WP26–28b/29/30 Executive Summary	
General Description	**WP26-28b** requests to extend the moose season in Unit 13 by 10 days, to close on September 30. *Submitted by: Southcentral Alaska Subsistence Regional Advisory Council* **WP26-29** requests to shift the moose season in Unit 13 five days later to Aug. 6-Sep. 25. *Submitted by: Nick Jackson* **WP26-30 r**equests to shift the moose season in Unit 13 ten days later to Aug. 11-Sep. 30. *Submitted by: Shirley "Tursy" Smelcer*
Proposed Regulation	Please see the Proposed Regulations section of the analysis.
OSM Preliminary Conclusion	**Support** Proposal WP26-28b and **take no action** on Proposals WP26-29 and WP26-30.
Southcentral Alaska Subsistence Regional Advisory Council Recommendation	
Eastern Interior Alaska Subsistence Regional Advisory Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**1 Support** See Written Public Comments on Wildlife Proposals and Closure Reviews section of the meeting book or www.doi.gov/subsistence/wildlife/public_comments for full comments.

DRAFT WILDLIFE ANALYSIS
WP26-28B/29/30

ISSUE

Proposal WP26-28b, submitted by the Southcentral Alaska Subsistence Regional Advisory Council (Council) requests to extend the moose season in Unit 13 by 10 days, to close on September 30.

Proposal WP26-29, submitted by Nick Jackson, requests to shift the moose season in Unit 13 five days later to Aug. 6-Sep. 25.

Proposal WP26-30, submitted by Shirley "Tursy" Smelcer, requests to shift the moose season in Unit 13 ten days later to Aug. 11-Sep. 30.

Proponent Statement

WP26-28b

The proponent states that this proposal would extend the moose season to compensate for changes in climate and allow for more additional harvest opportunity and provide a subsistence priority.

WP26-29 and -30

Proposals WP26-39 and WP26-30 included the exact same justification. Both proponents stated that their proposals seek to adjust the start and end dates of the federal moose hunting season 5–10 days later based on harvest trends and changing ecological conditions.

The majority of federally harvested moose in Unit 13 are taken during the final week of the current hunting season (Sep. 14–20). This trend suggests that peak moose activity—and hence the most effective hunting window—occurs toward the end of the existing season. A 5–10 day shift in the hunting season would better align the season with periods of higher success for federally qualified subsistence users.

This proposed shift is consistent with similar changes made across other parts of the state in recognition of a climate-driven shift in the moose rut. As Alaska continues to experience warming temperatures, biological indicators such as the timing of the rut and animal movement patterns are occurring later in the year. Adjusting the season by 5–10 days would ensure that federally qualified hunters are able to hunt during the most biologically and culturally appropriate opportunity.

In Unit 13, federally qualified subsistence users are increasingly dependent on moose due to the loss of caribou hunting opportunities and reduced availability of other game. Aligning the hunt with actual animal behavior increases the likelihood of harvest success, directly supporting household food security and cultural continuity in the region. Increasing the likelihood of successful moose harvests ensures a meaningful federal subsistence priority to federally qualified users.

The proposed Unit 13 moose season adjustment is biologically justified, consistent with statewide trends, and important to ensure adequate opportunity for successful moose harvests for rural subsistence users during a time of changing environmental conditions and increasing food insecurity. Increasing federal subsistence moose harvest success in the limited Federal lands of Unit 13 serves to ensure priority Federal subsistence uses pursuant to ANILCA Title VIII.

Current Federal Regulations

Unit 13—Moose

Unit 13E—1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household	*Aug. 1-Sep. 20*
Unit 13, remainder—1 antlered bull moose by Federal registration permit only	*Aug. 1-Sep. 20*

Proposed Federal Regulations

WP26-28b

Unit 13—Moose

Unit 13E—1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household	*Aug. 1-Sep. ~~20~~* ***30***
Unit 13, remainder—1 antlered bull moose by Federal registration permit only	*Aug. 1-Sep. ~~20~~* ***30***

WP26-29

Unit 13—Moose

Unit 13E—1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household	*~~Aug. 1-Sep. 20~~* ***Aug. 6 - Sep. 25***
Unit 13, remainder—1 antlered bull moose by Federal registration permit only	*~~Aug. 1-Sep. 20~~* ***Aug. 6 - Sep. 25***

WP26-30

Unit 13—Moose

Unit 13E—1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household	~~*Aug. 1-Sep. 20*~~ ***Aug. 11 - Sep. 30***
Unit 13, remainder—1 antlered bull moose by Federal registration permit only	~~*Aug. 1-Sep. 20*~~ ***Aug. 11 - Sep. 30***

Current State Regulations

Unit 13−Moose

Residents: One bull by permit, available only by application. See the Subsistence Permit Hunt Supplement for details.	*CM300*	*Aug. 20–Sept. 20*
OR		
Residents: One bull, with spike-fork antlers or 50-inch antlers or antlers with 4 or more brow tines on at least one side;	*HT*	*Sept.1–Sept. 20*
OR		
Residents: One bull by permit.	*DM348*	*Sept. 1-Sept. 20*
Nonresidents: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*DM335-DM339*	*Sept. 1-Sept. 20*

Extent of Federal Public Lands

Unit 13 is comprised of approximately 15% Federal public lands that consist of 6% Bureau of Land Management (BLM), 6% National Park Service (NPS), and 2% U.S. Forest Service (USFS) managed lands (**Table 1**).

Federal public lands within Denali National Park, as it existed prior to the passage of Alaska National Interest Lands Conservation Act (ANILCA) in December 1980, are closed to all hunting and trapping.

Federal public lands within the ANILCA additions to Denali National Park, as well as Federal public lands within Wrangell-St. Elias National Park, are closed to hunting and trapping except to resident zone communities and those households' holding subsistence use permits issued under 36 CFR 13.440. Most of the portion of Denali National Park located in Unit 13 is open to subsistence, and a smaller portion within Unit 13 is closed to subsistence. Denali National Preserve is open to subsistence and is not closed to non-federally qualified users.

BLM manages additional lands within Unit 13 that are selected for conveyance by the State of Alaska, Native Corporations, or Alaska Tribes (encumbered) and are not currently available for Federal subsistence because of the land selection status. If these land selections are relinquished (unencumbered), they would become lands available for Federal subsistence. The extent of lands managed by BLM has increased in recent years, expanding the extent of Federal lands open to subsistence in Unit 13. The changes in Federal jurisdiction of BLM lands are particularly notable in Unit 13E, 6% of which are now open to Federal subsistence use.

Table 1. Percentage of Federal public lands in Unit 13 by subunit.

Unit	NPS %	BLM %	USFS %	Total %
13A	0	2	0	2
13B	0	18	0	18
13C	1	2	0	3
13D	0	3	9	12
13E	20	6	0	26
13 All	6	6	2	15

Customary and Traditional Use Determination

Rural residents of Unit 13, Chickaloon, and Slana have a customary and traditional use determination for moose in Units 13A and 13D.

Rural residents of Units 13, 20D (Except Fort Greely), Chickaloon, and Slana have a customary and traditional use determination for moose in Unit 13B.

Rural residents of Units 12, 13, Chickaloon, Dot Lake, Healy Lake, and Slana have a customary and traditional use determination for moose in Unit 13C.

Rural residents of Unit 13, Chickaloon, McKinley Village, Slana, and the area between mileposts 216-239 of the Parks Highway have a customary and traditional use determination for moose in Unit 13E. However, there is no Federal subsistence priority for the residents of Denali National Park headquarters.

Under the guidelines of Alaska National Interest Lands Conservation Act (ANILCA), National Park Service regulations identify qualified local rural subsistence users in National Parks and National Monuments by: (1) identifying Resident Zone Communities that include a significant concentration of

people who have customarily and traditionally used subsistence resources on park lands; and (2) identifying and issuing subsistence use (13.440) permits to individuals residing outside of the Resident Zone Communities who have a personal or family history of subsistence use within the park or monument.

The resident zone communities for Denali National Park and Preserve are Cantwell (limited to the area within a 3-mile radius of the Cantwell post office as shown on a map available at the park visitor center), Minchumina, Nikolai, and Telida. A resident zone community must also have a customary and traditional use determination for moose in the area for residents to be eligible to hunt them in that portion of the park. Cantwell is the only community included in the analysis that meets both criteria, and its residents are eligible to subsistence hunt for moose in the portion of Denali National Park in Unit 13E.

Regulatory History

In 1995, the opening season date for moose in Unit 13 was changed from Aug. 25 to Aug. 1 to provide additional opportunity for federally qualified subsistence users without interference from State Tier II permit hunters (OSM 1995). Federal regulations have not changed since.

In 2001, the harvest limit under State general harvest regulations was changed from one bull with spike-fork or 50-inch antlers or three or more brow tines on at least one side to one bull with spike-fork or 50-inch antlers or four or more brow tines on at least one side with a season of Sept. 1–20. The same year, non-resident general moose hunting was eliminated from Unit 13 in the State regulations due to low moose population numbers. In addition, the Alaska Department of Fish and Game (ADF&G) also managed a State Tier II hunt (TM300) for one bull moose by permit Aug. 15–Aug. 31 between 1995 and 2008.

In March 2009, the Alaska Board of Game (BOG) revised the amount reasonably necessary for subsistence findings for moose in Unit 13, eliminated the Tier II hunt, and created the Community Subsistence Hunt, CM300 (CSH) with a season of Aug. 10–Sept. 20 (Robbins 2017). The CSH had an upper harvest limit of 100 any-bull moose for Unit 13 and an unlimited number of spike/fork, 50 inch, and four or more brow tine moose.

Also in 2009, the BOG adopted resident drawing permit hunts (DM330-334) for one bull moose with a season of Sept. 1–Sept. 20 in select areas where moose numbers had increased. For non-residents, drawing permit hunts (DM 335-339) were established to harvest one bull with 50-inch antlers or antlers with four or more brow tines on at least one side Sept. 1–Sept. 20. These three hunts were in addition to the State general resident hunt, which hadn't changed since 2001.

In 2011, the BOG adopted a new regulation for the CSH to allow any community or group of Alaska residents numbering 25 or more to apply for the hunt between Aug.10 and Sept. 20. Following this change, the number of participants in the CSH hunts increased substantially from 378 to 3,400, most of whom came from outside of the immediate area. The BOG decreased the CSH any-bull harvest allocation from 100 to 70.

In 2013, the BOG increased the CSH any-bull harvest allocation from 70 back to 100 in response to increased participation in the hunt. A winter registration hunt Dec. 1–Dec. 31, which was effective in 2014, was also added to provide additional opportunity for bulls that do not meet the antler restrictions. The hunt was closed after one day due to very high levels of participation and was not resumed.

In June 2014, the Glennallen Field Office of BLM became aware of unencumbered Federal public lands within the Paxson Closed Area (see Controlled Use Area section below), and they were subsequently removed from State selection. As a result, Federal public lands in the Paxson Closed Area were determined to be opened (i.e. no longer State selected) to the taking of big game, which includes moose and caribou, by federally qualified subsistence users under Federal subsistence regulations. In 2016, the Board rejected Wildlife Proposal WP16-16 which requested that the Federal public lands within the Paxson Closed Area in Unit 13 be closed to federally qualified subsistence users (OSM 2016).

In 2015, the BOG required participants in the CSH to commit to participation for two consecutive years and to provide an annual group report with the stipulation that if a report is not submitted, the entire group would be ineligible for a permit hunt the next regulatory year. The BOG also created an any-bull moose drawing for residents and shortened the CSH season by 10 days from Aug. 10–Sept. 20 to Aug. 20–Sept. 20, both of which were effective in 2016.

In 2017, to address concerns that the communal pattern of use was not providing reasonable opportunity in Unit 13, the BOG adopted amended Proposal 20 (RC25) at a special meeting in Glennallen in March 2017 to retain the CSH moose hunt for resident hunters for the fall (Aug. 20–Sept. 20) and winter (Dec. 1–Dec. 31; subsistence hunt only) hunts with the following restrictions: One bull by community harvest permit only; however, no more than 100 bulls that do not meet antler restrictions may be taken by Tier II permits during the Aug. 20–Sept. 20 season, up to 350 Tier II permits could be issued, one Tier II permit per household.

In 2018, the Unit 13B harvest limit in the Copper Basin Community Subsistence hunt (CM300) was changed by the BOG from one bull moose to one bull moose with spike-fork antlers, 50 inch antlers, or antlers with four or more brow tines on one side because the quota of 30 bulls without antler restrictions had been reached in Unit 13B.

In 2018, Proposal WP18-18 was submitted by the Ahtna Intertribal Resource Commission (AITRC) and requested that the moose season on Federal public lands in Unit 13E and Unit 13 remainder be changed from Aug. 1–Sept. 20 to Aug. 1–Mar. 31. In addition, AITRC requested authorization to distribute Federal registration permits (FM1301) to federally qualified tribal members only and that the BLM and Denali National Park and Preserve distribute (FM1301) permits to other federally qualified subsistence users. Proposal WP18-18 was withdrawn by the proponent (OSM 2018).

In July 2019, the Board rejected Temporary Wildlife Special Action WSA19-03, which requested closure of Federal public lands in Unit 13 to caribou and moose hunting by non-federally qualified users for the 2019/20 season. The Board determined the requested closure was not warranted for conservation, continuation of subsistence uses, or safety reasons. The Board concluded that the closure

was not necessary for the conservation of healthy caribou or moose populations in Unit 13, as these populations are routinely monitored, and annual biological data is used to inform management plans and to establish sustainable harvest guidelines. The closure was also not shown to be necessary to continue subsistence uses of those populations. Federally qualified subsistence users annual harvest rates had remained fairly consistent in comparison to the annual harvest rates by non-federally qualified users. Nevertheless, local harvesters do experience an influx of non-local hunters and many feel displaced by this activity and alter their subsistence activities as a result. In addition, the closure would not alleviate public safety concerns as non-federally qualified users would still be able to cross, use, and camp on Federal public lands to access and hunt State and private lands.

In April 2020, the Board adopted deferred Proposal WP18-19 with modification to establish a community harvest system for moose and caribou in Units 11 and 13 administered by AITRC. The modification was to name eight individual communities within the Ahtna traditional use territory authorized to harvest caribou and moose as part of the community harvest system, subject to a framework established by the Board under unit specific regulations. In 2022, the Board adopted WP22-36 with modification which clarified and codified several regulation changes regarding the community harvest system, including expanding the system into a portion of Unit 12.

In July 2020, the Board adopted with modification Temporary Wildlife Special Action WSA20-03, which requested closure of Federal public lands in Unit 13 to caribou and moose hunting by non-Federally qualified users for the 2020/21 season. The Board supported the closure due to its necessity for reasons of public safety and continuation of subsistence uses. The Board limited the closure to Units 13A and 13B because this is the area where most overcrowding, disruption of hunts, and serious safety concerns have occurred. The Board extended the request to the 2021/22 regulatory year as a regulatory proposal would not become effective until July 1, 2022, and to reduce the administrative burden associated with processing additional requests. Based on inquiry calls from non-federally qualified users during this closure, the greatest impact to State hunters appeared to be to users planning to access hunting areas by boat, specifically the Gulkana and Delta Wild and Scenic River Corridor areas of Unit 13 (SCRAC 2021).

In 2024, Unit 13 antlerless moose draw hunts (DM325, DM327, and DM329) did not occur under State regulations. Antlerless moose seasons must be reauthorized by a majority of affected State fish and game advisory committees (ACs) and the BOG every year. The ACs did not approve the antlerless moose hunts in Unit 13 for the 2024 fall hunting season (ADF&G 2024c). The Copper Basin AC expressed concern over the Unit 13 moose population, stating there are not enough moose right now (Copper Basin AC 2024).

In July 2024, the Board adopted WSA24-06 with modification. WSA24-06 requested closure of Federal public lands in Unit 13 to the hunting of moose by non-federally qualified users for the 2024/25 and 2025/26 seasons. The Board modified the request to only close Federal public lands in Unit 13B. The Board stated that due to conservation concerns, and heavy harvest pressure in Unit 13B, the closure was warranted for both the conservation of healthy populations of moose and to allow for continuation of subsistence uses as outlined in ANILCA Section 815(3).

In January 2025, the BOG adopted Proposals 39-42 to change population and harvest objectives for moose in Units 13B, 13C, and 13E (see **Table 2** in Biological Background Section). In their proposal to reduce objectives for Unit 13B (Proposal 39), ADF&G considered the changes as more biologically appropriate and sustainable based on the historic highs and lows of the Unit 13B moose population and harvest. Proposal 40, submitted by the Copper Basin Fish and Game Advisory Committee (AC), increased population objectives for moose in Unit 13C. In their proposal to reduce harvest objectives for Unit 13C (Proposal 41) and Unit 13E (Proposal 42), ADF&G stated the current objectives are not attainable and represent an unsustainable harvest rate. The new harvest objectives for both subunits include the long-term average harvest and a sustainable harvest rate.

Controlled Use Areas

The Delta Controlled Use Area is located in northern Unit 13B and is closed to motorized vehicles or pack animals for big game hunting, including the transportation of big game hunters, their gear, and/or parts of big game, August 5–25 under State and Federal regulations.

The Sourdough Controlled Use Area (Sourdough CUA) is located in southern Unit 13B between the Gulkana River and Richardson Highway. Under Federal regulations, motorized vehicles may not be used for subsistence hunting in the Sourdough CUA, except for access and transportation of harvested wildlife on Sourdough and Haggard Creeks, Middle Fork trails, or other trails designated by the Board. Under State regulations, the Sourdough CUA is closed to motorized vehicles for hunting, including transportation of hunters, their hunting gear, and/or parts of game, including the pipeline access road, but does not prohibit motorized access or transportation of game on the Richardson Highway, Gulkana River, Sourdough Creek Campground or boat launch, Sourdough and Haggard Creeks, Middle Fork and Haggard Creek trails, or other trails designated by ADF&G. While Federal regulations do not explicitly state the Gulkana River as an exception like under State regulations, the boundary of the Sourdough CUA is the eastern bank of the Gulkana River, and federally qualified subsistence users can access the Gulkana River by a motorized vehicle from the Richardson Highway via the Middle Fork trail.

The Tangle Lakes Archaeological District is located off the Denali Highway in Unit 13B and restricts off-road vehicles to designated trails between MP16 and MP37 under Federal and State regulations.

The Paxson Closed Area is located near Paxson, AK at the intersection of the Denali and Richardson Highways in Unit 13B and is closed to taking any big game under State regulations. The Paxson Closed Area in Unit 13B was established by the State in 1958 to provide a viewing area adjacent to the junction of the Richardson and Denali Highways. During 1991/92 and 1992/93 regulatory years, Federal public lands within the Paxson Closed Area were closed to the hunting of big game under the Special Provisions section for Unit 13 in the Federal Subsistence Management Regulations for Federal public lands in Alaska. However, the hunting for small game was still allowed in the Paxson Closed Area.

The Tonsina Controlled Use Area is located in southeastern Unit 13D and is closed to using motorized vehicles or pack animals for hunting, including the transportation of hunters, hunting gear, and/or parts of game, July 26–Sept. 30 under State and Federal regulations.

Current Events

Proposal WP26-31 requests that the Bureau of Land Management (BLM) lands in Unit 13 be closed to moose hunting by non-federally qualified users.

In August 2025, the Federal Subsistence Board (Board) rejected Emergency Wildlife Special Action, WSA25-04, which requested closure of Federal public lands in Unit 13C to non-federally qualified users for the 2025 season. The Board rejected the request because there were no imminent conservation concerns for moose in Unit 13C or threats to the continuation of their subsistence uses necessitating a closure for the 2025 season. The Board recognized the small amount of Federal public lands in Unit 13C may be important for rural residents but felt that more evidence was needed to justify the requested restriction (FSB 2025).

In September 2025, ADF&G issued two emergency orders (R4-3-25; R4-5-25) changing the harvest limit for the community hunts in Units 13E and 13C from one bull moose to one bull moose with spike or fork antlers, or antlers 50-inches wide or wider, or antlers with four or more brow tines on at least one side (general season antler restrictions). The quotas of 24 any bulls for Unit 13E and 5 any bulls for Unit 13C had been met, resulting in the harvest limit change (ADF&G 2025c, 2025d).

Biological Background

In the early 1900s, moose densities in Unit 13 were low but increased gradually until peaking in the mid-1960s. The population then declined due to a combination of factors including overhunting, severe winters, and predation, primarily by brown bears and wolves (Ballard et al. 1987, Schwanke 2012, Robbins 2014). The population reached a low in 1975 and then started to increase by 1978, reaching a second peak in 1987. Between 1988 and 1994, the moose population declined due to a combination of factors, including hunting pressure, deep snow and increasing wolf predation (Robbins 2014, 2018). From 1987 to 2001, the moose population declined by an estimated 47% (Tobey and Schwanke 2008, 2010). Moose populations in Unit 13 grew from 2001 through 2016 due to a combination of mild winters, predator control, and more conservative hunting regulations (Schwanke 2012, Robbins 2014).

State management objectives for moose in Unit 13 are shown in **Table 2.**

ADF&G conducts fall aerial surveys in trend count areas throughout Unit 13 to document sex and age composition and moose population trends (**Figure 1**). These survey data are extrapolated to estimate unit-wide abundance and composition metrics. In 2022, one additional count areas was established in Unit 13D. Between 2002 and 2015, population estimates for Unit 13 increased from 14,251 to 21,090, and then decreased to 17,746 in 2017 (**Table 3**). From 2017 to 2021, the unit-wide population estimate increased again to 19,298 moose but has been in a decline since 2021. In 2022, the Unit 13 moose population fell below State management objectives for the first time since 2002. In 2023, the Unit 13

moose population estimate was 14,473, the lowest since 2002 (**Table 3**) (Hatcher 2024, pers. comm.; ADF&G. 2024a, 2025). The last unit-wide population estimate in November 2024 estimated 14,800 moose (ADF&G 2025a).

With the exception of Unit 13B, most subunits met or exceeded population objectives between 2010 and 2021 (**Figure 2**). Moose abundance in Units 13A, 13C, and 13E has remained relatively stable since 2010. The Unit 13A moose population estimates remain within management objectives. The Unit 13C moose population estimate decreased substantially in 2024, while its population objective increased, resulting in the most recent Unit 13C moose population estimate to be well below (28%) current management objectives. The Unit 13E population estimate dipped just below objectives in 2023 and remained there in 2024. The Unit 13D moose population estimate dipped below objectives in 2022, where it has remained. The low 2023 estimate for Unit 13D is a reflection of annual variability due to moose distribution and survey conditions, rather than actual population fluctuations (Hatcher 2025, pers. comm.). The Unit 13B moose population, however, has exhibited a consistently declining trend since 2010. Only 2,809 moose were estimated in Unit 13B in 2023, which was just over half (53%) of the lower bound of the pre-2025 population objective range and a 49% decline from 2010 estimates (ADF&G 2011, 2012, 2013, 2014, 2015, 2016, 2017d, 2018, 2019, 2020c, 2021, 2022, 2023, 2024a). In 2024, the Unit 13B moose population estimate increased slightly to 3,074 moose, while the population objectives were reduced, indicating the Unit 13B moose population is currently at 68% of the lower bound of the new population objective range.

As population estimates are naturally variable from year to year due to survey conditions, weather, stochasticity, etc., averages of the most recent three-year population estimates may be more indicative of actual population status (McDonald 2024, pers. comm.). Three-year average population indices for Unit 13 moose show that Units 13A (3,757 moose), 13C (2,404 moose), and 13E (5,023 moose) are within 2025 management objectives; Unit 13D (925 moose) is only 16% below objectives, while Unit 13B (3,191 moose) is 30% below 2025 objectives (ADF&G 2025a, Hatcher 2025, pers. comm.).

Between 2004 and 2024, unit-wide fall bull:cow ratios have been above State management objectives, ranging from 27-35 bulls:100 cows and averaging 30.2 bulls:100 cows (**Table 3**; Hatcher 2024, pers. comm.; ADF&G 2024a; ADF&G 2025a). However, ratios have periodically dropped below objectives in Units 13A, 13C and 13E. When this happens, ADF&G responds by reducing the any-bull quota for the CM300 community hunt the following year (Hatcher 2025, pers. comm.). Ratios in Unit 13B have consistently been above State management objectives since 2010, ranging from 27 to 38 bulls:100 cows and averaging 33 bulls:100 cows. Unit 13D has had consistently higher bull:cow ratios than the other subunits, averaging 81 bulls:100 cows 2010–2023 with a record 138 bulls:100 cows observed in 2023 (**Figure 3**) (Hatcher 2024, pers. comm.). The lowest bull:cow ratios have been observed in the most accessible portions of each subunit (ADF&G 2024a). Also, between 2014 and 2023, fall yearling bull:100 cows ratios have generally been below State management objectives, ranging from 3 to12 yearling bulls:100 cows and averaging 7 yearling bulls:100 cows (**Table 3**, Hatcher 2024, pers. comm.; ADF&G 2024a).

Stout (2010) used fall calf:cow ratios of < 20 calves:100 cows, 20–30 calves:100 cows, and > 30–40 calves:100 cows to suggest declining, stable, and growing moose populations, respectively based on information from Franzmann and Schwartz 1998). While many factors contribute to population trends, this provides some context in evaluating calf:cow ratios in addition to management objectives. Between 2001 and 2024, unit-wide calf:cow ratios were below 30 calves:100 cows, the management objectives for four of the subunits. During this period, ratios ranged from 10 to 27 calves:100 cows, averaging 19 calves:100 cows, with the low of 10 calves:100 cows occurring in 2023 (**Table 3**). While these ratios may suggest the Unit 13 moose population is declining, unit-wide population estimates demonstrated a gradually increasing trend since 2002, but since 2021 have demonstrated a decreasing trend (**Table 3**, Hatcher 2024, pers. comm.).

Fall calf:cow ratios by subunit generally parallel the unit-wide ratios. Between 2010 and 2023, average calf:cow ratios for all subunits were below State management objectives, ranging from an average of 14 calves:100 cows in Unit 13C to 21 calves:100 cows in Unit 13A. Calf:cow ratios were exceptionally low in 2023 for all subunits, except Unit 13D, and represent the lowest ratios observed 2010-2023 in Unit 13A at 11 calves:100 cows and in Unit 13B at 10 calves:100 cows. In contrast, the 2023 calf:cow ratio in Unit 13D was the highest ratio observed across all subunits 2010–2023 at 48 calves:100 cows, although calf:cow ratios in Unit 13D have generally been low, averaging 18 calves:100 cows over thisperiod (Hatcher 2024, pers. comm.). ADF&G (2024a) notes that the high 2023 calf:cow ratio in Unit 13D occurred after predation control was activated for the first time and that the sample size was low.

Twinning rates may provide an index for nutritional status when calf recruitment rates are high (Hatcher 2025, pers. comm.). ADF&G has periodically conducted spring surveys since 2008 to estimate twinning rates in Units 13A, 13B and 13E. Overall, twinning rates in Unit 13 have fluctuated by year and subunit, ranging from 11% to 64% between 2008 and 2025. While sample sizes have varied (8 moose–44 moose), twinning rates have generally been higher in Unit 13E than in Units 13A and 13B (ADF&G 2020a, 2024a). Most recently, Unit 13 twinning rates have been low (32% in 2023, 23% in 2024, and 33% in 2025), while early calf mortality has been high, resulting in most cows not lactating over the summer. This suggests nutrition may be limiting, especially in Units 13C and 13B where there may have been too many moose during peak abundance in the 2010's (Hatcher 2025, pers. comm.).

ADF&G initiated intensive management for moose in Unit 13 with wolf predation control in 2000. All subunits are now included in the intensive management area (Units 13C and 13D were added in 2005 and 2022, respectively). Predation control has occurred periodically in response to wolf and moose abundance estimates. In 2023, predation control was activated in all subunits, except 13C due to the dramatic increase in wolf numbers in combination with declines in moose populations (ADF&G 2024a). In 2024, predation control was activated in all subunits in response to moose abundance below objectives in most subunits and low calf:cow ratios. Unit 13 subunits receiving predation control treatment experienced increases in moose abundance between 2015 and 2019, but abundance has since

declined in most subunits despite predation control efforts, likely as a result of overabundance of moose (ADF&G 2025a).

Moose typically congregate in subalpine habitats during fall rutting and move down to lower elevations as the snow increases. Winter distribution depends mainly on snow depth and to a lesser extent wolf distribution (Tobey and Schwanke 2010). Severe winters with deep snow increase winter mortality by causing nutritional stress through restriction of movements. Severe winters prevent access to adequate and/or quality food (Coady 1974, Testa 2004, Bubenik 2007, Innes 2010), and increase the risk of predation, primarily by wolves (Bishop and Rausch 1974, Peterson et al. 1984). Snow depths greater than 35 inches represent a critical depth for adults with calves (Coady 1974), older adults (≥8 yrs. old), and adult males, which are more susceptible to nutritional stress and death (Coady 1982).

Prime breeding bulls are particularly vulnerable to harvest during the rut, which primarily occurs during the month of September, although peak rutting activity often occurs later now as fall seasons become warmer (AITRC 2025, McNeeley 2012, McNeeley and Shulski 2011, Miquelle 1991). Many subsistence users will avoid taking bull moose during the rut because of the increased difficulty in preserving meat quality.

Table 2. State management objectives for moose in Unit 13 (Robbins 2018, BOG 2025). The italicized numbers in parentheses are the pre-2025 objectives. The BOG changed some objectives during their January 2025 meeting (BOG 2025).

Unit	Population Objective	Harvest Objective	Fall bull: 100 cow ratio	Fall yearling bull: 100 cow ratio	Fall calf:100 cow ratio
13	17,000-21,400	1,050-2,180	25	10	-
13A	3,500-4,200	210-420	25	10	25
13B	4,500-5,500 *(5,300-6,300)*	200-400 *(310-620)*	25	10	30
13C	2,500-3,250 *(2,000-3,000)*	80-200 *(155-350)*	25	10	30
13D	1,200-1,900	75-190	25	10	30
13E	5,000-6,000	150-300 *(300-600)*	25	10	30

Table 3. Unit 13 moose composition and population estimates from fall aerial surveys in trend count areas (CAs) (Hatcher 2024, pers. comm.; ADF&G. 2024a; ADF&G 2025a).

Year	Bulls :100 cows	Year-ling bulls: 100 cows	Calves: 100 cows	% Calves	Adults observed	Total moose observed	Population Estimate	Average Density in Unit 13 moose/mi^2 (# CAs flown)
2001	22	3	15	11%	4,132	4,647	14,988	0.81 (12)
2002	27	6	23	16%	2,098	2,485	14,251	0.77 (7)
2003	24	8	18	12%	3,902	4,457	17,307	0.94 (9)
2004	28	5	22	15%	3,355	3,932	15,409	0.83 (9)
2005	27	7	18	13%	3,500	4,009	15,380	0.83 (8)
2006	30	8	24	15%	3,499	4,138	15,636	0.85 (9)
2007	30	11	22	14%	3,707	4,334	16,968	0.92 (7)
2008	35	12	19	13%	3,918	4,481	17,040	0.92 (8)
2009	33	10	24	15%	4,550	5,355	18,812	1.02 (11)
2010	31	10	22	15%	4,996	5,847	19,720	1.07 (11)
2011	32	9	23	15%	4,787	5,614	20,350	1.10 (8)
2012	32	7	16	11%	5,764	6,468	20,575	1.11 (9)
2013	34	6	27	17%	5,694	6,837	20,634	1.12 (12)
2014	35	11	16	11%	1,975	2,213	20,492	1.11 (5)
2015	32	7	25	16%	4,665	5,558	21,090	1.14 (8)
2016	32	8	19	13%	3,361	3,848	20,585	1.11 (5)[a]
2017	29	6	20	13%	3,467	3,992	17,746	0.96 (6)
2018	29	5	13	9%	3,827	4,219	18,633	1.01 (4)
2019	28	4	16	11%	3,698	4,153	18,997	1.03 (7)
2020	27	5	18	12%	5,006	5,715	18,587	1.01 (13)

Year	Bulls :100 cows	Year-ling bulls: 100 cows	Calves: 100 cows	% Calves	Adults observed	Total moose observed	Population Estimate	Average Density in Unit 13 moose/mi² (# CAs flown)
2021	28	6	19	13%	5,226	6,013	19,298	1.04 (9)
2022[b]	29	6	16	11%	4,945	5,496	16,626	0.90 (13)
2023[b]	28	3	10	7%	4,291	4,466	14,473	0.79 (11)
2024	28	4	13				14,800	
AVERAGE	30	6	19	12.4%	4,390	4,696.3	18,855.7	

[a] Two count areas flown comp flights flown in 13B, 13C, and 13E.

[b] Includes new (additional) count area established in 13D

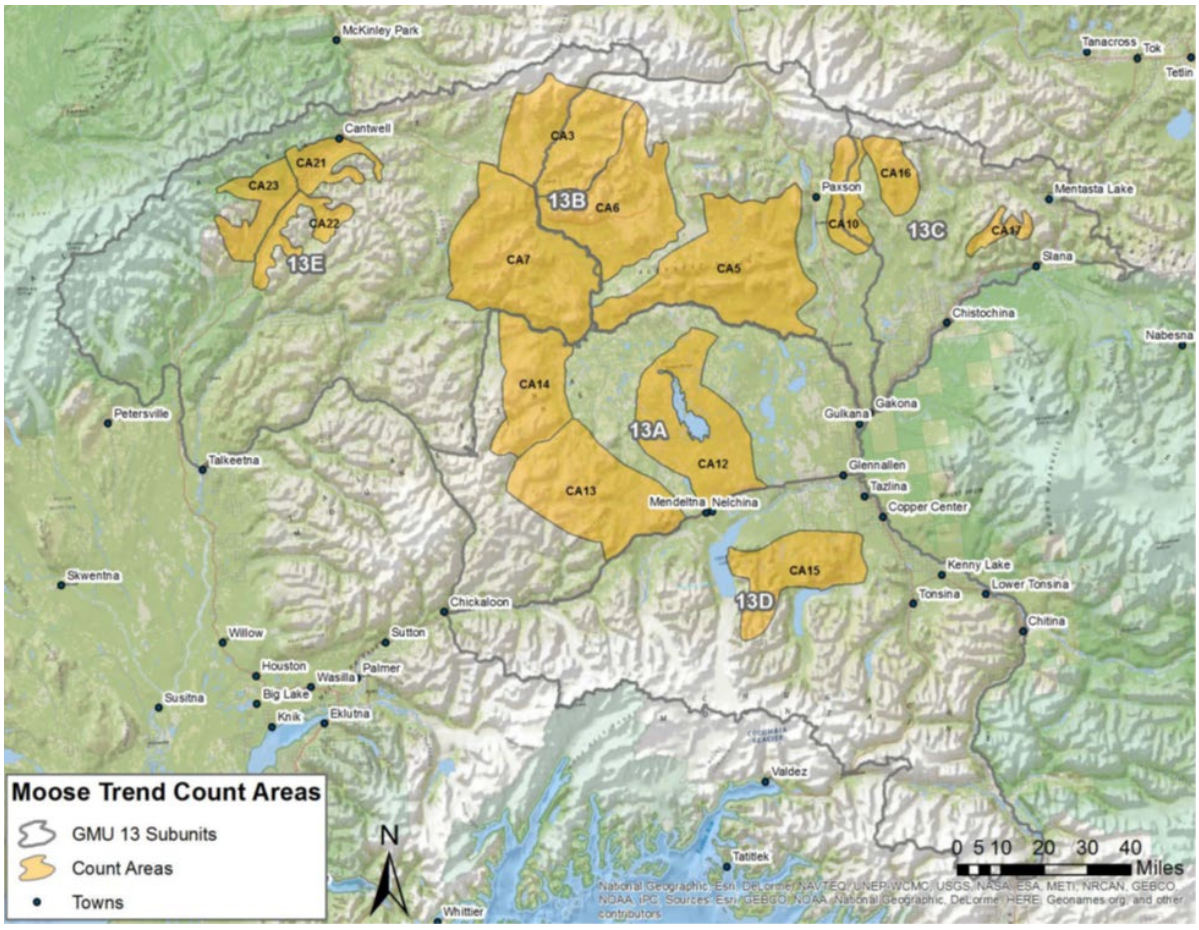

Figure 1. Map of Unit 13 subunit moose trend count areas (ADF&G 2025a).

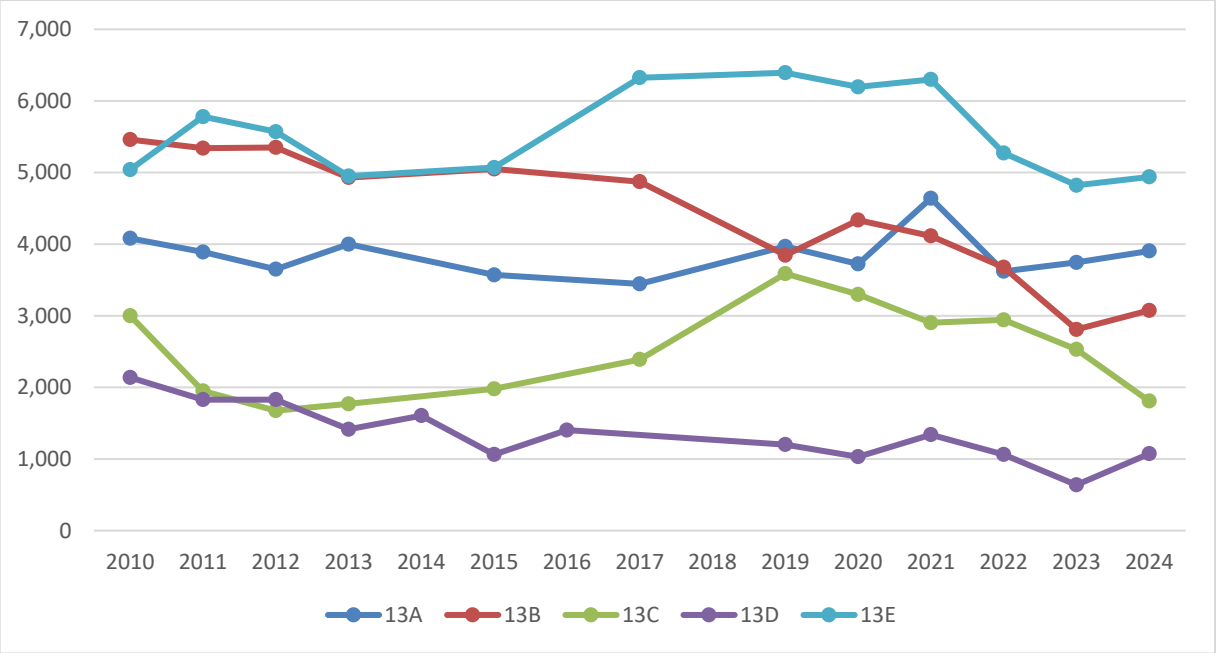

Figure 2. Estimated moose population by subunit (ADF&G 2011, 2012, 2013, 2014, 2015, 2016, 2017d, 2018, 2019, 2020a, 2021, 2022, 2023, 2024a, 2025).

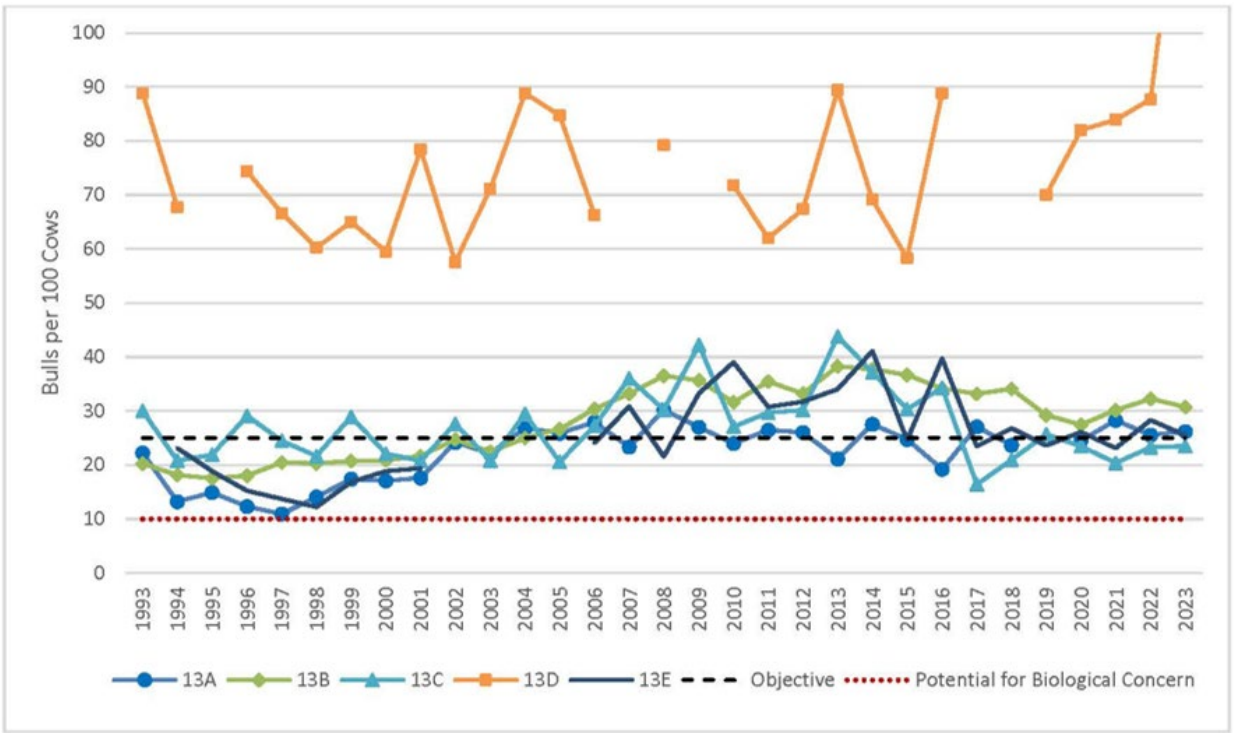

Figure 3. Moose bull:cow ratios in Unit 13 (ADF&G 2024d).

Cultural Knowledge and Traditional Practices

Communities with a customary and traditional use determination for moose in Unit 13 fall within Units 11, 12, 13, 14, and 20 (**Table 4**). Units 11 and 13 coincide with the traditional territory of the Ahtna Athabascans (de Laguna and McClellan 1981). Unit 12 and portions of Unit 20 fall within the upper Tanana region, populated historically by speakers of Tanacross and Upper Tanana Athabascan languages, with whom the Ahtna have historically maintained ties based on reciprocity and kinship (McKennan 1981, Reckord 1983, Haynes and Simeone 2007).

The communities of this region are highly reliant on harvest of fish and wildlife, with an average of 97% of surveyed households using subsistence resources (ADF&G 2025b). Salmon, moose, and caribou are among the most heavily harvested subsistence resources in the Copper River Basin and are particularly important for local food security (de Laguna and McClellan 1981; Holen, et al. 2012, 2015; Kukkonen and Zimpleman 2012; La Vine et al. 2013; La Vine & Zimpleman 2014).

Moose are typically hunted in late summer through late winter (ADF&G 2017c, Haynes & Simeone 2007, Reckord 1983, Simeone 2006), with harvest surveys showing that August and September are the primary months for moose harvest (Holen et al. 2015). The traditional practices of drying and freezing meat, as well as the proper and respectful treatment of harvested resources such as moose and caribou, are described in several ethnographic accounts of the Ahtna (de Laguna & McClellan 1981, Reckord 1983, Simeone 2006).

Based on the most recent available data, communities with a customary and traditional use determination for moose in Unit 13 harvested an average of 49.1 pounds of moose per person per survey year (**Table 4**). The number of moose harvested varies widely across communities and across years, likely in relation to local ecological conditions, community preference, hunter effort and competition, and regulations. During the most recent subsistence surveys of communities within Unit 13 (1982–2022), harvest ranged from no moose harvested in Mendeltna to a high of 112.5 pounds of moose harvested per person in Tolsona (**Table 4**). Considering all communities with a customary and traditional use determination for moose in Unit 13, Tetlin had an even higher harvest of 142.6 pounds of moose per person (**Table 4**). Sharing of moose is widespread. For instance, although no residents of Mendeltna reported harvesting moose in 2013, 100% of the households reported using moose (Holen et al. 2015). For all communities with a customary and traditional use determination for moose in Unit 13, moose comprised an average of 23% of their total harvest by weight (**Table 4**).

Table 4. Six measures of moose use by communities with a customary and traditional use determination for moose in all or a portion of Unit 13, during the most recent subsistence survey year for each community (ADF&G 2025b). Note that subsistence survey data for Healy Lake's use of moose are not available (ADF&G 2025b).

Community	Survey Year	% of HH Using	% of HH Attempting to Harvest	% of HH Harvesting	Estimated Number of Moose Harvested	Pounds of moose Harvested per Person	Moose as Percentage of Total Harvest
Northway	2014	96%	66%	24%	17	76.8	25%
Tetlin	2004	94%	81%	55%	22	142.6	No data
Tok	2011	70%	55%	28%	48	76.9	38%
Tanacross	2004	57%	65%	51%	21	110.5	No data
Lake Louise	2013	70%	50%	10%	1	23.7	32%
Nelchina	2013	61%	61%	33%	6	57.4	45%
Glacier View	1982	63%	No data	20%	8	44.9	0%
Glennallen	2013	71%	40%	10%	8	17.1	17%
Mendeltna	2013	100%	80%	0%	0	0	0%
Tolsona	2013	88%	50%	25%	4	112.5	36%
Gulkana	2013	90%	52%	17%	5	24.7	17%
Paxson	2013	50%	75%	25%	2	39.1	18%
Gakona	2012	81%	48%	17%	7	28.6	17%
Chistochina	2022	83%	78%	33%	6	65.9	43%
Mentasta Lake	2022	100%	70%	15%	4	28.1	41%
Slana/Nabesna Rd	2023	56%	56%	12%	7	37.5	31%
Chitina	2012	67%	48%	4%	2	7.9	3%
Copper Center/Silver Springs	2010	66%	61%	18%	16	33	16%
Kenny Lake	2012	60%	38%	8%	5	15.3	11%
Tazlina	2013	77%	62%	11%	10	19.4	13%
Tonsina	2013	70%	35%	9%	2	17	9%
Cantwell	2012	73%	44%	24%	15	51.9	51%
Chase	2012	69%	63%	19%	3	43.5	22%
Chickaloon	1982	61%	No data	44%	8	95.2	0%
Denali Park	2015	61%	7%	0%	0	0	0%
Dot Lake	2011	93%	50%	14%	2	32.7	28%
Dry Creek	2011	100%	52%	37%	14	92.2	66%
Average		**75%**	**55%**	**21%**	**9**	**49.1**	**23%**

Harvest History

Historically, Unit 13 has been an important area for moose hunting in Alaska due to its proximity to major human population centers within the state and road accessibility. Throughout the 1960s and early 1970s, annual harvests averaged more than 1,200 bulls and 200 cows (Tobey 2004). During this time, harvests occurred in both fall and winter seasons. By the late 1970s, harvests declined to approximately 775 bulls annually, while cow harvests and the winter season were eliminated, and bull:cow ratios were low. In response to declining moose numbers, ADF&G changed harvest limits from any bull to one bull with an antler spread of at least 36 inches or 3 brow tines on at least one antler in 1980. This harvest regime helps to promote growth of the moose population.

Subsequently, harvests increased, peaking in 1998 when 1,259 moose were reported harvested (Tobey 2004). However, since 1990, State harvest regulations have been revised several times in response to low bull:cow ratios, severe winter mortality, and increased predation. From 2001 to 2015, moose populations increased throughout Unit 13, although calf:cow ratios have remained below State management objectives (**Table 3**) (Robbins 2014).

Currently, moose harvest in Unit 13 occurs under State and Federal regulations. Federal hunts (FM1301) open on August 1st, the State CSH(CM300) opens on August 20th, and the general State season (HT) and drawing permit hunts opens on September 1st. All seasons close September 20th. However, most moose are harvested in mid-September during the State's general hunt (Robbins 2018, Del Frate 2017). Additionally, harvest success rates for State hunts exceed those for Federal hunts, despite the longer Federal season, although the amount of accessible Federal public land in Unit 13 is low. In 2024 and 2025, no moose harvest occurred on Federal public lands in Unit 13B under State regulations due to the closure adopted via WSA24-06.

Between 2000 and 2023, an average of 4,332 people hunted under State regulations each year, reporting an annual average harvest of 728 moose for a 17% success rate. Over the same period, an average of 579 people hunted under Federal regulations each year, reporting an annual average harvest of 62 moose for an 11% success rate (**Table 5**). The success rates for State and Federal hunters have fluctuated slightly during this period but generally has stayed around the average. The number of State hunters has fluctuated over time, with notable increases between 2009 and 2017, which may be related to changes in the State's community hunt in 2011. However, in recent years, the number of State moose hunters in Unit 13 has declined (**Table 5**). From 2000 to2023, an annual average of 839 moose were harvested in total, including an estimated 50–55 moose per year from illegal and/or unreported harvests (ADF&G 2020a, 2020b, OSM 2020). This is close to the lower end of the State's harvest objective of 1,050 moose.

Thus, federally qualified subsistence users hunting under Federal regulations comprise about 12% of total moose hunters and account for about 7% of reported harvests in Unit 13 on average. It is likely, however, that federally qualified subsistence users hunt under both Federal and State regulations, which would increase the percentage of Unit 13 moose hunters who are federally qualified. Similarly,

it is likely that some federally qualified subsistence users report successful harvests by Federal permit, while others report harvests under State regulations depending on where and when they harvest. Double reporting may also occur.

Examining harvest data by subunit helps to understand variation in hunting effort, competition, and harvest. Most hunting activity and harvest occur in Unit 13B under Federal regulations (**Table 6**). Since 2000, around 54% of all Federal moose hunters in Unit 13 have reported hunting in Unit 13B, while 59% of the reported Federal harvest has occurred in Unit 13B (**Table 6**). It is possible that other subunits are also important for Federal moose hunting but are not specified in harvest reports; between 2000 and2022, around 33% of Federal moose harvest reports did not specify in which subunit users hunted (**Table 6**). Local managers have indicated that both Units 13B and 13D are important for Federal moose hunting (Robbins 2015, SCRAC 2024, McKee 2024, pers. comm.), and the low reported Federal hunting rates in Unit 13D reflect variable availability of moose in this area rather than lack of reliance on Unit 13D Federal lands (McKee 2024, pers. comm). Ethnographic research suggests that all major roads throughout Unit 13 are relied upon by local hunters (Holen et al. 2012, 2015).

State moose hunters far out-number Federal moose hunters, with 79.1% of State moose hunting between 2000 and 2022 occurring in Units 13A, 13C, and 13E (**Table 6, Figure 4**). These three units contain the major roads of Unit 13: Denali, Parks, Glenn, and Richardson highways (**Map 1**). Notably, many of the accessible and heavily hunted areas along the Glenn and Richardson highways are not surveyed when estimating moose population size and density (**Figure 1**).

The high numbers of State moose hunters relative to Federal moose hunters in Unit 13 has been a consistent pattern since at least 2000 (**Figure 4**). Harvest report data indicates that from 2000–2022, State hunters had higher hunting success than Federal hunters in Units 13A (30.0% vs. 6.3%), 13B (14.0% vs. 12.2%), and 13C (25.9% vs. 13.3%) (**Table 6**). Based on current data, Federal hunters have higher average success rates than State hunters in Units 13D and 13E (**Table 6**). However, it is difficult to assess Federal hunting success by subunit due to the high proportion of harvest reports that do not specify hunting area as well as the limited amount of Federal lands in Unit 13 (**Table 6**). The average Federal hunter success rates for non-specified areas of Unit 13 is very low (5.6%) (**Table 6**), suggesting that Federal hunter success rates within specific subunits are even lower than currently reported. However, available data does not permit more precise understanding of Federal hunter success by subunit.

Many local users note that the State Community Subsistence Harvest Permit Program prevents local users from hunting and harvesting moose (Holen et al. 2012; Holen et al. 2015; Kukkonen and Zimpleman 2012; La Vine et al. 2013; La Vine 2014, SCRAC 2022). Beginning in 2011, any community or group of Alaskan hunters numbering 25 or more could apply for the State community hunt (CM300) (ADF&G 2017a). Between 2009 and 2016, the number of groups and participants in the CM300 hunt increased from 1 to 73 groups and from 378 to 3,400 participants (**Table 7**) (ADF&G 2017c). During this same period, the number of people hunting moose under State regulations in Unit 13 increased sharply, especially in Units 13A, 13B, and 13E, while the number of Federal moose hunters in Unit 13 remained relatively stable (**Figure 4**). The number of participants in the CM300

hunt peaked in 2018 at 6,820 participants and has since declined considerably to 2,102 participants in 2023. Although the number of groups, households, and participants of the CM300 hunt increased, the CM300 total moose harvest has not increased at the same rate (**Table 7**) (Del Frate 2017). Most of the hunters currently participating in the CM300 hunt are non-local residents (ADF&G 2024b).

Table 5. State and Federal moose hunters, harvest and success rates in Unit 13 2000-2023 (Hatcher 2024 and 2025, pers. comm.; SCRAC 2023, 2024; ADF&G 2020a, 2020b; OSM 2020).

Year	Total Federal permits issued	Total Federal Hunt-ers[1]	Federal Harvest (FM1301)	Federal Hunt Success Rate (%)	Total State Hunters[1]	State re-ported harvest	State Hunt Success Rate (%)	Total Har-vest[2]
2000	791	502	45	9	4,142	562	14	657
2001	933	526	37	7	3,588	468	13	555
2002	1,070	600	53	9	3,461	577	17	680
2003	1,069	565	61	11	3,362	611	18	722
2004	1,050	553	49	9	3,620	615	17	714
2005	935	561	51	9	3,826	575	15	676
2006	1,071	506	47	9	4,175	694	17	791
2007	935	439	53	12	3,921	650	17	753
2008	1,122	560	57	10	4,306	740	17	847
2009	1,093	630	61	10	4,398	867	20	978
2010	1,172	669	77	12	4,398	869	20	996
2011	1,327	680	80	12	4,220	872	21	1,002
2012	1,292	646	59	9	4,934	661	13	775
2013	1,203	535	50	9	5,239	673	13	778
2014	1,311	656	86	13	4,827	856	17	997
2015	1,327	700	85	12	5,032	972	19	1,112
2016	1,382	686	99	15	5,861	987	17	1,141
2017	1,398	686	90	13	5,283	912	17	1,057
2018	1,353	634	61	10	4,659	733	16	849
2019	1,240	498	71	14	4,144	843	20.3	964
2020	1,289	645	66	10	4,783	817	17.1	933
2021	1,159	520	62	11	4,116	777	18.9	889
2022	1,188	509	54	10	4,081	633	15.5	737
2023	1,023	393	38	10	3,585	504	14.7[3]	542
2024					3,787	705	19	751
Average	1,109	555	59	10	4,158	698	16	805

[1] Includes hunters who attempted to hunt; excludes people who obtained permits but did not hunt.
[2] Includes 50–55 additional moose each year from unreported and illegal harvests.
[3]Many hunters reported that weather and late leaf drop significantly impacted success.

Table 6. Average annual moose harvest statistics for Federal (FM1301) and State hunters in Unit 13 2000–2022 (ADF&G 2024b, OSM 2024).

Subunit	Federal hunters[1] (#)	Federal hunters[1] (%)	Federal harvest FM1301	Federal hunt success rate (%)	State hunters[1] (#)	State hunters[1] (%)	State harvest	State hunt success rate (%)
13A	13.2	1.9	0.8	6.3	1,323.2	30.0	242.7	18.4
13B	297.0	53.5	37.3	12.2	1,305.6	29.8	181.7	14.0
13C	10.3	1.8	0.7	13.3	316.9	7.3	82.4	25.9
13D	49.2	9.2	8.4	21.5	388.5	9.1	69.1	17.8
13E	16.9	3.1	3.3	23.7	856.3	19.3	154.3	18.1
Not specified	184.4	32.9	12.8	5.6	184.3	4.5	7.8	3.8

[1]Includes hunters who attempted to hunt; excludes people who obtained permits but did not hunt.

Table 7. Characteristics of the State of Alaska Community Subsistence Hunt for moose and total harvest in Units 11, 13 and a portion of Unit 12 from 2009–2016 (Rinaldi 2025, pers. comm., Hatcher 2024, pers. comm.; ADF&G 2017b, 2020b; Del Frate 2017; Robbins 2018).

Regulatory Year	Number of Groups	Number of Communities	Number of Households	Number of Individuals	CM300 Harvest
2009/2010	1	19	246	378	98
2010/2011[a]	-	-	-	-	-
2011/2012	9	31	416	814	86
2012/2013	19	29	460	969	98
2013/2014	45	41	955	2,066	156
2014/2015	43	41	893	1,771	150
2015/2016	43	43	1,039	1,984	170
2016/2017	73	48	1,527	3,400	199
2017/2018	83	53	1,680	3,784	188
2018/2019	57	60	2,894	6,820	154
2019/2020	61	59	1,807	4,203	159
2020/2021	49	50	912	1,979	138
2021/2022	54	48	994	2,180	131
2022/2023	47	51	883	1,983	124
2023/2024	52	48	927	2,102	108
2024/2025	49	46	884	1,803	125

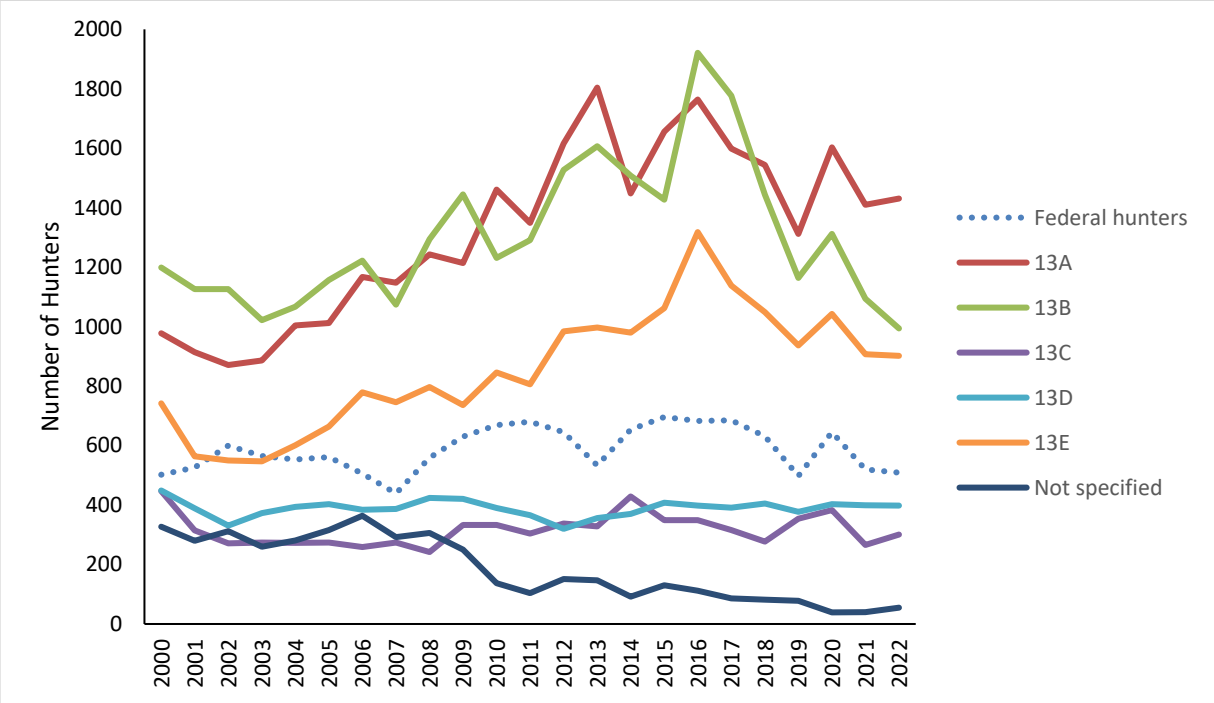

Figure 4. Annual reported State moose hunters in subunits of Unit 13, and annual number of Federal moose hunters (FM1301) in all areas of Unit 13 (ADF&G 2024b, OSM 2024). Includes hunters who attempted to hunt; excludes people who obtained permits but did not hunt.

Alternative(s) Considered

One alternative considered was to only extend or shift the moose season later in the year in some Unit 13 subunits. Moose population status, the amount of Federal public lands, and harvest pressure by federally qualified subsistence users varies greatly by subunit. Therefore, the benefits to federally qualified subsistence users and potential impacts to the Unit 13 moose population of extending or shifting the season also varies by subunit. Of course, if the season were only extended in a single subunit, harvest pressure in that subunit would likely increase disproportionately during the extended season dates.

Unit 13A contains very little Federal lands and accounts for < 1% of Federal hunters with < 1 moose harvested/year, while the moose population estimate has consistently been within management objectives. This suggests that extending or shifting the moose season in this subunit would be of limited benefit due to the small amounts of Federal land and historic use by Federal hunters but would not affect the moose population due to the extremely low harvest pressure and adequate status of the moose population.

Conversely, the majority of Federal hunters (54%) and harvest occur in Unit 13B, which is comprised of 18% Federal lands, much of which are easily accessible along highways and rivers. The Unit 13B moose population has been declining and is currently estimated at 68% of the lower end of the reduced State management objectives. The Board closed Federal public lands in Unit 13B to moose hunting by non-federally qualified users for the 2024 and 2025 seasons in part due to conservation concerns (FSB

2024). While extending or shifting the season in Unit 13B may have the greatest benefit to federally qualified subsistence users due to relatively high use by Federal hunters and accessible Federal lands, it would also increase harvest. While most biological metrics for the Unit 13B moose population (abundance, calf:cow ratios, yearling bull:cow ratios, twinning rates) have been consistently low and/or below management objectives, bull:cow ratios have been consistently above management objectives. This suggests that while conservation concerns may exist for the Unit 13B moose population, there are still surplus bulls available for harvest and bulls-only harvest should not affect the overall population.

Unit 13C also contains very little Federal lands and accounts for < 1% of Federal hunters with < 1 moose harvested/year. While the Unit 13C moose population estimate had consistently been within management objectives, the 2024 estimate decreased substantially, while management objectives increased. Therefore, the most recent Unit 13C moose population estimate is well below (28%) current management objectives. This suggests that extending or shifting the moose season in this subunit would be of limited benefit due to the small amounts of Federal land and historic use by Federal hunters. Effects on the moose population are unlikely due to the extremely low harvest pressure, although the recent decline suggests the Unit 13C moose population may not support any increases in harvest. Bull:cow ratios in Unit 13C have been below management objectives in recent years (**Figure 3**), and the State's any bull harvest quota for the CM300 community hunt was only 5 bulls in 2025.

Unit 13D is the second most utilized subunit, accounting for 9% of Federal hunters. While it contains 12% Federal lands, much of those lands are remote USFS lands. Less than 3% of Unit 13D is comprised of Federal lands easily accessible along the Richardson highway. However, the Unit 13D moose population has been below State management objectives since 2022. However, bull:cow ratios in Unit 13D are extremely high, averaging 81 bulls:100 cows 2010-2023 with a record 138 bulls:100 cows observed in 2023. This suggests that extending or shifting the season in Unit 13D would benefit some federally qualified subsistence users, and while the Unit 13D moose population may have declined, there are still surplus bulls available for harvest. Additionally, only 8.4 moose are harvested under Federal regulations each year from Unit 13D on average, which is only 1% of the average total Unit 13 moose harvest. Therefore, an increase in moose harvest in Unit 13D may not be biologically meaningful.

Unit 13E contains the most Federal lands of any subunit at 26%, while only 3% of Federal hunters and 3 moose harvests are reported each year in Unit 13E on average. The moose population is right at the lower end of State management objectives. This suggests extending the moose season in Unit 13E may be meaningful to the few federally qualified subsistence users hunting there given the large tracts of Federal land but would not impact the moose population due to the extremely low harvest pressure and adequate status of the moose population.

Discussion and Effects

If any of these proposals are adopted, the Unit 13 moose season will close later in the season. Proposal WP26-28b extends the season to close September 30th, providing federally qualified subsistence users with an additional 10 days to harvest moose. Proposals WP26-29 and -30 do not lengthen the overall

Federal season but shift it by 5 or 10 days later, respectively. As all State seasons close on September 20th, all of these proposals provide federally qualified subsistence users with a subsistence priority to harvest moose in late September without any competition from State hunters. As stated by the proponents in their submitted proposals, shifting the season later corresponds with changing weather patterns and moose behavior that could improve hunter success and ease field care of meat after butchering. As the Unit 13 caribou hunt has been closed for three years, users are increasingly dependent on moose. Adopting these proposals could also help address food security concerns. However, as the State hunt would be closed, users would have to distinguish land status in the field to ensure they are only hunting on Federal public lands during the extended season.

Impacts to the Unit 13 moose population are uncertain. Unit-wide, the moose population has been declining since 2021 and is currently below State management objectives. While bull:cow ratios are above objectives, calf:cow and yearling bull:cow ratios have been very low, indicating the Unit 13 moose population is declining and that bulls may not be available for harvest in the future. These metrics do not support regulation changes that may increase harvests. However, the State's general moose hunt in Unit 13 has antler restrictions, substantially mitigating conservation concerns. While the State's community hunt is any-bull, ADF&G reduces the any-bull quota if bull:cow ratios are below management objectives and implements antler restrictions once the quota is met, further mitigating conservation concerns for the Unit 13 moose population. While increasing any-bull harvest during an extended Federal season has the potential to negatively impact bull:cow ratios, Federal harvest has only comprised 7% of total moose harvest from Unit 13 on average (2001–2023), suggesting the expected small increases in harvest resulting from these proposed changes may not be biologically meaningful. Additionally, while bull:cow ratios are below management objectives in some subunits, they are well above levels for biological concern (**Figure 3**).

Adopting any of these proposals increases regulatory complexity by misaligning the closing date of the Unit 13 moose season between State and Federal regulations.

The outcome of Proposal WP26-31, which requests that the BLM lands in Unit 13 be closed to moose hunting by non-federally qualified users may affect the impacts of adopting any of these proposals.

OSM PRELIMINARY CONCLUSION

Support Proposal WP26-28b and **take no action** on Proposals WP26-29 and WP26-30.

Justification

Extending the moose season in Unit 13 increases subsistence opportunity and provides a meaningful subsistence priority, allowing federally qualified subsistence users to hunt during biologically and culturally appropriate times. As the State hunt is closed, all competition with other users. The extended season also provides better hunting conditions due to the later onset of rut in recent years and cooler weather that makes meat storage in the field easier.

A combination of low harvest pressure and adequate moose populations and/or bull:cow ratios suggest no conservation concerns and support extending the season in Unit 13 to provide additional opportunity for federally qualified subsistence users. The relatively small amount of Federal lands in Unit 13 further reduces potential impacts to the Unit 13 moose population.

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WRITTEN PUBLIC COMMENTS

Ahtna Intertribal Resource Commission