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

Project Title: No. 14: Survival and recruitment of Common Eiders (*Somateria mollissima dresseri*) in the Gulf of Maine.

This is a joint study with USGS, Maine DIFW, and USFWS.
Principal Investigator(s): Daniel G. McAuley USGS Patuxent Wildlife Research Center, 5768 South annex A, Orono, ME 04469-5768. dan_mcauley@usgs.gov
R. Bradford Allen, Maine Department of Inland Fisheries and Wildlife, 650 State Street, Bangor, ME 04401. brad.allen@state.maine.us
Co-investigators (USGS PWRC): Jerry R. Longcore, Patrick Corr
Co-Investigators/Partners:
Brian Benedict, Petit Manan National Wildlife Refuge
Linda Welch, Petit Manan National Wildlife Refuge

Project Description: Banding efforts for common eiders have not been constant over time. Survival and recovery rates are only available for adult females and there is a need for information on the other age-sex classes. During the 1970s to mid- 1980s there was an effort to band female eiders on a few islands in Maine. Numbers of adult females banded per year ranged from 120 to 609. Since then, 0-50 birds have been banded each year. Krementz et al. (1996) analyzed banding data for the Atlantic coast population of eiders and only had sufficient data for the years 1976-1986 for Maine. He found recovery rates were low and survival was high. Because these estimates are more than 15 years old, harvest has been increasing, and recruitment rate is likely declining, there is a need to obtain better estimates of survival and recovery rates for eiders.

We will select islands and archipelagos and attempt to capture a majority of the nesting females on each. Birds will be captured by hand nets and in drive traps set up along the perimeter of a nesting colony. Birds will be banded with standard USGS bands. Each year we will return to the same islands and band unmarked birds and record bands of previously banded birds (returns). In addition, we will attempt to capture pre-fledged ducklings and molting adults of all age/sex classes using drive traps**,** rocket nets, and night lighting techniques, near islands where nesting gulls are controlled and other nesting islands.

Objectives: We propose a long-term banding effort (5-10 years) to determine survival, recruitment, and recovery rates of common eiders in the Atlantic coast population, especially Maine. We will use traditional band analysis methodologies as well as mark - recapture methods. In addition, we will compare recruitment to the population between islands where populations of nesting gulls are controlled and islands with nesting gulls.

Preliminary Results: This was the first full year of the study. Permits were obtained and nesting gulls were successfully removed from Green Island. We captured nesting females from colonies on 7 islands: 360 new birds banded and 47 returns. During the

brood rearing period we counted at least 315 ducklings in crèches of 50 –100 ducklings around Green and Petit Manan Islands, where gulls had been controlled. Our drive trapping effort for ducklings and molting birds was extremely successful. We were able to capture >1,000 birds during a drive. Drives on 2 different days resulted in over 2,000 birds captured and we banded more than 1,800 birds. For the season we had 2,262 total captures: 2,141 "new" birds banded, 61 returns captured, 18 foreign retraps, and 41 repeat captures. We captured 758 AHY males, 1,328 AHY females, 52 local males, and 66 local females.

Project Status: Project is ongoing. We will continue the banding effort over the next several years.

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)
	$25,750				USGS PWRC
	$10,000				USFWS, R-5 Migratory Birds
		$10,000			Maine DIFW
	$35,700				USFWS, Petit Manan NWR

Total Expenditures by Category (US:

ACTIVITY	BREEDING	MOLTING	MIGRATION	WINTERING	TOTAL
Banding	*	*			*
Surveys					
Research	$50,000*	$34,000*			$84,000*
Communication					
Coordination					

* The banding is the research effort.