

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

GRANT NUMBER: AKW-10 Wildlife Restoration FY2016

PROJECT NUMBER: 13.0

PROJECT TITLE: The Status of Elk and Factors Influencing Their Populations

PERIOD: July 1, 2015 – June 30, 2016

PROJECT LOCATION: Statewide

REPORT DESCRIPTION: This performance report describes elk survey and inventory activities. Activities are listed by game management unit.

**The Status of Elk
and Factors Influencing Their Populations in Region I**

Region-wide:

Region I (Units 1, 2 and 3)

Region-wide Activities:

Activity 1: Provide information to state and federal regulatory processes on elk management.

Accomplishments: Information on elk and elk management was provided to state and federal regulatory bodies as requested.

Activity 1: Monitor harvest through analysis of drawing and registration permit data.

Accomplishments: The Petersburg Area Management Biologist collected and reviewed harvest and other data from elk hunt permit reports.

Activity 1: Monitor dispersal of elk through anecdotal information from hunters.

Accomplishments: Region I managers collected anecdotal reports of elk from hunters and others throughout the region.

Activity 1: Collect and analyze biological data including incisors for aging and photos of antlers.

Accomplishments: Region I managers collected teeth from lower jaws for aging and photographed antlers of all elk harvested during this report period. Data were analyzed to learn about age and antler configuration.

Activity 1: Conduct spring fecal pellet surveys as budgets permit.

Accomplishments: No activity during this report period.

Activities by Unit:

Units 1A, 1B, 2 and a portion of Unit 3

Activity 1: Monitor for the presence of elk in southern Southeast Alaska through contact with deer, elk, and bear hunters.

Accomplishments: Region I managers collected anecdotal reports of elk from hunters and others in these management units.

Activity 2: Monitor the general elk hunt for Units 1A, 1B, 2 and the “remainder of Unit 3.”

Accomplishments: Region I managers monitored for any elk taken outside the draw and registration permit hunt areas in Unit 3.

Unit 3

Activity 1: Monitor the Unit 3 Etolin Island elk hunt and analyze the permit report data.

Accomplishments: The Petersburg Area Management Biologist collected and reviewed harvest and other data from elk hunt permit reports.

Activity 2: Analyze recovered radio-collar data to evaluate movements, habitat use, and seasonal use of range.

Accomplishments: In cooperation with the Research Coordinator, GIS Analyst, and Management Coordinator, the Petersburg Area Management Biologist produced a draft final report on data collected from elk collared in Unit 3. A final report will be published during the next report period.

Activity 3: Conduct alpine abundance, sex and age surveys using fixed wing or helicopter on an annual basis.

Accomplishments: The Petersburg Area Management Biologist completed minimum count and demographic surveys of elk in alpine habitat during mid-summer.

Submitted by: Tom Schumacher, Management Coordinator

The Status of Elk and Factors Influencing Their Populations in Region II

Regionwide:

ACTIVITY. Prepare a biennial regional elk management report.

Staff collected information for preparation of the biennial report in 2014. The department is transitioning to a 5-year report and plan. The next report will be published in 2019.

ACTIVITY. Provide information to state and federal regulatory processes on elk management.

Staff routinely interact with federal staff and discuss management of elk relative to the respective regulatory systems. Staff prepared information for presentation to the state Board of Game meeting during the March 2015 meeting.

Activities by Unit:

Unit 8

ACTIVITY 1: Aerial composition surveys indicate an increasing trend in the Unit 8 elk population. The population on Raspberry and Afognak islands was estimated to be approximately 975 animals in 2015–16. This estimate is higher than previous reporting periods (765 and 885 in 2013–14 and 2014–15, respectively); and is notably higher than the 5-year average ($\bar{x} = 731$). Overall, elk herd estimates have been below management objectives for the past 15 years likely due to multiple factors including reduced habitat availability and high winter mortality. Increased snow accumulation combined with extended periods of cold weather during the harsh winters of 2006–07 and 2007–08 likely contributed to a reduction in herd size.

Obtaining calf:cow and bull:cow ratios continues to be challenging. Distinguishing yearling (spike) bulls in velvet from cows and estimating elk numbers in dense cover can be difficult during aerial surveys. Aerial surveys indicate the elk population was comprised of 15% calves in 2015–16. The ratio of calves:100 cows was 20.77 in 2015–16 indicating increased calf production during this reporting period compared to 2014–2015 estimates. Further, it is important to note, due to the difficulty in distinguishing spike bulls from cows, survey results may overestimate cow numbers (misidentify yearling bulls as cows) thereby underestimating the calf:cow ratio. The ratio of calves:100 cows may be slightly higher than observed indicating increased productivity this period. The bull:100 cow ratio was 15.6 in 2015–16.

ACTIVITY 2: From 27–30 June 2016, with support from project collaborators including Afognak, Ouzinkie, Natives of Kodiak, and Koniag Native Corporations as well as the Rocky Mountain Elk Foundation, we darted 21 adult elk (11 females, 10 males) and deployed 20 global positioning system (GPS) collars and 1 very high frequency (VHF) collar. Capture operations were conducted across Afognak and Raspberry Islands and included bull and cow elk from all 8 herds. Elk were in excellent spring condition with a mean body condition score of 4.1 (range = 2.5–5.0, SD = 0.7). Estimated ages of captured elk ranged from 2–13 years, with a mean age of 5.3 years ($n=7$).

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ACTIVITY 3: Hunt reports provided data on hunting effort and harvest. We issued 563 drawing and registration permits. Hunters reported harvesting 80 elk (49 males, 31 females). The harvest by permit hunt was as follows: Raspberry Island drawing hunt – 16 elk (9 males, 7 females); southwest Afognak drawing hunt – 13 elk (4 males, 9 females); eastern Afognak drawing hunt – 6 elk (5 males, 1 females); remainder of Unit 8 drawing hunt – 16 elk (13 males, 3 female); registration hunt – 27 elk (16 males, 11 females); Federal Subsistence – 2 elk (2 male). The reported 2015-16 harvest of 80 elk was about 8% of the estimated population.

On November 13, 2015 an Emergency Order was issued to close all portions of registration hunt RE755 to the harvest.

Submitted by: Cynthia M. Wardlow