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:** 10

PROJECT NUMBER: 4.41

PROJECT TITLE: Nelchina Brown Bear Demographics

PROJECT DURATION: July 1, 2011 – June 30, 2012

REPORTING PERIOD: July 1, 2011 – June 30, 2012

REPORT DUE DATE: September 1, 2012

PRINCIPAL INVESTIGATOR: Becky Schwanke, ADF&G, Interim Principal Investigator

WORK LOCATION: Western GMU 13A, Southcentral Alaska

I. PROGRESS ON PROJECT OBJECTIVES DURING LAST SEGMENT

OBJECTIVE 1: Capture additional animals to augment estimation of Nelchina brown bear productivity, cub survival, and annual rate of population change (λ).

All collared female brown bears were radiotracked in May to determine productivity and cub survival. A portion of the collared bears without cubs were captured in May, and their collars were removed. All remaining radiocollared bears that could be located were captured in June, and their collars were removed.

OBJECTIVE 2: Identify degree of calf/adult moose killing by collared bears, both within and outside the study's moose calving area.

An additional year of predation on large prey by individual bears was documented by visual observation while radio tracking with fixed wing aircraft, although these flights were limited to the fall of 2011. Large prey included moose calves, yearlings and adults, as well as caribou calves and adults. To further document predation characteristics, four bears were captured in May and fitted with vhf radiocollars with cameras. These bears were captured again in June, and their collars were removed.

OBJECTIVE 3: Develop an outline for a brown bear management strategy in Unit 13. The outline will provide the basis for addressing future intensive management objectives for moose set by the Board of Game.

A management strategy for brown bears in Unit 13 will be drafted following data collection and analyses.

II. SUMMARY OF WORK COMPLETED ON JOBS IDENTIFIED IN ANNUAL PLAN THIS PERIOD

JOB/ACTIVITY 1A: <u>Bear captures and data collection for productivity and survival</u>

No new bears were captured during this period for purposes of monitoring cub production and survival. Of the 34 individuals monitored this reporting period, following

mortality losses, only 4 bears remain collared that could not be located or status confirmed. All 20 bears that could be located during May and June, were captured for collar removal. The data collection for this job/activity is now complete.

JOB/ACTIVITY 1B: Bear monitoring and data analysis

A total of 99 bear locations were collected throughout this reporting period. For the 2011-12, cub-of-the-year survival averaged 81% (N=21); yearling survival averaged 100% (N=16). A total of 34 individual collared bears were monitored from 1 July 2011 – 30 June 2012. In the spring of 2012 only (1) cub-of-the-year litters was documented; the initial litter size was 2. A total of (8) yearling litters were documented; the average initial litter size was 1.75. Further data analyses are ongoing.

JOB/ACTIVITY 2A: Monitor predation characteristics of study bears

Of the 28 individual collared bears monitored throughout the fall of 2011, none were observed on a fresh kill, though flights were limited compared to previous reporting periods. Of the 28 individual collared bears monitored throughout the spring of 2012, no bears were observed on a fresh kill. Again, fewer spring flights were conducted during this reporting period compared to previous reporting periods. As for the 4 bears with camera collars, the data analyses is ongoing. During this reporting period, the final parentage genetic data was received from Wildlife Genetics International.

JOB/ACTIVITY 3A: Develop management strategy

No work was done on this job during this reporting period.

VI. RECOMMENDATIONS FOR THIS PROJECT

Summarize results, draft a management strategy, and report findings to appropriate venues.

Prepared by: Becky Schwanke, ADF&G, Interim Principal Investigator

Date: 23 August 2012