Alaska Department of Fish and Game
Division of Wildlife Conservation

Federal Aid in Wildlife Restoration
Annual Performance Report of
Survey-Inventory Activities
1 July 1993 - June 1994

BISON

Mary V. Hicks, Editor

Grant W-24-2
Study 9.0
December 1994

STATE OF ALASKA
Tony Knowles, Governor

DEPARTMENT OF FISH AND GAME
Carl L. Rosier, Commissioner

DIVISION OF WILDLIFE CONSERVATION
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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 that are 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:

Herd population size was estimated at 30 bison based on results of two aerial surveys in June 1994. Herd composition included 27 adults and 3 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 over the past 4 years. 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 during the past 3 years.

Copper River:

The Copper River bison herd size was estimated to include 69 animals based on results of aerial surveys during June 1994. Herd composition included 54 adults and 15 calves. We monitored radiocollared bison on 1 occasion during the survey period. The number of active collars has declined to 1, well below the management objective.

The Copper River bison hunting season was closed by emergency order 02-22-89 on 1 July 1989 and has remained closed.

Progress Towards Meeting Projected Objectives:

Chitina River:

Calf production and survival in the Chitina herd declined for the second year from an observed high of 7 calves in 1992. The number of adults observed remained stable. The spring 1994 herd estimate of 30 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 is an ongoing process and more habitat is threatened. Although the effects of this flooding are probably short-term, they may include reduced productivity and/or over-winter survival. 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. Calf production subsequently increased and yearly calf production has ranged between 9-15 per year. Bison numbers observed during annual survey flights increased slightly between 1990 and 1992 but have declined the last 2 years. The decline is in adult bison. Our data indicate calves are not surviving their first year of life or natural mortality of adults exceeded recruitment the last 2 years. The 1994 population estimate of 54 adults is well below the management objective for this herd. 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. When the herd numbers approximately 60 bison, recruitment is often less than the combined loss caused by hunting and natural mortality, producing periodic hunt closures.

Bison from the Copper River herd utilized agricultural fields in the Kenny Lake portion of Subunit 13D during the winter of 1993-94. Use of this area has increased over the last 2 years. If bison continue to use this area, we expect increased human conflicts with bison.

Segment Period Project Costs:

	Personnel	Operating	Total
Planned	5.3	2.5	7.8
Actual	5.3	1.9	7.2
Difference	0	0.6	0.6

Submitted by:

Jeff Hughes
Survey-Inventory Coordinator

Project Title: **Region III Bison Population and Habitat Management**

Project Location: Units 19, 20, and 25

Farewell Herd (Unit 19):

Project Objectives and Activities:

1. Maintain a minimum population of 200 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 3 bison composition counts in May 1994 in the Farewell area. Of 216 bison observed during the 16 May survey, 172 were adults and subadults and 44 were calves (20.4%).

During the 1993-94 regulatory year, we conducted 2 drawing hunts for the Farewell Bison Herd. We issued 50 permits and the hunt was monitored through mandatory hunter questionnaires and interviews. Harvests were monitored during both hunts.

We planned to assess range conditions on both winter and summer range. Maria Berger, a bison range expert from University of Alaska, Fairbanks, came to McGrath, but inclement weather largely thwarted field work.

Progress Meeting Project Objectives: The Farewell Herd remained at well over 200 animals, and the population is probably between 250 and 300, above the management objective. Of 50 permittees, 35 participated in the hunts, and 20 bison were legally harvested (57% success rate). Since calf production is high, and over 200 animals were sighted during a composition count, strong consideration should be given to reverting back to the 60-70 permit level of previous years.

Delta Herd (Unit 20D):

Project Objectives and Activities:

1. Maintain a healthy, free-ranging bison herd.
   a. Prevent the transmission of livestock diseases to the Delta bison herd.
   b. Prevent the spread of diseases from Delta bison to other wildlife species.

2. Manage the Delta Junction Bison Range (DJBR) to reduce conflicts between bison and agriculture.
   a. Use Delta bison hunt permit application fees to manage bison forage on the range.

b. Provide direct assistance until 1 October each year to landowners experiencing bison/agricultural conflicts inside fenced areas.

3. Provide the greatest opportunity to hunt and view bison.
   a. Manage for a precalving population of 360 bison (430 postcalving before hunting).
   b. Administer the Delta bison hunt to reduce landowner/hunter conflicts and maintain hunter access to private land in the Delta Agricultural Project.

Work Accomplished During the Project Segment Period: We collected blood samples from hunter-killed bison 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.

We managed bison forage on the Delta Junction Bison Range to reduce bison/agricultural conflicts. Forage management consisted of prescribed burning and fertilizing of perennial grasses, controlling noxious plants by mowing and disking, and planting annual crops for bison forage. We contracted to bury berm piles in June 1994.

We monitored movements of radiocollared bison during 1993-94 to determine when bison left the summer range, the DJBR, and when they moved into the Delta Agricultural Project. Bison migrated from the Delta River to the DJBR from approximately July 26-29, 1993. Most of the herd had moved to the DJBR by early August. Bison were first observed in the Delta Agricultural Project on August 27, 1993.

A University of Alaska graduate student continued data analysis for a research project entitled "Summer foraging ecology of bison on the Delta River." This research is an evaluation of summer range forage availability and utilization by bison.

We censused bison by air on July 10 and 26, and August 4, 24, and 25, 1993. From this census, we estimated a postcalving population of 465 bison. We collected sex and age composition data on August 17 and 26, September 29, and October 4, 1993, and we estimated 67 bulls:100 cows, and 62 calves:100 cows.

We issued drawing permits to take 90 either sex bison (hunt DI403) and 30 cow bison (hunt DI404) from October 7, 1993-March 31, 1994. Preliminary data indicate 89 hunters killed 50 bulls and 33 cows during hunt DI403. During hunt DI404, 29 hunters killed 1 bull and 26 cows.

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. We monitored bison movements to determine the level of bison/agricultural conflicts. The department provided the greatest opportunity to hunt by issuing 120 drawing permits. Work was completed on the Draft 1993-98 Delta Bison Management Plan with recommendations provided by the Delta Bison

Working Group. A University of Alaska graduate student continued a summer range analysis to provide information on summer range forage.

The completed 1993-98 Delta Bison Management Plan developed the following goals and objectives for management of the Delta bison herd:

Goal: Maintain a healthy, free-ranging bison herd in the Delta Junction area.

Objective 1: Prevent the transmission of diseases from livestock to the Delta bison herd.

Objective 2: If diseases are transmitted to the Delta bison herd, prevent the spread of diseases from bison to other wildlife species.

Goal: Reduce conflicts between bison and the public, including but not limited to agricultural interests, in the Delta Junction area.

Objective 1: Manage bison and summer range habitat so that at least 75% of the Delta bison herd remains west of the Richardson Highway (between BlackRapids Glacier and the Tanana River) until August 20 annually.

Objective 2: Keep the Delta bison herd out of the Delta Agricultural Project until October 1 annually.

Objective 3: The department will provide assistance to the public experiencing bison conflicts.

Goal: 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.

Objective 1: Calculate an accurate annual budget for accomplishing recommended goals and objectives.

Objective 2: Seek sufficient funding to accomplish all goals and objectives of managing the Delta bison herd on public lands.

Objective 3: Manage the Delta bison herd for maximum productivity with a sex ratio of no less than 30 bulls:100 cows.

Objective 4: The Department will organize volunteer efforts to help accomplish goals and objectives.

Objective 5: 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.

Objective 6: 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.

Objective 7: Investigate methods and funding sources to improve bison viewing opportunities for the public.

Project Location: Unit 25

Project Objectives and Activities:

1. Study the feasibility of reintroducing wood bison to the Yukon Flats area.
2. Gather information on present habitat suitability and historic and prehistoric occurrence.
3. Inform the public and other agencies about the feasibility and potential benefits of reestablishing wood bison in Alaska.

Work Accomplished During the Project Segment Period: We completed a detailed feasibility assessment during the period and included a review of habitat suitability and historic and prehistoric occurrence. We accomplished additional range assessment work in late June with the assistance of a University of Alaska graduate student with experience in bison forage assessment. We apprised the public and agencies of aspects of the potential reintroduction through slide presentations in Yukon Flats villages, Fairbanks, Anchorage, Juneau and through the distribution of the feasibility assessment. A management report will be prepared at the appropriate time.

Progress Meeting Project Objectives:

Objectives 1 and 2 were largely accomplished, and substantial progress was made toward objective 3 which is necessarily a continuing objective. We suggest the following revised management objectives:

1. Complete initial assessment of the suitability of the Yukon Flats as wood bison habitat.

2. Work with landowners and agencies to develop concensus on whether to proceed with a wood bison reintroduction and prepare a cooperative management plan.

3. Continue information efforts with the public and other agencies about the feasibility and potential benefits of reestablishing wood bison in Alaska.

4. Complete contract for an environmental assessment required by NEPA.

5. Investigate requirements for obtaining a CITES permit for translocating wood bison to the Yukon Flats.

6. Investigate potential release sites for habitat and logistic suitability.

Segment Period Project Costs:

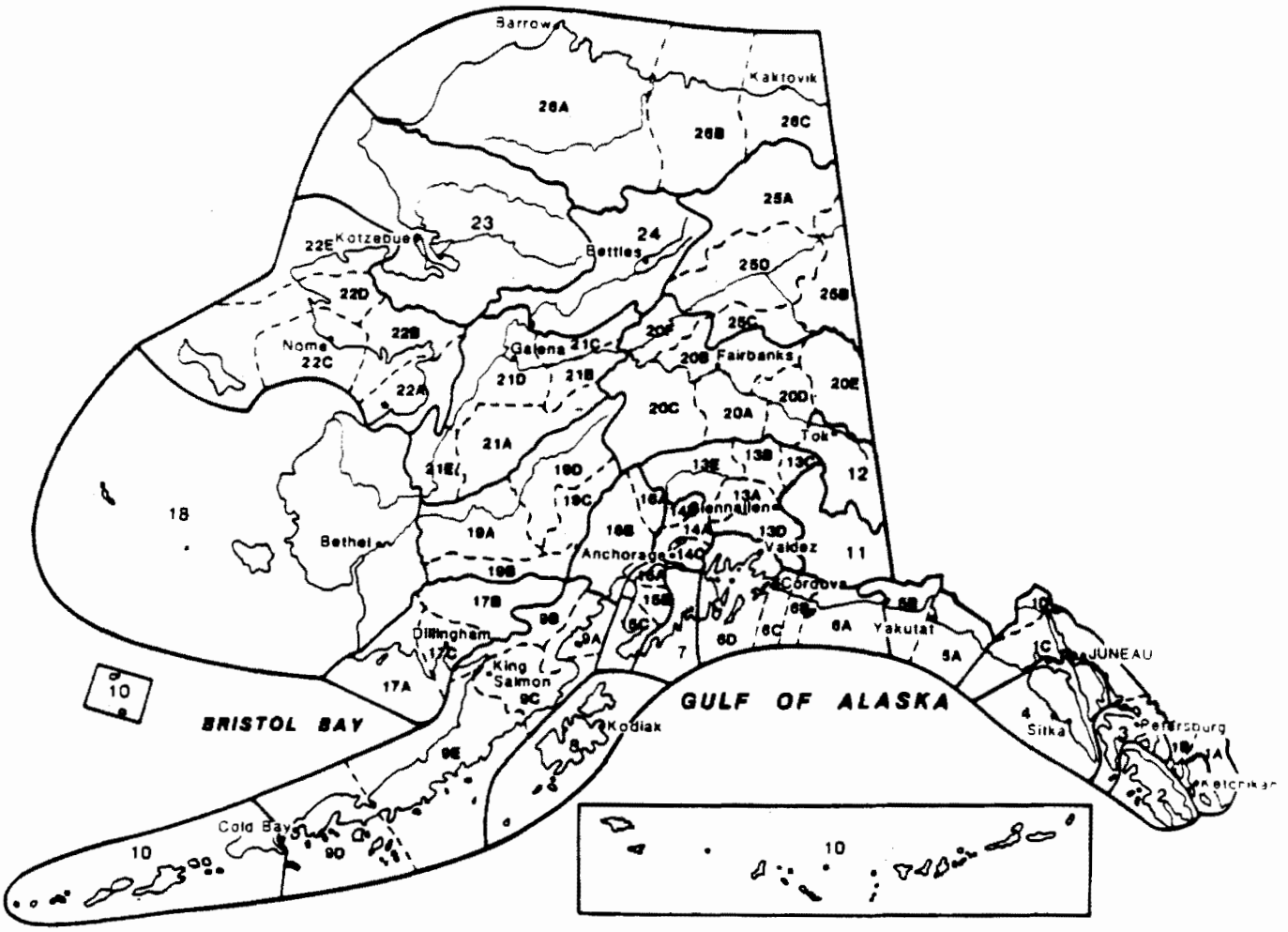
	Personnel	Operating	Total
Planned	28.3	12.0	40.3
Actual	24.9	21.3	46.2
Difference	3.4	-9.3	-5.9

Explanation: Several additional attempts to complete fall sex and age composition counts on both the Farewell and Delta herds were necessary due to poor survey conditions.

Submitted by:

Kenton P. Taylor
Regional Management Coordinator

Alaska's Game Management Units



The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manfacturer's excise tax collected from the sales of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program distributes funds to states using a formula based on each state's geographic area and number of paid hunting license holders. Alaska receives a maximum of 5% of revenues collected each year. The Alaska Department of Fish and Game uses its funds to help restore, conserve, and manage wild birds and mammals. These funds are also used to educate hunters to develop skills and attitudes for responsible hunting. Federal Aid funds paid for 75% of this study.