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-19 FY2017

PROJECT NUMBER : 3.0

PROJECT TITLE: Black bear (*Ursus americanus*) abundance, harvest rate, and diet in the Kenai Peninsula coast and Prince William Sound regions

PERIOD OF PERFORMANCE: July 1, 2018-June 30, 2019

REPORT DUE DATE:

PRINCIPAL INVESTIGATOR: Sean Farley

COOPERATORS: Dave Saalfeld, Jeff Selinger

I. PROGRESS ON PROJECT OBJECTIVES DURING PERIOD OF PERFORMANCE

OBJECTIVE 1: Develop black bear abundance estimates in PWS and southern Kenai Peninsula with Close Kin Mark Recapture (CKMR), classic mark-recapture statistics, and pedigree reconstruction

ACCOMPLISHMENTS: Biological samples from 110 bears were collected this year. Three bears were captured fall 2018 and provided hair and blood samples, 5 bears were captured and sampled spring 2019, and biopsy samples were collected from 102 bears in the fall of 2018.

OBJECTIVE 2: Determine dispersal distances from maternal area by black bears in PWS and southern Kenai Peninsula, and estimate susceptibility to harvest based upon dispersion.

ACCOMPLISHMENTS: Five bear were captured in the Port Dick area spring 2019, and 4 were collared with GPS/VHF radio collars. Location data are being collected and stored by the collars for eventual processing in Anchorage.

OBJECTIVE 3: Determine levels of genetic diversity and population structuring in PWS and Kenai Peninsula black bears.

ACCOMPLISHMENTS The biological samples collected from the bears (biopsy darts, blood samples) will be processed this winter (2019). In order to facilitate this a multi-year contract with the USGS Molecular Ecology Laboratory in Anchorage was signed in mid-2019. This contract work will provide for the genetic processing and data interpretation of the samples collected for this project with regards to objectives 1, 2, & 3.

OBJECTIVE 4: Determine the facultative dietary niche breadth and depth of black bears on Kenai Peninsula (south) and PWS using stable isotope analyses of black bear hair, muscle, and bone.

ACCOMPLISHMENTS A contract with the USGS Alaska Science Center in Anchorage was signed to provide support for collecting biological samples and interpreting stable isotope data of those samples for ecological modeling. In addition, another contract is in the process of acceptance with the US Geological Denver facility for isotope research for the assistance of a Research Ecologist. An additional 235 sample of hair, bone, and muscle have been collected for the isotope work.

II. SUMMARY OF WORK COMPLETED ON PROJECT TO DATE.

Biopsy sampling was conducted fall 2018. Captures and collaring was conducted spring 2019. Samples from sealed bears were collected fall 2018 and spring 2019. All samples have been cataloged and are being prepped for laboratory analysis. Contracts for genetic, foraging ecology, and isotope work (pending) were finalized.

III. SIGNIFICANT DEVELOPMENT REPORTS AND/OR AMENDMENTS.

1. None

IV. PUBLICATIONS

None

V. RECOMMENDATIONS FOR THIS PROJECT Project will continue.

Prepared by:

Date: