

**FEDERAL AID
ANNUAL PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 25526
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**MUSK OX
ANNUAL SURVEY AND INVENTORY**

STATE: Alaska

GRANT AND SEGMENT NO. W-33-6

PROJECT NO. 16.0

PERIOD: 1 July 2007 – 30 June 2008

PROJECT LOCATION: Statewide

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

REPORT DESCRIPTION: This performance report describes musk ox survey and inventory activities. Regionwide 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: Monitor harvest and analyze harvest data

Did not monitor harvest because the season was closed.

ACTIVITY 2: Monitor natural mortality and analyze natural mortality data.

Research project monitored natural mortality and analyzed and shared data.

ACTIVITY 3: Provide muskox management information to State and Federal regulatory processes.

Provided information to 2 State fish and game advisory committees, the Alaska Board of Game, and 2 Federal regional advisory councils.

Unit 26B and 26C:

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

Located groups at Beechy Point, Ribdon, Canning & Sagavarnirktok rivers, Lonely, and Deadhorse and classified 205 muskoxen (168 adults and yearlings and 37 calves).

ACTIVITY 2: 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.

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ACTIVITY 3: Deploy and maintain up to 20 radio-collars as needed to maintain an adequate sample size to conduct surveys

Deployed 10 vhf collars in concert with a research project (no capture mortalities).

ACTIVITY 4: Conduct census in April.

Did not conduct a census due to lack of funding.

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

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

Regionwide Activities:

ACTIVITY 1: 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 2007 we counted 374 musk ox on Nelson 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 Nunivak 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.

At least 3 groups numbering approximately 50 musk ox were spotted and photographed by members of the public in the Ingaksluguat Hills in April of 2008. This is north and a little east of Nelson Island.

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

Forty musk ox were harvested on Nelson Island during the report period; 22 were bulls and 18 were cows. Seventy-eight musk ox were harvested on Nunivak Island during this period; 38 bulls, 39 cows, and 1 sex not-reported.

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: Census muskox and evaluate population sex/age composition at least once every 3 years (next census scheduled for 2010).

This activity is next scheduled in 2010 and no work toward this activity was completed during the reporting period. The previous census, completed in 2007, found 2688 muskox in Unit 22 and Unit 23SW.

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

In April 2008 we used an R-44 helicopter to conduct an age/sex composition survey in Unit Unit 22C. We observed 279 muskoxen and classified 43 bulls 4-years-old or older (15%), 18 3-year-old bulls (6%), 16 2-year-old bulls (6%), 123 cows 4-years-old or older (44%), 15 3-year-old cows (5%), 18 2-year-old cows (6%), 42 yearlings (15%) and 4 muskoxen were unclassified (1.0%).

Muskox composition surveys are scheduled in Unit 23 Southwest during July 2008 and in Unit 22E during August 2008; results from those surveys will be summarized during next reporting period.

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 in January 2008 to develop new hunting seasons and bag limits for Seward Peninsula Muskox hunts in response to the November 2007 Board of Game (BOG) finding of 100-150 for the amount necessary for subsistence (ANS). Department staff assisted with preparation, facilitation, and summarization of the meeting.

The seasons and bag limits recommended to the BOG by the Cooperators replaced existing Tier II hunts with 4 new drawing hunts and 7 new registration hunts. The Cooperators considered muskox population size and harvest rates to provide expanded opportunity to hunters. The Cooperators also recommended a nested ANS of 40-50 muskox for Unit 22E within the 100-150 ANS determination for the Seward Peninsula population adopted by the BOG

The BOG considered the Cooperators recommendations during January 2008 and made only minor changes to Nome Road System hunting seasons before adopting the recommendations into regulation.

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 20 of 24 Tier II permits (83%) were filled; in Unit 22C 25 of 43 permits (58%) were filled, in Unit 22D 32 of 73 permits (44%) were filled; and in Unit 23SW 8 of 30 permits (27%) 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 138% of the harvest quota was filled when the harvest quota of 16 was exceeded by 6 animals (total harvest = 22). In combined state and federal hunts in Unit 22C 69% of the harvest quota was filled, 88% in Unit 22D, and 67% in Unit 23SW.

In Unit 22E we monitored a federal subsistence hunt and a combination of state Tier I subsistence registration and general season drawing hunts. Two of eighteen (2 of 18) federal permits (11%) were filled, 30 of 57 state registration permits (53%) were filled, and 13 of 20 (65%) state drawing permits were filled. In total, 55% 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 BLM and 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 22C. Analysis is on-going.

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, 2008, and observed 324 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).

Biologists from the Fairbanks ADFG office are conducting a study of total numbers, mortality, composition, and health assessment of the ANWR population. There was a fairly high level of calf and adult mortality due of bear predation and other causes. There was a high level of disease among the animals that were sampled. In Unit 26A there are a small and varying number of groups along the Colville River and a group of 13 found NW of Teshekpuk Lake. The group had no calves in 2008.

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. Approximately 52 adult and 11 calf muskoxen were found during caribou and moose surveys in June/July 2008 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 2007-2008.

Several muskoxen were captured and VHF radiocollars were attached in March in Unit 26A and Unit 26B. We monitored the radiocollared muskoxen in the group 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 6 hunters reported hunting; 6 hunters each took a bull muskox.

Unit 26(A): All muskox hunts were closed in 2006 in Units 26A and 26B due to declining numbers and remained closed during 2008.

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 2007. Based on a sample of 162 muskoxen, we observed 36 calves:100 cows, 24 yearlings:100 cows and 83 bulls:100 cows. Results of muskoxen surveys were discussed with the public. ADF&G also provided data from the February 2008 census to NPS.

Unit 26(A): 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.

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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.

Submitted by: Peter Bente, Survey and Inventory Coordinator, Region V