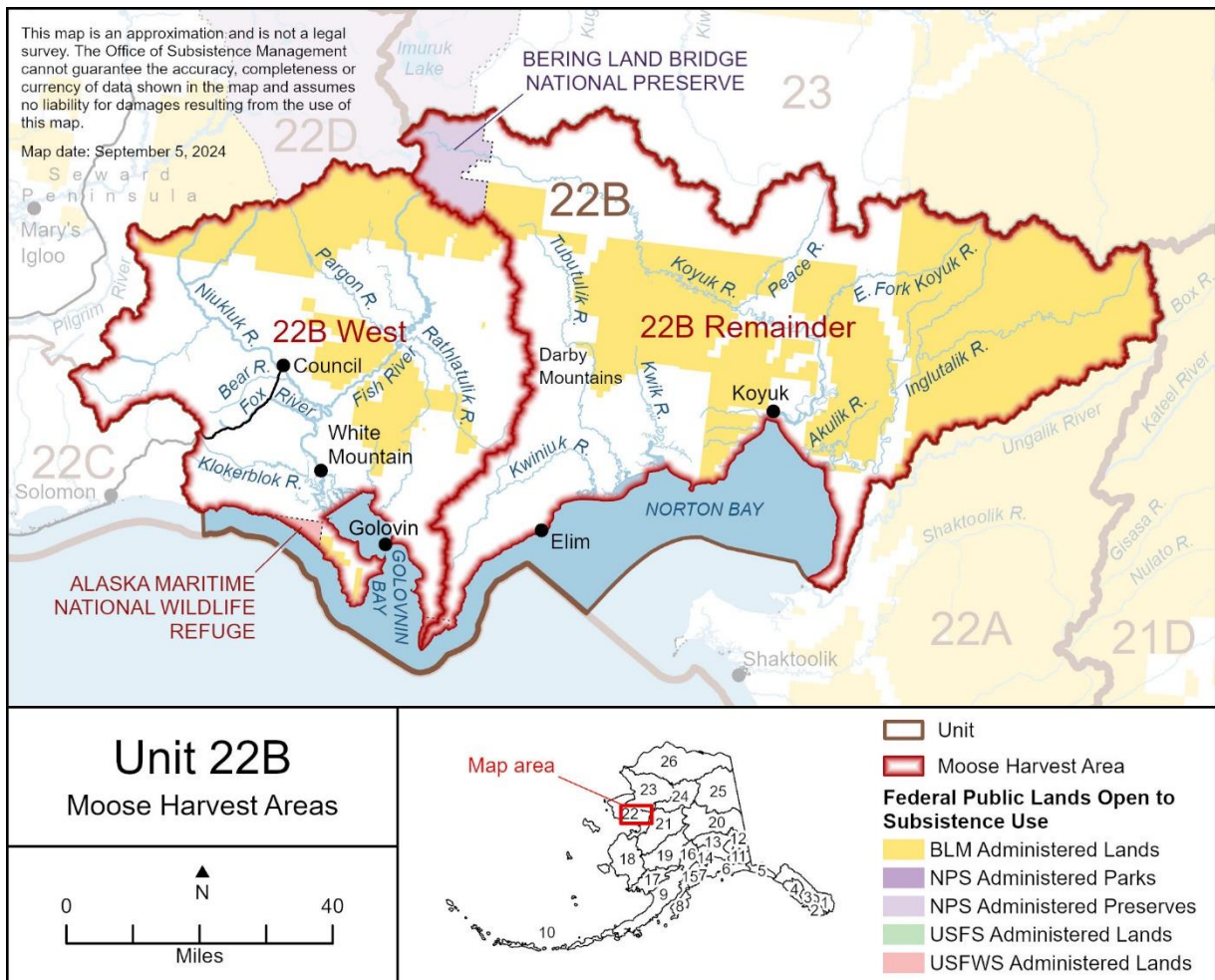


## Draft Wildlife Closure Review WCR26-11/12

**ISSUE:** Wildlife Closure Review WCR26-11/12 is a standard review of Federal subsistence wildlife closures. WCR26-11 reviews a closure to moose hunting by non-federally qualified users in Unit 22B West during the fall season. WCR26-12 reviews the closure to moose hunting, except by residents of White Mountain and Golovin in Unit 22B west during the winter season (**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 22B, west of the Darby Mountains (22B West)– Moose (**Map 1**)



**Map 1.** Map of Federal lands involved in Unit 22B West moose closure.

**Closure Dates:** Year-round.

## **Current Federal Regulations**

### **Unit 22B—Moose**

*Unit 22B, west of the Darby Mountains—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 federally qualified subsistence users hunting under these regulations*

*Unit 22B, west of the Darby Mountains—1 bull by either Federal or State registration permit. Quotas and any needed season closures will be announced by the Anchorage Field Office Manager of the BLM, in consultation with NPS and ADF&G.* Jan. 1-31.

*Federal public lands are closed to the taking of moose except by residents of White Mountain and Golovin hunting under these regulations*

## **Current State Regulations**

### **Unit 22B—Moose**

*Unit 22B, remainder Residents: One bull by permit available in person in RM840 Sep. 1-14  
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.*

*OR*

*Residents: One antlered bull by permit available in person in White Mountain and Golovin beginning RM843 Jan. 1-31.  
Dec. 1. Harvest quota to be announced. Season will be closed by emergency order when quota is reached.*

*Nonresidents*

*No open  
season.*

**Regulatory Year Initiated:** 2002

**Closure last reviewed:** 2022 – WCR22-11/12

**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 Kuzitrin; 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 Kuzitrin, 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 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 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.

### **Council Recommendation for Original Closure**

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.

### **State Recommendation for Original Closure**

The State supported Proposal WP02-34, as modified by OSM, to shorten the moose season, set a harvest quota, require a registration permit, and restrict harvest to federally qualified subsistence users.

### **Extent of Federal Public Lands**

Unit 22B west of the Darby Mountains is comprised of approximately 28% Federal public lands, consisting of 27% Bureau of Land Management (BLM) and 1% U.S. Fish and Wildlife Service (USFWS) 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 2001, the Board adopted a modified emergency special action, WSA01-09, which closed Federal public lands in Units 22B West, 22D Kuzitrin, 22D SW, and 22E. This action reduced the season length in Units 22D Kuzitrin and 22E and harvest limit in 22E, from one moose to one bull. The same year the Board considered WSA01-11, which requested a winter moose season for residents of Unit 22B West. The Board decided, through the results of the §804 analysis, to establish a Jan. 1–Jan. 31 moose season in Unit 22B West, open only to residents of Golovin and White Mountain.

In 2002, WP02-34 requested to codify the decisions from WSA01-09 for the conservation of a declining moose population. This proposal not only closed Federal public lands, it also shortened the season length and limited the number of moose harvested from each unit. The Board adopted WP02-34 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 2004, Special Action Requests WSA04-01 and WSA04-02 were submitted to adjust the moose harvest quotas in Unit 22B West, for both the fall and winter seasons. This request was submitted due to depressed moose population estimates, which led the State to reduce their harvest quotas. Special Action WSA04-01 was approved by the Board to reduce the combined fall Federal/State harvest quota to 23 moose. Special Action WSA04-02 was approved by the Board to reduce the total Federal/State harvest quota for both the August/September and January seasons to 30 moose.

In 2005, the Board adopted Proposal WP05-14a, which codified the regulatory changes made by WSA04-01 and WSA04-02. The Board also adopted Proposal WP05-15, to allow the winter harvest quota to remain flexible and delegate authority for quota announcements and closures to the Anchorage Field Office Manager of the BLM, in consultation with NPS and the Alaska Department of Fish and Game (ADF&G).

In 2006, the Board adopted Proposal WP06-40, which shifted season dates, removed the quota numbers from regulation, and placed into unit specific regulations authority for the Anchorage Field Office Manager of the BLM, in consultation with NPS and ADF&G, to announce any needed closures and quotas.

During closure reviews at their winter 2011 and 2015 meetings, the Council recommended to retain the closures (WCR10-11/12 & WCR14-11/12) because of the continued low moose population in Unit 22B. In both September 2013 and 2014, the State announced emergency orders to close the fall moose season in Unit 22B west of the Darby Mountains early as smaller quotas had recently been enacted in this area due to declining populations. This hunt area was covered under registration permit hunt RM840 with a fall harvest quota of 20 bulls.

At the 2020 Board of Game (BOG) meeting, proposal 35 was adopted as amended to change the availability of moose permits RM843 and RM840 in Unit 22. Moose permits are now only available in person in Unit 22 from July 25 to August 25, for the fall season and Dec. 1–Jan. 31 for the winter season.

In August 2020, the Board approved a revised closure policy, which stipulated that all closures would be reviewed every four years. The policy also specified that closures, similar to regulatory proposals, would 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 2022, the Board considered this closure under WCR22-11/12. They decided to maintain the status quo due to the moose population being below State management objectives. The decision to maintain the closure was consistent with the Council's recommendation.

## Current Events

In January 2024, ADF&G closed the RM843 hunt in Units 22B west by Emergency Order (EO) R5-1-24 (ADF&G 2024a). This winter season was only open for 5 days total before the harvest quota was reached. On September 9, 2023, ADF&G closed the fall RM840 hunt by EO #R5-6-23 (ADF&G 2023). This hunt was only open for 9 days out of the scheduled 14-day season. These two hunts have been consistently closed early via EO since 2018 (ADF&G 2019, 2020b, 2021, 2022).

## Biological Background

Moose migrated onto the Seward Peninsula starting in the 1930s and occupied almost all the suitable habitat by the late 1960s. Even though moose are a relatively recent addition to the Seward Peninsula, once established, they rapidly became an important food source for rural subsistence users. Fortunately, populations grew rapidly and expanded through the 1980s. But then, severe winters in the late 1980s and early 1990s caused declines in moose numbers. Densities decreased from highs of 1.0–1.5 moose/mi<sup>2</sup>, to lows of 0.2–0.5 moose/mi<sup>2</sup>. 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:

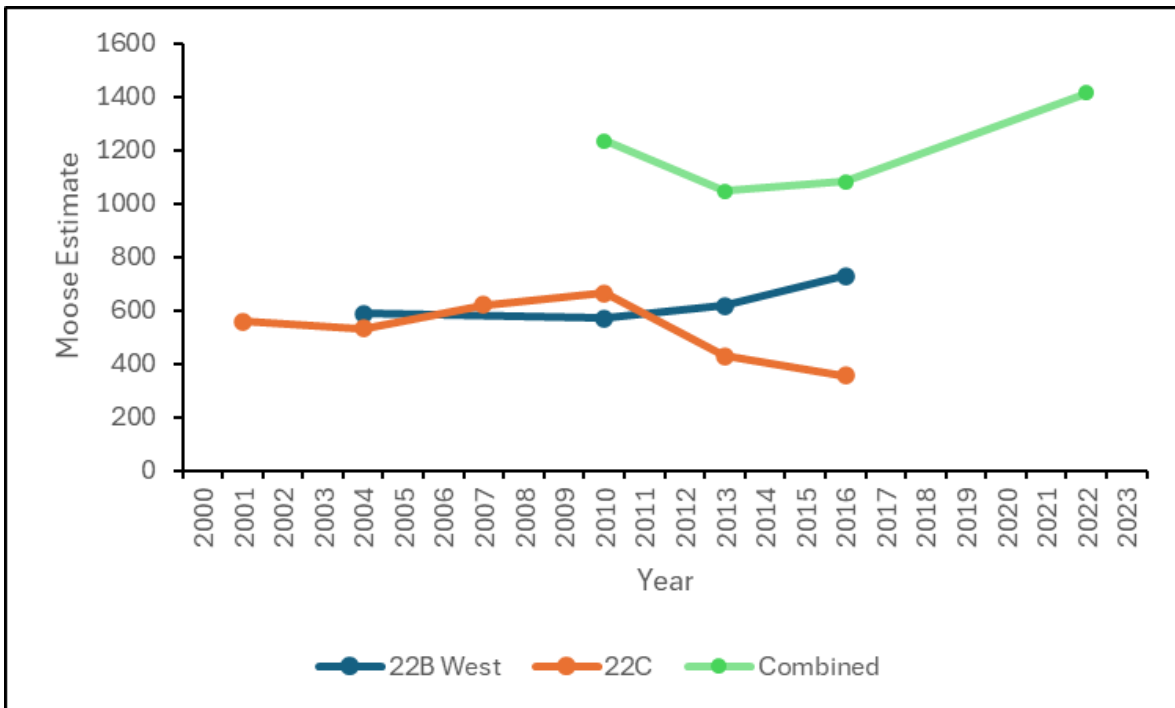
- Unit 22: 5,000–7,000 moose
- Unit 22B West: 1,000–1,200 moose, 15% calf
- Unit 22B East: 800–3,000 moose
- Unit 22C: maintain a population of 450–525 moose
- Units 22A, B, D and E: post-hunt sex ratio of 30 bulls:100 cows
- Unit 22C: post-hunt sex ratio of 20 bulls:100 cows
- Unit 22 Harvest objective: 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). Between 2004 and 2016, the Unit 22B west moose population ranged from 570 to 728 moose, averaging 626 moose (**Figure 1**). The moose population in this area trended upward over that period but remained well below the management objective. In 2023, ADF&G changed their analysis methodology for moose surveys due to moose movement between units (Henslee 2024, pers. comm.). Moose population estimates for Units 22B West and 22C are now combined. This new method resulted in an estimate of 1,415 moose in Units 22B and 22C in 2022 (**Figure 1**). This combined population estimate has also trended upward since 2016 but is just below management objectives for these subunits combined.

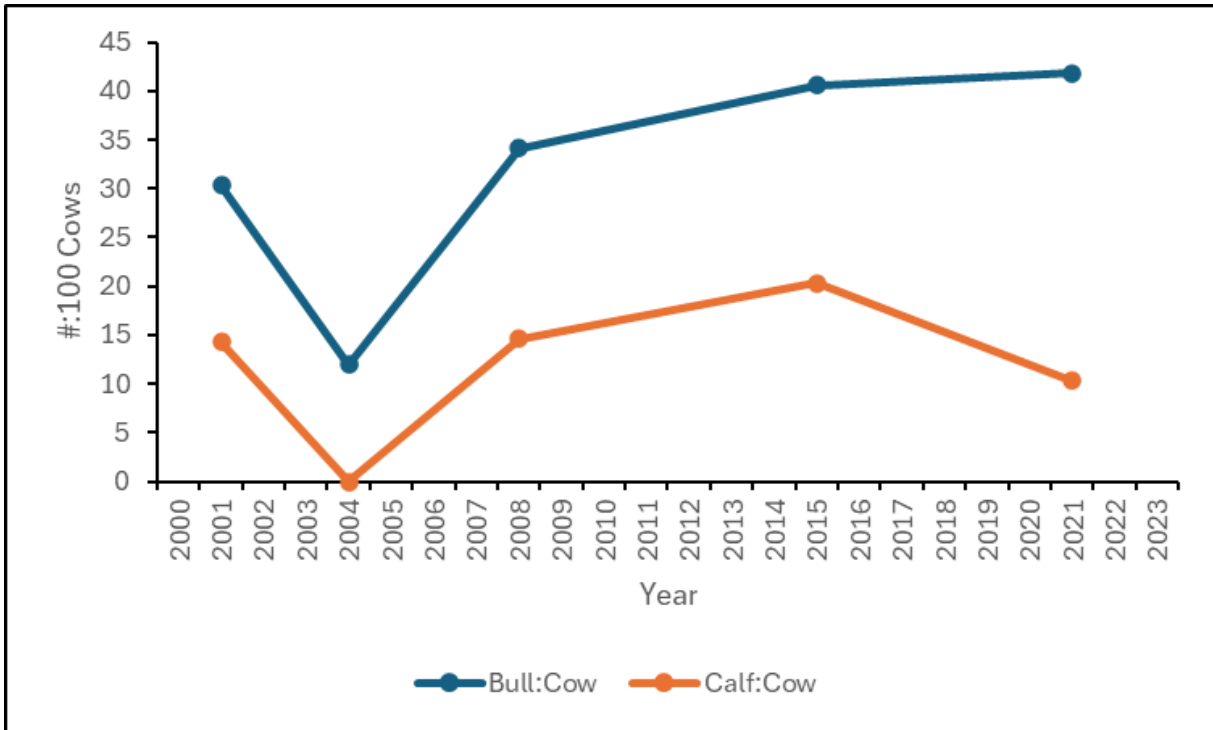
Age-sex composition ratios of bulls and calves to cows are used to evaluate trends in abundance, calf recruitment, and harvestable surpluses. Calf:cow ratios may also be used as an index to estimate

growth, as ratios of < 20 calves:100 cows, 20-40 calves:100 cows, and > 40 calves:100 cows may indicate declining, stable, and growing moose populations, respectively (Stout 2012). Calf:cow ratios in all surveyed years for Unit 22B are lower than management objectives of 15 calves:100 cows and may indicate a declining population (**Figure 2**). The 2004 calf cohort appeared non-existent. This may have been due to the overall population crash that started in the 1990s, but Unit 22B West has always had lower calf recruitment rates (Persons and Gorn 2006).

Between 2001 and 2021 bull:100 cow ratios met or exceeded State management objectives, ranging from 30 to 42 bulls:100 cows (**Figure 2**) (Henslee 2024, pers. comm.). The bull:cow ratio has increased since 2001 and has always remained above management objectives, indicating surplus bulls available for harvesting.



**Figure 1.** Moose population estimates for Unit 22B West, 22C and combined Unit 22B West & 22C (Henslee 2024, pers. comm.).



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

### Cultural Knowledge and Traditional Practices

The Inupiaq, Siberian Yupik, and Central Yup'ik people of the Seward Peninsula area 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).

Ethnographic evidence indicates people living in the Seward Peninsula region harvested caribou prior to European contact (Finstad et al. 2007). While caribou were hunted traditionally, the introduction of firearms, increased reliance on permanent settlements, and the influx of nonresident whalers increased hunting pressure throughout the 1800s (Finstad et al. 2007). Increased hunting pressure and caribou migration patterns led to significant declines in caribou populations by the mid-1800s (Braem et al. 2017, Finstad et al. 2007, Dau 2000). Reindeer were introduced from Siberia in 1892 under a Federal program initiated by Sheldon Jackson to provide more meat for the Inupiat people in the area, although management of this program did not equitably grant access and ownership of reindeer herds to Inupiat residents (Finstad et al. 2007, Dau 2000). Caribou migrated back into the area in the 1990s, causing the reindeer industry to decline as reindeer integrated with migratory caribou groups and left the region (Finstad et al. 2007).



Historically, people in the Seward Peninsula area hunted a variety of species opportunistically. Following major fires in the region, moose began migrating to the area in the mid-1900s, and harvest of this species grew as their population increased (SPRAC 2019a, 2019b, Braem et al. 2017, Soboelman 1985). 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, 2019a, 2019b).

This analysis considers a closure in Unit 22B West. Currently, residents of Brevig Mission, Diomedea, Elim, Gambell, Golovin, Koyuk, Nome, Port Clarence, Saint Michael, Savoonga, Shaktoolik, Shishmaref, Stebbins, Teller, Unalakleet, Wales, and White Mountain are federally qualified subsistence users of moose in this area. As of 2023, a total of 9,412 people resided in these communities. An additional 216 people resided in other parts of the Nome Census Area (ADLWD 2024), which covers approximately the same geographic extent as Unit 22. Nome is the main population center in the region, with 3,506 residents. Under current Federal regulations, only residents of White Mountain (population: 211) and Golovin (population: 184) (ADLWD 2024) may harvest moose on Unit 22B West Federal public lands during the January hunt.

Household subsistence surveys and information shared at Council meetings indicate that most moose hunting by Unit 22 residents occurs primarily in September and October, when access by roads and rivers is best, weather is cooler, and moose are not yet in rut (SPRAC 2019a, Mikow et al. 2018, Braem et al. 2017, Braem and Kostick 2014, Persons 2000). Most local users in Unit 22 will typically only hunt moose in winter if they do not successfully harvest in the fall (SPRAC 2019a). However, the winter hunt is often critical for residents of Golovin and White Mountain (Mikow et al. 2018, Braem et al. 2017), who have harvested all of their moose during the winter hunt in some years (e.g., Braem and Kostick 2014).

Based on moose search and harvest areas mapped in household subsistence surveys, residents of Golovin and White Mountain typically harvest all of their moose in Unit 22B West (Braem et al. 2017). Residents of Brevig Mission have also reported harvesting moose in Unit 22B West, though this pattern was not reported in all survey years (Mikow et al. 2014, 2018) and previous analyses found that residents of Brevig Mission rely primarily on Unit 22D (OSM 2002). Moose hunt areas used by residents of Golovin in 2012 included areas around Cheenik Creek and White Mountain (Braem et al. 2017). Moose hunt areas used by residents of White Mountain from 2015-2016 focused on those immediately around the community and north of the community in an area containing McCarthy Marsh (Mikow et al. 2018). In winter, it is very difficult and dangerous for residents of Golovin and White Mountain to travel to other areas for moose (OSM 2002).

Residents of Nome also harvest moose in Unit 22B, which is a source of notable user conflict in the area (Braem et al. 2017). Residents of Nome will reportedly travel as far east as Council to access the Niukluk River and Fish River drainages, which support salmon and nonsalmon fishing and provide access to large land mammal hunting areas (Braem et al. 2017). The high hunting pressure in Unit 22B and Unit 22D often results in the fall moose hunt closing after only a few days, which can result in residents from smaller communities being unable to harvest moose in the fall (SPRAC 2023, 2021,

2020, Braem et al. 2017). Residents of Golovin have reported that most of the Unit 22B moose harvested in the fall are taken by residents of Nome (Braem et al. 2017). This user conflict prompted the State to establish the resident-only State winter moose season, permits for which primarily go to residents of Golovin and White Mountain (SPRAC 2019a, Braem et al. 2017).

Additional concerns shared by local subsistence users include predation on moose by brown bears and the impacts of climate change on subsistence hunting. Local knowledge shared at Council meetings indicates that the brown bear population has increased substantially, posing safety threats to hunters and population threats to Unit 22 moose (SPRAC 2023, 2020, 2019a, 2019b, Braem et al. 2017). Residents of Golovin link the increase in brown bear population to trophy hunting, stating that the large male bears being harvested would otherwise help keep the overall brown bear population low (Braem et al. 2017).

Climate change patterns that directly impact moose hunting include later freeze-up, earlier break up, less snowfall in some years, and changing vegetation, all of which make hunting travel more challenging and dangerous (Braem et al. 2017). These issues are compounded by rising fuel costs. As one resident of Golovin described:

Well, going back to the later freeze-up and the earlier break up, we've also had years of hardly any snowfall. And that's a lot of wear and tear on your snowmachine. And also, it has an effect on how far you can go in a reasonable amount of time. And snow conditions also have an effect on how much gasoline you burn. And right now, we got 6 bucks a gallon and, well, some people can't afford to go hunting (Braem et al 2017: 82).

In Golovin, increasingly frequent and severe flooding in summer and fall also hinder subsistence harvest of salmon and nonsalmon fish (Braem et al. 2017). In other areas of Unit 22, residents have noticed that declining salmon harvest increase people's reliance on other food resources, including moose (SPRAC 2021). Similar patterns have been observed in White Mountain, where residents have become more reliant on moose as availability of caribou has declined (SPRAC 2023). These issues point to the interconnected nature of subsistence harvest, and the ways in which moose may be a critical resource in years where other resources are less abundant.

In addition to general harvest trends, subsistence household surveys conducted by ADF&G, Division of Subsistence provide insight into the local importance and harvest of moose under both Federal and State hunting regulations. Based on the household survey data from Golovin, moose harvest has declined from an estimated 21 moose harvested in 1989 to an estimated 4 moose harvested in 2012 (**Table 1**). Likewise, the percent of households using moose has declined over time in Golovin (**Table 1**). In contrast, moose harvest has stayed more stable in White Mountain, ranging from an estimated 12-17 moose harvested across survey years from 1999-2015 (**Table 1**). Moose have also become a more widely used resource in White Mountain, with the percentage of households using moose increasing from 70% in 1999 to 92% in 2015 (**Table 1**). Both communities increased in population

from 1990 to 2023, with the population in Golovin increasing by 57 people and the population in White Mountain increasing by 31 people (ADLWD 2023).

**Table 1.** Estimated harvest and use of moose by residents of Golovin and White Mountain (ADF&G 2024b). Note that subsistence household survey data is not available for Nome, residents of which also rely heavily on Unit 22B for moose.

Community	Survey Year	Estimated Number of Moose Harvested	Estimated Pounds of Moose Harvested per Person	Percentage of Surveyed Households Using Moose
Golovin	1989	21	67.5	91%
	2001	0	0	47%
	2010	3	11.8	61%
	2012	4	10.7	42%
White Mountain	1999	17	42.6	70%
	2006	12	32.9	60%
	2008	15	41.2	82%
	2015	14	39.1	92%

## Harvest History

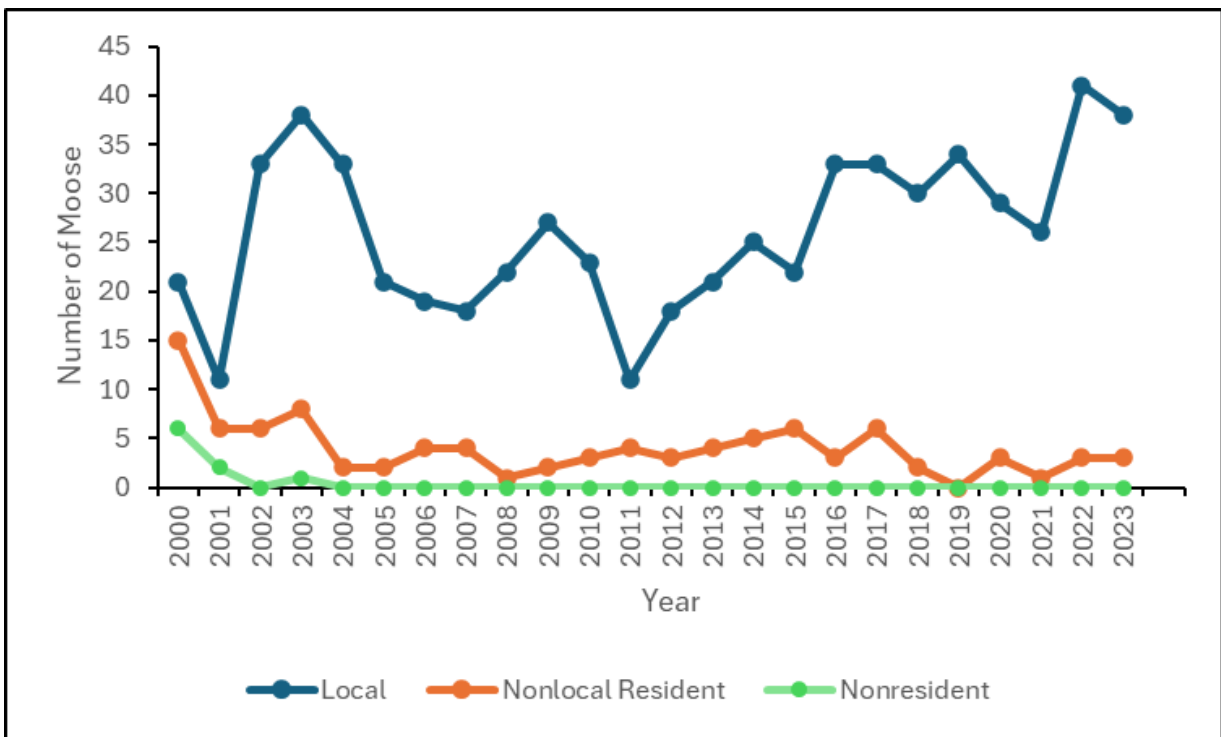
In Unit 22B West, harvest occurs by Alaska residents under Federal and State regulations by registration permit RM840 during the September hunt and registration permit RM843 during a January season. Actions taken by the BOG (see Regulatory History) have limited the availability of State permits to Unit 22 only, making it difficult for any nonlocal resident to receive a permit. All harvest under State regulations has occurred on non-Federal lands since 2002 due to the Federal lands closure. The non-resident season was eliminated in Unit 22B West in 2002.

Under Federal regulations, harvest may also occur by Federal (FM2202) registration permit during the January season. Only one moose has ever been reported harvested by Federal permit (FM2202) in 2001, which was before this closure was enacted (OSM 2021). While a Federal moose permit for the winter hunt exists, it has only ever been issued in 2001. Six permits were issued, with two in Golovin and four in White Mountain, with the harvest of one moose reported. Since either a Federal or a State registration permit may be used during the Federal January season, this was the only year anyone opted for the Federal permit.

Moose harvests in Unit 22B west are managed by quotas. Between 2000 and 2023, total reported moose harvest for fall and winter hunts ranged from 15 to 47 moose, averaging 31 moose per year (**Figure 3**). The fall RM840 hunt in Unit 22B West is heavily used and it has closed early by

emergency order from 2014 to 2023, with seasons ranging from 4-9 days (ADF&G 2019, 2020a, 2020b, 2021, 2022, 2023). The RM843 permit for the January season has been available since 2011 and annual reported harvest has ranged from 2 to 16 moose per year. The RM843 hunt also closed early in 2024 (see Current Events section).

The vast majority of moose harvested in Unit 22B West are taken by federally qualified subsistence users. Local residents of Unit 22 accounted for 50%–100% of all moose harvested in Unit 22B west between 2000 and 2020 with an average of 84% (Henslee 2024, pers. comm.). Since the closure has been established in 2020 residents account for an average 93% of all moose harvest in Unit 22B West (Henslee 224, pers. comm.) Residents of White Mountain and Golovin were the primary users of RM843 (ADF&G 2024) and are quite dependent on moose, as it is eaten in 92% and 42% of households, respectively (Table 1).



**Figure 3.** Reported moose harvest in both fall and winter hunts by user group in Unit 22B west (Henslee 2024 pers. comm.). Local users are Unit 22 residents, which correspond to federally qualified users for the fall hunt. Data was not refined to separate Golovin and White Mountain residents from other local residents for the winter hunt.

**Alternative(s) Considered**

One alternative considered was to eliminate the Federal moose permit (FM2202) for the winter hunt as it has not been utilized since 2001 as everyone has just used the State permit. Eliminating the permit would decrease regulatory complexity and administrative burden. However, this alternative is beyond the scope of a closure review. A regulatory proposal would need to be submitted to effect this change.

Another alternative considered was to eliminate the closure for the fall season. As the moose hunt is managed by quotas, conservation concerns for eliminating the closure are minimal. Since 2020 when permit restrictions were enacted, federally qualified subsistence users have harvested on average 93% of the moose in Unit 22B West, indicating eliminating the closure would not affect continuation of subsistence uses. However, the Unit 22B West moose population is still below management objectives and calf:cow ratios are very low. Additionally, quotas are quickly met and seasons typically close early, indicating demand for moose in the area far exceeds supply. Therefore, OSM did not consider this alternative further.

### **Effects**

If these closures are rescinded, non-federally qualified users would be able to harvest moose on Federal public lands within Unit 22B, west of the Darby Mountains. Even though the Unit 22B West moose population estimate is stable or slightly increasing, it is still below State management objectives (and the combined estimate is below combined management objectives for Units 22B and 22C) with relatively low recruitment. The bull:cow ratio is above management objectives but the calf:cow ratio is extremely low. This makes the growth potential for the herd small and limits the possibility of reaching management objectives.

While seasons continue to close early and harvest quotas are quickly met, the Unit 22B West moose population cannot withstand any increases in harvest, as evidenced by consistent emergency season closures. As it is managed and protected by harvest quotas, rescinding or modifying these closures would likely result in a zero to minimal increase in harvest. However, federally qualified subsistence users may experience increased competition and decreased harvest success if these closures are rescinded. On Federal public lands, competition with non-local users could reduce harvest opportunity for federally qualified subsistence users during the fall season. However, any increases in competition would likely be very small as federally qualified subsistence users harvest most of the moose in Unit 22B west (**Figure 3**).

During the winter season, competition with both non-federally qualified users and other federally qualified subsistence users, especially with residents of Nome, may reduce harvest opportunity for residents of White Mountain and Golovin. If the winter season were opened to all federally qualified subsistence users, residents of White Mountain and Golovin would similarly experience increased competition from Nome residents and other federally qualified subsistence users as well as reduced opportunity to harvest moose. The winter hunt is critical for these communities, which harvest all of their moose during the winter season in some years (see Cultural section).

### **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

The moose population in the portion of Unit 22B west of the Darby Mountains continues to be below State management objectives and recruitment remains low. Demand for moose in the area far exceeds supply as hunts typically close early as quotas are quickly met. Therefore, Federal public lands should remain closed to non-federally qualified users for the conservation of a healthy moose population and to allow the continuation of subsistence uses of moose during the fall and winter hunts.

The winter hunt should remain open to the harvest of moose by residents of White Mountain and Golovin only. The Federal closure during the winter hunt will help ensure the continuation of subsistence uses of moose for residents of these communities due to the continued low number of animals available for harvest.

## LITERATURE CITED

ADF&G 2019. Emergency Order 05-06-19. Issued September 6, 2019. Alaska Department of Fish and Game. Nome, AK. <https://www.adfg.alaska.gov/index.cfm?adfg=wcnews.ordersarchive>

ADF&G. 2020a. Tab 7.1 Nome Area Overview. Alaska Department of Fish and Game. Western Arctic/Western Region Alaska Board of Game meeting. January 17-20, 2020. Nome, AK. <http://www.adfg.alaska.gov/index.cfm?adfg=gameboard.meetinginfo&date=01-17-2020&meeting=nome>. Accessed May 14, 2021.

ADF&G 2020b. Emergency Order 05-08-20. Issued September 4, 2020. Alaska Department of Fish and Game. Nome, AK. <https://www.adfg.alaska.gov/index.cfm?adfg=wcnews.ordersarchive>

ADF&G 2021. Emergency Order 05-06-21. Issued September 9, 2021. Alaska Department of Fish and Game. Nome, AK. <https://www.adfg.alaska.gov/index.cfm?adfg=wcnews.ordersarchive>

ADF&G 2022. Emergency Order 05-04-22. Issued September 7, 2022. Alaska Department of Fish and Game. Nome, AK. <https://www.adfg.alaska.gov/index.cfm?adfg=wcnews.ordersarchive>

ADF&G 2023. Emergency Order R5-6-23. Issued September 9, 2023. Alaska Department of Fish and Game. Nome, AK. <https://www.adfg.alaska.gov/index.cfm?adfg=wcnews.ordersarchive>

ADF&G 2024a. Emergency Order R5-1-24. Issued January 5, 2024. Alaska Department of Fish and Game. Nome, AK. <https://www.adfg.alaska.gov/index.cfm?adfg=wcnews.ordersarchive>

ADF&G. 2024b. Alaska Department of Fish and Game General Harvest Reports. <https://secure.wildlife.alaska.gov/index.cfm?fuseaction=harvestreports.main> Accessed Sep. 6, 2024.

ADF&G. 2024c. Alaska Department of Fish and Game General Harvest Reports. <https://secure.wildlife.alaska.gov/index.cfm?fuseaction=harvestreports.main> Accessed Sep. 6, 2024.

ADLWD. 2024. Alaska population estimates: Cities and census designated places (CDPs), 2020 to 2023. <https://live.laborstats.alaska.gov/data-pages/alaska-population-estimates>. Retrieved September 17, 2024.

- Braem, N.M. and Kostick, M. 2014. Subsistence wildlife harvests in Elim, Golovin, Kivalina, Koyuk, Noatak, and Wales, Alaska, 2010-2011. ADF&G Division of Subsistence Special Pub No. SP2012-04. Fairbanks, AK.
- Braem, N.M., Mikow, E.H., Kostick M.L. 2017. Chukchi Sea and Norton Sound Observation Network: Harvest and Use of Wild Resources in 9 communities in arctic Alaska, 2012-2014. ADFG, Div of Subsistench Technical Paper No. 403. 797 pp. Fairbanks, AK.
- Dau, J. 2000. Managing reindeer and wildlife on Alaska's Seward Peninsula. *Polar Research* 19(1): 57-62.
- 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. 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.
- Henslee, S.R. 2024. Unit 22 Area Biologist. Personal communication: e-mail. Alaska Department of Fish and Game. Nome, AK.
- Mikow, E.H., Gonzalez, D., Kostick, M.L. 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., Braem, N.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.
- OSM. 2002. Staff analysis WP 02-35. Pages 27-60 in Federal Subsistence Board Meeting Materials. May 13-15, 2002. Office of Subsistence Management, USFWS. Anchorage, AK. 676 pp.
- OSM. 2024. Federal subsistence permit system. <https://subsistence.fws.gov/apex/f?p=MENU:101::> Accessed November 4, 2024.
- Persons, K. 2000. Unit 22 moose survey-inventory progress report. Pages 436-453 in M.V. Hicks, ed. Management report of survey-inventory activities, 1 July 1997-30 June 1999. ADF&G Fed. Aid in Wildl. Rest. Prog. Rep. Proj. W-27-1, Study 1.0, Juneau, AK. 587 pages.
- Persons, K. and T. Gorn. 2006. Unit 22 moose management report. Pages 514-542 in P. Harper, editor. Moose management report of survey and inventory activities 1 July 2003-30 June 2005. Alaska Department of Fish and Game. Project 1.0. Juneau, Alaska.
- 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.

Sobelman, S. 1985. The economics of wild resource use in Shishmaref, Alaska. ADF&G Division of Subsistence Technical Paper No. 100. Anchorage, Alaska.

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 proceedings. April 23-24, 2019 in Nome, Alaska. 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 proceedings. October 26-27, 2021 by teleconference. Office of Subsistence Management, USFWS. Anchorage, AK.

SPRAC 2023. Transcripts of the Seward Peninsula Subsistence Regional Advisory Council proceedings. November 1-2, 2023 in Nome, Alaska. Office of Subsistence Management, USFWS. Anchorage, AK.