Proposal - Modify 5AAC 85.056 (a), Hunting seasons and bag limits for wolves, and 5AAC 84.270 (13) Furbearer Trapping for wolves. Modify the wolf hunting and trapping seasons on Unimak Island in Unit 10.

5AAC 84.270(13). Furbearer trapping.

Species and Units	**Open Season**	**Bag Limit**
(13)		
Unit 10, that portion of Unimak Island west of 164° longitude	**Nov. 10 - June 30**	**No limit.**
Units 6, 7, **remainder of** 10, 11, 14(A), 15, and 18	Nov. 10 - Mar. 31	No limit.

5AAC 85.056(2). Hunting seasons and bag limits for wolf.

Units and Bag Limits	**Resident Open season (Subsistence and General Hunts)**	**Nonresident Open season**
Units 10, that portion of Unimak Island west of 164° longitude	**Aug. 10 - June 30**	**Aug. 10 - June 30**
10 wolves per day		
Units 9 and 10, **remainder of** Unimak Is.	Aug. 10 - May 25	Aug. 10 - May 25
10 wolves per day		
…		
Remainder of Unit 10	Aug. 10 - Apr. 30 (General hunt only)	Aug. 10 - Apr. 30
5 wolves		

ISSUE: The Unimak Caribou Herd (UCH) has recently undergone a significant population decline along with changes in other key population parameters. These changes are affecting the long-term viability of the population as well as subsistence harvest and other uses. In 2002, the UCH population was approximately 1,260 caribou. By 2010 the population had declined to approximately 400 caribou, based on a partial survey conducted by Izembek National Wildlife Refuge Staff. The causes of the initial decline are unknown; however, the continuing decline is due to high levels of predation on newborn caribou calves resulting in a prolonged period of chronic poor calf recruitment.

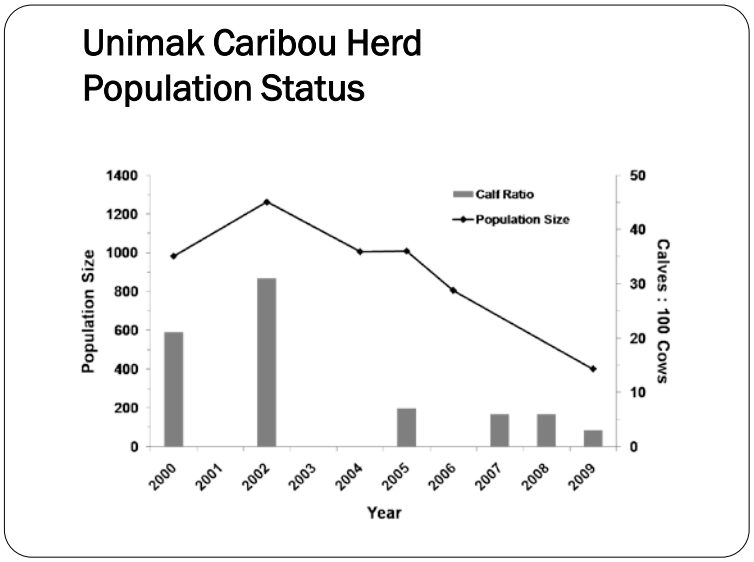
Table. Unimak caribou herd composition surveys and population estimates, 2000-2009.

Regulatory year	Bulls: 100 cows	Calves: 100 cows	Small bulls (% of bulls)	Medium bulls (% of bulls)	Large bulls (% of bulls)	sample size	Population counts
00	40	21	34	32	33	406	983[a]
2002	54	31	50	22	29	392	1,262[b]
2004							1,006[b]
2005	45	7	24	37	39	730	1,009[b]
2006							806[b]
2007	31	6	28	34	38	433	
2008	9	6	33	33	33	260	
2009	5	3	30	30	40	221	400[b]

[a] Count by Rod Schuh, registered guide, in May

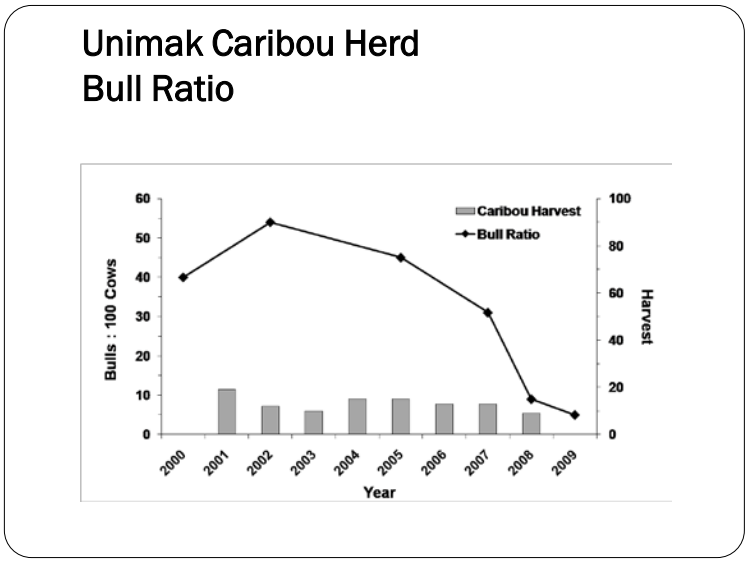
[b] Winter count by Izembek National Wildlife Refuge staff

While it is not uncommon for caribou populations to fluctuate over time, the primary concern for the UCH is that the decline has been accompanied by a concurrent decline in the bull ratio that result in reduced caribou pregnancy rates and calf production. The decline in bull numbers was not caused by human harvests; human harvest, including subsistence, remained low until closure of all hunting seasons in March 2009.



The Alaska Department of Fish and Game (Department) conducted a composition survey of 221 UCH caribou in October 2009. Significantly, only ten of the caribou were identified as adult bulls (4.9 bulls per 100 cows). This composition count also showed almost no calves survived into recruitment (3.4 calves per 100 cows). This lack

of calf recruitment results in ongoing depletion of the bull population, and a continued decline in the bull ratio is expected if calf recruitment does not improve. Bull caribou have lower survival rates and shorter lifespans than cow caribou. Because of this difference, bull numbers decline quickly in a population that does not have sufficient calf recruitment to offset the loss of adult animals. As bull numbers decrease it becomes increasingly difficult for reproductive cows to find bulls during the rut and pregnancy rates will decline at very low bull numbers. This appears to be the case in the UCH. With a decrease in pregnancy rates and calf production, calf recruitment is further compromised creating a negative feedback that further limits calf recruitment.



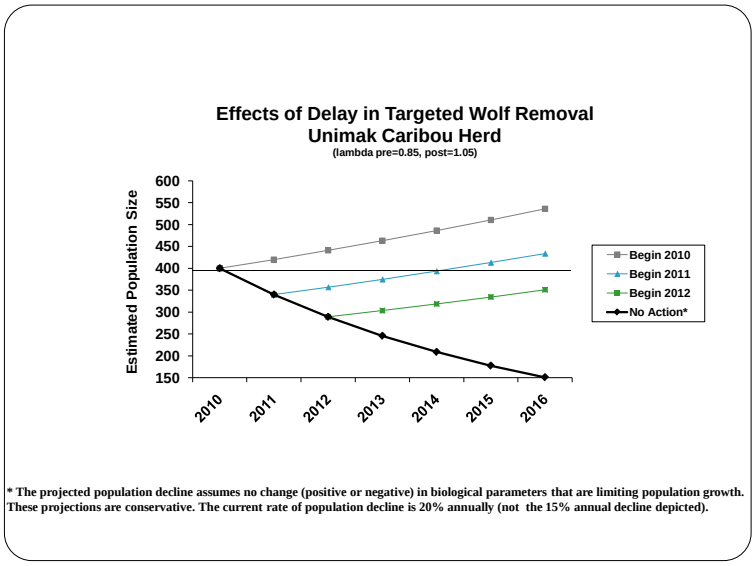
Wolves and bears are common on Unimak Island, and wolves are frequently observed during caribou surveys. There is no complete estimate of wolf numbers, but Department biologists believe that there are between 15-30 wolves on Unimak based on an extrapolation made from studies of similar populations and prey base. Based on areas of similar size, habitat, and ungulate prey base biomass on the neighboring Alaska Peninsula, 15-30 wolves are estimated to occupy the island in 2-5 packs. Brown bears are common on Unimak Island. During the spring of 2002 a line-transect survey was conducted that estimated the population size at approximately 300 bears. Based on research and management actions on adjacent herds and observations made by biologists and the public on Unimak Island, wolf predation on very young caribou calves is the primary factor limiting calf recruitment. There is no evidence that forage resources or disease are limiting. Predation by bears, though occurring, has a reduced effect on calf survival compared to other areas of the state.

If current trends in the UCH continue, the caribou population will experience a prolonged population low and may be extirpated from the island. Either outcome would result in the extended loss of opportunity for people who utilize caribou (consumptive, including subsistence use, and non-consumptive use) and would have consequences for the ecosystem on Unimak Island, including possible loss of the wolf population. Subsistence opportunities are currently nonexistent across the Alaska Peninsula and Unimak Island, as all caribou herds in the region have been closed to all forms of hunting due to population declines.

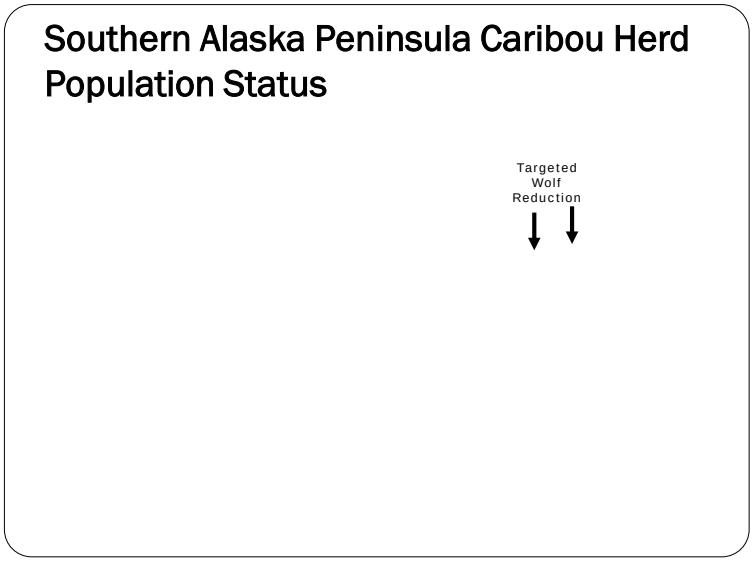
The Department's long-term plan is to transplant additional caribou bulls and conduct a targeted wolf removal in Unit 10, Unimak Island, targeting wolves only on the caribou calving grounds, in order to increase pregnancy rates and calf survival. The targeted wolf removal would be conducted with methods identical to those used on the Southern Alaska Peninsula (SAP) herd program in 2008 and 2009. That program, implemented under conditions similar to the UCH, resulted in substantive and immediate increases in calf survival, bull ratio, and

population size. The details of the UCH program appear in Proposal 132, which was presented to and adopted by the Alaska Board of Game at the Spring 2010. The adopted language is attached.

The Department has evaluated the consequences of delaying action to conserve the UCH and work towards restoration of subsistence harvests and other uses. Because the herd continues to decline, and because the potential of growth is reduced in small populations, a single year's delay in improving recruitment will likely result in an addition 3-5 years just to restore the population to even its current, depleted, size. Additionally the probability of increasing calf survival is reduced at lower population levels as a consequence of the reduced biological potential of the herd as limitations are imposed on targeted wolf removal.



Action during this calving season on the UCH would provide an immediate increase in calf recruitment, population size, and bull ratios. Results from action this year would likely be similar to results achieved on the adjacent SAP herd in 2008 and 2009 with immediate benefits and population stabilization.



PROBLEM: The USFWS has refused to permit the state to immediately proceed with its targeted wolf removal plans, to categorically exclude the implementation of targeted wolf removal from their NEPA process or to accept the departments ER or MRDG for compliance. Delaying action will put the caribou herd at further risk of extirpation and increase the length of time and effort required to restore subsistence harvest of caribou.

Extension of the wolf hunting and trapping seasons will allow for additional harvest by the public at a time crucial for survival of caribou calves. The season extensions will provide the public additional opportunity to, in some measure, compensate for the federal refusal to allow timely state action in the area where targeted wolf reduction would have occurred had the state been able to act.

The season extensions under normal methods and means will probably not provide the level of mitigation necessary to meet Board objectives for caribou calf survival and recruitment. However, the season extensions, through take of a small number of wolves near the caribou calving areas, could serve to mitigate the declining trend in calf survival and recruitment. While normally there would be little expectation of increased wolf harvests under an extended hunting and trapping season, members of the public, including local hunters, have indicated they would undertake such efforts if it would benefit the caribou population. Harvests will be limited to the wolf reduction area on the western end of the island.

The board has already determined, through the normal regulatory process, that action is necessary during this year's calving season on Unimak Island. Unforeseen delays in implantation of the actions adopted by the board necessitate emergency extension of the wolf hunting and trapping seasons on Unimak Island caribou calving areas to mitigate, to the extent possible, the lack of action caused by the response of the USFWS.

Unimak Island Caribou Herd Characteristics:

- The UCH ranges across much of Unimak Island. The island is the largest (1571mi^2) in the Aleutian Chain and is located across False Pass approximately 0.4 miles from the mainland. The majority of the island is part of the USFWS Alaska Maritime National Wildlife Refuge.
- The UCH is important for subsistence harvest from the village of False Pass (population 70) located on the island, subsistence for other nearby communities, and general hunting.
- Unimak Island is the southwestern extent of naturally occurring caribou in Alaska. Caribou were documented on Unimak at least 130 years ago.
- Caribou were reported swimming across False Pass as recently as the mid-1970's
- Subsequent studies of radio-collared caribou have not documented interchange with the SAP. Genetic studies indicate only slight differentiation between the herds.

Recent Events:

- The first solid evidence of a decline in Unimak Caribou was detected in 2005 when very low recruitment was observed (Table 1). Bulls remained numerous and light harvests continued through 2007 (Table 2).
- The lack of recruitment caused low bull numbers by 2008. Decreases in bulls occur before cows because of their shorter life span.
- Staff observed similar numbers of wolves on both the SAP and UCH calving grounds during calving surveys. However, total wolf numbers on Unimak are not known.

- By October 2008, bull ratios dropped lower than ever reported in Alaska and declined even further in 2009 (Table 1). The lack of bulls likely reduced breeding opportunities for females and caused the low calf production observed in 2009.
- In 2009, staff verified that caribou were in good body condition indicating adequate forage.
- In October 2009, only 221 caribou were observed including 11 adult bulls and 7 calves, 2 of which were male.
- USFWS conducted a survey in 2010 indicating a minimum of 400 animals present on the island, however no indication of the number of bulls or calves was collected.
- The BOG adopted regulations at the Spring 2010 meeting to conduct targeted wolf removal on the Unimak calving grounds.

WHAT WILL HAPPEN IF NOTHING IS DONE?
If the sex ratio and population size continue to decline, productivity of the population will be reduced and the viability of the herd may be compromised.

WHO IS LIKELY TO BENEFIT? Residents of Alaska and other users who seek to utilize caribou and wolf resources on Unimak Island, including subsistence hunters, other consumptive users, and non-consumptive users.

WHO IS LIKELY TO SUFFER? No one.

OTHER SOLUTIONS CONSIDERED? Implement the predation control plan adopted by the board at the Spring 2010 meeting.

PROPOSED BY: ALASKA DEPARTMENT OF FISH AND GAME

5AAC 92.125 - Unimak Wolf Management Plan

(*l*) **Unimak Wolf Management Area**. Notwithstanding any other provisions in this title, and based on the following information contained in this subsection, the commissioner or the commissioner's designee may conduct a wolf population reduction or wolf population regulation program on Unimak Island in Unit 10:

(1) the Unimak Wolf Management Area is established to reverse the population decline and facilitate population growth of the Unimak caribou herd (UCH) on Unimak Island in Unit 10; the UCH has been identified as an important resource for subsistence and other uses; the Unimak Wolf Management Area includes all of Unimak Island, encompassing approximately 1,571 square miles; active control will be confined to an area that is approximately 900 square miles and includes 57 percent of the lands within the management area;

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

(A) the UCH population information is as follows:

(i) the UCH has occupied Unimak Island throughout recorded history and was estimated at 5,000 caribou in 1975; the UCH population size was estimated to include 1,200 caribou in 2002 before entering a population decline; the most recent estimate of herd size was 400 caribou based on surveys conducted by Izembek National Wildlife Refuge staff in February 2010;

(ii) the cause of the UCH population decline was not investigated initially; however, low caribou calf survival is the primary cause of the decline currently;

(iii) calf ratios in October averaged 5.5 calves per 100 cows during the period of 2005 - 2009 (range 3 – 7 calves);

(iv) bull ratios declined from 45 bulls per 100 cows to 5 bulls per 100 cows during the period of 2005 - 2009; the decreased bull ratio is attributed to the lack of calf recruitment and cannot be explained by caribou harvests;

(v) pregnancy rates of cows that were 24 months of age or older decreased from 85 percent in 2008 (n=113) to 68 percent in 2009 (n=40); the decreased pregnancy rate is attributed to the inability of some reproductive females to find mates for breeding, which is caused by the low bull ratio;

(vi) adult female caribou in the UCH have excellent body condition based on a study conducted in 2009; nutrition and range conditions are not limiting reproduction or caribou survival;

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

(viii) state and federal caribou hunts were closed in 2009 due to the continued population decline and low calf recruitment; the closure remains in place as of 2010;

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

(i) wolves are a major predator of caribou on Unimak Island;

(ii) research into the causes of caribou calf mortality indicates that wolf predation is a major cause of caribou calf deaths during the first two weeks of life and wolves continue to be a major predator throughout the year; wolf predation was the primary cause of calf deaths in the adjacent Southern Alaska Peninsula caribou herd in Unit 9(D); the removal of 20 adult wolves from caribou calving grounds in Unit 9(D) during two years of a wolf predation management program increased caribou calf survival from one percent to 71 percent;

(iii) wolf density on the Alaska Peninsula is estimated at seven wolves per 1,000 square kilometers; wolf densities in the Unimak Wolf Management Area is thought to be similar based on observations made by biologists during caribou surveys; anecdotal evidence obtained from pilots, hunters, and local residents indicates that wolves are abundant throughout the area;

(iv) no wolf surveys have been conducted in the Unimak Wolf Management Area; wolves are frequently observed in the UCH calving ground; the Unimak Wolf Management Area is thought to include 15 - 30 wolves in two to five packs based on ungulate biomass and densities of nearby populations;

(v) an average of two wolves (range of 0 - 4 wolves) have been harvested annually in the Unimak Wolf Management Area;

(vi) brown bears are considered to be an important predator of caribou on the Alaska Peninsula and on Unimak Island; 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;

(vii) research into the causes of caribou calf mortality indicates that brown bears can be an important predator of caribou calves during the first two weeks of life; brown bear predation was a less important cause of caribou calf mortality than wolf predation in the adjacent Northern Alaska Peninsula caribou herd in Units 9(C) and 9(E) and Southern Alaska Peninsula caribou herd in Unit 9(D), which have similar ecosystems;

(viii) brown bears are considered abundant on Unimak Island; the brown bear density is 100 bears per 1,000 square kilometers in the Unimak Wolf Management Area;

(ix) brown bear harvests in the Unimak Wolf Management Area have averaged 10 brown bear annually from 2000 - 2008;

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

(A) the management population objective for the UCH is to maintain a population of 1,000 caribou with a bull ratio of at least 35 bulls:100 cows; the amount necessary for subsistence is 100 - 150 caribou annually and includes caribou harvested from the Southern Alaska Peninsula caribou herd in Unit 9(D); the caribou harvest objective required to meet the amount necessary for subsistence has not been met for 18 years; management objectives were established based on historic information regarding population numbers, habitat limitations, human use, and sustainable harvests; hunting seasons for the UCH were closed in March 2009; the UCH population contained a minimum of 400 caribou in February 2010;

(B) the wolf population objective for Unimak Island is to maintain a population of 8 - 15 wolves;

(C) the brown bear population objective for Unit 10 is to maintain a high density bear population with a sex and age structure that can sustain a harvest composed of at least 60 percent males; the brown bear population objective for Unit 10 is currently being met;

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

(A) justification for the Unimak Wolf Management Area is based on the board's recognition of the UCH as being important for providing caribou for human consumptive use including subsistence; the board established objectives for population size and composition in Unit 10 consistent with multiple use and principles of sound conservation and management of habitat and all wildlife species in the area;

(B) the objectives of the program are to halt the decline of the UCH 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 a specified control area that demonstrates a history of repeated use by caribou; the control area includes all lands on Unimak Island that are west of the 164 degree West line of longitude; the control area includes 900 square miles and includes approximately 57 percent of the lands within the Unimak Wolf Management Area; the department and the United States Fish and Wildlife Service are exploring the possibility of transplanting caribou bulls onto the island in order to improve the bull to cow ratio; wolf predation control is likely to be necessary in order to afford additional protection to these bulls and resulting calves;

(C) the commissioner may initiate the reduction of wolf numbers in the Unimak Wolf Management Area according to the following thresholds:

(i) the caribou population is below management objectives established by the board;

(ii) nutrition is not considered to be the primary factor limiting caribou population growth;

(iii) calf recruitment is an important factor limiting population growth and calf survival during the first four weeks of life is less than 50 percent;

(D) the commissioner may continue to reduce wolf numbers in the Unimak Wolf Management Area until the following thresholds can be met without the benefit of wolf reduction:

(i) the bull ratio can be sustained within management objectives and the fall calf ratio can be sustained above 25 calves per hundred cows;

(ii) the population can grow at a sustained rate of five percent annually;

(iii) harvest objectives can be met;

(E) the commissioner will suspend the wolf reduction program if the following conditions are observed pending further review by the board to determine if the program can be modified to achieve the objectives of this program before reinstating the program, except that hunting and trapping by the public specified in other sections of this title may continue and are not subject to this subparagraph:

(i) caribou nutritional indices such as pregnancy rates, calf and adult body mass, or other condition indices exhibit a declining trend from current values and the bull ratio is greater than 20 bulls:100 cows;

(ii) fall caribou calf ratios remain below 20 calves per 100 cows for three consecutive years of wolf removal from the Unimak Wolf Management Area;

(iii) the bull ratio remains below the caribou population objectives and does not increase for three consecutive years of wolf removal from the Unimak Wolf Management Area;

(iv) the wolf population is reduced to two breeding pairs;

(F) the wolf population objective for the Unimak Wolf Management Area is to reduce wolf numbers in the control area on Unimak Island in Unit 10 to the wolf population objective while maintaining at least two breeding pairs; wolves will not be removed from 43 percent of the lands within the management area that are outside the boundaries of the control area; because wolves will not be removed from all lands within the management area, logistic limitations prohibit public access to the majority of lands within the management area, wolf harvest by the public is low, and only wolves thought to be killing caribou calves will be removed, only a portion of the wolf population on Unimak Island will be affected by the management activities authorized by this plan; if the wolf population inadvertently declines to fewer than two breeding pairs, wolves may be translocated to the island from an adjacent population;

(G) reduction of predators by humans is necessary to stop the caribou population decline and to promote population recovery;

(H) reduction of wolf numbers in the prescribed control area is expected to increase caribou calf survival and recruitment and increase the caribou bull ratio to management objectives;

(I) reduction of bear numbers remains problematic due to the high density of brown bears in Unit 10, logistical limitations, and competing management priorities;

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

(A) 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;

(B) the commissioner may issue public aerial shooting permits, public land and shoot permits, or ground-based shooting permits, or allow agents of the state, or department employees to conduct aerial, land and shoot, or ground-based shooting as a method of wolf removal under AS 16.05.783, including the use of any type of aircraft;

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

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

(A) for up to 10 years beginning 5/16/2010, the commissioner may reduce the wolf populations in the Unimak Wolf Management Area;

(B) annually the department shall, to the extent practicable, provide to the board 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;

(7) other specifications that the board considers necessary:

(A) the commissioner shall suspend wolf control activities

(i) when prey population management objectives are obtained;

(ii) predation management objectives are met;

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

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