ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
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MIGRATORY GAME BIRDS ANNUAL SURVEY AND INVENTORY PERFORMANCE REPORT

STATE: Alaska **GRANT AND SEGMENT NR.:** W-33-1
PROJECT NR.: 11.0

WORK LOCATION: Statewide

PERIOD: 1 July 2002 – 30 June 2003

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

REPORT DESCRIPTION: This statewide performance report includes migratory game bird survey and inventory activities. Statewide activities are listed before specific activities by region.

The Status of Alaska Migratory Gamebirds and Factors Influencing Their Populations

PROJECT OBJECTIVES:

Statewide:

1. 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 ADF&G work plan/budget requests.
2. Coordination on the Pacific Flyway Council and Study Committee; information exchange, update population management plans, develop research needs; coordinate conservation programs between flyways and at national and international levels; develop harvest strategies, review and recommend 2003-04 hunting regulations, comment on federal harvest management programs.
3. 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. Complete synthesis of population status reports; implement the strategic plan; identify priority issues and action items with the Management Board.
4. Meet Pacific Flyway regional duck banding targets by collaborating with a cooperative network of USFWS, ADFG, and other banders.
5. Improve implementation of HIP for optimal registration of hunters, adequate sampling, and survey design by USFWS, and acceptable estimates of migratory bird harvest.
6. Cooperate with USFWS and other interests to promote the work of the statewide Alaska Migratory Bird Subsistence Co-management Council; support establishment and

functions of regional committees, implement linkages to flyway councils; continue development of spring and summer subsistence regulations in Alaska.

7. Effectively disseminate public information on migratory bird resources, conservation issues, and agency management and research programs. Continue participation in Hunter Education shotgun proficiency and interagency non-toxic shot programs.

Regional - Northern and Western:

1. Restore cackling Canada geese to 250,000 and emperor geese to 80,000; maintain other waterfowl populations through cooperative efforts of the Y-K Delta Goose Management Plan and Pacific Flyway Council.
2. Revise the Pacific Flyway management plans for Pacific white-fronted geese and emperor geese; integrate involvement of Y-K Delta, Bristol Bay and other regional interest groups.
3. Monitor progress on the Spectacled Eider and Steller's Eider Recovery Plans and annually advise on work plans; evaluate status changes for Russia and Y-K Delta population segments; extend non-toxic shot education and enforcement in coastal villages.
4. Obtain preliminary data on migration patterns and wintering areas of lesser sandhill cranes breeding in Bristol Bay through satellite telemetry.

Regional - Interior:

1. Implement the Management Plan for Mid-continent White-fronted Geese with Central and Mississippi Flyway states; develop a rangewide harvest strategy and continue investigation of diminished Interior/Northwest Alaska white-fronts and potential conservation actions.

Regional – Southcentral:

1. Maintain dusky Canada geese to prevent ESA listing; maintain goals of 20,000 birds and annual production of >20% young; implement actions in the Pacific Flyway management plan.
2. Produce annual estimates of dusky goose production on Copper River Delta (CRD) and numbers of breeding Canada geese and production on Middleton Island; evaluate survey methods for geese in Prince William Sound (PWS).
3. Maintain a marked sample of dusky geese on CRD for population estimation in winter.
4. Monitor Tule white-fronted geese summering in Upper Cook Inlet and Kahiltna Valley and implement marking as necessary to facilitate a mark-recapture population estimate during fall.
5. Develop distribution, abundance and trend data for sea ducks wintering in Kachemak Bay.
6. Compile a report and analysis of migration and wintering areas of sandhill cranes tracked by satellite telemetry from Cook Inlet.

7. Assist Region II in producing estimates of urban Canada geese and production in Anchorage; collaborate with USFWS and Municipality to manage and remove surplus geese.

PROJECT ACTIVITIES AND ACCOMPLISHMENTS:

Statewide:

1. Develop ADFG FY 04 work plan/budget request consistent with high priority management needs, federal activities, and state objectives.
2. Participate in meetings of the Pacific Flyway Council and Study Committee; complete revisions of high-priority management plans; review and recommend 2003-04 hunting regulations.
3. Participate in meetings of the Sea Duck Joint Venture; serve as U.S. co-chair of the Continental Technical Team; emphasize development of funding and partners to achieve work in the SDJV Strategic Plan; contribute to species/population status reports, research planning, and coordination of management projects.
4. Band ducks at several sites to meet Pacific Flyway regional duck banding targets, in conjunction with Area Office staff, USFWS and other banders.
5. Evaluate results of 2001 HIP surveys of harvest in Alaska to assess accuracy; monitor 2002 enrollments for adequate registration of hunters; with USFWS evaluate survey sampling design and harvest estimation methods, with emphasis on development of effective surveys for harvest of sea ducks, brant, and cranes.
6. Attend meetings of the Alaska Migratory Bird Subsistence Co-management Council, regional committees and public meetings statewide; cooperatively improve operating guidelines for the system; provide technical information on bird populations, harvest and conservation issues; collaborate with regional management committees and statewide Council to expand and improve subsistence hunting regulations for spring 2004.
7. Plan and produce public information products on migratory bird resources, conservation issues, and agency management and research programs, including websites, brochures, posters, videos and special publications. Participate in continuing cooperative shotgun proficiency and non-toxic shot education programs with USFWS and Hunter Education, including development of annual interagency plans, training instructors and conducting seminars and clinics, and information products. Begin planning sea duck information and education initiatives with USFWS, conservation groups and hunters.

Accomplishments: (numbers correspond with activity numbers)

1. The SFY 2004 Waterfowl Program annual work plans and budgets were developed 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 USFWS, U.S. Geological Survey-Biological Resources Division (USGS-BRD), and wildlife agencies of other states. The primary source of status information and process for determining the department's work plans was through the Pacific Flyway Council and Study Committee. The department actively participated in flyway communications, data exchanges, work sessions, and formal biannual meetings. Waterfowl Program staff also

participated in many coordination meetings, technical discussions, and planning functions with USFWS 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.

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

    - Alaska played an active role on the Pacific Flyway Council. Matt Robus served as Coastal Consultant to the Service Regulations Committee and Tom Rothe served on the Study Committee and as chair of the Aleutian Canada Goose Subcommittee, as well as the inter-flyway contact on canvasback management. We participated in business meetings in July 2002, a technical workshop in January 2003, and a technical symposium and spring meetings in March 2003.

    - ADF&G was a key agency in developing revisions to the Pacific Flyway Management Plans for Pacific Brant (adopted July 2002), Pacific White-fronted Geese (final review draft to PFC in March 2003), and Tule White-fronted Geese (in draft). In addition, coastal states and the USFWS made development of a Tule goose inventory survey a priority; a project design was drafted in March 2003 and ADF&G worked with Alaska agencies to coordinate monitoring of radio-marked birds in 2004.

    - ADF&G led the Pacific Flyway discussions of recommended changes to the USFWS Canvasback Harvest Strategy and 2002 and 2003 regulations; this included coordination among diving duck committees of all flyway councils. Contributed to Pacific Flyway recommendations on the FWS EIS on overabundant resident Canada geese; Environmental Assessment for swan hunting; and completion of the PFC Trumpeter Swan Implementation Plan (TSIP).

    - Participation in IUCN/Wetlands International, coordinating North American information for the Threatened Waterfowl Specialist Group.

3. Participation in North American Waterfowl Management Plan (NAWMP) programs. The Waterfowl Coordinator represented the Pacific Flyway and served as U.S. co-chair of the Sea Duck Joint Venture (SDJV) Continental Technical Team (CTT): managed CTT assignments to develop species status assessments; coordinated development of the 2003 package of endorsed projects and funding allocation recommendations; drafted comments related to sea ducks for the 2003 Update to NAWMP; and provided support and input to the first SDJV-sponsored North American Sea Duck Conference in Victoria, BC. Worked with Management Board chairs to plan SDJV work plans and meeting schedules. Chaired a CTT meeting in November 2002. In addition, the Coordinator has worked with ADF&G staff, USFWS, and non-governmental organizations to develop a strategic plan for inclusion of most of Alaska in the Pacific Coast Joint Venture (PCJV). A state steering committee met several times to determine conceptual approaches and draft sections of the plan. Program staff took the lead on relating waterbird population objectives to regional habitat target areas and writing several target area descriptions.

4. *Pacific Flyway Duck Banding Program* - During this reporting period, the Waterfowl Program continued its duck banding effort only at Minto State Game Refuge (see Regional – Interior). To date, the Pacific Flyway Study Committee and USFWS have not made

adequate progress in completing the Western Mallard Model or determining feasibility of a continental Pintail Model. These models are designed to prescribe annual hunting regulations through adaptive application of data on productivity and harvest, partially derived from band recovery data. Because these models are "data-hungry" and the cost of banding is high in Alaska, we are waiting for decisions on optimal levels and age-sex composition of target banding samples. Until geographic and composition targets are determined for the modeling processes, we will continue a maintenance level of banding.

5. *Harvest Information Program* - Waterfowl Program staff collaborated with ADF&G Licensing Section and FWS to improve the Harvest Information Program (HIP) in Alaska for the 2002 and 2003 hunting season. Specific tasks included coordination with FWS Harvest Surveys (Laurel, MD) to ensure that HIP forms, internet 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. Analysis of HIP enrollment data from 1998–2001 produced important new information on migratory bird hunter activity and community origins of hunters.

6. *Implementation of Bird Treaty Amendments* – The ADF&G Waterfowl Coordinator and headquarters staff continued work with the Service and Alaska Native representatives for the Alaska Migratory Bird Comanagement Council (AMBCC). Department activities and accomplishments included: (1) served as chair until October 2002; (2) participated in AMBCC meetings in October 2002 to identify issues and guidelines for the regional committees, and April and May 2003 to produce proposed 2004 spring hunting regulation proposals; (3) served on the AMBCC Technical Committee to develop regulatory options, prepare technical analyses, and present information on the status of migratory bird populations and harvest in Alaska (ADF&G contributed analyses of subsistence and recreational harvest data); (4) participated on the ad hoc harvest survey committee to design a comprehensive statewide subsistence harvest survey; and (5) helped lead two meetings to initiate a multi-region process to revise the Pacific Flyway Management Plan for Emperor Geese. In addition, ADF&G helped present 2003 spring hunting regulations to the Pacific Flyway Council, provided comments on proposed federal subsistence regulations, and facilitated a state-federal law enforcement coordination meeting for the spring 2003 season.

7. *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 Waterfowl Program web site, expanding pages on satellite telemetry of scoters and sandhill cranes, and expanding information on migratory bird hunting and regulations. Produced the annual 2002 Migratory Bird Hunting Regulations Summary and provided documents for public access on ADF&G websites. Waterfowl staff transmitted technical information on management and research projects at EVOS science conferences, North American Sea Duck Conference, and the North American Crane Workshop.

   Program staff collaborated with the Center for Alaska Coastal Studies to develop a Sea Duck Education curriculum for schools, a mobile educational display, and public presentations in

Homer and Anchorage. ADF&G provided matching funds for a federal grant, technical biological material, and editorial advice on the final products.

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 (HIT) on the Steel Shot Steering Committee with FWS to plan the annual nontoxic shot program of products and community clinics. The Coordinator conducted an agency training session to maintain the team of educators and collaborated with USFS to conduct a youth waterfowl hunter clinic in Cordova (August 2002). Twenty-five young hunters received classroom teaching and field exercises on safety, waterfowl conservation, hunter ethics, and shooting skills.

Regional - Northern and Western:

1. Participate in meetings and coordination of annual activities of the Y-K Delta Goose Management Plan with AVCP, USFWS and Pacific Flyway Council.
2. Meet and communicate with Y-K Delta, Bristol Bay and other interest groups to develop revisions to Pacific Flyway management plans for Pacific white-fronted geese and emperor geese.
3. Participate on the Spectacled/Steller's Eider Recovery Team; assist with completion of a Steller's Eider Recovery Plan; cooperatively develop annual work priorities.

Accomplishments: (numbers correspond with activity numbers)

1- 2. A coordination meeting was held with the Association of Village Council Presidents' Waterfowl Conservation Committee (WCC) and FWS in February to review the Y–K Delta Goose Management Plan, and co-management process to develop 2003 subsistence regulations. AVCP was restructuring the WCC, so there were no specific actions or decisions from the meeting.

3. ADF&G participated as a member of the Spectacled and Steller's Eider Recovery Team. During the performance period, recovery team meetings focused on the status and priority of eider recovery projects, coordination among agencies and industry-sponsored research, and completion a Steller's eider recovery plan. Program staff completed development of a Habitat Conservation Planning grant focused on listed and candidate coastal bird species, including: (1) education program for avoidance of albatross bycatch in longline fisheries; (2) research on potential interaction of eiders and fisheries; (3) a study of Steller's eider distribution in Cook Inlet and Kodiak; (4) studies of eider occurrence near potential wind energy facilities; and (5) studies of abundance and human interactions of Kittlitz's murrelets.

Regional - Interior:

1. Work with Central and Mississippi Flyway states to implement the Management Plan for Mid-continent White-fronted Geese; monitor annual status of diminished Interior/Northwest Alaska breeders and review analysis of survival and harvest patterns throughout their range by USFWS and USGS-BRD.
2. Band ducks at Minto Flats State Game Refuge to meet Pacific Flyway regional duck banding targets, in conjunction with Area Office staff and USFWS.

Accomplishments: (numbers correspond with activity numbers)

1. The department maintained frequent contacts with Mississippi and Central Flyway Technical Committees on issues related to management of mid-continent white-fronted geese. ADF&G reviewed survey and research reports on the status of birds in Interior Alaska, and coordinated with staff of Migratory Bird Management and Koyukuk NWR to evaluate results of surveys and research projects. ADF&G worked with Central Flyway states and the Service to review potential changes to harvest regulations that could affect Interior white-fronts. No relevant changes were proposed, and protective restrictions may be considered after further analysis of banded birds.

2. 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 2002 our duck banding effort on Minto Flats was successful. An average number of ducks were banded in 2002 (n = 1193) composed of 68% northern pintails, 29% mallards and 3% of other duck species.

Regional – Southcentral:

1. Conduct an aerial survey to produce an estimate of dusky Canada goose production on Copper River Delta (CRD).

2. Conduct ground surveys to estimate Canada goose numbers and production on Middleton Island (alternate years).

3. Evaluate survey methods to produce indices for Canada geese in Prince William Sound.

4. Band and mark 200-300 dusky Canada geese in late July 2002; as feasible, capture, band and radio-mark Canada geese from PWS.

5. Conduct aerial surveys to enumerate Tule white-fronted geese on the principal molting area in Kahiltna Valley and on Cook Inlet Coastal marshes.

6. Conduct a winter boat and aerial surveys of sea ducks in Kachemak Bay; estimate abundance and trends and record distribution.

7. Assist Region II with ground surveys to count urban Canada geese and annual production in Anchorage; develop the model-driven annual population estimate; collaborate with Region II and the Municipality to translocate several hundred goslings to suitable habitats in west Cook Inlet.

Accomplishments: (numbers correspond with activity numbers)

1. *Dusky Canada Goose Monitoring* – The July 2002 dusky Canada goose production survey was flown over the west Copper River Delta on July 27. The survey aircraft was a Robinson R22 helicopter with pilot and one observer. Weather conditions were favorable. Survey coverage was similar to previous years over the west delta, from Copper River islands to Point Whiteshed, and Egg Island. A total of 3,708 geese were counted on the survey, including an estimated 1336 young. Production of young dusky Canada geese on the Copper River Delta in 2002 (30.5%) was the highest recorded since 1977. ADF&G participated in

the annual meeting with USFS, USFWS and USGS-BRD to review results of 2002 surveys and research on the breeding grounds and coordinate field activities for 2003.

2 - 3. Dusky Canada geese are counted on Middleton Island in alternate years. No survey was conducted during this reporting period; the next effort is scheduled for June 2004. Although the department has worked with USFWS, USGS, and USFS to develop a method of estimating the number of Canada geese in Prince William Sound, no feasible survey or mark-recapture program has been found. Given that this is an opportunistic task, staff time and funds were insufficient to mount an experimental project this year.

4. During July 2002, dusky Canada geese were captured in molting drives on the Copper River Delta; 334 were banded and marked with neck collars. USGS-BRD crews that have been conducting work on breeding ecology annually have marked a sample of geese for other study purposes. They marked 490 in 2001 and 73 additional birds in 2002. As a consequence of this collaboration, the department has been able to reduce effort and costs by banding fewer geese in alternate years, while ensuring that the Pacific Flyway target is met.

5 . *Tule White-fronted Goose Monitoring* – Program staff flew a helicopter survey for molting Tule geese in the Upper Kahiltna Valley in July 2002. Only 61 geese were counted where there have been up to 800 in previous years. The periglacial lowlands were unusually dry this year, providing one potential explanation why geese may have dispersed in the region or molted elsewhere. Because Tule geese are widely dispersed during nesting and occupy shrub-forest habitats, breeding ground surveys have not proven reliable, and the molt survey has become an essential index to most of the population. ADF&G biologists applied all available Tule goose data, in consultations with the Alaska Department of Natural Resources, to evaluate impacts of licensing for natural gas exploration in the Lower Susitna and Kahiltna Valleys. ADF&G advised on critical and sensitive Tule goose areas, mitigation requirements, and the need for consistent goose monitoring efforts.

6. *Sea Duck Surveys in Kachemak Bay* – For the fifth consecutive year, a March waterfowl survey was conducted in Kachemak Bay in an effort to monitor long-term trends of wintering sea ducks. We estimated that 25,955 ducks occupied Kachemak Bay in 2003; 23,878 in 2002; 22,142 in 2001; 16,553 in 2000; and 26,283 ducks in 1999. Most ducks (60-80%) were observed in the shoreline stratum (<200m of shore). Ducks observed in the offshore stratum (>200m from shore) were most abundant in the <20m deep bathymetric substratum. Goldeneyes, mallards, and white-winged scoters comprised the largest proportion of the total duck estimate. We attribute most of the annual variation in our estimates to the large geographic scope of the survey, the diversity of 14 primary species in the bay, and different weather conditions during the annual survey periods. These results will provide baseline information on future dynamics of wintering waterfowl, as well as information to evaluate potential effects of local harvests.

7. *Urban Canada Geese in Anchorage* – The Waterfowl Program provided technical assistance to Region II and cooperating agencies to conduct surveys of urban geese in Anchorage during 2000, 2001, 2002, and 2003 as well as manage banding operations. Program biologists analyzed survey data, applied the mark-recapture models, and generated a population estimate of 1,448 geese in 2003. Waterfowl staff will continue to coordinate with and assist the Anchorage Waterfowl Working Group in gathering management data and will

implement strategies to maintain the goose population near the recommended population level of 2,000 geese.

ADDITIONAL FEDERAL AID-FUNDED WORK NOT DESCRIBED ABOVE THAT WAS ACCOMPLISHED ON THIS PROJECT DURING THIS SEGMENT PERIOD

(This item was identified in the Project Statement but not the W-33-1 annual work plan.)

Sandhill Crane Telemetry Project - During the 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. In 2000, we were successful in tracking three cranes during fall migration; two returned the next spring. To increase our sample size and validate previous data, nine additional satellite transmitters were deployed on sandhill cranes in upper Cook Inlet in April and July 2001. We were able to successfully track six cranes during the fall and subsequent spring migration. To broaden the scope of the study and investigate affinities between upper Cook Inlet and Bristol Bay cranes, we deployed seven satellite transmitters on cranes captured on the Nushagak Peninsula in August 2002. Results of the study were presented at the Ninth North American Crane Workshop (February 2003). A manuscript was submitted for review for publication in the proceedings. Final data from these birds were obtained in summer 2003 as their PTT batteries failed. A summary of this study, maps of crane movements and educational links to other crane projects are posted on our website:

http://www.state.ak.us/adfg/wildlife/duck/crane/crane.htm

Submitted by: Thomas C. Rothe, Michael J. Petrula, Daniel H. Rosenberg

Statewide Project Costs (in thousands):

State Share (25%)	Federal Share (75%)	Total
63.1	189.1	252.2