Antlerless Moose Hunts & Brown Bear Tag Fee
Reauthorizations for other Regions

PROPOSAL 155

5 AAC 85.045(a)(1). Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose seasons in Unit 1C as follows:

5 AAC 85.045. Hunting seasons and bag limits for moose.

<table>
<thead>
<tr>
<th>Units and Bag Limits</th>
<th>Resident Open Season (Subsistence and General Hunts)</th>
<th>Nonresident Open Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1C, Berners Bay drainages</td>
<td>Sept. 15 – Oct. 15 (General hunt only)</td>
<td>Sept. 15 – Oct. 15</td>
</tr>
</tbody>
</table>

1 moose by drawing permit only; up to 30 permits may be issued

... Unit 1C, that portion west of Excursion Inlet and north of Icy Passage

1 moose per regulatory year, only as follows:

... 1 antlerless moose by drawing permit only; up to 100 permits may be issued

Nov. 10 – Dec. 10 (General hunt only) Nov. 10 – Dec. 10

What is the issue you would like the board to address and why? Antlerless moose hunts have been authorized for the Berners Bay and Gustavus moose populations in Unit 1C for over a decade. Those hunts were instituted as tools that could be used to manage both populations to within carrying capacity of the limited habitat in each area and to offer additional harvest opportunity as warranted. Antlerless hunts have been periodically and successfully used in both areas but must be reauthorized each year.

Berners Bay: The Berners Bay (Unit 1C) strategic moose management plan calls for a post-hunt population of 90 moose based on the area’s estimated carrying capacity. The Department of Fish

Interior and Eastern Arctic Region Proposals
and Game (department) has been successful at maintaining the Berners Bay population close to the post-hunt population objective by implementing both bull and cow hunts.

From 1998–2006 the number of drawing permits for Berners Bay moose ranged from ten bull and ten antlerless permits to seven bull permits and no antlerless permits. The average annual harvest of bulls during that period was seven moose, and in years when antlerless permits were issued, the annual harvest averaged four cow moose. Although the department has authorization to issue a total of 30 permits each year, no more than 20 total permits have been issued during a single year. Several severe winters from 2006 – 2009 resulted in overwinter mortality and population declines. No Berners Bay moose permits were issued from 2007–2013.

The number of drawing permits issued annually for Berners Bay is based on the number of moose observed during winter aerial surveys. The mean number of moose seen during aerial surveys conducted from 1990–2006 was 77 (range: 59–108). The number of moose seen on surveys declined during consecutive severe winters from 2006–2009 and with only 33–62 moose seen during surveys from 2007-2009. Since 2010 most winters have been moderate to mild and the population has recovered. Under ideal survey conditions in 2012, 102 moose were observed, including 21 bulls, 81 cows, and 14 calves. Adjusted for sightability based on collared moose, the 2012 population was estimated at 113 +/- 11 moose. During the most recent survey in February 2019 a total of 106 moose were observed, including two bulls, 26 cows, 13 calves, and 65 adult moose of unknown sex. Based on that survey and sightability of collared moose, the population was estimated to be 137 +/- 23 moose. The survival of radiocollared moose has been high the last two years and we believe the population continues to slowly grow. The Berners Bay population now exceeds the population and bull:cow objectives in the management plan. However, more recent habitat data suggests habitat in Berners Bay can support a higher post-hunt population than previously thought.

The department plans to manage the population by harvesting bulls. Five bull permits were issued in 2014 and 2015, and in response to growing population estimates, seven bull permits were issued in 2016 and 2017. However, the department would like to retain the ability to implement an antlerless moose hunt should the population or habitat conditions warrant that type of management.

**Gustavus:** The Gustavus moose population (Unit 1C) rapidly expanded from just a few animals in the 1980s and early 1990s to a peak of about 400 animals in 2003. In 2002 the department estimated the density of moose on the Gustavus Forelands winter range exceeded five moose per km² despite only a small proportion of the area consisting of productive (abundant willow) winter habitat. In response to concerns about moose damaging the winter habitat, the department initiated spring browse surveys in 1999 and determined that an unsustainable level (85% - 95%) of the current annual growth of willow twigs had been consumed by moose.

To conserve winter habitat the department requested the board authorize an antlerless moose hunt, and the first antlerless hunt was held in the fall of 2000. From 2002–2008 hunters harvested between 11 and 67 antlerless moose annually, depending on the number of permits issued. No hunt was held in fall 2007 due to high moose mortality during the severe winter of 2006-2007, and no antlerless hunts have been held since 2009.
The objective of antlerless moose hunts in Gustavus is to maintain the moose population using the winter range to levels commensurate with habitat capability. Based on aerial surveys corrected for sightability and annual browse surveys, management of the population using antlerless hunts has been successful. In 2013, under favorable survey conditions 186 moose (25 bulls, 121 cows, and 40 calves) were observed. The population estimate corrected for sightability was 323 +/- 87 moose. Under poor late winter survey conditions in March 2014, 91 (24 cows, 12 calves, and 55 unknown) moose were seen yielding a sightability corrected population estimate of 244 +/- 98 moose. Due to exceptionally mild winter weather, at the time of this survey, a number of radiocollared moose had already transitioned to forested summer range outside the survey area. There was little snow cover during the winter of 2014–15, so no survey was attempted. The most recent survey under moderate conditions in March 2018 resulted in a population estimate of 218 ± 22 moose. The full survey area was not covered on this survey and so we expected this estimate to be a little low.

Severe winters from 2006 through 2009 reduced calf survival, but since then calf survival has improved. Even during severe winters survival of adult females remained high at about 89%. Given the improved survival rate of calves during successive mild winters and stable cow survival, the potential exists for the Gustavus moose population to rapidly increase.

The Gustavus moose population is currently at a level the department believes is appropriate for the available winter habitat. However, we believe it is important to retain the ability to implement antlerless hunts should the population increase to a level that is detrimental to the habitat.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F19-162)

PROPOSAL 156
5 AAC 85.045(a)(3). Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose hunt in Unit 5A, Nunatak Bench as follows.

<table>
<thead>
<tr>
<th>Units and Bag Limits</th>
<th>Resident Open Season (Subsistence and General Hunts)</th>
<th>Nonresident Open Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit 5(A), that portion south of Wrangell - Saint Elias National Park, north and east of Russell and Nunatak Fiords, and east of the east side of East Nunatak Glacier to the Canadian Border (Nunatak Bench)</td>
<td>Nov. 15 - Feb. 15</td>
<td>Nov. 15 - Feb. 15</td>
</tr>
</tbody>
</table>

Interior and Eastern Arctic Region Proposals
1 moose by registration permit only; up to 5 moose may be taken

…

**What is the issue you would like the board to address and why?** The Nunatak Bench (Unit 5A) hunt area is managed as a separate population because it is generally isolated from other moose populations by fiords and glaciers. The area is subject to severe winters and has low capability to support moose relative to other moose habitat in Unit 5A. The purposes of this hunt are to provide opportunity as the population allows and to maintain the number of moose within a level the limited habitat can support. This hunt opens after other moose hunts in the unit have closed, and it is a popular alternative for hunters who were unsuccessful during those hunts. Because much of the open season for this hunt takes place after bulls have dropped their antlers, either sex may be harvested.

The Nunatak Bench strategic moose management plan calls for a post-hunt population of no more than 50 moose. During an aerial survey in 2001 52 moose were seen. From 2005 through 2012 only 11 – 14 moose with one or two calves were seen during surveys. The decline in moose numbers following the 2001 survey may be related to the 68-foot rise of Russel Fiord flooding and damaging habitat when it was blocked by the surging Hubbard Glacier during 2003. Due to poor weather and the remoteness of the location this area was not surveyed again until December 2015 when a total of 14 moose (three bulls, two cows, three calves, and six unknown) were seen. A series of severe winters from 2006 through 2012 may have inhibited recovery of the population. Anecdotal reports from hunters indicate that wolves in the area may also be inhibiting recovery of this small population. Once again we were not able to survey this area during the 2018-19 winter due to poor survey conditions throughout the winter.

From 1997 through 2004 an average of 12 either sex permits were issued annually with an average of 4 people hunting each year. During that period a total of 15 moose (nine bulls, six cows) were harvested for an average of about two moose per year. No permits have been issued and no moose have been harvested in this area since 2004.

The Department of Fish and Game (department) believes it is important to retain the ability to implement an antlerless hunt in this area to prevent habitat damage should the population increase. The department will continue to monitor this population as conditions allow, but we do not plan to issue hunt permits until the population reaches at least 25 moose.

**PROPOSED BY:** Alaska Department of Fish and Game (HQ-F19-163)
PROPOSAL 157

5 AAC 085.045(4) Hunting seasons and bag limits for moose. Reauthorize the antlerless moose season in Unit 6C as follows.

<table>
<thead>
<tr>
<th>Seasons and Bag Limits</th>
<th>Resident</th>
<th>Nonresident</th>
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<tr>
<td></td>
<td>Open Season</td>
<td>Open Season</td>
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<tr>
<td></td>
<td>(Subsistence and General Hunts)</td>
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Unit 6(C)

1 moose per regulatory year, only as follows:

1 moose by drawing permit only; up to 40 permits for bulls and up to 20 permits for antlerless moose may be issued

or

1 moose by registration permit only;

Sept. 1-Oct. 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. The Department of Fish and Game recommends reauthorizing the state antlerless hunt in Unit 6C to achieve the harvest objectives when the federal subsistence hunt is not able to achieve the desired level of harvest. The population objective in Unit 6C is 600–800 moose. A population estimate completed during March 2018 yielded an estimate of 677 moose, 32% of which were calves. Because the available antlerless harvest quota in Unit 6C is currently harvested under a federal subsistence season administered by the U. S. Forest Service, we have not held the antlerless hunt since RY99. Continuation of the antlerless hunts will be necessary to manage population growth and keep it within the limits of what the habitat can support.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F19-164)
PROPOSAL 158

5 AAC 085.045(4) Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose seasons in Unit 13 as follows:

<table>
<thead>
<tr>
<th>Units and Bag Limits</th>
<th>Resident</th>
<th>Nonresident</th>
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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. 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 of Game adopted an October and March season during the February 2013 board meeting.

Since the inception of this hunt, the department has issued 10 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 of Game 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 10 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 2017–2018. 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-F19-165)

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PROPOSAL 159

5 AAC 85.045(a)(12). Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose draw permits in Units 14A and 14B as follows:

<table>
<thead>
<tr>
<th>Units and Bag Limits</th>
<th>Resident Open Season (Subsistence and General Hunts)</th>
<th>Nonresident Open Season</th>
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</table>

(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)

... 1 moose by targeted permit only; and by shotgun or archery 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:

...
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 2019 yielded an estimate of 7,800 moose in Unit 14A. This estimate was greater than the post-hunt objective of 6,000–6,500 moose but less than the 2017 survey estimate of 8,700 moose. The November 2018 composition survey indicated sex ratio of 34 bulls:100 cows and a calf ratio of 31 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. ADF&G 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

Interior and Eastern Arctic Region Proposals
PROPOSAL 160

5 AAC 85.045(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.

<table>
<thead>
<tr>
<th>Seasons and Bag Limits</th>
<th>Resident (Subsistence and General Hunts)</th>
<th>Nonresident Open Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5)</td>
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</tbody>
</table>

... 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

NONRESIDENT HUNTERS:
1 bull by drawing permit only; up to 60 permits for bulls will be issued in combination with resident hunts

... What is the issue you would like the board to address and why? Antlerless moose seasons must be reauthorized annually, and the Department of Fish and Game 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 2016 aerial composition count of moose in the Twentymile, Portage, and

Interior and Eastern Arctic Region Proposals
Placer river drainages found 153 moose with a bull:cow ratio of 30 bulls per 100 cows and a calf:cow ratio of 18 calves per 100 cows. In 2017 and 2018, there was not enough snow in early winter to conduct surveys.

The harvest of antlerless moose provides the department 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-F19-167)

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**PROPOSAL 161**

5 AAC 85.045(5). Hunting seasons and bag limits for moose.  
Reauthorize the antlerless moose seasons in Unit 14C as follows.

<table>
<thead>
<tr>
<th>Seasons and Bag Limits</th>
<th>Resident Open Season (Subsistence and General Hunts)</th>
<th>Nonresident Open Season</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Unit 14(C), Joint Base Elmendorf-Richardson (JBER) Management Area</strong></td>
<td><strong>Sept. 1—Mar 31</strong> (General hunt only)</td>
</tr>
<tr>
<td></td>
<td>1 moose by regulatory year by drawing permit, and by muzzleloading blackpowder rifle or bow and arrow only; up to 185 permits may be issued</td>
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<tr>
<td></td>
<td><strong>Unit 14(C), that portion known as the Birchwood Management Area</strong></td>
<td><strong>Sept. 1—Sept. 30</strong> (General hunt only)</td>
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<tr>
<td></td>
<td>1 moose by drawing permit, by bow and arrow only; up to 25 permits may be issued</td>
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<td></td>
<td><strong>Unit 14(C), that portion known as the Anchorage Management Area</strong></td>
<td><strong>Sept. 1.—Nov. 30</strong> (General hunt only)</td>
</tr>
</tbody>
</table>

*Interior and Eastern Arctic Region Proposals*
1 antlerless moose by drawing permit only, and by bow and arrow, shotgun, or muzzleloader only; up to 50 permits may be issued

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

1 bull by registration permit only

…

Remainder of Unit 14(C)

1 moose per regulatory year, only as follows:

1 bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on one side; or

1 antlerless moose by drawing permit only; up to 60 permits may be issued; or

1 bull by drawing permit only, by bow and arrow only; up to 10 permits may be issued

…

What is the issue you would like the board to address and why? Antlerless moose hunts must be reauthorized annually, and the department recommends reauthorizing the antlerless moose hunts in Unit 14C. The harvest of antlerless moose provides the Department of Fish and Game (department) 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 Interior and Eastern Arctic Region Proposals
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 intensively for a population objective of 1,500–1,800 moose and an annual harvest objective of 90–270 moose (5AAC 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 department 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. Since 2013, a lack of snow has limited the department’s ability to conduct surveys, but there has been no indication from either harvest or roadkill numbers that the moose population has changed significantly. It is likely that moose survival has been good during recent mild winters.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F19-168)
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PROPOSAL 162

5 AAC 085.045(13). Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose season on Kalgin Island in Unit 15B as follows:

<table>
<thead>
<tr>
<th>Units and Bag Limits</th>
<th>Resident Open Season</th>
<th>Nonresident Open Season</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>(Subsistence and General Hunts)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aug. 20—Sept. 20</td>
<td>Aug. 20—Sept. 20</td>
</tr>
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</table>

Unit 15(B), Kalgin Island

1 moose per regulatory year, by registration permit only

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 due to 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.

Interior and Eastern Arctic Region Proposals
During the most recent moose survey (March 2018), department staff counted 85 moose on Kalgin Island. This count exceeded the population objective of 20–40 moose. In the last 10 years, an average of 126 permits were issued for this hunt; of which 86 permittees hunted, with an annual harvest of 29 moose.

The "any moose" registration hunt is a management tool the Department of Fish and Game uses to maintain moose abundance within management objectives on the island. In addition, the registration hunt provides a mechanism to the department to continue gathering biological information from specimens provided by successful hunters. The difficult hunting conditions and limited access reduces concerns with over-harvest.

**PROPOSED BY:** Alaska Department of Fish and Game  
(HQ-F19-169)

<table>
<thead>
<tr>
<th>PROPOSAL 163</th>
<th>5 AAC 85.045(13). Hunting seasons and bag limits for moose.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reauthorize the antlerless moose seasons in Unit 15C as follows:</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Units and Bag Limits</th>
<th>Resident Open Season (Subsistence and General Hunts)</th>
<th>Nonresident Open Season</th>
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...  

Unit 15(C), that portion south of the south fork of the Anchor River and northwest of Kachemak Bay  

**RESIDENT HUNTERS:**  
1 bull with spike or 50-inch antlers or antlers with 4 or more brow tines on one side; or  
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  

*Interior and Eastern Arctic Region Proposals*
combination with the nonresident drawing hunt: or

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

NONRESIDENT HUNTERS:

1 bull with 50-inch antlers or antlers with 4 or more brow tines on one side; or Sept. 1—Sept. 25

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

What is the issue you would like the board to address and why? Antlerless moose seasons must be reauthorized annually, and the Department of Fish and Game (department) recommends reauthorization of the Homer bench land hunt (DM549) and the targeted hunt (AM550) along the Sterling Highway in 15C for the 2020-2021 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) where calves. This equates to a density of approximately 3 moose/mi² in the census area. Density estimates for the winter are difficult to determine because the areas available to moose vary depending on snowfall, but winter density is consistently higher. Fall composition counts in core count areas during December 2018 indicated 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 in deep snow winters as moose move 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 residences. Fifty permits were issued in each of the last ten 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 if moose pose a threat to highway vehicles. On average, 62 animals are killed each year in vehicle collisions in Unit 15C. The department 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.

Interior and Eastern Arctic Region Proposals
PROPOSED BY: Alaska Department of Fish and Game  
(HQ-F19-170)
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PROPOSAL 164

5 AAC 85.045(a)(14). Hunting seasons and bag limits for moose.
Reauthorize the antlerless moose draw permits in Units 16A as follows:

<table>
<thead>
<tr>
<th>Units and Bag Limits</th>
<th>Resident Open Season</th>
<th>Nonresident Open Season</th>
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<tbody>
<tr>
<td></td>
<td>(Subsistence and General Hunts)</td>
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</table>

Unit 16(A)
1 moose per regulatory year, only as follows:

... 1 antlerless moose by drawing permit only; up to 200 antlerless moose permits may be issued.
...

What is the issue you would like the board to address and why? Although antlerless hunts may not be offered every year, antlerless moose hunts must be reauthorized annually. The Board of Game passed a proposal to add up to 200 antlerless draw permits at the 2019 Southcentral Region Meeting.

Moose surveys conducted in March 2019 yielded an estimate of 4,200 moose in Unit 16A. This estimate was greater than the post-hunt objective of 3,500–4,000 moose but less than the 2017 survey estimate of almost 8,700 moose. Previous information support that this population is growing.

Densities of moose in excess of the population objective can have a negative impact on the habitat thereby creating a condition that leads to starvation in heavy snow winters. Reducing the population through antlerless permits can alleviate over-browsing of vegetation and help sustain the moose population within the unit.

PROPOSED BY: Alaska Department of Fish and Game  
(HQ-F19-171)
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PROPOSAL 165

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

Interior and Eastern Arctic Region Proposals
Reauthorize the antlerless moose season in Unit 17A as follows:

<table>
<thead>
<tr>
<th>Units and Bag Limits</th>
<th>Resident</th>
<th>Nonresident</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Open Season (Subsistence and General Hunts)</td>
<td>Open Season</td>
</tr>
<tr>
<td></td>
<td>(15)</td>
<td></td>
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<tr>
<td>Unit 17(A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 2 moose per regulatory year only as follows:</td>
<td></td>
<td></td>
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<tr>
<td>RESIDENT HUNTERS:</td>
<td></td>
<td></td>
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<tr>
<td>1 moose by registration permit only; or</td>
<td>Aug. 25–Sept. 25 (Subsistence hunt only)</td>
<td></td>
</tr>
<tr>
<td>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</td>
<td>Winter Season to be Announced by Emergency Order (Subsistence hunt only)</td>
<td></td>
</tr>
<tr>
<td>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;</td>
<td>Winter Season to be Announced by Emergency Order (Subsistence hunt only)</td>
<td></td>
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<tr>
<td>…</td>
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</tbody>
</table>

**What is the issue you would like the board to address and why?** Antlerless moose hunts must be reauthorized annually by the board. The Board of Game adopted an antlerless winter moose hunt (beginning in December of 2013) in Unit 17A in support of the Unit 17A Moose Management Plan. 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 ADF&G 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 2,369 moose ± 564. Due to this high moose abundance, the board adopted a fall antlerless hunt in Unit 17A at their spring...
2018 meeting, to allow additional antlerless harvest. The bag limit of two moose and antlerless harvest opportunities in both fall and winter 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

PROPOSAL 166

5 AAC 92.015. Brown bear tag fee exemption.
Reauthorize the brown bear tag fee exemptions for the Central/Southwest Region as follows:

5AAC 92.015. Brown bear tag fee exemption
(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 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 of Game meeting and in Unit 17 during the March 2011 Board of Game 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 of Game 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

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Interior and Eastern Arctic Region Proposals