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Division of Wildlife Conservation

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Annual Performance Report
Survey-Inventory Activities
1 July 1996- 30 June 1997

MUSKOX

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STATE OF ALASKA
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DEPARTMENT OF FISH AND GAME
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Project Title: Interior (Eastern Northslope) Muskox Population and Habitat Management

Project Location: Units 26B and 26C (26,000 mi²)
East of Unit 26A, west of the west bank of the Canning River and west of the west bank of the Marsh Fork of the Canning River and that portion east to the Alaskan-Canadian Border, north of the Continental Divide

Project Objectives and Activities:

1. Manage muskoxen harvest so that it does not appreciably restrict population growth or dispersal.
 - a. Review information from the U.S. Fish and Wildlife Service (FWS) on population size, sex and age composition, and movements of radiocollared muskoxen.
2. Maintain a bull:cow ratio of at least 50:100 and an adult bull:cow ratio of 35:100.
 - a. Monitor results of the muskoxen permit hunts.
3. Maintain direct communication with local residents of Nuiqsut, Kaktovik, and Barrow about management decisions concerning the reintroduction, conservation, and hunting of muskoxen.

Work Accomplished During the Project Segment Period: The Alaska Department of Fish and Game (ADF&G) conducted a population count in 26B West on April 16, 1997 and found 92 muskoxen. The FWS conducted a survey in 26B East and found 187 muskoxen. ADF&G will conduct a composition survey during the last few days of June 1997. The area biologist reviewed information collected by the FWS on population size, composition, and dispersal of muskoxen. Numbers within ANWR have stabilized at 400, but numbers and distribution to the east and west continue to slowly increase. We issued 5 "Tier II" subsistence permits for muskoxen hunters in Unit 26B and monitored the permit hunt for muskoxen in Unit 26C, administered by the FWS.

Progress Meeting Project Objectives: The current strategy of limiting the harvest to less than 15 bull muskoxen per year ensures that dispersal and population growth are not limited by hunting. The small number of permits ensures a fairly high level of compliance and provides opportunity to communicate with local users. Most muskoxen inhabit ANWR. FWS presently manages most of the hunting effort and conducts field research activities on the refuge. ADF&G plans a composition count for FY98. Management objectives continue to be met. When muskoxen abundance and distribution have changed significantly, an aerial survey in Unit 26B would be appropriate. A suggested revised project objective is to work with North Slope management agencies, landowners, and other interested persons to develop a management plan for muskoxen.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	6.0	4.5	10.5
Actual	3.3	2.7	5.9
Difference	2.7	1.8	4.6

Explanation: Personnel costs were lower than expected because of a staff position vacancy. Reassignment of some muskox S&I duties to Region V resulted in less operating expense to Region III than anticipated.

Submitted by:

David James
Management Coordinator

Project Title: Western Alaska Muskox Population Management

Project Location: Unit 18 (42,000 mi²)
Yukon-Kuskokwim Delta

Project Objectives:

1. Maintain a posthunt, precalving population size of 200-250 muskoxen on Nelson Island and a posthunt, precalving population size of 500-550 muskoxen on Nunivak Island.
 - a. Conduct aerial and ground surveys on Nunivak and Nelson Island to estimate the population size and sex and age composition of the 2 muskox populations.
2. Monitor the population size, distribution, and dispersal of muskoxen onto the mainland of Unit 18.
3. Develop a muskox comanagement plan with the community of Mekoryuk, the FWS, and the department.

Work Accomplished During the Project Segment Period: A postcalving aerial census/composition count (helicopter) was completed on Nunivak Island during August 1997. We saw 594 muskoxen during the census. The composition for these animals was 119 calves, 42 males 2+ years, 46 females 2+ years, 43 males 3+ years, 43 females 3+ years, 139 mature bulls (males 4 years and older), and 162 mature cows (females 4 years and older). By comparing the precalving population objective with the postcalving census results, the Nunivak Island muskox herd may be slightly below the population goal of 500-550 muskoxen.

A postcalving aerial survey/composition count of Nelson Island completed during August 1997 revealed a herd size of 265 muskoxen with the following composition: 70 calves, 30 males 2+ years, 30 females 2+ years, 16 males 3+ years, 17 females 3+ years, 30 mature bulls (males 4 years and older), and 72 mature cows (females 4 years and older). By comparing the precalving population objective with the postcalving census results, the Nelson Island muskox population is within the population goal of 200-250 muskoxen.

We continued to monitor dispersal of muskoxen from Nelson Island to the mainland through periodic observations reported by the public and air taxi pilots. These observations show there are small, stable populations of muskoxen on the mainland of Unit 18, and we believe the population is approximately 100-150 muskoxen. The population is held stable by natural mortality and poaching by nearby communities.

Drawing and registration permits for hunting muskoxen on Nunivak Island were issued during fall 1996 and spring 1997. The fall harvest on Nunivak Island was 4 bulls by drawing permit. The spring harvest on Nunivak Island was 24 cows taken by registration permit and 20 bulls taken by drawing permit. One bull was accidentally taken by a person holding a cow permit. The total harvest for this reporting period was 25 bulls and 24 cows.

After a 2-year hiatus, hunting of muskoxen on Nelson Island by registration permit resumed in 1996-1997. Ten bull and 10 cow permits were issued, resulting in a harvest of 10 bulls and 7 cows.

Progress Meeting Project Objectives: The size of the population on Nelson Island is within the minimum posthunt, precalving population goal. The population on Nunivak did not meet the goal of 500-550. Due to the death of the area biologist for Unit 18 in November 1996, muskox harvest quotas have not been established yet for Nunivak and Nelson Islands for the 1997-1998 regulatory year.

The mainland population is estimated at 100-150 animals ranging in an area of approximately 20,000 mi². The use of satellite telemetry or a larger conventional collaring effort are recommended to monitor growth of the mainland muskox population.

Project Location: Unit 22 (25,230 mi²)
Seward Peninsula and eastern Norton Sound

Unit 23 (1,920 mi²)
West of but not including the Kiwalik River Drainage.

Project Objectives: The following project objectives were developed through a management planning process completed in cooperation with local landowners and managers, other agencies, and the public:

1. Allow for continued natural increase in the size and distribution of the Seward Peninsula muskox population.
 - a. Complete a census of the Seward Peninsula muskox population every 2 years.
2. Provide for a limited hunting of muskoxen in a manner consistent with existing state and federal laws and regulations and goals and management objectives of the Seward Peninsula Cooperative Muskox Plan.
3. Manage muskoxen in Units 22B and 22C primarily for viewing, education, and other non-consumptive uses.
4. Work with local reindeer herding interests to identify and minimize conflicts between reindeer and muskoxen.
5. Protect and maintain muskox habitat and other components of their ecosystem.
6. Encourage cooperation and information exchange among agencies and muskox user groups to develop and implement management and research programs.

Work Accomplished During the Project Segment Period: Aerial surveys were conducted periodically to document the seasonal distribution of 9 radiocollared muskox in Units 22C, 22D and Unit 23 (northern Seward Peninsula). No census was completed this year in Unit 22. However, during the March 1997 moose census of Unit 22D, we counted 30 groups of muskox, totaling 361 animals. This is a slight increase over the 1996 census count of 347 muskox in Unit 22D.

Members of the public continued to provide information on muskox locations, particularly along the road corridors of Units 22B, 22C and 22D.

Progress Meeting Project Objectives: During this report period, muskox management efforts centered on attempts to improve interagency coordination. The continued presence of a Seward Peninsula federal subsistence hunt (1 Sep-31 Jan) has substantially influenced muskox management on the Seward Peninsula and may be compromising the objective of increasing the size and distribution of the muskox population in Units 22 and 23. The federal hunt does not fully comply with the harvest goals and objectives of the Seward Peninsula Cooperative Muskox Management Plan adopted in 1994. However, public opinion about the future of the muskox population may be changing and review of the objectives in the management plan with a broad group of stakeholders is being planned.

The current population of 951 muskoxen has changed little since the 1994 census of 925 animals.

Project Location: Unit 23 (43,000 mi²)
Kotzebue Sound and Western Brooks Range

Project Objectives:

1. Allow for muskox population growth and dispersal into historic range in northwestern Alaska.
2. Estimate muskox numbers in Unit 23 every 3 to 5 years.

Work Accomplished During the Project Segment Period: In March 1997 the department completed a census of the Cape Thompson muskox population. We counted 87 muskox south of the Wulik (Cape Krusenstern) and 204 muskox north of the Wulik for a total of 291. This is the highest count observed since the original transplant.

We collected staff and public observations of muskoxen. These reports indicate bull muskoxen are continuing to disperse throughout Unit 23 as single animals or groups of 2-3 animals. We believe calf production and early summer survival in 1996 was slightly above average for both the northern and southern Unit 23 populations.

We monitored radiocollared muskox (5 cows and 4 bulls) near Deering on a monthly basis. We made 9 relocation flights. One female died during this period, and the collar of a bull was apparently ripped off during the rut. During spring another cow flipped the transmitter section of her collar over the top of her horns. She was able to correct this problem on her own and will not need to be recaptured. A University of Alaska-Fairbanks graduate student will continue to use these collared animals to investigate muskox/reindeer interactions. We will continue to assist her with logistical support and supplemental information regarding muskox and reindeer locations in her study area through the conclusion of her study in the fall of 1997.

We have continued to participate in the development and implementation of the Seward Peninsula Cooperative Muskox Management Plan. The department also continued to work with federal agencies, the Board of Game, and Federal Subsistence Board to resolve differences between state and federal muskox hunting regulations in Unit 22 and Unit 23. Residents of Deering and Buckland were allowed to harvest 9 bull muskox during the winter federal hunt. Residents of Deering harvested 2 bulls and 1 cow in the southern portion of Unit 23. No animals were harvested by Buckland.

Progress Meeting Project Objectives: Between 1988 and 1997, the Cape Thompson muskoxen population grew approximately 8-11% annually. Muskoxen on the Seward Peninsula seem to have stabilized. Both populations on the northern Seward Peninsula and Cape Thompson vicinity have been monitored more frequently than set forth in our original project objectives.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	48.8	15.8	64.4
Actual	24.9	15.2	40.1
Difference	23.9	0.6	24.3

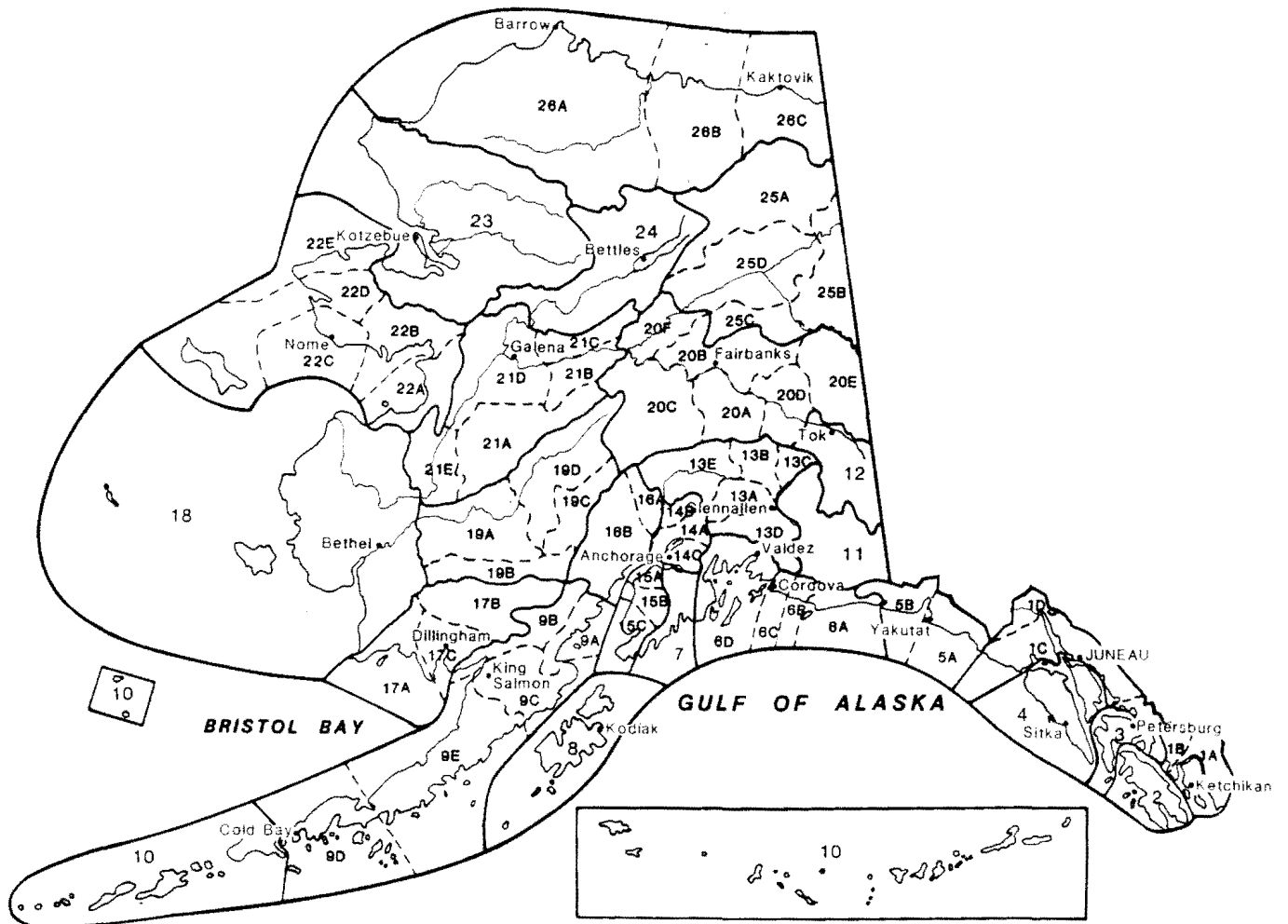
Explanation: Cost summary is approximate. Region V did not have administrative support for a fiscal summary at the close of the reporting period. Unit 18 activities were not completed after the accidental death and subsequent vacancy of the Unit 18 Area Biologist. This resulted in surplus personnel and operating monies at the close of the reporting period.

Submitted by

Peter Bente

Survey-Inventory Coordinator

Alaska's Game Management Units



The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sales of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program allots funds back to states through a formula based on each state's geographic area and number of paid hunting license holders. Alaska receives a maximum 5% of revenues collected each year. The Alaska Department of Fish and Game uses federal aid funds to help restore, conserve, and manage wild birds and mammals to benefit the public. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes for responsible hunting. Seventy-five percent of the funds for this report are from Federal Aid.



LeeAnne Ayres