Joint Venture
Annual Project Summary for Endorsed Projects
FY 02 – (October 1, 2001 to Sept 30, 2002)

Project Title: No. 4. Atlantic Study: Movements, Habitat Use, and Feeding Ecology of s in Chesapeake Bay and Other Atlantic Coastal Areas

Principal Investigator(s)*:* Matthew C. Perry, USGS Patuxent Wildlife Research Center, 11410 American Holly Drive, Laurel, MD 20708, USA. Matt_Perry@usgs.gov

Partners: USFWS and CWS

Project Description: The migrational pathways and critical habitats used by sea ducks in the Atlantic Flyway are in need of further research. The objective of this research was to learn the breeding and molting areas and the subsequent habitat types of surf scoters. During March-April 2001 and 2002, ten surf scoters (*Melanitta perspicillata*) were live-captured in Chesapeake Bay, MD, USA and each instrumented with implanted satellite transmitters. Initial work with floating mist nets was unsuccessful in capturing scoters in Chesapeake Bay. A net gun (Coda, Inc.) fired from a fast-moving boat at a distance of approximately 5-10 meters from the boat captured all 10 surf scoters. Within 24 hours after capture, each scoter underwent an intra-abdominal surgery to implant PTT 100 satellite transmitters (39 g) manufactured by Microwave, Inc., Columbia, Maryland. The transmitter's configuration included an external antenna (percutaneous) that was passed through the back of the duck using a surgical catheter. Each duck was held post-surgery for 1-9 days and then released at the site of capture.

Objectives: The study attempted to determine the current distribution of surf scoters on their breeding and molting areas. Delineating these populations and establishing the affinities among staging, breeding, and molting grounds will assist in future population monitoring and management. Specific objective was:
1. Determine route and destination of surf scoters when they leave Chesapeake Bay in the late winter and migrate to breeding areas (and subsequent molting areas).

Preliminary Results: Eight of the surf scoters successfully migrated to possible breeding areas in Canada and extensive data were obtained on the location of these ducks. During 2001, surf scoters traveled an average of approximately 1920 km between Chesapeake Bay and their coastal molting areas. During 2002, surf scoters traveled an average of 3360 km. Updated information from the ARGOS Systems aboard the NOAA satellites on scoter movements was made accessible on the Patuxent website. Habitat cover types of locations using GIS (Geographical Information Systems) and aerial photographs (in conjunction with remote sensing software) are currently being analyzed to build thematic maps with varying cosmetic layer applications. This will help provide a fuller picture of the habitat used by scoters during breeding and molting.

Project Status: The objective for male surf scoters was accomplished, but we plan to instrument females in the coming year to examine the breeding areas more thoroughly.

The one major obstacle has been capturing the ducks for instrumentation. A variety of techniques were tried and net capture gun was the only one successful with the appropriate weather conditions. Ducks are still being tracked as they begin southern migration and can be followed on the Atlantic Sea Duck Project Website: http://www.pwrc.usgs.gov/resshow/perry/scoters/

Project Funding Sources (US$):

SDJV (USFWS) Contribution	Other U.S. federal contributions	U.S. non-federal contributions	Canadian federal contributions	Canadian non-federal contributions	Source of funding (agency or organization)
$11,000					
	$20,000				USGS (in kind)
			$5,000		CWS (in kind)

Total Expenditures by Category (US$):

ACTIVITY	BREEDING	MOLTING	MIGRATION	WINTERING	TOTAL
Banding					
Surveys					
Research			$36,000		
Communication					
Coordination					