Unit 19A Wolf Predation Control Implementation Plan and Activities
Division of Wildlife Conservation Report to the Alaska Board of Game
March 2010

Background

Prior to 2004, the Central Kuskokwim Fish and Game Advisory Committee had expressed concern to the Board about declining moose numbers in both Units 19A and 19B. The committee submitted several regulation proposals and recommended wolf predation control to halt the decline of the moose population and boost moose numbers in the area. In response to the concerns of the advisory committee and other users, the Alaska Department of Fish and Game initiated a comprehensive planning process for the area with a citizen based planning committee composed of a broad cross-section of stakeholders in Units 19A and 19B wildlife management. Upon reviewing information on the moose populations the majority of the Central Kuskokwim Moose Management Planning Committee agreed:

> ***"There is a major concern that the moose populations in Units 19A and 19B will not meet the needs of local subsistence users and other consumptive users. Local observations and available scientific data indicate that the moose population has substantially declined and in some areas is very low and will continue to jeopardize subsistence and other uses."***

The Central Kuskokwim Moose Management Plan was developed by the planning committee and is a comprehensive plan for the area that included a recommendation for a wolf predation control program for Units 19A and 19B. The control program is one component of a multifaceted plan to rebuild the moose populations in the Central Kuskokwim region. The planning committee recommended that the first priority for wolf predation control efforts should be the areas most important for providing moose for subsistence uses. Unit 19A is where the majority of subsistence moose hunting by local residents and residents of Unit 18 occurs.

A wolf control implementation plan was first adopted by the Board of Game in March 2004 for the Central Kuskokwim and consisted of Units 19A and 19B. It was approved for 5 years and began on July 1, 2004. The Board authorized the commissioner to issue public aerial shooting permits or public land and shoot permits for Unit 19A only as methods of wolf removal pursuant to AS 16.05.783. In January 2006, the Board adopted a revised implementation plan in the form of an emergency regulation. The emergency regulation limited control activities to Unit 19A to make it consistent with the Board's previous findings that implemented wolf control in Unit 19A only. Also, the emergency regulation clarified and updated key components of the plan that included: wildlife population and human use information, predator and prey population levels and objectives, plan justifications, methods and means, time frame for updates and evaluations, and miscellaneous specifications. In May 2006, the Board further modified the emergency regulation and adopted it as a final regulation. Authorization to issue

public aerial shooting permits or public land and shoot permits was reaffirmed, and the following prey and predator population estimates and population objectives were specified.

- 2006 moose population: 2,700–4,250
- Moose population objective: 7,600–9,300.
- Fall 2004 precontrol wolf population: 125–150
- Wolf population control objective: 30–36

In March 2009, the Board of Game reauthorized the wolf control implementation plan for a period of 5 years, from July 1, 2009 through June 30, 2014. This reauthorization established a Central Kuskokwim Villages Moose Management Area (MMA) within the drainages of the Holitna, Hoholitna, and Stony Rivers to focus intensive management activities, including wolf control and habitat management, in a relatively small, accessible area. The department has the discretion to adjust its size and shape up to 40% (approximately 4,000 mi^2) of Unit 19A.

Plan Implementation Activities

2008–2009 CONTROL PROGRAM

We conducted control activities during regulatory year (RY) 2008–2009 in Unit 19A under authority of the wolf control implementation plan adopted by the Board in May 2006 (regulatory year begins on July 1 and ends on June30, e.g. RY 08=July 1, 2008–June 30, 2009). We received 71 applications for public wolf control permits and issued 41 permits, 16 to pilots and 25 to gunners. The control program was in effect during November 1, 2008–April 30, 2009. The control objective of 30–36 was specified in the in the May 2006 plan. To achieve the upper end of this objective we needed to remove 48–54 wolves. Thirty-one wolves were reported taken. (Table 1).

Table 1. Wolf harvest and wolf control take in Unit 19A, RY01–RY08.

Regulatory Year	Hunting and Trapping Harvest	Wolf Control Take	Total Kill
2001–2002	49	-	49
2002–2003	25	-	25
2003–2004	30	-	30
2004–2005	29	43	72
2005–2006	33	47	80
2006–2007	3	7	10
2007–2008	9	15	24
2008–2009	11	20	31

2009–2010 CONTROL PROGRAM

We are conducting control activities during RY09 in Unit 19A under authority of the wolf control implementation plan adopted by the Board in March 2009. As of January 11, 2010, we had received 62 applications for public wolf control permits and issued 18 permits, 12 to pilots and 6 to gunners. The control program will be in effect during November 1, 2009–April 30, 2010 or until the control objective of no fewer than 30–36 wolves is achieved, as identified in the March 2009 plan. To achieve the upper end of this objective we need to remove 36–60 wolves, and as of January 11, 2010, no wolves had been reported taken.

Status of Prey and Predator Populations

MOOSE POPULATION

Population Composition. In November 2005, we conducted composition surveys in central Units 19A and B in the Holitna–Hoholitna drainage and in western Unit 19A in the Aniak drainage including the Kuskokwim River from Lower Kalskag to Napaimiut. In central Units 19A and B, a total of 307 moose were observed and the bull:cow ratio was 8:100 with most bulls classified as yearlings (12 of 19). The calf:cow ratio was 24:100. In western Unit 19A, a total of 410 moose were counted, with a bull:cow ratio of 20:100 and a calf:cow ratio of 23:100. No composition surveys were completed during November 2006 because survey conditions were unsuitable.

In May 2007, we conducted twinning surveys in Unit 19A in the Aniak and Holitna River drainages. In the Aniak drainage, too few moose were located to provide for a meaningful analysis. In the Holitna River drainage, we located 71 moose, with 7 of 11 litters produced twins (64% twinning rate).

In November 2007, we conducted composition surveys in the Aniak drainage including the Kuskokwim River from Aniak to Lower Kalskag and in the Holitna drainage within the Holitna, Titnuk, and Hoholitna Rivers. In the Aniak survey we found 122 moose, including 68 cows, 35 calves (including 6 sets of twins and one set of triplets; 51 calves:100 cows), and 28 bulls:100 cows. In the Holitna survey, we found 200 moose, including 111 cows, 50 calves (including 9 sets of twins; 45 calves:100 cows), and 35 bulls:100 cows.

In November 2008, we conducted composition surveys in the Aniak drainage including the Kuskokwim River from Aniak to Lower Kalskag and in the Holitna drainage within the Holitna, Titnuk, and Hoholitna Rivers. In the Aniak survey we found 51 moose, including 31 cows, 7 calves (including 1 sets of twins; 23 calves:100 cows), and 42 bulls:100 cows. This sample size is less than ideal. In the Holitna survey, we found 117

moose, including 77 cows, 21 calves (including 3 sets of twins; 27 calves:100 cows), and 34 bulls:100 cows.

In November 2009, we conducted composition surveys in the Holitna drainage within the Holitna, Titnuk, and Hoholitna Rivers. We found 129 moose, including 69 cows, 25 calves (including 6 sets of twins; 36 calves:100 cows), and 51 bulls:100 cows.

Population Size. In March 2006, we estimated 2,700–4,250 moose (0.27–0.42 moose/mi^2) were present in Unit 19A. This estimate was corrected for moose sightability and was based upon extrapolation of population estimation surveys conducted in the entire area south of the Kuskokwim River in February 2005 (0.27 moose/mi^2 ±16%, 90% CI) and south of the Kuskokwim between Kalskag and Crooked Creek in March 2006 (0.39 moose/mi^2 ±15%, 90%CI; 3440 mi^2). The estimated population is well below the objective of 7,600–9,300 moose.

In March 2008 we estimated 3200–5275 moose (0.32–0.53 moose/mi^2) were present in Unit 19A. This estimate was based upon extrapolation of a population survey conducted in 3,874 mi^2 of the Holitna, Hoholitna, and Stony River drainages (0.55 moose/mi^2 ± 28% at 90% CI) that was corrected for moose sightability.

It appears that moose numbers within the Holitna, Hoholitna, and Stony River drainages increased between 2006 and 2008. Analysis of survey data from the 3874 mi^2 survey area indicated a density of 0.28 moose/mi^2 (± 17% at 90% CI) in 2006 and .44 moose/mi^2 (± 28% at 90% CI) in 2008. Neither estimate was corrected for sightability. This apparent growth is coincident with reduction of wolves to a very low level in these drainages.

Harvest. Based upon current estimates of recruitment, population density and bull:cow ratios, there is no harvestable surplus of moose in eastern Unit 19A (upstream from and excluding the George River). The hunting season was closed in eastern Unit 19A beginning in RY06, with the exception of the Lime Village Management Area (LVMA). Hunting is currently allowed in the LVMA under a state Tier II permit during August 10–September 25 and November 20–March 31 with a bag limit of 2 bulls and under a federal community harvest system during July 1–June 30 with a quota of 28 bulls. One bull was reported taken during RY08 under the state and federal hunts.

In western Unit 19A (downstream from and including the George River), the harvestable surplus is estimated to be 60 bulls. Beginning in RY06, hunting in this area was restricted to a state Tier II permit hunt with 200 permits issued and a federal permit hunt with 100 permits issued during September 1–20. The bag limit was 1 bull. Reported harvest during RY06 included 26 bulls taken by Tier II permittees and 6 bulls taken under the federal permit. During RY07, 230 Tier II and 100 federal permits were issued. Reported harvest included 54 bulls taken by Tier II permittees and 16 bulls taken under the federal permit. During RY08, 230 Tier II and 97 federal permits were issued. Reported harvest included 56 bulls taken by Tier II permittees and 11 bulls taken under the federal permit. During

RY09, 231 Tier II and 92 federal permits were issued. Preliminary reported harvest included 51 bulls taken by Tier II permittees and 13 bulls taken under the federal permit.

In addition, moose are allowed to be taken outside normal seasons and bag limits consistent with 5 AAC 92.019 for Alaska Native funerary or mortuary religious ceremonies. During RY06, 4 parties took 2 moose, including 1 bull and 1 cow. During RY07, 9 parties took 4 moose, including 4 bulls and 0 cows. During RY08 21 parties took 19 moose, including 15 bulls and 4 cows with 2 parties reporting unsuccessful hunts and no parties failing to report. During RY09 to date, 5 parties took 4 moose including 3 bulls and 1 cow, and one reported being unsuccessful, while 5 parties have contacted us but had not reported as of January 11, 2010.

WOLF POPULATION

Population Size. We conducted a complete wolf survey in Unit 19A in January and March of 2006, and estimated 107–115 wolves in 26–27 packs or approximately 1.1–1.2 wolves/100 mi^2. Sixty-seven wolves were reported killed after the survey was completed, leaving an estimated 40–48 wolves in the population when all take of wolves by control program permittees and hunters and trappers was suspended by emergency order on April 4, 2006.

We conducted a complete wolf survey in Unit 19A in February 2008, and estimated 74 wolves in 17 packs or approximately 0.74 wolves/100 mi^2. Prior to this survey, 4 wolves were reported killed during August 2007.

Harvest. Hunting and trapping harvest during RY01–RY08 averaged 24 wolves annually (Table 1). Periodically, higher harvests occurred and are probably related to effects of snow on travel in the Aniak and Holitna drainages. An additional 43, 47, 7, 15, and 20 wolves were taken in the wolf control program during the last 5 regulatory years, respectively.

Recommendations to Achieve Plan Objectives

We recommend continuation of wolf control activities.