

**Unit 19A Wolf Predation Control Implementation Plan and Activities**  
**Division of Wildlife Conservation Report to the Alaska Board of Game**  
**March 2008**

***Background***

For several years the Central Kuskokwim Fish and Game Advisory Committee 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 stop 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 B 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 developed by the planning committee is a comprehensive plan for the area that includes a recommendation for a wolf predation control program for Units 19A and B. 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 on 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

### *Plan Implementation Activities*

#### 2005–2006 CONTROL PROGRAM

We conducted control activities during regulatory year (RY) 2005–2006 in Unit 19A under authority of the wolf control implementation plan adopted by the Board in March 2004 and modified in January 2006 (regulatory year begins on July 1 and ends June 30, e.g., RY05 = July 1, 2005–June 30, 2006). We received 95 applications for public wolf control permits and issued 82 permits, 30 to pilots and 52 to gunners. The control program began on December 3, 2005, and was suspended on April 4, 2006 because the wolf population was reduced to the control objective of 40–53 specified in the predator control implementation plan adopted by the Board in January 2006. It was also temporarily suspended during January 18–27, 2006 due to a court injunction. Permittees took 47 wolves, and an additional 30 wolves were taken by hunters and trappers (Table 1). All take of wolves by hunters and trappers, was also suspended on April 4, 2006.

#### 2006–2007 CONTROL PROGRAM

We conducted control activities during RY06 in Unit 19A under authority of the wolf control implementation plan adopted by the Board in May 2006. We received 73 applications for public wolf control permits and issued 38 permits, 17 to pilots and 21 to gunners. The control program was in effect during November 1, 2006–April 30, 2007. We estimated that 9–35 wolves needed to be taken in order to reach the upper end of the control objective. Permittees took 7 wolves, and an additional 3 wolves were taken by hunters and trappers (Table 1).

Table 1. Wolf harvest and wolf control take in Unit 19A, RY01–RY06.

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 CONTROL PROGRAM

We are conducting control activities during RY07 in Unit 19A under authority of the wolf control implementation plan adopted by the Board in May 2006. As of January 28, 2008, we had received 82 applications for public wolf control permits and issued 47 permits, 18 to pilots and 29 to gunners. The control program will be in effect during November 1, 2007–April 30, 2008 or until the wolf population is reduced to the control objective of 30–36 specified in the in the May 2006 plan. To achieve the upper end of this objective we need to remove 30–57 wolves. As of January 28, 2008, no wolves have been reported taken in Unit 19A.

### ***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. The low bull:cow ratios observed during this and past composition surveys indicate that hunting pressure has been high in this area. 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, and current data are insufficient to evaluate the effect of the wolf control program on the moose population. Composition surveys are planned for November 2007 if survey conditions are suitable.

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 beginning at the southern part of the Macar Hills (labeled Kulukbuk Hills on the map) and ending approximately 10 miles south of Sleetmute. 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.

Population Size. In March 2006, we estimated 2,700–4,250 moose (0.27–0.42 moose/mi<sup>2</sup>) were present in Unit 19A. This 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<sup>2</sup> ±16%, 90% CI) and south of the Kuskokwim between

Kalskag and Crooked Creek in March 2006 ( $0.39 \text{ moose}/\text{mi}^2 \pm 15\%$ , 90%CI). The estimated population is well below the objective of 7,600–9,300 moose.

Poor survey conditions prevented a moose population estimation survey planned for March 2007. Another population estimation survey in the eastern portion of Unit 19A is planned for March 2008.

*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. 1 bull was reported taken during this regulatory year under the state and federal hunts.

In western Unit 19A (downstream from and including the George River), the harvestable surplus is 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.

#### 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  $1.1\text{--}1.2 \text{ wolves}/100 \text{ mi}^2$ . 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 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  $0.74 \text{ wolves}/100 \text{ mi}^2$ . As of February 8, no wolves were known to be reported killed.

*Harvest.* Hunting and trapping harvest over the past 6 years (RY01–RY06) averaged 28 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, and 7 wolves were taken in the wolf control program during the last 3 regulatory years, respectively.

#### ***Recommendations to Achieve Plan Objectives***

We recommend continuing wolf control activities as approved by the Board.