

FEDERAL WILDLIFE CLOSURE REVIEW
WCR12-07

Current Location: Units 17A and 17C—Caribou

Current Federal Regulations

Units 17A and 17C—that portion of 17A and 17C consisting of the Nushagak Peninsula south of the Igushik River, Tuklung River and Tuklung Hills, west to Tvativak Bay—up to 2 caribou by Federal registration permit. Public lands are closed to the taking of caribou except by residents of Togiak, Twin Hills, Manokotak, Aleknagik, Dillingham, Clark’s Point, and Ekuk hunting under these regulations. The harvest objective, harvest limit, and the number of permits available will be announced by the Togiak National Wildlife Refuge Manager after consultation with the Alaska Department of Fish and Game and the Nushagak Peninsula Caribou Planning Committee. Successful hunters must report their harvest to the Togiak National Wildlife Refuge within 24 hours after returning from the field. The season may be closed by announcement of the Togiak National Wildlife Refuge Manager.

*Aug. 1–Sept. 30.
Dec. 1–Mar. 31.*

Closure Dates: Aug. 1–Sept. 30, Dec. 1–Mar. 31

Current State Regulations

Species and Bag Limits – Caribou	Permit/Ticket Required	Open Season
<i>Unit 17A, all drainages east of Right Hand Point— one caribou</i>	<i>Harvest</i>	<i>may be announced</i>
<i>Unit 17C remainder—one caribou</i>	<i>Harvest</i>	<i>may be announced</i>

Note: The purpose of the “may be announced” season under State regulations is to provide a possible opportunity to harvest Mulchatna caribou, should they migrate into adjacent areas without mixing with Nushagak caribou.

Regulatory Year Initiated: 1994

Regulatory History

In 1994, Proposal 42 established a Jan. 1–Mar. 31 harvest season on the Nushagak Peninsula Caribou Herd (NPCH) in portions of Units 17A and 17C, and instituted a closure to all users except residents of Togiak, Dillingham, Manokotak, Twin Hills, Aleknagik, Clark’s Point, and Ekuk (FSB 1994). The newly established season started on January 1, 1995. Prior to the Board’s action, there had been no harvest season for the reintroduced Nushagak caribou population. Special Action S95-06 extended the season from Jan. 1–Mar. 31 to Dec. 1–Mar. 31 for the 1995/1996 regulatory year. When the Board adopted Proposal 34 in 1996, the season extension was adopted into Federal regulations and a fall season (Aug. 1 – Aug. 30) was established in the affected area (FSB 1996). In 1997, the Board adopted Proposal 47, which increased the harvest limit from one to two caribou on the Nushagak Peninsula portions of Units

17A and 17C, as there was a harvestable surplus of caribou and the previous year's harvest was well below the management objective (FSB 1997). In 1998, the Board approved Special Action 97-10, which extended the fall season from Aug. 1–Aug. 30 to Aug. 1–Sept. 30, and this extension became permanent when the Board adopted Proposal 39 in 1999 (FSB 1999).

There have also been a number of requests to changes the methods and means for harvesting Nushagak caribou that the Board has not adopted. In 1997, the Board rejected Proposal 48 that would have removed the same day airborne harvest restriction for caribou in Units 17A and 17C on the Nushagak Peninsula (FSB 1997). The issue was then resubmitted as Proposal 56 in 1998 and subsequently rejected by the Board (FSB 1998a). In 1998, Proposal 57 requested allowing NPCH caribou to be harvested from a snowmachine while it is in motion. The Federal Subsistence Board rejected the proposal for several reasons: harvesting caribou from a snowmachine in motion would have increased the likelihood of wounding animals; chasing with snowmachines could have caused undesirable physiological stress and decreased meat quality; and it would have caused misalignment between State and Federal regulations (FSB 1998b).

Closure last reviewed: 2008 — WCR08-07.

Justification for original closure (Section 815(3) criteria)

Section §815(3) of ANILCA states:

Nothing in this title shall be construed as – (3) authorizing a restriction on the taking of fish and wildlife for nonsubsistence uses on the public lands (other than national parks and monuments) unless necessary for the conservation of healthy populations of fish and wildlife, for the reasons set forth in 816, to continue subsistence uses of such populations, or pursuant to other applicable law;

Caribou were reintroduced to the Nushagak Peninsula in February 1988 after an absence of over 100 years. The reintroduction was a cooperative project between the U.S. Fish and Wildlife Service, Alaska Department of Fish and Game (ADF&G), and the villages of Togiak, Manokotak, Dillingham, and Choggiung Limited, with the goal of reestablishing a caribou population large enough to sustain a reasonable harvest, while still allowing the herd to grow.

A subsistence hunt was established in 1994, and Federal public lands were closed to the harvest of Nushagak caribou by all users, except by residents of Togiak, Dillingham, Twin Hills, Manokotak, Aleknagik, Clark's Point, and Ekuk. Community studies conducted in four of the seven villages slated to participate in the Nushagak caribou harvest indicated that caribou were an integral component of the seasonal round of wild resource harvest activities.

The closure was established and has been maintained since the caribou population is not large enough to allow for uses other than subsistence uses.

Council Recommendation for the Original Closure

The Bristol Bay Subsistence Regional Advisory Council supported the establishment of the hunt as well as the closure to non-Federally qualified users by stating that “[Togiak National Wildlife Refuge] will be able to monitor the hunt fairly closely with the Traditional Councils administering the permits; there's a real ownership with the people in this herd and in the management. The State will keep it closed on the State side so they can honor the original agreement” (FWS 1994:340).

State Recommendation for the Original Closure

The State supported Proposal 42 in 1994, stating that they had been part of the Nushagak Peninsula Caribou Management Planning Committee and agreed with its recommendation (FWS 1994:340).

Biological Background

In February 1988, 146 caribou from the Northern Alaska Peninsula Herd were transplanted to the Nushagak Peninsula (FWS 1994). The Nushagak Peninsula Caribou Herd (NPCH) has since experienced six phases of growth, with the most pronounced being a large population increase ($r = 0.32$) from the 1988 introduction through 1994 (Hinkes et al. 2005, Aderman and Lowe 2012) (**Figure 1**). This period of population growth exceeded the maximum theoretical potential for exponential population growth for caribou ($r = 0.30$) estimated by Bergerud (1980). Factors attributed to this dramatic growth may have included a high percentage of females in the herd, high calf production and survival, pristine range condition, few predators, and that no hunting was allowed on the herd from 1988–1995 (Aderman and Lowe 2012). The NPCH herd peaked at 1,399 caribou in February 1998 (FWS 1999), subsequently declined to a low of 462 caribou in July 2007, and then began increasing again.

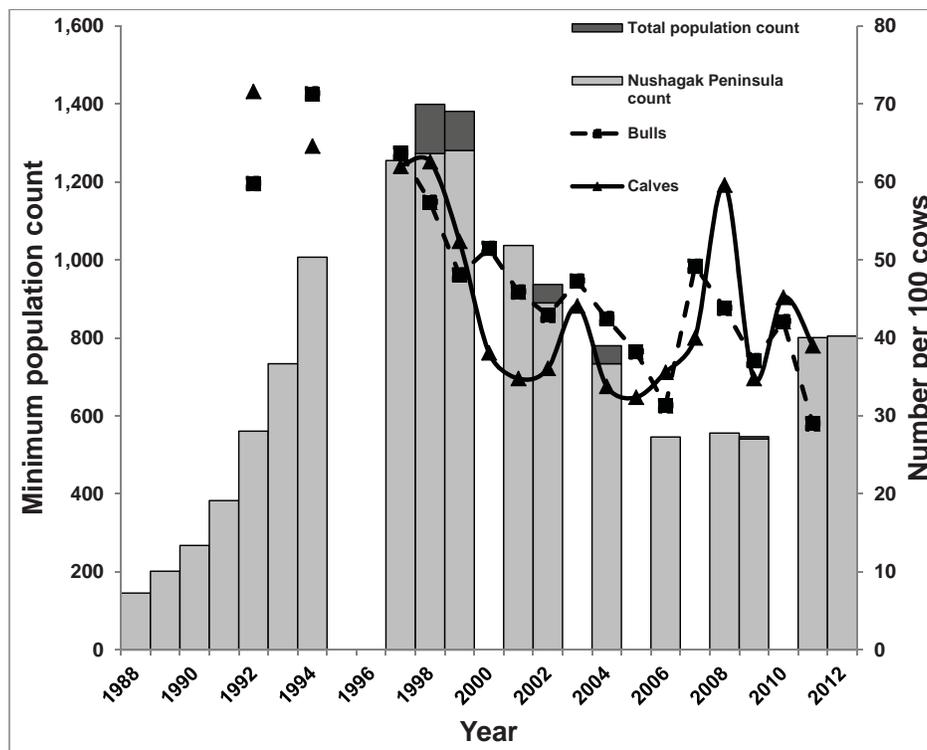


Figure 1. Estimated pre-calving minimum population counts (bars) and fall bull- and calf-to-cow ratios (lines) for the Nushagak Peninsula Caribou Herd, 1988–2011 (Aderman and Lowe 2012).

The most recent pre-calving survey was conducted in February 2012 and a minimum of 805 caribou were counted on the Nushagak Peninsula, which was similar to the 2010 survey results (**Figure 1**). In July 2012, the NPCH was estimated to contain a minimum of 902 caribou based on post-calving aerial surveys (Aderman 2012, pers. comm.), which is at the upper end of the Nushagak Peninsula Caribou Management Plan's population objective (to maintain a population of 400–900 caribou). The recent results also indicate the NPCH increased from a minimum of 859 caribou in July 2011 (Aderman and Lowe 2012). The herd is managed according to the guidelines of the management plan, which was prepared by personnel from the Togiak National Wildlife Refuge, ADF&G, and the Nushagak Peninsula Caribou Management Planning Committee (Committee). The Committee is made up of representatives from traditional councils of Togiak, Twin Hills, Manokotak, Aleknagik, Clark's Point, and Dillingham as well as the Nushagak Fish and Game Advisory Committee, Choggiung Limited, the Bristol Bay Native Association, Alaska Department of Fish and Game, and the Togiak National Wildlife Refuge.

Population composition surveys are conducted for the NPCH in early to mid-October. These surveys estimated 42 bulls:100 cows and 45 calves:100 cows in 2010 (Aderman and Lowe 2012) and 29 bulls:100 cows and 39 calves:100 cows in 2011 (Aderman 2012, pers. comm.). The average estimates from 1997 to 2010 were 46 bulls:100 cows and 36 calves:100 cows (**Figure 1**). At the time of reintroduction, the initial herd composition was heavily female biased, with 82.2% females, 9.6% males (12 males:100 females) and 8.2% calves (10 calves:100 females) (Aderman and Lowe 2012).

The causes of the decline between 1999 and 2009 are not clearly understood, and are almost certainly multi-factored (Aderman and Lowe 2012). The most likely explanation for the decline is that the exceptionally high growth through 1998 produced large annual cohorts of females that survived until a relative old age, at which time they declined in productivity. This high proportion of unproductive females, combined with high harvest years in 2001 and 2002, changed the population trajectory from an increasing trend to a decreasing trend, where it remained until the ultimate replacement of old, unproductive females with younger, productive females. Changing nutritional conditions (both short-term, such as those associated with drought or winter icing; as well as longer-term changes, such as lowered overall carrying capacity due to continuous grazing on the Nushagak Peninsula since 1988) underlay and exacerbated this decline, but were not likely the primary drivers. Wolf predation could be a factor in the decline; however, a study of wolf predation from 2007–2011 found that wolf predation was not a primary driver of Nushagak Peninsula caribou population dynamics (Walsh and Woolington 2012, report in progress). Brown bears are common on the Nushagak Peninsula and likely have learned to exploit the caribou population, but their impact on the NPCH is not known (Aderman and Lowe 2012).

Harvest History

Only Federally qualified subsistence users are allowed to harvest caribou from the NPCH. A Federal registration permit is required to harvest caribou on the Nushagak Peninsula in Units 17A and 17C and users are required to report their harvests to the Togiak National Wildlife Refuge within 24 hours of harvest. Reported harvest increased during the eight years after the season was established in 1994/1995 (**Table 1**). Unreported harvest can be high, similar to other rural areas in Alaska, and illegal take of NPCH caribou has been documented (Aderman and Lowe 2012). Most harvest occurred during the winter season, February and March, because of improved hunter access to the herd via snow machines (Aderman and Lowe 2012).

The NPCH Management Plan sets a harvest level of no more than 10 percent of the population when the population is over 600 caribou. In 2011, the Committee reviewed the management plan and updated the harvest strategy to make it more responsive to a dynamic caribou population. The updated strategy

Table 1. Reported harvest of caribou, by month, harvested on the Nushagak Peninsula during regulatory years 1994/1995 to 2011/2012 (Aderman and Lowe 2012; Aderman 2012, pers. comm.).

Regulatory year	Month						Unknown	Total
	AUG	SEPT	DEC	JAN	FEB	MAR		
1994/1995	NS ^a	NS	NS	3	1	25	6	35
1995/1996	NS	NS	3	0	5	43	1	52
1996/1997	5	NS	0	0	2	13	0	20
1997/1998	5	NS	0	2	25	35	0	67
1998/1999	0	2	0	0	0	50	3	55
1999/2000	0	0	0	2	7	54	0	63
2000/2001	0	6	0	0	22	98	0	126
2001/2002	0	3	0	0	9	115	0	127
2002/2003	3	0	0	0	0	0	0	3
2003/2004	2	3	0	0	0	29	0	34
2004/2005	1	0	0	0	0	8	0	9
2005/2006	1	1	0	0	0	9	0	11
2006/2007	NS	NS	NS	NS	0	NS	0	0
2007/2008	NS	NS	NS	NS	0	0	0	0
2008/2009	NS	NS	NS	NS	5	2	1	8
2009/2010	NS	NS	NS	NS	3	14	1	18
2010/2011	NS	NS	NS	NS	18	27	0	45
2011/2012	0	2	NS	NS	20	64	0	86
Total	17	17	3	7	117	586	12	759
% Total	2.2	2.2	0.4	0.9	15.4	77.2	1.6	-

^aNS = No season

annually establishes a harvest goal based on population size and trend, and permits harvest when the population exceeds 200 caribou and is stable or increasing. The Committee also updated the population objective, changing the previous goal of 600 to 1,000 caribou to 400 to 900 caribou. The Committee recommended the Federal registration permits be allocated to eligible communities based on a formula in which each community receives 5% of the total permits, plus additional permits based on a percentage of the aggregate participating communities.

Hunting effort is influenced by travel conditions, availability of and opportunity to take Mulchatna caribou and moose, and economic factors (Aderman and Lowe 2012). Most of the reported harvest has occurred in March (**Table 1**). Very difficult travel conditions limited the harvest in 2002/2003. As prescribed by the management plan, there were no fall hunts in 2006, 2007, and 2008 because the population was below 600 animals. There were a limited number of permits (five) available for the winter hunts in 2006/2007 and 2007/2008, but no harvest was reported (Aderman 2008, pers. comm.). Annual harvests have increased as the population has recovered and increased (**Table 1**). In 2011/2012 120 permits were issued, including two permits for the August and September 2011 season and the remaining 118 permits for the winter hunt (Aderman 2012, pers. comm.). In addition, the harvest limit was increased from one to two caribou for the Feb. 1–Mar. 31, 2012 season (Aderman 2012, pers. comm.).

Harvest reporting has not been completed, but two caribou were reportedly harvested in the fall season, and 84 caribou were harvested during the 2012 winter hunt (Aderman 2012, pers. comm.).

OSM PRELIMINARY RECOMMENDATION

Maintain status quo

Initiate proposal to modify or eliminate the closure

Other recommendation

Justification

The Nushagak Peninsula Caribou Herd has recovered from a recent population low in 2006, and the current population level is within the population objective set forth in the Nushagak Peninsula Caribou Herd Management Plan. The 2011/2012 harvest was 10% of the July 2011 minimum population count, which is the maximum harvest level identified in the Management Plan, and within the range of previous harvest levels (0–127 caribou harvested per year). Therefore, it is unlikely that a harvestable surplus is available beyond the Federal subsistence hunt, and the closure should remain in place. Lifting the closure could increase competition for a limited resource, and additional harvest could negatively impact the NPCH and be detrimental to subsistence users. Close monitoring by Togiak National Wildlife Refuge biologists and application of current regulations allow the Refuge Manager to adjust the harvest limit, to allocate the number of permits available to hunters, and to close the season if necessary.

Maintaining the status quo is necessary to conserve the caribou population and to continue subsistence uses under Section 804 of ANILCA and does not violate the prohibition of ANILCA Section 815(3). The status quo is consistent with sound management principles and the conservation of healthy wildlife populations while providing a preference for subsistence users.

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