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:** 12

PROJECT NUMBER: 1.74

PROJECT TITLE: How do regenerating burns influence moose populations and harvest in Interior Alaska?

PROJECT DURATION: 1 July 2012–30 June 2016

REPORT DUE DATE: 1 September 2014

PARTNER: None

PRINCIPAL INVESTIGATOR: Kalin A. Kellie Seaton, ADF&G

COOPERATORS: Dr. Todd Brinkman (UAF/SNAP), Liz Neipert (University of Colorado/U.S. Army), and Casey Brown (Ph.D. Candidate/UAF)

WORK LOCATION: Unit 20D

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

OBJECTIVE 2: Link individual moose dynamics to landscape-level dynamics.

JOB/ACTIVITY 2A: Compare moose density over the winter between the burn and control areas.

During the regular November moose survey, we worked with Delta area staff to conduct a census of the GSPE survey units that overlapped with the Hajdukovich burn, providing a total count of moose in that area. This will be compared qualitatively with the estimated number of moose in the control area, and larger southwest Unit 20D. These areas were also surveyed at a higher intensity than in previous years to improve estimate precision.

OBJECTIVE 3: Measure the impact of burn-level dynamics on population-level abundance and harvest.

JOB/ACTIVITY 3A: Compare moose density in the Hajdukovich burn with moose density in the rest of southwest Unit 20D.

We performed a brief comparison of moose density between areas for inclusion in the publication described below. The full analysis of moose density relative to boundaries was postponed due to lack of staff time to spend on this project.

JOB/ACTIVITY 3B: Compare moose harvest in the burn relative to the rest of southwest Unit 20D.

We performed a brief comparison of moose harvest between areas for inclusion in the publication described below. The full analysis of moose density relative to boundaries was postponed due to lack of staff time to spend on this project.

OBJECTIVE 4: Collaborate with Casey Brown (Ph.D. student, UAF) to model burn characteristics important to moose and predicting their occurrence on the landscape

JOB/ACTIVITY 4A: Provide project support.

We provided logistical support to Ph.D. candidate Casey Brown by providing ADF&G snow machines and technicians for winter browse surveys in March 2014.

OBJECTIVE 5: Collaborate with Casey Brown and Todd Brinkman (UAF, SNAP program) to quantify aspects of moose-hunter interaction.

JOB/ACTIVITY 5A: Provide project support.

We provided logistical support to UAF Ph.D. candidate Casey Brown through the loan of ADF&G ATVs during the fall field season (September 2013) and purchase of motion-sensing field cameras.

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

Spent ~ 40 hours helping create and later review the manuscript described below. I also worked with Casey Brown to determine the percent of GPS locations acquired by the GPS collars that were being transmitted via ARGOS. Limited transmission time can lead to incomplete GPS location records. We found that 93–96% of GPS locations acquired by the collars were being transmitted via the ARGOS satellite system, allowing Casey to proceed with several analyses prior to having the collars in hand.

III. PUBLICATIONS

Worked with Casey Brown to produce a manuscript entitled “Incorporating resilience thinking into management of a moose-hunter system in Alaska” for a special edition of the journal *Ecology and Society*. The paper has been accepted and is in preparation for publication. The paper uses the Unit 20D study area as a case study and includes several

analyses specifically highlighting the role of burns and access in success rates for moose hunters.

IV. RECOMMENDATIONS FOR THIS PROJECT

None.

PREPARED BY: Kalin A. Kellie Seaton

DATE: 13 August 2014