# STATE OF ALASKA

SEAN PARNELL, GOVERNOR

## DEPARTMENT OF FISH AND GAME

*DIVISION OF WILDLIFE CONSERVATION*

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TO: Alaska Board of Game Members

THRU: Kristy Tibbles, Executive Director, Boards Support

THRU: Dale Rabe, Deputy Director, Wildlife Conservation

FROM: David James, Regional Supervisor, DWC

DATE: July 30, 2010

SUBJECT: Request to modify brown bear regulations in Unit 26B

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The Alaska Department of Fish and Game requests the Alaska Board of Game (board) to adopt emergency regulations to open the resident and nonresident brown bear hunting seasons on August 10 and to convert the resident drawing permit hunt to a general season. An alternative to converting the drawing permit to a general season is to issue drawing permits to all permit applicants. The resident and nonresident seasons currently open on August 25.

This request is intended to help address the continuing decline of muskoxen in Unit 26B and the impact that brown bear predation is having on survival of adults and calves.

Muskoxen occupy a limited range of habitat types, have a low rate of reproduction compared to many other ungulates, and are vulnerable to excessive mortality due to human harvests or predation. Thus, the species is susceptible to extreme fluctuations in abundance and was once extirpated from much of its circumpolar range. Considerable effort and funds were expended to reintroduce 64 muskoxen to northeastern Alaska (NEAK) during 1969 and 1970. This population subsequently increased to a peak of approximately 800 muskoxen in 1995, and spread across the Arctic coastal plain from the Colville River in Alaska eastward to the Babbage River northern Yukon, Canada. Hunting seasons were initiated in GMU 26C (the arctic coastal plain between the Canning River and the Canadian border) during 1982 and GMU 26B (between the Colville and Canning Rivers) in 1990. Harvests in these management units reached a maximum of 20 muskoxen during the 2000-2001 regulatory year. Between 1999 and 2006, the population of muskoxen in NEAK declined to approximately 200 animals. The decline was especially severe in GMU 26C, where the population had virtually disappeared by 2006. Although the decline was less severe in GMU 26B, surveys suggested that muskoxen were less abundant and less widely distributed in this area during 2006 compared to the late 1990s . During this period, increasing trends were documented for muskox populations on the Seward Peninsula and Nunivak Island in western AK. Hunting of muskoxen was halted in GMU 26C during 2002–2003 and in GMU 26B during 2005–2006.

To evaluate potential causes of this decline, ADF&G initiated a study in 2007 to assess calf production, age-specific survival rates, causes of mortality, and nutritional status of muskoxen in NEAK. The population declined from 196 muskoxen during 2007 to 184 during 2010, and bear predation was the predominant cause of mortality. Of 56 calves and 42 adult muskoxen

known to have died during this period, 43 calves and 33 adults appeared to have been killed by grizzly bears. Additional deaths were due to disease (10 calves, 1 adult), accidents (drowning and motor vehicles; 2 calves and 7 adults), and starvation (1 calf and 1 adult). Analyses of muskox health and body condition suggested that a variety of pathogens are prevalent in this population, and that low levels of copper in the diet may be contributing to reduced immune system function. However, disease was not indicated as a common primary cause of death.

The severity of the recent decline of the NEAK population and the speed with which it has occurred (67% reduction between 1999–2006) indicate the critical nature of the situation and suggest that an immediate response is needed to prevent the population from once again becoming extirpated.

The department feels that additional harvest of brown bears would help prevent extirpation of the muskox population. Bear harvest over the last 2 years has averaged 20 bears annually from a population of approximately 270. The expected additional harvest of up to 30 bears annually is not expected to endanger the bear population.