

Alaska Department of Fish and Game
Division of Wildlife Conservation
Federal Aid in Wildlife Restoration
Annual Performance Report of
Survey-Inventory Activities
1 July 1989-30 June 1990

BISON



Compiled and edited by
Sid O. Morgan, Publications Technician
Vol. XXI, Part I
Project W-23-3, Study 9.0
February 1991

STATE OF ALASKA
Walter J. Hickel, Governor

DEPARTMENT OF FISH AND GAME
Don W. Collinsworth, Commissioner

DIVISION OF WILDLIFE CONSERVATION
W. Lewis Pamplin, Jr., Director
Wayne L. Regelin, Deputy Director

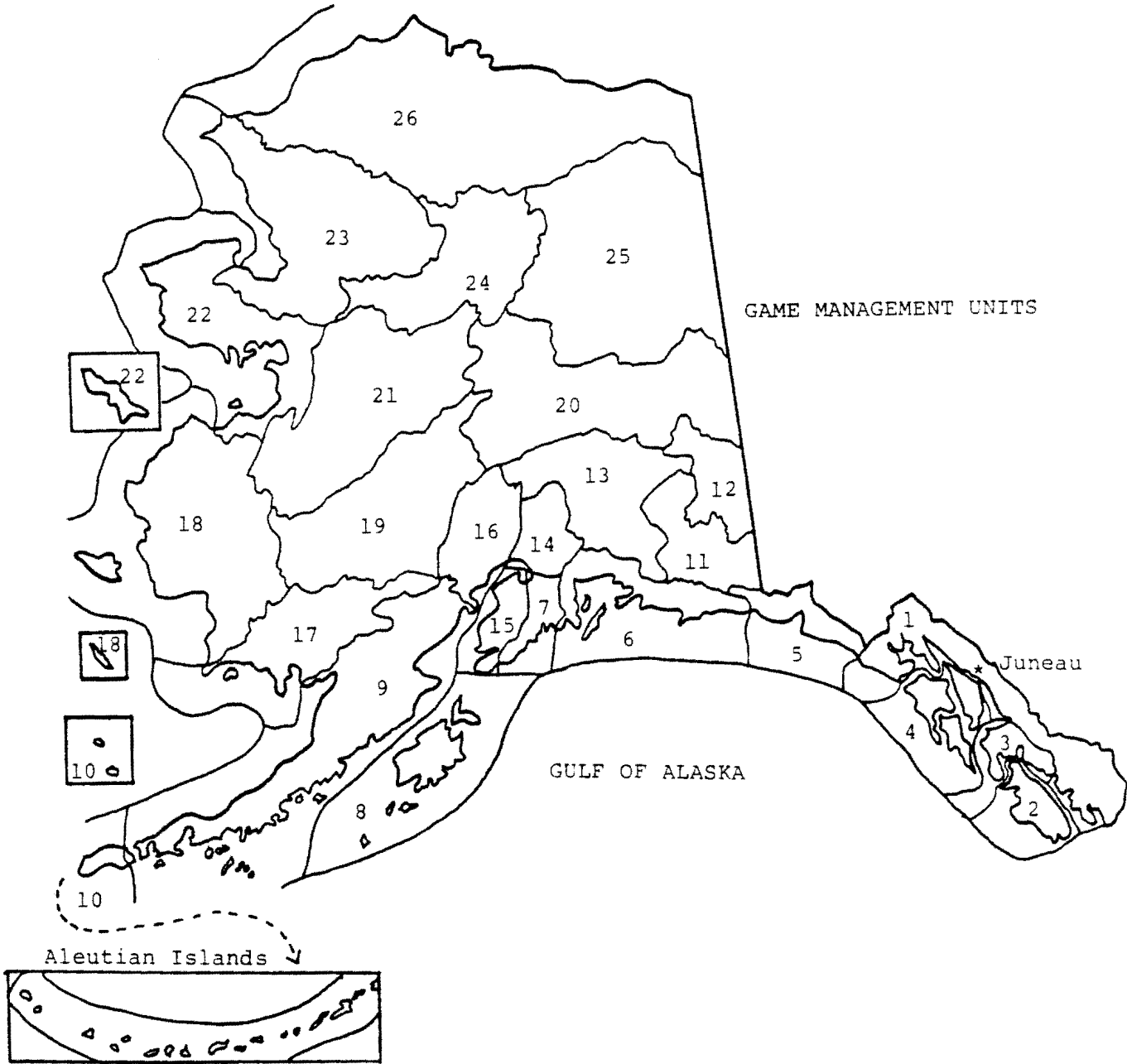
Persons intending to cite this material should obtain prior permission from the author(s) and/or the Alaska Department of Fish and Game. Because most reports deal with preliminary results of continuing studies, conclusions are tentative and should be identified as such. Due credit will be appreciated.

Additional copies of this report, or reports on other species covered in this series may be obtained from:

Publications Technician
ADF&G, Wildlife Conservation
P.O. Box 3-2000
Juneau, AK 99802
(907) 465-4190

The Alaska Department of Fish and Game operates all of its public programs and activities free from discrimination on the basis of race, color, national origin, age, or handicap. Because the department received federal funding, any person who believes he or she has been discriminated against should write to: O.E.O., U.S. Department of the Interior, Washington, D.C. 20240.

ARCTIC OCEAN



PROJECT TITLE: Southcentral Bison Management

PROJECT LOCATION: Units 9 and 11 (12,800 mi²)
Alaska Peninsula and Chitina and Copper Rivers

PROJECT OBJECTIVES:

To establish management objectives for the Popof herd in Unit 9 by 1991.

To increase the population in the Chitina River Herd to a minimum of 50 overwintering adult bison (Unit 11).

To maintain a minimum overwintering population of 60 adult bison in the Copper River Herd (Unit 11).

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Sex and age composition of the Copper River and Chitina River bison herds was determined on aerial surveys conducted on 31 May and 12 June 1990, respectively. The size of the Copper River herd was estimated at 67 bison, including 58 adults and 9 calves. The size of the Chitina River herd was estimated at 36 bison, including 28 adults and 8 calves. The Popof Island herd was surveyed by Division of Commercial Fisheries staff on 5 August 1989, and 164 bison were counted, including 150 adults and 14 calves.

No bison hunts were held in southcentral Alaska in 1989. A hunt of Popof Island bison has not been authorized, and the scheduled hunts for Copper and Chitina River bison were closed by Emergency Order because of a heavy overwinter mortality during 1988-89 and poor calf production and survival in 1989.

No cooperative agreements have been established with private landowners or the USFWS regarding management of Popof Island bison. Bison habitat evaluations were not conducted by the Department. Radio-collared bison were relocated to assist in locating Copper River bison for summer sex and age composition counts. There are currently 4 active radio collars in this herd.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Because of mortality during 2 consecutive severe winters, the Copper and Chitina River bison herds are below their population size objectives. Hunting seasons for these herds will remain closed until they increase to levels specified in the objectives. Objectives for the Popof Island herd have not been established.

SEGMENT PERIOD PROJECT COSTS:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	5.0	5.0	10.0
Actual	5.3	1.5	6.8
Difference	+3	-3.5	-3.2

No expenses were incurred on Popof Island; planned field assessments and interagency work to develop and implement a management plan were deferred because of Exxon Valdez oil spill activities. Bison surveys in Unit 11 were conducted at reduced cost because of distribution of bison and relocation of radio-collared bison.

SUBMITTED BY:

Kenneth W. Pitcher and John Trent
Regional Management Coordinators

PROJECT TITLE: Interior Bison Population And Habitat Management

PROJECT LOCATION: Unit 19 (36,500 mi²)
Drainages of the Middle Fork and upper
Kuskokwim River upstream from the village of
Kalskag

Unit 20 (50,000 mi²)
Tanana Valley, Central Alaska Range, White
Mountains, Tanana Hills

PROJECT OBJECTIVES:

Farewell Herd (Unit 19)

To maintain a minimum population of 200 bison and determine desired harvest level.

Delta Herd (Unit 20)

To maintain a population of approximately 275.

To reduce incidences of fall bison depredation on crops by 25% compared with FY87.

To replace and monitor 5 radio collars on individuals in the herd.

To initiate summer range analysis.

To manage fields in the Delta Junction Bison Range to maintain bison forage.

WORK ACCOMPLISHED DURING THE PROJECT SEGMENT PERIOD:

Farewell Herd (Unit 19)

Herd composition surveys were conducted twice during June 1990. On 9 June, 174 adult and 39 calf bison were counted (18% calves). A replicate survey was completed on 20 June; 120 adults and 24 calves were counted (17% calves). Although neither survey was completed, a minimum of 300 bison were in the herd.

Board of Game action during 1989 enabled increased opportunities for bison hunters in the Farewell area. Two drawing-permit hunts were conducted: one in August-September and one in March. There were 1,016 applicants for the 40 available fall permits. Only 27 of the 40 permit holders went afield; 14 hunters (10 bulls, 4 cows) harvested bison. There were 605 applicants for the 30 available spring permits. Nineteen (8 bulls, 11 cows) bison were legally harvested, and an additional cow was illegally taken. During the March season, 19 of 22 people that went afield were

successful (86% success rate). Overall, 33 bison were harvested by hunters during this reporting period.

Delta Herd (Unit 20)

Three aerial surveys (i.e., photocensuses) were conducted. The highest count was 432 bison on 22 August 1989. A sex and age composition survey on 24 August 1989 resulted in estimates of 50 calves:100 cows, 25 yearling bulls:100 cows, and 106 bulls:100 cows.

Permits were issued to harvest 30 cows and 35 either-sex bison during the 1989-90 hunt. Harvests totaled 62 bison. Hunters with cow permits shot 33 cows. Hunters with either-sex permits shot 5 cows and 24 bulls. Fifty-six bison were killed in the Delta Agricultural Project, and four were killed on the DJBR. Hunt procedures were changed so that bull permits were replaced with either-sex permits. This change was made on the assumption that most hunters with either-sex permits would harvest a bull, providing hunters with greater selection, reduced the potential for hunting violations by shooting a bison of the wrong sex, and reduced ADF&G staff time to administer the hunt. Blood was collected from hunter-killed bison for a serological survey. Data have not been analyzed for the 1989-90 hunt.

Fall bison movements were monitored by locating radio-collared bison. A large group of bison moved from the DJBR into the Delta Agricultural Project on 1 September 1989; however, most agricultural grain crops had been harvested and no depredations occurred. A study plan was developed for the evaluation of bison summer range on the Delta River. Preliminary work was begun on summer range analysis. Fecal samples were collected for food habit analysis, and habitat descriptions were begun on the Washington Range portion of Fort Greely Military Reservation.

To enhance DJBR forage quality, a prescribed burn was conducted on about 600 acres of Arctared fescue (Festuca rubra), and about 500 acres of bluegrass (Poa spp.) were fertilized. Development continued on a trail connecting the Gerstle and Panoramic Fields. Ninety miles of berm piles were burned and reconsolidations begun. Experiments were begun to control Bluejoint (Calamagrostis canadensis) in bison forage.

PROGRESS TOWARDS MEETING PROJECT OBJECTIVES:

Farewell Herd (Unit 19)

Maintenance of a minimum population of 200 bison in the Farewell herd was accomplished. Concerns of overutilization of the available browse led to an increase in allotted permits, effectively increasing hunter harvests during the reporting period. In addition to the documented harvest, minor additional mortalities occurred because of predation and/or starvation, but

total mortality does not appear to have arrested herd growth. Even following the severe winter of 1989-90, calf production remained high, and I suspect the herd will continue to increase. Range evaluations should be completed during 1990-91 to assess its carrying capacity.

To enable more accurate and cost-effective population surveys of the Farewell Bison Herd, 6 transmitter-equipped collars will be attached to bison during FY91. The Farewell Bison drawing permit hunts will continue to be operated from the area office in McGrath. We will continue to gather hunt statistics through the hunter questionnaire.

Delta Herd (Unit 20)

Development on the DJBR continues to reduce conflicts with bison in the Delta Agricultural Project, and no fall depredations occurred during this reporting period. Additional DJBR development is required, because we are not meeting the objective of annually holding bison on the DJBR until 1 October. The herd is above its population objective, and it will be reduced during the 1990-91 hunting season; the bull:cow ratio will be adjusted to reduce the number of bulls in the herd.

SEGMENT PERIOD PROJECT COSTS:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	11.2	9.5	20.7
Actual	11.2	9.5	20.7
Difference	0.0	0.0	0.0

SUBMITTED BY:

Kenton P. Taylor
Regional Management Coordinator



Federal Aid Project
funded by your purchase of
hunting equipment