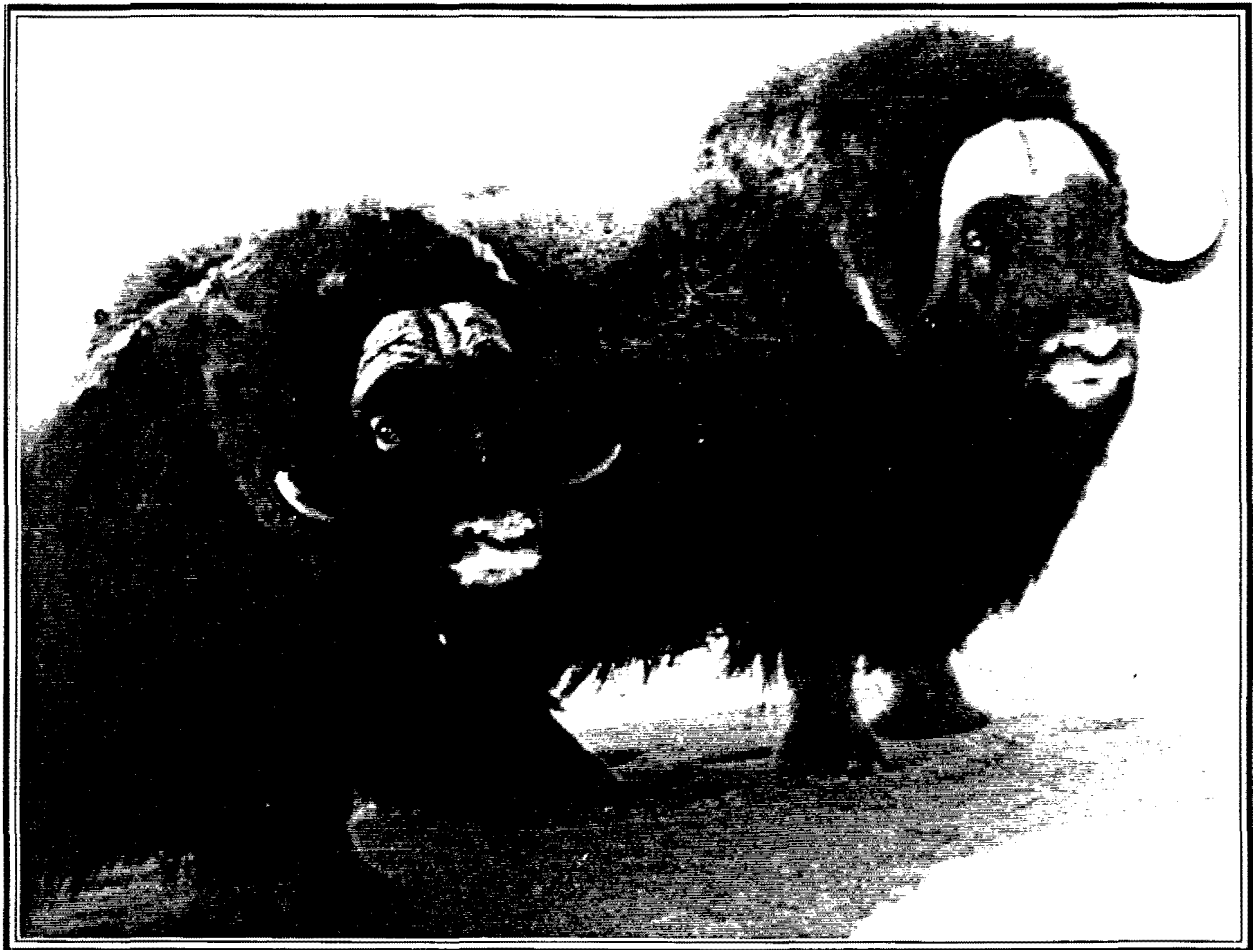


**Alaska Department of Fish and Game
Division of Wildlife Conservation**

**Federal Aid in Wildlife Restoration
Annual Performance Report
Survey-Inventory Activities
1 July 1998 - 30 June 1999**

MUSKOX

Mary U. Hicks, Editor



Wallen

**Grant W-27-2
Study 16.0
October 1999**

STATE OF ALASKA
Tony Knowles, Governor

DEPARTMENT OF FISH AND GAME
Frank Rue, Commissioner

DIVISION OF WILDLIFE CONSERVATION
Wayne L. Regelin, Director

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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 U. S. Fish and Wildlife Service (FWS), and the department.

Work Accomplished During the Project Segment Period: A postcalving aerial census/composition count was completed by helicopter on Nunivak Island during August 1999. We saw 634 muskoxen during the census which included 14 of the 15 count areas. The composition for these animals was 98 calves, 50 males that were 1+ years, 75 females 1+ years, 45 males 2+ years, 55 females 2+ years, 164 mature bulls (males 3+ years and older), and 147 mature cows (females 3+ years and older). By comparing the precalving population objective with the postcalving census results, the Nunivak Island muskox herd is somewhat above the population goal of 500–550 muskoxen.

In response to a concern by local residents that there were not enough cows left in the population on Nunivak, a composition count was conducted March 30–April 2 1999. We found 174 animals of which 28 were unclassified, 18 were short yearlings, 13 were 2-year-old bulls, 9 were 2-year-old cows, 15 were 3-year-old bulls, 13 were 3-year-old cows, and 39 were older bulls and 39 were older cows. We determined that the sex ratio in this population was satisfactory.

A postcalving aerial survey/composition count of Nelson Island completed during August 1998 revealed a herd size of 293 muskoxen with the following composition: 68 calves, 27 males 1+ years, 32 females 1+ years, 32 males 2+ years, 34 females 2+ years, 34 mature bulls (males 3+ years and older), and 66 mature cows (females 3+ years and older). By comparing the precalving population objective with the postcalving census results, the Nelson Island muskox population is within or slightly above 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 numbers of muskoxen on the mainland of Unit 18. Poaching by individuals from nearby communities regulates the number of animals on the mainland.

Drawing and registration permits for hunting muskoxen on Nunivak Island were issued during fall 1998 and spring 1999. The fall harvest on Nunivak Island was 8 bulls by drawing permit and 4 cows taken by registration permit. An additional cow was taken illegally. The spring harvest on Nunivak Island was 40 cows taken by registration permit and 35 bulls taken by drawing permit. The total harvest for this reporting period was 43 bulls and 46 cows.

Nelson Island muskoxen are hunted by registration permit. In 1998–1999, 15 bull and 15 cow permits were issued with a resulting harvest of 14 bulls and 15 cows and one of unknown sex. One citation was issued.

Progress Meeting Project Objectives: The size of the population on Nelson Island is within or just above the posthunt, precalving population goal. The population on Nunivak Island slightly exceeds the goal of 500–550. We plan to distribute the maximum number of permits authorized by the Board of Game for 1999–2000 hunting season.

There are 30 permits to be distributed for Nelson Island muskoxen. Both populations are being harvested at a 50:50 ratio of bulls to cows.

The number of muskoxen on the mainland is estimated to be less than 75–100 animals ranging in an area of approximately 20,000 mi². The use of satellite telemetry or a larger conventional collaring effort is recommended to monitor mainland muskoxen.

Project Location: Units 22 (25,230 mi²) and 23 (4,000 mi²)
Seward Peninsula and eastern Norton Sound and west of and including the
Buckland 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.
 - 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: The first State Tier II muskox hunt on the Seward Peninsula occurred during this reporting period. The season was 1 Aug–15 Mar with a bag limit of 1 bull. Nineteen of the 24 permits issued for hunting in Unit 22D (the portion north of Grantley Harbor, Imuruk Basin, and the Pilgrim River drainage) were filled, 6 of 9 permits for Unit 22E were filled, and 1 of 2 permits issued for Unit 23SW was filled. Staff traveled to the villages within the hunt areas and assisted in the Nome office to provide help with the Tier II application process. Staff also met in person with all permit winners to conduct muskox hunting orientations. We collected lower jaws of muskoxen from hunters to determine age composition of the harvest.

No muskox census work was undertaken during this reporting period. However, in March 1999 99 muskoxen were counted in the western portion of Unit 22B during a Unit 22B moose census which is 2 2/3 times the number of muskoxen (27) found in all of Unit 22B during the 1998 census.

Aerial surveys were conducted periodically to document the seasonal distribution of 6 radiocollared muskoxen (4 cows and 2 bulls) in Units 23SW.

Progress Meeting Project Objectives: Efforts to improve interagency coordination and increase public involvement regarding muskox management are paying off. The State Tier II hunt was held in combination with a federal subsistence hunt for federally qualified subsistence users on federal public lands. State and Federal managers worked together to inform the public about the 2 hunt options, held joint public meetings about muskox management, issued state and federal permits together, and gave all muskox hunters the same hunting orientation.

The Tier II scoring system favors applicants from the villages where the cost of living is higher. Lack of hunting opportunity for Nome residents in the existing hunt areas is creating a demand for hunting opportunity in Unit 22C. Tourism and wildlife viewing interests are strongly opposed to hunting along the road system. Currently, as specified in the Seward Peninsula Cooperative Muskox Management Plan, Units 22B, 22C, and 22D south of Grantley Harbor, Imuruk Basin, and the Pilgrim River are managed primarily for nonconsumptive uses. A review of the objectives in the management plan with a broad group of stakeholders is being planned for spring 2000.

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.
3. Manage a conservative harvest of bull muskoxen on the Northern Seward Peninsula.

4. Participate as cooperators in the Seward Peninsula Cooperative Muskox Management Planning group.
5. Explore the possibility with the public of establishing a limited hunt on muskox north of Kotzebue.
6. Monitor radiocollared muskox monthly.

Work Accomplished During the Project Segment Period: In June 1999 the department completed a census of the Cape Thompson muskox population. We counted 105 muskox south of the Wulik (Cape Krusenstern) and 269 muskox north of the Wulik for a total of 374 (299 adults and 75 calves). We counted 23 fewer adults than in 1998. Our limited information indicates calf production and recruitment currently appear high, compared to previous years. We suspect poor sightability may have caused the 1999 census to be lower than the 1989 census.

We collected observations of muskoxen from staff and the public. These reports indicate bull muskoxen are continuing to disperse throughout Unit 23 as single animals or in small groups. Normal fall movements associated with the rut are bringing lone bulls into increasing contact with unit residents.

We monitored radiocollared muskox (4 cows and 2 bulls) near Deering. We conducted 10 relocation flights. One cow died during this reporting period and 1 bull could not be located. We suspect the bull's collar may have malfunctioned. All animals remained in their previously described ranges with no significant movements.

We continue to participate in the development and implementation of the Seward Peninsula Cooperative Muskox Management Plan. The department worked 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 SW. The 1998-99 hunt was conducted jointly under federal and state management. This allowed residents access to animals on state managed lands adjacent to some villages. Fifty-six residents applied for the 2 Tier II permits. Both permits were issued to Deering hunters. One hunter was successful, and the second permit winner did not hunt. Three additional federal drawing permits were issued to Deering residents (2 hunters were successful) and 5 federal drawing permits were issued to Buckland residents (no hunters were successful). State and federally permitted hunters harvested 3 bulls in southern Unit 23.

A joint Federal Regional Advisory Council and State Advisory Committee meeting was held in January 1999 to discuss muskox hunting opportunities north of Kotzebue (Cape Thompson population). The public attending the meeting expressed their interest and concerns that included a possible health issue in regard to Project Chariot and concern regarding the structure of a joint federal- and state-managed hunt. Local residents favored companion proposals to the Board of Game and Federal Subsistence Board for joint hunts (3% of total population; federal hunt on Cape Krusenstern National Monument and state Tier II hunt north of Cape Krusenstern National Monument; bulls only).

Progress Meeting Project Objectives: Between 1988 and 1999 the Cape Thompson muskoxen population grew approximately 8-11% annually. Muskoxen on the Seward Peninsula (Unit 23

SW) 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	24.9	32.0	56.9
Actual	24.9	31.9	56.8
Difference	0	0.1	0.1

Submitted by

Peter Bente

Survey-Inventory Coordinator

Project Title: Interior Muskox Population and Habitat Management

Project Location: Units 26B and 26C (25,788 mi²)
Central and Eastern Arctic Slope

Objectives:

1. Maintain a stable population of 300–400 muskoxen.
2. Maintain a bull:cow ratio of at least 50:100 and an adult bull:cow ratio of 35:100.
3. Provide for a limited harvest of muskoxen.

Activities Planned:

1. Review and revise population management objectives.
2. Monitor the results of the permit hunts in Unit 26B (all objectives).
3. Deploy and monitor 10–12 radio collars in Unit 26B (all objectives).
4. Review FWS data on population size and sex and age composition in Unit 26C and on movements of radiocollared animals (all objectives).
5. Continue development and refinement of the management plan.
6. Write the regulatory years 1996–1997 through 1997–1998 management report (all objectives).

Activities Accomplished:

1. Reviewed and revised objectives.
2. Monitored results of permit hunts in Unit 26B (all objectives).
3. Deployed 12 radio collars in Unit 26B in April 1999; radiotracked in June; and conducted ground-based composition counts on 10 groups in Unit 26B during late June (all objectives).
4. Reviewed FWS data on population size and sex and age composition in Unit 26C and on movements of radiocollared animals (all objectives).
5. Continued development and refinement of the management plan.
6. Wrote the regulatory years 1996–1997 through 1997–1998 management report (all objectives).
7. Conducted precalving surveys in March/April 1999 (all objectives).

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	2.5	7	9.5
Actual	13.3	32.4	45.7
Difference	-10.8	-25.4	-36.2

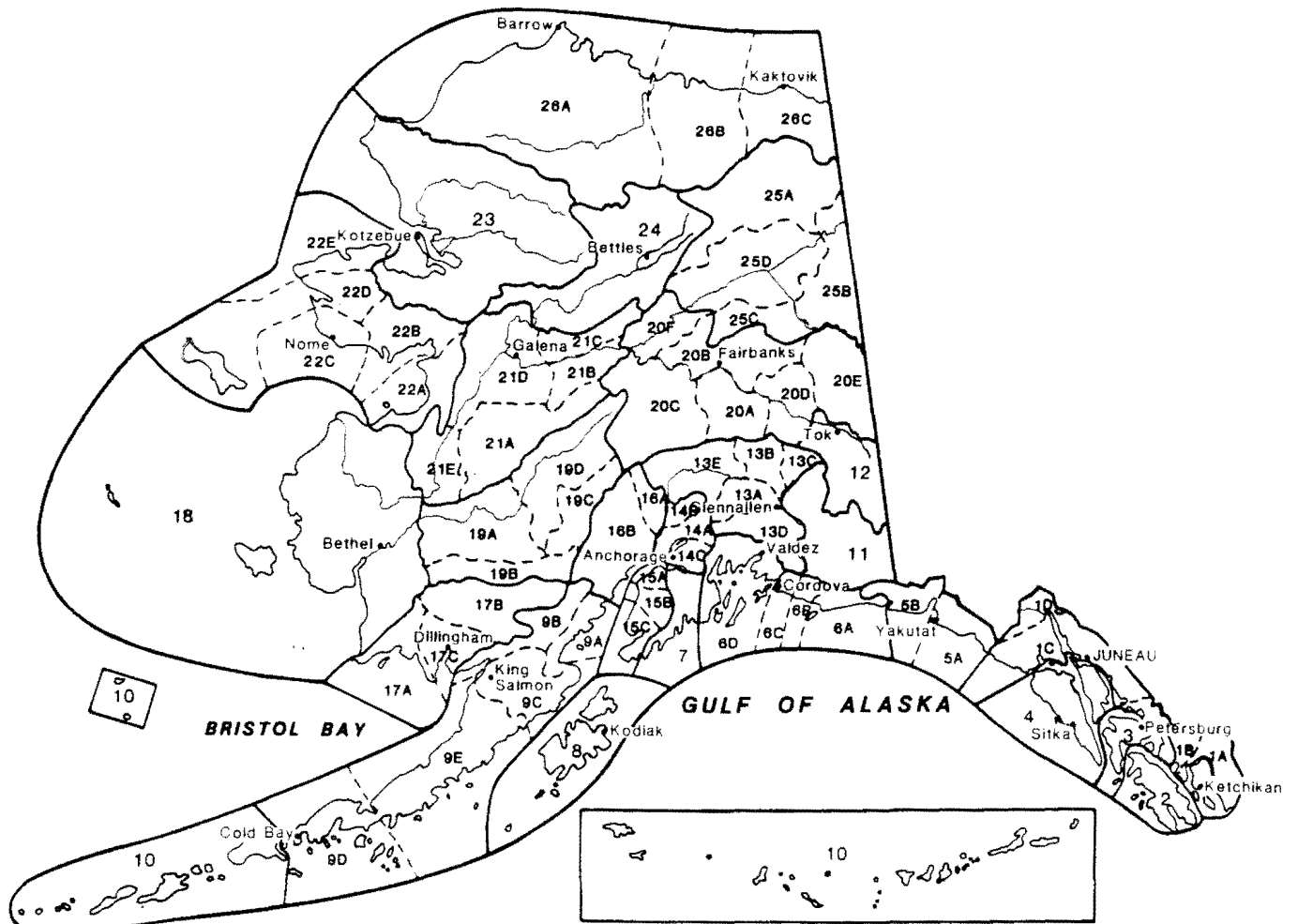
Explanation: **Operating & Personnel:** The establishment of 3 new hunts (Tier II, registration, and drawing) in Unit 26B was the culmination of a lengthy muskox management planning effort. This action required additional biological information through extensive survey and radiocollaring work to establish a means to collect more detailed data in the future. We completed the biennial Muskox Management Report.

Submitted by:

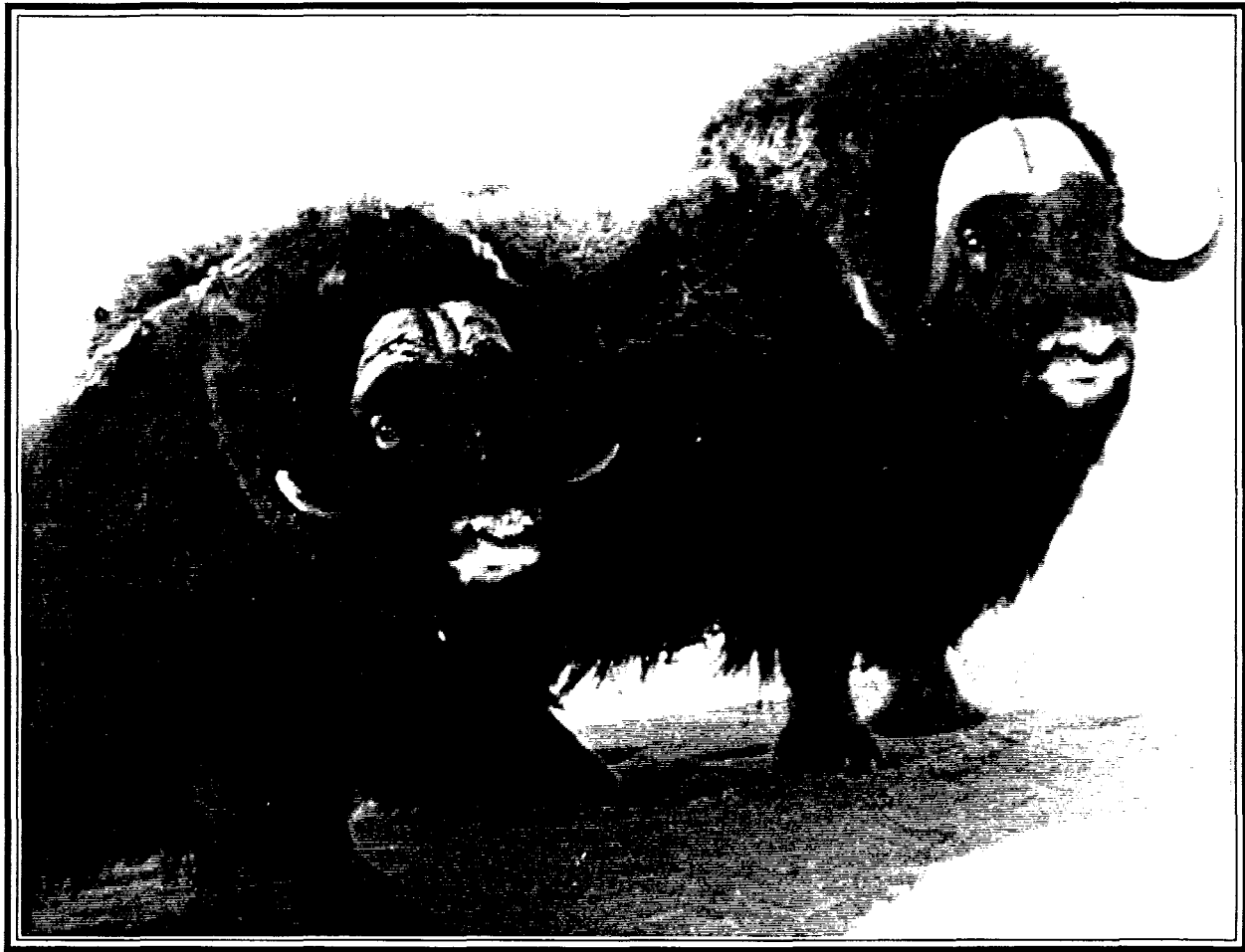
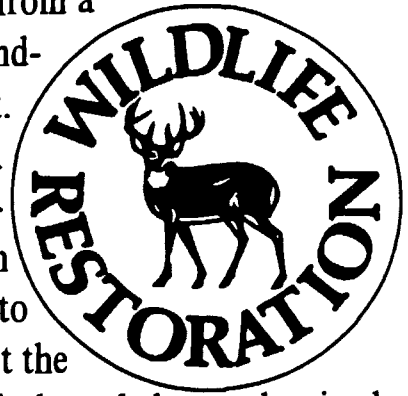
Roy Nowlin
Regional Management Assistant

David James
Management 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.



Wallen