

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-R-11-2019

PROJECT NUMBER:

PROJECT TITLE: Density and Demography of GMU13 Brown Bears

PERIOD OF PERFORMANCE: October 1, 2020 through March 31, 2021

PERFORMANCE YEAR: April 1, 2019 - June 30, 2024; year 2 of a 5-year grant

REPORT DUE DATE: Submit to Coordinator June 25, 2021; due to FAC June 29, 2021

PRINCIPAL INVESTIGATOR: Nick Demma

COOPERATORS:

Authorities: 2 CFR 200.328
2 CFR 200.301
50 CFR 80.90

I. PROGRESS ON PROJECT OBJECTIVES DURING PERFORMANCE YEAR

OBJECTIVE 1: Estimate brown bear density and abundance using Capture-Mark-Resight techniques

Continue radiocollaring bears in October 2020 to increase the marked sample leading up to conducting a CMR survey in GMU 13A during May 2022 (FY22).

ACCOMPLISHMENTS: We accomplished our objective to increase the sample of marked bears for the May 2022 CMR survey. We radiocollared 17 bears (4 males, 13 females) in the study area during October 2020. CMR aerial survey is scheduled for May 2022.

OBJECTIVE 2: Determine demographic vital rates for multiple age and sex classes of bears
Demographic information will be gathered from a sample of 13A bears instrumented with GPS radio collars.

ACCOMPLISHMENTS: We made additional progress towards accomplishing this objective. We deployed GPS radio collars on 47 bears during 3 capture efforts between October 2019-2020 and continue to collect demographic information on the surviving bears. We are monitoring the GPS collars and harvested bears brought in for sealing to detect mortalities of radiocollared bears and to determine cause of death and calculate survival

rates. To date, we have conducted 14 bi-monthly tracking flights during non-denning months (May-October), to evaluate production and survival of cubs of radiocollared sows.

OBJECTIVE 3: Calculate population growth rate (λ)

Use demographic data to model population growth and determine biological/ecological drivers of the GMU 13A bear population.

ACCOMPLISHMENTS: We made progress towards completing this objective.

We are in year 2 of a 5-year study and therefore still in the early stages of collecting demographic data. Therefore, we do not yet have enough data to calculate population growth rate. This will be done at completion of the study after all demographic data are collected.

OBJECTIVE 4: Calculate population harvest rate

Summarize brown bear harvest records and use CMR model results to calculate mean annual harvest rate during the study period.

ACCOMPLISHMENTS: We did not complete this objective.

Calculating harvest rate depends on bear density, and therefore dependent on results of the CMR survey and vital rates modeling for demographic data that will be collected during the entire study period to estimate density. So, mean annual harvest rate during the study period will be determined at the conclusion of the study.

II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.

We are in year 2 of a 5-year study and therefore do not yet have adequate demographic data to estimate vital rates (or abundance). Our Capture-Mark-Resight survey to estimate abundance is scheduled for May 2022.

III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.

None

IV. PUBLICATIONS

Identify and attach (cite) selected publications, photographs, screenshots of websites, or other documentation (including articles in popular literature, scientific literature, or other public

information products) that have resulted from this project that highlights the accomplishments of the project.

V. RECOMMENDATIONS FOR THIS PROJECT

Project will continue for 3 more years.

Prepared by: Nick Demma

Date: 6/24/21