

Wildlife Restoration OPERATING GRANT FINAL 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-23 FY2018

PROJECT NUMBER : 3.51

PROJECT TITLE: Evaluation of management strategies to enhance harvest from southwest Alaska caribou herds

PERIOD OF PERFORMANCE: July 1, 2017 to June 30, 2018

REPORT DUE DATE: Sept 1, 2018

PRINCIPAL INVESTIGATOR: Nick Demma, Neil Barten and Dave Crowley

COOPERATORS: Togiak National Wildlife Refuge

Authorities: 2 CFR 200.328
2 CFR 200.301
50 CFR 80.90

I. PROGRESS ON PROJECT OBJECTIVES DURING PERIOD OF PERFORMANCE

OBJECTIVE 1: Estimate production, survival, recruitment, and causes of mortality of MCH neonates.

ACCOMPLISHMENTS: Timing and location of calving, and sex, weight, survival, and cause of death data for calves radiocollared as neonates during 2011-2014 have been summarized and analyzed. **Conclusions:** Age-specific productivity of adult cows, timing and synchrony of calving, and body condition and mass of neonate calves indicate that caribou were not nutritionally limited during the period. Early survival of calves was limited primarily by predation, and the proportion of calves lost to predators between birth and fall is the most important factor determining fall calf recruitment. This work has been completed under this objective.

Beginning with the May 2018 calving season, this objective will be included under a new project (AKW-29 P10.0 Mulchatna Caribou Calf Survival and Mortality).

OBJECTIVE 2: Update the MCH database for evaluating survival of adult caribou

ACCOMPLISHMENTS: We continued work towards updating the MCH database but did not accomplish a fully functional database for evaluating annual adult survival.

After an initial push to convert and merge data stored in the old database and to obtain

minimum functionality for entering newly acquired telemetry and capture data, this effort encountered some difficulties. We tested a version of the database under field conditions in May 2018 for the purpose of managing collar deployments and re-deployments, telemetry data, collar retrievals, and producing up-to-date field data forms. Unfortunately, we could not get the database to function as needed and abandoned the field test.

OBJECTIVE 3: Evaluate survival and growth of MCH male caribou.

ACCOMPLISHMENTS: We have conducted basic analyses to determine annual survival, skeletal and antler growth of MCH male caribou. We did not accomplish a similar analysis relative to spatial differences of bulls to evaluate the effects of utilizing different seasonal ranges on survival and growth. The spatial analysis is currently on hold until we obtain a complete dataset of MCH telemetry for the period 2006-2014. Obtaining this dataset is partially dependent on the larger effort to update and revise the MCH database.

OBJECTIVE 4: Report findings in appropriate scientific and popular venues.

ACCOMPLISHMENTS: We continued drafting a DWC Technical Bulletin (final report) summarizing the results of the MCH bull study. In order to finish the final report, we need to complete data analysis for evaluating the spatial effects of seasonal range utilized on bull survival and growth. This aspect is partially dependent on the larger effort to update and revise the MCH database. We will consider publishing any noteworthy results in a peer-reviewed journal(s).

II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.

We did not perform additional work not previously described during this period of performance.

III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.

Corrective action was taken as a result of unallowable expenses on AKW-7 Caribou Intensive Management grant. \$124,457 was debited to this project. With the closure of AKW-7 Caribou, an effort to consolidate work on SW caribou herds will improve efficiency on project reporting.

IV. PUBLICATIONS

No reports or manuscripts were published during this reporting period.

V. RECOMMENDATIONS FOR THIS PROJECT :

Project will continue into FY20. Work previously conducted under objective 1 is now being conducted under AKW-29 P10.0, Accomplishing the remaining objectives will require finishing work on the Mulchatna caribou database, additional data analysis, and writing the final performance report and a technical manuscript. We anticipate accomplishing these objectives in FY20.

Prepared by: Nick Demma

Date: 10/30/2018