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 Intensive Management

PROJECT NUMBER: P2.0

PROJECT TITLE: Evaluate the Effectiveness of Intensive Management for Moose in Unit 15

PERIOD OF PERFORMANCE: April 1, 2015 to June 6, 2018

REPORT DUE DATE: September 28, 2018

PRINCIPAL INVESTIGATOR: David Saalfeld, Jeff Selinger, and Jason Herreman

COOPERATORS: Cynthia Wardlow

Authorities: 2 CFR 200.328
2 CFR 200.301
50 CFR 80.90

I. SUMMARY OF WORK COMPLETED ON PROJECT

OBJECTIVE 1: Monitor forage abundance and utilization to evaluate browse abundance and quality and determine habitat capability to develop reasonable IM population objectives.

ACCOMPLISHMENTS:

FY2016 - 39 sites were sampled using the Seaton browse removal method and plants were dried to create species mass curves. Feces were collected at each site for microhistology/nutrient analysis.

FY2017 - 40 sites were sampled using the Seaton browse removal method, with feces collected at each site for microhistology/nutrient analysis. Additional plants were dried to improve mass curves for species with minimal numbers of plants sampled in 2016 and voucher specimens pressed, dried, and mounted for all major species.

FY2018 - 41 sites were sampled in the spring using the Seaton browse removal method and feces were collected at each site for microhistology/nutrient analysis. Samples of major browse species were also collected at these sights for nutrient analysis. Summer moose fecal samples were collected across Unit 15C for microhistology and nutrient analysis.

OBJECTIVE 2: Investigate and monitor wolf, black bear and brown bear abundance relative to defined IM objectives.

ACCOMPLISHMENTS:

During this project, 24 wolves (10 females and 14 males) have been collared in the 15C IM area. Flights have been conducted bi-monthly throughout the winter (FY17 and FY18) to identify number of packs and pack size.

FY17 - During February and March 2017, we captured and collared 18 wolves in Unit 15C to aid in wolf abundance monitoring. Preliminary late winter data from collared individuals suggest ≥ 30 wolves comprising 4 – 5 packs within the 15C IM area. Further flights were planned to improve estimates of wolf abundance and pack dynamics in Unit 15C. Bear abundance studies were not completed during FY2017 and are not currently planned for future years.

FY18 - During February and March 2018, 6 additional wolves were captured and collared in 15C to supplement the 18 wolves collared in 2017. Preliminary data from collared individuals suggest ≥ 5 packs within the Unit 15C IM area. Additionally, preliminary data based on flights (i.e., data based on 10 complete flights where at least some members of each collared pack were observed) estimates an average minimum count of 31 wolves (range 23 – 36 individuals) within the 15C IM area. Further flights throughout the year have been planned to improve estimates of wolf abundance and pack dynamics in Unit 15C. Bear abundance studies were not completed during FY2018 and are not currently planned for future years.

SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.

OBJECTIVE 1: Monitor forage abundance and utilization to evaluate browse abundance and quality and determine habitat capability to develop reasonable IM population objectives.

Browse surveys were conducted to evaluate winter forage availability in Unit 15C to determine if the intensive management objectives are attainable and whether or not the moose population can be maintained at the current population size. Measurement of winter forage availability and utilization in Unit 15C began in spring of 2016 and continued in 2017 and 2018. Protocols follow those established in Paragi et al. (2008) and Seaton et al. (2011). Survey design estimates current annual growth of forage species and the amount removed each year as an index of forage availability.

FY2016 - 39 sites were sampled using the Seaton browse removal method and plants were dried to create species mass curves. Feces were collected at each site for microhistology/nutrient analysis.

FY2017 - 40 sites were sampled using the Seaton browse removal method, with feces collected at each site for microhistology/nutrient analysis. Additional plants were dried to

improve mass curves for species with minimal numbers of plants sampled in 2016 and voucher specimens pressed, dried, and mounted for all major species. During summer 2017 a collaborative effort, not under this grant, with the Kenai National Wildlife Refuge, Chugach National Forest, and Kenai Fjords National Park was launched to map and quantify habitat types on the Kenai Peninsula using fine-resolution digital photography and ground truthed vegetation plots. As part of this effort ground truthed plots were classified by dominance class (coniferous forest, broadleaf forest, mixed forest, shrub, herbaceous, non-vascular, or non-vegetated), overstory vegetative composition, understory vegetative composition, and tree cover diameter. Samples of major forage species were collected for nutritional analysis and moose fecal samples were collected for microhistology and nutrient analysis at sites visited in unit 15C.

FY2018 - 41 sites were sampled in the spring using the Seaton browse removal method and feces were collected at each site for microhistology/nutrient analysis. Samples of major browse species were also collected at these sights for nutrient analysis. Summer moose fecal samples were collected across Unit 15C for microhistology and nutrient analysis

OBJECTIVE 2: **Investigate and monitor wolf, black bear and brown bear abundance relative to defined IM objectives**.

During this project, 24 wolves (10 females and 14 males) have been collared in the Unit 15C IM area. Flights have been conducted bi-monthly throughout the winter (FY17 and FY18) to identify number of packs and pack size. So far, data from flights and collars have identified ≥ 5 packs. Preliminary data based on flights (2 flights of collared individuals during FY17 and 8 flights during FY18) estimate an average minimum count of 31 wolves (range 23 – 36 individuals) within the Unit 15C IM area. Eight other flights were attempted but due to weather conditions reducing visibility were not included in the minimum count estimates. Bear abundance studies were not completed during this study and are not currently planned for future years.

II. PUBLICATIONS

Annual Report to the Alaska Board of Game on Intensive Management for Moose with Wolf Predation Control in Game Management Unit 15A.

III. SIGNIFICANT DEVIATIONS AND/OR ADDITIONAL FEDERAL AID-FUNDED WORK NOT DESCRIBED ABOVE THAT WAS ACCOMPLISHED ON THIS PROJECT DURING THIS SEGMENT PERIOD

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. REVIEW OF PRIOR RESEARCH AND STUDIES IN PROGRESS ON THE PROBLEM OR NEED

Field work for monitoring forage abundance and utilization to evaluate browse abundance and quality was completed during the reporting period; however, not all results are currently available. Because samples are sent for analyses outside the department, the data from these samples are not yet available.

Wolf population dynamics shift over short temporal periods, as such 2 years of data is inadequate to provide accurate estimates of number of packs and minimum population size. In order to take advantage of existing collars and provide a better estimate of number of packs and minimum population size, we have developed a longer term project starting in FY2019 to address these issues.

Prepared by: David Saalfeld
Date: 9/19/2018