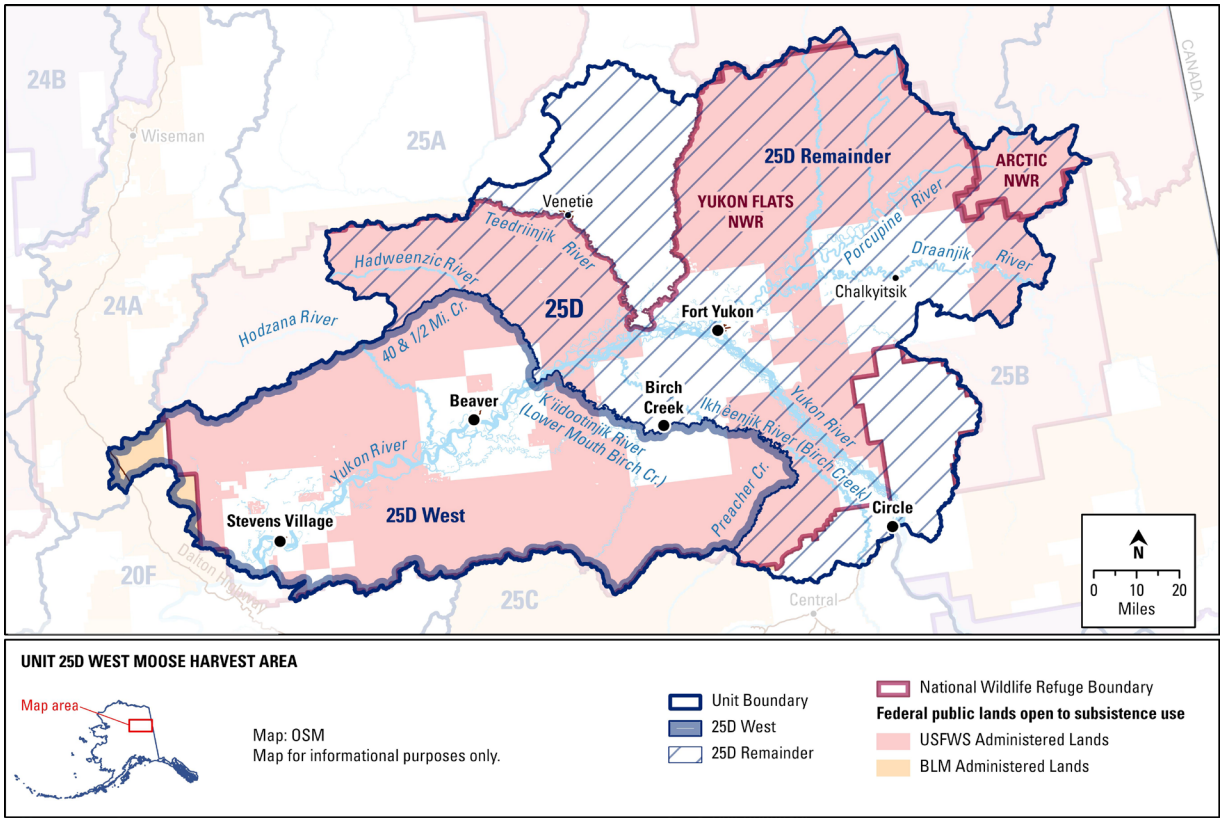
Draft Wildlife Closure Review
WCR26-22

ISSUE: Wildlife Closure Review WCR26-22 reviews the closure to moose hunting on Federal public lands in Unit 25D west, except by residents of Unit 25D west and Birch Creek hunting under Federal regulations (Map 1). It is the Federal Subsistence Board's (Board) policy that Federal public lands should be reopened when closures are no longer necessary, and that closures will be reviewed at least once every four years. The purpose of this review is to determine if these closures are still warranted.

Closure Location and Species: Unit 25D west – Moose



Map 1. Unit 25D west (WCR26-22 closure area) and communities of Stevens Village, Beaver, and Birch Creek.

Closure Dates: Year-round

Current Federal Regulations

Unit 25D west–Moose

Unit 25D west—that portion lying west of a line extending from the Unit 25D boundary on Preacher Creek; then downstream along Preacher Creek, Birch	*Aug. 25-Feb. 28*

Creek and lower mouth of Birch Creek to the Yukon River; then downstream along the north bank of the Yukon River (including islands) to the confluence of the Hadweenzic River; then upstream along the west bank of the Hadweenzic River to the confluence of Forty and One-Half Mile Creek; and then upstream along Forty and One-Half Mile Creek to Nelson Mountain on the Unit 25D boundary—1 bull by a Federal registration permit (FM2505).

Permits will be available in the following villages: Beaver (25 permits), Birch Creek (10 permits), and Stevens Village (25 permits). For residents of 25D west who do not live in one of the three villages, permits will be available by contacting the Yukon Flats National Wildlife Refuge Office in Fairbanks or a local Refuge Information Technician.

Moose hunting on Federal public lands in Unit 25D west is closed at all times except for residents of Unit 25D west and Birch Creek hunting under these regulations. The moose season will be closed by the Yukon Flats National Wildlife Refuge Manager when 60 moose have been harvested in the entirety (from Federal and non-Federal lands) of Unit 25D west.

Current State Regulations

Unit 25D west-Moose

Unit 25D, west of a line extending from the Unit 25D boundary on Preacher Creek, then downstream along the west banks Preacher Creek, Birch Creek, and Lower Mouth Birch Creek to the Yukon River, then downstream along the north bank of the Yukon River (including islands) to the confluence of the Hadweenzic River, then upstream along the west bank of the Hadweenzic River to the confluence of Forty and One-Half Mile Creek, then upstream along Forty and One-Half Mile Creek to Nelson Mountain on the Unit 25D boundary.	*Residents: One bull by permit (TM940)*	*Aug. 25-Feb. 28*

Regulatory Year Initiated: 1993

Closure last reviewed: 2022 – WCR22-22

Justification for Original Closure

Section 815(3) of ANILCA states:

> *Nothing in this title shall be construed as – (3) authorizing a restriction on the taking of fish and wildlife for nonsubsistence uses on public lands (other than national parks and monuments) unless necessary for the conservation of healthy populations of fish and wildlife, for the reasons set forth in section 816, to continue subsistence uses of such populations, or pursuant to other applicable law…*

Results from population surveys conducted in 1992 estimated that there were 605 moose in Unit 25D west, which was considerably lower than the population estimate of 1,479 moose in 1986. Although different population estimation methods were used, managers were concerned about the continued viability of this population based on its decline between 1986 and 1992, low moose density, low survival of yearling cows, high mortality rates of younger aged moose and cows, and under-reporting of the harvest (FWS 1993).

Based on the management goal to limit harvest to no more than 5% of the population (n=605 in 1992), the Board adopted modified Proposal 93-60, which reduced the maximum allowable harvest to 30 bulls and closed moose hunting in Unit 25D west to non-federally qualified users. Combined with the estimated annual subsistence harvest for Stevens Village, Beaver, and Birch Creek, it was determined that there was not a sufficient surplus of moose for harvest by nonresidents or residents living outside of Unit 25D west (FSB 1993). Thus, the original closure was implemented for the conservation of a healthy moose population and to ensure continued subsistence use of this population by federally qualified subsistence users (McLean 1992:89 Sumida and Alexander 1985; Caulfield 1983).

The Board adopted the closure to allow for continued subsistence uses of this moose population by the residents of Unit 25D west and Birch Creek. Permit systems that limit the hunt to these residents have been in place through the State system since the early 1980s and Federal permits since the early 1990s due to low moose density and high use by local residents (OSM 2012 [sic 2013]: 36-43; (McLean 1992:89 Sumida and Alexander 1985; Caulfield 1983).

Council Recommendation for Original Closure

Council members for the Eastern Interior Alaska Subsistence Regional Advisory Council (Council) had not been selected and finalized by the April 1993 Board meeting, so there was no recommendation. In all subsequent reviews 2006 (WCR05-22), 2009 (WCR08-22), 2013 (WCR12-22), 2017 (WCR15-22) and 2022 (WCR22-22), the Council voted to maintain the closure to ensure the continuation of subsistence uses and due to conservation concerns caused by low moose abundance, low density, and a limited harvestable surplus (EIRAC 2005, 2009, 2013, 2022, FWS 2013).

State Recommendation for Original Closure

The State supported modified Proposal 93-60 (see Regulatory History below) due to conservation concerns (OSM 1993).

Extent of Federal Public Lands

Unit 25D west is comprised of approximately 71% Federal public lands and consists of 71% U.S. Fish and Wildlife Service (FWS) managed lands (**Map 1**).

Customary and Traditional Use Determination

Residents of Unit 25D west and the village of Birch Creek have a customary and traditional use determination for moose in Unit 25D west.

Regulatory History

This closure is enacted through the customary and traditional use determination for moose in Unit 25D west. When the Federal Program began in 1990, the Federal Subsistence Board (Board) adopted the State customary and traditional use determination for moose in Unit 25D west which included only the residents of Beaver, Birch Creek, and Stevens Village.

The Board adopted and continued this closure from State regulations because of high demand for moose in an area with very few (McLean 1992: 89; Sumida and Alexander 1985; Caulfield 1983).

In the early 1980's, Unit 25D was divided by the State into Unit 25D west and Unit 25D east (now remainder) to allow the use of differing regulatory schemes to address the status of the respective moose populations. In 1983, the Alaska Board of Game enacted moose harvest registration permits in response to concerns about the moose population voiced by local residents, the ADF&G Advisory Committee and the Department (Sumida and Alexander 1985:1). In 1990, the Board began making regulations for subsistence harvests on Federal public lands and initially provided an unlimited number of Federal permits to residents of Beaver, Stevens Village (located within Unit 25D west) and Birch Creek to harvest bull moose (EIRAC 2013: 37).

In 1990, the Federal moose season in Unit 25D west ran Aug. 25-Sept. 25, Dec. 1-10, and Feb. 18-28. The harvest limit was one bull by Federal registration permit and only residents of Beaver, Birch Creek, and Stevens Village could hunt under Federal regulations. However, all State residents could hunt moose on Federal public lands during State seasons under State regulations. There was no open nonresident State moose season in Unit 25D west at the time.

In 1992, the Board adopted Proposal P92-117 with modification, which specified that federally qualified subsistence users could hunt moose in Unit 25D west under Federal regulations with a State Tier II permit and that the season would be closed when 35 bulls had been harvested. This was done to reduce the administrative burden on federally qualified subsistence users by allowing them to hunt on State and Federal lands by acquiring one, rather than two permits.

On July 7, 1992, the Board received Request for Reconsideration 92-19, filed on behalf of the Native Village of Stevens and the Dinyee Corporation [Stevens Village Corporation]. OSM does not have a copy of the request from Stevens Village and Dinyee Corporation. However, the Federal Register indicates that the Request asked the Board to change the regulations for subsistence moose harvest on public lands in Unit 25D west. Three changes were requested:

1. Moose hunting on all lands in that portion of Unit 25D west within the boundaries of the Yukon Flats National Wildlife Refuge be authorized only for the residents of Stevens Village, Beaver, and Birch Creek;

2. Moose hunting season be changed to allow year-round hunting or from August 25-February 28;

3. Institute community bag limits which are more in line with cultural practices in the region (58 Fed. Reg. 64, 17776-17777 [April 6, 1993]).

On September 15, 1992, the Board met to consider this Request and determined:

1. To close Federal lands in Unit 25D west to non-federally qualified users, "Therefore, in order to assure the continued viability of the moose population and provide for the continuation of subsistence uses, the Board closed public lands in Unit 25D west to moose harvest by individuals other than residents of Beaver, Birch Creek, or Stevens Village (58 Fed. Reg. 64, 17777 [April 6, 1993]).

2. To lengthen the subsistence moose harvest season to a split season, Aug. 25 – Sept. 25 and Nov. 1- Feb 28 (58 Fed. Reg. 64, 17777 [April 6, 1993]).

3. To institute designated hunter permits instead of community bag limits as requested, "Nevertheless, to ensure the continuation of subsistence uses and to ensure the conservation of healthy moose populations, the Board considered and adopted an apparent equivalent of community bag limits (58 Fed. Reg. 64, 17777 [April 6, 1993]).

In 1993, the Board adopted Proposal P93-60 with modification to: 1) close moose hunting on Federal public lands in Unit 25D west to non-Federally qualified users, 2) modify the open season dates to Aug. 25-Sept. 25 and Nov. 1-Dec. 20, 3) restrict harvest to antlered bulls only, and 4) reduce the quota to 30 antlered bulls as the maximum allowable harvest for the moose population on all lands in GMU 25D west, clarifying that the quota applied to all (Federal and non-Federal) lands of Unit 25D west. This was done due to conservation concerns over the declining moose population (58 Fed. Reg. 64, 17777 [April 6, 1993]), McLean 1992: 89, Caulfield 1983, Sumida and Alexander 1985).

In 1994, the Board adopted Proposal P94-77 with modification to: 1) expand the open season to Aug. 25-Feb. 28, and 2) remove the "antlered" harvest restriction, allowing the harvest of any bull. This was done to better accommodate the needs and traditions of the villages in Unit 25D west and because the existing quota insured against overharvesting.

In 1995, the Board adopted Proposal P95-52, allowing the take of moose and caribou in Unit 25 from a snowmachine or motorboat. This was done to alleviate unnecessary restrictions on federally qualified subsistence users in Unit 25 because this provision was already allowed in other units across the State.

In 1999, the Board adopted Proposal P99-61, which allowed the take of bull moose in Unit 25D west outside the open seasons for memorial potlatch and traditional cultural events with the provisions that any harvested moose counted toward the quota of 30 bulls and that the user must communicate the name of the deceased, number of moose harvested, harvester's name, and the date and location of harvest to the Yukon Flats National Wildlife Refuge (NWR) manager.

In 2000, the Board adopted Proposal P00-60 with modification to: 1) increase the harvest quota from 30 to 60 moose, and 2) issue 60 permits annually with 25, 25, and 10 permits being issued to residents of Stevens Village, Beaver, and Birch Creek, respectively. This was done in response to surveys which indicated that the moose population had risen and was able to sustain an increased bull harvest.

In 2001, the Board adopted Proposal WP01-43, which expanded the customary and traditional use determination for moose in Unit 25D west to include all residents of Unit 25D west. This change was made to include persons who lived on their Native Allotments in Unit 25D west who did not live within any of the three communities: Beaver, Birch Creek, or Stevens Village.

In 2012, the Board adopted Proposal WP12-63, which required edible meat to be left on the bones of caribou and moose harvested in Unit 25 until removed from the field and/or processed for human consumption. This was done to reduce meat spoilage.

In 2022, the Board voted to maintain status quo on WCR22-22 as part of the consensus agenda. The Council supported maintaining the closure due to the low moose population in the area and because it was in the best interest of the area's subsistence users.

Current Events

In 2024, two proposals were submitted regarding this hunt. The first, WP24-34, submitted by the Council, requested the addition of Fort Yukon and Circle to the list of communities with a customary and traditional use determination for moose in Unit 25D west. A companion proposal, WP24-35, was submitted by a resident of Circle, AK and requested adjustments to permit allocations to provide for the two added communities if WP24-34 was recommended by the Council and adopted by the Board. The Council heard extensive public testimony on these proposals at their October 2023 meeting. The Council opted to defer further discussion and a recommendation on these proposals until their winter 2024 meeting. Extensive public comment and two tribal consultations occurred in response to these proposals:

Letters of opposition to the proposals were received from:

- Council of Athabascan Tribal Governments, December 22, 2023
- Native Village of Stevens, October 5, 2023 (submitted at 2023 fall Council meeting)

- Birch Creek Tribal Council, June 29, 2023

Tribal Consultations:

- November 16, 2023: Tribal Consultation for tribal governments and ANCSA Corporations held via teleconference.
- January 31, 2024: In-person Tribal Consultation in Fairbanks, AK.
- Shortly following the January 2024 Tribal consultation, the proponent withdrew Proposal WP24-35.

At their winter meeting on March 7, 2024, the Council voted to withdraw its proposal, WP24-34. The Chair stated that the proposal, to add Circle and Fort Yukon to the customary and traditional use determination for moose in Unit 25D west, caused unwanted conflict among the Yukon Flats villages (EIRAC 2024a: 23). During the October 2023 EIRAC meeting and subsequent tribal consultations, some of this conflict was attributed to a disconnect between Tribal Governance and Federal law and the fact that that no one at the winter 2023 Council meeting, neither Council members nor OSM staff knew the regulatory history and details of cooperative moose management planning efforts (ADF&G 2002) in the Yukon Flats (EIRAC 2023: 252-254).

Biological Background

A Yukon Flats Cooperative Moose Management Plan (Management Plan) was completed in 2002. The Alaska Department of Fish and Game (ADF&G), Division of Wildlife Conservation developed the plan in cooperation with the Yukon Flats Fish and Game Advisory Committee, the Council of Athabascan Tribal Governments (CATG), the Yukon Flats NWR, and the Office of Subsistence Management (ADF&G 2002). The purpose of the plan was to "protect, maintain, and enhance the Yukon Flats moose population and habitat, maintain traditional lifestyles, and provide opportunities for use of the moose resource" (ADF&G 2002).

The Management Plan recommends goals, objectives, strategies, and actions for the moose population, harvest, and predator management (ADF&G 2002). Current State management objectives for moose in Unit 25D were revised for the regulatory years RY15-RY19. The objective to increase the moose population by 2–5% annually was removed because this objective is not measurable based on the precision level associated with population surveys and survey frequency. The objective to conduct ADF&G, Division of Subsistence household surveys was removed because there is no longer funding to conduct these. The objective to reduce illegal harvest of cow moose was removed because there is no method to measure this objective. The objective to maintain a minimum of 40 bulls:100 cows in the post-hunt population was the only management objective retained from the RY10-RY14 report period, and the only management objective for RY15-RY19 (Caikoski 2018).

Moose in Unit 25D (west) have been surveyed regularly (weather and snow conditions permitting) by the Yukon Flats NWR since 1992. Surveys have been conducted in both spring and fall. Fall surveys are preferred as cows and bulls can be differentiated. However, poor snow conditions have precluded

fall surveys in some years. Spring and fall surveys cannot be compared due to variability in survey conditions, moose behavior, distribution, and survival (Lake 2013).

Moose density in Unit 25D (west) has been consistently low over the last 50 years and is among the lowest in Interior Alaska (Lake 2013, Caikoski 2012). Between 1992 and 2018, fall moose population estimates ranged from 418-1,123 moose, averaging 645 moose (**Figure 1**). These estimates correspond to an estimated moose density of 0.18-0.49 moose/mi^2, averaging 0.31 moose/mi^2 (Lake 2013, 2015; Lake et al. 2018; Lake and Guldager 2023). From 1999-2010, the overall fall moose population appeared to be trending downward (no significant decreases noted between survey years); however, the moose population estimate increased significantly in 2015, and the highest estimate on record occurred in 2018 (Lake 2015, Lake et al. 2018; Lake and Guldager 2023, **Figure 1**). The 90% confidence intervals of the 1999 and 2015 point estimates overlap, while the 2018 point estimate is the highest in survey history. These recent increases demonstrate that moose numbers can naturally fluctuate over a decade within a low-density equilibrium (Lake et al. 2018).

Between 1999 and 2023, spring moose population estimates ranged from 300-735 moose averaging 530 moose (**Figure 1**). These estimates correspond to an estimated moose density of 0.13-0.32 moose/mi^2, averaging 0.23 moose/mi^2. The spring moose population appears to be trending upward since 2008 (**Figure 1,** Lake and Guldager 2023). However, the confidence intervals for the 2023 spring estimate overlap with those of previous estimates (2004 and 1999), further supporting that the Unit 25D west population fluctuates within a low-density equilibrium. Given this, despite recent increases in the Unit 25D (west) moose population density estimates, conservative harvest management is still recommended due to the consistent long term low density of moose (Lake et al. 2018; Bertram 2021 pers comm.).

Between 1992 and 2018, the bull:cow ratio for moose in Unit 25D (west) fluctuated widely, ranging from 31-72 bulls:100 cows/year and, averaging 55 bulls:100 cows, reflecting light harvest pressure (**Figure 2**, Lake 2013, 2015; Lake et al. 2018). The most recent estimate (fall 2018) is well above management objectives of 40 bulls:100 cows (Lake et al. 2018).

Between 1992 and 2023, the calf:cow ratio for moose in Unit 25D (west) ranged from 15-53 calves:100 cows/year, averaging 32 calves:100 cows/year (Lake 2013, 2015; Lake et al. 2018; Lake and Guldager 2023; **Figure 3**). Fall calf:cow 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). Over the long-term, the calf:cow ratio has exhibited a stable trend. While the fall 2015 ratio was the highest ratio ever recorded, indicating a growing population, the most recent spring estimate in March 2023 was only 15 calves:100 cows (Lake 2015; Lake et al. 2018; Lake and Guldager 2023; **Figure 3**). Reasons for the high calf:cow ratio in 2015 are unclear, but likely contributed to the observed population increase in 2018 (Lake et al. 2018).

Twinning rates are an indicator of nutritional status but are only available for a few years in Unit 25D (west) from two separate radio-collar studies. Observed twinning rates in 1998 and 1999 (daily

surveys) were 66% and 61%, respectively (Bertram and Vivion 2002). More recently, Hinkes (2015) and Lake (2016, pers. comm.) determined minimum twinning rates of 19%, 54% and 47% in 2014, 2015 and 2016, respectively. The 2014-2016 twinning rates were considered minimum because surveys were conducted weekly versus daily, increasing the possibility that moose may have already lost a calf between surveys. The reason for the low, minimum twinning rate in 2014 is unknown, but may have been related to poorer body condition of cows (low rump fat) measured in November 2013 (Hinkes 2015). However, the other twinning rates indicated good body condition and underutilized habitat (Lake 2016, pers. comm.).

Predators are the primary factor limiting the moose population in Unit 25D (west), and harvest, particularly of cows, may also be an important factor (ADF&G 2002, Caikoski 2012). A calf mortality study conducted by the Yukon Flats NWR found black and brown bears were responsible for 45% and 39% of moose calf mortality, respectively (Bertram and Vivion 2002). Wolves are likely the most important source of mortality after snowfall with elevated kill rates on adult female and young-of-the-year moose in early winter in some years (Lake et al. 2018, ADF&G 2002).

The Management Plan recommended increased harvest of black bears, brown bears, and wolves by local residents as a strategy for increasing the harvestable surplus of moose. As a result of these recommendations, the BOGliberalized predator regulations, including black bear baiting and community harvest, brown bear seasons and harvest limits, and wolf harvest limits (ADF&G 2002). However, harvest intensity on wolves and bears remains light, and public harvest of predators likely has not contributed to the recent observed increases in the Unit 25D (west) moose population (Lake et al. 2018).

In 2008, ADF&G completed an intensive management (IM) plan for Yukon Flats moose. A feasibility assessment of the IM plan determined that: 1) wolf harvest rates by local residents would not be sufficient to reduce the abundance of wolves; and 2) documented black bear density is the highest in Interior Alaska and harvest by local residents would not be sufficient to reduce abundance (Caikoski 2012).

Habitat

Wildland fire and flood events in the western Yukon Flats maintain early successional shrub communities (Caikoski 2012, Bertram 2015). The quality and availability of these communities for winter moose forage is variable across the Yukon Flats. Stands of new and early to mid-successional stage willows grow in lowlands, wetlands, newly formed river terraces, and upland burned areas. There are also large stands of old growth willow, growing primarily out of the reach for moose (Bertram 2015). Browse habitat does not appear to be limiting moose at past densities (ADF&G 2002). Current healthy calf production and recruitment, and high parturition and twinning rates indicate good nutritional health and quality winter habitat (Hinkes 2015, Lake 2015, Bertram and Vivion 2002, Caikoski 2012).

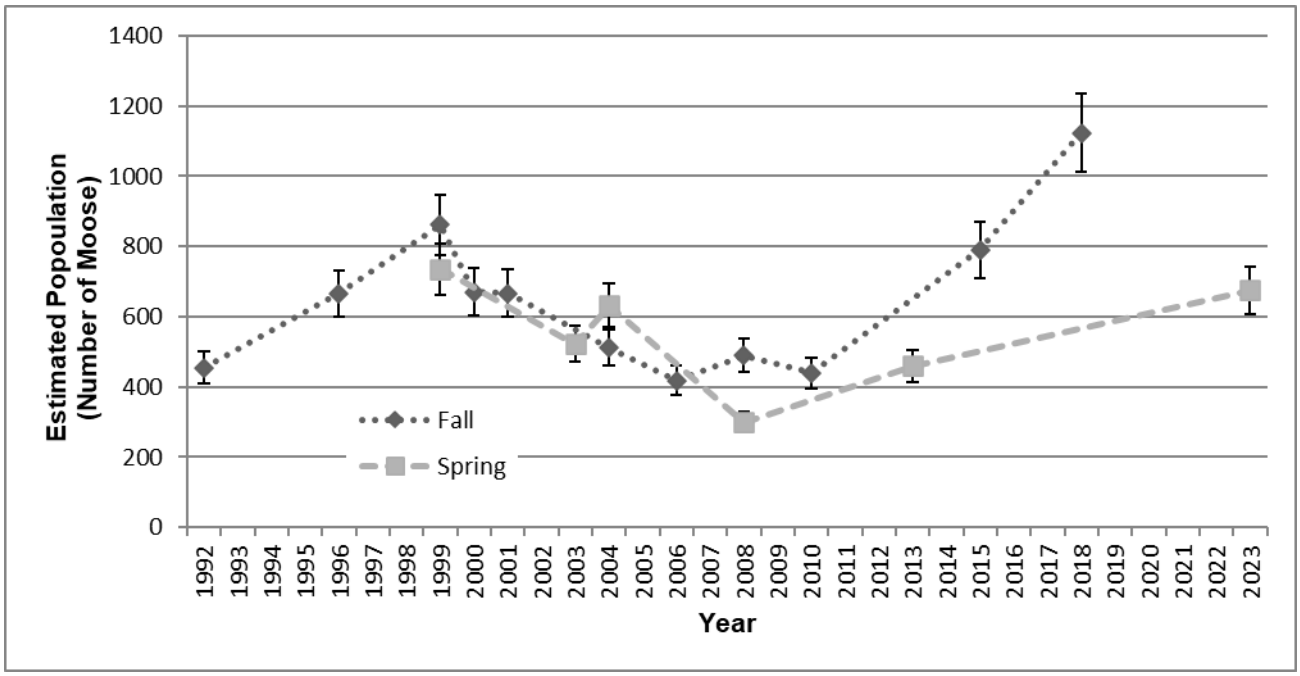


Figure 1. Estimated moose population (Error bars represent 90% confidence interval) in Unit 25D (west) from fall and spring GSPE surveys (Lake et al. 2018, Lake and Guldager 2023).

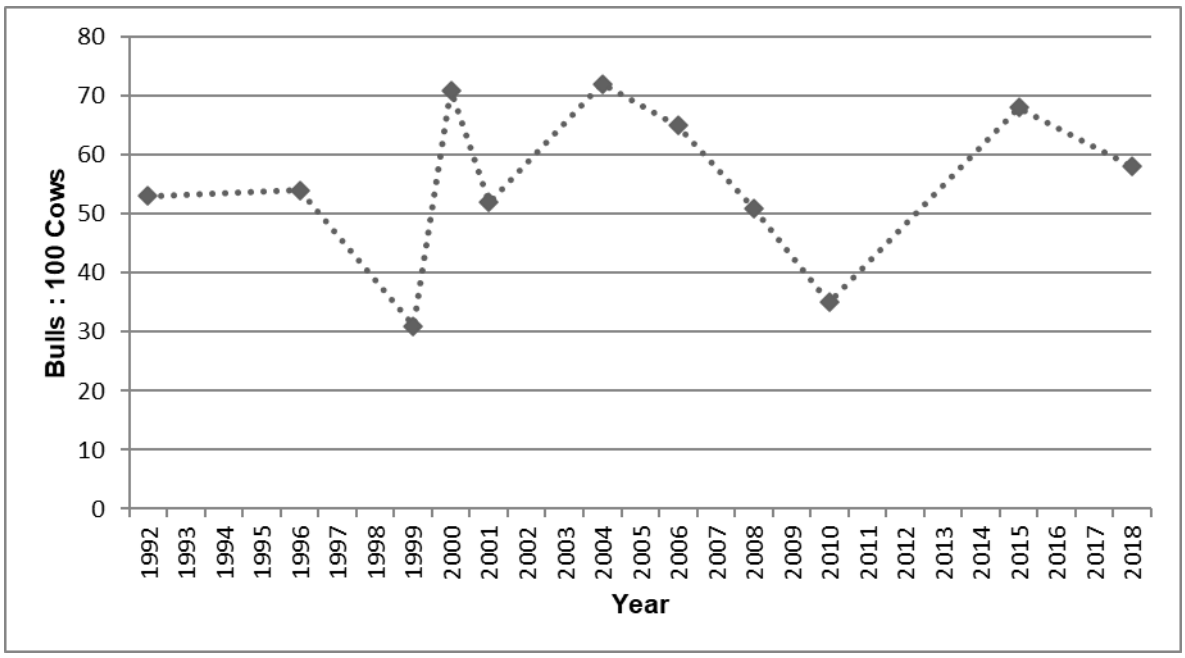


Figure 2. Estimated fall bull:cow ratios for moose in Unit 25D (west). Stratified random and regression analysis were used to determine estimates in 1992 and 1996, respectively. A GeoSpatial Population Estimator (GSPE) was used in all other years (Lake 2013, 2015; Lake et al. 2018).

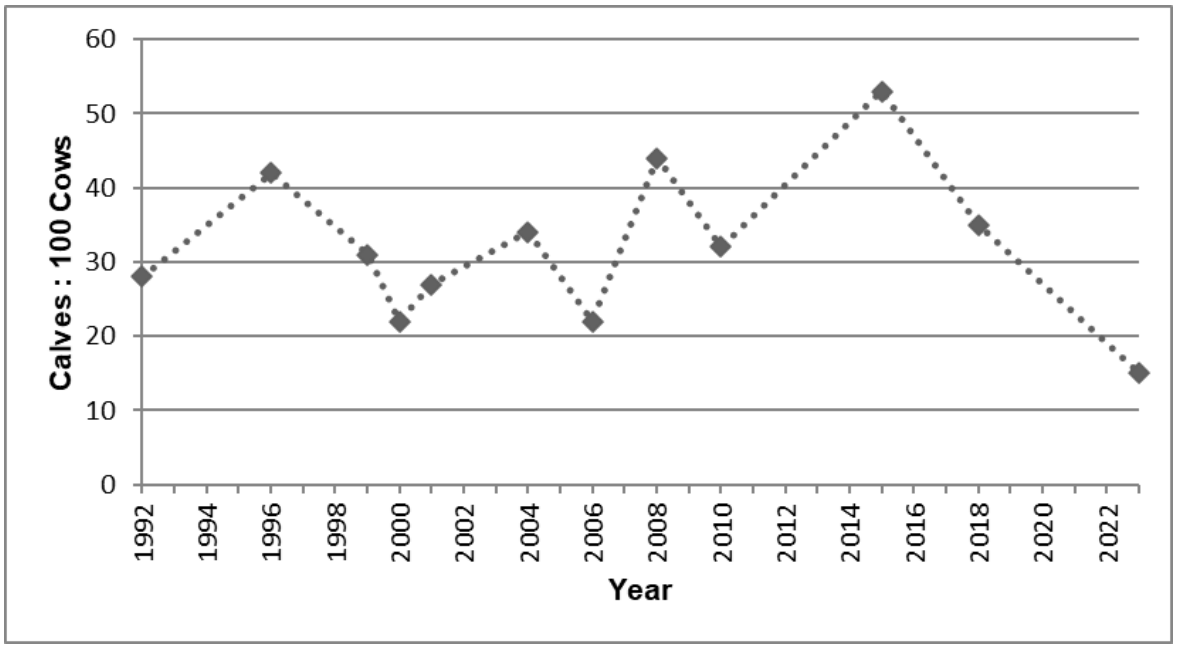


Figure 3. Estimated fall calf:cow ratios for moose in Unit 25D (west). Stratified random and regression analysis were used to determine estimates in 1992 and 1996, respectively. A GeoSpatial Population Estimator (GSPE) was used in all other years (Lake 2013, 2015; Lake et al. 2018; Lake and Guldager 2023).

Cultural Knowledge and Traditional Practices

The Gwich'in and Koyukon Athabascans of the Yukon Flats region have a long and uninterrupted history of harvesting moose. In addition to salmon, moose (all parts, not just meat), is perhaps the most important subsistence resource in the Upper Yukon region. Indigenous and Traditional knowledge of moose and moose hunting is a central feature of Gwich'in and Koyukon worldviews (Nelson 1973, Nelson et al. 1978, Caulfield 1983, Sumida and Alexander 1985, Sumida 1988, 1989, 1990; ADF&G 1992, Stevens and Maracle 2012, Van Lanen et al. 2012: 1-71, 151-160, Trainor et al. 2020a and 2020b).

Moose is a staple food and an aspect of cultural identity among all Yukon Flats communities. The communal harvest and sharing of moose is a central aspect of these subsistence economies (Caulfield 1983, Sumida and Alexander 1985, Sumida 1988, 1989, 1990; ADF&G 1992, Stevens and Maracle 2012, Van Lanen et al. 2012: 1-71, 151-160, Trainor et al. 2020a and 2020b).

As noted in Van Lanen et al., "In terms of effort, use, and social significance, moose is the single most important…resource for Yukon Flats communities…moose hunting is the primary fall harvesting activity and moose provides the primary source of wild meat" (2012: 20). Sharing the moose harvest among households in the community, and beyond, is important and very common. Most moose are harvested in fall. Hunters from Fort Yukon, Circle, Beaver, Birch Creek and Stevens Village generally harvest moose by boat and use the Yukon River as a highway to access numerous tributaries and

sloughs where moose are found (Caulfield 1983, Stevens and Maracle 2012, Van Lanen et al. 2012: 1-71, 151-160, Trainor et al. 2020a and 2020b).

During the 2024 wildlife cycle, tribal officials shared information about traditional Athabascan Tribal Governance regarding hunting areas in the Yukon Flats region. This information was provided in support of the current customary and traditional use determination for moose in Unit 25D west that includes only Beaver, Birch Creek and Stevens Village. Opposition to adding two communities to the customary and traditional use determination for moose in Unit 25D west (WP24-34) was voiced at the fall 2023 Council meeting and during both Tribal Consultations on WP24-34 (see Current Events section). The opposition is/was based on the role of Tribal Governance and Board consideration of which communities have customary and traditional use of moose in Unit 25D west. The State and Federal customary and traditional use determinations for moose in Unit 25D west are consistent with Tribal Governance determinations of specific hunting areas in the Yukon Flats. The sources consulted for this analysis indicate that Yukon Flats villages have their own mutually agreed upon discrete hunting areas. Tribal Governance of hunting areas is a dynamic and complex system.

Multiple sources describe community-specific hunting area boundaries, agreed upon by Yukon Flats leaders that are known by residents. In general, these sources say that residents of specific communities hunt within an area immediately around their home community. These sources also indicate that there are exceptions and nuance to these boundaries often determined by relationships. Examples of exceptions include invitations from a village to harvest resources near a village that is not a person's home village because the resources are unavailable near their home village or if a person moved from their home community to another and visited their home community, with permission, to hunt or fish (Caulfield 1983: 190-192).

Several sources have been consulted to describe the Tribal Governance, stewardship, and customary and traditional uses of moose in Unit 25D west. These include ADF&G technical papers focused on Yukon Flats communities and the moose harvests in Unit 25D west which began in 1983 when the State registration hunt was enacted (Sumida and Alexander 1985, Sumida 1988, 1989, 1990, ADF&G 1992, OSM 2024). Two land planning documents commissioned by Stevens Village Tribal Council (1990, 1991) were shared by the President of the Dinyee Corporation. These documents included specific language related to the Tribal and hunting territory of Stevens Village (see quotations below). Similar information was shared by members of Birch Creek, Stevens Village and Beaver during the Council discussion on October 6, 2023; testimony provided during tribal consultations on November 16, 2023 and January 31, 2024; phone calls from residents of affected communities and letters from Tribal Governments to OSM. This is the first time OSM staff had access of the Stevens Village Land Plans which detail the history and ethics of Yukon Flats Tribal Governance including delineation of hunting areas. Below are examples of the information in the land management plans:

> The local band organization defined both linguistic community and a subsistence use area with well-known boundaries. A band's territory was ordinarily closed to other groups, unless permission was granted for use. In many cases, long-term arrangements existed between adjacent bands that permitted exploitation of a resource in an area

> other than one's own if that resource was lacking in a person's home area (Stevens Village 1991: 3).
>
> Although a number of traditional settlements diminished due to disease, traditional boundaries were maintained (Stevens Village 1991: 4).
>
> For generations, tribal members also invited neighboring tribes, usually a family from another village to spend the year among them. By invitation, the visitors were allowed to share all resources on the traditional lands of Stevens Village. Local historians clearly remember residents of Tanana, Ft. Yukon, Birch Creek and others coming to live among them to trap muskrats, hunt moose etc, until the 1950s. Traditionally the people of Stevens Village shared their land resources, but everyone, meaning the local native people, maintained the same lifestyle (Stevens Village 1991: 36).

Both Stevens Village and the ADF&G Division of Subsistence documented that these traditional boundaries are known to tribal members by place names. Ethnolinguistic analysis of the indigenous place names throughout the Yukon Flats shows the consistency of the community boundaries and the governance that determines them (Caulfield 1983, Stevens Village 1991, 1999). The indigenous place name analyses are the result of collaborative work among many people including Athabascan linguistic scholars; Koyukon and Gwich'in speakers and scholars, including Chief Kilbourne George of Stevens Village; Eliza Jones, Koyukon Athabascan linguist and scholar; Clarence Alexander, former Grand Chief of the Gwich'in of Alaska who co-founded the Council of Athabascan Tribal Governments and co-authored the *Gwich'in Dictionary* with his wife, Virginia E. Alexander; and Dr. James Kari, linguist and Professor Emeritus with the Alaska Native Language Center at the University of Alaska Fairbanks, whose research specialty is the Dene/Athabascan languages of Alaska (Stevens Village 1999 and Caulfield 1983):

> The collated set of [place] names constitute a cognitive map or mental map that is rule-governed and well suited for memorization. The Stevens Village names conform to the general rules of the Northern Athabaskan place naming (see Kari 1994): a few core grammatical patterns (in particular the binomial naming pattern specific + generic); an economical clustering of names around salient features; concrete analyzable names which range between the functional and the metaphysical; and very few of personal names in Athabaskan place names. The Stevens Village cognitive map is a typical names network and territorial expanse for an Alaskan Athabaskan community that has maintained its population and land use activities. (I estimate that an average land use area for a single Athabaskan band was 3,000 to 4000 sq miles.) (Kari in Stevens Village 1999: 85).

Harvest History

Moose is an important subsistence resource for all communities in the Upper Yukon basin (ADF&G 2002, Stevens and Maracle 2012). Sharing of harvested moose among households is common (Stevens and Maracle 2012). Most moose are harvested in September with a small fraction harvested in August

(Stevens and Maracle 2012). Local hunters predominantly access moose hunting areas by boat and hunt within 30 miles of their community (Johnson et al. 2016).

Between regulatory years (RY) 2000 and 2023, total reported moose harvest by State and Federal permits in Unit 25D (west) fluctuated annually, ranging from 4 to 21 moose/year and averaging 12 moose/year (**Figure 4**). During the same time-period, reported moose harvest by Federal permit ranged from 3 to 14 moose/year, and averaged 7 moose/year (**Figure 4**). On average, 60% of the reported moose harvest occurred by Federal permit, indicating that more moose are harvested on Federal public lands in Unit 25D (west) (Caikoski 2012, 2018; ADF&G 2023; OSM 2016, 2020; **Figure 4**). Over the same time-period, annual harvest success rates for FM2505 permit holders who hunted under Federal regulations ranged from 22% to 100% and averaging 51%. Between 2000 and 2013, success rates displayed a declining trend, while success rates have trended upward since 2013. However, between 2000 and 2013, an average of 17 permit holders hunted. Since 2013 the average of permit holders who hunted has declined to an average of 13. In 2020 the success rate was 100%, but only one permit holder reported as hunted (OSM 2024).

Hunting under State regulations occurs by Tier II permit, TM940. Many of these permit-holders reside outside of Unit 25D west, including in Fairbanks and other non-rural communities. In 2023, there were 47 TM940 permit holders, 24 of which actually hunted. Only nine TM940 permit holders were federally qualified subsistence users. In 2022, there were 40 TM940 permit holders, 18 of which actually hunted and five of which were federally qualified subsistence users (ADF&G 2024).

Reporting rates by residents of Unit 25D have historically been low. Unreported harvest of moose, particularly illegal harvest of cows, has remained a chronic issue (Caikoski 2012). The Council of Athabascan Tribal Governments (CATG) has conducted numerous household surveys of Yukon Flats communities since 1993 (Stevens and Maracle 2012). According to these data, residents of Beaver, Birch Creek, and Stevens Village harvested 9-45 moose/year between 1993 and 2010, with an annual average of 22 moose (Figure 5; Stevens and Maracle 2012). These data do not reveal any long-term trends, but rather that harvest fluctuates annually due to various factors, including weather, water levels, moose distribution, fuel prices, and survey methodology and implementation (Stevens and Maracle 2012).

While the moose population and harvest in Unit 25D (west) vary annually, the average population harvest rate between 1993 and 2010 was estimated to be 3% (575 average moose population, Caikoski 2012; 22 moose harvested/year on average, Stevens and Maracle 2012). On average 24 moose were estimated to be harvested/year between 2010 and 2014 (Caikoski 2018). All of these harvest estimates are below the quota of 60 moose.

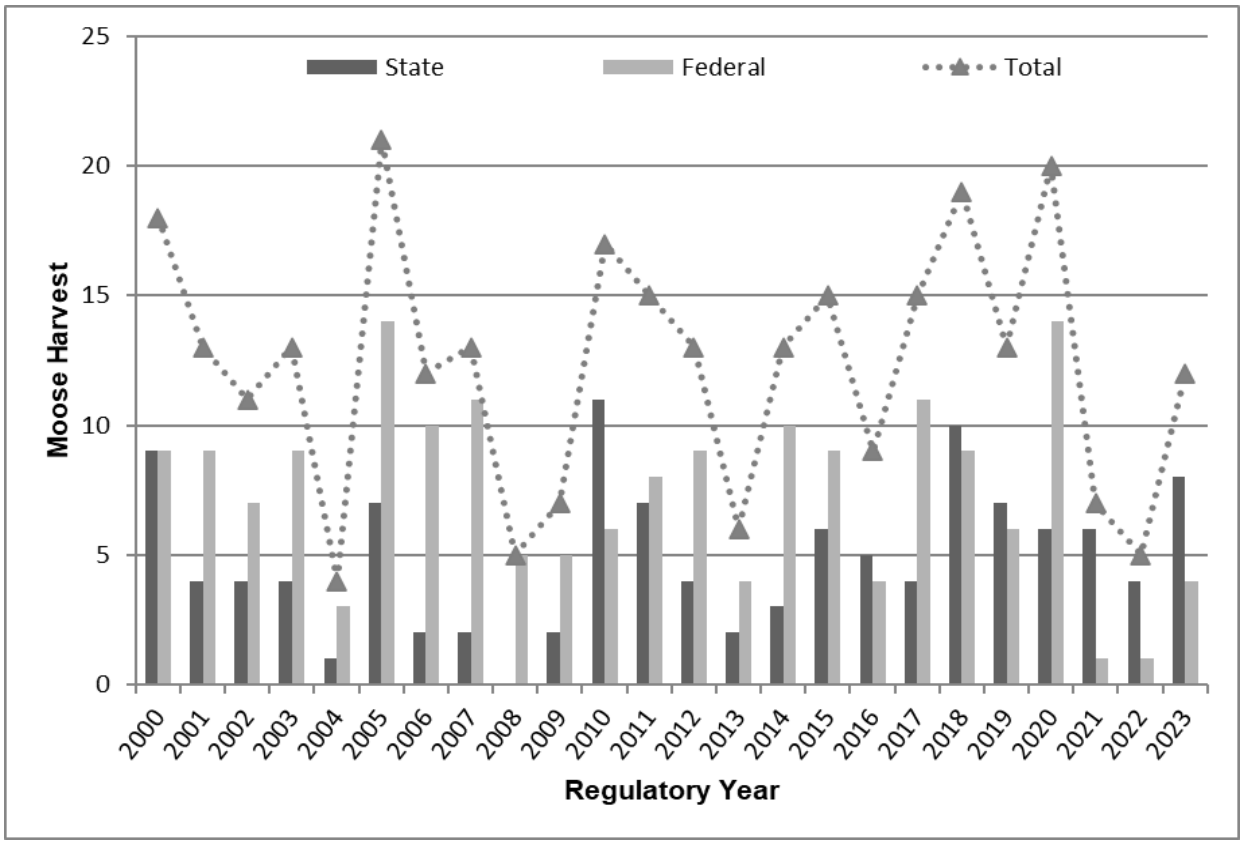


Figure 4. Reported moose harvest by State (TM940) and Federal (FM2505) permit in Unit 25D (west) (Caikoski 2012, 2018; ADF&G 2023; OSM 2016, 2020).

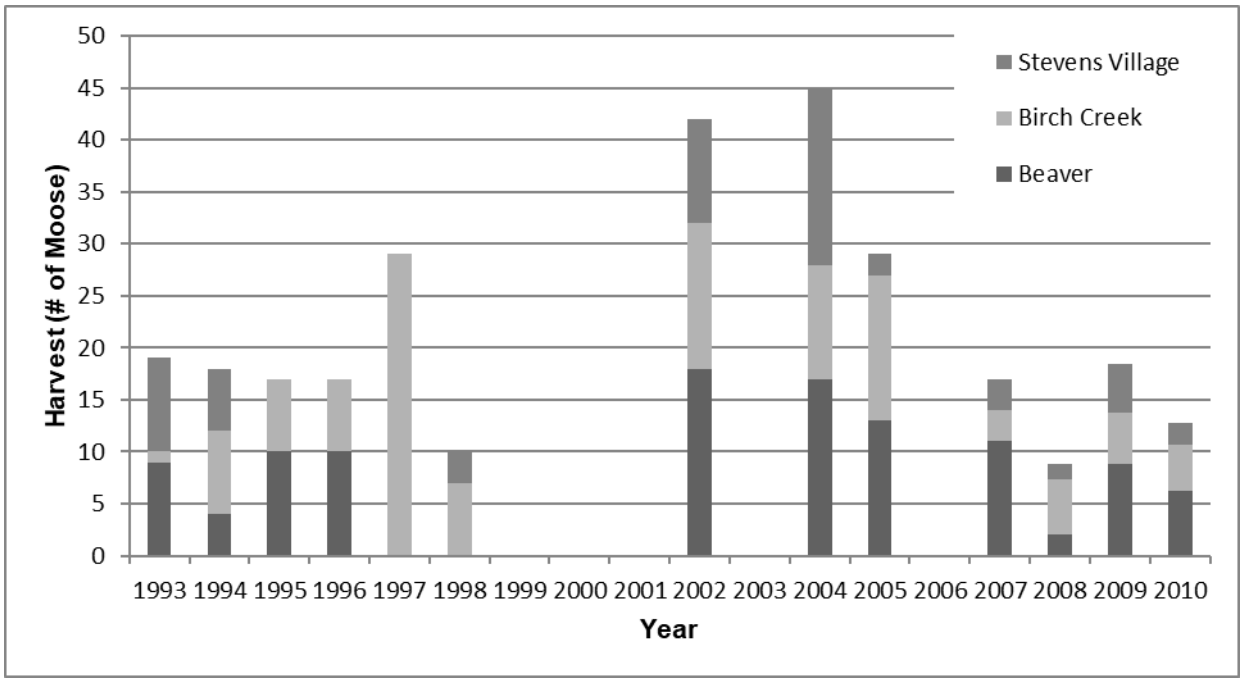


Figure 5. Moose harvest by community as reported from household surveys (Stevens and Maracle 2012).

Effects

If this closure is rescinded, moose hunting could occur on Federal public lands in Unit 25D west under State regulations. This would allow all Tier II permit holders to hunt on Federal lands under State regulations. Many TM940 permit holders are non-federally qualified users who reside outside of Unit 25D west, which would increase competition for federally qualified subsistence users and decrease their opportunity. Moose are an extremely important subsistence resource for federally qualified subsistence users in Unit 25D (west). While the existing harvest quota may protect the moose population from overharvest and reported harvest is low, actual harvest is likely higher due to unreported harvests. Continuation of this closure will allow for continuation of subsistence uses per ANILCA §815 (3). Continuation of the status quo was the Council conclusion after extensive consideration of alternatives throughout the analysis of and tribal consultation on WP24-34 and WP24-25.

OSM PRELIMINARY CONCLUSION

☒ **Retain the Status Quo**
☐ **Rescind the Closure**
☐ **Modify the Closure to** Click or tap here to enter text.
☐ **Defer Decision on the Closure or Take No Action**

Justification

Continuation of this closure will allow for continued subsistence uses of this moose population by the residents of Unit 25D west and Birch Creek. Permit systems that limit the hunt to these residents have been in place since the early 1980s due to low moose density and relatively high use by local residents (OSM 2012 [sic 2013]: 36-43; (McLean 1992:89 Sumida and Alexander 1985; Caulfield 1983). The status of this moose population remains low in 2024. Therefore, the closure is justified due to ongoing conservation concerns and to continue subsistence uses of a limited moose population.

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