

# STATE OF ALASKA

## DEPARTMENT OF FISH AND GAME DIVISION OF WILDLIFE CONSERVATION

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Ms. Nancy Hoffman, Refuge Manager  
Izembek National Wildlife Refuge  
P.O. Box 127 MS 515  
Cold Bay, Alaska 99571-0127

Dear Nancy:

The Unimak Island Caribou (UCH) herd continues to decline despite the closure of both federal and state regulated hunting. Fall composition surveys conducted in October 2009 confirmed chronically low calf recruitment and declining bull:cow ratios. Despite good survey conditions, staff located only 221 caribou which included 10 bulls and 7 calves. The observed bulls were mostly large and presumably older aged animals. Only 2 of the observed calves were male (please see Table 1 below).

The nutritional condition of the herd suggests forage resources are not limiting the UCH at this time. Staff handled 6 adult females in October and body condition was very good. Antler size in both males and females also indicates adequate nutrition. Pregnancy rates have been high for the last several years; however, pregnancy dropped substantially this past year. Because all other factors indicate adequate nutrition, we attribute the drop in pregnancy to the decline in bull:cow ratio below 10:100 in autumn of 2008. To our knowledge, bull: cow ratios below 10:100 have not been previously reported in Alaskan caribou herds.

As you are aware, the Southern Alaska Peninsula Herd (SAP) was in a similarly precarious situation in autumn 2007. Our analyses of the SAP at that time indicated that continued poor recruitment would result in extremely low bull:cow ratios creating an Alee effect that would result in reduced pregnancy. A wolf reduction program was instituted to arrest the decline, improve the age structure, and increase bull:cow ratios. The UCH was a primary comparison herd for evaluation of that program due to the similar demographics, dynamics, and proximity to the SAP.

Following the removal of a relatively small number of wolves, the SAP responded dramatically in 2008 and 2009 as recruitment increased from less than 1 to greater than 40 calves:100 cows in autumn and the new 2008 recruits survived very well over winter. The increase in SAP recruitment has gone a long way towards realizing the objectives of that program.

The combination of low UCH numbers, chronically low recruitment, and extremely low bull:cow ratios cause concern for conservation of this important resource. The low bull:cow ratio is of particular concern because low recruitment and ageing of the existing adult bulls creates the possibility of even lower recruitment through a strong Alee effect or even a complete loss of bulls from the island. The

subsequent, cumulative effect of these factors is the very possible demise of the UCH in the near future.

Despite the challenges, we believe remediation of this problem is very possible, as evidenced by the striking results for the SAP. Translocating bull caribou from the SAP to the UCH to increase pregnancy rates, coupled with a limited wolf reduction program to increase recruitment is a way to quickly stabilize the declining population. We know you share concerns for this important resource as one of the purposes for the Alaska Maritime Refuge is to conserve fish and wildlife populations, including caribou.

We note that the UCH has a positive customary and traditional finding for subsistence by the Alaska Board of Game (Board). Failing to reverse the decline of the UCH will have long-term impacts for local rural residents who rely on it for subsistence purposes. Proposals concerning the UCH will be discussed at the Federal Subsistence Board (FSB) meeting, beginning January 12.

As this is a pressing issue for both our agencies, we would very much like to discuss the status of the UCH and possible actions for its benefit before the January 29, 2010 Board meeting and, if possible, before the January 12, 2010 FSB meeting. At the January 29 Board meeting we will be briefing the members on the status of the UCH and possible remedies that could be undertaken to reverse its decline. Also, given the gravity of the situation and our obligation to provide information to the public concerning the status of wildlife throughout the State, we are in the process of drafting a news release about the status of the UCH and our associated concerns prior to the Board meeting.

I look forward to hearing from you and discussing this important matter at your earliest convenience.

Sincerely,



Doug Larsen  
Director

cc: U. S. Fish and Wildlife Service – Todd Logan, Larry Bell, Mike Boylan, Steve Delehanty, Bill Schaff  
Alaska Department of Fish and Game – Denby Lloyd, Pat Valkenburg, Tina Cunning, Brad Palach, Gino Del Frate, Mark Burch, Lem Butler, Bruce Dale, Craig Fleener

*Table 1. Unimak caribou herd composition surveys and population estimates, 2000-2009.*

Regulatory year	Bulls: 100 cows	Calves: 100 cows	Small bulls (% of bulls)	Medium bulls (% of bulls)	Large bulls (% of bulls)	sample size	Population counts
2000	40	21	34	32	33	406	983 <sup>a</sup>
2002	54	31	50	22	29	392	1,262 <sup>b</sup>
2004							1,006 <sup>b</sup>
2005	45	7	24	37	39	730	1,009 <sup>b</sup>
2006							806 <sup>b</sup>
2007	31	6	28	34	38	433	
2008	9	6	33	33	33	260	
2009	5	3	30	30	40	221	<300 <sup>c</sup>

<sup>a</sup> Count by Rod Schuh, registered guide, in May

<sup>b</sup> Winter count by Izembek National Wildlife Refuge staff

<sup>c</sup> Best guess based on recent observations. This is not an official population estimate.