

SPECIES
MANAGEMENT REPORT

Alaska Department of Fish and Game
Division of Wildlife Conservation
(907) 465-4190 PO Box 115526
Juneau, AK 99811-5526

CHAPTER 8: MOOSE MANAGEMENT REPORT

From: 1 July 2011
To: 30 June 2013

LOCATION

GAME MANAGEMENT UNIT: 7 (3,520 mi²)

GEOGRAPHIC DESCRIPTION: Eastern Kenai Peninsula

BACKGROUND

Federal public lands cover approximately 78% of Unit 7, 50% managed by the U.S. Forest Service–Chugach National Forest, 22% by the National Park Service–Kenai Fjords National Park, and 5% by the U.S. Fish and Wildlife Service–Kenai National Wildlife Refuge. The moose population in Unit 7 is at a low density relative to other units on the Kenai Peninsula. Severe winters with deep snow are normal for this region and probably contribute to a high mortality rate for moose in this area. Less than 10% of the moose harvest on the Kenai Peninsula over the past 20 years has come from Unit 7. Very little moose monitoring or research has been done by the Alaska Department of Fish and Game (ADF&G) in this unit since the 1970s and early 1980s due to budget constraints and other priorities. Survey efforts were increased during the 1990s, with the Resurrection Creek/Juneau Creek count areas counted every other year. From 2000 through 2011 these two areas were counted 5 times. The two most recent counts were 2010 and 2011, during which 76 and 95 moose were counted, respectively. No population estimate survey has ever been conducted in Unit 7.

MANAGEMENT DIRECTION

MANAGEMENT OBJECTIVES

1. Maintain a healthy population of moose with a minimum bull-to-cow ratio of 20–25:100.
2. Maintain the moose population at a level to promote public safety by reducing conflicts with Unit 7 residents, and participate in land management decisions that affect moose movements in an effort to direct moose into areas with lower vehicle traffic.

METHODS

Composition surveys are flown in traditional count areas as funding allows. Harvest data come from hunter information taken from harvest ticket reports. This report reflects updated data from ADF&G's Web-based database called WinfoNet; therefore, information in the tables may differ slightly from past reports.

Harvest data are summarized by regulatory year (RY). A regulatory year runs from 1 July through 30 June (e.g., RY11 = 1 July 2011–30 June 2012).

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

A comprehensive moose survey has never been conducted in Unit 7. Limited composition surveys, combined with harvest reports, suggest the moose population has remained relatively stable during the past decade. The actual number of moose counted during composition counts is not rigorously comparable between all years, because survey intensity and conditions are inconsistent. We perform composition counts in order to get an adequate sample of moose to calculate ratios of bulls:cows and calves:cows. Composition counts conducted in 2 count areas in December of 2010 showed 17 bulls:100 cows and 10 calves:100 cows, and a total of 76 moose observed. The same count areas flown in November of 2011 produced count ratios of 12 bulls:100 cows and 18 calves:100 cows with 95 moose observed. Recent bull:cow and calf:cow ratios have declined significantly compared to the historical 5-year averages in these 2 count areas from the 1980s of 36 bulls:100 cows and 27 calves:100 cows, suggesting a significant population decline. No surveys were conducted in 2012.

MORTALITY

Harvest

Season and Bag Limit. The traditional hunting period for moose in Unit 7 has been in August and September for more than 30 years. The general season in Unit 7 has been 20 August–20 September since 1993. Since 1987, the bag limit has been one bull with a spike or fork on at least one antler, or 50-inch antlers, or antlers with 3 or more brow tines on at least one side. In 2011, the bag limit was further restricted to 50-inch antlers, or antlers with 4 or more brow tines on at least one side (50-4bt).

The average reported harvest from 2008 through 2012 in Unit 7 was 19 moose (Table 2). Harvest rates declined significantly in 2011 and 2012 due to the increased bag limit restrictions.

Permit Hunts. Information for permit hunts DM210 and DM211, which encompass both Unit 7 and Unit 14C, are reported in the Unit 14C management report. Permit hunt DM522, which encompassed portions of Units 7 and 15A has been suspended since 2008 due to low moose numbers.

Board of Game Action and Emergency Orders. During the March 2013 meeting, The Board of Game reauthorized the antlerless moose permit hunt for the Placer River area (DM211). Other actions taken at the March 2013 meeting included changing the antler requirements for a legal bull from 50-4bt only to 50-4bt and spike for all general season hunts in Units 7 and 15.

Hunter Residency and Success. About half of the general season hunters were residents of Unit 7 (Table 3). The 5 year average of the annual success rates was 8% over the past 5 seasons (Table 3).

Harvest Chronology. Moose were harvested throughout the season, but in somewhat larger proportions at the start and end of the season (Table 4). The chronology of the harvest depends on weather conditions and other factors unrelated to moose abundance.

Transport Methods. Highway vehicles remain the main transportation method used by successful hunters in Unit 7 even with the recent minimal harvest (Table 5).

Other Mortality

Highway vehicles killed an average of 17 moose per year during the past 5 seasons in Unit 7 (Table 2). This is a decrease from the previous 5-year average of 25 and likely reflects decreasing population numbers. The effect of wolf and bear predation on moose and the degree of illegal take are unknown. In addition, the level of mortality for moose during severe winters is probably high and a significant limiting factor.

HABITAT

Assessment/Enhancement

No significant fires or other habitat alterations are known to have occurred in the unit during the reporting period.

CONCLUSIONS AND RECOMMENDATIONS

Our main concern for the moose populations in Unit 7 is the apparent decline in moose numbers. Anecdotal reports from local residents and hunters suggest the population has declined from populations in the 1980s. Moose vehicle collisions, long-term harvest trends and composition counts all support this decline. We believe the main cause is generally poor habitat due to forest succession and predation. In the future, it would be beneficial to work with the U.S. Forest Service to generate a long-term plan to address habitat concerns.

Moose densities in Unit 7 are chronically low and according to our limited data it appears we are meeting only a portion of our management objectives. Roadkill and human conflicts with moose have significantly decreased in Unit 7 but this appears to be due to low moose numbers rather than good land management practices. We expect bull/cow ratios to come back within management objectives due to the harvest restrictions imposed in 2011. Unfortunately population numbers are not likely to increase until large scale habitat manipulation occurs or a natural improvement in moose habitat occurs. In spite of conservation concerns raised by ADF&G and hunting seasons that had never begun before 20 August, the Federal Subsistence Board granted residents of Cooper Landing and Hope a moose season that starts on 10 August in Unit 7 on Federal Lands. The department will be working closely with the Board of Game to address Kenai Peninsula moose population concerns and moose management strategies. We will continue to recommend to the federal board similar and consistent strategies.

PREPARED BY:

Jason Herreman
Wildlife Biologist II

SUBMITTED BY:

Gino Del Frate
Management Coordinator

Please cite any information taken from this section, and reference as:

Herreman, J. 2012. Unit 7 moose management report. Chapter 8, pages 8-1 through 8-6 [*In*] P. Harper and L. A. McCarthy, editors. Moose management report of survey and inventory activities 1 July 2011–30 June 2013. Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2014-6, Juneau.

Table 1. Unit 7 moose aerial composition counts and estimated population size, 2008–2012.

Regulatory Year	Bulls: 100 Cows	Calves: 100 Cows	% Calves	Adults	Total Moose Observed	Estimated Population Size
2008	No Surveys Conducted					
2009	No Surveys Conducted					
2010	17	10	8	70	76	no survey
2011	12	18	14	82	95	no survey
2012	No Surveys Conducted					

Table 2. Unit 7 reported general season moose harvest and accidental death, 2008–2012.

Regulatory Year	Reported Hunter Harvest				Accidental death			Total Reported Mortality
	Bull	Cow	Unk	Total	Road	Train	Total	
2008	31	0	1	32	23	14	37	69
2009	25	0	2	27	18	8	26	53
2010	23	0	1	24	15	1	16	40
2011	9	0	0	9	21	23	44	53
2012	2	0	0	2	9	4	13	15

Table 3. Unit 7 residency and success of moose hunters for the general season, 2008–2012.

Regulatory Year	Successful				Unsuccessful				Total Hunters
	Local ^a Resident	Nonlocal Resident	Non- Resident	Total ^b (%)	Local ^a Resident	Nonlocal Resident	Non- Resident	Total ^b	
2008	15	15	2	32 (11)	116	145	7	269	301
2009	14	10	3	27 (9)	126	133	8	272	299
2010	14	8	1	24 (10)	101	111	10	225	249
2011	0	2	0	2 (2)	49	47	5	102	104
2012	3	4	2	9 (6)	57	74	7	144	153

^a Local = residents of Unit 7.

^b Includes unspecified residency.

Table 4. Unit 7 moose general season harvest chronology (percent of harvest), 2008–2012.

Regulatory Year	Harvest Periods						Unknown	Harvest
	8/20– 8/25	8/26– 8/31	9/1– 9/5	9/6– 9/10	9/11– 9/15	9/16– 9/20		
2008	22	9	9	9	19	28	3	32
2009	11	11	11	11	30	22	4	27
2010	17	4	17	13	25	21	4	24
2011	22	11	11	22	33	0	0	9
2012	50	0	0	0	50	0	0	2

Table 5. Unit 7 general season transport methods for successful moose hunters (percent of harvest), 2008–2012.

Regulatory Year	Percent of Harvest							Harvest
	3/4 wheel- ATV	Airplane	Boat	Highway Vehicle	Horse/ Dogteam	ORV	Unknown	
2008	3	6	9	50	28	0	3	32
2009	7	4	0	63	19	0	7	27
2010	4	8	4	50	21	4	8	24
2011	0	0	0	67	33	0	0	9
2012	0	0	50	50	0	0	0	2

The State of Alaska is an Affirmative Action/Equal Opportunity Employer. Contact the Division of Wildlife Conservation at (907) 465-4190 for alternative formats of this publication.