

**FEDERAL AID  
ANNUAL RESEARCH PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 115526  
Juneau, AK 99811-5526

**PROJECT TITLE:** Grizzly bear use of the North Slope oil fields and surrounding region

**PRINCIPAL INVESTIGATOR:** Richard T. Shideler

**FEDERAL AID GRANT PROGRAM:** Wildlife Restoration

**GRANT AND SEGMENT NO.** W-33-7

**PROJECT NO.** 4.40

**WORK LOCATION:** Fairbanks

**STATE:** Alaska

**PERIOD:** 1 July 2008 – 30 June 2009

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**I. PROGRESS ON PROJECT OBJECTIVES SINCE PROJECT INCEPTION**

This is the first year of the project.

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

JOB/ACTIVITY 1A: Develop a grizzly bear den habitat selection model.

I reviewed literature on habitat selection models and searched for available digital map products (e.g., land cover maps, Digital Elevation Models) at a scale useable in a selection model. This was the only activity because operating funds for this job did not become available during fiscal year (FY) 2009.

JOB/ACTIVITY 1B: Obtain data on habitat characteristics of radiomarked bears, and field verify areas of high, medium and low probability denning habitat based on the predictive model generated in job/activity 1a.

We inspected 13 dens of radiomarked bears to augment the existing database of ~300 dens previously inspected. Data on habitat characteristics of these dens will be used to develop the den habitat model in job/activity 1a.

We located dens of 26 radiomarked bears and 1 unmarked bear during early winter radiotracking surveys. These dens will be inspected in subsequent summer field seasons.

JOB/ACTIVITY 1C: Evaluate the efficacy of den detection methods (e.g., hand-held and airborne Forward Looking infrared "FLIR" imagers, trained scent dogs).

There was no activity on this job because operating funds did not become available during denning season in FY09.

JOB/ACTIVITY 1D: Construct and instrument an artificial den to test the accuracy of FLIR under varying snow conditions.

I obtained land use permits for excavation of the artificial den from the Alaska Division of Mining, Land and Water Management and from the State Historic Preservation Officer, and approvals from ConocoPhillips Alaska for electrical hookup for the instruments and artificial heat source. Excavation of the den is scheduled for September 2009.

JOB/ACTIVITY 2A: Monitor the locations of radiocollared bears.

We recaptured 25 radiomarked bears and replaced their VHF radiocollars, and captured 2 unmarked bears and fitted them with VHF radiocollars.

We flew 3 radiotracking flights and relocated up ~30 bears on each flight. We also located 3 bears from the oil field road system.

JOB/ACTIVITY 2B: Use DNA “fingerprinting” to identify recently captured bears that may have been related to previously food-conditioned bears, in order to assess the fate of offspring of food-conditioned bears.

We prepared 72 hair and tissue specimens, including those collected during bear captures in FY09 (see job 2a) and submitted them to Wildlife Genetics International (Nelson, British Columbia) for DNA fingerprinting. Operating funds for the analysis did not become available in FY09.

OBJECTIVE 3: Prepare annual and final progress reports, interim and final technical reports, and give presentations at scientific forums.

Data analysis was ongoing. I submitted a manuscript incorporating previously-collected data entitled “Effects of food-conditioning on grizzly bears in the North Slope oil fields, Alaska” to *Ursus*. I assisted with preparation of a manuscript, currently under revision, entitled “Carbon and nitrogen isotope analysis: a tool for bear management” to be submitted to *Ursus*.

**III. ADDITIONAL FEDERAL AID-FUNDED WORK NOT DESCRIBED ABOVE THAT WAS ACCOMPLISHED ON THIS PROJECT DURING THIS SEGMENT PERIOD**

None.

**IV. Publications**

I did not complete any publications during the report period.

**V. RECOMMENDATIONS FOR THIS PROJECT**

The project’s geographic scope includes most of the North Slope oil field production and previously anticipated expansion areas. Recent industry activity in the Point Thomson Unit suggests that oil and gas development is spreading eastward from Prudhoe Bay. There should be additional focus on grizzly bear use of this portion of the study area.

Project No. 4.40 – North Slope Grizzly Bear  
FY Annual Performance Report

PREPARED BY:

Richard T. Shideler  
Wildlife Biologist III

SUBMITTED BY:

Scott M. Brainerd  
Research Coordinator

Laura A. McCarthy  
Publications Technician II

APPROVED BY:

\_\_\_\_\_  
Clayton R. Hawkes  
Federal Assistance Coordinator  
Division of Wildlife Conservation

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Douglas N. Larsen, Director  
Division of Wildlife Conservation

APPROVAL DATE: \_\_\_\_\_