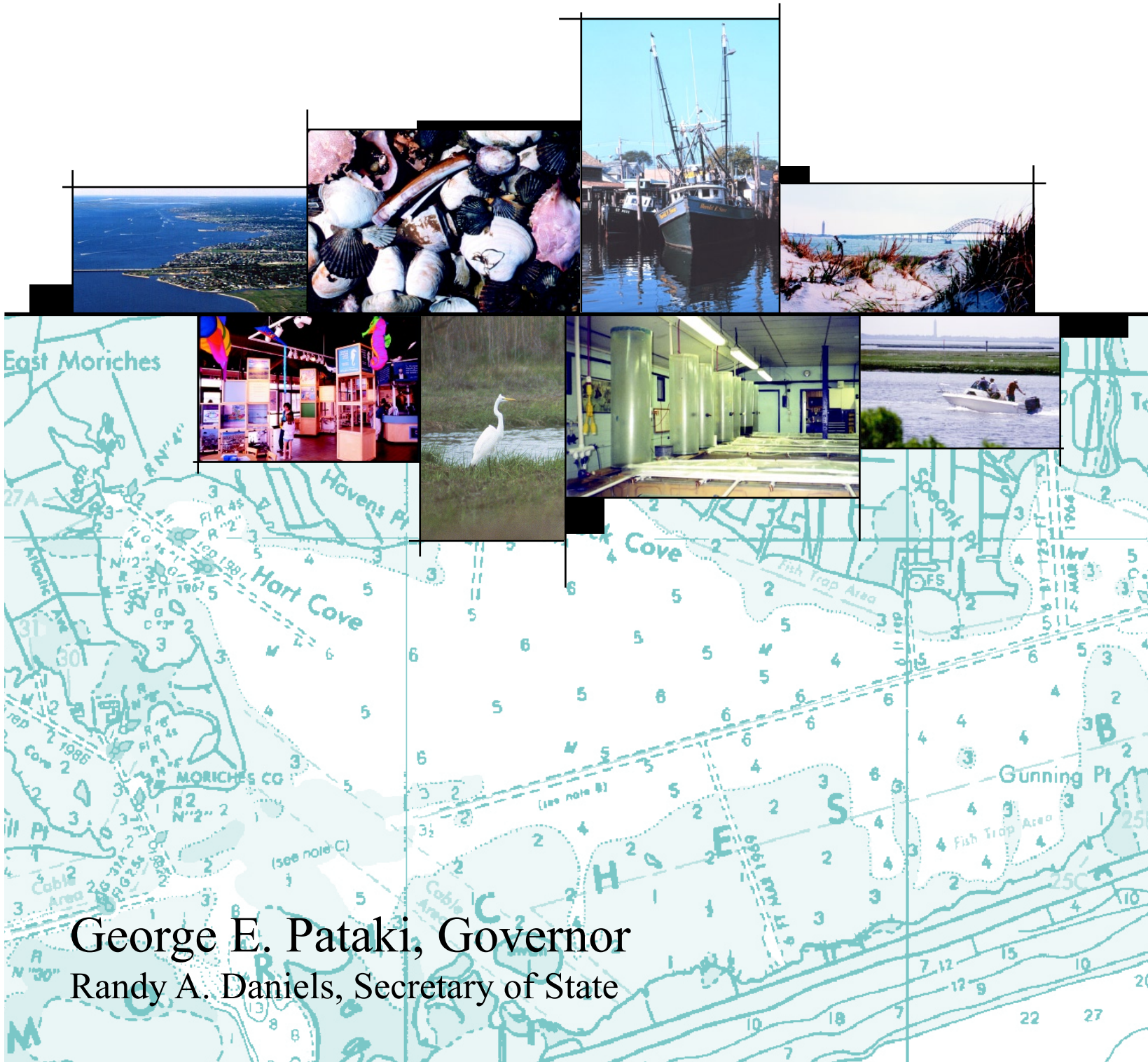


LONG ISLAND SOUTH SHORE ESTUARY RESERVE

Comprehensive Management Plan

IMPLEMENTATION STATUS REPORT



George E. Pataki, Governor
Randy A. Daniels, Secretary of State

George E. Pataki, Governor
Randy A. Daniels, New York State Secretary of State

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Ronald Masters/Mike Foley
John Venditto, Supervisor, Town of Oyster Bay/
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John Jay LaValle, Supervisor, Town of Brookhaven/
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William Glacken, Mayor, Village of Freeport
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Cornelia Schlenk, Chair, Technical Advisory Committee
Robert Grover, Great South Bay Audubon Society
Jill Ozarski, Long Island Chapter of the Nature Conservancy
David Conover, Dean and Director, Marine Sciences Research
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COMPREHENSIVE MANAGEMENT PLAN IMPLEMENTATION STATUS REPORT

April 2001 - July 2003

INTRODUCTION

This South Shore Estuary Reserve (SSER) Comprehensive Management Plan Implementation Status Report documents accomplishments by the Reserve Council and its partners since the Council's adoption of the Reserve's comprehensive management plan in April, 2001. The report reflects local priorities and the strong commitment of the Council and its partners to advance the implementation actions identified in the plan. The report also identifies the numerous actions initiated or completed since adoption of the plan - the protection of key open spaces, the implementation of best management practices to reduce nonpoint source pollution, and education, outreach and stewardship activities.

THE SOUTH SHORE ESTUARY RESERVE COUNCIL

The Long Island South Shore Estuary Reserve Act established the South Shore Estuary Reserve - five South Shore bays and the adjacent upland areas draining into them - and called for the Reserve's protection and prudent management. The Act also created the South Shore Estuary Reserve Council (Council), chaired by the New York State Secretary of State and comprised of representatives from South Shore towns and villages, Nassau and Suffolk counties and the City of Long Beach, and recreation, business, academic, environmental and citizen interests.

The Act charged the Council with preparation of a comprehensive management plan (CMP) for the Reserve for the purpose of establishing a consensus-based blueprint for the protection and restoration of the estuary's natural, cultural and economic-related resources. The plan was developed by the Department of State Division of Coastal Resources and adopted by the Council in April, 2001. Extensive input from the public and the Council's citizens and technical advisory committees was received throughout the process. The plan contains recommended actions focused on improving water quality, restoring and protecting living resources, expanding public use and enjoyment of the estuary, sustaining and expanding the estuary-related economy and increasing education, outreach and stewardship in the Reserve.

Following plan adoption, the Council identified initial priorities for its members and partners to address. These priorities were compiled by the Department of State Division of Coastal Resources in draft work plans for the Council, the Reserve's two counties and six towns, and were finalized after discussions with each of these partners. To better focus its efforts, the Council established work groups for storm water management, water quality monitoring, open space, formal education, and a coastal heritage trail. These work groups, and others expected to be formed over the next year, provide the technical expertise necessary to advance priorities of the Council and its partners. The Council's citizens advisory committee continues in its education and outreach role, working closely with the Council and its partners to build the broad public support needed for implementation of the plan.

A South Shore Estuary Reserve office was established by the Department of State Division of Coastal Resources in 2002. The office has three full time individuals working with the Council to advance its priorities.

SOUTH SHORE ESTUARY RESERVE COUNCIL PARTNERS

Successful implementation of the Reserve's comprehensive management plan relies on the active participation and financial and technical support of numerous implementation partners beyond Council members, its advisory committees and work groups. These partners include community groups, educational organizations and institutions, trade associations, local businesses, nonprofit conservation and research organizations and individual citizens who appreciate and use the estuary and its resources.

The Department of State continues to be a principal player in the plan's implementation. Division of Coastal Resources staff facilitate and document Council meetings; they share their technical expertise as members of the Council's work groups and work closely with the Reserve office and the Reserve's local governments, providing assistance throughout implementation of projects. The Division administers Local Waterfront Revitalization Program Environmental Protection Fund (LWRP EPF) grants, an important source of matching State funds for municipal efforts, and the Environmental Protection Fund Open Space Account (EPF OSA), which has been and continues to be an important source of State funds for improving the Reserve. The Department of State, along with the Department of Environmental Conservation, also administers Clean Water / Clean Air Bond Act (Bond Act) grants, an important source of matching State funds for local governments for capital storm water management and habitat restoration projects.

COMPREHENSIVE MANAGEMENT PLAN IMPLEMENTATION PROGRESS

The SSER comprehensive management plan calls for continuing efforts to improve and maintain the Reserve's water quality; protect and restore its living resources; expand public use and enjoyment of the estuary; sustain and expand the estuarine-related economy; and increase education, outreach and stewardship.

IMPROVING AND MAINTAINING WATER QUALITY

The comprehensive management plan calls on local governments in the Reserve to assume a leadership role in reducing nonpoint source pollution. Implementation actions include construction of storm water management projects, adoption of best management practices by municipalities, development of watershed plans, and continued water quality monitoring.

To reduce nonpoint source pollution, the following has been accomplished by CMP implementation partners:

- A storm water work group was established by the Department of State and Council to provide implementation partners with technical expertise on storm water runoff issues, local compliance with New York's implementation of the Environmental Protection Agency's Storm Water Phase II Final Rule, and comprehensive watershed planning.
- Storm Water Phase II Notices of Intent for general permits for small municipal separate storm sewer systems and construction activity were submitted by municipalities throughout the Reserve by the March 10, 2003 deadline.
- Storm water capital projects have been undertaken by Nassau County for Massapequa Creek and by Hempstead, Babylon, Islip, Brookhaven and Southampton in priority watersheds, many of the projects supported by matching Bond Act grants administered by the Departments of State and Environmental Conservation.
- Storm water projects have been implemented by Suffolk County within the Reserve using a dedicated local fund and State Bond Act grants to address nonpoint source pollution.
- All Suffolk County owned storm water outfalls located along county roads discharging to streams in the Reserve were inventoried by the Suffolk County Planning Department.
- Using matching LWRP EPF grants administered by the Department of State, Oyster Bay completed an inventory of municipal storm water outfalls and conveyance infrastructure, and the City of Long Beach is undertaking a similar project; Hempstead is digitizing existing maps of its storm water infrastructure.
- A Great South Bay storm water plan is being developed by Babylon in close cooperation with the villages of Amityville, Babylon and Lindenhurst. Islip completed its own Great South Bay storm water outfall survey and analysis.
- Using matching LWRP EPF grants and following a template developed by the storm water management work group, watershed management plans are being developed for Massapequa Creek by Oyster Bay; for contributing areas to Great Cove, and the watersheds of Browns and Green creeks, by Islip; for the Swan River by Brookhaven; and for Quantuck Bay by Southampton. Nassau County recently completed an environmental report that focused on the resources within and adjacent to the Massapequa Preserve and its watershed.
- Storm water remediation programs for eight tributaries in Suffolk County were developed by the Suffolk County Soil and Water Conservation District. These programs address storm water runoff along town, village and county roads and properties associated with the tributaries, and recommend best management practices for each of the locations.

- A watershed study for Ketchams Creek was completed using LWRP EFP funds and adopted by Babylon.
- A geographic information system based spatial analysis of nonpoint source pollution potential developed by the Department of State Division of Coastal Resources continues to play an important role in watershed planning in the Reserve. This tool is currently being expanded by the Division so that it can serve as a predictive model for nonpoint pollution loading to surface waters.
- A comprehensive restoration plan for the Beaver Dam Creek watershed is being developed by a task force of nearly two dozen local, State and federal agencies, and nongovernmental organizations, led by Ducks Unlimited. Elements of that plan are being implemented through matching Bond Act grants administered by the Departments of State and Environmental Conservation and through grants from the National Oceanic and Atmospheric Administration.
- As part of the Beaver Dam Creek restoration initiative, the Suffolk County Planning Department completed a land use and development analysis of the creek corridor.
- A duck sludge remediation plan for Suffolk County's newly acquired Gallo duck farm property on Mud Creek is being developed by the County under a U.S. Army Corps of Engineers grant.
- An assessment of the effectiveness of municipal best management practices to control nonpoint source pollution in the City of Long Beach and the thirty-one villages in the Reserve is being managed by the Department of State Division of Coastal Resources and funded through the EPF OSA.
- Baseline water quality monitoring continued through the efforts of Suffolk County, Hempstead, the United States Geological Survey, the New York State Department of Environmental Conservation, and several academic and citizen-based programs. Hempstead has recently expanded its monitoring activities in the vicinity of Point Lookout and has begun transferring its historic water quality data to electronic databases. Suffolk County has established a monitoring program as part of the Beaver Dam Creek effort previously mentioned, and has computerized County-wide historical water quality data from 1976 to the present.
- An analysis of historical stream flow and nitrogen data by the United States Geological Survey was published in a peer-reviewed report that will help water resource managers understand the effects of urbanization on South Shore tributaries and bays. The study was funded by the Department of State through the EPF OSA.

- At Jones Beach State Park, on-site septic systems were removed from the Park's nature center, police barracks and residence area by the NYS Office of Parks, Recreation and Historic Preservation (OPRHP), and a sewer system was extended to these locations.
- An Integrated Pest Management Plan was initiated by OPRHP for the golf course at Robert Moses State Park, and the agency began seeding lawns and parkway shoulders in the park with a turf grass variety that requires less maintenance than commonly-used varieties.

To reduce point source pollution, the following has been accomplished by CMP implementation partners:

- In order to improve the quality of effluent discharged into Reynolds Channel by its wastewater treatment plant, the City of Long Beach initiated design activities in June 2001 to upgrade the 7.5 mgd plant. Construction of improvements began in June 2002 and is expected to be completed by the end of 2004.

PROTECTING AND RESTORING LIVING RESOURCES

Protecting and restoring the diversity, abundance and productivity of living resources in the Reserve is a priority of the comprehensive management plan. These tasks necessitate an understanding of the interrelationships between living organisms and their environment, and require strategies to protect individual species as well as ecological systems.

To increase harvest levels of hard clams and other estuarine shellfish species, the following has been accomplished by CMP implementation partners:

- As part of New York Sea Grant's *Hard Clam Initiative*, three studies concerning hard clam reproduction, feeding, growth and survival were begun under financial support provided by Sea Grant, the NY/NJ Port Authority, and by the Department of State on behalf of the SSER Council.
- The Long Island Shellfish Managers Forum continued to coordinate town-based management recommendations for improved shellfish grow-out based on the results of the *Brown Tide Research Initiative* and other research information.
- Oyster Bay stocked its south shore clam beds with 1,129,000 seed clams in 2002.
- Islip's shellfish hatchery continued to add 20 to 40 million hard clams to Great South Bay annually and to conduct its bottom survey to assess existing crops of hard clams. The hatchery is also conducting experiments aimed at creating a viable output of oysters.
- Hempstead experimented with sampling devices, grid methods and associated statistical modeling techniques in preparation for a 2003 hard clam population assessment.

- Hempstead has increased its seed grow-out program to 2.2 million hard clams with the cooperation of local baymen. The Town has also stepped up efforts to limit commercial and residential licenses to those legally permitted to hold them; rewritten the Town code under which maintenance and surveillance of clamming is enforced; and hired and trained additional summer bay constables to target violators.
- Babylon has continued its grow-out program as funding and staffing have permitted.
- Southampton is improving its survey methodology, completing an assessment of shellfish resources in Town waters, and competing an aquaculture feasibility study with LWRP EPF support.

To protect and restore coastal habitats and wildlife, the following has been accomplished by CMP implementation partners:

- Since adoption of the plan, approximately 2,230 acres of tidal wetlands, eight upland grassland sites totaling 116 acres, and an island supporting a nesting colony of roseate terns were restored with Bond Act support by cooperating organizations in the *Long Island Wetlands Restoration Initiative* (LIWRI). The Initiative is comprised of representatives of State and federal agencies, local governments, and nongovernmental organizations.
- Eight formerly-connected tidal wetlands in Hempstead, Islip, Brookhaven and Southampton were selected by the LIWRI for future restoration.
- Submerged aquatic vegetation throughout the estuary is being mapped by the National Oceanic and Atmospheric Administration (NOAA) and the Department of State, with assistance from other partners. The work is being funded through the EPF OSA and a federal grant from NOAA's Coastal Services Center.
- A multi-use management plan was begun by the Bluepoint Bottomlands Council for the Nature Conservancy's newly acquired parcel of 11,500 acres of bay bottom in Great South Bay. The parcel was donated to the Conservancy by the Bluepoint Company's parent, First Republic Corporation of America.
- A County-wide vector (mosquito) control and wetlands management plan is being developed by the Suffolk County Departments of Public Works and Health Services.
- A Narrow Bay Floodplain and Hazard Mitigation Plan was prepared by the Suffolk County Planning Department for the Mastic Shirley peninsula. The prototypical approach used in this plan will be applied to other coastal areas in the County.
- Updates of New York Significant Coastal Fish and Wildlife Habitat narratives for the South Shore were begun by the Department of State.

- De-vegetation and restoration of shorebird habitat at Silver Point Beach has been begun by Hempstead.
- Using matching Bond Act funds, work has begun by Nassau County on restoring aquatic habitats in the Mill River watershed, specifically within the Tanglewood Preserve. The County has also initiated wetland restoration, flow augmentation, and buffer enhancement within the Massapequa Preserve, and upland pond restoration at Milburn Pond, Silver Lake, and Loft's and Mill ponds.
- Vegetation management to enhance piping plover nesting and foraging areas in Jones Beach State Park was conducted by the Office of Parks, Recreation and Historic Preservation.
- Management actions, including pre-nesting season fencing, area closures and predator deterrents, to protect and restore piping plovers, least terns and other coastal bird species were implemented at Robert Moses, Jones Beach and Gilgo state parks by the Office of Parks, Recreation and Historic Preservation, and by Hempstead on appropriate town-owned lands.
- Two miles of snow fence were erected by the Office of Parks, Recreation and Historic Preservation to re-establish dunes on the ocean beach front at Robert Moses State Park.

EXPANDING PUBLIC USE AND ENJOYMENT OF THE ESTUARY

The Reserve draws residents and tourists expecting ready access to the estuary and high quality recreational experiences. Local, State and federal agencies are the principal providers of this access and recreation. The plan calls for making better use of existing facilities, increasing the number of sites and types of activities, and increasing overall coordination among facilities.

To increase public use of the estuary and expand tourism, the following has been accomplished by CMP implementation partners:

- Site improvements for access and interpretation at a nine acre upland site on Lido Beach in Point Lookout are being implemented by Hempstead assisted by a Department of State administered LWRP EPF grant. The parcel was originally purchased by the New York State Department of Environmental Conservation.
- Several parcels of sensitive land were acquired by Suffolk County. These include: the Unitarian Universal Church property and the former Gallo duck farm on Mud Creek in East Patchogue; the Brooklyn Orphanage property on Champlin Creek in East Islip; the Barrett Heating property on Awixia Creek in Bay Shore; and Sagtikos Manor in West Bay Shore.
- The Oak Beach Inn property, a nine acre parcel on the Fire Island Inlet in Babylon, was also acquired by Suffolk County. Babylon entered into a contract with the County to manage the

site as open space, and has begun developing a special management area plan for it under an LWRP EPF grant.

- Babylon also has worked with the NYS Department of Transportation on a bike path through the Cedar Beach underpass.
- Public access to the Patchogue River is being addressed through a Local Waterfront Revitalization Program being developed by the Village of Patchogue through an LWRP EPF grant.
- Physical and visual access to the shoreline is being addressed through a Local Waterfront Revitalization Program under development by the Village of East Rockaway through an LWRP EPF grant.
- A recreational and public access component of a Local Waterfront Revitalization Program was completed through an LWRP EPF grant by the City of Long Beach for what is referred to there as the Phase C project area, a parcel of land abutting Reynolds Channel that is bordered by a new waterfront park and tennis court complex. Implementation of various aspects of the revitalization program has begun.
- Site evaluation and remediation of an abandoned incinerator along Reynolds Channel in the City of Long Beach, including the removal of degraded soils and installation of monitoring wells, was completed by the City. Long Beach has received an LWRP EPF grant from the Department of State to initiate transforming the incinerator into an urban environmental/education/recreation center.
- A Council coastal heritage trail work group was formed and continues to assist with the development of a South Shore Estuary Reserve Coastal Heritage Trail (Bayway). A two-day, consultant-led visioning workshop was held with work group members and other interested parties to establish goals, objectives and a work plan/strategy for the trail's design, implementation and management. As part of the overall effort, nine sites throughout the Reserve have been identified for interpretive kiosks that will use the New York State Coastal Resource Interpretive Program signage standards established for interpreting coastal and waterway heritage throughout the State.
- Numerous facility improvements that expand access and recreation were made by the Office of Parks, Recreation and Historic Preservation at Jones Beach, Robert Moses, Belmont Lake, Hempstead Lake, and Heckscher state parks, at the Bayard Cutting Arboretum, and the Connetquot River State Park Preserve.

SUSTAINING AND EXPANDING THE ESTUARY-RELATED ECONOMY

The Reserve is home to the largest concentration of commercial and recreational vessels, marinas and other water-dependent businesses in the State. The 3,000 water-dependent or water-enhanced businesses in the Reserve providing nearly 30,000 jobs depend upon access to the estuary, safe navigation, infrastructure to support daily operations, and clean water. Many of these businesses are clustered in historical maritime centers.

To sustain water-dependent businesses, the following has been accomplished by CMP implementation partners:

- A multi-year project was begun by Hempstead to inventory all shoreline structures as a step toward improving the permitting process for such structures. Hempstead has also begun a \$3.1 million capital project to rebuild all town-owned marinas and docks, breakwaters, floating docks, and bulkheads.
- Local Waterfront Revitalization Programs and/or Harbor Management Plans were initiated or being developed by Hempstead, Oyster Bay, Brookhaven and Southampton, supported by LWRP EPF grants, in order to manage land and water uses relating to their navigable waters.
- Significant progress was made by Islip in completing its Local Waterfront Revitalization Program and rezoning the waterfront area in the Bay Shore Maritime Center to allow expanded ferry operations.
- Cooperative efforts between Suffolk County localities and the County continued to identify and prioritize dredging needs to maintain navigation channels.

To sustain maritime centers, the following has been accomplished by CMP implementation partners:

- Renovation of the Village of Freeport's 'Nautical Mile' was completed with LWRP EPF support, reducing flooding, increasing waterfront access, and improving pedestrian amenities.
- Redevelopment of the four-acre Sea Breeze site along the bay shore was begun by the Village of Freeport.
- Development of new educational and interpretive programs for the Long Island Marine Education Center was begun by the Village of Freeport with LWRP EPF support.
- A debris site at the south end of Guy Lombardo Marina was removed and remediated by Hempstead.

- A river walk and new access piers at four street ends are being constructed by the Village of Patchogue as implementation of its Patchogue River Maritime Center Plan.
- A re-use plan for the gateway area of the Patchogue River was initiated by the Village of Patchogue.
- Several parcels of land were acquired by Islip for open space preservation.
- Key property along the Shinnecock Canal was acquired by Southampton, enabling the Town to move forward with implementation of its maritime center plan, funded through an LWRP EPF grant.

INCREASING EDUCATION, OUTREACH AND STEWARDSHIP

An informed and involved public is crucial for implementation of the comprehensive management plan. The Council, its Citizens Advisory Committee (CAC) and the Reserve office have been instrumental in promoting education, outreach and stewardship at interpretive centers, museums, nature centers, towns, parks, villages and county facilities throughout the Reserve.

To heighten public awareness of the estuary, the following has been accomplished by CMP implementation partners:

- A formal education work group was formed by the Council to encourage teachers, students and educational professionals to become involved in CMP implementation.
- The annual *Learning in the Estuary* conference was hosted by the New York State Marine Education Association at Southampton College for a second time; estuarine-related curriculum materials were developed and distributed as part of that conference.
- An annual symposium on the South Shore Estuary and high school environmental sciences research poster competition was held for the seventh time by the Dowling College Field Biology Club and Departments of Chemistry and Earth and Marine Science.
- Water and soil monitoring in Nassau County continued through the Massapequa High School Science Research Program titled South Shore Estuary Watch.
- Outreach efforts by the CAC continued and included school programs and public speaking engagements; production of an SSER slide show and tabletop photo exhibit; a nonpoint source pollution best management practices brochure for homeowners; regular issues of the Reserve newsletter; and attendance at fairs and festivals.
- An updated educational resource directory was completed by the CAC that features educational facilities throughout the Reserve and the programs they offer.

- A draft natural resource access guide has been developed by the Citizens Environmental Research Institute that provides information on sixty public access points in the Reserve. The guide will be offered in paper and web formats.
- The Hempstead Marine Nature Center in Oceanside hosted more than 8,000 visitors in 2002 and participated in guided, interpretive tours focusing on the estuary. Town conservation and waterways staff conducted lectures for schools and civic organizations on the dynamics of the Hempstead estuary.
- Numerous education/outreach activities were ongoing in Oyster Bay, including a Christmas tree/dune grass planting program at TOBAY Beach; a Marine Education Day; and "Don't Feed the Quackers Crackers and Bread."
- Tributary identification signs, fashioned after an original Town of Babylon design, have been installed by Suffolk County at twenty-seven locations where estuary tributaries intersect select County roads.
- Pamphlets explaining proper operation and maintenance of on-site wastewater treatment (septic) systems were prepared by the Suffolk County Office of Wastewater Management.
- A storm water stenciling programs was begun by Keep Islip Clean and the Islip Town Environmental Committee.
- Literature regarding the proper use and maintenance of on-site septic systems has begun to be distributed by Hempstead at Point Lookout civic meetings.
- A four-year draft multi-media outreach strategy was developed by the CAC.
- The SSER web site has been enhanced to support the outreach programs of many implementation partners and now offers a volunteer registry. It will be further expanded to include technical documents, a kids' corner, calendar of events, and other features.
- Numerous stewardship programs were conducted by Council members, the CAC and Reserve office, including beach and stream clean up programs, wetland and dune plantings, endangered shore bird protection, and water quality monitoring.
- Interpretive signs installed by the Office of Parks, Recreation and Historic Preservation at their new self-guided trail in the Connetquot River State Park Preserve help visitors understand the natural history of the pine barrens along the river. An interpretive observation room was created at the park for its trout hatchery hatching house. Interpretive signs focusing on the dune environment were also installed by the Office of Parks, Recreation and Historic Preservation at Jones Beach and Robert Moses state parks.
- A bird checklist for the Robert Moses/Captree/Gilgo parks area was created by the Office of Parks, Recreation and Historic Preservation.

**State-Assisted Implementation Projects in the South Shore Estuary Reserve
April 2001 - July 2003**

Since adoption of the South Shore Estuary Reserve comprehensive management plan in April, 2001, Governor Pataki has awarded twenty-eight Clean Water / Clean Air Bond Act (CWCA) and Local Waterfront Revitalization Program Environmental Protection Fund (LWRP EPF) grants to the Reserve's local governments for implementation of the plan. Through these awards, more than \$2.6 million of State funds has leveraged a comparable amount of local government match.

Project title. Grant recipient. [Total project cost / State grant award and source of funds]

Projects to improve and maintain water quality:

- *Beaver Dam Creek Farm Agricultural Nonpoint Source Project.* Suffolk County Soil & Water Conservation District. [\$30,222 / \$23,822 CWCA]
- *Browns Creek and Green Creek Watershed Management Plans.* Town of Islip. [\$85,214 / \$42,000 LWRP EPF]
- *Connequot Creek Stormwater Project - Phase II.* Town of Islip. [\$1,375,000 / \$687,500 CWCA]
- *Continuous Deflection Separation Installation at Woodmere Country Club.* Nassau County. [\$150,000 / \$75,000 CWCA]
- *Fletchman Farm Runoff Management.* Suffolk County Soil & Water Conservation District. [\$78,052 / \$59,000 CWCA]
- *GIS Map and Database of Town Storm Drains.* Town of Hempstead. [\$64,000 / \$32,000 LWRP EPF]
- *Installation of Leaching Basins.* Village of Lindenhurst. [\$210,000 / \$105,000 CWCA]
- *Johnson Avenue Drainage Improvements - Stormwater Mitigation.* Village of Islandia. [\$151,000 / \$75,500 CWCA]
- *Orchard Neck Creek, Center Moriches Stormwater Mitigation.* Town of Brookhaven. [\$132,000 / \$66,000 CWCA]
- *Preparation of Watershed Action Plans for Great Cove Tributaries.* Town of Islip. [\$130,539 / \$50,000 LWRP EPF]
- *Quantuck Bay and Mecox Bay Watershed Action Plans.* Town of Southampton. [\$120,000 / \$60,000 LWRP EPF]
- *Stormwater Abatement Activities.* Suffolk County. [\$664,794 / \$332,397 CWCA]
- *Swan River Watershed Action Plan.* Town of Brookhaven. [\$70,000 / \$35,000 LWRP EPF]

Projects to protect and restore living resources:

- *Beaver Dam Creek Tidal Wetlands Restoration Project Phase I.* Town of Brookhaven. [\$80,000 / \$40,000 CWCA]

- *Beaver Dam Creek Tidal Wetlands Restoration Project Phase II.* Town of Brookhaven. [\$360,000 / \$180,000 / CWCA]
- *Great South Bay - Restoration of Hard Clam Breeding Habitat.* Town of Brookhaven. [\$50,000 / \$25,000 LWRP EPF]
- *Moriches Bay Hard Clam Stock Assessment.* Town of Southampton. [\$24,000 / \$12,000 LWRP EPF]

Projects to expand public use and enjoyment of the estuary:

- *Lido Beach Marine Conservation Area.* Town of Hempstead. [\$100,000 / \$50,000 LWRP EPF]
- *Oak Beach Park Special Management Area Plan.* Town of Babylon. [\$200,000 / \$100,000 LWRP EPF]

Projects to sustain and expand the estuary-related economy:

- *City of Long Beach Local Waterfront Revitalization Program.* City of Long Beach. [\$80,000 / \$40,000 LWRP EPF]
- *Completion of the Village of Patchogue Local Waterfront Revitalization Program.* Village of Patchogue. [\$60,000 / \$30,000 LWRP EPF]
- *East Rockaway Waterfront Revitalization Program.* Village of East Rockaway. [\$60,000 / \$30,000 LWRP EPF]
- *Village of Lindenhurst Local Waterfront Revitalization Program.* Village of Lindenhurst. [\$50,000 / \$25,000 LWRP EPF]
- *Waterfront Urban Environmental Education Center.* City of Long Beach. [\$200,000 / \$100,000 LWRP EPF]

Projects to heighten public awareness of the estuary:

- *Conceptual Design of Waterfront Urban Environmental Center.* City of Long Beach. [\$300,000 / \$150,000 LWRP EPF]
- *Long Island Marine Education Center Coastal Education Project.* Village of Freeport. [\$40,000 / \$20,000 LWRP EPF]

Comprehensive implementation projects:

- *Implementation of SSER Comprehensive Management Plan.* Town of Brookhaven. [\$100,000 / \$100,000 LWRP EPF]
- *Implementation of SSER Comprehensive Management Plan.* Town of Oyster Bay. [\$176,000 / \$88,000 LWRP EPF]