STAFF ANALYSIS EMERGENCY SPECIAL ACTION WSA20-05

ISSUES

Emergency Wildlife Special Request WSA20-05, submitted by the Yukon Delta National Wildlife Refuge, requests that the fall moose season in the Kuskokwim hunt area of Unit 18 be extended from Sept. 1 - 30 to Sept. 1 - Oct. 7 for the 2020/21 regulatory year.

DISCUSSION

The proponent states that the average moose harvest since 2017 for the RM615 hunt within Zone 2 has been 74 moose, which is well below the quota of a 110 moose. The proponent further states that extending the season in Zone 2, which is predominantly Federal public lands, will allow for additional hunting opportunity for Federally qualified subsistence users, while also allowing the Federal manager to assess how much harvest increases during the requested week long extension. The proponent concludes by stating that if harvest does not increase as a result of this extension, further management action may be considered.

The applicable Federal regulations are found in 50 CFR 100.19(a) (Emergency Special Actions) and state that:

...In an emergency situation, if necessary to ensure the continued viability of a fish or wildlife population, to continue subsistence uses of fish or wildlife, or for public safety reasons, the Board may immediately open or close public lands for the taking of fish and wildlife for subsistence uses, or modify the requirements for take for subsistence uses, or close public lands to take for nonsubsistence uses of fish and wildlife, or restrict the requirements for take for nonsubsistence uses.

Existing Federal Regulation

Unit 18—Moose

Unit 18 – that portion east of a line running from the mouth of the Ishkowik Sept. 1 - 30River to the closest point of Dall Lake, then to the east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60°59.41' Latitude; W162°22.14' Longitude), continuing upriver along a line 1/2 mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake, then following the south bank east of the Unit 18 border and then north of and including the Eek River drainage¹—1 antlered bull by State registration permit; quotas will be announced annually by the Yukon Delta National Wildlife Refuge Manager Federal public lands are closed to the taking of moose except by residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautlauk, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag

¹Referred to as the Kuskokwim hunt area throughout the analysis.

Proposed Federal Regulation

Unit 18—Moose

Unit 18 – that portion east of a line running from the mouth of the Ishkowik Sept. $1 - \frac{30}{20}$ **Oct.** 7 *River to the closest point of Dall Lake, then to the east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60°59.41' Latitude;* W162°22.14' Longitude), continuing upriver along a line 1/2 mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake, then following the south bank east of the Unit 18 border and then north of and including the Eek River drainage¹—1 antlered bull by State registration permit; quotas will be announced annually by the Yukon Delta National Wildlife Refuge Manager

Federal public lands are closed to the taking of moose except by residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautlauk, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag

¹Referred to as the Kuskokwim hunt area throughout the analysis.

Existing State Regulation

Unit 18—Moose

Zone 1: Unit 18 – all Kuskokwim River drainages north and west of 1 antlered bull RM615 Sept. a line beginning at the confluence of Whitefish Lake and Ophir Cree k by permit at the Unit 18 boundary and continuing south west to the confluence of Tuluksak and Fog Rivers, then southerly to the lower Kisaralik *River-Kasigluk River cutoff of the Kisaralik River, then south westerly* to the lower Kisaralik River-Kasigluk River cutoff of the Kasigluk River, then south westerly to the Akulikutak River where the snowmachine trail crosses the river from the east side of Three Step Mountain, then westerly to the confluence of Kwethluk Rive r and Magic Creek, then southwesterly to the confluence of Eek Rive r and Middle Fork Eek River, then southwesterly to the Unit 18 boundary at 60° 4.983' N, 161° 37.140' W; and all drainages easterly of a line

1 - 7available in person in Bethel and villages within the hunt area Aug. 1-25 and online at http://hunt.ala <u>ska.gov</u> Aug. 1-Sept. 30

from the mouth of the Ishkowik River to the closest point of Dall Lake , then to the east bank of the Johnson River at its entrance into Nunavakanukakslak Lake at 60° 59.41' N, 162° 22.14' W, continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver along the east bank of Crooked Creek to the outlet at Arhymot Lake , then following the south bank of Arhymot Lake easterly to the Unit 18 boundary.

Zone 2: Unit 18 – all Kuskokwim River drainages south and east of a line beginning at the confluence of Whitefish Lake and Ophir Creek at the Unit 18 boundary and continuing southwest to the confluence of Tuluksak and Fog Rivers, then southerly to the lower Kisaralik River-Kasigluk River cutoff of the Kasigluk River, then southwesterly to the lower Kisaralik River-Kasigluk River cutoff of the Kasigluk River, then southwesterly to the Akulikutak River where the snowmachine trail crosses the river from the east side of Three Step Mountain, then westerly to the confluence of Kwethluk River and Magic Creek, then southwesterly to the confluence of Eek River and Middle Fork Eek River, then southwesterly to the Unit 18 boundary at 60° 4.983' N, 161° 37.140'.

I antlered bull RM615 Sept. by permit I – 30 available in person in Bethel and villages within the hunt area Aug. 1-25 and online at <u>http://hunt.ala</u> <u>ska.gov</u> Aug. 1-Sept. 30

Extent of Federal Public Lands

Unit 18 is comprised of 67% Federal public lands and consists of 64% U.S. Fish and Wildlife Service (USFWS) managed lands and 3% Bureau of Land Management (BLM) managed lands

The Unit 18 Kuskokwim moose hunt area is comprised of 57% Federal public lands and consists of 56% USFWS managed lands and 1% BLM managed lands (**Figure 1**).

Zone two within the Kuskokwim moose hunt area is comprised of 82% Federal public lands and consists of 79% USFWS managed lands and 3% BLM managed lands (**Figure 1**).

Customary and Traditional Use Determinations

Residents of Unit 18, Upper Kalskag, Aniak, and Chuathbaluk have a customary and traditional use determination in the portion of Unit 18 that includes the Yukon River drainage upstream of Russian Mission and the Kuskokwim River drainage upstream of, but not including, the Tuluksak River drainage.

Residents of Unit 18, Lower Kalskag, and Upper Kalskag have a customary and traditional use determination in Unit 18 remainder.

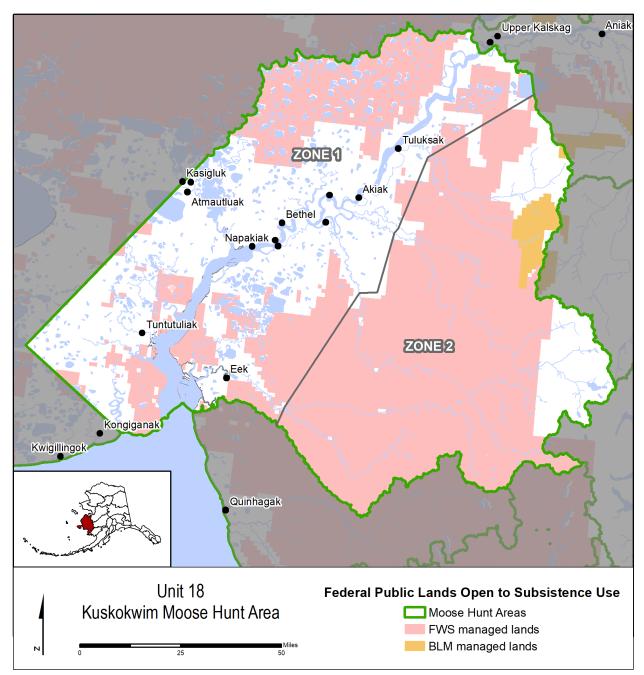


Figure 1. Federal public lands and hunt zones within the Kuskokwim moose hunt area, Unit 18.

Regulatory History

Federal public lands in the Kuskokwim area have been closed to non-Federally qualified users since 1991, when the Federal Subsistence Board (Board) acted on Proposal P91-124. Submitted by the Togiak National Wildlife Refuge, P91-124 requested that the moose season in the southern portion of Unit 18, including the Kanektok and Goodnews River drainages, be closed to allow establishment of a harvestable population. The Board adopted this proposal with modification to close Federal public

lands throughout Unit 18 to moose harvest, except by Federally qualified subsistence users, given low moose densities throughout Unit 18.

Until 2004, Federal and State moose harvest limits for the lower Kuskokwim River area were one bull or one antlered bull, and the fall seasons were approximately one month. The State winter season varied widely from a continuous fall/winter season (Sept. 1–Dec. 31) to a 10-day December season and a winter "to be announced" season. The Federal winter season varied from a 10-day season to a "to be announced" season.

Both the Federal and State seasons were closed in the fall of 2004 as part of a coordinated effort to build the Kuskokwim moose population. In 2003, at the request of local residents, the Alaska Board of Game (BOG) established a five-year moratorium on moose hunting under State regulations. The Board adopted Proposal WP04-51 in April 2004 that established a five-year moratorium on Federal public lands. The intent of the moratorium was to promote colonization of underutilized moose habitat. The moratorium was largely instigated by the Lower Kuskokwim Fish and Game Advisory Committee, which worked with the Alaska Department of Fish and Game (ADF&G), USFWS, and area residents to close the moose season for five years or when a population of 1,000 moose was counted in the lower Kuskokwim survey unit. Considerable outreach efforts were made to communicate the impact of the moratorium on the growth potential of the affected moose population to local communities.

In March 2009, the BOG established a registration hunt (RM615), in preparation for ending the moratorium on June 30, 2009. A Sept. 1 - 10 season was established, with a harvest limit of one antlered bull by registration permit. The season was closed when the quota was met. In November 2009, the BOG adopted a proposal that changed the boundary separating the Unit 18 lower Kuskokwim area from the Unit 18 remainder area.

In May 2010, the Board adopted Proposals WP10-58 and WP10-62, with modification to make boundary changes similar to the BOG actions. Adoption of these proposals helped to clarify the boundary for moose hunters and law enforcement. At the same meeting, the Board adopted Proposal WP10-54 with modification to reduce the pool of Federally qualified subsistence users eligible to hunt moose on Federal public lands within the lower Kuskokwim hunt area. This was necessary because of the small number of moose available to harvest relative to the large number of subsistence users with a customary and traditional use determination for moose (42 communities including Bethel).

Special action requests were approved to establish Federal moose seasons in the lower Kuskokwim hunt area in 2010 and 2012. In 2010, Emergency Wildlife Special Action WSA10-02 was approved to establish a Sept. 1 -5 moose season. In 2012, Emergency Wildlife Special Action WSA12-06 was approved to establish a Sept. 1 -30 moose season. The harvest quota was set prior to the start of the season and the harvest limit was one antlered bull by State registration permit.

In April 2014, the Board adopted WP14-27 with modification, establishing a Federal moose season in the Kuskokwim hunt area. The Sept. 1 - 30 season had a harvest limit of one antlered bull by State

registration permit. The Yukon Delta National Wildlife Refuge manager was delegated the authority to establish an annual quota and close the season once the quota was met.

In August 2018, the Tuluksak Native Community submitted Emergency Special Action Request WSA18-02, requesting that the Board open the moose season early in the Kuskokwim hunt area to accommodate a food shortage emergency. The Board approved this request with modification to open an Aug. 18 - 31 emergency season only to residents of Tuluksak, with a quota of seven antlered bulls by Federal registration permit.

In April 2020, the Board considered Proposal WP20-35 and Closure Review WCR20-38 concerning moose in the Kuskokwim hunt area. Proposal WP20-35 requested the addition of a may be announced season between Dec. 1 – Jan. 31. The Board rejected this proposal as part of the consensus agenda because of conservation concerns. The Board voted to maintain status quo on the Federal lands closure reviewed by WCR20-38 because demand for moose exceeds sustainable harvest levels.

ADF&G and the Yukon Delta NWR cooperatively manage the Kuskokwim hunt area in two zones (**Figure 1**). Zone 1 is primarily non-Federal lands, and quotas are set by ADF&G. Local subsistence users can easily access Zone 1 by boat along the Kuskokwim River. Therefore, quotas are quickly met, and seasons close early by emergency order. Zone 2 is primarily Federal public lands, and the Yukon Delta NWR sets quotas. Zone 2 is much more difficult to access, and quotas are not usually met.

Biological Background

Moose are believed to have begun colonization of the Yukon-Kuskokwim Delta in the 1940s (Perry 2014). By the 1990s, when the Federal public lands closure was initiated, moose densities throughout much of Unit 18 were very low. Though established populations existed in the far eastern portions of Unit 18, moose were only sparsely distributed throughout much of the unit. Harvested moose were likely to be immigrants from other areas, rather than part of a local breeding population (FSB 1991), and hunting pressure was effective in limiting growth of the moose population along the Kuskokwim River corridor (Perry 2014). The 2004 – 2008 hunting moratorium was effective in establishing a harvestable population, and the most recent indicators suggest that the population along the Kuskokwim River main stem and in its tributaries continues to grow.

The most recent population survey of the lower Kuskokwim survey area, which includes the main stem riparian corridor between Kalskag and Kwethluk, occurred in 2015. At that time, the population was estimated to be 1,378 moose, or 1.6 moose/mile² in Zone 1 (**Figure 2**). This represents an annual growth rate of 20% between 2011 and 2015. The population estimate for Zone 2 was 508 moose (YKDRAC 2019). At that time, the Kuskokwim moose population remained below the State's population objective of at least 2,000 moose in this area (Perry 2014).

Lack of snow cover in recent years has precluded additional population surveys. However, ADF&G currently estimates 2,500 moose in the Kuskokwim hunt area with 1,800 moose in Zone 1 and 700 moose in Zone 2, which exceeds population objectives (YKDRAC 2019). Browse surveys in Zones 1

and 2 indicate that the population is about one-half and one-third of what it could be, respectively (YKDRAC 2017a, 2019).

Composition estimates for the main stem were last obtained in 2016, when there were 70 bulls:100 cows. Bull:cow ratios, which were quite high during the harvest moratorium, declined when harvest resumed in 2009, but have remained consistently above the minimum objective of 30 bulls:100 cows (**Table 1**). Bull:cow ratios in the Kuskokwim tributaries are also reported to be high (Rearden 2018, pers. comm.).

Fall calf:cow ratios of < 20 calves:100 cows, 20-30 calves:100 cows, and > 30-40 calves:100 cows may indicate declining, stable, and growing moose populations, respectively (Stout 2010). Between 2007 and 2016, calf:cow ratios ranged from 49-73 calves:100 cows (**Table 1**; Jones 2018, pers. comm.). These high calf:cow ratios indicate a growing moose population. Twinning rates, which provide an index for nutrition, are also high at 40-50% (YKDRAC 2019).

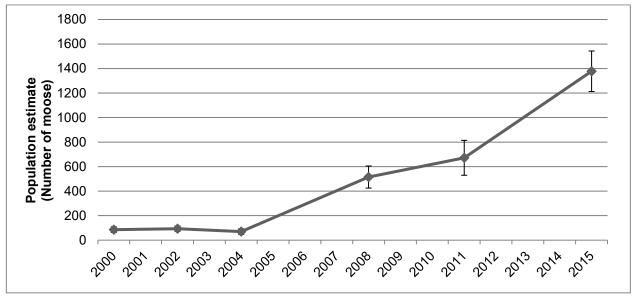


Figure 2. Estimated moose population size along the main stem of the Kuskokwim River, 2000 – 2015 (Perry 2014; Jones 2018, pers. comm.)

Table 1. Composition estimates for moose along the main stem of the Kuskokwim River, 2007 – 2016 (YDNWR 2015, Jones 2018, pers. comm.).

Year	Bulls:100 cows	Calves:100 cows
2007	98	73
2009	52	49
2010	51	49
2013	41	71
2016	70	56

Harvest History

Following the harvest moratorium, moose harvest on non-Federal lands was allowed under State regulation, beginning in 2009. In 2010, harvest on Federal public lands was opened to a subset of Federally qualified subsistence users, including residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag. In this analysis, this user group will be referred to as local users.

Since 2009, reported harvest has averaged 159 moose annually (ADF&G 2019a). Notably, reported harvest has increased, doubling between 2014 and 2017 (**Figure 3**). Local users have taken 95% of the reported moose harvest in the Kuskokwim hunt area since 2009, with 30% of the harvest attributable to residents of Bethel. However, non-local use is increasing, from two harvest reports in 2013 to 16 in 2017 (**Figure 3**). Non-local users that report harvesting moose are primarily Federally qualified subsistence users from coastal communities of Unit 18, but also include a few users from southcentral Alaska (ADF&G 2019a). About 30 moose, including around 20 cows are harvested each year for funerals and potlatches in Zone 1 (YKDRAC 2019; Moses 2020, pers. comm.).

Despite increases in quotas and harvest, demand still outweighs moose availability. Since 2009, an average of approximately 1,450 hunters have obtained permits to harvest moose in the Kuskokwim hunt area each year, but only 10% of permit holders have successfully harvested moose (ADF&G 2019a). The disparity between demand and the relatively small quotas has routinely resulted in emergency closure of the State season within days of its opening (**Table 2**). This has resulted in some frustration among locals, who note that short unpredictable seasons make planning difficult. Local residents have also commented on the challenges of hunting in early September in recent years, given warm conditions that make proper meat care difficult. To this end, many subsistence users have advocated for a later moose season (YKDRAC 2017b).

In an effort to better serve users in an area of checkerboard land status, State and Federal managers adjusted the structure of the hunt in 2017, introducing a zone-based hunt (**Figure 1**). An important feature of the zones is that, while they correspond roughly to State and Federal lands, they are delineated by easily identifiable geographical features (e.g. river confluences). Each of the two zones is managed with its own harvest quota. Zone 1, which is comprised primarily of State lands, is located along the main stem of the Kuskokwim River. The season and harvest quota for the main stem hunt are managed by ADF&G. Zone 2 is comprised primarily of Federal public lands, including those in the Tuluksak, Kisaralik, Kasigluk and Eek river drainages ("tributaries"). The season and harvest quota in the tributary hunt is managed by the Refuge (Rearden 2018, pers. comm.; YKDRAC 2017a).

There is more demand for moose in Zone 1, along the main stem, compared to Zone 2, in the tributaries. This is evidenced by the rate at which the quota is met within each zone, and the corresponding season length. On average, the main stem hunt has been open fewer than six days annually since 2011, and the quota has been met or exceeded most years. For the hunt in the tributaries, the quota has only been met one time, in 2014, despite increasing season lengths (**Tables 2** and 3). Local managers report that hunting in the tributaries is difficult, requiring specialized boats,

longer travel times, and more fuel. Heavy vegetation along the banks contributes to the difficulty. It is believed that the unmet quota is a function of these difficulties, rather than lack of need for moose meat (YKDRAC 2017a, YKDRAC 2017b, Rearden 2018, pers. comm.).

ADF&G is currently managing the Kuskokwim moose population for continued growth, and advises maintaining harvests within quotas and for bulls-only. However, ADF&G expects regulations in the Kuskokwim hunt area will be liberalized over the next five years if the moose population approaches carrying capacity as indicated by browse removal surveys (YKDRAC 2019).

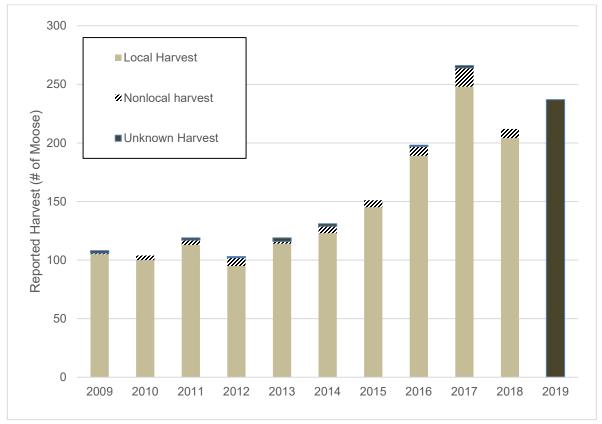


Figure 3. Reported moose harvest by RM615 in the Kuskokwim hunt area, 2009 – 2018 (ADF&G 2019a).

	Scheduled season dates		Actual season dates		Actual season length (number of days)	
Year	State	Federal	State	Federal	State	Federal
2011	Sept. 1 - 10	Sept. 1 - 5	Sep 1 - 6	Sep 1 - 6	6	6
2012	Sept. 1 - 10	Sept. 1 - 10	Sept. 1 - 8	Sept. 1 - 8	8	8
2013	Sept. 1 - 10	Sept. 1 - 10	Sept. 1 - 6	Sept. 1 - 6	6	6
2014	Sept. 1 - 10	Sept. 1 - 10	Sept. 1 - 4	Sept. 1 - 4	4	4
2015	Sept. 1 - 10	Sept. 1 - 8	Sept. 1 - 4	Sept. 1 - 8	4	8
2016	Sept. 1 - 10	Sept. 1 - 15	Sept. 1 - 5	Sept. 1 - 15	5	15
2017ª	Sept. 1 - 10	Sept. 1 - 25	Sept. 1 - 5	Sept. 1 - 25	5	25
2018ª	Sept. 1 - 10	Sept. 1 - 30	Sept. 1 - 7	Sept. 1 - 30	7	30
2019ª	Sept. 1 - 7	Sept. 1 – 30	Sept. 1 - 7	Sept. 1 - 30	7	30

Table 2. State and Federal moose seasons, 2011 – 2018 (Rearden 2018, pers. comm.; ADF&G 2019b; Jones 2019, pers. comm.; YKDRAC 2019).

^a The State season corresponds to Zone 1 and the Federal season corresponds to Zone 2.

Table 3. State and Federal moose quotas and harvest, 2011 – 2018 (Rearden 2018, pers. comm.; ADF&G 2019b; Jones 2019, pers. comm.; Moses 2020, pers. comm.).

	Quota (number of moose)			Harvest (number of moose)			
Year	State	Federal	Total	State	Federal	Unknown	Total
2011	81	19	100	93	11	15	119
2012	81	19	100	82	17	4	103
2013	81	19	100	89	21	9	119
2014	81	19	100	93	15	23	131
2015	110	45	155	105	31	15	151
2016	150	90	240	136	44	14	194
2017ª	170	110	280	186	80	0	266
2018ª	170	110	280	142	70	0	212
2019ª	180-200	110	290-310	165	72	-	237
2020ª	170	110	280				

^a The State quota corresponds to Zone 1 and the Federal quota corresponds to Zone 2.

Effects of the Proposal

If this request is approved, the moose season in the Kuskokwim hunt area of Unit 18 would be extended seven days, closing October 7 instead of September 30 for the 2020/21 regulatory year. This would increase hunting opportunity for Federally qualified subsistence users and could increase total moose harvest in this area.

While the Federal season applies to the entire Kuskokwim hunt area, the Federal hunt requires use of a State registration permit, which divides the area into Zones 1 and 2. Harvest quotas in Zone one are generally met in less than one week, and seasons are closed. Therefore, this season extension functionally only applies to Zone 2, where harvest quotas are not being met due to difficulty in accessing the area. Since 2017, the Federal in-season manager has announced Zone 2 harvest quotas of 110 moose; however, an annual average of only 74 moose have been reported harvested. Extending the season by a week could help meet harvest quotas.

State seasons in Zone 2 are Sept. 1-30, aligning with existing Federal seasons. Approval of this request would misalign State and Federal seasons. The Board would need approval from ADF&G to use a State permit under Federal regulations when State seasons are closed.

During the Council's deliberation of Proposal WP20-35 at their Fall 2019 meeting, ADF&G suggested increasing harvest opportunity by extending the fall season into mid-October instead of establishing a winter to-be-announced season. ADF&G stated that extending the season into October would likely achieve harvest quotas at a manageable pace (YKDRAC 2019).

OSM CONCLUSION

Support Special Action Request WSA20-05.

Justification

This request provides additional opportunity for Federally qualified subsistence users. No conservation concerns exist as harvest is managed through quotas, which are not being met. The in-season manager would close the season if quotas are met. Approval is needed from ADF&G to use a State permit to hunt under Federal regulations when State seasons are closed.

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INTERACENCY STAFF COMMITTEE RECOMMENDATION

Approve Temporary Special Action request WSA20-05 to extend the fall moose season in the Kuskokwim hunt area of Unit 18 from Sept. 1 - 30 to Sept. 1 - Oct. 7 for the 2020/21 regulatory year.

Justification

The Interagency Staff Committee (ISC) concurs with the OSM staff analysis' that there is no conservation concern for this moose population. The population had an annual growth rate of 20% between 2011 and 2015. The most recent bull:cow ratios (2016) are above State objectives and recent calf:cow ratios and twining rates indicate a generally stable to increasing moose population within the unit. Approving this request to extend the season by seven days would increase hunting opportunity for federally qualified subsistence users and could increase total moose harvest in Zone 2 of this unit, where moose are more difficult to access and recent harvest quotas have not been met. The quota for Zone 2 has been 110 moose since 2017, however, on average only 74 moose have been reported harvested. This conservative season extension will allow the Manager to evaluate if the action effectively improves harvest opportunities. Extending the season and opportunity for moose harvest, may also serve to reduce food security concerns associated with the COVID 19 Pandemic.