

Reauthorization of Antlerless Moose Hunts and Brown Bear Tag Fee Exemptions for other Regions

PROPOSAL 249

5 AAC 85.045(a)(5). Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose season in the Twentymile/Portage/Placer hunt area in Units 7 and 14C.

	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
Seasons and Bag Limits		

(5)

...

Unit 7, the Placer River drainages, and that portion of the Placer Creek (Bear Valley) drainage outside the Portage Glacier Closed Area, and that portion of Unit 14(C) within the Twentymile River drainage

RESIDENT HUNTERS:

1 moose by drawing permit only; up to 60 permits for bulls will be issued in combination with nonresident hunts, and up to 70 permits for antlerless moose will be issued; or

Aug. 20—Oct. 10
(General hunt only)

...

What is the issue you would like the board to address and why? Antlerless moose seasons must be reauthorized annually, and the Alaska Department of Fish and Game (ADF&G) recommends reauthorizing the antlerless hunt in Units 7 and 14C. The moose population in the Twentymile/Portage/Placer area has a history of rapid increase following mild winters and sharp reductions during severe winters. In 2009, antlerless permits were issued for the first time since 2004. The number of permits issued depends on the current population estimate and bull:cow ratios, as well as estimated winter mortality. A December 2020 aerial composition count of moose in the Twentymile, Portage, and Placer river drainages found 153 moose with a bull:cow ratio of 30 bulls per 100 cows and a calf:cow ratio of 14 calves per 100 cows.

The harvest of antlerless moose provides ADF&G with a management tool to maintain the number of moose in the Twentymile/Portage/Placer area at a population level low enough to reduce over-browsing of winter habitat, moose-vehicle collisions, and starvation during severe winters. The moose population will be healthier and more productive due to decreased stress levels associated with winter food shortages. This hunt has been successful in creating additional moose hunting opportunity with little or no controversy.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-025)

PROPOSAL 250

5 AAC 85.045(a)(12). Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose seasons in Unit 14C.

Seasons and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
(12)		
...		
Unit 14(C), Joint Base Elmendorf-Richardson (JBER) Management Area 1 moose per regulatory year by drawing permit, and by muzzleloading blackpowder rifle or bow and arrow only; up to 185 permits may be issued	Sept. 1—Mar 31 (General hunt only)	Sept 1.—Mar 31
Unit 14(C), that portion known as the Birchwood Management Area 1 moose by drawing permit, by bow and arrow only; up to 25 permits may be issued	Sept. 1—Sept. 30 (General hunt only)	Sept 1.—Sept. 30
Unit 14(C), that portion known as the Anchorage Management Area 1 antlerless moose by drawing permit only, and by bow and arrow, shotgun, or muzzleloading black powder rifle only; up to 50 permits may be issued	Sept 1.—Nov. 30 (General hunt only)	No open season

Unit 14(C), that portion of the Ship Creek drainage upstream of the Joint Base Elmendorf-Richardson (JBER) Management Area

1 moose by drawing permit only; up to 50 permits may be issued; or	Sept. 1—Sept. 30 (General hunt only)	Sept. 1—Sept. 30
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1 bull by registration permit only	Oct. 1—Nov. 30 (General hunt only)	Oct. 1—Nov. 30
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...

Remainder of Unit 14(C)

1 moose per regulatory year, only as follows:

...

1 antlerless moose by drawing permit only; up to 60 permits may be issued; or	Sept. 1—Sept. 30 (General hunt only)	No open season
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1 bull by drawing permit only, by bow and arrow only; up to 10 permits may be issued	Oct. 20—Nov. 15	No open season
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...

What is the issue you would like the board to address and why? Antlerless moose hunts must be reauthorized annually, and the Alaska Department of Fish and Game (ADF&G) recommends reauthorizing the antlerless moose hunts in Unit 14C. The harvest of antlerless moose provides the ADF&G with a management tool to maintain the number of moose in Unit 14C at the desired population objective (1,500 moose). This population size has been demonstrated to reduce over-browsing of winter habitat, moose-vehicle collisions, moose-human conflicts in urban areas, and starvation during severe winters. These hunts have also been successful in providing additional moose hunting opportunities in the state’s human population center with little controversy.

Moose in Unit 14C are managed for a population objective of 1,500–1,800 moose and an annual harvest objective of 90–270 moose (5 AAC 92.108). The number of antlerless permits issued depends on the current population estimate and bull:cow ratios, as well as estimated winter mortality. In 2013, the ADF&G estimated that the moose population contained approximately 1,533 moose in Unit 14C from a combination of population census, composition surveys and extrapolation to unsurveyed areas. A 2020 aerial composition count of the JBER management area and the Ship Creek drainage found 242 moose with a bull:cow ratio of 30 bulls per 100 cows and a calf:cow ratio of 25 calves per 100 cows. Compared to the 2013 survey of the same area, where a total of 225 moose were found with bull:cow and calf:cow ratios of 39:100 and 20:100, respectively, very little change has occurred. In addition, harvest numbers have remained relatively steady, indicating that

population level has likely not changed dramatically. At this population level, we have received fewer reports of human-moose conflicts and winter mortalities. Harvesting cow moose is paramount to maintaining the population at the low end of the objective while providing harvest opportunity.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-026)

PROPOSAL 251

5 AAC 085.045(a)(13). Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose season on Kalgin Island in Unit 15B as follows:

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
(13)		
...		
Unit 15(B), Kalgin Island		
1 moose per regulatory year, by registration permit only	Aug. 20—Sept. 20	Aug. 20—Sept. 20
...		

What is the issue you would like the board to address and why? Antlerless moose hunts must be reauthorized annually by the Board of Game. The current regulation for hunting moose on Kalgin Island in Unit 15B allows hunters to harvest antlerless moose with the goal of reducing the population to the management objective.

In response to concerns that the moose population on Kalgin Island had exceeded the island’s carrying capacity and deteriorating habitat conditions, the board established a drawing permit hunt for antlerless moose in 1995. In a further attempt to reduce the number of moose on the island, the board established a registration hunt for any moose in 1999. Despite these measures to reduce moose numbers, moose remain abundant on the island and continue to exceed the management objective.

During the most recent moose survey, Alaska Department of Fish and Game (ADF&G) staff counted 118 moose on Kalgin Island in February 2020. This count exceeded the population objective of 20–40 moose. In the last 10 years, an average of 122 permits were issued for this hunt; of which 87 permittees hunted, with an annual harvest of 30 moose.

The any moose registration hunt is recommended to provide liberal harvest opportunity on this predator-free island population. A registration hunt also allows the ADF&G to continue gathering biological information from specimens provided by successful hunters. The difficult hunting conditions and limited access will make over-harvest unlikely.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-023)

PROPOSAL 252

5 AAC 85.045(a)(13). Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose seasons in Unit 15C as follows:

This proposal would reauthorize the antlerless moose hunt for the Homer bench (DM549) and the targeted hunt (AM550).

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
(13)		
...		
Unit 15(C), that portion south of the south fork of the Anchor River and northwest of Kachemak Bay		
RESIDENT HUNTERS:		
...		
1 antlerless moose by drawing permit only; the taking of calves, and females accompanied by calves, is prohibited; up to 100 permits may be issued in combination with the nonresident drawing hunt: or	Oct. 20—Nov. 20	
...		
1 moose by targeted permit only[,]	Oct. 15—Mar. 31	
NONRESIDENT HUNTERS:		
...		
1 antlerless moose by drawing permit only; the taking of calves, and females accompanied by calves, is prohibited; up to 100 permits may be issued in combination with the resident drawing hunt		Oct. 20—Nov. 20
Remainder of Unit 15(C)		
...		

RESIDENT HUNTERS:

...

1 moose by targeted permit only[,] Oct. 15—Mar. 31

What is the issue you would like the board to address and why? Antlerless moose seasons must be reauthorized annually, and the Alaska Department of Fish and Game (ADF&G) recommends reauthorization of the Homer bench hunt (DM549) and the targeted hunt (AM550) along the Sterling Highway in Unit 15C for the 2020-21 hunting season.

In February 2017, a GSPE census was conducted in the northern portion of Unit 15C (north of Kachemak Bay) and resulted in a population estimate of 3,529 moose (95% CI: range 2,769–4,289), of which 19% (95% CI: 14–24) were calves. This equates to a density of approximately 3 moose/mi² in the census area. Fall composition counts in core count areas during December 2019 provided a bull ratio of 40 bulls:100 cows.

The Homer bench land in Unit 15C, which encompasses the hunt boundary of DM549, contains high densities of moose when deep snow drives moose into human populated areas. Even without deep snow, some moose die due to malnutrition and negative interactions with humans occur as moose become more aggressive in their search for food around human residences. Fifty permits were issued in each of the last 10 years resulting in an average harvest of 24 cows annually.

The purpose of AM550 is to allow for the harvest of antlerless moose along the Sterling Highway in Unit 15C during deep snow winters to reduce moose and vehicle collisions. On average, 62 known animals are killed each year in vehicle collisions in Unit 15C. ADF&G will decide when and where permits will be issued during the hunt period. Targeted hunts are administered through a registration permit and up to 100 moose may be taken. The number of permits issued each year will depend on conditions, and it is possible no permits will be issued in some years based on snow conditions.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-024)

PROPOSAL 253

5 AAC 85.045(a)(16). Hunting seasons and bag limits for moose.

Reauthorize the resident antlerless moose season in Unit 18 as follows:

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
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(16)

...

Unit 18, that portion that drains into Kuskokwim Bay south of the Carter Bay drainage

RESIDENT HUNTERS:

...

1 moose by registration permit only; to be announced by emergency order;

Dec. 1—Mar. 31
(Season to be announced)

No open season.

...

Remainder of Unit 18

RESIDENT HUNTERS:

2 moose; of which only 1 may be an antlered bull; a person may not take a calf or a cow accompanied by a calf; or

Aug. 1—Sept. 30

2 antlerless moose; or

Oct. 1—Nov. 30.

2 moose

Dec. 1—April 30.

NONRESIDENT HUNTERS:

...

1 antlerless moose

Dec. 1—Mar. 15

What is the issue you would like the board to address and why? To be retained, the antlerless moose seasons in Unit 18 must be reauthorized annually. The current antlerless hunts in the Remainder of Unit 18 were adopted at the January 2014 Board of Game meeting in Kotzebue. The current antlerless hunt in the Goodnews Hunt area and nonresident antlerless hunt was adopted at the January 2017 Board of Game meeting in Bethel. Both of these antlerless hunts were amended at the 2020 Board of Game meeting in Nome. The Board of Game has previously reauthorized the antlerless moose season for resident hunts in Unit 18 remainder for regulatory year (RY) 2016 through RY2021. This proposal requests reauthorization for RY2022.

Implementation of antlerless hunts began in 2007 and has continued each year due to increased moose abundance, productivity, and population growth along the Yukon River drainage in Unit 18. Based on the steady growth in moose populations and productivity, ADF&G proposes continued antlerless moose hunts in the Remainder of Unit 18.

Within the areas near the Yukon River, the moose population is estimated at a minimum of 24,000 animals with calf:cow ratios ranging from 35:100 to 75:100, and twinning rates from 30% to 40% for all areas. Population growth continues to be strong in this portion of Unit 18. The population is expected to continue to grow with high recruitment and adult survival.

Although the current year harvest data in the Remainder of Unit 18 has not been finalized due to the early proposal deadline, we expect harvest to be similar to the past four years and well within sustained yield for this robust population. Allowing antlerless harvest will benefit hunters through increased opportunity, and any increases in harvest may help slow the growth rate of the population in this portion of Unit 18.

The moose population in the Goodnews River drainage had grown steadily over the past 15 years following a closure in 2004. The fall hunt has had a quota of 10 when first adopted, and was recently increased to 30. The season has not been closed by Emergency Order, and the quota has not been met in the past few years. In the four years that the winter hunt has been held harvest has been low with zero to five moose harvested. The population now is over 450 moose and based on the steady growth in moose populations and productivity, ADF&G proposes continued antlerless moose hunts in the Goodnews River Drainage.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-038)

PROPOSAL 254

5 AAC 85.045(a)(17). Hunting seasons and bag limits for moose.

Reauthorize a winter any-moose season during February in a portion of Unit 19D as follows:

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
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(17)

...

Unit 19(D) that portion upstream from the Selatna River, excluding the Black River

RESIDENT HUNTERS:

...

1 moose, by registration permit only, a person may not take a cow accompanied by a calf

Feb 1 – Last day of Feb.

...

What is the issue you would like the board to address and why? Antlerless moose hunting seasons must be reauthorized annually. The goal is to provide additional harvest opportunity and meet harvest objectives.

The moose population in Unit 19D East has approximately doubled since predator removals began in 2003. The Alaska Department of Fish and Game (ADF&G) is observing decreasing nutritional status as indicated by declining twinning rates. Prior to intensive management, bull-to-cow ratios along the Kuskokwim River drainage were measured at 18 bulls per 100 cows. After predator reductions and a closure of moose hunting in the Bear Control Focus Area (BCFA), ratios improved to 39 bulls per 100 cows by 2007. By 2020 ratios had declined again and the two-year average was 17 bulls per 100 cows.

To maintain a healthy and productive moose population, ADF&G research (Boertje et al. 2007) indicates that when the 2-year average twinning rate is 11–20% populations should be stabilized. Twinning rates in Unit 19D East remained high until 2015; however, the current 2-year average twinning rate is now 17%, indicating a decreasing nutritional status in this population. The current Intensive Management plan for Unit 19D East calls for stabilization of the population through harvest when the two-year average twinning rate is between 15 and 20%.

Additional harvest opportunity is available. Winter hunts distribute hunter pressure and allow access to areas inaccessible in the fall.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-030)

PROPOSAL 255

5 AAC 85.045(a)(18). Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose seasons in Unit 20A as follows:

Units and Bag Limits	Resident Open Season Subsistence and General Hunts	Nonresident Open Season
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(18)

Unit 20(A), the Ferry Trail Management Area, Wood River Controlled Use Area, and the Yanert Controlled Use Area

RESIDENT HUNTERS:

...

Units and Bag Limits

**Resident
Open Season
Subsistence and
General Hunts**

**Nonresident
Open Season**

1 antlerless moose by drawing permit only; up to 2,000 permits may be issued in combination with the Remainder of Unit 20(A); a person may not take a cow accompanied by a calf; or

Aug. 15–Nov. 15
(General hunt only)

1 antlerless moose by registration permit only; a person may not take a cow accompanied by a calf; or

Oct. 1–last day of
Feb.

...

1 moose by targeted permit only; by shotgun, crossbow, or bow and arrow only; up to 100 permits may be issued

Season to be
announced by
emergency order
(General hunt only)

...

Remainder of Unit 20(A)

RESIDENT HUNTERS:

...

1 antlerless moose by drawing permit only; up to 2,000 permits may be issued in combination with Unit 20(A), the Ferry Trail Management Area, Wood River Controlled Use Area, and the Yanert Controlled Use Area; a person may not take a cow accompanied by a calf; or

Aug. 15–Nov. 15
(General hunt only)

1 antlerless moose by registration permit only; a person may not take a cow accompanied by a calf; or

Aug. 25– last day of
Feb.

...

Units and Bag Limits	Resident Open Season Subsistence and General Hunts	Nonresident Open Season
1 moose by targeted permit only; by shotgun, crossbow, or bow and arrow only; up to 100 permits may be issued	Season to be announced by emergency order (General hunt only)	
...		

What is the issue you would like the board to address and why? Antlerless moose hunting seasons must be reauthorized annually. Antlerless hunts are important for maintaining the moose population at levels that the habitat can support. Antlerless hunts also help regulate moose population growth, help to meet Intensive Management (IM) objectives for high levels of harvest, and provide subsistence hunters with a reasonable opportunity to pursue moose for subsistence uses without reducing bull-to-cow ratios.

If antlerless moose hunts are not reauthorized, the moose population could increase to levels beyond the ability of the habitat to support the moose population. Allowing the population to grow beyond what the habitat can support may require the population to be reduced dramatically to avoid long term habitat damage. Opportunity to hunt a harvestable surplus of cow moose would be lost, and the ability to meet IM harvest objectives could be compromised. Subsistence hunters in the portion of Unit 20A outside the Fairbanks Nonsubsistence Area (part of the western Tanana Flats) may not have a reasonable opportunity to pursue moose for subsistence uses.

Reauthorizing antlerless moose hunts will allow hunting opportunity and harvest to increase and allow the Alaska Department of Fish and Game (ADF&G) to manage the moose populations at an optimum level. The additional harvest will help in meeting IM harvest objectives without reducing bull-to-cow ratios. Meat and subsistence hunters will benefit from the opportunity to harvest cow moose. Moose populations will benefit by maintaining moose densities at a level compatible with their habitat. Motorists and residents may benefit from reduced moose–vehicle collisions and moose–human conflicts.

The current objective is to maintain moose numbers within the IM population objective of 10,000–15,000 moose, while monitoring indicators of moose and habitat condition for positive density-dependent responses. The Unit 20A population was estimated at 9,581–13,959 moose (90% confidence interval) in 2019. There is an estimated 5,040 mi² of moose habitat in Unit 20A which equates to a moose density of between 1.9 and 2.8 moose/mi². This estimate falls within the IM population objective. ADF&G does not want the population to further increase because of concerns about density effects such as twinning rates below 20% and short-yearling weights below 400 pounds. ADF&G will continue to monitor Unit 20A twinning rates and short yearling weights and may recommend fewer antlerless hunts in the future if these two thresholds are surpassed. However, at the current density of moose the intention is to harvest moose at a rate of 1% of the population which has been shown to stabilize the moose population at its current level. Antlerless harvest will be by drawing permits for a majority of Unit 20A and a registration permit outside the nonsubsistence area in northwest Unit 20A near Nenana. The harvest objective will be based on the most recent survey results. The three-year average antlerless moose harvest in Unit 20A is 80 moose.

The number of moose in Unit 20A was estimated at 17,768 (3.5 moose/mi²) in 2003. Research indicated this high-density moose population was experiencing density-dependent effects, including low productivity, relatively light calf weights, and high removal rates of winter forage. The objective beginning in regulatory year 2004–2005 (RY04) was to reduce moose numbers to the population objective of 10,000–12,000 moose (1.5–1.8 moose/mi²) unless indicators of moose condition showed signs of improvement at higher densities. In 2016, the Board of Game adopted the IM population objective of 10,000–15,000 moose and the 2019 population estimate is within the IM objective.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-031)

PROPOSAL 256

5 AAC 85.045(a)(18). Hunting seasons and bag limits for moose.

Reauthorize antlerless moose seasons in Unit 20B as follows:

Units and Bag Limits	Resident Open Season Subsistence and General Hunts	Nonresident Open Season
(18)		
...		
Unit 20(B), that portion within Creamer’s refuge		
...		
1 antlerless moose by bow and arrow only, by drawing permit only; up to 150 bow and arrow permits may be issued in the Fairbanks Management Area; a recipient of a drawing permit is prohibited from taking an antlered bull moose in the Fairbanks Management Area; or	Sept. 1–Nov. 27 (General hunt only)	Sept. 1–Nov. 27
1 antlerless moose by muzzle-loader by drawing permit only; up to 10 permits may be issued; a recipient of a drawing permit is prohibited from taking an antlered bull moose in the Fairbanks Management Area	Dec. 1–Jan. 31 (General hunt only)	Dec. 1–Jan. 31
Unit 20(B), remainder of the Fairbanks Management Area		

Units and Bag Limits	Resident Open Season Subsistence and General Hunts	Nonresident Open Season
...		
1 antlerless moose by bow and arrow only, by drawing permit only; up to 150 bow and arrow permits may be issued in the Fairbanks Management Area; a recipient of a drawing permit is prohibited from taking an antlered bull moose in the Fairbanks Management Area; or	Sept. 1–Nov. 27 (General hunt only)	Sept. 1–Nov. 27
1 moose by targeted permit only; up to 100 permits may be issued	Season to be announced by emergency order (General hunt only)	No open season.
Unit 20(B), that portion within the Minto Flats Management Area		
RESIDENT HUNTERS:		
...		
1 antlerless moose by registration permit only	Oct. 15–Feb. 28 (Subsistence hunt only)	No open season.
...		
Unit 20(B), the drainage of the Middle Fork of the Chena River		
1 antlerless moose by drawing permit only; up to 300 permits may be issued; a person may not take a cow accompanied by a calf; or	Aug. 15–Nov. 15 (General hunt only)	
1 antlerless moose by registration permit only; a person may not take a cow accompanied by a calf; or	Oct. 1– Last day of Feb. (General hunt only)	No open season.
...		
Unit 20(B), that portion southeast of the Moose Creek dike within one-half mile of each side of the Richardson highway		

Units and Bag Limits	Resident Open Season Subsistence and General Hunts	Nonresident Open Season
...		
1 moose by drawing permit only; by crossbow, bow and arrow, or muzzleloader only; up to 100 permits may be issued; or	Sept. 16–Last day of Feb. (General hunt only)	No open season.
1 moose by targeted permit only; by crossbow, shotgun, or bow and arrow only; up to 100 permits may be issued	Season to be announced by emergency order (General hunt only)	No open season.
Remainder of Unit 20(B)		
1 antlerless moose by drawing permit only; by youth hunt only; up to 200 permits may be issued; or	Aug. 5–Aug. 14 (General hunt only)	No open season
...		
1 antlerless moose by drawing permit only; up to 1,500 permits may be issued in the remainder of Unit 20(B); a person may not take a cow accompanied by a calf; or	Aug. 15–Nov. 15 (General hunt only)	No open season.
1 antlerless moose by registration permit only; a person may not take a cow accompanied by a calf; or	Oct. 1– Last day of Feb.	
1 moose by targeted permit only; by crossbow, shotgun, or bow and arrow only; up to 100 permits may be issued	Season to be announced by emergency order (General hunt only)	No open season.
...		

What is the issue you would like the board to address and why? Antlerless moose hunting seasons must be reauthorized annually. The goal is to provide for a wide range of public uses and benefits, and to protect the health and habitat of moose populations. Antlerless hunts are important for improving or maintaining the ability of moose habitat to support current populations. They also help regulate moose population growth, help to meet Intensive Management (IM) objectives for high levels of harvest, and provide subsistence hunters with a reasonable opportunity to pursue moose for subsistence uses without reducing bull-to-cow ratios.

If antlerless moose hunts are not reauthorized, the moose population may exceed population objectives causing habitat degradation and a loss of opportunity to hunt a surplus of antlerless

moose. Furthermore, subsistence hunters in the portion of Unit 20B in the Minto Flats Management Area may not have a reasonable opportunity to pursue moose for subsistence uses.

The reauthorization of antlerless moose hunts in Unit 20B will allow the Alaska Department of Fish and Game (ADF&G) to manage the moose population within the population objectives of 12,000 to 15,000 moose. Hunting opportunity and harvest will increase and allow ADF&G to manage this moose population at optimum levels. The additional harvest is necessary to meet intensive management harvest objectives while maintaining bull-to-cow ratios within objectives. Subsistence hunters will have reasonable opportunity to harvest cow moose. Moose populations will benefit by maintaining moose densities at levels compatible with their habitat. Motorists and residents may benefit from reduced moose–vehicle collisions and moose–human conflicts.

The moose population level in Unit 20B is currently within the population objective of 12,000–15,000 moose. The population declined from an estimated 20,173 moose in 2009 to 11,064 in 2015, due in large part to antlerless moose hunts designed to lower the population to those objectives. The population increased slightly to 12,478 moose in 2020. To maintain the current population level ADF&G recommends limited antlerless hunts in the Minto Flats Management Area (MFMA) and the Fairbanks Management Area (FMA). ADF&G will continue to monitor the moose population and may implement additional antlerless hunts if the population continues to trend upward.

Fairbanks Management Area (FMA)—The purpose of this antlerless hunt is to regulate population growth in the FMA and reduce potential moose–vehicle collisions and nuisance moose problems.

The number of moose–vehicle collisions in the FMA is high and pose significant safety risks to motorists. In addition, moose nuisance issues continue to place significant demands on property owners. To increase hunting opportunity and harvest and reduce moose–vehicle collisions, ADF&G incrementally increased the number of drawing permits for antlerless moose in the FMA during RY99–RY10. Moose–vehicle collisions and moose nuisance problems have remained lower since, presumably, in part due to consistent antlerless moose harvests.

Minto Flats Management Area (MFMA)—The primary purpose of this antlerless hunt is to provide a reasonable opportunity for subsistence uses and to regulate the moose population in the MFMA.

The MFMA moose density was high in 2010 (4.4 moose/mi²). To reduce the moose population, the harvest of antlerless moose during RY12 and RY13 was about 2.5% of the population. The fall 2015, 2017, and 2019 estimates showed more appropriate densities of 1.6, 1.7, and 2.0 moose/mi², respectively. Because the population level has been stable and within the population objectives, the antlerless harvest has been reduced to approximately 1% of the total population to maintain the current population level.

Targeted Hunt—The purpose of the targeted hunt is to allow the public to harvest moose that are causing nuisance or public safety issues. These permits are used sparingly but allow the public to harvest the moose instead of ADF&G just dispatching them.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-032)

PROPOSAL 257

5 AAC 85.045(a)(18). Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose hunting seasons in Unit 20D as follows:

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
(18)		
...		
Unit 20(D), that portion lying west of the west bank of the Johnson River and south of the north bank of the Tanana River, except the Delta Junction Management Area and the Bison Range <u>Controlled Use Area</u> [YOUTH HUNT MANAGEMENT AREA]		
RESIDENT HUNTERS:		
...		
1 antlerless moose by drawing permit only; up to 1,000 permits may be issued in combination with that portion in the Delta Junction Management Area; a person may not take a calf or a cow accompanied by a calf; or	Oct. 10–Nov. 25 (General hunt only)	
1 antlerless moose by registration permit only; a person may not take a calf or a cow accompanied by a calf	Oct. 10–Nov. 25 (General hunt only)	
...		
Unit 20(D), that portion within the Bison Range Controlled Use Area		
...		

1 bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on one side; or 1 antlerless moose, per lifetime of a hunter, by youth hunt drawing permit only; up to 10 permits may be issued; a person may not take a calf or a cow accompanied by a calf;

Sept. 1–Sept. 30
(General hunt only)

Sept. 1–Sept. 30

Unit 20(D), that portion within the Delta Junction Management Area

RESIDENT HUNTERS:

1 moose every four regulatory years by drawing permit only, a person may not take a calf or a cow accompanied by a calf; or

Sept. 1–Sept. 15
(General hunt only)

...

1 antlerless moose by drawing permit only; up to 1,000 permits may be issued in combination with that portion lying west of the west bank of the Johnson River and south of the north bank of the Tanana River; a person may not take a calf or a cow accompanied by a calf; or

Oct. 10–Nov. 25
(General hunt only)

1 antlerless moose by registration permit only; a person may not take a calf or a cow accompanied by a calf

Oct. 10–Nov. 25
(General hunt only)

NONRESIDENT HUNTERS:

1 moose every four regulatory years by drawing permit only, a person may not take a calf or a cow accompanied by a calf; or

Sept. 1–Sept. 15

...

What is the issue you would like the board to address and why? Antlerless moose hunts must be reauthorized annually. The objectives of the Unit 20D antlerless moose hunts are to 1) stabilize

population growth of this high-density moose population; 2) address concerns about range degradation, reduced nutritional condition, and reduced reproductive success; 3) make progress toward meeting the Unit 20D intensive management (IM) harvest objective of 500–700 moose; and 4) provide youth and disabled veteran hunting opportunity. These objectives are being met.

If antlerless moose hunts are not reauthorized, the moose population could quickly increase to levels beyond the ability of the habitat to support the moose population. Opportunity to hunt a harvestable surplus of cow moose would be lost, and the ability to meet IM harvest objectives could be compromised. Additionally, the population may need to be reduced dramatically when new data are available and analyzed.

Antlerless moose hunts are offered in southwest Unit 20D, which has the highest moose density in the unit. This area has great potential for population growth due to an abundance of high-quality moose habitat created from extensive land clearing for agricultural use and multiple wildfires over the past 30 years. Total moose harvest in all of Unit 20D averaged 270 moose (an average of 252 bulls and 18 antlerless moose) during regulatory years 2018 and 2019.

Antlerless hunting opportunity is limited at present because this small opportunity helps to maintain the moose population within the ability of habitat to support the population. The largest antlerless harvest (n=113) that occurred recently in Unit 20D was in 2009 when antlerless hunts were newly authorized. The southwest Unit 20D population estimate (approximately 4,000–4,500 moose, with a sightability correction factor applied) and bull harvest in southwestern Unit 20D (226–282) have been stable since 2011. The 2019 population estimate for southwest Unit 20D was 3,647 moose (corrected for sightability) with a density of 2.8 moose per square mile, 31 calves:100 cows and 28 bulls:100 cows.

Continued antlerless harvest will likely be needed to maintain the population at the optimal density and will help make progress toward the IM harvest objective of 500–700 moose without reducing bull-to-cow ratios below the management objectives. The population trend and harvest rate suggest the low, consistent antlerless harvest provided by the drawing permit hunts in Unit 20D, in conjunction with other mortality factors (including ceremonial harvest, vehicle collision, accidents, and predation), is an appropriate rate of antlerless moose mortality that contributes to stability in the southwest Unit 20D moose population.

The Alaska Department of Fish and Game will continue to evaluate antlerless moose hunts and their effect on moose density and population growth. Future antlerless moose hunts will be implemented as needed based on evaluation of three indices of density-dependent moose nutritional conditions in relation to changes in moose density: biomass removal of current annual growth on winter browse, proportion of females with twin calves, and late-winter calf weights.

Additional drawing or registration permits will be issued only if more harvest is needed in specific areas to maintain optimal moose densities.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-033)

PROPOSAL 258

5 AAC 85.045(a)(19). Hunting seasons and bag limits for moose.

Reauthorize a winter any-moose season during March in a portion of Unit 21D.

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
(19)		
...		
Unit 21(D), that portion south of the South bank of the Yukon River, downstream of the up-river entrance of Kala Slough and west of Kala Creek		
RESIDENT HUNTERS:		
...		
1 moose, by registration permit only, up to 15 days during March; a person may not take a cow accompanied by a calf	(Season to be announced)	
...		

What is the issue you would like the board to address and why? Antlerless moose hunting seasons must be reauthorized annually. The goal is to provide additional harvest opportunity and meet harvest objectives. This harvest opportunity of antlerless moose recently emerged because the moose population in the Kaiyuh Flats is increasing rapidly, especially the number of cows in the population. This reauthorization will likely improve or maintain hunting opportunity. If this antlerless moose hunt is not reauthorized, opportunity to utilize a harvestable surplus of cow moose would be lost, and our ability to meet Intensive Management (IM) harvest objectives could be reduced. In addition, rather than allow the population to go through dramatic rates of expansion and contraction, we believe it is necessary to slow the rate of increase.

The IM harvest objective for Unit 21D is 450–1,000 moose. The 10-year average estimated harvest during 2010–2019 was 408 moose, which includes the reported and estimated unreported harvest. The annual estimated harvest has not met the harvest objective since 2003 when the estimated harvest was 489 moose. Additional harvest from this hunt will help make progress toward achieving the IM harvest objectives without reducing bull-to-cow ratios to low levels. Subsistence hunters will benefit from the opportunity to harvest cow moose.

Analysis of three Trend Count Areas, Squirrel Creek, Pilot Mountain, and Kaiyuh Slough, within the Kaiyuh Flats in this hunt area showed a significant increase in moose abundance among all age classes, and adult moose abundance increased 57% above the 16-year average by 2017. Geospatial Population Estimate data also showed a statistically significant increase from 1,897 ($\pm 11\%$) moose in 2011 to 4,116 ($\pm 10\%$) moose in 2017. Moose twinning data for the hunt area also showed high and stable twinning rates since 2004.

The portion of Unit 21D affected by this reauthorization is approximately 21% (2,559 mi²) of Unit 21D (12,093.6 mi²). Moose abundance in this area was estimated at 4,000–4,500 moose, which is approximately 39–44% of the total moose estimated in Unit 21D. At 10,305 moose ($\pm 1,546$) in 2017, the mid-point for the total Unit 21D moose population estimate was above the IM population objective for all of Unit 21D (12,093.6 mi²) of 9,000–10,000 moose.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-034)

PROPOSAL 259

5 AAC 85.045(a)(19). Hunting seasons and bag limits for moose.

Reauthorize a winter any-moose season during part of February and March in Unit 21E as follows:

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
(19)		
...		
Unit 21(E)		
RESIDENT HUNTERS:		
...		
1 moose, by registration permit only, a person may not take a cow accompanied by a calf	Feb 15 – Mar 15	
...		

What is the issue you would like the board to address and why? Antlerless moose hunting seasons must be reauthorized annually. The goal is to provide additional harvest opportunity and meet harvest objectives.

This moose population is beginning to show signs of nutritional stress. The most current survey in 2019 indicated there are 9,777 moose in Unit 21E, which is within the range of the Intensive Management (IM) population objective of 9,000–11,000 moose. There is currently a harvestable surplus of 390 moose; however, approximately 200 moose are harvested each year and there are additional moose available to harvest. Bull-to-cow ratios are high, with 42 bulls per 100 cows in 2018. The Intensive Management (IM) harvest objective for Unit 21E is 550–1,100 moose.

Within the Unit 21E moose survey area (4,094 mi²), the overall moose density increased from 1.0 moose/mi² in 2000 to 2.1 moose/mi² in 2019. During most of these years of growth, twinning rates remained high; however, twinning rates began declining in 2015. The two-year average twinning rate in the Holy Cross area is 19%, while north of Anvik and Shageluk (where moose density is lower) the twinning rate is 32%. The current intensive management plan calls for stabilizing the population through harvest when the two-year average twinning rate is 15–20%. Browse utilization is high in the Holy Cross area where the population density is highest and where winter mortality in deep snow years is a concern.

Additional harvest opportunity is available. Winter hunts distribute hunter pressure and allow access to areas inaccessible in the fall.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-035)

PROPOSAL 260

5 AAC 85.045(a)(24). Hunting seasons and bag limits for moose.

Reauthorize the antlerless moose season in the western portion of Unit 26A as follows:

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
<p>(24)</p> <p>...</p> <p>Unit 26(A), that portion west of 156° 00' W. longitude and excluding the Colville River drainage.</p> <p>1 moose; a person may not take a calf or a cow accompanied by a calf</p> <p>...</p>	<p>July 1—Sept. 14</p>	<p>No open season.</p>

What is the issue you would like the board to address and why? To be retained, the antlerless moose season in the portion of Unit 26A west of 156° 00' W longitude and excluding the Colville drainage must be reauthorized annually.

The moose population in the western portion of Unit 26A north of the Colville drainage is somewhat unique compared to the unit-wide population, and the distribution is very sparse because there is very little moose habitat in the coastal plain. However, each year a small number of bulls and cows migrate into the area from the major river drainages in the central and southern parts of the unit. So far, the marginal habitat in this portion of Unit 26A has not allowed moose to establish a population, but these moose provide the only opportunity to harvest a moose in the northwestern portion of Unit 26A.

Unit 26A moose population estimates have historically fluctuated between 294 and 609 moose between 2011 and 2014. More recently, 145 moose and 218 moose in 2015 and 2018, respectively were observed during surveys. The overall trend appears to be slow growth after a decline that started in 2007. The number of moose in the antlerless hunt area is difficult to estimate but is approximately ten moose. Harvest reports indicate five antlerless moose have been harvested since 2005, and the annual harvest rate of antlerless moose is less than 1% of the total population. Due to the low harvest rate the Alaska Department of Fish and Game recommends reauthorization of the antlerless moose season in this area to provide additional hunting opportunity for the small number of hunters to opportunistically harvest antlerless moose in this remote portion of Unit 26A.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-039)

PROPOSAL 261

5 AAC 92.015(a)(4). Brown bear tag fee exemptions.

Reauthorize resident grizzly/brown bear tag fee exemptions throughout Interior and Northeast Alaska as follows:

- (a) A resident tag is not required for taking a brown bear in the following units:

...

- (4) Units 12, 19, 20, 21, 24, 25, 26(B), and 26(C)

...

What is the issue you would like the board to address and why? Brown bear tag fee exemptions must be reauthorized annually. Reauthorizing the exemption allows residents who have not purchased the \$25 brown bear tag to take bears opportunistically. This reauthorization would assist with our objective of managing Region III brown bear populations for hunter opportunity and would continue to allow hunters to take brown bears opportunistically.

Region III (Interior and Northeast Alaska) brown bear populations are healthy, and harvest is monitored through the brown bear sealing requirement. Reauthorizing all resident brown bear tag fees throughout Region III maintains simpler regulations, high resident hunter opportunity, and is not likely to cause declines in these brown bear populations. This reauthorization includes tag fee exemptions for subsistence registration permit hunts in Units 19A and 19B (downstream of and including the Aniak River drainage), 21D, and 24.

The Alaska Department of Fish and Game estimates that brown bear harvest accounts for less than 6% of the bear population. Harvest is composed primarily of males and is sustainable. Where harvests are elevated (i.e., Units 20A, 20B, 20D, and portions of 26B), brown bear populations are managed by adjusting seasons and bag limits. The resident tag fees that were in place prior to 2010 appeared to have little effect on harvest rates in these areas.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-036)

PROPOSAL 262

5 AAC 92.015. Brown bear tag fee exemptions.

Reauthorize the current resident tag fee exemptions for brown bear in Units 18, 22, 23 and 26A as follows:

(a) A resident tag is not required for taking a brown bear in the following units:

- ...
- (4) Units... 26;
- ...
- (8) Unit 22;
- (9) Unit 23;
- ...
- (13) Unit 18;
- ...

(b) In addition to the units as specified in (a) of this section, if a hunter obtains a subsistence registration permit before hunting, that hunter is not required to obtain a resident tag to take a brown bear in the following units:

- ...
- (4) Unit 18;
- ...
- (7) Unit 22;
- (8) Unit 23;
- ...
- (10) Unit 26(A).

What is the issue you would like the board to address and why? The Board of Game must reauthorize brown bear tag fee exemptions annually or the fee automatically becomes reinstated. We recommend continuing resident tag fee exemptions for the general season and subsistence season hunts in Region V (Units 18, 22, 23, and 26A).

General Season Hunts: Reauthorizations are needed for: Unit 18, where the tag fee has been exempted for 8 years; Unit 22, where the tag fee has been exempted for 18 years; Unit 23, where the tag fee has been exempted for 13 years; and Unit 26A, where the tag fee has been exempted for 8 years. Tag fee exemptions are desired to allow: 1) incremental increase in annual harvest; 2) opportunistic harvest by resident hunters; and 3) harvest by a wide range of users.

General season brown bear harvest rates are within sustained yield limits and previous exemptions of the resident tag fee have not caused dramatic or unexpected increases in overall harvest. In Units 18 and 26A, tag exemptions were authorized for RY2012 and harvest has remained within sustained yield and continues to be similar to the preceding ten-year period. In Unit 22, the 18-year tag-free period for residents has had an average annual harvest of 50 brown bears (range 41–63 bears). In Unit 23, harvest has been increasing slowly since 1961. The increase is primarily in response to increases in human population rather than regulatory changes, although annual harvests vary due to weather and hunting conditions.

Subsistence Season Hunts: Reauthorizations are needed for Units 18, 22, 23, and 26A where brown bear subsistence hunt requirements include: 1) registration permit, 2) tag fee exemption, 3)

salvaging meat for human consumption, 4) no use of aircraft in Units 22, 23 and 26A, 5) no sealing requirement unless hide and skull are removed from subsistence hunt area, and 6) if sealing is required, the skin of the head and front claws must be removed and retained by the Alaska Department of Fish and Game (ADF&G) at the time of sealing. Continuing the tag fee exemption helps facilitate participation in the associated brown bear harvest programs maintained by ADF&G for subsistence hunts.

In all units, subsistence brown bear harvest rates are low and well within sustained yield limits and exempting the resident tag fee has not caused an increase in subsistence harvest. In Unit 18, we estimate zero to three bears are taken annually in subsistence hunts. In Unit 22, subsistence harvest by permit is quite low, averaging less than one bear per year (less than 1% of the total brown bear harvest). In Unit 23, subsistence permit harvest is less than five bears annually since 1992 (less than 10% of the total brown bear harvest). In Unit 26A, between zero and five bears are taken annually by subsistence hunters.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F21-040)
