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-B-R4-2020 Amendment #1

**PROJECT NUMBER:** 1.0

**PROJECT TITLE:** Region IV Moose S&I program: Alaska's Moose Populations and Factors Influencing Their Status in Central/Southwest Alaska.

**PERIOD OF PERFORMANCE**: July 1, 2020 through June 30, 2021

**PERFORMANCE YEAR**: FY21

**REPORT DUE DATE:** September 2021

**PRINCIPAL INVESTIGATOR:** Todd A. Rinaldi

**COOPERATORS:** Dave Crowley, Heidi Hatcher Tim Peltier & Bryan Reiley.

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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: Population Size, Status, and Trend.** Assess the size and status of each moose population to evaluate the 5-year trend.

ACCOMPLISHMENTS:

*Unit 9*

- Conduct fall moose composition assessment.

  Seven moose trend count areas covering 892 $km^2$. Moose surveys were flown October to early December

- Conduct a spring calf productivity survey.

  COVID pandemic mandates prevented our ability to complete this task this reporting period.

*Unit 13*

- Conduct fall moose trend counts and/or GSPE in select areas to determine progress towards meeting IM objectives.

  Fifteen count areas in Units 13A–E, were completed between Oct 27 and Nov 24, 2020 requiring 209 hours of fixed-wing aircraft time. Six thousand one hundred and sixty-five moose were documented.

- Conduct a spring calf productivity survey.

  Sixty-five radiocollared cows were followed in Units 13A, 13B & 13E between May 12 and June 19 requiring 283.5 hours of fixed-wing aircraft time. This data was acquired along with twinning surveys identified under Objective 3. Parturition ranged for 80–87% depending on unit.

*Unit 14A&14B*

- Conduct a fall moose GSPE or composition survey as conditions allow in select areas of 14A.

  A GSPE of Unit 14A was completed over the course of 4 days in Nov–Dec requiring 85 hours of fixed-wing aircraft time - 1,704 moose were classified.

- Conduct spring calf productivity survey.

  Spring calving surveys were completed using a fixed-wing aircraft on 24 and 28 May 2021 using an established route over areas of known calving concentrations. Each survey required a total of 9.5 hours of flight time to complete. Twinning rate has decreased from previous years.

*Unit 16B*

- Conduct a fall moose GSPE or composition survey in the middle and southern portion of the unit as conditions allow.

A GSPE of Unit 16B-middle was completed on 15–19 November 2020 requiring 110.6 hours of fixed-wing flight time. One thousand and twenty-one moose were classified.

*Units 17B&C*

- Conduct a spring moose GSPE in select areas.

  No GSPE was completed due to staffing limitations.

- Conduct fall composition surveys in select areas.

  No composition survey was completed due to staffing limitations.

- Conduct moose calf twinning surveys in select areas within Unit 17C

  Due to staffing and pandemic related issues, no twinning surveys were completed this reporting period.

**OBJECTIVE 2: Mortality/Harvest Monitoring and Regulations.** Assess the number of moose harvested in Region IV by hunters in addition to other sources of mortality that may have an impact on each moose population.

ACCOMPLISHMENTS:

*Regionwide*

- Monitor harvest through analysis of registration, Tier II, and drawing permit data, potlatch information, and through contact with hunters.

  During FY21, staff were unable to travel to remote communities to issue moose permits due to pandemic restrictions and DWC made accommodations to issue permits . Fifteen thousand four hundred and seventeen moose hunting permits were issued and 2,605 moose (2264 bulls; 636 cows) were harvested in Region IV through draw, tier, general season, and registration hunts. Opportunities to harvest cow moose as a mechanism of population regulation are available in Unit 13, 14A and 17A. Thirty-six ceremonial potlatch permits were issued.

- Monitor natural mortality factors affecting the population

  Moose-vehicle and moose-train collisions were lower than in recent years due to lower snow depth and winter severity. In addition, there may have been less vehicle

traffic last year due to the pandemic. Moose vehicle collisions in Units 14A, 14B, and 16A were 239, compared to the previous five-year average of 338. Moose train collisions were 33, compared to a five-year average of 71 for Units 14A and 14B. Moose train collisions in Unit 13E were 18 last year. The previous five-year average was 60.

- Examine dead moose to look for causes of death, disease, mineral deficiencies, and contaminants.

  Mortality is monitored with using radiocollared moose and opportunistically during fieldwork across the region. In addition, staff respond to reports of sick or dead moose mainly in developed areas such as Unit 14. Starvation can be common even in in low snow years. This was an above average snow year in Units 13, 14, and 16 and but there are no indications or above normal winter mortality.

*Units 14A&B*

- Collect moose jaws from moose-vehicle collisions and through Unit 14A permit hunts to determine age structure of moose in the unit as well as those killed by vehicles.

  We did not request jaws be collected from cow moose harvested in draw hunts or from moose killed in moose-vehicle collisions due to the need to reduce foot traffic in our offices during the pandemic.

**OBJECTIVE 3: Habitat Enhancement /Assessment.** Assess moose habitat and browse availability directly or indirectly in specified areas of the state and perform habitat enhancement in areas where it is feasible.

ACCOMPLISHMENTS:

*Unit 13*

- Assess habitat quality through browse surveys and field observations.

  Thirty browse removal plots were assessed over the course 4 days using 2 crews and an R-44 helicopter. Over 138 plants and 1,340 twigs were sampled.

- Monitor productivity and the rate of twinning among both radiocollared cows and random unmarked cows.

  Sixty-five radiocollared cows were followed in Units 13A, 13B & 13E between May 12 and June 19 requiring 229 hours of fixed-wing aircraft and observer time. Twinning was average to above average range 33% except in Unit 13E, where twinning was 63%.

*Units 16A and 16B*

- Assess habitat quality and availability through browse utilization surveys and field observations.

  No browse plots were completed in Unit 16 this year. After last year's effort only one area remains in the south where snow and weather condition are highly variable due to the coastal climate and often preclude fieldwork.

- Monitor productivity and the rate of twinning among both radiocollared cows and random unmarked cows.

  At the time of project statement development, it was not clear if funding would be available to maintain the productivity surveys in the spring. Using existing allocations staff completed productivity and recruitment surveys from May 14 through June 2. Forty-one cows were monitored with an apparent parturition rate of 85% and twinning was 31%.

OBJECTIVE 4: **Moose Management with Public Participation and Outreach.** Manage the moose populations of Alaska with an effort to engage the public using public meetings, working groups, educational materials, and incentive programs.
ACCOMPLISHMENTS:

*Regionwide*

- Prepare moose portion of Annual Intensive Management Reports for the Board of Game to comply with regulatory requirements for Intensive Management programs.

  Annual Intensive Management reports were submitted to the Board of Game in February for Unit 13 currently under intensive management to benefit moose.

- Provide information to state and federal regulatory processes on moose management.

  All information collected is used to inform state and federal regulatory processes. Outside of common communication with our federal counterparts there was 2 federal proposals addressing moose during this reporting period. Staff compiled and presented biological, population, and hunting information at more than 12 Advisory Committee meetings, 4 Regional Advisory Council meetings, Subsistence Resource Commission meetings, and at the Federal Subsistence Board. There are 35 state Board of Game proposals addressing moose in Region IV presented the Board of Game.

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

We have met most of our objectives during FY21 however weather events and poor sampling conditions continue to present obstacles to conducting robust surveys across the region. This year we were able to do more work in Unit 16 because of weather as noted in *Significant Development Reports and/or Amendments* below

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

Many staff were teleworking from home as a result of the COVID-19 pandemic. Logistical issues related to the COVID pandemic did affect our ability to complete some activities.

We had an opportunity to complete a GSPE in Unit 16A due to favorable conditions which was not originally planned for under Objective 1. Results of that effort are detailed above.

At the time of project statement development, it was not clear if funding would be available to maintain the Unit 16 productivity surveys in the spring under Objective 1. Using existing allocations staff completed productivity and recruitment surveys from May 14 through June 2.

## IV. PUBLICATIONS

Alaska Department of Fish and Game. 2021. Annual report to the Alaska Board of Game on intensive management for moose with wolf predation control in the Game Management Unit 13, Nelchina caribou herd. Division of Wildlife Conservation, Juneau.

Moose Management Reports and Plans are currently being drafted and should be published during the next performance period (FY21). This is the first revision since the new report and plan format. Past plans and information can be found here: http://www.adfg.alaska.gov/index.cfm?adfg=librarypublications.wildlifepublications&sort=species&sort2=speciesname&speciesname=Moose

## V. RECOMMENDATIONS FOR THIS PROJECT

We recommend continued funding for this project to effectively manage moose populations in Central/southwest Alaska

**Prepared by:** Todd A. Rinaldi, Regional Management Coordinator

**Date:** 8/18/2021