FEDERAL AID
FINAL PERFORMANCE REPORT

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 25526
Juneau, AK 99802-5526

MUSK OX
SURVEY AND INVENTORY

STATE: Alaska **GRANT AND SEGMENT NR.:** W-33-5

Project Nr.: 16.0

PERIOD: 1 July 2006 – 30 June 2007

PROJECT LOCATION: Statewide

PROJECT TITLE: The Status of Musk Ox and Factors Influencing Their Populations

REPORT DESCRIPTION: This performance report describes musk ox survey and inventory activities. Region-wide activities are listed before specific activities by game management unit.

The Status of Musk Ox and Factors Influencing Their Populations in Region III

Regionwide Activities

ACTIVITY 1: Prepare a biennial muskox regional management report.

Prepared a biennial muskox regional management report.

ACTIVITY 2: Provide muskox management information to State and Federal regulatory processes.

Provided information to State fish and game advisory committees and Federal regional advisory councils.

ACTIVITY 3: Monitor harvest and analyze harvest data

Did not monitor harvest because the season was closed.

Activities by Unit

Unit 26B and 26C

ACTIVITY 1: Determine distribution and percent calves in Unit 26B during June.

Radiotracked and determined distribution of muskoxen in June, classified 175 muskoxen and estimated 12% calves.

ACTIVITY 2: Deploy and maintain up to 20 radio-collars as needed to maintain an adequate sample size to conduct surveys

In conjunction with a research project, deployed 9 very high frequency (VHF) collars in March 2007, with no capture mortalities.

ACTIVITY 3: Conduct census in April.

Did not conduct a census because we conducted one in April 2006.

ACTIVITY 4: Review information obtained by the U.S. Fish and Wildlife Service (FWS) on population size, and sex and age composition in Unit 26C, and on movements of radio-collared animals.

Reviewed information obtained by the FWS on population size, and sex and age composition in Unit 26C, and on movements of radio-collared animals.

Submitted by: Roy A. Nowlin, Region III Management Coordinator

The Status of Musk Ox and Factors Influencing Their Populations in Region V

Region-wide Activities

ACTIVITY 1: Prepare biennial regional muskox management reports.

A muskox management report was prepared during the reporting period.

ACTIVITY 2: Provide information to State and Federal regulatory processes on muskox management.

Area management staff reviewed State and Federal regulatory proposals, attended regulatory process meetings, and presented musk ox information to the State Board of Game, State Fish and Game Advisory Committees, Federal Subsistence Board, and Federal Subsistence Regional Advisory Councils.

Unit 18

ACTIVITY 1: Conduct annual aerial censuses of the Nunivak and Nelson Island populations to estimate population size and determine age-sex composition.

In July 2006 we counted 615 musk ox on Nunivak Island. These censuses were flown using a fixed-winged aircraft so the animals were classified as bulls, cows, 2-year-olds or calves. Due to poor weather and lack of aircraft availability no survey was completed of Nelson Island during the reporting period.

ACTIVITY 2: Monitor the population size, distribution, and dispersal of musk ox onto the mainland through harvest reporting, contacts with the public, and field observations.

A group of approximately six musk ox was spotted by state wildlife troopers during early January 2007 south and west of Marshall, AK. One dead musk ox was observed in the same area with a pack of wolves feeding off of it.

ACTIVITY 3: Monitor hunting and other mortality factors through harvest reporting, contacts with the public, and field observations.

Twenty-seven musk ox were harvested on Nelson Island during the report period; 14 were bulls and 13 were cows. Sixty-eight musk ox were harvested on Nunivak Island during this period; 29 were bulls and 39 were cows.

ACTIVITY 4: Work with local Advisory Committees, village representatives, and other agencies to promote the establishment of a huntable muskox population on the mainland.

We discussed musk ox at the Lower Kuskokwim, Central Bering Sea and Lower Yukon Advisory committee meetings.

ACTIVITY 5: Work with local residents to rescue stranded muskoxen as needed and reduce kills of nuisance animals.

No work was completed toward this activity during this reporting period because the discussion on stranded musk ox was not brought up during the meetings.

ACTIVITY 6: Continue to develop and utilize the ongoing cooperative muskox management plans (such as the Nelson Island Musk ox Herd Cooperative Management Plan) in cooperation with the public and other agencies.

Except for Advisory Committee meetings, we did not hold any public meetings where musk ox were discussed during the reporting period.

Units 22 and 23SW (the portion of Unit 23 west of and including the Buckland River drainage)

ACTIVITY 1: Conduct a minimum direct count aerial census of the Seward Peninsula muskox population in March and April to determine population size and percentage of yearlings in the population. (Muskox censuses are scheduled every three years: 2007, 2010, 2013, etc.) (This census was scheduled to occur in 2008 rather than 2007, but the work has been rescheduled to align the muskox census with the Unit 22B and Unit 22C moose censuses. Muskox censuses will continue to be scheduled every three years: 2007, 2010, 2013, etc.)

In March and April we used fixed wing aircraft to count muskoxen on the Seward Peninsula. Department and federal staff found 329 muskoxen in Unit 22B, 445 in Unit 22C, 746 in Unit 22D, 949 in Unit 22E, and 219 in Unit 23SW. The total count for the Seward Peninsula is 2688 muskoxen which is a 12.6% increase since the 2005 census count of 2,387 muskoxen. During the 30 year period from introduction in 1970 to 2000 growth averaged 14% annually.

ACTIVITY 2: Conduct on-ground age/sex composition surveys during March and April to determine population structure and yearling recruitment

In April 2007 we used an R-44 helicopter to conduct an age/sex composition survey in Unit 22B and Unit 22C. In Unit 22B we observed 317 muskoxen and classified 65 bulls 4-years-old or older (21%), 18 3-year-old bulls (6%), 19 2-year-old bulls (6%), 103 cows 4-years-old or older (32%), 32 3-year-old cows (10%), 31 2-year-old cows (10%), 47 yearlings (15%) and 2 muskoxen were unclassified (0.6%).

In Unit 22C we observed 412 muskoxen and classified 101 bulls 4-years-old or older (25%), 15 3-year-old bulls (4%), 25 2-year-old bulls (6%), 151 cows 4-years-old or older (37%), 27 3-year-old cows (7%), 28 2-year-old cows (7%), 65 yearlings (16%) and 0 muskoxen were unclassified (0%).

ACTIVITY 3: Participate in Seward Peninsula Muskox Cooperators Group meetings and facilitate exchange of information and ideas between agencies and user groups.

The Seward Peninsula Muskox Cooperators Group met November 2006 to revisit the amount necessary for subsistence (ANS) developed for the Seward Peninsula in 1998. The Cooperators determined the 1998 ANS needed adjustment and developed several methods for calculating a new number.

The group decided to base the new ANS on the average number of households that have applied to hunt muskox in each subunit. A 25% increase was applied to the number of weighted households to create a range and account for increasing demand for muskox as the resource becomes more available and important to subsistence users. This final

recommendation broken down by subunit is Unit 22B 41-51 muskoxen, Unit 22C 29-36 muskoxen, Unit 22D 68-85 muskoxen, Unit 22E 40-50 muskoxen, and Unit 23SW 26-32 muskoxen. The total of 204-254 muskoxen was rounded to 200-250 muskoxen and will be proposed to the Board of Game during the November 2007 meeting.

ACTIVITY 4: Monitor hunting and other mortality factors through harvest reporting, contacts with the public, and field observations.

Hunting was by Tier II subsistence permits in Units 22B, 22C, 22D, and 23SW. We monitored Tier II hunts and analyzed harvest reports: in Unit 22B 15 of 24 Tier II permits (63%) were filled; in Unit 22C 19 of 22 permits (86%) were filled, in Unit 22D 24 of 45 permits (53%) were filled; and in Unit 23SW 2 of 13 permits (15%) were filled. Monitoring of hunts was coordinated with federal staff administering federal subsistence hunts on federal public lands. In combined state and federal hunts in Unit 22B 100% of the harvest quota was filled, 100% in Unit 22C, 53% in Unit 22D, and 20% in Unit 23SW.

In Unit 22E we monitored a federal subsistence hunt and a combination of state Tier I registration and trophy drawing hunts. Six of twelve federal permits (50%) were filled, 10 of 24 state registration permits (42%) were filled, and 8 of 11 (73%) state drawing hunts were filled. Thirty-five percent (35%) of the harvest quota was filled in Unit 22E.

ACTIVITY 5: Work with local reindeer herders to identify and minimize conflicts between reindeer and muskoxen in an effort to conserve muskoxen and allow for population growth and expansion.

Activities related to reindeer herding occurred in Units 22 and 23SW. Nome staff provided information for the annual Reindeer Herders Association meeting.

ACTIVITY 6: Encourage cooperation and sharing of information among agencies and users of the resource in developing and executing management and research programs.

Nome staff works closely with Bureau of Land Management and National Park Service (NPS) staff to coordinate management activities. Staff attended Seward Peninsula Regional Advisory meetings and reported on muskox population status and hunt administration.

ACTIVITY 7: Provide orientation for Tier II and drawing permit muskox hunters in Unit 22.

Department staff used in-person and telephone interviews and web-based orientation information on the ADF&G website to provide hunters and the public with muskox identification, sex and age classification and hunting information.

ACTIVITY 8: Investigate causes of declining recruitment in portions of the Seward Peninsula using calving surveys and analysis of nitrogen from urine samples collected from winter range in Unit 22.

No calving surveys were conducted during this reporting period. Urine and fecal samples were collected from muskox groups on winter range during composition surveys in Unit 22B and Unit 22C. Analysis is ongoing.

Units 23NW, and 26A

ACTIVITY 1: Census muskox and evaluate population sex/age composition at least once every 3 years in Unit 23NW**.**

We censused muskox in the northwest portion of Unit 23 and westernmost portion of Unit 26A during February, 2007, and observed 347 individuals. This was slightly fewer than in previous years. Opportunistic observations of mixed sex-age groups and solitary bulls in Units 23 and 26A outside of their core range suggest emigration may be starting to limit the growth of this population.

ACTIVITY 2: Census and conduct muskox composition surveys annually in eastern Unit 26A (ANWR population).

We participated in a study that looked at total numbers, mortality, composition, and health assessment of the ANWR population, which took place during the spring and summer of 2007. 200 muskoxen were counted, which is a 30% decline since 2003. There was a fairly high level calf and adult mortality due of bear predation and other causes. There was a high level of disease among the animals that were sampled. During the population count, there were 2 groups of muskoxen found in Unit 26A, one group of 19 on the Colville River and a group of 21 found on Fish Creek. During composition counts, the group found on Fish Creek had 21 adults and 6 calves.

ACTIVITY 3: Conduct muskox distribution surveys periodically (every 2-3 years) in selected portions of Unit 26A to document range expansion of the population.

We surveyed the eastern portion of Unit 26A and looked for muskoxen in the western section during moose and caribou surveys. Shortly after composition surveys in June 2007, the Fish Creek group was found 35 miles out on the sea ice. The radiocollared animal in the bunch died and the rest were eventually found northwest of Teshekpuk Lake (about 60 miles to the west). The group only numbered 13 at that time and none of the calves had survived. Approximately 20 muskoxen were found during caribou surveys in June/July 2007 in the south-western region of Unit 26A, indicating an eastward expansion of the Cape Thompson Population into Unit 26A.

ACTIVITY 4: Capture muskox in Unit 26A to attach satellite, GPS, or conventional radiocollars. Up to 2 muskox will be captured in Unit 26A in 2005-2006.

Nine muskoxen were captured and VHF radiocollars were attached in March in Unit 26A and Unit 26B. We also attached 2 radiocollars to the group of muskoxen found NW of Teshekpuk Lake (formerly known as the Fish Creek group). There were no capture mortalities.

ACTIVITY 5: Monitor hunting and other mortality factors through harvest reporting, contacts with the public, and field observations.

Unit 23: Six Tier II muskoxen (TX107) permits were issued during the reporting period and 5 hunters reported hunting; 4 hunters each took a bull muskox.

Unit 26A: All muskox hunts were closed in 2006 in Units 26A and 26B due to declining numbers and remained closed during 2007.

ACTIVITY 6: Use public education to improve understanding of the conservation value of hunting regulations and obtain better harvest data through increased harvest reporting.

We talked to students, hunters and other individuals regarding hunting, wildlife management, and conservation of muskoxen in Units 23 and 26A.

ACTIVITY 7: Encourage cooperation and information exchange among agencies and muskox user groups to develop and implement management objectives.

Unit 23: ADF&G and NPS staff cooperatively collected sex/age composition information during August 2006. Based on a sample of 190 muskoxen, we observed 25 calves: 100 cows, 32 yearlings: 100 cows and 63 bulls: 100 cows. Results of muskoxen surveys were discussed with the public. ADF&G also provided data from the February 2007 census to NPS.

Unit 26A: We assisted staff from ADF&G Region 3 to conduct the muskox study in Units 26A and 26B. We worked with the North Slope Muskox Working Group to make recommendations for management decisions.

ACTIVITY 8: Record sightings of muskoxen to monitor range use and expansion.

Numerous observations of muskoxen, including latitude and longitude as well as group size, were recorded during wildlife surveys and other activities in Units 23 and 26A. Widely scattered mixed sex/age groups of muskox observed far from their 'core' range suggest muskox are slowly expanding into previously unused range.

ACTIVITY 9: Evaluate whether musk ox population growth will adversely affect resident reindeer and caribou populations.

In both Units 23 and 26A we noted and photographed several instances of caribou and muskoxen grazing peacefully in close proximity to each other. We responded to people in Point Lay who reported that muskoxen were displacing caribou from their hunting area.

Submitted by: Peter Bente, Region V Management Coordinator