

Draft Wildlife Closure Review
WCR26-13/14/15

ISSUE: Wildlife closure review WCR26-13/14/15 is a standard review of Federal subsistence wildlife closures to moose hunting in Unit 22D. WCR26-13 reviews the closure in Unit 22D Kuzitrin to moose hunting, except by residents of Units 22C and 22D. WCR26-14 reviews the closure in Unit 22D SW to moose hunting, except by residents of Units 22C and 22D. WCR26-15 reviews the closure in Unit 22D remainder to moose hunting, except by federally qualified subsistence users (**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 22D– Moose

WCR26-13: Unit 22D, within the Kougarok, Kuzitrin, and Pilgrim River drainages (22D Kuzitrin)

WCR26-14: Unit 22D, west of the Tisuk River drainage and Canyon Creek (22D SW)

WCR26-15: Unit 22D, remainder (22D remainder)

Closure Dates: Year-round for all closures.

Current Federal Regulations

Unit 22D—Moose

Unit 22D, that portion within the Kougarok, Kuzitrin, and Pilgrim River drainages—1 bull by State registration permit. Quotas and any needed closures will be announced by the Anchorage Field Office Manager of the BLM, in consultation with NPS and ADF&G. Sep. 1-14

Federal public lands are closed to the taking of moose except by residents of Units 22C and 22D hunting under these regulations

Unit 22D, that portion west of the Tisuk River drainage and Canyon Creek— 1 bull by State registration permit. Quotas and any needed closures will be announced by the Anchorage Field Office Manager of the BLM, in consultation with NPS and ADF&G. Sep. 1-14

OR

1 bull by Federal registration permit (FM2204). Quotas and any needed closures will be announced by the Anchorage Field Office Manager of the BLM, in consultation with NPS and ADF&G. Dec. 1-31

Federal public lands are closed to the taking of moose except by residents of Units 22C and 22D hunting under these regulations.

Unit 22D, remainder - 1 bull by State registration permit. Aug. 10-Sep. 14.

OR

1 antlered bull by State registration permit. Season may be announced,
Federal public lands are closed to the harvest of moose except by Federally qualified subsistence users Dec. 1-Jan. 31.

Current State Regulations

Unit 22D–Moose

Unit 22D, Kuzitrin River drainage (includes Kougarok and Pilgrim rivers), and Southwest area located west of Tisuk River drainage, west of the west bank of Canyon Creek beginning at McAdam's Creek continuing to Tuksuk Channel

Residents: One bull by permit available in person in Brevig Mission, Golovin, Nome, Teller, and White Mountain from July 25-Aug. 25. Harvest quota to be announced. Season will be closed by emergency order when quota is reached.

RM840 Sep. 1-14

OR

McAdam's Creek continuing to Tuksuk Channel

Residents: One antlered bull by permit available online at <http://hunt.alaska.gov> or in person in Brevig Mission, Golovin, Nome, Teller, and White Mountain (a season may be announced Jan. 1-Jan. 31).

RM849 May be announced

Nonresidents

No open season

Unit 22D, remainder

Residents: One bull by permit available in person in Brevig Mission, Golovin, Nome, Teller, and White Mountain from July 25- Aug 25. Harvest quota to be announced. Season will be closed by emergency order when quota is reached.

RM840 Aug. 10-Sep. 14.

OR

Residents: One antlered bull by permit available online at <http://hunt.alaska.gov> or in person in Brevig Mission, Golovin, Nome, Teller, and White Mountain (a season may be announced Dec 1-Jan 31)

RM849 May be announced

Nonresidents

No open season

Regulatory Year Initiated:

WCR26-13/14: 2002

WCR26-15: 2002; 2007–2019, closure rescinded; 2020, closure reestablished.

Closure last reviewed:

WCR26-13: 2022 – WCR22-13

WCR26-14: 2022 – WCR22-14

WCR26-15: 2024 – WCR24-15

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...

Section 816(b) of ANILCA states:

Except as specifically provided otherwise by this section, nothing in this title is intended to enlarge or diminish the authority of the Secretary to designate areas where, and established periods when, no taking of fish and wildlife shall be permitted on the public lands for reasons of public safety, administration, or to assure the continued viability of a particular fish or wildlife population.

Federal public lands were closed by the Federal Subsistence Board (Board) through the adoption of WP02-34. This was due to conservation concerns for the declining moose population and to provide federally qualified subsistence users an opportunity to harvest the limited number of moose on Federal public lands in Units 22B, west of the Darby Mountains; 22D Kuzitritin; 22D SW; and 22E. The Board adopted Proposal WP02-34 with the Office of Subsistence Management (OSM) modification, which shortened the moose seasons in 22B West, 22D Kuzitritin, 22D SW, and 22E and changed the harvest limit to bulls only in Units 22B West, 22D SW, and 22E. The Board adopted these changes to protect the cows in the area, as calf survivability was believed to be depressing the population. This proposal also restricted the harvest in all units to federally qualified subsistence users. The Board felt closing Federal public lands to all but federally qualified subsistence users would improve subsistence harvest opportunities in an area where the State had recommended restricting moose harvest.

Proposal WP02-35, a §804 analysis adopted by the Board, restricted harvest even further to residents living within some of these units. This proposal restricted participation in the Unit 22B West winter hunt to residents of Unit 22B West. The fall Unit 22D Kuzitritin hunt was restricted to residents of Unit 22D. Both the fall and winter hunts in Unit 22D SW were restricted to residents of Unit 22D. The

Board felt restricting moose harvest on Federal public lands to a subset of federally qualified subsistence users would improve subsistence opportunities for those who depend upon moose the most.

By 2007 the moose population had recovered enough for the closure to be rescinded in Unit 22D remainder via adoption of Proposal WP07-38. However, in 2020 the moose population had once again declined and estimated annual harvest exceeded sustainable levels. The Board adopted Proposal WP20-40 to close the Federal public lands in Unit 22D remainder again to the harvest of moose except by federally qualified subsistence users to provide additional protection to ensure the long-term viability of this moose population (FSB 2020).

Council Recommendation for Original Closure

WCR26-13/14/15: The Seward Peninsula Regional Advisory Council (Council) unanimously supported Proposal WP02-34, as modified by OSM. The Council believed this proposal would provide sufficient opportunity for federally qualified subsistence users while taking the most conservative approach to conserving the moose population. The Council also supported Proposal WP02-35 as modified by OSM. They felt restricting harvest to the most dependent users of the resource was a conservative measure that would still provide a subsistence priority.

WCR26-15: The Council voted unanimously to support WP20-40 in 2020, re-establishing the Federal lands closure to non-federally qualified users in Unit 22D remainder. The Council had submitted this proposal to protect the moose population in Unit 22D remainder by eliminating non-local harvest while still allowing harvest by federally qualified subsistence users in the region. The Council noted that all other subunits in Unit 22D were closed to non-federally qualified users at the time.

State Recommendation for Original Closure

WCR26-13/14/15: The State supported a modification of WP02-34 to revise the moose season to Aug. 20 – Sep. 14, set the harvest limit to 1 antlered bull by State registration permit and restrict the harvest to only federally qualified subsistence users. It also supported the conclusions of the Section 804 analysis to give a priority to rural residents of Unit 22D and 22C to hunt moose in the Kougarak, Kuzitrin, and Pilgrim River drainages and in Unit 22D SW.

WCR26-15: The State opposed Proposal WP20-40 as they believed action adopted by the Board of Game (BOG) (Proposals 33 and 35) would be sufficient to protect the moose population in Unit 22D remainder. They felt less drastic steps (like changing the harvest limit from one moose to one bull) would be appropriate to protect the moose population and did not think a total closure was necessary. Harvest records indicated that federally qualified subsistence users harvested most moose from this hunt area and the State didn't believe the closure was necessary to provide for subsistence uses.

Extent of Federal Public Lands

Unit 22D is comprised of approximately 23% Federal public lands and consists of 12% Bureau of Land Management (BLM) lands and 11% National Park Service (NPS) managed lands.

Unit 22D Kuzitrin is comprised of approximately 47% Federal public lands and consists of 28% NPS and 19% BLM managed lands. Unit 22D SW is comprised of approximately 11% Federal public lands, all of which are BLM managed lands. Unit 22D remainder is comprised of approximately 8% Federal public lands, all of which are BLM managed lands (**Map 1**).

Customary and Traditional Use Determination

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

Regulatory History

In 1998, the Board adopted Proposal WP98-87, which changed the harvest limit from one moose to one antlered bull in Unit 22D Kuzitrin, due to a declining local moose population and heavy hunting pressure. This action was taken to protect the cows in the population and to stimulate herd growth, as this population of moose was below management objectives.

In 2001, the Board approved WSA01-09, closing Federal public lands in Units 22B, 22D and 22E to moose hunting except by federally qualified subsistence users. This action also created the new Unit 22D SW hunt area and modified the season dates and harvest limits for the fall and winter seasons (OSM 2001a and 2001b). This Special Action was prompted, in part, by an Alaska Department of Fish and Game (ADF&G) Emergency Order issued on July 3, 2001, which shortened the upcoming resident and nonresident moose season in the most heavily hunted parts of Units 22B and 22D (Persons 2002).

As a follow-up to these actions, the BOG addressed concerns about declining moose populations in parts of Unit 22 by adopting several proposals at their November 2001 meeting. Proposals 19 and 21 shortened seasons in portions of Units 22B and 22D, respectively, added registration permit requirements, and created additional hunt areas. Harvest limits were modified throughout Unit 22 and nonresident seasons closed through adoption of Proposals 16, 17, 18, and 20 (ADF&G 2002).

In 2002, WP02-34 requested to close Federal public lands to the harvest of moose by non-federally qualified users in units 22B West; 22D Kuzitrin and SW; and 22E for the conservation of a declining moose population. The proposal also asked to shorten the season length and limit the number of moose harvested from each unit. The Board adopted WP02-35 with OSM modification to require either a Federal or State permit and to limit harvest to bulls only other than the fall 22D Kuzitrin hunt and the winter 22D SW hunt. Adoption of this proposal addressed conservation concerns for the moose population while still providing for the continuation of subsistence uses of moose on Federal public lands in Unit 22. at the same time the Board adopted proposal WP02-35, a §804 subsistence user prioritization analysis, which restricted harvest even further to residents living within some of these units. This proposal restricted participation in the Unit 22B West winter hunt to residents of Unit 22B

West. The fall Unit 22D Kuzitrin hunt was restricted to residents of Unit 22D. Both the fall and winter hunts in Unit 22D SW were restricted to residents of Unit 22D. The Board felt closing Federal public lands to all except federally qualified subsistence users, or a subset of them, would improve subsistence harvest opportunities for moose.

In 2005, ADF&G issued an emergency order changing the State fall moose hunt in Unit 22D to Sep. 1–14. Due to this action, the Board approved Special Action Request WSA05-01, which shortened the Federal moose hunting season for all of Unit 22D from Aug. 20–Sep. 30 to Sep. 1–14. Both actions were taken in response to conservation concerns over harvests exceeding the joint Federal/State harvest quota for the Kuzitrin River drainage in 2003 and 2004 (OSM 2005). Overharvest occurred in both years, despite Federal and State efforts to reduce the harvest by closing the seasons early.

In 2006, the Board adopted Proposal WP06-40 with modification to reduce the moose season from Aug. 20 – Sep. 30 to Sep. 1 – 14. The action on Proposal WP06-40 was consistent with the temporary action taken on WSA05-01 (OSM 2006). WP06-40 also removed the quota numbers from the regulations and delegated authority to announce any needed closures and quotas to the BLM Field Office Manager, in consultation with NPS and ADF&G (OSM 2006).

Upon consideration of Wildlife Closure Review WCR06-15 in 2006, the Council submitted Proposal WP07-38 to eliminate the moose hunting closure in Unit 22D remainder to all non-federally qualified users. In 2007, the Board adopted WP07-38, eliminating the closure to non-federally qualified users in Unit 22D remainder, and aligning Federal and State hunting season dates. Harvest limits were one bull during the early fall, late fall, and January seasons, but were one moose during a December season (OSM 2007).

In 2011 and 2014, the Council was presented with a review of the closures (WCR10-13; WCR10-14 and WCR14-13; WCR14-14, respectively) and recommended that these closures be maintained (SPSRAC 2011, OSM 2010).

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

At its March 2016 meeting, the Council submitted Proposal 28 to the BOG, requesting elimination of the nonresident moose season in Units 22E and 22D remainder until the relationship between moose abundance, distribution, and population trajectory within the two subunits was better understood. During discussion of the proposal, ADF&G was asked for an overview of the moose population in the area. ADF&G brought concerns about the decreasing population numbers in Unit 22D to the attention of the Council, mentioning that moose in Unit 22D were last counted in 2014, and that declines in the population were observed in both major survey areas. Additionally, ADF&G noted that some Unit 22D moose may have migrated to Unit 22E. Even with the possible migration taken into consideration, a

significant decline in Unit 22D moose was observed during the 2014 survey (SPRAC 2016). The BOG adopted an amended Proposal 28 to eliminate the nonresident season for Unit 22D remainder only prior to the 2017/18 regulatory year.

In 2016, the Board approved Special Action Request WSA16-07, which closed the Unit 22D remainder December cow season. The Council supported WSA16-07, stating that hunters had expressed concern about the moose population in the area. ADF&G noted that the average annual reported harvest of cow moose in Unit 22D over the last ten years averaged one cow per year, but that an antlerless harvest rate as low as 3% could have a substantial negative impact to the population.

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

Similarly, in 2018, the same request was submitted as Special Action Request WSA18-03. The Board again approved this request with modification to change the harvest limit from one moose to one antlered bull in Unit 22D remainder for the remainder of the current wildlife regulatory cycle (through June 30, 2020). This ensured that antlerless moose in Unit 22D remainder were protected until a proposal could be submitted to change Federal subsistence regulations.

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

In April 2020, the Board adopted WP20-40, which reestablished the closure of Federal public lands in Unit 22D remainder to moose hunting except by federally qualified subsistence users. Unit 22D remainder was the only hunt area in Unit 22D that was still open to all users. This closure protected the moose population in Unit 22D remainder (OSM 2020a). The Board also adopted WP20-38 as modified by OSM. Proposal WP20-38 requested that the December and January moose seasons in Unit 22D remainder be combined into a may be announced season, that the Oct. 1–Nov. 30 season be eliminated, and that the harvest limit be modified to one bull by State registration permit for both remaining seasons. The OSM modification was to delegate authority to the Federal manager to announce harvest quotas, close the fall season and to open a may be announced season between December 1 and January 31 via a delegation of authority letter only and to modify the harvest limit for the may be announced winter season to be one antlered bull (OSM 2020b).

In 2020, the BOG adopted Proposal 33, which changed several aspects of the Unit 22D remainder hunt: it eliminated the Oct. 1–Nov. 30 portion of the moose season; changed the winter hunt to a may be announced season; and established use of the registration permits RM840 and RM849 for Unit 22D remainder, both of which have strict reporting requirements and harvest quotas. Adoption of Proposal 35 changed the availability of the RM840 permit to make it only available in person from vendors on the Seward Peninsula. These two actions together limited the number of non-local hunters that would be able to obtain a registration permit and would allow ADF&G to be able to close the Unit 22D remainder hunt area when a quota was reached (ADF&G 2020).

In 2022, the Board reviewed WCR22-13 and WCR22-14, voting to maintain status quo as the moose population in Unit 22D was below state management objectives. In addition, low bull:cow ratios showed a lack of surplus bulls available for harvest and low calf:cow ratios indicated a declining population. These low metrics, along with state hunting quotas often being exceeded led the Board to maintain status quo, which was consistent with the Council recommendation.

In 2024, the Board reviewed WCR24-15, voting to maintain status quo to continue to reduce competition. While the BOG took action to conserve the moose population, restrict harvest, and limit hunter numbers, the small quota of available moose is rapidly harvested. The Board determined that keeping Federal lands closed to non-federally qualified users would allow federally qualified subsistence users to hunt with reduced competition.

Current Events

In 2024 ADF&G closed the RM840 hunts in Units 22D Kuzitrin and SW by Emergency Order (EO) R5-5-24 (ADF&G 2024a). These seasons were only open for 3 days total when the harvest quota of 27 bulls was reached. Unit 22D remainder was closed by EO R5-3-24 after being open for 20 days when the quota of 17 bulls was harvested (ADF&G 2024c).

Biological Background

Habitat

Habitat data for Unit 22 is sparse. Winter browse was seen as a limiting factor when moose density/numbers were at their highest during the mid-1980s. Because of this, moose populations had been managed based on what winter browse could easily support throughout Unit 22D. Browse is no longer viewed as a limiting factor to moose in this unit and brown bear predation on calves is now seen as the most significant factor influencing moose numbers (Gorn and Dunker 2014). Two browse surveys have been conducted in Unit 22D in recent years, each indicating low amounts of browse removal. The first survey in 2017 showed 16.2% removal and the second in 2020 showed 11% removal of browse (Germain 2020).

Population Management

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

State management goals for moose in Unit 22 are to protect, maintain, and enhance the moose population and its habitat. The goal of ADF&G is to increase or stabilize the moose population to achieve recovery in Units 22A, 22B, and 22D (Germain 2023). Specific population objectives include:

- Unit 22: 5,000 – 7,000 moose
- Unit 22D: 2,000–2,500 moose
- Unit 22E: 600–800 moose
- Units 22A, B, D and E: post-hunt sex ratio of 30 bulls:100 cows
- Harvest objective: 300–680 moose

In 2024, ADF&G estimated the total Unit 22 moose abundance as 6,700 moose which is within State management objectives (ADF&G 2024a). While ADF&G considers the status of the Unit 22 moose population to be stable to increasing unit-wide, moose abundance in Units 22C and 22D does not appear to be increasing (ADF&G 2024b). ADF&G considered the status of the Unit 22D moose population to be stable/declining in 2020 (ADF&G 2020) and to be stable from 2020–2023 (ADF&G 2023).

The moose population in Unit 22D has appeared to be trending downward since 2002 and has remained below State management objectives. From 2001–2023, the Kuzitrin survey area (which includes both Unit 22D Kuzitrin and SW hunt areas under Federal regulations) averaged 835 moose, and the remainder survey area averaged 602 moose. In 2021, the population in the Kuzitrin and remainder survey areas was estimated to be 670 and 562, respectively for a subunit-wide estimate of 1,232 moose, which is well below the Unit 22D management goal of a minimum 2,000 moose. The following estimate in 2023, which used the new analysis method of combining Unit 22D and 22E moose populations was only 1,922 moose (**Figure 1**), which is still just below the Unit 22D population objective and well below the combined Unit 22D and 22E minimum population objective of 2,600 moose.

The Unit 22D bull:100 cow ratio has hovered around the population objective, although it has spent more time below the objective of 30 bulls: 100 cows in both survey areas since 2001 (**Figure 2**). From 2001-2022, the bull:cow ratio in the Unit 22D Kuzitrin area has ranged from 13–33 bulls:100 cows,

averaging 25 bulls:100 cows. Over the same time period, the bull:cow ratio in the Unit 22D remainder survey area has ranged from 16–38 bulls:100 cows, averaging 27 bulls:100 cows. (Henslee 2024, pers. comm.).

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). Between 2001 and 2022, calf:cow ratios in the Kuzitrin survey area have ranged from 8–33 calves:100 cows, averaging 15 calves:100 cows, which is indicative of a declining population (Stout 2012). Over the same time period, calf:cow ratios in the Unit 22D remainder survey area ranged from 6–36 calves:100 cows, averaging 24 calves:100 cows, which is indicative of a stable population (**Figure 3**). However, the overall Unit 22D population has trended downward, even though the recruitment rate increased from 12% in 2020 to 16% in 2023 (ADF&G 2023).

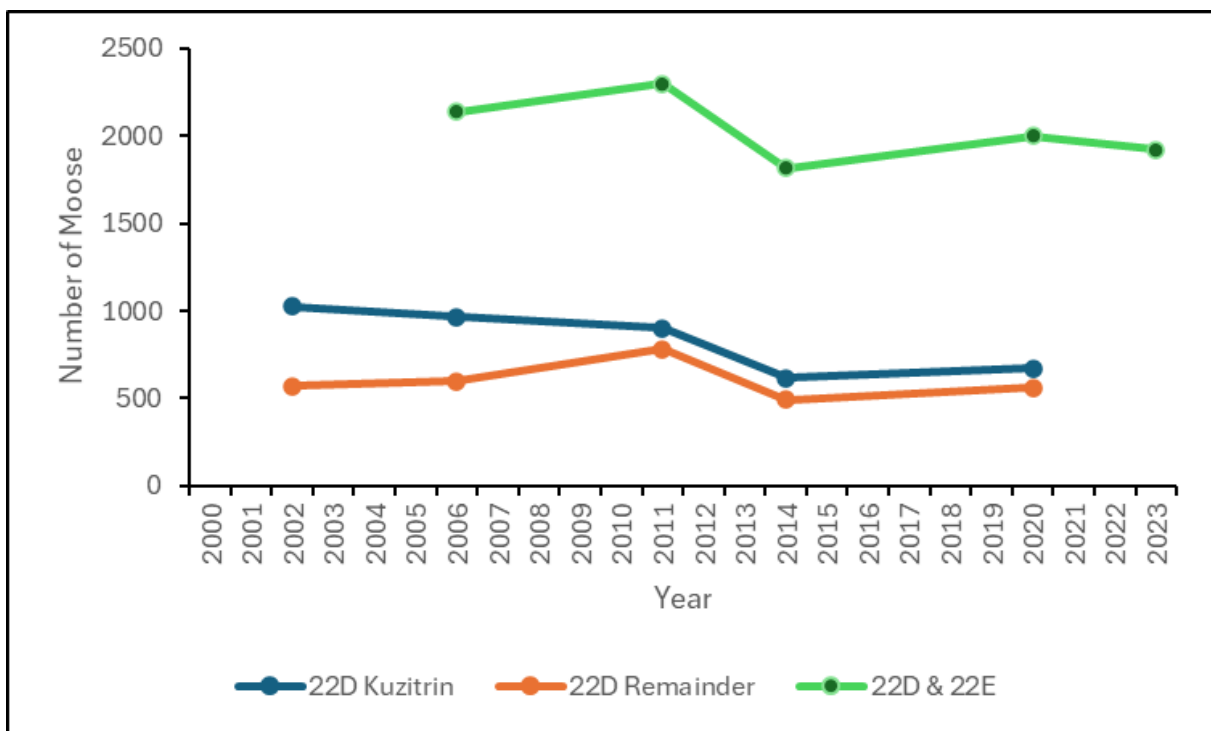


Figure 1. Population estimates for Unit 22D moose and new methodology of combined survey areas of Unit 22D and 22E (Henslee 2024, pers. comm.).

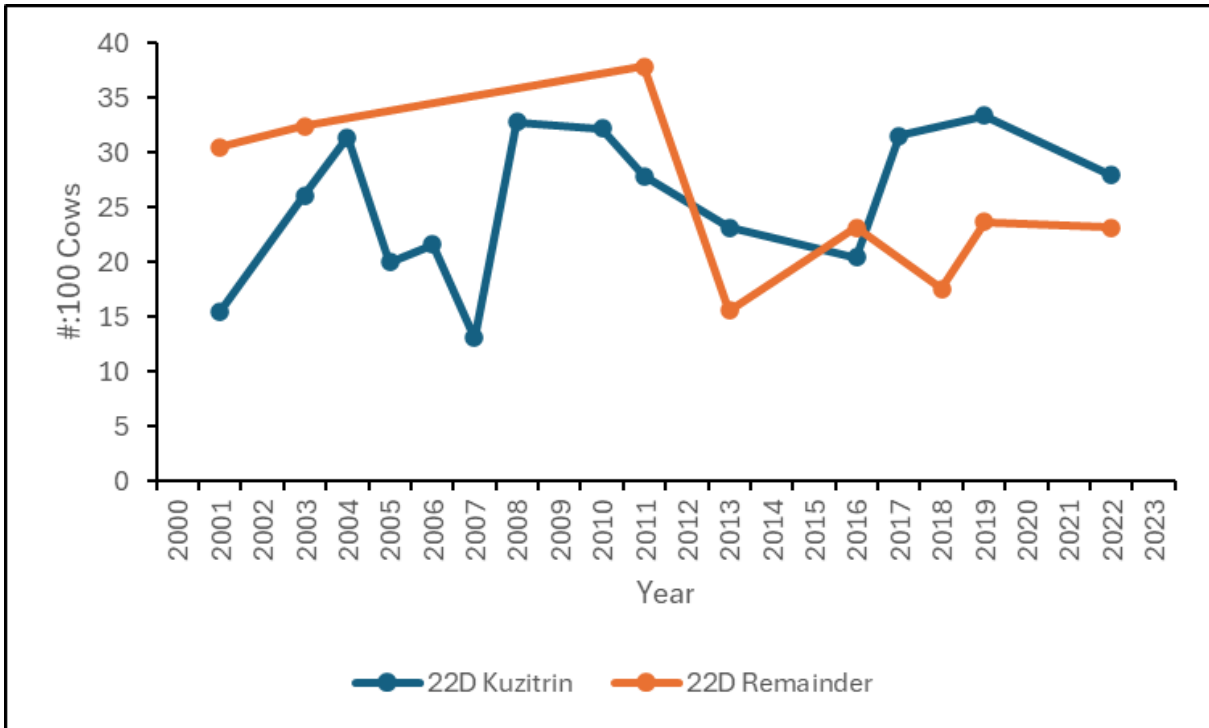


Figure 2. Bull:100 cow ratio for Unit 22D Kuzitrin and 22D Remainder moose survey areas (Henslee 2024, pers. comm.).

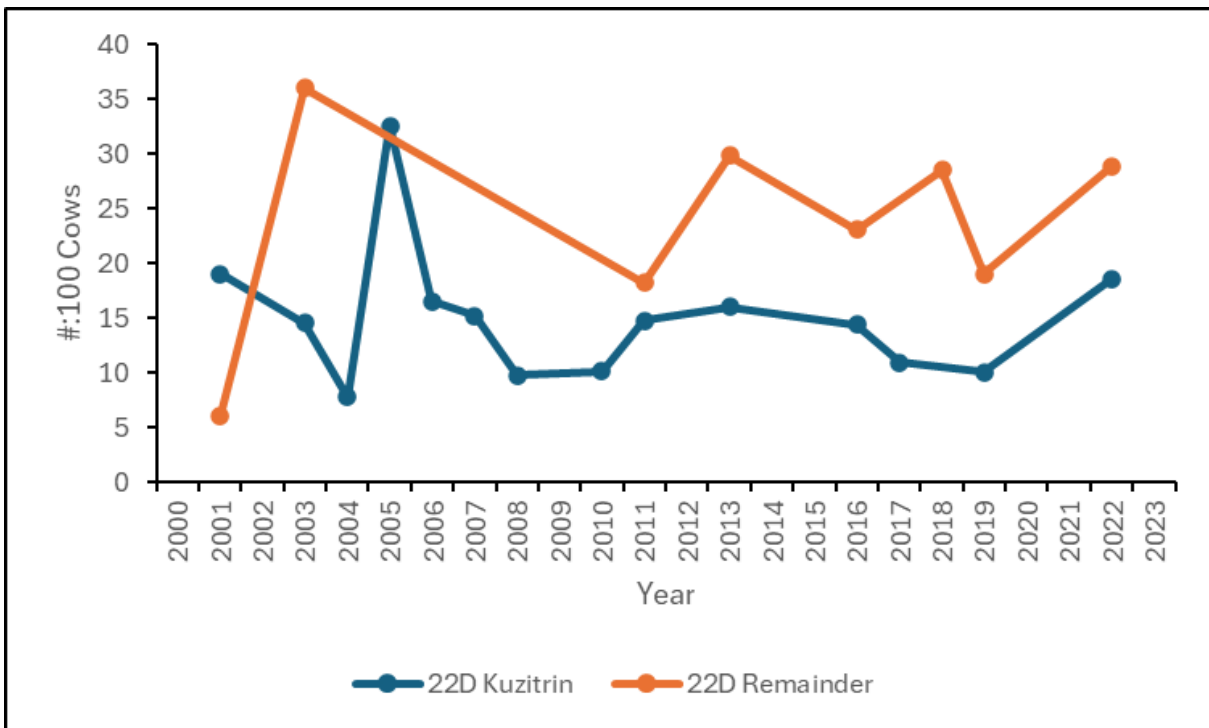


Figure 3. Calf:100 cow ratio for Unit 22D Kuzitrin and 22D Remainder moose survey areas (Henslee 2024, pers. comm.).

Cultural Knowledge and Traditional Practices

The Iñupiaq, Siberian Yupik, and Central Yup'ik people of the Seward Peninsula have a deeply rooted practice of subsistence hunting, fishing, and gathering of wild resources (Raymond-Yakobian and Zdor 2020). Until European contact in the early 19th century, many of these groups were semi-nomadic, moving with the seasons based on the availability of wild resources. During the winter months, people often lived in permanent villages along the coast where they harvested seals, belugas, other marine mammals, fish, and small land mammals. During warmer months, they established family fish camps near rivers and lakes to harvest fish and plant resources (Ray 1984).

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

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

This analysis considers closures in three portions of Unit 22D: Unit 22D Kuzitrin, Unit 22D SW, and Unit 22D remainder. In Unit 22D Kuzitrin and Unit 22D SW, only residents of Units 22C and 22D are currently eligible to harvest moose. Nome is the main population center in Unit 22C, and Brevig Mission, and Teller are the two populated communities located in Unit 22D. In Unit 22D remainder, only federally qualified subsistence users—that is, residents of Unit 22—may currently harvest moose under Federal regulations. However, Brevig Mission, Teller, and Nome are the primary communities with a history of hunting moose in this area (Magdanz and Olanna 1986; Braem 2012; Mikow et al. 2018, 2020).

Nome is the regional hub for the communities of the Seward Peninsula and Norton Sound. In 2023, Nome had an estimated population of 3,506 (ADLWD 2024). Teller is approximately 60 miles northwest of Nome, and has road access to Nome in the summer months only (Ahmasuk 2007). Many of Teller's residents trace their origins to the previously populated village of Mary's Igloo (DCRA 2024). In 2023, the estimated population of Teller was 225 (ADLWD 2023). Brevig Mission is located approximately 70 miles northwest of Nome, and is not accessible by road (Ahmasuk 2007). In 2023, the estimated population of Brevig Mission was 428 (ADLWD 2023).

In a subsistence survey conducted for the 2015—2016 study year by ADF&G, Division of Subsistence, participating households from Brevig Mission were documented harvesting moose within Unit 22D remainder, with the greatest number of harvests occurring in the central portion of Unit 22D remainder (Mikow et al. 2018). Residents of Brevig Mission who participated in the survey did not report harvesting moose in any other hunt areas that year (Mikow et al. 2018). Information about the location of Brevig Mission’s moose harvest areas in earlier subsistence studies is not available (Conger and Magdanz 1990, Mikow et al. 2014).

In 2015—2016, ADF&G documented participating households from Teller hunting for moose in Unit 22D SW and Unit 22D remainder, with the greatest number of harvests occurring in Unit 22D SW (Mikow et al. 2018). A single moose harvest was documented in Unit 22C, but no other hunt areas were noted for participants from Teller in this study year (Mikow et al. 2018). An earlier subsistence survey did not include information about areas used by the community to hunt moose (Mikow et al. 2014).

While there is no recent information from ADF&G subsistence surveys about Nome’s subsistence patterns, a study conducted in the 1980s documented moose use areas by participants from Nome, for as long as they had lived in the community (Magdanz and Olanna 1986). The results of this study showed that Nome residents’ documented long-term use area for moose extended into all portions of Unit 22D (Magdanz and Olanna 1986).

Brevig Mission and Teller’s moose harvest and use levels have been documented in multiple surveys conducted by ADF&G, Division of Subsistence; three measures of moose harvest and use over study years between 1989 and 2016 are given in **Table 1**. On average, residents of Brevig Mission harvested approximately 27 pounds of moose per person per survey year, and an average of 62% of surveyed households in the community reported using moose (ADF&G 2022, **Table 1**). Teller residents harvested an average of approximately 17 pounds of moose per person per survey year, and an average of 58% of surveyed households used moose (ADF&G 2022, **Table 1**). Subsistence survey-based harvest estimates for Nome’s use of moose are not available for any year (ADF&G 2024f).

From 2015 to 2016, the most recent study period for which big game subsistence data are available for Brevig Mission and Teller, 85% of surveyed households in Brevig Mission and 55% of surveyed households in Teller used moose (ADF&G 2022, Mikow et al. 2018, **Table 1**). During this time, Brevig Mission households harvested an estimated 33 pounds of moose in edible weight per person (ADF&G 2022, Mikow et al. 2018, **Table 1**). During the same study period, Teller households harvested approximately 32 pounds of moose in edible weight per person (ADF&G 2022, Mikow et al. 2018, **Table 1**).

For Teller, a higher percentage of surveyed households used moose than caribou in 2015—2016, but that situation was reversed for Brevig Mission. The fall moose hunting season was most important for both communities. In Brevig mission, 85% of moose were taken in the fall, while in Teller all moose were harvested in fall (Mikow et al. 2018).

In meetings of the Seward Peninsula Council, a member from Brevig Mission described how road connectivity has resulted in Unit 22D becoming an area of intensive subsistence and recreational use (SPRAC 2019b). Additionally, he shared his observations regarding high wolf activity and predation on moose in the subunit, particularly in and around the Bendeleben Mountains (SPRAC 2019b). Past comments by members of the Council indicate that closures within Unit 22D to all but those most directly dependent on moose in the area are desirable to protect diminished moose populations, provide subsistence hunting opportunity, and to respect local hunting patterns (SPRAC 2019b, 2021, 2022).

Table 1. Three measures of moose harvest and use by residents of Brevig Mission and Teller between 1989 and 2016 (ADF&G 2022, Mikow et al. 2014*).

Community	Year	Estimated Number of Moose Harvested	Estimated Pounds of Moose Harvested per Person	Percentage of Surveyed Households Using Moose
Brevig Mission	1989	9	25.3	87%
	2000	24	42.5	86%
	2005	8	12.8	10%
	2011-2012*	18	23.7	43%
	2015-2016	21	33.0	85%
	Average	16	27.2	62%
Teller	2000	7	14.4	68%
	2005	5	10.8	78%
	2011-2012	4	8.7	31%
	2015-2016	15	31.6	55%
	Average	8	16.6	58%

Harvest History

Moose harvest in Unit 22D occurs by State registration permit under State and Federal regulations. All nonresident seasons in Unit 22D are closed. While one Federal moose permit exists for Unit 22D (FM2204), this is only for the winter hunt in Unit 22D SW and no harvest has ever been reported using this permit. Therefore, this section will focus on State reported harvest. State registration permit RM840 is used for State fall hunts in Units 22B, 22C, and 22D and for Federal hunts in Unit 22D, although each hunt area is managed under separate quotas. The RM849 permit is used for may be announced winter seasons under State regulations in Units 22C and 22D and for the may be announced winter season under Federal regulations in Unit 22D remainder.

Between 2019 and 2023, reported harvest averaged 207 moose/year unit-wide, which is below management objectives. However, total harvest based on reported harvest and subsistence household surveys is estimated within management objectives of 300-680 moose/year (ADF&G 2024a). But all hunts in Unit 22D are managed by quota and in 2023 and 2024, closed within 9.5 days of opening on average, with two hunts closing in 2 days (ADF&G 2024a, 2024b 2024c, 2023b, 2023c, 2023d). In

2024, the quota in Unit 22D Kuzitrin/22D SW was 27 bulls and for Unit 22D remainder was 17 bulls, both of which were met and seasons closed early (ADF&G 2024e).

No non-resident harvest has occurred in Unit 22D Kuzitrin/22D SW (these hunt areas are combined under State regulations) or in Unit 22D remainder since the State non-resident season closed in 2002 and 2016, respectively. All harvest under State regulations has occurred on non-Federal lands since 2002 due to the Federal lands closure. Except there may have been some State harvest in Unit 22D remainder from 2007 to 2020 when the Federal land closure was rescinded.

In Unit 22D Kuzitrin, reported moose harvest by all users averaged 33 moose/year between 2000 and 2023 (**Figure 4**). Residents of Units 22C and 22D harvested an average 28 moose/ year or 85% of total harvest over the same time frame. While the percentage of harvest by local residents has remained constant, between 71% and 94%, the amount harvested by local residents has declined steadily as moose populations and quotas have been reduced since 2002. Over the last five years, 20019–2023, local resident harvest averaged 22 moose, which is down from the previous five-year average of 30 moose (Henslee 2024, pers. comm.).

In Unit 22D remainder, the reported moose harvest by all users averaged 19 moose/year between 2000 and 2023 (**Figure 5**). Local resident harvest averaged 12 moose/ year or 62% of total harvest for the same time frame. Reported total harvest by local residents increased since changing to antlered bull only in 2015 and the closure of the nonresident season in 2016. From 2000–2014, local residents harvested an average 47% of all moose taken from 2015–2023 they were responsible for 81% of total harvest. However, harvest decreased when the State switched from a general season hunt requiring a harvest ticket to a registration permit with a quota in 2020 (Henslee 2024, pers. comm.).

In Unit 22D SW, reported moose harvest by all users averaged 4.5 moose/year between 2000 and 2023 (**Figure 6**). Local resident harvest averaged 4 moose/ year or 88% of total harvest for the same time frame. Reported harvest by nonlocal residents has been sporadic, occurring in nine out of the past 24 years. Local harvest has increased significantly in the area since 2020, with 2023 reporting the greatest harvest by local residents' since 2000 (Henslee 2024, pers. comm.).

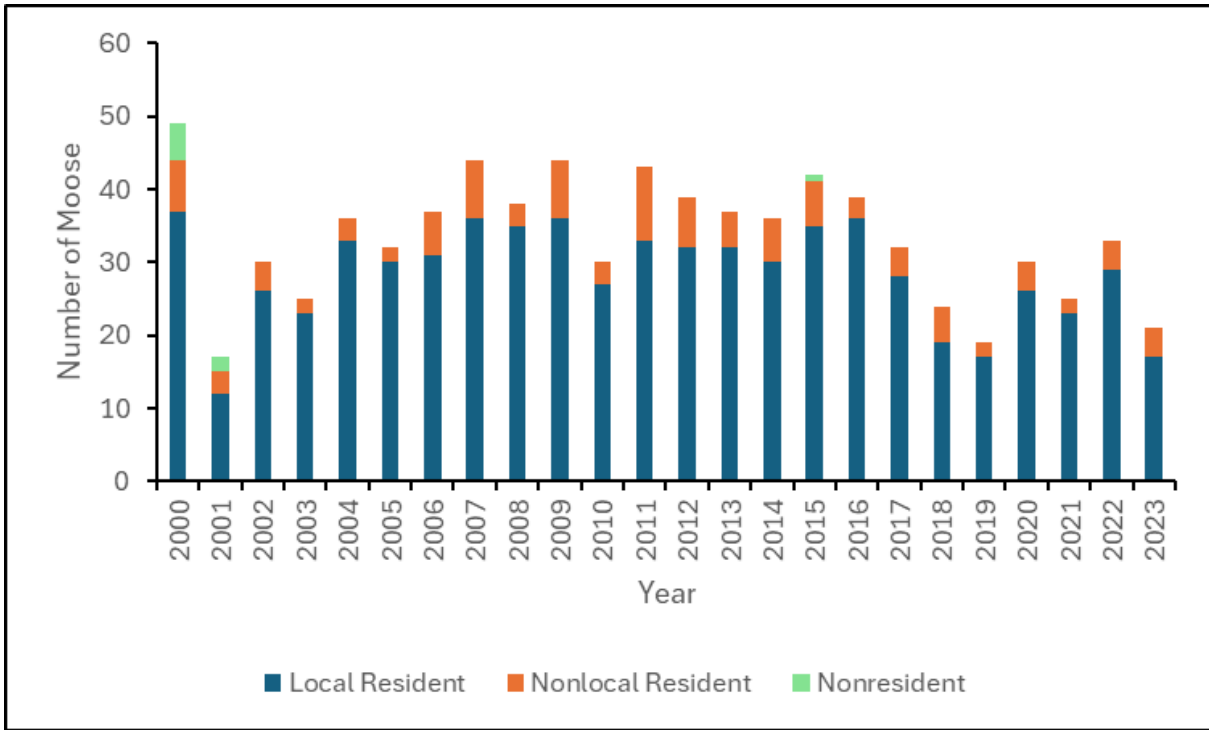


Figure 4. Reported moose harvest by user group in Unit 22D Kuzitrin (Henslee 2024, pers. comm.). Local residents reside in Units 22C and 22D, nonlocal residents are state of Alaska residents living outside of those units.

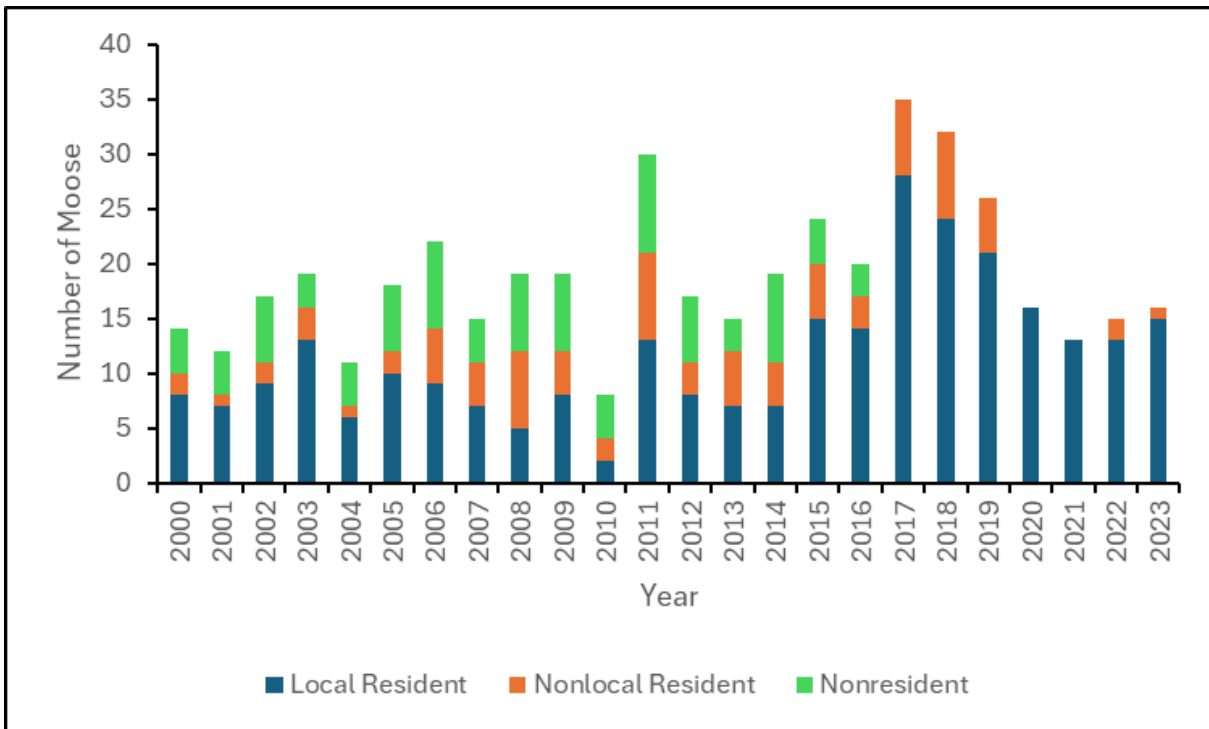


Figure 5. Reported moose harvest by user group in Unit 22D remainder (Henslee 2024, pers. comm.).

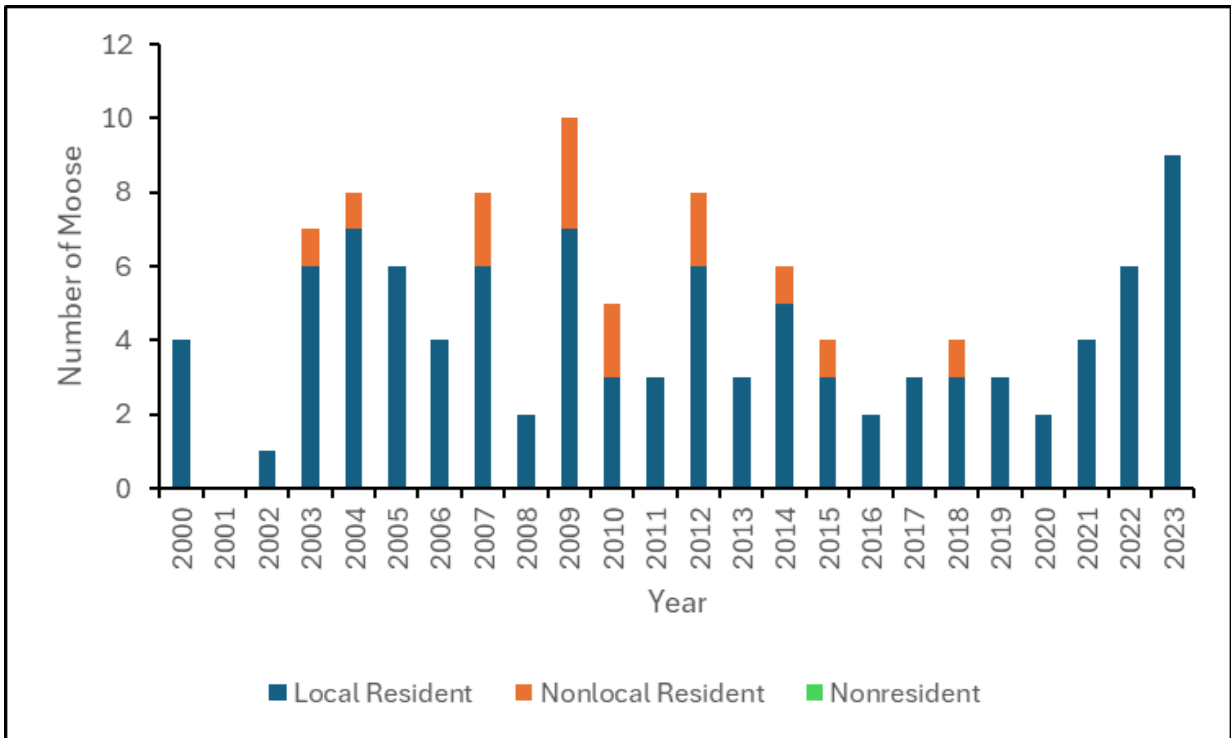


Figure 6. Reported moose harvest by user group in Unit 22D SW (Henslee 2024, pers. comm.). Local residents reside in Units 22C and 22D, nonlocal residents are state of Alaska residents living outside of those units.

Effects

If these closures are rescinded, all users would be able to harvest moose on Federal public lands within Unit 22D in all seasons. However, nonresident seasons are currently closed under State regulations. All resident moose seasons in Unit 22D under State regulations are managed by registration permit and a quota system, so there would be no increase in harvest. However, conservation concerns exist for the Unit 22D moose population, and State and Federal seasons have closed early because quotas were being approached. In 2024, the Unit 22D Kuzitritin/22D SW hunt was only open three days before the quota was reached. Lifting the closure would also decrease opportunity for federally qualified subsistence users who would have to compete with non-federally qualified users for moose harvest on Federal public lands in Unit 22D. However, since permit distribution of the RM840 permit was limited to Unit 22 in 2020, very few nonlocal residents hunt moose in Unit 22D.

If the closures in Units 22D Kuzitritin and 22D SW are opened to all federally qualified subsistence users (i.e. the §804 restriction is removed), the effects would be similar to rescinding the closure.

If these closures are retained, Federal public lands in Unit 22D remainder would remain closed to moose hunting by non-federally qualified users and Federal public lands in Units 22D Kuzitritin and 22D SW, would remain closed to moose hunting by anyone who does not live in Unit 22C or 22D. There would be little added protection for the Unit 22D moose population as most harvest already

occurs by federally qualified subsistence users. Methods adopted by the State for permit distribution and the quota system currently in place protects the moose population from overharvest. However, the closure provides for continuation of subsistence uses and a subsistence priority for federally qualified subsistence users to harvest a moose without competition from non-federally qualified users.

OSM PRELIMINARY CONCLUSION

- Retain the Status Quo**
- Rescind the Closure**
- Modify the Closure to**
- Defer Decision on the Closure or Take No Action**

Justification

Conservation concerns exist for the Unit 22D moose population, which is below management objectives for both population and bull:cow ratios. Demand for moose in the area far exceeds supply as hunts typically close early as quotas are quickly met. Maintaining these closures is recommended to continue subsistence uses and to conserve a healthy moose population in Unit 22D. Retaining the closure will ensure only federally qualified subsistence users are able to harvest moose on Federal public lands in Unit 22D, reducing competition with nonlocal residents and maintaining a Federal subsistence priority for this limited resource.

LITERATURE CITED

ADF&G. 2002. Summary of Actions Board of Game. ADF&G. Arctic/Western Region Alaska Board of Game meeting. November 2–6, 2002 Anchorage, AK.

ADF&G. 2016a. State Closes Nonresident Moose Hunt in Remainder of Unit 22D. Emergency Order 05-05-16. Division of Wildlife Conservation. Nome, AK.

ADF&G. 2020. RC 4: Department Reports and Recommendations. Tab 7.2: Nome Proposals, Proposal 33. Alaska Board of Game Meeting Information. Western Arctic/Western Region. January 17-20, 2020. Nome, AK. <http://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=01-17-2020&meeting=nome>. Accessed January 21, 2020.

ADF&G. 2022. Community subsistence information system, ADF&G Div. of Subsistence. <https://www.adfg.alaska.gov/sb/CSIS/>. Retrieved August 5, 2022.

ADF&G. 2023a. 2023 GMU 22D and 22E Moose Population Survey Summary. Division of Wildlife Conservation. Nome, AK.

ADF&G. 2023b. Hunting and Trapping Emergency Order No. 05-05-23. Division of Wildlife Conservation. Nome, AK

ADF&G. 2023c. Hunting and Trapping Emergency Order No. 05-04-23. Division of Wildlife Conservation. Nome, AK

ADF&G. 2023d. Hunting and Trapping Emergency Order No. 05-03-23. Division of Wildlife Conservation. Nome, AK

ADF&G. 2024a. Hunting and Trapping Emergency Order No. 05-05-24. Division of Wildlife Conservation. Nome, AK.

ADF&G. 2024b. Hunting and Trapping Emergency Order No. 05-04-24. Division of Wildlife Conservation. Nome, AK

ADF&G. 2024c. Hunting and Trapping Emergency Order No. 05-03-24. Division of Wildlife Conservation. Nome, AK

ADF&G. 2024d. RC 4: Tab 4.1 Unit 22 Overview. ADF&G. Western Arctic/Western Region Alaska Board of Game meeting. January 26–29, 2024. Kotzebue, AK.
<https://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=01-26-2024&meeting=kotzebue>. Accessed Sep. 12, 2024.

ADF&G. 2024e. RM840 Permit Hunt Information for RY 2024. Alaska Department of Fish and Game. Juneau, AK. https://www.adfg.alaska.gov/index.cfm?adfg=huntingmaps.hunt_details&huntfile_id=26028

ADF&G. 2024f. Community subsistence information system, ADF&G Div. of Subsistence.
<https://www.adfg.alaska.gov/sb/CSIS/>. Retrieved September 12, 2024. FSB. 2020. Transcripts of Federal Subsistence Board proceedings. April 22, 2020. Office of Subsistence Management, FWS. Anchorage, AK.

ADLWD. 2023. Alaska population estimates: Cities and census designated places (CDPs), 2020 to 2023.
<https://live.laborstats.alaska.gov/data-pages/alaska-population-estimates>. Retrieved July 25, 2024.

Braem, N. M. 2012. Subsistence wildlife harvests in Noorvik, Shungnak, and White Mountain, Alaska, 2008 – 2009. ADF&G, Division of Subsistence Special Publication No. SP2011-003. Fairbanks, AK.

Braem, N.M., E.H. Mikow and M.L. Kostick, with contributions by A. Brenner, A.R. Godduhn and B. Retherford. 2017. Chukchi Sea and Norton Sound observation network : Harvest and use of wild resources in 9 Communities in Arctic Alaska, 2012 – 2014. ADF&G, Division of Subsistence Technical Paper No. 403. Anchorage and Fairbanks, AK.

Conger, A. O. and J. Magdanz. 1990. The harvest of fish and wildlife in three Alaska communities: Brevig Mission, Golovin, and Shishmaref. ADF&G, Division of Subsistence Technical Paper No. 188. ADF&G and U.S. Fish and Wildlife Service. Anchorage and Juneau, AK.

Dau, J. 2000. Managing reindeer and wildlife on Alaska’s Seward Peninsula. *Polar Research* 19(1): 57-62.

DCRA. 2024. State of Alaska Division of Community and Regional Affairs (DCRA) open data. <https://dcracdo-dcced.opendata.arcgis.com/>. Retrieved August 13, 2024.

- Finstad, G. L., Kielland, K. K., and W.S. Schneider, W. S. 2007. Reindeer herding in transition: historical and modern day challenges for Alaskan reindeer herders. *Nomadic Peoples*, 10(2): 31–49.
- Germain, S. R. 2020. GMU 22D Browse Survey Summary. ADF&G DWC Nome.
- Germain, S.R. 2023. Moose management report and plan, Game Management Unit 22: Report period 1 July 2010–30 June 2015, and plan period 1 July 2015–30 June 2020. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2023-15, Juneau.
- Hansen, W. 2021. Moose calf survival and nutrition in GMU 22D, Final Performance Report. Alaska Department of Fish and Game Division of Wildlife Conservation. Juneau, AK.
- Magdanz, J. and A. Olanna. 1986. Subsistence land use in Nome, A Northwest Alaska regional center. ADF&G Division of Subsistence Technical Paper No. 148. Juneau, AK.
- Mikow, E., Braem, N. M., and M. Kostick, M. 2014. Subsistence wildlife harvests in Brevig Mission, Deering, Noatak, and Teller, Alaska, 2011-2012. ADF&G, Division of Subsistence Special Publication No. 2014-02. Fairbanks, AK.
- Mikow, E. H., Gonzalez, D., and M.L. Kostick. 2018. Subsistence wildlife harvests in Brevig Mission, Teller, and White Mountain, Alaska, 2015 – 2016. ADF&G, Division of Subsistence Special Publication No. 2018-03. Fairbanks, AK.
- Mikow, E. H. D. Gonzalez and M.L. Kostick, M. L. 2020. Harvest and use of wild resources in Wales, 2017. ADF&G, Division of Subsistence Technical Paper No. 457. Anchorage and Fairbanks, AK. OSM 2001a. Staff analysis WSA01–09. Office of Subsistence Management. FWS. Anchorage, AK.
- OSM 2001b. Staff analysis WSA01–11. Office of Subsistence Management. FWS. Anchorage, AK.
- OSM. 2002. Staff Analysis WP02-34. Pages 12-26 in Federal Subsistence Board Meeting Materials May 13-15, 2002. Office of Subsistence Management, USFWS. Anchorage, AK. 676 pp.
- OSM 2005. Staff analysis WSA05–01. Office of Subsistence Management. FWS. Anchorage, AK.
- OSM 2006. Staff analysis WP06–40. Office of Subsistence Management. FWS. Anchorage, AK.
- OSM. 2007. Staff Analysis WP07-37. Pages 467-475 in Federal Subsistence Board Meeting Materials April 30-May 2, 2007. Office of Subsistence Management, USFWS. Anchorage, AK. 643 pp.
- OSM. 2020a. Staff Analysis WP20-40. Pages 1,053-1,069 in Federal Subsistence Board Meeting Materials April 20-23, 2020. Office of Subsistence Management, USFWS. Anchorage, AK. 1445 pp
- OSM. 2020b. Staff Analysis WP20-38. Pages 1,029-1,052 in Federal Subsistence Board Meeting Materials April 20-23, 2020. Office of Subsistence Management, USFWS. Anchorage, AK. 1445 pp
- Persons, K. 2002. Unit 22 moose survey-inventory progress report. Pages 475-495 in C. Healy, ed. Moose management report of survey and inventory activities 1 July 1999–30 June 2001. ADF&G. Federal Aid Wildlife Restoration Progress Report. Grant W–24–4 and W–24–5 Study 1.0 Juneau.

Ray, D.J. 1984. Bering Strait Eskimo. Pages 285–302 in W.C Surtevand, ed. The handbook of North American Indians, Volume 5: Arctic. Smithsonian Institution, Washington D.C.

Raymond-Yakoubian, J. and E. Zdor, E. 2020. Sociocultural features of the Bering Strait region in: Young, O.R., P.A. Berkman, and A.N. Vylegzhanin, eds. Governing Arctic seas: Regional lessons from the Bering Strait and Barents Sea. Informed decision making for sustainability. Springer.

SPRAC. 2016. Transcripts of the Seward Peninsula Subsistence Regional Advisory Council proceedings, March 09, 2016 in Anchorage, Alaska. Office of Subsistence Management, USFWS. Anchorage, AK.

SPRAC. 2019a. Transcripts of the Seward Peninsula Subsistence Regional Advisory Council proceedings, October 22-23, 2019 in Nome, Alaska. Office of Subsistence Management, USFWS. Anchorage, AK.

SPRAC. 2019b. Transcripts of the Seward Peninsula Subsistence Regional Advisory Council, April 23-24, 2019. Nome, AK. Office of Subsistence Management, USFWS. Anchorage, AK.

SPRAC 2020. Transcripts of the Seward Peninsula Subsistence Regional Advisory Council proceedings. March 11-12 in Nome, Alaska. Office of Subsistence Management, USFWS. Anchorage, AK.

SPRAC. 2021. Transcripts of the Seward Peninsula Subsistence Regional Advisory Council, October 26-27, 2021. Teleconference. Office of Subsistence Management, USFWS. Anchorage, AK.

SPRAC. 2022. Transcripts of the Seward Peninsula Subsistence Regional Advisory Council, March 3, 2022. Teleconference. Office of Subsistence Management, USFWS. Anchorage, AK.

Tape, K. D., D.D. Gustine, R.W. Ruess, L.G. Adams and J.A. Clark. 2016. Range expansion of moose in arctic Alaska linked to warming and increased shrub habitat. PLoS ONE, 11(4).
<https://doi.org/10.1371/journal.pone.0152636>