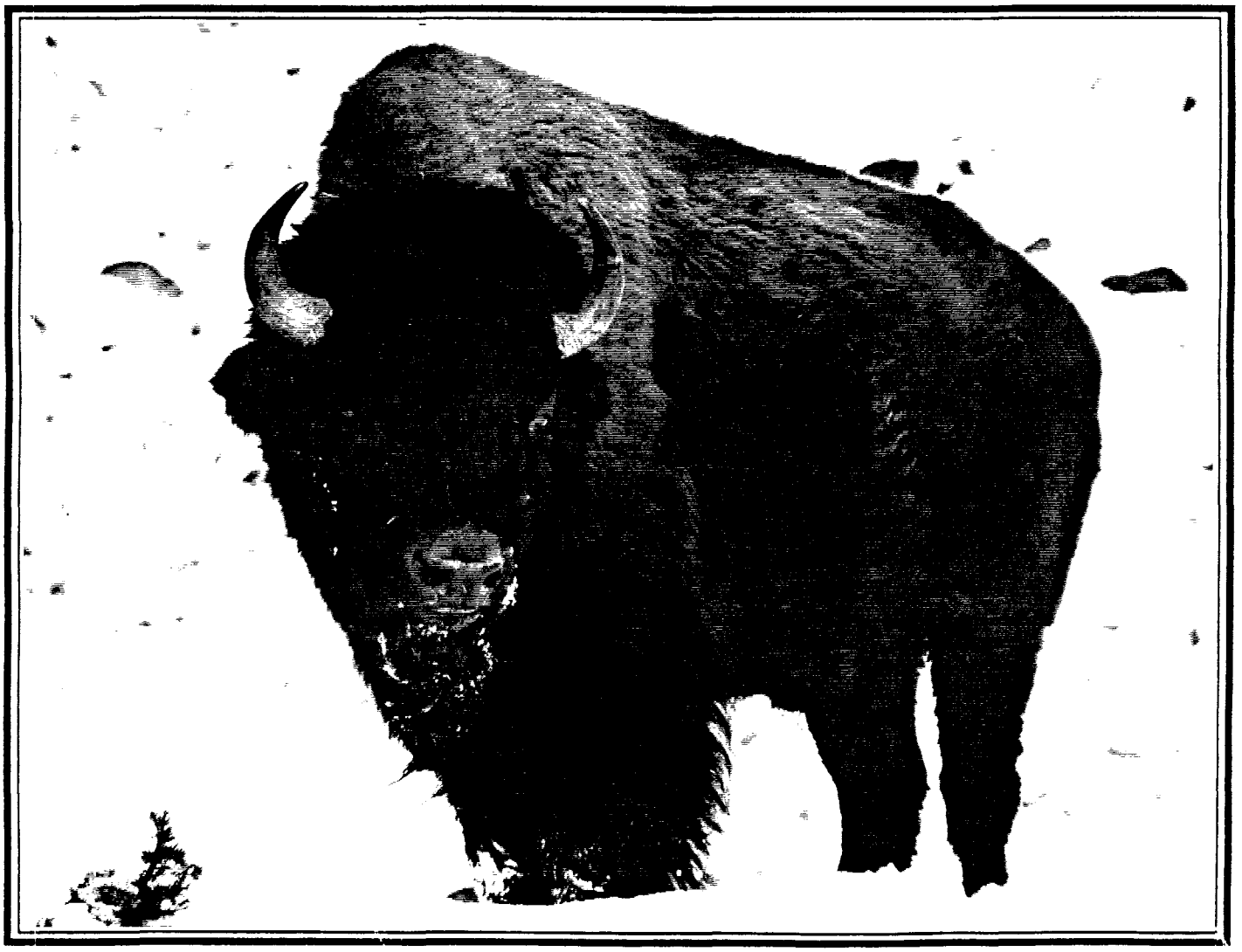
Alaska Department of Fish and Game
Division of Wildlife Conservation

Federal Aid in Wildlife Restoration
Annual Performance Report of
Survey-Inventory Activities
1 July 1995- 30 June 1996

BISON

Mary V Hicks, Editor



LEONARD LEE RUE III

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DEPARTMENT OF FISH AND GAME
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Mary Hicks
Publications Specialist
ADF&G, Wildlife Conservation
P.O. Box 25526
Juneau, AK 99802
(907) 465-4190

Project Title: **Southcentral Bison Population Management**

Project Location: Unit 11 (13,300mi^2)
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 and maintain and monitor 5 radiocollars on individuals in the herd.

Work Accomplished During the Project Segment Period:

Chitina River: Based on results of 2 aerial surveys in June 1996, population size was estimated at 39 bison,. Herd composition included 32 adults and 7 calves. The Chitina River bison hunting season was closed by emergency order 02-22-89 on 1 July 1989 and has remained closed.

Flooding of the Chitina River during 1990 started a process of river rechannelization, causing an extensive change in the Chitina bison range. The river utilizes channels on the north bank, and approximately one-half of the vegetation on heavily grazed river bars on the north banks east of Bear Island has eroded. Substantial areas of bison habitat have been lost since the river started rechannelizing to the north.

Copper River: Based on results of aerial surveys during June 1996, the Copper River bison herd size was estimated to include 72 animals. Herd composition included 60 adults and 12 calves. The Copper River bison hunting season was closed by emergency order 02-22-89 on 1 July 1989 and has remained closed.

Progress Meeting Projected Objectives:

Chitina River: Calf production and survival in the Chitina herd increased in 1996 after declining for 3 years. Calf production and survival is still well below the 12 calves observed during the mid 1980s. The number of adults observed approximates last year's count and is slightly higher than observed in prior years. Because calf recruitment has been low for the past few years, most of the increase in the count is attributable to favorable survey conditions that resulted in locating a number of adult bulls adjacent to the main herd. Adult bulls are usually solitary and may be difficult to find during aerial surveys. Factors influencing increased calf production are unknown.

The spring 1996 herd estimate of 39 bison is well below management objectives for this herd. A subjective evaluation of flooding on the Chitina bison range is that the herd has lost an appreciable amount of heavily utilized habitat. This river rechannelization is an ongoing process and more habitat is threatened. Although the effects of flooding are probably short-term, they may include reduced productivity and/or overwinter survival. Predation rates on the Chitina bison herd are unknown, but incidents of wolves taking bison are reported. Hunting of the Chitina herd should remain closed until herd numbers exceed the minimum management objective by at least 5 adult bison.

Copper River: The Copper River Bison Hunt was closed because of poor calf recruitment in 1989 when we observed only 3 calves, but annual calf production has ranged between 9-15 since then. Bison numbers observed during annual survey flights increased slightly between 1990 and 1992, then declined until 1996. Our count data suggest calves are not surviving their first year of life and natural mortality of adults exceeded recruitment the prior 3 years. The reason for the poor herd performance in recent years is unknown. However, severe winters coupled with poor range conditions are possible limiting factors. Snow depths during the winter of 1995-96 were much lower, and we counted an increase in the number of bison. Predation rates on Copper River Bison are unknown. Accidents are a known source of mortality in this herd with numerous incidents of bison falling off cliffs or going through the ice in the Copper River. Until more information is available concerning range condition, predation rates, and other sources of mortality, a conservative management approach of this herd is recommended.

The 1996 population estimate of 60 adults is the minimum management objective for this herd. When the herd numbers approximately 60 bison, recruitment is often less than the combined loss caused by hunting and natural mortality, producing prolonged periods with hunt closures. Hunting of this herd should not be allowed until 80 to 90 adult bison are observed and calf production approaches 15 per year. Allowing the herd to increase should provide a minimum harvest of 8 bison annually.

A few bison from the Copper River herd utilized agricultural fields in the Kenny Lake portion of Unit 13D during the winter of 1993-94. Use of this agricultural area was continued again this year by a few individual animals, but the main herd has yet to cross into the Kenny Lake area. If bison graze on agricultural crops to any greater extent than observed, we expect conflicts with local farmers.

Segment Period Project Costs:

	Personnel	Operating	Total
Planned	0.0	2.6	2.6
Actual	0.0	1.4	1.4
Difference	0.0	1.2	1.2

Submitted by:

Jeff Hughes
Survey-Inventory Coordinator

Project Title: **Interior Bison Population and Habitat Management**

Project Location: Unit 19C and 19D (18,803 mi^2)
Farewell Herd.

Project Objectives and Activities:

1. Maintain a minimum population of 250 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: We conducted 1 comprehensive bison composition survey during July 1995 in the Farewell area. The highest historical levels of bison were recorded. We observed 260 bison, 210 adults and subadults and 50 calves (19.2%). No summer surveys were conducted in 1996, but the relatively mild winter (95-96) should have resulted in relatively high parturition rates.

During the 1995-96 regulatory year, we conducted 2 drawing permit hunts for the Farewell bison herd. We issued 40 permits and the hunt was monitored through mandatory hunter questionnaires and interviews. Harvests were monitored during both hunts.

Preliminary range assessment was conducted during summer 1994 on the Farewell Bison Range. These investigations indicated the range is in good shape and probably capable of sustaining more bison than are now in the herd.

Progress Meeting Project Objectives: The Farewell herd remained at well over 200 animals, and the population is probably between 280 and 300, above the management objective. Of 40 permittees, 31 participated in the hunts, and 21 bison were legally harvested (68% success rate). Calf production remains high, and the soundness of the range indicates the herd can increase without adverse effects on the habitat. Therefore, we have opted to let the herd increase to 300 adults. This new objective should be attainable by summer 1998 by reducing the available permits to 20 in each of the 2 scheduled hunts.

Project Location: Unit 20D (5637 mi^2)
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. Keep the Delta bison herd out of the Delta Agricultural Project until October 1 annually.
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 the goals and objectives of a free-ranging, healthy herd and a 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 July 1, 1993-November 1, 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: Blood samples were collected from hunter-killed bison for serological studies to evaluate the health of the bison herd. Results indicate bison continue to be free from most of the infectious diseases for which serum antibody tests are conducted with the exception of parainfluenza III.

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

Movements of radiocollared bison were monitored during 1995-96 to determine the time bison left the summer range and the DJBR and moved into the Delta Agricultural Project. Bison began migrating from the Delta River to the DJBR approximately July 27, 1995. Bison were first observed in the Delta Agricultural Project on August 25, and large numbers of bison were in the Delta Agricultural Project by August 31, 1995.

A University of Alaska graduate student completed her thesis entitled "Summer Habitat Relationships and Foraging Ecology of the Delta Bison Herd."

Aerial bison censuses were flown on July 18 and 19 and August 17 and 21, 1995. The census resulted in a postcalving population estimate of 485 bison. Sex and age composition data were collected on September 26, 27, and 28, 1995, resulting in estimates of 87 bulls:100 cows and 52 calves:100 cows.

Drawing permits were issued to take 70 bull (hunt DI403) and 50 cow bison (hunt DI404) from October 7, 1995-March 31, 1996. Preliminary data indicate 61 bison were killed during hunt DI403, including 1 bull killed by a hunter with an Alaska Fish and Wildlife Safeguard raffle permit.

We pursued additional funding sources for management of the DJBR by trying to rejuvenate the bison raffle administered previously by Alaska Fish and Wildlife Safeguard. No progress was made initiating a new raffle.

The 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 October 7; a staggered start was used for hunters.

Coordination with Alaska Department of Transportation continued to investigate the development of bison viewing facilities using ISTEA funding.

Progress Meeting Project Objectives: Herd health goals were accomplished with no serious wildlife diseases occurring in the herd. The Delta Junction Bison Range was successfully managed with permit application fees to reduce bison/agricultural conflicts. Bison movements were monitored to determine the level of bison/agricultural conflicts; however, bison movement dates did not meet management objectives. The department provided the greatest opportunity to hunt by issuing drawing permits, and preliminary data indicate hunters killed 107 bison. No progress was made estimating a budget to accomplish all goals and objectives, and no additional funding sources were located. A University of Alaska graduate student continued summer range analysis to provide information on summer range forage. The permit drawing hunt was successfully administered to reduce landowner/hunter conflicts.

Project Location: Unit 25 (53,100 mi^2)

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 was appointed to the Wood Bison Recovery Team and assisted in preparing 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 neccessary to proceed with 1 or more reintroductions in Alaska. The department cooperated with FWS in preparing a letter and information packet for distribution to all households in Yukon Flats communities. The department also met with representatives of the Yukon Flats Wood Bison Reintroduction Committee to discuss ways to make progress reintroducing wood bison to the Yukon Flats. This citizen's group was formed to help foster progress on the wood bison project and other natural resource issues. In response to an invitation from communities involved in wood bison management in N.W.T., Canada, the Fort Yukon area biologist accompanied representatives from Fort Yukon on a weeklong trip to Fort Resolution and Fort Providence. This trip provided an opportunity for Yukon Flats residents to participate in bison management field activities, become familiar with cooperative agreements developed by communities and the N.W.T. government that benefited wood bison management, and gain familiarity with wood bison. These activities stimulated a positive interest in moving forward with the project and active involvement of local governments and the citizen's committee in pursuing neccessary steps to formally evalute the project. In addition to activities related to the Yukon Flats wood bison project, an initial assessment of potential wood bison habitat was carried out in the Mosquitoe flats area in Unit 20E. The results suggest the area is suitable habitat for at least a few hundred bison.

Progress Meeting Project Objectives: Progress was made on objectives 1, 2, and 3. Existing objectives are suitable for the coming year.

Segment Period Project Costs:

	Personnel	Operating	Total
Planned	82.8	51.6	134.4
Actual	101.7	35.5	137.2
Difference	-18.9	16.1	-2.8

Explanation: Personnel expenditures were more than planned because funding was provided for a permanent seasonal position to assist with the wood bison reintroduction project. Operating expenditures were less than planned because efforts to initiate and support a wood bison public working group and to contract a public outreach program were not successful.

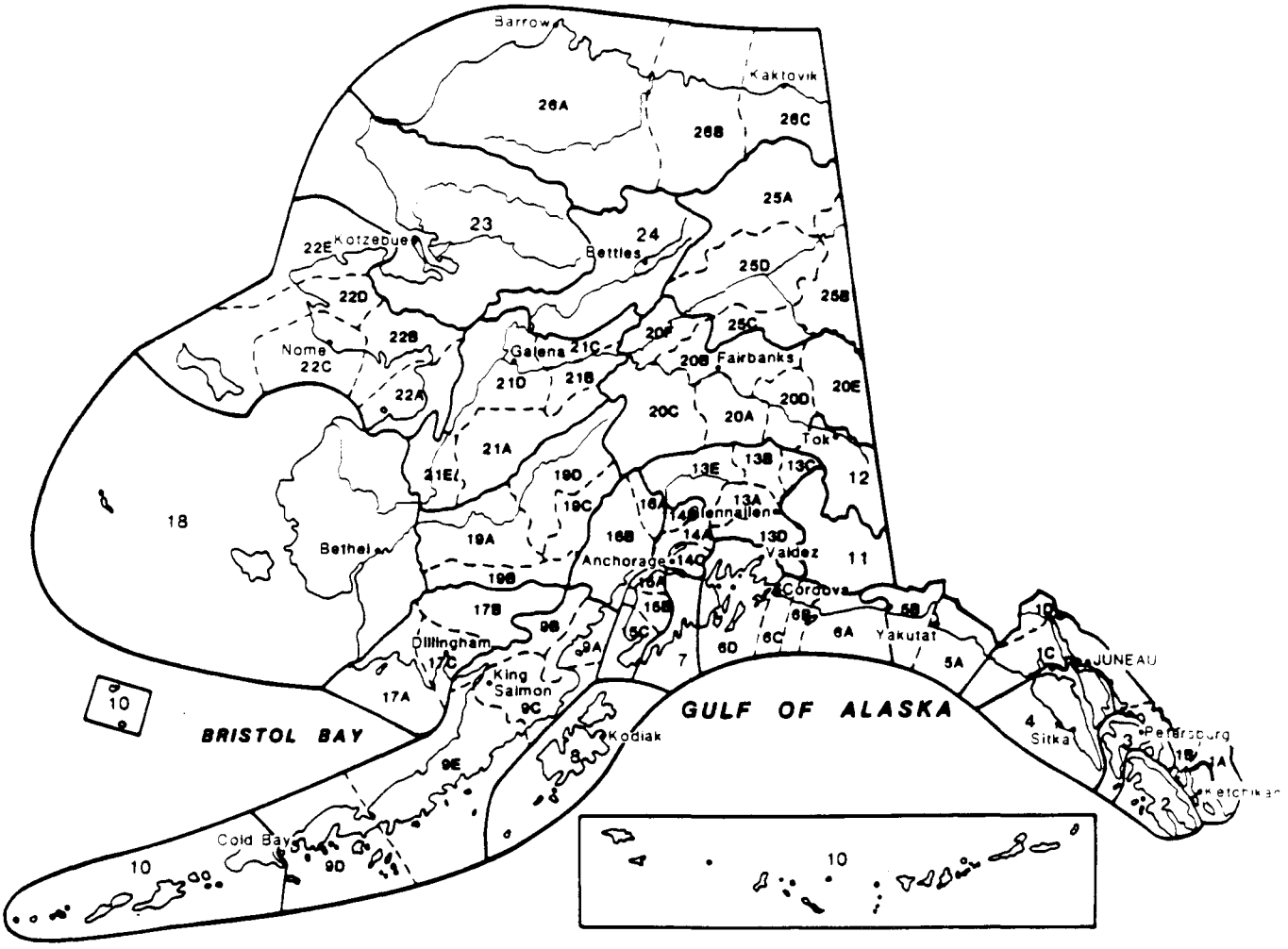
Submitted by:

David James
Management Coordinator

NOTES

NOTES

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.

LEONARD LEE RUE III