

**Unit 19D-East Predation Control Implementation Plan and Activities**  
**Division of Wildlife Conservation Report to the Alaska Board of Game**  
**March 2010**

***Background***

The Unit 19D-East wolf predation control implementation plan was first adopted by the Board of Game in fall 1995. In January 2000, the Board made a finding of emergency regarding the Unit 19D-East situation and extended the Commissioner's authority to reduce wolves during 2000–2005. In March 2001, the Department established the Experimental Micro Management Area (EMMA) to focus predation control and associated management efforts in a relatively small area and to conduct research on the efficacy of the program. In March 2003 the Board re-evaluated the Unit 19D-East wolf predation control program and issued comprehensive new board findings. The Board endorsed the EMMA concept and allowed the department discretion to change the size of the control area to provide for adaptive management.

The wolf predation control program began in regulatory year (RY) 2003 (regulatory year begins on July 1 and ends June 30, e.g., RY03 = July 1, 2003–June 30, 2004). In January 2006, the Board adopted a revised implementation plan in the form of an emergency regulation. The emergency regulation clarified and updated key components of the implementation 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, added black and brown bear predation control within the EMMA, deleted the link between the hunting closure in the EMMA and intensive removal of predators, and adopted a final predator control implementation plan. The plan was approved for 5 years, beginning on July 1, 2004. The following prey and predator population levels and population objectives for Unit 19D-East were specified.

- 2004 moose population: 3,444–5,281 (0.5 moose/mi<sup>2</sup>)
- Moose population objective: 6,000–8,000
- Moose harvest objective: 400–600
- Fall 2000 pre-control wolf population estimate: 198
- Wolf population control objective:
  - As low as possible in EMMA
  - No less than 40 in 19D-East
- Pre-control black bear population estimate:
  - 1,700 in 19D-East
  - 130 in EMMA
- Black bear population control objective:
  - As low as possible in EMMA
  - Maintain as a viable part of natural ecosystem in 19D-East
- Pre-control brown bear population estimate:

- 128 in 19D-East
- 9 in EMMA
- Brown bear population control objective:
  - As low as possible in EMMA
  - Maintain as a viable part of natural ecosystem in 19D-East

In March 2009, the Board of Game reauthorized the predation control implementation plan for a period of 5 years, from July 1, 2009 through June 30, 2014. This plan redefined the EMMA as the bear control area (BCA) and established the wolf control focus area. The focus area includes approximately 4,600 mi<sup>2</sup> surrounding the villages of McGrath, Takotna, Medfra and Nikolai to concentrate wolf control around villages. The Department has the authority to adjust the size and shape of this area (in RY09, the estimated size of the wolf control focus area was 4,484 mi<sup>2</sup>). The Board also established the Upper Kuskokwim Villages Moose Management Area (MMA), which includes 1,118 mi<sup>2</sup> surrounding the village of McGrath and adjacent to Takotna and Medfra. It was created to designate an area where moose numbers are closely monitored and objectives for moose and moose harvest can be applied. The Department has the authority to change the size and shape of the wolf control focus area, the MMA, and the BCA.

In March 2009, the Board of Game also expanded bear control efforts to include bear snaring within the BCA because bear numbers had largely recovered following Department nonlethal bear removal in 2003 and 2004 and because public efforts to reduce bear numbers were not successful. Snaring of any bear will be implemented under bear control permit conditions during spring 2010.

### ***Plan Implementation Activities***

#### **WOLF CONTROL**

The Board authorized the commissioner to issue public aerial shooting or land and shoot permits as the method of lethal wolf removal pursuant to AS 16.05.783. We exercised discretion to adjust the size of the area where wolf predation control activities would occur within the Unit 19D-East Wolf Predation Control Area. The wolf control zone established when control efforts began in RY03 initially encompassed 1728 mi<sup>2</sup>, surrounding and including the EMMA. Within 2 weeks, it was expanded to 3,210 mi<sup>2</sup> to allow permittees to take wolves that used the EMMA but were frequently located outside its borders. In RY06, we expanded the wolf control zone to 6,245 mi<sup>2</sup> to provide local residents with more moose available for harvest by hunters displaced from the EMMA, which was closed to moose hunting. The expanded area included all of Unit 19D-East, west of a north-south line near Telida (153° 20' 0.00" west longitude). In RY09, the wolf control area was restricted to a 4,484 mi<sup>2</sup> area downriver of 4th of July Creek, Soda Creek, and the Tonzona Rivers.

In RY08, we received 37 applications and issued 7 pilot and 7 gunner permits. These permittees took 19 wolves from Unit 19D East (Table 1). We estimated that 35–59 wolves needed to be taken to reach the control objective.

In RY09, as of January 12, 2009, we received 51 applications and issued 7 pilot and 8 gunner permits. To date, these permittees have taken no wolves from Unit 19D East. We estimate that 55–65 wolves need to be taken to reach the control objective.

Table 1. Wolf control dates, control permits issued and wolves killed.

Year	Authorized dates	Permits issued		Wolves killed		
		Pilot	Gunner	F	M	Total
RY03	Dec. 2003–Apr. 30, 2004	28 <sup>a</sup>		7	10	17 <sup>b</sup>
RY04	Nov. 17, 2004–Apr. 30, 2005	6	11	7	7	14
RY05	Dec. 3, 2005–Apr. 30, 2006 <sup>c</sup>	3	3	3	1	4
RY06	Nov. 1, 2006–Apr. 30, 2007	5	3	2	0	2
RY07	Nov. 1, 2007–Apr. 30, 2008	9	15	13	16	29
RY08	Nov. 1, 2008–Apr. 30, 2009	7	7	8	11	19

<sup>a</sup>Record of number of pilots vs. gunners was lost, some permittees had multiple permits.

<sup>b</sup>Three additional wolves were taken illegally outside the control zone.

<sup>c</sup>The wolf control program was closed January 18–27, 2006 due to a court injunction.

#### BLACK BEAR AND BROWN BEAR CONTROL

The board approved black bear and brown bear control within the EMMA beginning in RY06. We began issuing control permits on September 1, 2006 and continued until June 30 of each regulatory year. Requirements and restrictions for the take of black and brown bears included in the Alaska Hunting Regulations apply to the permittees, except that permittees do not have an individual kill limit and they may set out 10 additional bait stations for black bears, may bait brown bears, and may take brown bears same-day-airborne at bait stations if the bait stations are registered with the McGrath office. In addition, hunting regulations allow permittees to bait black bears, take black bears same-day-airborne at bait stations and sell the raw hide and skull of both black and brown bears if they obtain a department sale tag and permit.

In RY08, we issued 10 black bear control permits and 11 black bear control baiting permits. Also, we issued 11 grizzly bear control permits and 10 grizzly bear control baiting permits. Generally, the same individuals holding black bear permits held grizzly bear permits and monitored the same bait stations. Three grizzly bears and no black bears were taken during RY08 using bear control permits.

In RY09, as of January 12, 2010, we have issued 10 black bear control permits and 5 black bear control baiting permits. Also, we have issued 10 grizzly bear control permits and 5 grizzly bear control baiting permits. No bears have yet been taken using bear control permits.

#### *Status of Prey and Predator Populations*

##### MOOSE POPULATION

*Population Size.* In fall 2001, we estimated 3,959 moose in Unit 19D-East (0.46 moose/mi<sup>2</sup>), based on extrapolation of a survey conducted in a 5,204 mi<sup>2</sup> portion of the unit. Using similar techniques in 2004, we estimated 4,374 moose in Unit 19D-East (0.5 moose/mi<sup>2</sup>).

In fall 2008, we estimated 5,481 moose in Unit 19D-East (0.61 moose/mi<sup>2</sup>), based on extrapolation of a survey conducted in a 4,195 mi<sup>2</sup> portion of the unit. This estimate is below our intensive management objective of 6,000–8,000.

In fall 2009, we conducted a moose population estimation survey within the 1,118 mi<sup>2</sup> MMA. A preliminary estimate of 1,806 moose was obtained. That estimate will be extrapolated to all of Unit 19D-East when it is finalized.

*Harvest.* Beginning in RY08, an area in the immediate vicinity of McGrath that had been closed to moose hunting using discretionary permit authority was reopened with a Sept 1–Sept 15 season. Upstream of the village of Takotna on the Tokotna River, the season was Sept 1–Sept 20. Elsewhere within Unit 19D-East, the season was Sept 1–Sept 25. The RY01–RY09 average reported harvest of moose in Unit 19D-East under the registration permit system is 80 per year (range 60–103; Table 2). This harvest is well below our objective of 400–600 moose annually.

Table 2. Unit 19D-East moose registration permit hunt (RM650) results, 2001–2009.

Regulatory year	Successful	Unsuccessful	Did not hunt	Total permits issued
2001–2002	73	137	83	293
2002–2003	98	127	50	275
2003–2004	75	115	66	256
2004–2005	60	109	73	242
2005–2006	71	115	51	237
2006–2007	62	112	74	248
2007–2008	86	99	68	253
2008–2009	103	114	74	291
2009–2010	92	130	72	294

## WOLF POPULATION

*Population Size.* The wolf population density was moderate, with an fall 2000 pre-control population estimate of 198 wolves (23.3 wolves/1000 mi<sup>2</sup>). We estimated the 2004 fall wolf population was 103 wolves based on the spring 2005 wolf survey, RY04 wolf harvest, and estimated number of pups. No surveys were completed during winter 2006–2007 because of unsuitable survey conditions. However, we estimated the fall 2006 population at 85–110 wolves using our PredPrey model. We estimated the fall 2007 wolf population was 86–114 wolves based on previous population estimates, previous harvest, productivity, survival and immigration. A partial wolf survey was conducted in Unit

19D-East during March 2009, including the entire 6,245 mi<sup>2</sup> wolf control area and 44–46 wolves were found. The fall 2008 wolf population estimate of 75–99 wolves was based on this survey and previous harvest. The fall 2009 wolf population was an estimated 95–105 wolves, based on previous population estimates, previous harvest, productivity, survival and immigration. A wolf population survey is planned during RY09, but has not been completed as of January 12, 2010.

*Harvest.* Wolf harvest was 15–44 during RY97–RY09 (Table 3). The desires of local trappers to help reduce predation on moose and a private wolf harvest incentive program have helped to maintain a relatively high level of trapping effort.

Table 3. Reported wolf harvest in 19D, 19D-East, and EMMA; RY97–RY08. Includes wolves taken in wolf control program beginning in RY03.

Regulatory year	Wolf harvest			% 19D-East harvest in EMMA
	19D <sup>a</sup>	19D-East	EMMA	
1997–1998	30	29	22	76%
1998–1999	21	14	3	21%
1999–2000	40	34	12	35%
2000–2001	37	36	17	47%
2001–2002	30	24	7	29%
2002–2003	44	39	22	56%
2003–2004	35(17)	27	7	26%
2004–2005	32(14)	29	15	52%
2005–2006	15(4)	15	7	47%
2006–2007	24(2)	19	5	21%
2007–2008	38(29)	38	5	13%
2008–2009	29 (19)	28	4	14%

<sup>a</sup> Number in parenthesis is the number of wolves taken in the wolf control program.

#### BLACK AND BROWN POPULATIONS

*Population Size.* In 2005, we estimated the pre-control black bear population at 1,700 in Unit 19D-East by using data from the bear removal program as well as extrapolating bear estimate data from areas with similar habitat. We estimated the brown bear pre-control population at 128 in Unit 19D-East by extrapolating brown bear data from bear removal in the EMMA, as well as extrapolating bear estimate data from areas with similar habitat.

During May 2007, we conducted an aerial black bear survey and estimated 72 independent black bears (60 – 91 95% CI) in the EMMA.

*Harvest.* During RY01–RY08, 53 black bears were reported taken in Unit 19D East. As of RY03, all black bears taken in Unit 19D East were required to be sealed (average = 7/year; Table 4). In RY03–RY05, registration hunt permits were available for hunters to take 2 additional black bears per year in 19D-East. However, no permits were issued. In RY06, the black bear bag limit was changed from 3 to 5 under general hunting regulations. The maximum number any hunter harvested since RY01 was 2 black bears per year.

During RY01–RY08, 24 brown bears were killed in 19D-East (average = 3/year). Harvest averaged 2/year prior to implementation of the brown bear resident tag fee exemption in 1998. The bag limit for brown bears in Unit 19D was raised to 2/year in RY06 but no hunter has reported harvesting 2 brown bears during any regulatory year.

Table 4. Reported black and brown bear harvest in Unit 19D East RY01–RY08.

Regulatory year	Black bear		Brown bear	
	Hunting harvest	Control take	Hunting harvest	Control take
2001–02	2		4	
2002–03	6		0	
2003–04	8		1	
2004–05	3		4	
2005–06	8		2	
2006–07	1	0	4	0
2007–08	16	0	3	0
2008–09	7	0	2	3

***Recommendations to Achieve Plan Objectives***

We recommend continuing the predator control program.