Interim Report to the Alaska Board of Game on Intensive Management for Caribou with Wolf Predation Control in GMUs 9B, 17B&C, and 19A&B, the Mulchatna Caribou Herd

Prepared by the Division of Wildlife Conservation
August 2012

Interim annual updates are limited to sections that have changed substantially since the prior annual report in February. For complete information, see the prior annual report.

1) Description of IM Program[1] and Department recommendation for reporting period

A) This report is an interim review for a predation control program authorized by the Alaska Board of Game (Board) under 5 AAC 92.125.

B) Month this report was submitted by the Department to the Board:

February ___ (annual report) August X (interim annual update[2]) Year: 2012

C) Program name (geographic description/GMU and species/herd):
Mulchatna Caribou Herd Predation Management Area;
GMUs 9B, 17B&C, and 19A&B;
Mulchatna Caribou herd.

D) Existing program does not have an associated Operational Plan.

E) Game Management Unit(s) fully or partly included in IM program area:
GMUs 9B, 17B&C, and 19A&B.

F) IM objectives for caribou:
Population size: 30,000 - 80,000; Harvest: 2,400 – 8,000.

G) Month and year the current predation control program was originally authorized by the Board:
The plan was initially authorized in March 2011 for GMUs 9B and 17B&C and was modified in March 2012 to include GMUs 19A&B.

H) Predation control is currently active in this IM area.

I) If active, month and year the current predation control program began:
March 1, 2012 in Regulatory Year (RY) 2011 (RY 2011 = 1 July, 2011 through 30 June, 2012).

J) A habitat management program funded by the Department or from other sources is currently active in this IM area (Y/N): N.

K) Size of IM program area (square miles) and geographic description:
39,683 sq. miles, in GMUs 9B, 17B&C, and 19A&B.

L) Size and geographic description of area for assessing ungulate abundance:
approximately 50,000 sq. miles and includes the range of the Mulchatna Caribou Herd.

M) Size and geographic description of area for ungulate harvest reporting:

[1] For purpose and context of this report format, see appendix.
[2] The interim annual update may be limited only to sections that changed substantially since prior annual report

approximately 50,000 sq. miles and includes the range of the Mulchatna Caribou Herd.

N) Size and geographic description of area for assessing predator abundance:

The wolf assessment area in GMUs 17 and 9B is a 7,612 square mile area defined by 4 corners (N60 34.0 W158 25.0, N60 34.0 W155 55.0, N56 18.0 W158 25.0, and N59 18.0 W155 55.0).

Wolf numbers are also assessed in a 3,996 square mile area that includes a portion of GMU 17B and the eastern portion of GMU 19B by Region IV staff and are monitored in GMU 19A by Region III staff.

O) Size and geographic description of predation control area:

The predation control area measured approximately 2,870 sq. miles during RY 2011. It encompassed an area from Tikchik Mountain (N 60 03.00, W 158 18.00) east to Sleitat Mountain (N 60 03.00, W 157 04.00), southeast to the Koktuli Hills (N 59 48.00, W 156 18.00), southwest to Lower Klutuk Creek (N 59 19.00, W 157 04.00), back west to the Muklung Hills (N 59 19.00, W 158 18.00) and then north returning to Tikchik Mountain (see Figure below).

P) Criteria for evaluating progress toward IM objectives:

Trends in fall calf-to-cow ratios, fall bull-to-cow ratio, and caribou abundance.

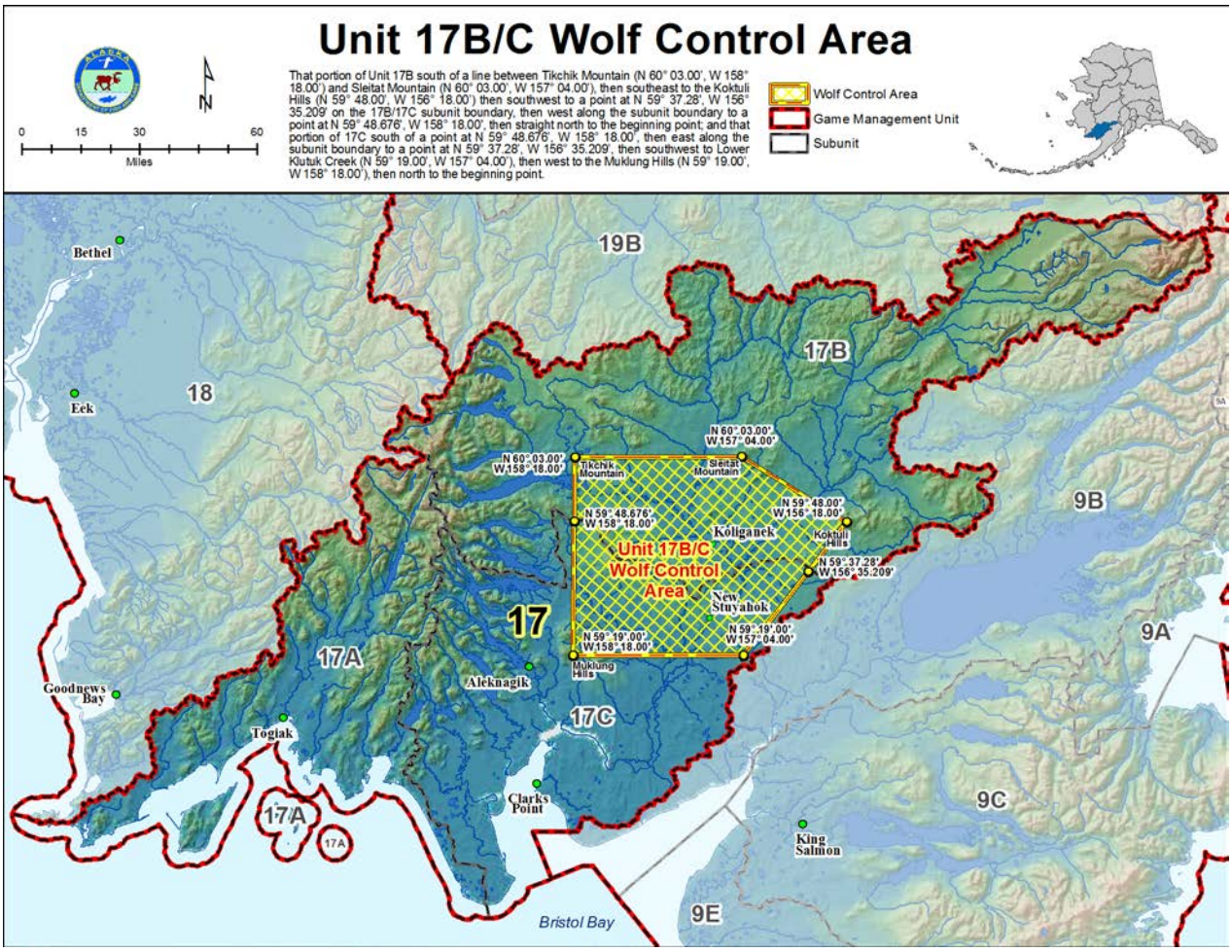
Q) Criteria for success with this program:

The bull-to-cow ratio can be sustained within management objectives (35 bull:100 cows), fall calf ratio can be sustained above 30 calves:100 cows, the population can grow at a sustained rate of 5% annually, caribou harvest objectives are met.

R) Department recommendation for IM program in this reporting period:

The Department recommends continuation of the predation control program during RY 2012 calving season while monitoring the herd progress towards IM objectives.

Figure. Map of the Mulchatna Caribou Herd Predation Control Area in Game Management Unit 17, Spring 2012 (RY 2011).



2) Prey data

Date(s) and method of most recent summer abundance assessment for caribou

Photo-census of post-calving aggregation conducted on July 7, 2008.

Compared to IM area, was a similar trend and magnitude of difference in abundance observed in nearby non-treatment area(s) since program inception and in the last year? Describe comparison if necessary:

N/A: This program was initiated in March, 2012 (RY 2011). It is too early to determine trends in abundance that resulted from these activities.

Date(s) of most recent age and sex composition survey: October 9 – 11, 2011

Compared to IM area, was a similar composition trend and magnitude of difference in composition observed in nearby non-treatment area(s) since program inception and in the last year? Describe comparison if necessary:

N/A: This program was initiated in March, 2012 (RY 2011). It is too early to determine trends in composition that resulted from these activities.

Table 1. Caribou abundance, age and sex composition in assessment area (L) since program implementation in year 1 (2011) to reauthorization review in year 2017 in Mulchatna Caribou Herd Predation Management Area. Regulatory year is 1 July to 30 June (e.g, RY 2011 = 1 July, 2010 through 30 June, 2012).

Eastern Segment of the MCH

		Composition (number per 100 females)		
Period	RY	Young	Males	Total *n*
Year 0	2010	16.9	12.8	2,581
Year 1	2011	14.3	17.6	2,649
Year 2				
Year 3				

Western Segment of the MCH

		Composition (number per 100 females)		
Period	RY	Young	Males	Total *n*
Year 0	2010	23.4	22.7	2,011
Year 1	2011	28.1	34.1	1,995
Year 2				
Year 3				

All Areas Combined

			Composition (number per 100 females)		
Period	RY	Abundance (variation)	Young	Males	Total *n*
Year 0	2010	-	19.5	16.8	4,592
Year 1	2011	-	19.0	21.7	5,282[a]
Year 2	2012[b]	-	-	-	-
Year 3					
Year 4					

[a] Includes caribou not assigned to the Eastern or Western Segment of the MCH

[b] A photo-census was conducted 6-7 July, 2012, but the population estimate was not available when the report was prepared.

Describe trend in abundance or composition:

N/A: This program was initiated in March, 2012 (RY 2011). It is too early to determine trends in abundance or composition that resulted from these activities.

Table 2. Caribou harvest in assessment area (M). Methods for estimating unreported harvest are described in Survey and Inventory reports.

Period	RY	Reported			Estimated		Total harvest
		Male	Female	Unknown	Unreported[a]	Illegal	
Year 0	2010 [b]	249	220	4	Unk	Unk	449
Year 1	2011 [b]	223	238	9	Unk	Unk	470
Year 3							
Year 4							
Year 5							

[a] Wounding Loss, Mortuary, etc.

[b] Data from harvest report cards, July 30, 2012.

Describe trend in harvest or composition:

There has been a decline in the reported harvest since 1999. The majority of harvest shifted geographically from GMU17 to GMU 18 and chronologically from fall to late winter. There have also been no harvests by nonresidents since the season was closed in 2009.

3) Predator data

Date(s) and method of most recent spring abundance assessment for wolves (if statistical variation available, describe method here and list in Table 2):

A minimum abundance estimate survey was conducted in February, 2012. The objective of the program is to remove all wolves from the control area – the calving grounds of the MCH

Date(s) and method of most recent fall abundance assessment for wolves (if statistical variation available, describe method here and list in Table 2):

N/A: Fall abundance has not been estimated due to logistical and weather constraints.

Other research or evidence of trend or abundance status in wolves:

Long-time local residents and local air taxi pilots report a higher frequency of wolf sightings in the area.

Table 3. Wolf abundance objectives and removal in wolf assessment area (N) of Mulchatna Caribou Herd Predation Management Area. Removal objective is to annually remove 100 % of the wolves in the wolf predation control area (O), so estimated or confirmed number remaining in the control area (O) by the May calving season each regulatory year is 0.

Subunit 9B

Period	RY	Harvest removal from area N		Dept. control removal from area O	Public control removal from area O	Total removal[a] from area N
		Trap	Hunt			
Year 1	2011[b]	8	3	-	0	11
Year 2						
Year 3						
Year 4						
Year 5						

[a]Additional removal may be Defense of Life and Property, vehicle kill, etc.
[b]Data from harvest report cards, July 31, 2012.

Subunits 17B&C

Period	RY	Harvest removal from area N		Dept. control removal from area O	Public control removal from area O	Total removal[a] from area N
		Trap	Hunt			
Year 1	2011[b]	17	66	-	10	93
Year 2						
Year 3						
Year 4						
Year 5						

[a] Additional removal may be Defense of Life and Property, vehicle kill, etc.
[b] Data from harvest report cards, July 31, 2012.

Subunits 19A&B

Period	RY	Harvest removal from area N		Dept. control removal from area O	Public control removal from area O	Total removal[a] from area N
		Trap	Hunt			
Year 1	2011[b]	-	4	-	8[c]	12
Year 2						
Year 3						
Year 4						
Year 5						

[a] Additional removal may be Defense of Life and Property, vehicle kill, etc
[b] Data from harvest report cards, July 31, 2012.
[c] Includes wolves taken by the public permitted under the Unit 19(A) Predation Control Area program.

Combined Areas

Period	RY	Spring abundance (variation) in area N	Harvest removal from area N		Dept. control removal from area O	Public control removal from area O	Total removal[a] from area N
			Trap	Hunt			
Year 1	2011[bc]	-	25	73	-	18[d]	116
Year 2							
Year 3							
Year 4							
Year 5							

[a] Additional removal may be Defense of Life and Property, vehicle kill, etc
[b] Data from harvest report cards, July 31, 2012.
[c] Wolf surveys were conducted in RY 2011, but a final number was not available in time for this report
[d] Includes wolves taken by the public permitted under the Unit 19(A) Predation Control Area program.

4) Habitat data and nutritional condition of prey species

Where active habitat enhancement is occurring or was recommended in the Operational Plan, describe progress toward objectives:

Objective(s): N/A. There are no demonstrated methods to improve caribou habitat, and no reason to believe that habitat is limiting the caribou population.

Area treated and method: N/A

Observation on treatment response: N/A

Evidence of progress toward objective(s): N/A

Similar trend in nearby non-treatment areas? N/A

Describe any substantial change in habitat not caused by active program: N/A

Table 4. Nutritional indicators for caribou in assessment area (L) of the Mulchatna Caribou Herd Predation Management Area.

Period	RY	Pregnancy Females >2 yrs age[a]	Female Calf Weights at 10.5 months in lbs (n)
Year 1	2011	79% [a]	124 (20)
Year 2	2012	78% [a]	119 (13)
Year 3			
Year 4			
Year 5			

[a] Pregnancy rate is based on known-aged animals from a collared sample of adult female caribou. Pregnancy status is determined in May based on observed characteristics of pregnancy (antler retention, udder development, and/or presence of a calf at heel).

Where objectives on nutritional condition were listed in the Operational Plan, describe trend in condition indices since inception of (a) habitat enhancement or (b) enhanced harvest: N/A

Evidence of trend: N/A

Similar trend in nearby non-treatment areas? N/A

5) Costs specific to implementing Intensive Management

Table 5. Cost ($1000 = 1.0) of agency salary based on estimate of proportional time of field level staff and cost of operations for intensive management activities (e.g., predator control or - habitat enhancement beyond normal Survey and Inventory work) performed by personnel in the Department or work by other state agencies (e.g., Division of Forestry) or contractors in the Mulchatna Caribou Herd Predation Management Area. Fiscal year (FY) is also 1 July to 30 June but the year is one greater than the comparable RY (e.g, FY 2012 is 1 July 2011 to 30 June 2012).

		Predation control[a]		Other IM activities		Total IM	Research
Period	FY	Time[b]	Cost[c]	Time[b]	Cost[c]	cost[c]	cost[cd]
Year 1	2012	0.0	0.0	2.5	36.0	36.0	415.0
Year 2							
Year 3							
Year 4							
Year 5							

[a] State or private funds only.
[b] Person-months (22 days per month)
[c] Salary plus operations
[d] Separate from implementing IM program but beneficial for understanding of ecological or human response to management treatment (scientific approach that is not unique to IM).