

**Alaska Department of Fish and Game  
Wildlife Restoration Grant**

**Grant Number:** W-33

**Segment Number:** 10

**Project Number:** 1.72

**Project Title:** Identification of factors affecting calf production, calf survival, and survival of female adult moose in Game Management Unit 15C

**Project Duration:** July 1, 2011 – June 30 2013

**Reporting Period:** July 1, 2011 – June 30, 2012

**Report Due Date:** Sept. 1 2012

**PRINCIPAL INVESTIGATOR:** Thomas McDonough, ADF&G

**WORK LOCATION:** Lower Kenai Peninsula, GMU 15C

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**I. PROGRESS ON PROJECT OBJECTIVES DURING LAST SEGMENT**

**OBJECTIVE 1:** Quantify pregnancy rates, parturition rates, and parturition dates of adult cow moose.

Job/activity 1a: We captured and fitted radio collars on 50 adult female moose in February 2012. Pregnancy rates were 84% as determined through blood testing. Parturition rates were 68% based on aerially monitoring cows daily during calving. Parturition dates were from 15May through 16June with a median parturition date of 25May. Parturition dates were determined through daily aerially monitoring using vaginal implant transmitters. Similar data will be collected again in 2013.

**OBJECTIVE 2:** Determine twinning rates of adult cow moose.

Job/activity 2a: We conducted aerial surveys of radio collared cows during calving to determine a twinning rate of 44%. Similar data will be collected again in 2013. Analysis of twinning rates from cows not radio collared was collected but has not yet been summarized.

**OBJECTIVE 3:** Determine cow and calf mortality rates.

Job/activity 3a: Radio collared cows were aerially monitored daily during calving and for the first 5 weeks post-calving. Aerial monitoring occurred weekly from 6 to 8 weeks post calving, and bimonthly or monthly henceforth. As of August 2012, 10 out of 54 radio collared calves

were still alive. Survival of calves not collared but with radio collared cows appears to be higher than that of radio collared calves. Brown bears were the biggest cause of mortality of radio collared calves. Analysis is preliminary but appears to show at least 40% of the mortality of radio collared calves coming from brown bear predation. Six of the 50 radio collared cows have died as of August 2012. Five of those deaths appear to be due to brown bear predation and one from a capture-related mortality.

**OBJECTIVE 4:** Determine seasonal movements of radio collared cows.

Job/activity 4a: Periodic aerial telemetry flights of collared cows has occurred since initial collaring. Movement data has not yet been analyzed.

**OBJECTIVE 5:** Assess nutritional condition of cow moose at the yearly peak and nadir.

Job/activity 5a: Body condition from rump fat indices were assessed during spring 2012 captures. Median rump fat of adult cows was 2.0cm. Body condition will be assessed in the fall of 2012 and again in the spring of 2013.

## **V. PUBLICATIONS**

None

## **VI. RECOMMENDATIONS FOR THIS PROJECT**

We recommend continuing this project at least through FY2014 or for the life of intensive management activities.

### **Prepared by:**

Thomas McDonough

### **Date:**

23August, 2012