

# ***North Cape Shellfish Restoration Program*** **2004 Annual Report**

**Rhode Island Department of Environmental Management  
National Oceanic and Atmospheric Administration  
United States Fish and Wildlife Service**



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## Acknowledgements

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Cover photograph. Remote set oysters in a nursery tray prior to release in 2004.



**2004 *North Cape***

# SHELLFISH RESTORATION PROGRAMS

## Executive Summary

Restoration efforts by State and federal Trustees continued to move forward in 2004 in response to natural resource injuries resulting from the 1996 *North Cape* oil spill that released 828,000 gallons of heating oil into Block Island Sound. Following legal settlement in 2000, the Trustees established a Shellfish Restoration Program to address the loss of 150 million surf clams (*Spisula solidissima*) and another 648,000 bivalves by implementing projects targeting three species. The 5-year Program includes enhancing quahog (*Mercenaria mercenaria*), and restoring bay scallop (*Argopecten irradians*) and eastern oyster (*Crassostrea virginica*) to Rhode Island waters. The goals of the Shellfish Restoration Program are to restore lost shellfish wet-tissue biomass (due to direct loss and foregone production), and lost ecological services through the restoration of bivalve populations.

The 2004 bay scallop program included survivorship monitoring of the 2003 releases in four coastal salt ponds using stratified random dive surveys. A bay scallop spawning sanctuary was established in Ninigret Pond with broodstock over-wintered from the 2003 scallop seed, and the recruitment of juvenile bay scallops to this pond was monitored. The scallop spawner sanctuary proved to be a cost effective method of enhancing recruitment to the pond, with a strong, late season, set of spat recorded from the spat bags. Aspects of the scallop program formed the basis for two University of Rhode Island Coastal Fellows research projects. The 2004 oyster program included remote setting of oysters to produce disease-free oyster spat with subsequent nursery growout and release to selected sites. Survivorship and growth of the oysters released in 2003 was also monitored. A total of 499,100 oysters were produced in 2004 to supplement the seed oysters released in 2003. The 2004 quahog program included the purchase and growout of disease-free commercially produced quahog seed, and continued nursery growout of 2003 quahog seed prior to release into sanctuary areas in two coastal salt ponds. Habitat assessments were conducted to determine the most suitable sites for all shellfish releases and baseline monitoring was undertaken to allow an assessment of growth and survival in 2005. Discrete experiments were also established to assess the growth and mortality of quahogs released at 2 different densities and 3 size classes. During October 2004 632,000 quahogs were released at a density of 10 m<sup>-2</sup>, to over 3,000 m<sup>2</sup> of Quonochontaug and Ninigret Ponds.