Sea Duck Joint Venture
Annual Project Summary for Endorsed Projects
FY03 (October 1, 2002 – Sept. 30, 2003)

Project Title: No. 33: Characterization of annual migration and habitat use of Black Scoters (*Melanitta nigra*) staging on the Alaska Peninsula

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Project Description: Steady declines in population indices of breeding Black Scoters (*Melanitta nigra*) in Alaska have prompted Region 7 of the U.S. Fish and Wildlife Service to identify Black Scoters as a '*species at risk*'. Very little is known about the life history, distribution and ecology of Black Scoters, making it difficult to discern specific reasons for this decline. Some evidence suggests, however, that sources for decline may occur across seasons. High levels of certain contaminants have been identified in Black Scoters associated with a major, over-winter die-off near Cape Yakataga, Alaska. Further, current spring and fall subsistence harvest estimates of Black Scoters exist only for the Yukon-Kuskokwim Delta (Y-K Delta) and are not available for other coastal regions in Alaska. They are the second most common duck reported in Y-K Delta subsistence harvest surveys, a cause for concern because harvest is proportionally higher for Black Scoters than for any other duck.
Broad-scale studies identifying migration patterns and relationships between critical habitats are needed to identify causes for population declines and accurately assess population trends of Black Scoters. Satellite telemetry is a useful way for researchers to track long distance movements and describe cross-seasonal habitat use of migratory species.
Captures in 2003 were conducted at Nelson Lagoon (55º 00'N, 161º 10'W) along the Bering Sea coast of the Alaska Peninsula, where a substantial population (>10,000) of spring-staging Black Scoters, believed to breed along western coastal Alaska, has been identified.

Experimental Design:
Black Scoters were captured opportunistically in April 2003 using floating and over-water hanging mist-nets with decoys in areas of scoter activity. Captured individuals were transported back to camp and a wildlife veterinarian surgically implanted 17 individuals with intra-abdominal PTT satellite transmitters.
Satellite implanted individuals have been continuously monitored and patterns of movement recorded since implantation. Telemetry data will be analyzed using Arcview GIS software.

Objectives: The primary objectives outlined for this study include: 1) identifying breeding, molting and wintering habitats and associations among these areas; 2) assessing timing of movements in relation to population surveys and subsistence harvest; 3) assessing the impact of surgical procedures and surgically implanted transmitters on survival of spring staging and migrating Black Scoters.

Preliminary Results: Satellite transmitters were implanted successfully in 17 individuals (15 adult males, 1 juvenile female, 1 juvenile male) in April 2003 at Nelson Lagoon, Alaska. Of these, two birds died near the capture site and one transmitter ceased transmitting location information within two weeks of capture. Individuals departed Nelson Lagoon in April/May and moved to northerly locations using near-shore waters along western coastal Alaska. Six adult males moved inland for duration suggestive of association with nesting females. Locations were consistent with known breeding areas. The remaining birds resided in near-shore waters of the Kuskokwim Shoals and Kvichak Bay, Alaska for the summer months.
Preliminary maps depicting movements of individuals can be viewed at the Alaska Science Center website (www.absc.usgs.gov). A link to this site can also be found on the SDJV website.

Project Status: Currently fourteen individuals are alive and transmitting good location information. We are seeking funding to continue implanting satellite transmitters in Black Scoters at Nelson Lagoon, as well as other winter and breeding locations.