

**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.**

<b>Units and Bag Limits</b>	<b>Resident Open Season (Subsistence and General Hunts)</b>	<b>Nonresident Open Season</b>
Unit 1C, Berners Bay drainages  1 moose by drawing permit only; up to 30 permits may be issued  ...	Sept. 15 – Oct. 15 (General hunt only)	Sept. 15 – Oct. 15
Unit 1C, that portion west of Excursion Inlet and north of Icy Passage  1 moose per regulatory year, only as follows:  ...	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 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 km<sup>2</sup> 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)  
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