Hughes 2018).

Muskoxen were extirpated in Alaska by the late 1800s, and perhaps even earlier on the Seward Peninsula (Gorn and Dunker 2015). Muskoxen were reintroduced to Units 22C and 22D in 1970 and have since expanded their range to the north and east (Gorn and Dunker 2015). Currently, muskoxen from the Seward Peninsula population occupy suitable habitat in Units 22, 21D, 24D and the southern portion of Unit 23 (Dunker and Germain 2022).

Muskox management on the Seward Peninsula has been guided by recommendations developed by the Seward Peninsula Muskox Cooperators Group (Cooperators). The group was composed of staff from NPS, BLM, USFWS, ADF&G, Bering Straits Native Corporation, Kawerak Inc., Reindeer Herders Association, Northwest Alaska Native Association, residents of Seward Peninsula communities and representatives from other interested groups or organizations. The Cooperators Group has not met since January of 2008 and is now defunct (Braem 2022, pers. comm.). The following management goals formed the basis of the cooperative interagency management plan for Seward Peninsula muskoxen developed from 1992 through 1994 (Nelson 1994): 1) manage populations to allow for growth while providing for harvest; 2) protect habitats; and 3) encourage cooperation and information sharing among agencies.

Aerial survey methods used to monitor the Seward Peninsula muskox population include minimum counts, distance sampling and composition surveys. Survey areas include the core count area of Units 22B, 22C, 22D, 22E, and 23 SW, and the expanded count area, which includes northern Unit 22A, southeastern Unit 23, western Unit 21D, and western Unit 24. Beginning in 2010, distance sampling techniques, conducted during the winter, were implemented to estimate abundance of Seward Peninsula muskox. This methodology replaced the minimum count surveys used since 1980. The minimum count surveys assumed 100% coverage but had varying effort from year to year. The distance sampling protocol was developed to provide more useful data and improve long-term monitoring efforts (Gorn and Dunker 2015). Surveys of the expanded count area were also implemented in 2010 to better understand the eastward migration of muskoxen from the Seward Peninsula, their current distribution and total population. Composition surveys, completed in the spring after distance sampling, document large scale patterns in the age and sex structure of the population.

After reintroduction, the Seward Peninsula muskox population experienced periods of growth between 1970 and 2000 (14% annual rate of increase) and 2000 and 2010 (3.8% annual rate of increase), peaking at 2,903 muskoxen in 2010 (Gorn 2011). However, a 23.4% decrease in abundance occurred

in 2012 and from 2015–2021, the muskox population experienced an annual rate of decline of 2%, to an estimated 2,071 muskoxen. The latest survey, conducted in 2024, estimated a total 1,932 muskoxen, indicating stability in the population since the last survey (ADF&G 2025) (**Figure 1**). It was hypothesized the decline was related to the high mortality rates of adult cows and declines in the number of short yearlings (10–12-month-old muskoxen) (Gorn 2012); however, some caution should be used when interpreting these mortality rates as they are based on a small sample size (Gorn 2011).

Composition surveys indicated declines in mature bulls between 2002 and 2011 (**Figure 2**), which prompted changes to the method of determining sustainable harvest rates (Gorn 2011). Research suggested that selective harvest of mature bulls on the Seward Peninsula could be a driver of reduced population growth. The theory is young male muskoxen may be less effective at maintaining a harem, leading to extended calving seasons which in turn may decrease calf survival and reduce recruitment. Younger males may also be less effective than mature bulls at defending their harem from predatory attacks, leading to more predation mortality. Therefore, annual harvest was restricted to less than 10% of the estimated number of mature bulls in the interest of conservation (Schmidt and Gorn 2013). Following this change in harvest management, the mature bull:cow ratio of Seward Peninsula muskoxen has increased over the 2011 low of 29:100 and remained stable through 2021 at an average of 38:100 (Dunker 2017a, 2022 pers. comm.). In 2024, the range-wide ratio increased to 46 mature bulls:100 cows, indicative of a healthy and stable population of mature bulls (ADF&G 2025).

Short yearlings (SY) are muskox between 10 and 12 months old and provide a measure of recruitment and population growth. Composition surveys indicate a decrease in short yearlings between 2002 and 2015, from 44:100 to 23:100, with low recruitment rates of particular concern (Gorn and Dunker 2015; Dunker 2022, pers. comm.). Between 2002 and 2021, SY:cow ratios for the entire Seward Peninsula muskox population ranged from 17-44 SY:100 cows (**Figure 3**). Ratios have been increasing since 2015, peaking in 2024 at 43 SY:100 cows, indicating a healthy and stable population of SY. The next muskox population abundance and composition survey is tentatively scheduled for spring 2028 (ADF&G 2025).

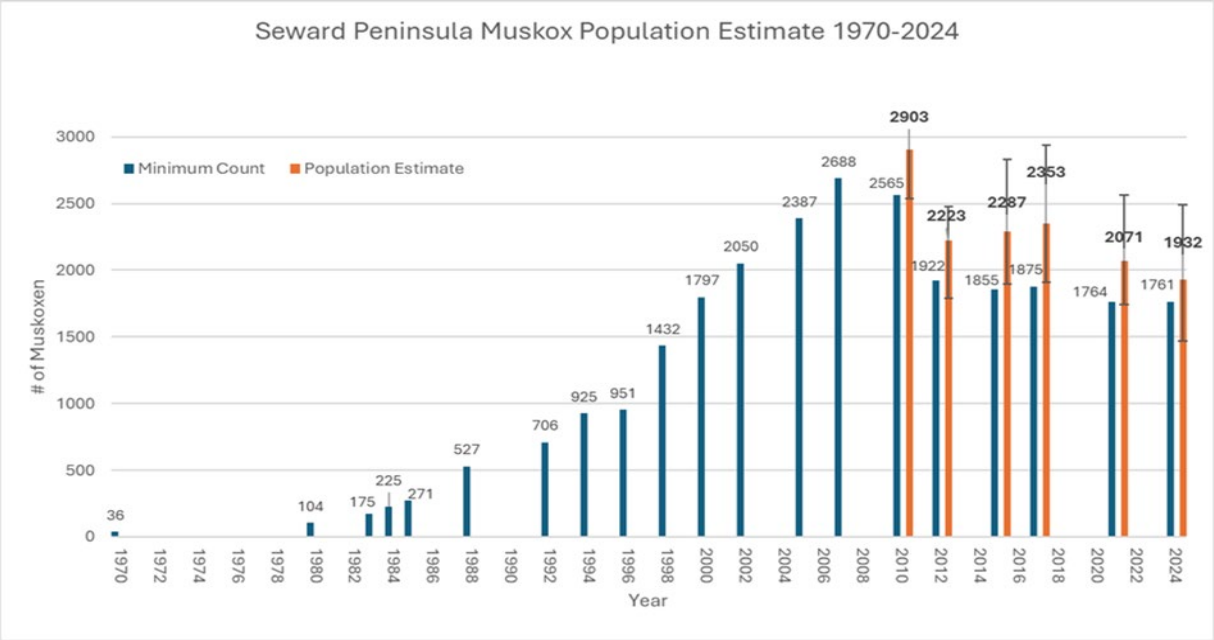

Figure 1. Population estimates for Seward Peninsula muskox. The results pre-2010 are from the minimum count surveys and post-2010 are from the distance sampling technique (Carson 2025, pers. comm.).

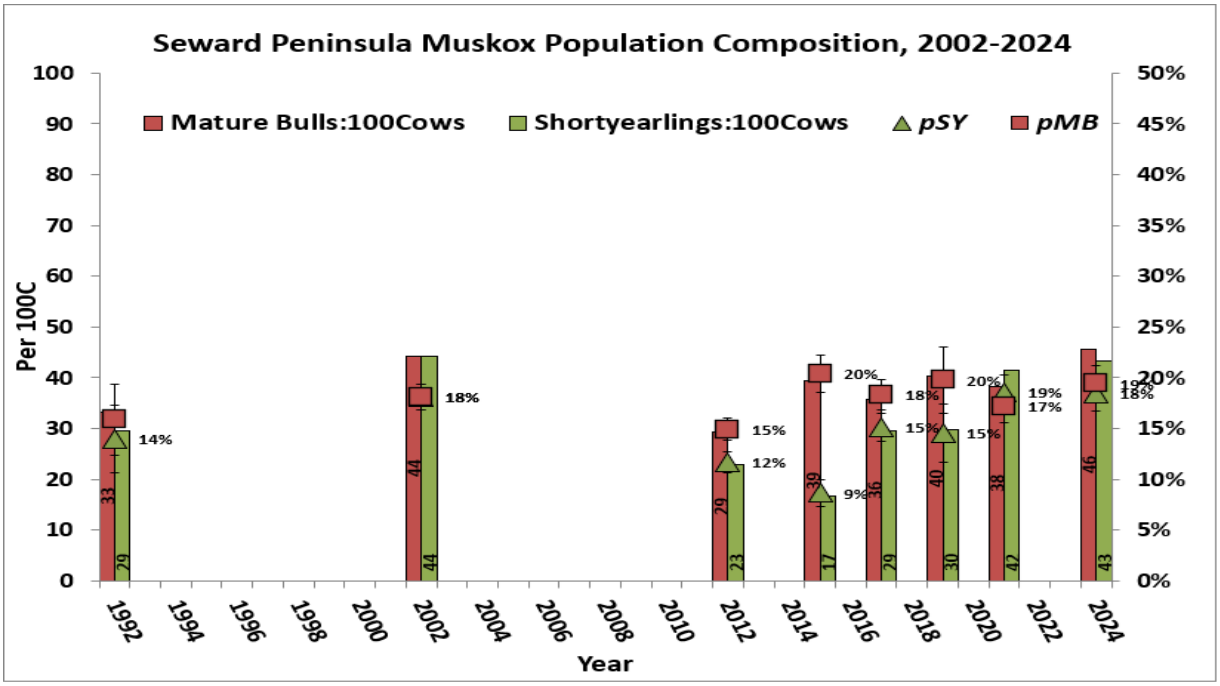

Figure 2. Population composition for Seward Peninsula muskox. Ratios are the number of mature bulls:100 cows and short yearlings:100 cows. Mature bulls are ≥ 4 years old. Short yearlings are muskoxen between 10 and 12 months old. pSY and pMB are the proportion of short yearlings and mature bulls (respectively) in the estimate (Gorn and Dunker 2015, Dunker 2017b, 2022).

Cultural Knowledge and Traditional Practices

In Iñupiaq, muskoxen are called *umingmak*, "the one with hair like a beard" (Lent 1999). Paleontological evidence indicates that muskoxen occupied most of the unglaciated interior, western, and all of northern Alaska during the Pleistocene (Lent 1998). The earliest archaeological evidence for use of muskoxen in Arctic Alaska dates to Birnirk culture, beginning in approximately 600 A.D. (Lent 1998, 1999). Birnirk people used ladles and spoons made of muskox horn, and have been found buried in muskox robes (Lent 1999).

Muskoxen were likely always present at relatively low numbers, and their use was limited but continuous over approximately 1500 years (Lent 1998). Historically, muskoxen provided fat when caribou were lean in late winter and early spring and provided an alternative food source in years when caribou were scarce. In comparison to caribou, the availability of muskoxen was more predictable in time and space (Klein 1989).

Muskoxen were more heavily hunted following the introduction of firearms, and were also intensively harvested by whalers, trappers, and traders in the 1800s. According to ethnohistoric research, the last muskoxen in Northwestern Alaska were hunted in the late 1850s around Wainwright, but the exact timing of their local extirpation further south in the Northwest Arctic and Seward Peninsula regions is unknown (Lent 1999). Due to their extirpation, residents of the Seward Peninsula were unable to hunt muskoxen for an extended period of time, representing a significant disruption in their long-term pattern of use.

Muskoxen were reintroduced to the region in 1970 (Machida 1997, Lent 1999). While muskoxen are not a major source of food in relation to other subsistence resources, they have become more important within some families. A harvested muskox yields a large amount of meat and is shared with the community. The Seward Peninsula Council member from Brevig Mission has described how all parts of the animal are used, including the many uses of qiviut (SPRAC 2025). Although muskoxen are a valuable subsistence species, they also represent a nuisance and threat to some communities and hunters (Lent 1999; Kutz et al. 2017; Mason 2015; SPRAC 2019, 2022; NWARAC 2023).

In discussion of the current proposal, members of the Seward Peninsula Council noted that weather conditions have been more stable in the spring than in the winter. Rivers have been freezing later, making travel conditions more dangerous earlier in the winter (SPRAC 2025).

Harvest History

Prior to 2012, muskox harvest rates on the Seward Peninsula were calculated as 3% of the total population size. Since 2012, Seward Peninsula muskox harvest rates have been based primarily on the number of mature bulls in the population. Specifically, harvest quotas are calculated as 10% of the estimated number of mature bulls within the hunt area, and range-wide harvest targets are set at 2% of the estimated population size (Gorn and Dunker 2013; Gorn and Dunker 2015).

This shift in harvest management was accompanied by a significant reduction in harvest. Range-wide, harvest declined from 111 muskoxen in 2011 (5.5% of the total population) to 26 muskoxen in 2012 (1.2% of the total population). In 2024, total muskoxen harvest from the Seward Peninsula population was 60 muskoxen, about 3% of the total estimated population. Total reported harvest has increased to above 2% since 2023, averaging 2.7% of the estimated population; from 2012–2022 it remained below 2% of the total population, averaging 1.3% (**Figure 3**, Carson 2025, pers. comm.). After the population decline in 2012, the realized harvest rate has ranged from 1%–1.8% with an average of 1.3% between 2012 and 2021 (Carson 2025, pers. comm.). Between 2012 and 2024, total reported harvest range-wide has ranged from 24-60 muskox/year, averaging 32 muskox/year. Unit 22C has accounted for more muskox harvest than any other area. Notably, there is no Federal muskox hunt and no (< 1%) Federal lands in Unit 22C. Harvest percentages by affected subunit vary widely, with 18% of total muskox harvest occurring in Unit 22B, 21% in Unit 22D, 14% in Unit 22E, and 8% in Unit 23 SW.

Harvest of muskoxen on the Seward Peninsula by Federal permit has remained low with most muskox harvest occurring by State permit. From 2001–2012 Federal permit harvest averaged 5.3 muskoxen per year. From 2013- 2021, after the change in harvest management, Federal permit harvest averaged 3.4 muskoxen per year. From 2001- 2020, Federal permit harvest of muskox ranged from 0-15 muskoxen harvested per year, with an average success rate of 27%. Since 2012, harvest by Federal permit has accounted for 3.4%- 25% of overall muskox harvest on the Seward Peninsula, averaging 10% (OSM 2022).

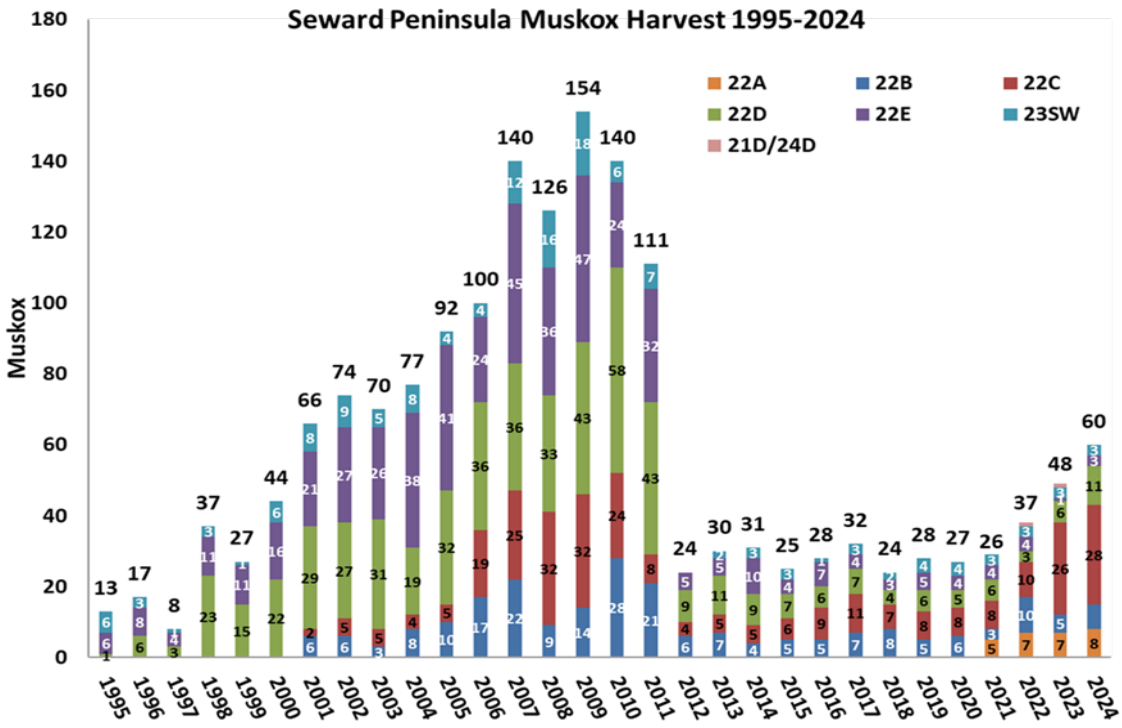

Figure 3. Reported Federal and State harvest of Seward Peninsula muskox by subunit (Carson 2025, pers. comm.).

Discussion and Effects

If this proposal is adopted, federally qualified subsistence users would have 15 more days to harvest muskoxen from the Seward Peninsula population, increasing opportunity. This 15-day extension would allow time to avoid bad weather and other travel dangers users face while hunting muskoxen, as almost all users wait until later in the season to harvest muskox.

No impact on the muskox population is expected as the Seward Peninsula muskox population is closely managed through harvest quotas and permit numbers. As the proponent stated in their proposal, pregnant cows should not be negatively affected as calving occurs in late April-May. While hunting in late March could additionally stress muskox groups, including late term cows, the overall low hunting pressure is not expected to substantially disturb muskox groups or impact calving.

This proposal would increase regulatory complexity by misaligning the closing date of State and Federal muskox hunts. Users would need to differentiate land status during the extended Federal season from March 16-31. However, users already must differentiate land status in the Unit 22D Kuzitrin hunt area from Aug. 1-Dec. 31 as the State season does not open until January 1st. Additionally, any Federal permit holder (vs. State Tier II permit holder) must differentiate land status throughout the season as the Federal permits only apply to Federal public lands.

OSM PRELIMINARY CONCLUSION

Support proposal **WP26-64**

Justification

Adopting this proposal increases opportunity for federally qualified subsistence users and there are no conservation concerns. Weather and travel conditions are better and safer later in March, while meat and qiviut quality are still good.

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