

This proposal was deferred by the Board of Game at the Statewide 2010 meeting. It was previously listed as proposal 32.

PROPOSAL 133 - 5 AAC 92.125. Predation Control Areas Implementation Plans.

Establish a predation control plan for Units 9C and 9E.

(l) The Northern Alaska Peninsula Predation Management Area. Notwithstanding any other provisions in this title, and based on the following information contained in this section, the commissioner or the commissioner's designee may conduct a wolf population reduction or wolf population regulation on the Alaska Peninsula in Units 9(C) and 9(E):

(A) The Northern Alaska Peninsula Wolf Management Area is established to stabilize the population decline and facilitate growth in the Northern Alaska Peninsula caribou herd (NAPCH) on the mainland portions of Units 9(C) and 9(E) to aid in achieving intensive management objectives; the control area includes all Alaska Peninsula drainages south of the south bank of the Naknek River and the southern boundary of Katmai National Park to a line from the southernmost head of Port Moller Bay to the head of American Bay, encompassing approximately 19,461 square miles;

(B) the discussion of wildlife populations and human use information is as follows:

(i) the NAPCH population information is as follows:

(a) the NAPCH was estimated at 20,000 caribou in the 1940s and again in the 1980s, but has declined to fewer than 3,000 caribou since the last peak population size; the most recent estimate of herd size was 2,000 to 2,500 caribou based on surveys conducted in October 2009;

(b) the initial decline in population size was attributed to nutritional limitations imposed by a depleted range following the peak in the 1980s; parasites and/or disease were also suspected to have had a negative influence on the herd's status;

(c) predator management was considered previously, but was not implemented because nutritional indices indicated that individuals of this herd were experiencing nutritional limitations that might be further aggravated by any attempts to increase herd size; indications of improved condition include increased pregnancy rates, increased neonate weights, and increased calf weights; these changes alone have been insufficient to alter herd status;

(d) pregnancy rates of cows that were 24 months of age or older increased from 57% in 2005 (n=315) to 84% in 2009 (n=104);

(e) birthmass of calves increased during the period of 2005 to 2007; birthmass of male calves increased from 7.7kg in 2005 (n=26) to 8.0kg in 2006 (n=19) and 8.6kg in 2007 (n=28); female calves born in 2005 weighed 7.8kg (n=15), 7.3kg in 2006 (n=30), and 8.0kg in 2007 (n=22);

(f) female calves captured at 10 months of age weighed 49.9kg in 2005 and 56.7kg in 2007; however the small sample size precludes statistical comparison;

(g) research into calf mortality documented survival rates during the first two months of life that averaged 14% during the period of 2005 through 2007 (n=143), which was significantly lower than survival rates observed

in several other herds studied in the state; survival during the first two weeks of life has averaged 40% and survival from two weeks to two months averaged 34%; cause of death during the first two weeks of life was primarily attributed to wolves (43%) and brown bears (31%); cause of death could not be assessed after calves reached two weeks of life due to logistic limitations;

(h) calf ratios in October averaged 10.3 calves per 100 cows during the period of 2003 to 2009 (range 7 to 16);

(i) bull ratios declined to 19 bulls per 100 cows during the period of 2004 to 2009 despite hunting closures in 2005;

(j) harvestable surplus is estimated to be 0 caribou based on chronic poor calf recruitment and reduced bull ratio;

(k) high levels of consumptive use have been a priority for the Northern Alaska Peninsula Caribou Herd; from 1990 to 1998 an average of 724 people reported hunting caribou, harvesting an average of 716 caribou annually; harvest has been regulated under the Tier II permit system since 1999;

(l) state and federal caribou hunts were closed in 2005 due to the continued population decline and low calf recruitment; the closure remains in place as of 2010;

(ii) the predator population and human use information is as follows

(a) wolves are a major predator of caribou on the Alaska Peninsula;

(b) research into the causes of caribou calf mortality indicates that wolves are typically responsible for 43% of the calf deaths during the first 2 weeks of a life;

(c) wolf density in the Northern Alaska Peninsula Wolf Management Area is estimated at 7 wolves per 1000 square kilometers; anecdotal evidence obtained from biologists, pilots, trappers, and local residents indicates that wolves are abundant throughout the area;

(d) in 2008 the wolf population in the Northern Alaska Peninsula Wolf Management Area was thought to include 200 to 300 wolves and composed of 30 to 50 packs based on habitat type and prey base;

(e) an average of 24 wolves (range of 7 to 50 wolves) have been harvested annually in the Northern Alaska Peninsula Wolf Management Area;

(f) brown bears are considered to be an important predator of caribou on the Alaska Peninsula; while brown bears have been known to kill adult caribou opportunistically, brown bears are regarded as an effective predator of calves during the first 10 days of life;

(g) research into the causes of caribou calf mortality indicates that brown bears are typically responsible for 31% of the calf deaths during the first 2 weeks of a life;

(h) brown bears are considered abundant throughout the Alaska Peninsula; densities range from 100 to 150 bears per 1000 square kilometers in the Northern Alaska Peninsula Wolf Management Area;

(i) brown bear harvests in the Northern Alaska Peninsula Wolf Management Area have averaged 179 brown bear annually from 2000 to 2007;

(C) predator and prey population levels and objectives and the basis for those objectives are as follows:

(i) intensive management population objectives established by the board for the NAPCH is 12,000 - 15,000 caribou; the intensive management harvest objective is 800 - 1,500 caribou annually; population and harvest objectives have not been met for 15 years;

(a) intensive management objectives were established by the board based on historic information regarding population numbers, habitat limitations, human use, and sustainable harvests;

(b) the estimated NAPCH population in October 2009 was 2,000 to 2,500 caribou;

(c) hunting seasons for the NAPCH were closed in July 2005; No legal harvest of caribou has occurred for the NAPCH since the 2004 regulatory year;

(ii) wolf population objectives for Unit 9 is to maintain a wolf population that can sustain a 3-year-annual harvest of 50 wolves; the wolf population objective for Unit 9 is currently being met;

(iii) brown bear population objectives for Unit 9 are to maintain a high density bear population with a sex and age structure that can sustain a harvest composed of 60% males, with 50 males 8 years of age or older during combined fall and spring seasons; the brown bear population objective for Unit 9 is currently being met;

(D) justification, objectives, and thresholds for the predator management implementation plan are as follows:

(i) justification for the Northern Alaska Peninsula Predator Management Area is based on the board decision to designate the NAPCH important for providing high levels of human consumptive use; the board established objectives for population size and annual sustained harvest of caribou in Units 9C and 9E consistent with multiple use and principles of sound conservation and management of habitat and all wildlife species in the area;

(ii) the objectives of the program is to halt the decline of the NAP and to achieve a sex and age structure that will sustain the population; the goal of this program is to reduce the number of wolves in specified control areas that demonstrate a history of repeated use by caribou; the two control areas are as follows:

(a) the northern control area is defined as all lands that drain into the Bering Sea between the southern bank of the Naknek River in Unit 9(C) and the northern bank Meshik River in Unit 9(E) and all lands in Unit 9(E) that drain into the Pacific Ocean between and including Alinchak Bay and Kujulik Bay;

- (b) the southern control area is defined as all lands in Unit 9(E) that drain into the Bering Sea between the southern bank of Fracture Creek and Port Moller Bay;
- (iii) The commissioner may initiate the reduction of wolf numbers in the Northern Alaska Peninsula Predator Management Area according to the following thresholds:
 - (a) the caribou population is below intensive management objectives established by the board and caribou harvest objectives are not being met;
 - (b) nutrition is not considered to be the primary factor limiting caribou population growth;
 - (c) calf recruitment is an important factor limiting population growth and calf survival during the first four weeks of life is less than 50%;
- (iv) the commissioner may continue to reduce wolf numbers in the Northern Alaska Peninsula Predation Management area until the following thresholds can be met without the benefit of wolf control:
 - (a) the bull-to-cow ratio can be sustained within management objectives and the fall calf-to-cow ratio can be sustained above 25 calves per hundred cows; or
 - (b) the population can grow at a sustained rate of 5% annually; or
 - (c) harvest objectives can be met;
- (v) the commissioner will suspend the wolf reduction program if the following conditions are observed pending further review by the Alaska Board of Game to determine if the program can be modified to achieve the objectives of this program before reinstating the program; hunting and trapping by the public specified in other sections of this title may continue and are not subject to this clause:
 - (a) caribou nutritional indices as evidenced by pregnancy rates, calf and adult body mass, or other condition indices exhibit a declining trend from current values; or
 - (b) fall caribou calf ratios remain below 20 calves per hundred cows for 3 consecutive years following the initiation of the wolf reduction program; or
 - (c) the caribou population sex ratio remains below the caribou population objectives and does not increase for 3 consecutive years following the initiation of the wolf reduction program;
- (vi) the wolf population objective for the Northern Alaska Peninsula Management Area is to reduce wolf numbers in control areas within Units 9(C) and 9(E); Because wolves will not be removed from all lands within the management area and because logistic limitations prohibit public access to the majority of lands within the management area, the majority of wolves in Unit 9(C) and 9(E) will not be affected by the management activities authorized by this plan;
- (vii) reduction of predators by humans is necessary to stop the caribou population decline and promote recovery;

(viii) reduction of wolf numbers in prescribed control areas is expected to increase caribou calf survival and recruitment and increase the caribou population sex ratio to management objectives;

(ix) reduction of bear numbers remains problematic due to the high density of brown bears in Units 9(C) and 9(E), logistical limitations, and competing management priorities;

(E) the authorized methods and means used to take wolves are as follows:

(i) hunting and trapping of wolves by the public in treatment areas during the term of the management program may occur as provided in the hunting and trapping regulations set out elsewhere in this title, including the use of motorized vehicles as provided in 5 AAC 92.080;

(ii) the commissioner may issue public aerial shooting permits, public land and shoot permits, allow agents of the State to conduct aerial shooting, or allow Department employees to conduct aerial shooting as a method of wolf removal under AS 16.05.783, including the use of any type of aircraft;

(iii) the commissioner may authorize the use of state employees or state owned or charter equipment, including helicopters, as a method of wolf removal under AS 16.05.783;

(F) the anticipated time frame and schedule for update and reevaluation are as follows:

(i) for up to 10 years beginning July 1, 2010, the commissioner may reduce the wolf populations in the Northern Alaska Peninsula Predation Management Area;

(ii) annually the Department shall, to the extent practicable, provide to the board at the board's spring meeting a report of program activities conducted during the preceding 12 months, including implementation activities, the status of caribou and wolf populations, and recommendations for changes, if necessary to achieve the objectives of the plan;

(G) other specifications that the board considers necessary:

(i) the commissioner shall suspend wolf control activities

(a) when prey population management objectives are obtained;

(b) predation management objectives are met;

(c) upon expiration of the period during which the commissioner is authorized to reduce predator numbers in the predator control plan area;

(ii) the commissioner shall annually close wolf hunting and trapping seasons as appropriate to ensure that the minimum wolf population objectives are met.

ISSUE: The Northern Peninsula Caribou Herd in Game Management Units 9C and 9E has declined from a peak population size of 20,000 caribou in 1989. During the fall of 2009, the population size was estimated to be less than 2,500 caribou. The initial decline was attributed to deteriorated range conditions associated with excessive population size in the 1980s. Nutrition is no longer a significant limiting factor based on several indices of condition including pregnancy rates, neonate calf weights, 10-month calf weights, and other indices of body condition, which have improved over the last 4 years.

The primary factor limiting population growth and harvest opportunity is the poor calf recruitment that has occurred over the past 7 years (11, 7, 7, 14, 7, 10, and 16 calves: 100 cows in the fall of 2003, 2004, 2005, 2006, 2007, 2008, and 2009 respectively). Calf recruitment has been insufficient to offset adult mortality, resulting in a decreased population size and the closure of state and federal caribou hunts since 2005. The low population size and skewed age structure will delay population growth and limit future hunting opportunity.

The Board has set intensive management objectives to maintain the population between 12,000 and 15,000 animals with a harvest between 800 and 1,500. The Department recommends the following management objectives for the Northern Alaska Peninsula Caribou Herd:

1. Sustain a population size of 6,000-15,000 animals
2. Maintain a minimum fall bull:cow ratio of 35:100
3. Regulate population size and predation rates to sustain a calf ratio of at least 25 calves per 100 cows and harvest objectives.
4. Temporarily limit population growth if the population is below objectives when a decreasing trend in nutritional indices is detected. Nutritional indices include pregnancy rates, calf and adult body mass, and other indices of condition. Allow the population growth to continue when nutritional indices return to normal values.

The provisions allowed for in this plan will increase calf recruitment and improve the population's sex and age structure. Hunting opportunity will be reinstated when the population can sustain a limited harvest based on fall sex and age composition surveys.

WHAT WILL HAPPEN IF NOTHING IS DONE? If the population continues to decline, population recovery will be prolonged and future opportunity for caribou hunters in Unit 9C and 9E will be further compromised.

WILL THE QUALITY OF THE RESOURCE HARVESTED OR PRODUCTS PRODUCED BE IMPROVED? Yes

WHO IS LIKELY TO BENEFIT? In the near term we expect the herd to stabilize and with favorable conditions slowly increase. Hunters will benefit as the herd recovers.

WHO IS LIKELY TO SUFFER? The season was already closed by department action. No negative effects are anticipated. .

OTHER SOLUTIONS CONSIDERED? Continued hunting restrictions for caribou by the Department will be necessary. Without predator management the herd may stabilize below objectives or continue to decline.

PROPOSED BY: The Alaska Department of Fish and Game (HQ-10W-G-031)

Note: This proposal was deferred by the Board of Game at the Statewide 2010 meeting. It was previously listed as proposal 33.

PROPOSAL 134 - 5 AAC 92.108. Identified big game prey populations and objectives.

Modify the population objectives for the Northern Alaska Peninsula Caribou Herd (NAP) in Unit 9C and 9E.

Population	Findings	Population Objective	Harvest Objective
...			
Caribou Herds			
...			
Northern Alaska Peninsula	Positive	<u>6,000-15,000</u> [12,000-15,000]	800-1,500
...			

ISSUE: The Northern Alaska Peninsula Caribou Herd (NAP) in Unit 9C and 9E is a small- to medium-sized caribou herd that occupies a geographically restricted range, bounded by the Pacific Ocean and Bering Sea. Past attempts to maintain the herd at peak population size are believed to have contributed to the decline of this herd and the eventual loss of harvest opportunity.

Formerly the management objectives were to maintain a herd size of 15,000 to 20,000 caribou in the NAP. While these objectives were achieved in the 1980s, managers recognized that the population had exceeded the carrying capacity of the range and reduced the objective to 12,000 to 15,000 caribou. The Board adopted this population objective as the intensive management objective and set a harvest objective of 800 and 1,500 caribou annually.

Studies (2005-2007) of the herd’s health identified poor nutrition as one of several factors limiting the population’s growth potential 15 years after the initial decline was detected. While nutritional indices have improved, a review of management objectives is warranted to avoid herd increases that would lead to a deterioration of range conditions.

The Department recommends a review of population objectives for the Northern Alaska Peninsula Caribou Herd to accommodate changes in carrying capacity. Population size, while relevant to a discussion of harvest potential, does not fully incorporate all of the information necessary to arrive at a sustainable harvest estimate. Population growth rate, sex ratio, calf recruitment, age structure, and carrying capacity must also be taken into consideration when making management decisions to optimize the long-term use of this resource. Harvest objectives can be realized in a wider range of population size than is currently recognized by Intensive Management objectives.

WHAT WILL HAPPEN IF NOTHING IS DONE? Managers will be required to achieve NAP population size objectives that may, at times, exceed the carrying capacity of the range and

are likely not sustainable over long periods of time. While this condition will produce a high harvest potential in some years, the opportunity for harvests will not be consistent through time.

WILL THE QUALITY OF THE RESOURCE HARVESTED OR PRODUCTS PRODUCED BE IMPROVED? Yes

WHO IS LIKELY TO BENEFIT? In the near term we expect the herd to stabilize and with favorable conditions slowly increase. Hunters will benefit as the herd recovers.

WHO IS LIKELY TO SUFFER? No negative effects are anticipated.

OTHER SOLUTIONS CONSIDERED? Modify the structure of 5AAC 92.108 to incorporate population objectives that play a role in producing an estimate of harvest potential such as the population's sex ratio, calf recruitment, nutrition indices, etc.

PROPOSED BY: The Alaska Department of Fish and Game (HQ-10W-G-032)
