

# **Antlerless Moose & Brown Bear Tag Fee Reauthorizations for Other Regions**

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**PROPOSAL 131**

**5 AAC 85.045(a)(11). Hunting seasons and bag limits for moose.**

Reauthorize the antlerless moose seasons in Unit 13 as follows:

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
(11)		
Unit 13		
1 moose per regulatory year, only as follows:		
...		
1 antlerless moose by drawing permit only; up to 200 permits may be issued; a person may not take a calf or a cow accompanied by a calf	Oct. 1—Oct. 31 Mar. 1—Mar. 31 (General hunt only)	No open season.
...		

**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 (board). The current regulation allows hunters to take a limited number of cows in specific areas to keep the population within objectives.

This Unit 13 antlerless hunt was initially adopted in March 2011 and the first Unit 13 antlerless hunt under this regulation took place in September 2012. The hunt was modified when the board adopted an October and March season during the February 2013 board meeting.

Since the inception of this hunt, the Department of Fish and Game (department) has issued ten permits annually for a hunt in Unit 13A. The department intentionally limited the number of permits issued annually to gain public support for the hunt even though a higher rate of cow harvest was desirable to regulate the moose population within objectives. After considering a proposal during the 2015 board meeting, which was submitted by the public to increase the number of cow permits issued annually, the board directed the department to issue a sufficient number of permits to allow the harvest of up to one percent of the cow population when the moose population is above the midpoint of the population objective for the subunit.

Moose have generally increased at an average rate of 2% per year in the intensive wolf management area over the past ten years. The current population objective for Unit 13A is 3,500–4,200 and the population was estimated to be above objective in 2015–2016 and within objectives in 2017. The antlerless hunt in western Unit 13A is necessary to maintain the population within the intensive management objectives. The additional harvest provided by the hunt will also assist in achieving the harvest objectives for the population. If antlerless moose hunting opportunities are not reauthorized in Unit 13, the intensive management program and objectives will likely need to be restructured to maintain the moose population within a population size range that does not result in nutritional limitations for the moose and to achieve the harvest objectives recommended by the public, advisory committees, and the board.

**PROPOSED BY:** Alaska Department of Fish and Game (HQ-F18-047)  
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**PROPOSAL 132**

**5 AAC 84.045(a)(12). Hunting seasons and bag limits for moose.**

Reauthorize the antlerless moose seasons in Units 14A and 14B as follows:

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
(12)		
Unit 14(A)		
1 moose per regulatory year, only as follows:		
...		
1 antlerless moose by drawing permit only; up to 2,000 antlerless moose permits may be issued.	Aug. 20—Sept. 25 (General hunt only) Nov. 1—Dec. 15 (General hunt only)	No open season
...		
1 moose by targeted permit only; by crossbow, shotgun or bow and arrow only; up to 200 permits may be issued.	Winter season to be announced (General hunt only)	No open season

Unit 14(B)

1 moose per regulatory year,  
only as follows:

...

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

Winter season to be announced (General hunt only)

No open season

**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. There are two types of antlerless moose hunts in the Matanuska-Susitna Valley – a drawing permit hunt used to regulate growth of the moose population in Unit 14A and targeted hunts used to mitigate public safety concerns in Units 14A and 14B.

Moose surveys conducted in February 2017 yielded an estimate of 8,700 moose in Unit 14A. This estimate was greater than the post-hunt objective of 6,000–6,500 moose and greater than the 2013 survey estimate of 8,500 moose with a bull ratio of 21 bulls:100 cows and a calf ratio of 45 calves:100 cows.

Antlerless moose hunts have been authorized in Unit 14A since 2001 in order to regulate the growth of the population. The permit level was increased from 450 to 1,000 in 2013 to account for the continued increase in the population and again in spring 2018 from 1,000 to 2,000. Increased harvest based on the increased permit levels is expected to bring the population back to within the objective for the unit of 6,000–6,500.

The current increases in the harvest have seemingly slowed the population growth, however, it has not reduced the moose population to within objectives. If the density of moose is allowed to increase, we anticipate an increase the number of moose-human conflicts and moose may experience nutritional stress as the population nears carrying capacity. Cow harvests are warranted to control the moose population’s growth and recommended as a way to provide additional moose hunting opportunity in the Matanuska-Susitna Valley.

The targeted moose hunts in Units 14A and 14B are an effective tool to address public safety concerns related to moose-vehicle collision and nuisance management issues. Moose-vehicle collisions result in property damage and may result in human injury or death. An average of 266 moose per year were killed in the Matanuska-Susitna Valley area during the last few years of average snowfall and substantially more were killed during higher snowfall years. The Department of Fish and Game also receives periodic complaints from the public about crop depredation and aggressive behavior that can be mitigated by this hunt structure.

**PROPOSED BY:** Alaska Department of Fish and Game (HQ-F18-045)  
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**PROPOSAL 133**

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

Reauthorize the antlerless moose seasons in Unit 18 as follows:

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
(16)		
...		
Unit 18, that portion south of and including the Goodnews River Drainage	Sept. 1—Sept. 30	
1 antlered bull by registration permit only; or		
1 moose by registration Permit only; During the Jan. 1–Jan 31 a season up to 21 days may be announced by emergency order	Jan. 1—Jan. 31 (Season to be announced)	
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—Mar. 15	
NONRESIDENT HUNTERS:		
1 antlered bull: or		Sept. 1—Sept. 30
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. The Board of Game has previously reauthorized the antlerless moose season for resident hunts in Unit 18 Remainder for regulatory year (RY) 2016 – RY2018. This proposal requests reauthorization for RY2019.

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, the Department of Fish and Game (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 17,000 animals with calf:cow ratios ranging from 65:100 to 75:100 and twinning rates from 20% to 50% for all areas. Population growth continues to be strong in this portion of Unit 18 and anecdotal evidence suggests that calf survival rates remain high. 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 in the past 15 years following a closure in 2004. The fall hunt has had a quota of ten in the first few years of the hunt and recently increased to 30. The season has not been closed by emergency order and the past few years the quota was not met. The population now is over 300 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-F18-061)  
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**PROPOSAL 134**

**5 AAC 85.045(a)(15). Hunting seasons and bag limits for moose.**

Reauthorize the antlerless moose season in Unit 17A as follows:

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
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(15)

Unit 17(A)

Up to 2 moose per regulatory year only as follows:

RESIDENT HUNTERS:

1 moose by registration permit only; or	Aug. 25—Sept. 25 (Subsistence hunt only)
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1 antlered bull by registration permit; during the period Dec. 1 – Last day of Feb. a season of up to 31 days may be announced by emergency order; or	Winter season to be announced by emergency order (Subsistence hunt only)
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1 antlerless moose by registration permit; during the period Dec. 1 –Last day of Feb. a season of up to 31 days may be announced by emergency order;	Winter season to be announced by emergency order (Subsistence hunt only)
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...

**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 (board). The board adopted an antlerless moose hunt in Unit 17A in support of the Unit 17A Moose Management Plan, which was modified during a meeting of the Unit 17A Moose Management Planning Group in December 2012. The planning group consists of entities interested in the management of this moose population and includes representatives from the Bristol Bay Federal Subsistence Regional Advisory Council, the Nushagak and Togiak Fish and Game Advisory Committees, the Togiak National Wildlife Refuge, and the Department of Fish and Game Unit 17 management office.

According to the third goal of the revised Unit 17A Moose Management plan, antlerless moose hunting opportunity can be offered when the population is above 600 moose and increasing. The revised plan also recommends that when the population exceeds 1,200 moose, a bag limit of up to two moose is established. Based on the most recent survey with good conditions in March 2017, both of these conditions have been met with a population estimate of 1,990 moose  $\pm$  437. After further analyses, this estimate will be corrected for sightability, which will result in a higher population estimate further supporting liberal harvest strategies. The bag limit of two moose and antlerless harvest opportunity provides a mechanism to limit population growth and allows hunters to harvest surplus animals.

The moose population in subunit 17A is growing and can sustain additional harvest, however, the objectives for this population include allowing it to expand into neighboring areas as well as

provide for additional harvest opportunity. The population is currently contributing to the growth of moose populations elsewhere, especially to the north and west.

**PROPOSED BY:** Alaska Department of Fish and Game (HQ-F18-044)  
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**PROPOSAL 135**

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

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

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
(18)		
Unit 20(A), the Ferry Trail Management Area, Wood River Controlled Use Area, and the Yanert Controlled Use Area		
RESIDENT HUNTERS:		
...		
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—Feb. 28	
...		
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	
...		

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

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

Aug. 25—Feb. 28

...

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

...

**What is the issue you would like the board to address and why?** Antlerless moose hunting seasons must be reauthorized annually. Our 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:cow ratios.

If antlerless moose hunts are not reauthorized, the moose population may increase to unacceptable levels or may need reduction when new data is available and analyzed. Opportunity to hunt a harvestable surplus of cow moose will be lost and our ability to meet intensive management harvest objectives will 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.



This reauthorization of antlerless moose hunts will likely improve or maintain the ability of moose habitat to support the current moose population. Hunting opportunity and harvest will increase and allow the Department of Fish and Game (department) to manage these moose populations at optimum levels. The additional harvest will help in meeting intensive management harvest objectives without reducing bull:cow ratios to low levels. Meat and subsistence hunters will benefit from the opportunity to harvest cow moose. Moose populations will benefit by having moose densities compatible with their habitat. Motorists and residents may benefit from reduced moose-vehicle collisions and moose-human conflicts.

Our current objective is to maintain moose numbers within the IM population objective of 10,000–15,000 moose (the IM population objective adopted by the Board of Game in 2016) while monitoring indicators of moose and habitat condition for positive density-dependent responses. The Unit 20A population was estimated at 10,622–14,009 moose (90% confidence interval) in 2015. Because this estimate falls within the IM population objective and the department has not detected any indicators that the nutrition is not limited within this population, our 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 in northwest Unit 20A near Nenana. The harvest objective will be based on the most recent survey results.

The number of moose in Unit 20A was estimated at 17,768 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 was to reduce moose numbers to the population objective of 10,000–12,000 unless indicators of moose condition showed signs of improvement at higher densities. The Unit 20A population was estimated at 10,272–14,115 moose (90% confidence interval) in 2012.

**PROPOSED BY:** Alaska Department of Fish and Game (HQ-F18-058)  
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**PROPOSAL 136**

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

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

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
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(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

...

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; by 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.

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)

...

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—Feb. 28  
(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

...

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

Sept. 16—Feb. 28  
(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

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—Feb. 28 (General hunt only)	
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	No open season.

...

**What is the issue you would like the board to address and why?** Antlerless moose hunting seasons must be reauthorized annually. Our 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: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:cow ratios within objectives. Subsistence hunters will have reasonable opportunity to harvest cow moose. Moose populations will benefit by having moose densities 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 our population objectives 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 our population objectives. The population increased slightly to 12,871 moose during the 2017 survey. Because the population estimate is within our objectives, we recommend limited antlerless hunts in the Minto Flats Management Area (MFMA) and the Fairbanks Management Area (FMA) to maintain the current population level. We will continue to monitor the moose

population and may implement additional antlerless hunts if the population continues to trend upward.

*Fairbanks Management Area*—The purpose of this antlerless hunt is to regulate population growth in the FMA and potentially reduce moose-vehicle collisions and nuisance moose problems.

The number of moose-vehicle collisions in the FMA are 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 regulatory year (RY) 1999–RY2010. Moose-vehicle collisions and moose nuisance problems declined during RY2006–RY2013, presumably in part due to consistent antlerless moose harvests.

*Minto Flats Management Area*—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/mi<sup>2</sup>). In order to reduce the moose population, harvest of antlerless moose during RY2012 and RY2013 was about 2.5% of the population. The fall 2015 and 2017 estimates showed more appropriate densities of 1.6 and 1.7 moose/mi<sup>2</sup>, 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 a nuisance or public safety issue. These permits are used sparingly but allow the public to harvest the moose instead of ADF&G just dispatching them.

*Unit 20B, drainage of the Middle Fork of the Chena River and the Remainder of Unit 20B*—The antlerless moose harvest in this area is designed to regulate the moose population in this portion of Unit 20B and help meet the IM harvest objectives for Unit 20B.

**PROPOSED BY:** Alaska Department of Fish and Game (HQ-F18-059)

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**PROPOSAL 137**

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

Reauthorize antlerless moose seasons in Unit 20D as follows:

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
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(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 Controlled Use 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 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

Oct. 10—Nov. 25  
(General hunt only)

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

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 undesirable levels. Opportunity to hunt a harvestable surplus of cow moose would be lost and our 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 wild fires over the past 30 years. Total moose harvest in all of Unit 20D averaged 275 moose (an average of 261 bulls and 13 antlerless moose) during regulatory year (RY) 2015 and RY2016.

Antlerless hunting opportunity is limited. 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 (128–277) have been stable since 2011. The 2017 population estimate for southwest Unit 20D was 4,553 moose (corrected for sightability) with a density of 2.7 moose per square mile, 40 calves:100 cows and 22 bulls:100 cows.

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: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 mortality that contributes to stability in the southwest Unit 20D moose population.

The 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 permits 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-F18-060)  
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**PROPOSAL 138**

**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:

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



**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 recent moose population estimates have fluctuated between 609 moose in 2011, 294 moose in 2014 and 348 moose in 2017. The number of moose that are found in the antlerless hunt area is difficult to estimate but is approximately ten moose per year. Harvest reports indicate two 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 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-F18-062)

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**PROPOSAL 139**

**5 AAC 92.015. Brown bear tag fee exemptions.**

Reauthorize the resident brown bear tag fee exemptions 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 six years; Unit 22, where the tag fee has been exempted for 16 years; Unit 23, where the tag fee has been exempted for 11 years; and Unit 26A, where the tag fee has been exempted for six 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. Increased harvest is allowable because portions of these units have high bear populations.

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 16-year tag-free period for residents has had an average annual harvest of 50 brown bears (range 41–63 bears). In Unit 23, general harvests have been increasing slowly since 1961, primarily in response to increases in human population rather than regulatory changes, although harvests are annually quite variable due to effects of weather on hunting conditions. Harvest data for Unit 23 show no trend in the sex ratio, age or size of bears harvested under all types of hunts.

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 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 1–3 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 one and five bears are taken annually by subsistence hunters.

**PROPOSED BY:** Alaska Department of Fish and Game (HQ-F18-065)  
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**PROPOSAL 140**

**5 AAC 92.015. Brown bear tag fee exemptions.**

Reauthorize the resident brown bear tag fee exemptions for the Central/Southwest Region as follows:

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

- (1) Unit 11;
- (2) Units 13 and 16(A);
- (3) Unit 16(B) and 17;

...

(11) Unit 9, within the following areas, unless a smaller area is defined by the department in an applicable permit:

(A) Unit 9(B), within five miles of the communities of Port Alsworth, Nondalton, Iliamna, Newhalen, Pile Bay, Pedro Bay, Pope Vanoy Landing, Kakhonak, Igiugig, and Levelock;

(B) Unit 9(C), within five miles of the communities of King Salmon, Naknek, and South Naknek;

(C) Unit 9(D), within five miles of the communities of Cold Bay, King Cove, Sand Point, and Nelson Lagoon;

(D) Unit 9(E), within five miles of the communities of Egegik, Pilot Point, Ugashik, Port Heiden, Port Moller, Chignik Lake, Chignik Lagoon, Chignik Bay, Perryville, and Ivanof Bay;

(12) Unit 10, within three miles of the community of False Pass, unless a smaller area is defined by the department in an applicable permit.

(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:

- (1) Unit 9(B);
- (2) Unit 9(E), that portion including all drainages that drain into the Pacific Ocean between Cape Kumliun and the border of Unit 9(D) and Unit 9(E);
- (3) Unit 17;

...

**What is the issue you would like the board to address and why?** Brown bear tag fee exemptions must be reauthorized annually or the fee will be automatically reinstated.

General Season Hunts: The Board of Game (board) liberalized brown bear hunting regulations including the tag fee exemption to increase the harvest of brown bears in Units 11, 13, and 16 during the March 2003 board meeting and in Unit 17 during the March 2011 board meeting. The tag fee exemption in these units provides greater opportunity to harvest of brown bears by allowing opportunistic harvest.

The board also exempted brown bear tag fees for bear hunts near communities in Unit 9 to address public safety concerns in communities during the board meeting in March 2011. Brown bears are abundant in Unit 9 and are managed as a trophy species. Brown bears are frequently observed in communities where they destroy property in search of food or garbage and occasionally kill pets. The liberalized bear seasons and bag limits adopted along with the elimination of the tag fee were intended to allow people to take bears before they destroy property, to promote a greater acceptance of the unit's bear population, and to resolve some of the compliance issues associated with the take of bears in defense of life or property.

Subsistence Brown Bear Hunts: The board waived the brown bear tag fee requirement for subsistence brown bear hunts in Unit 17 and portions of Unit 9. Subsistence brown bear harvest rates are low and well within sustainable limits. Exempting the resident tag fee has not caused an increase in subsistence harvest in these units. Continuation of the exemption accommodates cultural and traditional uses of brown bears in these units and provides an alternative for hunters who take brown bears primarily for their meat.

**PROPOSED BY:** Alaska Department of Fish and Game (HQ-F18-064)  
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**PROPOSAL 141**

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

Reauthorize the resident grizzly/brown bear tag fee exemptions for the Interior and Eastern Arctic Region 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.

Region III (Interior and Eastern Arctic) brown bear populations are healthy and harvest is monitored through the brown bear sealing requirement. Eliminating all resident brown bear tag fees throughout Region III simplifies regulations, increases resident hunter opportunity, and is not likely to cause declines in these brown bear populations. 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.

The Department of Fish and Game (department) 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.

The department also recommends that the tag fee exemptions for subsistence registration permit hunts in Units 19A and 19B (downstream of and including the Aniak River drainage), 21D, and 24 should also be reauthorized to provide additional subsistence opportunity in these areas.

**PROPOSED BY:** Alaska Department of Fish and Game (HQ-F18-063)

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