

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

**Federal Aid in Wildlife Restoration
Annual Performance Report
Survey-Inventory Activities
1 July 1999 - 30 June 2000**

BISON

Mary V Hicks, Editor



Leonard Lee Rue III

**Grant W-27-3
Study 9.0
September 2000**

STATE OF ALASKA

Tony Knowles, Governor

DEPARTMENT OF FISH AND GAME

Frank Rue, Commissioner

DIVISION OF WILDLIFE CONSERVATION

Wayne L. Regelin, Director

Persons intending to cite this material should receive permission from the author(s) and/or the Alaska Department of Fish and Game. Because most reports deal with preliminary results of continuing studies, conclusions are tentative and should be identified as such. Please give authors credit.

Free copies of this report and other Division of Wildlife Conservation publications are available to the public. Please direct requests to our publications specialist:

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

The Alaska Department of Fish and Game administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility, or if you desire further information please write to ADF&G, P.O. Box 25526, Juneau, AK 99802-5526; U.S. Fish and Wildlife Service, 4040 N. Fairfield Drive, Suite 300, Arlington, VA 22203 or O.E.O., U.S. Department of the Interior, Washington DC 20240.

For information on alternative formats for this and other department publications, please contact the department ADA Coordinator at (voice) 907-465-4120, (TDD) 907-465-3646, or (FAX) 907-465-2440.

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 April and June 2000. Bison observed included 37 (6 calves and 31 adults) in the Chitina River Herd and 87 (14 calves and 73 adults) in the Copper River Herd. Drawing permit hunts were held for the Chitina (DI450) and Copper River (DI454) Herds in 1999. Two permits were issued for the Chitina hunt and 12 were issued for the Copper River Herd. This was the first year a bison hunt was conducted for either herd since hunting was closed by emergency order in 1989.

Progress Meeting Objectives

Chitina River Herd

Between 1994 and 1997 counts on the Chitina Bison Herd increased from 30 to 46 animals, an increase of 53%. The 1998 count declined 30% when only 32 bison were observed. Increased overwinter mortality and reduced calf production were likely causes of this decline. The winter of 1997-98 was especially severe in the lower Chitina Valley. In early May, 6 dead adult bison were found and necropsied. Necropsy results coupled with low bone marrow fat content led to the conclusion that starvation was the reason for these mortalities. The winter of 1999-00 was milder and survival increased. The June 2000 count of 37 bison represents a 12% increase. Calf production in 1999 and 2000 was 6 calves each year. It appears that recruitment within the Chitina Bison Herd depends on overwinter snow conditions. Calf recruitment following moderate or severe winters will probably be low.

Two drawing permits were issued for bulls from the Chitina Herd. Both hunters were successful in taking large, old bulls. Both permittees used aircraft as transportation and both expressed a high level of satisfaction with the hunt.

Because changes in bison abundance in the Chitina Herd appear to be dependent on winter severity, I recommend that limited harvest of adult bison be allowed following mild winters when calf production is high. Ten years of hunting closure did not achieve 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, thus minimizing the impact of a severe winter. I recommend next year a drawing hunt for 2 bulls be held with the allocation dependent on calf production in 2001.

Copper River Herd

Bison numbers in the Copper River Herd increased 36% between 1995 and 1997, rising from 64 to 87 bison. The 2000 count of 87 is similar to counts the last 4 years. 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 during the last 4 years, with 14–19 calves observed each spring. High survival and calf production the last 4 years correlate with the low winter severity index for this period because bison are susceptible to severe winter weather.

A drawing permit hunt was held in 1999/2000 with 12 permits issued. Seven bison (6 bulls, 1 cow) were taken. All hunters were Alaskan residents and all bison were reported taken on public lands or private farms in the Kenny Lake area. I recommend maintaining this hunt in years when counts and calf production are high.

Segment Period Project Costs

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

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. Write management report, and 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 the harvest from the permit hunts.

Activities Accomplished

1. Wrote the management report and revised population management objectives.
2. Conducted several aerial survey flights to assess the population.
3. Monitored radio collars during the aerial survey flights.
4. Worked with the Alaska Department of Natural Resources and Alaska Department of Fish & Game's Division of Wildlife Conservation habitat biologist to finish the farewell prescribed burn plan. The prescription was met and the burn was attempted, but actual firing conditions were not adequate to generate the desired effect of burning so we halted the burn. We may try again next spring.
5. Harvest was monitored through the permit system, including a mandatory questionnaire.

Project Location: Unit 20D (5,637 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 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 increasing or decreasing 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. Write management report and review and revise population management objectives.
- 2. Assess range conditions and work with fire control agencies to improve habitat (objective 2a).
- 3. Monitor the harvest from the permit hunts (objective 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 (objectives 3e).
9. Continue investigation of options to improve bison viewing opportunities (objective 3g).

Activities Accomplished

1. Wrote management report and reviewed and revised population management objectives via the 2000–2005 Delta Bison Management Plan (objective 1 and 3).
2. Assessed range condition on the Delta Junction Bison Range and implemented forage management practices. No prescribed burn was completed because the necessary fire prescription was not present (objective 2b).
3. Monitored harvest using permit reports (objectives 3c and 3e).
4. Radio collars were placed on bison and radiocollared bison were monitored (objectives 3a and 3b).
5. Conducted aerial census flights to estimate population size and conducted ground composition counts to estimate herd composition (objectives 3c and 3e).
6. Monitored bison movements from summer range to the Delta Junction Bison Range and the Delta Agricultural Project (objective 2a, 2b, and 3f).
7. Managed bison forage on the Delta Junction Bison Range (objectives 2a and 2b).
8. Updated Delta Bison Management Plan to cover 2000–2005 (objective 3e).
9. Improved bison viewing by erecting a bison viewing sign along the Richardson Highway (objective 3g).

Segment Period Costs

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	53.0	20.7	73.7
Actual	30.8	7.7	38.5
Difference	+22.2	+13.0	+35.2

Explanation: Although the FY00 Workplan indicated an operating budget of 20.7, only 11.5 was actually allocated because the wood bison project in the Fort Yukon area office was temporarily suspended. Therefore the actual operating difference was +3.8. Unspent funds resulted from cancellation of aerial surveys in Unit 19 because of poor weather. Some savings resulted from lower than expected costs in Unit 20D.

Unspent personnel funds resulted from cancellation of aerial surveys and other fieldwork because of poor weather or survey conditions.

Submitted by

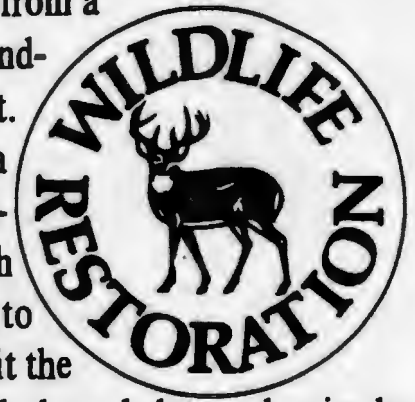
Roy Nowlin
Regional Management Assistant

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