

**NEW YORK STATE COASTAL MANAGEMENT PROGRAM**

**309 ASSESSMENT AND STRATEGIES**

**July 1, 2011 through June 30, 2016**

**New York State  
Department of State**

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# New York State

## Section 309 Combined Assessment and Strategy

### 2011 – 2016

#### Introduction

New York's 3,200 mile coastline is diverse. The Long Island marine coast hosts a multi-million dollar commercial fish industry, the State's busiest harbors, and miles of recreational beaches and tidal wetland habitats. Its Hudson River Valley, from the Federal Dam at Troy to New York Harbor, has been nationally recognized for its scenic beauty and cultural history. At the river's mouth, New York City stands as one of the world's greatest urban waterfronts, an international port with sprawling waterfront esplanades and critical environmental areas. New York's Great Lakes region offers a varied landscape of agriculture, dramatic shorelines, and large and small harbors.

More than 15 million people - 85% of the State's population – live and work in the State's coastal zone, which accounts for only 12% of the State's land mass. Land uses within the coastal zone are diverse: industrial, commercial, residential, recreational. These uses bring their own impacts to the coast and affect water quality, ecological communities, and public use and enjoyment of the State's coastal resources. But the State also enjoys unique opportunities to reclaim derelict waterfronts for many new uses, relieving pressure on open space and bringing a sense of renewed vitality to urban coastal communities.

New York's CZMA Section 309 Draft Assessment and Strategy examines these opportunities through its evaluation of the nine subject coastal enhancement areas: public access, coastal hazards, ocean and Great Lakes resources, wetlands, cumulative and secondary impacts, marine debris, special area management plans, energy and government facility siting, and aquaculture. New York's 309 assessment and strategy also continues the integration of the principles of ecosystem-based management (EBM) into the Department's CZMA activities, part of the State's broad 2006 commitment to more closely align with EBM principles the efforts of the nine State agencies responsible for managing human activities that impact ecosystems.

The 2011 - 2016 assessment and strategy builds on the direction set in previous 309 coastal enhancement strategies and reflects changes to the New York coastline that have occurred since 2006. The previous New York State Strategy placed a high priority on cumulative and secondary impacts, with coastal hazards, wetlands, special area management planning, and energy and government facility planning all placed as medium priorities. This 2011 - 2016 Combined Assessment and Strategy summarizes achievements since 2006 and is presented in two parts: in addition to this Introduction, an assessment describes the current status of each Priority Enhancement Area and associated accomplishments; and a strategy section identifies strategies for improvements to several enhancement areas for which the Department plans significant effort and achievement over the next five years. The format and content of this combined assessment and strategy were established by the Final Section 309 Guidelines prepared by the federal Office of Ocean and Coastal Resource Management.

New York's draft 309 assessment and strategy was developed by teams of the Department of State's Coastal Resource and Oceans and Great Lakes specialists. Each of the nine priority enhancement areas were assigned two staff based on the relevance of their background, experience and current roles and responsibilities at the Department. The overall effort was overseen by two supervisory staff members. Draft assessments and strategies were reviewed and commented upon by senior staff at the Department, and revised accordingly by assigned staff. The draft 309 document was posted on the Department of State's website as part of a news story announcing the availability of the draft 309 assessment and strategy document for public review. Notice was posted in the September 15, 2010 New York State Register announcing the availability of the draft document for public review during a 30-day comment period ending October 15, 2010. No comments were received during the public comment period.

## Select Accomplishments Completed Using 309 Funds During the 2006 to 2011 Grant Period

### Wetlands

#### Significant Coastal Fish and Wildlife Habitats

The Department of State, working with the Department of Environmental Conservation, developed revisions to the Significant Coastal Fish and Wildlife Habitat narratives and boundaries for the Long Island South Shore region. The boundary revisions resulted in two new designated habitats (Democrat Point and Westhampton Beach and Dunes, Suffolk County); five habitat boundary extensions (Silver Point Beach, Nassau Beach, Great South Bay-East, Swan River, and Moriches Bay); five combined habitats to form two separate habitat areas (Jones Beach West, Jones Beach East); and three repealed habitats (Cedar Creek County Park, Champlins Creek, and Orowoc Creek). Twenty habitat boundaries were unrevised. All Significant Coastal Fish and Wildlife Habitat narratives were updated to include current data.

Revisions to the Significant Coastal Fish and Wildlife Habitat in the South Shore region were adopted by New York State on August 28, 2008 and went into effect on December 15, 2008 after OCRM approval. The habitat area narratives are used to protect natural resources in planning and federal consistency decisions.

Updates and revisions to the Significant Coastal Fish and Wildlife Habitats along the Hudson River were also initiated during the 2006-2011 period using 309 funding for staff support. With assistance from the Hudson River National Estuarine Research Reserve, the Department has drafted revisions to existing habitat narratives and boundaries. New habitats have also been proposed and are currently under review. Adoption of revisions and new designations are planned for June 2011.

#### Revision and Consolidation of Coastal Policies

In order to better address cumulative and secondary impacts it was proposed to amend state regulations, consolidate and update the State's coastal policies, complete the consistency review manual, and provide consistency training to communities. It was recognized that there were problems with interpretation of the state regulations, especially as they apply to other state agencies completing state consistency requirements on their own projects. Revised regulatory language, which would clarify and streamline the process, provide all regulations in one document, and make clear the relationship with the State's equivalent of NEPA, was drafted and submitted to the state office of regulatory reform for review and approval. However, a series of events affecting the executive office of the State resulted in withdrawal of the regulatory amendments and prevented subsequent resubmittal. The proposed regulatory changes will be resubmitted sometime following the 2010 gubernatorial elections.

Review of the 44 State Coastal Policies, and the 13 Long Island Sound policies was undertaken. During the review it was evident that many new and emerging issues needed to be addressed. For example, climate change and sea level rise, energy facility siting in and on the water, and smart growth are issues not fully addressed in current policy, but are policy areas where the State is focusing attention. Small working groups were formed to address these topics and groups of policies. Each of these groups continues to make progress toward finalizing the policies which will be submitted as part of the new regulations.

A manual explaining the Consistency process in New York was completed. It provides a comprehensive review of procedures beneficial to communities and agencies alike. Included in the Manual are extensive appendices which include pertinent federal and state laws and regulations as well as examples of documents and decisions designed to help the reader understand the process. The Manual will soon be posted on the DOS website.

Even prior to its completion, the Manual has been used for training. Training has been provided to communities, like Southold and Mamaroneck, as well as State and federal agencies. After completion of the Manual, training efforts will be expanded.

In addition to the efforts discussed above, DOS undertook development of a workflow management system which will be linked to a document management system. The automated workflow system includes the complete consistency process for federal permitting actions. It will provide reviewers with improved project management opportunities and managers will have improved oversight of progress. Additionally, and as included in the amended 309 strategy, the database of consistency project information is being updated at the same time. Improvements to the utility of the database will include the ability to use Google maps for geocoding and locating projects and the ability to easily identify projects in the vicinity so that cumulative impacts can be evaluated. The combination of these efforts will greatly improve the Department's ability to conduct consistency reviews.

### Measurable Results

During the 2005 to 2011 grant period, staff from the Office of Coastal, Local Government, and Community Sustainability continued to work on the Measurable Results Data Base (MRDB). New data was collected and records entered for nearly 400 projects funded by New York State's Environmental Protection Fund (EPF). These EPF projects were categorized into one of thirteen project types, ranging from commercial fisheries to scenic and historic projects. Access and recreation, redevelopment, and water quality projects constituted the bulk of the project types.

The MRDB was evaluated for usefulness as a performance measure for the Office. The conclusion was that the MRDB offers only limited usefulness to measure office performance because of its platform and design. In order to overcome software platform issues, a trial conversion of approximately 5% of the data was successfully completed. Data entry into the MRDB was continued based on the knowledge that the data tables can be converted from Paradox, that is currently used, to other software platforms that are supported by the Department, and because performance measure development was already underway.

The Office prepared annual performance reports for the Coastal Zone Management Act Performance Measurement System (CZMAPMS), for both phase II and phase III of the CZMAPMS. In 2009 and 2010, staff also met new requirements for reporting the metadata that the CZMAPMS responses are derived from. Completion of this work was supported through 309 funds and other funding sources.

The Office began drafting performance measures for key functions in the program areas of consistency, LWRPs, and brownfields. Initial drafts were created by using a results-based matrix to identify measures of outcomes for our work. Office staff created a stepped performance measurement chart based on a logic model. The logic model was prepared by the State of Washington and adapted to fit the situations in our office. The initial set of draft measures was provided to OCRM in June 2010. Additional performance measures will be prepared for other program areas – e.g. hazards, climate change - during the final year of the 309 grant.

## Special Area Management Planning

### Preparation of Special Area Management Plans

Diverse special area management planning guidance documents were completed during the grant period. These documents include watershed management plans, natural area plans, waterfront redevelopment plans, maritime center / harbor management plans, and Local Waterfront Revitalization Programs.

Relating to watershed management guidance, plans were completed and adopted locally for Greens Creek and Browns River (2007), Hashamomuck Pond (2006), and Swan River (2007); all three were submitted to OCRM. An additional eleven watershed plans are currently under development.

Completed and submitted redevelopment plans include a Southern Waterfront Plan for the City of Peekskill (2009), which is coordinated with the preparation of a private redevelopment plan for an associated 45-acre site and advances private redevelopment plans for the overall area; Planning for City of New Rochelle East End Waterfront Redevelopment (2006); City of Kingston Hudson River Waterfront Development Guidelines and Standards (2010); and Town of Oyster Bay Eastern Waterfront Redevelopment Plan (2009).

Among the special area management planning efforts relating to natural area plans was the designation by the Secretary of State (April 2010) of nine areas totaling 25,050 acres in the Town and Village of East Hampton as Scenic Areas of Statewide Significance (SASS). The designation was the culmination of a long process which included the development of an inventory of scenic landscapes and strategies for their protection outlined in the East Hampton Scenic Resources Protection Plan, a public meeting and a public hearing on the SASS designation. Additionally, a natural area restoration plan for New York City's Shoelace Park was completed (2010) and submitted to OCRM.

Harbor management plans were completed and submitted for Beacon Harbor (2009) and Mt. Sinai Harbor (2007). Numerous Local Waterfront Revitalization Programs were completed or amended during the subject period and are listed in the SAMP assessment on page 81.

# Wetlands

## Section 309 Enhancement Objective

Protection, restoration, or enhancement of the existing coastal wetlands base, or creation of new coastal wetlands

## Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Please indicate the extent, status, and trends of wetlands in the coastal zone using the following table:

Wetlands type	Estimated historic extent (acres)	Current extent (acres)	Trends in acres lost since 2006 (Net acres gained & lost)	Acres gained through voluntary mechanisms since 2006	Acres gained through mitigation since 2006	Year and source(s) of Data
Tidal (Great Lakes) vegetated	---	32221.7	---	---	---	National Wetland Inventory (NWI)(various dates 1997-present)
Tidal (Great Lakes) non-vegetated	---	79497.8	---	---	---	NWI(various dates 1997-present)
Non-tidal/ freshwater	---	51311.5	---	---	---	NWI(various dates 1997-present)
Other (lake and riverine)	---	18662.8	---	---	---	NWI(various dates 1997-present)

2. If information is not available to fill in the above table, provide a qualitative description of information requested, including wetlands status and trends, based on the best available information.

- New York State does not currently have a statewide wetland tracking system or habitat restoration program. Wetland maps required by the Freshwater and Tidal Wetland Acts are maintained by the NYS Department of Environmental Conservation, and are used for regulatory purposes. Wetland tracking and/or restoration is currently completed through various regional programs/organizations, such as the South Shore Estuary Reserve Program, Hudson River Estuary Program, Long Island Sound Study, Hempstead Harbor Protection Committee, Manhasset Bay Protection Committee, Ducks Unlimited, Inc.; USDA's Natural Resource Conservation Service; various local watershed planning efforts, etc. New York State is active in wetland restoration including funding restoration through the 1997 Clean Air/Clean Water Bond Act, working collaboratively with USDA and USFWS to restore wetlands through the Wetlands Reserve Program and Partners for Fish and Wildlife, respectively.

New York State currently regulates freshwater wetlands that are 12.4 acres in size or larger and subsequently maps only those regulated wetlands. This process, therefore, does not capture all wetlands within the State or the Coastal Area. As a result, the numbers for current wetland acres above are based on the National Wetland Inventory, seamless wetland data available from the US Fish and Wildlife Service.

- According to the Association of State Wetland Managers, New York wetlands historically totaled 2,562,000 acres, statewide. Currently it is estimated that wetlands have decreased by nearly 60% with only 1,025,000 acres remaining (loss of 1,537,000).

- As mentioned above, restoration programs are typically overseen and monitored through local programs/organizations. The same is generally true for the recording and analysis of trends. Trend analysis has been completed for a number of areas:
  - North Shore of Long Island in Nassau and Suffolk Counties (DEC between 1974 and 1999) = 123.75 acres lost at eight targeted wetlands. Current mapping was completed in 2005. Based on preliminary results, the analyzed 10 wetland complexes averaged between a 0.5-0.75 acre loss per year when compared to 1974 numbers.
  - Peconic Estuary (DEC between 1974-1999) = 16.31 acres lost at two targeted wetlands.
  - South Shore of Long Island in Nassau and Suffolk Counties (DEC between 1974 and 1999) = 284 acres lost at four targeted wetlands.
  - Jamaica Bay (DEC)
    - Between 1974 and 1994 = 526 acres lost
    - Between 1994 and 1999 = 220 acres lost
  - In the NY/NJ harbor it is estimated that over 300,000 acres of tidal wetlands and underwater lands have been filled and only 20% of the original wetland acres currently remain.
  
- According to the NYS Department of Environmental Conservation, between the mid 1980s and the mid 1990s there was a net gain of approximately 15,500 acres of freshwater wetlands, statewide. In the coastal lowlands net gains equaled approximately 70 acres.
  
- Long Island Sound restoration between 2006-2009 included 9 sites:

Year	Site	Acres
2006	St. Thomas Point Eelgrass, Southold	2
2007	Harbor Island Park, Mamaroneck	.9
2007	Concrete Plant Park, Bronx	.006
2007	Starlight Park, Bronx	.007
2007	Oyster Bay Waterfront, Oyster Bay	.09
2007	Great Pond Interdunal Swale, Southold	.3
2008	Terry's Point eelgrass, Southold	.75
2009	Mill Pond, Port Washington	6
2009	Manursing Lake, Rye	80
	<b>Total Acres</b>	<b>90.053</b>

3. Provide a brief explanation for trends.

Research is continuing to determine causes of widespread wetland loss. Factors could include sea level rise, dredging prior to regulation, wave energy erosion, inlet stabilization reducing sediment supply, sediment budget disruption, water quality degradation, and eutrophication. The Department of Environmental Conservation has developed a Tidal Wetlands Loss Strategy for Jamaica Bay and wetlands loss in general. Tidal wetlands trends analysis conducted by the Department of Environmental Conservation show that regulatory programs are successful in selected areas, as wetland loss has been undetectable in areas such as Moriches and Shinnecock Bays, however, losses may be occurring in other areas which are not currently being monitored.

4. Identify ongoing or planned efforts to develop monitoring programs or quantitative measures for this enhancement area.

New York State does not have a statewide monitoring program, however programs exist on a local/program level including the Hudson River Estuary Program, Hudson River NERR, Long Island Sound Study, South Shore Estuary Reserve, etc. Some existing monitoring efforts include:

- a. The Hudson River Environmental Conditions Observing System (HRECOS) (HREP/DEC)
- b. Classification of wetland communities and reference sites (Natural Heritage Program/DEC)
- c. Freshwater tidal wetland monitoring (HRNERR)
- d. Marsh plant community monitoring (HRNERR)
- e. Various monitoring of eelgrass restoration and tidal wetlands (salinity and elevation (Peconic Estuary Program))

5. Use the following table to characterize direct and indirect threats to coastal wetlands, both natural and man-made. If necessary, additional narrative can be provided below to describe threats.

Type of threat	Severity of impacts (H,M,L)	Geographic scope of impacts (extensive or limited)	Irreversibility (H,M,L) H= no possible restoration M= potential restoration L= restoration possible
Development/Fill	M	Limited	H
Alteration of hydrology	L	Limited	M
Erosion	M	Limited	M
Pollution	M	Limited	L
Channelization	L	Limited	L
Nuisance or exotic species	M	Extensive	M
Freshwater input	L	Limited	L
Sea level rise/Great Lake level change	M	Extensive	H
Other (please specify)			

Notes: Severity of Impact and Irreversibility will vary with locations. Irreversibility was addressed in the following manner: H = no possible restoration; M = potential for restoration; L = restoration is possible.

- Development/Fill - Medium. While addressed/managed through State Tidal and Freshwater Wetlands laws, freshwater wetlands less than 12.4 acres are not regulated and potential filling/development can occur in smaller wetlands. Despite overall success in protecting regulated wetlands, losses do occur. The Department of State currently addresses wetland threats associated with development/fill through LWRP policies and local laws as well as the application of consistency review. The irreversibility of this threat is High, as restoration is highly unlikely once development/fill has taken place.
- Alteration of hydrology - Low. While addressed/managed through State Tidal and Freshwater Wetlands laws, freshwater wetlands less than 12.4 acres are not regulated and potential alteration of hydrology can occur. Wetland threats associated with hydrology can be addressed under LWRP policies and local laws as well as the application of consistency review. The irreversibility of this threat is Medium.
- Erosion - Medium. Wetlands and riparian areas experience losses associated with erosion from storm events and runoff. As impervious surfaces increase, flow can increase causing additional erosion. Erosion subsequently causes additional sedimentation and turbidity in wetlands, ponds and lakes, thereby acting as an indirect threat to these resources. The irreversibility of this threat is Medium. Restoration is possible, however, it is still a challenging activity.

- Pollution - Medium. Severity will vary with location. Watersheds experiencing intense development and high percentages of impervious surfaces will typically experience higher levels of pollution. The irreversibility of this threat is medium, with the introduction of best management practices.
  - Channelization - Low. Channelization is not a common practice in New York, however smaller wetlands are still threatened if they do not fall under the State Tidal and Freshwater Wetlands Laws.
  - Nuisance or exotic species - Medium. New York has experienced the expansion of a number of nuisance and/or exotic species including Canada geese, purple loosestrife, phragmites, water chestnut, didymo, flowering rush, and European frogbit, etc. Invasive species can, and in some cases have, impacted New York's ecosystems, food supply, built environments, recreation, and human health. Depending on the species and habitat conditions, restoration of native species is possible; however, it can be costly.
  - Freshwater input - Low. Variable throughout the coastal areas. Estuary areas rely on certain degrees of freshwater input, however increased impervious cover and stormwater runoff increase the potential for freshwater input in sensitive estuarine habitats. Groundwater recharge and capture of stormwater helps address issues of intrusion.
  - Sea level rise/Great Lake level change - Medium. Sea level rise trends identified by the Department and DEC indicate that New York will likely be significantly impacted through extensive tidal wetlands losses. Increased development in/or adjacent to wetland areas preclude the migration of wetlands. Shoreline protection activities, such as bulkheading, also restrict wetlands from migrating landward. This is particularly true for the South Shore of Long Island where many marsh islands exist with no upland areas available for migration. Assessments also show that dunes and beach areas will experience increased erosion, flooding, and storm damage. The Sea Level Rise Task Force, created in 2007, is tasked with assessing impacts to the state's coastlines from rising seas and recommending protective and adaptive measures. The Department has dedicated staff to sit on and advise the Sea Level Rise Task Force. The Department also has designated staff to focus on the lake level issues in the Great Lakes.
6. **(CM)** Indicate whether the Coastal Management Program (CMP) has a mapped inventory of the following habitat types in the coastal zone and the approximate time since it was developed or significantly updated

Habitat type	CMP has mapped inventory (Y or N)	Date completed or substantially updated
Tidal (Great Lakes) Wetlands	Y	2005
Beach and Dune	N	----
Nearshore (SAV)	Y	2006
Other - SCFWH	Y	2005, 2008

Tidal Wetlands - Imagery for Long Island Sound and Peconic's tidal wetlands was collected in 2005, with a few flight lines being re-flown in 2006. Imagery was received by DEC in 2006, and trends analysis was begun on selected marshes.

Nearshore (SAV) - USFWS developed eelgrass inventory for Long Island Sound 2006

Other - Significant Coastal Fish and Wildlife Habitat areas have been mapped beginning with the first designated habitats in 1987. Updated mapping inventory includes:

- 2005 - Long Island North Shore
- 2008 - Long Island South Shore

7. **(CM)** Use the table below to report information related coastal habitat restoration and protection. The purpose of this contextual measure is to describe trends in the restoration and protection of coastal habitat conducted by the State using non-CZM funds or non-Coastal and Estuarine Land Conservation Program (CELCP) funds. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

Contextual measure	Cumulative acres for 2004-2010
Number of acres of coastal habitat restored using non-CZM or non-Coastal and Estuarine Land Conservation Program (CELCP) funds	90 (Long Island Sound)
Number of acres of coastal habitat protected through acquisition or easement using non-CZM or non-CELCP funds	2250.5 (2006-2009)

### **Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the wetland management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

Management categories	Employed by state/territory (Y or N)	Significant changes since last assessment (Y or N)
Wetland regulatory program implementation, policies, and standards	Y	N
Wetland protection policies and standards	Y	Y
Wetland assessment methodologies (health, function, extent)	Y	N
Wetland restoration or enhancement programs	Y (local)	N
Wetland policies related public infrastructure funding	Y	N
Wetland mitigation programs and policies	Y	N
Wetland creation programs and policies	Y	N
Wetland acquisition programs	Y	Y
Wetland mapping, GIS, and tracking systems	Y	N
Special Area Management Plans	Y	Y
Wetland research and monitoring	Y	N
Wetland education and outreach	Y	N
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
- Characterize significant changes since the last assessment;
  - Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - Characterize the outcomes and effectiveness of the changes.

The management categories with significant changes since the last assessment, include wetland protection policies and standards; wetland acquisition programs; and Special Area Management Plans. Additional information provided for remaining management categories.

*Wetland protection policies and standards (309)*

- a) Significant Coastal Fish and Wildlife Habitats – Article 42 Executive Law Waterfront Revitalization of Coastal Areas and Inland Waterways 19NYCRR Part 600. Revisions to the Significant Coastal Fish and Wildlife Habitat Areas on the South Shore of Long Island were completed in 2008. The revisions included the updates of 20 habitats; 2 new habitats, 5 boundary changes, 5 habitats combined into 2 separate habitats, and 3 repealed habitats. As a result of the routine program changes there are now 29 habitats on the South Shore of Long Island.
- b) Revisions were completed as part of a 309 Routine Program Change.
- c) Updated biological information and refined impact assessment language have resulted in a great level of protection of these areas through consistency review and proactive planning with local governments and other state agencies. Both the new designations and the revisions refine Policy 7 of the NYS CMP and the Division’s ability to implement that Policy.

*Wetland acquisition programs*

- DEC - 2009 Open Space Conservation Plan (State Funding/306)
  - a) The New York State Open Space Conservation Plan was revised and updated in 2009. The new plan contains a list of priority conservation areas across the state, a recommendation to protect open space areas and a description of the environmental benefits that will result from following the recommendation, relative to riparian areas, coastal and flood plain areas, forests, wetlands, and other important areas. The new Open Space Plan also contains an action agenda to address climate changes, foster green communities, and connect people to nature and recreation. The Open Space Plan also includes the State Coastal and Estuarine Land Conservation Program Plan, which was approved by NOAA in 2008. This plan qualifies the State to receive federal funds under the Coastal and Estuarine Land Conservation Program (CELCP).
  - b) Since 2006, New York has received over \$3,533,705 in CELCP funds towards the acquisition of 284 acres of land encompassing sensitive coastal habitats throughout the State. These funds have allowed for the permanent protection of these habitats in the coastal area.

*Special Area Management Plans*

See Special Area Management Plan Enhancement Area.

3. **(CM)** Indicate whether the CMP has a habitat restoration plan for the following coastal habitats and the approximate time since the plan was developed or significantly updated.

Habitat type	CMP has a restoration plan (Y or N)	Date completed or substantially updated
Tidal (Great Lake) Wetlands	Y	Various dates - see below
Beach and Dune	Y	Various dates - see below
Nearshore	Y	Various dates - see below
Other (various - see below)	Y	Various dates - see below

*Tidal Wetlands*

- Hudson Raritan Estuary Comprehensive Restoration Plan (NY/NJ HEP- March 2009)
- Hudson River National Estuarine Research Reserve Management Plan (2009)
- Peconic Estuary Program Habitat Restoration Plan (November 2009)
- Ocean and Great Lakes – Sandy Creek and Great South Bay Demonstration Projects (2008-present)
- Long Island Sound Study Habitat Restoration Initiative (2003 - Updates in the form of Annual Summaries of Completed Project- 2005, 2006, 2007, 2008)

*Beach and Dunes:*

- New York’s Eastern Lake Ontario Dune and Wetland System: Guidelines for Resources Management in the 21<sup>st</sup> Century (2007)

*Nearshore:*

- Great South Bay Hard Clam Restoration Plan (2007)
- Moriches Bay Hard Clam Stock Assessment Plan (2007)
- Plan for Hard Clam Spawner Sanctuary Management in Eastern and Central Great South Bay (2009)
- Eelgrass Restoration Plan for the Peconic Estuary (September 2009)

*Other:*

- Wildlife and Habitat Conservation Framework: An Approach for Conserving Biodiversity in the Hudson River Estuary Corridor (2006)
- Hudson River Estuary Wildlife and Habitat Conservation Framework (2006)
- Hudson River Action Agenda 2005-2009
- Target Ecosystem Characteristics (TECs) for the Hudson Raritan Estuary: Technical Guidance for Developing a Comprehensive Ecosystem Restoration Plan (2007)
- Action Plan for the New York-New Jersey Harbor Estuary Program (June 2008)
- NY/NJ Harbor Estuary Program Hudson Raritan Estuary Comprehensive Restoration Plan (March 2009)
- Watershed Management/Action Plans:
  - Binnewater Restoration Plan (2007)
  - Swan River Watershed Action Plan (2008)
  - Beaverdam Creek Tidal Wetland Restoration Plan (2008)

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the Coastal Management Program and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Select type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H, M, L)
Wetland Trend Analysis	Data and Capacity	M
Wetland Restoration/Monitoring	Data and Capacity	M
Significant Coastal Fish and Wildlife Habitats - Great Lakes/St. Lawrence Update	Data and Capacity	H
Significant Coastal Fish and Wildlife Habitats - Westchester County	Data and Capacity	H
Significant Coastal Fish and Wildlife Habitats - Regulatory Protection	Regulatory	H

Currently, the priority need identified by the CMP include continuation of Significant Coastal Fish and Wildlife Habitat (SCFWH) updates statewide, continuing with the region-by-region approach. These revisions directly provide program change benefits and serve to protect wetland and habitat resources effectively. Revised narratives provide for consistency review to be undertaken with the most current information and allow for better protection of key attributes of these significant habitats. Revised narratives also identify potential restoration activities to be further explored or developed. Definition of other wetland needs is dependent on the outcome of research by the NYS Department of Environmental Conservation and the Department of State.

The Department of State has updated the Significant Coastal Fish and Wildlife Habitat documentation for the North and South Shore of Long Island, receiving OCRM concurrence in 2005 and 2008 respectively. Currently, the Department of State is working to revise and designate the Significant Coastal Fish and Wildlife Habitat along the Hudson River and to develop draft documentation and boundaries for habitats on Long Island Sound in Westchester County. Subsequent to the completion of the Hudson River documentation, the Department will identify those habitats on the Great Lakes and St. Lawrence River as a priority for updating data and impact assessment language. These are the regions of the State in

greatest need of updating and the regions facing the greatest pressure from proposed siting of several energy facilities and related infrastructure. It will be a priority of the Department to complete the update process for State designation and a Routine Program Change.

The Department of State uses its federal consistency authority to approve, deny, or require modifications to proposed federal actions that can impair or destroy Significant Coastal Fish and Wildlife Habitats. Since the consistency authority is limited to federal actions there exists a gap in the implementation of this policy for State and local actions. While State agencies are also required to certify that direct State-proposed actions be consistent with the Significant Habitat Policy (Coastal Policy #7), there is a considerable lack of implementation by State agencies leading to actions that harm and destroy Significant Coastal Fish and Wildlife Habitats. In order to ensure correct implementation of Coastal Policy 7, the Department has identified the need for implementation of these policies to better protect and preserve designated habitat areas.

The Department of State reached out to the Department of Environmental Conservation, Long Island Sound Study, Hudson River NERR, and other organizations to gather information on wetland trends, wetland restoration, and monitoring. Trend analysis, monitoring, and restoration are time consuming, impacting limited staffing resources and sometimes, financially prohibitive. Monitoring and trends are often addressed at a local scale and there is no central database for information. The New York State Department of Environmental Conservation conducted the Tidal Wetland Trends Analysis to address losses between 1974 and 1999. Since then, trends analyses have been conducted on a smaller scale through localized programs. The New York State Office of Cyber Security and Critical Infrastructure Coordination (CSCIC) may be capable of filling the need for a central database for use by the resource agencies to conduct trends analysis and monitoring.

### **Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**        X    
**Medium**            
**Low**              

Briefly explain the level of priority given for this enhancement area.

Wetlands are unique habitats that are some of the most productive area in New York State. Wetlands, both tidal and freshwater, provide a number of ecosystem services including wildlife habitat, sediment control, flood attenuation, human recreation, research and education. While protected through various State regulatory programs, it is imperative to further protect, monitor, and restore these critical habitats. The overall level of priority for this enhancement area for the coastal zone has not changed from the previous assessment and remains high.

The updates to the Significant Coastal Fish and Wildlife Habitats have been a positive change leading to more accurate impact assessment language which is critical to the development of appropriate and sound management and consistency determinations. Improved management decisions and consistency determinations will only be achieved by having up-to-date information and data. To date, updates to the Significant Coastal Fish and Wildlife Habitats have not been completed statewide. The Significant Coastal Fish and Wildlife Habitat narratives for the Great Lakes/St. Lawrence River and the Long Island Sound portion of Westchester County are still incomplete. The need for updated information and the gap in the implementation of State Consistency makes this enhancement area priority high.

2. Will the CMP develop one or more strategies for this enhancement area?

**Yes**   X    
**No**       

Briefly explain why a strategy will or will not be developed for this enhancement area.

**Strategy 1:** As part of this application, the Department proposes the updating of existing State designated Significant Coastal Fish and Wildlife Habitat narratives, including supporting data and impact assessment language, for the Great Lakes and St. Lawrence region, and Westchester County's Long Island Sound shoreline. Significant Coastal Fish and Wildlife Habitat narratives and boundaries are used by the Coastal Management Program as well as by Department of Environmental Conservation permit reviewers, municipal governments, consultants, educators, and others in making management decisions that protect listed species, rare communities, and important human uses associated with the state's wetland resources. The Great Lakes and St. Lawrence regions are pressured with the upcoming coastal issues of energy generation, climate change, and lake level regulation. The current impact assessments in SCFWH documentation do not address these emerging coastal management strategies. Updates to the impact assessment language would allow the Department the ability to make sound policy decisions and consistency determinations and ensuring that up-to-date data and impact assessments are used to inform those decisions and determinations.

**Strategy 2:** In order to achieve better implementation of the Significant Coastal Fish and Wildlife Habitat Program, the Department is proposing, as part of this application, the development of a regulatory program that would provide a comprehensive approach to further the protection of State designated Significant Coastal Fish and Wildlife Habitats (SCFWHs). The New York State management policy recognizes the importance of protecting the set of special physical, chemical, geographic and community components which functionally define significant fish and wildlife habitats. The development of a regulatory program will allow the NYS Coastal Management Program the authority to control activities within the mapped boundaries of the SCFWHs to afford greater protection to vital resources. The proposed establishment of a regulatory program will address the potential impacts associated with activities proposed within state designated Significant Coastal Fish and Wildlife Habitats. The development of the regulatory program will include assessing impacts of activities in SCFWHs to determine appropriate management strategies to protect and improve coastal habitats.

## Coastal Hazards

### Section 309 Enhancement Objective

Prevent or significantly reduce threats to life and property by eliminating development and redevelopment in high-hazard areas, managing development in other hazard areas, and anticipating and managing the effects of potential sea level rise and Great Lakes level change

### Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Characterize the level of risk in the coastal zone from the following coastal hazards:

(Risk is defined as: “the estimated impact that a hazard would have on people, services, facilities and structures in a community; the likelihood of a hazard event resulting in an adverse condition that causes injury or damage.” *Understanding Your Risks: Identifying Hazards and Estimating Losses. FEMA 386-2. August 2001*)

Type of hazard	General level of risk (H,M,L)	Geographic Scope of Risk (Coast-wide, Sub-region)
Flooding	H	New York City (NYC), Nassau & Suffolk Counties: high. Hudson Valley, Lake Ontario: moderate
Coastal storms, including associated storm surge	H	NYC, Nassau & Suffolk Counties: high. Hudson Valley, Lake Ontario: moderate
Geological hazards (e.g., tsunamis, earthquakes)	L	South Shore of Nassau & Suffolk Counties, NYC
Shoreline erosion (including bluff and dune erosion)	M	Nassau & Suffolk Counties, Lake Ontario
Sea level rise and other climate change impacts	M	NYC, Nassau & Suffolk, Hudson Valley
Great Lake level change and other climate change impacts	M	Lakes Erie and Ontario
Land subsidence	L	10-12 inches per century or less, NYC, Nassau and Suffolk Counties
Other (please specify)		

An assessment of the risk of coastal flooding and storms is available from the state Multi-Hazard Mitigation Plan (Multi-Hazard Plan) of 2008, assembled by the State Emergency Management Office (SEMO). The Multi-Hazard Plan and other sources are cited in the description below. At the time of the previous assessment NOAA/OCRM was initiating development of the National CZM Performance Measurement System (CZMPMS). Progress on coastal hazards performance measures as reported through the CZMPMS is noted below.

2. For hazards identified as a high level of risk, please explain why it is considered a high level risk. For example, has a risk assessment been conducted, either through the State or Territory Hazard Mitigation Plan or elsewhere?

Flooding: Risk of coastal flooding is documented in the state Multi-Hazard Mitigation Plan, compiled by the State Emergency Management Office (SEMO) in response to requirements of the federal Disaster Mitigation Act (PL 93-

288). SEMO reported 46 coastal flooding events between 1815 and 2007, or an average of about one every 4 years.<sup>1</sup> SEMO analysis based on historic events indicates coastal flooding with damages of at least \$25,000.00 can be expected once every 7 years.<sup>2</sup> SEMO carried out a county by county assessment of flood risk, using an arbitrary “rating score” to evaluate the relative risk exposure between counties, but the method relied on FEMA Q3 flood data which was not available for all counties at the time of the assessment.<sup>3</sup> The SEMO rating system uses 9 criteria, mostly related to National Flood Insurance Program (NFIP) coverage, to rate the counties on a scale of 50. Higher scores indicate higher flood risk exposure, relative to the other counties. The SEMO evaluation includes total NFIP insured coverage by county:

Westchester:	\$1.24 billion NFIP policy coverage
Suffolk:	\$9.26 billion NFIP policy coverage
Nassau:	\$7.48 billion NFIP policy coverage
New York City:	\$5.6 billion NFIP policy coverage
Erie:	\$500 million NFIP policy coverage

Flood insurance is required for all federally insured mortgages and is recommended for all properties within the flood plain or otherwise exposed to potential flood damages. The figures above do not reflect total coastal flood exposure for several reasons: SEMO lacks information on the total number of parcels within the flood zone for some communities (New York City, Nassau, Westchester), the ratio of parcels in the flood zone with and without NFIP coverage is not known, the NFIP coverage includes coverage for riverine flooding as well as coastal flooding, most NFIP policies are for homes and relatively few are for commercial buildings. Nonetheless, the figures reflect substantial flood risk exposure.

Coastal Storms: The occurrence of significant damages to development from coastal storms is relatively infrequent in New York, but the consequences are potentially extreme. The most significant coastal storm in our region during the past 100 years was the Great New England Hurricane of 1938. In 2008 Risk Management Services, Inc. (RMS) investigated the potential damages to our region from an event similar to the 1938 hurricane and found: “The particular situation that led to the 1938 storm, characterized by a very high forward speed and intense damaging winds, appears to occur on average around once a century.”<sup>4</sup> RMS estimated that a hurricane making land fall along New York’s coast could cause damages to the region (including New Jersey and New England) of between \$1 billion and \$150 billion, with a hurricane similar to the 1938 event estimated to cause \$35 billion in damages. RMS reported 9 major storms have impacted the New England region since 1900, all of which made landfall in New York and five of which were equivalent to a category 3 hurricane or greater, in intensity over land. Due to the fact that the most damaging winds occur on the east side of a cyclonic storm system, some of the most potentially damaging events are those which make landfall near New York City or in New Jersey.

RMS estimated a storm similar to the 1938 hurricane making landfall in the Delaware Bay area would cause \$115 billion in damages to the region, due to the increased wind impacts to the New York-New Jersey metropolitan area which would be on the right side of the storm center. New York experiences lower level but significant damages from nor’easter type storms, but little summary information is available on the cumulative damages over time or geographic differences in risk exposure for these types of storms. In a preliminary report for a storm damage reduction project (Reformulation of the Atlantic Coast of New York Storm Damage Reduction Study) the U.S. Army Corps of Engineers found that the cumulative damages over time from low level events, that do not breach the barrier islands, exceeds the damages from infrequent events powerful enough to cause breaches.<sup>5</sup> The fact that cumulative damages from lower intensity storms can exceed the damages from relatively infrequent major storms suggests a significant amount of development is exposed to damages from relatively less intense events, and that sea level rise could significantly increase the risk exposure from coastal storms, given the density of development and low topography of certain coastal areas.

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<sup>1</sup> New York State Standard Multi-Hazard Mitigation Plan, 2008, Table 3-7.

<sup>2</sup> Ibid., p. 3-137.

<sup>3</sup> Ibid., tables 3-16, 3-17.

<sup>4</sup> The 1938 Great New England Hurricane, Looking to the Past to Understand Today’s Risk, RMS, Inc., 2008, p. 9.

<sup>5</sup> U.S. Army Corps of Engineers, New York District, draft Formulation Report, November 2008.

The National Climatic Data Center (NCDC) reports the following information for coastal storms in New York is available for the 1950-2009 period.<sup>6</sup> This summary covers the marine and Great Lakes counties of New York, but does not include counties of the Hudson River, Niagara River or St. Lawrence River. See the discussion that follows for explanations.

Nassau County: 38 storm events, 12/93 through 11/09;  
Suffolk County: 44 storm events; 1/93 through 11/09;  
Westchester County: 4 storm events; 2/95 through 4/07;

For the five counties constituting New York City:

Richmond County (Staten Island): 6 storm events; 12/93 through 4/07;  
Queens County: 17 storm events; 12/93 through 11/09  
New York County (Manhattan): 3 storm events; 3/94 through 12/96;  
Bronx County: 5 storm events; 3/94 through 4/07;  
Kings County (Brooklyn): 6 storm events; 12/93 through 4/07;

For the Lake Ontario region:

Niagara County: 0 storm events,  
Orleans: 0 storm events,  
Monroe: 0 storm events,  
Wayne: 0 storm events,  
Cayuga: 2 storm events,  
Oswego: 0 storm events,

For the Lake Erie region:

Erie: 6 storm events (seiche), 12/00 through 12/08  
Chautauqua: 3 storm events (seiche), 11/05 through 1/08

The dates in the summary above indicate the earliest and latest dates for which the NCDC database has records. Information reported here for Nassau, Suffolk and Westchester counties, as well as the five counties of New York City, appears in the NCDC database under their Event Type classification “Ocean and Lake Surf”. There is a separate Event Type class “Hurricanes and Tropical Storms”, but not for extra-tropical storms or nor’easters. There is also a classification for floods, but the records must be examined to determine whether these are inland or coastal storms. For example, NCDC records for Nassau County under the Event Type “Flood” indicate there were 106 events between 8/93 and 11/09, of which 32 were classed as “Coastal Flood”. This is an average of 2 coastal flood events per year for the 16 year record in Nassau County. The difference between this frequency and the frequency calculated by SEMO above can be explained by the lower severity threshold in the NCDC database for documenting an event.

The absence of storm records for most of Lake Ontario does not indicate that such events did not occur, but rather that the information has not been entered into the NCDC database. Note that none of the NCDC database records precedes 1993. This indicates that earlier events have not been entered into the database for the “Ocean and Lake Surf” Event Type. The limited time record for coastal storms results in the omission of more severe storms characteristic of our region on a relatively infrequent basis (> 20 year interval). As a result, the average number of storms, average distribution of impacts and average annual cost of coastal storm impacts in New York is not well reflected in the records NCDC has compiled to date. NCDC records include some information on the nature of each event such as: Coastal Flooding, Heavy Surf, Beach Erosion, Rip Currents, Storm Surge; but this information must be extracted from the record individually for each storm. Although the Cayuga County record cites one event as a “coastal storm”, impacts occurred mainly in the southern portion of Cayuga County well away from Lake Ontario.

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<sup>6</sup> NCDC Storm Events Database, see <http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms>

NCDC classifies that event as a coastal storm due to impacts in Ohio. These limitations on the NCDC database indicate the data must be carefully evaluated to create usable information for coastal planning.

Shoreline Erosion: Shoreline erosion is a chronic occurrence on New York State beaches but there are a number of programs already in place to address these impacts. The Coastal Erosion Hazard Area (CEHA) regulatory program, described further in item 5, contextual measure for mapped inventory of areas affected by erosion, applies to most of the ocean and Great Lakes shorelines. The CEHA program seeks to conserve natural protective features such as beaches, dunes and bluffs, and to reduce development within these features. Where long term average erosion rates have been calculated to equal or exceed one foot per year, special Structural Hazard Areas have been defined that include restrictions on construction within a set-back zone equal to 40 times the average annual erosion rate landward of the natural protective feature. There have been multiple beachfill operations to maintain the beaches on Fire Island in recent years, financed by a special local erosion control tax district or by FEMA. The state has been working with the U.S. Army Corps of Engineers on a long term plan to reduce storm impacts, including erosion, for the south shore region of Suffolk County, constituting 83 miles of shoreline. The state funded dredging of Jones Inlet, with placement of over 670,000 cubic yards of sand<sup>7</sup> on the beaches to the west in 2008. State efforts on the Sea Level Rise Task Force and the Climate Adaptation Plan are aimed at supporting adaptive measures that will help address risk from shoreline erosion and inundation.

Sea Level Rise and Climate Change Impacts: New York State has initiated several efforts aimed at understanding and managing impacts from climate change and sea level rise. DOS is a member of the managing board or a member of the advisory group for most of these efforts. The state Sea Level Rise Task Force was appointed by the Governor and state legislature in 2008 and charged to develop an assessment of potential impacts and recommendations for state actions. A report to the Governor and legislature is anticipated for late 2010. DOS has a representative on the Task Force as well as on the operational Steering Committee and in the individual work groups on Natural Resources, Law, Infrastructure, Shoreline Protection and Community Resilience. DOS has been participating on the project advisory committee of the ClimAID Study by the New York State Energy Research and Development Authority, which is investigating climate change impacts and adaptation strategies.

DOS has made significant contributions to the Ocean-Coastal sector of the ClimAID study, including suggestions on Sea Level Rise and Climate Change impacts. Reports and recommendations from the ClimAID Study are expected sometime in late 2010. DOS is also participating in the Governor's Climate Action Program (CAP) as directed by Executive Order 24. DOS' role in the CAP includes advancing options for adaptation, particularly with respect to coastal areas. Findings and recommendations from the CAP are expected in winter 2010. The Coastal Office is utilizing other forums, such as the Mid-Atlantic Regional Council on the Ocean (MARCO) agreement to advance climate change planning in partnership with other agencies and states. Internally, DOS and NYS DEC have initiated an effort to create a state approach to assessing, planning for, and managing climate change impacts. This effort includes representatives from the New York State Energy Research and Development Authority and the State Office of Emergency Management, and invitations to participate have been extended to other state agencies. Discussions of possible products have included a process template for state agencies to use in assessing climate change impacts, identifying adaptation strategies and selecting preferred actions; and a database of projected impacts correlated with involved agencies, so that managers at the state agency and local government level could examine current climate impact projections and available management options. The interagency work group has not made commitments to specific products at this time.

Independently, DOS is reviewing programs such as Local Waterfront Revitalization, Consistency evaluations, local government services and the state building code to identify opportunities to include climate change adaptation in state-wide management activities. Sea level rise and climate change impacts are important issues for New York State, the Office is playing a significant role in developing state policies and programs that address these impacts, and we expect a continuing role assisting implementation of adaptation actions in the future.

3. If the level of risk or state of knowledge of risk for any of these hazards has changed since the last assessment, please explain.

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<sup>7</sup> Personal communication, Mr. Ronald Masters, Commissioner, Town of Hempstead Department of Conservation and Waterways.

Increased certainty about climate change and potential impacts has emerged since the last assessment. The level of scientific agreement regarding the association of greenhouse gases with surface temperature increases and other impacts has risen significantly, as demonstrated in documents such as the Intergovernmental Panel on Climate Change Fourth Assessment Report (2007). An initial effort at downscaling global climate change to the regional level provided valuable information on the regional effects of climate change in 2007.<sup>8</sup>

Sea level rise associated with climate change will have significant effects on coastal areas. A study supported by Lloyd's insurance estimated the effects of climate change on storm impacts for undefended Atlantic tropical coastal areas. Their summary of findings states "If no action is taken by the 2030s, sea-level rise of 30cm alone could increase future average losses by more than 80% from present levels, meaning that more extensive damage will be experienced more often. An increase of 5% in the number of more powerful hurricanes would raise future average flood damage losses to more than 90% above present levels. Even with a decrease in the number of storms, future average losses would be around 70% above present levels."<sup>9</sup> While this study is not specific to New York, the general trend of increasing impacts associated with sea level rise, coupled with increasing coastal development indicates the increasing risk exposure for our coastal areas.

Storm impacts associated with climate change are presently under study, but some research suggests increased tropical storm energy and duration due to warmer ocean temperatures is already apparent.<sup>10, 11, 12</sup> The potential effects of climate change on nor'easter type storms is unknown.

4. Identify any ongoing or planned efforts to develop quantitative measures of risk for these hazards.

The state Multi-Hazard Mitigation Plan (State Emergency Management Office) assessment of flood vulnerability does not distinguish riverine flooding, local drainage or high groundwater flooding, fluctuating lake water levels, coastal flooding or coastal erosion related sources of flood impacts. Since 309 activities under the Hazards title are directed specifically at coastal hazards, and since better data sources for analysis may become available, there are opportunities to refine risk estimates to better serve our coastal communities. Pending the findings, recommendations, funding and authorizations of the state Sea Level Rise Task Force and the Climate Adaptation Council, some potential information enhancements include:

- More detailed examination of potential coastal inundation using enhanced topographic data sources and consideration of hydrologic connectivity;
- More detailed examination of the distribution of storm impacts over our coastal areas for the purpose of improving knowledge of probability for planning;
- Better information on sea level rise projections is emerging which could be incorporated into inundation assessments for ocean coastal communities;
- Refined examination of community assets or infrastructure networks within identified risk zones would enhance local planning;
- Guidance on the incorporation of coastal inundation risk into community planning could improve local land use management and applications for mitigation funding assistance.

More detailed description of risk from exposure to coastal storms is needed to support planning. Currently there is little agreement in the scientific community on whether increased Atlantic Hurricane activity since 1995 is due to the effects of climate change or a multi-decadal hurricane cycle. There is little or no information available on the frequency and distribution of extra-tropical storms (nor'easters) or on the distribution of their impacts over the landscape. Other than the historical record, there is little information available on the frequency of Great Lakes storms or the distribution of their impacts over the landscape. To compound the difficulty, these storms and their

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<sup>8</sup> Confronting Climate Change in the U.S. Northeast, Northeast Climate Impacts Assessment, Union of Concerned Scientists, July 2007.

<sup>9</sup> Coastal Communities and Climate Change, Maintaining Future Insurability, RMS Inc., 2008

<sup>10</sup> Atlantic Hurricanes and Natural Variability in 2005, Trenberth and Shea, Geophysical Research Letters, 2006.

<sup>11</sup> Increasing Destructiveness of Tropical Cyclones Over the Past 30 Years, Kerry Emanuel, Nature, V. 436, August 2005.

<sup>12</sup> Tropical Cyclones and Permanent El Nino in the Early Pliocene Epoch, Federov, Brierly and Emanuel, Nature, February, 2010.

impacts will be affected by climate change and sea level rise. These information needs cannot be addressed efficiently by individual states.

DOS spent time during the previous grant period researching these storms. In the absence of better sources, DOS is using the flood stage frequency information produced by FEMA for the National Flood Insurance Program as a primary source of information. However, we observe that this information is relatively crude for the purposes of local land use planning. Since community resilience depends on effective land use, DOS will continue to seek more accurate information on storm frequency and the distribution of impacts for the purpose of providing better technical assistance to partners in local government.

5. **(CM)** Use the table below to identify the number of communities in the coastal zone that have a mapped inventory of areas affected by the following coastal hazards. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

Type of hazard	Number of communities that have a mapped inventory	Date completed or substantially updated
Flooding	289	(see explanation below)
Storm surge	(see explanation below)	
Geological hazards (including Earthquakes, tsunamis)	0	
Shoreline erosion (including bluff and dune erosion)	87	Lake Erie: 1988 Lake Ontario: 1988 Westchester: 1989 N. Shore Nassau/Suffolk: '88 S. Shore Nassau/Suffolk: '88 (Exception: S. Shore Islip, Brookhaven, Southampton: '98)
Sea level rise	0	
Great lake level fluctuation	0	
Land subsidence	0	
Other (please specify)		

**Flooding:** Flood Insurance Rate Maps (FIRMs) are available for all coastal communities in New York, 134 villages, 155 towns and 26 cities. Digital FIRMs or DFIRMs are under development through a coordinated effort of NYS-DEC and FEMA. DFIRMs offer increased opportunities to incorporate additional information, such as the Limit of Moderate Wave Action, and to be extracted as GIS files for other applications such as local coastal hazard or sea level rise management studies.

The New York State DFIRMs incorporate digital orthophotos as a base layer, displaying more current and specific information about the location of development in the flood plain than the formerly used paper maps. Some of the DFIRMs incorporate higher quality elevation data, such as lidar sources. It would be optimal to produce new hydraulic studies in conjunction with the DFIRMs to improve the flood probability estimates, but the funding assistance available from FEMA currently is not adequate for this additional product. As a result, the new DFIRMs rely on hydraulic studies and statistics that were mostly developed in the 1970's and 1980's. The state is working to produce DFIRMs for all locations and will develop them for much of the coastal area not already covered during the coming five year period. DFIRMs are currently available for the following counties, current status shown in parenthesis:<sup>13</sup>

Great Lakes Region	Erie	(Preliminary)
	Monroe	(Preliminary)
	Niagara	(Final)

<sup>13</sup> [www.rampp-team.com/ny.htm](http://www.rampp-team.com/ny.htm)

Hudson Region	Dutchess	(Preliminary)
	Putnam	(Preliminary)
	Ulster	(Final)
Long Island Sound	Westchester	(Preliminary due)
	New York	(lidar contract underway)
Atlantic Ocean	Nassau	(Final)
	Suffolk	(Final)
	New York	(lidar contract underway)

At the present time there is no program within the state or at DOS that provides or requires flood plain mapping other than the National Flood Insurance Program (NFIP). The communities identified above with coastal flood mapping are utilizing NFIP maps or digital flood insurance rate maps (DFIRMs). DFIRMs are being developed by the state Flood Plain Management Office as resources permit. At the present time Nassau County and Suffolk County have DFIRMs (circa 2009). The five counties of New York City are in the process of acquiring lidar data to support DFIRMs. Draft recommendations of the state Sea Level Rise Task Force, prepared with guidance from DOS, include requirements for coastal areas to map exposure to coastal inundation and sea level rise. These recommendations will be released for public comment at the end of 2010. The state legislature will subsequently determine a course of action on these recommendations.

Storm Surge: Storm surge mapping has been a component of some, but not all LWRPs in the past, using SLOSH mapping. Stony Brook University, School of Atmospheric and Marine Science, examined potential storm surge in the New York metropolitan region using a hydraulic model as one component of planning for infrastructure protection and municipal adaptation. In an extension of the work, Stony Brook produced a coupled weather and hydraulic model that forecasts water levels for select locations around the region.<sup>14</sup> New York City also prepared a plan for evacuation to reduce storm surge impacts on the basis of potential inundation.<sup>15</sup> A generalized map of potential storm surge inundation is available from the State Multi-Hazard Mitigation Plan. Some communities have incorporated SLOSH maps into their Multi-Hazard Mitigation Plan for eligibility for Stafford Act mitigation funds through FEMA. Since there is no inventory of the content of these Multi-Hazard Mitigation Plans it is not possible to determine which incorporate SLOSH or other storm surge information. There are draft recommendations to the state Sea Level Rise Task Force that all communities prepare maps depicting storm surge and sea level rise exposure, but no schedule for creation of such maps will be known until the recommendations are formally acted upon in the winter of 2010 or later.

Geologic Hazards: Earthquakes and tsunamis are rare in the New York region and consequently the need for mapping the vulnerability to such events is not a priority.

Shoreline Erosion: The Shoreline Erosion paragraph in item 2, above, describes the assessment method used for mapping erosive shorelines under the CEHA program.

Sea Level Rise: The Department of State believes that there are no communities in New York that have mapped potential inundation due to sea level rise. In the context of climate change and sea level rise adaptation, recommendations are currently being prepared for the Governor and state legislature to foster resilience. Among the draft recommendations is enhanced mapping of areas potentially affected by sea level rise and storm surge. At this time it is uncertain which recommendations will be approved or how they will be implemented.

The Nature Conservancy produced an internet application that depicts potential sea level rise inundation for a portion of the south shore of Suffolk County.<sup>16</sup> We recommend that local governments which are planning for adaptation to sea level rise or to reduce storm impacts, utilize this or a similar estimate to identify areas of potential impacts for more detailed investigation.

<sup>14</sup> See <http://stormy.msfc.sunysb.edu/>

<sup>15</sup> See [http://www2.sunysuffolk.edu/mandias/38hurricane/storm\\_surge\\_maps.html](http://www2.sunysuffolk.edu/mandias/38hurricane/storm_surge_maps.html)

<sup>16</sup> See <http://www.coastalresilience.org/future-scenarios.html>

A 2002 paper prepared for the Metropolitan East Coast region for the US National Assessment of Potential Climate Change Impacts, found long term relative sea level rise (due to post-glacial adjustment, other geologic factors and local conditions) varies between 2.73 mm per year (about 11.4 inches per 100 years) in New York City, and 2.27mm per year (about 9.5 inches per 100 years) at Montauk Point on the extreme eastern end of Suffolk County.<sup>17</sup> This does not account for accelerated sea level rise associated with climate warming.

Great Lake Level Fluctuation: No communities in New York have mapped potential inundation associated with periodic water level increase, to DOS’s knowledge. There are current discussions by the International Joint Commission regarding possible revision of the bi-national agreement for regulation of Lake Ontario levels that could lead to development of adaptation plans for shoreline communities. DOS developed an outline process for preparing adaptation plans in 2008. In cooperation with NYS DEC, a general outline process for regional shoreline planning was developed. Preliminary information regarding climate change impacts to the Great Lakes basin suggest lower water levels may be a concern in the future, as a result of a net decrease in supplies due to increased evaporation and transpiration.

Land Subsidence: Land subsidence is not mapped as a coastal hazard in New York State because the scale of impacts is relatively small. Land subsidence is one component of sea level rise.

### **Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Building setbacks/ restrictions	Y	N
Methodologies for determining setbacks	Y	N
Repair/rebuilding restrictions	Y	N
Restriction of hard shoreline protection structures	N	N
Promotion of alternative shoreline stabilization methodologies	Y	N
Renovation of shoreline protection structures	Y	N
Beach/dune protection (other than setbacks)	Y	N
Permit compliance	Y	N
Sediment management plans	N*	N
Repetitive flood loss policies, (e.g., relocation, buyouts)	N	N
Local hazards mitigation planning	Y	Y
Local post-disaster redevelopment plans	N	N
Real estate sales disclosure requirements	N	N
Restrictions on publicly funded infrastructure	Y	Y
Climate change planning and adaptation strategies	N	N
Special Area Management Plans	Y	N
Hazards research and monitoring	Y	N
Hazards education and outreach	N	N
Other (please specify)		

<sup>17</sup> Impacts of sea level rise in the New York City Metropolitan area, Gornitz, Couch and Hartig, Global and Planetary Changes, 32, 2002, p. 61-88.

\*Note: The New York Harbor Estuary Program implemented a sediment management plan during the past five years. A Long Island Regional Sediment Study is underway by the Army Corps of Engineers, focused mainly on inlet dredging efficiency and identifying offshore borrow areas for sand compatible for beach placement.

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
  - a) Characterize significant changes since the last assessment;
  - b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - c) Characterize the outcomes and effectiveness of the changes.

**Local Hazards Mitigation Planning:** Section 104 of the federal Disaster Mitigation Act of 2000 established the requirement for state and local governments to cooperate in development of hazard mitigation plans as a standard to qualify for post-disaster mitigation funding through FEMA. The first New York State Hazard Mitigation Plan was completed in 2005, and the first revised version, encompassing more complete reporting on county and local government conditions was completed in 2008. In conformance with the development of the first state hazard mitigation plan in 2005 the State Emergency Management Office initiated grants with local governments to complete local plans.

During the past five years a significant number of local governments in the state have completed or initiated hazard mitigation plans. For communities exposed to flood inundation or hurricane risks, assessment of these risks is a required condition for a complete plan. The availability of improved information on risk exposure and the availability of post-disaster mitigation funds for mitigation (adaptive) measures is a very positive development for managing coastal hazards. DOS has initiated a Post-Storm Redevelopment program aimed at improving vulnerability assessment further and utilizing all available resources to facilitate community adaptation to more resilient conditions. DOS expects to complete draft guidance on Post-Storm Redevelopment by late 2010. At the present time DOS is seeking partners in local government to pilot the adaptive planning technique as outlined in the draft Post-Storm Redevelopment project. This change is a non-CZM-based initiative.

**Restrictions on publically funded infrastructure:** Governor Patterson signed the state Smart Growth Public Infrastructure Policy Act on 8/30/2010. The Act specifies that infrastructure investments must be based on Smart Growth principles, with priority given to existing infrastructure and projects that are consistent with local governments' comprehensive plans. Over the course of time this act will tend to encourage development and redevelopment of existing urban areas and with emerging emphasis on assessing climate change impacts, including sea level rise, infrastructure investment in vulnerable areas should be gradually reduced. This change is a non-CZM based initiative.

3. **(CM)** Use the appropriate table below to report the number of communities in the coastal zone that use setbacks, buffers, or land use policies to direct development away from areas vulnerable to coastal hazards. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

For CMPs that use numerically based setback or buffers to direct development away from hazardous areas report the following:

Contextual measure	Number of communities
Number of communities in the coastal zone required by state law or policy to implement setbacks, buffers, or other land use policies to direct develop away from hazardous areas.	87
Number of communities in the coastal zone that have setback, buffer, or other land use policies to direct develop away from hazardous areas that are more stringent than state mandated standards or that have policies where no state standards exist.	4

Note: The numbers above refer to incorporated communities that participate in the state Coastal Erosion Hazard Areas Act program. There are no counties included in these figures.

For CMPs that do not use state-established numerical setbacks or buffers to direct development away from hazardous areas, report the following: N/A

Contextual measure	Number of communities
Number of communities in the coastal zone that are required to develop and implement land use policies to direct development away from hazardous areas that are approved by the state through local comprehensive management plans.	
Number of communities that have approved state comprehensive management plans that contain land use policies to direct development away from hazardous areas.	

### **Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

Gap or need description	Type of gap or need (regulatory, policy, data, training, capacity, communication & outreach)	Level of priority (H,M,L)
State policy and policy guidance	Policy	H
State Inter-agency Climate Change Approach	Policy	H
CZM Program Services for Climate Change	Outreach and program	H
Information Resources	Data	H
Pilot Application Post-Storm Planning	Program, outreach, training	H

Despite economically depressed times, in New York communities there continues to be demand for properties in coastal areas, with accompanying development pressure such as applications for variances from regulations designed to protect wetlands and erosion-vulnerable shore fronts. Although real estate prices have declined during the national economic slump, in most communities the limited undeveloped waterfront lots still command prices higher than median levels, infill construction continues, and older seasonal homes are occasionally torn down to be replaced by large, often multi-story homes. At the same time, much more is known now about how climate changes and sea level rise will impact coastal resources and communities.

*Policy:* In response to these changing needs, the state coastal policies under the New York State Coastal Management Program (CMP) are being updated. Policy emphasis will foster coastal resilience. This type of approach will necessarily recognize and incorporate the protection of natural and beneficial functions of coastal features and floodplains as much as possible and practicable within the context of socio-economic considerations. Agencies should cooperatively examine their respective development and conservation policies and regulations to ensure that they are not contradictory or duplicative. Training of professional staff to effectively communicate and deliver technical guidance within the broader, more coordinated policy approach is needed.

*CZM Program Services for Climate Change:* As New York’s coastal agency, and as part of our continued cooperation with other agencies on developing climate change strategies and policy recommendations, our office is well positioned to communicate climate change issues to our coastal communities. Outreach development on this topic, through the CZM program in coordination with other agencies, is beginning and will substantially and logically support our efforts to

encourage climate change adaptation planning on the local level and will serve both to educate the public and maximize community ‘buy in’ and adoption of local plans. Outreach fully complements objectives under the Local Waterfront Revitalization Program.

*Information Resources:* The Coastal Erosion Hazard Area Maps are in need of revision. The Department of Environmental Conservation (DEC), which is responsible for the map updates, is currently seeking funds for the update. As part of the update, it is anticipated that DEC will produce shoreline change data for the coastlines of New York, which would assist management efforts to address erosion. It is recognized that elevation data with a high degree of vertical accuracy (e.g. LIDAR) and nearshore bathymetry is additional information that will be necessary to evaluate sea level rise impacts. The NYS Sea Level Rise Task Force will recommend that this data be collected, and has worked with the USGS to get American Recovery and Reinvestment Act funds to collect the data. Other useful informational resources would also be: information on lake level change and impacts of that change for Lake Ontario; coastal resilience maps to support planning at the local level (depicting assets or resources exposed to hazards or risks); sea level rise inundation and storm surge modeling and risk mapping; and a mapped inventory of coastal structures.

*Pilot Application Post-Storm Planning:* Our current NOAA coastal fellow has completed the groundwork for a coastal community post-storm planning process. Implementation of the process in receptive communities is the next step. Outreach, as mentioned above, would support this effort to enlist participants, gain feedback, and refine the post-storm planning approach.

### **Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High** \_\_\_\_\_  
**Medium**   X    
**Low** \_\_\_\_\_

Briefly explain the level of priority given for this enhancement area.

The increasing risk of negative impacts associated with climate change and sea level rise in the coastal area, coupled with existing development exposure and coastal resource management issues, raises the importance of coastal hazards for the state program. Due to the growing recognition of climate change and sea level rise impacts, it is anticipated that these issues will remain a priority for the state program during the coming 309 grant period.

2. Will the CMP develop one or more strategies for this enhancement area?

**Yes** \_\_\_\_\_  
**No**   X  

Briefly explain why a strategy will or will not be developed for this enhancement area.

While a strategy specific to this enhancement area will not be developed, issues relating to coastal hazards will be addressed in part through cross-cutting, fundamental strategies developed for Wetlands, Cumulative and Secondary Impacts, and Special Area Management Planning enhancement areas. Additional activities related to coastal hazards will be conducted outside of federal 309 funding.

## Public Access

### Section 309 Enhancement Objective

Attain increased opportunities for public access, taking into account current and future public access needs, to coastal areas of recreational, historical, aesthetic, ecological, or cultural value

### Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Characterize threats and conflicts to creating and maintaining public access in the coastal zone:

<b>Type of threat or conflict causing loss of access</b>	<b>Degree of threat (H,M,L)</b>	<b>Describe trends or provide other statistics to characterize the threat and impact on access</b>	<b>Type(s) of access affected</b>
Private residential development (including conversion of public facilities to private)	M	Knowledge of trends based on existing data sources, observation and close involvement with local government and agency partners. Existing data sources do not currently track changes over time; statewide data is currently being compiled by the Office of Cyber Security and Critical Infrastructure Coordination (CSCIC).	Access for water-dependent uses such as boating, fishing, swimming and water-enhanced uses such as walking and hiking.
Non-water dependent commercial/industrial uses of the waterfront (existing or conversion)	M	Same as above.	Same as above.
Erosion	M	Same as above.	Same as above.
Sea level rise/ Great Lake level change	M	Same as above.	Same as above.
Natural disasters	L	Same as above.	Same as above.
National security	L	Same as above.	Same as above.
Encroachment on public land	L	Same as above.	Same as above.
Other			

The Department of State does not currently possess comprehensive statewide data which characterizes trends in land use for New York's coastal area, nor is such data currently available from other agencies.

However, the Office of Cyber Security & Critical Infrastructure Coordination (CSCIC), at the behest of the NYS GIS Coordinating Body, has prepared a State of New York Geographic Information Systems (GIS) Strategic Plan, a five year road map which was accepted by the GIS Coordinating Body in August 2008. The highest priority identified in the strategic plan is to develop a statewide parcel data layer, including active outreach to and coordination with the Office of Real Property Services (ORPS). Electronic parcel data exists for well over 90% of New York, and there is high demand for this information, however, achieving a statewide parcel data resource will require significant State resources and coordination. Significant barriers still exist for standardizing the format and content of the electronic records and for gaining universal acceptance of the need for parcel data sharing among the counties. Given these barriers it is fair to observe that the creation of statewide parcels will involve a sustained effort. However, the strategic plan also documented that the unique, extremely broad, multi-agency utility of these data to state government makes it worth the effort and expense to overcome these barriers.

The Coastal Change Analysis Program (C-CAP) produces a nationally standardized database of land cover and land change information for the coastal regions of the United States. C-CAP products are developed using multiple dates of remotely sensed imagery and consist of raster-based land cover maps for each date of analysis, as well as a file that highlights what changes have occurred between these dates and where the changes were located. Land cover data

provide an accurate depiction of the natural landscape and understanding how that landscape is changing. Land cover trends can help communities understand how their land use management efforts are working, and provide trend information for future planning initiatives.

Statewide C-CAP land cover data is available on a county-by-county basis. Trend analysis is available for a number of time periods: 1996 to 2001; 2001 to 2006; and 1996 to 2006. For the purposes of this assessment, the 1996 to 2006 was utilized. GIS-based analysis could not be performed because the Office's MapInfo based software cannot utilize raster-based data.

General trends in land cover observed from C-CAP data for New York's coastal area include:

- Land in the Low Intensity Developed and High/Medium Intensity Developed categories increased in all of the coastal counties of the State;
- The amount of land converted to the Low Intensity Developed land and High/Medium Intensity Developed categories was highest in Long Island, followed by the Hudson Valley, Lake Erie and Lake Ontario;
- The coastal county with the greatest conversion of land to the Low Intensity Developed Land and High/Medium Intensity Developed categories was Suffolk County (Long Island), followed by Orange County (Hudson Valley), Westchester County (Hudson Valley and Long Island Sound), Dutchess County (Hudson Valley), Nassau County (Long Island), and Erie County (Lake Erie).

The general trends observed from the C-CAP data are reinforced by a number of regional analyses that have been conducted. These analyses are described in the Cumulative and Secondary Impacts section of the 309 report and are summarized below:

- In the Hudson Valley region, continuing development associated with urbanization/suburbanization is extending up the Hudson River Valley. Growth in the Hudson Valley occurred 50% faster than that of the whole state from 1980 to 2006. The 10 coastal counties in the Hudson Valley experienced a 15% increase in population as compared to the entire state which experienced less than a 10% increase in population.
  - In the Great Lakes/St. Lawrence/Niagara region, development pressure is resulting in the conversion of agricultural lands to residential and commercial uses. From 2002 to 2007, total change in county farmland acres ranged from a 21% decline in Jefferson to a 25% increase in Monroe. The number of farms declined (2006 – 2007) in all counties ranging from 2.5% (Monroe, Jefferson) to 0.2% (St. Lawrence).
  - In New York City, population growth and shifts in economic sectors are resulting in the continued transition of the City's waterfront from industrial and traditional maritime activities to mixed-use residential, commercial and recreational uses. Sixty-nine percent of all growth in New York State from 2000 to 2008 was attributable to New York City.
  - On Long Island, population growth and development pressure is resulting in conversion of agricultural land, expansion of shore protection structures, and displacement of water dependent uses by non-water dependent. The population of Long Island (Nassau and Suffolk Counties) increased by approximately 4% from 2000 to 2008.
2. Are there new issues emerging in your state that are starting to affect public access or seem to have the potential to do so in the future?

Climate change and offshore energy production are two issues which are emerging as potential threats to public access in the coastal area:

### **Climate Change**

Global climate change has the potential to greatly impact public access and recreation in the coastal area. The anticipated sea level rise, increased coastal flooding, loss of wetlands, erosion and shoreline change will require adaptations by waterfront park managers and users. Recreational activities associated with natural resources such as

fishing, bird watching and the study of nature will be affected as the habitat that supports these activities changes. Managers of historic sites will also need to evaluate the impacts that climate change and associated impacts may have on the environmental setting, especially historic landscapes. Climatic changes will also impact how people recreate and their frequency of participation. It is predicted that summer recreational activities will have a longer season as the climate warms, while shorter winters will curtail opportunities for winter recreational activities.

**Offshore Energy Production**

The development of offshore energy facilities has the potential to significantly impact both physical and visual access to the coastal area. New York State has set the goal of meeting 30% of New York’s energy needs by renewable energy sources and 15% by improvements in energy efficiency by 2015 as well as achieving an 80% reduction in Greenhouse Gas Emissions from 1990 levels by 2050. New York’s wind resources are recognized to be among the best of the east coast and when coupled with existing infrastructure, high demand and high pricing, the New York coastal zone is attractive to wind energy developers. Five utility scale wind electric generating facilities have been proposed in or adjacent to New York’s Coastal Zone. Three hydrokinetic facilities having been granted preliminary permits by the FERC and two facilities have applied for preliminary permits. It is proposed that all five facilities will utilize existing tidal currents in constrained areas such as the East River, Long Island Sound, and Shelter Island Sound. These facilities can impact recreational and commercial fishing by creating exclusion zones. Additionally, the siting of large-scale commercial wind farms can significantly impact the visual quality of the coastal area.

- 3. **(CM)** Use the table below to report the percent of the public that feels they have adequate access to the coast for recreation purposes, including the following. If data is not available to report for this contextual measure, please describe below actions the CMP is taking to develop a mechanism to collect the requested data.

<b>Contextual measure</b>	<b>Survey data</b>
Number of people that responded to a survey on recreational access	2,300
Number of people surveyed that responded that public access to the coast for recreation is adequate or better.	Question not addressed in survey.
What type of survey was conducted (i.e. phone, mail, personal interview, etc.)?	Mail
What was the geographic coverage of the survey?	Statewide
In what year was the survey conducted?	2005

- 4. Briefly characterize the demand for coastal public access within the coastal zone, and the process for periodically assessing public demand.

The Statewide Comprehensive Outdoor Recreation Plan (SCORP) is the principal tool used in determining outdoor recreation demand in New York. The plan assesses existing and future recreation demands, evaluates the current recreational opportunities and estimates needs. SCORP is produced every five years by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). The Office, the Department of Environmental Conservation, and other State agencies assist in the preparation of SCORP. The most recent SCORP document was completed in December 2008 and serves as a status report and as an overall guidance document for recreation resource preservation, planning, and development in New York for the period from 2009 through 2013.

The population of New York State is expected to increase by 3.3% for the period 2005 to 2025, a fairly small increase, especially considering it takes place over the course of 20 years. However, changes in the composition of the population are substantial. These changes are the result of a number of factors, including: a net out-migration of residents, especially among younger New Yorkers; an increase in racial diversity; and an increased proportion of the elderly. Of particular significance, the number of residents over the age of 60 is projected to increase by 52.6%. These changes, more than the change in total population, will have the greatest effect on recreation patterns. Based on the 2004 General Public Recreation Survey, the ten most popular activities (with participation rates) among New Yorkers age 60 or greater include the following water-related activities: swimming (25.5%), boating (22.5%), and fishing (13.4%).

As part of the General Public Recreation Survey, New Yorkers were asked what recreation facilities they felt were needed within 30 minutes of their home. Relaxing in a local park continues to be one of several recreation activities mentioned by most New York residents. This is followed by walking/jogging, visiting museums/historic sites, swimming and biking. However, the walking/jogging experiences the highest total of activity days followed by relaxing in the park, swimming, visiting museums/historic sites, and biking.

In 2005 the New York State Office of Parks, Recreation and Historic Preservation collected data from approximately 2,300 individuals on participation in outdoor activities and attitudes toward environmental and recreational issues. Additionally, park professionals and local government officials were asked about the need for recreation facilities in their community. The results, while similar, did show some differences, notably the absence of swimming facilities from the park professional's list of the top five most needed facilities. Swimming pools and beaches were ranked first by the public. A possible explanation for this discrepancy is that because of the large capital investment, ongoing operational costs and liability concerns that swimming facilities typically involve, they were rated lower among park professionals.

Of the activities studied in the 2004 General Public Recreation Survey, swimming was the third most popular when measured by activity days and fourth most popular in terms of number of participants. This activity is most popular in the southern areas of the state, where a longer season combined with more available facilities, make it the recreation of choice for many people. Based on information from the Outdoor Recreation Facilities Inventory, the Long Island region has almost one-quarter of New York's developed beaches and approximately one-sixth of the state's pool area. Over the next 20 years, the number of swimmers and frequency of swimming is expected to change little.

New York's coast is the third longest in the nation. More than 15 million people - 85% of the State's population - live and work along the coast, an area that accounts for only 12% of the State's land mass. Trends indicate that participation in coastal recreational activities, such as swimming and fishing, will continue to increase, which, in turn, is expected to increase demand for coastal access. The needs of an aging population and expanded opportunities for disabled users must also be accounted for. Renewed interest in urban waterfronts has increasingly focused around improved public access, including improved shoreline trails and fishing access.

5. Please use the table below to provide data on public access availability. If information is not available, provide a qualitative description based on the best available information. If data is not available to report on the contextual measures, please also describe actions the CMP is taking to develop a mechanism to collect the requested data.

<b>Types of public access</b>	<b>Current number(s)</b>	<b>Changes since last assessment (+/-)</b>	<b>Cite data source</b>
<b>(CM)</b> Number of acres in the coastal zone that are available for public (report both the total number of acres in the coastal zone and acres available for public access)	764,400 acres in the coastal zone  283,836 acres in the coastal zone available for public access	Information not available: Relevant data currently being compiled by CSCIC.	NYS DOS  New York State Office of Cyber Security & Critical Infrastructure Coordination (CSCIC)
<b>(CM)</b> Miles of shoreline available for public access (report both the total miles of shoreline and miles available for public access)	3,200 miles of shoreline  Relevant data currently being compiled by CSCIC.	Information not available: Relevant data currently being compiled by CSCIC.	NYS DOS
Number of State/County/Local parks and number of acres	85 State Parks (119,600 acres)  96 County Parks (27,560 acres)  215 Local Parks (27,730 acres)	Information not available: Relevant data currently being compiled by CSCIC.  1 State Park - Walkway Over the Hudson State Historic Park (1.28 miles long)	CSCIC
Number of public beach/shoreline access sites	286 public beach access sites	Information not available: Relevant data currently being compiled by CSCIC.	Statewide Comprehensive Outdoor Recreation Plan (SCORP)
Number of recreational boat (power or non-power) access sites	777 (public and commercial)  NYS DEC owns 67 boat launches	Information not available: Relevant data currently being compiled by CSCIC.	SCORP  NYS DEC
Number of designated scenic vistas or overlook points	Comprehensive data not available.  15 designated scenic areas of statewide significance (SASS) totaling with 195 subunits representing scenic vistas.	Information not available: Relevant data currently being compiled by CSCIC.  + 9 designated SASS totaling 25,050 acres in the East Hampton SASS with 29 subunits representing scenic vistas.	NYS DOS

<b>Types of public access</b>	<b>Current number(s)</b>	<b>Changes since last assessment (+/-)</b>	<b>Cite data source</b>
Number of State or locally designated perpendicular rights-of-way (i.e. street ends, easements)	Comprehensive data not available.	Information not available: Relevant data currently being compiled by CSCIC.	
Number of fishing access points (i.e. piers, jetties)	203 sites  NYS DEC holds easements for 19 fishing access points in the CZ	Information not available: Relevant data currently being compiled by CSCIC.	SCORP  NYS DEC
Number and miles of coastal trails/boardwalks	213 trails/boardwalks totaling 976 miles	Information not available: Relevant data currently being compiled by CSCIC.	SCORP
Number of dune walkovers	Comprehensive data not available	Information not available: Relevant data currently being compiled by CSCIC.	
Percent of access sites that are ADA compliant access	Comprehensive data not available  18 ADA compliant trails  9 ADA compliant destinations owned by DEC (interpretive sites, fishing, boating, canoeing)	Information not available: Relevant data currently being compiled by CSCIC.	SCORP  NYS DEC
Percent and total miles of public beaches with water quality monitoring and public closure notice programs	Comprehensive data not available.  See below.	Information not available: Relevant data currently being compiled by CSCIC.	
Average number of beach mile days closed due to water quality concerns	Comprehensive data not available.  See below.	Information not available: Relevant data currently being compiled by CSCIC.	

The public lands and waters of the State provide a significant recreational resource. These resources are also an essential part of the character of many shoreline communities. Recreational facilities reflect a wide variety of active and passive activities, while preserving other important assets such as natural resources and maritime heritage.

Statewide, the State's outdoor recreation resources include almost 4.5 million acres of recreation and open space. There are also numerous public lands owned and managed by county and local governments as well as a growing number of lands held by land trusts.

At the State level, the Office of Parks, Recreation and Historic Preservation (OPRHP) and Department of Environmental Conservation (DEC) are responsible for the bulk of outdoor recreation and conservation in the State. DEC's primary coastal focus is on fishing and natural resources, while OPRHP directs its efforts at the full range of recreational boating and water recreation. The role of the State in providing natural, cultural and recreational opportunities goes beyond the boundaries of the lands administered by OPRHP and DEC, and also includes Environmental Protection Fund Local Waterfront Revitalization Program grants to municipalities from the Department of State for improvements to local access and recreation. The lands, facilities and programs administered by the Canal Corporation, Department of Transportation, Office of General Services and other New York State agencies also contribute to the State's outdoor recreation system. In addition, there are numerous coastal access sites maintained for local residents and/or the public by counties, towns and park districts for a variety of recreation activities.

Statewide, OPRHP administers about 330,000 acres of land incorporating 178 state parks, 35 historic sites, 67 marine facilities and boat launch sites, 20 parkways, over 5,000 structures, 77 developed beaches, 53 swimming pools, 29 golf courses, over 800 cabins and rental houses, 8,355 campsites, and over 1,350 miles of trail, as well as several outdoor education centers, museums, nature centers and the Empire State Games facilities. DEC administers nearly 4 million acres of land (including 3 million acres of Forest Preserve, over 700,000 acres of State Forest, and over 190,000 acres of Wildlife Management Areas), over 662,000 acres of Conservation Easements, 52 campgrounds, several day-use areas, 12 fish hatcheries, 1,280 miles of easements for public fishing rights, over 400 boat launch and fishing access sites, two Submerged Heritage preserves, the Belleayre Mountain Ski Center, and about 2,800 miles of trail, as well as several environmental education centers and summer camps.

Comprehensive statewide data which quantifies and describes the facilities providing public access in the coastal area is not available at this time. Data used in this assessment was obtained from a variety of sources, including the SCORP database and the NYS DEC Geographic Information System. It is important to note, however, that neither of these data sources track changes over time; therefore, it is not possible to fully assess the changes to number or type of facilities since the last 309 assessment.

Some specific changes to public access facilities in the State are listed below:

### **State Parks**

On October 3, 2009 Governor David A. Paterson opened the Walkway Over the Hudson State Historic Park as a legacy project of the Hudson Fulton Champlain Quadricentennial. The park provides access to the Hudson River's breathtaking riverscape for pedestrians, hikers, joggers, bicyclists, and people with disabilities. The bridge deck stands 212 feet above the river's surface and is 6,678 feet (1.28 miles) long, making it the longest elevated pedestrian bridge in the world.

### **Scenic Vistas**

Scenic Areas of Statewide Significance (SASS) designation affords special protection from potentially adverse federal or State actions which could impair the scenic quality of the SASS. Narratives prepared for each SASS describe the character and scenic quality of the SASS landscape and provide guidance to the public and regulatory agencies as to which landscape elements should be protected and which actions could impair the scenic quality of the SASS. Policy 24 of the New York State Coastal Management Plan (CMP) applies to those areas encompassed by the SASS designation. There are six stretches, totaling 117,796 acres of the Hudson River and its shorelands that have been designated as scenic areas of statewide significance. These are the Columbia-Greene North SASS, the Catskill-Olana SASS, the Estates District SASS, the Ulster North SASS, the Esopus-Lloyd SASS and the Hudson Highlands SASS. Within these six areas there are 166 subunits representing scenic vistas.

Nine areas, totaling 25,050 acres in the Town and Village of East Hampton, Long Island, received SASS designations in 2010. These areas include the Montauk Point SASS, the Lake Montauk SASS, the Hither Hills SASS, the Napeague SASS, the Accabonac SASS, the Gardiners Island SASS, the Three Mile Harbor SASS, the Northwest SASS, and the East Hampton SASS. Within these nine areas there are 29 subunits representing scenic vistas. An additional 5 areas totaling

2,209 acres with potential for designation as Scenic Areas of Local Significance were identified in the study that would be protected through local measures or through other State programs.

### **State or Locally Designated Perpendicular Rights-of-way**

At this time there is no comprehensive listing of State or locally designated perpendicular rights-of-way (i.e., street ends, easements) that provide public access to the coast. However, it is recognized that rights-of-way do provide valuable public access opportunities for many coastal communities. For example, the Village of Cape Vincent LWRP identifies three street ends which provide access for passive recreation along the St. Lawrence River.

### **Dune Walkovers**

Dune walkovers are most common on Long Island and Eastern Lake Ontario. In 2008, a dune crossover was constructed at Deer Creek Marsh Wildlife Management Area, located on the eastern shore of Lake Ontario in Oswego County, to enable visitors to traverse across the fragile dunes - without harming them - and enjoy access to both Deer Creek and Lake Ontario.

### **ADA-Compliant Access**

Data sources do not consistently provide detail on the availability of ADA-compliant access. For this report, the Department obtained data for several sources including the SCORP (2008) and the DEC GIS database. However, at this time there is no comprehensive listing of ADA compliant public access sites in the coastal zone. New York State strives to improve the level of access to parks, historic sites, and open space areas to persons with disabilities. Actions to achieve this goal will be accomplished by the agencies responsible for SCOPR – the NYS Department of Environmental Conservation and the NYS Office of Parks, Recreation and Historic Preservation – and will include: surveying existing facilities to determine if they are accessible, identifying actions that will be required to make facilities accessible, utilizing the proposed ADA Accessibility Guidelines to make recreation facilities accessible, and incorporating accessibility standards in all new construction and major modifications of existing state recreational facilities.

### **Public Beach Water Quality Monitoring Data**

The Natural Resources Defense Council publishes an annual report titled “Testing the Waters: A Guide to Water Quality at Vacation Beaches” (Nineteenth Edition, July 2009) which summarizes water quality and beach closure data for the State. Listed below are some of the data characterizing the water quality of the State’s public beaches:

- In 2008, New York reported 365 coastal beaches, 1 (<1%) of which was monitored daily, 25 (7%) more than once a week, 167 (46%) once a week, 41 (11%) every other week, 119 (33%) once a month. Twelve beaches (3%), where public access was prohibited, were not monitored.
- In 2008, 8 percent of all reported beach monitoring samples exceeded the state’s daily maximum bacterial standards. The beaches with the highest percent exceedance rate in 2008 were Krull Park in Niagara County (42%), Tanner Park in Suffolk County (41%), Pultneyville Mariners Beach in Wayne County (37%), Woodlawn Beach, Woodlawn Beach State Park in Erie County (34%), Sunset Bay Beach Club (32%) and Lake Erie State Park Beach (32%) in Chautauqua County, Ontario Beach in Monroe County (30%), Minasseroke Beach in Suffolk County (29%), and Evans Town Park (29%) and Lake Erie Beach (26%) in Erie County. Niagara County had the highest percent exceedance rate in 2008 (29%), followed by Wayne (26%), Monroe (24%), Erie (22%), Chautauqua (21%), Westchester (8%), Cayuga (7%), Suffolk (7%), Queens (6%), Nassau (5%), Richmond (4%), Jefferson (3%), Kings (2%), Bronx (1%), and Oswego (0%).
- New York had 846 closing/advisory events lasting six consecutive weeks or less in 2008. Total closing/advisory days for 846 events lasting six consecutive weeks or less increased 4 percent to 1,610 days in 2008 from 1,547 days in 2007, 1,280 days in 2006, and 827 days in 2005. In addition, there were two extended events (141 days total) and no permanent events in 2008. Extended events are those in effect for more than 6 consecutive weeks but not more than 13 consecutive weeks; permanent events are in effect for more than 13 consecutive weeks. In 2007, there were no extended or permanent events.
- For events lasting six consecutive weeks or less, 33% (524) of closing/advisory days in 2008 were due to monitoring that revealed elevated bacteria levels, 66% (1,058) were preemptive (i.e. without waiting for

monitoring results) due to heavy rainfall, <1% (1) was preemptive due to known sewage spills/leaks, and 2% (27) were preemptive due to other reasons.

- The reported sources of beach water contamination for 2008 are as follows: 8% (135) of closing/advisory days were from unknown sources of contamination, 84% (1,355) were from stormwater runoff, 20% (328) were from sewage spills/leaks, and 5% (80) were from other sources of contamination. Totals exceed 100 percent because more than one source of contamination was reported for some events.

New York State is making significant progress in increasing the amount and type of coastal public access through Local Waterfront Revitalization Programs, special area management plans, and projects funded through the Environmental Protection Fund. These programs provide local governments with tools and resources needed to effectively plan and implement public access improvements in their communities.

Listed below are some of the significant public access improvements in each region:

### **New York City**

The Department's involvement in New York City has helped to restore and revitalize abandoned, deteriorated waterfront infrastructure - including park space, fishing and recreational piers, and related amenities. Some of the key public access projects include:

- New York City designed and constructed a 1500-foot long portion of Harlem River Park along the Manhattan side of the Harlem River with the following results:
  - Construction of 1500 linear feet of bikeway and esplanade, providing a critical ¼-mile link in the Harlem River Bikeway to built portions north and south along the Harlem River.
  - Reconstruction of 550 linear feet of structurally failing, 400 linear feet of structurally unsound, and 300 linear feet of structurally endangered Harlem River shoreline.
  - Protection of the structural integrity of the adjacent Harlem River Drive, which would have been undermined if the structural failure of the adjacent shoreline were allowed to continue.
  - Construction of 1.25 acres of parkland with several seating areas and plant beds, including benches, game tables, trees, shrubs, grasses and perennials, and installation of 1400 linear feet of safety railing.
  - Enhancement of the ecology, water quality, air quality and esthetic character of the surrounding environment.
- The City Parks & Recreation landscape architecture team employed a “Designing the Edge” approach as a pilot project to address shoreline infrastructure repair to a heavily-armored shoreline, while also addressing the needs of the adjacent underserved community. The approach brought together a design team of marine biologists, engineers and landscape architects that engaged the community in the design of their park, waterfront esplanade and the seawall separating park use from the water. The result is varied shoreline infrastructure that not only provides stabilization, but is built with rough, porous surface to reduce wave energy and stream velocity, support and engender estuarine life, and provide habitat for filter-feeding organisms that provide natural water filtration. The design provides steps to the water's edge, one of the very few small water craft put-ins along the bulkheaded Harlem River shoreline, two publicly-accessible tide pools, and tidal wetland habitats in three gabion structures.
- The NYC Economic Development Corporation, in collaboration with the National Lighthouse Museum, designed and constructed public amenities for the 845-foot Pier One adjacent to the Staten Island Ferry Terminal on Staten Island. The historic site upland of the pier was once home to the U.S. Lighthouse Service Depot, supplier of U.S. lighthouses and lenses for over a century, beginning in 1862. New amenities include: maritime decorative and educational elements, including a variety of buoys, interactive play features, and an inlaid compass, whose points indicate destinations where U.S. lighthouse lenses manufactured on site were eventually housed; a fish cleaning station; seating, tables, chairs and new lighting.

## **Long Island**

New York State has been working with local, county and regional agencies to enhance public access on Long Island by providing more beaches, boat launches, open spaces and other recreational access points to the public. Some of the key public access projects include:

- As part of the Long Island Sound Access Initiative, the State has expanded public waterfront access at three new sites along Long Island Sound:
  - City of Rye;
  - Jamesport on the North Fork of Long Island;
  - Nissequogue River Park.
- Significant open space has been acquired that increases access to Long Island's South Shore, while protecting environmentally significant areas and expanding recreational opportunities at the following locations:
  - Sunken Meadow State Park;
  - Carmans River/Connetquot River;
  - Mount Loretto property.

## **Great Lakes/St. Lawrence River**

Municipalities located along the St. Lawrence River and the Great Lakes of Ontario and Erie continue to revitalize their waterfronts by enhancing existing public access sites and creating new public access points, trails, and interpretive centers. Some of the key public access projects funded through the Environmental Protection Fund since the last 309 assessment include:

Great Lakes:

- The City of Buffalo completed construction of the new Frank Lloyd Wright-designed boathouse. Frank Lloyd Wright's Rowing Boathouse has become an international tourist destination, hosting visitors from across the country and the world. It is also a fully functioning rowing boat house that hosts world-class regattas and is among the premier rowing venues in North America, playing a major role in the establishment of a Buffalo Public Schools' rowing program. The City is also planning, designing, and will be constructing several other projects to improve public access to its Lake Erie, Buffalo and Niagara River waterfronts, and to improve connections to the existing Olmsted Park system and Shoreline Trail.
- The Town of Grand Island is rehabilitating an underutilized waterfront parcel by removing an abandoned derelict sanitary sewer station and transforming the area into a safe and accessible waterfront park along the Niagara River. Additionally, the Town is advancing a Master Plan prepared for its Scenic Woods/Bicentennial Parks – developing 5.75 acres of nature trails throughout the parks.
- The Village of Lewiston continued to make public access enhancements at Lewiston Landing, located along the Niagara River, including: construction of a new stairway and walkways, removal of deteriorated docks (8) and replacement with new docks (8), installation of various site amenities, and bank stabilization. Designs are being completed for the Lewiston Promenade, a new facility proposed as a second level to the existing parking area. This project will include a seasonal ice skating rink and other facilities to offer year-round events.
- The Town of Newfane designed and constructed a 690 square-foot restroom/shower facility at the marina at Olcott Harbor, having two multi-user restrooms and two ADA-compliant shower rooms. These new facilities provide a much needed boater amenity while also benefitting local businesses which depend upon tourism.
- The City of Niagara Falls assessed current conditions and recommended a design for a LaSalle Recreation Way that will create a continuous waterfront and neighborhood access trail throughout the City. The City is continuing to assess Niagara Falls parks and open spaces with the intention of connecting the areas with the Niagara River waterfront.
- The City of Oswego designed and constructed improvements to the “Red,” “White” and “Blue” docks at the Wright's Landing Marina, including renovation of the docks/ installation of electric and potable water service on

the docks, and upgrade of electric service at the marina. The Wright's Landing Marina Complex is located on the Oswego Harbor/ Lake Ontario and west of the mouth of the Oswego River.

- The City of Tonawanda designed and installed 368 feet of transient dockage on the Erie Canal to accommodate increased boat usage of the Tonawanda Gateway Harbor and providing a linkage with the land-based Longs Point Park, the Canalway Trail, and downtown businesses. The City has also completed designs for ADA-compliant fishing access on Ellicott Creek, and will begin construction in 2010.
- The Town of Tonawanda constructed a non-motorized boat launch and ADA compliant restroom facility at Aqua Lane Park.
- The Village of Youngstown designed and rehabilitated its Niagara River Waterfront Park, including rehabilitation of the public boat launch, pier, and parking area.
- The City of Watertown completed design and construction of Black River improvements at the “Hole Brothers” site to facilitate boater/kayak access, and at the “Route 3 Wave” water feature to facilitate spectator access. The City continues to progress plans to connect the downtown with the riverfront and improve other waterfront parks.
- Along the Genesee River, the City of Rochester designed and constructed/installed various public amenities around the privately-held Corn Hill Landing mixed-use apartment complex, in areas retained through permanent public use and access easements. A similar project to enhance the pedestrian experience is underway at Brooks Landing. Additionally, the City continued to design and construct multiple segments of the Genesee Riverway Trail, a multi-use trail and greenway linking recreational, historical and cultural attractions, and connects with the Seaway Trail and Erie Canal Heritage Trail. The City has also been planning and designing a new 6.8-acre, 118 slip public marina facility at the Port of Rochester. Surrounding the marina will be a new public promenade connecting with the River Trail, Lake Ontario, and other public access nodes in the area.

#### St. Lawrence River:

- The Village of Cape Vincent constructed a new 25' x 57' concrete boat ramp and associated 120' seawall at East End Park.
- The Village of Clayton constructed a new public dock at Frink Park and a 1,254 feet long Riverwalk along the St. Lawrence River to promote use of the St. Lawrence River and Clayton's water-related recreational resources, while connecting institutions and neighborhoods. Renovations of the Clayton Opera House were also completed, creating a year-round cultural center, a destination for visitors, and a new center of life for downtown Clayton fostering culture, commerce, and a sense of community in the region.
- The City of Ogdensburg constructed a visitor information center in the Greenbelt Park, located immediately adjacent to the St. Lawrence River and municipal marina, providing a link between the waterfront and downtown business district.

#### **Hudson River**

Several municipalities in the Hudson Valley Region have been actively planning for new public access (i.e., waterfront trails, fishing pier, public marinas) in conjunction with multiple-use redevelopment project proposals. These projects include:

- Adjacent to their mixed-use Hudson River development, the City of Newburgh constructed a fishing pier at First Street with DOS EPF funding.
- With EPF funding from DOS, the City of Kingston continues to expand its riverfront walkway along its Rondout Creek waterfront, a thriving area filled with shops and restaurants.
- The Village of Dobbs Ferry, has completed the design of a waterfront promenade along its Hudson River shoreline and will soon be constructing the improvements. The design and construction are funded with EPF grants.

**Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Statutory, regulatory, or legal system changes that affect public access	Y	N
Acquisition programs or policies	Y	N
Comprehensive access management planning (including GIS data or database)	Y	N
Operation and maintenance programs	Y	N
Alternative funding sources or techniques	Y	N
Beach water quality monitoring and pollution source identification and remediation	Y	N
Public access within waterfront redevelopment programs	Y	N
Public access education and outreach	Y	N
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
- Characterize significant changes since the last assessment;
  - Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - Characterize the outcomes and effectiveness of the changes.

There have been no significant changes since the last assessment.

3. Indicate if your state or territory has a printed public access guide or website. How current is the publication and/or how frequently is the website updated? Please list any regional or statewide public access guides or websites.

There is no printed statewide public access guide for New York. Online information is available on a number of State agency websites, including the following:

- Empire State Development maintains the “I Love New York” website, which is described as the "Official New York State Tourism Website" (<http://www.iloveny.state.ny.us/main.asp>). The website includes information about attractions, recreational activities, accommodations and events which can be searched by location;
- The Office of Parks, Recreation and Historic Preservation (OPRHP) (<http://nysparks.state.ny.us/>) website includes information and directions for all New York state-owned parks which is searchable by location, region, or amenity/activity;

- The Department of Environmental Conservation (DEC) (<http://www.dec.ny.gov/>) website includes information about boating access and launching areas available to the public, as well as state and public fishing rights access maps. The DEC website also offers use of the State Lands Interactive Mapper (SLIM), an internet mapping tool that allows users to discover recreational features such as roads, trails, and parking lots on DEC owned lands, print maps, and obtain supported information on the use of state owned forest lands. In addition to general mapping of recreational features, SLIM provides for limited spatial data analysis.

Additionally, Empire State Development publishes a number of printed tourism guides. These guides are produced for individual communities, counties and regions.

Information presented on the websites and in printed materials is updated as warranted, or on an annual basis.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H,M,L)
Improved Geographic Information System capabilities for mapping and evaluating land use changes and public access enhancements.	Data availability and compilation.	M
Improved performance measurement system for public access enhancements.	Data availability and compilation.	M
Improved public information on public access sites.	Data availability and compilation.	M

New York State has taken a number of steps to improve access to data related to coastal access. The NYS GIS Coordinating Body, operating under the auspices of the NYS Office of Cyber Security and Critical Infrastructure Coordination, coordinates, promotes and facilitates the development, effective use, and sharing of geographic information.

It also removes barriers to implementing geographic information technology to improve the delivery of public services, protect the public and the environment, and enhance the business climate for the benefit of the State, its municipalities, businesses and citizens. The NYS GIS Data Sharing Cooperative is a group of governmental entities and not-for-profit organizations that have executed Data Sharing Agreements for the purpose of improving access to GIS data among members. The Cooperative was established by Technology Policy 97-6 (GIS Data Sharing), which also directed all NYS agencies to join the Cooperative. The Data Sharing Cooperative was primarily developed to encourage public agencies in New York to share in the creation, use, and maintenance of GIS data sets at the least possible cost.

The Department participates in both of these initiatives. A great deal of information exists on the local, county and regional levels, which as part of the work of CSCIC can be included as data layers, are available, collected and organized into a comprehensive database. A significant obstacle in developing a comprehensive database is that much of the data is not uniformly available for all parts of the coastal area.

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**                
**Medium**      X    
**Low**              

Briefly explain the level of priority given for this enhancement area.

Public access to shorelands and coastal waters continues to be an important facet of the State’s CMP.

2. Will the CMP develop one or more strategies for this enhancement area?

**Yes**                
**No**          X  

Briefly explain why a strategy will or will not be developed for this enhancement area.

While a strategy specific to this enhancement area will not be developed, issues related to public access will be addressed in part through the crosscutting fundamental strategy developed for the Cumulative and Secondary Impacts enhancement area. New York State is making significant progress in increasing the amount and type of coastal public access through Local Waterfront Revitalization Programs, special area management plans, and projects funded through the Environmental Protection Fund. These programs provide local governments with tools and resources needed to effectively plan and implement public access improvements in their communities.

The State is also making significant progress in coordination of existing programs to more effectively plan and implement public access improvements. At the state level, coordination of the Open Space Conservation Plan, Statewide Comprehensive Outdoor Recreation Plan and Coastal and Estuarine Land Conservation Program Plan helps ensure the effective use of federal, state and local funds for implementing critical public access projects.

# Marine Debris

## Section 309 Enhancement Objective

Reducing marine debris entering the Nation's coastal and ocean environment by managing uses and activities that contribute to the entry of such debris.

## Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. In the table below, characterize the significance of marine/Great Lakes debris and its impact on the coastal zone.

Source of marine debris	Extent of source (H,M,L)	Type of impact (aesthetic, resource damage, user conflicts, other)	*Significant changes since last assessment (Y or N)
Land Based – Beach/Shore Litter	H	aesthetic; resource damage (entanglement/ ingestion hazard for marine life, birds, and other wildlife; water quality hazard); user conflicts; other impacts (human health and safety; economic)	N
Land Based – Dumping	L	"	N
Land Based – Storm Drains and Runoff	H	"	N
Land Based – Fishing Related (e.g. fishing line, gear)	H	"	N
Ocean Based – Fishing (Derelict Fishing Gear)	H	"	N
Ocean Based – Derelict Vessels	L	aesthetic; resource damage (water quality); other (human health and safety; navigation hazard; economic)	N
Ocean Based – Vessel Based (cruise ship, cargo ship, general vessel)	L	aesthetic; resource damage (entanglement/ ingestion hazard for marine life, birds, and other wildlife; water quality)	N
Hurricane/Storm	M	aesthetic; resource damage (entanglement/ ingestion hazard for marine life, birds, and other wildlife; water quality hazard); other impacts (human health and safety; navigation hazard; economic)	N
Other (please specify): Land-Based -- Windborne Trash (e.g. plastic bags, balloons, etc.)	M	aesthetic; resource damage (entanglement/ ingestion hazard for marine life, birds, and other wildlife; water quality hazard)	N
Other (please specify): Land and Vessel-Based -- plastic pellets (a/k/a 'nurdles') and micro plastics	M	aesthetic; resource damage (ingestion hazard for marine life, birds, and other wildlife; water quality hazard)	N

\*Note: The last assessment did not capture the scope of the issue area and its impacts.

2. If information is not available to fill in the above table, provide a qualitative description of information requested, based on the best available information.

Disparate and diffuse sources for potential marine debris within New York State's coastal lands and waters present a tremendous challenge to effective mitigation and management. Marine debris is most apparent to the public along the state's coasts and shorelines. This type of debris pollution is a 'visible' problem and may be removed during coastal "beach cleanups." However, much marine debris pollution remains submerged and inaccessible (e.g., derelict fishing gear; large, dumped items) or circulates freely in the water column (e.g., micro-plastic pieces). This 'hidden' debris goes virtually unnoticed by the public and its impacts may be greatly underestimated.

Multiple debris pathways into coastal and marine environments further complicate effective marine debris prevention and removal. Debris originates from street litter and other trash transported in urban runoff and stormwater or carried by the wind. Water and wind move debris from overflowing garbage cans, uncovered dumpsters, landfills, industrial facilities, and port and marine transfer stations. Other avenues for debris include the release of helium balloons, recreational shoreline/ fishing/and boating activities, commercial fishing, illegal dumping on land and at sea, accidental release, and storms and natural disasters.

The rankings and impacts in the above table are based on published information on the significance and prevalence of various types of debris in the coastal environment and reflect annual beach clean-up data for New York State. Clean-up data is collected and reported by volunteers and compiled by the American Littoral Society, NY, for the Ocean Conservancy.

- *'Beach/ shore litter'* ranks high because it represents the largest share of items recovered during annual cleanups.
- *'Land-based trash from storm drains and runoff'* also ranks high because this source represents the most common pathway for debris items to reach the shore or enter the waterways and eventually be washed back to shorelines.
- *'Land-based Fishing Related'* and *'Ocean-based Fishing'* both rank high due the prevalence of these types of debris in the nearshore and offshore waters. These two sources are underrepresented in beach cleanups because debris is most likely to remain in the water and inaccessible to volunteers. [Monofilament fishing line, for example, may get caught up in trees along the shore (away from open beach areas), beneath pier/ dock structures, on jetties, rocks, and in submerged aquatic vegetation. Derelict gear can have negative impacts on fisheries.] Both sources are significant hazards for wildlife and also for boats, swimmers, and divers.
- *'Land-based - Dumping'* ranks low as dumping into coastal waters is generally prohibited and illegally dumped items are generally large and heavy with little potential to travel. Debris can therefore be more readily identified and removed if present along a shoreline. This category is also the lowest for New York State beach clean-ups.
- *'Ocean-based - Derelict Vessels'* ranks low because while this is a growing problem in some locations and can pose a navigation hazard it is not a pervasive source common to all areas. Where it has occurred in NY, local governments have taken the initiative to remove the vessels.
- *'Ocean-based - Vessel-based'* ranks low because this source is thought to contribute less to marine debris than land-based sources. This is due to international law controlling ocean dumping and applying restrictions and enforceable controls on at-sea disposal (MARPOL).

- *'Hurricane/ Storm'* ranks medium because the frequency of large coastal storms affecting the New York coast, and the debris generated through coastal damages, is modest.

Two categories have been added:

- *'Land-based - Windborne Trash'* ranks medium because it is a component of other land-based trash. It is difficult to quantify how much or for how long beach/ shore litter or runoff trash has been carried by wind or to determine exactly where it came from.
- *'Land and Vessel-based' - plastic pellets/ micro plastics'* ranks medium because it is a pervasive source of marine debris (found both along shorelines and in the water column). The extent of this problem is just beginning to be recognized and studied. In addition to hazards from ingestion by marine life and birds, these sources leach toxins into the tissues of aquatic life and directly into the water column. These toxins pose a threat to human health and have been linked to hormonal changes in fish. Due to the extremely small size and large numbers of this type of debris, it is not easily detected, collected, or removed from the environment.

3. Provide a brief description of any significant changes in the above sources or emerging issues.

The many sources of marine debris and mechanisms for entering the coastal and marine environment remain virtually unchanged.

*Emerging issues include:*

- Increased recognition of problems associated with single-use plastic bags and stronger interest and political action to curb their use and enhance reuse. The same is true for the use of plastic bottles and polystyrene containers.
- Increased recognition of water quality degradation and biological impacts resulting from toxics in the marine environment through photodegradation of micro plastics and leaching from pre-manufacture grade plastic resin pellets.
- Pharmaceuticals are an emerging marine pollutant which enters the waste stream through similar pathways as land-based debris, but their solubility in water precludes categorization as 'debris'.

4. Do you use beach clean-up data? If so, how do you use this information?

No. The State does not presently use beach clean-up data in any regular or formal manner. Beach clean-up data was used to inform this assessment and may be used from time to time in managing State parks.

### **Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

Management categories	Employed by state/territory (Y or N)	Employed by local governments (Y, N, Uncertain)	Significant changes since last assessment (Y or N)
Recycling requirements	Y	Y	Y
Littering reduction programs	N	Y	N
Wasteful packaging reduction programs	N	Y	N
Fishing gear management programs	Y	Y	N
Marine debris concerns in harbor, port, marine, & waste management plans	Y	Y	N
Post-storm related debris programs or policies	Y	Y	N
Derelict vessel removal programs or policies	N	Y	N
Research and monitoring	N	N	N
Marine debris education & outreach	N	N	N
Beach/ shore cleanups; Other direct removal of debris items	N	Uncertain	N
Pier/ Marina best management practices	N	Uncertain	N
Taxes/ fees/ or other economic disincentives or incentives	N	N	N
Bans/ regulatory controls	N	N	N

**Management categories** in the above table are summarized below:

- **'Recycling Requirements' -**  
*(State):* Title 27, ECL -- **NYS Plastic Bag Reduction, Re-Use, and Recycling Act**, Eff. Jan. 01, 2009; grocery and certain retailers must collect and recycle plastic bags; **Amendment to the 'Bottle Bill' - NYS Returnable Containers Act**, Eff. Oct., 22, 2009; extends deposit requirement to include bottled waters.  
*(Local):* NYC employs recycling laws and is active in promoting recycling; Westchester County; Greene County; Albany County; others.

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
  - a) **Characterize significant changes since the last assessment;**
    - Title 27, ECL -- NYS Plastic Bag Reduction, Re-Use, and Recycling Act, Eff. Jan. 01, 2009; grocery and certain retailers must collect and recycle plastic bags.
    - Amendment to the 'Bottle Bill' - NYS Returnable Containers Act, Eff. Oct., 22, 2009; .extends deposit requirement to include bottled water.
  - b) **Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and**
    - Both measures result from non-CZM driven changes.

c) **Characterize the outcomes and effectiveness of the changes.**

Recent legislative measures enacted (to require deposit collection on bottled water and to require retailers to provide collection points to recycle plastic bags) should reduce the total volume of waste generated. To further improve the effectiveness of these measures, compliance on the part of retailers is paramount. Ultimately, it should be feasible to quantify the number of bags returned for recycling and the number of water bottles returned for deposit refund. This data would be a useful measurement of the material removed from the total waste stream which is comprised of landfill trash, widespread litter, and marine debris.

Unfortunately, the number of recycled plastic bags and returned water bottles would likely constitute a relatively small component of the total waste stream. Nevertheless, these are extremely important measures. Perhaps, the most significant outcomes of this legislation are the environmental message being communicated to the public and the commitment to reducing waste.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Type of gap or need</b> <i>(regulatory, policy, data, training, capacity, communication &amp; outreach)</i>	<b>Level of priority</b> (H,M,L)
Knowledge and comprehension of the issue, including sources and pathways for debris --i.e. connections from land to sea -- and the influence that individual actions/ choices can have on the problem  (General Public/ Consumers/ Coastal and Marine Resource Users/ Communities)	Communication and outreach -- Marine debris education/ outreach/ stewardship (long-term/ with comprehensive approach to the topic)	H
Effective mechanical prevention of debris entry into waterways through runoff and existing storm and sewer infrastructure	Regulatory, policy, capacity - implementation of simple, existing technology	M
Effective waste reduction and recycling (Consumers/ Producers/ Point-of-Sale)	Regulatory, policy, incentives/ disincentives, communication and outreach, training, technology	M
Improved research and monitoring ; Identification of most likely pathways and accumulation areas (local)	Capacity, training, data	M
Cooperative clean-up efforts (State/ Regional/ Local)	Policy, Capacity, Outreach	M
Guidance on recreational fishing/ boating BMPs	Regulatory, policy, incentives/disincentives, communication and outreach, training, technology	M
Implementation of commercial fishing BMPs related to marine debris; Enforcement mechanism	Regulatory, policy, incentives/disincentives, communication and outreach, training, technology	M

• **Long-term education and outreach:**

Environmentally beneficial behavioral changes and consumer choices are necessary to stem the tide of marine debris. Marine debris is largely 'out of sight, out of mind' for many New Yorkers. Working with local governments, an integrated communication approach is needed which clearly draws the connection between upland activities and consequences of those activities for the coastal area and ocean. This approach will help to

'make it real' in the public consciousness and will help improve New Yorkers' understanding that they live in a 'water state'.

The message must be broadly directed toward the general public. It should also target particular audiences who have the ability to impact marine debris in specific ways (e.g., fishers, boaters, beachgoers, business owners/industry, pier/marina operators, residents, visitors/tourists, school groups, etc.). Targeting various coastal resource user groups in this way will emphasize particular aspects of marine debris (e.g., cigarette litter; plastic bags; fishing line entanglement, etc.) and should provide concrete actions that people can take. This approach serves to reinforce the larger, take away message.

- **More effective waste reduction and recycling:**

The state legislative measures recently enacted concerning recycling were important steps to raise public awareness of the need to reduce waste in the environment. More action is needed to clarify the relationship between waste reduction and marine debris. This relationship is not commonly understood by most consumers. A few actionable ideas are offered below:

Regulatory and policy improvements can be made nationally and in New York to optimize the types and weights of packaging materials used in food service, grocery stores, and retail establishments. Such improvements have the potential to effectively change the composition and volume of our waste and may lead to cost savings for businesses.

Incentives may be introduced for consumers at the point-of-sale as well as for retailers offering options or incentives. Waste reduction policies can be implemented within these businesses and service employees can receive training to pro-actively offer customers options and respect waste reduction policies such as minimizing bag use when packing. Disincentives for consumers, retailers, and producers should be explored as well. Outreach can raise consumer awareness of their options, encourage recycling, and emphasize the benefits of making more environmentally friendly choices. Apartment or housing complexes, schools, universities, hospitals and other institutions, sports arenas, and large outdoor events can be targeted to streamline their waste production, and encourage re-use, recycling, and proper disposal practices.

- **Required mechanical prevention - screening and capture devices:**

Existing storm-water infrastructure can be retrofitted with relatively simple and inexpensive mechanical screening devices as is being done by Operation Splash on Long Island's South Shore tributaries to capture floatables and other large debris items which can then be disposed of properly. New York has adopted the USEPA's 'best management practices' (BMPs) and encourages their implementation, but there is no requirement to implement them. To minimize entry of debris into waterways, an inventory should be made of existing infrastructure and mitigations employed. Based on this information, retrofitting of insufficiently screened discharge locations and new infrastructure should be required. Regulatory changes would be necessary to enforce a requirement.

- **Enhanced clean-up efforts:**

As a complement to the International Coastal Clean-up, the state could coordinate and conduct periodic cleanups with or without volunteer assistance based upon this model. In addition to directly removing potential marine debris from New York's landscape and shorelines, cleanup efforts would begin to provide the database necessary for further policy recommendations and decision-making. They may also serve as a forum for effective public outreach and public involvement.

- **Development and implementation of marine debris BMPs:**

'Best management practices' (BMPs) should be established for activities and processes which potentially have impacts in the coastal area and ocean. These would be implemented through various programs and regulatory means or may be volunteer measures. Communicating BMPs to appropriate audiences will increase their adoption and maximize marine debris prevention and control. Examples would be BMPs for recreational fishing

and boating, marina and boatyards, public and commercial pier practices, beaches and campgrounds, municipal stormwater outfalls, coastal businesses, etc.

- **Research and monitoring:**

Data on the types and distribution of coastal and marine debris is lacking. Such information can point to local problems and major sources and pathways for debris entry. Marine debris 'hot spots' could potentially be identified and mapped for use by decision-makers. An evaluation of how to best capture the total 'marine debris picture' within a local area or region and examine trends is necessary.

### **Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**        \_\_\_\_\_  
**Medium**      X    
**Low**        \_\_\_\_\_

**Briefly explain the level of priority given for this enhancement area.**

The true social cost of marine debris is not known. Marine debris has long been recognized as a societal problem with broad implications for ocean and human health. The scope of impacts resulting from marine debris encompasses direct and cumulative impacts for coastal communities, potential for harm to wildlife, impairments to water quality, navigation, and scenic and recreational resources, and includes economic impacts felt at the local and state levels. Due to the continued pervasiveness of marine debris in coastal and marine environments and the seriousness of these impacts, marine debris should be considered a priority for coastal management. Marine debris also offers a unique opportunity to engage the public in coastal stewardship. Improvements in this enhancement area will improve quality of life for communities statewide.

2. Will the CMP develop one or more strategies for this enhancement area?

**Yes**   X    
**No** \_\_\_\_\_

Briefly explain why a strategy will or will not be developed for this enhancement area.

For the reasons stated above, marine debris is a priority issue for coastal management. Solutions will require the ability to take an informed, comprehensive look at the full scope of the issue and in view of coastal resources and local coastal interests. The Coastal Zone Management Act (CZMA) of 1972 authorizes the State Coastal Management Program (CMP). As lead agency for the state CMP it is properly within this agency's purview to develop policies and programs in the interest of protecting coastal resources and the interests of coastal communities. A marine debris program aligns with our mission, responsibilities, professional areas of expertise, and complements existing policies affecting coastal resources statewide including those of the Long Island Sound, Hudson River Estuary, and the South Shore Estuary Reserve.

## Cumulative and Secondary Impacts

### Section 309 Enhancement Objective

Development and adoption of procedures to assess, consider, and control cumulative and secondary impacts of coastal growth and development, including the collective effect on various individual uses or activities on coastal resources, such as coastal wetlands and fishery resources.

### Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Identify areas in the coastal zone where rapid growth or changes in land use require improved management of cumulative and secondary impacts (CSI) since the last assessment. Provide the following information for each area:

Geographic Area	Type of growth of change in land use	Rate of growth or change in land use	Types of CSI
Hudson Valley Region	Continuing development and urbanization/suburbanization extending up the Hudson River valley.	Growth in the Hudson Valley occurred 50% faster than that of the whole state from 1980 to 2006. The 10 coastal counties in the Hudson Valley experienced a 15% increase in population as compared to the entire state which experienced less than a 10% increase in population. <sup>18</sup>	Impacts include scenic area visual quality impacts, loss of historic agricultural landscapes, water quality impacts on streams and tributaries as well as the Hudson, storm water impacts from runoff and storm sewer discharge, inadequate wastewater treatment systems and malfunctioning septic systems, over fishing of river spawning fish species.
Great Lakes/St. Lawrence/Niagara Region	Continuing subdivision and development of riparian property, including conversion of agricultural lands. Wind energy farms emerging. Increased concentration of boathouses on St. Lawrence River.	From 2002 to 2007, total change in county farmland acres ranged from a 21% decline in Jefferson to a 25% increase in Monroe <sup>19</sup> . The number of farms declined (2006 – 2007) in all counties ranging from 2.5% (Monroe, Jefferson) to 0.2% (St. Lawrence) <sup>20</sup> .  While the population of the southern Lake Ontario counties (Orleans, Monroe, Wayne) grew between 1960 and 2000 (29.3%, 24.4% and 37.9% respectively), a decline of	Impacts include loss of beaches and habitat from structural shore protection in the Great Lakes (e.g. increase shoreline hardening along Lake Ontario), coastal hazard vulnerability (e.g. bluff erosion), water quality impacts from runoff and degradation of near shore vegetation, water quality impacts to streams and tributaries associated with regional development, disruption of natural groundwater flow, increased demand for water withdrawal, loss of urban vitality / increased rate of sprawl, increased water quality / habitat impacts associated with increased boat usage.

<sup>18</sup> Scenic Hudson, Inc. (2008). *Hudson River Coast at Risk on the Eve of the 400<sup>th</sup>: Audit and Action Agenda for New York State Coastal Management Program*.

<sup>19</sup> United States Department of Agriculture: National Agricultural Statistics Service. Accessed 03/09/10.

[http://www.agcensus.usda.gov/Publications/2007/Online\\_Highlights/County\\_Profiles/New\\_York/index.asp](http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/County_Profiles/New_York/index.asp)

<sup>20</sup> United States Department of Agriculture: National Agricultural Statistics Service. Accessed 03/09/10.

[http://www.nass.usda.gov/Statistics\\_by\\_State/New\\_York/Publications/County\\_Estimates/2008/Farmland2008.pdf](http://www.nass.usda.gov/Statistics_by_State/New_York/Publications/County_Estimates/2008/Farmland2008.pdf)

Geographic Area	Type of growth of change in land use	Rate of growth or change in land use	Types of CSI
		4.1%, 0.8% and 2.6% was predicted for 2000-2007 <sup>21</sup> . All counties in the region are expected to lose population between 2000 and 2009, except Jefferson and Oswego, which will grow slightly (< 1%) <sup>22</sup> .	
New York City	Transition from coastal industry and traditional maritime activity in selected areas, storm water and waste water discharge.	Sixty-nine percent of all growth in New York State from 2000 - 2008 was attributable to New York City (355,000 of the 514,000 increase statewide). <sup>23</sup>	Impacts include transitioning of traditional shoreline industry to other uses (Red Hook, Greenpoint and the Navy Yard in Brooklyn). Urban storm water runoff and discharge as well as sanitary waste discharge impacts on water quality and natural resources.
Long Island	Storm water and wastewater discharge, conversion of limited agricultural land to development, expansion of shore protection structures, displacement of water dependent uses by non-water dependent uses (e.g. residential development).	The population of Long Island (Nassau and Suffolk Counties) was projected to increase by 109,936 persons or approximately 4% from 2000 to 2008. <sup>24</sup>	Impacts include water quality degradation, sea level rise, diminished beaches for recreation and habitat, increasing coastal hazard vulnerability, reduced shellfish habitat and harvest, visual impacts, loss of shore upland habitat, destruction of near shore upland and aquatic vegetation.

- Identify sensitive resources in the coastal zone (e.g., wetlands, waterbodies, fish and wildlife habitats, critical habitat for threatened and endangered species) that require a greater degree of protection from the cumulative or secondary impacts of growth and development. If necessary, additional narrative can be provided below to describe threats.

<sup>21</sup> Genesee/Finger Lakes Regional Planning Council. 2008-2009 Comprehensive Economic Development Strategy Update. Accessed 03/09/10. <http://www.gflrpc.org/Publications/CEDS/2008-09/0809CEDS.htm>

<sup>22</sup> ESRI, Redlands, California. Accessed 03/09/10. <http://mapapps.esri.com/create-map/index.html>

<sup>23</sup> New York City Department of City Planning. (2010). *The "Current" Population of New York City: Release of Population Estimates by the Census Bureau for July 1, 2008*. Accessed 03/03/10. <http://www.nyc.gov/html/dcp/html/census/popcur.shtml>.

<sup>24</sup> U.S. Census Bureau. Population Estimates Program. Accessed 03/25/10. [http://factfinder.census.gov/servlet/DTTable?\\_bm=y&-geo\\_id=05000US36059&-ds\\_name=PEP\\_2008\\_EST&-mt\\_name=PEP\\_2008\\_EST\\_G2008\\_T001](http://factfinder.census.gov/servlet/DTTable?_bm=y&-geo_id=05000US36059&-ds_name=PEP_2008_EST&-mt_name=PEP_2008_EST_G2008_T001) and [http://factfinder.census.gov/servlet/DTTable?\\_bm=y&-geo\\_id=05000US36103&-ds\\_name=PEP\\_2008\\_EST&-redoLog=false&-mt\\_name=PEP\\_2008\\_EST\\_G2008\\_T001](http://factfinder.census.gov/servlet/DTTable?_bm=y&-geo_id=05000US36103&-ds_name=PEP_2008_EST&-redoLog=false&-mt_name=PEP_2008_EST_G2008_T001).

Type	CSI Threats/Sensitive Coastal Resources	Level of Threat (H, M, L)
Embayments, tributaries, and lakes <ul style="list-style-type: none"> <li>• Long Island</li> <li>• Hudson River</li> <li>• Great Lakes/St. Lawrence River</li> </ul>	Nonpoint source pollution	M – severity varies by location. M M – severity varies by location.
Wetlands <ul style="list-style-type: none"> <li>• Long Island</li> <li>• Hudson River</li> <li>• Great Lakes/St. Lawrence River</li> </ul>	Adjacent development, docks, shallow draft motorized vessels, fragmentation	M/L – SAV threats from shallow draft vessels, dock impacts. M – adjacent development and fragmentation.
Beaches, dunes and bluffs <ul style="list-style-type: none"> <li>• Long Island</li> <li>• Hudson River</li> <li>• Great Lakes/St. Lawrence River</li> </ul>	Shoreline hardening	M/L – much of the shoreline has been impacted, but new impacts are managed through existing regulatory programs.  L – not highly applicable given landscape of area.  H – although regulatory programs exist, threat from shoreline hardening remains high.
Fish and wildlife habitats	Nonpoint pollution, dredging	M – significant coastal fish and wildlife habitats are protected and impacts are managed through the CMP but full scope of impacts may not be known as the State Environmental Quality Review process and Department of Environmental Conservation Regulations cannot effectively evaluate the full scope of cumulative and secondary impacts.
Scenic areas <ul style="list-style-type: none"> <li>• Long Island</li> <li>• Hudson River</li> </ul>	Poorly sited or designed development	H  H - impacts managed through designation of Scenic Areas of Statewide Significance, but the area continues to see a proliferation of shoreline development proposals, many of which do not require a Federal permit and therefore are not reviewed for coastal consistency. State consistency applies to some

Type	CSI Threats/Sensitive Coastal Resources	Level of Threat (H, M, L)
<ul style="list-style-type: none"> <li>• Great Lakes/St. Lawrence River</li> </ul>		<p>shoreline development. Problems with the application of consistency are being addressed through the regulations, through the development and dissemination of the consistency manual and through training based on the manual.</p> <p>H</p>
Long Island, South Shore	<ul style="list-style-type: none"> <li>• Water quality and habitat degradation</li> <li>• reduction in shellfish harvest</li> <li>• changes to natural shoreline</li> <li>• alteration of community character.</li> </ul>	<p>H/M</p> <p>H</p> <p>M</p> <p>L</p>
Long Island Sound	<ul style="list-style-type: none"> <li>• Water quality and habitat degradation</li> <li>• reduction in shellfish harvest</li> <li>• changes to natural shoreline</li> <li>• alteration of community character</li> </ul>	<p>H</p> <p>H</p> <p>M</p> <p>M</p>
Peconic Estuary	<ul style="list-style-type: none"> <li>• Water quality and habitat degradation</li> <li>• reduction in shellfish harvest</li> <li>• changes to natural shoreline</li> <li>• alteration of community character</li> </ul>	<p>M</p> <p>M – coming back as a result of management efforts.</p> <p>M</p> <p>M</p>
Hudson River	<ul style="list-style-type: none"> <li>• Water quality</li> <li>• changes to the natural shoreline</li> <li>• alteration of community character</li> </ul>	<p>M – water quality appears to be improving as a result of management efforts.</p> <p>L – as compared to other regions of the State.</p> <p>H – significant changes being seen as water dependent use (waterfront industry) declines and shoreline development proposals increase and focus moves farther upriver.</p>
Great Lakes / St. Lawrence River	<ul style="list-style-type: none"> <li>• Water quality</li> <li>• changes to the natural shoreline</li> </ul>	<p>M</p> <p>M/H</p>

Type	CSI Threats/Sensitive Coastal Resources	Level of Threat (H, M, L)
	<ul style="list-style-type: none"> <li>alteration of community character</li> <li>shoreline hardening and sediment supply impacts.</li> </ul>	H  H
Harbor areas throughout the state	<ul style="list-style-type: none"> <li>Water surface conflicts</li> <li>closure of shellfish beds</li> <li>vessel waste discharge.</li> </ul>	M  M - varies by location but threats are decreasing due to management efforts.  H – threats are decreasing as a result of management efforts, including designation of NDZs.

### **Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

Management Categories	Employed by state/territory (Y or N)	Significant changes since last assessment (Y or N)
Regulations		
1. Shoreline and Riparian Protection Program	Y	Y
2. New York State Consistency Regulations	Y	Y
Coastal Policies		
1. Revision of Coastal Policies	Y	Y
Guidance	Y	Y
1. Consistency Review Manual		
Management Plans		
1. Local Waterfront Revitalization Programs	Y	Y
2. Scenic Areas of Statewide Significance	Y	Y
3. Watershed Management	Y	Y
4. Brownfield Opportunity Area Program	Y	Y
5. Maritime Center Plans	Y	Y
Research, Assessment, Monitoring		
1. Significant Coastal Fish and Wildlife Habitats	Y	Y
Mapping		
1. Consistency Review Database	Y	Y
Education and Outreach		
1. Land Use Training and Technical Assistance	Y	Y
2. NYS DOS Watershed Guidebook	Y	Y
Other		
1. NYS Environmental Protection Fund Local Waterfront Revitalization Program	Y	Y
2. Smart Growth Initiatives	Y	Y
3. Vessel Waste No-Discharge Zones	Y	Y

Management Categories	Employed by state/territory (Y or N)	Significant changes since last assessment (Y or N)
4. Land Conservation and Open Space Protection	Y	Y

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
- a) Characterize significant changes since the last assessment;
  - b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - c) Characterize the outcomes and effectiveness of the changes.

• **Regulations**

- *Shoreline and Riparian Protection Program (306)* – Several New York State regulations help manage and protect the coastal area from cumulative and secondary impacts resulting from existing land use practices, growth, and development. These include: Protection of Waters (ECL Article 15, Title 5); Freshwater Wetlands (ECL Article 24); Tidal Wetlands (ECL Article 25); Stormwater SPDES; Coastal Erosion Hazard Area (ECL Article 34); Wild, Scenic and Recreational Rivers System (ECL Article 15, Title 27); Flood Control (ECL Article 16); and Participation in Flood Insurance Programs (ECL Article 36).

Recognizing the growing problems related to cumulative and secondary impacts in developed and developing coastal areas, especially along shorelines and riparian areas, the Department has drafted legislation (“Buffer Bill”) for the establishment of a Shoreline and Riparian Protection Program to identify riparian protection zones with greater setbacks and greater protection of riparian resources. The Coastal Division is committed to advancing this bill to become State law when possible and will amend the bill language as necessary to achieve successful passage.

- *New York State Consistency Regulations (309)* – The Division has been revising the New York State Consistency Regulations in order to clarify and consolidate the regulations to make state consistency regulations easier to understand. Specifically, revisions to NYCRR Part 600.3 are being considered to clarify the state consistency process and requirements for State agencies as it has been found that few other State agencies undertake consistency review. Currently the regulations pertaining to State consistency are confusing for State agencies and by not undertaking consistency review, relatively minor impacts are slipping by unmitigated, resulting in an increase of cumulative and secondary impacts. By consolidating all the information into one location with a clear definition of the process, the updates to the State consistency regulations will better manage cumulative and secondary impacts through the successful implementation of State consistency.

• **Policies (309)**

- *Revision of Coastal Policies* -- The Division is currently reviewing and revising New York’s enforceable CMP policies. This effort is intended to strengthen the policy language and identify gaps in the implementing regulations to address previously unanticipated uses and impacts (e.g. unidentified methods of energy development) and to ensure that New York’s coastal policies align with principles of Ecosystem Based Management and climate change adaptation. Strengthening the regulations and policies that implement the State’s CMP will result in greater management of cumulative and secondary impacts associated with coastal uses.

• **Guidance (309)**

- *Consistency Review Manual* – Recognizing the growing problems related to cumulative and secondary impacts in developed and developing coastal areas (e.g., combined effect of bulkheads on bay shorelines,

secondary impacts from bulkhead construction materials), the Division amended a 2001-309 strategy to focus attention on improved application of coastal consistency. The amended strategy resulted in the preparation of a draft Consistency Review Manual which was completed in June 2004. The manual has been amended and was submitted in June 2010. The completed manual is being distributed to federal, state, and local governments, and training will be provided to assist them in understanding the consistency process and how cumulative and secondary impacts can be better managed through consistency review.

The completed manual and subsequent training will dramatically improve understanding of the consistency process by Division staff, state and federal agency reviewers, consultants, local governments, and applicants. This will expedite and improve consistency applications, increasing compliance and thus strengthen New York's ability to address the cumulative and secondary impacts resulting from new development in the coastal area, and will provide for better protection of coastal resources. Better application of the State's Coastal Policies will encourage development in existing urban and marine commerce areas, reducing development pressure on other areas. In addition, the policies directly benefit resource quality including public access, air and water quality, natural habitat, natural protective features and living resources.

- **Management Plans (306/309/State Funding):**

- Special Area Management Plans (SAMPs) are formulated to address resource or development issues in a defined geographic area. SAMPs that focus on resources (e.g. watershed management plans, harbor management plans, and water quality improvement plans) address cumulative and secondary impacts to environmental quality through a comprehensive examination of the resource issues combined with measures aimed at restoring habitat, improving water quality and providing access to improved natural resource areas. SAMPs aimed at economic revitalization (local waterfront revitalization programs, downtown redevelopment plans, and brownfield opportunity areas plans) have secondary benefits for environmental quality by concentrating development in urban areas, providing appropriate management of storm water and other development impacts, and limiting conversion of undeveloped areas. Further elaboration of the way these SAMPs are protecting the State's coastal resources can be found in the SAMP enhancement area assessment.

- **Research, Assessment, Monitoring (309/306/State Funding):** Several studies and monitoring programs, by the Department and other agencies, have been completed or are ongoing that monitor and examine water quality in New York's CMZ, for instance:

- *Significant Coastal Fish and Wildlife Habitats (SCFWHs)* - Habitat narratives and boundaries for the Long Island Sound were updated and revised and the Department received OCRM concurrence for the Routine Program Change submitted to incorporate the revisions into the NYS Coastal Management Program. The Department also completed updates and revisions to the habitat narratives and boundaries for the South Shore of Long Island. These refinements allow New York State and local governments to better manage the significant aquatic resources in these areas and to reduce cumulative and secondary impacts from proposed uses or development that would affect the habitat. See Wetlands Enhancement Area Assessment for further discussion of the current status of this management category.

- **Mapping (306)**

- *Consistency Review Database* – Currently all BOA, EPF and consistency review projects are geocoded in order to record location information associated with these projects. Staff has been working with the Bureau of Information Technology Services to fix bugs and make improvements to our existing GIS-based dot-net application. This GIS application is linked to the consistency review database used by the consistency review unit to record information associated with federal and state consistency review. The upgrades will create a more robust database which will allow the unit to complete consistency reviews more efficiently and keep better track of data in order to improve our reporting capabilities. Specifically, the upgrades will allow staff to code and track projects based on project categories or types. Combined with the geocoding capabilities of the software, staff will be able to use this information to track types of activities along waterbodies or specific geographic areas in order to be able to assess the cumulative level of threat from these activities and any cumulative impacts associated with individual projects in order to better manage cumulative and secondary impacts along our coast.

## **Education and Outreach**

- *Land Use Training and Technical Assistance (306/State Funding)* - Municipal officials seeking basic information about local government powers and duties can look to the land use courses offered by the Department of State. These courses can benefit members of planning boards and zoning boards of appeals, elected officials, zoning enforcement officers and municipal employees. The 43 courses are intended to familiarize local officials with procedure, applicable State statutes, general design concepts and the context in which local decision-making occurs. The Program is a trusted resource among local government officials—particularly members of planning boards, zoning boards of appeals, and local governing boards.

In 2010, the Training Program will launch a new approach to face-to-face training, in partnership with regional and county planning agencies, tailoring content to the State's distinct regions and adding new courses. Specialists, representing the Department's other community assistance programs, will accompany training staff to engage with local officials and professionals about government efficiency and waterfront and brownfields redevelopment. The Division is also working on a program to integrate training about land use planning and coastal consistency review, as well as regulations to improve community resilience to climate change and sea-level rise. Through this program, local government personnel are provided up-to-date land use and municipal management tools to improve local decision-making. The community can, thus, enhance its ability to protect the coastal area from the cumulative and secondary impacts that sometimes accompany growth.

- *Watershed Guidebook (306)* - In 2009 the Division, in partnership with DEC's Division of Water, published a guidebook which "presents the essential steps to watershed planning and contains case studies of dedicated individuals, agencies, and organizations across the State who are making a positive difference in the quality of their watersheds and their communities."<sup>25</sup> Communities are concerned to protect and restore their water resources from the cumulative and secondary impacts that may arise from agriculture, economic growth and development. In this training manual, a step by step guide is provided to take local residents and officials from laying the solid foundation of identifying key stakeholders through tracking implementation for the completed plan and by monitoring its performance.

## **• Other**

- *New York State Environmental Protection Fund (EPF) Local Waterfront Revitalization Program (LWRP)(State Funding)* - Since inception in 1994, Title 11 of the EPF has provided more than \$214 million in assistance, through 1340 grants to villages, towns, cities and counties on New York's coast and along designated inland waterways, \$75 million in the past three grants round/years. Many of the grants are used to address cumulative and secondary impacts, including grants for beneficial use of dredged material, brownfield redevelopment, erosion management, watershed plans, LWRP preparation, and harbor management. There are eight EPF grant priority categories, which are reviewed and adjusted annually to best reflect the needs of local governments and the State's priorities in managing waterfront areas. "Adapting to climate change" is the most recent addition. See the SAMP enhancement area assessment for further discussion of plans developed under EPF LWRP grants.
- *Smart Growth Initiatives (State Funding)* - A new category of local assistance grants was created through the New York State Environmental Protection Fund pursuant to Chapter 63 of the Laws of 2005, using State funding. The Quality Communities Program provided financial and technical resources to draft and implement plans and strategies to create economically strong, vibrant communities while protecting the state's open space and natural resources.

The Quality Communities Program evolved into the Smart Growth Initiative. A grant program accompanied the policy initiative with 2007-08 and 2008-09 grants administered by the Department of Environmental

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<sup>25</sup> DOS: Coastal. *Watershed Plans: Protecting and Restoring Water Quality*. 2009. Accessed 03/18/10.  
[http://www.nyswaterfronts.com/watershed\\_guidebook.asp](http://www.nyswaterfronts.com/watershed_guidebook.asp)

Conservation and targeted geographically to the Adirondack region in 2007 and the Catskill region in 2008. Administration of the Smart Growth Grant Program returned to the Department of State for the 2009-10 award year, assigning \$500,000 for projects in lower Hudson Valley counties. Half of the funding was designated to strengthening centers, ideally with a component for transit-oriented development, while the other half went to a regional plan to improve existing centers and reduce total vehicle miles traveled in the valley. Six awards, totaling \$250,000, were made to individual municipalities and coalitions for strengthening and a single \$250,000 award was made to a coalition of nonprofit organizations to develop the regional plan.

The Smart Growth Initiative addresses cumulative and secondary impacts on several fronts, providing funds for communities to identify and protect critical open space resources, put comprehensive community plans in place to guide development, and develop programs to make community centers attractive for development. Taken together, these grant purposes reduce cumulative and secondary impacts by reducing development pressure on sensitive areas and steering development to more appropriate areas.

- *Vessel Waste No-Discharge Zones (State Funding)* - Vessel wastes often contain microorganisms, nutrients and/or chemical additives such as chlorine, formaldehyde or phenyls, which can degrade water quality in areas where they are discharged. Nutrient loading, the release of toxic materials and pathogens, and spread of disease are among the potential effects from vessel waste discharges. Cumulative and secondary impacts from vessel waste discharge may include significant damage fish and other aquatic life from hypoxia, harm to marine and estuarine life from and the release of toxic materials and pathogens, and the spread of diseases such as hepatitis to humans who come in contact with contaminated waters.

The designation of Vessel Waste No-Discharge Zones (NDZ) builds upon existing standards in federal law prohibiting the discharge of untreated sewage from vessels within all navigable waters of the United States. The Clean Water Act authorizes Vessel Waste No-Discharge Zone (NDZ) designations where a State has determined that greater environmental safeguards are warranted to protect the quality of particular waterbodies. Based on a State's petition, the EPA concludes whether or not there are sufficient vessel waste pumpout or dump station facilities for vessels using the area.

The following NYS coastal waters have been approved as NDZs by the EPA since the last 309 assessment: the South Shore Estuary Reserve (southern Long Island), Oyster Bay and Cold Spring Harbor, and Hempstead Harbor. The Division is currently involved in an effort with the New York State Department of Environmental Conservation (DEC) and the NYS Environmental Facilities Corporation (EFC) to designate Long Island Sound open waters as an NDZ, for which a petition is currently being finalized. Following a NYS DEC proposal, in May 2010 the EPA designated the entire 524 mile NYS Canal System as a NDZ, lying within NY's Coastal Non-Point Pollution Area.

- *Land Conservation and Open Space Protection*
  - *New York State Open Space Plan (OSP) (State Funding)* – The Open Space Plan is a comprehensive, statewide plan representing current open space conservation actions, tools, and programs. The OSP is administered by NYS DEC, NYS Office of Parks Recreation and Historic Preservation, the Department of State (DOS), the Adirondack Park Agency (APA), the Department of Agriculture & Markets (DAM) and the Department of Transportation (DOT), and was revised and updated in 2009. The new plan contains a list of priority conservation areas across the state, and addresses cumulative and secondary impacts through a series of recommendations to protect open space areas and their environmental benefits including riparian areas, coastal and flood plain areas, forests, wetlands, and other important areas. The new OSP also addresses cumulative and secondary impacts through an action agenda aimed at addressing climate changes and fostering green communities.

- *Coastal and Estuarine Land Conservation Program (306)* – The State Coastal and Estuarine Land Conservation Program Plan (CELCP), which was approved by NOAA in 2008, is included in the OSP. This plan qualifies the State to receive federal funds under the Coastal and Estuarine Land Conservation Program (CELCP). The development of the CELCP Plan was a CZM driven change under 306 funding source.

The CELCP Plan was designed to support the resource management priorities in New York’s Coastal Zone Management Program. In particular, New York’s CELCP priorities are the protection of tidal and freshwater wetlands, coastal floodplains, coastal erosion hazard areas, significant coastal fish and wildlife habitats, wild and scenic rivers, and lands suitable for providing coastal-based recreation and water-related access. Protection of these types of lands will achieve the following goals of the New York Coastal Management Program: improving water quality in the State’s coastal and estuarine waters; protecting and restoring living resources such as endangered and threatened species and their habitats associated with those waters; expanding public use and enjoyment of coastal resources; and helping to grow the coastal-related economy.

Since 2006, New York has received more than \$3.5 million in CELCP funds towards the acquisition of over 284 acres of land encompassing sensitive coastal habitats throughout the State. These funds have allowed for the prevention and protection from cumulative and secondary impacts by providing for the permanent protection of critical coastal resources.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H,M,L)
<i>Shoreline and Riparian Protection</i> – Although there are a number of programs currently implemented at the State level, in order to protect shoreline and riparian areas at individual sites many of the threats to the State’s natural resources are non-point and have a cumulative negative impact on NY’s coastal area.	Regulatory and/or policy	H
<i>LWRPs and SAMPs</i> – As the State has adopted principles of ecosystem-based management and Smart Growth and faces the challenge of climate change, the traditional approach found in LWRPs and SAMPs can be adapted to more effectively address cumulative and secondary impacts.	Regulatory, policy, data and training	H
<i>Significant Coastal Fish and Wildlife Habitats</i> - The SCFWHs for Westchester County (Long Island Sound), the Great Lakes, and St. Lawrence regions would benefit from being updated with more current information and scientific understanding.	Data and regulatory	H
<i>Watershed Management</i> - As human demand for water increases, natural systems can be threatened and hydrologic regimes compromised. Expanded access to data on a watershed scale to address large scale impacts is necessary.	Regulatory and policy	M
<i>Mapping</i> – There are several key needs in regard to data gaps, software compatibility issues, capacity, and training.	Data, capacity and training	H

Gap or need description	Type of gap or need (regulatory, policy, data, training, capacity, communication & outreach)	Level of priority (H,M,L)
<i>Education and Outreach</i> – The training needs of local officials are shifting. Community resilience to climate change and sea level rise is increasingly important. Training is being developed to meet these needs and to heighten understanding of coastal consistency review.	Communication and outreach	M

- *Shoreline and Riparian Protection* – Although there is a variety of State programs and regulations that addresses negative environmental impacts on a site by site basis, New York as a whole is having difficulty addressing the full magnitude of cumulative and secondary impacts upon the State’s natural resources. The Department continues to advance the “Buffer Bill” as a whole, but several of the recommendations proposed in the Buffer Bill could be implemented by the Department independently of the proposed legislation in order to strengthen the protection of shoreline and riparian areas throughout the State. Many of these recommendations will enable communities and the State to identify, assess and develop potential measures and management practices to address cumulative and secondary impacts at a watershed or ecosystem scale. These might include:
  - Establish a new funding category for the development of local plans and laws designed to protect shorelines, riparian buffer areas, watersheds and scenic viewsheds by indentifying, assessing and addressing cumulative and secondary impacts;
  - Examine the State’s Coastal Policies to determine if protections for shoreline and riparian buffer areas and scenic viewsheds can be strengthened (underway as part of an ongoing effort to update the State’s Coastal Policies);
  - Priority access to funding for projects designed to protect critical areas (e.g., headwater streams), restore natural protective features (e.g., tidal wetlands), remove structures from hazard areas, and establish contiguous open space along shorelands and riparian areas, and land use management approaches and capital projects needed to reduce nonpoint source pollution, improve and/or protect water quality, and protect or restore stream corridors and/or aquatic habitat;
  - Incorporate additional elements designed to address flood protection, such as the identification of critical coastal and riparian buffers, strategies and techniques for protecting coastal and riparian areas, and guidelines and standards for compatible land uses as part of voluntary intermunicipal watershed plans;
  - Work with the Department’s Codes Division to examine whether setbacks from waterbodies for all buildings and related infrastructure can be established in the State Building Code;
- *Local Waterfront Revitalization Programs (LWRP) and Special Area Management Plans (SAMPs)* – Traditionally, the Department has addressed cumulative and secondary impacts through LWRPs and SAMPs. However, by applying recently developed principles of Ecosystem-Based Management and Smart Growth, will improve the effectiveness of LWRPs and SAMPs to address cumulative and secondary impacts. An emerging issue in New York State is the cumulative and secondary impacts resulting from climate change and sea level rise. LWRPs and SAMPs could be amended to address these impacts with adaptive planning. Further identification of measurable indicators will allow the NYSDOS and municipalities to more adequately monitor the success/effectiveness of LWRPs to address cumulative and secondary impacts through effective adaptive management.
- *Significant Coastal Fish and Wildlife Habitats (SCFWH)* – As further described in the Wetlands enhancement area assessment and the SCFWH Update strategy, the State intends to update the SCFWHs for the St. Lawrence River region, the Great Lakes region and the Long Island Sound portion of Westchester County. By updating SCFWH assessments, the State will be more able to identify and address uses in these regions that, individually,

result in minor impacts but, cumulatively, result in quite significant impacts, to better protect the State's coastal resources.

- *Watershed Management* – A new approach to identification and quantification of the cumulative impacts of known or suspected threats to the environment and human health is needed. Some threats are related to the effect of land development/water extraction on watershed hydrology and groundwater flow, that currently sustains coastal tributaries, nearshore water quality and habitats (including SCFWHs). Alteration of hydrology can adversely influence groundwater-dependent ecosystems. Impacts can include periods of prolonged low or excessively high stream flow, altered wetland structure, changes in water temperature, modification of nutrient cycling, and chemical composition of the water.

Each new development/water extraction has an individual impact, such as impingement/entrainment of fish, which may be assessed for permitting purposes at a discrete point in time, however when combined, these individual withdrawals have a cumulative impact which needs to be considered and managed in order to maintain proper ecosystem health and function. As part of an effort to identify cumulative impacts on a watershed or ecosystem scale, new data is needed relating to identification and quantification of the cumulative impacts of known or suspected threats to the environment and human health at this larger scale. Furthermore, there is a need to quantify the cumulative impacts in order to assess the management measures that are needed to control impacts. The State and individual communities need to approach development management strategies at an ecosystem or watershed scale to more adequately assess and address the cumulative impacts to New York's water resources.

- *Mapping* – The Department currently utilizes MapInfo Professional for GIS mapping and data analyses. While the program is capable of doing complex analyses similar to other programs in use, there are a number of models which have been developed for land use and management which are based on ESRI's ArcGIS software. As a result of using MapInfo exclusively, the Department is limited in what it can do with natural resources data due to an incompatibility between current software and that on which other modeling has been based. For instance, NOAA's Coastal Services Center offers a number of data analysis tools that can be used to address coastal management of cumulative and secondary impacts, such as the Habitat Priority Planner, Nonpoint Source Pollution and Erosion Comparison Tool, and the Impervious Surface Analysis Tool. These tools are developed as extensions to ESRI's ArcGIS and Spatial Analyst software and, as such, are unavailable to the Department's MapInfo system.
- *Education and Outreach* - The Department and its training partners are evolving their collaboration to meet changing needs of local government officials. Several adaptations are under way to improve and broaden content and delivery methods for Local Government's Land Use Training and Technical Assistance series. The Division is developing training materials to educate local officials on developing plans to address community resilience to climate change and also for coastal consistency review. Recognizing that New York's communities will be facing a variety of issues/impacts associated with climate change, the Department wants to assist them in being as prepared as possible.

### **Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**          X    
**Medium**    \_\_\_\_\_  
**Low**        \_\_\_\_\_

Briefly explain the level of priority given for this enhancement area.

As identified in the assessment of this enhancement area and others throughout this document, New York’s natural, scenic, recreational and community resources are being impacted by a variety of causes, including non-point source pollution, shoreline hardening, sea-level rise, erosion, poorly sited or poorly designed development, and habitat fragmentation. Each threat has its own resulting impact; however, when assessing the cumulative impacts of all of these threats combined, the potential impact to New York’s coastal area is amplified severalfold. By giving this enhancement area a high priority rating, the New York State Department of State can take important steps towards developing a strategy that will identify, analyze, and address this variety of cumulative and secondary impacts in order to provide better protection to the State’s coastal resources.

2. Will the CMP develop one or more strategies for this enhancement area?

Yes

No

Briefly explain why a strategy will or will not be developed for this enhancement area.

A strategy will be developed for this enhancement area to refine the approach for developing new and amended Local Waterfront Revitalization Programs (LWRP) and Special Area Management Plans (SAMPs) to use principles of Ecosystem-Based Management; Smart Growth; and climate change adaptation along with state-of-the-art GIS analyses to more adequately identify, analyze, and address cumulative and secondary impacts. The strategy would also include the identification of measurable indicators to enable the NYSDOS and municipalities to more adequately monitor the success/effectiveness of LWRPs to enable effective adaptive management.

# Special Area Management Planning

## Section 309 Enhancement Objective

Preparing and implementing special area management plans for important coastal areas.

The Coastal Zone Management Act (CZMA) defines a Special Area Management Plan (SAMP) as “a comprehensive plan providing for natural resource protection and reasonable coastal-dependent economic growth containing a detailed and comprehensive statement of policies; standards and criteria to guide public and private uses of lands and waters; and mechanisms for timely implementation in specific geographic areas within the coastal zone. In addition, SAMPs provide for increased specificity in protecting natural resources, reasonable coastal-dependent economic growth, improved protection of life and property in hazardous areas, including those areas likely to be affected by land subsidence, sea level rise, or fluctuating water levels of the Great Lakes, and improved predictability in governmental decision making.”

### Resource Characterization

Identify geographic areas in the coastal zone subject to use conflicts that can be addressed through special area management plans (SAMP). Also include areas where SAMPs have already been developed, but new issues or conflicts have developed that are not addressed through the current plan. If necessary, additional narrative can be provided below.

<b>Geographic Area</b>	<b>Major Conflicts</b>	<b>Is this an emerging or a long-standing conflict?</b>
Long Island Sound	Residential and commercial development along shorelines has impacted ecosystems, has limited public recreational access to the shoreline, and has impacted scenic resources.	Long-standing
	Off-shore wind turbine development may have potential effects on ecosystems and on scenic and aesthetic resources.	Emerging
	Development of Liquid Natural Gas (LNG) infrastructure threatens ecosystems and results in potential conflicts with other on-water uses.	Emerging
	Development and other land uses, both along the waterfront and higher in the watershed, have led to water quality issues- especially pollution from stormwater runoff, storm sewer discharge, inadequate wastewater treatment systems and other non-point sources.	Long-standing
	Identification of appropriate sites for the placement of dredge materials continues to be an issue.	Long-standing
	Shoreline stabilization and development of shoreline structures creates impacts to habitats and ecosystems and creates a conflict between public/private rights and uses.	Long-standing
	Carbon sequestration, through the injection of carbon into underground strata, has numerous impacts yet to be determined.	Emerging
South Shore of Long Island	Residential and commercial development along shorelines has impacted ecosystems, has limited public recreational access to the shoreline, and has impacted scenic resources.	Long-standing
	Off-shore wind turbine development may have potential effects on ecosystems and on scenic and aesthetic resources.	Emerging
	Development of Liquid Natural Gas (LNG) infrastructure threatens ecosystems and results in potential conflicts with other on-water uses.	Emerging
	Development and other land uses, both along the waterfront and higher in the watershed, have led to water quality issues- especially pollution from stormwater runoff, storm sewer discharge, inadequate wastewater treatment systems and other non-point sources.	Long-standing

<b>Geographic Area</b>	<b>Major Conflicts</b>	<b>Is this an emerging or a long-standing conflict?</b>
	Identification of appropriate sites for the placement of dredge materials continues to be an issue.	Long-standing
	Shoreline stabilization and development of shoreline structures creates impacts to habitats and ecosystems and creates a conflict between public/private rights and uses.	Long-standing
	Carbon sequestration, through the injection of carbon into underground strata, has numerous impacts yet to be determined.	Emerging
Hudson River Valley	Residential and commercial development along shorelines has impacted ecosystems, has limited public recreational access to the shoreline, and has impacted scenic and historic resources.	Long-standing
	The existence of railroad tracks, along both the east and west shores of the Hudson River, has limited public access to the River.	Long-standing
	Shoreline stabilization and development of shoreline structures creates impacts to habitats and ecosystems and creates a conflict between public/private rights and uses.	Long-standing
	Development and other land uses, both along the waterfront and higher in the watershed, have led to water quality issues- especially pollution from stormwater runoff, storm sewer discharge, inadequate wastewater treatment systems and other non-point sources.	Long-standing
Great Lakes	Great Lakes off-shore wind turbine development may have potential effects on ecosystems and on historic, scenic and aesthetic resources.	Emerging
	Shoreline stabilization and development of shoreline structures creates impacts to habitats and ecosystems and creates a conflict between public/private rights and uses.	Long-standing
	Carbon sequestration, through the injection of carbon into underground strata, has numerous impacts yet to be determined.	Emerging
	Significant increases in water withdrawal, for uses such as bottling water and hydraulic fracturing, may result in potential cumulative impacts to groundwater hydrology and groundwater dependent ecosystems, such as streams and near shore habitats.	Emerging
St. Lawrence River Valley	Boathouse proliferation along the St. Lawrence Seaway, especially in the Thousand Islands area, has impacted natural and scenic resources.	Long-standing
	Shoreline stabilization and development of shoreline structures creates impacts to habitats and ecosystems and creates a conflict between public/private rights and uses.	Long-standing
Niagara River	Lack of access and connections to the region's natural, cultural, recreation, scenic and heritage resources is an issue that is being addressed by the Niagara River Greenway Commission.	Long-standing
Harlem and East Rivers	Intense residential and commercial development along shorelines has impacted ecosystems and has limited public recreational access to the shoreline.	Long-standing
	Development and other land uses have led to water quality issues- especially pollution from stormwater runoff, storm sewer discharge, inadequate wastewater treatment systems and other non-point sources.	Long-standing
	Shoreline stabilization and development of shoreline structures creates impacts to habitats and ecosystems and creates a conflict between public/private rights and uses.	Long-standing

**Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. Identify below any special management areas in the coastal zone for which a SAMP is under development or a SAMP has been completed or revised since the last Assessment:

<b>SAMP Title</b>	<b>Status</b>	<b>Date approved or revised</b>
<b>Watershed Management Plans</b>		
Mill Creek Watershed Plan - Village of Port Jefferson.	Completed inventory and characterization component of Watershed Management Plan.	In progress.
Lake Montauk Watershed Plan - Town of East Hampton	Preliminary field work completed, including water quality sampling and natural resource inventories. DOS staff reviewed and approved first sub-report produced by Cornell Cooperative Extension.	In progress.
Niagara River Watershed Plan-Phase I- Town of Tonawanda	Work on the watershed plan has just commenced.	In progress.
Alley Creek Watershed Management Plan- NYC	Awarded in 2009, the Alley Creek Watershed Management Plan will address stormwater runoff, aging infrastructure, habitat protection, and invasive species removal.	In progress.
Beaverdam Creek Watershed Management Plan	The Beaverdam Creek Action Plan address critical issues including stormwater runoff and nonpoint source pollution.	In progress.
Bronx River Watershed Management Plan- NYC	The Bronx River Watershed Management Plan is in its final stages of development. The plan will address nonpoint pollution including Combined Sewer Outfalls.	In progress.
Dering Harbor Watershed Management Plan- Town of Shelter Island	Awarded in 2009, the Dering Harbor Watershed Management Plan will address stormwater runoff, sedimentation, and nitrogen.	In progress.
Forge River Watershed Management Plan	The Forge River Watershed Management Plan will address stormwater runoff, nutrients, and other nonpoint source pollution issues.	In progress.
Great Cove Tributaries Watershed Management Plan	The Town of Islip is preparing watershed management plans for five tributaries to Great Cove.	In progress.
Greens Creek and Browns River Watershed Management Plan	The Greens Creek and Browns River Watershed Management Plan addresses stormwater runoff and other nonpoint source pollution issues. Numerous priority water quality projects have been implemented including a number of stormwater abatement projects.	Completed 2007.
Hashamomuck Pond Watershed Management Plan	The watershed management plan for Hashamomuck Pond identifies Best Management Practices including installation of grass channels, bioretention	Completed 2006.

SAMP Title	Status	Date approved or revised
	systems, dry swales, sediment forebays, oil separators, low flow outlets and site restoration.	
Swan River Watershed Action Plan	The Swan River Watershed Action Plan focuses on habitat protection and nonpoint source pollution. Currently, priority projects are being implemented including a fish ladder and habitat restoration project.	Completed 2007.
Quassaick Creek Watershed Management Plan	Awarded in 2009, the Quassaick Creek Watershed Management Plan will address Combined Sewer Overflows, nutrients, and nonpoint source pollution.	In progress.
Rondout Creek Watershed Management Plan	Awarded in 2009, the Rondout Creek Watershed Management Plan will address nonpoint source pollution, drainage patterns, and Combined Sewer Overflows.	In progress.
<b>Redevelopment Plans</b>		
Planning for Newburgh/Hudson River LWRP Revision- City of Newburgh	Preliminary draft LWRP submitted to DOS for review.	In progress.
Southern Waterfront Redevelopment- City of Peekskill	Working with City to complete construction documents for shoreline stabilization along several stretches of waterfront.	Southern Waterfront Redevelopment Plan completed and approved July 2009.
Planning for East End Waterfront Redevelopment- City of New Rochelle		Completed March 2006.
Hudson River Waterfront Development Guidelines and Standards- City of Kingston	Working with consultant Scenic Hudson to distribute Illustrated Principles of Sound Waterfront Development guidance document.	Completed May 2010.
Town of Tonawanda Waterfront Land Use Plan	Work with the Town of Tonawanda has just commenced.	In progress.
Town of Oyster Bay Eastern Waterfront Redevelopment Plan	Plan has been completed for the Towns waterfront along Oyster Bay Harbor.	Completed May 2009.
<b>Natural Area Plans</b>		
Mill Pond Overlook Restoration- Natural Area Plan- Town of Oyster Bay	Consultant hired to undertake plan.	In progress.
East Hampton SASS	State designation of nine areas totaling 25,000 acres.	SOS designated April 2010.
Fresh Kills Redevelopment: Ecological Studies and Environmental Review- Borough of Staten Island; Stewardship & Implementation Planning; Planning for Early Implementation Activities	DOS is working with the City to advance Phase 1 development of North and South Parks. Schematic designs have been completed for North Park and are all-but-complete for South Park. Site-wide concept plans for wetland and habitat restoration, native plant propagation, roadway alignment and parking are nearing completion, and a draft Stewardship & Implementation Plan and associated MOU with the NYC Dept. of	In progress.

<b>SAMP Title</b>	<b>Status</b>	<b>Date approved or revised</b>
	Sanitation is under review.	
<b>Maritime Center/Harbor Management Plans (HMPs)</b>		
NYC Maritime Support Services Study - NYC EDC	Draft Maritime Support Services Study update to inventory and estimate demand through 2015 for maritime industry and support services submitted to DOS for review.	In progress.
Beacon Harbor HMP	Draft HMP has been completed and let for 60-day review. Comments are being addressed.	Completed December 2009.
Mt. Sinai HMP	The Sinai Harbor Management Plan, completed and adopted by the Town of Brookhaven, establishes priorities and specific recommended actions to improve the environmental resources of the harbor; improves public access to the harbor; reduces conflicts between different uses of the harbor; and creates a balance between demands on the harbor's natural resources and the protection of those resources.	Completed December 2007.
Port of Rochester HMP	Work with the City of Rochester has just commenced.	In progress.
Sodus Bay HMP	This HMP has been drafted, DOS has provided comments, and comments are now being addressed by the consultant. Public 60-day review of the HMP will happen concurrently with the Sodus Point LWRP Amendment.	In progress.
<b>Local Waterfront Revitalization Programs (LWRPs)</b>		
Long Island		
Village of East Hampton		
Village of East Hampton	LWRP was approved by SOS.	December 2007.
Village of Ocean Beach	LWRP was approved by SOS.	November 2010.
Village of Greenport	DOS is working with the community to develop the various sections of the LWRP.	September 2010.
Town of Huntington	DOS is reviewing the draft LWRP for its readiness for review by potentially affected agencies.	In progress.
Village of Lindenhurst	DOS is reviewing the draft LWRP for its readiness for review by potentially affected agencies.	In progress.
City of Long Beach	DOS is working with the City to develop the local laws to implement the LWRP.	In progress.
Village of Patchogue	LWRP under development.	In progress.
Hudson River		
City of Albany		
City of Albany	DOS is working with the community to develop the various sections of the LWRP.	In progress.

<b>SAMP Title</b>	<b>Status</b>	<b>Date approved or revised</b>
Town of Bethlehem	DOS is working with the community to develop the various sections of the LWRP.	In progress.
Village of Dobbs Ferry	LWRP was approved by SOS	October 2006.
City of Hudson	DOS is working with the City to identify changes needed to address 60-day review comments.	In progress.
Village of Ossining	DOS is working with the Village to prepare a draft amendment for review by potentially affected agencies.	
City of Rensselaer	DOS is working with the community to develop the various sections of the LWRP.	In progress.
Village of Tarrytown	DOS is working with the community to develop the various sections of the LWRP.	In progress.
<b>St Lawrence River and Great Lakes</b>		
City of Buffalo	DOS is working with the City to prepare the draft LWRP for review by potentially affected agencies	In progress.
Town of Grand Island	LWRP was approved by SOS	December 2006.
Town of Hamlin	LWRP was approved by SOS	August 2008.
City of Oswego	DOS is working with the City to draft the sections of the LWRP	In progress.
City of Rochester	DOS is working with the City to draft an LWRP amendment	In progress.
Village of Sodus Point	LWRP was approved by SOS	December 2006.
Town of Tonawanda	LWRP was approved by SOS	September 2008.
City of Watertown	DOS is working with the City to address comments received from review by potentially affected agencies.	In progress.

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
  - a) Characterize significant changes since the last assessment (area covered, issues addressed and major partners);
  - b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - c) Characterize the outcomes and effectiveness of the changes.

#### **Watershed Management Plans (309 and state funding)**

Supported by \$27.2 million in Environmental Protection Fund funding to communities within the coastal zone and the coastal nonpoint area, watershed management planning examines impacts to surface water quality on a watershed basis and includes the identification and prioritization of storm water infrastructure capital improvement projects. To date, the efforts have resulted in 31 watershed plans, involving 417 municipalities in 50 counties (see table above for most recently approved). These plans cover almost 9400 square miles - 20% of the land area of New York State. The agreements are intermunicipal and involve state agencies and water quality protection and restoration advocacy organizations. Many intermunicipal organizations have chosen to extend the collaborative process, following planning with implementation.

### **Redevelopment Plans (309 and state funding)**

The Department of State worked successfully with the Town of Oyster Bay and the Cities of Peekskill and New Rochelle to develop plans for the redevelopment of sections of their waterfronts in need of redevelopment. These plans will guide the reinvestment into the waterfronts of these communities as well as guide the development of land use regulations that achieve the communities' identified visions for their waterfront.

The Department also worked with Scenic Hudson to develop a guide for appropriate waterfront development along the Hudson River. This guide provides tools to promote the development of lively, pedestrian-friendly, mixed-use riverfronts in and adjacent to municipal centers while conserving forests, farms, wetlands, and fields, and providing for a continuous public greenway corridor along the river. The land-use pattern promoted in this guide will allow riverfront communities to accommodate and benefit from new development in ways that increase economic viability, enhancing main streets and community life while protecting the Hudson River's ecology and internationally celebrated beauty. The guidelines in this document emphasize the important relationship between downtown revitalization and new development outside of the urban core. The guide offers development guidelines that are applicable to municipalities of varying scales.

### **Natural Area Plans (309 and state funding)**

- **East Hampton Scenic Areas of Statewide Significance**

More than 250 separate visual landscapes were analyzed using evaluation criteria based on the results of a scenic landscape survey of more than 200 East Hampton residents. The visual assessment process emphasized both natural and cultural factors in the landscape. In historic coastal landscapes such as in East Hampton, human activities over the centuries have modified and often enhanced the scenic character of the land. Understanding and documenting historical and cultural traditions helped in assessing scenic character, especially in a community with such a strong tradition of art, painting, photography, and architecture. The information collected was incorporated into revised narratives and maps which comprised a 2007 draft document entitled *East Hampton Scenic Areas of Statewide Significance*.

The Secretary of State designated nine areas totaling 25,050 acres in the Town and Village of East Hampton as Scenic Areas of Statewide Significance (SASS) (April 2010). The designation was the culmination of a long process which included the development of an inventory of scenic landscapes and strategies for their protection titled East Hampton Scenic Resources Protection Plan and a public meeting and public hearing on the SASS designation.

### **Maritime Center/Harbor Management Plans (309 and state funding)**

Chapter 791 of the Laws of 1992 was enacted, amending Article 42 of the Executive Law (Waterfront Revitalization and Coastal Resources Act) to provide local governments with the clear authority to comprehensively manage activities in harbor and nearshore areas by developing comprehensive harbor management plans and laws to implement those plans. Harbor management plans are to be comprehensive and must consider a variety of regional needs such as the competing needs of commercial shipping and recreational boating, commercial and recreational fishing and shellfishing, aquaculture, waste management, mineral extraction, dredging, public access, recreation, habitat and other natural resource protection, water quality, open space, aesthetic values, and common law riparian or littoral rights, and the public interest in underwater lands. Harbor management plans must cover all surface waters within or adjacent to a municipality. This includes in-water areas adjacent to open shorelines as well as actively used enclosed bays or harbors. The harbor management plan provides a rational basis for the allocation and use of space within a harbor or nearshore area. A harbor management plan and its implementation effectively zones surface water areas and underwater lands for specific uses or a range of specific uses in order to avoid conflicts or improve conditions within harbor or nearshore areas. The DOS has worked with or is still working with the communities in the table identified above to develop Harbor Management Plans that will either stand alone or be incorporated into LWRPs. The Town of Brookhaven and the City of Beacon have each adopted HMPs for their respective harbors.

**Local Waterfront Revitalization Programs (LWRPs) (306/State funding)**

LWRPs are land and water use plans as well as strategies to implement the plans, and, as such, each one serves as a Special Area Management Plan (SAMP). LWRPs may be comprehensive and address all issues that affect a community's waterfront or harbor areas or they may address only the most critical issues affecting the coastal area. As planning documents, LWRPs are locally prepared land and water use plans for the developed, natural, public, and working waterfronts. LWRPs provide a comprehensive framework within which communities can develop a vision for the waterfront and in-water areas. LWRPs also provide the organizational structure, local laws, and projects to achieve the plan. Furthermore, each LWRP amends the State's Coastal Management Program with information and proposed uses for each defined Local Waterfront Area. As identified in the table above, the Department has worked with many communities through use of the Environmental Protection Fund Local Waterfront Revitalization Program grant program to develop LWRPs during the 2006-2011 assessment period.

Although the Department is working with many communities throughout the State to develop LWRPs, there are some regions that have been slow to adopt LWRPs and their implementing local laws - such as the South Shore of Long Island. An interim step is to work with some of these regions to develop regional or ecosystem based LWRPs that address issues that extend beyond a single municipality - such as climate change, sea-level rise, energy development, aquaculture, etc - similar to the approach taken during the development of the Long Island Sound Coastal Management Program - but not necessarily as comprehensively. Often regional issues are identified by one or more communities, but a single municipality may lack the capacity to solve some of these larger, more complex issues. By working with multiple communities on topic-based LWRPs, the State might be able to assist communities in successfully tackling these regional issues.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy).

<b>Gap or need description</b>	<b>Type of gap or need (regulatory, policy, data, training, capacity, communication &amp; outreach)</b>	<b>Level of priority (H,M,L)</b>
<i>Regional/Ecosystem Scale SAMPs</i> - To better address some of the conflicts identified in the resource characterization table above that are of a more regional, watershed, or ecosystem nature (such as climate change or energy infrastructure development), there is a need to develop intermunicipal, regional, or ecosystem scale SAMPs (including LWRPs) that incorporate current thinking and planning methodologies (e.g. Ecosystem Based Management, Smart Growth, Climate Change Resiliency, and Marine Spatial Planning).	Capacity	H
<i>GIS Data</i> - To better support the development of regional or ecosystem scale SAMPs, there is a need for better GIS data related to the location of various resources/uses (e.g. habitats, land and water uses, infrastructure, etc.).	Data	H Efforts underway through CSCIC, OGLECC, and DOS Oceans and Great Lakes Program
<i>Measurable Indicators</i> - To better track the results of management efforts identified in SAMPs to in-turn better inform adaptive management, there is a need for improved tracking of measurable indicators and results.	Data	M

The New York State Coastal Management Program was approved in 1982 under the charge of the Department of State (DOS) in response to increasing use conflicts involving local, state and federal land and water resources. To address these issues, the Coastal Management Program began working with various municipalities through the Local Waterfront Revitalization Program (LWRP) to improve decision-making processes. However, many issues facing the coast and watersheds transcend municipal boundaries and although LWRPs have proven to be quite successful at addressing land and water uses at the municipal level, there are times when complex issues reach well beyond the boundaries of a single municipality. The programs and grants available through DOS have provided the catalyst for DOS' involvement in a variety of regional projects and proposals and this has resulted in numerous collaborative actions. DOS has brought diverse stakeholders together to understand issues, avoid conflict, and establish on-going dialogue to pro-actively plan next steps toward implementing common goals and objectives. This includes addressing complex land use issues that result from the interaction between natural processes and human development.

The DOS would like to capitalize on these regional successes, such as the Department's successful watershed management planning efforts, to develop other regional SAMPs that address more complex regional and ecosystem scale issues (e.g. water quality, climate change, habitat degradation, energy development, etc.) - especially in regions lacking adopted local programs, such as the South Shore of Long Island. Climate change and sea level rise impacts on the South Shore of Long Island are likely to be the second most severe in the State outside of New York City due to the extent of hardened shoreline, lack of upland areas for wetland migration, and vulnerability of natural features (e.g., dunes and beaches) to increased erosion, flooding and storm damage. To date, no LWRPs have been adopted for the South Shore, despite the Department's efforts to engage communities and work towards LWRP adoption. Since communities are unable to successfully adopt LWRPs, the Department intends to undertake the development of a SAMP to address a region's most pressing issues.

Furthermore, as DOS's current management approach (LWRPs, HMPs, and SAMPs) addresses use conflicts to protect uses and habitats along the near-shore, increased attention should be focused on in-water uses further seaward. In New York's offshore areas there is increasing pressure for alternative energy facility siting and an increased awareness of important ocean habitat areas as data gathering techniques have improved. As a result, Coastal and Marine Spatial Planning has become a high priority for New York State, just as it has with the Federal government and many other state coastal programs. Coastal and Marine Spatial Planning is intended to improve ecosystem health and services by planning human uses in concert with the conservation of important ecological areas, such as areas of high productivity and biodiversity, areas and key species that are critical to ecosystem function and resilience. By obtaining a better understanding of the demands of each human use and each ecosystem function, the DOS can better manage, or assist local governments in managing, in-water uses to reduce use conflicts and protect ecosystem health. Improved Geographic Information System (GIS) data, to which the State or Department is currently lacking access, would prove to be quite beneficial to the development of SAMPs that address regional issues - both upland and in-water. The Department will be seeking additional data sources to improve its capabilities to develop holistic regional and ecosystem focused SAMPs.

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**     \_\_X\_\_  
**Medium**  \_\_\_\_\_  
**Low**     \_\_\_\_\_

The SAMP enhancement area was given a high priority rating since approved SAMPs refine the state's Coastal Management Program and each SAMP contains the information and projects necessary to enable the State and municipalities to better manage New York State's coastal resources. Given the development pressure and use conflicts identified throughout the coastal zone, and given the extent and degree of the priority needs and information gaps identified above, the NYSDOS recognizes that new SAMPs need to be developed for those regions currently lacking

approved SAMPs or LWRPs to address current or anticipated conflicts (e.g. energy development, water quality issues, sea level rise, and development conflicts).

2. Will the CMP develop one or more strategies for this enhancement area?

Yes

No

Two strategies will be developed for the SAMP enhancement area to address issues and conflicts identified in the resource characterization and the priority needs and information gaps sections. First, a SAMP will be developed for the South Shore of Long Island focusing on the region's most pressing issues - water resources management, habitat protection and climate change adaptation - since local governments along the South Shore have been slow to prepare and adopt LWRPs to address their most critical issues and protect their most valuable resources. Second, LWRPs and SAMPs will be developed or amended that implement the SAMP for Long Island's South Shore. Along with the strategy identified for the Cumulative and Secondary Impacts enhancement area, SAMPs statewide (including LWRPs) will focus more on regional issues and conflicts and will take greater strides towards addressing these conflicts at a regional or ecosystem scale.

## Ocean/Great Lakes Resources

### Section 309 Enhancement Objective

Planning for the use of ocean resources

### Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. In the table below characterize ocean and/or Great Lakes resources and uses of state concern, and specify existing and future threats or use conflicts.

<b>Resource or use</b>	<b>Threat or use conflict</b>	<b>Degree of threat (H,M,L)</b>	<b>Anticipated threat or use conflict</b>
Shellfish beds and benthic habitat, including rare or sensitive habitats like deepwater corals, tilefish borrows, sponges, etc.	Energy infrastructure (currently wind and LNG) construction and maintenance, including generation and transmission. Potential for numerous use conflicts exist in this busy section of the ocean.	M	Continued and expanded proposals for new, untested technologies to develop offshore energy infrastructure, such as wind, wave, tidal, bio-extraction and solar. Offshore carbon sequestration proposals and regional scale energy transmission corridors in the Atlantic.
Finfish habitats	Same as above plus migratory corridor issues.	H	Same as above
Marine mammals and turtle habitats	Same as above plus migratory corridor issues.	H	Same as above
Lobster habitats	Same as above	H	Same as above
Beachfill and sand removal	Same as above	L	Same as above
Dredge material disposal sites	Same as above	L	Same as above
Offshore benthic habitats	Same as above	H	Same as above
Recreational uses: fishing, diving, boating.	Same as above	M	Same as above
Commercial uses: fishing, charter services, commerce, transportation.	Same as above	M	Same as above

2. Describe any changes in the resources or relative threat to the resources since the last assessment.  
An increased number of ocean use proposals have come before us for consistency determinations and are likely to affect New York's coastal resources. These are predominantly energy generation and transmission proposals.

**Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Comprehensive ocean/Great Lakes management plan or system of Marine Protected Areas	In Development	Y
Regional comprehensive ocean/Great Lakes management program	Y	Y
Regional sediment or dredge material management plan	Y	Y
Intra-governmental coordination mechanisms for Ocean/Great Lakes management	Y	Y
Single-purpose statutes related to Ocean/Great Lakes resources	Y	N
Comprehensive ocean/Great Lakes management statute	Y	N
Ocean/Great Lakes resource mapping or information system	Y	Y
Ocean habitat research, assessment, or monitoring programs	Y	Y
Public education and outreach efforts	Y	Y
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
  - a) Characterize significant changes since the last assessment;
  - b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - c) Characterize the outcomes and effectiveness of the changes.

The Ocean and Great Lakes Program evolved significantly since the last 309 review.

***Comprehensive Ocean/Great Lakes management plan (State Funding/306):*** New York State is currently developing an Offshore Management Plan through an adaptive, phased approach. The initial focus will be on habitat protection and renewable energy in the Atlantic Ocean extending from Long Island out to the continental shelf edge. This is an important effort to address the competing uses of the ocean, with a focus on renewable wind energy and habitat protection. New York will submit a Comprehensive Management Plan Amendment to OCRM. With the amendment’s acceptance, the plan will be used in the Department’s consistency review of proposed offshore wind energy applications. In order to develop the plan, Department of State is reaching out to partner with groups that have an interest in the plan’s outcome including: other State agencies, federal agencies, neighboring states, industry groups, nonprofits, and local citizens.

***Regional comprehensive Ocean/Great Lakes management program (State Funding/306):***

*On a state/regional scale:* New York has initiated regional programs to provide vision, oversight and guidance to local stakeholders, including farmers, fishers, loggers, conservationists, and local officials, to develop new and inclusive planning and implementation activities in two Demonstration Areas identified by the New York Ocean and Great Lakes Council statute: 1) eastern Lake Ontario’s Sandy Creek Watershed and 2) Long Island’s Great South Bay. This has resulted in increased on-the-ground experience in applying ecosystem approaches to local land and water planning, and restorative and corrective measures to address known ecosystem problems. In both

demonstration areas New York has built partnerships that cross municipal boundaries to integrate Ecosystem-based Management.

*On a national/regional scale:* New York State took the initiative and created the Mid-Atlantic Regional Council on the Ocean (MARCO). This effort started with NYS DOS convening and leading the first ever regional ocean dialogues among the Mid-Atlantic states. With the support of Governor Paterson, in September 2008 DOS staff initiated discussions with coastal management agency principals in the four neighboring Mid-Atlantic states (New Jersey, Delaware, Maryland and Virginia) to identify common ocean issues that could benefit from regional approaches and explore the possibility of forming a formal regional ocean partnership. Following up on these discussions, on March 6, 2009, NYS DOS staff drafted and submitted, on behalf of the five Mid-Atlantic governors, their shared ocean priorities to Nancy Sutley, Chair of the White House Council on Environmental Quality, in a jointly signed letter.

On June 9, 2009, NYS DOS staff held a summit of the Governors of the Mid-Atlantic State in New York, co-hosted by Governor David A. Paterson and Governor Jon S. Corzine of New Jersey. With designees from the other states present, the Mid-Atlantic Governors' Agreement on Ocean Conservation was signed, committing the states to work together on four shared ocean issues: increased protection for sensitive offshore habitats; development of offshore renewable energy; strategies to adapt to climate change; and water quality improvements. These efforts are consistent with national policy established in a June 12, 2009 memorandum from President Obama, which created an Interagency Ocean Policy Task Force. The Task Force is charged with developing recommendations for a national policy that ensures protection, maintenance, and restoration of oceans, coasts and the Great Lakes.

In order to build support for the Mid-Atlantic State Governors' actions and recommendations with key ocean interest stakeholders, and to secure commitments moving forward, DOS organized a MARCO Stakeholder Conference held on December 9 and 10, 2009. Over 150 ocean stakeholders from across the region assembled in support of the Mid-Atlantic Governors' ocean agenda. The conference successfully helped to raise public awareness and build a broader constituency for ocean issues and identify programs, activities and resources that stakeholders could commit to accomplishing.

MARCO is successfully providing New York with a venue for collaborating with neighboring states, reaching out to the federal government in partnership with the other states, and informing the public of critical ocean issues.

***Regional sediment or dredge material management and planning (306/ State/309):*** NYS DOS maintains involvement in the NYC regional dredging issues, but has recently become more involved in dredge material management in Long Island Sound and the South Shore Estuary Reserve. NY was also informed that there was a need for NYS regulatory participation on the Great Lakes Regional dredging team. DOS's involvement on these dredging teams is new, but necessary to ensure and enable consistent sediment management practices throughout the state. Additional information regarding this issue is outlined in the *Energy & Government Facility Siting* section.

***Intra-governmental coordination mechanisms for Ocean/Great Lakes management (State Funding/306):*** New York Ocean and Great Lakes Council, established by the New York Ocean and Great Lakes Ecosystem Conservation Act, is comprised of nine state agencies charged with integrating Ecosystem-based Management (EBM) into New York decision making. In April of 2009, the Council delivered a report to the Governor and Legislature that sets the guidelines for how New York will integrate EBM principles. This report provides a road map new state wide initiatives and collaboration between state agencies. Through the work of the Council, New York State agencies are working together on issues that they had previously ignored and/or tackled separately.

***Ocean/Great Lakes resource mapping or information system (State Funding):*** Launched publicly in July 2008, the New York Ocean and Great Lakes Atlas (Atlas) is an online web mapping application that allows users to view and download a wide range of data. Currently, the Atlas provides access to datasets encompassing geographic, natural resource, and community information. All of the data is downloadable directly into GoogleEarth and in professional geographic information system formats. The Atlas has recently expanded from just having a data viewer to including

a data portal. With the portal, users can now use key words to search for information. Over 800 datasets have been collected for access through the Atlas. The continued expansion of the Atlas has resulted in greater information dissemination throughout the state, including providing decision makers with key information for making sound decisions.

**Ocean habitat research, assessment, or monitoring programs (State Funding):** NYS DOS is working with National Center for Ecological Analysis and Synthesis to develop an Offshore Health Index for New York’s Ocean and Great Lakes. Developing the Health Index involves evaluating the compound impact of human uses on ecosystems. Initially the project will show the current status of the waters, but over time it can be used to evaluate how ecosystem health has changed and potentially to model the outcomes of different management scenarios. Together this will significantly increase managers’ ability to assess current management practices.

**Public education and outreach efforts (State Funding):** As mentioned above, the Ocean and Great Lakes Program is working to integrate Ecosystem-based Management practices into the day-to-day decision making of State agencies in New York, and to develop an offshore plan to protect habitats and to site renewable energy. For example, DOS staff took the draft Ecosystem-based Management report to the Governor and Legislature on the road to gain input and feedback on the Council’s plan for implementing EBM, as well as to educate the public on EBM. Staff continues to reach out to local communities to garner input into policy and planning efforts. New York is working closely with constituent groups to learn how they use the water, and to make the planning process transparent. In addition, stakeholder meetings are being planned for the New York Ocean and Great Lakes Atlas. These meetings will provide New York State with guidance on where to improve the Atlas’ capabilities (particularly in relation to tools for interpreting data), while also teaching the public about the Atlas, thereby increasing its user base.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need Description</b>	<b>Type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H, M, L)
Understanding of resource status (e.g. marine habitats, and resources)	Data, capacity, regulatory	H
Resource mapping – location of habitats, ecosystems	Data, capacity, regulatory	H
Lack of policy and regulation for offshore alternative energy facility siting	Data, policy, regulatory	H
Current LWRPs, SAMPs, and HMPs are limited to nearshore waters and do not consider offshore issues.	Data, policy, regulatory, communication and outreach	H

New York is currently working to obtain increased information on the location and status of our natural resources in the marine environment.

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**       X    
**Medium**

**Low** \_\_\_\_\_

This enhancement area is given a high level of priority due to the rapidly increasing interest in offshore renewable energy development.

2. Will the CMP develop one or more strategies for this enhancement area?

**Yes** \_\_\_\_\_X\_\_\_\_\_

**No** \_\_\_\_\_

# Energy & Government Facility Siting

## Section 309 Enhancement Objectives

Adoption of procedures and enforceable policies to help facilitate the siting of energy facilities and Government facilities and energy-related activities and Government activities which may be of greater than local significance

### Resource Characterization

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. In the table below, characterize the types of energy facilities in your coastal zone (e.g., oil and gas, Liquefied Natural Gas (LNG), wind, wave, Ocean Thermal Energy Conversion (OTEC), etc.) based on best available data. If available, identify the approximate number of facilities by type.

Type of Energy Facility	Exists in CZ (# or Y/N)	Proposed in CZ (# or Y/N)	Interest in CZ (# or Y/N)	Significant changes since last assessment (Y or N)
Oil and gas facilities	83 Wells 55 power plants	N	Y	N
Pipelines	109 lines at ~200 miles	3	Y	Y (3 new proposals)
Electric transmission cables	124 lines at ~285 miles	5	Y	Y
LNG	2	1 (offshore CZ)	Y	Y (3 new proposals and 1 objection)
Wind	N	5	Y	Y (substantial interest)
Wave	N	N	N	N
Tidal	N	5	Y	Y (substantial interest)
Current (ocean, lake, river)	N	N	Y	N
OTEC	N	N	N	N
Solar	N	N	Y	N
Other (please specify) Conventional hydro	Multiple	2	Y	Y (several re-habilitation proposals)

2. Please describe any significant changes in the types or number of energy facilities sited, or proposed to be sited, in the coastal zone since the previous assessment.

There are minimal significant changes in the types or numbers of energy facilities sited in the coastal zone since the last assessment. There has, however, been substantial interest in utility scale wind electric generation as well as pilot scale hydrokinetic electric generation facilities. Five utility scale wind electric generating facilities have been proposed in or adjacent to New York's Coastal Zone; of these, one facility is nearing the end of the regulatory process. New York's wind resources are recognized to be among the best on the east coast and when coupled with existing infrastructure, high demand and high pricing, the New York coastal zone is very attractive to wind energy developers. Three hydrokinetic facilities having been granted preliminary permits by the FERC and two facilities have applied for preliminary permits.

Technological development is rapidly increasing and may be comparable to the wind industry between 15 and 20 years ago. All 5 facilities propose to utilize existing tidal currents in constrained areas such as the East River, Long Island Sound, and Shelter Island Sound.

Given the nature of the FERC's permitting procedures, the number of permitted facilities may change depending on the developer's attention to applicable time frames. Multiple facilities have been observed to lose their preliminary permits for failing to follow procedures, only to reapply shortly thereafter. Several natural gas line transmission line expansion projects have been proposed, but likely do not represent a significant change in natural gas line presence in the coastal zone. In addition to the previously discussed conventional natural gas transmission line expansion, there have been three proposals to site offshore Liquefied Natural Gas (LNG) facilities adjacent to New York's territorial waters. Project developers have withdrawn their permit applications or otherwise indicated that they no longer had an interest in pursuing permits for two of these facilities. The third facility, Liberty Natural Gas, proposes to install a turret system which would provide a connection to LNG carriers with specialized, on-board re-gasification equipment. This system requires no permanent infrastructure that is visible above the water surface; the only permanent facilities are an underwater pipeline to the shore and on site flexible piping attached to a mobile underwater turret buoy. This facility is proposed to be installed approximately 20 miles south of New York territorial waters and the associated transmission pipeline is proposed to approach New York waters as it enters New Jersey. Five electric transmission lines have been proposed that are, in whole or in part, within the coastal zone. Two of these lines are proposed in conjunction with proposed wind electric generating facilities and two are proposed to interconnect the NY ISO and PJM electric grids.

These four lines are not significantly different than facilities discussed in the previous assessment. The fifth electric transmission line does, however, represent a significant change in the type of proposed facilities. The proposed line, the Champlain Hudson Power Express, proposes to install a high voltage DC underwater and underground transmission line from Canada, through Lake Champlain, the Hudson River, and existing rail road rights of ways to New York City and Connecticut. There has been interest in siting new conventional hydroelectric facilities within New York's coastal area, but developers that have actively been pursuing federal authorization for the only new proposed facility have recently withdrawn their application. Multiple existing facilities are seeking re-licensure or otherwise propose to rehabilitate and convert existing impoundments for use as hydroelectric facilities.

3. Does the state have estimates of existing in-state capacity and demand for natural gas and electric generation? Does the state have projections of future capacity? Please discuss.

New York State has recently completed an intensive energy planning process that culminated in a comprehensive report entitled *2009 State Energy Plan*. This plan includes a number of sector-specific Issue Briefs and Technical Assessments. The assessment of natural gas capacity and demand conducted for this report estimated that NYS demand for natural gas is approximately 1,200 billion cubic feet of natural gas per year, of which, approximately 95% is imported from out of the State. The demand for natural gas is projected to remain relatively flat throughout the 10 year planning horizon of the energy plan. New York has adequate natural gas import capacity to supply these needs and given proposed natural gas transmission line expansion projects, capacity will likely increase. Additionally, NY estimates 168 trillion cubic feet of natural gas may be commercially obtainable within the Marcellus shale formation; its proximity to NY makes it an attractive source of future natural gas supply. The environmental consequences and feasibility of extracting this gas with current methodologies remains to be seen.

New York's electrical installed generating capacity is approximately 38,700 MW with an undetermined amount of local distributed generation. NYS's peak electrical demand occurred in 2006 at 33,939 MW. In-state demand for electricity was approximately 165,000 Gwh/year in 2008 which represents an average annual growth of 1% over the previous 10 years. When separated by region, the "downstate" or NYC area, demand grew by an average 1.7% annually, whereas "upstate" demand grew by an average 0.3% annually. Future electricity demand has been modeled under 3 scenarios. By projecting 2008 values the NYS ISO estimates that demand will increase to approximately 191,000 Gwh/year over 10 years, however, the NYS ISO's reliability needs assessment (a much more comprehensive needs study) estimates demand at approximately 10,000 Gwh/year less or 181,000 Gwh/year. The final projection assumes NYS will meet its 45 X 15 goal (discussed below), in which case, demand is projected to decrease to

approximately 164,000 Gwh/year over 10 years. Electrical generation installed capacity is expected to remain relatively flat between 40,000 – 41,000 MW over the 10 year planning horizon ending in 2019.

4. Does the state have any specific programs for alternative energy development? If yes, please describe including any numerical objectives for the development of alternative energy sources. Please also specify any offshore or coastal components of these programs.

New York State has a very comprehensive program designed to further alternative energy development. Research and development is largely handled by the New York State Energy Research and Development Authority (NYSERDA), a public benefit corporation of the State of New York. NYSEDA's aim is to help New York meet its energy goals by reducing energy consumption, promoting the use of renewable energy sources, and protecting the environment. They accomplish this through various funding mechanisms, a carbon cap and trade program, environmental monitoring, and various other initiatives. Additionally NYS Governor Paterson has created a 45 by 15 initiative whereby 30% of NY's energy needs should be met by renewable energy sources and 15% by improvements in energy efficiency by 2015. Also, Governor Paterson has issued Executive Order No. 24 which sets a goal of an 80% reduction in Greenhouse Gas Emissions from 1990 levels by 2050. An identified measure in reaching this goal is the use of renewable energy. The NYS Department of State is at the beginning stages of a comprehensive planning process that will result in an amendment to the CMP. This amendment will identify areas of the outer continental shelf potentially suitable for renewable energy development, foster developer certainty, and expedite regulatory procedures across state, federal and local jurisdictions.

5. If there have been any significant changes in the types or number of government facilities sited in the coastal zone since the previous assessment, please describe.

Government facilities are largely unchanged since the previous assessment. There have been minor disposals of federal property, including several General Service Administration owned U.S. Coast Guard managed lighthouses. Currently pending is the sale by the federal government of the of the 843-acre Plum Island, home to the Department of Homeland Security operated Plum Island Animal Disease Center, and a 9.5 acre site on the mainland used for docking facilities and parking for employees of the Center. The situation is being monitored closely by the Department.

On-going federal navigation channel deepening and maintenance, and open-water disposal site management has resulted in expanded coordination between NYS and applicable state and federal regulatory and planning agencies. As in the last 309 assessment, DOS continues to participate in the NY/NJ Harbor Dredged Material Management Plan (DMMP) regional dredging team (RDT) and the Long Island Sound DMMP teams (RDT, project delivery team, and steering committee).

The NY/NJ Harbor RDT continues to meet monthly to manage regional dredging projects and coordinate with the managers and regulators of placement sites, as well as investigate alternative treatment technologies. Updates to the DMMP are ongoing and DOS will continue participation on this RDT to ensure protection of the interests of the State. It is anticipated that this will continue to be managed under the 306-10 grant task.

The LIS DMMP effort has received adequate funding over the past two years and has picked up momentum in the data collection and reporting for the development of the management plan. DOS staff has been contributing data and participating regularly in monthly conference calls with the project delivery team (PDT) as well as occasional RDT conference calls and project reviews. DOS will continue to contribute to this effort and it is anticipated that the DMMP will be completed by 2013. It is anticipated that this will continue to be managed under the 306-10 grant task.

DOS began participating on the New England Regional Dredging Team (NERDT) in October of 2008 and has been attending the regular meetings of this group. The NERDT meets bi-annually at minimum, to discuss the New England District Corps' maintenance and improvement dredging for the region (including Long Island Sound), alternative treatment technologies, and amendments in the regulatory guidance for the region. DOS will continue participation

on this RDT to ensure protection of the interests of the State. It is anticipated that this will continue to be managed under the 306-10 grant task.

The Great Lakes Dredging Team released the draft “Great Lakes System Dredged Material Management Long Term Strategic Plan” in January 2010 to address sediment management solutions for the critical harbors and confined disposal facilities (CDFs) managed by the Great Lakes and Ohio River Division of the Corps. NYS DOS was recently informed that there was a need for NYS regulatory participation on this dredging team. DOS’s involvement on this dredging team is new, but necessary to ensure and enable consistent sediment management practices throughout the state, as well as to ensure CZM consistency with the NYS Coastal Program. At this time, it is unclear when this Long Term Strategic Plan is expected to be complete, however DOS will continue to participate as necessary to ensure protection of the interests of the State. Increased coordination with the agencies tasked with regulating this part of the State is needed. It is anticipated that this will be managed under the 306-10 grant task.

**Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. Does the state have enforceable policies specifically related to energy facilities? If yes, please provide a brief summary, including a summary of any energy policies that are applicable to only a certain type of energy facility.

NYS has four enforceable energy policies and three air quality policies that may indirectly relate to energy generation. NY’s energy policies discuss basing energy decisions on: public needs, environmental compatibility, effects on other energy facilities, and location within a water body. More broadly, NY’s air quality policies discuss: land classification pursuant to the Clean Air Act, preventing generation of significant amount of nitrates and sulfates, and preventing national and state air quality standards from being violated. There are no energy policies that are applicable only to a certain type of energy facility.

2. Please indicate if the following management categories are employed by the State or Territory and if there have been significant changes since the last assessment:

<b>Management categories</b>	<b>Employed by state/territory (Y or N)</b>	<b>Significant changes since last assessment (Y or N)</b>
Statutes or regulations	Y	N
Policies	Y	Y
Program guidance	Y	N
Comprehensive siting plan (including SAMPs)	Y	Y
Mapping or GIS	Y	Y
Research, assessment or monitoring	Y	Y
Education and outreach	Y	N
Other (please specify)		

3. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.
  - a) Characterize significant changes since the last assessment;
  - b) Specify if it was a 309 or other CZM-driven change (specify funding source) or if it was driven by non-CZM efforts; and
  - c) Characterize the outcomes and effectiveness of the changes.

**Policies and Regulations (309):** A significant effort is underway to revise NYS’s coastal policies and regulations. The revised policies will encourage energy conservation, renewable energy generation and appropriate use of geological resources.

**Comprehensive Siting Plan (State Funding):** New York recently completed a comprehensive energy plan that considers multiple sectors within New York’s energy profile. This plan provides clear guidance to regulators, planners, and the public that will enable New York to diversify its energy portfolio and continue its work toward a clean energy economy. Additionally, New York is initiating a significant Special Area Management Plan offshore of Long Island in New York Bight. This SAMP will focus on renewable energy generation and transmission as well as habitat protection. While still in the project initiation and early stakeholder involvement phases, benefits through enhanced collaboration with other states and regional organizations are evident and the process is expected to result in a comprehensive, federally enforceable amendment to NYS’s CMP.

**Mapping or GIS (State Funding):** There have been significant changes since the last assessment relating to Mapping or GIS. Over 400 GIS data layers have been compiled into an easily viewable, publically accessible mapping portal (the Atlas being developed through the Ocean and Great Lakes Ecosystem Conservation Council effort headed by the Department) which provides a significant amount of data to the private and public sector alike. This has resulted in a significantly greater educated public and increased awareness of state agency activities. NY also continues its ongoing orthoimagery program, by which the entire state is aerially photographed on a revolving 4-5 year basis. These geographically referenced images provide for increased documentation, scientific research, and enforcement activities.

**Research, Assessment or Monitoring (State Funding):** Through its regulatory responsibilities, New York has significantly increased its monitoring requirements for newly permitted energy facilities. Such monitoring requirements generally include post construction monitoring and reporting and steps are being taken to consider this data in an adaptive management scheme. NY continues to collect all monitoring data submitted in response to permit conditions to enable future assessment and to document individual project implementation. NYSERDA provides significant funding to both the residential and commercial sector for alternative energy development and energy efficiency upgrades and will continue to do so throughout the assessment term. Additionally, NY is participating in efforts supported by the Mid-Atlantic Regional Council on the Ocean to standardize renewable energy siting information and reporting requirements among member states; this will provide for increased regulatory certainty which may result in greater renewable energy facility development.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H,M,L)
Federal Regulatory Communication	Communication	H
OCS characterization studies	Data	H
DMMP preparation	Regulatory, communication	M
Visual assessment methodologies	Data, regulatory, training	H
Re-assessment of Beneficial Use Determination Regulations	Regulatory	H
Underwater Transmission Line Planning	Regulatory	H

**Federal Regulatory Communication:** It is essential that federal regulatory agencies are aware of their federal consistency obligations and refrain from issuing permits or other regulatory decisions conditioned upon CMP concurrence; the CZMA does not provide for this. These conditional authorizations undermine the intent of the CZMA and create needless confusion among applicants and regulators alike. Additionally, given the strict timelines provided in the CZMA and its regulations, communication is critical. The Department will continue to expand and develop working partnerships with federal agencies.

**OCS Characterization Studies:** OCS characterization studies provide a base of ecological information to support regulatory decisions. These data are also used by developers of renewable energy projects to obtain financing for potential development. As was done for the Gulf of Mexico, the federal government should prepare a resources characterization study for the Mid-Atlantic region. This will be addressed through the Ocean/Great Lakes Resources enhancement areas.

**DMMP Implementation and Acknowledgement:** There is need for regional dredged material management. To date, DMMP development has been completed in New York City and is underway in Long Island Sound and the South Shore Estuary to establish regionally consistent sediment management practices. However, additional DMMP's need be undertaken in other coastal areas, for example along Lake Ontario, so that resource protection guidance can be developed for dredging activities. Additional activities on the part of the Department related to DMMP implementation and acknowledgement will be conducted outside of federal 309 funding.

**Visual Assessment Methodologies:** Many energy facilities expected to be proposed within or adjacent to NY's coastal area are proposed to be sited offshore. This may result in multiple fixed structures in a viewshed that is typically associated with open space. New York has procedures in place to evaluate visual impacts, however, significant coordination with federal and local agencies is necessary to facilitate wide scale adoption of these procedures and to facilitate their implementation.

**Re-Assessment of Beneficial Use Determination Regulations:** NY's beneficial use determination (BUDS) regulations, administered by the Department of Environmental Conservation, provide for the beneficial reuse of dredged sediment. These regulations are intended to protect resources from contamination, but as currently written inhibit the process of locating suitable sites for dredge material placement. While it is recognized that determining the suitability of material for beneficial reuse is necessary, the DOS and other agencies involved in beneficial reuse of dredged materials have urged a rewrite of the regulations.

**Underwater Transmission Line Planning:** The substantial increase in interest in the renewable energy potential of the OCS will ultimately result in the need to site multiple electric transmission lines or other linear infrastructure. Multi-agency collaboration from planning, regulatory, and resource agencies alike will be necessary to affectively protect offshore resources. NY plans to undertake these discussions through various multi-agency task forces and multi-state regional planning efforts and coordinate these actions with the ongoing energy and habitat planning effort through the Wetlands, Cumulative and Secondary Impacts, and Ocean/Great Lakes Resources enhancement areas.

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**        \_\_\_\_\_  
**Medium**      X  \_\_\_\_  
**Low**        \_\_\_\_\_

Briefly explain the level of priority given for this enhancement area.

Addressing the increasing demands of offshore energy siting and development is an important emerging issue in the State and will remain a priority for the state program during the foreseeable future.

2. Will the CMP develop one or more strategies for this enhancement area?

**Yes**        \_\_\_\_\_  
**No**          X  \_\_\_\_

Briefly explain why a strategy will or will not be developed for this enhancement area.

While a strategy specific to this enhancement area will not be developed, issues related to energy and government facility siting will be addressed in part through cross-cutting fundamental strategies developed for the Wetlands, Cumulative and Secondary Impacts, and Ocean/Great Lakes Resources enhancement areas. Additional activities on the part of the Department related to energy and government facility siting will be conducted outside of federal 309 funding.

## Aquaculture

### **Section 309 Enhancement Objective**

Adoption of procedures and policies to evaluate and facilitate the siting of public and private aquaculture activities in the coastal zone, which will enable States to formulate, administer, and implement strategic plans for marine aquaculture.

### **Resource Characterization**

*Purpose: To determine the extent to which problems and opportunities exist with regard to the enhancement objective.*

1. Generally characterize the private and public aquaculture facilities currently operating in your state or territory. Current aquaculture operations within New York's coastal zone are principally focused on municipal shellfish production for resource enhancement purposes, with the cultured species including bay scallops (*Argopecten irradians*), Eastern oyster (*Crassostrea virginica*), and Northern quahog (*Merceneria merceneria*). On a county level, Suffolk County has just recently embarked on a new shellfish cultivation leasing program for private, commercial shellfish aquaculture on publicly-owned underwater lands on Long Island's East End.

The Town of East Hampton, for example, on Long Island's south fork, operates a municipal shellfish program that includes a state of the art hatchery on Fort Pond Bay, nurseries on Three Mile Harbor, and field grow-out systems in Napeague Harbor. Launched in 1989 through a grant to the Town by New York State, the East Hampton Shellfish Hatchery Program is designed for the annual production of ten million seed shellfish for the purpose of restocking public shellfish beds in Town and surrounding State waters. The hatchery operates under a twenty-five year agreement with New York State, which receives ten percent of yearly seed production in exchange for initial capital funding. This share is generally disseminated into state waters adjacent to East Hampton. Shellfish stocked in local waters are available for harvest by all Town residents.

During 2009 alone, nearly 13 million seed shellfish were produced and seeded out or overwintered in East Hampton Town. In addition, more than 200,000 previously overwintered bay scallops were seeded to experimental spawner sanctuaries and over 1.3 million shellfish (including overwintered clams) were provided to New York State for seeding. The market value of all shellfish grown in 2009 is estimated to be about \$550,000. Local shellfish, a significant portion of which originated at the hatchery, continue to be a staple of the Long Island seafood market and can also be found elsewhere on the east coast of the United States.

Also on the East End of Long Island, the Town of Southold and Cornell Cooperative Extension (CCE) have conducted large scale plantings, both directly to the bay bottom and deployed in lantern nets, of hatchery-reared bay scallop juveniles (seed) in the Orient Harbor portion of Peconic Bay in an effort to establish scallop spawner sanctuaries. Scallops were planted at relatively high densities to ensure a high probability of successful fertilization of eggs. As part of the project, the Town and CCE monitored the survival, growth and reproduction of scallops planted in the field as well as the phytoplankton food quantity and quality to determine their potential effects on the success of the bay scallop spawner sanctuary restoration effort and naturally occurring populations of the species overall. Most notably, in 2007 the bay scallop population in Orient Harbor increased to 13.5 times that seen in the prior two years following the spawning of scallops from the first large scale plantings in 2006. By contrast, there was no increase in scallop populations in 2007 in monitored areas where population levels had been very low and where plantings had not been conducted in 2006.

In 1988, the Town of Islip, on Long Island's South Shore, established Long Island's first large-scale municipally operated shellfish hatchery and nursery culture facility. The objective of the Town shellfish culture facility is to provide a sustainable source of seed clams to assist the recovery of stocks and to rebuild the public resource in Great South Bay. The facility is designed to produce up to forty million seed clams for planting annually. The Town of Brookhaven operates a similar hatchery facility and program on Long Island's North Shore.

The towns of Islip and Brookhaven continued their work with the Long Island Chapter of The Nature Conservancy (TNC) to restore hard clams to Long Island’s Great South Bay. In 2002, TNC accepted ownership from the Bluepoints Oyster Company of 11,500 acres of bottomlands in Great South Bay, and added 1,500 acres more in 2004. TNC has worked closely with the Bluepoints Bottomlands Council, a group of government, business, academic and environmental community members to manage and restore the Bluepoints property and all of the Great South Bay, a coordinated effort toward restoration that benefits from the fact that the bay’s bottomlands are owned by only three entities: TNC and the towns of Islip and Brookhaven. As of the summer of 2008, over one million clams had been placed in no-take spawner sanctuaries in Great South Bay in an effort to re-establish regional hard clam populations.

Suffolk County has developed a new shellfish cultivation leasing program consistent with modern conservation principles that will provide secure access for private commercial shellfish aquaculture on publicly owned underwater lands in Peconic Bay and Gardiners Bay on Long Island’s East End. Pursuant to New York State Environmental Conservation Law, the state ceded title to approximately 100,000 acres of underwater lands in both bays to Suffolk County for the purpose of shellfish cultivation, and authorized the County to prepare, adopt and implement a shellfish aquaculture lease program for the bays. A 2002 policy guidance report by the Suffolk County Aquaculture Committee informed the completion of the County’s program management plan for its aquaculture lease program in Peconic and Gardiners bays, which completely describes all aspects of the program.

The lease program authorizes access to public underwater lands for the controlled or partially controlled raising, breeding, growing, and containment of shellfish through on-bottom and/or off-bottom culture techniques for a term of 10 years. Pending the issuance of permits by the New York State Department of Environmental Conservation and other regulatory agencies, lessees would be allowed to deploy shellfish culture gear on their leases to facilitate shellfish grow-out activities. Shellfish aquaculture leases may either be 2.5 or 5-acre circular plots, or a 10-acre square. In response to the County’s first aquaculture lease application cycle in 2010, 25 applications were received identifying a total of 73 lease sites. Applicants were asked to select up to three preferred lease sites in priority order.

Type of existing aquaculture facility	Describe recent trends	Describe associated impacts or use conflicts
Municipal shellfish hatchery programs	Stocking of shellfish on publicly owned local lands is consistent and growing	No apparent impacts or use conflicts.
Spawner sanctuary programs	Increasing numbers of spawner sanctuaries have been established	Control of illegal taking / poaching an emerging issue.
Bottomland leasing programs	First year lease cycle began 2010	Potential limits on commercial finfishing, benthic species, and navigation.

**Management Characterization**

*Purpose: To determine the effectiveness of management efforts to address those problems described in the above section for the enhancement objective.*

1. For each of the management categories below, indicate if the approach is employed by the state or territory and if significant changes have occurred since the last assessment.

Management categories	Employed by state/territory (Y or N)	Significant changes since last assessment (Y or N)
Aquaculture regulations	Y	N
Aquaculture policies	Y	N
Aquaculture program guidance	N	N
Research, assessment, monitoring	N	N
Mapping	N	N
Aquaculture education and outreach	N	N
Other (please specify)		

2. For management categories with significant changes since the last assessment provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference rather than duplicate the information.

NOT APPLICABLE.

- a) Characterize significant changes since the last assessment;
- b) Specify if it was a 309 or other CZM driven change (specify funding source) or if it was driven by non-CZM efforts; and
- c) Characterize the outcomes and effectiveness of the changes.

**Priority Needs and Information Gaps**

Using the table below, identify major gaps or needs (regulatory, policy, data, training, capacity, communication and outreach) in addressing each of the enhancement area objectives that could be addressed through the CMP and partners (not limited to those items to be addressed through the Section 309 Strategy). If necessary, additional narrative can be provided below to describe major gaps or needs.

<b>Gap or need description</b>	<b>Type of gap or need</b> (regulatory, policy, data, training, capacity, communication & outreach)	<b>Level of priority</b> (H, M, L)
Research quantifying the ecological effects on benthic communities of on-bottom shellfish culture harvest	Scientific data	M

**Enhancement Area Prioritization**

1. What level of priority is the enhancement area for the coastal zone (including, but not limited to, CZMA funding)?

**High**     \_\_\_\_\_  
**Medium**    \_\_\_\_\_  
**Low**          X  

Briefly explain the level of priority given for this enhancement area.

The level of priority fully reflects the fact that aquaculture is not currently, nor is it anticipated that it will become, a major factor in the management of New York State’s coastal resources over the next five years. Researchers, extension specialists, municipal resource managers, industry associations and concerned stakeholders continue to play a significant role meeting the needs of this emerging industry. The State’s coastal policies and existing regulations provide adequate guidance. The State will continue its support for municipal shellfish programs through competitive State grant awards.

2. Will the CMP develop one or more strategies for this enhancement area?

**Yes**        \_\_\_\_\_  
**No**           X  

Briefly explain why a strategy will or will not be developed for this enhancement area.

While a strategy specific to this enhancement area will not be developed, issues related to aquaculture will be addressed in part through the cross-cutting, fundamental strategies developed for the Cumulative and Secondary Impacts and the Special Area Management Planning enhancement areas. Additional activities on the part of the Department related to aquaculture will be conducted outside of federal 309 funding.

# Update Significant Habitat Program

## I. Issue Area(s)

The proposed strategy or implementation activities will support the following priority (high or medium) enhancement area(s) (*check all that apply*):

- |   |  |
|---|--|
| <input type="checkbox"/> Aquaculture                                    | <input checked="" type="checkbox"/> Cumulative and Secondary Impacts |
| <input checked="" type="checkbox"/> Energy & Government Facility Siting | <input checked="" type="checkbox"/> Wetlands                         |
| <input checked="" type="checkbox"/> Coastal Hazards                     | <input type="checkbox"/> Marine Debris                               |
| <input checked="" type="checkbox"/> Ocean/Great Lakes Resources         | <input type="checkbox"/> Public Access                               |
| <input type="checkbox"/> Special Area Management Planning               |  |

## II. Program Change Description

A. The proposed strategy will result in, or implement, the following type(s) of program changes (*check all that apply*):

- A change to coastal zone boundaries;
- New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- New or revised local coastal programs and implementing ordinances;
- New or revised coastal land acquisition, management, and restoration programs;
- New or revised Special Area Management Plans (SAMP) or plans for Areas of Particular Concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- New or revised guidelines, procedures and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government and other agencies that will result in meaningful improvements in coastal resource management.

B. Describe the proposed program change(s) or activities to implement a previously achieved program change. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)

The proposed program changes involve updates to existing State-designated Significant Coastal Fish and Wildlife Habitat (SCFWH) narratives and maps if necessary, including supporting data and impact assessment language, for the Great Lakes and St. Lawrence regions. The Department is currently revising SCFWH documentation and boundaries for habitats along Westchester County's Long Island Sound Shoreline. The program change will also include the completion of the documentation updates for State designation and federal concurrence. Data (biological, physical, and chemical data) would be collected, analyzed, and stored in a central database to track changes over time, such as restoration projects.

## III. Need(s) and Gap(s) Addressed

Identify what priority need the strategy addresses, and explain why the proposed program change or implementation activities are the most appropriate means to address the priority need. This discussion should reference the key findings of the Assessment and explain how the strategy addresses those findings.

The assessment for the Wetlands Priority Enhancement Area identified SCFWHs as a critical means of protecting New York State's habitat areas. Updating and strengthening the impact assessment language of the SCFWH narratives based on revised data is important in light of the recent increase in the number of proposed projects related to the development and installation of wind energy generation sites in the Great Lakes and St. Lawrence regions. Currently four wind farms are proposed along the Great Lakes subject to federal consistency review by the Department of State. The New York Power Authority (NYPA) recently issued an RFP requesting proposals to provide up to 500 MW of additional capacity derived from offshore wind generating facilities. NYPA has identified 17 locations where they believe such a project would be viable. Transmission lines and other associated infrastructure could affect SCFWHs. The significant vertical profile of the units that will be required to make any offshore wind project feasible will likely affect SCFWHs and bird migratory areas. Current impact assessment language in the SCFWH narratives (originally designated in 1987 and 1994) do not include potential impacts related to energy generation activities. As such, the Department will focus on the Great Lakes and St. Lawrence regions in the next round of revisions. The Department has successfully updated the habitat documentation for the North and South Shores of Long Island and is currently updating documentation for habitats in the Hudson River and Westchester County.

#### **IV. Benefit(s) to Coastal Management**

Discuss the anticipated effect of the program change or implementation activities including a clear articulation of the scope and value in improved coastal management and resource protection.

Significant Coastal Fish and Wildlife Habitat (SCFWH) narratives and boundaries are used by the Coastal Management Program as well as by Department of Environmental Conservation permit reviewers, municipal governments, consultants, educators, and others in making management decisions that protect listed species, rare communities, and important human uses associated with the state's wetland resources. Updating the existing SCFWH narratives, including supporting data and impact assessment language, for the Great Lakes and St. Lawrence region, and Westchester County's Long Island Sound shoreline is the most appropriate method for addressing this priority need because current information and impact assessments are critical for ensuring sound decision-making, including consistency reviews, Local Waterfront Revitalization Program planning, permit decisions, and other critical natural resource management activities.

The existing impact assessments do not address the emerging coastal issues of energy generation, climate change, and lake level regulation. Updates to the impact assessment language are needed to support sound policy decisions and consistency determinations.

#### **V. Likelihood of Success**

Discuss the likelihood of attaining the proposed program change and implementation activities. The state or territory should address: 1) the nature and degree of support for pursuing the strategy and the proposed change; and, 2) the specific actions the state or territory will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.

The likelihood of attaining this proposed program change is high. In partnership with NYS DEC, the Department has recently updated the Peconic Bays region and Long Island North and South Shore Significant Coastal Fish and Wildlife Habitat narratives. This proposed effort builds on the interagency success achieved in the earlier updating efforts. Recent activities, including energy proposals, have led to requests from the Department of Environmental Conservation to update and revise Significant Coastal Fish and Wildlife documentation to address changes in habitat structure and related impacts. The Department of Environmental Conservation has supported the Department of State's efforts by providing information and data collected through their various programs. The two Departments have had recent conversations about coordinating efforts and providing appropriate data to be reflected in habitat documentation.

## VI. Strategy Work Plan

Using the template below, provide a general work plan that includes the major steps necessary for achieving the program change and/or implementing a previously achieved program change. The plan should identify significant projected milestones/outcomes, a schedule for completing the strategy, and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual outcomes are a useful guide to ensure the strategy remains on track, OCRM recognizes that these benchmarks may change some over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. Further detailing of annual tasks, budgets, benchmarks, and work products will be determined through the annual award negotiation process.

**Total Years:** Five (5)

**Total Budget:** .625 FTE annually for five years = \$335,000

**Final Outcome(s) and Products:** Routine program changes resulting from updates to narratives for existing State designated significant coastal fish and wildlife habitat narratives for the Great Lakes and St. Lawrence region, and Westchester County's Long Island Sound shoreline. Updates to the impact assessment language would allow the Department the ability to make sound policy decisions and consistency determinations and ensuring that up-to-date data and impact assessments are used in informing those decisions and determinations.

**Year(s):** 1

**Description of activities:** For Westchester County region, submit updated habitat documentation to appropriate State and Federal agencies for review, conduct public information hearings and public meetings, and finalize SCFWH narratives. Submit RPC to implement related program change.

**Outcome(s):** Updated SCFWH narratives and boundary maps.

**Budget:** \$67,000

**Year(s):** 2

**Description of activities:** For the Great Lakes and St. Lawrence region, coordinate with NYS Department of Environmental Conservation staff to compile most recent existing biological survey data and review of habitat boundary information.

**Outcome(s):** Updated and compiled biological survey data and habitat boundary information for Great Lakes and St. Lawrence region.

**Budget:** \$67,000

**Year(s):** 3

**Description of activities:** For the Great Lakes and St. Lawrence region, revise boundary information as needed in the Division GIS system and produce draft updated habitat boundary maps. Revise SCFWH narratives to include updated and new biological information and impact assessments.

**Outcome(s):** Draft updated SCFWH narratives and boundary maps.

**Budget:** \$67,000

**Year(s):** 4

**Description of activities:** For the Great Lakes, conduct public information hearings and public meetings, and finalize SCFWH narratives. Submit RPC to implement Great Lakes program change.

**Outcome(s):** Draft updated SCFWH narratives and boundary maps.

**Budget:** \$67,000

**Year(s):** 5

**Description of activities:** For the St. Lawrence region conduct public information hearings and public meetings, and finalize SCFWH narratives. Submit RPC to implement St. Lawrence program change.

**Outcome(s):** Draft updated SCFWH narratives and boundary maps.

**Budget:** \$67,000

**VII. Fiscal and Technical Needs**

- A. Fiscal Needs: If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the applying agency has made, if any, to secure additional state funds from the legislature and/or other sources to support this strategy.

NOT APPLICABLE.

- B. Technical Needs: If the state does not possess the technical knowledge, skills, or equipment to carry out the proposed strategy, identify these needs. Provide a brief description of what efforts the applying agency has made, if any, to obtain the trained personnel or equipment needed (for example, through agreements with other state agencies).

NOT APPLICABLE.

**VIII. Projects of Special Merit (Optional)**

If desired, briefly indicate what PSMs the CMP may wish to pursue to augment this strategy. Any activities that are necessary to achieve the program change or that the state intends to support with baseline funding should be included in the strategy above. The information in this section will not be used to evaluate or rank PSMs and is simply meant to provide the CMPs the option to provide additional information if they choose. PSM descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not do provide detailed project descriptions that would be needed for the PSM competition.

NOT APPLICABLE.

# Establish a direct permit program for activities within State designated Significant Coastal Fish and Wildlife Habitats

## I. Issue Area(s)

The proposed strategy or implementation activities will support the following priority (high or medium) enhancement area(s) (*check all that apply*):

- |  |   |
|--|---|
| <input type="checkbox"/> Aquaculture                         | <input type="checkbox"/> Cumulative and Secondary Impacts |
| <input type="checkbox"/> Energy & Government Facility Siting | <input checked="" type="checkbox"/> Wetlands              |
| <input type="checkbox"/> Coastal Hazards                     | <input type="checkbox"/> Marine Debris                    |
| <input type="checkbox"/> Ocean/Great Lakes Resources         | <input type="checkbox"/> Public Access                    |
| <input type="checkbox"/> Special Area Management Planning    |   |

## II. Program Change Description

A. The proposed strategy will result in, or implement, the following type(s) of program changes (*check all that apply*):

- A change to coastal zone boundaries;
- New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- New or revised local coastal programs and implementing ordinances;
- New or revised coastal land acquisition, management, and restoration programs;
- New or revised Special Area Management Plans (SAMP) or plans for Areas of Particular Concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- New or revised guidelines, procedures and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government and other agencies that will result in meaningful improvements in coastal resource management.

B. Describe the proposed program change(s) or activities to implement a previously achieved program change. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)

The proposed program change involves modification of Article 42 of New York State Executive Law to create a permit program within the Department of State for activities within or adjacent to Significant Coastal Fish and Wildlife Habitats (SCFWH). Based on an analysis of the Significant Coastal Fish and Wildlife Habitat narratives and associated impact assessment language and current regulatory programs, permit standards will be developed, and variance procedures and appeals processes will be created. The development of the permit program will include drafting regulation (in coordination with local, state, and federal agencies). The Department will coordinate with appropriate agencies to develop findings, applicability, definitions, and use guidelines. The development of the permit program will allow the Department to review proposed activities within and adjacent to SCFWHs and authorize appropriate use permits.

## III. Need(s) and Gap(s) Addressed

Identify what priority need the strategy addresses, and explain why the proposed program change or implementation activities are the most appropriate means to address the priority need. This discussion should reference the key findings of the Assessment and explain how the strategy addresses those findings.

The development of the regulatory program would provide a comprehensive approach that would further the protection of State-designated Significant Coastal Fish and Wildlife Habitats (SCFWHs). The Department has

invested previous 309 efforts in the designation of over 250 SCFWHs and the regulatory program will set forth a strategy to keep these habitat areas as viable and healthy ecosystems. The assessment of the wetlands priority enhancement area, found that wetland regulatory programs have not had sufficient, significant changes in the last reporting period that would be necessary to keep the programs current with increased pressures on wetland survival.

The assessment found that current regulatory programs appear to have limited ability to address specific concerns and issues related to the New York State Coastal Management Program and specifically the protection of the individual Significant Coastal Fish and Wildlife Habitats, which have particular protection needs. Coastal Policy 7 is not being fully implemented by all New York State agencies. This has resulted in continued damage to Significant Coastal Fish and Wildlife Habitats throughout the State. The analysis of limitations within existing regulatory programs will guide the development of a regulatory program aimed exclusively at the SCFWHs and ensure that State consistency is appropriately applied, pursuant to Article 42 '919 of New York State Executive Law. The regulatory program will also ensure that habitat areas will be protected based on the levels of evaluation criteria, including Ecosystem Rarity; Species Vulnerability; Human Use; Population Level, and Replaceability.

#### **IV. Benefit(s) to Coastal Management**

Discuss the anticipated effect of the program change or implementation activities including a clear articulation of the scope and value in improved coastal management and resource protection.

Significant Coastal Fish and Wildlife Habitats (SCFWHs) are smaller, discrete ecological communities which contribute to the overall significance of the larger ecosystem in which they reside. Significant Coastal Fish and Wildlife Habitats contain a unique combination of environmental and biological conditions which fish and wildlife need for survival. These habitat areas include coastal wetlands, breeding grounds, nursery areas, migratory routes and areas of high human use of the fish and wildlife resource. The New York State management policy recognizes the importance of protecting the set of special physical, chemical, geographic and community components which functionally define significant fish and wildlife habitats. The development of a regulatory program will allow the NYS Coastal Management Program the authority to control activities within the mapped boundaries of the SCFWHs to afford greater protection of vital resources.

The cumulative impacts of smaller activities within SCFWHs, larger regional activities such as offshore energy generation and lake level regulation, and the changes associated with global climate change, have the potential to significantly impact the ecology and functioning of coastal habitats. The Coastal Management Program needs to use a comprehensive approach to reduce potential impacts to SCFWH areas. The regulatory program will:

- protect and preserve the health and viability of SCFWHs;
- protect values and ecosystem services provided by SCFWHs;
- consider human health and safety.

#### **V. Likelihood of Success**

Discuss the likelihood of attaining the proposed program change and implementation activities. The state or territory should address: 1) the nature and degree of support for pursuing the strategy and the proposed change; and, 2) the specific actions the state or territory will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.

The likelihood of attaining this proposed program change is moderate, as it requires an amendment to State legislation and enactment of regulations. This is the Department's first attempt at establishing a permit program related to Significant Coastal Fish and Wildlife Habitats and Policy

Recognized challenges include generating consensus among other resource agencies on need and appropriate regulation; developing clear and concise language that precisely defines activities subject to regulation; developing adequate outreach to State agencies and local governments; timing for completion of requirements under the State Administrative Procedures Act.

New York State is committed to improving the effectiveness of all aspects of the CMP and Local Waterfront Revitalization Programs to manage coastal resources. The proposed regulatory program would help eliminate gaps in the current regulatory authority of the State to address potential impacts associated with proposed activities within designated Significant Coastal Fish and Wildlife Habitats.

## VI. Strategy Work Plan

Using the template below, provide a general work plan that includes the major steps necessary for achieving the program change and/or implementing a previously achieved program change. The plan should identify significant projected milestones/outcomes, a schedule for completing the strategy, and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual outcomes are a useful guide to ensure the strategy remains on track, OCRM recognizes that these benchmarks may change some over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. Further detailing of annual tasks, budgets, benchmarks, and work products will be determined through the annual award negotiation process.

**Total Years:** Five (5)

**Total Budget:** .625 FTE annually for five years = \$335,000

**Final Outcome(s) and Products:** Routine program changes resulting from the establishment of a regulatory program to address the potential impacts associated with activities proposed within state designated significant coastal fish and wildlife habitats.

**Year(s):** 1

**Description of activities:** Work with NYS DEC, other agency partners and appropriate stakeholders to review existing regulations and develop a draft permit program and draft regulations for activities proposed in designated significant coastal fish and wildlife habitats. Items to be addressed in developing the draft permit program and draft regulations include: regulated activities; standards for permit issuance; variance provisions; and appeals process.

**Outcome(s):** Draft permit program outline and draft regulations.

**Budget:** \$67,000

**Year(s):** 2

**Description of activities:** Circulate draft regulations, including consolidated CMP policies, as required under the State Administrative Procedures Act. Develop outreach material for distribution to coastal communities, State and federal agencies, and non-governmental organizations involved in coastal management activities.

**Outcome(s):** Draft regulations circulated. Outreach material developed.

**Budget:** \$67,000

**Year(s):** 3

**Description of activities:** Conduct outreach to identified interest groups to solicit comments on the proposed regulations as per the State Administrative Procedures Act requirements and revise the draft regulations as per comments received.

**Outcome(s):** Outreach conducted and draft regulations revised to reflect comments received.

**Budget:** \$67,000

**Year(s):** 4

**Description of activities:** Finalize the draft regulations and initiate the rulemaking process. Prepare guidance material for distribution to coastal communities, State and federal agencies, and non-governmental organizations involved in coastal management activities.

**Outcome(s):** Final draft regulations prepared and rulemaking initiated. Guidance material prepared.

**Budget:** \$67,000

**Year(s):** 5

**Description of activities:** Complete rulemaking process and adopt regulations. Submit new regulations to OCRM as a routine program change. Develop training for key agencies and local governments.

**Outcome(s):** Regulations adopted and submitted to OCRM. Training developed for agencies and local governments.

**Budget:** \$67,000

#### **VII. Fiscal and Technical Needs**

- A. Fiscal Needs:** If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the applying agency has made, if any, to secure additional state funds from the legislature and/or other sources to support this strategy.

Not applicable.

- B. Technical Needs:** If the state does not possess the technical knowledge, skills, or equipment to carry out the proposed strategy, identify these needs. Provide a brief description of what efforts the applying agency has made, if any, to obtain the trained personnel or equipment needed (for example, through agreements with other state agencies).

Not applicable.

#### **VIII. Projects of Special Merit (Optional)**

If desired, briefly indicate what PSMs the CMP may wish to pursue to augment this strategy. Any activities that are necessary to achieve the program change or that the state intends to support with baseline funding should be included in the strategy above. The information in this section will not be used to evaluate or rank PSMs and is simply meant to provide the CMPs the option to provide additional information if they choose. PSM descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not do provide detailed project descriptions that would be needed for the PSM competition.

Not applicable.

## Marine Debris Strategy

Update the New York State coastal policies to explicitly address marine debris and resource impacts; Implementation of marine debris policy through coastal program guidance and stewardship activities.

### NYS Department of State - New York State Coastal Management Program

#### I. Issue Area(s)

The proposed strategy or implementation activities will support the following priority (high or medium) enhancement area(s) (*check all that apply*):

- |  |   |
|--|---|
| <input type="checkbox"/> Aquaculture                         | <input type="checkbox"/> Cumulative and Secondary Impacts |
| <input type="checkbox"/> Energy & Government Facility Siting | <input type="checkbox"/> Wetlands                         |
| <input type="checkbox"/> Coastal Hazards                     | <input checked="" type="checkbox"/> Marine Debris         |
| <input type="checkbox"/> Ocean/Great Lakes Resources         | <input type="checkbox"/> Public Access                    |
| <input type="checkbox"/> Special Area Management Planning    |   |

#### II. Program Change Description

A. The proposed strategy will result in, or implement, the following type(s) of program changes (*check all that apply*):

- A change to coastal zone boundaries;
- New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- New or revised local coastal programs and implementing ordinances;
- New or revised coastal land acquisition, management, and restoration programs;
- New or revised Special Area Management Plans (SAMP) or plans for Areas of Particular Concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- New or revised guidelines, procedures and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government and other agencies that will result in meaningful improvements in coastal resource management.

B. **Describe the proposed program change(s)** or activities to implement a previously achieved program change. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)

#### Programmatic Objectives

The proposed program change will result in:

- Assessment and potential modifications of relevant, enforceable coastal policies to encompass marine debris sources and their introduction to shorelines and waterways where appropriate and where such changes are currently supported by existing state laws and our authority to implement the CMP.
- Assessment of the need for a stand-alone policy to specifically address marine debris and its impacts and identification of the basis for legal authority in implementing such a policy. This work is expected to be coordinated in the context of ongoing efforts to update the coastal policies. Policy review, legal research, and recommendations for revisions and/ or new policy will be completed and implemented during year one.
- Development of technical guidance for the New York State Coastal Management Program and communities to reduce sources of anthropogenic debris reaching New York State's coastal, marine, and large lake environments; intercept the transport of such debris via water and wind; implement best management practices related to coastal recreational and commercial activities; and remediate debris accumulations at the shoreline.

- Communication of a consistent, identifiable program message encompassing the scope of the marine debris problem within New York State which advocates sustainable, low environmental impact behaviors, choices, and policies and which encourages implementation of best management practices; highlight specific problem areas and educate the public on locally implementable actions to prevent and remediate marine debris.
- Incorporation of marine debris awareness into existing programs and projects.

### III. Need(s) and Gap(s) Addressed

Identify what priority need the strategy addresses, and explain why the proposed program change or implementation activities are the most appropriate means to address the priority need. This discussion should reference the key findings of the Assessment and explain how the strategy addresses those findings.

Priority need(s) addressed:

- **Regulatory, policy**

Policy improvements to explicitly encompass and deal with marine debris is a logical extension of our field of concerns under the New York State Coastal Management Program and the topic significantly relates to issues which are already represented by our policies (e.g., water quality protection, control of polluted runoff and storm water; wildlife and habitat protection; protection of scenic qualities). The assessment identified numerous areas where regulatory/ policy measures was lacking. Enhancing existing policies and/ or creating new policy is a prerequisite step to enable management of marine debris.

- **Communication and outreach**

Marine debris education/ outreach/ stewardship

Effective mitigation of marine debris is not only advanced by recognition of the problem within the state's coastal program but through clarification of the issue in the public consciousness. Such an approach is essential to realizing effective marine debris prevention and mitigation and to foster stewardship of coastal and marine resources. The assessment identified communication of marine debris, education and outreach on the topic as the highest priority need.

The issue will be approached in the context of local impacts of marine debris emphasizing important means for communities and individuals to feel that their actions can make a difference. A coherent, consistent message will be developed to encourage public, marine debris dialogue, improve the level of knowledge and understanding of the issue, and to enhance the potential for public and private cooperation to reduce and remediate marine debris. Program guidance will be developed to complement changes within the state coastal policies. Additional priority needs and gaps identified in the assessment, which are presently beyond the scope of our authority or resources may be more effectively addressed in the future as a result of this effort.

### IV. Benefit(s) to Coastal Management

Discuss the anticipated effect of the program change or implementation activities including a clear articulation of the scope and value in improved coastal management and resource protection.

Formally addressing marine debris through New York State's Coastal Management Program and enforceable policies identifies the issue as a coastal problem which the State recognizes and intends to manage. Such a policy is warranted, in that it will create a vehicle for effective management of marine debris sources and its transport and/ or disposal into New York's waterways and ultimately the marine environment. The policy will serve as the basis and incentive for New York's communities to begin to grapple with solutions under the New York State Coastal Management Program (CMP) and the Coastal Nonpoint Pollution Control Program (CNPCP), and will afford them the option to incorporate marine debris concerns into local programs according to local needs and priorities.

Recognizing marine debris in the State's coastal policies is the stepping stone needed to begin to explore management approaches and alternatives, including regulation, implementation of best management practices, coordination of prevention and recovery efforts, and the establishment of research, monitoring, and reporting protocols. State marine debris policy complements existing policies under the Long Island Sound Coastal Management Program and supports objectives of the South Shore Estuary Reserve Comprehensive Management Plan and the National Estuary Programs around Long Island and the National Estuarine Research Reserve on the Hudson River.

Integrating marine debris awareness into the state's programs and local government actions has relevance for a broad array of public interests and pertains to every aspect of good coastal zone management and resource protection. Prevention of marine debris encompasses many objectives and responsibilities under the New York State Coastal Management Program including the protection of water quality, safeguarding of public health and safety, protection of fish and wildlife habitat, and the protection and enhancement of aesthetic, recreational, scenic, and economic values of shared coastal resources. This program change also supports the specific recommendation to 'minimize pollution by floatable debris' under the Long Island Sound Coastal Management Program. The Local Waterfront Revitalization Program framework provides opportunity for communities to identify and address the issue in terms of local needs and concerns and serves as an appropriate mechanism for defining local policies and actions.

Marine debris is a statewide problem as debris has sources well beyond the coastal area. Marine debris is also recognized to be a pervasive global problem. New York's trash today can gradually make its way to the shorelines of other states and to distant parts of the world. Efforts to educate the general public, communities, visitors, and others therefore fosters stewardship of the world's coastal and marine environments with benefits for coastal management and resource protection at this scale.

Development of the New York State coastal program to include marine debris aligns with the goals and objectives of NOAA's programs.

#### **IV. Likelihood of Success**

Discuss the likelihood of attaining the proposed program change and implementation activities. The state or territory should address: 1) the nature and degree of support for pursuing the strategy and the proposed change; and 2) the specific actions the state or territory will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.

The Department will assess appropriate amendments to the coastal policies and/ or the viability of creating a new draft policy in support of coastal and marine debris prevention and mitigation. Coastal policy assessment, recommendations for revisions, and draft policy writing will be accomplished during year one, concurrent with the Department's broader effort to update the policies. This review will receive management support and can be accomplished entirely in house.

To implement any amendments or additions to the coastal policies which would address marine debris, it is important to develop the appropriate guidance for New York's Coastal Management Program and further launch a strong public message. This guidance document and marine debris 'messaging' will be developed in years 2-3. Outreach activities will focus initially on the South Shore Estuary Reserve (SSER), ultimately incorporating Long Island, New York City, the Hudson River Estuary, and the Great Lakes. The SSER serves as a good pilot location for these efforts as it offers the advantage of being a distinct conservation area with a special area management plan and the Department can readily maximize our existing SSER resources and established relationships with communities and local partners.

'Floatable debris' has been a concern of the Long Island Sound Study (LISS) since the early 1990's. New York Sea Grant at the SUNY Stony Brook School of Marine and Atmospheric Sciences (SoMAS) helped to develop a 'Clean Marinas Program' and the school also houses the Waste Reduction and Management Institute (WRMI), dedicated to resolving complex waste management issues affecting Long Island - specifically including floatable debris. It is reasonable to anticipate a high level of interest and participation from these partners as well as the South and North Shore Long Island communities and non-profit environmental stewardship and education groups such as the Peconic Baykeeper, Operation SPLASH (Stop Polluting, Littering, and Save Harbors), The Nature Conservancy, the Riverhead Foundation, and the Atlantis Marine Aquarium.

## VI. Strategy Work Plan

Using the template below, provide a general work plan that includes the major steps necessary for achieving the program change and/or implementing a previously achieved program change. The plan should identify significant projected milestones/outcomes, a schedule for completing the strategy, and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual outcomes are a useful guide to ensure the strategy remains on track, OCRM recognizes that these benchmarks may change some over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. Further detailing of annual tasks, budgets, benchmarks, and work products will be determined through the annual award negotiation process.

**Total Years:** 4 years

**Total Budget:** \*\$ 214,200

**Final Outcome(s) and Products:** Marine debris recognized as a management concern in the New York State Coastal Management Program's enforceable coastal policies.

**Year(s):** 1-2

### **Description of activities:**

- Assess potential modifications of relevant, enforceable coastal policies to encompass marine debris sources and their introduction to shorelines and waterways where appropriate and where such changes are currently supported by existing state laws and our authority to implement the CMP.
- Assess the need for creating a stand-alone policy, specifically addressing marine debris and its impacts; Research and identify legal authorities to implement such a policy.
- Policy Enhancements:
  - Update existing coastal policies to recognize the marine debris problem including common pathways for debris pollution and transport;
  - Evaluate the feasibility of crafting a separate policy to address marine debris and determine if adequate state law is available to make a new policy enforceable;
  - Develop written guidance for staff working with consistency and LWRP communities.

**Outcome(s):** Marine debris will be explicitly recognized as a management concern under the New York State Coastal Management Program and within its enforceable coastal policies.

**Budget:** \* \$107,200 [1 staff member @ .50 FTE in each year]

**Year(s):** 3-4

### **Description of activities:**

- Develop technical guidance for the New York State Coastal Management Program.
- Develop a consistent, identifiable program message which advocates sustainable, low environmental impact behaviors, choices, and actions and which encourages implementation of best management practices.
- Develop outreach materials which highlight specific problem areas and educate the public on locally implementable actions to prevent and remediate marine debris.
- Initiate public outreach in coordination with the South Shore Estuary Reserve (SSER) office; identify potential partners and opportunities; Coordinate with non-profits and community groups; engage communities to identify specific locations and/or marine debris issues of particular local concern; Develop standards and protocols for local, volunteer monitoring and cleanups.
- Develop strategy for ongoing implementation and expansion of outreach efforts and to incorporate marine debris awareness into existing programs and projects, as appropriate.

**Outcome(s):** Development of technical guidance for the New York State Coastal Management Program and implementation through development of marine debris program messaging and materials; Availability of on-line marine debris information and resources; Outreach in coordination with SSER office; Identification of long term program goals.

**Budget:** \* \$107,200 [1 staff member @ .50 FTE in each year]

**Year(s):** 5

**Description of activities:** N/A

\*Past year 4 the program becomes a regular CZM program activity under the 306 grant.

## **VII. Fiscal and Technical Needs**

- A. Fiscal Needs: If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the applying agency has made, if any, to secure additional state funds from the legislature and/or other sources to support this strategy.

The Department anticipates that the 309 program funding will fully support these efforts. In addition, staff and other resources are available to us through NYS Environmental Protection, Open Space Fund which supports the South Shore Estuary Reserve. Other funding may be sought as appropriate grant opportunities become available.

- B. Technical Needs: If the state does not possess the technical knowledge, skills, or equipment to carry out the proposed strategy, identify these needs. Provide a brief description of what efforts the applying agency has made, if any, to obtain the trained personnel or equipment needed (for example, through agreements with other state agencies).

Not Applicable.

## **VIII. Projects of Special Merit**

If desired, briefly indicate what PSMs the CMP may wish to pursue to augment this strategy. Any activities that are necessary to achieve the program change or that the state intends to support with baseline funding should be included in the strategy above. The information in this section will not be used to evaluate or rank PSMs and is simply meant to provide the CMPs the option to provide additional information if they choose. PSM descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not do provide detailed project descriptions that would be needed for the PSM competition.

## Ecosystem Scale LWRPs

### I. Issue Area(s)

The proposed strategy or implementation activities will support the following priority (high or medium) enhancement area(s) (*check all that apply*):

- |   |  |
|---|--|
| <input type="checkbox"/> Aquaculture                                    | <input checked="" type="checkbox"/> Cumulative and Secondary Impacts |
| <input checked="" type="checkbox"/> Energy & Government Facility Siting | <input checked="" type="checkbox"/> Wetlands                         |
| <input checked="" type="checkbox"/> Coastal Hazards                     | <input type="checkbox"/> Marine Debris                               |
| <input checked="" type="checkbox"/> Ocean/Great Lakes Resources         | <input type="checkbox"/> Public Access                               |
| <input checked="" type="checkbox"/> Special Area Management Planning    |  |

### II. Program Change Description

A. The proposed strategy will result in, or implement, the following type(s) of program changes (*check all that apply*):

- A change to coastal zone boundaries;
- New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- New or revised local coastal programs and implementing ordinances;
- New or revised coastal land acquisition, management, and restoration programs;
- New or revised Special Area Management Plans (SAMP) or plans for Areas of Particular Concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- New or revised guidelines, procedures and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government and other agencies that will result in meaningful improvements in coastal resource management.

B. Describe the proposed program change(s) or activities to implement a previously achieved program change. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)

The proposed program change will expand the scale at which Local Waterfront Revitalization Programs (LWRP) are developed to more closely align them with regional and ecosystem-based planning, incorporating principles of Smart Growth and climate change resiliency. This approach will move beyond developing LWRPs based solely on issues within a single municipality's boundaries to developing regional or multi-jurisdictional LWRPs that are at an ecosystem or watershed scale and which identify regional scale projects for protecting, restoring, or managing whole ecological systems. Looking beyond a single municipality's jurisdiction will make it easier to identify cumulative and secondary impacts of proposed or already existing developments.

As an initial step, the NYSDOS will consult local and regional constituents and stakeholders on ways to create a stronger regional or ecosystem scale focus on LWRPs. LWRP guidance will then be developed to assist municipalities in working collaboratively to develop ecosystem or watershed scale LWRPs that identify and address cumulative and secondary impacts. LWRP guidance will also include the identification of measurable indicators to enable the Department and municipalities to more adequately monitor the success/effectiveness of LWRPs, including LWRP policies.

Once the LWRP guidance is developed, the NYSDOS will work directly with municipalities to develop LWRPs, through awards provided from the New York State Environmental Protection Fund LWRP (EPF LWRP) grants program, and to review LWRP content and effectiveness and periodically update previously approved LWRPs.

Through the development of new regional or ecosystem-focused LWRPs, the NYSDOS will have the opportunity to expand the data in its Geographic Information System (GIS) with data collected during the planning processes. Data collected could include natural resources and ecosystem inventories (including information necessary to update SCFWHs), trends analyses related to development and ecosystem changes, and shoreline stabilization structures inventories. The data, information, and analyses gathered from development of the LWRPs will also be used to further refine measurable objectives and indicators for trends analysis and in the development of a protocol for assessing secondary and cumulative impacts.

### **III. Need(s) and Gap(s) Addressed**

Identify what priority need the strategy addresses, and explain why the proposed program change or implementation activities are the most appropriate means to address the priority need. This discussion should reference the key findings of the Assessment and explain how the strategy addresses those findings.

The resource and management characterization identified the need to look at uses and potential impacts outside of a single municipality's jurisdiction to adequately address cumulative and secondary impacts. Some assessments also identified the need to take a more holistic approach at managing the State's coastal resources - including regional scale inventories of natural resources (including whole ecosystems) with a description of baseline conditions, development of measurable objectives and/or indicators, a thorough identification of user conflicts and the development of a protocol, using baseline inventories and measurable indicators, to identify and assess cumulative and secondary impacts that extend beyond a single municipality's jurisdiction.

By developing guidance on the preparation of regional SAMPs and LWRPs and in turn assisting municipalities in developing these LWRPs (during which the State can gather and analyze trends data), New York State can take important steps towards identifying, analyzing and addressing cumulative and secondary impacts to protect vital natural resources and ecosystems.

### **IV. Benefit(s) to Coastal Management**

Discuss the anticipated effect of the program change or implementation activities including a clear articulation of the scope and value in improved coastal management and resource protection.

Through the development of multi-jurisdictional LWRPs, the State will have the opportunity to collaborate with municipalities, to gather and analyze vital natural resources and regional trends data, to identify and address user conflicts and cumulative and secondary impacts to more effectively protect ecosystems.

Anticipating an increasing number of proposals for development projects, including energy generation and transmission, communities will be able to use the data gathered during LWRP development to develop effective coastal policies to protect ecosystems, community resources, and community character from cumulative and secondary impacts - even those generated outside of a community's Local Waterfront Revitalization Area (LWRA). Furthermore, data and analyses gathered during LWRP development can be used to address all of the 309 enhancement areas.

### **V. Likelihood of Success**

Discuss the likelihood of attaining the proposed program change and implementation activities. The state or territory should address: 1) the nature and degree of support for pursuing the strategy and the proposed change; and, 2) the specific actions the state or territory will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.

It is widely recognized in the field of natural resources management that management needs to occur at the ecosystem level, but this is considerably difficult to achieve when land use planning typically only occurs at the municipal level. Recognizing that ecosystems extend beyond municipal boundaries, successful natural (coastal) resources management must be carried out at the regional level.

Communities throughout New York State recognize that there is only so much that can be achieved individually and so an increasing number of municipalities and regional entities are undertaking intermunicipal/regional planning initiatives. The NYSDOS had great success working with intermunicipal partnerships to develop watershed management plans and it is expected that this success will continue with these enhanced, regionally focused LWRPs that not only provide the planning framework for considering regional issues, but that provide the LWRP policies for addressing those same issues that may originate from beyond their municipal borders.

## **VI. Strategy Work Plan**

Using the template below, provide a general work plan that includes the major steps necessary for achieving the program change and/or implementing a previously achieved program change. The plan should identify significant projected milestones/outcomes, a schedule for completing the strategy, and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual outcomes are a useful guide to ensure the strategy remains on track, OCRM recognizes that these benchmarks may change some over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. Further detailing of annual tasks, budgets, benchmarks, and work products will be determined through the annual award negotiation process.

**Total Years: 5 years**

**Total Budget: 1.5 FTE annually for 5 years = \$804,000**

**Final Outcome(s) and Products:**

The final products resulting from this 5 year effort will be:

- 1) Guidance for developing Local Waterfront Revitalization Programs that are more closely aligned with principles of regional ecosystem-based management, Smart Growth, and climate change resilience.
- 2) Performance measures/measurable indicators for identifying cumulative and secondary impacts. Measurable indicators will also be used to monitor the success/effectiveness of LWRPs to enable effective adaptive management when necessary.
- 3) Enhanced, regionally focused LWRPs that identify ways to identify and address regional issues, including cumulative and secondary impacts, and incorporate principles of ecosystem based management and climate change resilience.
- 4) Expanded Geographic Information System (GIS) with data collected during the planning process. GIS could include data related to natural resources and ecosystem inventories (including information necessary to update SCFWHs), trends analyses related to development and ecosystem changes, and shoreline stabilization structures inventories.

**Year(s): 1**

**Description of activities:** Through consultation with local and regional constituents and stakeholders, the Department will develop guidance on the preparation of LWRPs with a stronger regional and ecosystem focus. LWRP guidance would also include the process for identifying general measurable indicators to enable the Department and municipalities to more adequately identify cumulative and secondary impacts and to monitor the effectiveness of LWRPs enabling successful adaptive management.

**Outcome(s):** LWRP guidance and set of general measurable indicators

**Budget: 1.5 FTE for year 1 = \$160,800**

**Year(s): 2-5**

**Description of activities:** Through the EPF LWRP grants awards, the Department will work with targeted municipal, local and regional entities to develop/amend LWRPs that incorporate the principles identified above, to identify location-specific measurable indicators and performance measures for identifying cumulative and secondary impacts and for adaptive management. LWRPs will also include adaptive management measures should they be necessary.

**Outcome(s):** LWRPs, measurable indicators/performance measures, and adaptive management measures.

**Budget: 1 FTE/year for years 2, 3, 4, and 5 = \$428,800**

**Year(s): 2-3**

**Description of activities:** As the Department works with EPF award grantees to develop LWRPs, the Department will create a central data repository of LWRP GIS data. Data gathered will include: natural resources/ecosystem inventories, community resources inventories (i.e., local/regional infrastructure and recreational assets), land use inventories, identification of potential sources of pollution, and data related to energy infrastructure, shoreline erosion, and marine debris. This data will be used by the Department to conduct various trends analyses, to update SCFWHs, to identify cumulative and secondary impacts, to develop management alternatives for addressing issues related to coastal resources management and to accomplish tasks identified under multiple 309 enhancement areas.

**Outcome(s):** NYSDOS GIS data repository.

**Budget: .5 FTE/year for years 2 and 3 = \$107,200**

**Year(s): 2-5**

**Description of activities:** The NYSDOS will begin working with municipalities with newly adopted regional, or ecosystem scale, LWRPs to review and assess the effectiveness of those LWRPs and performance measures/measurable indicators to determine if adaptive management measures need to be taken to improve LWRP success or to address potentially identified cumulative or secondary impacts.

**Outcome(s):** Review and assessment of LWRPs and performance measures/measurable indicators with potential adaptive management measures put in place.

**Budget: .25 FTE/year for years 2, 3, 4 and 5 = \$107,200**

## VII. Fiscal and Technical Needs

- A. Fiscal Needs:** If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the applying agency has made, if any, to secure additional state funds from the legislature and/or other sources to support this strategy.

Not Applicable

- B. Technical Needs:** If the state does not possess the technical knowledge, skills, or equipment to carry out the proposed strategy, identify these needs. Provide a brief description of what efforts the applying agency has made, if any, to obtain the trained personnel or equipment needed (for example, through agreements with other state agencies).

Currently the NYSDOS is using MapInfo for its GIS. Although the MapInfo has been relatively successful, the NYSDOS has recognized the difficulty in using this GIS platform, especially when interacting with some EPF LWRP award grantees and other agencies - as ArcGIS seems to be the industry standard. In concert with the effort to expand the NYSDOS's GIS, the Department intends to purchase ArcGIS user licenses in the future.

## VIII. Projects of Special Merit (Optional)

If desired, briefly indicate what PSMs the CMP may wish to pursue to augment this strategy. Any activities that are necessary to achieve the program change or that the state intends to support with baseline funding should be included in the strategy above. The information in this section will not be used to evaluate or rank PSMs and is simply meant to provide the CMPs the option to provide additional information if they choose. PSM descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not do provide detailed project descriptions that would be needed for the PSM competition.

# NYS Coastal Management Program Amendment

## Long Island South Shore Estuary Regional Special Area Management Plan for Water Quality Improvement, Habitat Restoration and Climate Change Adaptation

### I. Issue Area(s)

The proposed strategy or implementation activities will support the following priority (high or medium) enhancement area(s) (*check all that apply*):

- |  |  |
|--|--|
| <input type="checkbox"/> Aquaculture                                 | <input checked="" type="checkbox"/> Cumulative and Secondary Impacts |
| <input type="checkbox"/> Energy & Government Facility Siting         | <input checked="" type="checkbox"/> Wetlands                         |
| <input checked="" type="checkbox"/> Coastal Hazards                  | <input type="checkbox"/> Marine Debris                               |
| <input checked="" type="checkbox"/> Ocean/Great Lakes Resources      | <input type="checkbox"/> Public Access                               |
| <input checked="" type="checkbox"/> Special Area Management Planning |  |

### II. Program Change Description

A. The proposed strategy will result in, or implement, the following type(s) of program changes (*check all that apply*):

- A change to coastal zone boundaries;
- New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- New or revised local coastal programs and implementing ordinances;
- New or revised coastal land acquisition, management, and restoration programs;
- New or revised Special Area Management Plans (SAMP) or plans for Areas of Particular Concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- New or revised guidelines, procedures and policy documents, which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government and other agencies that will result in meaningful improvements in coastal resource management.

B. Describe the proposed program change(s) or activities to implement a previously achieved program change. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)

The goal of this strategy is to be completed in two phases:

Phase I - The Department will develop an amendment to the New York State Coastal Management Program through a Long Island South Shore Estuary (SSE) Special Area Management Plan for water quality improvement, habitat restoration and climate change adaptation (SAMP) for OCRM's concurrence. The SAMP will address continuing and emerging issues affecting the SSE ecosystem health, establish priorities to ensure the most critical aspects of the strategy are achieved, and, develop specific criteria and enforceable policies that reflect current understandings of the ecosystem's functions to guide federal, state and local government agencies' day-to-day decisions, as well as minimize potential negative impacts of proposed offshore energy generation and upland support facilities. In addressing these issues, the SAMP will align with the work of President's Interagency Ocean Policy Task Force as outlined in December 2009.

The SAMP's development relies on interpreting existing data to identify gaps, outlining future estuary research and monitoring needs, and developing a capital improvement plan to guide the efforts and expenditures of the State, local governments and nonprofit entities.

Phase II - The Department will oversee and manage the SAMP's implementation for water quality improvement, habitat restoration and climate change adaptation, as well as assessing the need for a second partial amendment to enhance the stability of the SSE-related economy, public use and enjoyment, and other critical topic areas.

### III. Need(s) and Gap(s) Addressed

Identify what priority need the strategy addresses, and explain why the proposed program change or implementation activities are the most appropriate means to address the priority need. This discussion should reference the key findings of the Assessment and explain how the strategy addresses those findings.

The strategy will employ a regional SAMP as the most appropriate means to achieve coordinated resource protection and institute enforceable policies to protect public health and safety and protect and restore habitats. The following priority needs will be addressed:

- **Degraded estuarine resources.** The Department and its municipal and nongovernmental partners on the south shore of Long Island have made significant progress, however, much remains to be accomplished in addressing the impacts of the SSE's highly urbanized watershed on water quality and living resources. The SSE has the greatest concentration of State designated Significant Coastal Fish and Wildlife Habitats (SCFWH) in New York State.
- **Local governments' adoption of enforceable practices, policies, laws and regulations to protect regional coastal resources and guide local, State and federal decisions that affect those resources.** Since the Long Island South Shore Estuary Reserve (SSER) Comprehensive Management Plan was completed in 2001, local governments have been slow to prepare and adopt Local Waterfront Revitalization Programs (LWRP). Adoption of LWRPs could provide more specific policy standards to address regional resource protection and decision-making related to specific water quality and living resource issues in the SSE.
- **Emerging issues of climate change and sea level rise.** Climate change and sea level rise impacts on the South Shore of Long Island are likely to be the second most severe in the State outside of New York City due to the extent of hardened shoreline, lack of upland areas for marsh migration, and vulnerability of natural features (e.g., dunes and beaches) to increased erosion, flooding and storm damage. To protect human health and safety and maintain ecosystem integrity, current scientific data will be used to identify potential climate change impacts, evaluate risks, and develop appropriate adaptation plans and strategies.
- **SAMP implementation through coordinated public funding.** Now more than any time since the South Shore Estuary Reserve Council's (SSERC) creation 16 years ago, funds are tighter, priorities loom larger and there is greater scrutiny over how public funds are expended. The SAMP's implementation plan will prioritize projects based on human and SSE ecosystem needs to maximize the use of available funds.

The SAMP's guidance and policies will be based on the broad knowledge of existing information generated by the SSER Comprehensive Management Plan as well as DOS and SSERC partner efforts and scientific research over the past ten (10) years. In addition, guidance and policies will include impact assessments from the recent update to the SCFWH in the SSE as well as the State's new practices identified in the Sea Level Rise Task Force, Climate Action Council, NYS Research and Development Authority (NYSERDA) ClimAid report, and New York State agencies' (DOS/DEC/NYSERDA/SEMO) community climate change adaptation planning. Guidance and standards generated from the Oceans and Great Lakes Ecosystem Conservation Council (OGLECC) will be used, especially as it relates marine special planning to maintain and restore viable finfish nurseries and shellfish habitat.

### IV. Benefit(s) to Coastal Management

Discuss the anticipated effect of the program change or implementation activities including a clear articulation of the scope and value in improved coastal management and resource protection.

The SAMP will reflect current thinking on emerging issues and recommendations, and will be based on an integrated analysis of water quality, habitats, and sea level rise/climate change in order to guide regional best management practices, enforceable standards and policies, and prioritize SSE improvement projects. Public health and safety will be improved and the viability of the SSE's ecosystem will be protected and restored by amendment of the NYS CMP to guide future consistency decisions. SSE partner governments will incorporate standards and policies into local laws and regulations and be more inclined to prepare and adopt LWRPs, harbor management plans or program components in the priority areas of water quality, wetlands and habitats, and climate change adaptation.

## **V. Likelihood of Success**

Discuss the likelihood of attaining the proposed program change and implementation activities. The state or territory should address: 1) the nature and degree of support for pursuing the strategy and the proposed change; and, 2) the specific actions the state or territory will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.

The Department has a proven record of accomplishment in completing and upholding a regional program amendment as evidenced by the success of the Long Island Sound Coastal Management Program Amendment. The DOS will ensure success of the SAMP by managing all aspects of its preparation and implementation. During Phase I, the DOS and 24-member SSERC, on which all SSE local governments are represented and the DOS chairs, will provide support and expertise for the preparation and submission of the SAMP, as outlined below. Preparing a SAMP for specific issues will maintain workloads at a manageable scale.

## **VI. Strategy Work Plan**

Using the template below, provide a general work plan that includes the major steps necessary for achieving the program change and/or implementing a previously achieved program change. The plan should identify significant projected milestones/outcomes, a schedule for completing the strategy, and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual outcomes are a useful guide to ensure the strategy remains on track, OCRM recognizes that these benchmarks may change some over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. Further detailing of annual tasks, budgets, benchmarks, and work products will be determined through the annual award negotiation process.

**Total Years:** 5

**Total Budget:** \$804,000

**Outcome(s) and Products:**

**Year(s):** 1-3

**Description of activities:** Develop a Special Area Management Plan covering Long Island's SSE for water quality improvement, habitat restoration and climate change adaptation that will lead to an amendment of the New York State Coastal Management Program.

1. Conduct periodic stakeholder briefings with the SSERC members, State legislators, State agencies, federal partners, key officials, organizations, advocacy groups, estuary experts, scientists and other key partners on the SAMP's strategy, scope of work, anticipated deliverables and timeline. Maintain existing and expand new partner relations through regularly scheduled SSERC meetings. Distribute pertinent information by email and on the SSERC's website for review and comment.
2. Collect pertinent geographic, water quality, habitat, climate change, legal and other data for use in the planning process. Expand membership of experts on topic-specific SSERC work groups. Vet data with experts to gain acceptance. Conduct trends analysis of geographic and ecologic value data for SCFWH between 2002 and the 2008 designations. Analyze water quality management practices and stormwater abatement projects implemented since 2001. Identify successful practices and project

types with the greatest potential to reverse and prevent the degradation of habitats and living resources. Protect public health. Overlay SSE data with the Ocean and Great Lakes Ecosystem Conservation Council's bio-geophysical and infrastructure data, renewable energy requirements and human use data affecting the planning area to identify data gaps.

3. Complete an integrated analysis of water quality, habitat impairment data, and potential sea level rise/climate change impacts. Define risks and formulate science-based regionally specific impact assessments into appropriate coastal policies that protect humans, halt resource degradation, restore the quality and function of the SSE ecosystem, and lead to a climate change adaptation strategy.
4. Policy development and a legal review of the SSER enabling legislation will identify any modifications necessary to implement the SAMP.
5. Recommend specific water quality, coastal habitat protection and climate change adaptation measures and projects to guide and direct the SSERC's work for the next ten (10) years.
6. Conduct public review of the SAMP and submit a New York State Coastal Management Program change based on the SAMP's three issue areas.

**Outcome(s):** SAMP submitted to OCRM as a proposed RPC for water quality, habitats, and climate change and completion of a ten (10) year implementation plan.

**Portion of budget for Year(s): 1-3:** \$482,400

**Year(s): 4-5**

**Description of activities:** Oversight and management of the SAMP's implementation for water quality improvement, habitat restoration and climate change adaptation as an amendment to the NYS CMP.

1. Train local, state and federal government agency staff in the application of regional policies and preparation of LWRPs to implement the policies and recommendations of the SAMP.
2. Facilitate preparation of LWRPs or partial LWRPs focusing on water quality improvement, habitat restoration and climate change adaptation based on SAMP recommendations.
3. Analyze benefits of completing a SSE Coastal Management Program to: expand public use and enjoyment of the estuary; sustain and expand the estuary-related economy; increase education, outreach and stewardship activities; and identify other areas of concern such as embayment uses, harbor management, and dredging and dredged material management.
4. Establish local water quality, habitats and sea level rise monitoring programs with consistent scientific protocols and long-term monitoring objectives as recommended by the SAMP.
5. Guide State funding of improvement projects and monitor SSERC partner implementation of the SAMP.

**Outcome(s):** Greater local government collaboration, improved local regulations, better public safety protection, and restored critical coastal resources.

**Portion of the Budget for Year(s): 4-5:** \$321,600

## VII. Fiscal and Technical Needs

- A. Fiscal Needs:** If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the applying agency has made, if any, to secure additional state funds from

the legislature and/or other sources to support this strategy.

This strategy relies on Program staff to oversee and manage all SAMP components and phases, which includes preparing and assembling all portions of the SAMP for OCRM's concurrence (Phase I) and SAMP implementation and needs analysis for a second amendment (Phase II). Additional targeted State funds will be employed to collect and analyze information leading to policy development, and facilitate its implementation. The State-funded SSER Office staff and assistance from SSERC partners will support SAMP preparation. DOS will educate policy users to ensure guidance is followed and facilitate local governments' adoption of implementing laws and regulations. In addition, the SSER Office will provide technical assistance to government and nongovernment entities and conduct outreach activities to educate constituents on important SSE issues.

- B. Technical Needs:** If the state does not possess the technical knowledge, skills, or equipment to carry out the proposed strategy, identify these needs. Provide a brief description of what efforts the applying agency has made, if any, to obtain the trained personnel or equipment needed (for example, through agreements with other state agencies).

Not Applicable

### **VIII. Projects of Special Merit (Optional)**

If desired, briefly indicate what PSMs the CMP may wish to pursue to augment this strategy. Any activities that are necessary to achieve the program change or that the state intends to support with baseline funding should be included in the strategy above. The information in this section will not be used to evaluate or rank PSMs and is simply meant to provide the CMPs the option to provide additional information if they choose. PSM descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not do provide detailed project descriptions that would be needed for the PSM competition.

Not Applicable

## CMP Amendment: Atlantic Ocean and Great Lakes

### I. Issue Area(s)

The proposed strategy or implementation activities will support the following priority (high or medium) enhancement area(s) (*check all that apply*):

- |   |   |
|---|---|
| <input type="checkbox"/> Aquaculture                                    | <input type="checkbox"/> Cumulative and Secondary Impacts |
| <input checked="" type="checkbox"/> Energy & Government Facility Siting | <input type="checkbox"/> Wetlands                         |
| <input type="checkbox"/> Coastal Hazards                                | <input type="checkbox"/> Marine Debris                    |
| <input checked="" type="checkbox"/> Ocean/Great Lakes Resources         | <input type="checkbox"/> Public Access                    |
| <input type="checkbox"/> Special Area Management Planning               |   |

### II. Program Change Description

A. The proposed strategy will result in, or implement, the following type(s) of program changes (*check all that apply*):

- A change to coastal zone boundaries;
- New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- New or revised local coastal programs and implementing ordinances;
- New or revised coastal land acquisition, management, and restoration programs;
- New or revised Special Area Management Plans (SAMP) or plans for Areas of Particular Concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- New or revised guidelines, procedures and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government and other agencies that will result in meaningful improvements in coastal resource management.

B. Describe the proposed program change(s) or activities to implement a previously achieved program change. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)

This strategy involves Local and Regional Program staff support for submitting phased amendments to the NYS Coastal Management Program relative to habitat protection and criteria for siting of wind energy generation and transmission facilities in New York's marine, estuarine and Atlantic Ocean environments, and the Great Lakes Erie and Ontario. The principal goal of this effort is to develop decisional criteria to responsibly site offshore wind energy production and transmission facilities and protect critical ocean and Great Lakes habitats. Both of these elements will need to consider how best to accommodate existing human uses, to the extent practical. This effort aligns with the work of the President's Executive Order and the final recommendations of the Interagency Ocean Policy Task Force. In addition, this strategy is consistent with the Mid-Atlantic Regional Council on the Ocean (MARCO) priorities.

New York will be using a phased approach, based on existing information and available resources. The phases are sequential, but will be overlapping. Each phase will result in an amendment to the New York State Coastal Management Program, followed by ongoing revisions. As new information becomes available, updates will be undertaken as necessary and appropriate.

### III. Need(s) and Gap(s) Addressed

Identify what priority need the strategy addresses, and explain why the proposed program change or implementation activities are the most appropriate means to address the priority need. This discussion should reference the key findings of the Assessment and explain how the strategy addresses those findings.

The assessment pertaining to the Ocean/Great Lakes Resources Priority Enhancement Area identified information gaps relating to the location and status of habitats and natural resources in New York's offshore Atlantic Ocean marine habitat, and regulatory and policy gaps relating to these marine ecosystems. Modified or new policies will be developed to address offshore siting criteria for wind energy development and offshore habitat protection. This will include revisiting the current coastal policies for energy, as the current policy and accompanying explanations do not include offshore wind or other emerging new technologies. Analysis of existing data and responsibilities of State and federal agencies as they stand and develop over time will influence how and to what extent we revise or propose new policies to most effectively be positioned to site renewable offshore energy projects. Existing information, including biogeophysical, infrastructure, minimum offshore wind requirements, legal/jurisdictional, and human uses, will be used as a basis for this work. Beyond our outcome of new or revised coastal policies will be the identification of gaps that can inform state and federal partners as to what information is most urgent, useful, and cost effective to pursue as we move forward.

Examples of how policies may be revised include siting criteria like visual impacts, navigation safety, uses in and around offshore energy facilities, specific location relative to appropriate physical parameters, impacts to habitats, location of transmission corridors and their landfall locations. Wind farm, orientation, spacing, and size may also be considered as this work progresses.

#### **IV. Benefit(s) to Coastal Management**

Discuss the anticipated effect of the program change or implementation activities including a clear articulation of the scope and value in improved coastal management and resource protection.

The strategy will be done in phases over time and, based on available resources, will allow New York to be positioned to make sound decisions on offshore wind energy project proposals. Understanding the links between offshore activities and resources is vital to enhanced decision-making capability. The first phase of this work will result in a "first screening" of locations that may be appropriate for offshore wind development and areas that are clearly to be avoided. Working with federal partners, DOS will be able to identify lease blocks where New York is comfortable with the Department of the Interior seeking developer interest in offshore wind development. Our overall benefit will be to allow better informed decisions on offshore wind proposals, effectively seek enhanced protection measures for critical offshore habitats, and avoid, to the maximum extent practical, conflicts with existing ocean uses.

#### **V. Likelihood of Success**

Discuss the likelihood of attaining the proposed program change and implementation activities. The state or territory should address: 1) the nature and degree of support for pursuing the strategy and the proposed change; and, 2) the specific actions the state or territory will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.

The likelihood of attaining the program change is high. This work is strongly supported by the Governor's office and DOS has amassed many partners to complete this work. Over the course of dozens of briefings from local governments, state agencies, federal agencies and a broad base of stakeholders, including environmental advocates, this work is fully supported and we are confident that our process and timeline will be effective.

DOS will develop mechanisms and criteria for regular updates and revisions, as necessary and appropriate. Given the groundswell of interest and activity in this area, we expect new information will become available that will warrant revisiting the first phase accomplishments. Our process is designed to be open and transparent, and we are developing ways to regularly update and provide opportunities for participation to the full spectrum of stakeholder interests.

#### **VI. Strategy Work Plan**

Using the template below, provide a general work plan that includes the major steps necessary for achieving the program change and/or implementing a previously achieved program change. The plan should identify significant projected milestones/outcomes, a schedule for completing the strategy, and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual outcomes are a useful guide to ensure the strategy remains on track, OCRM recognizes that these benchmarks may change some over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. If the state intends to fund implementation activities for the proposed program change, describe

those in the plan as well. Further detailing of annual tasks, budgets, benchmarks, and work products will be determined through the annual award negotiation process.

**Total Years:** Five (5)

**Total Budget:** 0.25 FTE annually for five years = \$134,000

**Final Outcome(s) and Products:** A series of amendments to the NYS Coastal Management Program relative to habitat protection and criteria for siting of renewable energy generation facilities and other offshore issues in the State's offshore Atlantic Ocean, Long Island Sound, Peconic Estuary, and Great Lakes environments.

**Year(s): 1**

**Description of activities:** Preparation of the RPC submission of revised or new policies for offshore energy siting and habitat protection in the Atlantic Ocean as an amendment to the State coastal management program. Brief CMP coastal stakeholders and partners on LWRP changes based on the amendment and how the amendment will affect ongoing LWRP work.

**Outcome(s):** Progress toward Atlantic Ocean Amendment to CMP.

**Budget:** \$26,800

**Year(s): 2**

**Description of activities:** Submit Atlantic Ocean amendment to OCRM as RPC. Encourage local partners to address their nearshore jurisdictional waters consistent with new offshore policies. Application of new policies will be integrated in the development of new and revising existing LWRPs that include offshore waters and in other State funded activities, like watershed planning, harbor management planning, intermunicipal planning, or regional plans. Support preparation of the revised or new offshore policies in the Long Island Sound and Peconic Estuary.

**Outcome(s):** Approved amendment to CMP.

**Budget:** \$26,800

**Year(s): 3**

**Description of activities:** Begin preparation of RPC submission of new or revised offshore policies for the Peconic Estuary, Long Island Sound, and any remaining areas and issues in the Atlantic Ocean. Brief CMP coastal stakeholders and partners on LWRP changes based on new or revised policies of the amendment and how the amendment will affect LWRPs and continue assistance with LWRP work in Long Island Sound and the Peconic Estuary. Continue application of new policies to integrate the development of new and revised existing LWRPs that include offshore waters and in other State funded activities, like watershed planning, harbor management planning, intermunicipal planning, or regional plans. Support preparation of the revised or new offshore policies in New York State waters in Lake Erie and Lake Ontario.

**Outcome(s):** Progress toward amendments to CMP relative to the Peconic Estuary, Long Island Sound, and any remaining areas and issues in the Atlantic Ocean.

**Budget:** \$26,800

**Year(s): 4**

**Description of activities:** Submit Long Island Sound and the Peconic Estuary amendment to OCRM as RPC. Encourage local partners to address their nearshore jurisdictional waters consistent with these new offshore policies. Application of new policies will be integrated in the development of new and revising existing LWRPs that include offshore waters and in other State funded activities, like watershed planning, harbor management planning, intermunicipal planning, or regional plans. Begin preparation of RPC submission of new or revised offshore policies for Lake Erie and Lake Ontario.

**Outcome(s):** Approved amendment to CMP. Progress toward amendments to CMP for Lake Erie and Lake Ontario.

**Budget: \$26,800**

**Year(s): 5**

**Description of activities:** Submit Lake Erie and Lake Ontario amendment to OCRM as RPC. Encourage local partners to address their nearshore jurisdictional waters consistent with these new offshore policies. Application of new policies will be integrated in the development of new and revising existing LWRPs that include offshore waters and in other State funded activities, like watershed planning, harbor management planning, intermunicipal planning, or regional plans.

**Outcome(s):** Approved amendment to CMP.

**Budget: \$26,800**

## **VII. Fiscal and Technical Needs**

- A. Fiscal Needs:** If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the applying agency has made, if any, to secure additional state funds from the legislature and/or other sources to support this strategy.

This strategy relates to Local and Regional Program staff support for the Department's submitting of a series of amendments to the NYS Coastal Management Program and subsequent advisement to LWRP participants. The technical analyses, policy development and federal coordination work associated with the amendments will be accomplished by the Department's Ocean and Great Lakes Program staff under State funding.

- B. Technical Needs:** If the state does not possess the technical knowledge, skills, or equipment to carry out the proposed strategy, identify these needs. Provide a brief description of what efforts the applying agency has made, if any, to obtain the trained personnel or equipment needed (for example, through agreements with other state agencies).

Not applicable

## **VIII. Projects of Special Merit (Optional)**

If desired, briefly indicate what PSMs the CMP may wish to pursue to augment this strategy. Any activities that are necessary to achieve the program change or that the state intends to support with baseline funding should be included in the strategy above. The information in this section will not be used to evaluate or rank PSMs and is simply meant to provide the CMPs the option to provide additional information if they choose. PSM descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not do provide detailed project descriptions that would be needed for the PSM competition.

Not applicable

## 5-Year Budget Summary by Strategy

At the end of the Strategy section, please include the following budget table summarizing your anticipated Section 309 expenses by strategy for each year.

<b>Strategy Title</b>	<b>Year 1 Funding</b>	<b>Year 2 Funding</b>	<b>Year 3 Funding</b>	<b>Year 4 Funding</b>	<b>Year 5 Funding</b>	<b>Total Funding</b>
Update of existing SCFVH narratives: Great Lakes, St. Lawrence region, and Westchester LIS shoreline	\$67,000	\$67,000	\$67,000	\$67,000	\$67,000	\$335,000
Creation of Article 42 direct permit program	\$67,000	\$67,000	\$67,000	\$67,000	\$67,000	\$335,000
Update / implementation of NYS coastal policies to address marine debris management	\$53,600	\$53,600	\$53,600	\$53,600	-	\$214,400
Ecosystem scale LWRPs	\$160,800	\$160,800	\$160,800	\$160,800	\$160,800	\$804,000
Long Island South Shore Estuary SAMP	\$160,800	\$160,800	\$160,800	\$160,800	\$160,800	\$804,000
CMP Amendment: Atlantic Ocean and Great Lakes	\$26,800	\$26,800	\$26,800	\$26,800	\$26,800	\$134,000
<b>Total Funding</b>	<b>\$536,000</b>	<b>\$536,000</b>	<b>\$536,000</b>	<b>\$536,000</b>	<b>\$482,400</b>	<b>\$2,626,400</b>