

LONG ISLAND SOUND
Coastal Management Program

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

LONG ISLAND SOUND Coastal Management Program

your coast, your future

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The New York State Coastal Management Program is administered by the New York State Department of State, Division of Coastal Resources and Waterfront Revitalization, 41 State Street, Albany, New York 12231.

January 1999



STATE OF NEW YORK

GEORGE E. PATAKI
GOVERNOR

January 18, 1999

Dear New Yorker:

Long Island Sound is one of New York State's great treasures. The Sound and its shore lands provide us with a unique combination of habitats and open space, working waterfronts, recreational opportunities and livable communities.

I am pleased to release the Long Island Sound Coastal Management Program. This program, developed with extensive participation from local governments and citizens, sets forth a clear vision for the Long Island Sound coast - a future of clean water, revitalized urban waterfronts, restored habitats, good jobs, and more public access. The Long Island Sound Coastal Management Program is a blueprint to achieve this vision.

Long Island Sound's unique places - its working harbors, its harborfront villages, and its ecologically rich natural areas - will be celebrated. The Sound Program recognizes that these special areas are the foundation not only for preservation of the Sound's environmental and man-made assets but also for positive change in where and how development occurs. We will have a strong economy where the working waterfront plays a key role and well-paying jobs are a reality. Urban waterfronts will shine with new opportunities and renewed connections to this region's proud heritage. Finally, our links to the natural world will be intensified by protecting and restoring the areas where significant natural resources abound.

New York State, through the Clean Water/Clean Air Bond Act and the Environmental Protection Fund, is committing more resources to the Sound now than in any time in recent memory. However, the State alone cannot realize the vision for the Sound described in this program. We must create partnerships for the Sound, and together - governments, private enterprise, citizens, the academic world - we will steer a course for an even better future.

The Long Island Sound Coastal Management Program is a significant achievement. With the assistance and advice of the Long Island Sound Coastal Advisory Commission, the most rewarding work is yet to come and our success will help assure that the Sound we treasure today will remain so for future generations.

Very truly yours,

A handwritten signature in black ink that reads "George E. Pataki".



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INTRODUCTION

The Waterfront Revitalization of Coastal Areas and Inland Waterways Act, Article 42 of the Executive Law, is the foundation for the New York State Coastal Management Program. The legislative findings declare that:

The social and economic well-being and the general welfare of the people of the state are critically dependent upon the preservation, enhancement, protection, development and use of the natural and man-made resources of the state's coastal area and inland waterways.

The legislature further finds that it is in the interest of the people of the state that coordinated and comprehensive policy and planning for preservation, enhancement, protection, development and use of the state's coastal and inland waterway resources take place to insure the proper balance between natural resources and the need to accommodate the needs of population growth and economic development.

THE LONG ISLAND SOUND COASTAL MANAGEMENT PROGRAM

The Long Island Sound Coastal Management Program builds on the long-standing partnership of state and local government in the management of coastal resources.

The program draws its authority from Article 42 of the Executive Law. It refines the existing New York State Coastal Management Program and incorporates the existing array of programs and laws governing activities in the coastal area. The Long Island Sound Coastal Management Program is based on public consensus and close consultation with the state agencies whose programs and activities affect the coast. Finally, it integrates capabilities of state and local government into an enforceable program for the Sound.

The Long Island Sound Coastal Management Program replaces the state Coastal Management Program for the Sound shorelines of Westchester County, New York City to the Throgs Neck Bridge, Nassau County, and Suffolk County. Its specially tailored standards are used for consistency decisions made by the Department of State and other state agencies except where there is an approved Local Waterfront Revitalization Program. The program defines what constitutes a balance between appropriate and needed economic development and protection and restoration of the natural and living resources of the Sound. It complements the Long Island Sound Study Comprehensive Conservation and Management Plan, which focuses on water quality in the deep waters of the Sound, by addressing the upland watershed and harbor and nearshore waters.

Local government priorities for the coast, expressed in local plans and in Local Waterfront Revitalization Programs, are supported by the Long Island Sound Coastal Management Program in two important ways. First, it establishes priorities and targets state capital and program efforts to better reflect approved Local Waterfront Revitalization Programs. Second, it provides resource protection and development information for use in periodic updates of approved Local Waterfront Revitalization Programs and in the development of new Local Waterfront Revitalization Programs within the region.

Currently, of the 50 municipalities along the New York State Long Island Sound shore, ten have approved Local Waterfront Revitalization Programs and 14 are in various stages of developing

a local program. These communities, listed below, contain approximately 82 percent of the 304 miles of shoreline in the region.

- Village of Port Chester*
- Town of Mamaroneck*/
Village of Larchmont*
- Village of Mamaroneck*
- City of Rye*
- City of New Rochelle
- City of New York*
- Town of North Hempstead
- Village of Manorhaven
- Village of Sea Cliff
- City of Glen Cove
- Town of Oyster Bay
- Village of Bayville
- Town of Huntington
- Village of Old Field
- Village of Lloyd Harbor*
- Village of Northport
- Town of Smithtown*
- Village of Nissequogue*/
Village of Head-of-the-Harbor*
- Town of Brookhaven
- Village of Port Jefferson
- Town of Riverhead
- Town of Southold

*approved Local Waterfront Revitalization Program

Chapter 1

CHARTING the COURSE

Long Island Sound is one of New York State's great treasures. The Sound and the land surrounding it is a complex area of natural beauty, bountiful resources, and a rich living history found in its buildings, villages, and harbors. It is one of the most intensely populated areas in the nation, and one of the wealthiest.

These qualities continue to attract people and development to the Long Island Sound coast, placing demands on both the natural and built environments. Decisions made today will affect how the Sound will look in the future. All New Yorkers must meet the "challenge of the coast" to restore and preserve its benefits for present and future generations—to achieve a clean environment while providing opportunities for economic growth.

A VISION FOR LONG ISLAND SOUND

The vision for the Long Island Sound coastal area encompasses the tapestry of natural, economic, and cultural resources that make it unique—

a Long Island Sound coastal area enriched by *enhancing* community character, *reclaiming* the quality of natural resources, *reinvigorating* the working waterfront, and *connecting* people to the Sound.

To better understand the significance of and opportunities presented by the land and water resources of the Sound, the region is viewed from four perspectives—the developed coast, the natural coast, the public coast, and the working coast. Each coast must be considered for both its own intrinsic value, and its interrelationship with the other coasts. These four coasts are the organizational foundation of the Long Island Sound Coastal Management Program.

THE DEVELOPED COAST

Theme: Enhance community character by improving the quality of existing development, promoting a sense of connection to the Sound, and focusing growth and investment to preserve the positive relationship between the built and natural landscapes and between existing and new development.

A unique sense of place is captured in the mix of historic structures, traditional harbors, residential areas, open spaces, working waterfronts, agricultural land, and tree-shaded country roads that makes up the landscape of the Sound communities. These and other valuable characteristics contribute to "a sense of the Sound" that must be protected and enhanced.

Improving the quality of existing development. Long Island Sound is a largely stable, developed coast. Existing development can be enhanced to improve environmental quality throughout the Sound and to meet the demand for more liveable communities along the Sound's shoreline.

Promoting a sense of connection to the Sound. Within each community, links to the Sound's rich cultural and natural legacy should be forged at every opportunity. Development should create a coastal focus that emphasizes its connection to the Sound. Waterfront uses should contribute to the coastal ambiance of a community and substantially advance physical and visual access to the shore for the general public.

Focusing new growth and investment. The natural and working landscapes along the Sound's shore frame and define communities. The contrast and interplay of the green and the built environment should be maintained and celebrated as essential components of community character.

The quality of existing development and of new growth and investment must emphasize excellence in design in order to enrich the Sound's communities. New development, redevelopment, and existing development, both public and private, should:

- protect vistas and views of the Sound and its embayments
- provide a sense of continuity with the past
- emphasize massing and clustering of structures and uses
- consider relationships among buildings, open spaces, and the water
- maintain a scale compatible with the surrounding community or landscape
- include a range of landscapes from wild and natural to designed
- minimize conflicts with neighboring uses
- respect and incorporate cultural and built heritage
- protect distinctive places

THE NATURAL COAST

Theme: Reclaim the value and achieve sustainable use of the Sound's natural resources by improving the quality and function of ecological systems, respecting the dynamics of shoreline change, and providing high quality coastal waters.

The Sound's ecological systems, shoreline, and coastal waters sustain and complement human activities throughout the Sound. The bond that connects people to the natural world and their responsibility as members of the natural world must be recognized.

Improving the quality and function of ecological systems. The Sound's major ecological systems must be restored and stewardship of the living mantle overlying both the Sound's natural and developed landscapes must be improved. Enhancing the Sound's ecological systems should be based on principles of:

- preserving the diversity of native plant and animal species
- protecting wetlands and significant habitats
- restoring native plant and animal populations and biological productivity
- safeguarding vulnerable species and rare or exemplary communities
- managing potentially imperiled natural areas

Respecting the dynamics of shoreline change. The coast is not inherently hazardous: more often, it is the inappropriate human interventions in the natural coastal processes of the shoreline that create a hazard for human life and property. Avoiding inappropriate decisions for locating structures is the first and most reasonable way to respect the dynamics of changing shorelines. Allowing the Sound's shorelines to operate as natural dynamic systems and restoring these natural processes also provide benefits of public access, scenic beauty, wetland and water quality improvements, and erosion and flood protection. Human interference with the Sound's shoreline dynamics will continue to result in a loss of these and other benefits—at public cost. Accepting these costs is only appropriate in areas where public benefits clearly outweigh public costs.

Providing high quality coastal waters. Both watershed approaches and efforts targeting specific pollution sources are necessary to reverse the pervasive pollution that continues to degrade the Sound's waters. Improving the Sound's water quality will depend on reducing pollutants arising

from existing development and will require participation of all levels of government, and the private sector. Several sources of pollution will need to be reduced to improve water quality, including:

- nitrogen loads from municipal treatment facilities
- combined sewer overflows
- vessel waste discharges
- discharges of floatable materials
- nonpoint sources

THE PUBLIC COAST

Theme: Connect people to the Sound and its public resources by improving visual and physical access and by providing a diversity of recreational opportunities.

The Sound coast is one of the most densely populated landscapes on the eastern seaboard, but few people are able to enjoy the expanses of the Sound's shoreline and waters. Only three state recreational facilities exist. Communities providing waterfront access based on residency requirements and overused public facilities are common. Each of these conditions inhibits connection of the public to the Sound. Increasing access for the public will require innovative approaches.

Improving visual access. Visual access to open waters of the Sound, expanses of natural resource areas including wetlands and forest lands, village waterfronts, and working coastlines are all important reliefs to densely developed areas. Limited physical access to the shore heightens the importance of maintaining and creating visual access to the Sound. The following opportunities must be advanced to increase visual access:

- Public areas offering views of the Sound should be incorporated into a visual access system that includes scenic roads and viewing points.
- Waterfront development, including landscaping, should not create a visual barrier or intrude on the water's edge or surface.
- Vegetation, particularly mature trees, should be retained as elements that frame vistas of the Sound, its embayments, and landscapes.

Improving physical access. Creative partnerships with local government and land conservation groups that would provide access must be advanced. Public open spaces should be connected through a system of greenways and blueways to expand access opportunities beyond a series of unrelated access points. Existing public access areas must be protected and improved, and new public access areas developed. Existing public access facilities should be upgraded and expanded through maintenance and capital improvement programs. Additional opportunities on state-owned land that may be suitable for public access should be advanced. Access along public lands and waters is a right that must be protected. Uses that unreasonably interfere with appropriate public use of its foreshore, underwater lands, or the water's surface directly impair the public's right to enjoy their resources.

Providing a diversity of recreational opportunities. The public lands and waters of the Sound offer a significant recreational resource which is fundamental to the character of many of the communities along its shore. Recreational and access facilities should reflect the myriad active and passive recreational opportunities that the Sound offers. The needs of an aging population and expanded opportunities for disabled users should be highlighted. In this area of the state's coast, with limited recreational facilities in relation to its potential and demand, a broad array of recreation and access options will be created by recognizing and seizing the many small and non-traditional opportunities present along the Sound shore.

THE WORKING COAST

Theme: Reinvigorate the Sound's working waterfront, its jobs and products, at appropriate locations by protecting uses dependent on the Sound, furnishing necessary infrastructure, providing business and marketing assistance, and promoting efficient harbor operation.

The Sound and its embayments are valuable components of the state's economy. The waters of the Sound are heavily used for commercial navigation and recreational boating; the living resources of the Sound are harvested for food; the shoreline provides many locations for water-dependent commercial and transportation uses. Protecting and sustaining this infrastructure will result in both economic and environmental benefits.

Protecting uses dependent on the Sound. Water-dependent uses—waterborne transportation of both passengers and cargo, commercial fishing, aggregate transshipment, ship repair, and petroleum transfer—must be maintained and their economic survival enhanced to ensure that basic regional needs are accommodated.

Furnishing necessary infrastructure. Infrastructure needs for this valuable component of the state's industrial and transportation network vary widely and can best be supported in specific areas where these water-dependent uses are concentrated. Identifying these areas of concentration and coordinating the infrastructure needs is one of the strategies that will support revitalization of the working waterfront. Harbors also require infrastructure to support water-dependent uses. This infrastructure includes commercial fishing docks and facilities; vessel maintenance services for ships, tugboats, and recreational craft; and safe navigation channels.

Providing business and marketing assistance. Waterfront businesses can benefit by locating in developed waterfront centers which do not contain the most important concentrations of natural resources and, therefore, where there are greater opportunities for expansion. Marketing assistance is another means of economic support for the working waterfront, including development of export markets for commercial fishery products. Environmental quality needs to be improved, and simultaneously, regulatory processes can be expedited, if they affect viability of water-dependent businesses.

Promoting efficient harbor operation. Harbor management plans and regulations can be used to analyze, and minimize, the growing conflicts among harbor uses and between harbor uses and natural resources in the harbors. Planning for harbor infrastructure is also necessary, particularly for dredging of harbor channels, shoreline stabilization, and removal or reuse of derelict structures.

IMPLEMENTING THE VISION

The Long Island Sound Coastal Management Program sets a clear direction for state government to coordinate its actions and resources to address environmental and economic concerns of the Sound coast. It also recognizes the critical partnership of the state and local governments and the public in achieving this vision for the Sound.

The Long Island Sound Coastal Management Program sets priorities for state action, in part, by concentrating state efforts on certain special places—waterfront redevelopment areas, regionally important natural areas, and maritime centers. For each of these special areas, and others as appropriate, the basic tools available to the state should be used, in cooperation with local governments, to accomplish agreed-upon, site-specific actions which integrate environmental protection, economic development, and research programs.

Chapter 2

LONG ISLAND SOUND COASTAL BOUNDARY

The New York State Long Island Sound coastal area extends from the New York/Connecticut border to Orient Point and across the waters of the Race to include Fishers Island. The westernmost extent of the Long Island Sound Coastal Management Program is the Throgs Neck Bridge in New York City.

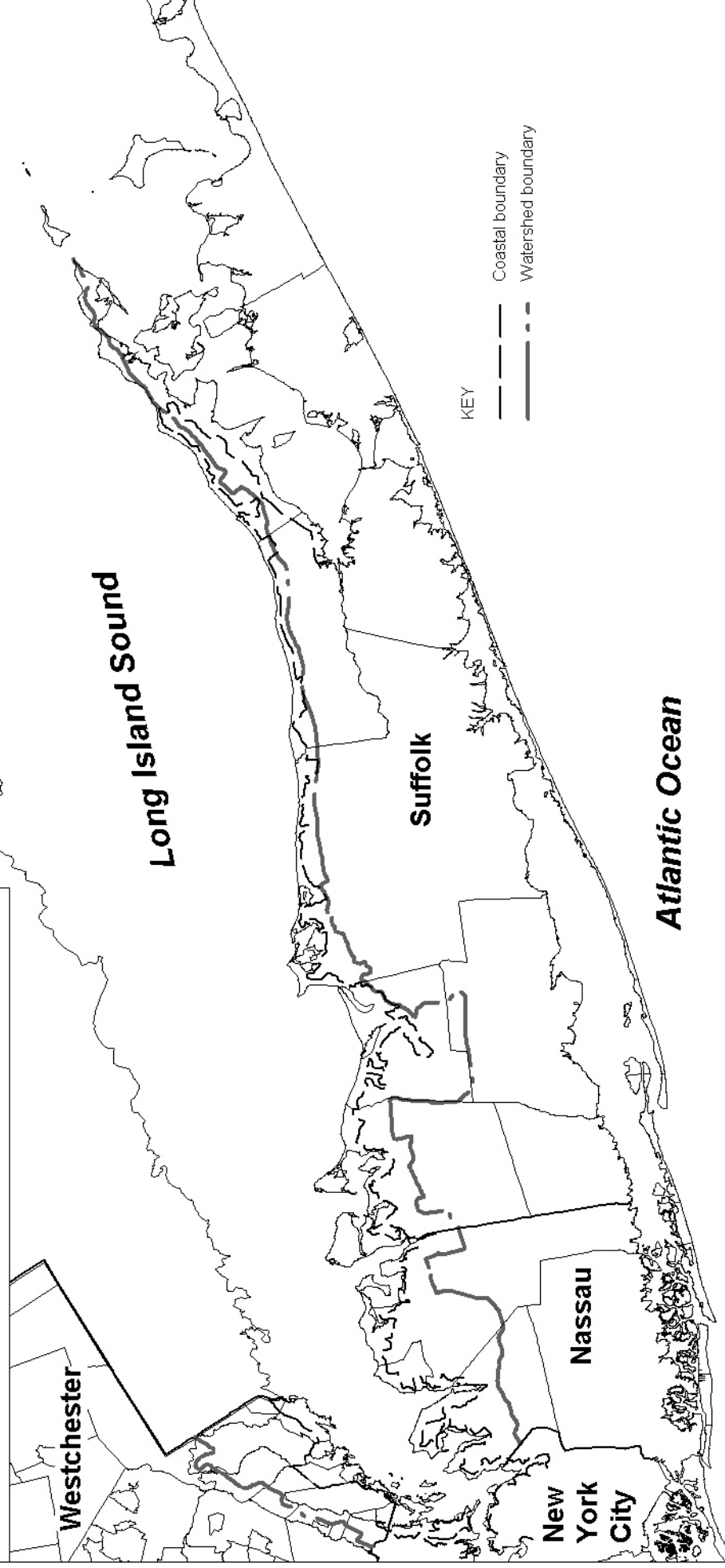
The waterside boundary is the New York/Connecticut state line in Long Island Sound. The inland coastal boundary is the New York State coastal boundary, or the boundary as amended by the approved Local Waterfront Revitalization Programs of the City of Rye, Town of Mamaroneck, Village of Larchmont, Village of Mamaroneck, New York City, Village of Lloyd Harbor, Town of Smithtown, Village of Nissequogue, and Village of Head-of-the-Harbor. This boundary is shown on map 1.0.

The Long Island Sound Coastal Management Program makes minor modifications of the coastal boundary to incorporate lands of high natural value within regionally important natural areas. These boundary extensions are shown on maps 1-1.3.

MAP 1.0

LONG ISLAND SOUND COASTAL BOUNDARY

CONNECTICUT



MAP 1.1

LONG ISLAND SOUND

COASTAL BOUNDARY EXTENSION



Cold Spring Harbor

Oyster Bay Harbor

KEY

— Coastal boundary

- - - Coastal boundary extension



Map prepared by NYSDOS Division of Coastal Resources, GIS Unit, May 1998

Base Map Copyright NYSDOT

MAP 1.2

LONG ISLAND SOUND

COASTAL BOUNDARY EXTENSION



LONG ISLAND SOUND

Northport Bay

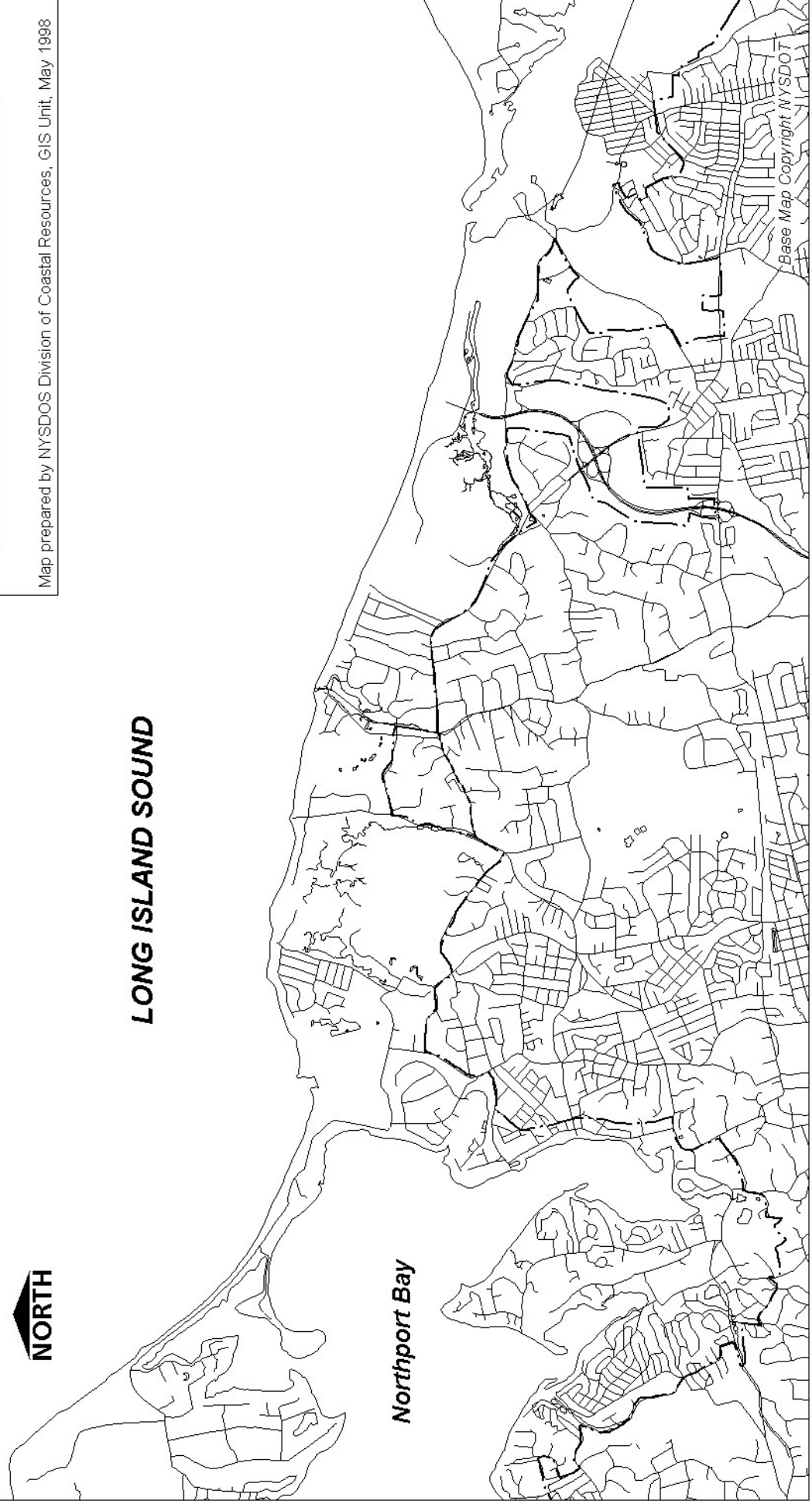
KEY

— Coastal boundary

- - - Coastal boundary extension



Map prepared by NYSDOS Division of Coastal Resources, GIS Unit, May 1998



MAP 1.3

LONG ISLAND SOUND

COASTAL BOUNDARY EXTENSION



LONG ISLAND SOUND

**Port Jefferson
Harbor**

Smithtown Bay

KEY

— Coastal boundary

- - - Coastal boundary extension



Map prepared by NYSDOS Division of Coastal Resources, GIS Unit, May 1998

Base Map Copyright NYSDOT
Hik P G

Chapter 3

FINDINGS and RECOMMENDATIONS

The Sound coast means different things to different people, often defined by individual experiences of living, working, and playing on its shores. The Long Island Sound Coastal Management Program has been organized around four thematic coasts—the developed coast, the natural coast, the public coast, and the working coast—to better focus attention on the issues that are of significance to the people of the region.

The Long Island Sound Coastal Management Program sets public policy for federal and state actions affecting the economic and environmental resources of the Sound coast. It is grounded in the legislative purposes listed in Article 42 of the Executive Law and other pertinent state laws. These directives have been refined by extensive public involvement, draft and approved Local Waterfront Revitalization Programs, and the recommendations of the Long Island Sound Study Comprehensive Conservation and Management Plan.

The findings which follow are summarized from the detailed analyses presented in volume 2 of the Long Island Sound Coastal Management Program.

THE DEVELOPED COAST

Enhance community character by improving the quality of existing development, promoting a sense of connection to the Sound, and focusing growth and investment to preserve the positive relationship between the built and natural landscapes and between existing and new development.

The Long Island Sound coastal region is essentially a developed coast. Much of community character is defined by the existing patterns and style of development, a pattern and style that over the years has exhibited a close relationship to Long Island Sound and to natural landscapes in the coastal area.

Changing development patterns can enhance the community character of the Long Island Sound coastal region and the sense of place of the individual communities that come together to form the region's identity. To ensure that change maintains or enhances community character and ties to the Sound and the surrounding landscape, the impacts of development must be managed to improve quality of life and the environment. This can lead to the coexistence of successful built-up areas and surrounding natural and working landscapes that respects the natural and economic values of the Long Island Sound.

DEVELOPED COAST FINDINGS

- The regional structure of the Long Island Sound coast is based on a series of 17 waterfront communities which represent the traditional harbors and commercial, industrial, and cultural centers of the region. These centers are linked by residential communities and open spaces.
- Most land adjacent to the Sound is used for some public or private purpose, the bulk of which is residential. Three different types of development activity occur within the coastal area of the Sound: (1) modest infill development in stable, almost fully developed areas of the coast in the western portion of the region; (2) redevelopment of deteriorated, abandoned, and underutilized areas in urban or previously developed areas of the coast in the western

portion of the region; and (3) major new development in previously undeveloped areas located in eastern Long Island.

- Population in the coastal area and watershed has remained relatively stable for the past 20 years. Population growth is expected to increase by about 1 to 2 percent over the next ten years. The current, slow population growth period follows the 78 percent growth rate of the post-World War II era.
- Although population is remaining relatively constant, the number of total housing units has continued to increase, leading to continued development pressure. For example, in the watershed of Nassau County, population declined by 8,550 while the number of housing units increased by 8,557.
- Seasonal housing, located mostly in eastern Long Island, is increasingly being converted for year-round use.
- Current land use consists of a mix of three major categories: residential use, comprising about 70-80 percent of the shoreline; recreational use and dedicated open space, comprising about 10-20 percent of the shoreline; and commercial/industrial uses, comprising about 5-10 percent of the shoreline. Vacant lands comprise about 5 percent of the shoreline.
- The number of housing units in the coastal area of Nassau and Suffolk counties could increase by 20 percent if all land under current zoning available for residential development were developed. This would approximately equal the number of units built between 1970 and 1990 when the population grew by only 1,928 and an additional 7,023 housing units were added. The population of the coastal area of Nassau and Suffolk counties can be projected to increase between 2,000 to 12,000 people by 2010. Thus, build out is a real possibility in the foreseeable future.
- The general land use trend in the built up sections of the Long Island Sound coast in Westchester County, New York City, Nassau County, and western Suffolk County suggests that minor changes can be expected. Change will occur with redevelopment of previously developed land with a resulting change of use from institutional, commercial, or industrial uses to residential use. The most significant changes in land use can be seen in eastern Suffolk County, where areas of agricultural and vacant land are declining, and areas of residential, commercial, and industrial land are increasing.

ENHANCING COMMUNITY CHARACTER: Recommendations for the Developed Coast

Recommendation 1: Foster a development pattern on the Long Island Sound coast which focuses on the 17 existing centers of development, strengthens the waterfront economy, and preserves natural resources.

The regional character of the Long Island Sound coast is defined by the pattern of open and developed land. There are 17 waterfront communities that are the focal point of the developed land pattern. These communities are centers of economic and cultural activity within the region and should be maintained to enhance the region's quality of life, coastal character, and remaining open lands and natural resources. These communities are:

- | | |
|---|------------------------|
| • Village of Port Chester | • City of Glen Cove |
| • Village of Mamaroneck | • Village of Roslyn |
| • City of New Rochelle | • Village of Sea Cliff |
| • City Island | • Village of Bayville |
| • Village of Manorhaven/
Port Washington | • Oyster Bay |

- Cold Spring Harbor
- Huntington Harbor
- Village of Northport
- Stony Brook
- Setauket
- Village of Port Jefferson
- Mattituck Inlet

By its construction, funding, and regulatory powers affecting infrastructure provision, government is a dominant force in shaping the course of development. Through state infrastructure provision, development, particularly large-scale development in the coastal area, should be encouraged to locate within, contiguous to, or in close proximity to existing areas of development, provided environmental conditions are suitable for and able to accommodate development. Concentrating development to use existing infrastructure must be accompanied by maintenance and improvement of that infrastructure.

This recommendation seeks to:

- strengthen existing residential, industrial, and commercial centers within the stable and developing coasts, particularly the identified 17 traditional waterfront communities
- foster an orderly pattern of growth where outward expansion is occurring in the developing coast
- increase the productivity of existing public services and moderate the need to provide new public services by promoting new development where these already exist
- protect open space

Implementation: Seventeen communities on the Sound shore define the regional development pattern of the Sound coastal area. The state should focus investment and technical assistance to strengthen these existing centers of development consistent with their character and local objectives and to foster cohesive development in the Long Island Sound coastal area.

State agencies that could be project partners with local governments to strengthen existing centers of development include the Department of State (e.g. waterfront planning and revitalization), the Department of Environmental Conservation (e.g. brownfields remediation and environmental protection), the Empire State Development Corporation (e.g. development economics and marketing), the Office of Parks, Recreation, and Historic Preservation (e.g. public parks, historic preservation, and open space), and the Department of Transportation (e.g. road improvements).

These agencies, involved local governments, and counties can cooperate to establish priorities for state investment and direct actions to support development strategies.

The departments of State, Environmental Conservation, and Transportation, Empire State Development, and the Office of Parks, Recreation, and Historic Preservation will cooperate to ensure that the Environmental Protection Fund, Clean Water/Clean Air Bond Act, and other appropriate funding sources are identified to assist local governments and counties to make the necessary infrastructure improvements to support concentration of development. For example, improving the level of treatment for nitrogen while expanding treatment capacity at the Port Chester, Blind Brook, Port Washington, and Glen Cove wastewater treatment plants may be necessary to meet the nitrogen reduction goals of the Long Island Sound Study Comprehensive Conservation and Management Plan. The Department of State will work with the Department of Environmental Conservation to explore ways to accommodate development within the limits of the Long Island Sound Study Comprehensive Conservation and Management Plan Phase 3 Nitrogen Reduction Plan.

The Department of State will assist involved local governments to develop or refine Local Waterfront Revitalization Programs, pursuant to Article 42 of the Executive Law, to reflect local priorities for development, infrastructure, and recreational needs.

Recommendation 2: Work with local governments to advance development in brownfields and underused urban waterfronts to produce regional economic benefits, meet the demand for new large-scale development, and restore deteriorated environments.

On the Sound coast, 17 communities have significant existing waterfront development. Of those, six have brownfields and/or sufficient underused, previously built sites available for redevelopment which, if revitalized, would have a regional economic benefit. These communities include the villages of Port Chester, Manorhaven, and Port Jefferson, the cities of New Rochelle and Glen Cove, and the Town of Smithtown.

These communities contain some of the most significant commercial waterfront centers on the Sound, and exhibit some or all of the following characteristics:

- The waterfront has traditionally been used for water-dependent uses.
- The commercial waterfront center adjoins a central business district where uses that are complementary and supportive of water-dependent and waterfront commercial uses can be located without displacing or competing with water-dependent uses.
- The waterfront and business districts attract people from a broad area or region.
- New commercial uses are desired and can be sited without unduly affecting community character and natural resources.
- Significant land parcels are available for development or redevelopment.
- The area contains higher concentrations of brownfields or underused previously developed sites than other locations on Long Island Sound.
- The local government has demonstrated a commitment to revitalizing its brownfields or underused sites.

Redevelopment of these waterfront areas is an important step in achieving the overall vision for the Sound, and the state will work with interested local governments to reclaim brownfields and other underused land for a range of appropriate uses including water-enhanced retail, hotels, and restaurants; water-dependent industry; freight or passenger ferry service; marinas; and parkland. Successful redevelopment is a process that begins with redevelopment strategies that are tailored to the needs of the community. These strategies clearly define the steps in turning a brownfield or other site into a new use that benefits the community and the region.

The strategies will create an environment for redevelopment with appropriate land and water uses and foster continuing economic and environmental revitalization. Components of the strategies might include developing supportive land use regulations, preparing generic environmental impact statements, programming land assembly, conducting market and feasibility studies, programming infrastructure improvements, analyzing hazardous waste and remediation needs, coordinating remedial action plans with reuse and redevelopment plans, and developing public/private partnerships. The redevelopment strategies should use the best proven techniques, as well as non-traditional and innovative approaches to solve redevelopment problems. For example, waterfront redevelopment areas could be designed as receiving areas for transfer of development rights programs, thus providing more flexibility for waterfront developers and helping to meet other community land use goals.

Implementation: The Department of State, Empire State Development, and the Department of Environmental Conservation, using Clean Water/Clean Air Bond Act, Environmental Protection Fund, and other funds, will work with local governments and the private sector to revitalize urban waterfronts for new economic uses. When needed, redevelopment strategies to guide reinvestment and redevelopment will be prepared in cooperation with local governments. The

redevelopment strategies will address appropriate and economically feasible land use, environmental remediation, public amenities, job creation, and infrastructure.

Recommendation 3: Advance cooperative public and private efforts to establish desired uses on large sites which are in single ownership and which are the most suitable for new appropriate development.

There are a limited number of large, currently developed sites that, if they were to become available for redevelopment, could significantly affect the region, due to the large scale of development that the site could accommodate. Characteristics of these sites include single ownership; planned or previous institutional, utility, or energy use; and interest in redevelopment. Given their limited number, these large sites should be treated as important regional resources. There is a state interest in promoting cooperative planning and subsequent reuse of these sites to ensure that the range of regional needs for economic development, housing, open space, and recreation is met.

Creating new activity centers on these shoreline parcels presents a rare opportunity for economic development. These sites also provide opportunities for inclusion of public access, greenways, and water-dependent uses within a mixed use development. As specific recommendations can provide more tangible direction and guidance for future development of these sites, the state and local governments should undertake a cooperative planning process to develop desired land use scenarios for each of these sites.

This approach should also be adopted to address the future of any assemblage of smaller sites into a large development or redevelopment site.

Implementation: The Department of State will work with the involved towns to encourage cooperation with the landowners of the identified large sites, to advance assessment of the potential array of uses and overall design of a site. The Department of State will work cooperatively with local governments and others to prepare land use scenarios for these sites. The Department of State will assist local governments to develop or refine Local Waterfront Revitalization Programs to reflect development and design preferences for these large sites.

Recommendation 4: Maintain and enhance historic maritime communities to strengthen the region's coastal heritage and coastal economy.

In 1998, Governor Pataki signed into law a bill establishing a Long Island Sound state heritage area. The heritage area encompasses the land between Route 25-A and the Sound from Great Neck to the Village of Port Jefferson. It would highlight significant early American history, including the Revolution, the development and character of the historic maritime communities, and the Gold Coast mansions. The bill also created a heritage area planning commission to oversee a management plan for the area. The plan would incorporate the findings and recommendations of the Long Island Sound Historic Centers of Maritime Activity Advisory Committee that were presented to Governor Pataki and the State Legislature in 1997 as a joint effort between the Department of State and the Office of Parks, Recreation, and Historic Preservation.

Recommendations of the Historic Centers of Maritime Activity Study included promoting preservation of maritime heritage through restoration and tourism projects, development of interpretive centers, links with the system of greenways and blueways proposed in this document, and assistance with projects to upgrade waterfront amenities and infrastructure.

To maintain the qualities of the heritage area, consideration should be given to how development and redevelopment activities will protect the existing community character, sense of place, and maritime integrity of the centers of maritime activity.

Water-dependent commercial and industrial uses should be protected and promoted. Appropriate commercial water-dependent use development should occur. Water-enhanced uses should support the maritime heritage of the community, and the natural resources that have supported maritime activities should be preserved.

Implementation: The Department of State will cooperate with the Office of Parks, Recreation, and Historic Preservation and the heritage area planning commission as the management plan is prepared. The department will work with local governments, the public, and maritime users to advance protection and appreciation of the historic and maritime heritage of the Sound coast, especially through Local Waterfront Revitalization Programs and projects funded through the Environmental Protection Fund and Clean Water/Clean Air Bond Act.

The Long Island Sound Historic Maritime Communities Study recommends that a voluntary, statewide Historic Maritime Communities Program be established that would use the Local Waterfront Revitalization Program and the Heritage Areas Program as vehicles for the state to provide assistance.

Recommendation 5: Assist local governments to use their existing land use authority to protect recreational lands for their associated open space, habitat, and aesthetic purposes.

Continued use of public and private recreational land should be encouraged. This can be achieved by providing advice to communities on land use regulations to zone appropriate land for specific recreational uses. These lands, including golf courses, should be valued for not only recreational use but for open space and aesthetic benefits. In addition, these lands, depending upon the intensity of use, offer some natural resource benefits, such as wildlife habitat. If conversion of private recreational land occurs, the preference would be that other open space uses be developed or that low density or clustered development occur which retains the bulk of the site in open space.

Implementation: The Department of State will provide technical assistance on this matter to local governments.

Recommendation 6: Advance Local Waterfront Revitalization Programs, specific issue or geographic components of Local Waterfront Revitalization Programs for all municipalities on Long Island Sound. Revise existing Local Waterfront Revitalization Programs to incorporate the relevant components of the Long Island Sound Coastal Management Program.

Local Waterfront Revitalization Programs provide the appropriate level of land use planning for a community to examine its potential for new development and resource protection. State assistance to local governments for the completion of Local Waterfront Revitalization Programs or preparation of components of Local Waterfront Revitalization Programs should include continuing technical assistance and funding through the Environmental Protection Fund. Priority should also be placed on revising existing Local Waterfront Revitalization Programs to incorporate the Long Island Sound Coastal Management Program, using funding sources such as the Environmental Protection Fund to achieve this objective. The Local Waterfront Revitalization Programs should focus on land available for development or redevelopment, consider its resource values and role in the character of the community, examine potential uses, and determine suitable land and water use. Current land use regulations should be reviewed to ensure that the community is best able to take advantage of development opportunities, while maintaining or improving community character, and protecting and improving natural resources.

Implementation: Local governments should actively participate in completion and revision of Local Waterfront Revitalization Programs and enact the necessary local legislation to implement their Local Waterfront Revitalization Programs. The Department of State will support completion of Local Waterfront Revitalization Programs in the Long Island Sound coastal area, as well as revision of approved Local Waterfront Revitalization Programs to incorporate the Long Island Sound Coastal Management Program. The department will also continue to seek funding, including support from the Environmental Protection Fund (Title 11, Local Waterfront Revitalization Program), to assist local governments in this effort.

Recommendation 7: Survey the historic and archaeological resources of the Long Island Sound coastal region.

There are large numbers of historic structures and archaeological sites that exist in the region; however, the lack of advancement towards formal designation, listing, and recognition of historic resources is a concern. A comprehensive survey of historic resources involving an evaluation of significance is needed that results in a formal designation of historic significance at national, state, regional, or local levels, with its attendant protection of the resource.

Implementation: The survey will be done incrementally by local governments using funds now available through Title 11, Local Waterfront Revitalization Programs Environmental Protection Fund. The Department of State will cooperate with the Office of Parks, Recreation, and Historic Preservation, the Department of Education, local governments, and private groups to conduct the appropriate research to determine which sites are eligible for inclusion in the state and national registers of historic places. Once this determination has been made, these entities will cooperate to ensure that eligible sites are listed and protected. The Office of Parks, Recreation, and Historic Preservation's Certified Local Government Program provides funding to permit local governments to undertake the necessary research to identify, nominate, and protect historic sites.

Recommendation 8: Assist local governments to protect historic and archaeological resources through Local Waterfront Revitalization Programs and strengthened local laws.

The protection of historic and archaeological resources should be fostered by using Local Waterfront Revitalization Programs to specifically identify and protect historic structures and districts, and areas of archaeological sensitivity. Local preservation laws can also be strengthened.

Implementation: The Department of State will continue to provide technical assistance to local governments to prepare or amend local preservation laws. The Office of Parks, Recreation, and Historic Preservation will assist local governments to become certified local governments through its Certified Local Government Program.

Recommendation 9: Protect scenic resources within the Long Island Sound coastal region.

Scenic quality is an important part of a community's character and sense of place. Designation of Scenic Areas of Statewide Significance, pursuant to the Waterfront Revitalization and Coastal Resources Act, would recognize the most important scenic areas within the Long Island Sound coastal region.

Implementation: The Department of State, in cooperation with local governments, will undertake a comprehensive scenic resources evaluation of the Long Island Sound coastal area and prepare appropriate area designations.

THE NATURAL COAST

Reclaim the value and achieve sustainable use of the Sound's natural resources by improving the quality and function of ecological systems, respecting the dynamics of shoreline change, and providing high quality coastal waters.

The natural coast is comprised of a rich diversity of natural resources that are the basis for the productivity of the Sound, as well as a source of scenic beauty and recreational enjoyment. The Long Island Sound Coastal Management Program concentrates on the integrity of ecological communities, appropriate responses to natural coastal processes, and improved management of water resources and overall water quality.

NATURAL COAST FINDINGS

Ecological Resources

Long Island Sound is a complex ecosystem consisting of physical (non-living) and biological (living) components and their interactions. The physical components include the open waters, embayments, and tributaries of the Sound, as well as coastal lowlands, headlands, bluffs, adjacent upland areas, small offshore islands, and soils. These features continue to develop and change through the action of tides and offshore currents, and through weathering by precipitation and surface runoff. The biological components include the plants and animals that make up a wide range of ecological communities in and around the Sound. These ecological communities provide vital habitat for waterfowl, finfish, and shellfish.

- The Sound coast contains areas of exceptional natural resources of regional significance which offer ecological, economic, and recreational benefits. With focused stewardship, the benefits offered by these areas can be increased.
- State and local regulations have arrested the loss of tidal wetlands, protecting the 65 to 75 percent of the Sound's total vegetated wetlands that remain. However, impairments and threats to wetlands and habitats on the Sound coast continue. Impacts fall into three categories: physical loss and fragmentation of resources, degradation of resources, and functional loss of resources. Restoration of wetland values, as well as pursuing a net increase in wetlands, would have a positive effect on habitat, water quality, and recreational enjoyment.
- In the western part of the Sound coast, impairments are most directly related to impacts of nearby heavy development and use. Habitat value is affected by lowered water quality that results from combined sewer overflows, strained wastewater treatment plants, hazardous waste contamination, stormwater runoff contamination, animal waste, and the introduction of exotic plants.
- In the central part of the Sound coast, wetlands are affected by loss of vegetated buffer, as well as some instances of illegal fill, and mosquito ditching. Road runoff and sedimentation add pollutant loadings to wetlands in this part of the coast. Use of motor boats and jet skis in shallow waters adjacent to wetlands can affect wetland vegetation both by direct physical disturbance and through the indirect effects of wave action. Water quality impairments, including vessel discharge and contaminated sediments, groundwater plumes, and human use affect habitat viability.
- Vegetated tidal wetlands along eastern Long Island's north shore are located at four tidal inlets. These areas are critical fish and bird habitat. In addition, the beaches are used for bird and turtle nesting; rocky shorelines are used for seal haulouts. These are also valuable habitats. Disturbances to bluffs and resulting beach erosion threaten bird and turtle nesting.

Heavy boating activity reduces the quality of seal haulout habitat. The ecological communities located in the inlets are affected by poor water quality from nonpoint source pollution.

- While significant fish and wildlife habitat areas remain along the Sound shoreline, fragmentation of habitat threatens the diversity of wildlife and marine life. In addition, changing vegetative cover from native species to exotics in domestic, commercial, and institutional landscaping affects bird and animal use of the coast and requires greater inputs of water and fertilizers. Invasions of exotic species adversely affect natural ecological communities.

Coastal Flooding and Erosion Hazards

Erosion and flooding have been causing changes in the coastal geography of the Long Island Sound region since glacial retreat began thousands of years ago. Beaches and dunes have developed and changed; bluffs have slumped and been washed away; inlets have opened and closed; bays have changed shape and depth; wetlands have appeared and disappeared. These events, whether occurring incrementally or in a single storm event, are part of a dynamic natural process that never allows coastal landforms to remain the same for more than a moment in geologic time.

Natural processes acting upon unencumbered coastal features, such as nearshore areas, beaches, dunes, bluffs, wetlands, and floodplains, are not considered hazardous. Coastal hazards arise when people build on these dynamic landforms, which continue to change. This eventually results in those structures being damaged or lost by the naturally occurring erosion or flooding.

While population levels have been relatively stable for Long Island in recent years, development in coastal areas, including locations of dynamic shoreline change, has steadily increased. As growing numbers of people choose to live in these areas, greater numbers of structures are at risk.

- Development in erosion and flood prone areas is continuing. Presently, more than 8,200 structures are located in such areas. Over 1,200 structures are currently located seaward of the coastal erosion hazard area boundary, set by Article 34 of the Environmental Conservation Law.
- The trend toward shoreline hardening is increasing. In 1969, only 8.96 miles of Suffolk County's 132.5 miles of Long Island shoreline were hardened with riprap, bulkheads, or seawalls. Today, 43.7 miles of the county's shoreline are hardened.
- Approximately 50 percent of the Sound shoreline has been armored with erosion control structures. Many of these structures do not serve an erosion control function. Even for those structures that are intended to control erosion, poor design, siting, maintenance, and lack of remediation have created downdrift erosion, beach loss, and other problems on and off the site.
- Areas of rapid erosion on the Long Island Sound shoreline occur at Bayville, Asharoken, and along the bluffs of Smithtown, Brookhaven, and Riverhead.
- The historic rates of erosion along the Sound shoreline need to be measured to define structural hazard areas, so that the Coastal Erosion Hazard Area Act can operate more effectively.
- Development in coastal hazard areas can be better managed to ensure there is a reasonable likelihood structures will remain safe, or not at risk. Development in flood hazard areas can also be better managed to reduce risks from flooding.

Water Resources and Water Quality

Population growth and associated development have had negative effects on the quality of water in the Sound. In urban areas, numerous point and nonpoint sources have degraded the Sound's waters. Wastewater treatment facilities discharge permitted levels of pollutants into the Sound, and combined storm and sanitary sewers channel untreated overflows directly into its waters. In the less developed areas of the region, diffuse pollutants—septic system effluent, lawn and agricultural chemicals, and sediments—contribute to water quality problems.

- For the Sound as a whole, point sources of water pollution, including effluent from wastewater treatment plants are the most critical contributors to water quality impairments. The Long Island Sound Study Comprehensive Conservation and Management Plan estimates that nearly half of the anthropogenic (human caused) nitrogen loadings to the Sound are from point sources.
- Nonpoint pollution (street runoff, lawn fertilizers, etc.) is also a significant source of contamination, accounting for 21 percent of in-basin anthropogenic nitrogen loading. Of particular concern are problems in embayments on the Sound. Nitrogen deposition from atmospheric sources ("acid rain") provides about 4 percent of the anthropogenic nitrogen loading to the Sound.
- On-site sewage disposal systems contribute to pollution problems in several areas of the watershed, from Guion Creek in Westchester County to nine segments in Suffolk County. Problems arise from poor siting and lack of maintenance.
- Siting marinas in areas with poor flushing and vessel waste discharge in enclosed embayments impair water quality, affecting both shellfish harvesting and human enjoyment. Improperly conducted boat maintenance in marinas and boat yards can contribute to water quality impacts.
- Groundwater transport of hazardous waste plumes is reaching Soundbays, for example Port Jefferson Harbor and Glen Cove Creek. Evaluation and remediation of problem sites need to proceed. In Oyster Bay Harbor and in the Oak Neck Creek portion of the Mill Neck Creek wetlands, high concentrations of heavy metals warrant continued monitoring.

RECLAIMING THE VALUE AND SUSTAINED RESPONSIBLE USE OF THE SOUND'S NATURAL RESOURCES: Recommendations for the Natural Coast

Improving the Quality and Function of Ecological Systems

Recommendation 10: Protect and restore unique areas of regional significance characterized by a diversity of outstanding natural resources, which are at risk.

Along the Long Island Sound coast, there are defined geographic areas that contain significant natural features, which together form a landscape of environmental, economic, and cultural importance to the public. Some of these areas and their resources are at risk from existing or new activities that could impair the viability of the area and reduce the quality of life enjoyed by residents and visitors to the Sound coast. With a focused management program for these areas, stewardship can be improved to ensure that these resources remain a vital component of the Sound coast.

The objectives of the Long Island Sound Coastal Management Program for regionally important natural areas are listed below. The objectives are related to one another, because the resources, as well as their impairments, are related. The achievement of a given objective may depend on the achievement of another. An overall strategy to guide protection and restoration actions must be developed for each regionally important natural area that shows recognition of these relationships.

- Prevent fragmentation of natural ecological communities.
- Curtail nutrient and contaminant loads to Long Island Sound and its tributaries.
- Manage development in the regionally important natural area watersheds to result in cleaner surface waters, protection of estuarine life, maintenance of commercial shellfishing, and restoration of shellfish harvesting where natural ecosystem processes may permit.
- Maintain the benefits of natural shoreline functions.
- Protect and restore freshwater and tidal wetlands and their natural functions.
- Protect and, where appropriate, expand populations of New York Natural Heritage elements (endangered, threatened, and rare species and rare natural communities).
- Maintain sustainable populations of fish, shellfish, and wildlife species that depend on the resources of a regionally important natural area for critical stages in their life cycles.
- Protect, and where possible, expand native plant communities.
- Ensure that recreational activities will be compatible with the protection of ecological communities; endangered, threatened, and rare species; species of special concern; economically important species; and other intrinsic ecosystem elements.
- Prevent impairments to coastal access and develop new access opportunities that are compatible with protection of natural resources.
- Request the public to drive the process of protecting the resources of the regionally important natural area.

Within these areas, protection and restoration of natural resources and their related uses is the primary objective. Tidal and freshwater wetlands can be restored, water quality can be improved, aquatic and upland habitats can be protected, and indigenous species can be re-established.

The combination of advancing appropriate development in waterfront redevelopment centers and improving productivity of regionally important natural areas will reduce cumulative and secondary impacts of development and human use on the region's natural resources. Map 6.0 shows areas that have been initially identified as meeting the criteria.

Implementation: The Department of State and the Department of Environmental Conservation, with Clean Water/Clean Air Bond Act, Environmental Protection Fund, and other funds, will protect and restore the natural resource values in regionally important natural areas in cooperation with local governments. Any necessary management plans will specify actions to enhance and protect the resource values in these areas, as well as actions to restore impaired resources. Such actions may include restoration or creation of wetlands, nonpoint source pollution management, habitat enhancement, and land acquisition. The plans will establish priorities for action and implementation funding. The plans will be incorporated into the Long Island Sound Coastal Management Program when approved by the Department of State and involved local governments.

The Clean Water/Clean Air Bond Act and the Environmental Protection Fund are key funding sources to develop and implement the protection and restoration strategies for each regionally important natural area.

Recommendation 11: Achieve a net gain in the quality and quantity of tidal wetlands and no net loss in the quality and quantity of freshwater wetlands in the Long Island Sound coastal area.

Over the past 100 years, the acreage of tidal and freshwater wetlands in the region has declined, with many remaining wetlands being degraded by encroachment into buffer areas, runoff from development, and other factors. The remaining tidal and freshwater wetlands, therefore, take on added significance. There is a critical need to restore ecological functions of the remaining wetlands of the Sound to more fully realize the economic, ecological, and aesthetic potential of those areas and of the Sound ecosystem as a whole.

Undeveloped uplands, which provided buffers for the Sound's wetlands, have been greatly reduced. The long-term viability of wetlands is often linked with the existence of sufficient upland buffers.

Actions should be taken within wetlands and in areas contiguous to wetlands in order to reconstruct lost physical features essential to natural functioning of the wetland, to change altered characteristics that adversely affect the functioning of wetlands, to promote a net gain in wetlands, and to enhance the wetland's contribution to the health and diversity of the Sound ecosystem.

There are a number of studies and plans which identify the need for wetland restoration sites. These sources include the Long Island Sound Comprehensive Conservation Management Plan, the Long Island Sound Study Habitat Restoration Plan, Local Waterfront Revitalization Programs, local planning documents, and park management plans. Restoration within these wetlands and in contiguous areas should be considered a starting point for restoration of wetland systems. Many of these sites will be more fully evaluated as part of management plans prepared by the Department of State, the Department of Environmental Conservation, the Office of Parks, Recreation, and Historic Preservation, and local governments.

Implementation: The Department of Environmental Conservation, in cooperation with the Department of State, U.S. Environmental Protection Agency, the Connecticut Department of Environmental Protection, the U.S. Fish and Wildlife Service, the New York City Department of Environmental Protection, and New York City Department of Parks and Recreation, has solicited recommendations from local governments and the public for restoration of 12 habitat types, including freshwater and tidal wetlands along the Sound shore. Over 450 nominations were received in this Long Island Sound Habitat Restoration Initiative. Priority ranking criteria have been developed with public review and comment.

In evaluating these nominations and future recommendations, the Long Island Sound Habitat Restoration Initiative Team will establish Soundwide priorities for habitat restoration. The Department of Environmental Conservation met with local governments around the Sound on the New York side to ascertain local restoration priorities.

As the Long Island Sound Study habitat restoration team continues evaluating sites and making recommendations, special consideration will be given to those projects which further the actions and recommendations identified in the Long Island Sound Study Comprehensive Conservation Management Plan, the Long Island Sound Coastal Management Program, the state Open Space Conservation Plan, and Local Waterfront Revitalization Programs. The participation of local agencies, conservation groups, and the public has added to the successful development of restoration priorities.

The Clean Water/Clean Air Bond Act is critical in funding restoration of wetlands identified by the interagency management team. For purposes of the bond act, "aquatic habitat restoration projects involve planning, design, construction, management, maintenance, reconstruction, revitalization, or rejuvenation activities intended to improve the waters of the state of ecological significance or any part thereof, including, but not limited to ponds, bogs, wetlands, bays, sounds, streams, rivers, or lakes and shorelines thereof, to support a spawning, nursery, wintering, migratory, nesting, breeding, or foraging environment for fish and wildlife and other biota."

The departments of Environmental Conservation and State are particularly interested in projects that restore spawning habitat, restore wetlands including open marsh water management, restore marine submerged aquatic vegetation, stabilize and restore stream banks and beds, restore fish passage, and restore shellfish beds.

The interagency Long Island Sound Study Habitat Restoration Team has identified three criteria to set priorities for restoration of sites:

- *ecological considerations*: area, trust species benefits, potential to obtain historical ecological function, potential to restore to full species use
- *logistical considerations*: technical probability of success, community support, cost/acre, implementation readiness, degree of maintenance
- *public/economic benefits*: access/open space, environmental equity, economic benefits, recreational use, education, associated surface and groundwater improvements

Additional sites may be added to the list of proposed wetland restoration sites as information becomes available.

The Clean Water/Clean Air Bond Act will be a critical source of funding for restoration efforts. The Transportation Equity Act for the Twenty-First Century, the Environmental Protection Fund, and other funding sources also can provide means to undertake restoration projects.

Recommendation 12: Promote use of indigenous Long Island plants.

Nonindigenous invasive plants overrun indigenous plants, replacing diverse plant communities of high habitat value with plants unable to provide for the needs of Long Island's fish and wildlife. Increased use of indigenous plants will protect the diversity of plants on Long Island and reduce the need for the use of pesticides, fungicides, and fertilizers.

An indigenous plants program should encourage use of Long Island plants to maintain and restore natural ecological communities, but should clearly recognize that ornamental and collection specimens are also acceptable, particularly in historical settings or in an educational function, such as arboretums.

An indigenous plants program would call for state leadership in initiating interest in and use of Long Island species.

Implementation: The Office of Parks, Recreation, and Historic Preservation has formed an Ad Hoc Group on Invasive Plant Management. In addition to the Office of Parks, Recreation, and Historic Preservation, members of the Ad Hoc group include the departments of State, Environmental Conservation (Natural Heritage Program), Transportation, Public Service, the New York State Museum, the New York City Department of Environmental Protection, the Albany Pine Bush Commission, the Brooklyn Botanic Garden, Cornell University, Audubon Society of New York State, and the Natural Resource Conservation Service. The group's mission is to provide coordination and guidance on the management of invasive species of plants to protect biodiversity in New York State.

Recommendation 13: Protect wildlife corridors in the Long Island Sound coastal and watershed areas by avoiding fragmentation.

Continuing new development continues to fragment wetlands and other natural ecological communities. This loss of habitat leads to local extirpations which have increased negative effects on regional wildlife populations. Where a local extirpation occurs, obstacles, such as dense development, highways, and fences, can prevent repopulation. This is true especially for amphibians, reptiles, and some small mammals. Linking ecological communities by habitat corridors will benefit certain species by allowing increased movement for population expansions, for foraging, or for avoidance of adverse conditions.

Existing wildlife corridors, such as Mattituck Creek and the Nissequogue River and Connetquot River corridors, are necessary for migrating songbird populations because they serve as stopover sites. These corridors form a series of habitats, rather than a contiguous stretch of land.

The developed nature of the Long Island Sound coast makes it imperative that areas of remaining open space be maintained. Where possible, opportunities to join these open space areas or to connect them to stream corridors should be pursued.

Implementation: The Office of Parks, Recreation, and Historic Preservation, the Department of State, the Department of Environmental Conservation, the Department of Transportation, and local government, with assistance from affected property owners and others will identify existing wildlife corridors. Other opportunities to identify important wildlife corridors and potential linkages are presented when Local Waterfront Revitalization Programs, special area management plans, road and drainage improvements, and recreation plans are prepared.

As the Open Space Conservation Plan is updated, the Department of Environmental Conservation and the Office of Parks, Recreation, and Historic Preservation should consider including lands which offer opportunities to add to habitat or to link habitats to promote wildlife movement. The Clean Water/Clean Air Bond Act could provide a funding source for acquisition. The Environmental Protection Fund could fund local government efforts to plan parts of the corridor system.

Recommendation 14: Develop an ecosystem monitoring program for Long Island Sound.

Public agencies and conservation groups are involved in a wide variety of efforts to improve the natural resources of Long Island Sound. The combined effectiveness of these individual efforts within the seven ecological complexes of the Long Island Sound coastal area has not been evaluated to determine their efficacy and their interrelationships.

A monitoring program should be established that would evaluate the results of these public and private efforts and identify opportunities to better coordinate efforts. Another major component of the monitoring program should include routine surveys of plants and animals within the complexes so public and private decisions can better ensure the long-term viability of these natural resources. This data could serve as the basis for identifying additional actions that are needed to improve conditions within the ecological complexes.

An important consideration is developing statewide standards for future monitoring programs to ensure compatibility of collected data.

Implementation: The Long Island Sound Coastal Management Program supports the recommendations for monitoring, assessment, and research presented under the heading "Management and Conservation of Living Resources and their Habitats" in the Long Island Sound Study Comprehensive Conservation Management Plan. There are other important data gathering efforts underway. For example, the Office of Parks, Recreation, and Historic Preservation is preparing a comprehensive inventory of natural resources in all state parks. The project will

provide the necessary information to integrate natural resource management concerns with ongoing park maintenance and planning efforts.

The Department of State will cooperate with the Department of Environmental Conservation, the Office of Parks, Recreation, and Historic Preservation, local governments, and the research community to develop a standardized format for gathering information necessary to monitor the biological diversity and functions of the Sound ecosystem. The format of the information gathered should encourage data entry into a geographic information system by the state.

Respecting the Dynamics of Shoreline Change

Based on the inventory and analysis of coastal processes and coastal hazards within the region, the following actions are recommended. Map 2.0 shows the locations of major recommendations.

Recommendation 15: Amend Environmental Conservation Law Article 34 regulations to require mitigation for impacts of hard erosion control structures and to guarantee mitigation through performance bonds.

Numerous shore protection structures already exist along the Long Island Sound shore, and many continue to be built. Although the cumulative negative impact of these structures has not been quantified, it is potentially large. Before a permit is granted to allow construction of hard erosion control structures, their purpose, function, impact, and alternatives need to be carefully evaluated. If properly used, each of the variety of hard structures can be effective in reducing erosion, but this benefit must be weighed against potential negative impacts including increased beach and bluff erosion, aesthetic impairments, loss of recreational resources, loss of habitats, and water quality degradation. Regulatory standards should ensure that hard erosion control structures are used only when other alternatives are proven to be inappropriate and negative impacts of these structures are mitigated. Consideration should be given to use of performance bonds for mitigation resulting from damages caused by hard erosion control structures.

Use of public funds for flooding and erosion control projects should be limited to those instances where the projects would result in a public benefit that exceeds the public cost. Priority for expenditure of public funds should be given to actions which protect public health and safety, mitigate flooding and erosion problems caused by previous human intervention, protect areas of intensive development, and protect substantial public investment in land, infrastructure, and facilities.

Implementation: The Department of State will assist local government with necessary planning for regulatory changes to advance the recommendation.

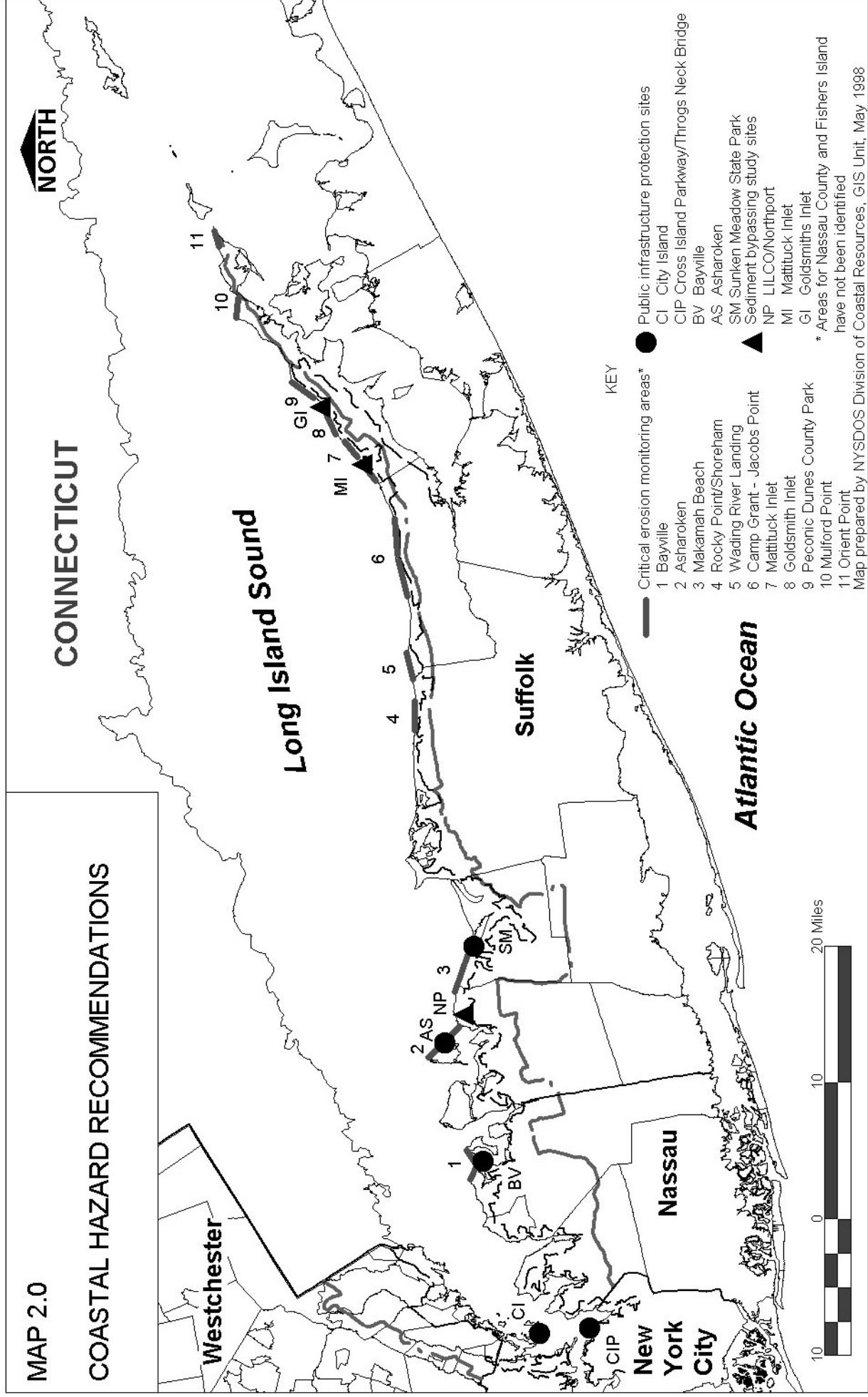
Regulations for the Coastal Erosion Hazard Area Act (ECL Article 34) can be amended by the Department of Environmental Conservation to provide for required mitigation and use of performance bonds.

Recommendation 16: Establish a coastal processes monitoring program for critical erosion areas along the Long Island Sound shore.

Detailed information on coastal processes, which is necessary for improved hazard management, is lacking throughout the region. Initially, a study should focus on the most rapidly eroding locations. These areas are Bayville, Asharoken, Makamah Beach (Town of Huntington), the north shoreline of Old Field, the area from Baiting Hollow to Jacobs Point Bluffs in Riverhead, and Mattituck Creek, Goldsmith Inlet, Peconic Dunes County Park, Mulford Point, and Orient Point, all in the Town of Southold.

MAP 2.0

COASTAL HAZARD RECOMMENDATIONS



In addition, structural hazard areas, locations experiencing an average rate of erosion of one foot per year or greater, should be identified for the Long Island Sound coast. Currently, only natural protective features are mapped. Erosion rate analyses would allow for accurate determinations of eroding areas which could be reflected in the coastal erosion hazards area line to show the differences in erosion rates throughout the Sound. This would allow for improved regulation of new development and redevelopment in areas where risk is greatest.

Implementation: A study of coastal processes and shoreline response in the Long Island Sound coastal area has been completed. The Department of State has identified sites where measurements should be taken to determine shoreline change, a first step in implementing an historical shoreline change analysis. Initial monitoring has begun from Mattituck to Horton Point in Southold.

The Department of Environmental Conservation through regulatory requirements, and/or the Department of State through its monitoring efforts, will design and undertake a long-term comprehensive erosion rate study in the Long Island Sound coastal area which meets regulatory purposes as a minimum. The Department of Environmental Conservation will remap the coastal erosion hazard area accordingly.

Recommendation 17: Establish permanent sediment bypassing systems along the Long Island Sound coast to correct problems caused by past structural intervention and where there is a demonstrated public benefit.

The effects of existing structures perpendicular to the shore should be evaluated to determine the need for sediment bypassing. A comprehensive plan to bypass sediment or alter the size and configuration of structures, or remove the structures would result. Initial site locations to be addressed include Mattituck Inlet, Goldsmith Inlet, and the LILCO facility at Northport.

Implementation: The Department of State will draft a proposal to evaluate effects of existing structures and identify the need for sand bypassing within specific areas of the Long Island Sound coastal area. A limited evaluation has begun at Goldsmith Inlet and Mattituck Inlet.

Based on such a study, the departments of State and Environmental Conservation would work with the U.S. Army Corps of Engineers to develop requirements and guidelines for specific areas.

The Department of State, the Department of Environmental Conservation, and other appropriate state agencies would act to implement recommendations of the study.

Recommendation 18: Assist local governments to manage development in flood and erosion prone areas, through erosion management plans that include a post-storm redevelopment component.

Erosion management plans that specifically address local conditions and solutions should be prepared by local governments and incorporated into their Local Waterfront Revitalization Programs. For areas where substantial unavoidable loss of life or property is likely the erosion management plan should include a detailed post-storm redevelopment component which would specify less hazardous locations for redevelopment, thereby allowing communities to promote safer coastal development. This approach may be expanded where appropriate to address localized severe erosion. This plan should be coordinated with Federal Emergency Management Agency Flood Hazard Mitigation Plans being developed through the State Emergency Management Agency.

Implementation: Local governments should prepare erosion management plans and flood mitigation plans and incorporate these plans into their Local Waterfront Revitalization Programs.

Communities that are not preparing Local Waterfront Revitalization Programs should be encouraged to do so. Local law changes may be required.

The Department of State will provide technical assistance to local governments to complete or revise Local Waterfront Revitalization Programs to include erosion management plans. Federal funding is available through the State Emergency Management Agency for preparation of flood mitigation plans. Communities may be eligible for funding under the Environmental Protection Fund.

Recommendation 19: Encourage development of local zoning regulations to adequately address siting of structures and land uses in flood and erosion hazard areas.

Local governments should be encouraged to use their land use powers to limit building in hazard areas, limit building size and type in hazard areas, require additional setbacks, and initiate local acquisition programs (taking advantage of federal funds for acquisition), as appropriate, in hazard areas to reduce future exposure to hazard risk. Setbacks based on hazard areas should be established in addition to routine yard setbacks under existing zoning regulations. Recession rates, to be obtained from a comprehensive shoreline erosion study, would be used to determine appropriate additional setbacks. In addition, local zoning laws should make allowances for water-dependent uses and for small, moveable structures, such as cabanas, that might be appropriate for temporary seasonal uses in certain shoreline areas.

Implementation: The departments of State and Environmental Conservation will provide technical assistance to local governments on methods to reduce development's future exposure to hazard risks.

Local governments should develop and adopt improved land use regulations to protect public health and safety through management of development in hazard areas. These regulations should also provide for temporary seasonal uses.

Local governments are encouraged to assume authority for implementing the Coastal Erosion Hazard Area Act.

Providing High Quality Coastal Waters

The following three recommendations are derived from the Long Island Sound Study Comprehensive Conservation Management Plan, and are among its major recommendations. These and all other enforceable policies of the Comprehensive Conservation Management Plan are incorporated into the Long Island Sound Coastal Management Program.

Recommendation 20: Implement the Long Island Sound Study nitrogen reduction targets and the Final Phase 3 Nitrogen Reduction Strategy approved by the Long Island Sound Study Policy Committee.

The Long Island Sound Study found that nitrogen is the most significant cause of low oxygen levels in the Sound, with attendant impacts on the Sound ecosystem. As an example, nitrogen levels in the Long Island Sound contribute to hypoxic events which result in fish kills, and diminish the habitat value of the bottom waters for fish and shellfish.

The Long Island Sound Study has adopted Phase III Nitrogen Reduction Targets which call for a 58.5% reduction in the total enriched load of nitrogen to Long Island Sound from point and nonpoint sources within the New York and Connecticut portions of the watershed by 2014.

Implementation: The Comprehensive Conservation Management Plan describes the various implementation methods the state will employ.

The Long Island Sound Study has adopted a program to achieve nitrogen reduction targets consistent with the Clean Water Act by 2014. This program includes developing zone-by-zone plans that will highlight the mix of point and nonpoint source controls to be implemented in each management zone.

Specific actions needed to implement the Phased Nitrogen Reduction Strategy include:

- Achieve secondary treatment at all sewage treatment plants in the watershed.
- Where feasible, incorporate advanced nitrogen removal in treatment plants.
- Implement the nonpoint source pollution controls discussed below to reduce nitrogen.
- Develop and implement nutrient management plans for each of the Long Island Sound Study planning zones to achieve the nitrogen reduction targets.
- The Department of Environmental Conservation will propose modifications to State Pollutant Discharge Elimination System permits for point source discharges.
- A 15 year, phased, enforceable schedule, commencing after completion of the zone-by-zone plans, will assure steady progress in achieving the nitrogen reduction targets at five-year increments.

The Clean Water/Clean Air Bond Act provides significant funding to implement these actions.

Recommendation 21: Reduce loadings of toxic substances in order to reduce risk to humans, wildlife, and ecological communities.

Toxic substances in the Long Island Sound can cause mortality, and chronic or long-term effects related to bioaccumulation of contaminants. Poor flushing of receiving waters, especially in semi-enclosed embayments, allows toxics to accumulate and concentrate in sediments. Reduction of the loadings to the embayments would benefit the living resources of the Sound. Based on results from the Long Island Sound Study, assessments of contaminated sediments should be improved and remediation developed and implemented, where appropriate.

Implementation: The Long Island Sound Study Comprehensive Conservation Management Plan describes in detail various implementation methods the state will employ.

Recommendation 22: Control combined sewer overflows to minimize pollution by pathogens, nutrients, toxic materials, and floatable debris.

Sewer overflows discharge untreated or inadequately treated sewage into the Sound. Nutrients in the sewage allow the growth of algae that depletes oxygen from the waters of the Sound as it decays. Pathogen contamination can result in closure of beaches and shellfishing grounds. Adopt the recommendations of the Comprehensive Conservation Management Plan to:

- Implement existing plans for combined sewer overflow abatement.
- Identify, set priorities, and control dry period overflows and illegal sewer connections.

Implementation: The Long Island Sound Study Comprehensive Conservation Management Plan describes in detail the various implementation methods the state will employ. The Clean Water/Clean Air Bond Act will be a significant source of funds to implement these improvements.

Recommendation 23: Provide vessel pumpout stations and support designations of no discharge zones to reduce direct contamination of waters and shellfish by vessel sewage discharge.

Vessel sewage discharge can result in direct contamination of waters and shellfish by pathogens, nutrients, and chemicals. No-discharge zones, where vessels are prohibited from discharging

wastes into marine waters, should be designated to reduce direct contamination of waters and shellfish by pathogens and to reduce nutrient loading to embayments.

Implementation: The Department of State has conducted a survey to determine the number of vessels by major Long Island Sound embayment and has updated surveys of existing pumpout facilities. The Department of State, in cooperation with the Department of Environmental Conservation, has completed a plan, pursuant to the Clean Vessel Act, for the construction, renovation, and maintenance of pumpout facilities. The plan also identifies where facilities are needed to meet standards for no-discharge zone designation. In cooperation with local governments, the Department of State and the Department of Environmental Conservation will seek a determination from the Environmental Protection Agency that sufficient pumpouts exist to allow designation of each of Long Island Sound's embayments as vessel waste no-discharge zones.

The state Navigation Law has been amended to automatically designate a no-discharge zone once the Environmental Protection Agency has determined adequate pumpouts exist to designate a vessel waste no-discharge zone. The law also permits local governments to enforce no-discharge programs.

The Department of Environmental Conservation is providing Clean Vessel Act funds to public and private marinas to construct, renovate, and maintain pumpout facilities.

The Office of Parks, Recreation, and Historic Preservation, Sea Grant, and other agencies, as appropriate, will implement public information and education programs to encourage compliance.

The Department of State and the Department of Environmental Conservation, through permit conditions, will continue to require public and private marinas to provide or maintain pumpout facilities, where an adequate number of pumpouts are not available. Funding for pumpout facilities is available through the federal Clean Vessel Act of 1992, administered by the Department of Environmental Conservation.

Recommendation 24: Advance intermunicipal efforts to reduce nonpoint source pollution in Long Island Sound's embayments.

The New York State Coastal Nonpoint Pollution Control Program, as authorized under the Coastal Zone Act Reauthorization Amendments of 1990, and the New York State Nonpoint Source Program as authorized under the Clean Water Act, section 319, recognize that there are certain basic management practices which can be used effectively to reduce water quality impacts from nonpoint source pollution. While unfocused nonpoint source control responses may help to reduce water quality impacts, a coordinated program of management practices undertaken on a watershed or sub-watershed basis will have a greater impact. The Long Island Sound Study and the Priority Waterbody List identify the priority water quality impairments resulting from nonpoint sources of pollution.

Implementation: State agencies will advance the use and implementation of best management practices. The Department of State will advance best management practices for the land use categories described below, to control nonpoint source pollution. In addition, the Department of State and the Department of Environmental Conservation will assist in the preparation of more detailed, watershed- and sub-watershed-based plans for land areas contributing to use impairments or threatened waters, such as many of the Long Island Sound embayments. The Clean Water/Clean Air Bond Act, the Environmental Protection Fund, and section 319 of the Clean Water Act can all provide funding for nonpoint source pollution control projects. The Department of State Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grants and section 319 funds can be used by local governments for intermunicipal watershed plans.

Funding from the Clean Water/Clean Air Bond Act, the Environmental Protection Fund, and the section 319 program can be used to implement coastal nonpoint source pollution control measures.

The departments of State and Environmental Conservation will advocate the use and implementation of best management practices detailed in the Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters and the Management Practices Catalogue for Nonpoint Source Pollution Prevention and Water Protection in New York State, which was prepared by the Department of Environmental Conservation in cooperation with the member agencies of the New York Nonpoint Source Coordinating Committee. The manual details practices for urban stormwater runoff; road and right-of-way maintenance; leaks, spills, and accidents; resource extraction; on-site waste disposal; hydrologic and habitat modification; construction; silviculture; and agriculture. The following are specific implementation means for each land use category.

Urban and general development. New construction, including roads and bridges, can contribute to nonpoint source pollution if the site is not properly managed to control sedimentation and runoff during site preparation and construction. Similarly, site design can ensure that post-development runoff does not increase erosion and sedimentation and that natural drainageways are maintained. On-site sewage disposal systems need to be sited properly and maintained to avoid contamination of groundwater and surface waters.

The Department of Environmental Conservation, the Department of State, and Department of Transportation are coordinating efforts to develop standards for new construction (including roads and bridges), which require that post-development runoff should not exceed, as nearly as is practicable, the pre-development peak runoff rate and average volume; and post-development total suspended solids loadings should not exceed pre-development rates. The Department of Transportation has developed standards for stormwater control on new roads, which local governments can adopt. The Department of Environmental Conservation has completed phase II revisions of the stormwater regulations. The Department of State is investigating amendments to the Uniform Fire and Building Code to address stormwater management.

The Department of Environmental Conservation and the Department of State will provide technical assistance in the development of comprehensive watershed management and protection programs.

The Department of Health has amended technical guidelines for on-site sewage disposal systems, making provisions for proper siting, design, installation, operation, and maintenance, so that discharges to the ground surface are eliminated and discharges to ground waters which are closely hydrologically connected with surface waters are minimized to the extent practicable.

State and local health departments and local sanitary districts and municipalities, should develop and implement effective maintenance strategies for on-site sewage disposal systems, applicable to both new and existing systems. Such programs should include routine inspection.

State and local agencies, private groups, citizens groups, Cooperative Extension, and the state Water Resources Institute should continue to cooperate to develop and conduct education programs and other programs, as appropriate, to reduce nonpoint pollution from a variety of sources.

The Department of State will work with the Office of Parks, Recreation, and Historic Preservation and the Department of Environmental Conservation to recommend changes in practices at state-owned golf courses in the Long Island Sound watershed. The recommendations should focus on minimizing irrigation and the application of fertilizers, herbicides, and pesticides, in order to limit volumes of nutrients and contaminants leaching into groundwater or running overland into coastal waters. Private golf courses should be encouraged to evaluate their management regimes.

The Department of Transportation has issued the Environmental Procedures Manual (1995) to ensure that the planning, development, and maintenance of roads, highways, and bridges is done in a manner that protects water quality, limits disturbance of natural drainage features, and reduces use of hazardous materials and nutrients, among other considerations.

The Department of State will consider changes to the Uniform Fire Protection and Building Code to address nonpoint pollution issues, such as sediment and erosion control and stormwater management.

Local governments should incorporate appropriate best management practices into their Local Waterfront Revitalization Programs.

Marinas. Marinas are important uses along the Sound shore, but they need to be sited and designed to take advantage of natural flushing, to avoid waters intended for shellfishing (SA waters), to eliminate pollution from hull maintenance areas and fueling areas, and to accommodate disposal of vessel wastes.

The Department of State and the Department of Environmental Conservation will use existing permitting authorities to implement recommendations for siting, construction, expansion, and operation of marinas.

Harbor management plans developed for Local Waterfront Revitalization Programs will incorporate measures to minimize impacts to water quality through proper design of maintenance dredging operations and other activities.

Local governments should incorporate standards for marinas and marina-related activities into their Local Waterfront Revitalization Programs and local laws.

Hydromodifications. Dredging of new channels in appropriate locations and maintenance of necessary existing channels at appropriate depths are necessary to support commercial and recreational boat traffic in the Sound and its harbors. Dredging that is not properly designed and carried out can cause a variety of water quality impairments.

The Department of State and the Department of Environmental Conservation will use existing regulatory authority to ensure that necessary dredging operations are properly designed.

THE PUBLIC COAST

Connect people to the Sound and its public resources by improving visual and physical access, and providing a diversity of recreational opportunities.

The public's right to gain physical and visual access to the recreational opportunities and beauty of New York's coastal resources has long been recognized. However, this right has not always been easily exercised, particularly in the Long Island Sound region. Here, there are few facilities open to everyone that offer major recreation opportunities. The general public is usually excluded from local access and recreational facilities. The nature of existing, as well as continuing, development makes the provision of additional coastal access and recreation facilities difficult. Visual access to the waters and shores of the Sound is often blocked by development. The basic right to use and enjoy public trust lands can be hindered by structures that limit the public's ability to reach public trust lands. For example, long docks obstruct lateral access along public trust lands and impede public use of surrounding public waters.

PUBLIC COAST FINDINGS

Public Access, Recreation, and Open Space

- The economic value of water-dependent activities related to public access to and recreational use of Long Island Sound is substantial. It has been calculated for New York at approximately \$2.238 billion annually.
- With the exception of Sunken Meadow and Wildwood state parks on Long Island's north shore, Playland, an amusement park in Westchester County, and Pelham Bay Park in New York City, most large scale active access and recreation facilities on the Long Island Sound coastline exclude the general public. The major state facilities open to the general public along the Sound tend to be farthest away from the largest population centers, i.e. all state parks are located in Suffolk County.
- Opportunities to significantly increase the amount and type of public access, recreation, and open space along the Sound shoreline for the general public are limited, short of opening local facilities to nonresidents, many of which may not be able to accommodate increased use.
- Opportunities for increased general public access will come from smaller, more incremental actions such as making improvements at existing state parks, improving more local parks with state funds and thereby opening them to nonresidents, and increasing the number of state and state-assisted fishing access points.
- Only a third of the 75 public fishing access sites are open to the general public and these are not evenly distributed through the region.
- Acquisition of additional open space in the more undeveloped reaches of Suffolk County is essential, although there are parcels throughout the region that are suitable for public acquisition as open space, as described in the Open Space Conservation Plan and the recommendations of the Region 1 Advisory Committee.
- Maintenance and management programs for existing public access areas are as crucial as providing new space.
- There are opportunities for improving waterfront public access on municipally and state-owned non-park lands, especially, but not only, when facilities on these lands are developed, improved, or current uses are discontinued.
- Excellent opportunities for new or improved point access, scenic overlooks, or visual corridors are available from streets terminating at the shoreline.
- There are some brownfields where intensive industrial uses in the past have left deteriorated, unattractive, and underutilized sites, some of which are contaminated with toxic materials. There are opportunities for increasing access by developing marine commercial uses to serve the recreational boating industry and for furthering public access by establishing waterfront walkways and linear parks.
- The existing system of parks and open spaces near and along the Sound shoreline offers the opportunity for establishing linkages among them in the form of greenways and blueways, both at the neighborhood and wider scale.

Shipwrecks and Recreational Diving

- Recreational diving is the fastest growing water-dependent recreational activity in the Long Island Sound region; yet, access to the shoreline and boat ramp access for recreational divers are extremely limited.
- Shipwrecks are important historical, archaeological, and recreational resources that should be afforded greater protection by state and local governments.

Public Trust and Underwater Lands

- Extension of docks and catwalks over public trust lands to reach deep water may exceed the littoral interests of shorefront landowners and prevents full public enjoyment of trust lands and waters.
- Legal and illegal shoreline obstructions such as fill, structures, and long docks block lateral access along stretches of the public trust shorelands. Increased development has eliminated many informal access points along the Sound that were used by fishermen and others to gain access to public trust lands. Visual access to the Sound is also limited by development.

CONNECTING PEOPLE TO THE SOUND: Recommendations for the Public Coast

Improving Visual Access

Recommendation 25: Identify, preserve, and provide access to regionally important vistas.

In every part of the Sound coast, there are scenic land and water vistas of state and regional significance. These include the views of the Sound from Larchmont Manor Park, of the Huntington Harbor complex from Ocean Avenue in the Village of Northport, of the Sound and the distant Connecticut shoreline from Route 25A in Smithtown, or, in Smithtown again, the panoramic view of the Sound and the Nissequogue River from the bluff on the west shore at its mouth. Protecting these views, as well as identifying and evaluating other views, and making recommendations for their protection and provisions for public accessibility, can be accomplished through the Scenic Areas of Statewide Significance Program. Important to this program would be intermunicipal cooperation in undertaking the necessary comprehensive planning and zoning to accomplish implementation objectives.

Implementation: The Department of State proposes to identify and evaluate regionally important scenic land and water vistas in the Long Island Sound region, as part of the Scenic Areas of Statewide Significance Program (Executive Law, Article 42 and 19 NYCRR Part 602.5c). The Department of State, in cooperation with local governments, will prepare management plans for each area designated as a scenic area of statewide significance, which will identify specific means to protect regionally significant visual access.

The Department of State will assist Local Waterfront Revitalization Program communities to identify suitable locations where eligible projects can be funded to protect and enhance visual access and to apply for funds from the Transportation Equity Act for the Twenty-First Century.

The Department of State and the Department of Transportation, utilizing the funding available from the Environmental Protection Fund and federal dollars through the Scenic Byways Program, should provide assistance to local governments for the preparation of appropriate land use controls to protect the scenic integrity of roads identified under the Scenic Byways Program.

Through funding available from the Scenic Byways Program or the Transportation Equity Act for the Twenty-First Century, interpretive exhibits to enhance public enjoyment of views of the coastal environment should be provided at suitable locations.

The state, using funding from the Scenic Byways Program and the Transportation Equity Act for the Twenty-First Century, should take specific actions, such as the establishment of trails, selective cutting of vegetation, creation of overlooks along streets and highways, and provision of interpretive exhibits, to ensure maximum public understanding of designated scenic areas of statewide significance.

The Department of Environmental Conservation and/or the Office of Parks, Recreation, and Historic Preservation should use funding available from the Environmental Protection Fund, Land and Water Conservation Fund, Transportation Equity Act for the Twenty-First Century, and the Scenic Byways Program to acquire either outright or by use of easements, or provide grants for acquisition of key parcels of land that are essential to the protection and management of designated scenic areas of statewide significance. Any lands acquired or protected through easements should be included in the Open Space Conservation Plan or subsequent updates.

Improving Physical Access

Recommendation 26: Complete a coastal network of community and regional greenways and blueways that link public waterfront access points, the foreshore, the nearshore surface waters, and large and small public parks and open spaces to improve access to the coast and to coastal recreation facilities.

Governments must cooperate with nonprofit and private interests to identify the actions needed to complete a network of greenways and blueways. Cooperation is also important with private groups, such as the non-profit Long Island Greenbelt Trail Conference, Inc., which have taken an active role in building and maintaining hiking trails that take advantage of existing greenways. The effort must build upon existing greenway and blueway linkages to create a regional system.

Local governments through their Local Waterfront Revitalization Programs also have an opportunity to identify and implement a variety of greenway projects. For example, trails around the edges of the Sound's many harbors can be established to bring pedestrians to the water and the activities taking place on the waterfront. Communities can identify linkages among local parks and open spaces that would be attractive or interesting corridors for community residents to walk in and between. Communities can also establish blueways for hand-launched boats.

The acquisition of additional open space in the Long Island Sound region is not only important for environmental and scenic reasons. It is also important for the development of greenways, which can serve many public access and recreational purposes.

Implementation: The Department of State, local governments, counties, state agencies, and private groups should cooperate to identify opportunities to create or expand greenways and blueways along the Sound coast. As a longer-term effort, the Department of State will work with state agencies, local governments, counties, and private groups to ensure that a comprehensive Long Island Sound greenway-blueway plan is implemented. The Department of Transportation, the Department of Environmental Conservation, and the Office of Parks, Recreation, and Historic Preservation should develop appropriate greenway and blueway systems within and between their own properties. Funds from the Environmental Protection Fund (Title 9, Title 3), Land and Water Conservation Fund, the Clean Water/Clean Air Bond Act, and the Transportation Equity Act for the Twenty-First Century could be used for this purpose.

Funds should also be made available from the same funding sources to assist county and local governments with the development of greenway and blueway projects within and between state, county, and local public parks, open spaces, and other publicly owned properties.

The Department of Environmental Conservation and the Office of Parks, Recreation, and Historic Preservation, in acquiring additional open space in the Sound region in accordance with the recommendations of the state Open Space Conservation Plan, should consider how these open spaces can be linked within the greenway-blueway system.

Communities with Local Waterfront Revitalization Programs should identify greenway and blueway systems, including those which could form linkages with the wider regional system.

Recommendation 27: Maintain the public interest in public trust lands along the Sound coast by identifying these lands and ensuring that all private use of these lands comports with the public trust doctrine.

A basic inventory information on the exact locations of public trust lands as well as ownership of other lands should be obtained. Because of the cost of the project, it should be done incrementally when major planning activities or studies are undertaken for specific geographic areas, such as harbor management plans, redevelopment strategies, and the like. The mapped information will show where the public has a right to go, serve as a basis of information for approval of permits for structures and activities over or on public trust lands, and be an important source of information for reasserting public trust rights on public trust lands being used in a manner that is inconsistent with public trust purposes.

Careful analysis of ownership will often result in a greater than assumed public interest. Consequently, approvals for construction of in-water structures and activities over or on public trust lands should be based on adequate information with regard to ownership. Applicants for permits and authorization for work below mean high water or on lands which may have been formerly underwater, should be required to demonstrate that they are the littoral owner and/or have littoral rights and that they are legally using any public trust lands.

Implementation: The Department of State, the Department of Environmental Conservation, the Office of General Services, any state agency, or local governments undertaking major plans or studies for specific geographic areas of the Sound should map the coastline for that area to show the location of trust lands as part of the project. Long Island Sound Coastal Management Program policy 9 requires documentation from permit applicants showing that they have littoral rights and are legally using public trust lands. Towns with public trust responsibilities would be encouraged to seek similar information.

Recommendation 28: Reassert public trust rights on public trust lands that are used in a manner that is incompatible with the public trust doctrine.

Over the past 200 years, the state and local governments have made grants of underwater land to private owners for purposes other than beneficial use and enjoyment. Those grants retained, in most instances, the right of the public to use the foreshore. Where full fee grants have been made, the use by the present owner must comport with the best public trust use and not be injurious to the public good.

The state should review, with the cooperation of municipalities, letters patent to determine compliance with the public trust doctrine. Because of the high cost of undertaking such a project, it can be done incrementally when major planning activities or studies are undertaken for specific geographic areas such as harbor management plans, redevelopment strategies, and natural area plans. If conditions of a grant have not been complied with, consideration should be given to whether the letters patent should be canceled.

Implementation: The Department of State, the Department of Environmental Conservation, the Office of General Services, or any other state agency undertaking major plans or studies for specific shoreline areas of the Sound should review: grants of underwater land to private owners to determine the status of their use with respect to public rights under the public trust doctrine, and letters patent as described above.

Currently, under the Public Lands Law, sections 8 and 14, the Office of General Services and the Attorney General are empowered to seek revocation of grants or bring trespass actions in order to reassert public trust rights on those public trust lands not being used in a manner consistent with the public trust doctrine.

Recommendation 29: Develop educational materials to inform the public and local governments on coastal resources and issues that affect the wise management and use of those resources.

There are many complex issues that affect both governmental and individual decisions on use and stewardship of the Sound and its resources. Creating an atmosphere in which there is public stewardship of resources and support for governmental activities to protect resources or to promote appropriate development will be an important tool in advancing the recommendations of the Long Island Sound Coastal Management Program, the Long Island Sound Comprehensive Conservation Management Plan, and other plans and programs. A public education program using meetings, brochures, public service announcements, and other tools should be developed with the cooperation of state agencies and local governments.

Implementation: The Department of State has initiated meetings with appropriate state agencies, including the Department of Education, the Department of Environmental Conservation, BOCES, and Sea Grant, to outline the scope of a public education program to promote stewardship of the Sound's resources and to define a process for implementing the program.

Recommendation 30: Prepare and distribute a guide to public access and recreational areas and facilities for the Long Island Sound region.

The general public is often unaware of opportunities, other than those provided by the few well-known state parks, for obtaining access to the lands and waters of the Sound. A public access guide will enable the public to seek out those other lesser known locations that are also open to the general public but which may not offer the types of active recreation found in the state parks. These would include public and private nature preserves, historic sites, municipal and county parks, street ends, etc., many of which offer opportunities for a variety of passive recreation, such as hiking, nature study, birdwatching, or photography. The guide would also indicate locations providing visual access to the Sound as well as provide discussions of important historic, natural, and cultural features of the Sound region. Several states, particularly California and South Carolina, have prepared excellent public access guides, which could be used as models for a Sound guide.

Implementation: The Office of Parks, Recreation, and Historic Preservation, the Department of State, the Department of Environmental Conservation, and the Office of General Services will, as funds are available, cooperatively prepare a public access guide for the Long Island Sound region.

Recommendation 31: Continue interagency efforts to protect shipwrecks and other underwater sites of historic or archaeological importance.

There is a need for state agency cooperation to protect shipwrecks and other underwater cultural resources of historic and archaeological significance, such as inundated historic structures or lost cargoes, as well as to protect and increase access to these resources.

The coastal policies for Long Island Sound should specifically recognize the historic, archaeological, and recreational value of shipwrecks and other underwater cultural resources. Where shipwrecks of historic or archaeological significance are in danger of physical destruction over a short period of time, an in-depth archaeological survey and excavation of the vessel should be conducted to conserve as much of it as possible and to preserve the historic integrity of the vessel or resource and the information that can be derived from it. Where the resource is not in immediate danger of physical destruction, it should be preserved in place for recreational diving and historic preservation purposes. Where historic shipwrecks or other resources of state or

national importance are identified, underwater sanctuaries should be established to preserve the shipwrecks and sites for their historic, recreational, and/or biological values.

Implementation: The Office of Parks, Recreation, and Historic Preservation, the Department of State, the Office of General Services, and the State Museum should cooperatively protect shipwrecks and other cultural resources of historic and archaeological significance and value as well as protect and increase access to these and other shipwrecks by: (1) conducting an inventory and physical survey of all known shipwrecks in Long Island Sound; and (2) identifying and conducting in-depth surveys of historic and archaeologically important shipwrecks and other cultural resources that are or should be protected by federal and state historic protection laws.

The state legislature has amended the Navigation Law to clarify the definition of "wrecks" and "abandoned historic shipwrecks" to provide greater protection for historic shipwrecks.

Providing a Diversity of Recreational Opportunities

Recommendation 32: Develop an appropriate mix of, and establish priorities for, public access and recreation facilities, and open space areas to meet needs.

The tables which follow list site-specific recommendations by county and group them into three general categories: fishing and boating access; parks, beaches, and street ends; and trails, walkways, and greenways. While some activities are obviously confined to a single category—ocean swimming, for example, is limited to beaches—there are many overlaps among these categories with respect to the types of activities that can take place. A boat launch site, for example, can provide access for fishing from boats, as well as for pleasure boating. In all of the categories, there are many possibilities for engaging in a variety of passive recreation activities, such as nature study, hiking, photography, bird watching, picnicking, or just relaxing and enjoying a waterfront scene. Maps 3.0-3.6 depict the locations of the site-specific recommendations listed in the tables.

The third column of the tables shows the source of the recommendation. Many of the recommendations were obtained from draft or approved Local Waterfront Revitalization Programs. A significant number came from the Department of Environmental Conservation's Marine Recreational Fishing Access Plan, released in March 1993. Several recommendations came from the Office of Parks, Recreation, and Historic Preservation's Statewide Comprehensive Outdoor Recreation Plan. A few came from the Long Island Regional Planning Board. One came from the Long Island Greenbelt Trail Conference. The recommendations of the Long Island Sound Coastal Management Program are also noted.

At this time, there are no priorities given for implementation among the many recommendations, although recommendations cited from draft Local Waterfront Revitalization Programs can be considered to have a lower priority, because they may be subject to change during the process of completing and approving the draft Local Waterfront Revitalization Programs.

The Department of Environmental Conservation's Marine Recreational Fishing Access Plan sets the following priorities for the first five-year phase of implementation, based on the assumption that a long-term, stable funding source will be established: rehabilitate and/or expand as many existing boat launch ramps as can be identified and funded; construct at least one new fishing pier in each county (Westchester, Nassau, Suffolk) and rehabilitate and/or expand as many existing fishing piers as can be identified and funded; and acquire at least five new marine beach access properties in the marine district, giving priority to areas on Nassau County's north shore and on Suffolk County's mid-north shore and east-end ocean, Sound, and bay shores.

The Open Space Conservation Plan forms the basis for the recommendations for the acquisition and protection of open space along the immediate coastline in the Long Island Sound region. The

plan identifies 131 priority projects statewide within resource areas and corridors that deserve immediate attention from the Office of Parks, Recreation, and Historic Preservation, the Department of Environmental Conservation, and their partners in land conservation.

There are eight priority projects identified on the Long Island Sound coastline:

- *Northeast Queens Shoreline, New York City*: Unique and critical natural resource areas representing some of the last contiguous coastal habitats in this area. Representative parcels include, but are not limited to Powells Cove, Udalls Cove, and Udalls Ravine.
- *Fort Totten*: A significant historic fort and grounds in Queens that will provide waterfront access and recreation opportunities.
- *City Island Wetlands, New York City*: A vacant Bronx shorefront area in its natural state with significant wetlands; may also provide waterfront access.
- *Westchester Marine Corridor, Westchester County*: The corridor along Westchester County's marine shoreline on Long Island Sound. The area includes an array of natural and historical resources and public access and recreation opportunities. Representative sites include, but are not limited to: Edith Reed Buffer, Davids Island, and Huckleberry Island.
- *Oyster Bay-Cold Spring Harbor*: Protection for streambank corridors and uplands buffering tidal wetlands and tributaries and lands linking existing public holdings. Acquisition of watershed properties.
- *Hempstead Harbor Trail, Town of North Hempstead*: Three small parcels that would link the 1.75 mile Hempstead Harbor Shoreline Trail north toward Beacon Hill and south toward Roslyn Viaduct which would result in a 3½ mile public walkway along Hempstead Harbor.
- *Arthur Dean Estate, Oyster Bay*: This 85-acre estate on Long Island is contiguous to Planting Fields Arboretum State Historic Park. The property would expand the passive recreation activities at and provide a buffer for the Arboretum.
- *Long Island Sound Coastal Area*: Select sites along the Long Island Sound coast:

Oyster Bay-Cold Spring Harbor: Protection for streambank corridors and uplands buffering wetlands and tributaries; lands linking existing public holdings; and acquisition of watershed properties.

Crab Meadow, Town of Huntington: Lands on the western tributary of, and freshwater wetlands contiguous to, Crab Meadow offering headwater protection for the wetlands.

Mount Sinai Harbor, Town of Brookhaven: Upland adjacent to wetlands and freshwater wetlands adjacent to tidal wetlands. An emphasis on Pipe Stave Hollow is recommended.

Long Creek-Mattituck Inlet, Town of Southold: Tidal wetlands and surrounding upland is at the inland end of Mattituck Inlet and Creek.

Wading River Creek Wetlands, Town of Southold: Forty-five acres of tidal wetlands along the river.

Dam Pond East Marion-Orient, Town of Southold: Fifty-five acres of watershed uplands and tidal pond for habitat protection.

Arshamonque Wetlands: One hundred and seventy-seven acres of extensive contiguous open space that would link Moore's Woods to Hashamonque Pond.

If these areas are acquired, they would only incrementally improve public access and recreation opportunities. About 13 percent of the above listed open space proposed for acquisition is

principally to improve or expand access. Over 60 percent of the proposed acquisitions are to protect wetlands and habitats, although many of these areas will also provide for some access and passive recreation opportunities. Another 185 acres along the shoreline are to protect historic resources, although these, too, will provide for public access and passive recreation. This underscores the need to pursue non-traditional means of increasing public access and recreational opportunities, as set forth in other recommendations of the Long Island Sound Coastal Management Program.

The priority projects were selected by the Department of Environmental Conservation and the Office of Parks, Recreation, and Historic Preservation from the many areas proposed for acquisition by the three regional advisory committees covering the Sound region. In light of the findings in this program concerning insufficient access and recreational areas along the Sound for the general public, these other areas proposed for acquisition, plus additional ones, should be weighed and evaluated by the committees, as part of future updates of the Open Space Conservation Plan.

Priorities for state land conservation actions will follow the criteria for the new, unified system for evaluation of land conservation projects presented in the Open Space Conservation Plan. The plan has among its goals one which is particularly important for the public coast: "To provide high quality outdoor recreation, on both land and water, accessible to New Yorkers regardless of where they live, how much money they have, or their physical abilities."

The unified system for evaluation of land conservation projects is designed to meet the following objectives:

- Identify specific places with exceptional natural resource or recreational values which may be threatened by land use change or which could serve critical recreational needs.
- Determine the most appropriate strategy for conserving the resource values of those places including what action should be taken by the Department of Environmental Conservation or the Office of Parks, Recreation, and Historic Preservation.
- Evaluate the costs and benefits of individual land conservation actions.
- Establish priorities for land conservation actions given limited public resources.
- When state land acquisition is the most appropriate strategy, ensure that land to be acquired is worthy of public investment and clearly meets the goals of this plan.
- Provide for statutory and reasonable outside input into the project evaluation process.

Implementation: Future updates of the Open Space Conservation Plan should consider adding sites that present recreational and public access opportunities along the Sound for the general public.

The Department of State will identify state-owned, non-park waterfront lands (not including public trust lands) to determine if opportunities exist to provide a level of public access and recreational use which is consistent with such factors as proximity to population centers, public demand, the type and sensitivity of natural resources affected, and the current uses of the state-owned lands.

The Department of State should take steps to improve access at street ends by: (1) determining the legality of municipal prohibitions against nonresident parking at street ends along the Sound that provide access to public trust lands; and (2) reviewing the Community Highway Improvement Program, which provides state funds to communities for local highway improvements, to determine if it could be used to ensure that nonresidents have the same parking rights as residents at street ends on the Sound.

The Office of Parks, Recreation, and Historic Preservation should continue to improve facilities and their use at existing state parks by increasing maintenance, undertaking renovations, adding new facilities, and improving transportation access to the parks. The State Park Infrastructure Fund is an important source of monies for these tasks.

The Office of Parks, Recreation, and Historic Preservation and the Department of Environmental Conservation should continue to adapt existing public access and recreation facilities and provide new activities and facilities to meet the needs of both persons with disabilities and a demographically changing population, specifically at this time, an increasingly elderly population. The Office of Parks, Recreation, and Historic Preservation and the Department of Environmental Conservation also should pursue possibilities to increase recreational diving opportunities by allowing recreational diving from the shore in state parks and other state lands on the Sound, where the activity would be compatible and not interfere with other activities.

Through the Office of General Services and the Attorney General, steps should be taken to improve access to and use of public trust lands by requiring the removal of physical barriers or establishing upland easements or other mitigative measures that would eliminate obstructions to free and unimpeded passage along and use of public trust shorelines. The Department of Environmental Conservation and the Office of Parks, Recreation, and Historic Preservation should provide perpendicular accessways to public trust lands at all suitable locations on their access and recreational facilities.

Through concessions, community boating and sailing centers should be established at state access facilities where small boats (rowboats, canoes, sailboats, etc.) could be rented. Such centers can provide significant amounts of access to the water from relatively small waterfront parcels.

Local governments should examine the feasibility of making more recreational access facilities available, without needing to increase the supply, through the use of intermunicipal reciprocity agreements. Such agreements between municipalities would allow residents of a municipality to use access facilities of any other municipality that is a participant in the agreement.

Important sources of funding for project implementation are the state's Environmental Protection Fund and the Clean Water/Clean Air Bond Act. However, some project recommendations obtained from draft or approved Local Waterfront Revitalization Programs may never receive federal or state funding because of the reluctance of the municipalities to open the project to nonresidents as a condition of receiving such funding.

Table1 Public Access and Recreation Recommendations, Westchester County

CATEGORY	RECOMMENDATION	SOURCE
Fishing and boating access	New Rochelle, Five Island Park: expand park to provide more fishing and boating facilities.	MRFAP
	Village of Mamaroneck, Harbor Island Park: rehabilitate and expand existing boat launch ramp (recently completed).	MRFAP
	City of Rye, Playland Park: rehabilitate existing fishing pier.	MRFAP, LWRP
	Westchester County: construct at least one new fishing pier within the next five years. It is recommended that the pier be located in Port Chester due to its designation as a waterfront redevelopment area.	MRFAP
	City of Rye, Playland Park: recommend that Westchester County develop a boat launch facility to meet the growing demand for recreational boating facilities.	LWRP
Parks, beaches, and street ends	Village of Port Chester: expand and enhance Columbus Park to capitalize on its waterfront location by developing new water enhanced recreational facilities and linking the park via a pedestrian path to a proposed nearby public marina.	LWRP
	Village of Port Chester: expand and improve William James Memorial Park as a passive water enhanced recreation facility.	LWRP
	Village of Port Chester: develop a new "gateway park" at the entrance to the central business district and the coastal zone to provide needed open space in this area and to serve as a small passive park.	LWRP
	City of Rye: provide a vista area at the end of Dearborn Avenue on the Sound by undertaking limited improvements on existing city owned property for some park benches and trash receptacles.	LWRP
	City of Rye, Playland Park: the county must maintain the breakwaters around the beach area to prevent beach erosion and retain the beaches as an attractive swimming area.	LWRP
	Village of Larchmont: study possibilities for removal of leaf composting at Flint Park.	LWRP
	City of New Rochelle: Ensure that Davids Island, the largest undeveloped island in the Sound, is retained for full or partial public use that takes advantage of the island's historic, natural, and scenic setting.	LIS CMP
Trails, walkways, and greenways	Village of Port Chester: construct an appropriately scaled continuous pedestrian walkway in as many locations as feasible along the entire Byram River waterfront of the village.	LWRP
	City of Rye, Blind Brook: refurbish and extend a walkway along Blind Brook from the Rye Nature Center through Disbrow Park to Oakland Beach Avenue to improve access to waterfront for passive recreation purposes.	LWRP

Source of Recommendation—**LIS CMP:** Long Island Sound Coastal Management Program; **LWRP:** Local Waterfront Revitalization Program; **MRFAP:** Marine Recreational Fishing Access Plan

Table 2 Public Access and Recreation Recommendations, New York City

CATEGORY	RECOMMENDATION	SOURCE
Fishing and boating access	Queens, Udalls Cove, Little Neck Bay: provide fishing access at DEC tidal wetland site. ¹	MRFAP
	Bronx, Pelham Bay Park: construct boat launch ramp and develop fishing area.	MRFAP
	Queens, Bayside Marina: rehabilitate existing boat launch ramp.	MRFAP
	Queens, Little Bay Park: construct fishing pier and boat launch ramp.	MRFAP
	City Island: determine potential sites for fishing and boating landing piers.	MRFAP, NYCCP
Parks, beaches, and street ends	Queens, Udalls Cove/Ravine: acquire private land and map as parkland.	NYCCP
	Queens, Fort Totten: examine the feasibility of park use at the historic battery of the fort. Improve access by expanding the existing bicycle path between the fort's entrance and Northern Boulevard.	NYCCP
	Bronx, Pelham Bay Park: implement a containment program for Pelham Bay Landfill as a first step in making greater use of the southern zone of Pelham Bay Park.	NYCCP
	Bronx: develop street end point access at Lafayette Avenue within the Brush Avenue industrial area; to the Triborough Bridge and Tunnel Authority Park at Throgs Neck Bridge; and at Layton, Outlook, Watt, and Randall Avenues.	NYCCP
	Bronx, Co-op City: locate a CSO holding tank on a publicly owned site in the area and treat the site's surface for park use if no longer needed by DOT.	NYCCP
Trails, walkways, and greenways	Queens, Udalls Cove/Ravine: undertake studies to establish a trail system.	NYCCP
	Bronx, Co-op City: develop an esplanade at the Co-op City waterfront.	NYCCP

Source of Recommendation—**MRFAP**: Marine Recreational Fishing Access Plan; **NYCCP**: New York City Comprehensive Plan

¹MRFAP notes two possibilities for improving fishing access:

- Limited off-street parking can be developed at those sites with adequate upland property to accommodate a parking area. A clearing (outlined by plantings and/or wooden posts) large enough for five or ten cars could supply a user opportunity now very often limited only to local residents because of parking restrictions.
- On-street parking regulations should be reviewed in those municipalities where there are DEC tidal wetland properties. Municipalities that restrict on-street parking in the vicinity of such properties should be requested to allow some limited on-street parking within reasonable distance (1/4 mile) surrounding these sites.

Table 3 Public Access and Recreation Recommendations, Nassau County

CATEGORY	RECOMMENDATION	SOURCE
Fishing and boating access	Village of Manorhaven: conduct feasibility/cost analysis for dock rehabilitation and use of adjacent public lands.	LWRP
	Sea Cliff, Tappan Beach Marina: remove existing unusable launch ramp and replace; construct bulkhead.	MRFAP
	Port Washington, Webster Park: construct fishing pier.	MRFAP
	Villages of Saddle Rock and Great Neck, Udalls Mill Pond and Parkland: improve utilization of parkland and public access to the pond's shoreline.	LWRP
Parks, beaches, and street ends	Village of Manorhaven: reallocate parking space and develop a long range master plan for uses in Manorhaven Park.	LWRP
	Village of Manorhaven: as part of undertaking a feasibility and preliminary cost analysis for the rehabilitation of the North Sheets Creek Preserve wetland system, develop a public access and nature appreciation program.	LWRP
	Town of North Hempstead, Hempstead Harbor: revitalize the Scudder Lane street end in the Glenwood Landing area to improve public access to this part of harbor, including provision of a boat launch.	LWRP
	Town of North Hempstead, Port Washington: redevelop the 960 acre publicly owned site along and adjoining the west shore of Hempstead Harbor to provide enhanced physical and visual access to the waterfront, a variety of waterfront and upland active and passive recreation activities and preservation of natural areas.	Town of North Hempstead
	Town of North Hempstead, Manhasset Bay: provide additional public access and passive recreation on town-owned property along the eastern shoreline of Manhasset Bay. Connect upland areas with a series of pathways or boardwalks extending along the full length of the shore.	Town of North Hempstead
	Village of Sea Cliff, Hempstead Harbor: refurbish steps to beach and construct walkway/trail along the shoreline from Sea Cliff Beach to Rum Point, approximating the route of the original boardwalk.	Village Shoreline Study
Trails, walkways, and greenways	City of Glen Cove, Glen Cove Creek: any new or rehabilitated water-related uses along the creek should include landscaping and walkways to afford pedestrian access and connect public and private properties along the creek.	LIRPB
	North Hempstead, Hempstead Harbor: develop shoreline east of West Shore Road between Bar Beach and Roslyn into linear park or greenway to improve visual quality of harbor. Inclusion of Roslyn Harbor area in linear park will provide additional waterfront access to Roslyn CBD, which is a major tourist attraction because of unique scenic nature.	LIRPB, LWRP
	North Hempstead, Hempstead Harbor: extend the public walkway that connects the Town Dock in Port Washington with Sunset Park farther south through the commercial area to just north of the Knickerbocker Yacht Club.	LWRP

Source of Recommendation—**LIRPB**: Long Island Regional Planning Board; **LIS CMP**: Long Island Sound Coastal Management Program; **LWRP**: Local Waterfront Revitalization Program **MRFAP**: Marine Recreational Fishing Access Plan.

Table 4 Public Access and Recreation Recommendations, Western Suffolk County

CATEGORY	RECOMMENDATION	SOURCE
Fishing and boating access	Sunken Meadow State Park: study feasibility of constructing a boat launch ramp.	MRFAP
	Kings Park, Kings Park Psychiatric Center: expand use of existing launch ramp on Nissequogue River for general public use.	MRFAP
	Old Field, Flax Pond: develop limited upland off-street parking at 146 acre DEC tidal wetland site.	MRFAP
	Northport, Steers Beach South: consider development potential for fishing access.	MRFAP
	Huntington, Harbor Arts Center: develop as fishing access site.	MRFAP
	Smithtown, Riverside Conservation Area: complete county improvements in this area to enable its use for fishing and canoe launching.	LWRP
Parks, beaches, and street ends	Town of Smithtown, Caleb Smith State Park: OPRHP should acquire certain parcels near the park to help maintain its integrity, quality, and character.	LWRP
	Town of Smithtown: obtain additional land from the state at Kings Park Bluff to enable the existing bluff parking area to be moved back from the bluff.	LWRP
	Town of Smithtown, Callahan's Beach: repair the damage on the escarpments caused by erosion that threatens to undermine the parking and picnic areas.	LWRP
	Town of Smithtown: provide additional public access to the water at Sunken Meadow State Park.	SCORP
	Village of Lloyd Harbor, Caumsett State Park: develop the park to provide increased public access for passive recreation, commensurate with protection of the park's unique natural environment. Preparation of a comprehensive management plan would be important in this respect.	SCORP, LIS CMP

Source of Recommendation—**LIS CMP**: Long Island Sound Coastal Management Program; **LWRP**: Local Waterfront Revitalization Program; **MRFAP**: Marine Recreational Fishing Access Plan; **SCORP**: State Comprehensive Outdoor Recreation Plan

¹MRFAP notes two possibilities for improving fishing access:

- Limited off-street parking can be developed at those sites with adequate upland property to accommodate a parking area. A clearing (outlined by plantings and/or wooden posts) large enough for five or ten cars could supply a user opportunity now very often limited only to local residents because of parking restrictions.
- On-street parking regulations should be reviewed in those municipalities where there are DEC tidal wetland properties. Municipalities that restrict on-street parking in the vicinity of such properties should be requested to allow some limited on-street parking within reasonable distance (1/4 mile) surrounding these sites.

Table 5 Public Access and Recreation Recommendations, Eastern Suffolk County

CATEGORY	RECOMMENDATION	SOURCE
Fishing and boating access	Mt. Sinai, Davis Island: develop limited upland off-street parking at 6 acre DEC tidal wetland site.	MRFAP
	Riverhead, Baiting Hollow: develop limited upland off-street parking at 77 acre tidal wetland site.	MRFAP
	Mattituck Inlet, Oregon Marsh: develop limited upland off-street parking at 31 acre tidal wetland site.	MRFAP
	Peconic, Goldsmiths Inlet: construct concrete launch ramp in location not subject to erosion from existing jetty.	MRFAP
	Mattituck Inlet: construct boat launch ramp on 1.3 acre site purchased from Carey Resources, Inc.	MRFAP
	Mattituck Inlet, Luther's Road Launch Ramp: construct concrete launch ramp.	MRFAP
	Jamesport, Iron Pier Beach: rehabilitate existing boat launch site and stabilize beach, if it can be determined that stabilization is feasible.	MRFAP
	Wading River, Wading River Creek Boat Launch: rehabilitate existing launch ramp; increase parking area and dredge river mouth.	MRFAP
	Peconic, Peconic Dunes: provide fishing access during off-season.	MRFAP
Parks, beaches, and street ends	Mattituck, Mattituck Creek: provide for recreation and various other public uses, including marine recreation and marine commercial, in connection with the phase-out and removal of various industrial uses on the west side of the mouth of Mattituck Creek.	LIRPB
	Inlet Point Pond County Park: provide a small parking area for fishing and other passive activities.	LIRPB
	Peconic, Goldsmiths Inlet County Park: improve site and parking lot for future uses such as swimming, fishing, and hiking activities.	LIRPB

Source of Recommendation—**LIRPB**: Long Island Regional Planning Board; **MRFAP**: Marine Recreational Fishing Access Plan

¹MRFAP notes two possibilities for improving fishing access:

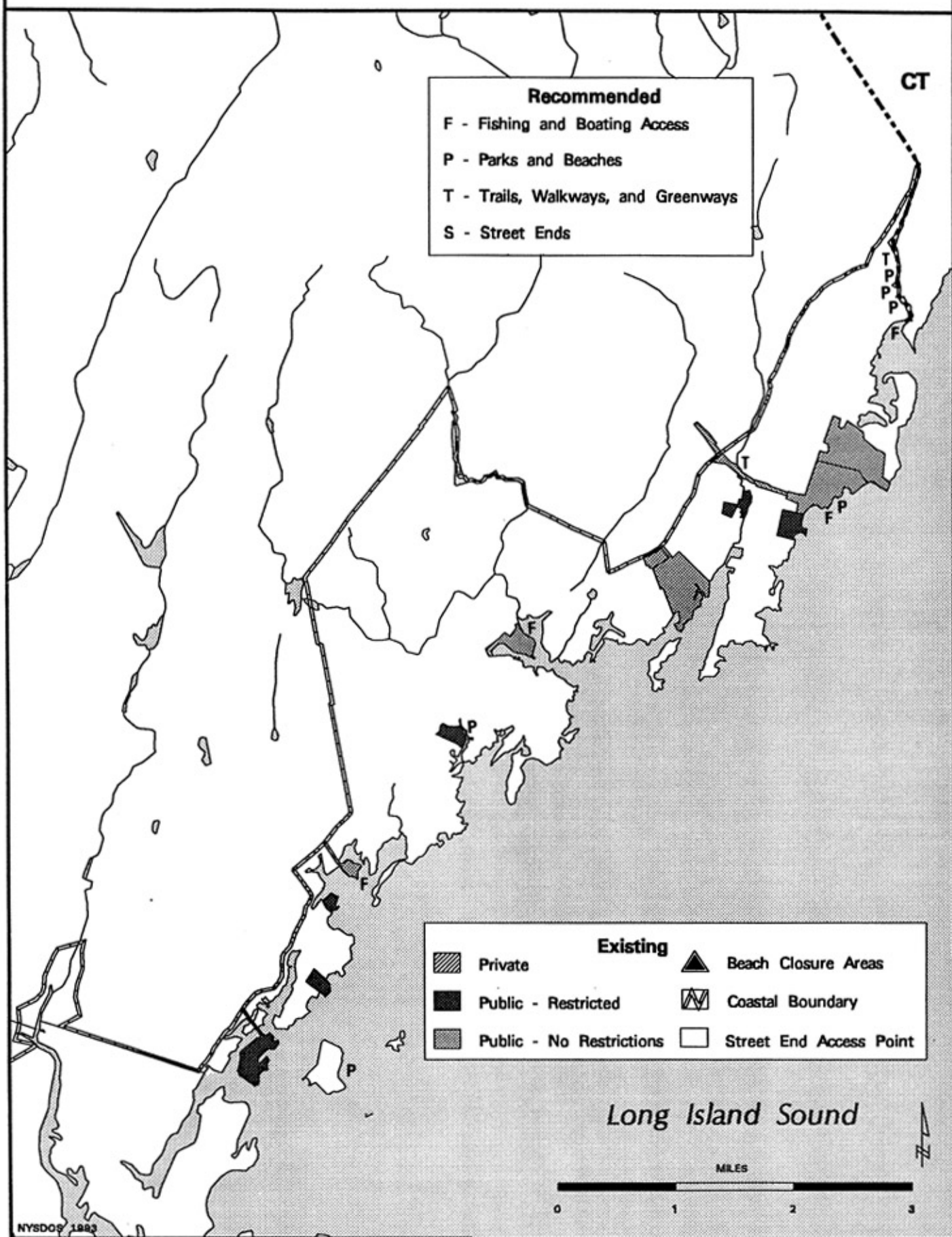
- Limited off-street parking can be developed at those sites with adequate upland property to accommodate a parking area. A clearing (outlined by plantings and/or wooden posts) large enough for five or ten cars could supply a user opportunity now very often limited only to local residents because of parking restrictions.
- On-street parking regulations should be reviewed in those municipalities where there are DEC tidal wetland properties. Municipalities that restrict on-street parking in the vicinity of such properties should be requested to allow some limited on-street parking within reasonable distance (1/4 mile) surrounding these sites.

Table 6 Public Access and Recreation Recommendations, Western and Eastern Suffolk Counties

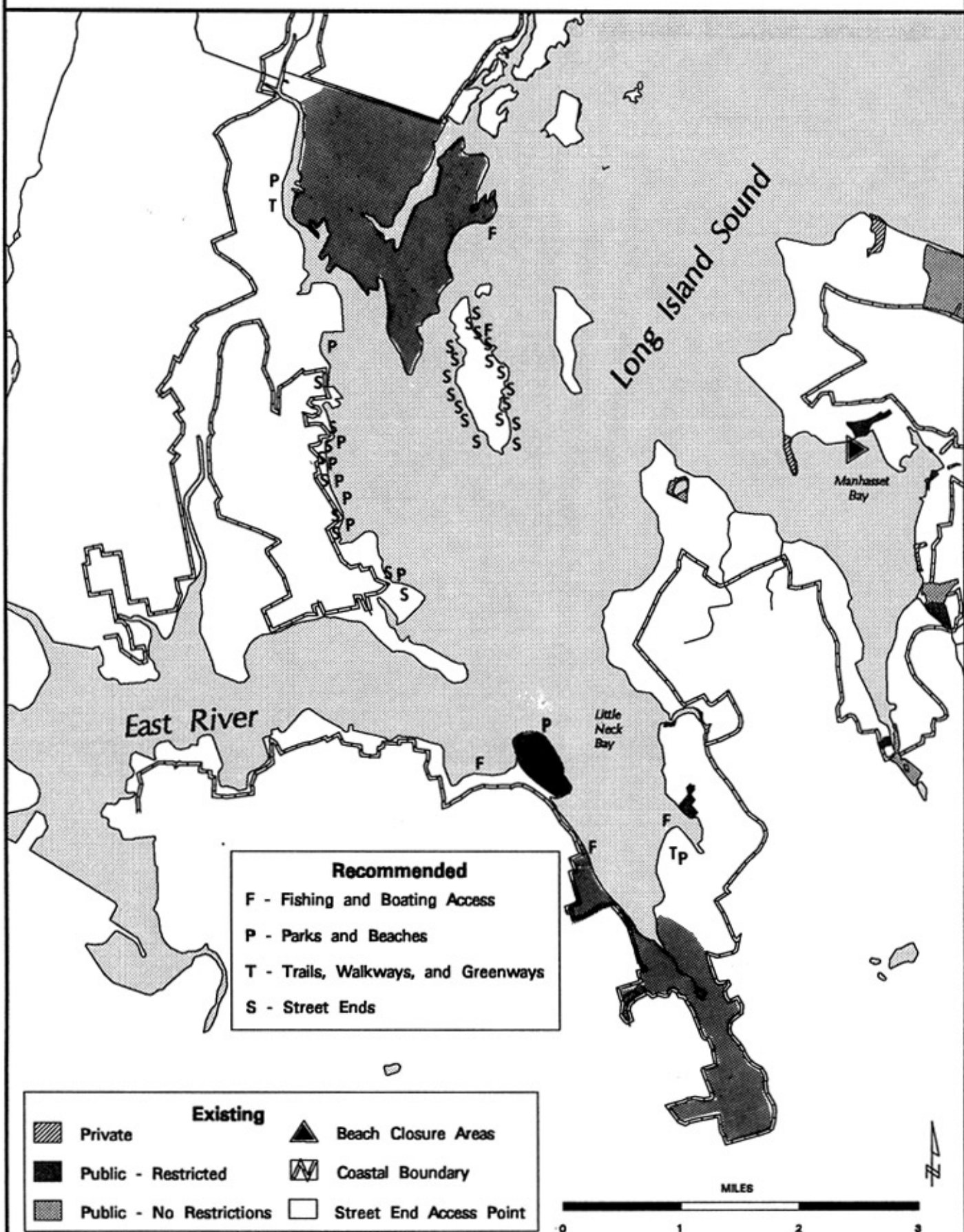
CATEGORY	RECOMMENDATION	SOURCE
Trails, walkways, and greenways	Caumsett, Sunken Meadow, and Wildwood State Parks: provide lateral access along significant distances of the shorelines on either side of these parks to provide opportunities for increased recreational use of public trust lands adjacent to the parks. Involved in this would have to be the removal of any shoreline obstructions to lateral access along public trust lands. This might include removal of illegally placed fill or structures, provision of access past structures legally located on public trust lands, or provision of in-kind public access through adjacent upland easements or other mitigation. Street end access points to the shoreline at varying distances on either side of the parks could be designated as links back inland.	LIS CMP
	East-west hiking trail through Riverhead and Southold; north-south trail from Peconic River headwaters to Wildwood State Park.	LIGTC

Source of Recommendation—**LIS CMP:** Long Island Sound Coastal Management Program; **LIGTC:** Long Island Greenbelt Trail Conference

Recommended Public Recreational Access



Recommended Public Recreational Access



Nassau County

Recommended Public Recreational Access

MAP 3.2

Long Island Sound

Hempstead Harbor

Manhasset Bay

Little Neck Bay

Cold Spring Harbor

Recommended

- F - Fishing and Boating Access
- P - Parks and Beaches
- T - Trails, Walkways, and Greenways
- S - Street Ends

Existing

- Private
- Public - Restricted
- Public - No Restrictions
- Beach Closure Areas
- Coastal Boundary
- Street End Access Point

MILES

Western Suffolk County Recommended Public Recreational Access

MAP 3.3

Long Island Sound

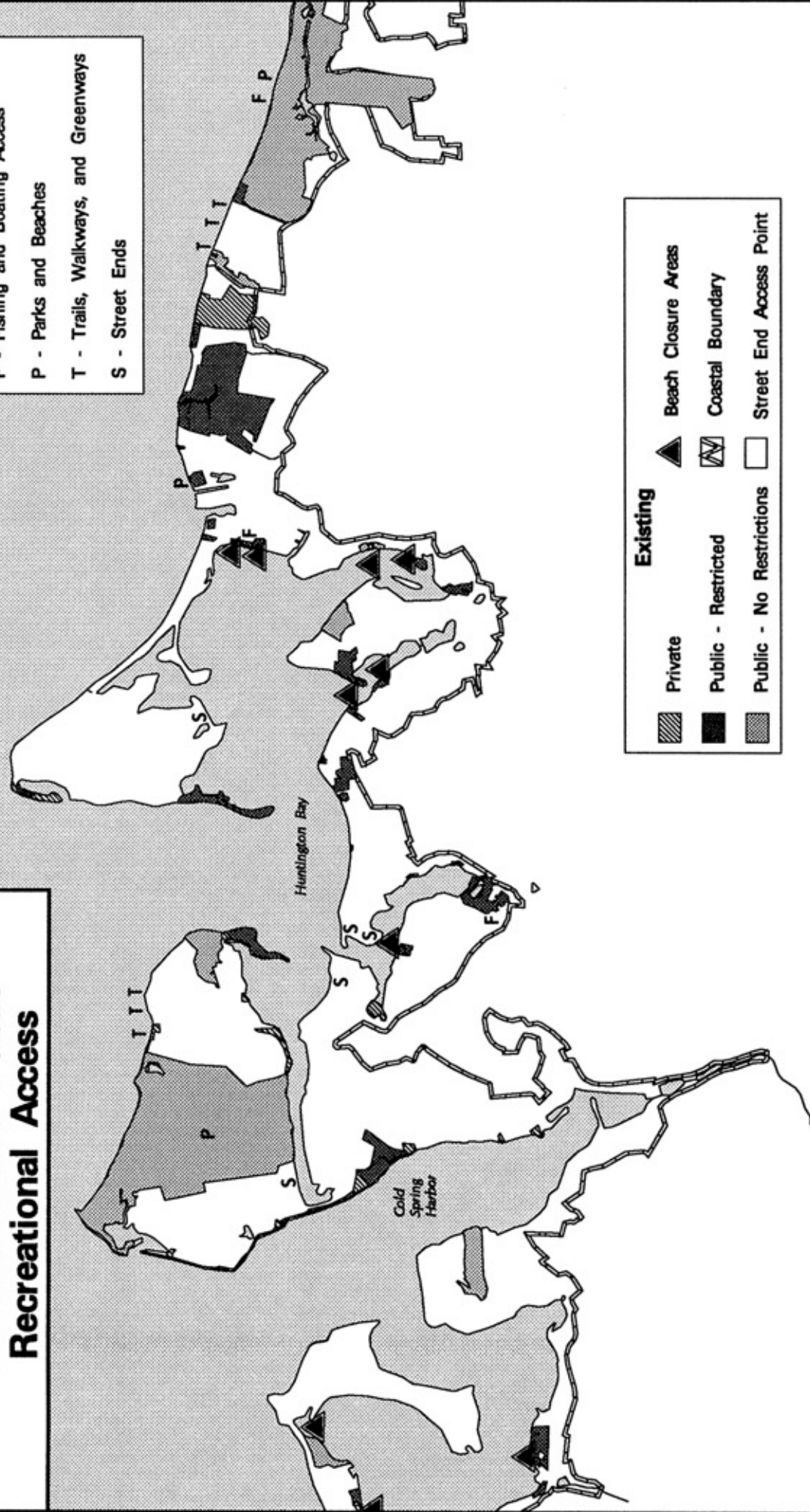
Recommended

F - Fishing and Boating Access

P - Parks and Beaches

T - Trails, Walkways, and Greenways

S - Street Ends



MILES

Smithtown - Port Jefferson **Recommended Public Recreational Access**

MAP 3.4

Long Island Sound

Smithtown Bay

Recommended

- F - Fishing and Boating Access
- P - Parks and Beaches
- T - Trails, Walkways, and Greenways
- S - Street Ends

Existing

- Private
- Public - Restricted
- Public - No Restrictions

- Beach Closure Areas
- Coastal Boundary
- Street End Access Point

MILES









Eastern Suffolk County

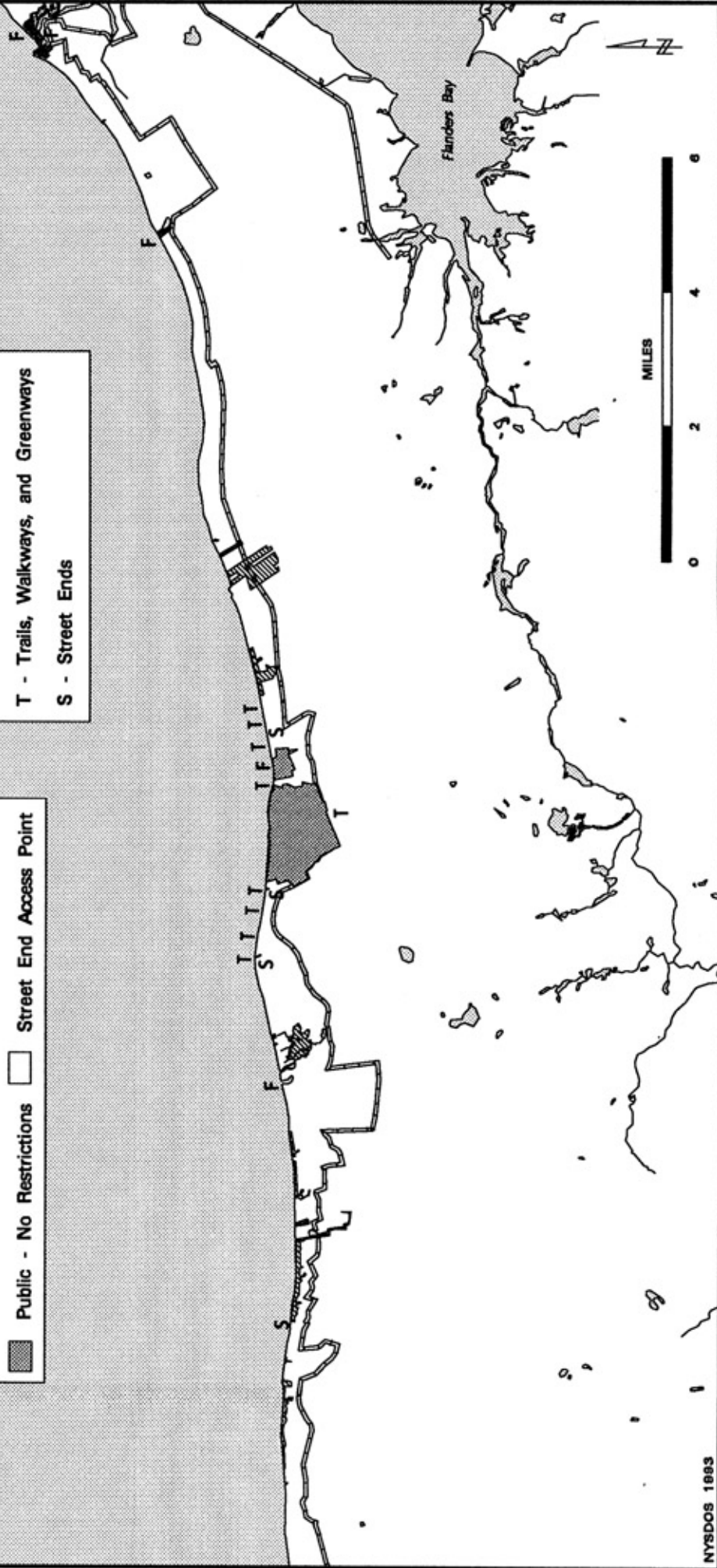
Recommended Public Recreational Access

MAP 3.5

Long Island Sound

Existing	
	Private
	Public - Restricted
	Public - No Restrictions
	Beach Closure Areas
	Coastal Boundary
	Street End Access Point

Recommended	
F	Fishing and Boating Access
P	Parks and Beaches
T	Trails, Walkways, and Greenways
S	Street Ends

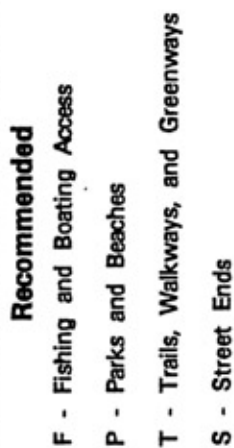
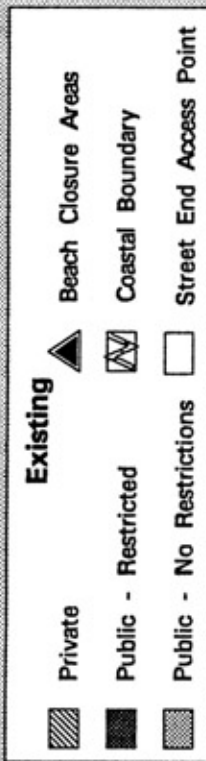


Eastern Suffolk County

Recommended Public Recreational Access

MAP 3.6

Long Island Sound



Fishers Island



THE WORKING COAST

Reinvigorate the Sound's working waterfront, its jobs and products, at appropriate locations by protecting uses dependent on the Sound, providing necessary infrastructure, business, and marketing assistance, and promoting efficient harbor operation.

The Working Coast consists of uses and businesses that share a common trait—they require a location on the shoreline to function or they depend on harvesting the living or mineral resources in coastal waters. The Sound's working coast consists of areas where: individual public or private marinas, yacht clubs, and boat yards exist; concentrations of commercial or recreational fishing vessels exist; petroleum products, aggregates, or other waterborne commerce are imported or exported; or ferries arrive or depart from the shore. These uses generate billions of dollars for the regional economy and are vital to the economic health of the region. Long Island Sound's working coast uses should be protected and promoted as important elements of the region's maritime heritage and economy.

WORKING COAST FINDINGS

- There are nearly 200 working coast businesses on Long Island Sound. Marinas and boat yards represent about 75 percent; the remaining 25 percent include fuel transshipment, commercial fishing facilities, recreational fishing facilities, aggregate transshipment, ferry terminals, dredging activities, and coastal agriculture.
- Nearly 66 percent, or 125 businesses, are concentrated in 10 embayments:

Port Chester	Glen Cove Creek
Mamaroneck Harbor	Huntington Harbor
Echo Bay-New Rochelle Harbor	Northport Harbor
City Island-East Shore Bronx	Port Jefferson
Port Washington-Manorhaven	Mattituck Inlet
- Major challenges facing all water-dependent businesses to varying degrees include: competition for space on the waterfront and space on the water, inadequate or deteriorated coastal infrastructure, impacts of regulation and taxation, degradation or depletion of coastal resources, lack of public awareness of working coast uses and businesses, and business needs of working coast uses.

Marinas and Boat Yards

- The Long Island Sound region supports one of the country's largest recreational boating fleets and is a nationally recognized sailing capital.
- Growth opportunities for new marinas and boat yards or for expansion of existing facilities are limited mostly to areas where existing concentrations of water-dependent uses exist, since these areas are most suitable and present fewer environmental and siting constraints.
- Most successful marinas are large and diversified, selling, servicing, and storing boats. In successful marinas, over 50 percent of gross revenues can be attributed to support services related to marinas. An increasing number of small, individual or family owned and operated marinas and boat yards are converting to corporate owned and operated businesses to better survive.
- There is constant pressure to replace marinas with non-water-dependent uses, primarily residences and restaurants, in many areas throughout the Sound. Although some

communities protect marinas and boatyards using land use regulations, many communities offer no protection for these uses, or do not sufficiently protect or give preference to these uses over non-water-dependent uses. An added problem is that marinas are often assessed as non-water-dependent uses even where non-water-dependent uses are prohibited by local zoning laws.

- There is a need for regulatory simplification whether the desired goal is to complete minor modifications to an existing marina, expand an existing marina, or construct a new marina. Project approval times need to be coordinated and shortened without compromising environmental quality.
- There are only two boat yards in New York on Long Island Sound which are capable of servicing large vessels. Boat yards, like marinas, often require some sort of mixed use or temporary off-season use that can take advantage of a boat yard's equipment to subsidize their vessel repair operations and seasonal boat yard income. The more successful boat yards have diversified and are likely to have some permanent or transient slips.

Commercial Fishing

- There are a total of 146 full- and part-time commercial trap and trawl fishing vessels based in ports on Long Island Sound; some are nonresident vessels. Many of these vessels are concentrated in six locations, all in Suffolk County: Huntington Harbor, Northport Harbor, Port Jefferson Harbor, Setauket Harbor, Mount Sinai, and Mattituck Inlet.
- The largest segment of the commercial fishing industry is hundreds of independent baymen and lobstermen.
- The volume of commercial fishery landings in the Sound has increased from 8,360,600 pounds (1987) to 16,567,563 pounds in 1991, nearly 100 percent. The major fisheries, which include American lobster, hard clams, and surf clams, were worth over \$58 million, or 64 percent of the value of total Long Island Sound harvested product (\$91 million).
- The Long Island Sound fish and seafood industry's true value is not realized because much of its harvested product leaves the state for processing.
- The commercial harvesters on Long Island Sound face an array of continuing problems. Many of the constraints on commercial fishers stem from impacts of waterfront development, conflicts with recreational boaters who have crowded harbors, and reduced services (repair, fuel, docking, gear storage, pack out space, ice, and processing). Other problems include conflicts with recreational fisherman over space allocation in the Sound and depleted stocks.

Recreational Fishing

- A report prepared for the Long Island Sound Study, *The Economic Importance of Long Island Sound's Water Quality Dependent Activities*, estimates that the 1990 total sport fishing value for New York State's portion of Long Island Sound is \$418 million.
- There are an estimated 50 to 100 party and charter boats operating within the Long Island Sound region. These boats are concentrated in: City Island, Port Washington, Huntington, Northport, Port Jefferson, Mount Sinai, and Mattituck Inlet.
- The majority of the commercial recreational fishing vessels on the Sound are smaller charter boats carrying no more than six passengers.
- Availability of dock space is a major problem. There are few docks on the north shore that will accept large party or charter boats. In addition, temporary docking and fuel or other services is a problem in the eastern half of the Sound.

- Many charter and party boats stationed in ports in the western half of the Sound are traveling with increased frequency to the east because seasonal poor water quality and overfishing have lowered fish populations in the western half.

Ferry Development

- A number of problems affect the ability of the existing ferry services to support the expanded operation of Long Island industries and to improve access to commuters. These problems are traffic congestion within the Village of Port Jefferson and the remote location and the narrow approach road of the Orient Point Ferry, making it of limited use for commercial transport. These constraints significantly add to the time needed to move goods. For the region to fully function as an economic unit, improved transportation linkages will be necessary.
- Ferry service holds potential for significant ridership and offers the following major advantages: accommodation of large commercial vehicles; a direct link to New England, allowing direct import and export of products by Long Island and New England companies; and direct access to major highways on Long Island and in New England.
- Because traffic associated with ferry service can adversely affect communities, new or expanded ferry service should be limited to suitable sites and have the support of local government.

Transfer and Storage of Petroleum Products

- Over 75 percent of the Long Island supply of petroleum products is delivered by tanker and barge to storage terminals in 10 locations. Northport and Northville receive products from offshore terminals where water depths are approximately 45 to 60 feet. All other petroleum unloading and storage terminals in the region are located in eight embayments where water depths are relatively shallow.
- Four locations account for nearly 90 percent of petroleum waterborne shipments in the region: the Hutchinson River in Westchester County; Hempstead Harbor in Nassau County; and Port Jefferson and Northville in Suffolk County.
- While transporting petroleum by tanker and barge is an efficient, cost effective way to import petroleum products, the present system presents environmental and land use concerns since most of the existing petroleum terminals are located at the heads of embayments, or in other poorly flushed and highly developed areas. Tanks and terminal docks can take up valuable waterfront land, and tankers and barges pose a risk of oil spills and conflicts with other uses in confined waterways.

Aggregate Transshipment

- Sand and gravel are no longer exported from any north shore location on Long Island. There are no active sand and gravel mines in the coastal area of the Long Island Sound region and no mining of underwater lands has occurred for over 20 years.
- Nassau and Suffolk counties still produce a significant volume of sand and gravel to serve the needs of Long Island, but the overall volume of material has decreased.
- Stone must be imported. Barges are the principal means to transport stone from quarries to north shore bays and harbors. Transshipment points for stone imports in the region are: Port Chester, Hutchinson River, Hempstead Harbor, Glen Cove, and Port Jefferson.
- Maintaining transshipment points along the Long Island Sound shoreline is necessary to ensure that aggregates can be easily imported and, if necessary although unlikely, exported from the region.

Dredging

- Most dredging projects are for channels and basins supporting water-dependent uses in maritime centers. A few channels support water-dependent uses outside of maritime centers.
- There is a trend toward reduced channel and basin depth in maritime centers as industrial water-dependent uses requiring deep draft channels are replaced by recreational water-dependent uses.
- Some federal channel and basin projects that have been authorized, but not completed or are partially completed, are no longer necessary for deep draft industrial water-dependent uses.
- Dredging and dredged material disposal are not well coordinated, resulting in maintenance dredging delays, high costs, multiple event and long-term resource impairments from projects spread out over time, and the loss of opportunities to use dredged material for beneficial purposes, such as beach nourishment and landfill closures.

Coastal Agriculture

- The vast majority of agricultural lands in the coastal area of the Long Island Sound region are located in eastern Suffolk County in the towns of Riverhead and Southold. Relatively small, isolated pockets of agricultural land exist in the coastal area in western Suffolk County. No agricultural land exists in the coastal area of Nassau and Westchester counties and New York City.
- Nursery and greenhouse products account for a majority of market sales, \$67 million. Three other emerging agricultural uses are the grape and wine industry, horse farms, and the sod industry.
- Farms provide freshly grown produce to area markets, as well as significant open space that maintains the community character important to the east end tourism industry. The open space that farmland provides on the east end is particularly significant since it provides relief from the dense development pattern that characterizes parts of the Sound shoreline and most of Long Island.
- Throughout Suffolk County, including the coastal area, the amount of agricultural lands continues to diminish due primarily to residential development.
- Four techniques are being used by Suffolk County and the towns of Riverhead and Southold to preserve farmland: purchase of development rights, transfer of development rights, clustering of housing units, and outright acquisition (used mostly for historic or watershed protection purposes).
- New York State has instituted the Agricultural and Farmland Protection Programs (Agriculture and Markets Law Article 25-AAA) to provide technical and financial assistance to counties for agricultural and farmland protection efforts. The Clean Water/Clean Air Bond Act provides funding for local initiatives that maintain the economic viability of the agricultural industry, such as purchase of development rights.
- State agricultural districts do not provide permanent protection for farmland.

***REINVIGORATE THE WORKING WATERFRONT: Recommendations for the Working Coast
Protecting Uses Dependent on the Sound***

Recommendation 33: Improve siting requirements for marinas and other docking facilities.

The following criteria should be applied when boating and docking facilities are developed or expanded in the Long Island Sound coastal area:

- Site new or expand existing marinas in areas with suitable characteristics including: sufficient upland space for parking and support facilities, adequate near shore depth, absence of wetlands that could be affected, compatible water quality classifications, absence of shellfish beds or fish spawning grounds, minimal need for dredging, and adequate water circulation.
- Give preference to siting new marinas and yacht clubs in established centers of maritime activity, where suitable characteristics exist, rather than elsewhere. Siting these uses outside maritime centers is likely to be problematic due to unsuitable environmental characteristics and incompatible with various elements that comprise community character, such as land use, shellfishing, aesthetics, and noise. (The existing maritime centers that exhibit suitable characteristics include Port Chester, Mamaroneck Harbor, Echo Bay-New Rochelle Harbor, City Island-East Shore Bronx, Port Washington-Manorhaven, Glen Cove Creek, Huntington Harbor, Northport Harbor, Port Jefferson Harbor, and Mattituck Inlet.)
- Avoid or minimize adverse impacts on surrounding pre-existing neighborhoods and communities.
- Marinas incorporating marine services and boat repair should have a higher priority than those providing berthing or storage uses only.
- Marinas should not displace or impair the operation of water-dependent transportation, industry, or commerce and should not encroach upon navigation channels or channel buffer areas.
- Incorporate public access to the shore through provisions such as including access from the upland, boat ramps, and transient boat mooring.
- Provide new pumpout facilities unless existing pumpout capacity meets foreseeable demand; municipally owned and operated pumpout facilities should be provided free of charge or for a modest fee to help cover operating expenses.
- A boating facility should be treated as a commercial marina, since the potential impacts can be as significant as those from a commercial marina or yacht club. (A boating facility means one encompassing 4,000 square feet or greater of surface waters, as measured by the outermost perimeter of the dock, purposefully designed to accommodate six or more boats.)

Implementation: Long Island Sound Coastal Management Program provides marina and other docking facility siting criteria. Local governments should incorporate these criteria into their Local Waterfront Revitalization Programs, as appropriate to their needs.

Recommendation 34: Increase efforts to preserve the Sound's shellfishery.

To preserve the shellfish resources of Long Island Sound, efforts to protect water quality and habitat for shellfish, such as hard clams, surf clams, oysters, and mussels, must continue to be a high priority. Efforts to initiate, continue, or expand shellfish assessments or surveys and to collect harvesting data in order to implement appropriate management measures are recommended, particularly for the high value hard and surf clam, and oyster shellfishery. Spawner stock protection efforts, such as closing selected harvest grounds, establishing maximum

legal harvesting size limits to protect the most productive shellfish, improving nonpoint source pollution controls, and preventing and reducing use conflicts between shellfishing and other uses, such as vessel mooring areas, are recommended. Controlled entry in the commercial hard clam shellfishery in Long Island Sound should be considered in addition to maximum catch limits to help reduce overharvesting.

State and local marine patrols must continue and should be coordinated to provide efficient and effective enforcement of shellfish, natural resource, and water quality regulations. Consideration should be given to the preparation of a shellfish plan by local governments and the state that would evaluate the above actions, as well as others, and include a strategy to preserve and improve the Sound's shellfishery.

Implementation: The Department of Environmental Conservation and the Department of State will focus efforts on appropriate restoration efforts of shellfish resources. Restoration of shellfish habitats is critical, and is being undertaken with funds provided through the Clean Water/Clean Air Bond Act and the Environmental Protection Fund. Further, the Department of State will encourage Local Waterfront Revitalization Programs to address shellfish management issues.

As appropriate, amend the state's recreational and commercial harvest regulations and improve enforcement of existing regulations by state environmental conservation officers.

State harvest and fishery regulations must work to prevent overharvesting and ensure fair stock allocation between recreational and commercial users.

Amend local recreational and commercial harvest regulations and improve enforcement of existing regulations by local environmental enforcement officers. This action can also be advanced through Local Waterfront Revitalization Programs.

Recommendation 35: Provide for petroleum transshipment and encourage phase-out of certain oil storage facilities.

Spills or leaks from oil storage facilities in areas with productive shellfish beds, state-designated coastal fish and wildlife habitats, or federal wildlife refuges could cause significant harm. To reduce this potential, neither new facilities nor expansion of existing facilities should occur in these areas. In addition, with its productive shellfish beds and other high value natural resources, the existing Oyster Bay and Cold Spring Harbor facilities should be phased out over time as other opportunities for petroleum transshipment and storage are developed and as feasible site reuse options are presented. These facilities are relatively small-scale storage facilities, are served by an onshore offloading and storage facility, are not part of a pipeline transfer system, and are located in a harbor area that exhibits outstanding natural resource values.

Implementation: The Department of State and the Department of Environmental Conservation application of regulatory standards to reduce risks, Department of State assistance to local governments on land use regulations as part of Local Waterfront Revitalization Programs, and market forces will implement this recommendation.

Recommendation 36: Implement a state oil spill contingency plan.

The Department of Environmental Conservation is working with the U.S. Coast Guard, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service to finalize an oil spill contingency plan for the state's marine district. The petroleum industry, the Department of Environmental Conservation, the federal government, public interest groups, and local emergency services agencies have all indicated that an oil spill contingency plan is necessary. The plan would be fully coordinated with and use the equipment and personnel of all levels of government and of the petroleum industry. Sufficient resources should be devoted to this effort, and other state agencies and local governments should cooperate in preparation of the plan.

Implementation: The Department of Environmental Conservation has completed an operational plan for the state's marine district to implement this recommendation. Individual harbor response plans are now being prepared by the Department of Environmental Conservation.

Recommendation 37: Protect agriculture and farmland.

Agricultural districts, the primary mechanism used by the state to protect agricultural lands, provide incentives for farmers to continue farming through lower tax assessments and protection from nuisance suits for an eight-year period. They do not provide permanent protection. Eight-, twelve-, and twenty-year agricultural district terms are permitted, but so far only eight-year districts have been created. In addition, the Agricultural and Markets Law was recently amended to include Article 25-AAA which authorizes counties to prepare county agricultural and farmland protection programs. Technical and financial assistance is provided for preparing and implementing the plans.

Suffolk County recently completed the Suffolk County Agricultural and Farmland Protection Plan in accord with the provisions of Article 25-AAA, section 324, of the State Agriculture and Markets Law. The plan was funded in part with a grant from the Department of Agriculture and Markets and identifies various techniques and strategies to protect Suffolk's remaining farmland.

Implementation: Purchasing development rights is an effective way to protect and preserve agricultural lands of statewide importance. Likely state funding sources include the Environmental Protection Fund, the Farmland Protection Trust Fund, and the Clean Water/Clean Air Bond Act. Since 1996, the state has awarded more than \$2 million for projects on Long Island, where development pressure on farmland is the highest. The Department of Agriculture and Markets is evaluating a list of approximately 40 parcels that have been recommended for protection by Suffolk County and the eastern Long Island municipalities.

Furnishing Necessary Infrastructure

Recommendation 38: Improve the economic viability of maritime centers, by working with local governments and the private sector to identify opportunities and priorities for public and private investments to upgrade necessary infrastructure such as: water and sewer lines; maintenance dredging of navigation channels and anchorage basins, docks, and piers; bulkheads; boat ramps; sidewalks and parking lots; rest rooms; pumpout stations; and waterfront parks.

Focusing infrastructure investments will enable government and the private sector to better plan improvements for inadequate or deteriorated infrastructure. This infrastructure, which is often too expensive for many water-dependent businesses to maintain or provide on their own, is necessary to sustain water-dependent uses and improve the quality and attractiveness of the working coast. Maritime centers will better enable the public sector to target existing economic assistance programs to strengthen the region's waterfront economy. By directing the growth of water-dependent commercial and industrial uses to maritime centers, government will more fully use existing public investment in waterfront infrastructure. Identifying maritime centers, and setting management priorities for each, ensures an effective, systematic approach for waterfront infrastructure investment.

Implementation: The Department of State will work in partnership with local governments to establish priorities for infrastructure improvements. Based on the established priorities, public and private funds can be pursued to invest and complete projects in maritime centers. The Department of State will seek funding from existing state sources and other federal, local, and private sources to construct necessary projects.

Recommendation 39: Investigate options to obtain capital funds needed for necessary infrastructure in the Sound's maritime centers.

Since colonial times, waterborne commerce has been key to the economic growth and vitality of the state. Today, centers of maritime activity and ports are critical links in the state's system of intermodal transportation, since they allow commercial vessels to transfer waterborne commerce to landside transportation, such as trucks and trains, from which goods are transported to inland wholesale or retail markets or airports. The centers of maritime activity and ports link many of the state's businesses to water transportation and help to ensure that a wide variety of low cost goods and services are available to consumers. Waterborne transportation is one of the least expensive, safest, and environmentally sound methods of transportation available today. Increasingly centers of maritime activity and ports are also being used for marine recreational purposes.

Infrastructure is aging and deteriorating in the Sound's maritime centers as well as in other port and maritime locations in the state's coastal area. Declining infrastructure in the state's centers of maritime activity and ports impairs the ability of water-dependent uses to function efficiently and prosper, having a negative affect on the state's maritime economy of waterborne commerce, transportation, and recreation. Waterfront communities and waterfront business owners find it difficult, if not impossible, to afford maintenance of existing infrastructure and to provide new improved infrastructure.

A critical and costly infrastructure problem is the need to maintain adequate depths in existing navigation channels and basins to ensure unobstructed and efficient vessel access to and from maritime centers and ports. Obstructed navigation channels and basins, caused by excessive sediment accumulation, adversely affects the state's intermodal transport system, rendering it inefficient and unsafe. This is a pressing issue facing nearly all of the state's maritime centers and ports. Many private or local government dredging proposals have either been significantly reduced in scale or abandoned all together due to prohibitive project costs for sediment testing, dredging, and disposal. Two major problems that contribute to the high cost of dredging projects are: (1) the cost to test sediment for contaminants, and (2) if contaminated sediments are found, the lack of suitable disposal areas. Finding suitable disposal areas can cause inordinately long delays in, or the cancellation of, dredging projects.

Implementation: To ensure that Long Island Sound's maritime centers continue to serve important regional economic and recreational needs, consideration should be given to the ongoing infrastructure and maintenance needs of these harbors and how capital investments might be made. The Department of Transportation, Empire State Development, and the Department of State should analyze the Sound's maritime centers to establish: the relative economic importance of these areas to the state, the range of primary infrastructure needs, how the state can assist in ensuring that primary infrastructure needs are met, which state agencies should be responsible for providing infrastructure, and the means to generate funds to pay for infrastructure improvements. The Department of Environmental Conservation should be involved in assessing the environmental impacts of dredging and disposal options.

Recommendation 40: Assist the commercial fishing industry in providing adequate commercial fishing infrastructure.

Commercial harvesters are faced with problems related to inadequate fishery infrastructure on Long Island Sound. The following types of support facilities are necessary to meet the needs of the commercial fishing industry:

- dock space and offloading areas at Huntington Harbor, Northport Harbor, Port Jefferson Harbor, Setauket Harbor, and Mount Sinai; maintain these facilities at Mattituck Inlet

- gear storage space in Huntington Harbor, Northport Harbor, Port Jefferson Harbor, and Setauket Harbor
- appropriately scaled baymen's docks in suitable locations near areas of significant harvest activity or provisions for mooring or dock space at existing piers
- water and power hookups at Mattituck Inlet and at other unloading stations where hookups are needed
- repair, commercially priced fuel, ice, refrigeration, and storage facilities at appropriate locations
- adequate road access to commercial fishing ports
- commercial fishing support facilities in western Long Island Sound where no significant facilities exist
- fish processing facilities, since value-added product can produce higher economic return to the fish and seafood industry and the region (Following the example of other states, the feasibility of a state government built and/or funded, centrally located processing facility on Long Island that would process a wide variety of product from island-wide sources should be explored.)

Implementation: Public and private investments for construction of fishing docks and other necessary infrastructure for harvesters would advance this action.

The completion of Local Waterfront Revitalization Programs, including harbor management plans, that identify priority commercial fishing infrastructure needs will advance this action.

Recommendation 41: Construct artificial fishing reefs.

Artificial fishing reefs, such as the one in Smithtown Bay, create suitable habitat and sanctuaries to increase fish populations in the vicinity of the reef. In accord with the state's Plan for the Development and Management of Artificial Reefs in New York's Marine and Coastal District, the state should site artificial reefs in the Long Island Sound off Matinecock Point in the Town of Oyster Bay, Eatons Neck in the Town of Huntington, Mount Sinai in the Town of Brookhaven, and Mattituck Inlet in the Town of Southold; the state should maintain the existing reef in Smithtown Bay in the Town of Smithtown. Consideration should be given to establishing management zones in the vicinity of the reefs to minimize the potential for use and gear conflicts. In addition to requiring that artificial reefs planned for the Sound are properly designed, sited, and constructed, the state must ensure that artificial reefs are not constructed with hazardous materials or substances.

Implementation: The Department of Environmental Conservation should construct artificial reefs in the Sound as fiscal resources allow.

Recommendation 42: Encourage private enterprise to develop private ferry services which are compatible with community needs.

Ferries provide an option to trucks and automobiles for freight and commuter movement. They can also offer enjoyable recreational experiences. The state should support the development of private ferries and their location in maritime centers. If ferries cannot be sited in maritime centers, commuter ferries may be located in appropriate locations outside these areas.

Implementation: The Long Island Sound Coastal Management Program and Local Waterfront Revitalization Programs will be used to guide ferry services to appropriate locations. Where there is local consensus and support, the state will continue to work with local and county governments and the private sector to establish new commuter ferry routes to New York City and other destinations from shoreline locations on the Sound.

Recommendation 43: Support private initiatives to complete a system of offshore unloading terminals and a pipeline distribution system to transport petroleum to inland locations.

The completed portion of Long Island's pipeline system consists of: (1) two offshore unloading terminals at Northport and Northville; (2) a submarine pipeline that transports oil from the offshore unloading terminals to inland storage tanks; and (3) an overland pipeline distribution system that begins in Port Jefferson and transports petroleum two miles south to storage facilities in East Setauket, then seven miles further south to storage facilities in Holtsville, and then 26 miles west to storage facilities in Plainview, a combined total distance of 35 miles. Completing the system would entail the construction of:

- an offshore unloading platform and submarine pipelines at Port Jefferson; explore the feasibility of an offshore unloading facility to serve Nassau County
- a pipeline distribution system from Northville south to Riverhead and then west to the major inland storage facilities in Holtsville; if an offshore unloading terminal is thought to be necessary for Nassau County, explore the feasibility of a pipeline distribution system in Nassau County to connect to the inland storage facilities at Plainview

A completed system would eliminate the need: (1) for federal dredging projects to facilitate the movement of petroleum products, (2) to locate petroleum storage facilities on the waterfront, and (3) for large petroleum carrying vessels and barges to enter embayments with their associated environmental risks. Such pipelines should be well-maintained and closely monitored to assure that the risk of spills is minimized.

Implementation: An assessment should be made of the environmental and economic issues and potential impacts associated with the proposed reconfiguration of petroleum import facilities that serve the Long Island Sound region. The assessment should include an analysis of the following: the impact on the region's oil supply in the near term, the potential effect on increased truck movement on Long Island's highway system, the risk of supply accidents, and the effects on the cost of fuel delivery.

Providing Business and Marketing Assistance

Recommendation 44: Ensure that property tax assessments appropriately reflect the use value of waterfront land occupied by water-dependent commercial and industrial uses.

Property tax assessments for working coast uses are often not based on the use of the land for commercial or industrial water-dependent activities, but rather on the anticipated "highest and best use," which is often residential, even though such uses do not exist in the area or are not permitted by zoning. This practice may place an unfair economic burden on working waterfront businesses. The result is that some water-dependent businesses, in order to pay higher tax bills not reflective of the true use of the land, have to sell. As a result, the economies of small communities are weakened, and well-paying jobs are lost.

Implementation: Local governments can protect working coast uses through a variety of means. Among these are enacting zoning that classifies waterfront lands where water-dependent uses are concentrated for those uses and establishing a clear policy that the highest and best use of lands occupied by working coast uses is for those uses. In education programs for local assessors, this recommendation could be advanced by emphasizing the responsibility of assessors to look at the use and zoning of parcels used by water-dependent businesses when setting assessments and not the "highest and best value" for other uses. Finally, other techniques could be evaluated, including a use-value assessment program, similar to the Agricultural Districts Law.

Recommendation 45: Expedite regulatory approvals for appropriate water-dependent uses in maritime centers.

The following approaches should be considered to expedite the review process while maintaining environmental standards for appropriate water-dependent uses in maritime centers:

A *generic environmental impact statement* could be prepared for existing or proposed water-dependent uses to cover a range of improvements or routine maintenance activities. The generic environmental impact statement should be undertaken in conjunction with the development of a harbor management plan. The generic environmental impact statement for the maritime center plan could provide harbor specific information about: existing land and water uses; natural resources; permitted land and water uses; redevelopment opportunities and objectives; natural resource protection and restoration objectives; other relevant data on environmental conditions; performance standards and design guidelines for future development; and perhaps a generic environmental impact statement that covers information typically asked of applicants by regulators. The generic environmental impact statement would expedite the review of existing permits and could be the basis for issuing a general permit.

A *consolidated application process* could be developed to contain: one standard application which is copied to, and reviewed by, all the involved state agencies; for major proposals, a pre-application meeting or scoping session attended by involved agencies; a single hearing; and one state approval. Additionally, permits for water-dependent uses in the maritime centers could receive priority processing.

The use of *reconfiguration perimeter permits* by the Department of Environmental Conservation should be continued and expanded. Perimeter permits allow the alteration or reconfiguration of in-water structures, such as the number, width, length, and location of docks, piles, and ramps within the perimeter or envelope of an existing docking facility. This type of permit allows owners of marinas or other water-dependent uses to respond more rapidly to changing market conditions regarding vessel widths and lengths, by adjusting the number and location of boat slips. The reconfiguration perimeter should be shown on a map or survey that clearly shows the relationship to neighboring properties, underwater land boundaries and owners, existing facilities and uses, and natural resources. Reconfiguration perimeter permits should be site and facility specific. If a state-approved maritime center plan were in place, an increased number or greater range of activities would be allowed consistent with the plan.

Implementation: Encourage relevant local governments to prepare the above referenced generic environmental impact statements, in cooperation with the Department of State, and the Department of Environmental Conservation. Further, amend relevant state permit regulations to improve the regulatory process in maritime centers, while maintaining environmental integrity.

Local governments can also cooperate with the state to improve their regulatory processes.

Recommendation 46: Continue efforts with the private sector to market fishery products.

The state should continue its efforts with the commercial fishing industry by providing information and guidance on product development and marketing assistance to locate in the most lucrative foreign and domestic markets. Product and marketing assistance will focus primarily on underutilized species. The potential to establish new foreign and domestic markets is promising given the close proximity of New York's two international airports and the specialty markets created by the large number and diversity of restaurants in New York City. This can be achieved by:

- increasing the seafood industry's access to federal government programs, such as the Market Access Program administered by the United States Department of Agriculture, United States

Department of Commerce. The United States Food and Drug Administration also provide assistance in developing export market opportunities

- assisting the seafood industry in applying for grants to develop export market plans for seafood products through the export market development programs administered by the Empire State Development
- assisting the industry in applying for low interest loans from Empire State Development's various economic development programs to improve their effectiveness in accessing domestic and foreign markets.
- exploring ways the Sound's commercial harvesters can sell their products directly to consumers from unloading stations or locations near unloading stations.

Implementation: Increased efforts by relevant state agencies is necessary to improve product development and identify new markets for the commercial fishing industry.

Recommendation 47: Encourage the private sector development of aquaculture.

The culture of aquatic animals and plants has developed into a billion dollar industry in the United States. Many states have aquaculture plans and guidelines that are used in projects with commercial harvesters or to encourage and guide private sector led development of aquaculture facilities. Some states actively seek out aquaculture investors by offering low interest loans, grants, and technical assistance. New York State does not have a comprehensive aquaculture plan to work with commercial harvesters or guide investors planning to develop aquaculture facilities in the state.

With the exception of shellfish culture, minor emphasis has been placed on the actual culture of marine finfish, crustaceans, and aquatic plants. Culture of these species for food, cosmetic, and medicinal purposes could provide revenue for the commercial fishing industry and return revenue to the region and its communities. Aquaculture should be encouraged, provided that the introduction of nonindigenous species, introduction or recurrence of disease, or the displacement of native stocks or viable habitat do not occur.

Implementation: The agencies with an interest in facilitating aquaculture—Department of Agriculture and Markets, Office of General Services, Empire State Development, and the departments of Environmental Conservation and State should consider: guidelines and regulations regarding the culture of aquatic plants and animals in the marine district; the specific geographic areas in the Sound and the marine district that could be designated exclusively for aquaculture facilities, particularly pen-culture and off-bottom culture; and a listing of species conducive to culture.

Promoting Efficient Harbor Use

Recommendation 48: Work with local governments to improve the safety and efficiency of harbors.

Conflicts between water-dependent and non-water-dependent uses, and conflicts between water-dependent commercial and recreational uses within Long Island Sound's harbors have substantially increased in recent years. Increased conflicts have created competition for space on the foreshore, surface waters, and underwater lands of the Sound's harbors. These conflicts degrade the natural and cultural characteristics of harbors and interfere with the development and operation of uses that are appropriate to the harbors. These conflicts also limit the ability of communities to accommodate potential growth of water-dependent recreation uses without displacing existing water-dependent uses or threatening important natural or cultural resources.

The Department of State should assist local governments to address these issues. Through Local Waterfront Revitalization Programs, harbor management plans can address the needs of water-dependent commercial and industrial uses and minimize water use conflicts for all water bodies in the region, beginning with the maritime centers. It is necessary to take into account commercial and recreational vessel traffic, including traffic generated by existing and, if appropriate, potential ferry services, to ensure that vessel traffic does not pose a public safety hazard. It will also be necessary to address public access, recreation, natural resource protection, water quality, aesthetic values, common law littoral rights, and the public interest in lands underwater.

The Department of State and local governments should ensure that the Office of General Services is involved so the use and occupation of state-owned underwater lands comports with the public trust and with Office of General Services lease and easement program.

Implementation: The Department of State needs to provide increased planning, technical, and financial support through the Environmental Protection Fund (Title 11, Local Waterfront Revitalization Programs) to local governments to complete harbor management plans.

Recommendation 49: Ensure that dredging is done to the extent necessary to meet the current and future needs of water-dependent commercial and industrial uses of the Long Island Sound.

The very existence, continuation, and promotion of waterborne transportation, commerce, and recreation in maritime centers and in other, limited areas outside of maritime centers are dependent upon channel or basin dredging. Navigation channels and basins need to be maintained in order to support existing and to attract new water-dependent uses which rely on and benefit from sufficient navigation channels and basins. However, large-scale dredging projects for new channels and maintenance of existing large, deep channels and basins have waned throughout the region. The need for large, deep draft channels and basins is not as great, since many waterfront sites, once characterized by water-dependent industrial uses, are now used principally for marinas, yacht clubs, boat ramps, boat repair, water-enhanced, or residential uses which require only the dredging of smaller basins and spur channels. This change in uses has reduced the need for maintaining large, deep channels and basins.

Implementation: Long Island Sound Coastal Management Program provides standards that call for protecting and maintaining existing navigation channels at the appropriate depth for vessels using the harbor.

The Department of State, in conjunction with local government, should complete management plans for maritime centers that contain harbor-specific information about dredging needs and more detailed dredging standards. The Long Island Sound Coastal Management Program will be amended to include the enforceable policies and standards from the completed management plans.

The Department of State should ensure local governments' participation and cooperation in working with the state to control nonpoint source pollution and thus lessen the amount of sediment reaching the Sound's navigation channels and basins.

Recommendation 50: Expedite and coordinate dredging projects within maritime centers.

Dredging and disposal of contaminated material are not well coordinated. This lack of coordination typically results in: the misuse of valuable sand supplies for non-related shoreline projects; excessive delays in completing simple maintenance dredging because suitable dredged material disposal sites remain unidentified; and the inability of dredging sponsors to take advantage of combining their projects to reduce costs.

Improved dredging coordination for both public and private entities, could increase opportunities to resolve problems such as: the lack of clean dredged material for beach and dune restoration projects, the lack of suitable material to cap polluted sediments, and the excessive cost of testing and monitoring. Costs could be reduced by conducting monitoring and testing for multiple dredging and disposal projects located in close proximity to each other at one time, rather than separately at different times. Costs could be reduced by scheduling multiple dredging projects in one location rather than moving equipment to complete dredging projects scheduled for different times. Coordinated dredging and disposal projects could also minimize long-term resource impairments resulting from multiple dredging projects spread out over long periods of time, and minimize the cumulative and secondary impacts within harbor areas and offshore disposal areas.

Implementation: This action can be advanced through public/private cooperative efforts in maritime centers to provide specific information on dredging needs and disposal options. Improved coordination will occur through consultations with local governments and commercial waterfront property owners during the planning process and during project review phases.

The Department of State will work with local governments that may want to create harbor improvement districts to support local dredging needs.

The Long Island Sound Study is revising the Long Island Sound Dredged Material Management Plan, which will greatly improve federal and state coordination of dredging and material disposal activities. The departments of Environmental Conservation and State are actively involved in this revision.

Chapter 4

LONG ISLAND SOUND COASTAL POLICIES

The Long Island Sound Coastal Management Program policies presented in this chapter consider the economic, environmental, and cultural characteristics of the Long Island Sound coastal region. They take the place of the statewide policies of the New York State Coastal Management Program. The policies are comprehensive and reflect existing state laws and authorities. They represent a balance between economic development and preservation that will permit beneficial use of and prevent adverse effects on the Sound's coastal resources. The policies are the basis for federal and state consistency determinations for activities affecting the Long Island Sound coastal area. They are also a guide for development of new Local Waterfront Revitalization Programs and revisions to approved Local Waterfront Revitalization Programs. Definitions of terms used in the policies appear at the end of the chapter.

The policies are organized under four headings: developed coast policies, natural coast policies, public coast policies, and working coast policies.

SUMMARY OF POLICIES

The following is a summary list of the Long Island Sound Coastal Management policies.

DEVELOPED COAST POLICIES

- Policy 1 Foster a pattern of development in the Long Island Sound coastal area that enhances community character, preserves open space, makes efficient use of infrastructure, makes beneficial use of a coastal location, and minimizes adverse effects of development.
- Policy 2 Preserve historic resources of the Long Island Sound coastal area.
- Policy 3 Enhance visual quality and protect scenic resources throughout Long Island Sound.

NATURAL COAST POLICIES

- Policy 4 Minimize loss of life, structures, and natural resources from flooding and erosion.
- Policy 5 Protect and improve water quality and supply in the Long Island Sound coastal area.
- Policy 6 Protect and restore the quality and function of the Long Island Sound ecosystem.
- Policy 7 Protect and improve air quality in the Long Island Sound coastal area.
- Policy 8 Minimize environmental degradation in the Long Island Sound coastal area from solid waste and hazardous substances and wastes.

PUBLIC COAST POLICIES

- Policy 9 Provide for public access to, and recreational use of, coastal waters, public lands, and public resources of the Long Island Sound coastal area.

WORKING COAST POLICIES

- Policy 10 Protect Long Island Sound's water-dependent uses and promote siting of new water-dependent uses in suitable locations.
- Policy 11 Promote sustainable use of living marine resources in Long Island Sound.
- Policy 12 Protect agricultural lands in the eastern Suffolk County portion of Long Island Sound's coastal area.
- Policy 13 Promote appropriate use and development of energy and mineral resources.

LONG ISLAND SOUND COASTAL POLICIES

DEVELOPED COAST POLICIES

- Policy 1 Foster a pattern of development in the Long Island Sound coastal area that enhances community character, preserves open space, makes efficient use of infrastructure, makes beneficial use of a coastal location, and minimizes adverse effects of development.**

The regional character of Long Island Sound's coast is defined by the pattern of developed and open land. Within the Sound's pattern of development, the developed land features 17 waterfront communities that serve regional economic functions. These communities possess a distinctive character, reflecting their maritime heritage, and serve as focal points for commercial, cultural, and recreational activities within the region. In the western two-thirds of the Sound coastal region, suburban residential development around and between these communities is also an important element of the regional character.

Natural areas, parks, woodlands, working agricultural lands, and large estates comprise the open space component of the Sound's pattern of development. This component is dominant in the eastern half of the Sound coastal region. The remaining large estates, parkland, and fragments of open and wooded land found in the western half of the Sound coastal region take on added significance in defining community character because their acreage is more limited. The open landscape provides ecological, scenic, recreational, and economic benefits to the Sound region.

The collection of natural, recreational, commercial, ecological, cultural, and aesthetic resources in the community or landscape defines its character; and the distribution of developed and open lands establishes a pattern of human use that reflects an historic choice between economic development and preservation of coastal resources.

Development that does not reinforce the traditional pattern of human use would result in an undesirable loss of the community and landscape character of the Long Island Sound coastal region. Development, public investment, and regulatory decisions should preserve open space and natural resources and sustain the historic waterfront communities as centers of activity. Water-dependent uses generally should locate in existing centers of maritime activity in order to support the economic base and maintain the maritime character of these centers, and to avoid disturbance of shorelines and waters in open space areas.

The policy is intended to foster a development pattern that provides for beneficial use of the Sound's coastal resources. The primary components of the desired development pattern are: strengthening traditional waterfront communities as centers of activity, encouraging water-dependent uses to expand in maritime centers, enhancing stable residential areas, and preserving open space.

1.1 Concentrate development and redevelopment in or adjacent to traditional waterfront communities.

Maintain traditional waterfront communities and ensure that development within these communities supports and is compatible with the character of the community.

Focus public investment, actions, and assistance in waterfront redevelopment areas to reclaim unused waterfront land and brownfields for new purposes.

Locate new development where infrastructure is adequate or can be upgraded to accommodate new development.

1.2 Ensure that development or uses take appropriate advantage of their coastal location.

Reserve coastal waters for water-dependent uses and activities.

Accommodate water-enhanced uses along the Sound waterfront where they are compatible with surrounding development, do not displace or interfere with water-dependent uses, and reflect the unique qualities of a coastal location through appropriate design and orientation.

Allow other uses that derive benefit from a waterfront location, such as residential uses, in appropriate locations.

Avoid uses on the waterfront which cannot by their nature derive economic benefit from a waterfront location.

1.3 Protect stable residential areas.

Maintain stable residential areas and allow for continued compatible residential and supporting development in or adjacent to such areas.

1.4 Maintain and enhance natural areas, recreation, open space, and agricultural lands.

Avoid loss of economic, environmental, and aesthetic values associated with these areas.

Avoid expansion of infrastructure and services which would promote conversion of these areas to other uses.

Maintain natural, recreational, and open space values including those associated with large estates, golf courses, and beach clubs.

1.5 Minimize adverse impacts of new development and redevelopment.

Minimize potential adverse land use, environmental, and economic impacts that would result from proposed development.

Minimize the potential for adverse impacts of types of development which individually may not result in a significant adverse environmental impact, but when taken together could lead to or induce subsequent significant adverse impacts.

Policy 2 Preserve historic resources of the Long Island Sound coastal area.

Archaeological sites and historic structures are tangible links to the past development of a community—both its cultural and economic life—providing a connection to past generations and events. The Native American sites, Colonial era farmsteads and outbuildings, 19th century commercial districts, fishing villages, lighthouses, shipwrecks, and Gilded Age mansions are important components in defining the Sound's distinctive identity and heritage. In a broader sense, these resources, taken together, continue to shape the coastal culture of the Long Island Sound region.

Although large numbers of prehistoric and historic sites have been lost as a result of urban growth, the Office of Parks, Recreation, and Historic Preservation has determined that the Long Island Sound coastal region contains numerous archaeological sites in all prehistoric stages and many intact historic resources and structures. These resources remain threatened by development and individual actions.

The intent of this policy is to preserve the historic and archaeological resources of the Long Island Sound coastal area. Concern extends not only to the specific site or resource but to the area adjacent to and around specific sites or resources. The quality of adjacent areas is often critical to maintaining the quality and value of the resource. Effective preservation of historic resources must also include active efforts, when appropriate, to restore or revitalize. While the Long Island Sound Coastal Management Program addresses all such resources within the coastal area, it actively promotes preservation of historic, archaeological, and cultural resources that have a coastal relationship.

2.1 Maximize preservation and retention of historic resources.

Preserve the historic character of the resource by protecting historic materials and features or by making repairs using appropriate measures.

Provide for compatible use of the historic resource, while limiting and minimizing alterations to the resource.

Minimize loss of historic resources or historic character when it is not possible to completely preserve the resource.

Relocate historic structures only when the resource cannot be preserved in place.

Allow demolition only where alternatives for retention are not feasible.

Avoid potential adverse impacts of development on nearby historic resources.

2.2 Protect and preserve archaeological resources.

Minimize potential adverse impacts by redesigning projects, reducing direct impacts on the resource, recovering artifacts prior to construction, and documenting the site.

Prohibit appropriation of any object of archaeological or paleontological interest situated on or under lands owned by New York State, except as provided for in Education Law, § 233.

2.3 Protect and enhance resources that are significant to the coastal culture of the Long Island Sound.

Protect historic shipwrecks.

Prevent unauthorized collection of artifacts from shipwrecks.

Protect the character of historic maritime communities.

Preserve and enhance historic lighthouses and other navigational structures by providing for their long-term protection through the least degree of intervention necessary to preserve the structure. Consider extensive shoreline stabilization only if relocation of historic lighthouses is not feasible.

Policy 3 Enhance visual quality and protect scenic resources throughout Long Island Sound.

Visual quality is a major contributor to the character of the Long Island Sound region and its communities, and the primary basis for public appreciation of the Sound's landscape. The Sound coastal region includes different landforms, a variety of upland and shoreline vegetation, a complex land and water interface, well-defined harbors, and historic villages. Some areas need

particular emphasis on improving visual quality in order to support the character of the Sound. In addition to the many highly scenic natural resources found throughout the Sound, the variety of cultural elements in the landscape and the interplay of the built and natural environments are of particular importance to the visual quality of the Sound.

The intent of this policy is to protect and enhance visual quality and protect recognized scenic resources of the Sound's coastal area.

3.1 Protect and improve visual quality throughout the coastal area.

Enhance existing scenic characteristics by minimizing introduction of discordant features.

Restore deteriorated and remove degraded visual elements, and screen activities and views which detract from visual quality.

Preserve existing vegetation and establish new vegetation to enhance scenic quality.

Group or orient structures to preserve open space and provide visual organization.

Improve the visual quality associated with urban areas and the historic maritime communities on Long Island Sound.

Anticipate and prevent impairment of dynamic landscape elements that contribute to ephemeral scenic qualities.

Recognize water-dependent uses as important additions to the visual interest of the Sound's coast.

Protect scenic values associated with public lands, including public trust lands and waters, and natural resources.

3.2 Protect aesthetic values associated with recognized areas of high scenic quality.

Protect aesthetic and scenic values associated with the Nissequogue River, and any areas designated as scenic areas of statewide significance.

Prevent impairment of scenic components that contribute to high scenic quality.

NATURAL COAST POLICIES

Policy 4 Minimize loss of life, structures, and natural resources from flooding and erosion.

Within the Long Island Sound coastal area, there are presently more than 8,200 buildings and other structures located in special flood hazard areas, and over 1,200 buildings and other structures seaward of the present coastal erosion hazard area boundary. In response to existing or perceived erosion and flood hazards, many landowners have constructed erosion protection structures. Approximately 50 percent of the Sound shoreline has been armored with erosion control structures, and the trend is continuing. In Suffolk County, for example, only 8.96 miles of the 132.5 miles of the Sound shoreline was engineered with riprap, bulkheads, or seawalls in 1969. Today, 43.7 miles of the county's shoreline are hardened. This significant increase in the miles of hardened shoreline is generally not associated with water-dependent uses in maritime centers but mostly for uses that do not have a functional relationship to coastal waters. While some erosion control structures are necessary to protect development, there are many erosion control structures located along the Long Island Sound shore that are not necessary for erosion protection or may cause erosion.

Erosion protection structures often contribute to erosion both on and off the site due to poor design and siting and lack of downdrift remediation. Increased erosion, aesthetic impairments, loss of public recreational resources, loss of habitats, and water quality degradation can result from erosion protection structures. The cumulative impact of these structures can be large.

Before a permit is granted to allow construction of erosion protection structures, the purpose, function, impact, and alternatives to a structure need to be carefully evaluated to determine that the structures are necessary and to avoid adverse impacts.

Although the Long Island Sound shoreline has been heavily fortified, there are significant stretches of the coast that remain in a natural state. The natural shoreline has an inherent natural, social, and economic value that should be respected to ensure continuing benefits to the state and the region. Consequently, those portions of the Sound shoreline that are not fortified should generally remain in a natural condition to respond to coastal processes.

Development and redevelopment in hazard areas needs to be managed to reduce exposure to coastal hazards. Hardening of the shoreline is to be avoided except when alternative means, such as soft engineering alternatives, are not effective. Beach nourishment, revegetation, offshore bar building, or inlet sand bypassing are preferred approaches to control erosion because of fewer environmental impacts than hard structures. Hard structures may be more practical to protect principal structures or areas of extensive public investment. Areas of extensive public investment include City Island and the Throgs Neck in the Bronx, the Cross Island Parkway section of Queens, Bayville, the Asharoken tombolo, Sunken Meadow State Park, Wildwood State Park, portions of waterfront redevelopment areas, and the maritime centers.

Barrier landforms that protect significant public investment or natural resources should be maintained. Soft structural protection methods are to be used to conform with the natural coastal processes. Barrier beach landforms should be maintained by using clean, compatible dredged material, when feasible, for beach nourishment, offshore bar building, or marsh creation projects.

Sea level rise relative to the shore is another significant factor in the incidence of erosion and flooding over time. For the Sound, tidal gauge data collected within the last 100 years suggests a relative sea level rise varying from about 0.1 inches to less than 0.04 inches per year. At that rate, a horizontal movement of mean sea level of one to three inches per year (assuming a 1 on 30 beach/nearshore slope) is anticipated in the region. As a result, sea level rise should be considered when projects involving substantial investments of public expenditures are designed.

This policy seeks to protect life, structures, and natural resources from flooding and erosion hazards throughout the Long Island Sound coastal area. The policy reflects state flooding and erosion regulations and provides measures for reduction of hazards and protection of resources.

4.1 Minimize losses of human life and structures from flooding and erosion hazards.

Use the following management measures, which are presented in order of priority: (1) avoid development other than water-dependent uses in coastal hazard areas; (2) locate or move development and structures as far away from hazards as practical; (3) use vegetative non-structural measures which have a reasonable probability of managing flooding and erosion, based on shoreline characteristics including exposure, geometry, and sediment composition; (4) enhance existing natural protective features and processes, and use non-structural measures which have a reasonable probability of managing erosion; (5) use hard structural erosion protection measures for control of erosion only where the above measures are not sufficient to protect the principal use, or the use is water-dependent or reinforces the role of a maritime center or a waterfront redevelopment area.

Mitigate the impacts of erosion control structures.

Manage development in floodplains outside of coastal hazard areas so as to avoid adverse environmental effects, to minimize the need for structural flood protection measures, and to meet federal flood insurance program standards.

4.2 Preserve and restore natural protective features.

Prevent development in natural protective features except development as specifically allowed in 6 NYCRR Part 505.8.

Maximize the protective capabilities of natural protective features by: avoiding alteration or interference with shorelines in a natural condition; enhancing existing natural protective features; restoring impaired natural protective features; and managing activities to minimize interference with, limit damage to, or reversed damage which has diminished the protective capacities of the natural shoreline.

Minimize interference with natural coastal processes by: providing for natural supply and movement of unconsolidated materials; minimizing intrusion of structures into coastal waters and interference with coastal processes; and mitigating any unavoidable intrusion or interference.

4.3 Protect public lands and public trust lands and use of these lands when undertaking all erosion or flood control projects.

Retain ownership of public trust lands which have become upland areas due to fill or accretion resulting from erosion control projects.

Avoid losses or likely losses of public trust lands or use of these lands, including public access along the shore, which can be reasonably attributed to or anticipated to result from erosion protection structures.

Mitigate unavoidable impacts on adjacent property, natural coastal processes and natural resources, and on public trust lands and their use.

4.4 Manage navigation infrastructure to limit adverse impacts on coastal processes.

Manage navigation channels to limit adverse impacts on coastal processes by designing channel construction and maintenance to protect and enhance natural protective features and prevent destabilization of adjacent areas; and make beneficial use of suitable dredged material.

Manage stabilized inlets to limit adverse impacts on coastal processes.

4.5 Ensure that expenditure of public funds for flooding and erosion control projects results in a public benefit.

Give priority in expenditure of public funds to actions which: protect public health and safety; mitigate flooding and erosion problems caused by previous human intervention; protect areas of intensive development; and protect substantial public investment in land, infrastructure, and facilities.

Expenditure of public funds is: limited to those circumstances where public benefits exceed public cost; and prohibited for the exclusive purpose of protecting private development, except where actions are undertaken by an erosion protection district.

4.6 Consider sea level rise when siting and designing projects involving substantial public expenditures.

Policy 5 Protect and improve water quality and supply in the Long Island Sound coastal area.

The purpose of this policy is to protect the quality and quantity of water in the Long Island Sound area. Quality considerations include both point source and nonpoint source pollution management. The primary quantity consideration is the maintenance of an adequate supply of potable water in the region.

The Comprehensive Conservation Management Plan developed by the Long Island Sound Study (1994) clearly summarizes the major surface water quality impairments in the region. These impairments reflect the intensity of upland and water uses in the Sound coastal area, and result from both point and nonpoint sources. Impairments also result from pollution sources outside the Sound coastal area. Consequences of water quality impairments include hypoxia, a major problem in the western portions of the coastal area; reduced availability of crustaceans and certified, marketable shellfish; increased closure days for beaches; and reduced enjoyment of the Sound shoreline.

Due to the geologic and soil characteristics of the Sound coastal region, surface water pollution can readily contaminate groundwater resources. The sandy, highly porous soils of Long Island allow nutrients and other pollutants to pass with little filtration into aquifers. Since Long Island is served by a sole-source aquifer, activities that introduce pollutants to surface waters must be controlled. In addition, nutrient input from groundwater flow into embayments is, in some cases, a significant factor in water quality impairments. For these reasons, land use, even in upland areas, can have permanent adverse effects on water quality in this region.

Water quality protection and improvement in the region must be accomplished by the combination of managing new and remediating existing sources of pollution. In some areas with existing water quality impairments, more aggressive remediation measures will be needed than for the region as a whole.

5.1 Prohibit direct or indirect discharges which would cause or contribute to contravention of water quality standards.

Restore Long Island Sound's water quality by reducing impairments caused by major sources of pollution by: limiting nitrogen loadings from waste water treatment plants to levels at or below levels occurring in 1990, reducing nitrogen discharges sufficient to limit the occurrence of hypoxia, and remediating existing contaminated sediment, and limiting introduction of new contaminated sediment.

Prevent point source discharges into coastal waters and avoid land and water uses which would: (1) exceed applicable effluent limitations, or (2) cause or contribute to contravention of water quality classification and use standards, or (3) materially adversely affect receiving water quality, or (4) violate a vessel waste no-discharge zone prohibition.

Ensure effective treatment of sanitary sewage and industrial discharges by maintaining efficient operation of treatment facilities, providing secondary treatment of sanitary sewage, improving nitrogen removal capacity, incorporating treatment beyond secondary for new wastewater treatment facilities, reducing demand on facilities, reducing loading of toxic materials, reducing or eliminating combined sewer overflows, and managing on-site disposal systems.

5.2 Manage land use activities and use best management practices to minimize nonpoint pollution of coastal waters.

5.3 Protect and enhance the quality of coastal waters.

Protect water quality based on physical factors (pH, dissolved oxygen, dissolved solids, nutrients, odor, color, and turbidity), health factors (pathogens, chemical contaminants, and toxicity), and aesthetic factors (oils, floatables, refuse, and suspended solids).

Minimize disturbance of streams, including their beds and banks, in order to prevent erosion of soil, increased turbidity, and irregular variation in velocity, temperature, and level of water.

Protect water quality of coastal waters from adverse impacts associated with excavation, fill, dredging, and disposal of dredged material.

5.4 Limit the potential for adverse impacts of watershed development on water quality and quantity.

Protect water quality by ensuring that watershed development protects areas that provide important water quality benefits, maintains natural characteristics of drainage systems, and protects areas that are particularly susceptible to erosion and sediment loss.

Limit the impacts of individual development projects to prevent cumulative water quality impacts upon the watershed which would result in a failure to meet water quality standards.

5.5 Protect and conserve the quality and quantity of potable water.

Prevent contamination of potable waters by limiting discharges of pollutants and limiting land uses which are likely to contribute to contravention of surface and groundwater quality classifications for potable water supplies.

Prevent depletion of existing potable water supplies by limiting saltwater intrusion in aquifers and estuaries through conservation methods or restrictions on water supply use and withdrawals and allowing for recharge of potable aquifers.

Limit cumulative impacts of development on groundwater recharge areas to ensure replenishment of potable groundwater supplies.

Policy 6 Protect and restore the quality and function of the Long Island Sound ecosystem.

The Long Island Sound ecosystem consists of physical (non-living) components, biological (living) components, and their interactions. Its physical components include environmental factors such as water, soils, geology, energy, and contaminants. The biological components include the plants, animals, and other living things in and around the Sound.

Certain natural resources that are important for their contribution to the quality and biological diversity of the Sound ecosystem have been specifically identified by the state for protection. These natural resources include regulated tidal and freshwater wetlands; designated Significant Coastal Fish and Wildlife Habitats; and rare, threatened, and endangered species. In addition to specifically identified discrete natural resources, the quality of the Sound ecosystem also depends on more common, broadly distributed natural resources, such as the extent of forest cover, the population of overwintering songbirds, or benthic communities. These more common natural resources collectively affect the quality and biological diversity of the Sound ecosystem.

This policy also recognizes and provides for enhancement of natural resources within regionally important natural areas for which management plans have been prepared.

6.1 Protect and restore ecological quality throughout Long Island Sound.

Avoid significant adverse changes to the quality of the Long Island Sound ecosystem as indicated by physical loss, degradation, or functional loss of ecological components.

Maintain values associated with natural ecological communities.

Retain and add indigenous plants.

Avoid fragmentation of natural ecological communities and maintain corridors between ecological communities. Maintain structural and functional relationships between natural ecological communities to provide for self-sustaining systems.

Avoid permanent adverse change to ecological processes.

Reduce adverse impacts of existing development when practical.

Mitigate impacts of new development; mitigation may also include reduction or elimination of adverse impacts associated with existing development.

6.2 Protect and restore Significant Coastal Fish and Wildlife Habitats.

Protect Long Island Sound's designated significant coastal fish and wildlife habitats from uses or activities which would destroy habitat values or significantly impair the viability of the designated habitat beyond its tolerance range which is the ecological range of conditions that supports the species population or has the potential to support a restored population where practical.

Where destruction or significant impairment of habitat values cannot be avoided, minimize potential impacts through appropriate mitigation.

Wherever practical, enhance or restore designated habitats so as to foster their continued existence as natural systems.

6.3 Protect and restore tidal and freshwater wetlands.

Comply with statutory and regulatory requirements of the state's wetland laws.

Use the following management measures, which are presented in order of priority: (1) prevent the net loss of vegetated wetlands by avoiding fill or excavation; (2) minimize adverse impacts resulting from unavoidable fill, excavation, or other activities; and (3) provide for compensatory mitigation for unavoidable adverse impacts. Provide and maintain adequate buffers between wetlands and adjacent or nearby uses and activities to protect wetland values.

Restore tidal and freshwater wetlands wherever practical to foster their continued existence as natural systems.

6.4 Protect vulnerable fish, wildlife, and plant species, and rare ecological communities.

6.5 Protect natural resources and associated values in identified regionally important natural areas.

Protect natural resources comprising a regionally important natural area. Focus state actions on protection, restoration, and management of natural resources.

Protect and enhance activities associated with sustainable human use or appreciation of natural resources.

Provide for achievement of a net increase in wetlands when practical opportunities exist to create new or restore former tidal wetlands.

Adhere to management plans prepared for regionally important natural areas.

Policy 7 Protect and improve air quality in the Long Island Sound coastal area.

This policy provides for protection of the Long Island Sound coastal area from air pollution generated within the coastal area or from outside the coastal area which adversely affects coastal air quality.

7.1 Control or abate existing and prevent new air pollution.

Limit pollution resulting from new or existing stationary air contamination sources consistent with applicable standards, plans, and requirements.

Recycle or salvage air contaminants using best available air cleaning technologies.

Limit pollution resulting from vehicle or vessel movement or operation.

Limit actions which directly or indirectly change transportation uses or operation resulting in increased pollution.

Restrict emissions or air contaminants to the outdoor atmosphere which are potentially injurious or unreasonably interfere with enjoyment of life or property.

Limit new facility or stationary source emissions of acid deposition precursors consistent with achieving final control target levels for wet sulfur deposition in sensitive receptor areas, and meeting New Source Performance Standards for the emissions of oxides of nitrogen.

7.2 Limit discharges of atmospheric radioactive material to a level that is as low as practicable.

7.3 Limit sources of atmospheric deposition of pollutants to the Sound, particularly from nitrogen sources.

Policy 8 Minimize environmental degradation in the Long Island Sound coastal area from solid waste and hazardous substances and wastes.

Most, if not all, Long Island towns have solid waste management plans approved by the Department of Environmental Conservation. In addition, all significant Long Island landfills have been assigned monitors employed by the Department of Environmental Conservation to ensure that adverse impacts, such as leachates to groundwater, are mitigated. The Department of Health is implementing a gas monitoring system. Smaller and more incremental solid waste problems arise from littering.

The intent of this policy is to protect people from sources of contamination and to protect Long Island Sound's coastal resources from degradation through proper control and management of wastes and hazardous materials. In addition, this policy is intended to promote the expeditious remediation and reclamation of hazardous waste sites in and around Glen Cove Creek and other areas to permit redevelopment. Attention is also required to identify and address sources of soil and water contamination resulting from landfill and hazardous waste sites and in-place sediment contamination in the Long Island Sound region.

8.1 Manage solid waste to protect public health and control pollution.

Plan for proper and effective solid waste disposal prior to undertaking major development or activities generating solid wastes.

Manage solid waste by: reducing the amount of solid waste generated, reusing or recycling material, and using land burial or other approved methods to dispose of solid waste that is not otherwise being reused or recycled.

Prevent the discharge of solid wastes into the environment by using proper handling, management, and transportation practices.

Operate solid waste management facilities to prevent or reduce water, air, and noise pollution and other conditions harmful to the public health.

8.2 Manage hazardous wastes to protect public health and control pollution.

Manage hazardous waste in accordance with the following priorities: (1) eliminate or reduce generation of hazardous wastes to the maximum extent practical; (2) recover, reuse, or recycle remaining hazardous wastes to the maximum extent practical; (3) use detoxification, treatment, or destruction technologies to dispose of hazardous wastes that cannot be reduced, recovered, reused, or recycled; (4) use land disposal as a last resort.

Phase out land disposal of industrial hazardous wastes.

Ensure maximum public safety through proper management of industrial hazardous waste treatment, storage, and disposal.

Remediate inactive hazardous waste disposal sites.

8.3 Protect the environment from degradation due to toxic pollutants and substances hazardous to the environment and public health.

Prevent release of toxic pollutants or substances hazardous to the environment that would have a deleterious effect on fish and wildlife resources.

Prevent environmental degradation due to persistent toxic pollutants by: limiting discharge of bioaccumulative substances, avoiding resuspension of toxic pollutants and hazardous substances and wastes, and avoiding reentry of bioaccumulative substances into the food chain from existing sources.

Prevent and control environmental pollution due to radioactive materials.

Protect public health, public and private property, and fish and wildlife from inappropriate use of pesticides.

Take appropriate action to correct all unregulated releases of substances hazardous to the environment.

8.4 Prevent and remediate discharge of petroleum products.

Minimize adverse impacts from potential oil spills by appropriate siting of petroleum offshore loading facilities.

Have adequate plans for prevention and control of petroleum discharges in place at any major petroleum-related facility.

Prevent discharges of petroleum products by following approved handling and storage, and facility design and maintenance principles.

Clean up and remove any petroleum discharge, giving first priority to minimizing environmental damage.

8.5 Transport solid waste and hazardous substances and waste in a manner which protects the safety, well-being, and general welfare of the public; the environmental resources of the state; and the continued use of transportation facilities.

8.6 Site solid and hazardous waste facilities to avoid potential degradation of coastal resources.

PUBLIC COAST POLICIES

Policy 9 Provide for public access to, and recreational use of, coastal waters, public lands, and public resources of the Long Island Sound coastal area.

The Long Island Sound shoreline is one of the most densely populated coastal regions along the eastern seaboard, yet physical and visual access to coastal lands and waters is limited for the general public. Limitations on reaching or viewing the coast are further heightened by a general lack of opportunity for diverse forms of recreation at those sites that do provide access. Often access and recreational opportunities that are available are limited to local residents. Existing development has made much of the coast inaccessible and new development has diminished remaining opportunities to provide meaningful public access. In addition to loss of opportunities for physical access, visual access has also been lost due to the loss of vantage points or outright blockage of views. Access along public trust lands of the shore has been impeded by long docks, and shoreline fortification has led to physical loss of access.

Existing public access and opportunities for recreation are inadequate to meet the needs of the residents of the Sound, let alone residents of the state. Given the lack of adequate public access and recreation, this policy incorporates measures needed to provide and increase public access throughout the Sound. The need to maintain and improve existing public access and facilities is among these measures, and is necessary to ensure that use of existing access sites and facilities is optimized in order to accommodate existing demand. Another measure is to capitalize on all available opportunities to provide additional visual and physical public access along with appropriate opportunities for recreation.

9.1 Promote appropriate and adequate physical public access and recreation throughout the coastal area.

Provide convenient, well-defined, physical public access to and along the coast for water-related recreation.

Provide a level and type of public access and recreational use that takes into account proximity to population centers, public demand, natural resource sensitivity, accessibility, compatibility with on-site and adjacent land uses, and needs of special groups.

Protect and maintain existing public access and water-related recreation.

Provide additional physical public access and recreation facilities at public sites.

Provide physical access linkages throughout Long Island Sound.

Include physical public access and/or water-related recreation facilities as part of development whenever development or activities are likely to limit the public's use and enjoyment of public coastal lands and waters.

Provide incentives to private development which provides public access and/or water-related recreation facilities.

Restrict public access and water-related recreation on public lands only where incompatible with public safety and protection of natural resources.

Ensure access for the general public at locations where state or federal funds are used to acquire, develop, or improve parkland.

9.2 Provide public visual access from public lands to coastal lands and waters or open space at all sites where physically practical.

Avoid loss of existing visual access by limiting physical blockage by development or activities. Minimize adverse impact on visual access.

Mitigate loss of visual access by providing for on-site visual access or additional and comparable visual access off-site.

Increase visual access wherever practical.

9.3 Preserve the public interest in and use of lands and waters held in public trust by the state, New York City, and towns in Nassau and Suffolk counties.

Limit grants, easements, permits, or lesser interests in lands underwater to those instances where they are consistent with the public interest in the use of public trust lands.

Determine ownership, riparian interest, or other legal right prior to approving private use of public trust lands under water.

Limit grants, including conversion grants, in fee of underwater lands to exceptional circumstances.

Reserve such interests or attach such conditions to preserve the public interest in use of underwater lands and waterways which will be adequate to preserve public access, recreation opportunities, and other public trust purposes.

Evaluate opportunities to re-establish public trust interests in existing grants which are not used in accordance with the terms of the grant, or are in violation of the terms of the lease, or where there are significant limitations on public benefits resulting from the public trust doctrine.

9.4 Assure public access to public trust lands and navigable waters.

Ensure that the public interest in access below mean high water and to navigable waters is maintained.

Allow obstructions to public access when necessary for the operation of water-dependent uses and their facilities.

Permit interference with public access for riparian non-water-dependent uses in order to gain the minimum necessary reasonable access to navigable waters.

Use the following factors in determining the minimum access necessary: the range of tidal fluctuation, the size and nature of the water body, the uses of the adjacent waters by the public, the traditional means of access used by surrounding similar uses, and whether alternative means to gain access are available.

Mitigate substantial interference or obstruction of public use of public trust lands and navigable waters.

WORKING COAST POLICIES

Policy 10 Protect Long Island Sound's water-dependent uses and promote siting of new water-dependent uses in suitable locations.

The intent of this policy is to protect existing water-dependent commercial, industrial, and recreational uses and to promote suitable use of maritime centers. It is also the intent of this policy to enhance the economic viability of water-dependent uses by ensuring adequate infrastructure for water-dependent uses and their efficient operation in maritime centers.

There are nearly 200 water-dependent uses located along the Long Island Sound shore. These uses are vital to the economic health of the region. The Sound's commercial fishing fleet is a prominent water-dependent use and is addressed separately in policy 11.

10.1 Protect existing water-dependent uses.

Avoid actions which would displace, adversely impact, or interfere with existing water-dependent uses.

10.2 Promote maritime centers as the most suitable locations for water-dependent uses.

Ensure that public actions enable maritime centers to continue to function as centers for water-dependent uses.

Protect and enhance the economic, physical, cultural, and environmental attributes which support each maritime center.

10.3 Allow for development of new water-dependent uses outside of maritime centers.

New water-dependent uses may be appropriate outside maritime centers if the use: (1) should not be located in a maritime center due to the lack of suitable sites; or (2) has unique locational requirements that necessitate its location outside maritime centers; or (3) would adversely impact the functioning and character of the maritime center if located within the

maritime center; or (4) is of a small scale and has a principal purpose of providing access to coastal waters.

10.4 Improve the economic viability of water-dependent uses by allowing for non-water-dependent accessory and multiple uses, particularly water-enhanced and maritime support services.

10.5 Minimize adverse impacts of new and expanding water-dependent uses, provide for their safe operation, and maintain regionally important uses.

Site new and expand existing marinas, yacht clubs, boat yards, and other boating facilities where there is: adequate upland for support facilities and services; sufficient waterside and landside access; appropriate nearshore depth to minimize dredging; suitable water quality classification; minimization of effects on wetlands, shellfish beds, or fish spawning grounds; and adequate water circulation.

Maintain existing ferry services and promote new ferry services to increase the transportation efficiency of passengers and cargo in the Sound region.

Improve protection of natural resources when importing, transshipping, or storing petroleum products by promoting inland storage and offshore transshipment of product.

Maintain regionally important aggregate transshipment facilities.

10.6 Provide sufficient infrastructure for water-dependent uses.

Protect and maintain existing public and private navigation lanes and channels at depths consistent with the needs of water-dependent uses.

Provide new or expanded navigation lanes, channels, and basins when necessary to support water-dependent uses.

Use suitable dredged material for beach nourishment, dune reconstruction, or other beneficial uses.

Avoid placement of dredged material in Long Island Sound when opportunities for beneficial reuse of the material exist.

Allow placement of suitable dredged material in nearshore locations to advance maritime or port-related functions, provided it is adequately contained and avoids negative impacts on vegetated wetlands and significant coastal fish and wildlife habitats.

Avoid shore and water surface uses which would impede navigation.

Give priority to existing commercial navigation in determining rights to navigable waters.

Provide for services and facilities to facilitate commercial, industrial, and recreational navigation.

Foster water transport for cargo and people.

Maintain stabilized inlets at Glen Cove Creek, Port Jefferson, Mount Sinai, Mattituck Inlet, and Silver Eel Pond.

10.7 Promote efficient harbor operation.

Limit congestion of harbor waters, conflict among uses, foster navigational safety, and minimize obstructions in coastal waters to reduce potential hazards to navigation.

Prohibit any increase or additional use of coastal waters if such an increase or addition poses a public safety hazard, which cannot be mitigated.

Prohibit intrusions or encroachments upon navigation channels and other identified vessel use areas.

Policy 11 Promote sustainable use of living marine resources in Long Island Sound.

The living marine resources of the Sound play an important role in the social and economic well-being of the people of Long Island. Commercial and recreational uses of the Sound's living marine resources constitute an important contribution to the economy of the region and the state. Commercial products provide high protein food sources to consumers and are distributed throughout the state and nation, and to expanding international markets. In addition to the food value of the Sound's living marine resources, they have economic significance in the commercial development of value-added food stuffs, pharmaceuticals, cosmetics, and oils. These same resources provide recreational experiences and important accompanying economic activity.

Continued use of the Sound's living resources depends on maintaining long-term health and abundance of marine fisheries resources and their habitats, and on ensuring that the resources are sustained in usable abundance and diversity for future generations. This requires the state's active management of marine fisheries, protection and conservation of habitat, restoration of habitats in areas where they have been degraded, and maintenance of water quality at a level that will foster occurrence and abundance of living marine resources. Allocation and use of the available resources must: (1) be consistent with the restoration and maintenance of healthy stocks and habitats, and (2) maximize the benefits of resource use so as to provide valuable recreational experiences and viable business opportunities for commercial and recreational fisheries. Based upon ownership of underwater lands, many towns also provide for the direct management of shellfish resources of Long Island Sound.

11.1 Ensure the long-term maintenance and health of living marine resources.

Ensure that commercial and recreational uses of living marine resources are managed in a manner that: results in sustained useable abundance and diversity of the marine resource; does not interfere with population and habitat maintenance and restoration efforts; uses best available scientific information in managing the resources; and minimizes waste and reduces discard mortality of marine fishery resources.

Ensure that the management of the state's transboundary and migratory species is consistent with interstate, state-federal, and interjurisdictional management plans.

Protect, manage, and restore sustainable populations of indigenous fish, wildlife species, and other living marine resources.

Foster occurrence and abundance of Long Island Sound's marine resources by: protecting spawning grounds, habitats, and water quality; and enhancing and restoring fish and shellfish habitat, particularly for anadromous fish, oysters, and hard clams.

11.2 Provide for commercial and recreational use of the Sound's finfish, shellfish, crustaceans, and marine plants.

Maximize the benefits of marine resource use so as to provide a valuable recreational resource experience and viable business opportunities for commercial and recreational fisheries.

Where fishery conservation and management plans require actions that would result in resource allocation impacts, ensure equitable distribution of impacts among user groups, giving priority to existing fisheries in the state.

Protect the public health and the marketability of marine and fishery resources by maintaining and improving water quality.

Promote development of and maintain existing artificial reefs to improve marine resources habitat and expand nearshore fishing opportunities.

11.3 Maintain and strengthen a stable commercial fishing fleet in Long Island Sound. Protect and strengthen commercial fishing harvest operations, facilities, and waterfront infrastructure to support a stable commercial fishing industry.

Improve existing and support expansion of fishing operations and facilities for offshore commercial fishing in Huntington Harbor, Northport Harbor, Port Jefferson Harbor, and Mattituck Inlet. Maintain existing commercial fishing operations and facilities in Oyster Bay, Setauket, and Mount Sinai at present levels.

Support nearshore harvesting throughout the Sound region by providing access, berthing, and off-loading facilities suitable for nearshore operators.

Protect commercial fishing from interference or displacement by competing land and water uses.

Strengthen the economic viability of the Sound's commercial fishing fleet through appropriate domestic and international marketing.

11.4 Promote recreational use of marine resources.

Provide opportunities for recreational use of marine resources.

Provide adequate infrastructure to meet recreational needs, including appropriate fishing piers, dockage, parking, and livery services.

Promote commercial charter and party boat businesses in maritime centers.

11.5 Promote managed harvest of shellfish originating from uncertified waters.

Allow for harvest of shellfish from uncertified waters, provided shellfish sanitation protocols are adhered to for protection of public health.

Limit environmental disturbance of the harvest area by using the scale or method of shellfish harvesting operations that is most appropriate to the resource and the physical characteristics of the harvest area. Allow sufficient shellfish spawning stock to remain in the harvest area to maintain the resource while reducing the likelihood of illegal harvesting.

Promote hand-harvesting of stock for depuration and for relays by nearshore harvesters.

11.6 Promote aquaculture.

Encourage aquaculture of economically important species.

Protect native stocks from potential adverse biological impacts due to aquaculture.

Provide leases of state-owned underwater lands for aquaculture only in areas which are not significant shellfish producing areas or which are not supporting significant shellfish hand-harvesting, and only where aquaculture operations would not significantly impair natural resources or water quality.

Policy 12 Protect agricultural lands in the eastern Suffolk County portion of Long Island Sound's coastal area.

The intent of this policy is to conserve and protect agricultural land in the Suffolk County portion of the Sound's coastal area by preventing the conversion of farmland to other uses and protecting existing and potential agricultural production. Suffolk's agricultural acreage has been sharply reduced over a relatively short period of time. Over the past half century there has been a 72 percent reduction in agricultural acreage (119,016 acres in 1940 to 34,000 acres in 1992). This

loss has occurred primarily due to residential development which has rapidly transformed Suffolk's landscape from one dominated by agrarian uses and activities to one dominated by single family residences. Protecting the remaining agricultural land in Suffolk County is necessary to ensure preservation of Suffolk's agricultural economy, 300-year farming heritage, open space, and scenic quality.

Suffolk County's agricultural land is among the most productive in the state. Protecting these agricultural lands is critical for four major reasons:

- Suffolk County soils are the richest and most productive soils in the state. If these agricultural lands are not further protected, development, particularly residential, is expected to continue to encroach upon agricultural lands impairing the viability of agriculture to an irreversible level.
- The county's agricultural products are diverse and unmatched by any other of the state's regions. The insulating coastal climate, extended growing season, fertile soils, and moderately sloping topography, provide ideal growing conditions for tree and shrub nurseries, fruits, vegetables, and potatoes, as well as the emerging agricultural uses of sod farms, vineyards, and horse farms.
- Suffolk's agricultural economy is highly productive, leading all other counties in the state in wholesale value of agricultural products sold, and is a major part of region's economy.
- Suffolk County's agriculture also provides scenic and open space values that contribute to and define much of the special regional character and sense of place that attracts visitors to eastern Long Island. These scenic and open space qualities of agricultural lands provide relief from the congestion and dense development that characterize much of Long Island and the Sound coast.

12.1 Protect existing agriculture and agricultural lands from conversion to other land uses.

Protect existing agricultural use and production from adverse impacts due to: public infrastructure and facility development; creation of other conditions which are likely to lead to conversion of agricultural lands; and environmental changes which are likely to reduce agricultural productivity or quality, including, but not limited to, quantitative and qualitative changes to groundwater resources.

Provide sufficient buffer as part of new development when it is located near agricultural land.

12.2 Establish and maintain favorable conditions which support existing or promote new coastal agricultural production.

Promote new and maintain existing local services and commercial enterprises necessary to support agricultural operations.

Provide economic support of existing agriculture by allowing mixed uses which would assist in retention of the agricultural use.

Promote activities and market conditions that would likely prevent conversion of farmlands to other land uses.

12.3 Minimize adverse impacts on agriculture from unavoidable conversion of agricultural land.

Minimize encroachment of commercial, industrial, institutional, or residential development on agricultural lands.

Retain or incorporate opportunities for continuing agricultural use.

Locate and arrange development to maximize protection of the highest quality agricultural land in large contiguous tracts for efficient farming.

12.4 Preserve scenic and open space values associated with the Sound's agricultural lands.

Locate and arrange development to maximize protection of agricultural land in large contiguous tracts to protect associated scenic and open space values.

Allow farms to operate using appropriate modern techniques and structures without consideration of scenic values.

Policy 13 Promote appropriate use and development of energy and mineral resources.

Major power generating facilities located in the Long Island Sound coastal area that provide power to the region include: the Glenwood Power Station adjacent to Hempstead Harbor, which uses oil-powered steam turbines; the Northport Power Station adjacent to Northport Bay, which uses oil-powered steam turbines; the Port Jefferson Power Station adjacent to Port Jefferson Harbor, which uses oil-powered steam turbines; and the Shoreham facility, which includes gas turbines and is the site of the former nuclear facility. Such facilities are necessary uses which, because they receive fuel oil by water, involve some risk to the coastal environment.

Electric power on Long Island has been the highest priced in the continental United States. However, with state leadership and the creation of the Long Island Power Authority to assume control of electric energy production from LILCO, a 20 percent reduction in the cost of energy to Long Islanders is at hand. There are still challenges that face the Sound region, however. One is dependence on imported oil for electric generation and home heating. Natural gas is unobtainable in a large portion of the region. Strong reliance on motor vehicle transportation has also resulted in an overdependence on imported gasoline.

In dealing with the Sound's energy problems, the first order of preference is the conservation of energy. Energy efficiency in transportation and site design, and efficiency in energy generation are the best means for reducing energy demands. Reduced demand for energy reduces the need for construction of new facilities that may have adverse impacts on coastal resources.

For similar reasons, greater use should be made of sustainable energy resources, such as solar, wind, and hydroelectric power. While solar and wind power may make marginal contributions to the Sound's energy needs, the most substantial source of sustainable energy potentially available to the Sound is hydroelectricity. Although the Sound offers few opportunities for the development of local hydroelectric generation facilities, the extension of power transmission lines to the Sound for importation of electricity is possible to help meet the region's energy needs.

In addition to the impacts of construction of new energy generating facilities, the potential impacts of oil and gas extraction and storage and mineral extraction must be considered. In particular are the potential adverse impacts of mining activities on aquifers, which are the source of drinking water for Long Island.

13.1 Conserve energy resources.

Promote and maintain energy efficient modes of transportation, including rail freight and intermodal facilities, waterborne cargo and passenger transportation, mass transit, and alternative forms of transportation.

Plan and construct sites using energy efficient design.

Capture heat waste from industrial processes for heating and electric generation.

Improve energy generating efficiency through design upgrades of existing facilities.

13.2 Promote alternative energy sources that are self-sustaining, including solar and wind powered energy generation.

In siting such facilities, avoid interference with coastal resources, including migratory birds, and coastal processes.

13.3 Ensure maximum efficiency and minimum adverse environmental impact when siting major energy generating facilities.

Site major energy generating facilities in a coastal location where a clear public benefit is established.

Site major energy generating facilities close to load centers to achieve maximum transmission efficiency.

Site and construct new energy generating and transmission facilities so they do not adversely affect natural and economic coastal resources.

13.4 Minimize adverse impacts from fuel storage facilities.

Regional petroleum reserve facilities are inappropriate in the Long Island Sound coastal area.

The production, storage, or retention of petroleum products in earthen reservoirs is prohibited.

Liquefied Natural Gas facilities must be safely sited and operated.

Protect natural resources by preparing and complying with an approved oil spill contingency plan.

13.5 Minimize adverse impacts associated with mineral extraction.

Commercial sand and aggregate mining is generally presumed to be an inappropriate use in the Long Island Sound coastal area.

Preserve topsoil and overburden using appropriate site preparation techniques and subsequent site reclamation plans.

DEFINITIONS

Selected terms used in the policies are defined as follows:

Accretion means the gradual and imperceptible accumulation of sand, gravel, or similar material deposited by natural action of water on the shore. This may result from a deposit of such material upon the shore, or by a recession of the water from the shore.

Agricultural land means land used for agricultural production, or used as part of a farm, or having the potential to be used for agricultural production. Agricultural lands include lands in agricultural districts, as created under Article 25-AA of the Agricultural and Markets Law; lands comprised of soils classified in soil groups 1, 2, 3, or 4 according to the New York State Department of Agriculture and Markets Land Classification System; or lands used in agricultural production, as defined in Article 25-AA of the Agriculture and Markets Law.

Aquaculture means the farming of aquatic organisms, including fish, mollusks, crustaceans, and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. Farming also implies ownership of the stock being cultured.

Best management practices means methods, measures, or practices determined to be the most practical and effective in preventing or reducing the amount of pollutants generated by nonpoint sources to a level compatible with water quality standards established pursuant to section 17-0301 of the Environmental Conservation Law. Best management practices include, but are not limited to, structural and non-structural controls, and operation and maintenance procedures. Best management practices can be applied before, during, or after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters.

Boating facility means a business or accessory use that provides docking for boats and encompasses 4,000 square feet or greater of surface waters, as measured by the outermost perimeter of the dock, and is designed to accommodate six (6) or more boats.

Coastal Barrier Resource Area means any one of the designated and mapped areas under the Coastal Barrier Resources Act of 1982, (P.L. 97-348), and any areas designated and mapped under the Coastal Barrier Improvement Act of 1990 (P.L. 101-591), as administered by the U.S. Fish and Wildlife Service, and any future designations that may occur through amendments to these laws.

Coastal Hazard Area means any coastal area included within an Erosion Hazard Area designated by the New York State Department of Environmental Conservation pursuant to the Coastal Erosion Hazard Areas Act of 1981 (Article 34 of the Environmental Conservation Law), and any coastal area included within a V-zone as designated on Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency pursuant to the National Flood Insurance Act of 1968 (P.L. 90-448) and the Flood Disaster Protection Act of 1973 (P.L. 93-234).

Development, other than existing development, means any construction or other activity which materially changes the use, intensity of use, or appearance of land or a structure including any activity which may have a direct and significant impact on coastal waters. Development shall not include ordinary repairs or maintenance or interior alterations to existing structures or traditional agricultural practices. The term shall include division of land into lots, parcels, or sites.

Historic maritime communities means historic centers of maritime activity identified in Chapter 587, Laws of 1994, for the purpose of fostering the protection and beneficial enjoyment of the historic and cultural resources associated with maritime activity on Long Island Sound.

Historic resources means those structures, landscapes, districts, areas or sites, or underwater structures or artifacts which are listed or designated as follows: any historic resource in a federal or state park established, solely or in part, in order to protect and preserve the resource; any resource on, nominated to be on, or determined eligible to be on the National or State Register of Historic Places; any cultural resource managed by the state Nature and Historic Preserve Trust or the state Natural Heritage Trust; any archaeological resource which is on the inventories of archaeological sites maintained by the Department of Education or the Office of Parks, Recreation, and Historic Preservation; any resource which is a significant component of a Heritage Area; any locally designated historic or archaeological resources protected by a local law or ordinance.

Long Island Sound means all tidal waters within the Long Island Sound coastal area.

Long Island Sound coastal area means that portion of the New York State coastal area beginning at the Connecticut-New York State border and extending south to the intersection of the state coastal area boundary with the Bruckner Expressway, resuming the state coastal boundary south to its intersection with the Throgs Neck Expressway, then following the Throgs Neck Expressway to the Throgs Neck Bridge, following the Throgs Neck Bridge and the Clearview Expressway to the intersection with the state coastal boundary at the Cross Island

Parkway, then following the state coastal boundary east to its intersection with the topographic divide in the eastern portion of the Town of Southold, following the topographic divide to Orient Point, extending seaward to the New York boundary and including Plum Island and Fishers Island.

Maritime center means a discrete portion or area of a harbor or bay that is developed with, and contains concentrations of water-dependent commercial and industrial uses or essential support facilities. The harbor or bay area is a center for waterborne commerce, recreation, or other water-dependent business activity and, as such, is an important component of the regional transportation system. A maritime center is characterized by: sheltered and suitable hydrologic conditions; land- and water-based infrastructure, essential for the operation of water-dependent commercial and industrial uses, extant or easily provided; physical conditions necessary to meet the siting and operational requirements of water-dependent uses; close proximity to central business districts; and limited high value natural resources.

The following are Long Island Sound maritime centers:

- Port Chester (Byram River-
Port Chester Harbor)
- Mamaroneck Harbor
- Echo Bay-New Rochelle Harbor
- City Island-East Shore Bronx
- Port Washington-Manorhaven
(Manhasset Bay)
- Glen Cove Creek
- Huntington Harbor
- Northport Harbor
- Port Jefferson Harbor
- Mattituck Inlet

Maritime support services means industrial, commercial, or retail uses which provide necessary goods and services to water-dependent businesses, thus enabling these businesses to operate in an efficient and economically viable manner.

Native or indigenous stock means fish, shellfish, and crustaceans originating in and being produced, growing, living, or occurring naturally in the coastal waters of Long Island Sound.

Natural ecological community means a variable assemblage of interacting plant and animal populations that share a common environment.

Natural protective features means a nearshore area, beach, bluff, primary dune, secondary dune, or wetland, and the vegetation thereon.

Regionally important natural area means a defined geographic area within the Long Island Sound coastal boundary generally composed of a variety of smaller, natural ecological communities that together form a landscape of environmental, social, and economic value to the people of New York. To be identified as a regionally important natural area, an area must contain significant natural resources which are at risk and require additional management to protect or restore resource values. Thirteen regionally important natural areas have been initially identified for the Long Island Sound coastal area: Crab Meadow-Fresh Pond, Eastern Islands, Fishers Island, Little Neck Bay, Lloyd Neck-Eatons Neck, Mount Sinai Harbor, Oyster Bay-Cold Spring Harbor, Pelham Bay Park-Westchester Islands, Riverhead Bluffs, Stony Brook-Setauket, Sunken Meadow-Nissequogue River, Wading River, and Wildwood-Baiting Hollow.

Public trust lands means those lands below navigable waters, with the upper boundary normally being the mean high water line, or otherwise determined by local custom and practice. Public trust lands, waters, and living resources are held in trust by the state or by the trustees of individual towns for the people to use for walking, fishing, commerce, navigation, and other recognized uses of public trust lands.

Rare ecological communities means ecological communities which, according to the state Natural Heritage Program, qualify for a Heritage State Rank of S1 or S2; and those which qualify for both a Heritage State Rank of S3, S4 or S5; and an Element Occurrence Rank of A.

Traditional waterfront communities means communities which historically have contained concentrations of water-dependent businesses; possess a distinctive character; and serve as a focal points for commercial, recreational, and cultural activities within the region. On Long Island Sound, these communities are: Village of Port Chester, Village of Mamaroneck, City of New Rochelle, City Island, Village of Manorhaven-Port Washington, City of Glen Cove, Village of Roslyn, Village of Sea Cliff, Village of Bayville, Village of Northport, Stony Brook, Setauket, Village of Port Jefferson, Oyster Bay, Cold Spring Harbor, Huntington Harbor, and Mattituck Inlet.

Vulnerable fish and wildlife species means those listed in 6 NYCRR Part 182.5 as Endangered Species, and Threatened Species.

Vulnerable plant species means those listed in 6 NYCRR Part 193.3 as Endangered Species, Threatened Species, Exploitably Vulnerable Species, and Rare Species.

Water-dependent use means a business or other activity which can only be conducted in, on, over, or adjacent to a water body because such activity requires direct access to that water body, and which involves, as an integral part of such activity, the use of the water.

Water-enhanced use means a use or activity which does not require a location adjacent to coastal waters, but whose location on the waterfront adds to the public use and enjoyment of the water's edge. Water-enhanced uses are primarily recreational, cultural, retail, or entertainment uses.

Waterfront Redevelopment Area means a waterfront area which is part of or near a business district and contains blighted or underutilized properties which are adequate in size to accommodate significant redevelopment of regional or statewide benefit. The following factors shall be considered in identification of waterfront redevelopment areas: (1) evidence of community commitment and initiative; (2) participation in the Local Waterfront Revitalization Program; (3) adequacy of local land and water use regulations; (4) adequacy of infrastructure; (4) opportunities for local and regional economic growth; and (5) opportunities for improved public access, environmental quality, and creation of local activity centers. Long Island Sound's waterfront redevelopment areas include portions of: the Village of Port Chester, the City of New Rochelle, the Village of Manorhaven, the City of Glen Cove, the Town of Smithtown, and the Village of Port Jefferson.

Chapter 5

SPECIAL COASTAL AREAS

Along Long Island Sound's coast, there are harbors where new or expanded marinas and boat yards, passenger ferries, water-dependent industry, commercial fishing, and water-based recreation can thrive. Hotels, new retail, waterfront access, and restaurants can reclaim brownfields and enliven urban waterfronts for residents and tourists. Restoring coastal habitat, expanding wetlands, protecting open space, and sustaining native plant and animal populations can strengthen ecological vitality throughout the Sound, but especially in those areas where significant natural resources are most sensitive to development. These special coastal areas are the Sound's maritime centers, waterfront redevelopment areas, and regionally important natural areas.

Maritime centers focus on the needs of the working coast. Through careful evaluation of the physical, infrastructure, and economic factors of each maritime center, priorities for state actions can be set to ensure the effective and efficient operation of water-dependent commercial and industrial uses. Infrastructure investments in maritime centers, combined with various incentives and regulatory streamlining, will encourage the development of new working coast uses within, rather than outside, maritime centers. The dispersed development of new working coast uses outside maritime centers would likely have more significant adverse impacts on the environment and established residential communities than will the concentration of working coast uses in maritime centers.

Redevelopment areas present opportunities to set priorities for public and private development projects to restore and revitalize waterfronts or areas near the waterfront that have been previously developed and are now underutilized or in a deteriorated condition. Establishing investment priorities based on a redevelopment strategy tailored for the community will encourage the consolidation of major new growth in existing centers to minimize urban sprawl, protect unspoiled areas, provide new public amenities, and improve the environmental quality of the redeveloped area.

Within regionally important natural areas, priorities can be set for state agency efforts to protect, enhance, and restore areas that contain significant coastal resources that are most sensitive to development.

This chapter describes the three types of special coastal areas and the characteristics these areas possess. The waterfront redevelopment areas and the regionally important natural areas that are discussed in this section are not meant to constitute a comprehensive list. Additional areas are likely to be identified by local governments, citizens, and state agencies.

In cooperation with local governments, management plans will be prepared for these areas. When the plans are complete, the area will be formally identified as part of the Long Island Sound Coastal Management Program.

MARITIME CENTERS

There are approximately 200 working coast uses located along the Long Island Sound shoreline. Nearly two-thirds of these uses and activities are clustered in sheltered bays and harbors that have historically been developed with water-dependent commercial and industrial uses. These sheltered bays and harbors, or maritime centers, are essential for waterborne commerce, recreation, and the state's transportation system.

Major challenges facing all water-dependent uses to varying degrees include: competition for space on the waterfront and the water, inadequate or deteriorated coastal infrastructure, impacts of regulation and taxation, degradation of coastal resources, lack of public awareness of working coast uses and businesses, and changing markets and business climate. The designation of maritime centers is a means to address these problems. The locations of these centers of maritime activity are shown on map 4.0.

It is critical to maintain and strengthen the working coast as a vital part of the economic health of the region. The economic contribution of the working coast could be improved, if the problems encountered by water-dependent businesses that significantly impair their ability to function were better understood and addressed by state and local agencies.

IDENTIFYING MARITIME CENTERS

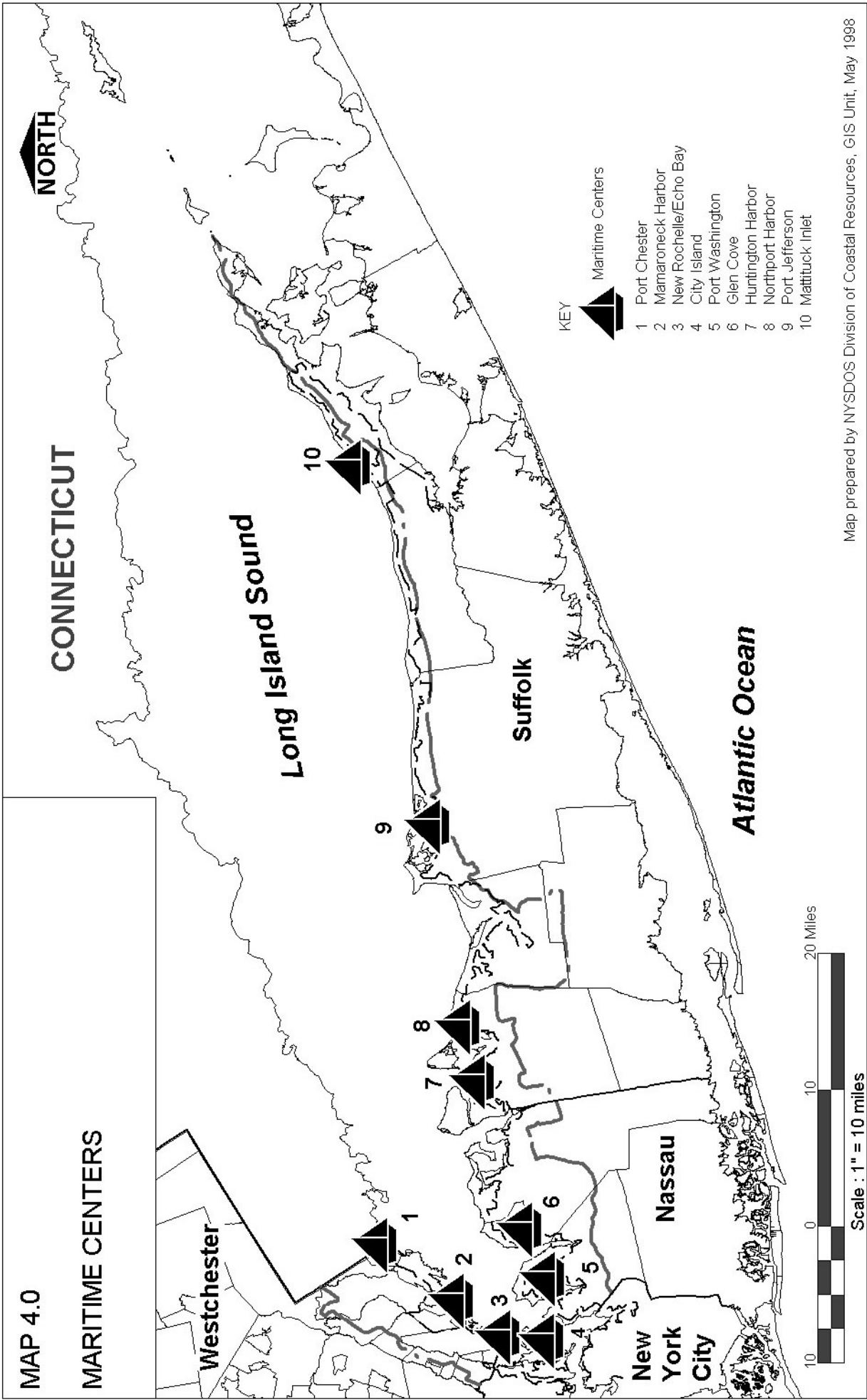
Maritime centers are identified to enable better protection of existing water-dependent uses, to foster the development of new water-dependent uses in appropriate locations where growth opportunities exist, to protect and ensure the wise use of underutilized commercial waterfront land that is suitable for water-dependent uses, and to ensure the efficient and effective operation of water-dependent uses. Water-dependent uses have unique siting requirements; thus, it is important to protect suitable developed and underutilized waterfront commercial property, which are limited in number in the Sound region.

A maritime center is defined as:

a discrete portion or area of a harbor or bay that is developed with, and contains concentrations of, water-dependent commercial and industrial uses or essential support facilities. The harbor or bay area is a center for waterborne commerce, recreation, or other water-dependent business activity, making it an important component of the regional transportation system.

The following characteristics are used to identify maritime centers:

- concentration of large and intensive water-dependent commercial or industrial uses
- sheltered locations and suitable hydrologic conditions, such as sufficient water depth and good flushing
- adequate existing navigation channels, anchorage and turning basins, piers and docks, and land-based infrastructure essential for the operation of water-dependent commercial and industrial uses; if needed, new infrastructure could be provided more easily and at lower cost
- physical conditions meet the unique siting and operational requirements of most water-dependent commercial and industrial uses to ensure the efficient and effective operation of water-dependent uses
- close proximity to central business districts where commercial uses can be located that complement or support water-dependent uses, but which are inappropriate for a waterfront location



- lack of conflict with high value natural resources, such as beaches, dunes, or bluffs; wetlands; shellfish beds, bird habitat or other fish and wildlife habitat; or exceptional surface water quality.

LONG ISLAND SOUND'S MARITIME CENTERS

There are ten maritime centers along the Sound coast. These are: Port Chester Harbor, Mamaroneck Harbor, New Rochelle Harbor-Echo Bay, City Island-East Bronx Shore, Manorhaven-Port Washington, Glen Cove Creek, Huntington Harbor, Port Jefferson Harbor, Northport Harbor, and Mattituck Inlet. These areas are the most suitable and appropriate locations on the Sound coast for expansion of existing, or the development of new, water-dependent commercial and industrial uses.

Summary descriptions, which include management objectives and a description of project and procedural actions to achieve the objectives, for the maritime centers of Mamaroneck Harbor, Huntington Harbor, Port Jefferson, and Mattituck Inlet are provided in volume 2 of the Long Island Sound Coastal Management Program. These descriptions have been prepared based on consultations with local officials. Abbreviated descriptions are provided for six other maritime centers.

WATERFRONT REDEVELOPMENT AREAS

Continued economic growth in areas that can best accommodate growth is central to the vitality of the Long Island Sound region. Along the Sound coast, there are areas where the state, working with local governments, can spur redevelopment.

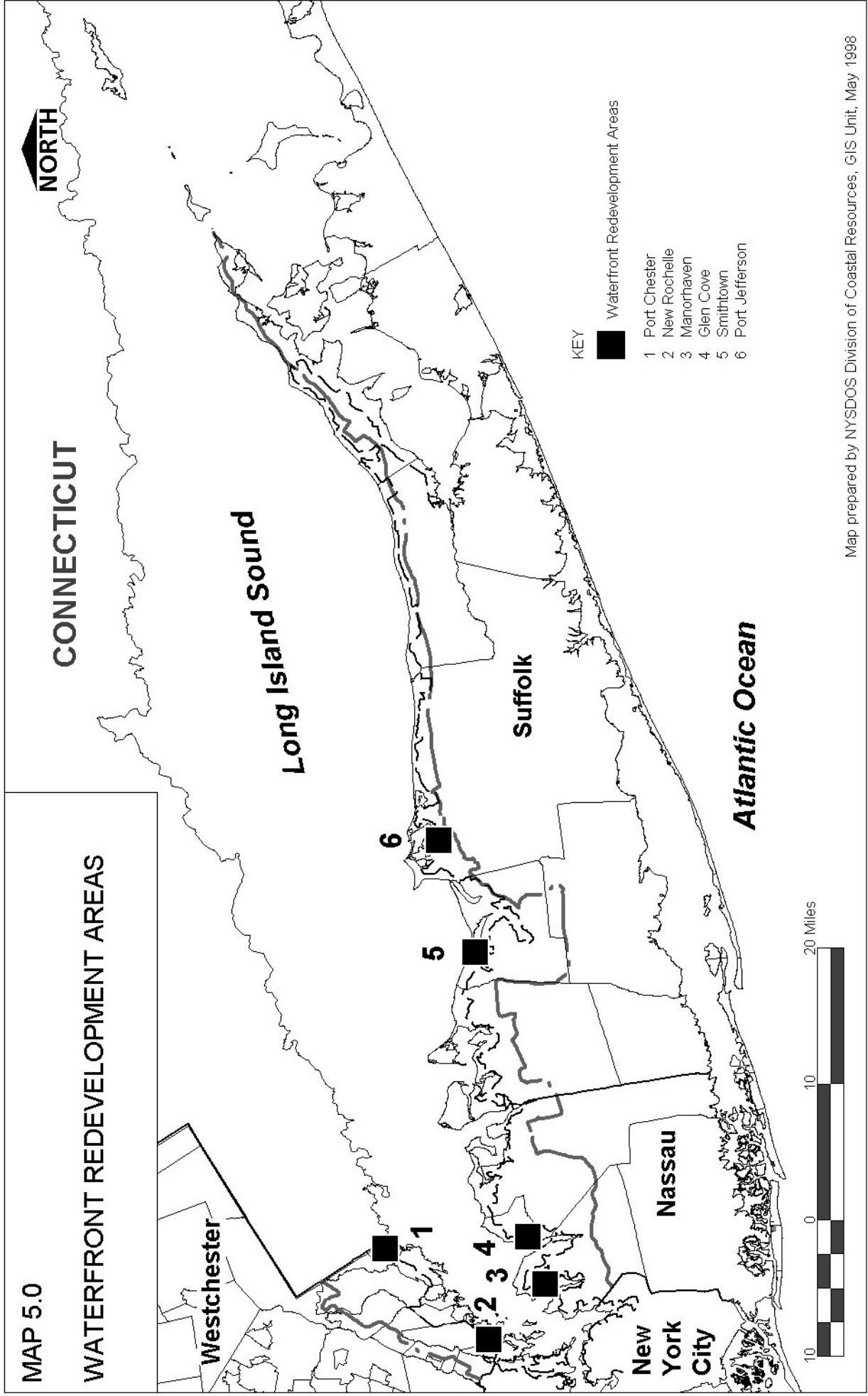
Recognizing these areas offers the following benefits:

- Redevelopment provides opportunities to revitalize degraded areas and to restore environmental and visual integrity to a disturbed area.
- Existing infrastructure can be used more efficiently and provided at a lower cost than entirely new services at other locations.
- Redeveloping areas present opportunities to reestablish the public's connection to the waterfront by integrating public access into redevelopment projects.
- Redeveloping areas provide opportunities to introduce new uses that meet community and regional needs.
- Development sprawl along the waterfront is discouraged since development can be channeled into and accommodated on already disturbed locations rather than in environmentally sensitive areas.

IDENTIFYING WATERFRONT REDEVELOPMENT AREAS

Areas that offer potential for redevelopment on the Long Island Sound shore are generally part of or near a business district and contain blighted or underutilized properties which are adequate in size to accommodate significant redevelopment. In their geographic scope, waterfront redevelopment areas are generally a discrete portion of a community, not the entire community.

The characteristics of waterfront redevelopment areas include: (1) urban waterfronts; (2) locations where redevelopment serves as a catalyst for the reclamation of a blighted or underutilized area or improves a deteriorated condition; (3) areas where infrastructure and



transportation facilities exist; (4) brownfields; and (5) locations where redevelopment can advance the Long Island Sound Coastal Management Program by improving public access, retaining and expanding water-dependent uses, facilitating new economic activities appropriate to the region, and improving the environmental quality of the area.

Within these areas, redevelopment actions should result in a majority of the following: a restored and revitalized waterfront or adjacent inland area; a strengthened local and regional economy through the development of commercial, industrial, and residential uses; improved waterfront recreation opportunities, public access, or dockage; improved views to the waterfront; restored and preserved historic sites; improved environmental quality; enhanced community character and sense of place; and enhanced visiting pleasure.

The conditions which characterize a waterfront redevelopment area are:

Condition 1: Community Initiative and Commitment

The **community** demonstrates **initiative** and **commitment** to undertake and follow through on major redevelopment projects to improve the area. The local government demonstrates an interest in, and commitment to, significantly improving the community's waterfront or business district through an expression of one or more of the following: citizen support and consensus; plans which demonstrate sound economic development and land/water use objectives; or preparation of preliminary waterfront inventories and design plans.

Condition 2: Local Planning

The community has an approved Local Waterfront Revitalization Program or is actively preparing a Local Waterfront Revitalization Program. A Local Waterfront Revitalization Program provides the **local** comprehensive land use **planning** context for redevelopment.

Condition 3: Adequate Land and Water Use Controls

The community has, or will have in place, **adequate land and water use controls** to manage the use, density, and location of development. These controls are necessary to ensure that the size, scale, and intensity of uses generated by redevelopment are appropriate and compatible with the landside and waterside character of the community.

Condition 4: Land and Water Use Optimization

New development will make **optimal** use of the area's **land and water** resources which include the built and natural environments, land and water uses, community character, and infrastructure, with particular attention to providing water-dependent and water-enhanced uses.

Condition 5: Infrastructure

Infrastructure and transportation systems exist which are adequate to service the proposed redevelopment. If the existing systems are inadequate, they can be repaired or upgraded to satisfactorily service the intended redevelopment.

Condition 6: Economic Growth

Opportunities exist to stabilize or improve the local and regional economy through redevelopment projects. The area can accommodate a significant increment in growth and development. Redevelopment opportunities exist to achieve **economic growth** and diversity on the local and regional level through the development of a range of appropriate uses.

Condition 7: Opportunities to Restore and Redevelop

Sufficient development demand exists which can be channeled to areas for redevelopment. These development pressures can be used as **opportunities to restore and redevelop** significant

blighted or underutilized areas, buildings, land, waterfronts, or neighborhoods, and to remediate environmental problems through appropriate redevelopment.

Condition 8: Public Access

Public access can be improved by enhancing existing public access or by establishing new public access. Opportunities exist to establish: public open spaces on the waterfront which allow a wide range of recreational uses, waterfront recreation facilities and features to attract people to the waterfront, or an access circulation system that links waterfront areas and the business district to the waterfront.

Condition 9: Community Needs

The area to be redeveloped will serve **community needs** as an activity center for a range of cultural, living, employment, recreational, and educational opportunities. The redeveloped waterfront can be established or improved as a place for people to gather, socialize, recreate, or work. Redevelopment will result in the addition of new public or semi-public facilities or improvements to existing facilities.

Condition 10: Regional Significance

The area can accommodate a significant level of new development and is, or has the potential to be, a waterfront area of **regional** or statewide **significance**. Redevelopment in the area will make major contributions to the region for retention or expansion of water-dependent uses or expansion of economic activities appropriate to the region.

Condition 11: Environmental Improvement

Redevelopment will result in **environmental improvement** by remediating brownfields, improving stormwater management, and improving visual quality.

LONG ISLAND SOUND'S WATERFRONT REDEVELOPMENT AREAS

In the Long Island Sound coastal area, there are at least six areas having the above characteristics—they have brownfields and/or sufficient underused, previously built sites available which, if redeveloped, would have a regional economic impact. These areas, shown on map 5.0, include portions of: the villages of Port Chester, Port Jefferson, and Manorhaven, the Town of Smithtown, and the cities of New Rochelle and Glen Cove. Other smaller communities, such as the Village of Roslyn waterfront, may also have these characteristics.

REGIONALLY IMPORTANT NATURAL AREAS

While there are many beautiful natural areas along the Sound shore, some natural landscapes are of greater than local significance because they host outstanding arrays or significant examples of natural elements or ecological communities. In many cases, the natural resources of these areas have attracted human use from prehistoric times.

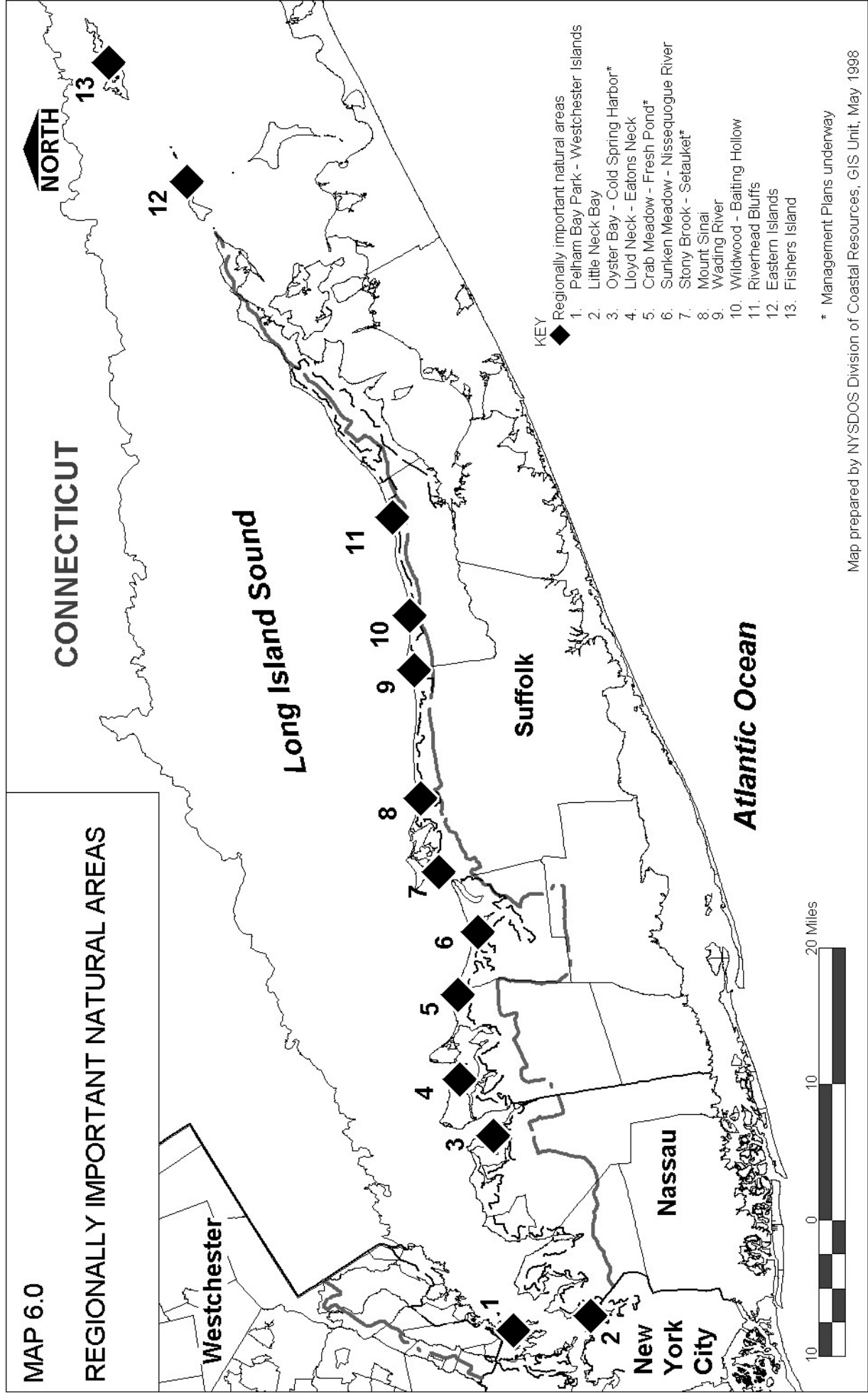
Natural coastal landscapes and the plants and animals that they support enrich the quality of life enjoyed by residents and visitors to the Sound, but ensuring that these resources can thrive or even be sustained in areas that are under increasing pressure from development is difficult. Protection programs, whether for natural areas or for built resources, such as historic structures, generally focus on the specific resource and do not always incorporate the broader area that adjoins and influences the viability of the resources.

Ecological communities cannot be viewed in isolation from one another. They are part of, and interact with, larger landscapes and ecological systems that contain a myriad of elements. Because these elements interact and are interdependent, their management must be addressed in an integrated, holistic manner. The process of identifying regionally important natural areas should

be followed in order to define primary areas of concern within which management efforts can be concentrated to protect and enhance the individual resources and larger natural landscapes of Long Island Sound.

MAP 6.0

REGIONALLY IMPORTANT NATURAL AREAS



IDENTIFYING REGIONALLY IMPORTANT NATURAL AREAS

Regionally important natural areas are defined geographic areas within the Long Island Sound coastal boundary and generally are composed of a variety of smaller, natural ecological communities that together form a landscape of environmental, social, and economic value to the people of New York. A regionally important natural area would meet the following three conditions:

Condition 1: The area contains significant natural resources.

The natural resources of the area are significant to the coastal region if they contain assemblages or outstanding examples of natural ecological communities; fish or wildlife habitat; endangered, threatened, or rare plants or plant communities; or coastal geologic features. Significance is further determined by analysis of the cultural value or the historic or present-day human use made of the natural resources, which may enhance the standing of a potential regionally important natural area. Although people may live in an area to be considered as a regionally important natural area, it must have a preponderance of significant natural resources to satisfy this condition.

Condition 2: The resources are at risk.

Areas determined to contain significant resources are evaluated next with regard to whether the resources are at risk. Risk is determined by the degree to which a potential regionally important natural area's natural and related cultural resources have been subject to, or are likely to be subject to, primary, secondary, and cumulative negative impacts associated with existing and new development or people's activities. Such impacts place ecosystem viability and, consequently, people's quality of life, at risk.

Condition 3: Additional management measures are needed to preserve or improve the significant resources, or sustain their use.

Finally, an area with significant resources that are found to be at risk must require additional management measures beyond those currently available to maintain or improve those resources and the viability of the ecological complex within which they function.

MANAGEMENT OBJECTIVES

The objectives of the Long Island Sound Coastal Management Program for regionally important natural areas are listed below. The objectives are related to one another, because the resources, as well as their impairments, are related. The achievement of a given objective may depend on the achievement of another. An overall strategy must be developed for each regionally important natural area that shows recognition of these relationships.

- Prevent fragmentation of natural ecological communities.
- Curtail nutrient and contaminant loads to Long Island Sound and its tributaries.
- Manage development in the watersheds to result in cleaner surface waters, protection of estuarine life, maintenance of commercial shellfishing, and restoration of shellfish harvesting where natural ecosystem processes may permit.
- Maintain the benefits of natural shoreline functions.
- Protect and restore freshwater and tidal wetlands and their natural functions.
- Protect and, where appropriate, expand populations of New York Natural Heritage elements (endangered, threatened, and rare species and rare natural communities).
- Maintain sustainable populations of fish, shellfish, and wildlife species that depend on the area's resources for critical stages in their life cycles.

- Protect, and where possible, expand native plant communities.
- Ensure that recreational activities will be compatible with the protection of ecological communities; endangered, threatened, and rare species; species of special concern; economically important species; and other intrinsic ecosystem elements.
- Prevent impairments to coastal access and develop new access opportunities that are compatible with protection of natural resources.
- Involve the public in the process of protecting the resources of the regionally important natural area.
- Preserve the historic and cultural resource of the area with special consideration to sustainable resource-based economic activities.

LONG ISLAND SOUND'S REGIONALLY IMPORTANT NATURAL AREAS

There are at least thirteen areas along the Sound coast that can be characterized as regionally important natural areas. They are shown on map 6.0. Management plans are underway or have been completed for Crab Meadow-Fresh Pond, Oyster Bay-Cold Spring Harbor, and Stony Brook-Setauket. These plans outline protection and restoration strategies and can be used to set priorities for action.

Chapter 6

ADVANCING the SOUND COASTAL PROGRAM

The Long Island Sound Coastal Management Program is a blueprint for state and local action to achieve a common vision for the Sound...

to enhance community character, reclaim the quality of natural resources, reinvigorate the working waterfront, and connect people to the Sound

This chapter presents an outline of activities focused on special areas, Local Waterfront Revitalization Programs, and other actions, currently underway that are designed to advance the recommendations of the Long Island Sound Coastal Management Program. It also indicates those recommendations that remain for future implementation as funding and staff resources are available.

PARTNERSHIPS FOR IMPLEMENTATION

The Long Island Sound Coastal Management Program is designed to be a living document that will evolve over time so it continues to meet the needs and expectations of the state and the people in the region. Due to the comprehensive nature of the program no one level of government or agency is responsible for implementing all of its recommendations. Implementing the vision for the Sound contained in this program requires approaches built on cooperation and partnerships between the state and local governments in the region and between government and the public.

Long Island Sound Coastal Advisory Commission. The legislature amended Article 42 of the Executive Law to create the Long Island Sound Coastal Advisory Commission. (Refer to the Appendix) The commission is composed of representatives of local governments, environmental and business groups, and the commissioners of the departments of Environmental Conservation, the Office of Parks, Recreation, and Historic Preservation, and Empire State Development. The commission advises the secretary of state on implementation of the Long Island Sound Coastal Management Program.

Governor Pataki recognized the critical role a body such as the Long Island Sound Advisory Commission can play in fostering a public-private partnership that is key to the successful implementation of the Long Island Sound Coastal Management Program. The Governor has directed the Long Island Sound Coastal Advisory Commission to serve as a forum to seek public and private actions to implement the recommendations of the Long Island Sound Coastal Management Program as follows:

- To reclaim the quality of natural resources, focus on implementing the plans being prepared for regionally important natural areas, including Oyster Bay-Cold Spring Harbor, Stony Brook-Setauket, and Crab Meadow; and on implementing watershed plans being prepared for the Sound's harbors and embayments.
- To reinvigorate working waterfronts, identify how the regulatory process in maritime centers can be simplified and how necessary infrastructure improvements can be achieved.
- To connect people to the Sound, seek commitments to expand public access to and recreational use of the Sound.

- To enhance community character, assist state and local governments to redevelop the areas identified as suitable for development.

Local Governments. Local governments are critical players in the successful implementation of the Long Island Sound Coastal Management Program. The Department of State, the Long Island Sound Coastal Advisory Commission, and state agencies should solicit local government involvement in advancing the program. Further, local governments should be encouraged and assisted to complete Local Waterfront Revitalization Programs.

ACTIONS UNDERWAY

LONG ISLAND SOUND'S SPECIAL AREAS

The Long Island Sound Coastal Management Program identifies three types of special areas that are the foundation of a strategy to address regional resource protection and economic development needs. At one end of the development continuum are regionally important natural areas where natural resource values prevail and where development, if it occurs, is compatible with natural resource protection. At the other end of the continuum are redevelopment areas and maritime centers—those areas of the Sound shoreline where more intensive land and water development is appropriate.

Oyster Bay-Cold Spring Harbor Regionally Important Natural Area. The Department of State, in cooperation with the Department of Environmental Conservation; the U.S. Fish and Wildlife Service; Nassau and Suffolk counties; the towns of Oyster Bay and Huntington; the villages surrounding the harbor complex; and civic, business, and environmental groups, has prepared a management plan for the Oyster Bay-Cold Spring Harbor regionally important natural area. The plan presents specific actions and projects to protect and restore the natural and cultural resources in the area. The work is being complemented with a Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant to the Town of Oyster Bay for a harbor management plan and a water quality improvement program. The town also received a \$25,000 grant from Title 11, Local Waterfront Revitalization Program Environmental Protection Fund to prepare a mitigation study for the Mill Pond overflow.

There are two underused, yet key sites on the Oyster Bay waterfront that have been the focus of much public concern. The Western Waterfront Task Force was formed in 1997 to guide redevelopment of these parcels, the Jakobson's Shipyard and Capone sites. This task force, chaired by Senator Carl Marcellino, oversaw the Oyster Bay Western Waterfront conceptual Land Use Plan that considered options for reuse of the site.

Governor Pataki recently announced that \$2.3 million in state funds is available for development of the Oyster Bay Western Waterfront Project. These funds will be used for demolition and removal of abandoned shipyard facilities and for landscaping of the site. In addition, about \$660,000 in federal and state funds, through the Department of Environmental Conservation, will be used to construct a boat ramp and other improvements to the site.

The Town of Oyster Bay received a \$207,760 Clean Water/Clean Air Bond Act grant for stormwater remediation at Centre Island Beach. This project will construct a comprehensive stormwater management system to reduce stormwater runoff that has resulted in seasonal closures of shellfishing beds adjacent to Centre Island Beach Park. Based on engineering designs funded through the Department of State Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant, the town will restore critical wetlands along the shore to filter stormwater and improve habitat. A new wetland will be created on a portion of the site.

Stony Brook-Setauket Regionally Important Natural Area. There are several efforts that will serve as a foundation for preparation of the Stony Brook-Setauket regionally important natural area management plan in the near future.

The Village of Head-of-the-Harbor has received from the Department of State two Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grants in 1994 and 1995 for \$14,000 to complete stormwater management plans and construction drawings to reduce nonpoint source pollution in Stony Brook Harbor. This has been completed. In 1996, the village received from the Department of State two construction grants totaling \$100,000 from Title 11, Environmental Protection Fund to implement the stormwater management plans to improve water quality.

The Clean Water/Clean Air Bond Act awarded \$112,500 to the village to implement three stormwater improvement projects which will complete the village's on-going program of stormwater mitigation designed to reduce nonpoint source pollution of Stony Brook Harbor. The Harbor Hill Road project will manage approximately 66% of the runoff from its immediate watershed. The project involves the construction of pre-cast drainage catch basins, retention/filtration basins and 4,700 feet of asphalt curbing on Harbor Hill Road. The finished project will include restoration of roadside vegetation.

The second project is located along Farm Road. Farm Road intersects with Harbor Hill Road and, due to its extreme grade, carries stormwater at high velocities onto Harbor Hill Road and into Stony Brook Harbor. This project involves construction of subsurface leaching basins, filter strips, and a dry riprap area to filter out sediments. This project will resolve all the stormwater runoff problems now experienced on Farm Road-Harbor Hill Road.

The third project covers a portion of Saddle Road and Saddle Road Pond, the highest in elevation of three ponds that flow into Mill Creek at the historic Stony Brook Grist Mill and then into Stony Brook Harbor at Porpoise Channel. The existing conduit pipe is only 4 inches in diameter and restricts pond outflow while increasing sedimentation from Saddle and Rhododendron Roads. This project would restore the scenic beauty of this natural spring fed pond and control nonpoint runoff directly into the harbor.

The Suffolk County Department of Public Works received a \$39,250 Nonpoint Source Implementation Program grant from the Department of Environmental Conservation to control stormwater from upland roads that now drains untreated into Stony Brook Harbor. This project complements the other stormwater control projects in the watershed.

The Town of Brookhaven has received from the Department of State two Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grants in 1994 and 1996 for \$28,000 to complete a land use and natural resources inventory for the West Meadow Creek watershed, a significant tributary of the regionally important natural area. The hydrological analysis of the creek's flushing characteristics is complete. The town will use the watershed inventory to prepare management measures to better protect and enhance the water quality and natural resources of West Meadow Creek and its watershed.

The Town of Smithtown received a 1997 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant of \$72,000 to complete a hydrographic study of Stony Brook Harbor. This grant will provide data on sediment transport and circulation dynamics in the harbor for use in determining how channels should be managed.

A Stony Brook Harbor Task Force, comprised of the departments of State and Environmental Conservation, the county, the towns and villages, civic associations and the Marine Sciences Research Center initially organized to address dredging issues, is discussing development of a Stony Brook Harbor management plan.

The harbor management plan for the Port Jefferson harbor complex will identify and address the priority issues and conflicts as identified by communities within the bay system. Its purpose will also be to identify the ways in which protection and restoration of the harbor's natural resources can be achieved while providing for a range of recreation and commercial use of the harbor. This planning effort will contribute to the future development of a joint management plan for the Stony Brook-Setauket regionally important natural area by providing detailed information on the area and helping to establish consensus on resource management objectives and priorities. The project, with the exception of the adoption of local laws, is complete.

City of Glen Cove Waterfront Redevelopment Area. The Department of State awarded the City of Glen Cove \$50,000 from the Title 11, Local Waterfront Revitalization Program Environmental Protection Fund in 1995 to complete a strategy to foster redevelopment along one mile of Glen Cove Creek. There is a significant amount of disturbed, underutilized land in the creek corridor, including over 50 acres of hazardous waste sites, that can be redeveloped.

The redevelopment strategy, completed in 1997, includes an economic and land use analysis for Glen Cove Creek. It identifies the most practical future uses given: the waterfront location and existing uses; existing hazardous waste sites; and close proximity to the city's central business district. The redevelopment strategy also includes: conceptual plans to better connect Glen Cove Creek to the city's central business district; recommendations to improve vehicular and pedestrian circulation and infrastructure; and recommendations to improve aesthetics and environmental quality.

A significant component of the department's work with Glen Cove was to clarify the status of clean up efforts underway on over 50 acres of hazardous waste sites. A concise description of this information was necessary to guide the land use plan and determine the appropriate level of remediation given the likely future land use of a site.

To facilitate the remediation and redevelopment of the hazardous waste sites, the Department of State was awarded \$125,000 in 1995 by the federal Office of Ocean and Coastal Resource Management to prepare site plans for the two largest hazardous waste sites. The site plans identify the most appropriate land uses and public access opportunities. The Department of Environmental Conservation provided \$250,000 for sediment testing which allowed the U.S. Army Corps of Engineers to begin dredging the creek.

The city has also completed a report that contains recommendations to improve the economic viability of existing marinas in Glen Cove Creek. The recommendations consist primarily of actions to improve conditions either immediately or over the short term. The city completed this report with a \$27,500 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant in 1995.

The city has started three additional projects to implement the Glen Cove Creek redevelopment strategy. In 1996, the city was awarded two Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grants for \$174,000. One grant is for the preparation of specific design alternatives and construction drawings for the Mill Pond area to improve vehicular and pedestrian circulation between the city's downtown and the Glen Cove Creek waterfront and restore Mill Pond. The second grant is for a construction project for improvements at the head of the creek and the Garvies Point boat ramp.

The city received two 1997 Clean Water/Clean Air Bond Act awards totaling \$3,378,750. The largest grant (\$2.87 million) will be used for nitrogen removal and facility improvements at the Glen Cove Wastewater Treatment Plant. The second grant will fund repair of a bulkheaded section of Glen Cove Creek to reduce sedimentation of the creek. Both of these projects are important to the revitalization of Glen Cove Creek. The city also received two additional grants

totaling \$97,500 for brownfields investigation. The sites to be investigated are located on Glen Cove Creek

Village of Port Chester Waterfront Redevelopment Area. Department of State will assist the village to refine its urban renewal plan, if necessary, to serve as a redevelopment strategy. The village has advanced a number of construction projects that have improved public access to the waterfront, upgraded waterfront infrastructure, and enhanced the scenic quality of the waterfront. The Department of State awarded the village a \$65,000 Title 11, Environmental Protection Fund grant in 1995 to prepare design and construction drawings for reconstruction of bulkheads in the village's marina on the Byram River, construction of a public waterfront walkway, and improved connections between the waterfront and the central business district.

Village of Manorhaven Waterfront Redevelopment Area. The Village of Manorhaven is completing a draft Local Waterfront Revitalization Program. The village received a \$25,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant in 1994 from the Department of State to prepare a development strategy focusing on renovation of a public dock and wetlands restoration. This work will be reflected in the Local Waterfront Revitalization Program. To complete the dock renovation, the village received a \$100,000 construction grant from the same grant source in 1996. This project will result in increased public use and enjoyment of the village's waterfront and historic dock.

Port Jefferson Maritime Center. The Village of Port Jefferson and Town of Brookhaven received from the Department of State a \$20,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant in 1994 to prepare a harbor management plan for the Port Jefferson-Conscience Bay harbor complex. All five municipalities that have frontage on the Port Jefferson-Conscience Bay Harbor complex—the Town of Brookhaven and the villages of Port Jefferson, Belle Terre, Poquott, and Old Field—are participating in developing the plan. The plan addresses issues that are of most concern to these five municipalities. The harbor management plan addresses problems affecting significant economic activity as well as problems related to protecting high value natural resources.

The harbor management plan consists of two parts. For the southern portion of Port Jefferson Harbor, which is commercially developed with mostly water-dependent uses, the harbor management plan addresses the need to: resolve surface water conflicts by establishing water use zones; improve dredging coordination; streamline project reviews; and establish priorities for infrastructure improvements. For the balance of the harbor complex—Conscience Bay, Setauket Harbor, and Little Bay—which consists mostly of low density residential and open space uses, the harbor management plan addresses the need to protect and enhance natural resources by improving water quality, strategically locating areas for vessel moorings, and ensuring appropriate shoreline development.

In response to concerns regarding deteriorating surface water quality in the harbor complex, the Village of Port Jefferson was awarded by the Department of State a \$18,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant in 1995. The grant's purpose is to identify the origin of untreated stormwater that is being discharged into the harbor from at least 18 stormwater outfalls. In 1998, a Clean Water/Clean Air Bond Act grant was made to the town to reduce stormwater pollution at the town marina.

In 1997, village residents voted to acquire the Mobil property, a key site on the waterfront. The Office of Parks, Recreation, and Historic Preservation awarded the village \$500,000 to assist with the acquisition. The village was awarded a \$20,000 Title 11, Local Waterfront Revitalization Program grant to prepare a reuse plan for the site.

Village of Mamaroneck Maritime Center. In pursuit of the village's objectives to increase public access to the commercial harbor area, the village received from the Department of State and the

Office of Parks, Recreation, and Historic Preservation Environmental Protection Fund grants in 1996 totaling \$200,000. The project will restore a significant portion of deteriorated bulkhead located in a large waterfront park and be used as a tie-up area for transient vessels.

The village also received an Environmental Protection Fund grant (Title 11, Local Waterfront Revitalization Programs) to study ways to improve dredging coordination and facilitate dredging projects. This project may be used as a model to improve dredging coordination and to facilitate dredging projects in other Long Island Sound maritime centers and appropriate harbor areas. ***Mattituck Inlet Maritime Center (Town of Southold).*** The town has received from the Department of State a \$25,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant in 1994 to complete a harbor management plan that has focused on Mattituck Inlet. This work is the foundation for preparation of a maritime center plan.

Huntington Harbor Maritime Center (Town of Huntington). Huntington Harbor is one of 10 centers of maritime activity identified along the Sound shoreline, a historic maritime area, and one of the most congested recreational harbors. The intense level of use has created numerous problems ranging from public safety to displacement of baymen. In response to the need to address these problems, the town received from the Department of State a \$30,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant from the 1996 round. This project will result in a management plan for Huntington Harbor that will provide a comprehensive framework for improved use and development of the waters and uplands of the harbor. The plan will identify projects, including immediate action projects, to enhance public use and safety in the harbor.

CLEAN WATER/CLEAN AIR BOND ACT

The Clean Water/Clean Air Bond Act, approved by the voters in 1996, provides over \$1.75 billion to improve the quality of the state's water, air, and open space resources. The bond act identifies specific management plans which are to be implemented through award of bond act funds. Two hundred million dollars of the bond act has been earmarked for projects to improve water quality in Long Island Sound. The Long Island Sound Study Comprehensive Conservation Management Plan is the principal plan which sets priorities for reduction of nitrogen, specifically through upgrades of wastewater treatment plants. In addition, Local Waterfront Revitalization Programs and Department of State or Department of Environmental Conservation special area management plans completed or underway will contain specific projects that will achieve the nitrogen reduction and other water quality goals of the Comprehensive Conservation Management Plan.

Governor Pataki has announced two rounds of Title 3 Clean Water/Clean Air Bond Act awards to communities on Long Island Sound, amounting to over \$19.2 million. Below is a sampling of these awards.

Town of Brookhaven. The town was awarded four Clean Water/Clean Air Bond Act grants in 1997 for a variety of water quality improvement projects. These grants, totaling \$265,806, will fund Phragmites removal in Stony Brook Creek and improve stormwater management in Stony Brook, Mount Sinai, and Port Jefferson harbors.

Town of Mamaroneck. The town received a \$34,500 grant to restore Pryer Manor Marsh, a critical natural area draining to the Sound.

City of New Rochelle. The City of New Rochelle received two grants amounting to \$191,400. One project is an aquatic and non-aquatic planting program to restore native vegetation. The second is for installation of grit chambers to reduce nonpoint source pollution.

New York City. New York City received three Clean Water/Clean Air Bond Act grants for habitat protection and restoration. These projects total \$575,000.

Pelham Bay Park Lagoon. Formerly a shallow bay, the project site was filled with construction debris in the 1930s to create the huge parking lot of Orchard Beach and connect Hunter Island to the mainland. Additional alterations were made in the 1960s, when the shoreline of the lagoon was straightened to create a rowing course. The goal of the proposed project is to restore four acres of salt marsh in Pelham Bay Park. Approximately 24,000 cubic yards of land fill material will be excavated from the site. After backfilling with clean sand and grading to the appropriate contours to allow normal tidal flow, native salt marsh plants will be planted. This will include 134,510 plugs of salt marsh cordgrass, *Spartina alterniflora*, and 3,000 native, salt tolerant shrubs. The project will increase the coverage of salt marsh vegetation at the site by 86%.

Twin Ballfield Restoration at Forest Park. The Twin Ballfields were constructed in 1966 at the bottom of a natural basin depression, known as a glacial kettle, by the placement and grading of fill to create a level playing field. Drains were installed to convey water from the site in an effort to maintain dry conditions. Due to a combination of failed drainage, soil compaction, and poor placement (topographic low) the site became increasingly wetter and finally unplayable. This project will reclaim the site as a kettle pond habitat which will require little or no maintenance beyond the scheduled monitoring period. Wildlife habitat for aquatic invertebrates, waterfowl, migratory birds, and possibly herpetiles will be created.

Town of North Hempstead. The town has received \$9,705 for a nonpoint source abatement and sedimentation pond improvement project on Hempstead Harbor. This project will reduce nonpoint source pollution to Hempstead Harbor by treating stormwater runoff and stabilize an area of the shoreline to allow for development of a nature trail. The project involves four components: excavate two sediment ponds near the harbor; increase the height of the surrounding access road and dike with additional fill; realign pipes, add riprap and a manhole to facilitate sediment entrapment and maintenance; and stabilize the site with erosion and sediment control measures and plantings.

The town also received \$230,756 for wetlands improvements on the Morewood site on Hempstead Harbor. The project restores 6.4 acres of existing freshwater wetlands and creates an additional 3.6 acres of new wetlands.

Village of Northport. The Village of Northport received \$36,400 from the Clean Water/Clean Air Bond Act for the James Street watershed. Stormwater runoff from this watershed now flows untreated into Northport Harbor. The James Street terminus at the harbor is currently washed out, impairing not only water quality but also public access to the harbor. This project will receive the surface flow from James Street and adjacent intersections. Two catch basins will be installed, and outfall of the catch basin closest to the harbor will be into a new tidal marsh constructed adjacent to the south bulkhead. This tidal wetland will receive and treat any overflow from the upland catch basin that is not absorbed by percolation.

Town of Oyster Bay. The Town of Oyster Bay received two Clean Water/Clean Air Bond Act grants for projects to improve water quality and aquatic habitat in Hempstead Harbor. These projects total \$332,368.

Glenwood Road Area Runoff Control and Remediation. Glenwood Road receives the runoff from over 1,200,000 square feet of pavement, developed property, and natural woodland. This runoff contributes to water quality impairments to Hempstead Harbor and resulting beach closures. This project is part of a comprehensive plan covering all town land and adjacent private properties. This project will receive runoff of up to 2 inches/hour and treat it through a series of structural measures and the addition of a tidal wetland vegetation.

Tappen Beach Natural Shoreline Restoration. Tappen Beach is one of nine beaches on Hempstead Harbor. All have been closed periodically as a result of impaired water quality, especially following heavy rainstorms. Nonpoint source pollution is a contributing factor, and the

present shoreline topography and drainage structures allow the runoff to enter Hempstead Harbor without detention and primary treatment. This project would address this by: modifying utilities; installing a perimeter filter strip for stormwater collection, diversion, and retention; developing dunes for shoreline protection and integrating filter strips; developing tidal marshes to improve the natural habitat and increase wildlife while reducing pollutants through phyto remediation.

COASTAL NONPOINT POLLUTION CONTROL PROGRAM

There is a new level of attention focused on coastal water quality. In 1990, Congress passed and President Bush signed the Coastal Zone Act Reauthorization Amendments. Among other provisions, the new section 1455b of the Coastal Zone Management Act requires states with approved coastal zone management programs to develop and implement a coastal nonpoint pollution control program, aimed at controlling nonpoint pollution which impacts coastal water quality.

The Coastal Zone Act Reauthorization Amendment requires that the coastal nonpoint program include enforceable elements to address a wide range of sources of pollution, including that generated by agriculture, urban and development activities, and hydromodifications, such as channel dredging. The state is free to use a wide variety of mechanisms to achieve this goal. The coastal nonpoint program is based on the proposition that certain land uses and development activities have been demonstrated to cause water quality impairments and that there are specific measures that are known to address the problems. Recognizing the fact that nonpoint pollution from areas outside the coastal area can impact coastal water quality, U.S. Environmental Protection Agency and the National Oceanic and Atmospheric Administration also have specified that the coastal nonpoint program apply to the coastal area and additional upland areas which may be sources of pollution to coastal waters. For the Long Island Sound watershed, this means that the entire watershed will be subject to the nonpoint program.

The New York State Coastal Nonpoint Pollution Control Program has been completed by the Department of State and the Department of Environmental Conservation and approved by the National Oceanic and Atmospheric Administration and the Environmental Protection Agency. This program presents a comprehensive statewide approach to reducing nonpoint source pollution to coastal waters through a series of management practices.

Watershed Management. The Town of North Hempstead, the Town of Oyster Bay, the City of Glen Cove, and the villages of Flower Hill, Roslyn, Roslyn Harbor, Sands Point, and Sea Cliff have signed an intermunicipal agreement to create the Hempstead Harbor Protection Committee. Nassau County is also a significant participant. The committee formed to prepare a study of nonpoint source pollution and water quality in the harbor with the goal of cooperative management of the harbor. The Department of State has awarded the communities two Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grants totaling \$130,000 to support this effort. The Hempstead Harbor Water Quality Improvement Plan, which contains specific recommendations for programmatic and capital projects, was completed in May 1998.

The Hempstead Harbor municipalities have a number of projects underway that implement recommendations of the Water Quality Improvement Plan. The Town of North Hempstead received a \$7,500 Title 11, Local Waterfront Revitalization Program grant to prepare a Waterfowl Education Program. The Department of State has provided three 1997 Title 11, Environmental Protection Fund grants to the Village of Sea Cliff to support the work of the committee, to expand water quality testing in the harbor through the Coalition to Save Hempstead Harbor, and to design a sewer extension along Shore Road. The Village of Roslyn Harbor received \$1,750 to install "pooper scooper" signs, develop a public education brochure, and prepare a nonpoint source control law.

Following the example of the Hempstead Harbor Protection Committee, the municipalities around Manhasset Bay have also created an intermunicipal organization to prepare a watershed management plan for that bay. The Town of North Hempstead, Nassau County, and the villages of Baxter Estates, Great Neck, Kensington, Plandome, Plandome Heights, Plandome Manor, Port Washington North, Sands Point, Thomaston are all active participants in this effort. The group received a \$72,000 grant from the Department of State, Title 11, Local Waterfront Revitalization Program Environmental Protection Fund to evaluate nonpoint source pollution in the watershed and determine the actions that the municipalities, individually and as a group, can undertake to improve water quality.

To address concerns related to deteriorating surface water quality in Mattituck Inlet, the Town of Southold received from the Department of State a \$40,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant in 1996. This project will develop a stormwater management plan that will reduce the level of sediments, nutrients, and pollutants from entering Mattituck Inlet, thereby protecting the habitat and the economic uses associated with shellfishing. The project will include a priority list of watershed improvement projects and designs for recommended stormwater mitigation projects.

In Westchester County, the Town of Mamaroneck received a \$45,000 Title 11, Environmental Protection Fund grant on behalf of a group of municipalities in the Sheldrake-Mamaroneck Rivers watershed to prepare a watershed management plan. This work will complement other watershed management plans along Westchester County's Long Island Sound shoreline.

LOCAL WATERFRONT REVITALIZATION PROGRAMS

Local Waterfront Revitalization Programs are an important foundation of the Long Island Sound Coastal Management Program. Local government authority, expressed in Local Waterfront Revitalization Programs and local land use planning and zoning, is identified as a measure to implement the Long Island Sound Coastal Management Program in the majority of the 50 recommendations. The state-local partnership in the coastal area is essential because local governments, alone, have authority over the land use decisions that affect the long-term goals of the Long Island Sound Coastal Management Program for resource enhancement and focused economic development.

The Department of State will continue to work with the 23 communities along the Sound shore that are participating in the Local Waterfront Revitalization Program. Department of State will assist these communities to reflect the objectives of the Long Island Sound Coastal Management Program and their local priorities in the Local Waterfront Revitalization Programs or components of local programs. The department will assist other eligible, but non-participating, communities who wish to prepare Local Waterfront Revitalization Programs or to begin components of local programs to address specific issues of concern or geographic areas of concern.

Village of Bayville. In 1996, the village received from the Department of State a \$4,000 Title 11, Environmental Protection Fund grant for the preparation of plans and construction drawings to address erosion and stormwater problems affecting the Oyster Bay regionally important natural area. The village received a \$12,500 Title 11, Local Waterfront Revitalization Program grant in 1997 to construct erosion control structures along Creek Road, adjacent to Mill Neck Creek. This project implements a recommendation of the Oyster Bay-Cold Spring Harbor regionally important natural area management plan.

Town of Brookhaven. The town will complete a draft Local Waterfront Revitalization Program for the north shore of the town's coastal area. Work required for an approved Local Waterfront Revitalization Program includes updating the inventory and analysis, preparing coastal policies, and developing implementation mechanisms. The town received a \$15,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant to improve the Cedar

Beach Nature Pavilion which is used to promote increased understanding of the town's coastal resources. This project is in addition to the natural resource planning the town is participating in for the Stony Brook-Setauket regionally important natural area.

City of Glen Cove. The City of Glen Cove Local Waterfront Revitalization Program will be revised to include the detailed redevelopment plans being prepared for Glen Cove Creek. The outcome will be greater specificity and consistency in federal, state, and local decision making that will facilitate remediation, redevelopment, and increase public access.

Town of Huntington. In 1996, the town received from the Department of State a \$30,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant. The purpose of the grant is to prepare a Local Waterfront Revitalization Program for Huntington Harbor and the surrounding uplands.

Village of Lloyd Harbor. The village Local Waterfront Revitalization Program was approved in 1997. The village received a \$10,000 Title 11, Environmental Protection Fund grant in 1998 for restoration of Fiske Pond.

Town of Mamaroneck/Village of Larchmont. The town and village have an approved joint Local Waterfront Revitalization Program that focuses on maintaining existing commercial and recreational water-dependent uses, and improving the quality of surface waters, habitats, and wetlands by minimizing nonpoint source pollution. An update of the Local Waterfront Revitalization Program to reflect the Long Island Sound Coastal Management Program and to revise the coastal policies has been completed. In 1996, the Town of Mamaroneck received from the Department of State a \$30,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant. The purpose of the grant is to minimize sediment entering Mamaroneck Harbor from the Sheldrake River by stabilizing the river's banks with plantings and rebuilding stone walls. The Town of Mamaroneck was awarded a \$46,600 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant in 1997 to prepare an intermunicipal nonpoint source pollution control program for the Mamaroneck and Sheldrake River watersheds. This project will identify best management practices and provide guidance for future applications to the Clean Water/Clean Air Bond Act.

Village of Mamaroneck. The village has an approved Local Waterfront Revitalization Program. The village is in the process of updating its Local Waterfront Revitalization Program by including standards for harbor management and control of nonpoint sources. In the future, the village may choose to update and revise its coastal policies. The village received from the Department of State a \$25,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant in 1994 for dredging coordination management. This project is complete.

New York City. New York City has an approved Local Waterfront Revitalization Program, and has received from the Department of State a \$150,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund to revise the Local Waterfront Revitalization Program to reflect the Long Island Sound Coastal Management Program and the city's comprehensive waterfront plan. New York City and Department of State will submit the revised New York City Local Waterfront Revitalization Program to the federal Office of Coastal Resource Management as a regional coastal management program for the entire New York City waterfront. New York City received two 1997 Title 11, Local Waterfront Revitalization Program grants totaling \$112,000. One grant will support its public outreach program for approval of its Local Waterfront Revitalization Program. The second is to prepare a heritage preservation study of City Island.

City of New Rochelle. The city has received funding from the Department of State, Title 11, Local Waterfront Revitalization Program Environmental Protection Fund to update and complete its draft Local Waterfront Revitalization Program.

Villages of Nissequogue and Head-of-the-Harbor. The villages of Nissequogue and Head-of-the-Harbor have an approved Local Waterfront Revitalization Program that reflects the need to improve water quality in Stony Brook Harbor. In pursuit of the objective, the villages received a total of \$16,800 from the Department of State, Title 11, Local Waterfront Revitalization Program Environmental Protection Fund to complete a stormwater management plan. The Village of Head-of-the-Harbor was awarded a \$100,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant to build two stormwater improvement projects.

Town of North Hempstead. The town has a draft Local Waterfront Revitalization Program, which requires refinement and updating to include new plans for redevelopment of the Morewood property. In 1996 the town received from the Department of State a \$30,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant. The purpose of the grant is to prepare a portion of a large vacant site, most of it occupied by a former sand mining operation, for development of a trail by removing large sand mining machinery. The site, which is located on the west shore of Hempstead Harbor, has been identified as one of five large sites of regional significance on the Sound shoreline with economic development, public access, and open space potential. The town has completed a detailed redevelopment plan for the area which includes plans for a waterfront nature trail.

In Manhasset Bay, which is the town's second major harbor, the Town of North Hempstead and Nassau County are cooperatively planning a nature trail that will link town- and county-owned parks along the Manhasset Bay shore. In 1996, the town received from the Department of State a \$25,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant to assist in the trail effort. This project will result in a feasibility study and planning and design for the trail. In addition to expanded public access offered by a new trail, this project is also designed to restore tidal wetlands and mitigate pollution from stormwater drainage into the bay. Because much of the bay's shoreline has been bulkheaded, this project provides important natural habitat for waterfowl and marine shellfish and finfish.

Town of Oyster Bay. The Town of Oyster Bay has a draft Local Waterfront Revitalization Program. Oyster Bay and the surrounding upland have been identified as an regionally important natural area, and the town is working with Department of State, the surrounding villages, the U.S. Fish and Wildlife Service, and the Village of Lloyd Harbor to prepare a regionally important natural area management plan. The town has received a grant from the Environmental Protection Fund to develop a harbor management plan and a coastal water quality improvement program for the Oyster Bay-Cold Spring Harbor complex. These town studies will be important elements of the plan. After the plan has been completed, the town may choose to complete its Local Waterfront Revitalization Program for the north shore of the town's coastal area.

Village of Old Field. The village has received from the Department of State a \$14,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant to prepare a Local Waterfront Revitalization Program which will focus on coastal hazards management. Department of State will continue to assist the village to complete a draft Local Waterfront Revitalization Program.

Village of Port Chester. As part of the work to be done in the Village of Port Chester redevelopment area, Department of State will assist the village if it chooses to update its Local Waterfront Revitalization Program by revising its coastal policies and by adding additional detail for its redevelopment area.

Village of Port Jefferson. The Department of State will work with the Village of Port Jefferson to complete a final Local Waterfront Revitalization Program that will incorporate the harbor management plan being prepared.

Town of Riverhead. The Town of Riverhead intends to prepare a draft Local Waterfront Revitalization Program as part of a comprehensive plan update.

City of Rye. The City of Rye has an approved Local Waterfront Revitalization Program, which it may choose to revise and update to incorporate more recent information from the Long Island Sound Coastal Management Program. In 1997, the city received \$21,500 from Title 11, Local Waterfront Revitalization Program Environmental Protection Fund to design a sediment control system for the city marina to minimize the need for dredging.

Village of Sea Cliff. The Village of Sea Cliff is preparing a draft Local Waterfront Revitalization Program with the assistance of the Department of State.

Town of Smithtown. The Town of Smithtown's Local Waterfront Revitalization Program was approved in 1988. The local program reflects the potential redevelopment area at the Kings Park Psychiatric Center. In 1996 the Town of Smithtown received two Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grants. One grant is for \$45,000 to update the town's Local Waterfront Revitalization Program. The second grant is for \$28,000 to restore Old Dock Bluff Park Beach by filling eroded areas, reconstructing a wooden stairway from the bluff to the beach, and revegetating the bluff.

Town of Southold. A \$25,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant was awarded by the Department of State to the town in 1994 to fund a town-wide erosion management program that will be incorporated into the draft Local Waterfront Revitalization Program.

The Department of State awarded a \$15,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund grant to the town in 1995 to complete design plans and construction drawings for specific road ends to advance the town's objectives to improve water quality and increase public access. The plan calls for improving road ends to enhance and increase public access to Long Island Sound and to mitigate pollution by controlling stormwater runoff. To implement the street end design plans, a \$42,000 Title 11, Local Waterfront Revitalization Program Environmental Protection Fund construction grant was awarded by the Department of State to the town in 1996.

The town received three Title 11, Local Waterfront Revitalization Program grants in 1997 to implement a variety of projects. Using a \$3,500 grant, the town will sponsor a workshop to discuss ferry related impacts on Long Island coastal communities, with a particular emphasis on the north shore and east end. Communities are concerned about increased vehicular traffic generated by ferries serving Connecticut casinos. They also received \$160,000 to study a severe erosion problem in the vicinity of Mattituck Inlet and Goldsmith Inlet to determine the cause of the erosion and the best means of mitigating damages. Finally, the town received \$60,000 to establish a GIS database to support a growth management planning initiative and to implement the Local Waterfront Revitalization Program. The grant would be used to acquire data, train staff, and begin analysis of data.

NONPOINT SOURCE IMPLEMENTATION GRANTS PROGRAM

The Department of Environmental Conservation funds projects for nonpoint source pollution control under its Nonpoint Source Implementation Grants Program funded through the Environmental Protection Fund and the federal Clean Water Act. A sampling of projects funded on Long Island Sound include:

Town of Huntington. The town received a grant of \$30,500 from the Department of Environmental Conservation's Nonpoint Source Implementation Program. The grant supports an engineering feasibility study to develop mechanisms for better control of storm water flowing into Centerport Harbor and its surrounding wetlands.

Town of Southold. The town received a \$25,000 grant for stormwater mitigation along Mattituck Creek to reduce nonpoint source pollution.

LONG ISLAND SOUND STUDY

The Long Island Sound Study began in 1985, with federal funds to focus on research, monitoring, and assessment of water quality for the Sound. In 1988, Long Island Sound was formally designated an "Estuary of National Significance" under the National Estuary Program. In addition to specific studies aimed at achieving a better understanding of the Sound, the Long Island Sound Study has prepared the Comprehensive Conservation Management Plan, which was reaffirmed by Governor Pataki in 1996. The plan characterizes each priority water quality problem of Long Island Sound and describes the general approach and specific actions needed to solve it. In addition, the plan proposes actions to increase public education and involvement, protect aquatic resources and habitats, monitor progress, and refine management efforts.

The Clean Water/Clean Air Bond Act provides a significant means for implementing the priorities of the Comprehensive Conservation Management Plan. The highest priorities of the plan are nitrogen reduction through improvements to wastewater treatment plants, nonpoint source reduction, and aquatic habitat restoration. Secondary priorities are habitat restoration, storm water control, combined sewer overflow abatement, and sediment remediation. The Department of Environmental Conservation is working to implement the nitrogen reduction program set forth in the Long Island Sound Study Comprehensive Conservation Management Plan.

A multi-agency effort, involving the U.S. Fish and Wildlife Service, the U.S. Environmental Protection Agency, the Department of State, the Department of Environmental Conservation, Connecticut Department of Environmental Protection, the Long Island Sound Study staff, and Sea Grant, is currently advancing implementation of the Habitat Restoration Initiative for Long Island Sound.

IMPLEMENTATION SUMMARY

The following list summarizes the implementation status of the 50 recommendations of the Long Island Sound Coastal Management Program. These recommendations, both individually and collectively, represent priorities for public actions to achieve the vision for the Sound. Within the Long Island Sound coastal region, these actions should receive priority for existing available state funding and should be viewed as an indicator of need as resources become available.

No.	Recommendation	Underway	Future Action
<i>The Developed Coast</i>			
1	Foster a development pattern on the Long Island Sound coast which focuses on the 17 existing centers of development, strengthens the waterfront economy, and preserves natural resources.	√	√
2	Work with local governments to advance development in brownfields and underused urban waterfronts to produce regional economic benefits, meet the demand for large-scale new development, and restore deteriorated environments.	√	
3	Advance cooperative efforts between the state and local governments to establish desired uses on large sites which are in single ownership and which are the most suitable for new appropriate development.	√	
4	Maintain and enhance historic maritime communities to strengthen the region's coastal heritage and coastal economy.	√	
5	Assist local governments to use their existing land use authority to protect recreational lands for their associated open space, habitat, and aesthetic purposes.	√	
6	Advance Local Waterfront Revitalization Programs or specific issue or geographic components of Local Waterfront Revitalization Programs for all municipalities on Long Island Sound.	√	
7	Survey the historic and archaeological resources of the Long Island Sound coastal region.		√
8	Assist local governments to protect historic and archaeological resources through Local Waterfront Revitalization Programs and strengthened local laws.	√	
9	Protect scenic resources within the Long Island Sound coastal region.		√
<i>The Natural Coast</i>			
10	Protect and restore unique areas of regional significance characterized by a diversity of outstanding resources, which are at risk.	√	√
11	Achieve a net gain in the quality and quantity of tidal wetlands and no net loss in the quality of freshwater wetlands in the Long Island Sound coastal area.	√	
12	Promote use of indigenous Long Island plants.	√	
13	Protect wildlife corridors in the Long Island Sound coastal area and watershed areas by avoiding fragmentation.		√
14	Develop an ecosystem monitoring program for Long Island Sound.		√
15	Amend Environmental Conservation Law Article 34 regulations to require mitigation for impacts of hard erosion control structures and to guarantee mitigation through performance bonds.	√	
16	Establish a coastal processes monitoring program for critical erosion areas along the Long Island Sound shore.		√
17	Establish permanent sediment bypassing systems along the Long Island Sound coast to correct problems caused by past structural intervention and where there is a demonstrated public benefit.		√
18	Assist local governments to manage development in flood and erosion prone areas, through erosion management plans that include a post-storm redevelopment component.	√	
19	Encourage development of local zoning regulations to adequately address siting of structures and land uses in flood and erosion hazard areas.	√	
20	Implement the Long Island Sound Study nitrogen reduction targets and the Final Phase 3 Nitrogen Reduction Strategy approved by the Long Island Sound Study Policy Committee.	√	
21	Reduce loadings of toxic substances in order to reduce risk to humans, wildlife, and ecological communities.	√	
22	Control combined sewer overflows to minimize pollution by pathogens, nutrients, toxic materials, and floatable debris.	√	

No.	Recommendation	Underway	Future Action
23	Provide vessel pumpout stations and support designations of no discharge zones to reduce direct contamination of waters and shellfish by vessel sewage discharge.	√	
24	Advance intermunicipal efforts to reduce nonpoint source pollution in Long Island Sound's embayments.	√	
<i>The Public Coast</i>			
25	Identify, preserve, and provide access to regionally important vistas.	√	
26	Complete a coastal network of community and regional greenways and blueways that would link public waterfront access points, the foreshore, the nearshore surface waters, and large and small public parks and open spaces to improve linear and perpendicular access to the coast and to coastal recreation facilities.		√
27	Maintain the public interest in public trust lands along the Sound coast by identifying these lands and ensuring that all private use of these lands comports with the public trust doctrine.	√	
28	Reassert public trust rights on public trust lands that are used in a manner that is incompatible with the public trust doctrine.	√	
29	Develop educational materials to inform the public and local governments on coastal resources and issues that affect the wise management and use of those resources.		√
30	Prepare and distribute a guide to public access and recreational areas and facilities for the Long Island Sound region.		√
31	Continue interagency efforts to protect shipwrecks and other underwater sites of historic or archaeological importance.	√	
32	Develop an appropriate mix of, and establish priorities for, public access and recreation facilities, and open space areas to meet needs.	√	
<i>The Working Coast</i>			
33	Improve siting requirements for marinas and other docking facilities.	√	
34	Increase efforts to preserve the Sound's shellfishery.	√	
35	Provide for petroleum transshipment and encourage phase-out of certain oil storage facilities.	√	
36	Implement a state oil spill contingency plan.		√
37	Protect agriculture and farmland.	√	
38	Improve the economic viability of maritime centers, by working with local governments and the private sector to identify opportunities and priorities for public and private investments to upgrade necessary infrastructure such as: water and sewer lines; maintenance dredging of navigation channels and anchorage basins, docks, and piers; bulkheads; boat ramps; sidewalks and parking lots; rest rooms; pumpout stations; and waterfront parks.	√	
39	Investigate options to obtain capital funds needed for necessary infrastructure in the Sound's maritime centers.		√
40	Assist the commercial fishing industry in providing adequate commercial fishing infrastructure.	√	
41	Construct artificial fishing reefs.	√	
42	Encourage private enterprise to develop private ferry services which are compatible with community needs.	√	
43	Support private initiatives to complete a system of offshore unloading terminals and a pipeline distribution system to transport petroleum to inland locations.		√
44	Ensure that property tax assessments appropriately reflect the use value of waterfront land occupied by water-dependent commercial and industrial uses.		√
45	Expedite regulatory approvals for appropriate water-dependent uses in maritime centers.	√	
46	Continue efforts with the private sector to market fishery products.	√	
47	Encourage private sector development of aquaculture.		√

No.	Recommendation	Underway	Future Action
48	Work with local governments to improve the safety and efficiency of harbors.	√	
49	Ensure that dredging is done to the extent necessary to meet the current and future needs of water-dependent commercial and industrial uses of the Long Island Sound.	√	
50	Expedite and coordinate dredging projects within maritime centers.	√	

Appendix

Use and regulation of public property; water frontage, wharves, and docks, see C.J.S. Municipal Corporations § 1812 et seq.

WESTLAW Research

Municipal corporations cases: 268k[add key number].

Navigable waters cases: 270k[add key number].

States cases: 360k[add key number].

§ 923. Long Island Sound coastal advisory commission

1. Definitions. As used in this section, the following words and terms shall have the following meanings unless the context indicates another or different meanings or intent:

(a) "Long Island Sound coastal management program" or "program" shall mean that regional program prepared by the department pursuant to the recommendation of the governor's task force on coastal resources.

(b) "Long Island Sound coastal advisory commission" or "commission" shall mean that commission created pursuant to subdivision two of this section.

2. Long Island Sound coastal advisory commission. (a) The Long Island Sound coastal advisory commission is hereby created in the department. The commission shall consist of seventeen members. The legislature shall appoint six members, all of whom must be local government officials, two of whom shall reside in Westchester county, two of whom shall reside in Nassau county and two of whom shall reside in Suffolk county. Of these six, two voting members shall be appointed by the temporary president of the senate, and two members shall be appointed by the speaker of the assembly. One voting member shall be appointed by the minority leader of the senate and one member shall be appointed by the minority leader of the assembly. In addition five members shall be appointed by the secretary, one of whom shall be chair; one of whom shall represent builders, one of whom shall represent recreational anglers, one of whom shall represent commercial fishing, one of whom shall represent recreational boaters and one of whom shall represent birders; in addition, membership on the commission shall include one member, a New York state resident, appointed by and from the Long Island Sound study management conference; the Long Island Sound study citizens' advisory committee co-chair residing in New York state; the director of New York sea grant; and the commissioners of economic development, environmental conservation and parks, recreation and historic preservation; one member shall be appointed by the commissioner of economic development and shall represent business; one member shall be appointed by the commissioner of environmen-

tal conservation and shall represent environmental protection; and one member shall be appointed by the commissioner of parks, recreation and historic preservation and shall represent recreation. The commission shall meet at least once a year and shall encourage attendance at such meetings of representatives from local governments on the sound and other interested parties. Copies of the minutes of each meeting shall be forwarded to the secretary.

(b) Every state agency and public corporation having jurisdiction over land or water on or in the sound, or over programs relating to the purposes and goals of this article shall, to the fullest extent practicable, offer full cooperation and assistance to the council in carrying out the provisions of this section.

(c) Every local agency with programs relating to the sound shall offer assistance to the commission, to the extent practicable, in carrying out the provisions of this section.

(d) In the event of a vacancy occurring in the office of any member, such vacancy shall be filled in the same manner as the original appointment. The members of the commission shall serve without compensation.

3. Powers and duties of the commission. The commission shall have the power:

(a) to make by-laws for the management and regulation of its affairs;

(b) to utilize, to the extent practicable, the staff and facilities of existing state and local agencies;

(c) to annually review the Long Island Sound coastal management program and policies and recommend revisions thereto;

(d) to assist in the coordination of this program with other programs and activities affecting Long Island Sound;

(e) to hold public hearings to solicit input and comment from the public on implementation of the program; and

(f) to prepare an annual report on the conduct of its activities.

(Added L.1995, c. 212, § 2.)

Historical and Statutory Notes

Effective Date. Section effective July 26, 1995, pursuant to L.1995, c. 212, § 3.

Former § 923. Section, added L.1981, c. 482, § 6, related to cooperation with, and assistance of other agencies with respect to the office of metropolitan trans-

portation authority inspector general, and was repealed by L.1983, c. 427, § 1, eff. July 11, 1983.

Legislative Findings and Intent of L.1995, c. 212. L.1995, c. 212, § 1, eff. July 26, 1995, provided: "One of New