

**Draft Wildlife Closure Review**  
**WCR26-02**

**ISSUE:** WCR26-02 is a standard review of Federal subsistence wildlife closures to the harvest of moose by non-federally qualified users (NFQUs) on Federal public lands in Unit 5A from Sept. 16 – Sept. 30 (East of the Dangerous River) and Oct. 8 – Oct. 21 (West of the Dangerous River) (**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 the closures in Unit 5A are still warranted.

**Closure Location and Species:** Unit 5A, except Nunatak Bench, east of the Dangerous River (Unit 5A East) and Unit 5A, except Nunatak Bench, west of the Dangerous River (Unit 5A West) – Moose

**Closure Dates:** Unit 5A (East): Sept. 16 – Sept. 30

Unit 5A (West): Oct. 8 – Oct. 21

**Current Federal Regulations**

**Unit 5A—Moose**

*Unit 5A, except Nunatak Bench, east of the Dangerous River—1 bull by joint State/Federal registration permit only. Sept. 16–Nov. 15*

*From Sept. 16-Sept. 30, Federal public lands will be closed to taking of moose, except by residents of Unit 5A hunting under these regulations.*

*Unit 5A, except Nunatak Bench, west of the Dangerous River—1 bull by joint State/Federal registration permit only. Oct. 8–Nov. 15*

*From Oct. 8-Oct. 21, Federal public lands will be closed to taking of moose, except by residents of Unit 5A hunting under these regulations.*

**Current State Regulations**

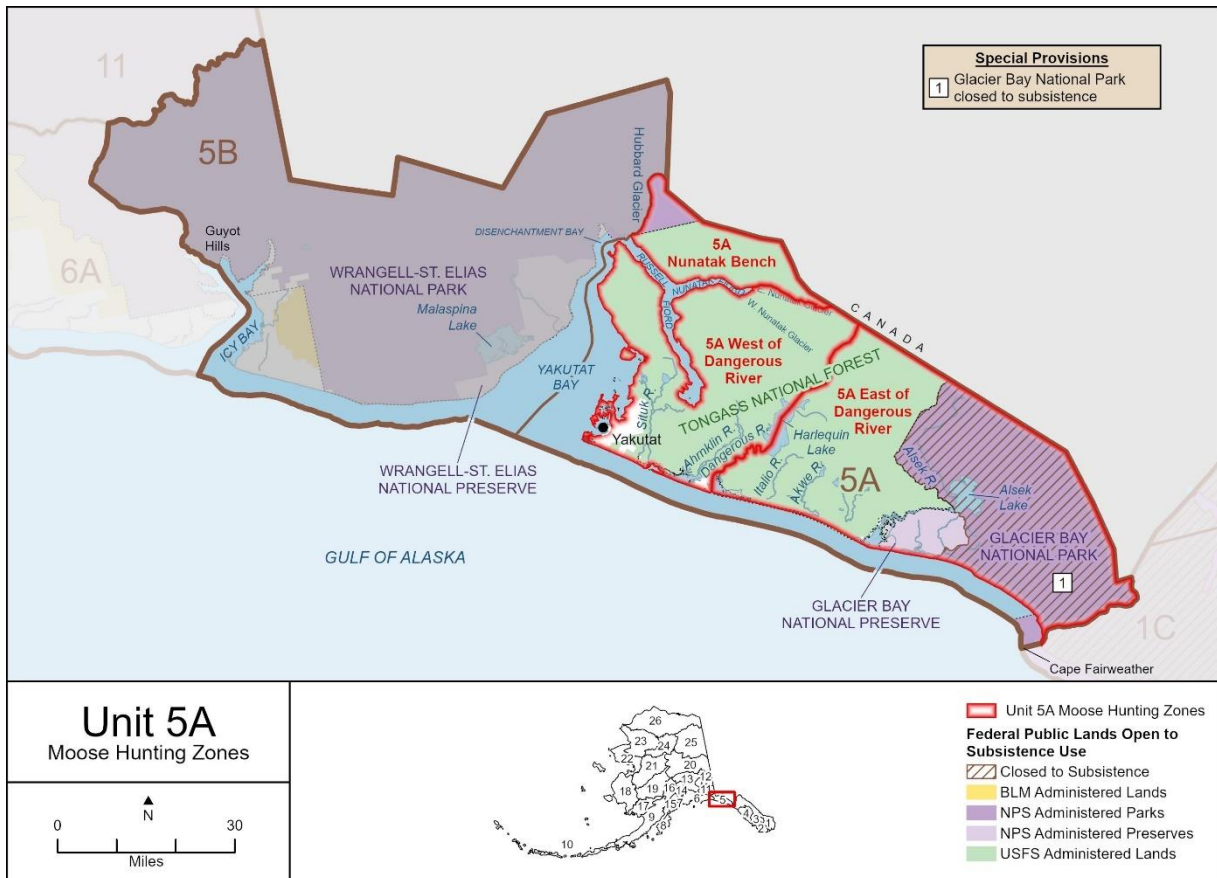
**Unit 5A—Moose**

*Unit 5A east of Dangerous River and Harlequin Lake Both residents and nonresidents: One bull by permit, available online, or in person in Douglas and Yakutat beginning Aug 15. RM061 Oct. 1-Nov. 15*

Unit 5A west of Dangerous River and Harlequin Lake, and southwest of Russell and Nunatak fiords and the East Nunatak Glacier

Both residents and nonresidents: One bull by permit, available online, in person in Douglas and Yakutat beginning Aug 15.

RM061 Oct. 15-Nov. 15



**Map 1.** Unit 5A moose hunt areas.

**Regulatory Year Initiated:** 1991 (Oct. 15-21); 2000 (Oct. 8-21); 2018 (Sept. 16-30, Unit 5A East)

**Closure last reviewed:** 2022 – WCR22-02

**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...*

The Board closed Federal public lands in Unit 5A, except Nunatak Bench from Oct. 15– Oct. 21 to taking of moose, except by federally qualified subsistence users (residents of Unit 5A) to assure a preferential subsistence opportunity for rural Alaska residents with customary and traditional use determinations for moose in Unit 5A, effective 1991. The regulatory dates for the closure of Federal public lands to NFQUs were changed in 2000 from Oct. 15 – 21, to October 8 – 21 (P00-010), to reflect the change in the Federal moose season start date to October 8. Closure dates were again changed to Sept. 16 – 30, east of the Dangerous River during the 2018/2019 regulatory season to reflect the change in the Federal moose season start date to September 16.

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

The Southeast Alaska Subsistence Regional Advisory Council (Southeast Council) had not been established prior to the enactment of the original closure, and therefore, there was no Council recommendation given at that time. Since the establishment of the Southeast Council, the Council has supported the closure because it has provided greater opportunity for federally qualified subsistence users (FQSUs) to harvest moose in an area that typically receives relatively high hunting pressure.

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

The State recommendation for the original closure was not found in the 1990 Federal Subsistence Board Meeting Book or in the archives.

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

Unit 5A East is composed almost entirely of Federal public lands administered by the U.S. Forest Service (USFS) and the National Park Service (NPS), with the exception of two Native allotments and a SEALASKA Corporation site near Cannery Creek. However, Glacier Bay National Park is closed to all hunting, including Federal subsistence hunting. Unit 5A West is composed of 93% Federal public lands, all of which are USFS lands within the Tongass National Forest (see **Map 1**).

### **Customary and Traditional Use Determination**

Residents of Unit 5A have a customary and traditional use determination for moose in Unit 5. Therefore, the only Federally Qualified Subsistence Users (FQSUs) for this hunt are the resident of Unit 5A. All non-residents of Unit 5A, including other rural Alaskans will be analyzed as non-federally qualified users (NFQUs).

### **Regulatory History**

Moose hunting in Unit 5A, except Nunatak Bench, has been managed using a registration permit system since 1978. In 1990, the Federal government began managing subsistence hunting, fishing, and trapping on Alaska's Federal public lands to fulfill the requirements of Title VIII of ANILCA (55 Fed.

Reg 126; 27125 [June 29, 1990]). In 1990, the Board approved Special Action S90-25, which closed Federal lands in Unit 5A, except Nunatak Bench to moose hunting from Oct. 15–21, except for Yakutat residents. The Federal Register notice states that the action was taken to “assure a preferential subsistence opportunity for rural Alaska residents with a Customary and Traditional Use determination (C&T).” Additionally, the harvest quota for Unit 5A except Nunatak Bench was set at a total of 60 bulls, with no more than 30 bulls to be taken west of the Dangerous River (Western Yakutat Forelands, 5A West) (**Map 1**).

In 1992, the list of communities with a customary and traditional use determinations (C&T) for moose in Unit 5A was expanded to include all the residents of Unit 5A, and not just the residents of Yakutat (P92-012A). Therefore, Unit 5A, except Nunatak Bench, was closed to moose hunting Oct. 15-21, except for residents of Unit 5A. Also in 1992, the Board used an emergency special action (S92-10) to close the moose season in Unit 5A West because the harvest quota had been reached.

In 1994, the Board adopted Proposal P94-17 for Unit 5A, which allowed a community-based harvest of 10 additional moose for community potlatches and ceremonial uses from Aug. 1 to Dec. 31.

In 1996, the Board adopted Proposal P96-014, extending the Federal moose season in Unit 5A except Nunatak Bench by one week, moving the start date from Oct. 15 to Oct. 8. This action was taken to provide increased harvest opportunity for FQSUs.

In 2000, the dates for the moose hunting closure to NFQUs in Unit 5A except Nunatak Bench were changed from Oct. 15 - 21 to Oct. 8 – 21 (P00-010), to reflect the change in the Federal moose season start date of October 8.

In 2004, the Board adopted proposal WP04-20, which established a joint State/Federal registration permit for moose in Unit 5A except Nunatak Bench (RM061) that allowed for more efficient management and harvest monitoring. The State issued Emergency Orders in 2004 and 2007 to close the hunt in Unit 5A West when the number of moose harvested reached 28, to prevent the harvest from exceeding the quota of 30 bulls.

In October 2008, the State issued an Emergency Order closing Unit 5A West when the harvest reached 20 bull moose. Also in 2008, in response to continued low bull:cow ratios in Unit 5A, and to align with the State action, the Board adopted Special Action WSA08-05. This special action reduced the total harvest quota from 60 bulls to 50 bulls for Unit 5A except the Nunatak Bench, and from 30 to 20 bulls for Unit 5A West. The Federal subsistence priority was maintained through the early season authorized for FQSUs and the closure period for NFQUs.

In 2009, the State raised the harvest quota from 50 to 55 bull moose in Unit 5A except the Nunatak Bench, and from 20 to 25 bull moose in Unit 5A West. This change was based on surveys conducted during the winter of 2008, which indicated improved bull:cow ratios.

In 2010, the Board adopted Special Action WSA09-04, which delegated the USFS Yakutat District Ranger temporary authority to establish a harvest quota and close the moose season for Unit 5A,

except the Nunatak Bench. Also in 2010, the Board adopted WP10-22, delegating authority to the Yakutat District Ranger to set Federal subsistence harvest quotas; close, reopen or adjust seasons; and adjust harvest and possession limits for moose (as well as deer and mountain goats) via delegation of authority letter. From 2010-2016, the Yakutat District Ranger and ADF&G established the moose harvest quota in the fall for Unit 5A except the Nunatak Bench at 55 bulls, with no more than 25 bulls to be taken in Unit 5A West. In 2012, SEALASKA Corporation lands near Yakutat (known as “the nine townships”) reverted from State to Federal management as final land selections were made under the Alaska Native Claims Settlement Act, increasing the amount of Federal public land available for Unit 5A (Yakutat) for residents to hunt between Oct. 8 and Oct. 21. Consequently, in Unit 5A West, minimal land is available for NFQUs to hunt until Federal lands open under State regulations on October 22nd. This land status change also effectively opened popular hunting areas closer to town for FQSUs a week earlier, helping to distribute hunting pressure during the Federal season.

In 2012, the Southeast Council voted to retain the Oct. 8 – Oct. 21 closure to NFQUs in Unit 5A following wildlife closure review WCR12-02. The moose population in Unit 5A was below the recommended State management goals for the population and the minimum bull:cow ratio. This closure was reviewed again in 2015 (WCR15-02) and 2022 (WCR22-02), and the continued closure was supported by the Southeast Council, for the purposes of conservation and the continuation of subsistence uses.

Since 2012, the Yakutat District Ranger has closed Unit 5A West by Federal special action annually, before the season end date of November 15, in order to not exceed the joint Federal/State harvest quota. From 2013-2024, only residents of Unit 5A were allowed to participate in the moose hunt on the federal public lands of Unit 5A West, since the quota was met prior to the end of the Federal closure on Oct. 21.

In 2014, in response to rapid harvest rates exceeding the quota, managers reduced the reporting period for the joint State/Federal moose registration permit (RM061- Unit 5A, except Nunatak Bench) from 5 days to 3 days, effective in the 2015 season. In the 2018 season, managers reduced the reporting period for the joint State/Federal moose registration permit to 24 hours for Unit 5A West. Both of these changes to permit requirements are still in effect.

In 2015, the Southeast Council submitted Proposal WP16-06, requesting that a definition of “Nunatak Bench” be added to the Federal subsistence regulations for Unit 5. The Board supported the proposal, and the definition of Nunatak Bench was added to the 2016-2018 Federal Subsistence Regulations. The definition is as follows: “In Unit 5A, Nunatak Bench is defined as that area east of the Hubbard Glacier, north of Nunatak Fiord, and north and east of the East Nunatak Glacier to the Canadian Border.”

In 2017, in response to the recent survey findings including an increased bull:cow ratio observed in 2016, the Yakutat District Ranger and ADF&G established the moose harvest quota in the fall for Unit 5A except the Nunatak Bench, at 60 bulls, with no more than 30 bulls to be taken in 5A West.

In 2017, the Yakutat Fish and Game Advisory Committee (Yakutat AC) submitted Proposal WP18-10, requesting that the Federal season for moose in Unit 5A East open from Sept. 1 – Nov. 15, with Federal public lands closed to the harvest of moose except by residents of Unit 5A from Sept. 1 – Sept. 14, rather than Oct. 8-21. The Yakutat AC requested this early September season in Unit 5A East because they believed that it would increase hunting opportunity for subsistence users during a period where days were longer, weather was potentially better, and local air taxi might be more available. The Yakutat AC also thought that this change might reduce some of the typically heavy hunting pressure during the opening days of the subsistence season in the more accessible Unit 5A West. This proposal was controversial. Unit 5A East is primarily accessed by airplane, and as a result, hunting here is cost prohibitive to many Yakutat residents. The Southeast Council discussed dates and believed that Yakutat residents would not be the ones to benefit because they were typically still engaged in fishing and not hunting yet during the dates proposed by the Yakutat AC. The Council ended up supporting WP18-10 with modification, changing the season open date from Sept. 1 – Nov. 15 to Sept. 16 – Nov. 15, and changing the closure dates from Sept. 1 – Sept. 14 to Sept. 16 – Sept. 30. The Council believed that these modifications would provide a two-week priority for rural residents during a later time when most would be finished fishing, thereby meaningfully expanding subsistence harvest opportunities.

During its 2018 regulatory meeting, the Board adopted WP18-10 with modification, based on the recommendation of the Southeast Council. As a result, the Federal moose season dates for Unit 5A East were changed to Sept. 16-Nov. 15, with Federal public lands closed to the harvest of moose, except by residents of Unit 5A from Sept. 16 – 30. This also resulted in dividing Unit 5A except Nunatak Bench into two separate hunt areas: Unit 5A West and Unit 5A East. Since 2018, the Yakutat District Ranger and ADF&G have established the moose harvest quota for Unit 5A West and 5A East at 30 bulls each.

In 2018, the Yakutat AC submitted a parallel proposal to the Alaska Board of Game (BOG) (Proposal 25), requesting that the State season in Unit 5A East be open Sept. 16-Nov. 15. The BOG adopted Proposal 25 during their January 2019 meeting, with modification to align the Board action on Proposal WP18-10 to the current State season of Oct. 1-Nov. 15 in Unit 5A East.

In August 2020, the Board approved a revised closure policy, which stipulated that all closures will be reviewed every four years (FSB 2020). The policy also specified that closures, similar to regulatory proposals, will be presented to the Councils for a recommendation and then to the Board for a final decision. Previously, closure reviews were presented to Councils who then decided whether to maintain the closure, or to submit a regulatory proposal to modify or eliminate the closure (FSB 2007).

This closure was first reviewed under the revised closure policy in 2022 (WCR22-02). At that time, the Southeast Council recommended retaining the closure because they felt that it was still serving an important role in reducing hunting pressure and providing a meaningful subsistence priority to FQSUs in the area. At its regulatory meeting, the Board retained the closure, consistent with the Southeast Council's recommendation as part of the consensus agenda.

## **Current Events**

The moose quotas for Unit 5A west and Unit 5A east were again set at 30 moose in 2024. Preliminary data for the 2024 Yakutat moose hunt indicate that 30 moose were harvested west of the Dangerous River and 27 moose were harvested east of the Dangerous River. Of the harvested moose, all of the moose from Unit 5A west were harvested by residents of Yakutat (FQSUs), whereas in Unit 5A east 10 moose were harvested by residents of Yakutat, 4 of which were harvested during the federally closure to NFQUs (before Oct. 1). Unit 5A west was closed to moose harvest on Oct. 8, and Unit 5A east remained open until the end of the moose season (Nov. 15).

## **Biological Background**

### Habitat

Although no recent habitat studies have been conducted to assess the quality of the moose habitat in Unit 5A, the USFS Yakutat Ranger District in collaboration with Yakutat City and Borough trail crew have begun a pilot project to improve moose habitat on the Yakutat Forelands (Oehlers & Abreu-Vigil 2023). In 2023, five treatment units totaling six acres were selected for reduction of shrubs and young conifers to increase young willow availability for moose browse. In 2024, an additional eleven acres were treated (Oehlers 2024, pers. comm.).

Good body condition and high pregnancy and twinning rates indicate that the quality and quantity of forage habitat was good in the early to mid-2000s (ADF&G 2005, Oehlers 2007). A relatively stable low-density population also indicates good quality habitat.

### Breeding

Breeding strategies of moose differ between the tundra (Alaska/Yukon-*Alces alces gigas*) and taiga (Eastern, northwestern, and Shira's subspecies-*Alces alces americana*, *Alces alces andersoni*, *Alces alces shirasi*), and there are likely gradations between these two strategies (Schwartz 1997). Tundra moose tend to be relatively polygamous breeders and form assemblages during the rut, where dominant males can monopolize females. Consequently, one male can breed with many cows during one breeding season. In forest dwelling taiga moose, one bull will remain with a single female or small group of females for one or several days, likely breeding with only a few females during rutting season. Moose in Yakutat are likely in a mixing zone between *Alces alces gigas* and *Alces alces andersoni* (Schmidt et al. 2009). If females are not bred during their first estrus cycle, they may experience a recurrent estrous cycle and breed later in the season (Schwartz 1997). However, one study in Southcentral Alaska reported that an estimated 88% of calves were conceived during the first estrus cycle within a season (Schwartz and Hundertmark 1993).

The breeding season in interior Alaska ranges from September 28-October 12, with calving season occurring from approximately mid-May to mid-June, peaking the last two weeks of May (Wilton 1992, Schwartz 1997). Moose in Yakutat have been observed congregating from August-October, coinciding with the rutting season (Oehlers 2021). Older prime bulls come into rut earlier than younger bulls and

because rutting bulls are more vulnerable to harvest, hunting seasons held during the peak of rut may increase the harvest of prime bulls (Timmerman and Buss 1997). However, in a 1992 survey of 19 moose management jurisdictions, Wilton (1992) found that 74% of 136 moose hunting seasons coincided with the rutting period (September 16-October 15). Currently, many Federal fall moose seasons in Alaska open in September, or even earlier, including in Unit 5A.

### Population Management

Moose were first sighted along the lower Alsek River drainage in Unit 5A East in the late 1920s and early 1930s. By the 1950s, the moose population had expanded its range westward to the Malaspina Forelands west of Yakutat Bay. The population grew rapidly, and by the 1960s, was estimated to be over 2,000 animals, likely above the carrying capacity of the range (Sell 2017). During the 1960s and early 1970s, the population declined due to liberal harvest seasons, including cow hunts designed to protect the moose habitat, and severe winters in 1970 and 1972 that reduced survival and recruitment (Scott 2010).

In 1974, the moose population in Unit 5A was estimated to be approximately 300 animals (OSM 1996). Concern over low population numbers resulted in a hunting closure in Unit 5A from 1974–1977. After the hunting closures in the 1970s, the population slowly increased to about 600-800 animals, which appears to be carrying capacity of the area. In 1989, the State developed a management plan for Unit 5A Yakutat Forelands, which included the following objectives: 1) maintain a moose population of 850 animals post-hunt; 2) sustain an annual harvest of 70 moose; 3) provide a hunter success rate of 28%, and 4) maintain a post-hunt bull:cow ratio of 20:100 (ADF&G 1990). The management objectives and harvest management strategies are updated in ADF&G's moose management reports for Unit 5 based on existing biological data and public input.

The current State management objectives for moose in Unit 5 (Churchwell 2021) are:

- Post-hunt moose numbers (estimated): 600-800
- Annual hunter kill (average): 60
- Post hunt bull:cow ratio: 25:100
- Number of hunters (annual average): 250
- Hunter-days of effort (annual average): 1,025
- Hunter success (annual average): 28%

Between 2000 and 2020, surveys of the Unit 5A Yakutat Forelands were conducted as conditions permitted (**Table 1**), but no surveys have been conducted since 2020. Typically, raw numbers from wildlife aerial surveys are adjusted using a “sightability model” which incorporates variation in survey conditions such as timing, survey routes, number of trained personnel and variable snow conditions. However, the criteria for a sightability model have not been consistently recorded in Yakutat Forelands surveys. Thus, only the raw survey data are used to monitor trends in moose abundance (Barten 2006, Barten 2008a, Scott 2010). Consequently, results of aerial surveys are minimum counts and should be used primarily as an index for population trend analysis.



Some surveys have been limited to subsections of the forelands, designed to obtain herd composition data rather than population trends. Reliable herd composition surveys are not always feasible due to insufficient snowfall and aircraft availability relative to when bulls begin to shed their antlers (Sell 2017). Prior to 2005, surveys were conducted in open areas where concentrations of moose were known to occur. The distribution and movements of moose in addition to the observer's ability to detect moose during aerial surveys are highly variable and dependent on the weather conditions, timing, and amount of snow cover in the late fall. Thus, moose counts prior to 2005 may have missed large segments of the moose population and are probably not very reliable for detecting population trends (Barten 2008a). In 2005, a more rigorous systematic survey design was developed using line transects which allowed for increased survey coverage, increased reliability of population trends, reduced bias in the areas selected, and consistency between years.

Following the moose hunting closures in the mid-1970s and the 1989 management plan, the Yakutat Forelands moose counts slowly recovered to approximately 633 and 685 moose in 2005 and 2007, respectively (**Table 1, Figure 1**). Low bull:cow ratios were observed starting in 2006, particularly in Unit 5A West (**Table 1**). Following the 2007 survey, several severe winters likely reduced survival and recruitment and caused a decline in the moose population (**Figure 1, Barten 2012**). The surveys conducted between 2007 and 2012, either were focused on sex and age composition (2008 and 2011) or experienced poor to fair survey conditions and timing (2010). The age composition of the bulls harvested from 2003-2012 suggested that the various age classes were well represented in the population and that calf survival was high enough to provide continued harvest of bull moose at previous levels (Sell 2014).

The mild winters of 2014-2015 and 2015-2016 are thought to have resulted in improved over-winter survival for ungulate populations in the Southeast region (Scott 2017). In 2015 and 2016, a total of 828 and 543 moose, respectively, were observed on the Yakutat Forelands. During December surveys, percentage of calves was similar in 2015 and 2016 (18% and 17%, respectively), indicating healthy pre-winter survival in both years. Across the Yakutat Forelands, bull:cow ratios were higher in 2016 (36:100) than 2015 (19:100), meeting the State's management objective of 25 bulls:100 cows in 2016. In Unit 5A West, where harvest is predominantly by FQSU's, bull:cow ratios ranged from 10:100 in 2006, to 38:100 in 2016 (Barten 2002, 2005, 2006, 2008; Converse and Rice 2003; Oehlers 2008a, b, c; Oehlers 2012; Scott 2010, 2011a, 2011b, 2013a,b; Sell 2016a, b).

Most recently, ADF&G conducted surveys on January 17, 2020. Due to the late season timing, along with survey conditions (high wind and flight speeds), identification of sex and age (calves) was difficult. A total of 230 and 115 moose were observed in Unit 5A West and East, respectively. The total Unit 5A count was 345 moose. The observation rate of 43-66 moose/hour (average=55.6 moose/hr.) was lower than the previous (2016) survey that had an observation rate of 59-72 moose/hour (average=64.5 moose/hr.). However, this difference was likely in part related to the survey conditions (Churchwell 2020). Heavy snow years (2019-20 and 2020-21) may have impacted the Unit 5A moose population, but recent years have been fairly mild (2022-2023 and 2023-2024). No aerial surveys have been conducted since 2020, so their current status is unknown (Churchwell 2024). However, given

continued rapid harvest rates, the population is likely relatively stable, and the Yakutat Tlingit Tribe has funds to conduct moose surveys during the 2024-2025 season.

**Table 1.** Moose survey results for Unit 5A, 2002-2016 (Barten 2002, 2005, 2006, 2008; Converse and Rice 2003; Oehlers 2008a, b, c; Oehlers 2012; Scott 2010, 2011a, 2011b, 2013a,b; Sell 2016a, b). Some surveys emphasized sex and age ratio, rather than a population trends.

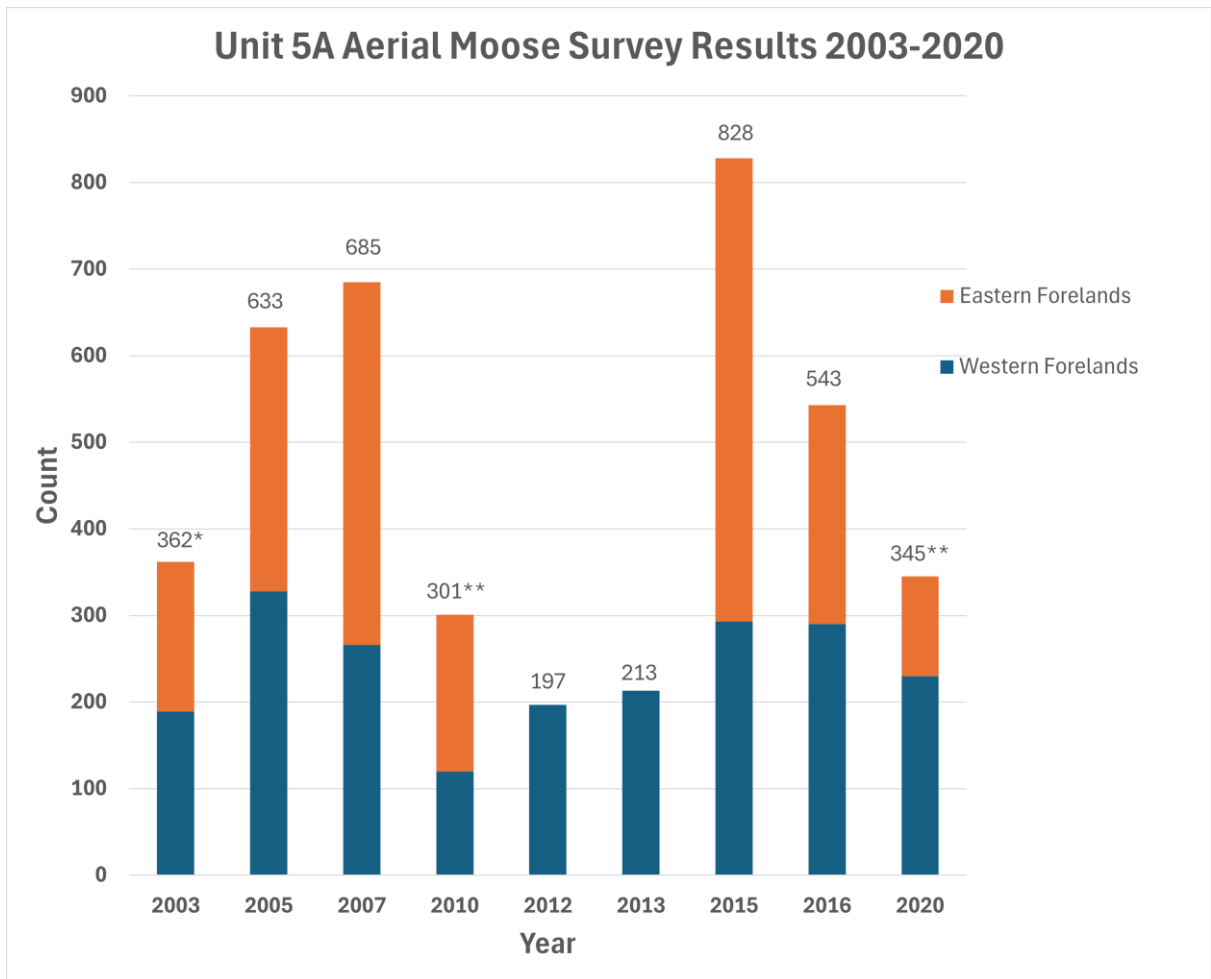
Survey Area	Year	Month	Composition Survey?	Bulls	Cows	Calves	Unk	Total	Bull:cow
<b>Yakutat Forelands</b>	2002	March	Y	28	146	21	0	195	19:100
<b>Western Forelands (5A West)</b>	2003	Dec.	N	3	23	23	140	189	<sup>1</sup>
	2005	Dec.	N	10	46	47	224	328	<sup>1</sup>
	2006	Nov.	Y	12	119	11	0	142	10:100
	2007	Dec.	N	24	21	21	200	266	11:100 <sup>3</sup>
	2008	Nov.	Y	23	67	4	0	94	34:100
	2008	Dec.	Y	24	166	31	0	221	14:100 <sup>3</sup>
	2010	March	N			10	110	120 <sup>2</sup>	<sup>1</sup>
	2011	Nov.	Y	28	141	60	0	229	20:100
	2012	Dec.	N	3	12	14	168	197	<sup>1</sup>
	2013	Oct.	Y	13	35	4	2	54 <sup>2</sup>	37:100
	2013	Dec.	N	18	36 <sup>4</sup>	41	117	212	12:100 <sup>3</sup>
	2015	Dec.	N	33	43	51	166	293	16:100 <sup>3</sup>
	2016	Dec.	N	68	39	43	140	290	38:100 <sup>3</sup>
2020	Jan.	N	4	5	5	216	230 <sup>2</sup>	N/A	
<b>Eastern Forelands (5A East)</b>	2003	Dec.	N	7	23	25	118	173 <sup>2</sup>	<sup>1</sup>
	2005	Nov.	Y	33	166	17	0	216	20:100
	2005	Dec.	N	31	25	28	221	305	<sup>1</sup>
	2007	Dec.	N	55	49	53	262	419	18:100 <sup>3</sup>
	2008	Dec.	Y	23	100	4	2	139	23:100 <sup>3</sup>
	2010	March	N			15	166	181 <sup>2</sup>	<sup>1</sup>
	2013	Oct.	Y	12	26	6	0	44 <sup>2</sup>	46:100
	2015	Dec.	N	76	85	100	274	535	21:100 <sup>3</sup>
	2016	Dec.	N	54	38	44	117	253 <sup>2</sup>	35:100 <sup>3</sup>
	2020	Jan.	N	2	9	11	93	115 <sup>2</sup>	N/A

<sup>1</sup> survey conducted after bulls started to drop antlers, no bull:cow ratio estimated

<sup>2</sup> poor survey conditions/timing = some areas not surveyed and/or high winds and flight speeds or survey conducted early or late in the season, thus total number of moose should be considered a minimum count.

<sup>3</sup> minimum count

<sup>4</sup> cows with calves only



**Figure 1.** Moose survey results for non-composition surveys in Unit 5A east (Eastern Forelands) in orange and Unit 5A west (Western Forelands) in blue from 2003-2020. Total count (east and west combined) is indicated above the bar.

\* Indicates the use of older survey methods that are less comparable.

\*\* Indicates poor survey conditions or timing that likely resulted in lower detectability.

### Cultural Knowledge and Traditional Practices

Yakutat is the only community in Unit 5A, being relatively isolated along the Gulf of Alaska between the borders of the Tongass National Forest and the Wrangell-St. Elias National Park and Preserve (Sill et al. 2017) (**Map 1**). The community is roughly 225 miles northwest of Juneau, accessible only by plane or boat (ADCCED 2024). Yakutat has a diverse cultural history (ADCCED 2024; Goldschmidt and Haas 1998). Prior to European contact, numerous villages were scattered among anadromous fish streams along hundreds of miles of the coast. Eventually, these villages coalesced into Yakutat, and while Yakutat is considered a Tlingit community, it still retains the cultural influences of the peoples of

these settlements – including Eyak, Ahtna, and relatives of the southern Tutchone (Sill et al. 2017: 23). People have made their living harvesting a variety of fish, wildlife, and plant resources here for generations (Goldschmidt and Haas 1998).

European explorers and traders began coming to the area in the 18<sup>th</sup> century, and Yakutat was part of the region's active fur trade by the early 19<sup>th</sup> century (ADCCED 2024). However, violence and disease stemming from trade and colonization greatly reduced human populations in the area by the mid-19<sup>th</sup> century (ADCCED 2024; Sill et al. 2017). Commercial fishing, fish processing, and timber production became key local industries in the early 1900s (Sill et al. 2017). Commercial fishing and subsistence harvesting remain key components of the local economy today (ADCCED 2024; Sill et al. 2017).

Today, Yakutat has a population of approximately 677 people (ADCCED 2024). Yakutat residents continue to harvest a wide variety of wild resources, including most species of salmon, many types of non-salmon fish (e.g. Pacific halibut, Eulachon, and Pacific herring), large land mammals (e.g. moose, deer, and bears), small land mammals (e.g. marten and snowshoe hare), marine mammals, a variety of marine invertebrates (e.g. shrimp, crab, and octopus), a variety of vegetation (berries, greens, seaweeds, and firewood), birds, and eggs (Sill et al. 2017). According to the most recently conducted comprehensive subsistence survey, Yakutat residents harvested an average of 262 pounds of wild foods per person in 2015 (Sill et al. 2017). Salmon accounted for the greatest percentage of this total per person harvest (35% or 93 lbs.), followed by large land mammals (18% or 48 lbs.) and non-salmon fish (18% or 47 lbs.) (Sill et al. 2017).

The moose population in the area, however, is a relatively recent subsistence resource in Unit 5A, having likely emigrated here along the Alsek River beginning in late 1920s and early 1930s (Sill et al. 2017). Previously, mountain goats, bears, and seals provided greater sources of meat for Yakutat residents (Sill et al. 2017). Yet, moose has become a key subsistence resource in the area since this time. Moose accounted for about 90% (43 lbs.) of the overall large land mammal harvest in Yakutat in 2015 (Sill et al. 2017). Moose was reported as the fourth most frequently used resource by Yakutat households in 2015 (Sill et al. 2017). Only Pacific halibut, Sockeye salmon, and Chinook salmon were used by a greater percentage of households in 2015 (Sill et al. 2017). Furthermore, moose appears to have become quantitatively more important in terms of bulk contribution to subsistence harvests when compared to the data collected during the previous comprehensive subsistence survey conducted in Yakutat in 2000 (ADF&G CSIS 2024).

In 2015, seventy-five percent of surveyed Yakutat households reported using moose, while 49% reported hunting moose, with only 20% successfully harvesting moose (Sill et al. 2017). Moose were primarily harvested in October (33%) and November (9%) (Sill et al. 2017). Moose exhibited one of the largest differences in the percentage of hunters attempting to harvest and those successfully harvesting (Sill et al. 2017). As Sill and colleagues (2017: 42) explain, “moose is the main species targeted within the [large land mammal] category, and competition for the resource is high in the more accessible hunting areas around Yakutat.” Still, 64% of Yakutat households reported receiving moose from others, while 32% of households reporting giving moose away, reflecting the cultural importance of sharing in the community (Sill et al. 2017).

Overall, about 44% of surveyed Yakutat households reported using less large land mammals in 2015 than in recent years, while 39% reported using about the same amount, and 12% reported using more (Sill et al. 2017). The primary reasons reported for using less large land mammals were unsuccessful hunts (29%), less sharing (21%), less effort (19%), and less availability of the resource (12%) (Sill et al. 2017). When asked to evaluate the impact of not getting enough large land mammals in 2015, about 45% of surveyed households described the impact as minor, 35% explained that not getting enough had a major effect on their household, and 5% stated that the impact was severe (Sill et al. 2017). Households that did not get enough large land mammals adapted primarily by using more store-bought foods (Sill et al. 2017).

Though Yakutat households generally reported high or marginal levels of food security (89% of households) in 2015, access to subsistence resources throughout the year appeared to be a greater food security issue than access to store bought foods for most residents (Sill et al. 2017). About 33% of surveyed households reported that at some point in the year their subsistence foods ran out and they could not get more (Sill et al. 2017: 37). The other food security issues most frequently reported by Yakutat households included lacking the equipment or monetary resources needed to get food (21%) and worrying about having enough food (14%) (Sill et al. 2017). As Sill and colleagues explained (2017: 37), “Yakutat is a remote community with high costs of living. Combined with a seasonal workforce, access to sufficient store-bought foods can be a challenge.” The winter months of November through February were noted by food insecure households as being the most problematic, as fewer wild resources are available in the winter and employment options also tend to be lower during this time of the year (Sill et al. 2017).

During the previous review of this closure (WCR22-02), the Southeast Council supported maintaining the closure because it was providing a meaningful subsistence priority (SERAC 2021). However, Council member Robbins explained that the moose hunt in Unit 5A East might be more effectively utilized by local subsistence harvesters if the season opening date for this hunt were moved back to October 8 (SERAC 2021). As Mr. Robbins explained, the moose hunt in Unit 5A East is not only more difficult and expensive to access from Yakutat, it also occurs at a time when many locals are busy with other commercial and subsistence activities, like fishing (SERAC 2021). The quality of moose meat can also be problematic because the rut tends to occur during this earlier portion of the season:

When the subsistence season was moved ahead two-plus weeks [into September], it became very inconvenient for the local subsistence harvesters there because they were busy fishing and all the other activity. Where it was set originally, on the 8<sup>th</sup> of October, was way more convenient and so it makes it a lot more difficult for the local subsistence users to participate in the moose hunt early...and we end up with lower quality meat in the freezer...So, consequently, I would really like to see it [the Unit 5A East season] changed back to the way it was (SERAC 2021: 607).

## Harvest History

Harvest occurs in Unit 5A East and West by registration permit RM061 under State and Federal regulations. These hunts are managed by harvest quotas, and hunts in Unit 5A West are often closed early because quotas are met. For the years 2014-2018 and 2020-2024, the moose harvest quota was met, and the Federal season was closed in Unit 5A West prior to the end of the Federal closure to NFQSU, which includes all non-residents of Unity 5A.

The total reported moose harvest in Unit 5A, except Nunatak Bench from, ranged from 30 to 48 moose per year from 2004 to 2011, averaging 38 moose per year (Barten 2004, Sell 2014). From 2012-2023, total reported harvest ranged from 33-64 moose per year (**Table 2**). An average of 19 moose were harvested annually in Unit 5A East from 2012-2023, while an average of 30 moose were harvested annually in Unit 5A West during the same time period. The Unit 5A moose seasons are closed early so that harvest quotas are not exceeded. However, due to the delay in harvest reporting, the final reported moose harvest has met or exceeded the harvest quota in Unit 5A West each year since 2012, except for 2023 (**Table 2**). Harvest in the less accessible Unit 5A East, however, only met the harvest quota in 2020.

FQSU, which for this hunt only includes residents of Unit 5A, account for the majority of the moose harvest in Unit 5A West, including 100% of the annual reported harvest from 2014-2020, and 2022-2023 (**Table 2**). This is due in large part to the annual harvest quota being met before the end of the Federal closure to NFQSU. In Unit 5A East, FQSU accounted for an average of 43% of the moose harvest from 2012-2023. The lower percentage of the harvest taken by FQSU in Unit 5A East is primarily related to issues of access, expense, and season timing (see SERAC 2021). Because Unit 5A West is more easily accessed and the timing of the Federal closure here does not conflict as much with local users' other commercial and subsistence activities, it typically receives more hunting pressure from FQSU. Since the harvest season in Unit 5A West often closes early due to quotas being met before the end of the Federal closure to NFQSU, Unit 5A East is often the only hunt option available for NFQSU.

Unit 5A West averaged 73 total hunters (all users) annually from 2012-2023, whereas Unit 5A East averaged 51 total hunters (all users) per year for the same period (**Table 3**). The total number of days hunted was also higher in Unit 5A West, averaging 204 days annually versus 184 days in Unit 5A East from 2012-2023 (**Table 3**). In recent years, hunting effort has been concentrated in the shorter Unit 5A West hunting season (**Figures 2 and 3**). However, hunting success rates have been similar in both areas. Reported hunter success rates averaged 39% in Unit 5A West and 32% in Unit 5A East from 2012-2023, exceeding the State management objective of 28% (**Table 3**). Harvest by FQSU has accounted for about 43% of the total moose harvested in Unit 5A East from 2012-2023. However, only 45% of FQSU harvest from Unit 5A East has taken place during the September closure period between 2021-2023 (**Table 4**). This proportion has ranged widely from 0% (2017) to 50% (2022, **Table 5**).

From 2017-2023, 22% of the moose harvested by FQSU have been harvested from Unit 5A East. Similarly, 25% of unsuccessful hunts by FQSU have taken place in Unit 5A East, over the same time period.

**Table 2.** Total reported harvest of bull moose in Unit 5A, 2012-2023 (Schumacher 2017; Burch 2021; Churchwell 2024, personal comm.). Designation of federally qualified subsistence user (FQSU) is based on harvester’s community of residence.

Year	Quota West	Total Harvest West (% FQSUs)	Quota East	Total Harvest East (% FQSUs)	Total
2012	25	27(89%)	30	13 (23%)	40
2013	25	25 (92%)	30	8 (50%)	33
2014	25	28 (100%)	30	16 (81%)	44
2015	25	29 (100%)	30	21 (48%)	51
2016	25	27 (100%)	30	17 (59%)	44
2017	30	35 (100%)	30	22 (46%)	57
2018	30	30 (100%)	30	17 (71%)	47
2019	30	30 (100%)	30	22 (46%)	52
2020	30	32 (100%)	30	32 (34%)	64
2021	30	35 (97%)	30	23 (39%)	58
2022	30	32 (100%)	30	19 (21%)	51
2023	30	28 (100%)	30	21 (33%)	49
<b>Average</b>	<b>28</b>	<b>30 (98%)</b>	<b>30</b>	<b>19 (46%)</b>	<b>49</b>
<b>Std. Dev.</b>	<b>2.6</b>	<b>3.2 (4%)</b>	<b>0</b>	<b>5.9 (18%)</b>	<b>8.4</b>

**Table 3.** Hunting effort by all users for moose in Unit 5A, 2012-2023 (Schumacher 2017; Burch 2021; Churchwell 2024, Personal Comm.). Numbers are reflective of all hunters who reported at least 1 day of hunting.

Area	Year	Total Number of Hunters	Total Number of Days Hunted	Success Rate	Average # of Days Hunted by Successful hunters	Average # of Days Hunted by all Hunters
5A West	2012	81	271	33%	2.9	3.3
	2013	89	328	28%	2.2	3.7
	2014	69	171	41%	2.0	2.5
	2015	80	233	36%	2.0	2.9
	2016	72	178	38%	1.3	2.5
	2017	68	190	37%	2.1	2.8
	2018	64	161	43%	1.9	2.5
	2019	63	204	35%	2.4	3.2
	2020	82	209	44%	2.0	2.5
	2021	60	109	58%	1.4	1.8
	2022	74	180	43%	2.1	2.4
2023	76	209	37%	1.4	2.8	
<b>Average</b>		<b>73</b>	<b>204</b>	<b>39%</b>	<b>2.0</b>	<b>2.7</b>
<b>Std. Dev.</b>		<b>9</b>	<b>56</b>	<b>7.5%</b>	<b>0.5</b>	<b>0.5</b>
5A East	2012	42	175	31%	2.8	4.2
	2013	30	154	27%	2.6	2.9

Area	Year	Total Number of Hunters	Total Number of Days Hunted	Success Rate	Average # of Days Hunted by Successful hunters	Average # of Days Hunted by all Hunters
	2014	54	200	30%	3.0	3.7
	2015	48	180	44%	3.4	3.8
	2016	47	183	36%	1.8	3.9
	2017	59	182	26%	2.3	3.1
	2018	40	129	23%	3.1	3.2
	2019	62	210	24%	2.3	3.4
	2020	73	234	20%	2.3	3.2
	2021	60	219	38%	2.6	3.7
	2022	52	182	37%	2.5	3.5
	2023	42	159	50%	3.5	3.8
<b>Average</b>		<b>51</b>	<b>184</b>	<b>32%</b>	<b>2.7</b>	<b>3.5</b>
<b>Std. Dev.</b>		<b>10</b>	<b>30</b>	<b>9.8%</b>	<b>0.5</b>	<b>0.3</b>

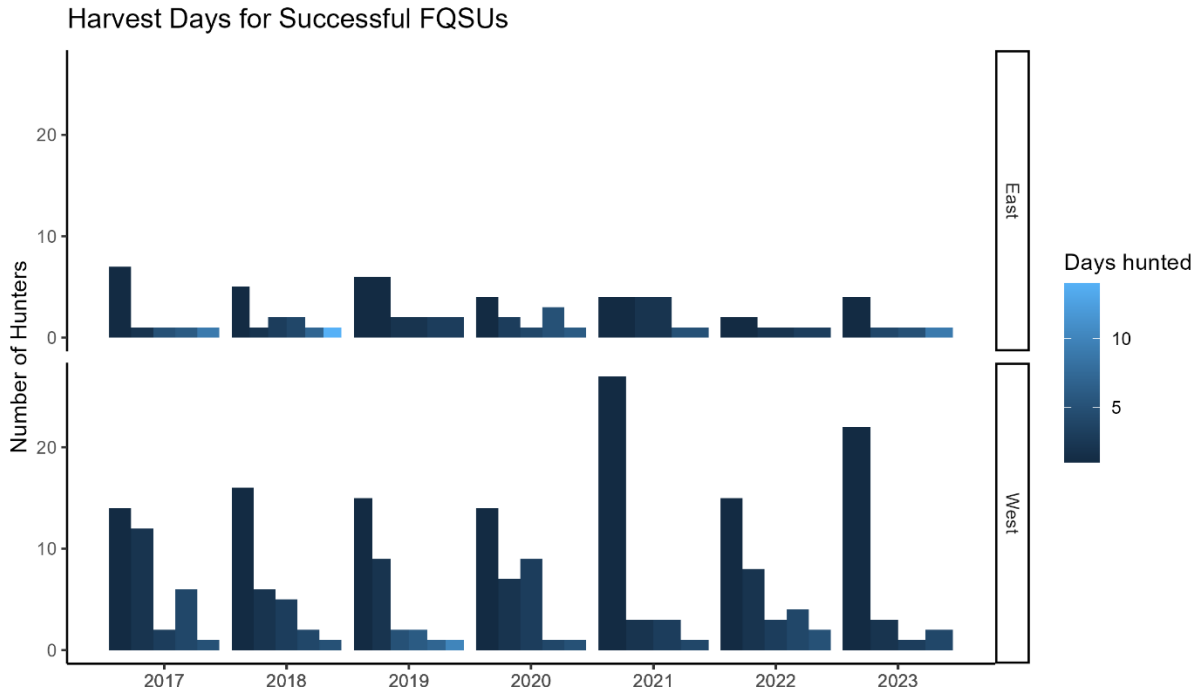
**Table 4.** Moose harvest by user type in Unit 5A East during and after the Sept. 16-30 closure period, 2021-2023. (Churchwell 2024)

User type	During closure	After closure	Total
FQSU	9	11	20
NFQU	0	40	40
Unknown	1	2	3
<b>Total</b>	<b>10</b>	<b>53</b>	<b>63</b>

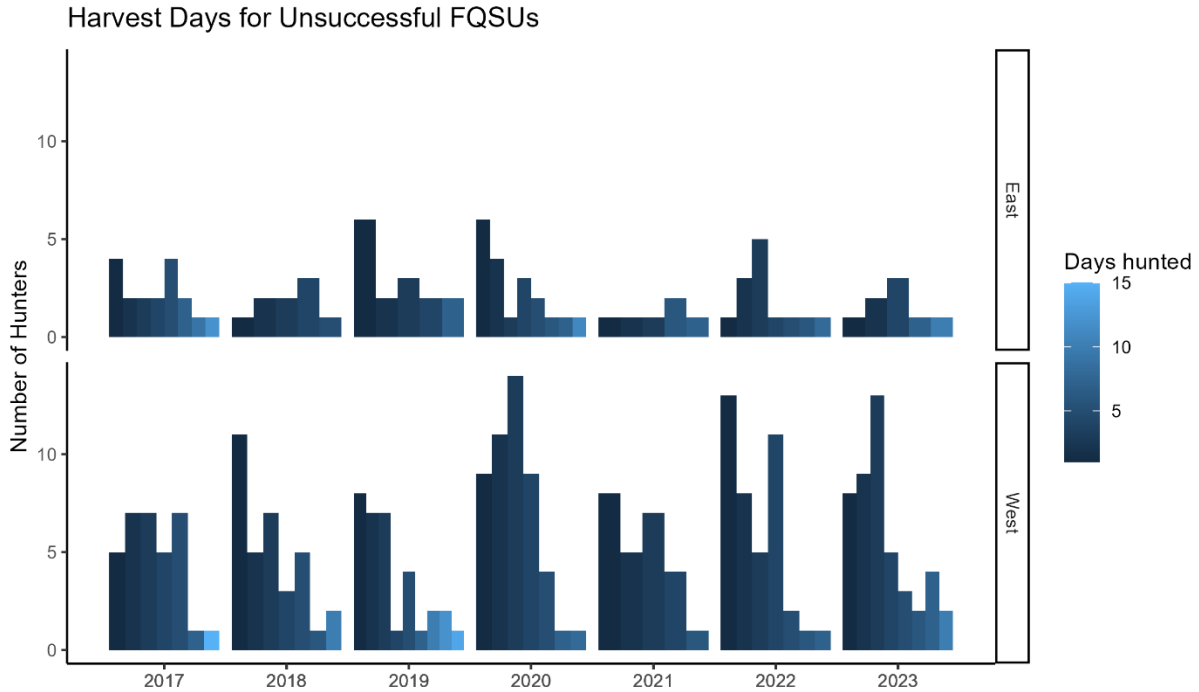
**Table 5** Moose harvest by FQSUs in Unit 5A East during and after the Sept. 16-30 closure period.

Year	During closure	After closure	Proportion occurring during closure
2017	0	11	0%
2018	5	7	42%
2019	4	6	40%
2020	3	8	27%
2021	4	5	44%
2022	2	2	50%
2023	3	4	43%
<b>Total</b>	<b>21</b>	<b>43</b>	<b>-</b>
<b>Average</b>	<b>3</b>	<b>6</b>	<b>33%</b>
<b>Std. Dev.</b>	<b>1.6</b>	<b>2.9</b>	<b>17%</b>





**Figure 2.** Hunting effort shown as the number of Federally Qualified Subsistence Users (FQSUs), who were successful in harvesting a moose in Unit 5A East (top) and West (bottom) from 2017-2023. Darker blue bars represent FQSUs, who harvested their moose in fewer days, whereas lighter bars indicate an increase in days hunted.



**Figure 3** Hunting effort shown as the number of Federally Qualified Subsistence Users (FQSUs), who were unsuccessful in harvesting a moose in Unit 5A East (top) and West (bottom) from 2017-2023. Darker blue bars represent FQSUs, who harvested their moose in fewer days, whereas lighter bars indicate an increase in days hunted.

### Alternative(s) Considered

Clarify Regulatory Language: One alternative considered was to clarify the regulatory language, specifying that Federal lands in Unit 5A East and West are closed to moose hunting, except by federally qualified subsistence users. Only residents of Unit 5A have a customary and traditional use determination for moose in Unit 5A, so the closure only applies to non-federally qualified users. Having 'residents of Unit 5A' in the regulation instead of 'federally qualified subsistence users' is confusing because it implies there is a Section 804 restriction in place. However, this correction can also be done administratively and does not require regulatory action.

Shorten the Moose Season in Unit 5A East: Another alternative considered was to shorten the moose season in Unit 5A East from Sept.16-Nov.15., to Oct. 8-Nov. 15. This option is based on feedback received from a Southeast Council member about the earlier season opening in Unit 5A East conflicting with other commercial and subsistence activities that typically take place at that time, and that harvesting moose during the earlier portion of the season can result in lower quality meat (SERAC 2021). These issues, as well as the reduced accessibility of Unit 5A East appear to result in less utilization of the area by FQSUs. This option would effectively end the current closure to NFQUs in Unit 5A East as well. However, this alternative is outside the scope of a closure review. A regulatory proposal is required to effect this change.

Rescind the closure in Unit 5A East: Another alternative would be to rescind the closure to NFQUs in Unit 5A East, but maintain the Sept.16-Nov.15 Federal harvest season. Harvest quotas are typically not being met in Unit 5A East, and FQSUs have accounted for less than half of the average yearly harvest in this area since 2012. Additionally, the State season does not open until Oct. 1, although if the closure is rescinded, a State proposal could be submitted to extend it.

It is unclear how many FQSUs hunt in Unit 5A East during the closure period, although FQSUs harvested more moose after the closure than during it from 2021-2023 (**Table 4**). Feedback from a previous Southeast Council member indicates the September season and corresponding closure period is often not particularly useful due to other seasonal activities, subsistence priorities, lower meat quality due to rutting moose, and warmer weather that can make proper meat care challenging. This alternative is within the scope of this closure review and is something the Council may wish to consider further.

Shift the closure dates in Unit 5A East: Another option may be to shift the closure dates in Unit 5A East to later in the season. The closure period in this area could potentially be shifted to Oct. 1-14 to correspond to the first two weeks of the State season. This would be within the scope of the closure review and an alternative the Council may wish to consider further. However, overall harvest and hunter activity has generally been substantially lower in Unit 5A East than Unit 5A West. The harvest quota for Unit 5A East has only been met in one year since 2012. It may be difficult to justify this alternative under section 815(3) of ANILCA.

## **Effects**

If the closure is rescinded, there would be increased opportunity for NFQUs, who are all non-residents of Unit 5A, to harvest moose in Unit 5A West. Without the closure, it is very likely that NFQUs would hunt earlier in the State season for Unit 5A West, as Yakutat is easily accessible by daily commercial airlines services. Currently, FQSUs account for the majority of the moose harvested in Unit 5A, particularly in Unit 5A West where quotas are often met before the end of the Federal closure to NFQUs. If this closure is rescinded, NFQUs would be able to hunt Federal lands a week earlier west of the Dangerous River, resulting in increased harvest by this user group and increased competition between user groups. Rescinding the Unit 5A West closure would likely decrease harvest opportunity of a limited resource for FQSUs of Unit 5A.

Modifying the closure to rescind the closure in Unit 5A East, while retaining the Unit 5A West closure, may eliminate an unnecessary restriction on NFQUs as little FQSU harvest occurs within the current Unit 5A East closure dates. The majority of moose harvest, by all user groups, in Unit 5A East occurs outside of the closure dates. Rescinding the closure in Unit 5A East would have no immediate impact on NFQUs, as the State moose season opens October 1<sup>st</sup>. However, a State proposal could be submitted to extend the State season in this area, although bull moose are in rut and temperatures are warmer in September, hindering proper meat care. This modification would retain status quo for the Unit 5A West closure, maintaining greater harvest opportunity for Yakutat residents in the area they utilize most heavily.

It is unclear whether a conservation concerns exist for any alternative since the lack of recent biological information and surveys hinders accurate and updated assessment of the Unit 5A moose population. However, close management of the Unit 5A moose harvest through harvest quotas provides some indicator of population sustainability.

## OSM PRELIMINARY CONCLUSION

- Retain the Status Quo**
- Rescind the Closure**
- Modify the Closure** to rescind the closure in Unit 5A East and retain the status quo for the closure in Unit 5A West and clarify the regulatory language.
- Defer Decision on the Closure or Take No Action**

The draft regulations read:

### **Unit 5A—Moose**

*Unit 5A, except Nunatak Bench, east of the Dangerous River—1 bull by joint State/Federal registration permit only. Sept. 16–Nov. 15*

~~*From Sept. 16–Sept. 30, Federal public lands will be closed to taking of moose, except by residents of Unit 5A hunting under these regulations.*~~

*Unit 5A, except Nunatak Bench, west of the Dangerous River—1 bull by joint State/Federal registration permit only. Oct. 8–Nov. 15*

~~*From Oct. 8–Oct. 21, Federal public lands will be closed to taking of moose, except by residents of Unit 5A federally qualified subsistence users hunting under these regulations.*~~

Disclaimer: These are draft regulations written by staff to convey OSM's conclusion. OSM maintains leeway in revising the regulatory language below, if needed to most accurately reflect OSM's conclusion and the Board's motion on record.

### **Justification**

Moose has become a key subsistence resource for Yakutat residents since emigrating to the area in the late 1920s/early 1930s. Moose accounted for about 90% of the large land mammal harvest in Yakutat in the most recently conducted comprehensive subsistence survey, and it appears to have become quantitatively more important in terms of bulk contribution to overall subsistence harvests when compared to the data collected during the previous comprehensive subsistence survey previously conducted in Yakutat. The Federal closure for Unit 5A moose remains important to the residents of Unit 5A as it provides for the continued subsistence use of the moose population as mandated by Title VIII of ANILCA. FQSU account for the majority of the moose harvested in Unit 5A, except Nunatak

Bench, and 100% of the moose harvested in Unit 5A West in most years. As this moose population is closely managed by harvest quotas and these quotas are quickly met in Unit 5A West, usually before the end of the Federal closure to NFQUs, maintaining the closure in Unit 5A West is necessary for the continuation of subsistence uses of moose. Without the closure, NFQUs would be able to hunt Federal lands a week earlier in Unit 5A West, resulting in increased competition between users, and thereby decreasing harvest opportunity of a limited resource for FQSUs.

However, harvest quotas are not being met in Unit 5A East and FQSUs only accounted for an average of about 43% of the total moose harvest from 2012 - 2023. The majority of Federal moose harvest in Unit 5A East (55%,) in recent years (2021-2023) has occurred after the closure has ended. This may be due to issues of weather, access, and other economic priorities. Feedback from the Council and others is needed to evaluate the necessity of this closure and whether the current season dates for Unit 5A East should be maintained or shifted to later in the season. Lower FQSU harvest and participation in Unit 5A East, particularly during the closure period, suggests that this closure may not be necessary for the continuation of subsistence uses.

Changing the regulatory language to ‘federally qualified subsistence users’ is more accurate and clarifies that no §804 restriction is in place.

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