Interim Annual Report to the Alaska Board of Game on Intensive Management for Moose with Wolf Predation Control in Unit 13

Prepared by the Division of Wildlife Conservation
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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) Prey data

Date(s) and method of most recent [fall/spring] abundance assessment for moose (if statistical variation available, describe method here and show result in Table 1):

Fall trend count areas (CA) are surveyed annually November – December to determine sex and age composition of moose; most recent surveys November 2010. Trend count data, corrected for estimated sightability were extrapolated to estimate unit-wide population abundance in 2010.

Compared to IM area, was a similar trend and magnitude of difference in abundance observed in nearby non-treatment area(s) since program inception (Y/N)? No and in the last year (Y/N)? Unknown.

Describe comparison if necessary:

The total number of observed moose in CAs receiving treatment has increased by 56% (2001-2010), whereas CA 15 in Unit 13(D) which is adjacent to the current IM area has been relatively stable since inception of the IM program (2001-2010; observed moose increased 3%). CA 15 was not flown in 2009, but was flown in 2010.

Table 1. Moose abundance, age and sex composition in assessment area since program reauthorization in Year 5 (2005) to reauthorization review in Year 10 (2010) in CAs in the Unit 13 Wolf Predation Control Area. Regulatory year is 1 July to 30 June (e.g, RY 2010 is 1 July 2010 to 30 June 2011).

			Composition (number per 100 females)			
Period	RY	Moose observed (Estimated Abundance)	Young	Yearling bulls	Males	Total *n*
Year 5	2005	3871 (11,910)	18.8	7.3	25.3	3871
Year 6	2006	3845	23.7	8.3	28.9	3845
Year 7	2007	4334	22.1	10.6	30.5	4334
Year 8	2008	4310	19.4	11.6	33.4	4310
Year 9	2009	4875 (14,710)	22.9	9.3	32.8	4875
Year 10	2010	5112 (15,900)	21.4	9.7	28.2	5112

Description of trend in abundance or composition:

Moose across the Unit 13 control area have increased steadily since the IM program renewal in 2005. Cows continue to increase annually across the control area, though bulls declined between 2009 and 2010. Based on extrapolation of fall count area densities, corrected for estimated sightability, moose population estimates were calculated in 2005 by subunit: 2,720 moose in Unit 13(A), 3,970 moose in Unit 13(B), 1,170 moose in Unit 13(C), and 4,050 moose in Unit 13(E). Moose population estimates in 2010 by subunit were: 3,490 moose in Unit 13(A), 5,280 moose in Unit 13(B), 1,700 moose in Unit 13(C), and 5,430 moose in Unit 13(E).

2) Predator data

Date(s) winter 2010-11 and method of most recent spring abundance assessment for wolves (if statistical variation available, describe method here and list in Table 3):

The most recent spring abundance estimate for Unit 13 of 152 (spring 2011) was derived over the course of the 2010-2011 winter and is based on wolf and track sightings gathered from staff biologists, hunters, trappers, and pilots, adjusted for documented harvest.

Date(s) fall 2010 and method of most recent fall abundance assessment for wolves (if statistical variation available, describe method here and list in Table 3):

The most recent fall abundance assessment of 303 wolves (fall 2010) was derived using the same methods. The preliminary fall 2011 abundance estimate is 238 – 278.

The wolf population in Unit 13 has been relatively stable since 2006-07. The annual take by all methods has reflected this trend.

Table 3. Wolf abundance objectives and removal in wolf assessment area of the Unit 13 Wolf Predation Control Area. The annual removal objective in Unit 13 depends on the fall abundance in relation to the spring objective of 135 – 165 wolves. No less than 135 wolves will remain by 30 April each RY in all of Unit 13. The annual removal since Year 1 (referred to in this report as 2005) has averaged 43% (range = 34% - 49%). If non-lethal predation control methods were used by Department personnel, clarify with footnote in control removal tally.

Period	RY	Fall abundance (variation)	Harvest removal		Dept. control removal	Public control removal	Total removal[a]	Spring abundance (variation)
			Trap	Hunt				
Year 5	2005	309	61	23	0	61	145	157
Year 6	2006	280	47	25	0	33	105	160
Year 7	2007	254	48	9	0	33	90	153
Year 8	2008	273	38	26	0	55	121	144
Year 9	2009	272	40	18	0	23	81	180
Year 10	2010	303	31	8	0	103	142	152

3) Habitat data and nutritional condition of prey species

Table 4. Nutritional indicators for moose in assessment area of the Unit 13 Wolf Predation Control Area.

Period	RY	13A West Twinning Rate (radio-collared cows)	13(B)/13(C)/13(E) Twinning rates (random cows)
Year 5	2005		
Year 6	2006	35%	
Year 7	2007	14%	
Year 8	2008	26%	53%
Year 9	2009	27%	50%
Year 10	2010	30%	
Year 11	2011	33%	

4) 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 Unit 13 Wolf Predation Control Area. Fiscal year (FY) is also 1 July to 30 June but the year is one greater than the comparable RY (e.g, FY 2010 is 1 July 2009 to 30 June 2010).

			Operations and contracting			Total cost
Period	FY	Salary[a]	Federal Aid[b]	Public Funds[c]	Other[d]	
Year 5	2006	15.0				15.0
Year 6	2007	15.0				15.0
Year 7	2008	15.0				15.0
Year 8	2009	15.0				15.0
Year 9	2010	30.0				30.0
Year 10	2011	25.0				25.0

[a]State Fish and Game fund matched 1:3 with Federal Aid (see footnote b) except for activities directly involving predator control (state funding only).
[b]Federal Aid in Wildlife Restoration (excise tax on firearms and ammunition)
[c]Capital Improvement Project or General Fund revenue from Alaska Legislature
[d]Grants, donations from private organizations, etc.