

**MUSKOX
ANNUAL SURVEY AND INVENTORY
PERFORMANCE REPORT**

STATE: Alaska

GRANT AND SEGMENT NR: W-33-3

PROJECT NR: 16.0

PERIOD: 1 July 2005–30 June 2006

PROJECT LOCATION: Regions III and V

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

REPORT DESCRIPTION: This performance report describes Region III muskox survey and inventory activities. Regionwide activities are listed before specific activities by herd and game management unit.

**The Status of Muskox
and Factors Influencing Their Populations in Region III**

Regionwide Activities

Activity: Provide muskox management information to state and federal regulatory processes.

Provided information to the Alaska Board of Game, state Fish and Game advisory committees, federal regional advisory committees, and the Federal Subsistence Board.

Activity: Monitor harvest and analyze harvest data

Monitored harvest of 4 muskoxen and analyzed harvest data.

Activities by Unit

Unit 26B and 26C

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

Conducted a June composition count in Unit 26B; classified 175 muskoxen with 12% calves and 22% yearling recruitment.

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

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

Total Regional Segment Period Project Costs (in thousands): \$48.8

Submitted by: Roy A. Nowlin, Management Coordinator

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

Regionwide Activities

Activity: 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 muskox information to the Alaska Board of Game, state Fish and Game advisory committees, the Federal Subsistence Board, and federal regional advisory councils.

During the November 2005 Board of Game (BOG) meeting, the department provided information regarding population status of muskoxen in Units 18, 23, 22, and 26A. We commented on and provided additional information at the board's request on 8 proposals affecting the Seward Peninsula (Units 22 and 23SW). Regulatory changes include: 1) a subsistence registration hunt replaced the Tier II hunt in Unit 22E; 2) Ten percent of the Unit 22E drawing permits were allocated to nonresidents; 3) the season for the Unit 22E drawing hunt was lengthened to 1 August–15 March; 4) in Units 22D SW and 23SW the allowable harvest rate was increased to up to 8% with a cow harvest of up to 4%; and 5) the regulatory code for Seward Peninsula muskoxen was simplified and harvest limits were replaced by harvest rates. These changes were all proposed by the Seward Peninsula Muskox Cooperators. The BOG rejected a cooperators proposal to allow proxy hunting for muskoxen.

Activities by Unit

Unit 18

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

In July 2005 we counted 588 muskoxen on Nunivak Island. These censuses were flown using a fixed-winged aircraft so the animals were classified as either bulls, cows, 2-year-olds, or calves. Due to weather and aircraft availability, no survey was completed of Nelson Island during the reporting period.

Activity: Monitor the population size, distribution, and dispersal of muskoxen onto the mainland through harvest reporting, contacts with the public, and field observations.

Several groups of muskoxen were reported in the fall of 2005 and the winter of 2005–06. These include single animals seen near the villages of Pilot Station, Kotlik, and Akiachak; multiple animals near Bethel and Kasigluk; and a group near some extinct volcanoes southeast of Chevak.

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

Thirty muskoxen were harvested on Nelson Island during the report period. Fifteen were bulls and 15 were cows. Thirty-seven bulls and 38 cows were harvested on Nunivak Island during the report period.

Activity: Work with local advisory committees, village representatives, and other agencies to promote the establishment of a huntable muskox population on the mainland.

We discussed muskoxen at the Lower Kuskokwim, Central Bering Sea and Lower Yukon advisory committee meetings.

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

Nuisance muskoxen were discussed at local Advisory Committee meetings and addressed via newspaper articles in the local papers. During this time period we did not need to address any issues with stranded muskoxen.

Activity: Continue to develop and utilize the ongoing cooperative muskox management plans (such as the *Nelson Island Muskox 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 muskoxen were discussed during the reporting period.

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

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

In April 2006 we used an R-44 helicopter to conduct an age/sex composition survey in Unit 22D. We observed 516 muskoxen and classified 99 bulls 4 years old or older (19%), 32 three-year-old bulls (6%), 28 two-year-old bulls (5%), 193 cows 4 years old or older (37%), 41 three-year-old cows (8%), 26 two-year-old cows (5%), and 84 yearlings (16%); 13 muskoxen were unclassified (3%).

Activity: 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 did not meet during the reporting period. The next meeting is scheduled November 2006.

Activity: 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, 22E, and 23SW. We monitored Tier II hunts and analyzed harvest reports. In Unit 22B, 10 of 21 Tier II permits (48%) were filled; in Unit 22C, 5 of 8 permits (63%) were filled; in Unit 22D, 16 of 38 permits (42%) were filled; in Unit 22E, 25 of 57 permits (44%) were filled; and in Unit 23SW, 9 of 12 permits (75%) 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, 63% of the harvest quota was filled; in Unit 22C, 83%; in Unit 22D, 72%; in Unit 22E, 58%; and in Unit 23SW, 33%.

A bulls-only drawing permit hunt was held in Unit 22E in which 8 of 10 permits (80%) were filled. Two hunters did not hunt, so the success rate for the hunt was 100%.

Reports from the public and field observations indicate that bears are increasingly successful at preying on muskoxen on the Seward Peninsula.

Activity: 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: 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 federal 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: 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: Investigate causes of declining recruitment in portions of the Seward Peninsula by 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 7 muskox groups on winter range during composition surveys in Unit 22D. Analysis is ongoing.

Units 23NW, and 26A

Activity: Census muskoxen and evaluate population sex/age composition at least once every 3 years in Unit 23NW.

Poor weather precluded a muskox census in northwest Unit 23 during this reporting period.

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

We participated in a complete census of muskoxen from the Arctic National Wildlife Refuge (ANWR) population, which took place 8–14 April 2006. Six aircraft flew transects covering nearly all possible muskox habitat in Units 26B, 26C, and eastern Unit 26A; we counted 216 muskoxen. This is more than the number counted in 2004 (198) and 2005 (188)

but indicates an increase in survey effort, rather than an increase in animal numbers. We surveyed the area from the Itkillik River drainage and westward and only counted 19 muskoxen. We counted 78 muskoxen in this same area in 2002.

Composition counts were conducted for the ANWR population on 12 June 2006. We observed 175 adults and 21 calves (12% calves). The group found in Unit 26A on Fish Creek had 15 adults and 7 calves.

Activity: 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 side of Unit 26A and looked for muskoxen in the western section during moose and caribou surveys. A group of 11 muskoxen was found on upper Judy Creek 32 miles west of the Colville River in 2004; they moved north to the Kogru River in 2005, and to Fish Creek in 2006, when the group numbered 22, indicating a westward expansion of the ANWR population. Approximately 20 muskoxen were found during caribou surveys in June/July 2006 in the southwestern region of Unit 26A, indicating an eastward expansion of the Cape Thompson Population into Unit 26A.

Activity: Capture muskoxen in Unit 26A to attach satellite, GPS, or conventional radio collars. Up to 2 muskoxen will be captured in Unit 26A in 2005–06.

We captured and attached VHF radio collars to 2 muskoxen in Unit 26A and Unit 26B during the spring of 2006. There were no mortalities.

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

Unit 23: The Tier II muskox hunt (TX107) was closed by emergency order in September 2005 after 6 muskoxen were found illegally killed in 2 events. Therefore, there was no hunting harvest during this reporting period.

Unit 26A: Three muskoxen were harvested during the Tier II muskox hunt (TX108) in Units 26A and 26B in 2005. All muskox hunts were closed for 2006 in Units 26A and 26B due to declining numbers.

Activity: 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 about hunting, wildlife management, and conservation of muskoxen in Units 23 and 26A.

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

Unit 23: Although we did not census muskoxen during the reporting period, ADF&G and NPS staff cooperatively collected sex/age composition information during July 2005. Based on a sample of 228 muskoxen, we observed 30 calves:100 cows, 47 yearlings:100 cows and 65 bulls:100 cows. Results of muskox surveys were discussed with the public.

Unit 26A: We cooperated with staff from the ANWR FWS and from ADF&G Region 3 to complete the census and the composition counts in Units 26A, 26B, and 26C. We worked with the North Slope Muskox Working Group to make recommendations for management decisions.

Activity: 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 muskoxen observed far from their “core” range suggest muskoxen are slowly expanding into previously unused range.

Activity: Evaluate whether muskox 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.

Total Regional Segment Period Project Costs (in thousands): 108.9

Submitted by: Peter Bente, Management Coordinator