

**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**

# **MIGRATORY GAME BIRDS**

**Status, Trends, and Public Use of Migratory Game Birds in Alaska**

**Mary U. Hicks, Editor**



**ADF&G**

**Biologist Mike Petrula and lesser sandhill crane  
with satellite radio transmitter for migration studies**

**Grant W-27-3  
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**STATE OF ALASKA**

**Tony Knowles, Governor**

**DEPARTMENT OF FISH AND GAME**

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**DIVISION OF WILDLIFE CONSERVATION**

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## **Title: Status, Trends, and Public Use of Migratory Game Birds in Alaska**

**Project Location:** Statewide Functions

### **Project Objectives**

- Conduct assessments of annual status, production, and harvest information on migratory bird populations in Alaska from a variety of data sources. Evaluate concerns, coordinate with other agencies, develop Alaska Department of Fish and Game (ADF&G) work plan/budget requests.
- Coordination on the Pacific Flyway Council and Study Committee; information exchange, update population management plans, develop research needs; coordinate conservation programs between flyways at national and international levels; develop harvest strategies, review and recommend annual hunting regulations, comment on federal harvest management programs.
- Collaborate with coastal state agencies, federal agencies, academic institutions, and non-governmental organizations to implement the Sea Duck Joint Venture under the North American Waterfowl Management Plan. Synthesize existing data, draft a strategic plan, and identify key issues and action items.
- Meet Pacific Flyway regional duck banding targets by forming a cooperative network of U.S. Fish and Wildlife Service (FWS), ADF&G, and other banders.
- Monitor implementation of the national Harvest Information Program (HIP) for adequate registration of hunters, survey sampling, and estimates of harvest, with special emphasis on sea ducks and brant.
- Implement a migratory bird subsistence harvest comanagement system in Alaska, with linkages to flyway councils; establish comanagement bodies and the management system this year.
- Effective dissemination of public information on migratory bird resources, conservation issues, and agency management and research programs. Continue participation in Hunter Education shotgun proficiency and interagency nontoxic shot programs.

**Work Accomplished During the Project Segment Period:** We developed Waterfowl Program annual work plans and budgets through analysis of migratory game bird status information, identification of management problems, and assessment of the department's capabilities and role in addressing needs relative to programs by FWS, U.S. Geological Survey-Biological Resources Division (USGS-BRD), and other state wildlife agencies. The primary source of status information and process for determining the department's project plans is through the Pacific Flyway Council and Study Committee. The department actively participates in ongoing flyway

communications, data exchanges, work sessions, and formal biannual meetings. Waterfowl Program staff also participate in many coordination meetings, technical discussions, and planning functions with FWS Region 7, USGS-BRD Alaska Science Center, U.S. Forest Service (FS), and Bureau of Land Management (BLM) to identify migratory birds issues and develop cooperative projects in Alaska.

The following list includes the primary ADF&G activities and accomplishments at the flyway national and international levels during this reporting period.

1. Contributions to revision and adoption of the first Pacific Flyway Management Plan for the Aleutian Canada Goose
2. Lead role in revision and adoption of the Pacific Flyway Management Plan for the Cackling Canada Goose (July 1999), revision of the Western Tundra Swan plan, and a Conservation Assessment for the Dusky Canada Goose (in press)
3. Contributions to Pacific Flyway recommendations on scoping for an EIS on strategies for overabundant resident Canada geese; drafting an Environmental Assessment for swan hunting; a proposed rule for ESA delisting of Aleutian Canada geese; development of a Tule white-fronted goose monitoring plan; adjustments to Central Flyway frameworks for midcontinent white-fronted geese; conceptual framework for the North American Bird Conservation Initiative (NABCI); and revision of Pacific Flyway Council bylaws
4. Participation in North American Waterfowl Management Plan (NAWMP) programs by representing the Pacific Flyway on the Arctic Goose Joint Venture (AGJV) Technical Committee; representing Pacific Flyway and serving as U.S. co-chair of the Sea Duck Joint Venture (SDJV) Continental Technical Team; led drafting of an SDJV Strategic Plan, managed CTT assignments to develop science needs documents for 20 populations, and worked with Management Board chairs to plan SDJV work plans and schedules
5. Participation in IUCN/Wetlands International, coordinating North American information for the Threatened Waterfowl Specialist Group

#### *Harvest Information Program*

Waterfowl Program staff collaborated with ADF&G Licensing Section and FWS to implement the Harvest Information Program (HIP) in Alaska for the 1999 hunting season. Specific tasks included coordination with FWS Harvest Surveys (Laurel, MD) to ensure that HIP forms, telephone response systems, and data entry protocols were accurate and consistent with federal regulations and program needs; contracting for production of HIP cards in state duck stamp vendor booklets; improving performance of state license vendors in submitting enrollment cards; answering numerous inquiries from ADF&G staff, license vendors, and the public; and monitoring hunter enrollment data acquisition. Program staff began a dialogue with FWS to improve and extend the harvest survey design for Alaska and ensure special sampling of sea duck, crane, and brant hunters in future surveys.

#### *Implementation of Bird Treaty Amendments*

Amendments to the migratory bird treaties with Canada and Mexico were finalized in 1997 to authorize and regulate spring and summer subsistence hunting and to involve rural Alaskans

directly in the migratory bird management regime. During this reporting period, the ADF&G Waterfowl Coordinator and headquarters staff worked with the Service and the Native Migratory Bird Working Group to establish a comanagement process for implementing treaty amendments. Department tasks and accomplishments with Region 7 include: (1) public presentations and consultations with the general public and native organizations on the prospective comanagement system during fall 1999; (2) development of state of Alaska comments on the proposed system; (3) plan and participate in an April 2000 workshop with native leaders to establish the Alaska Migratory Bird Comanagement Council, a statewide body, and draft bylaws; (4) design AMBCC operating procedures, revise bylaws and develop methods for regional management operations; and (5) ADF&G presentations at meetings of Pacific Flyway Council and other groups to advise that AMBCC involvement in the flyway system and national regulatory regime would begin in 2001.

### *Public Information*

In the area of public information products, the program frequently provided answers to questions and technical information to the public, other agencies and conservation groups on a wide variety of topics concerning waterfowl biology, management and hunting. Specifically, program staff maintained and improved the web page on satellite telemetry of scoters (EVOS project), contracted for design and developed material for a comprehensive waterfowl website (Federal Aid Outreach grant), produced information in the migratory bird hunting regulations summary, and maintained an Alaska toll-free telephone line for questions on waterfowl hunting and nontoxic shot. In addition, staff presented scientific papers at several professional conferences.

Since 1989, ADF&G has supported a statewide clearinghouse for advice and information on lead poisoning in waterfowl and effective use of nontoxic shot. The Waterfowl Coordinator worked with Hunter Information and Training on the Steel Shot Steering Committee with FWS to annually plan nontoxic shot program funding, products and community clinics, and maintain a team of trained agency educators. Waterfowl staff organized and conducted clinics in Tok and supported clinics by consultant Tom Roster in Anchorage, Kodiak, and Nome during August.

**Progress Meeting Project Objectives:** The effective working relationships and extensive coordination efforts by program staff have resulted in annual work plans and budget requests that balance state, flyway, and national conservation needs and in multiagency initiatives that reflect the department's interests and capabilities.

ADF&G played a leadership role in progress on Pacific Flyway objectives for updating management plans. As subcommittee chair, the Waterfowl Coordinator co-chaired a special planning meeting and completed drafting of the Cackling Canada Goose plan, adopted by the Pacific Flyway Council in July 1999. ADF&G also contributed to the first flyway Aleutian Canada Goose plan, adopted at the same time. ADF&G continues to lead revisions of the plan for Western Tundra Swans.

The department's representation of the Pacific Flyway on the Arctic Goose Joint Venture technical committee has ensured that western states are fully involved with AGJV initiatives, especially controversial strategies to reduce overabundant white geese in the midcontinent and to

meet science needs for Pacific brant. In November of 1999 ADF&G relinquished its seat on AGJV Technical Committee to Oregon to participate in the new Sea Duck Joint Venture.

The department continues to play a key role in development of the Sea Duck Joint Venture, established under the North American Waterfowl Management Plan (NAWMP) in 1998. The Waterfowl Coordinator represents the Pacific Flyway on the Continental Technical Team and was elected U.S. co-chair. The CTT has made good progress designing and producing the first draft of a Strategic Plan in December 1999. At Board direction, the CTT will attempt to finalize the plan by March 2001. Species Status Reviews were also drafted for 20 sea duck populations; these are under peer review and scheduled for publication in 2001. Both the CTT and Management Board are fully functional, and rapid progress is expected in endorsing new science projects for sea ducks.

In Alaska, interagency duck banding efforts have been modest, focused only where field offices have committed to the program. Mallard banding goals for the state have never been met because the breeding population is dispersed and more effort is required to capture birds where they are prevalent (Gulf Coast and areas of Interior Alaska). Pintail banding has been relatively successful because of active banding in western Alaska. ADF&G will try to enlist area and regional office support for one or more banding stations (e.g., Minto Flats), but more effort is needed on some federal wildlife refuges.

HIP was successfully implemented in Alaska with no major problems in 1998, and incremental improvements were made during this reporting period. Hunters seemed aware of the program in 1999 and data entry procedures were well established. However, the department will continue to insist on improved vendor compliance. The two most common problems are that vendors are giving enrollment cards to hunters instead of submitting them to the department and cards are still being submitted late.

During this period, the department and FWS Region 7 have made substantial progress in establishing a comanagement system to implement migratory bird treaty amendments in Alaska. Advanced planning and consultation resulted in a thorough review of structural options for the system and a well-accepted decision document by FWS in March 2000. The April workshop with native leaders resulted in a high degree of consensus on the functions and roles of the statewide Alaska Migratory Bird Comanagement Council and draft bylaws. The Council should be in good position to begin substantive conservation planning and drafting spring and summer hunting regulations.

Nontoxic shot education efforts have been largely successful in Alaska through a cooperative ADF&G/FWS program. Hunter seminars and shooting clinics have been conducted in all rural regional centers and urban cities. Hunter compliance and public awareness of nontoxic shot rules seem relatively good, although we have conducted no systematic evaluation. Law enforcement contacts in urban and rural areas show low numbers of lead shot violations. ADF&G will continue to provide nontoxic shot education and integrate this material with a broad shotgun proficiency program. Future efforts should provide additional coverage on the North Slope, in Bristol Bay, and in Southeast Alaska.

**Project Location:** Regional – Northern and Western Alaska

**Project Objectives**

- Restore cackling Canada geese to 250,000 and emperor geese to 80,000 and maintain other waterfowl populations through Y-K Goose Management Plan and Pacific Flyway Council.
- Revise Pacific Flyway management plans for brant and western tundra swans, integrating involvement of North Slope and Y-K Delta interest groups.
- Monitor progress on the Spectacled Eider and Steller's Eider Recovery Plans and annually advise on work plans; evaluate status changes for Russia and the Y-K Delta; extend nontoxic shot education and enforcement efforts in coastal villages.

**Work Accomplished During the Project Segment Period:** A coordination meeting was held with Association of Village Council Presidents' Waterfowl Conservation Committee (WCC), FWS, ADF&G, Washington Department of Fish and Wildlife, and representatives of Washington and Oregon farm groups to review progress and issues of the Y-K Delta Goose Management Plan. No plan revisions were sought, but current issues included (1) reducing emperor goose harvest and engaging villages in the south Kuskokwim area in conservation efforts and (2) balancing management of wintering cackling geese in Washington and Oregon to achieve the population objective while implementing programs to reduce crop depredation. Follow-up discussions occurred at Pacific Flyway meetings in January and March 2000.

ADF&G participated as a member of the Spectacled and Steller's Eider Recovery Team. During the performance period, only 1 recovery team meeting was held. The team reviewed the status of spectacled eider recovery projects but made little progress on a draft Steller's eider recovery plan. During spring 2000, ADF&G consulted with FWS on a proposed rule to designate critical habitat for both species. ADF&G began development of state comments on the rule.

**Progress Meeting Project Objectives:** The Y-K Delta Goose Management Plan was last revised in 1998. Under cooperative management programs of the Y-K Delta Goose Management Plan and Pacific Flyway plans, Pacific white-fronted geese now number over 400,000, far above objective level. Gradual liberalization of regulations is providing more harvest opportunity for all users. Cackling Canada geese, at 240,000 birds, are approaching the population goal of 250,000. Continued dialogue with agencies and interest groups in Washington and Oregon provide a balanced approach to maintaining the population while addressing crop depredation complaints on the wintering grounds. The agencies and AVCP-WCC have been disappointed in the lack of cooperation from several villages that continue to hunt emperor geese. These agencies and councils jointly approved the use of helicopters by FWS Law Enforcement to contact spring hunters, monitor taking of emperors, and issue citations.

The Pacific Flyway management plan for cackling Canada geese has been revised and was endorsed by Pacific Flyway Council in July 1999. This plan recognizes restoration of the population, the dramatic shift north in wintering grounds, and new management procedures. It

also integrates a harvest strategy consistent with the Y-K Delta Goose Management Plan and the Canada goose agricultural depredation plan in place in Washington and Oregon. No progress has been made on revisions to the Pacific brant plan; a renewed effort is scheduled for fall 2000. Revision of the management plan for Western Tundra Swans continued, with anticipated flyway council adoption in 2001.

Recovery actions for spectacled eiders are continuing on schedule, dependent on availability of funds. However, an evaluation of delisting the Russia population segment remains on hold. The Steller's eider team has not progressed in review and expansion of a recovery plan. The joint recovery team has been without a leader for over a year. The recovery team was not consulted in developing designations of critical habitats under the ESA.

**Project Location:** Regional – Interior Alaska

### **Project Objectives**

- Implement the Management Plan for midcontinent white-fronted geese with Central and Mississippi Flyway states, including a rangewide harvest strategy; continue investigation of diminished Interior/Northwest Alaska breeders and potential conservation actions.
- Annually band a large sample of ducks on Minto Flats State Game Refuge as part of the Pacific Flyway Duck Banding Program. Regional targets are 1000 mallards and pintails.

**Work Accomplished During the Project Segment Period:** The department maintained frequent contacts with Mississippi and Central Flyway Technical Committees on issues related to management of midcontinent white-fronted geese. Current research reports on the status of birds in Interior Alaska and habitat use in Mexico were reviewed and considered. We used teleconferences and e-mail exchanges to promote development of a joint harvest strategy for all jurisdictions and to discuss potential regulation changes for the 1999 season. All three flyway councils involved reached consensus on moderate liberalization of hunting regulations.

The department has continued to work with Pacific Flyway states to plan and implement a flywaywide duck-banding program to support population modeling of western mallards and pintails. During August 2000, despite high water levels in Interior Alaska, our duck banding effort on Minto Flats was successful. The total number of ducks banded in 2000 ( $n = 1229$ ) was lower than what was achieved in previous years, however, a record number of mallards ( $n = 921$ ) were banded. Poor weather conditions and low numbers of northern pintails (16% of the total) are the probable reasons for our lower capture success. Pintails are the most abundant duck species banded (40–77%) on Minto Flats in most years. The proportion of hatch-year birds banded on Minto Flats declined for the fourth consecutive year to the lowest ever recorded by ADF&G (9%) indicating that production by interior Alaska's dabbling ducks was extremely low in 2000. Low production undoubtedly reduced the number of ducks banded this year.

**Progress Meeting Project Objectives:** ADF&G played a significant role in the intensive coordination of regulation proposals among the Pacific, Mississippi and Central Flyway Councils. Although complicated, the process resulted in more sound harvest recommendations



that were mostly adopted by FWS. Monitoring of surveys, survival rates, and harvest distribution of Interior Alaska white-fronts will continue to detect undue differential hunting mortality and determine a trend in this population segment.

The department's duck-banding efforts on Minto Lakes continue to be a successful and important part of the Pacific Flyway banding program. The interagency banding effort must be extended in the Interior and other areas to achieve regional and statewide banding goals. Greater participation by ADF&G area and regional staff and federal refuge staff would improve geographic coverage and numbers of banded ducks.

**Project Location:** Regional – Southcentral Alaska

### **Project Objectives**

- Maintain dusky Canada geese to prevent ESA listing; maintain goals of 20,000 birds and annual production of >20% young; implement the Pacific Flyway management plan.
- Produce survey estimates of dusky goose production on Copper River Delta (CRD); numbers of Canada geese and production on Middleton Island; evaluate survey methods for geese in Prince William Sound (PWS).
- Maintain a marked sample of dusky geese on CRD for population estimation in winter; begin study of seasonal distribution of Canada geese from Prince William Sound.
- Continue enumeration and marking of Tule white-fronted geese summering in Upper Cook Inlet and Kahiltna Valley.
- Produce estimates of urban Canada goose numbers and production in Anchorage; collaborate with FWS and Municipality to manage and remove surplus geese.
- Design and conduct surveys of sea ducks wintering in Kachemak Bay to assess abundance, distribution, and trends.
- (New) design and conduct a pilot project to mark and track lesser sandhill cranes from Cook Inlet to migration and wintering areas with satellite telemetry.

### **Work Accomplished During the Project Segment Period**

#### *Dusky Canada Goose Monitoring*

Monitoring of dusky Canada geese has long been a high priority of the department and the Pacific Flyway. ADF&G continued extensive coordination with Washington and Oregon, FWS, FS and USGS-BRD by attending flyway subcommittee meetings and participating in coordination of annual field programs on the Copper River Delta (CRD). The department conducted the annual helicopter production survey of the CRD in July 1999, documenting 14.7% young dusky geese. No banding and marking operations were conducted during this period because they are scheduled in alternate years, occurring next in July 2000.

We conducted a survey of Canada geese on Middleton Island from June 19–21, 2000. The effort documents the growth of this island group and periodically determines its status as part of the dusky Canada goose population. Survey methodology was similar to surveys conducted in 1996 and 1997. The number of adult geese observed varied slightly (<288 geese) among the last 3 surveys (range 1168–1456), indicating little change in the size of the breeding population in the late 1990s. However, the number of young observed in 2000 increased by approximately 50%. More broods in 2000 ( $n = 310$ ) than in previous years (183 in 1996, 201 in 1997), rather than increased brood size, are responsible for the increase in young. We estimate that 48% of the Canada goose population on Middleton Island was composed of young in 2000, compared to 34% and 40% in 1996 and 1997, respectively. Higher rates of nest success, resulting in more broods, raised our estimate of geese in 2000. ADF&G obtained genetic samples from geese at all locations.

Nesting chronology was relatively more synchronous in 2000 than in previous years with most observed broods being from 5–11 days of age. Thus, peak nest initiation occurred between 6 and 12 May and peak of hatch occurred between 8 and 14 June (using an average clutch size of 6 and incubation period of 28 days). A small number of nests were initiated much earlier. Relatively greater proportions of younger (1996) or older (1997) aged broods in previous years indicate that breeding chronology in 2000 was intermediate with respect to the timing of nesting.

#### *Tule White-fronted Goose Monitoring*

ADF&G did not conduct fieldwork on Tule white-fronted geese during this period. The department collaborated with California, Oregon, USGS-BRD and FWS to develop a monitoring program that will provide a reliable population index for Tules. The plan relies on winter banding and marking in the near-term and marking on any new Tule areas found in Alaska. ADF&G provided funding to Ducks Unlimited and BLM to support landcover mapping of the Susitna Valley and coastal marsh nesting areas, and the formerly used Redoubt Bay area. Comparative habitat analyses are planned for 2001.

#### *Sea Duck Surveys in Kachemak Bay*

For the second year, a March waterfowl survey was conducted in Kachemak Bay in an effort to monitor long-term trends of wintering sea ducks. Compared to results obtained in 1999 ( $n = 14,377$  ducks), the number of ducks counted in the nearshore stratum (<200m from shore) was down in 2000 ( $n = 10,121$  ducks). Data from the offshore stratum (>200m from shore) have yet to be analyzed. Nearshore totals indicate markedly fewer scoters than last year, down more than other species. However, because they use areas farther from shore, 1999 scoter totals may increase when the offshore stratum is tallied. Analysis and inclusion of aerial survey data for the offshore stratum will provide the best indications of population changes in sea ducks and in species composition. We expect substantial annual variation, given the geographic scope of the survey, which includes 14 species and different weather conditions during annual survey periods.

#### *Sandhill Crane Telemetry Project*

During fall of 1999 the department developed a concept plan to mark sandhill cranes in Cook Inlet with satellite transmitters to document their movements on state game refuges and during

fall migration to wintering areas. Concurrently, a citizen in Oregon asserted that Cook Inlet cranes constituted a distinct population that staged on the Columbia River and was subject to threats, warranting listing under the Endangered Species Act. ADF&G staff coordinated with wildlife departments of Washington, Oregon and California and FWS Regions 1 and 7 to evaluate the assertions about population segments and threats and to implement the satellite radio project. With cooperative funding by FWS, the department flew surveys of Cook Inlet coastal areas in June to locate breeding cranes and document production. Satellite PTTs designed for leg band attachment were ordered to provide 12-month tracking. Field capture and marking operations were planned for July 2000.

**Progress Meeting Project Objectives:** Flywaywide harvest restrictions have resulted in relative stability in the dusky goose population, as indicated by improved monitoring methods; the 1999–2000 winter index of 15,459 geese was derived from an indirect mark-resight estimate facilitated by banding and collaring of 550 dusky geese by ADF&G on the Copper River Delta in July 1998. A continued trend in high predation rates on nests and young has prevented the 20% production objective, as measured by the ADF&G July survey (11.7% young in 1998; 14.7% in 1999). The current flyway management plan calls for beginning intervention with predators on the Copper River Delta if the population falls below 10,000.

Surveys of Middleton Island geese have documented the rapid growth of this population in a nearly predator-free environment. The June 2000 data indicate that the number of adults is stabilizing, but production remains very high. Geese marked on Green Island and Middleton Island in 1998 provided direct evidence that these island birds were a component of the wintering goose complex in western Oregon. A high rate of production from these islands provides a buffer for the marginal Copper River Delta dusky geese and keeps the composite index above the critical level.

The Waterfowl Program provided technical assistance to Region II and cooperating agencies to conduct Anchorage goose surveys in 1999. Program biologists analyzed survey data, applied the mark-recapture model, and generated an annual population estimate of  $3318 \pm 160$ . Survey results indicate that the cultural harvest of eggs in spring, translocation of goslings in July, and limited airport kills are stabilizing or reducing the urban goose population. The Waterfowl Program continues to advise the Anchorage Waterfowl Working Group on scientific and flyway-wide aspects of Anchorage Canada goose management.

The project to monitor wintering sea ducks in Kachemak Bay was designed as a 5-year effort to develop trend information over sufficient time to account for variation in the number of birds and environmental conditions. Experience with equipment and methods improved in 1999, providing confidence in the design. Shoreline and aerial coverage is effective over all major habitat types for developing abundance estimates for the study area. Analysis of species habitat associations will provide additional information on factors affecting winter distribution of sea ducks.

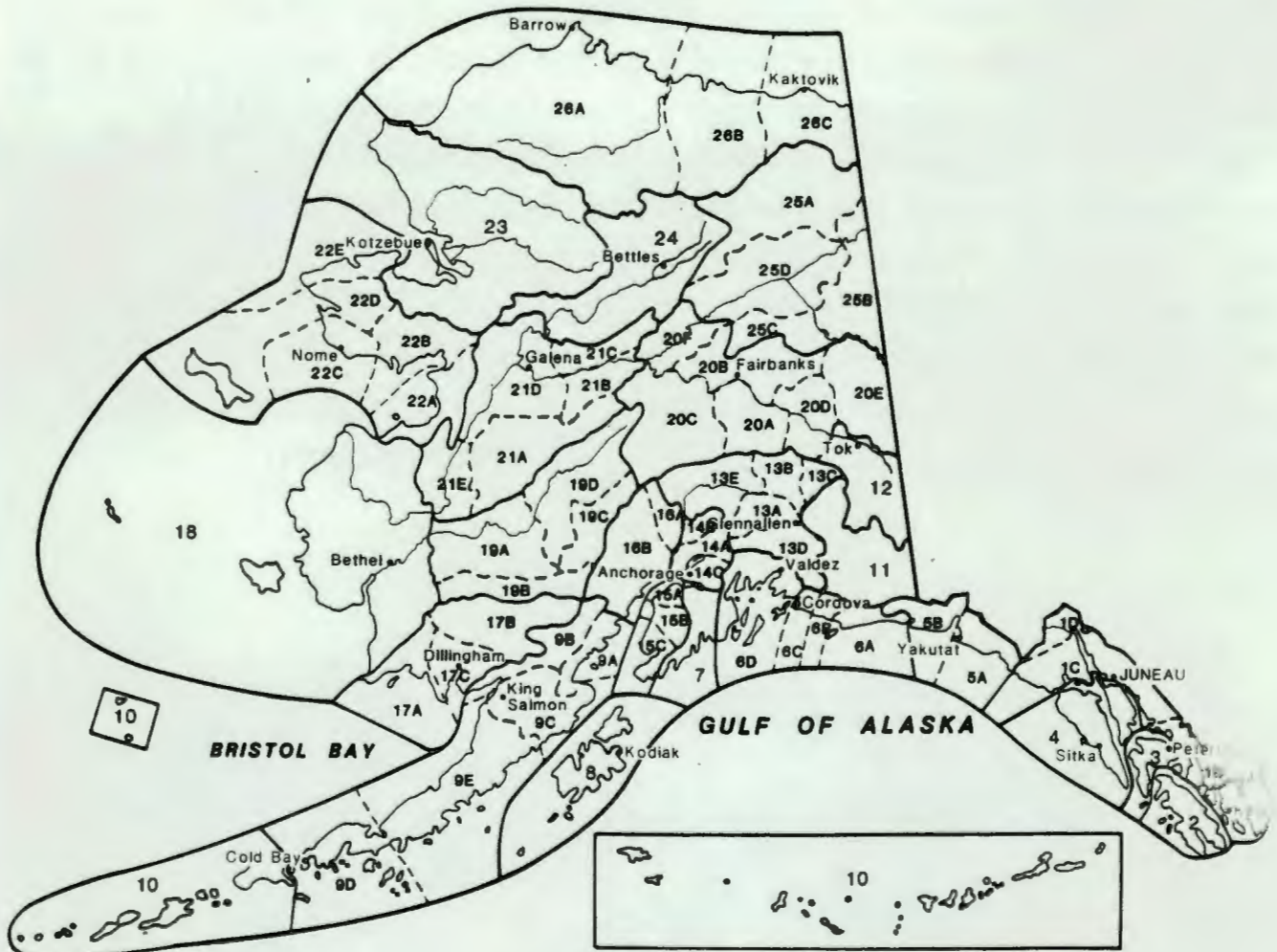
Planning and implementation of the satellite telemetry project on Cook Inlet sandhill cranes is proceeding as planned.

**Segment Period Project Costs**

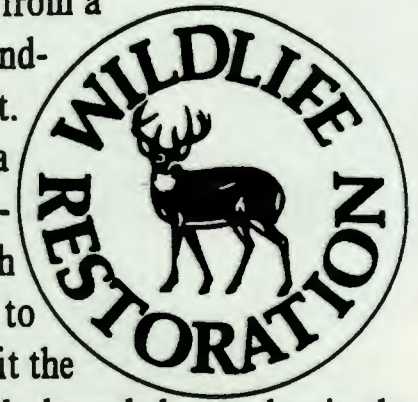
	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	121.0	60.0	181.0
Actual	120.9	57.0	177.9
Difference	0.1	3.0	3.1

*Explanation:* The annual work plan showed planned spending of \$216.4 before the final legislative allocation of the department's budget. Planned expenses shown here are the allocations received by the Waterfowl Program for the work plan. Actual expenditures were slightly lower than expected because of minor cost-savings in field projects.

# 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.



ADF&G