

FEDERAL AID ANNUAL RESEARCH PERFORMANCE REPORT

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 115526
Juneau, AK 99811-5526

Alaska Department of Fish and Game Wildlife Restoration Grant

GRANT NUMBER: W-33

SEGMENT NUMBER: 9

PROJECT NUMBER: 1.62

PROJECT TITLE: Response of moose and their predators to wolf reduction and short-term bear removal in a portion of Unit 19D East

PROJECT DURATION: 1 July 2005–30 June 2012

REPORT DUE DATE: 1 September 2011

PRINCIPAL INVESTIGATOR: Mark A. Keech, ADF&G

WORK LOCATION: Interior Alaska. Unit 19D East, the upper Kuskokwim River drainage upstream of the Selatna River. Intensive study area (also known as the “Experimental Micro-Management Area” or “EMMA”). The 528-mi² area along the Kuskokwim and Takotna rivers within Unit 19D East that immediately surrounds the community of McGrath.

I. SUMMARY OF WORK COMPLETED THIS SEGMENT ON JOBS IDENTIFIED IN ANNUAL WORK PLAN

JOB/ACTIVITY 1A: Moose population estimation.

During 8–12 November 2010 we conducted aerial moose surveys within the EMMA (528 mi²) and expanded EMMA (1,118 mi²) portions of Unit 19D East. We estimated 793 (± 154) moose in the EMMA and 1,796 (± 312) moose within the expanded EMMA. We used 5 fixed-wing aircraft to complete the survey. No federal Pittman-Robertson operating funds were used on this job.

JOB/ACTIVITY 1B: Calf mortality study.

We monitored the survival of the 2010 calf cohort, their annual survival rate (May 2010–May 2011) was approximately 39% (20 of 55 lived). We attributed 13 deaths (39%) to black bears, 5 deaths (15%) to brown bears, 5 deaths (15%) to wolves, 5 deaths (15%) to known causes other than predation, and 5 deaths (15%) to unknown causes. No federal Pittman-Robertson operating funds were used on this job.

JOB/ACTIVITY 1D: Monitoring moose during calving, and twinning surveys.

Twinning surveys were conducted by area staff in the study area during normal survey and inventory activities. Twinning rate for uncollared females was 37% (14 of 38 parturient females

observed). We did not monitor radiocollared females during this segment period for parturition or twinning. No federal Pittman-Robertson operating funds were used on this job.

JOB/ACTIVITY 1E: Monitor collared moose for survival and movements.

During this segment period we conducted approximately 12 radiotracking flights to determine survival and movements of adult and yearling moose. No federal Pittman-Robertson operating funds were used on this job

JOB/ACTIVITY 6: Literature review, data analysis, report writing, publication of results.

During this segment period the principal investigator reviewed literature on moose mortality, population dynamics/modeling, and productivity, as well as bear and wolf population estimation techniques. The 2010 annual research progress report for this project was also completed during this report period and a manuscript “Effects of Predator Control, Individual Traits, and Environment on Moose Survival in Alaska” was published in the *Journal of Wildlife Management*. No federal Pittman-Robertson operating funds were used on this job.

III. PUBLICATIONS

KEECH, M. A., M. S. LINDBERG, R. D. BOERTJE, P. VALKENBURG, B. D. TARAS, T. A. BOUDREAU, AND K. B. BECKMEN. 2011. Effects of predator treatments, individual traits, and environment on moose survival in Alaska. *Journal of Wildlife Management* 75:1361–1380.

PREPARED BY: Mark A. Keech

DATE: 22 August 2011