

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-29

PROJECT NUMBER: P10.0

PROJECT TITLE: Mulchatna Caribou Calf Survival and Mortality

PERIOD OF PERFORMANCE: 23 March 2018 – 31 October 2022

PERFORMANCE YEAR: 24 March 2020 – 30 Sept 2021

REPORT DUE DATE: 29 Dec 2021

PRINCIPAL INVESTIGATOR: Nick Demma, WBIII ADFG

COOPERATORS: Renae Sattler, WBIII ADFG

Authorities: 2 CFR 200.328
2 CFR 200.301
50 CFR 80.90

I. PROGRESS ON PROJECT OBJECTIVES DURING PERFORMANCE YEAR

OBJECTIVE 1: Document location and timing of use of primary calving and post-calving ranges.

ACCOMPLISHMENTS: We accomplished this objective.

During May 12-14, 2020, we located and observed 69 radiocollared adult cow caribou to determine parturition status. Travel restrictions due to the Covid-19 pandemic and considerations for personnel safety necessitated that we conduct field operations from Palmer instead of from Dillingham, which is our typical base for this field work because it is much closer to both calving areas. Basing in Palmer required a 275 mile one-way (~6 hour roundtrip) daily commute to the closest calving area (East). Because the other calving area (West) was another 90 miles farther, we elected to focus our neonate captures in the East calving area. Because of this, as well as several days of poor flying weather, we only captured neonates during 2 days: May 16th and 20th. During these 2 days we captured and radiocollared 42 neonates.

During May 10-13, 2021, we located and observed 68 radiocollared adult caribou cows to determine parturition status. During May 15-22, 2021, we captured and radiocollared 48

caribou neonates. The calf captures were primarily distributed within both primary calving areas, with a few collars deployed in peripheral areas.

We used the distribution of parturient cows, newborn calf capture locations, and telemetry data to determine the location and timing of use of primary calving areas. Location and use of post-calving ranges were determined primarily by radio collar locations.

OBJECTIVE 2: Evaluate survival of MCH calves from birth to 1-year-of-age.

ACCOMPLISHMENTS: We made significant progress on this objective.

On May 16th and 20th, 2020 we captured and radiocollared 42 neonates and monitored them throughout the year with fixed-wing aircraft to determine survival status. We retrieved 30 collars that had switched to “mortality status,” (i.e., double pulse rates, indicating non-movement and a potential mortality) and examined each site for clues to animal fate (i.e., whether the animal died or slipped the collar) such as calf remains and blood residue on the collar, predator scat, tracks, and hair. We used this information to assign a fate for each calf and to calculate proportion surviving to 1-year-of-age

During May 15-22, 2021, we captured and radiocollared 48 neonates and monitored them through the end of the performance year. We recovered 15 recently-deployed calf collars during May 18-25, 2021 that had switched to mortality status. We investigated each site and collar, as described above, to assign a fate for each calf and calculated proportion surviving to the end of the performance year.

The last collar retrievals for calves born and collared in 2021 are scheduled for October 2021 and May 2022, which are in the next performance year. The collars retrieved in October and May will allow us to calculate survival from birth to 6-months-, and 1-year-of-age respectively, for this cohort.

OBJECTIVE 3: Characterize mortality patterns (timing, location, cause of death) of calves from birth to 1-year-of-age.

ACCOMPLISHMENTS: We made significant progress on this objective.

During May 2020, we captured and radiocollared 42 neonates shortly after birth and monitored them throughout the year with fixed-wing aircraft to determine survival status. On May 20th and 23rd, 2020, we retrieved a total of 9 collars from recently-captured neonates, that were in mortality mode, and examined each site for clues to animal fate. All sites were investigated within 96 hours of collars being deployed. From remains and other clues at the sites, we assigned fate (unknown or dead), and proximal cause of death and predator species when possible.

We also retrieved calf collars in mortality mode on October 5th and 27th (n=9 and n=5, respectively), and an additional 7 during May 12-25, 2021. We examined sites for remains and applied a chemical reagent that detects blood residue to all collars. This information was used to classify fate and proximal cause of death of each calf when possible.

During May 2021, we captured and radiocollared 48 neonates within ~3 days of birth and monitored them through the end of the performance year with fixed-wing aircraft to determine survival status. During May 18-25, 2021, we retrieved 15 collars from recently-captured neonates that were in mortality mode and examined each site for clues to animal fate. Most sites were investigated within 24 hours of collars switching to mortality mode. From remains and other clues at the sites, we assigned fate and proximal cause of death and predator species, when possible.

The last collar retrievals for calves born and collared in 2021 are scheduled for October 2021 and May 2022, which are in the next performance year. The sites and collars retrieved in October and May will allow us to evaluate timing, location, fate, and proximal cause of death, when possible, for calves surviving the neonatal period.

II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.

During this performance period, we did extensive work formatting, validating, and combining all calf capture, fate, and cause of death data collected during the performance period to date. From this we began analyzing and summarizing characteristics of Mulchatna caribou calf survival during 2018-2021.

III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.

No SDRs or amendments were submitted during this performance year.

IV. PUBLICATIONS

In June 2021, the Mulchatna Caribou Herd (MCH) Interagency Management Group published a newsletter to inform the public on the status of the MCH, current management programs, and research. The newsletter included some results from this study.

V. RECOMMENDATIONS FOR THIS PROJECT

Project will continue for 1 more year.

Prepared by: Nick Demma

Date: 14 Nov 2021