WP26–61 Executive Summary	
General Description	Wildlife Proposal WP26-61 requests to require a Federal registration permit for moose in Unit 22E. *Submitted by the Seward Peninsula Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 22E—Moose** *Unit 22E—1 antlered bull* ***by Federal registration permit****.* *Aug. 1–Mar. 15.* *Federal public lands are closed to the taking of moose except by federally qualified subsistence users hunting under these regulations*
OSM Preliminary Conclusion	**Support** Proposal WP26-61 **with modification** to delegate authority to the BELA superintendent to set harvest quotas, determine the number of permits issued and the method of permit allocation, and close the season.
Seward Peninsula Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None.**

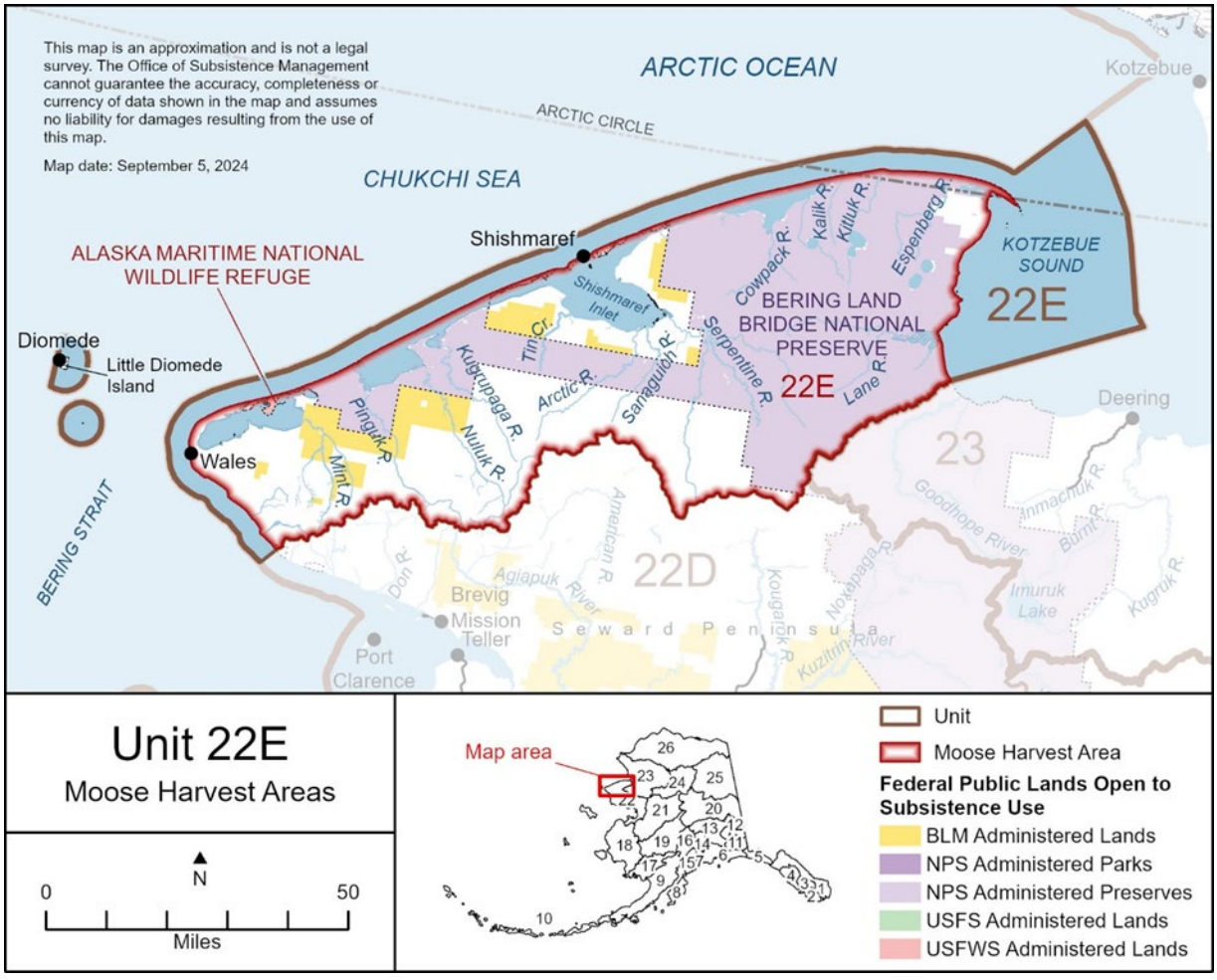
Draft Wildlife Analysis
WP26-61

ISSUE

Wildlife Proposal WP26-61, submitted by the Seward Peninsula Subsistence Regional Advisory Council (Council), requests to require a Federal registration permit for moose in Unit 22E (**Map 1**).

Proponent Statement

The proponent states requiring a Federal registration permit for Unit 22E will allow for greater harvest data to be collected, improving management of this moose population.



Map 1. Map of Federal lands in Unit 22E.

Current Federal Regulations

Unit 22E—Moose

Unit 22E—1 antlered bull.	*Aug. 1–Mar. 15.*
Federal public lands are closed to the taking of moose except by federally qualified subsistence users hunting under these regulations	

Proposed Federal Regulations

Unit 22E—Moose

Unit 22E—1 antlered bull ***by Federal registration permit****.*	*Aug. 1–Mar. 15.*
Federal public lands are closed to the taking of moose except by federally qualified subsistence users hunting under these regulations	

Current State Regulations

Unit 22E−Moose

Unit 22E	*Residents: One bull*	*HT*	*Aug.1–Dec. 31*
	OR		
	Residents: One antlered bull	*HT*	*Jan. 1– Mar. 15*
	Nonresidents: One bull with 50-inch antlers or antlers with 4 or more brown tines on at least on side by permit.	*DM855*	*Sept. 1–14*

Extent of Federal Public Lands

Unit 22E is comprised of approximately 56% Federal public lands and consists of 50% National Park Service (NPS) and 6% Bureau of Land Management (BLM) managed lands.

Customary and Traditional Use Determination

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

Regulatory History

In 2002, WP02-34 requested to close Federal public lands to the harvest of moose by non-federally qualified users in units 22B West; 22D Kuzitrin and SW; and 22E for the conservation of a declining moose population. The proposal also asked to shorten the season length and limit the number of moose harvested from each unit. The Board adopted WP02-35 with OSM modification to require either a Federal or State permit and to limit harvest to bulls only other than the fall 22D Kuzitrin hunt and the winter 22D SW hunt. Adoption of this proposal addressed conservation concerns for the moose population while still providing for the continuation of subsistence uses of moose on Federal public lands in Unit 22. The Board felt closing Federal public lands to all except federally qualified subsistence users, or a subset of them, would improve subsistence harvest opportunities for moose. The Alaska Board of Game (BOG) also adopted new regulations for moose in Unit 22E in 2002, changing the harvest limit from one moose to one antlered bull, shortening the season by three months, and closing the nonresident season.

In the summer of 2003, the Native Village of Wales submitted a Temporary Special Action Request, WSA03-09, to change the harvest season for moose and muskox taken for the Kingikmiut Dance Festival from Nov. 15–Dec. 31 to Jan. 1–Mar. 15. This Temporary Special Action was approved by the Board in October 2003. The Board stated these changes would have little impact on moose and muskox populations and would provide additional subsistence opportunities. The Native Village of Wales subsequently submitted Proposal WP04-69 to permanently change the harvest season for moose and muskox taken for the Kingikmiut Dance Festival, as described above. The proposal was adopted by the Board at its May 2004 meeting.

In 2008, the BOG adopted a proposal that established a resident winter season from Jan. 1–Jan. 31 for one antlered bull, as well as a nonresident antler-restricted registration hunt from Sept. 1–14 with a 10-bull harvest quota in Unit 22E. These changes were a result of an increasing moose population as determined by ADF&G.

In 2010, the Board adopted Proposal WP10-79, which changed the harvest limit from one bull to one antlered bull and extended the Federal season from Aug. 1–Dec. 31 to Aug. 1–Mar. 15 in Unit 22E. These changes were requested to provide more harvest opportunity for federally qualified subsistence users and to eliminate the inadvertent harvest of cow moose.

At its February 2011 meeting, the Council voted unanimously to submit a proposal requesting that the closure of Federal public lands to moose harvest, except by federally qualified subsistence users be rescinded in Unit 22E due to the recovery of the population. However, no proposal was submitted during the regulatory cycle.

At its January 2014 meeting, in response to an increasing moose population, the BOG extended the Unit 22E winter resident moose season from Jan. 1–Jan. 31 to Jan. 1–Mar. 15.

In 2015, the Council reviewed Wildlife Closure Review WCR14-16 and voted to submit a proposal for the upcoming wildlife regulatory cycle to rescind the closure given the recovery of the Unit 22E moose population.

In 2016, the Board rejected Proposals WP16-46 and WP16-47, both submitted by the Council. Proposal WP16-46 requested rescinding the moose hunting closure to non-federally qualified users in Unit 22E. While the Unit 22E moose population had increased above State management objectives, the adjacent moose population in Unit 22D had declined. New information suggested the apparent population increase in Unit 22E may have been due to redistribution of moose during low snow years. Therefore, the Council opposed, and the Board rejected Proposal WP16-46. Proposal WP16-47 requested establishing an antlerless moose season from July 15 ─ Dec. 31 in Unit 22E. The Board rejected Proposal WP16-47 due to conservation concerns as part of the consensus agenda.

In August 2020 the Board approved a revised closure policy, which stipulated all closures will be reviewed every four years. The policy also specified that closures, similar to regulatory proposals, will be presented to the Councils for a recommendation and then to the Board for a final decision. Previously, closure reviews were presented to Councils who then decided whether to maintain the closure or to submit a regulatory proposal to modify or eliminate the closure.

The closure to moose hunting by non-federally qualified users in Unit 22E was reviewed by the Council and the Board in 2022 as WCR22-16. Both determined not enough information was available to rescind the closure as updated harvest information was needed, and it was unclear whether the observed population increase was due to increased productivity or to immigration from Unit 22D. Therefore, the Board voted to maintain the closure as part of the consensus agenda.

Also, in 2022 the BOG adopted Proposal 265 as amended. This proposal changed the nonresident RM855 registration permit for moose in Unit 22E to a nonresident drawing permit (DM855). The BOG amended and adopted this proposal to allow up to 25 permits to be available. This hunt was previously managed by harvest quota with an unlimited number of registration permits available. The drawing hunt was adopted to restrict the number of nonresident hunters accessing Unit 22E, which reduced competition among nonresident applicants The permit was set to be available for Regulatory Year (RY) 23, as the drawing application period for RY22 had already occurred.

Current Events

Wildlife Closure Review WCR26-16 is a standard review of a Federal subsistence wildlife closure to the harvest of moose by non-federally qualified users hunting on Federal public lands in Unit 22E. The Board will consider this closure review at their April 2026 wildlife regulatory meeting. The OSM preliminary conclusion presented to the Seward Peninsula Council at their winter 2025 meeting was to retain the status quo.

Biological Background

Moose migrated onto the Seward Peninsula starting in the 1930s and occupied almost all the suitable habitat by the late 1960s. Even though moose are a relatively recent addition to the Seward Peninsula, once established they rapidly became an important food source for rural subsistence users. Fortunately, populations grew rapidly and expanded through the 1980s. But then, severe winters in the late 1980s and early 1990s caused declines in moose numbers. Densities went from highs of 1.0–1.5 moose/mi2, to lows of 0.2–0.5 moose/mi2. Populations in Units 22B and 22D experienced the largest declines and have never recovered to these higher numbers but have stabilized at lower densities (Germain 2023). Brown bear predation on calves is considered the main limiting factor on Unit 22 moose populations (Henslee 2024, pers. comm.).

State management goals for moose in Unit 22 are to protect, maintain, and enhance the moose population and its habitat. The goal of ADF&G is to increase or stabilize the moose population to achieve recovery in Units 22A, 22B, and 22D (Henslee 2025). Specific population objectives include:

- Unit 22: 5,000 – 7,000 moose
- Units 22D and 22E combined: Maintain a population of 2,600 – 3,300 moose
- Manage for a post-hunt (fall) sex ratio of 30 bulls:100 cows in all areas of Unit 22
- Unit 22 harvest objective: 300–680 moose

Prior to 2020, Units 22D and 22E had separate populations objectives (Unit 22D: 2,000-2,500 moose; Unit 22E: 600-800 moose). However, in 2020, the population objective for these subunits were combined because movement data from collared cows and ear-tagged bulls suggest movement between these subunits is common (Henslee 2025).

In 2024, ADF&G estimated the total Unit 22 moose abundance as 6,700 moose which is within State management objectives (ADF&G 2024a). Between 2003 and 2020, the moose population in Unit 22E ranged from 504–662 moose (Henslee 2024, pers. comm.) (**Figure 1**). However, moose move between Unit 22E and the Agiapuk, American and Nuluk river drainages in Unit 22D (Persons 2004) where moose abundance declined in 2015. The apparent population increases in Unit 22E may be due to the redistribution of moose between areas, possibly because of a low snow year (SPRAC 2015). In 2023, ADF&G and NPS changed their management method from subunit level estimate to survey area estimate for moose estimation due to these movements between subunits, which allowed for a more precise estimate (Henslee 2024, pers. comm.). They now estimate moose abundance for Units 22D and 22E combined. This resulted in an estimation of 1,922 moose in Units 22D and 22E in 2023, which is well below the combined minimum population objective for Units 22D and 22E of 2,600 moose (**Figure 1**).

Age-sex composition ratios of bulls and calves to cows are used to evaluate the harvestable surplus, trends in abundance and calf recruitment. Calf:cow ratios may also be used as an index to estimate population trajectory, as fall ratios of < 20 calves:100 cows, 20–40 calves:100 cows, and > 40 calves:100 cows may indicate declining, stable, and growing moose populations, respectively (Stout

2012). Calf:cow ratios in all surveyed years are close to expected numbers for a stable population (**Figure 2**). Between 2014 and 2022, bull:cow ratios in Unit 22E met or exceeded State management objectives, ranging from 30–41 bulls:100 cows (**Figure 2**) (Henslee 2024, pers. comm.). However, since 2014, the bull:cow ratio has been decreasing, with the lowest ratio occurring in 2022 just meeting State objectives, indicating few surplus bulls available for harvest.

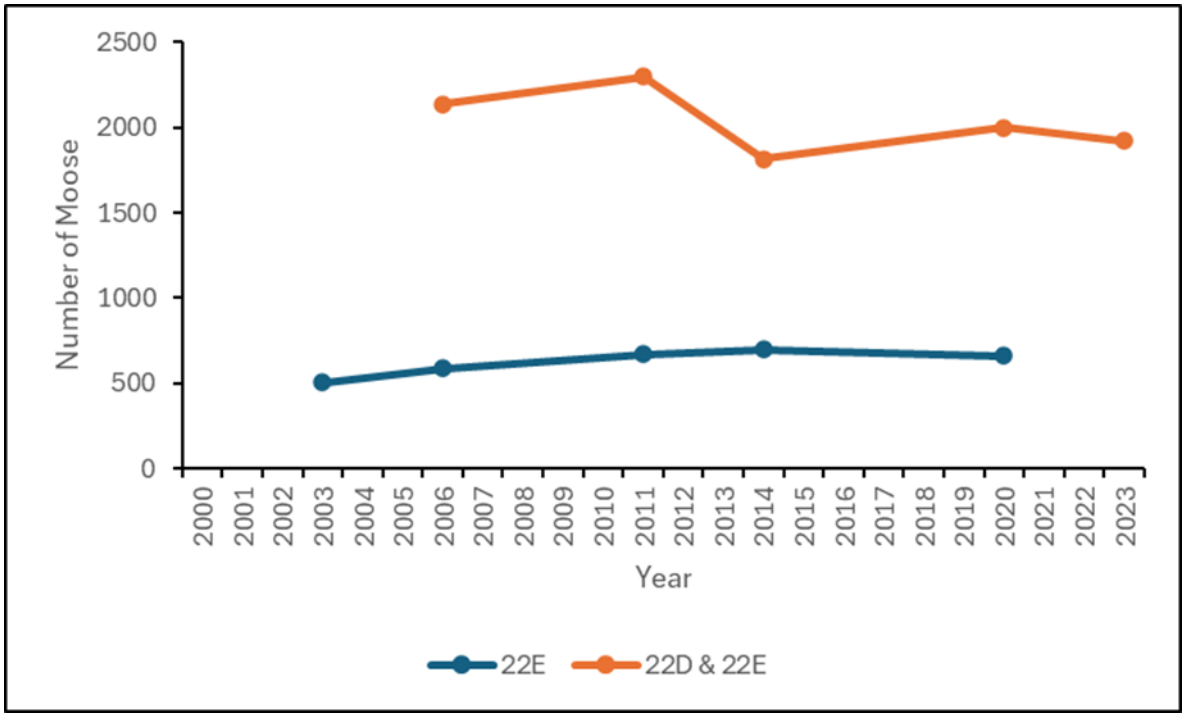


Figure 1. Moose population estimates for Unit 22E and combined Unit 22D and 22E (Henslee 2024, pers. comm.).

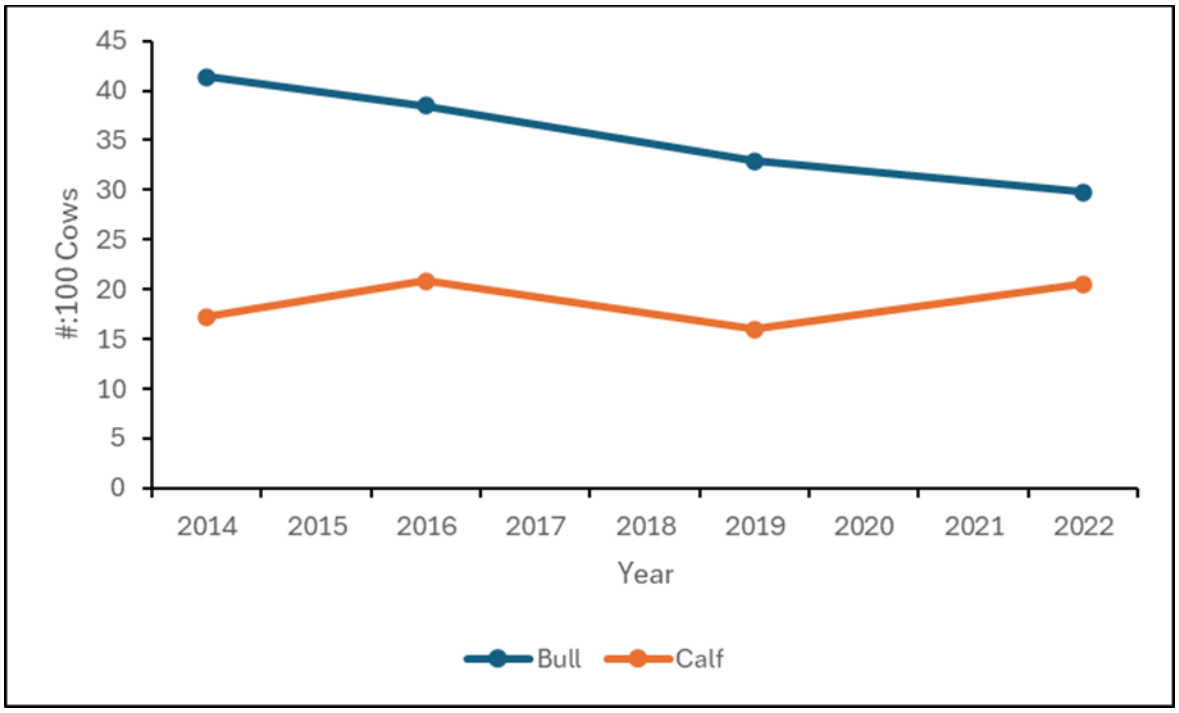


Figure 2. Bull:100 cow and calf:100 cow ratios for Unit 22E moose (Henslee 2024, pers. comm.).

Cultural Knowledge and Traditional Practices

The Iñupiaq, Siberian Yupik, and Central Yup'ik people of the Seward Peninsula subsistence region have a deeply rooted practice of subsistence hunting, fishing, and gathering of wild resources (Raymond-Yakobian and Zdor 2020). Until European contact in the early 19th century, many of these groups were semi-nomadic, moving with the seasons based on the availability of wild resources. During the winter months, people often lived in permanent 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 (Ray 1984).

Historically, people in the Seward Peninsula area hunted a variety of species opportunistically. Large ungulates were not readily available on the Seward Peninsula in the second half of the 19th century (Tape et al. 2016). While caribou were hunted traditionally, their numbers declined in the mid-1800s (Dau 2000). Reindeer were introduced from Siberia in 1892 under a Federal program initiated by Sheldon Jackson to provide more meat for the Iñupiat people in the area (Dau 2000). The reindeer industry was an important source of food in the region until the 1990s, when caribou moved back into the area. Reindeer dispersed with migrating caribou, and the reindeer industry declined (Finstad et al. 2007). Moose began moving into the Seward Peninsula in the 1940s following major fires in the region, and harvest of this species grew as their population increased (SPRAC 2019a, 2019b; Braem et al. 2017; Tape et al. 2016).

Most residents of Unit 22 prefer to hunt moose in late summer and early fall, when access by roads and rivers is best, and the moose are not yet in rut (SPRAC 2019a, Persons 2000). In some communities, the winter moose hunt has historically been more important (Georgette et al. 2004, Braem et al. 2017). In addition to harvest by hunters, local knowledge shared at Council meetings indicates that predation by wolves and brown bears is increasingly impacting the Unit 22 moose population (SPRAC 2020, SPRAC 2019a, 2019b).

Currently, only federally qualified subsistence users may hunt moose in Unit 22E. This includes all residents of Unit 22, who have a customary and traditional use determination for moose throughout the unit. The communities of Shishmaref (population: 579 people) and Wales (population: 112 people) are the only communities in Unit 22E (ADLWD 2023).

Subsistence household surveys conducted by ADF&G provide insight on the local importance and use of moose. Based on moose search and harvest areas mapped in household subsistence surveys, residents of Shishmaref and Wales harvest nearly all of their moose in Unit 22E, and federally qualified subsistence users from other surveyed communities do not typically hunt for or harvest moose in Unit 22E (Gonzalez et al. 2020, Mikow et al. 2020, 2018, 2014, Braem et al. 2017, Braem 2012, OSM 2004). Although there are no subsistence surveys from the larger community of Nome, ethnographic data suggests that residents of Nome typically harvest moose in Units 22B and 22C (Braem et al. 2017).

Based on household survey data, an average of 61% of households in Shishmaref and an average of 57% of households in Wales use moose (**Table 1**) Available data indicates the estimated number of moose harvested per year has declined over time (**Table 1**). Although moose harvest has decreased over time, moose remain an important resource that is used throughout both communities (**Table 1**).

In Unit 22E, there are no roads that facilitate access to moose habitat and access via rivers is limited (Braem et al. 2017). While in some years moose are primarily harvested in fall (e.g., Braem et al. 2017), people also rely heavily on hunting opportunities in January, February, and March. During winter, hunting areas that are inaccessible in fall become accessible by snow machine, and during later winter increased light makes hunting easier than during darker months (Gonzalez et al. 2020, Mikow et al. 2020, Braem and Kostick 2014, Persons 2000).

Declines in moose harvest may be due to increased use of caribou instead of moose, declines in moose populations, and/or because winter moose hunts were not permitted during some years (Gonzalez et al. 2020, Braem 2012). These trends may also be influenced by climate change, which is increasingly impacting moose hunting. In Shishmaref, later freeze up is associated with fewer moose available in fall, and in some years, insufficient snow in October and November impedes travel by snowmachine (SPRAC 2019a, Braem et al. 2017). Simultaneously, rain in winter and melting snowpack makes travel for winter hunting more dangerous (SPRAC 2020, Braem et al. 2017). The changing climate has meant that weather patterns are highly variable from year to year, requiring subsistence users to remain flexible in response to unpredictable hunting conditions (SPRAC 2019a).

In addition to challenges posed by climate change, Council members have reported notable concern about nonlocal harvest of moose in Unit 22E and 22D, particularly in light of declining harvests by local users. Nonlocal hunters, facilitated by hunting guides, often use planes to access hunting areas that cannot typically be accessed by subsistence hunters (SPRAC 2019a, 2019b). As of 2023, hunt managers have decreased the number of available permits for nonresidents hunting moose in Unit 22E (Carson 2025, pers. comm.).

Table 1. Estimated harvest and use of moose by residents of Shishmaref and Wales (ADF&G 2024b).

Community	Survey year	Estimated number of moose harvested	Estimated pounds of moose harvested per person	% surveyed households using moose
Shishmaref	1988-1989	39	45.0	76%
	1995	68	65.5	82%
	2000	46	44.2	77%
	2009	33	31.5	35%
	2014	18	15.6	49%
	2017	15	15.5	44%
	Average	**37**	**35.8**	**61%**
Wales	1993	6	22.1	41%
	2000	14	51.6	61%
	2010	5	17.2	61%
	2017	2	5.6	65%
	Average	**7**	**23.2**	**57%**

Harvest History

Resident harvest in Unit 22E is likely under reported because only general harvest tickets are required, which have no penalty for failure to report requirement like a registration permit. Data from household subsistence surveys indicates that harvest is typically higher than reported, so total harvest estimates are made to account for assumed unreported harvest (SPRAC 2019a). In 2021, reported harvest and estimates of unreported harvest from household subsistence surveys estimated total harvest to be approximately 8% of the total Unit 22E moose population (Dunker 2021, pers. comm.). In 2017, ADF&G estimated a 6–8% harvest rate for moose in Unit 22E, while the estimated sustainable harvest rate is only 4–6% of the population (ADFG 2017). A State drawing permit (DM855) is required for non-residents, which results in accurate harvest numbers for nonresidents. All harvest under State regulations has occurred on non-Federal lands since 2002 due to the Federal lands closure.

Reported moose harvest has been relatively low in Unit 22E, averaging 17 moose annually and ranging from 6–30 moose/year between 2000 and 2024 (**Figure 3**). However, total reported moose harvest increased considerably from 2013–2024, with a range of 16–30 and an average of 23 moose/year. Local residents (residents of Unit 22/federally qualified subsistence users) accounted for 78% of the

reported harvest between 2000 and 2012. However, from 2013–2024 they accounted for only 44% of the total reported harvest, although it is unknown how many of these harvests occurred on Federal vs. non-Federal lands. While local and nonlocal state resident harvest has remained constant at low levels, annual nonresident harvest has increased substantially since 2008, when the State reopened a nonresident season. Nonresident harvest has accounted for between 15%–63% of the Unit 22E moose harvest and has averaged 43% of total harvest since 2013 (**Figure 3**). But, since 2020, nonresident harvest has decreased, due to State Emergency Orders closing seasons early and the start of the drawing permit DM855 in 2023.

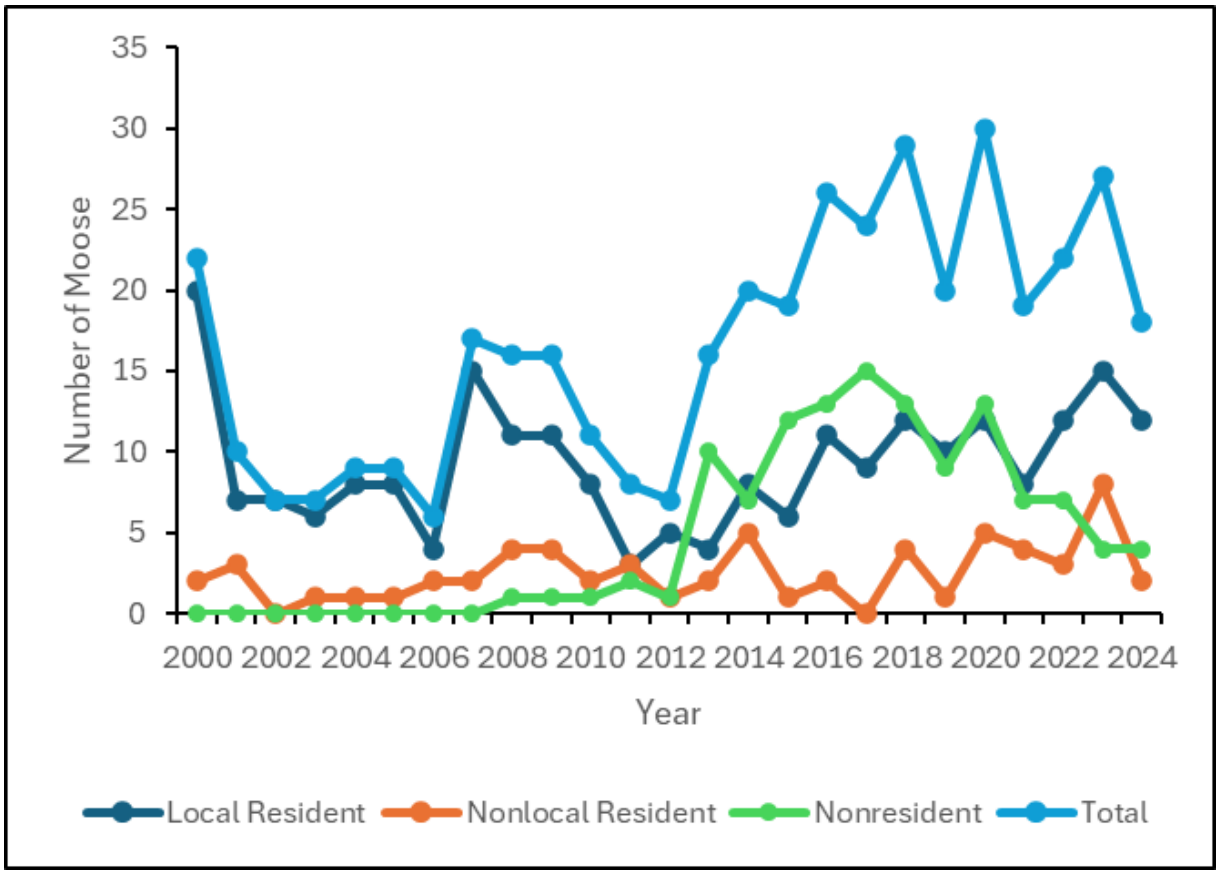


Figure 3. Reported moose harvest by user group in Unit 22E (Henslee 2024 pers. comm.; Carson 2025, pers. comm.). Local residents are residents of Unit 22; nonlocal residents are Alaska residents living outside of Unit 22.

Alternative(s) Considered

One alternative to consider is to submit a proposal to the BOG requesting a State registration permit be required for moose in Unit 22E under State regulations. Then, a State registration permit could be required under Federal regulations (instead of a Federal permit), streamlining permit requirements and harvest reporting, and better informing moose management in Unit 22E. However, this alternative is well outside the scope of the proposal. The next call for State proposals in this area is in May 2026.

Another alternative to consider is to delegate authority to administer the registration permit to the NPS Bering Land Bridge National Preserve (BELA) superintendent as recommended by BELA staff. Specific authority would include setting harvest quotas, determining the number of permits to be issued, the method of permit allocation, and closing the season. These authorities were suggested to proactively facilitate hunt administration if a quota system or a limited number of permits for all users are established under State and Federal regulations. BELA is the only Federal land manager still located in Nome, and they work closely with rural residents in Unit 22E whom harvest these moose. BELA manages the greatest amount of Federal public land in Unit 22E and would facilitate distribution of a registration permit, giving a local point of contact for subsistence users.

Discussion and Effects

If this proposal is adopted, federally qualified subsistence users would be required to obtain a Federal registration permit to hunt moose in Unit 22E. While this would increase the administrative burden on subsistence users, the information gathered from better harvest reporting would improve and inform management of the Unit 22E moose population. State regulations only require a harvest ticket, and since Federal public lands are closed to hunting under State regulations, federally qualified subsistence users would need to obtain an additional Federal permit to hunt on Federal public lands if WP26-61 is adopted. Adopting this proposal would increase the administrative burden of the Federal land manager, as they would be responsible for administering the registration permit.

No direct impact to the moose population is expected from adopting this proposal. However, the moose population may benefit long-term from more informed management.

OSM PRELIMINARY CONCLUSION

Support Proposal WP26-61 **with modification** to delegate authority to the BELA superintendent to set harvest quotas, determine the number of permits issued and the method of permit allocation, and close the season.

The draft regulations read:

Unit 22E—Moose

Unit 22E—1 antlered bull ***by Federal registration permit.***	*Aug. 1–Mar. 15.*
Federal public lands are closed to the taking of moose except by federally qualified subsistence users hunting under these regulations.	
The Bering Land Bridge National Preserve superintendent after coordination with ADF&G, OSM, the BLM Anchorage Field Office, and the Chair of the affected Council(s) is authorized within the regulatory parameters set by the Board, to set annual quotas,	

determine the number of permits to be issued and the method of permit allocation, and close the season.

Justification

Requiring a Federal registration permit would improve harvest reporting, allowing better tracking of harvest and more informed management decisions, which may benefit both users and the resource over the long-term. The moose population in Unit 22E has shown a slight but steady increase since the early 2000s, while moose abundance has fluctuated in Unit 22D. Moose movements between these two units is currently not fully understood; therefore, more harvest data is necessary to inform management decisions.

Delegating authority to an in-season manager to administer the permit provides management flexibility to quickly respond to changing herd and hunt conditions, optimizing conservation and subsistence opportunity. Adopting WP26-61 with this modification will provide a local land manger to work with rural residents who would need to acquire a registration permit. The specific authority delegated through this modification allows the BELA superintendent to decide how to allocate permits and set quotas in conjunction with the State if ADF&G implements a harvest quota or limits the number of permits for moose in Unit 22E under State regulations.

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