

# Wildlife Restoration MULTI-YEAR GRANT INTERIM 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:** AKW-7 Project 2.0

**PROJECT TITLE:** Statewide Intensive Management for Moose Populations Identified as Important for Providing High Levels of Harvest for Human Consumptive Use and Predators Influencing Moose Population Status (Region IV).

**PERIOD OF PERFORMANCE:** April 17, 2017–March 31, 2018

**REPORT DUE DATE:** Sept 28, 2018

**PRINCIPAL INVESTIGATOR:** Todd A. Rinaldi

**COOPERATORS:** Dave Crowley, Tim Peltier and Frank Robbins

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Authorities: 2 CFR 200.328  
2 CFR 200.301  
50 CFR 80.90

### **I. PROGRESS ON PROJECT OBJECTIVES DURING PERFORMANCE YEAR**

**OBJECTIVE 1:** Conduct more frequent and more robust surveys to estimate the population size and composition (bulls, cows and calves) of moose to evaluate if IM treatments are successful in Units 13 and 16.

Principle investigators (PIs) will conduct more frequent and robust (with sightability estimates) moose surveys to evaluate the effects of IM treatments in Units 13 and 16 where predator control has been previously conducted. Wherever it is feasible to do so, these surveys will normally be conducted using techniques described in the GeoSpatial Survey Operations Manual (GSPE; Kellie and DeLong, 2006).

**ACCOMPLISHMENTS:** A lack of suitable survey conditions (i.e., snow cover, flying conditions) precluded the completion of a GSPE in Unit 13 during this reporting period.

GeoSpatial Population Estimator surveys of 16B-South and 16B-Middle were completed this reporting period under AK-23 1.0 *The Status of Alaska Moose and Factors Influencing Their Populations in Region IV*.

OBJECTIVE 2: Does not pertain to Region IV.

ACCOMPLISHMENTS: None

OBJECTIVE 3: Estimate adult moose survival rates using radio collars to evaluate the effects of the IM treatment.

A sample of radiocollared adult female moose will be maintained within Unit 9 to evaluate reproductive rates, adult survival, nutritional status, and to estimate calf survival. The PIs, along with other research and management staff will capture and radiocollar moose in November, March and June using a helicopter and standard capture techniques (Adams et al. 1989) and conduct monitoring flights from a fixed-wing aircraft to assess objectives 1–3.

ACCOMPLISHMENTS: Plans to capture 10 additional cow moose and deploy radio-collars was scheduled for April 2018. The season up to that time was cold and snowy and perfect for captures; then a week before captures were scheduled, temperatures increased to record levels too warm for safe capture of pregnant cows. Captures were then cancelled for the spring and re-scheduled, if possible, for late October 2018.

Calf moose are monitored daily from May 12 for the 1<sup>st</sup> two weeks post-parturition, or to mortality if within the two-week period. If a calf survived the two-week period it was monitored one additional time at the 1<sup>st</sup> month of life, followed by once in late fall-early winter, and finally in spring just prior to parturition. All monitoring flights were conducted with a Super Cub, and pilot/observer team. Sixteen mortalities of cows and calves were assessed from the air with two mortalities assessed from the ground. Some calf mortalities were determined from behavior of the cow, i.e., the cow moved 5-12 miles overnight and did not have calf(s) in the morning, or cow remained onsite but crossed a river and calf(s) disappeared. Site of mortality was assessed for presence of any remaining body parts, bones, hair, pattern of dispersal of remains, and presence of predator sign.

Monitoring of known surviving calves during this reporting period was to be conducted on a monthly basis following the May-June parturition flights. The first of these flights was conducted July 6, 2017. Although the radio signals were clear, the vegetation where each cow-calf pair was located, was too dense to enable visual sighting of calves despite extensive circling and hours spent in the attempt. The monthly search effort was then deemed too ineffective and inefficient to repeat. Monitoring calf survival was then scheduled for once in late fall-early winter when brown bears are mostly dened, and again in late winter-early spring prior to their emergence from dens. This partitions monitoring of calf survival within periods likely to be individually dominated by brown bear predation, and wolf predation. During this reporting period, only the flight in late fall-early winter (early November) was completed. The late winter-early spring was completed outside this reporting period.

**OBJECTIVE 4:** Monitor moose nutritional status to evaluate the influence of nutrition on moose population's status.

A subsample of collared moose from Objective 3 will be monitored from fixed-wing aircraft to determine the number of calves produced per individual and the survival of those calves to fall and the subsequent spring. Recruitment rates will be determined by monitoring all radiocollared adult female moose from fixed wing aircraft and determining the number of calves recruited per each female moose.

**ACCOMPLISHMENTS:** Parturition and twinning rate are indicators of nutritional status in moose. Productivity and twinning are evaluated through survey of parturition and twinning of collared moose in May and June of each year. Therefore, no activities were completed during this reporting period.

**OBJECTIVE 5:** Does not pertain to Region IV.

**ACCOMPLISHMENTS:** None

**OBJECTIVE 6:** Investigate and monitor wolf, black bear and brown bear abundance relative to defined IM objectives.

Wolves will be marked with radio collars to estimate wolf population size and compare it to the intensive management objectives established to increase the moose population in Units 13 and 16.

**ACCOMPLISHMENTS:** Due to conflicting work priorities and lack of suitable wolf tracking conditions this objective was not met during this period in Unit 16. During this reporting period no additional wolves were captured and collared. One fixed-wing tracking flight (Piper Super Cub) was conducted in the fall and two flights (Piper Super Cub and Cessna 185) during spring field operations, in an attempt to capture additional wolves, lead staff to presume there are at least 5-6 wolf packs in the unit. Efforts will continue to capture and collar wolves to aid in enumeration.

Minimum wolf surveys were conducted in Units 13A, 13C, and 13E using Piper PA-18 fixed-wing aircraft and contract pilots experienced in identifying and following wolf tracks. An observer assisted in spotting wolves and wolf tracks, and recorded data and notes. Multiple aircraft were utilized in an attempt to complete each survey area as quickly as possible to minimize the effects of movements.

### 13A

During January 24–28, 2018 one pilot/observer team surveyed the eastern portion of Unit 13A. A total of 26 wolves were directly observed, with pack sizes ranging from two to eight. The survey area was completed in 22.9 hours

A second pilot/observer team began surveying the western portion of Unit 13A on January 26, 2018, though deep snow and poor tracking conditions precluded a successful survey. A second attempt was launched February 16–18, 2018. Persistent winds throughout the survey period prevented further coverage in the southwest portion of the survey area, but conditions were otherwise excellent in the remainder of the survey area. A total of 10 wolves were directly observed, with pack sizes ranging from two to four. Survey time, including the aborted attempt on January 26 was 20.5 hours.

### 13C

Two pilot/observer teams began surveying Unit 13C on January 18, but ice fog delayed the survey attempt. Both teams did eventually take-off but were forced to land early due to increasing ice fog later in the day. Clouds, fog, and wind persisted preventing any further survey attempts until late January.

On January 26 and 27 a second attempt was made to survey Unit 13C by two pilot/observer teams. Conditions were excellent in the western half of the unit, however excessive winds in the eastern half of 13C resulted in wind-blown conditions, obscured tracks, and difficult flying. A total of 28 wolves were directly observed, with pack sizes ranging from three to eight. Including both attempts the survey area was completed in 30.3 hours.

### 13E

Four pilot/observer teams surveyed Unit 13E on February 16–17. A total of 74 wolves were directly observed, with pack sizes ranging from two to 21. Survey time was 53.3 hours.

## **II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.**

### Unit 9:

[http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/moose\\_2015\\_2020\\_smr\\_gmu\\_9.pdf](http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/moose_2015_2020_smr_gmu_9.pdf)

[http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/wolf\\_2015\\_2020\\_smr\\_gmu\\_9\\_10.pdf](http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/wolf_2015_2020_smr_gmu_9_10.pdf)

### Unit 13:

[http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/wolf\\_2015\\_2020\\_smr\\_gmu\\_13.pdf](http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/wolf_2015_2020_smr_gmu_13.pdf)

### Unit 16:

[http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/moose\\_2015\\_2020\\_smr\\_gmu\\_16a\\_16b.pdf](http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/moose_2015_2020_smr_gmu_16a_16b.pdf)

[http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/wolf\\_2015\\_2020\\_smr\\_gmu\\_16.pdf](http://www.adfg.alaska.gov/static/research/wildlife/speciesmanagementreports/pdfs/wolf_2015_2020_smr_gmu_16.pdf)

### **III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.**

This is the first time in several years that formalized minimum wolf counts have been conducted across multiple subunits of Unit 13. Funding, staffing and weather/survey conditions have previously precluded efforts.

In Unit 16, population surveys were conducted in two areas where survey conditions have prevented completion since 2011. This information is critical to managing moose in this growing population.

USFWS approved an amendment to decrease the grant duration, ending the grant on June 30, 2018. After extensive investigation by DWC and USFWS staff into performance reporting and financial accounting of the 5-year AKW-7 Intensive Management award for projects Caribou 1.0, Moose 2.0, and Deer 3.0, it was determined it is in the State's best interest to cease work on and terminate the entire AKW-7 award, first Caribou on Dec. 1, 2017, and then moose and deer projects on June 30, 2018.

### **IV. PUBLICATIONS**

Brockman, C. J., and T. C. Peltier. 2018. Wolf management report and plan, Game Management Unit 16: Report period 1 July 2010–30 June 2015, and plan period 1 July 2015–30 June 2020. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2018-24, Juneau.

Crowley, D. W. 2017. Moose management report and plan, Game Management Unit 9: Report period 1 July 2010–30 June 2015, and plan period 1 July 2015–30 June 2020. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2017-5, Juneau.

Crowley, D. W., and C. Peterson. 2018. Wolf management report and plan, Game Management Units 9 and 10: Report period 1 July 2010–30 June 2015, and plan period 1 July 2015–30 June 2020. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2018-31, Juneau.

Hatcher, H. L. 2018. Wolf management report and plan, Game Management Unit 13: Report period 1 July 2010–30 June 2015, and plan period 1 July 2015–30 June 2020. Alaska

Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2018-26, Juneau.

Peltier, T. C. 2017. Moose management report and plan, Game Management Units 16A and 16B: Report period 1 July 2010–30 June 2015, and plan period 1 July 2015–30 June 2020. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2017-7, Juneau.

Robins, F. R. 2017. Moose management report and plan, Game Management Unit 13: Report period 1 July 2010–30 June 2015, and plan period 1 July 2015–30 June 2020. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G/DWC/SMR&P-2017-X, *In Press*.

## **V. RECOMMENDATIONS FOR THIS PROJECT**

Not Applicable – this grant has expired.

**Prepared by:** Todd A. Rinaldi

**Date:** 9/26/2018