

FEDERAL AID ANNUAL 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-7 **Segment Number:** 1

Project Number: 1.0

Project Title: Statewide Intensive Management for Caribou Populations Identified as Important for Providing High Levels of Harvest for Human Consumptive Use and Predators Influencing Caribou Population Status.

Project Duration: April 1, 2015 – March 31, 2020

Report Period: April 1, 2015 – March 31, 2016

Report Due Date: June 29, 2016

PRINCIPAL INVESTIGATOR: Torsten Bentzen (RIII)

WORK LOCATION: Fortymile Caribou Herd for Region III, Onion Portage Region V

I. PROGRESS ON PROJECT OBJECTIVES DURING LAST SEGMENT

Objective 1: Conduct more frequent and more robust summer surveys to estimate the population size and fall composition (bulls, cows and calves) of caribou to evaluate if IM treatments are successful.

Region III

ACTIVITY 1: Maintain a sample of at least 50 GPS collared cows.

PROCEDURE: During October 5-6, 2015 we recaptured 9 known age female caribou and fitted them with new GPS collars. On March 14 and 31, 2016 we collaborated with YDE staff in Dawson to recapture 6 VHF collared cows of known age in Yukon Canada and fit them with new GPS collars. Again on April 13 we deployed an additional 7 GPS collars on known age adult females in Alaska. An additional 36 short yearling female caribou were captured during this report period and fitted with VHF collars to maintain an adequate sample (~20) of collared three-year-old cows to monitor parturition rate. This maintains a current sample of 165 collared FCH cows (67 GPS, 98 VHF).

ACTIVITY 2: Conduct radiotracking flights to assess range size and use and evaluate appropriate sample of GPS collars to evaluate range use relative to VHF collars.

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PROCEDURE:

- 1) Comprehensive radio tracking flights were conducted in October, November and December 2015, and January, March, April, May, and June 2016 to evaluate distribution of GPS to VHF collared cows.
- 2) Evaluation of seasonal distribution maps and caribou density is ongoing. Work was begun to produce routinely updatable seasonal range maps and core area estimates for the FCH starting during calving 2015. We used both VHF and GPS collar data to best compare current movement information to data collected during 1992-2008.

Objective 2: Estimate calf production, survival and causes of mortality using radio-collars and or camera-collars to determine if a) calf mortality can be reduced to meet IM population and/or harvest objectives or b) to evaluate the effects of the IM treatment.

Region V

We bought 30 calf collars and deployed them on 4 month old caribou at Onion Portage to look at over-winter mortality as an initial step. Calves weighed 10% higher than the long-term average. We radiotracked those collars on a monthly basis (except for the shortest daylight months) from September 2015 through July 2016. We planned to conduct regular site visits to conduct more timely investigation of mortalities, but calf mortality was very low over winter (>75% survival rate). We recently used that code to conduct site visits in this fiscal year (last week).

Objective 3: Estimate adult caribou survival rates using radio-collars to evaluate the effects of the IM treatment.

Region III

ACTIVITY 1: Reassess newborn calf weights as index of changing nutritional condition in the FCH.

PROCEDURE: In May 2016 we captured and weighed 70 newborn (≤ 3 days old) calves randomly selected throughout the calving area during May 18–24 which spanned the peak of calving (May 19). Based on preliminary analysis of the 2016 data, neonate weights of both sexes were similar to those observed 1994-2002.

ACTIVITY 2: Model FCH demographics

PROCEDURE: All collared cows 3-years-old or older were observed from the air daily during 12–26 May to determine parturition.

ACTIVITY 3: Determine timing and source of mortality relative to changes in herd status and predator abundance.

PROCEDURE:

- 1) 69 newborn calves (33 females 36 males) were collared during May 18-28.
- 2) All calves were radiotracked daily during May 19th to the 31st. 11 calves died during this period. All kill sites were visited within 4 hours of observation and cause of death determined. No capture related abandonment was observed.

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- 3) We were able to redeploy 8 collars from calves that died during the calving period. This boosted our sample of collared calves from 61 to 69.
- 4) We radiotracked all collared calves 13 times (roughly every other day) in June. Nine collared calves died during June. All kill sites were visited the same day they were observed and cause of death determined.
- 5) We continue to radiotrack all calves weekly during July and August and visit kill sites. Three calves died during July.

ACTIVITY 4: Determine perinatal mortality rate.

PROCEDURE: Daily radiotracking of all parturient cows until calves were collared 24-48 hrs after birth allowed us to determine perinatal mortality rates among a sample of 78 cows. We observed one instance of non-predator related perinatal mortality.

Objective 4: Monitor moose nutritional status to evaluate the influence of nutrition on Caribou population status and evaluate IM population objectives.

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Objective 5: Monitor forage abundance and utilization to evaluate browse abundance and quality and determine habitat capability to develop reasonable IM population objectives.

No activity to report.

Objective 6: Investigate and monitor wolf, black bear and brown bear abundance relative to defined IM objectives.

No activity to report.

Objective 7: Report findings in appropriate scientific and popular publications.

No activity to report.

Prepared by: Nathan Soboleff

Date: September 22, 2016