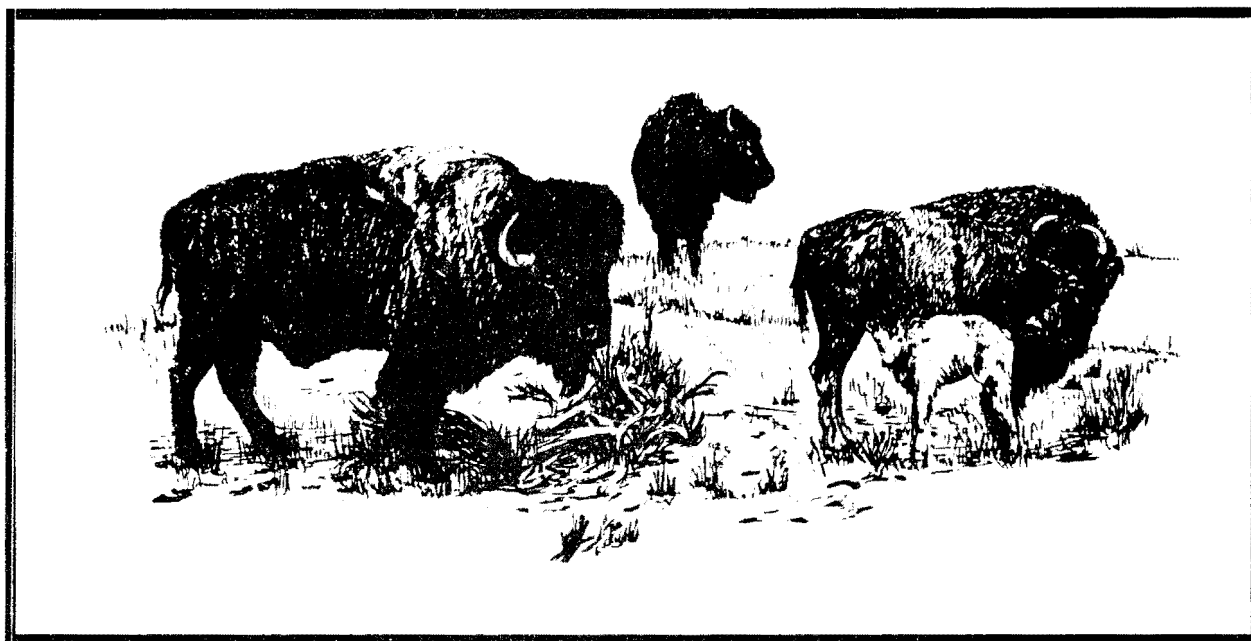

Alaska Department of Fish and Game
Division of Wildlife Conservation

Federal Aid in Wildlife Restoration
**Annual Performance Report of
Survey-Inventory Activities**
1 July 1992 - 30 June 1993

B I S O N

Susan M. Abbott, Editor



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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 (13,300 mi²)
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 that are classified as older than calves and maintain and monitor 5 radio collars on individuals in the herd.

Work Accomplished During the Project Segment Period:

Chitina River

We estimated herd population size at 32 bison based on results of two aerial surveys conducted in June 1993. Herd composition included 27 adults and 5 calves.

The Chitina River bison hunting season was closed by Emergency Order 02-22-89 on 1 July 1989 and has remained closed since.

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 3 years. The River now 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 been eroded. Substantial areas of bison habitat have been lost during the past 3 years.

Copper River

We estimated the Copper River bison herd size to include 75 animals based on results of aerial surveys conducted during June 1993. Herd composition included 60 adults and 15 calves. We monitored radio-collared bison once during the survey period. The number of active collars has declined to 2, 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 since.

Progress Towards Meeting Projected Objectives:

Chitina River

Calf production and survival in the Chitina herd declined in 1993 but the number of adults observed increased by 3. The spring 1992 herd estimate of 32 bison is well below management objectives for this herd. A subjective evaluation of flooding on the Chitina bison range left the impression that the herd has lost an appreciable amount of previously heavily used habitat. This is an ongoing process and more habitat is threatened. Although impacts 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 only 3 calves were observed. Calf production subsequently increased and yearly calf production ranged between 9-15 annually since. During May 1993, 7 dead bison were located along the Copper River, but the cause of death was not determined. Such high natural mortality would preclude herd growth in 1993. Natural mortality rates and causes have not been determined for the Copper River herd. The 1993 population estimate of 60 adults exceeds the minimum management objective for this herd. Hunting of this herd, however, should not be allowed until between 80 and 90 adult bison are observed and calf production approaches 15 per year. Allowing the herd to increase should provide for a minimum harvest of 8 bison on a yearly basis. When the herd numbers approximately 60 bison, recruitment is often less than the combined loss caused by hunting and natural mortality thus producing periodic hunt closures.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	5.3	2.5	7.8
Actual	5.3	1.3	6.6
Difference	0	+1.2	+1.2

Submitted by:

Jeff Hughes
Survey-Inventory Coordinator

Project Title: Region III Bison Population and Habitat Management

Project Location: Units 19 and 20

Farewell Herd (Unit 19)

Project Objectives and Activities:

1. Maintain a minimum population of 200 bison and determine desired harvest level.
 - 1a. Conduct aerial surveys to assess population size and age composition.
 - 1b. Administer permit hunt and monitor harvest.

Work Accomplished During the Project Segment Period:

- 1a. We conducted one bison composition count in June 1993 in the Farewell area. Of 222 bison observed, 171 were adults and subadults while 51 were calves (23.0%).
- 1b. During the 1992-93 regulatory year, 2 drawing hunts were conducted for the Farewell Bison Herd. We issued 50 permits and monitored the hunt through mandatory hunter questionnaires and interviews. Harvests were monitored during both hunts.

Progress Toward Meeting Project Objectives:

The Farewell Herd remained at well over 200 animals, and the population is probably between 250 and 300, which is above the management objective. Of 50 permittees, 38 participated in the hunts, and 13 bison were legally harvested (34% success rate). One hunter accidentally shot an additional cow and the calf hidden on the opposite side. He forfeited the meat and was cited. Since calf production is high, and we saw over 200 bison 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.

- 1a. Prevent the transmission of livestock diseases to the Delta bison herd.
- 1b. Prevent the spread of diseases from Delta bison to other wildlife species.
2. Manage the Delta Junction Bison Range to reduce conflicts between bison and agriculture
 - 2a. Use Delta bison hunt permit application fees to manage bison forage on the range.
 - 2b. 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.
 - 3a. Manage for a precalving population of 360 bison (430 postcalving before hunting).
 - 3b. 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:

1. We collected blood samples from hunter killed bison to evaluate the health of the bison herd. Results are not yet available from those analyses.
2. Bison forage was managed on the Delta Junction Bison Range to reduce bison/agricultural conflicts. Forage management consisted of prescribed burning and fertilizing forage.

We monitored movements of radio-collared bison during fall 1992 to determine when they left the summer range and when they left the DJBR. Bison migrated from the Delta River to the DJBR beginning approximately 23 July 23 1992. Most of the herd had moved to the DJBR by the first week of August. Bison were first observed in the Delta Agricultural Project between 22-26 August 1992.

A University of Alaska graduate student continued work on a research project entitled "Summer foraging ecology of bison on the Delta River". This research will evaluate summer range forage availability and utilization by bison.

3. We flew a bison census on 23 June 1992 and we estimated a postcalving population of 482 bison with 21% calves. Sex and age composition data were collected on 13-14 August 1992 and resulted in estimates of 87 bulls:100 cows, and 46 calves:100 cows.

Drawing permits were issued to take 80 either sex (hunt 403) and 20 cow bison (hunt 404) from 7 October 1992 - 31 March 1993. Preliminary estimates indicate 74 bulls and 19 cows were harvested.

Progress Towards Meeting Project Objectives: Accomplishment of health goals were unknown because results of bison serology were not available. 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 100 drawing permits. Work continued on the Draft 1993-98 Delta Bison Management Plan and recommended management goals and objectives were developed. Summer range analysis was continued by a University of Alaska graduate student to provide information on summer range forage.

A draft 1993-98 Delta Bison Management Plan was written with recommendations provided by the Delta Bison Working Group. The draft plan was distributed for public comments. The Delta Bison Working Group reviewed public comments and made final recommendations to the Department. Recommended goals and objectives follow:

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 from livestock 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 Black Rapids Glacier and the Tanana River) until August 20 annually.

Objective 2: Keep the Delta bison herd out of the Delta Agricultural Project until 1 October 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 herd health, free-ranging, and conflict goals and objectives.

- Objective 1: Calculate an accurate annual budget for accomplishing recommended goals and objectives.
- Objective 2: Acquire additional nondepartment funding sufficient 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: Organize volunteer efforts to help accomplish goals and objectives.
- Objective 5: 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.
- 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.

Segment Period Project Costs:

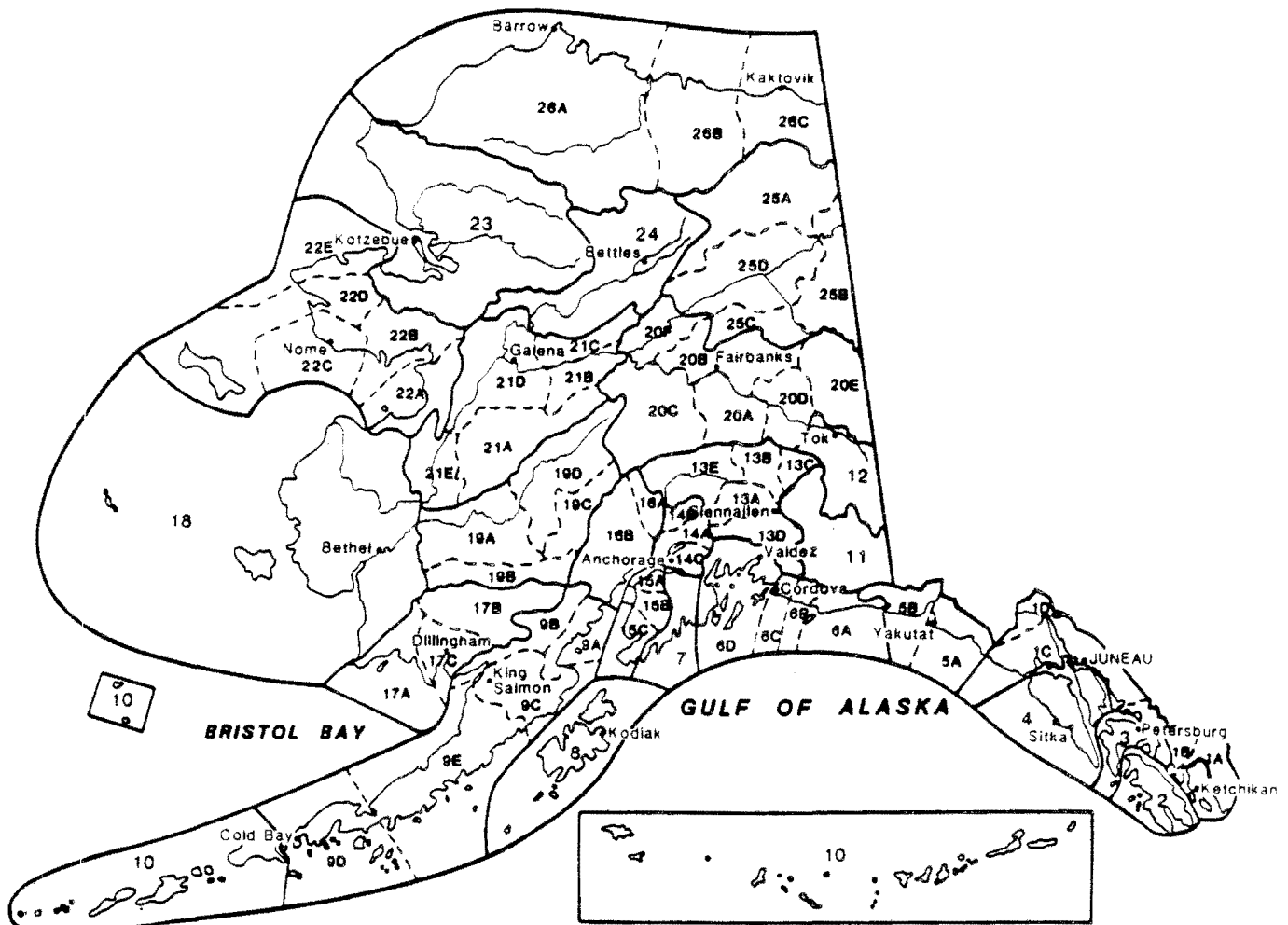
	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	13.5	58.5	72.0
Actual	14.0	15.3	29.3
Difference	- 0.5	43.2	42.7

Explanation: Operational funds for bison were reduced during budget allocations to 26.0 by removing permanent seasonal salary listed as operating funds.

Submitted by:

Kenton P. Taylor
Regional Management Coordinator

Alaska's Game Management Units



Federal Aid in Wildlife Restoration

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 then allots the funds back to states through a for-

each state's area and of paid censehold-s t a t e . ceives 5% enues col-year, the lowed. The



mula based on geographic the number hunting li-ers in the Alaska re-of the rev-lected each maximum al-Alaska Depart-

ment of Fish and Game uses the funds to help restore, conserve, manage, and enhance wild birds and mammals for the public benefit. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes necessary to be reponsible hunters. Seventy-five percent of the funds for this project are from Federal Aid.