

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

**Federal Aid in Wildlife Restoration
Annual Performance Report
Survey-Inventory Activities
1 July 1997 - 30 June 1998**

BISON

Mary U. Hicks, Editor



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Study 9.0
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DEPARTMENT OF FISH AND GAME
Frank Rue, Commissioner

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Project Title: Southcentral Bison Population Management

Project Location: Unit 11 (13,300mi²)
Chitina and Copper rivers

Project Objectives: Maintain the Chitina River bison herd at a minimum of 50 overwintering animals classified as older than calves. Maintain the Copper River herd at a minimum of 60 overwintering bison classified as older than calves.

Work Accomplished During the Project Segment Period: Aerial surveys of the Chitina River and Copper River bison herds were conducted during June 1998. Bison observed included 32 (3 calves and 27 adults and 2 yearlings) in the Chitina River herd and 84 (17 calves and 67 yearling and older) in the Copper River herd. There has not been an open hunting season for either herd since they were closed by emergency order 02-22-89 issued on 1 July 1989.

Progress Meeting Projected Objectives:

Chitina River Herd: Between 1994 and 1997 counts on the Chitina bison herd went from 30 to 46 animals, an increase of 53%. The 1998 count declined 30% when only 32 bison were observed. The reason for the decline is increased overwinter mortality and reduced calf production. The winter of 1997–98 was especially severe in the lower Chitina Valley. Snow depth records from McCarthy and a report on snow conditions from a local trapper indicated a deep snow pack on the Chitina bison range from mid October until early April. In early May, 6 dead adult bison were found and necropsied. We concluded starvation caused these mortalities, based on necropsy results and low bone marrow fat content. During the 1998 survey only 2 yearlings were identified, indicating 5 of the calves born in 1997 were also lost over winter but not found. The loss of 6 adults and 5 calves accounts for the decline in the number of adult bison counted in 1998.

Calf recruitment in the Chitina herd was low between 1992 and 1995, increased in 1996 and 1997, then declined again in 1998. Snow records from a local resident in Chitina indicate moderate winter severity between 1992 and 1995, mild winters in 1996 and 1997, and a severe winter in 1997–98. Recruitment to the Chitina bison herd depends on overwinter snow conditions, and little calf recruitment can be expected during moderate or severe winters.

Because changes in bison abundance in the Chitina herd seem dependent on winter severity, I recommend a hunting season be opened following mild winters when calf production is high. Ten years of hunting closure has not resulted in achieving the management objective of 50 bison. Because older adults are lost during severe winters, some harvest of adults could reduce the number of aged animals in the herd, minimizing the effect of a severe winter. I recommend that next year a drawing hunt for 2–4 bulls be held with the exact allocation dependent on calf production in 1999.

Copper River Herd: Bison numbers in the Copper River herd increased 36% between 1995 and 1997, rising from 64 to 87 bison. The 1998 count of 84 is down slightly but trees obstructed our

view of bison, and we probably did not count all the animals. Because of the difficulty in censusing the Copper River herd, some variability in the number of adults counted can be attributed to survey conditions. Calf production has been high with 17 calves observed the last 2 years. High survival and calf production the last 3 years correlate with the low winter severity index for this period. Because bison are susceptible to severe winter weather, I recommend opening a hunt on the Copper River herd and allowing some harvest while the herd is high. Hunts could be held in years with good calf production.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	5.3	0.0	5.3
Actual	5.3	0.0	5.3
Difference	0.0	0.0	0.0

Submitted by:

Michael G. McDonald
Assistant Management Coordinator

Project Title: Interior Bison Population and Habitat Management

Project Location: Units 19C and 19D (18,803 mi²)
Farewell Herd

Project Objectives and Activities:

Maintain a minimum population of 300 bison and determine desired harvest level.

- a. Conduct aerial surveys to assess population size and age composition.
- b. Administer permit hunt and monitor harvest.
- c. Assess carrying capacity of the current Farewell Bison Range.

Work Accomplished During the Project Segment Period: No surveys were completed because of poor flying conditions. We conducted 2 drawing permit hunts, issuing 40 permits. We monitored hunts through mandatory hunter questionnaires and interviews. Of the 40 permittees, 31 participated in the hunts, and 23 bison were legally harvested (74% success rate). Hunter success rates were higher during the March hunts than during September hunts.

Progress Meeting Project Objectives: We met our population objective. The Farewell herd was probably between 350 and 400 animals. We also met our objective of providing a drawing permit hunt. In previous reporting periods, we assessed range conditions but did not develop a carrying capacity model. Calf production remained high, indicating good quality range. The herd could probably increase without adverse effects on the habitat. Limiting the number of hunter permits to 40 should allow the population to increase.

Project Location: Unit 20D (5,633 mi²)
Delta Herd

Project Objectives and Activities:

1. Maintain a healthy, free-ranging bison herd in the Delta Junction area.
 - a. Prevent the transmission of diseases from livestock to the Delta bison herd.
 - b. If diseases are transmitted to the Delta bison herd, prevent the spread of diseases from bison to other wildlife species.
2. Reduce conflicts between bison and the public, including but not limited to agricultural interests in the Delta Junction area.

- a. Manage bison and summer range habitat so that at least 75% of the Delta bison herd remains west of the Richardson Highway (between Black Rapids Glacier and the Tanana River) until August 20 annually.
 - b. Annually keep the Delta bison herd out of the Delta Agricultural Project until 1 October.
 - c. Provide assistance to the public experiencing bison conflicts.
3. Manage the Delta bison herd to provide the greatest opportunity to hunt and view bison by providing maximum biological yield from public lands, while accomplishing our goals and objectives of a free-ranging, healthy herd and reduction in conflicts.
- a. Calculate an accurate annual budget for accomplishing recommended goals and objectives.
 - b. Seek sufficient funding to accomplish all goals and objectives of managing the Delta bison herd on public lands.
 - c. Manage the Delta bison herd for maximum productivity with a sex ratio of no less than 30 bulls:100 cows.
 - d. Organize volunteer efforts to help accomplish goals and objectives.
 - e. Manage the Delta bison herd at 360 bison precalving from 1 July 1993–1 November 1995. The Delta bison management program will be evaluated in November 1995 to determine compliance with goals and objectives, funding and staffing levels, and biological capacity of public lands. Thereafter, herd size will be adjusted to include increasing or decreasing as required to match resources with goals and objectives.
 - f. Administer the Delta bison hunt to reduce landowner/hunter conflicts and to maintain hunter access to private land in the Delta Agricultural Project to the extent possible.
 - g. Investigate methods and funding sources to improve bison viewing opportunities for the public.

Work Accomplished During the Project Segment Period: We collected blood samples from hunter-killed bison for serological studies to evaluate the health of the herd. Results indicate bison continue to be free from most of the infectious diseases for which serum antibody tests are conducted, except for parainfluenza III.

Bison forage was managed on the Delta Junction Bison Range (DJBR) to reduce bison/agricultural conflicts. Forage management consisted of fertilizing approximately 680 acres of perennial grasses, planting approximately 350 acres of annual crops for bison forage, and controlling noxious plants by mowing and disking.

We monitored movements of radiocollared bison to determine when bison left the summer range and the DJBR and moved into the Delta Agricultural Project. Bison were first seen on the DJBR on 27 July 1997. Some bison made a temporary movement into the Delta Agricultural Project on

August 10 but returned to the DJBR. Bison began moving permanently from the DJBR into the Delta Agricultural Project on 21 August 1997. There were no crop damage reports to the department, although damage probably resulted from the early movement.

We estimated a postcalving population of 474 bison from aerial surveys flown on 23, 25, and 30 June, 29 August, and 5 September 1997. Sex and age composition data were collected on 15 and 18 August and 11 September 1997, resulting in estimates of 53 bulls:100 cows and 47 calves:100 cows. The spring 1998 precalving population was estimated to be 361 bison, 1 bison over the objective.

We issued drawing permits to take 60 bull (hunt DI403) and 70 cow bison (hunt DI404) from 1 October 1997–31 March 1998. Preliminary hunt results indicated 56 bulls and 62 cows were taken during the 2 hunts.

Timing of the permit drawing hunt and scheduling of hunters was organized to minimize conflicts between private landowners and bison hunters. The hunting season started 1 October, and hunting periods for permittees were staggered.

Progress Meeting Project Objectives: Goals for health of the herd were accomplished. No serious wildlife diseases occurred. DJBR was managed with permit application fees to reduce bison/agricultural conflicts. Precalving herd size was 1 bison over the objective. Bison movements were monitored to determine the level of bison/agricultural conflicts. Bison movement dates did not meet management objectives. The department provided the greatest opportunity to hunt by issuing drawing permits, and preliminary data indicated hunters killed 118 bison. The permit drawing hunt was successfully administered to reduce landowner/hunter conflicts

Project Location: Unit 25 (53,100 mi²)
Yukon Flats Wood Bison Reintroduction

Project Objectives and Activities:

1. Work with landowners and agencies to develop consensus on whether to proceed with a wood bison reintroduction; prepare a cooperative management plan.
2. Continue information efforts with the public and other agencies on the feasibility and potential benefits of reestablishing wood bison in Alaska.
3. Determine whether significant wood bison habitat exists elsewhere in Interior Alaska.
4. Begin more detailed investigations and development of a release site on the Yukon Flats when an implementation agreement and plan are apparent.

Work Accomplished During the Project Segment Period: The Fort Yukon Area Biologist continued to serve on the Wood Bison Recovery Team and assisted in preparing and editing a

final draft of the Wood Bison Recovery Plan. This plan includes the reintroduction of wood bison to Alaska as a high priority and details major steps necessary to proceed with 1 or more reintroductions. Public information efforts in Yukon Flats communities and other areas in Alaska stimulated growing public interest and moving forward with the project. Local governments resolved to move ahead to cooperatively implement the project, and substantial effort was spent discussing management and implementation plans. U.S. Fish and Wildlife Service withdrew support for the project in late 1997, resulting in requests for information by other agencies and the public. Four papers related to bison were published during this period, and 3 were presented at the International Bison Symposium.

Progress Meeting Project Objectives: Progress was made on objectives 1, 2, and 3. Suggested revised objectives for the coming year include 1) work with public interests to complete draft management plans and a NEPA evaluation and 2) work with local communities and private landowners to develop and establish a temporary release facility.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	44.0	10.5	54.5
Actual	37.0	14.8	51.8
Difference	7.0	-4.3	2.7

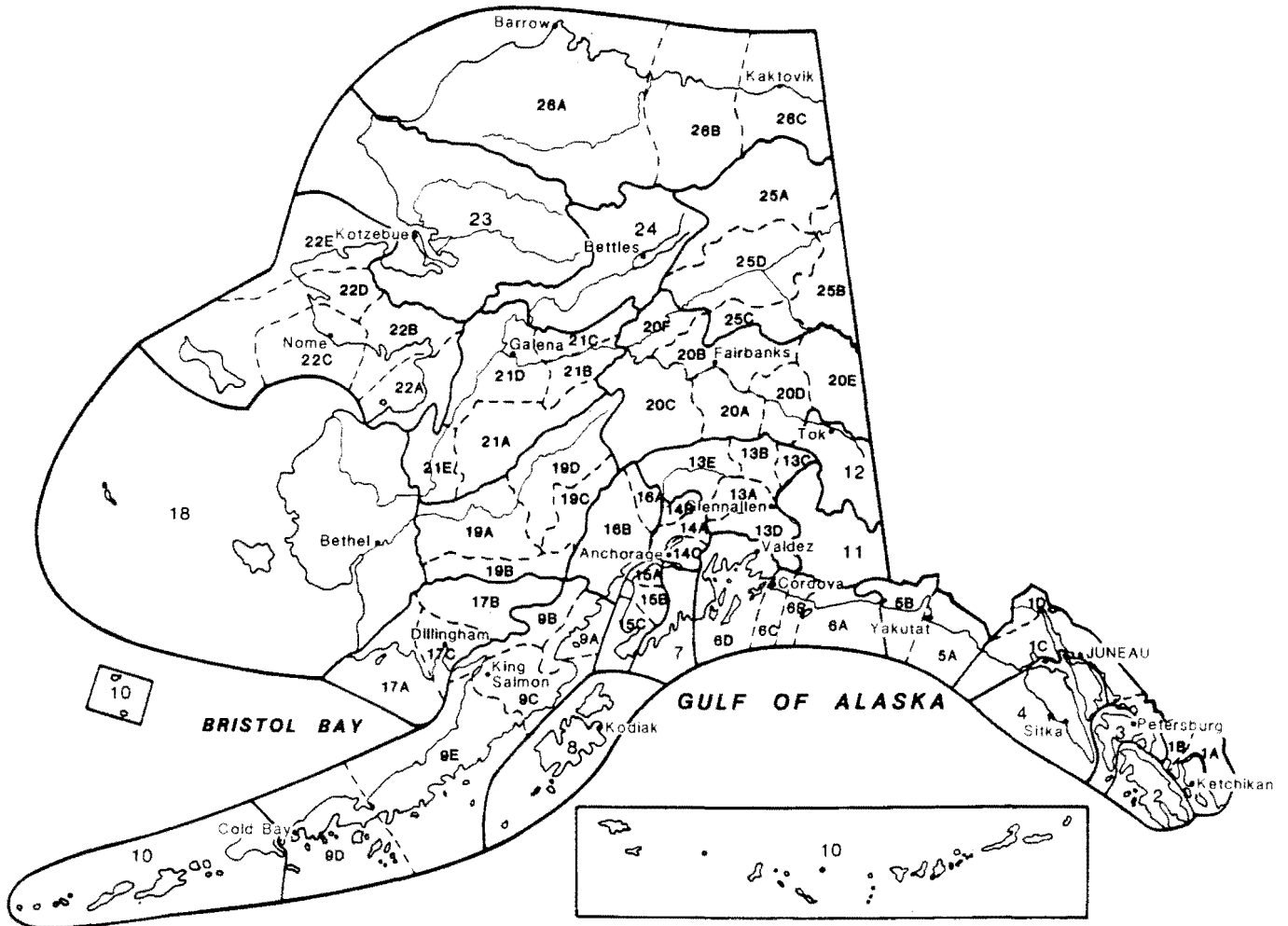
Explanation: Personnel — Costs were lower than expected because weather prevented fieldwork in Unit 19. Operating — The operating allocation was actually 14.0, a budgetary decision made after the Work Plan was submitted. Although fieldwork was canceled, funds were used to purchase capture equipment and telemetry collars that will be used for future bison work in Unit 19.

Submitted by:

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Regional Management Assistant

David D. James
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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.



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