

Alaska Department of Fish and Game
Division of Wildlife Conservation

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

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

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Rosenberg

ADF&G biologists remove male surf scoter from a mist net

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STATE OF ALASKA
Tony Knowles, Governor

DEPARTMENT OF FISH AND GAME
Frank Rue, Commissioner

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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) annual work plans and budget requests.
- Coordinate work with the Pacific Flyway Council (PFC) and Study Committee (PFSC); exchange data, update population management plans, develop research needs; coordinate conservation programs between flyways at national and international levels; develop harvest strategies, review and recommend 1999–00 hunting regulations, comment on federal harvest management programs.
- Complete an assessment report on sea duck status and harvest in Alaska with U.S. Fish and Wildlife Service (FWS) Region 7 and U.S. Geological Survey-Biological Resources Division (USGS-BRD); identify key issues and action items.
- Meet Pacific Flyway regional duck banding targets by forming a cooperative network of 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 nonrural harvest, focusing 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.
- Disseminate public information on migratory bird resources, conservation issues, and agency management and research programs. Continue participation in Hunter Education shotgun proficiency and nontoxic shot programs.

Work Accomplished During the Project Segment Period: Waterfowl Program annual work plans and budgets are developed through analysis of migratory game bird status information, identification of management problems, and assessment of the department's capabilities and role to address needs in relation to programs by FWS, 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 (USFS) and Bureau of Land Management (BLM) to identify migratory birds issues and develop cooperative projects in Alaska.

During this reporting period, primary ADF&G activities at the flyway, national and international levels, include the following:

1. contributions to revision and adoption of management plans for Eastern Population of Tundra Swans (all 4 flyways, July 1998), midcontinent White-fronted Geese (3 flyways, July 1998), and the first Pacific Flyway Management Plan for the Aleutian Canada Goose (July 1999); lead role in revision of the Pacific Flyway Management Plan for the Cackling Canada Goose (July 1999);
2. development and direction of Conservation Assessment for the Dusky Canada Goose (in prep.);
3. contributions to Pacific Flyway recommendations on strategies for overabundant midcontinent white geese; Adaptive Harvest Management (AHM) and 1998 duck regulation frameworks; and national scaup harvest strategies;
4. participation in North American Waterfowl Management Plan (NAWMP) programs by representing the Pacific Flyway on the Arctic Goose Joint Venture (AGJV) technical committee;
5. development of the NAWMP Sea Duck Joint Venture (SDJV) conceptual framework; drafting the Prospectus; formation of the Management Board and Continental Technical Team; and representing the Pacific Flyway on both levels; and
6. participation in IUCN/Wetlands International, coordinating North American information for the Threatened Waterfowl Specialist Group.

Since 1996, the department has collaborated with FWS Region 7 to develop a summary report and preliminary plan for sea duck conservation in Alaska. The department made significant contributions to the report on the subjects of population data for harlequin ducks, summarization of statewide subsistence harvest data, historical data from state and federal harvest surveys, and a preliminary prioritization of management and research needs.

The department has continued to work with Pacific Flyway states to plan and implement a flyway-wide duck banding program to support population modeling of western mallards and pintails. In 1997, ADF&G established a duck banding station on Minto Flats State Game Refuge. During August 1998, with logistic support by FWS aircraft, a total of 1985 ducks were banded, including over 1500 pintails. Program staff also analyzed recovery data and harvest distribution of Alaska-banded ducks.

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 1998 hunting season. Specific tasks included drafting the Federal Aid start-up agreement for the department; briefing the Alaska Board of Game and submitting implementing regulations; frequent coordinating 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; producing posters, flyers, and radio PSAs announcing HIP and its purposes; contracting for

production of HIP cards in state duck stamp vendor booklets; answering numerous inquiries from ADF&G staff, license vendors and the public; and monitoring hunter enrollment data acquisition.

Treaty Amendments

ADF&G has worked closely with FWS since the mid-1980s to amend the migratory bird treaties with Canada and Mexico to authorize and regulate spring and summer subsistence hunting and to involve rural Alaskans directly in the migratory bird management regime. The treaty amendment process culminated with Senate ratification of the amendments in October 1997. During this reporting period the ADF&G Waterfowl Coordinator and headquarters staff worked with the Service and the Native Migratory Bird Working Group to develop alternatives for a system to implement treaty amendments and comanagement process and to gather public opinion. Department tasks and accomplishments with Region 7 include (1) collaboration in design of public information flyers, a video production, and a computer presentation; (2) public presentations and forums during fall 1998 in Nome, Kotzebue, Bethel, Dillingham, King Salmon, and Barrow; (3) ADF&G presentations at Pacific Flyway Council meetings and the National Flyway Council (March 1999); (4) analysis of public comments and design of a formal document proposing system alternatives (May 1999); and (5) answering questions about treaty implementation issues and soliciting opinions from the International Association of Fish and Wildlife Agencies, state wildlife agencies, and public interest groups.

Public Information

The program frequently provided answers to questions and technical information to the public, other agencies, and conservation groups on a variety of topics concerning waterfowl biology, management, and hunting. Aside from informal contacts, staff assisted the Anchorage Waterfowl Working Group with public information on the biology and management of urban Canada geese, established (and still operating) a web page on satellite telemetry of scoters (EVOS project), expanded information in the migratory bird hunting regulations summary, and maintained an Alaska toll-free telephone line for questions on waterfowl hunting and nontoxic shot.

Since 1989, the program has served as a statewide clearinghouse for advice and information on lead poisoning in waterfowl and effective use of nontoxic shot. This function is served through many telephone contacts with hunters, ammunition dealers, hunter education instructors and local governments in rural Alaska. The Waterfowl Coordinator co-chaired the Steel Shot Steering Committee with FWS to annually plan hunter information initiatives and community clinics, train and advise a team of agency educators, and conduct nontoxic shot seminars and shooting clinics focused in rural areas. Program staff organized and conducted clinics with CONSEP consultant Tom Roster in McGrath and King Salmon during August and with FWS law enforcement agents in Barrow during April 1999.

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, complementing initiatives and programs by FWS and other agencies.

ADF&G played a leadership role in achieving objectives for interflyway management plans for Eastern Tundra Swans and midcontinent White-fronted Geese this year. The department actively

engaged with the other flyways in developing technical and policy elements of these plans affecting Alaska species and secured support of the Pacific Flyway Council for the plans. The department also made major contributions toward updating a backlog of outdated Pacific Flyway management plans by leading or coleading revisions of 3 goose plans and 1 for Western Tundra Swans. It will take several years and a dedicated effort by the 10 member states to meet the objective of making all 20 population management plans current.

The department's representation of the Pacific Flyway on the Arctic Goose Joint Venture technical committee ensured that western states were fully involved with AGJV initiatives, especially controversial strategies to reduce overabundant white geese in the midcontinent. This topic has dominated joint venture business for the past two years. However, ADF&G was also able to gain cooperation of joint venture partners to support an analysis of Interior Alaska white-fronted goose concerns, including an apparent population decline and the potential for harvest vulnerability in northern Alberta, central Texas, and Mexico. The AGJV structure facilitated a dialogue among researchers in Alaska and Canada and management biologists in the Pacific, Central, and Mississippi Flyways.

The department played a key role in conceptual planning of a new Sea Duck Joint Venture under the NAWMP, which began in June 1998. The Waterfowl Coordinator served on an organizing committee that drafted and completed the joint venture Prospectus for the *pro tempore* board that met first in March 1999. The committee has become the Continental Technical Team, charged with developing North American species status reports and a draft Strategic Plan. For such a broad endeavor, the joint venture has been effectively organized and is making efficient progress toward an operational program in 2000.

The document "Population Status and Trends of Sea Ducks in Alaska" was completed in April 1999. The report and interim "plan" will serve as a focal point for interagency planning in Alaska over the next 5 years. It also will provide a substantial foundation for more information and planning documents at the Pacific Coast scale, if such efforts are initiated through the Pacific Flyway Council and/or Sea Duck Joint Venture.

For the past six years, the Pacific Flyway duck banding project has been successful in banding a large number of mallards, pintails, and other ducks to improve harvest management. Currently, it seems that mallard banding is sufficient to operate a Western Mallard Model for integration with the national Adaptive Harvest Management system. However, for pintails that are highly mobile between breeding areas, there are problems in identifying useful correlates of annual production and survival that can be measured for the Pacific Flyway with a reasonable banding effort. As a consequence, a more simplistic model at the continental level will probably drive harvest management.

In Alaska, interagency duck banding efforts have been modest and 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, certain 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 1 or more banding stations (e.g., Minto Flats). More effort is needed also on some federal wildlife refuges.

HIP was successfully implemented in Alaska with no major problems. Through paper and telephone enrollments, the department acquired 9550 complete registrations for the 1998 season, about 80% of the expected number of licensed waterfowl hunters. The department distributed supplemental information to license vendors to correct the two most common problems: (1) vendors gave enrollment cards to hunters instead of submitting them to the department, and (2) information did not clearly explain that junior, senior, and disabled veteran hunters were exempt from state duck stamp and HIP requirements. FWS obtained a good database for harvest survey sampling and provided the database to ADF&G. Results of the actual Alaska harvest survey are not yet available for evaluation.

The department and FWS Region 7 have conducted an extensive public involvement process to help design a comanagement system to implement migratory bird treaty amendments in Alaska. Meetings with the Native Migratory Bird Working Group and in rural communities provided a thorough spectrum of public concerns and desires for system structure and functions. However, no consensus was apparent, largely because of differing views about the degree of local and regional control vs. unified statewide functions. The challenge will be to adopt a system that balances diverse regional issues with the advantages of economy and solidarity of statewide functions.

Nontoxic shot education efforts have been largely successful in Alaska through a cooperative ADF&G/FWS program. A sustained information campaign of posters, brochures, and media pieces since 1990 has provided broad public exposure to the problem of lead poisoning and effective use of steel shot. Hunter seminars and shooting clinics have been conducted in all rural regional centers, with thorough coverage of Anchorage and Fairbanks; but more events are warranted in Southeast Alaska. ADF&G provided technical assistance, logistic support, and participated in the intensive nontoxic shot initiative in the Yukon–Kuskokwim (Y–K) Delta, in response to high rates of lead ingestion in threatened spectacled eiders. Over the past three years, education events have been held in nearly all villages, and the program’s effectiveness is apparent from public popularity, support from local governments, and responsiveness of stores in stocking steel shot. Over the next few years, nontoxic shot education should be integrated with a broad shotgun proficiency program, extending community events to the North Slope, Bristol Bay, and Southeast.

Project Location: Northern and Western Alaska (Regional)

Project Objectives:

- Restore cackling Canada geese to 250,000; emperor geese to 80,000, and maintain the status of other waterfowl through Y–K Goose Management Plan and Pacific Flyway.
- Revise Pacific Flyway management plan for brant, integrating involvement of North Slope and Y–K Delta interest groups, and revise the 1986 cackling Canada goose plan.

- Monitor and revise annual progress on the Spectacled Eider Recovery Plan; evaluate status changes for Russia and the Y-K Delta; continue nontoxic shot education efforts in coastal villages.
- Develop the Steller's Eider Recovery Plan, information products, and public involvement with FWS and recovery team.

Work Accomplished During the Project Segment Period: Current issues for the 1999-2001 revision of the Y-K Delta Goose Management Plan were developed among the cooperating parties during winter. Key issues included (1) reducing emperor goose harvest and engaging certain villages in the south Kuskokwim area in conservation efforts; (2) balancing management of wintering cackling geese in Washington and Oregon to achieve the population objective while implementing programs to reduce crop depredation; and (3) increasing support for use of nontoxic shot on the Y-K Delta. These issues were addressed during three meetings of the Association of Village Council Presidents (AVCP) Waterfowl Conservation Committee in Bethel and in Pacific Flyway meetings in January and March.

The Pacific Flyway Study Committee (PFSC) and its cooperators elevated the need to revise outdated management plans for cackling Canada geese and Pacific brant. During February, a joint work session was held in Portland by members of the cackler and Aleutian goose subcommittees to develop final drafts. As cackler chair, ADF&G produced a complete draft and distributed it for review to all states and cooperators. Final edits were completed at the March PFSC meeting. Several years ago work on the brant plan was suspended until the University of Alaska completed a population model. Over the past two years, the model has been reviewed by the Pacific Flyway, at scientific conferences, and by modeling experts. The model contains unusually strong density dependence in population regulation and other technical aspects that have raised questions about its reliability. Over the summer the model was subjected to a scientific peer review by USGS-BRD, and an evaluation workshop is scheduled.

ADF&G participated as a member of both Spectacled and Steller's Eider Recovery Teams. Joint meetings of the teams were held in October 1998 and March 1999. The Spectacled Eider Team focused on review and recommendations for ongoing survey and research programs, progress toward delisting the Russia population segment, and continued community involvement programs for the Y-K Delta. The Steller's Eider Team reviewed drafts of a recovery plan developed by a contractor and provided direction for improvements. Both teams were advised that a lawsuit resulted in the need for FWS to identify critical habitat for both eider species.

Progress Meeting Project Objectives: The Y-K Delta Goose Management Plan has been revised for 1999-2001. Under cooperative management programs of this plan and Pacific Flyway plans, Pacific white-fronted geese now number over 415,000, far above objective level. A cooperative harvest strategy is in place to implement liberalization of regulations and provide more harvest opportunity for all users. Cackling Canada geese, at 215,000 birds, continue to increase toward the goal of 250,000. A cooperative harvest strategy provides for increased harvest in Washington and Oregon to address crop depredation complaints, while promoting slow population growth.

The number of emperor geese have not substantially increased since 1986 (54,600 spring 1999). Managers are concerned that predation on broods, continued subsistence hunting, and low overwinter survival of juveniles are combining to inhibit restoration. During spring of 1999, Y-K Goose Plan cooperators met with representatives of several villages and attempted to open a dialogue on reduction of emperor goose harvest. These talks did not produce results, largely because these villages have alienated themselves from the cooperative process and harbor a variety of philosophical differences with AVCP. Plan cooperators supported continued emphasis by FWS on law enforcement for emperor harvest in spring 1999, with resolve to reengage with the south Kuskokwim villages next year.

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, pending a workshop on the population model and decisions on its utility in reevaluating the population objective and harvest management thresholds.

Recovery actions for spectacled eiders, including a thorough survey and research effort, continue to expand and gain effect. However, the Recovery Team is currently without a leader, and consideration of delisting the Russia breeding segment has been put on hold. The Steller's Eider Recovery Team is making slow progress toward a recovery plan that will guide operational work. To date, neither team has been asked to assist the Service in developing designations of critical habitats under the Endangered Species Act (ESA).

Project Location: Interior Alaska (Regional)

Project Objectives:

- Complete drafting and adoption of a management plan for midcontinent White-fronted Geese with Central and Mississippi Flyway states, including a rangewide harvest strategy and conservation features for diminished Interior/Northwest Alaska breeders.

Work Accomplished During the Project Segment Period: Frequent contacts were maintained with Mississippi and Central Flyway Technical Committees to address remaining issues and concerns with the draft multiflyway plan. Teleconferences and e-mail exchanges were used to promote development of a joint harvest strategy for all jurisdictions and discuss potential regulation changes for the 1999 season. Extensive coordination was implemented to keep all interested parties updated on the status of Interior Alaska White-fronted Geese and the in-depth analysis of survival rates and harvest patterns. Survey and research results were transmitted between the Koyukuk NWR biologist, USGS-BRD analysts, Canadian Wildlife Service (CWS) analysts, FWS Region 7, and flyway technical committees. A substantive consultation was conducted to evaluate the extent to which Alaska birds are differentially harvested in northern Alberta, Texas, and Mexico, and whether in these areas regulatory restrictions were warranted.

Progress Meeting Project Objectives: A management plan for midcontinent White-fronted Geese was adopted by the Mississippi, Central, and Pacific Flyway Councils in July 1998. This plan eliminates population management by eastern and western segments, adopts a new population monitoring method, and sets population thresholds for general levels of harvest. Unfortunately, no specific rangewide harvest prescriptions gained concurrence of all jurisdictions. As a result, over objections by ADF&G and some other states, 1998 seasons and bag limits were unilaterally expanded in Alberta and Saskatchewan. The department asked CWS to delay liberalization until a rangewide harvest agreement was reached and analysis of vulnerability of Alaska geese was completed. The lack of a comprehensive harvest strategy also created an awkward environment in 1999 for implementing more liberal regulations in the United States, as called for in the plan. ADF&G played a significant role in the intensive coordination of regulation proposals by the Mississippi and Central Flyways, with FWS. Technical analyses on survival and harvest distribution of Interior Alaska white-fronts are currently under critical review that may lead to changes in regulations.

Project Location: Southcentral Alaska (Regional)

Project Objectives:

- Maintain dusky Canada geese to prevent ESA listing; progress toward 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).
- Band and mark 1000 dusky geese on CRD; capture and radiomark Canada geese from Middleton Island (10) and PWS (10), as feasible.
- Continue to enumerate and delineate nesting and mark Tule white-fronted geese from Upper Cook Inlet to Kahiltna Valley.
- Produce estimates of urban Canada geese and production in Anchorage; collaborate with Region II and Municipality to manage and remove surplus geese.
- (NEW) Design and conduct surveys of sea ducks wintering in Kachemak Bay to assess abundance, distribution, and trends.

Work Accomplished During the Project Segment Period: Monitoring and conservation of dusky Canada geese has long been a high priority of the Pacific Flyway and the subject of extensive meetings of the flyway subcommittee, Washington–Oregon depredation working group, and agency cooperators planning operational tasks in Alaska (FWS, USFS, USGS-BRD). ADF&G played an active role in this extensive coordination, attending and chairing flyway subcommittee meetings, and participating in coordination of annual field programs on the Copper River Delta (CRD). The department conducted survey and banding operations of dusky geese on Green and Middleton Islands to investigate their relation to Copper River birds. The

annual production survey and biennial banding and marking were completed on CRD. In addition, ADF&G collected genetic samples from geese at all locations.

ADF&G worked with Pacific Flyway states of California and Oregon to begin designing a method to monitor the status of Tule white-fronted geese. Liberalization of white-fronted goose harvest regulations, in response to abundant Pacific white-fronts, could make the small population of Tule geese vulnerable to excessive harvest. Surveys since 1994 have documented the absence of Tules in the Redoubt Bay breeding area discovered in 1979 and the presence of about 1000 Tules breeding and molting in the Kahiltna/Lower Susitna Valleys; breeding grounds for 80% of the population are unknown. No fieldwork was conducted during this reporting period.

Primary responsibility for management of Anchorage urban Canada geese was reassigned from the Waterfowl Program to Region II in 1998. With completion of a community planning process, a FWS Environmental Assessment, and a 1998 management plan, the Region can be most effective at implementing specific local management actions. Waterfowl Program support included assistance with annual population and production surveys, banding and marking, translocating goslings to Susitna Flats, and producing population models and harvest summaries.

A winter sea duck survey program was initiated for Kachemak Bay in March 1999 in response to a lack of information about wintering sea duck aggregations, potential declines, and local concerns about harvest pressure. During March 8–16, the entire shoreline of Kachemak Bay from Anchor Point to the entrance of Seldovia Bay was surveyed by skiff. Aerial surveys were conducted with a FWS aircraft and pilot–observer on 39 random transects to count species of sea ducks, such as scoters and long-tailed ducks, that frequent exposed waters.

Progress Meeting Project Objectives: Flywaywide harvest restrictions have resulted in relative stability in the dusky goose population, as indicated by improved monitoring methods; the latest index of 13,500 geese was derived from an indirect mark–resight estimate during winter 1998–99. Banding and collaring of 550 duskys by ADF&G on the Copper River Delta in July 1998 met the marking objective necessary to support estimation of the population during winter. A continued trend in high predation rates on nests and young has prevented achieving the 20% production objective, as measured by the ADF&G July survey (11.7% in 1998; 10-year average 13.7%). The current flyway management plan calls for beginning intervention with predators on the Copper River Delta if the population falls below 10,000.

In May 1998 an ADF&G crew attempted to assess the number of breeding Canada geese on Green Island in Prince William Sound and mark a sample. Fifteen nests were found, but 7 were destroyed by predators. Four incubating females were captured on nests and fitted with plastic collars and VHF radios. During mid-July, the department flew to Middleton Island to band and mark geese. A total of 96 geese were banded, including 32 marked with green collars (20 with VHF radios). Between November 1998 and March 1999, all 4 marked geese from Green Island and 24 of 32 marked on Middleton Island were located visually or by telemetry in the Willamette Valley of Oregon. This provided the first convincing evidence that these island birds were a component of the wintering goose complex in the Northwest. It also corroborated preliminary genetic evidence that island birds were showing up in hunter checkstation samples in western

Oregon. These results strengthened the Pacific Flyway approach of managing island geese and Copper River Delta geese as subpopulations of the dusky Canada goose.

ADF&G collaborated with California, Oregon, USGS-BRD and FWS to assess problems in obtaining a reliable population index for Tule geese. A project plan and operational tasks are being designed for implementation in winter 1999–2000. Radiotelemetry to locate new nesting grounds, inventory of Upper Cook Inlet breeders, and the capability to mark a sample of Tule geese may be important tasks for ADF&G, FWS, and USGS-BRD in Alaska.

The Waterfowl Program successfully provided technical assistance to Region II and cooperating agencies to ensure that 1998 Anchorage goose surveys were consistent with previous efforts. Staff biologists helped coordinate citywide surveys and applied the mark–recapture model to generate an annual population estimate of 3850 ± 261 . Intensive banding and marking by program staff since 1992 (>1600 geese) precluded the need for more marking, but 145 geese were banded during relocations from airports. Program staff also guided and assisted with the first translocation of goslings out of the city; 80 geese were released in suitable habitat near wild adults on the west side of Cook Inlet. Morphometric data and genetic samples collected during banding contributed to broader studies of relationships among Canada geese along the Alaska Gulf Coast and Pacific Northwest. Analysis of band/collar recovery data are not only helping to estimate harvest and other mortality of urban geese but also providing opportunistic data on winter locations and habitat use in Oregon. The Waterfowl Program continues to advise the Anchorage Waterfowl Working Group on scientific and flyway aspects of Anchorage Canada goose management.

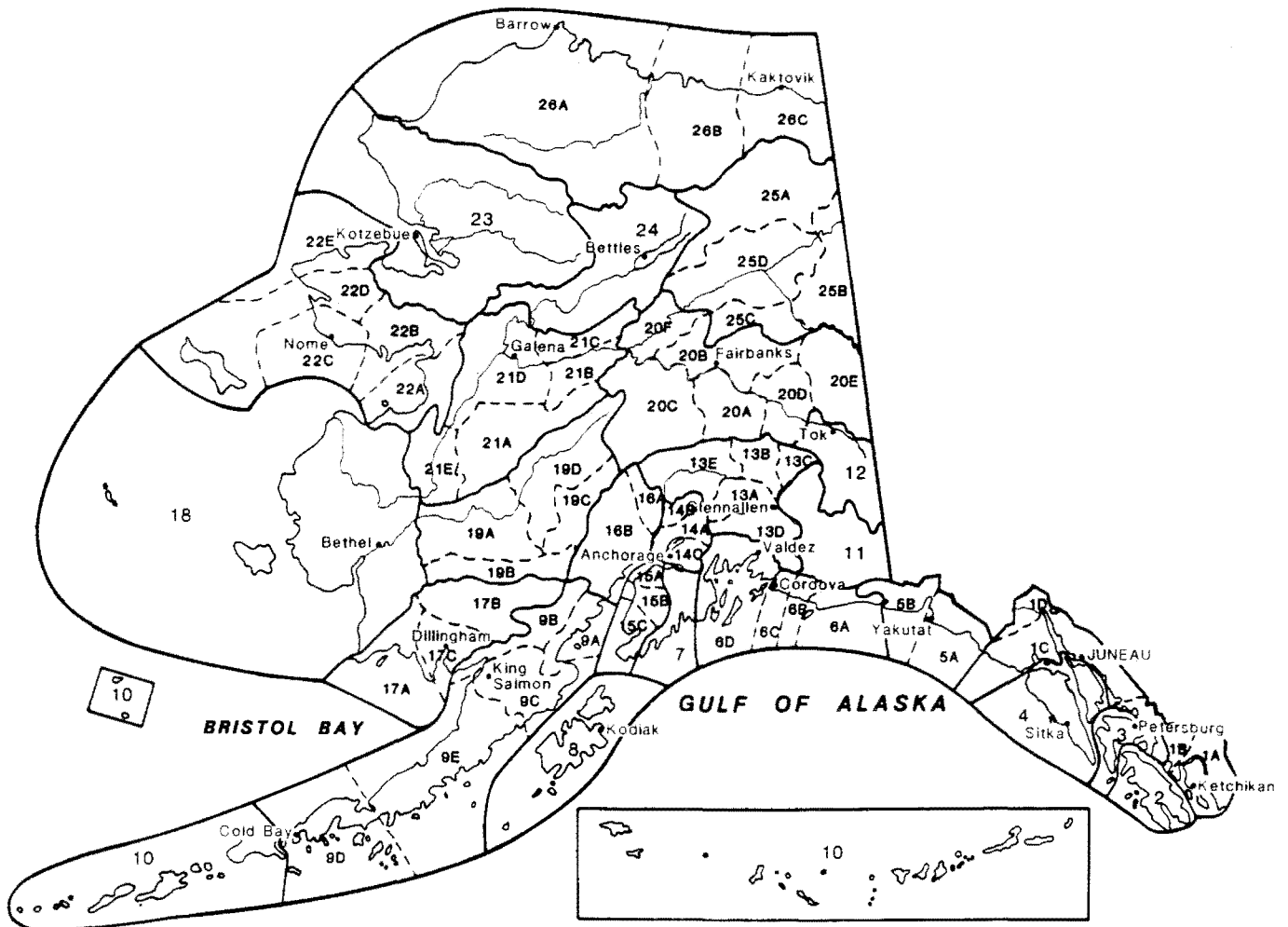
The March 1999 survey of sea ducks in Kachemak Bay demonstrated that weather and equipment needs must be addressed in field planning. Shoreline and aerial coverage was thorough, despite heavy snows and short daylight hours. Preliminary analysis indicates that the total number of sea ducks will be close to the estimated 15,000 from FWS boat and aerial surveys in 1994, with scoters (spp.), mallards, and goldeneyes as the most abundant species/groups. Several more years of surveys will be necessary to establish trend information and to explore spatial and seasonal variation in abundance of sea ducks between November and April.

Segment Period Project Costs:

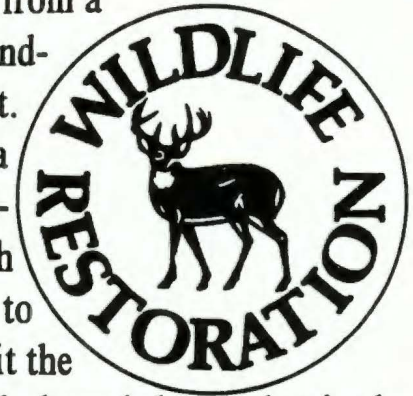
	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	161.6	58.8	220.4
Actual	137.4	60.4	197.8
Difference	24.2	-1.6	22.6

Explanation: The primary reason expenditures were lower than expected is that slightly more staff salary expenses were charged to non-Federal Aid projects. The amount of difference did not affect the performance of work toward objectives in the work plan.

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.



Rosenberg

ADF&G biologists remove male surf scoter from a mist net