

OUTCOME 10: HEIGHTENED PUBLIC AWARENESS OF THE ESTUARY



The Reserve Council and partners recognize that an informed and involved public is critical to achieving the water quality, living resource, public access, and maritime heritage goals identified in the CMP. In both formal and informal settings, a variety of Reserve partners who focus on education and stewardship of the estuary's resources have successfully accomplished a variety of projects and programs consistent with implementation actions recommended in the CMP.

Support of a Reserve Website

The Reserve Council website (www.estuary.cog.ny.us) was redesigned and expanded to serve as a user-friendly communication tool for the Reserve Council, Reserve partners, and the general public. The website, supported by the NYS Department of State (DOS) and maintained by the Reserve Office, now serves as a repository for information about the Reserve program, including: information about the Reserve Council, its committees, and its partners; the Reserve CMP and major Reserve Council CMP implementation priorities; technical reports; fact sheets and brochures, including the Reserve Council *Estuary News* newsletter; education and stewardship resources and opportunities; and continuous updates that inform website users about upcoming events and activities related to the Reserve.

Updates to the Education Resource Directory

The Reserve *Education Resource Directory* developed by the Reserve Office is an interactive product located on the Reserve Council website that provides information about various organizations, businesses, and facilities that provide estuary-related education programs. The *Education Resource Directory* was expanded to identify additional educational organizations and facilities in the Reserve and to provide an interactive format for website users to submit applications for new locations and programs.

Creation of an Access Guide

A *Natural Resource Access Guide for the South Shore Estuary Reserve* was designed and placed on the Reserve Council website with assistance from the Reserve Council's Citizens Advisory Committee (CAC), NYS DOS, and funding support from both the NYS Environmental Protection Fund (EPF) and the National Oceanic and Atmospheric Administration (NOAA). The guide includes user, access, and interpretive information about 56 sites throughout the Reserve including waterfront parks, nature preserves, nature centers, hiking trails, bike routes, and historical sites.

Working with Outreach Partners

The Reserve Council CAC and Reserve Office continued to function as a clearinghouse and point of contact for Reserve-related education and outreach efforts. Outreach materials including brochures, fact sheets, newsletters, and display exhibits were distributed by the Reserve Office and CAC members to a diverse group of governments, elected officials, educational institutions, estuary-related businesses, and non-profit organizations. Reserve Council partners assisted with Reserve outreach efforts by distributing these materials to the public. Many state agencies, local governments, elected officials, and non-profit organizations produced constituent newsletters and mailings that included promotion of Reserve education and stewardship activities. Outreach partners included:

- Fire Island National Seashore
- New York State Office of Parks Recreation and Historic Preservation, LI Region
- New York State Department of Environmental Conservation
- Nassau County Legislators
- Suffolk County Legislators
- Reserve Towns and Villages
- Long Island Maritime Museum
- Long Island Traditions
- Fire Island Lighthouse Preservation Society
- The Nature Conservancy
- Association of Marine Industries
- Sierra Club
- Islip Town Leaseholders Association
- American Littoral Society
- Audubon Brookside Preserve
- Citizens Campaign for the Environment
- Brookhaven Baymans Association
- New York Marine Trades Association
- New York State Marine Education Association
- Dowling College Department of Earth and Marine Sciences
- South Bay Cruises
- J&J Bait and Tackle
- Ducks Unlimited
- Trout Unlimited
- South Shore Waterfowlers Association
- Operation SPLASH
- Mastic Beach Property Owners Association
- New York Sea Grant
- Cornell Cooperative Extension of Suffolk County
- Post-Morrow Foundation

The American Littoral Society sponsors and organizes an International Coastal Cleanup, and since 2002 has worked with the Reserve Office to designate a Reserve component of the cleanup. Cleanups are also organized by the Town of Hempstead, Great South Bay Audubon Society, Trout Unlimited, Friends of Massapequa Preserve, and the Sierra Club.

Provision of Professional Development Opportunities for Teachers

Reserve partners provided the following professional development opportunities for teachers:

- The Long Island Regional Office of the NYS Office of Parks Recreation and Historic Preservation provided training opportunities for teachers that highlighted Reserve resources. New programs were developed and implemented by the Theodore Roosevelt Nature Center at Jones Beach on the bay near the fishing piers.
- The New York State Marine Education Association (NYSMEA) hosted an annual conference for educators that focused on incorporating lessons about the estuary and ocean into curricula. NYSMEA also distributed a handbook for teachers that includes lesson plans related to the estuary.
- The Town of Hempstead offered educational programs for teachers at several sites including the Levy Park and Preserve and the Oceanside Marine Nature Study Area.



Reserve partners are expanding opportunities for educators to increase their knowledge and learn to incorporate estuary-related topics into classroom curricula.

OPERATION SPLASH ESTUARY STEWARDSHIP

Since 1990, Operation SPLASH (Stop Polluting, Littering, and Save Harbors), a non-profit volunteer organization based in Freeport, has been at the cutting edge of promoting citizen education and “hands-on” stewardship of the South Shore Estuary. SPLASH volunteers operate three boats that regularly patrol the local waters of Freeport and the eastern Hempstead Bays, removing and documenting floatable debris from the water and tidal marshes. In response to the growing problem of marine pollution, SPLASH initiated several projects to educate citizens and prevent debris from entering the bays.



One of Operation SPLASH's three boats



Floatable debris trap at Mill Basin

In partnership with local businesses, SPLASH acquired and placed cigarette butt receptacles throughout Freeport's Nautical Mile, accompanied by signs reading *Please Respect Our Waters*. SPLASH members placed *Drains to Bay* markers on local storm drains and worked in partnership with the local chamber of commerce and the Village of Freeport to fund and install demonstration storm drain filters that capture floatable wastes and remove other pollutants. Finally, SPLASH partnered with the Town of Hempstead, the Village of Freeport, and a private landowner to successfully design and install an innovative floatable marine trap on Freeport Creek at Mill Basin. The debris trap is maintained and debris is removed by SPLASH volunteers.

Supporting Entities that Conduct Education Programs Aboard Watercraft

Reserve partners offered the following on-board educational programs:



Reserve partners provide educational programs aboard watercraft engaging students in hands-on learning about the estuary.

- Fire Island National Seashore conducted a program called Fire Island Trek, which includes guided canoe tours and other interpretive programs that help to foster appreciation for the resources of Great South Bay.
- The Long Island Maritime Museum is developing educational programs to be used aboard their restored 1888 oyster sloop, Priscilla, once it passes Coast Guard certification.
- The New York Sportfishing Federation conducted the Teach a Kid to Fish program which offers educational boating trips for children in conjunction with the Freeport Boatmen's Association. The Boatmen's Association also worked with Nassau BOCES to provide shipboard education opportunities.

- The Captree Boatmen’s Association conducted seasonal bay tours from the Captree State Park boat basin including fishing demonstration and environmental education excursions for various organizations. Excursion participants included youth camps, school groups, and other non-profit organizations. These trips offer opportunities for hands-on environmental education and encourage stewardship of Reserve resources. The Captree and Freeport fishing fleet also worked with both Nassau and Western Suffolk BOCES to run shipboard education programs.

Establishment of a Clearinghouse for Student Research

- Students of Dr. Paul Lichtman, Research Coordinator at the Uniondale school district, used the south shore estuarine environment as the laboratory for many of their research projects related to algal blooms, hypoxia, nonpoint and point source pollution, and bioremediation. Dr. Lichtman’s students successfully competed in a variety of state, national, and international science competitions and fairs including the Dowling College South Shore Estuary Symposium and the Intel and Siemens Science Competition.
- Students of Dr. Lori Zaikowski, Chair of the Dowling College Chemistry Department, participated in the Chemistry in Action program, in which they monitored dissolved oxygen, various nutrients, and benthic invertebrate organisms in various Reserve tributaries.

SCIENTIFIC SYMPOSIUM ON THE SOUTH SHORE ESTUARY

Dowling College, located on the Connetquot River in Oakdale, hosted an annual South Shore Estuary Reserve symposium and scientific research poster contest for area high school students. The symposium represents an outstanding opportunity for high school students to share their research with the scientific and local communities, and to discuss their projects with scientists who are knowledgeable in their field of research. In 2005, over 200 students, teachers, and scientists attended the symposium’s program that included scientific poster exhibits, estuary-related teacher and student workshops, a student research and outstanding educator award ceremony, and an art and photography exhibit.

Organizing the symposium has been a successful partnership-based effort between the Dowling College Departments of Chemistry and Earth and Marine Sciences; the Science Exploration Club; the New York Marine Education Association; and the Aquatic Research and Environmental Assessment Center of Brooklyn College.



Students at the Dowling College symposium

Establishing an Awards Program

A Reserve Council Stewardship Award program was established in 2005 to recognize organizations or individuals that have made significant contributions to protect and restore the estuary’s unique natural environment and maritime traditions. The Reserve Council CAC developed criteria and a selection process, reviewed nominations, and presented recommended nominees to the Reserve Council. The first award was presented in September 2005 to Mr. Bill Hamilton of the Brookhaven Baymens Association for his work assisting the Long Island Chapter of the The Nature Conservancy in shellfish restoration efforts of the Bluepoints Bottomlands project.



The first Reserve Council Stewardship Award was presented in 2005.

Designation of Bird Conservation Areas

NYS Department of Environmental Conservation developed a Bird Conservation Area program modeled after the Audubon Society's Important Bird Areas program in an effort to safeguard and enhance bird populations and their habitats on State lands and waters. In 2004, the NYS Department of Environmental Conservation designated the South Shore Tidal Wetlands Bird Conservation Area, which includes all State-owned tidal wetland parcels located in the Reserve, along with associated upland habitat, mudflats and open water areas, totaling 1377 acres.

- The Audubon Society included many sites within the Reserve in its second edition of Important Bird Areas of New York: Habitats Worth Protecting (2005).

NEXT STEPS FOR EDUCATION, OUTREACH, AND STEWARDSHIP

Reserve partners will advance development of new visual outreach tools including videos or CDs that can be used for multiple purposes, including teacher training, curriculum components, and public service programs.

Reserve partners will work cooperatively to reestablish a formal education workgroup to develop recommendations for incorporating and correlating environmental, cultural, and historic aspects of the Reserve with New York State teaching standards.

Reserve partners will establish and expand support for citizen and school-based estuary monitoring programs, including educator training on the use of monitoring equipment and the use of local excursion vessels as monitoring platforms.

Reserve partners will establish new local tributary monitoring groups to assess the health of the tributaries and increase public stewardship activities.

Reserve partners will expand interpretive exhibits to focus on stewardship activities.

The Reserve Office will update and expand the stewardship opportunities page on the Council website.

The Reserve Council and its Citizens Advisory Committee will strengthen, promote, and expand the Stewardship Award program.

The Reserve Council and partners will organize and conduct a Reserve science symposium that brings scientific experts, educators, high school and college level science students and researchers involved in Reserve related research together to coordinate efforts, share information, and identify additional research needs and career paths for students.

