ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF WILDLIFE CONSERVATION
PO Box 115526
Juneau, AK 99811-5526

Alaska Department of Fish and Game
Wildlife Restoration Grant

GRANT NUMBER: AKW-10 Wildlife Restoration FY2016

PROJECT NUMBER: 11.0

PROJECT TITLE: Migratory Game Bird Annual Survey and Inventory: Status, Trends, and Public Use of Migratory Game Birds in Alaska.

PROJECT DURATION: July 1, 2015 – June 30, 2016

REPORT DUE DATE: September 1, 2016

PRINCIPAL INVESTIGATOR: Dan Rosenberg

COOPERATORS: Mike Petrula, Jason Schamber, Kyle Smith

WORK LOCATION: Statewide

I. SUMMARY OF WORK COMPLETED ON JOBS IDENTIFIED IN ANNUAL PLAN THIS PERIOD

Job/Activity 1: Conduct assessments of annual status, production, and harvest information on migratory bird populations in Alaska from a variety of data sources. Evaluate problems and concerns, coordinate with other agencies, and develop ADFG work plan/budget requests.

Accomplishments The FY 2016 Waterfowl Program annual work plans and budgets were developed through analysis of migratory game bird status information, identification of management needs and issues, Pacific Flyway management plans, and assessment of the department's capabilities and role in addressing needs relative to programs by U.S. Fish and Wildlife Service (USFWS), the Alaska Migratory Bird Co-management Council (AMBCC), U.S. Geological Survey-Biological Resources Division (USGS-BRD), U.S. Forest Service (USFS), Joint Ventures, 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 (PFC) and Study Committee (PFSC). The department actively participated in Pacific 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 the AMBCC, USFWS Region 7, USGS-BRD Alaska Science Center, USFS, University of Alaska, Canadian Wildlife Service, and the Sea duck and Arctic Goose Joint Ventures to identify migratory bird issues and develop cooperative projects in Alaska.

Job/Activity 2: 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.

Accomplishments: Alaska played an active role on the PFC (Bruce Dale) and PFSC (Dan Rosenberg). The Waterfowl Program Coordinator (Coordinator) served on the Pacific Flyway Study Committee and represented the Pacific Flyway on the Arctic Goose Joint Venture and the Harvest Management Working Group. The Coordinator chaired subcommittees to update the PFSC and revise management plans for Aleutian Canada geese, emperor geese, mid-continent greater white-fronted geese, Pacific Coast Trumpeter Swans, and eastern tundra swans. The Coordinator also served on subcommittees to review and edit plans and coordinate management activities for Brant, cackling geese, Pacific white-fronted geese and Tule geese, Taverner's, lesser, and Vancouver Canada geese, lesser snow and Ross' geese, and western tundra swans. The Coordinator recommended early-season regulations for sport hunting in Alaska to the Council and USFWS. The Coordinator integrated and coordinated PFC activities with the AMBCC and worked closely with the Executive Director and committee members to develop and review proposals and incorporate the AMBCC in the revision of the Pacific Flyway emperor goose management plan and develop the AMBCC emperor goose management plan.

During this reporting period, the Coordinator and waterfowl program staff worked with the Pacific Flyway to revise the emperor goose plan for adoption in FY17, and liberalized harvests of Brant, snow geese, and canvasbacks. We continued working with the USFWS, North Slope Borough and AMBCC to implement harvest regulations that meet the needs of local residents while minimizing the incidental harvest of Steller's eiders and yellow-billed loons.

Job/Activity 3: Collaborate with coastal state agencies, federal agencies, academic institutions and non-governmental organizations to implement the Sea Duck Joint Venture and Arctic Goose Joint Venture strategies 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.

Accomplishments: Coordinator worked with partners in the U.S. and Canada to review and recommend sea duck research and management projects to update objectives in the 2014-2018 SDJV Strategic Plan. Staff is analyzing results of a 2012–2014 sea duck population monitoring program in South-central Alaska last surveyed in 2003. Staff continued to monitor results and data analysis of a SDJV funded population delineation project in cooperation with the USFWS, USGS, and Canadian Wildlife Service. Barrow's goldeneyes were instrumented with satellite transmitters in Southeast, AK in 2012 and expanded to Kachemak Bay, AK in FY13 and 14 (see below). Staff began a new SDJV funded satellite telemetry project in April 2015 at Nelson Lagoon to further study the movements and distribution of

black scoters. In 2016, staff returned for a second season at Nelson Lagoon to continue the effort of satellite tagging black scoters. Coordinator worked with partners in the U.S., Canada, and Russia to review and recommend Arctic Goose research and management projects and update objectives in the AGJV Strategic Plan. Program coordinator worked with the AGJV Management Board to develop management and communications strategies for overabundant light geese.

Job/Activity 4: Update information compiled on sea duck status and harvest in Alaska with USFWS Region 7 and USGS-BRD; identify key issues and action items.

Accomplishments: Program coordinator and staff in cooperation with USFWS-R7 and USGS-BRD have tracked sea duck population trends and demographics in Alaska, which are used to identify data gaps and research and managements priorities. Fall/winter harvest is compiled through HIP and reported by staff to the USFWS and Pacific Flyway. Program staff review spring/summer subsistence harvest estimates of sea ducks from ADF&G conducted harvest surveys.

Job/Activity 5: Meet Pacific Flyway regional duck banding targets by forming a cooperative network of USFWS, ADFG, and other banders.

Accomplishments: The Waterfowl Program continued its duck banding effort at Minto Flats State Game Refuge and in Anchorage (see Regional–Interior and Southcentral). Staff established goals for operational banding needs in Alaska and other states as part of the PFSC and PFC, and the USFWS Adaptive Harvest Management Models for western Mallards and northern pintails. This involved collaboration with USFWS Region 7 to define banding needs and apply banding and harvest data to regulatory prescriptions in Alaska and the Pacific Flyway states.

Job/Activity 6: Monitor implementation of HIP for adequate registration of hunters, survey sampling, and estimation of non-rural harvest, with emphasis on harvest of sea ducks, brant and cranes.

Accomplishments: Waterfowl Program staff collaborated with ADF&G Licensing Section and FWS to implement the Harvest Information Program (HIP) in Alaska. This included design and printing of state duck stamps and contracting for production of HIP cards in state duck stamp vendor booklets, evaluation of survey design, improving performance of state license vendors in submitting enrollment cards, and answering numerous inquiries from ADF&G staff, license vendors, and the public. We continued to compile HIP enrollment data and to assess trends in migratory bird harvest and hunter activity statewide. Hunter enrollment cards and duck stamps are distributed to licensed vendors in time for the spring subsistence season.

Job/Activity 7: Support enhancement of the migratory bird subsistence harvest co-management system in Alaska, and linkages to flyway councils; expand and improve

statewide harvest strategies, harvest data collection, and outreach projects. Serve as technical representative to the Alaska Migratory Bird Co-management Council.

Accomplishments: The ADF&G Waterfowl Coordinator and Director Bruce Dale continued work with the Service and 11 Native regional representatives of the AMBCC, participating in regulatory meetings in September, 2015 and April, 2016. Department activities and accomplishments include: (1) serving on the AMBCC Handicraft Committee, Invitation Committee, Transportation Committee, Fall/Winter Harvest Working Group, Standard Operations Procedures Committee and Harvest Survey Committee to develop regulatory proposals and solutions to outstanding regulatory issues and concerns; (2) implementing a federal regulation to allow the sale of handicrafts containing non-edible bird parts and preventing waste of edible bird parts (3) presenting information on the status and trends of migratory bird populations and harvest in Alaska to the AMBCC; (4) assisting with development of 2016 federal subsistence regulations and technical review and analyses of proposals; (5) chairing the Emperor Goose Subcommittee to address a subsistence harvest and revise the Management Plan; and (7) serving as liaison between the AMBCC and PFC including drafting PFC recommendations to support Alaska subsistence harvest regulations. The Program Coordinator participated in the assessment and review of the statewide harvest survey and coordinated with Subsistence Division staff in this process. Program coordinator and staff attended regional management body committee meetings in Bethel and Kodiak.

Job/Activity 8: Effective dissemination of public information on migratory bird resources, conservation issues, and agency management and research programs. Support Hunter Education shotgun proficiency and non-toxic shot programs.

Accomplishments: In the area of public information products, program staff 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, regulations, and hunting. Program staff maintains, reviews, and updates department web pages on migratory birds including research projects, endangered species information, and information on migratory bird hunting and regulations. The Coordinator and staff edited and revised the hunter regulations brochure and coordinated with USFWS special agents to assure consistency with federal regulations. Coordinator and staff transmitted technical information on management and research projects to the Pacific Flyway, the AMBCC, at state and federal coordination meetings, and scientific conferences.

Job/Activity 9: Participate in interagency efforts to monitor highly pathogenic avian influenza including: (1) implement and refine wild bird surveillance programs in the national and Pacific Flyway strategies, and the Alaska Interagency Sampling Protocol; (2) coordinate sample submissions to certified laboratories and registry of samples in the national database; (3) develop joint notification protocols and communication plans for release of information to affected agencies and the public; (4) develop cooperative response plans for discovery of positive tests or bird

mortality events; and (5) collaboratively develop and deliver public information products on avian influenza, current situations, agency surveillance efforts, and precautionary hygiene for public contacts with wild birds.

Accomplishments: Program coordinator participated in developing and refining national and regional surveillance programs and communication protocols as a technical representative to the Pacific Flyway. ADF&G program staff coordinated with USDA and USGS-BRD to conduct surveillance of highly pathogenic avian influenza as part of national and regional strategies. Staff participated in sampling of live and hunter-shot birds at interior and southcentral Alaska locations following the Alaska Interagency Sampling Protocols. Collected samples were submitted to laboratories directly or jointly with partner agencies. Surveillance results were communicated to the Pacific Flyway, AMBCC, governmental and non-governmental organizations through meetings and electronic correspondence. Program coordinator and staff delivered directly and jointly public information on avian influenza current status, sampling efforts, precautionary hygiene via press releases and media interviews.

Job/Activity 10: Work cooperatively with other state and federal agencies, non-governmental organizations, and divisions and programs within ADFG to formulate, review, evaluate, and comment on land use plans, management plans, resource development plans, the NEPA process, Endangered Species Section 7 consultation, and other state and federal special areas management and regulatory functions.

Accomplishments: Program coordinator and staff have reviewed permit applications for ecological impacts and mitigation strategies for energy development projects (oil and gas, wind, hydroelectric), large scale mining projects, state special area management activities and planning documents, section 7 consultation for development in Steller's and Spectacled eider habitat, NEPA documents for the Izembek National Wildlife Refuge and the Chugach National Forest Land Management Plan, and NPRB proposals. Coordinator and staff provided recommendations to the scoping process for the revision of the State Comprehensive Wildlife Conservation Strategy.

Regional - Northern and Western

Job/Activity 1: Restore cackling Canada geese to 250,000 and emperor geese to 80,000. Maintain the status of other waterfowl above population objective through Y-K Goose Management Plan and Pacific Flyway Council. Revise the Y-K Goose Management Plan in coordination with the USFWS, the Pacific Flyway Council, AVCP Waterfowl Conservation Committee, the AMBCC and the Oregon Farm Bureau.

Accomplishments: The Program Coordinator represented the Department at meetings of the Waterfowl Conservation Committee of the Association of Village

Council Presidents and is working collaboratively on efforts to revise the Yukon-Kuskokwim Delta Goose Management Plan, the Pacific Flyway Emperor Goose Management Plan and the Pacific Flyway Brant Management Plan and the joint Pacific, Central, and Mississippi flyways Mid-continent White-fronted Goose Management Plan. The Y-K Delta Goose Management Plan has expired and is up for renewal. It remains in effect by continuing agreement. The Waterfowl Coordinator, members of the PFSC, the Oregon Farm Bureau, the USFWS, and the AVCP Waterfowl Conservation Committee continued to meet to discuss population status and changes to the Management Plan and resolve management concerns regarding cackling geese survey methodologies, population estimates and objectives, and harvest strategies through the AMBCC, PFSC, and PFC processes as well as resolve issues of agricultural crop depredation while maintaining adequate subsistence opportunities. The updated and revised version of the Cackling Canada goose Management Plan is set to be adopted by the Pacific Flyway Council in September 2016.

The Program Coordinator, working with the Pacific Flyway and AMBCC has reassessed the population status of Cackling Canada Geese which now meet population objectives. The Department maintains it commitment to the Y-K Delta Goose Management Plan that supports populations necessary for subsistence hunting. Working within the framework of the AMBCC, the Waterfowl Coordinator has kept Native Regional Representatives informed of the process to revise Pacific Flyway management plans for pacific Brant, tundra swans, cackling Canada geese, Mid-continent White-fronted Geese and is working cooperatively with the AMBCC to revise the Emperor Goose Management Plan.

Job/Activity 2: Prioritize revisions of Pacific Flyway Management Plans and begin process incorporating involvement of the PFSC and Alaskan stakeholders.

Accomplishments: The Program Coordinator worked with the Pacific Flyway Study Committee and AMBCC to develop a schedule of revisions for Management Plans. Many Plans have exceeded the standard 5-year term and are overdue for updating and revisions. Recently completed and adopted Plans include Mid-continent White-fronted geese and Western Arctic Snow geese. Plans that are scheduled to be completed in FY 17 include Emperor Geese, Tundra Swans, Brant, and Cackling Canada geese.

Job/Activity 3 and 4: Assist in implementation of the Steller's Eider Recovery Plan and monitor progress and update annual work priorities on the Spectacled Eider Recovery Plan; cooperate in development and implementation of effective population assessment and recovery tasks; coordinate public involvement efforts with USFWS and local interest groups.

Accomplishments: As a former member of the Recovery Teams, staff worked with the Steller’s and spectacled eider teams to update annual work plans and funding priorities, review survey data, and design research projects to address information needs. The Recovery Team met in this fiscal year by teleconference to receive

updates on ongoing studies and the Steller's eider re-introduction efforts. The Recovery Team members were informed that the Team has been disbanded and will be invited back at some future time to be part of a restructured Recovery Team. The Waterfowl Coordinator has met with the USFWS Regional Director, the North Slope Borough, and the AVCP on future directions for eider management.

Job/Activity 5: Monitor the distribution and movements of satellite transmitted Black Scoters captured and marked in Nelson Lagoon, AK in 2015 and coordinate with partner agencies; disseminate information to the scientific community and the public. Mark additional birds in 2016.

Accomplishments: In April 2015, staff completed the first of 2 years of PTT deployments at Nelson Lagoon, Alaska as part of a multi-agency effort to delineate Pacific populations of scoters. Staff spent 10 days in Nelson Lagoon with the intent of deploying 8 PTTs in adult female BLSCs. The result was the instrumentation of 1 adult female BLSC. The PTT was monitored remotely until the transmitter failed in December 2015. An annual report was disseminated to the SDJV Science Board and partner agencies.

In 2016, we returned to Nelson Lagoon and deployed 10 PTTs in females. The PTTs are currently being monitored and movements tracked. An annual report is in preparation to be submitted to the SDJV and partner agencies in September 2016.

Job/Activity 6: Oversee revision and implementation of the Management Plan for Mid-continent White-fronted Geese with Central and Mississippi Flyway states, and affected users on the Arctic Coastal Plain.

Accomplishments: Staff continues to monitor annual status of Arctic Coastal Plain breeders in conjunction with the USFWS and review analysis of survival and harvest patterns throughout their range with USFWS and USGS-BRD. Staff also reviews hunting regulations with counterparts in the Central and Mississippi Flyways. The program coordinator successfully worked with the Central and Mississippi Flyways to coordinate activities to complete a revised Mid-continent White-fronted Goose Management Plan.

Job/Activity 7: Provide support to the USGS Arctic Coastal Plain project to measure and forecast the ecosystem response to climate change for populations of Arctic nesting geese.

Accomplishments: The ADF&G waterfowl program and Conoco Phillips are partnered with the US Geological Survey to investigate population dynamics of lesser snow geese and black brant on the Arctic Coastal Plain of Alaska. This project was funded by the AGJV. A comparative demographic analysis can inform the Pacific Flyway Council on the potential impact of continued expansion of lesser snow geese and the contribution of black brant colonies to the flyway population, and address questions of how these species interact in a changing environment. In July 2015, staff

participated in molt captures and banding of lesser snow geese and black brant at brood rearing areas on the Colville River delta. An annual report is in development.

Regional - Interior:

Job/Activity 1: Oversee revision and implementation of the Management Plan for Mid-continent White-fronted Geese with Central and Mississippi Flyway states, and affected users in Interior and Northwest Alaska. With USFWS and regional groups, monitor numbers of breeding birds in Interior/Northwest Alaska, identify sources of mortality, and evaluate results of new research; develop appropriate recommendations on harvest strategies within and outside of Alaska.

Accomplishments: Staff monitored the annual status of Interior/Northwest Alaska breeders in conjunction with the USFWS and reviewed analysis of survival and harvest patterns throughout their range with USFWS and USGS-BRD. Also, staff reviewed hunting regulations with counterparts in the Central and Mississippi Flyways. The program coordinator successfully worked with the Central and Mississippi Flyways to coordinate activities to complete a revised Mid-continent White-fronted Goose Management Plan.

Job/Activity 2: Band ducks at Minto Flats State Game Refuge to meet Pacific Flyway Adaptive Harvest Management Goals.

Accomplishments: 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 northern pintails. In August 2015, trapping was conducted on the Minto Flats State Game Refuge. Approximately, 1900 ducks were banded. Band information was reported to the USGS Bird Banding Lab and FWS Headquarters.

Regional - Southcentral

Job/Activity 1: Maintain dusky Canada geese to prevent ESA listing; progress toward 20,000 birds and annual production of >20% young. Revise and implement the Pacific Flyway management plan. Produce annual estimates of dusky goose production on Copper River Delta (CRD), breeding Canada geese and production on Middleton Island; improve or develop methods to obtain indices of geese breeding on Middleton Island and in Prince William Sound (PWS).

Accomplishments: Program staff continued to work with Pacific flyway states and USFWS to monitor the population status and harvest of dusky Canada geese. The Coordinator worked closely with the Chugach National Forest to incorporate dusky Canada Geese as a “species of conservation concern” in the Assessment Phase of the Forest Management Plan Revision and coordinated with the Cordova local advisory committee on the Management Plan revision.

Program staff conducted the annual dusky Canada goose production survey over the west Copper River Delta on July 16, 2015. Individual survey methods and coverage were similar to previous years over the west delta, from Copper River Islands to Point Whiteshed, and Egg Island. Staff counted 5,936 adults and 781 goslings and estimated that 1,562 goslings were present on the west CRD survey area. Production of dusky Canada geese was 20.8%; based on this survey, the Pacific Flyway Dusky Canada Goose Management Plan objective of achieving annual production of 20% young has been met every year since 2008.

The Breeding Ground Index used as the population index of dusky Canada geese includes a biannual count of breeding adults on Middleton Island; conducted in June during the brood rearing period. This biennial effort is directed at documenting growth of this island group and periodically determining its status as part of the dusky Canada goose population. Program staff did not conduct the biennial survey of Canada geese on Middleton Island this year. The next biennial population survey is scheduled for June 2016. In May 2016, program staff continued a pilot project to estimate abundance of dusky Canada geese on Middleton Island using nest plots. Middleton Island was divided into 168 (~200m × 400m) plots. A crew of six observers searched 25 randomly selected plots and located 195 nests. An abundance estimate (95% CL) will be based on nest density adjusted for observer detection and habitat type.

Job/Activity 2: Band and mark with neck collars up to 600 dusky geese semi-annually on CRD.

Accomplishments: Program staff in cooperation with the US Forest Service, Pacific Flyway states, and the Canadian Wildlife Service bands adult dusky Canada geese on the west CRD every other year to monitor distribution and estimate survival rates. Staff did not conduct banding drives this year. The next banding drive will be in July 2016.

Job/Activity 3: Monitor and report on satellite-marked Canada geese from Middleton Island and PWS. Monitor Tule white-fronted geese radio-marked birds migrating through Upper Cook Inlet and molting in western Alaska.

Accomplishments: To monitor annual movements of dusky Canada geese program staff deployed 66 implantable satellite transmitters (PTTs) in females nesting in Prince William Sound (PWS), Middleton Island (MI), and on the Copper River Delta, Alaska from 2011–2014. Program staff is currently monitoring 26 active PTT's. Data is shared with other Pacific Flyway states and the USFWS.

As part of a cooperative Pacific Flyway project, in the fall of 2015 and spring of 2016, Program staff coordinated a search for VHF radios deployed on Tule white-fronted geese. Transmitters were deployed by CA and OR state agencies at Summer Lake Wildlife Area, OR. ADF&G conducted a fall telemetry monitoring flight in the Upper Cook Inlet Basin (UCIB) in August 2015 prior to fall migration and detected 25 radios that were deployed in California and Oregon. A total of 54 radios were available for detection in Alaska during the summer of 2015. Program staff

conducted two aerial telemetry flights (May and June) and detected 34 unique radio-collared birds during the nesting period and post-nesting period. In cooperation with the USFWS a survey was conducted on the Innoko NWR on July 9, 2016 and detected 1 radio-marked bird. Results were shared with the Yukon Delta and Innoko National Wildlife Refuges and Pacific Flyway states.

Job/Activity 4: Continue and expand banding, population surveys and radio telemetry projects to assess the number and seasonal distribution of wintering sea ducks in the Gulf Coast, Kodiak, and Cook Inlet regions; link wintering birds to seasonal use areas. Analyze data and prepare report for wintering seaduck surveys conducted in Kachemak Bay from 2012-2014.

Accomplishments: As part of a multi-year project program staff conducted boat and aerial surveys of wintering sea ducks in Kachemak Bay from March 2012–2014 to estimate the number and distribution of sea ducks inhabiting the bay during winter. Staff is working with a biometrician to analyze survey results for species composition and abundance which will be compared to data from previous surveys conducted from 1999–2003. This analysis will be used to design a long-term monitoring program for waterfowl in Kachemak Bay and surrounding areas.

A pilot project was conducted in Kachemak Bay to capture molting harlequin ducks with the purpose of estimating population size and harvest rates. No birds were captured due to unworkable conditions. The project has been temporarily suspended until capture techniques can be refined.

Job/Activity 5: Report on the distribution and movements of satellite transmitted Barrow's goldeneyes captured and marked in Kachemak Bay and coordinate with partner agencies; disseminate information to the scientific community and the public.

Accomplishments: The waterfowl program led a cooperative Sea Duck Joint Venture Project with the U.S. Fish and Wildlife Service, the Alaska SeaLife Center, and Environment Canada to delineate the population of Barrow's goldeneyes wintering in Southcentral Alaska. Program staff is currently analyzing data on movements, seasonal use locations, and philopatry from satellite transmitted birds marked in Kachemak Bay. Results will be compared with goldeneyes marked on coastal wintering areas in British Columbia, Canada and Southeastern Alaska. A poster and lecture was presented at conferences by partner agency staff. A draft manuscript has been prepared on fidelity to wintering areas by breeding birds.

Job/Activity 6: Band ducks in Upper Cook Inlet to meet Flyway management goals and contact hunters in Cook Inlet marshes to obtain HPAI samples if needed.

Accomplishments: Program staff coordinated with USDA and USGS-BRD to obtain AI samples from local hunters in Cook Inlet marshes as part of the State's surveillance program. Staff also obtained samples from Anchorage mallards as part of a demographic assessment of urban waterfowl.

Job/Activity 7: Band and monitor urban mallards in Anchorage to assess health parameters, diet, seasonal distribution, survival rates, and harvest rates.

Accomplishments: Program staff advised and supported the efforts of a citizens group to monitor snow geese and sandhill cranes on the Anchorage Coastal Wildlife Refuge. Program staff addressed land use and habitat issues on the Palmer Hay Flats State Game Refuge including Board of Game action to incorporate state owned parcels into the refuge, and managing motorized access routes to prevent erosion and pond draining. Program staff continued a project implemented in FY14 to assess the health of urban mallards in cooperation with a graduate research project at the University of Alaska Fairbanks. In FY16 staff marked 149 birds with metal leg bands and colored tarsus bands and re-sighted banded individuals from previous years to conduct survival analysis and gain information on seasonal movements; and sample birds for body condition, genetics, parasites, avian influenza, and food habits (stable isotopes).

Job/Activity 8: Report on survey, satellite telemetry, and genetic study to assess population status and distribution of Canada geese introduced to Kodiak and Shuyak Island in 1986.

Accomplishments: ADF&G in cooperation with the Kodiak NWR implanted 7 Vancouver Canada geese on Shuyak Island with satellite transmitters in 2014. In cooperation with the USFWS we conducted an aerial survey in March 2015 based on satellite transmitter locations and other known wintering sites to monitor the wintering population. We counted 1,816 geese on the east side of Kodiak Island and parts of Afognak Island. This survey will likely be repeated on a 5 year cycle. Program staff is currently monitoring 4 active PTT's. A final report will be prepared following data collection.

Regional – Southeast

Job/Activity 1: Report on the distribution and movements of satellite transmitted Barrow's goldeneyes captured and marked in Juneau and coordinate with partner agencies; disseminate information to the scientific community and the public.

Accomplishments: As a continuation of a cooperative Sea Duck Joint Venture Project with the U.S. Fish and Wildlife Service, U.S. Geological Survey, Simon Fraser University, and Environment Canadian a project begun in FY12 to delineate the population of Barrow's goldeneyes wintering in Southeast Alaska, program staff continued to work with cooperators in FY16 to analyze data and report on results. A poster and lecture was presented at conferences by partner agency staff. A draft manuscript is being prepared for journal review.

II. SIGNIFICANT DEVIATIONS AND/OR ADDITIONAL FEDERAL AID-FUNDED WORK NOT DESCRIBED ABOVE THAT WAS ACCOMPLISHED ON THIS PROJECT DURING THIS SEGMENT PERIOD None

III. PUBLICATIONS Rosenberg, D.H., M.J. Petrula, D. Zwiefelhofer, T. Hollmen, D.D. Hill, and J.L. Schamber. 2016. Seasonal movements and distribution of Pacific Steller's eiders. Alaska Department of Fish and Game, Final Wildlife Research Report ADF&G/DWC/WRR-2016-7, Juneau.

IV. RECOMMENDATIONS FOR THIS PROJECT

None.

Prepared by: Daniel Rosenberg, Statewide Waterfowl Coordinator

Date: September 6, 2016