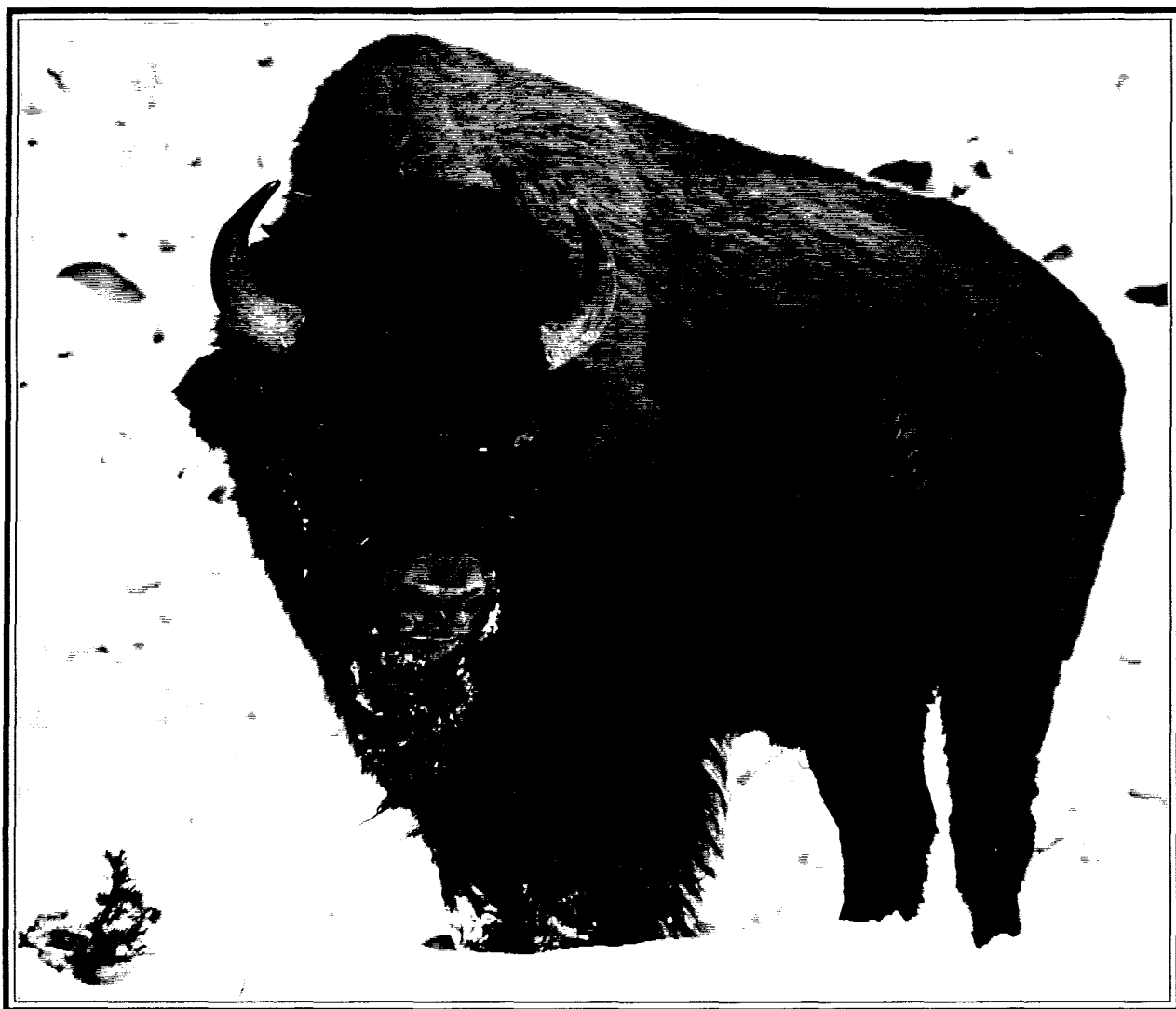


Alaska Department of Fish and Game
Division of Wildlife Conservation

Federal Aid in Wildlife Restoration
Annual Performance Report
Survey-Inventory Activities
1 July 1998- 30 June 1999

BISON

Mary V Hicks, Editor



Leonard Lee Rue III

Grant W-27-2
Study 9.0
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**STATE OF ALASKA
Tony Knowles, Governor**

**DEPARTMENT OF FISH AND GAME
Frank Rue, Commissioner**

**DIVISION OF WILDLIFE CONSERVATION
Wayne L. Regelin, Director**

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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 1999. Bison observed included 33 (6 calves and 27 adults) in the Chitina River herd and 87 (19 calves and 68 adults) 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 ranged from 30 to 46 animals, an increase of 53%. The 1998 count declined 30% when we observed only 32 bison. The reason for the decline was increased overwinter mortality and reduced calf production. The winter of 1997–98 was especially severe in the lower Chitina Valley. The winter of 1998–99 was milder and no overwinter mortality was observed. Bison numbers remained relatively stable, and calf production increased this year. Recruitment to the Chitina bison herd depends on overwinter snow conditions, and little calf recruitment can be expected during moderate or severe winters.

A drawing permit hunt with 2 permits issued for bulls is scheduled for the fall of 1999. Ten years of hunting closure did not result in achieving the management objective of 50 bison. Because winter mortality on older bison increases during severe winters, some harvest of adults would reduce the number of aged animals in the herd, thus minimizing the effect of a severe winter. Also, changes in bison abundance in the Chitina herd seem dependent on winter severity; a hunting season can be held and bag limit increased following mild winters when calf production improves. I recommend maintaining a hunt for 2–4 adults with the allocation dependent on calf production and survival the previous year.

Copper River Herd

Bison numbers in the Copper River herd increased 36% between 1995 and 1997, rising from 64 to 87 bison. The 1999 count of 87 indicates little change in herd size. Calf production has been high with 17–19 calves observed the last 3 years. We expected calf survival to be high because the winter severity index for this period was low, indicating mild winters. However, survey results do not indicate the herd increased this year, even with higher calf production. Because much of the bison range is heavily timbered making censusing the herd difficult, it is possible we do not count all the bison. If count data are correct and represent herd population trend, factors other than productivity are limiting herd growth. Dispersal of bison out of the Copper River Herd has not been documented in recent years.

A drawing permit hunt with 12 permits issued is scheduled for 1999. The season dates are 1 Sep 31-Mar. The intent is to harvest some older animals that will be lost during the next severe winter. The yearly allocation for future hunts will depend on calf recruitment and overwinter adult survival the previous year.

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	5.3	0.0	5.3
Actual	5.3	0.6	5.9
Difference	0.0	-0.6	-0.6

Explanation: Unplanned operating funds were spent on bison surveys because the Alaska Board of Game approved drawing permit hunts for both the Chitina and Copper River bison herds; surveys were required to determine the number of permits to be issued based on population size.

Submitted by:

Michael G. McDonald
Assistant Management Coordinator

Project Title: Interior Bison Population and Habitat Management

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

Objective: Maintain a minimum population of 300 bison.

Activities Planned:

1. Review and revise population management objectives.
2. Conduct ground or aerial surveys to assess population size and sex and age composition.
3. Replace and monitor radio collars.
4. Assess range conditions and work with fire control agencies to improve habitat.
5. Monitor harvest from the permit hunts.

Activities Accomplished:

1. Conducted 2 radiotracking survey flights, 1 in August 1998 and 1 in March 1999.
2. Deployed 6 new radio collars on adult female bison in October 1998.
3. Monitored harvest from the permit hunt during fall 1998 and spring 1999.

Project Location: Unit 20D (5637 mi²)
Delta Herd

Objectives:

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 from livestock 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 agriculture 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 20 August annually.

- b. Keep the Delta Bison Herd out of the Delta Agricultural Project until 1 October 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.
- a. Calculate an accurate annual budget for accomplishing recommended goals and objectives.
 - b. Seek funding sufficient 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 bull: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 to 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 an increasing or decreasing status as required and 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.

Activities Planned:

1. Review and revise population management objectives.
2. Assess range conditions and work with fire control agencies to improve habitat (objective 2a).
3. Monitor harvest from permit hunts (objectives 3c and 3e).
4. Replace and monitor radio collars (objectives 3a, and 3b).
5. Conduct ground or aerial surveys to assess population size and sex and age composition (objectives 3c and 3e).
6. Monitor timing of bison movements from summer range to the Delta Junction Bison Range and the Delta Agricultural Project (objectives 2a, 2b, and 3f).
7. Manage fields in the Delta Junction Bison Range to maintain bison forage (objectives 2a and 2b).

8. Update the current Delta Bison Herd 5-year Management Plan (objective 3e).
9. Continue investigation of options to improve bison viewing opportunities (objective 3g).

Activities Accomplished:

1. Reviewed population management objectives and drafted revised objectives developed for public review and comment as part of the 5-year management planning process discussed in number 8 below (objective 3e).
2. Assessed range conditions on the Delta Junction Bison Range (objectives 2a and 2b). (No need for prescribed fire was determined.)
3. Monitored the harvest from permit hunts DI403 and DI404 via permit reports to assess post-hunt herd sex ratio, productivity, and size (objectives 3c and 3e).
4. Monitored radiocollared bison for movements and location and replaced radio collars as needed (objectives 2a, 2b, and 3b).
5. Conducted ground-based surveys to determine herd composition, and conducted aerial surveys to determine herd size and productivity (objectives 3c and 3e).
6. Monitored bison movements to determine timing of movements to the Delta Junction Bison Range and from the Delta Junction Bison Range to the Delta Agricultural Project; monitored bison movements as needed to determine bison depredation patterns within the Delta Agricultural Project (objectives 2a and 2b).
7. Managed bison forage on the Delta Junction Bison Range to keep bison out of the Delta Agricultural Project with a combination of fertilizing, disking, mowing, and planting (objectives 1a, 1b, 2a, 2b, 2c, 3c, 3e, and 3f).
8. Began work with the Delta Bison Working Group to develop a 1999–2004 Delta Bison Management Plan (objectives 1a, 1b, 2a, 2b, 2c, 3c, 3e, and 3f). (A draft plan was developed and prepared for public review.)
9. Worked cooperatively with the Alaska Department of Transportation to replace a bison viewing interpretive sign at Black Rapids Glacier (objective 3g).

Project Location: Unit 25D (17,569 mi²)
Yukon Flats Wood Bison Reintroduction

Objectives:

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 investigation and development of a release site on the Yukon Flats when an implementation agreement and plan are apparent.

Activities Planned: Continue to assess feasibility of reintroducing wood bison to the Yukon Flats (objectives 1 and 2).

Activities Accomplished:

1. Collaborated with authorities in paleontology, archaeology, and anthropology to complete a manuscript that summarizes current knowledge regarding the biogeography and history of wood bison in Alaska and northern Canada (objectives 1, and 2).
2. Continued to discuss pertinent issues with FWS and interested communities and other interested parties in Alaska and Canada (all objectives).

Segment Period Project Costs:

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	62.4	15.5	77.9
Actual	25.0	12.5	37.5
Difference	37.4	3.0	40.4

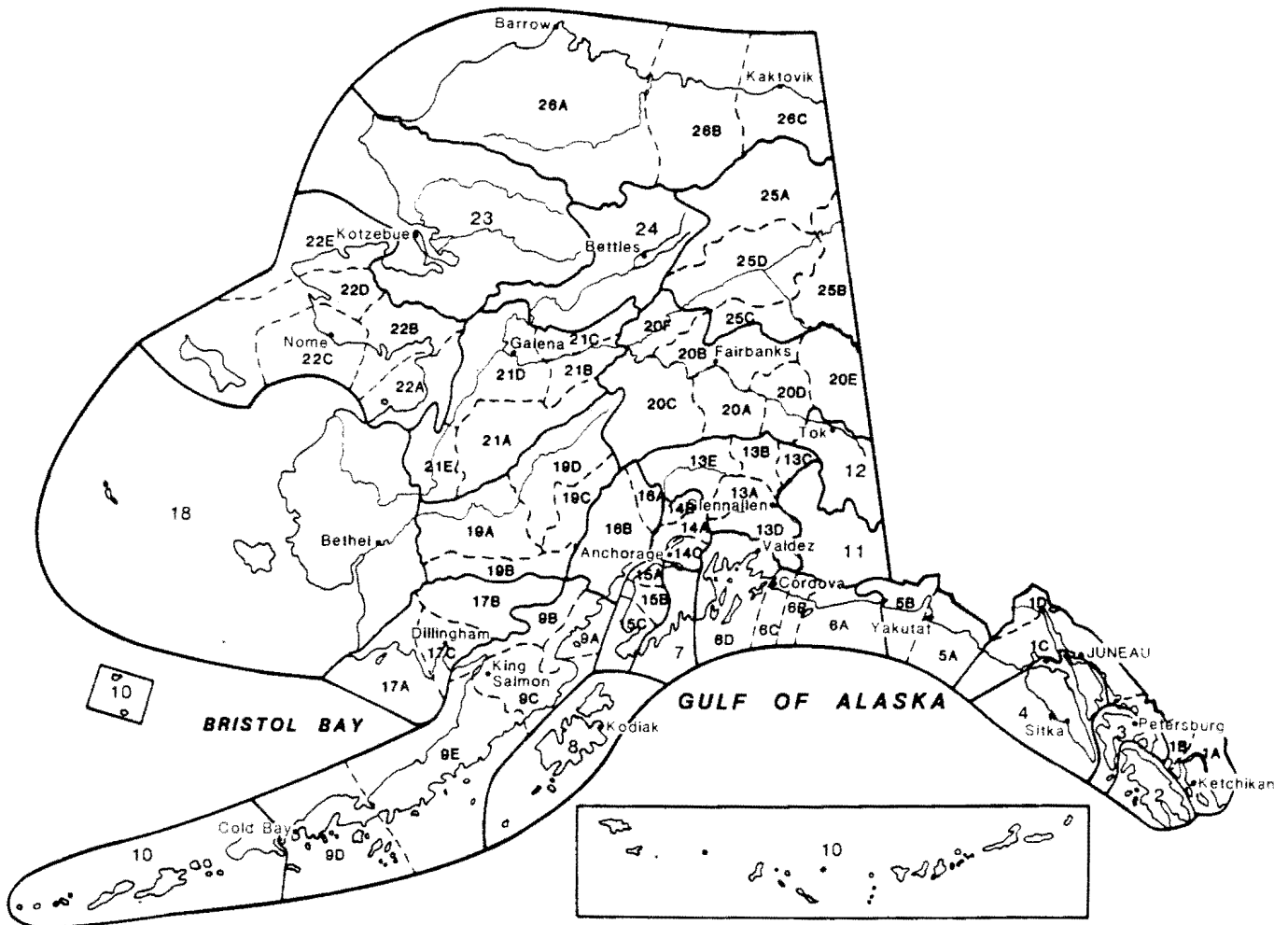
Explanation: Operating: The wood bison project was unavoidably delayed as a result of opposition from the Yukon Flats NWR and the USFWS regional office. Therefore, expenditure of operating funds was reduced. **Personnel:** The delay in the wood bison project negated the need for the amount of personnel time that would have been required of the Fort Yukon area biologist and the rural area assistant area biologist if the project had gone forward. The new McGrath area biologist spent minimal time on the bison project because of the need to address other projects. As a result of detailed time sheet accounting for an entire fiscal year, it will be possible to make realistic personnel expenditure projections in future federal aid work plans.

Submitted by:

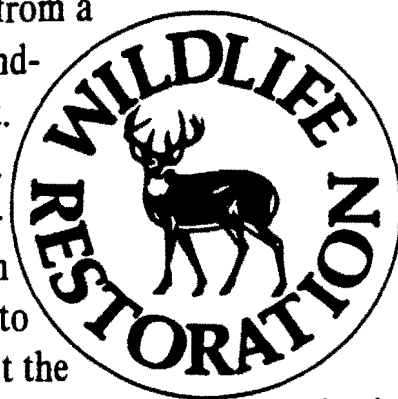
Roy Nowlin
Regional Management Assistant

David James
Management Coordinator

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