

**NEW YORK STATE COASTAL MANAGEMENT PROGRAM**

**309 ASSESSMENT AND STRATEGIES**

**July 1, 2021 through June 30, 2025**

**New York State  
Department of State**

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## **Contents**

<b>Introduction.....</b>	<b>3</b>
<b>Summary of Recent Achievements Completed During the 2016-20 Grant Period ..</b>	<b>4</b>
<b>Wetlands Phase I Assessment.....</b>	<b>6</b>
<b>Coastal Hazards Phase I Assessment.....</b>	<b>11</b>
<b>Coastal Hazards Phase II Assessment.....</b>	<b>24</b>
<b>Public Access Phase I Assessment .....</b>	<b>34</b>
<b>Marine Debris Phase I Assessment.....</b>	<b>41</b>
<b>Cumulative and Secondary Impacts Phase I Assessment.....</b>	<b>52</b>
<b>Special Area Management Planning Phase I Assessment .....</b>	<b>67</b>
<b>Special Area Management Planning Phase II Assessment.....</b>	<b>80</b>
<b>Ocean and Great Lakes Resources Phase I Assessment .....</b>	<b>88</b>
<b>Ocean and Great Lakes Resources Phase II Assessment .....</b>	<b>99</b>
<b>Energy and Government Facility Siting Phase I Assessment .....</b>	<b>107</b>
<b>Energy and Government Facility Siting Phase II Assessment .....</b>	<b>115</b>
<b>Aquaculture Phase I Assessment.....</b>	<b>119</b>
<b>Aquaculture Phase II Assessment.....</b>	<b>123</b>
<b>SAMPs Strategy .....</b>	<b>130</b>
<b>Enhancing Coastal Consistency.....</b>	<b>142</b>
<b>Community and Coastal Resiliency Strategy .....</b>	<b>147</b>
<b>Offshore Planning .....</b>	<b>155</b>
<b>Summary of Stakeholder and Public Comment .....</b>	<b>161</b>

## Introduction

New York State's coastal resources, including natural, recreational and economic, are some of the State's greatest assets. At over 3,200 miles, our coasts offer a diversity of marine and freshwater regimes that fall into four distinct regions: Long Island, a glacially formed island with Long Island Sound to the north and the Atlantic Ocean off its southern shore; New York city, a major international city and port where the coast is highly developed and competition for limited resources is intense; the Hudson River valley, an ecologically and historically important corridor which extends from the federal dam in Troy to New York Harbor; and the Great Lakes - St. Lawrence river region, a vast freshwater, non-tidal coastal system which offers a varied landscape of agriculture, dramatic shorelines, large ports and small harbors.

New York's coastal area is unique as it contains a variety of natural, recreational, industrial, commercial, cultural, aesthetic, and energy resources of local, statewide, regional and national significance. Due to this diversity of resources, the coast is threatened by competing demands. Almost 16 million people- approximately 85% of the State's population - live and work in the State's coastal counties, which account for only 12% of the State's land mass. Coastal New York employs approximately 7.3 million people annually, earning a total of almost \$524 billion. This equates to almost \$1.3 trillion in gross domestic product.

New York's 2021-2025 Section 309 Assessment and Strategy examines issues and opportunities through its evaluation of nine coastal enhancement areas: wetlands, coastal hazards, public access, marine debris, cumulative and secondary impacts, special area management plans (SAMPs), ocean and Great Lakes resources, energy and government facility siting, and aquaculture.

The 2021-2025 Section 309 Assessment and Strategy builds on previous 309 coastal enhancement strategies and reflects changes to coastal counties and communities that have occurred since 2015. Previous New York State 309 strategies placed a high priority on protecting ocean and Great Lakes resources and addressing cumulative and secondary impacts through development of new SAMPs to address regional issues affecting our Great Lakes and the south shore of Long Island. In this 2021-2025 Assessment and Strategy, New York will continue its efforts to expand the focus of SAMPs to address a variety of critical coastal issues, including protection and restoration of natural areas and helping our coastal communities become more resilient to changing climatic conditions and coastal hazards.

This 2021-2025 309 Assessment and Strategy summarizes achievements since 2015 and lays out a path for the next five years. The assessment describes the current status and associated accomplishments of each of the nine Enhancement Areas as it pertains to New York's coastal and ocean resources. The strategy section identifies ways the

coastal program will improve processes and carry our projects to better a number of enhancement areas over the next five years. The format and content of this assessment and strategy were established by the Section 309 Program Guidance prepared by the Office of Coastal Resource Management (OCM).

As guided by OCM, the assessment is comprised of two phases, phase I is a high-level assessment of all nine enhancement areas and designed to inform the phase II assessments, which are carried out for those enhancement areas that received a “High” priority ranking during the phase I process. New York’s phase I assessment was developed by a working group of program specialists from the Department of State’s Office of Planning, Development and Community Infrastructure (OPDCI). Enhancement area team members were assigned to the team based on the relevance of their background, experience and current roles and responsibilities in OPDCI. The assessment team continued to collaborate upon the completion of phase I assessment to assist in concentrating efforts on the enhancement areas that received a “high” priority ranking.

Strategies for guiding OPD goals for the next five-year period were developed concurrently with the phase II assessments. Draft assessments and strategies were reviewed by senior staff and revised accordingly.

### **Summary of Recent Achievements Completed During the 2016-20 Grant Period**

OPDCI staff developed coastal risk area maps for the Lake Ontario shoreline and the maps were used in conjunction with an updated version of the DOS Risk Assessment Tool. This mapping and risk assessment was a critical element of the community resilience planning initiative which was also supported through 309 funding.

The Ocean and Great Lakes team drafted a community resilience planning process to be used with Lake Ontario coastal communities. This will be the foundation used for developing community resilience planning guidelines. Our GIS team used GIS tools to create tentative coastal reach boundaries based on hydrogeologic parameters, and the reach boundaries were uploaded to the new web-based DOS Geographic Information Gateway.

OPDCI completed a FY16 Project of Special Merit in September 2019. The project included development of monitoring protocols for shorelines across New York State and one season of field data collection. It is recognized that more data is needed to further refine the protocols and detect trends/changes in shoreline project performance over time. OPDCI began drafting a scope of work during the reporting period to further refine the monitoring protocols and continue data collection in the Great Lakes (and Long Island) region.

OPDCI also completed a draft updated Comprehensive Management Plan for the South Shore Estuary Reserve. This update was completed with strong participation from the South Shore Estuary Reserve Council members and partners. The CMP includes updated information on resources and uses in the reserve, and has many new outcomes identified including SAV monitoring and conservation, water quality improvement measures and a new chapter on resiliency. The final CMP is expected to be completed and posted in the Summer of 2020.

## Wetlands Phase I Assessment

**Section 309 Enhancement Objective:** Protection, restoration, or enhancement of the existing coastal wetlands base, or creation of new coastal wetlands. §309(a)(1)

### **Phase I (High-Level) Assessment:**

*Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.*

### **Resource Characterization:**

1. Using provided reports from NOAA's Land Cover Atlas,<sup>1</sup> please indicate the extent, status, and trends of wetlands in the state's coastal counties. You can provide additional or alternative information or use graphs or other visuals to help illustrate or replace the table entirely if better data are available. Note that the data available for the islands may be for a different time frame than the time periods reflected below. In that case, please specify the time period the data represents. Also note that Puerto Rico currently only has data for one time point so will not be able to report trend data. Instead, Puerto Rico should just report current land use cover for all wetlands and each wetlands type.

Current state of wetlands in 2016 (acres): **1,256,542 acres** (2010). Under direction from NOAA the existing 2010 data was used, New York expects small changes in wetland cover up or down noted in the tables below.

### **Coastal Wetlands Status and Trends**

<b>Change in Wetlands</b>	<b>from 1996-2016</b>	<b>from 2011-2016</b>
Percent net change in total wetlands (% gained or lost) *	<b>-0.024% (1996-2010)</b>	No data available.
Percent net change in freshwater (palustrine wetlands) (% gained or lost) *	<b>0.075% (1996-2010)</b>	No data available.
Percent net change in saltwater (estuarine) wetlands (% gained or lost) *	<b>-2.34% (1996-2010)</b>	No data available.

<sup>1</sup> <https://coast.noaa.gov/digitalcoast/tools/lca.html>. Note that the 2016 data will not be available for all states until later Summer 2019. NOAA OCM will be providing summary reports compiling each state's coastal county data. The reports will be available after all of the 2016 data is available.

**How Wetlands Are Changing\***

<b>Land Cover Type</b>	<b>Area of Wetlands Transformed to Another Type of Land Cover between 1996-2016 (Sq. Miles)</b>	<b>Area of Wetlands Transformed to Another Type of Land Cover between 2011-2016 (Sq. Miles)</b>
Development	7.2 (1996-2010)	No data available.
Agriculture	1.7 (1996-2010)	No data available.
Barren Land	0.5 (1996-2010)	No data available.
Water	3.1 (1996-2010)	No data available.

*\* Note: Islands likely have data for another time period and may only have one time interval to report. If so, only report the change in wetlands for the time period for which data are available. Puerto Rico does not report.*

2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends of coastal wetlands since the last assessment to augment the national data sets. None available.

**Management Characterization:**

1. Indicate if there have been any significant changes at the state or territory level (positive or negative) that could impact the future protection, restoration, enhancement, or creation of coastal wetlands since the last assessment.

**Significant Changes in Wetland Management**

<b>Management Category</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
Statutes, regulations, policies, or case law interpreting these	N
Wetlands programs (e.g., regulatory, mitigation, restoration, acquisition)	N

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
  - a. Describe the significance of the changes;
  - b. Specify if they were 309 or other CZM-driven changes; and
  - c. Characterize the outcomes or likely future outcomes of the changes.

## **Wetlands programs (e.g., regulatory, mitigation, restoration, acquisition)**

### **2016 Open Space Conservation Plan**

The New York State Open Space Conservation Plan (OSCP) was revised and updated in 2016. The OSCP is the primary tool used to set goals and recommendations for preserving and enhancing open space protection and statewide recreation. The fundamental purpose of the OSCP is to urge increased protection of our state's significant natural, scenic, recreational, historic and cultural resources. The revised OSCP makes recommendations to our state, federal, and local governments, non-profits, philanthropists, and state citizens on programs and partnerships, education and outreach, policies and regulations, research and funding. The OSCP lists priority conservation projects, publicly identified and reviewed, which are eligible for acquisition under the State Environmental Protection Fund and other state, federal and local sources. DEC, DOS, Office of Parks Recreation and Historic Preservation (OPRHP) and other State agencies collaborate on development of the OSCP. The OSCP included the State's proposals for the Coastal and Estuarine Land Conservation Program (CELCP).

This plan was not a 309 driven change.

The new plan contains 16 Open Space Conservation Goals:

- To protect water quality, including surface and underground drinking water supplies, lakes, streams and coastal and estuarine waters needed to sustain human life and aquatic ecosystems.
- To provide accessible, quality, outdoor recreation and open space to all New Yorkers.
- To protect habitat for the diversity of plant and animal species to ensure the protection of healthy, viable and sustainable ecosystems
- To improve quality of life and overall health in our communities, especially those with limited current access to open space.
- To maintain critical natural resource-based industries such as farming, forest products, commercial fishing and tourism.
- To address global climate change by encouraging more compact community design patterns.
- To address global climate change by sustainable stewardship of our forests for climate mitigation and adaptation.
- To address climate change by protecting our coastlines, broad riparian corridors and wetlands.



- To address global climate change by adding to the tree canopy in our urban centers and urban communities to moderate temperature fluctuations, thereby lowering our energy consumption.
- To maintain an interconnected network of protected lands and waters enabling flora and fauna to adapt to climate change
- To protect habitat to sustain the traditional pastimes of hunting, fishing, trapping and wildlife viewing
- To provide places available to all New Yorkers for education and research relating to ecological, environmental and cultural resources
- To protect and enhance scenic, historic and cultural resources considered to be valued parts of the common heritage of our citizens
- To strategically preserve, restore, and/or create a matrix of natural systems sufficiently complex and interconnected to be self-sustaining while performing the critical natural functions necessary to sustain us
- To improve quality of life with targeted green infrastructure that restores environmental benefits of open space, aesthetics, clean air, water, soil and access to nature in disadvantaged communities that have suffered an excessive, unfair share of environmental degradation
- To identify, sustain, and rebuild natural lands, features, and systems that prevent or buffer impacts to life and property from extreme weather events.

### **Hudson River Habitat Restoration – Ecosystem Restoration Feasibility Study**

Developed by the U.S. Army Corps of Engineers, in partnership with DEC's Hudson River Estuary Program and the Department of State, the Feasibility Study provided feasibility level analyses for navigation improvement measures and aquatic ecosystem restoration measures, including evaluation of eroding shorelines, degraded fish and wildlife habitat, impediments to fish passage, and flooding control measures.

This plan was not a 309 driven change.

The study included the development of restoration goals and objectives, evaluation of baseline conditions and identification of restoration opportunities. A total of 1800 restoration opportunities were identified through Geographic Information System [GIS] analysis and nomination during municipality outreach meetings hosted by the Nature Conservancy, Partners Restoring the Hudson, and NYSDEC. Sites were screened and prioritized in order to advance sites that provided the maximum ecological benefits meeting restoration goals. The NY District evaluated and prepared a Draft Integrated Feasibility Report and Environmental Assessment for the Hudson River Basin. Alternatives developed were evaluated and compared to identify a Tentatively Selected Plan (TSP). The TSP consists of ecosystem restoration at five sites including: Restoration of 2 side channels with adjacent wetlands (38 acres) and wetlands (144 acres) at

Binnen Kill and Schodack Island; Restoration of shorelines (0.5 miles) and wetlands (4 acres) at Henry Hudson Park; and Restoration of Tributary Connectivity through the removal or partial removal of 4 dams and or impediments along Rondout and Moodna Creeks opening up a total of 17 miles of high quality habitat for migratory fish.

**Enhancement Area Prioritization:**

1. What level of priority is the enhancement area for the coastal management program?

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

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

Wetlands play a critical role in New York State by providing wildlife habitat, flood attenuation, sediment control, water quality protection, recreation, research, and education. Wetlands in New York State are protected through various regulatory programs including Article 24 and 25 (Freshwater and Tidal Wetlands Act) administered by DEC; the Coastal Management Program and others.

Wetlands are unique habitats that are some of the most productive areas 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. As mentioned above, these important resources are protected through various State regulatory programs, including the CMP.

Addressing coastal habitat in a changing environment continues to be a challenge. We are faced with increasing extreme weather, rising temperatures, and sea level rise, as a part of overall climate change. To address these issues the DOS continues to address community resiliency in the face of these changing environments. Through sound planning, communities can also protect and restore important habitats, including coastal wetlands, which will help them to be more resilient. Our ability to adapt and be more resilient must also be addressed in coastal policies related to wetlands and habitats.

Agency, academic and non-governmental organization stakeholders were surveyed, and wetlands were identified as being among the top three priority enhancement areas. Loss of wetlands to development, and water level fluctuation due to climate change, highlight the importance of this enhancement area to stakeholders.

## Coastal Hazards Phase I Assessment

**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. §309(a)(2)

**Phase I (High-Level) Assessment:** *(Must be completed by all states.)*

*Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.*

### Resource Characterization:

1. In the table below, indicate the general level of risk in the coastal zone for each of the coastal hazards. The following resources may help assess the level of risk for each hazards. Your state may also have other state-specific resources and tools to consult. Additional information and links to these resources can be found in the “Resources” section at the end of the Coastal Hazards Phase I Assessment

Template:

- The state’s multi-hazard mitigation plan.
- Coastal County Snapshots: Flood Exposure
- Coastal Flood Exposure Mapper
- Sea Level Rise Viewer/Great Lakes Lake Level Change Viewer
- National Climate Assessment

### General Level of Hazard Risk in the Coastal Zone

Type of Hazard	General Level of Risk <sup>2</sup> (H, M, L)
Flooding (riverine, stormwater)	H
Coastal storms (including storm surge)	H
Geological hazards (e.g., tsunamis, earthquakes)	L to M (in NYC, risk of EQ)
Shoreline erosion	H
Sea level rise	H
Great Lakes level change	H
Land subsidence	L
Saltwater intrusion	M-H (local concerns in Long Island due to pumping wells)
Other (please specify)	

2. If available, briefly list and summarize the results of any additional data or reports on the level of risk and vulnerability to coastal hazards within your state since the last assessment. The state’s multi-hazard mitigation plan or climate change risk assessment or plan may be a good resource to help respond to this question.
- The New York Division of Homeland Security and Emergency Services released an updated multi-hazard mitigation plan for New York State in 2019. The HMP categorizes risk related to flooding and coastal hazards in a slightly different way than the aforementioned risk categories, as follows: coastal hazards, flooding, and hurricane. Some language from the HMP related to risks in New York:
    - “New York is very vulnerable to the impacts of sea-level rise, including storm surge and coastal flooding since much of New York State’s coast is highly developed and populated”
    - “Many coastal areas of New York State are highly vulnerable to coastal hazards due to the lack of storm protection and the erosion of supportive and protective natural features such as beaches, dunes and bluffs.”
    - “With ninety percent of New York State’s population residing in waterfront communities, management of flooding and erosion hazards is a critical concern.”
  - The U.S. Army Corps of Engineers completed draft versions of the National Shoreline Management Study (NSMS) for Lake Ontario (2019) and Lake Erie (2017). The NSMS is congressionally authorized to document the nature and impacts of shoreline change for each regional of the US. Erosion is a serious problem for residents and commercial and industrial facilities along the shoreline in both Lake Erie and Lake Ontario, with the southern shore of Lake Ontario experiencing more erosion than the eastern shore of the Lake.
  - Draft NYS Flood Risk Management Guidance for the Implementation of the Community Risk and Resiliency Act (June 20, 2018) provides recommendations for state agencies to consider flood risk for projects involving new or substantially

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<sup>2</sup> 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*

improved structures or repair of structures. This guidance incorporates possible future conditions, including the greater risks of coastal flooding presented by sea-level rise and enhanced storm surge, inland flooding expected to result from increasingly frequent extreme-precipitation events and the increasing risk of compound flooding, resulting from simultaneous storm surge and heavy precipitation.

- The southern shore of Lake Ontario experienced historic high-water levels and devastating flooding in both 2017 and 2019. The flooding in 2017 prompted the President to declare a major disaster declaration. Data has been collected and reports have been released documenting this historic flooding. Examples include:
  - Peer reviewed journal article on the hydrologic and climatic conditions that precede major flood events in Lake Ontario (Carter and Steinschneider, 2018)
  - Great Lakes Water Levels Integrated Assessment Report documenting changes in water levels and recommended policy and management actions to better adapt to future variability in water levels (University of Michigan Graham Sustainability Institute, 2018)
  - USGS Lake Ontario Flood Monitoring and Mapping- The objective of this project is to produce a library of flood-inundation maps (FIMs) at half-foot increments of elevation that would span 245 to 250 feet or the range in elevation from the year-round average water level to a water level that exceeds the 2017 peak (by almost one foot)

**Management Characterization:**

1. In the tables below, indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) have occurred that could impact the CMP’s ability to prevent or significantly reduce coastal hazards risk since the last assessment.

**Significant Changes in Hazards Statutes, Regulations, Policies, or Case Law**

Topic Addressed	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Elimination of development/redevelopment in high-hazard areas <sup>3</sup>	Y	Y	N

<sup>3</sup> Use state’s definition of high-hazard areas.

<b>Topic Addressed</b>	<b>Employed by State or Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
Management of development/redevelopment in other hazard areas	Y	Y	N
climate change impacts, including sea level rise or Great Lakes level change	Y	Y	Y

**Significant Changes in Hazards Planning Programs or Initiatives**

<b>Topic Addressed</b>	<b>Employed by State or Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
Hazard mitigation	Y	Y	Y
Climate change impacts, including sea level rise or Great Lakes level change	Y	Y	Y

**Significant Changes in Hazards Mapping or Modeling Programs or Initiatives**

<b>Topic Addressed</b>	<b>Employed by State or Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
Sea level rise or Great Lakes level change	Y	Y	Y
Stochastic rain events and intense storms	Y	Y	Y

2. Briefly state how “high-hazard areas” are defined in your coastal zone.

For the purposes of the Coastal Erosion Hazard Area regulations (Chapter 6, New York Codes, Rules and Regulations (NYCRR), Part 505) development (or redevelopment in the event of 50% or greater damage from storms or erosion) is prohibited from mapped coastal erosion hazard areas as follows:

- Dunes: 25-feet landward of the landward toe of the dune.
- Bluffs: 25-feet landward of the receding edge of the top of the bluff.
- Beaches: 100-feet landward of the place where there is a marked change in material or physiographic form, or from the line of permanent vegetation, whichever is most seaward.

An additional area designation “Structure Hazard Areas” would be characterized as “High” erosion areas: Where the long-term average annual erosion rate is 1 foot per year or greater, the extent of these areas begins at the edge of the bluff or landward most point of active erosion and extends landward 40 times the average annual erosion rate.

Per the draft NYS Flood Risk Management Guidance (2018), coastal high hazard area is defined as “an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other areas subject to high-velocity wave actions from stores or seismic events.”

For the purposes of resilience and recovery planning efforts, the DOS Risk Area Maps characterize flood/erosion hazard areas as “Extreme”, “High” and “Moderate”, in descending order of risk. DOS Risk Area Maps were originally developed for use in downstate (Marine) coastal areas of NYS. In 2018/2019, DOS updated the Risk Area Maps for use along the Lake Ontario shoreline, including the St. Lawrence River. The methodology and datasets used to develop the extreme, high, and moderate risk zones varied from the downstate maps; for example, Lake Ontario does not have sea level rise.

3. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
  - a. Describe the significance of the changes;
  - b. Specify if they were 309 or other CZM-driven changes; and
  - c. Characterize the outcomes or likely future outcomes of the changes.

**Under Hazards Statutes, Regulations, Policies, or Case Law:**

1. Climate change impacts, including sea level rise or Great Lakes level change
  - a. Significance of the change:
    - i. **Adoption of State Sea Level Rise projections:** In early 2017, NYS adopted sea level rise (SLR) projections (6 NYCRR Part 490) under a requirement from the Community Risk and Resiliency Act (CRRRA). The adopted projections are based on peer-reviewed research conducted by scientists at Columbia University, Cornell University, and Hunter College

as part of the New York State ClimAID study, which included consideration of the possibility of rapid melt of land-based ice on Antarctica and Greenland. Recently published research confirms that such rapid melting of land-based ice is occurring and could result in high rates of SLR, especially if greenhouse gas emissions continue unabated. The adopted regulation includes high projections of approximately six feet of SLR by 2100. This is the first time the State has adopted SLR projections for use by named (in the CRRA) permitting and funding agencies.

- ii. **New Lake Ontario Water Level Management Plan:** The International Joint Commission (IJC) approved Plan 2014 in December 2017 (effective January 7, 2017), a new plan for managing water levels and flows in Lake Ontario and the St. Lawrence River. The previous water management plan, Plan 1958D, with deviations Plan 1958DD, had unintended negative impacts on coastal ecosystems by not including enough water level variation. The new plan allows for more natural variation in water levels, including an increase to the maximum Lake Ontario water level by 2.4 inches. In addition to coastal ecosystem benefits, the new Plan change would slightly increase hydropower energy production, and while Plan 2014 still maintains protection to coastal development from damage that would occur without regulation, damages under Plan 2014 may occur sooner and there may be a slight increase to costs for maintenance of coastal structures due to erosion compared to Plan 1958DD.
- iii. **Climate Leadership and Community Protection Act (CLCPA):** On July 18, 2019, Governor Cuomo signed into law the Climate Leadership and Community Protection Act through Chapter 106 of the laws of 2019- the most aggressive climate policy for a major global economy. The CLCPA, among other things, increases the stringency of the state's long-term economy-wide greenhouse gas reduction goal to 85 percent below 1990 levels by 2050 and establishes a new goal to achieve net-zero emissions economy-wide by 2050. The Act directs the development of a scoping plan, by the Climate Action Council, that identifies and recommends regulatory measures and other state actions that will ensure the attainment of the state's 100 percent net-zero goal and establishes a process for the consideration of the social and economic transitions needed to ensure that the state's most vulnerable communities are not disproportionately impacted. This Law also amends the Community Risk and Resiliency Act (CRRA) by requiring agency promotion of adaptation and resilience actions.
- iv. **Environmental Conservation Law (ECL) amendment to Article 54 Environmental Protection Act §54-1101:** A legislative update to section 54-1101 (1) of the ECL effective 4/12/2016 added to the language, "The secretary is authorized to provide on a competitive basis, within amounts



appropriated, state assistance payments to municipalities toward the cost of any local waterfront revitalization program, including planning projects to mitigate future physical climate risks and updates to existing local waterfront revitalization program plans to mitigate future climate risks. Eligible costs include planning, studies, preparation of local laws, and construction projects.” This language was added by a budget bill that, in this section, was implementing the goals of the Community Risk and Resiliency Act (CRRA) (Ch. 355 of the Laws of 2019) which requires state agencies to consider future physical climate risks, etc. in funding and regulatory decisions.

**b. CZM or 309-driven change:**

- i. **SLR projections:** CZM staff participated in the review of selected SLR projections. Adoption of SLR projections is a requirement under the Community Risk and Resiliency Act (2014). This was a CZM-driven change.
- ii. **Water level management plan:** CZM staff played a supportive role during the development of the new water level management plan. This was a CZM-driven change.
- iii. **CLCPA:** CZM staff will play a role in the implementation of the CLCPA, particularly as it relates to local governments and climate justice. This was not a CZM or 309-driven change. **Amendment to Article 54:** CZM staff assisted in writing and reviewing the amendment language. This was a CZM-driven change.

**c. Outcomes:**

- i. **SLR projections:** These projections will guide future planning efforts and must be considered by applicants in the State for certain permit and funding programs, but they will not have any impact on federal flood insurance rates or independently create any new design standards or permit requirements. By law, these projections must be reviewed and updated every 5 years.
- ii. **Water level management plan:** Recent extreme precipitation events will continue to challenge our ability to predict, manage and respond to changes in water levels.
- iii. **CLCPA:** The law provides clear targets for the electric sectors for 2025, 2030 and 2035. Over the next several years, the Climate Action Council will create a scoping plan, providing recommendations for reducing emissions across all sectors of the economy. The scoping plan will be updated every 5 years.
- iv. **Amendment to Article 54:** We anticipate an increased number of Local Waterfront Revitalization Plans that include coastal and climate hazards planning.

## Under Hazards Planning Programs or Initiatives:

### 1) Hazard Mitigation

#### a) Significance of the change:

- i) **Updated Hazard Mitigation Plan:** In 2018/2019, the New York Division of Homeland Security and Emergency Services (DHSES) updated the NYS Multi-Hazard Mitigation Plan (HMP). The updated HMP is now an online, interactive website that includes direct access to data. The intention is for the HMP, and associated data, to be easily updated so that local governments can use up-to-date information and data when updating their own local HMPs.
- ii) **Regional Economic Development Initiative (REDI):** In May 2019, Governor Cuomo announced the development of the REDI Commission, a multi-agency task force charged with developing a plan to strengthen infrastructure along Lake Ontario's waterfront while strengthening the region's local economies, which are heavily dependent on summer tourism. The REDI process included identification of at-risk assets and resilience projects for communities, businesses and private homeowners (through 3 separate funding programs) that experienced damage from the spring 2019 high-water event. This was an expedited planning and implementation process that could be replicated in the future. This is the first basin-wide type planning effort to address flooding and resiliency.

#### b) CZM or 309-driven change:

- i) **Updated HMP:** DHSES serves as the lead state agency responsible for the maintenance and 5-year update of the State Hazard Mitigation Plan under the direction of the Disaster Preparedness Commission, which is comprised of the agencies that contribute to mitigation, response and recovery in New York. FEMA must approve state mitigation plans so that States are eligible to receive certain types of non-emergency disaster assistance, including funding for mitigation projects. This was not a 309 or CZM-driven change.
- ii) **REDI:** This was a Governor initiative with support from DOS and other agencies. DOS used 309-supported staff time to help develop content and guide the REDI process in terms of addressing existing 309 goals for Lake Ontario resiliency. This was a 309-driven change.

#### c) Outcomes:

- i) **HMP:** In this update, the HMP specifically addresses climate change, specific to each hazard. Since the HMP is now an online, interactive platform, updates can be made regularly in response to new information or data. More up-to-date information on hazards can improve local hazard mitigation planning or implementation efforts. The HMP can also inform other state or local planning

efforts, such as adaptation or resilience plans.

- ii) **REDI:** Recent extreme high-water levels across the Great Lakes basin may signal larger shifts in weather patterns and suggest a “new normal” of conditions that are proving to be beyond the ability to fully compensate through adjusting outflows. The REDI process has helped those impacted better understand the variety of measures to help reduce flooding impacts; however, engagement around acceptance of a new normal will be ongoing.

## 2) Climate Change impacts, including sea level rise or Great Lakes level change

### a) Significance of the change:

- i) **Model Local Laws:** DOS worked with the Department of Environmental Conservation and other partners to create model local laws (a requirement under the Community Risk and Resiliency Act) to help local governments be more resilient to sea-level rise, storm surge, and flooding. A set of Model Local Laws to Increase Resilience was published by DOS in June 2019 consisting of five chapters: Basic Land Use Tools for Resiliency; Wetland and Watercourse Protection Measures; Management of Floodplain Development; and Stormwater Control Measures. The fifth and final chapter of the Model Local Law to Increase Resilience will be published in late 2019 (Coastal Shoreline Protection Measures). This forthcoming chapter will have model local laws to help local governments along the coast be more resilient to sea-level rise, storm surge, and flooding. This is the first compendium of its kind with specific risk-reduction related model local laws for local governments in New York.
- ii) **Countywide Resiliency/Smart Growth Planning Grant Program:** DOS issued contracts to five counties through the Smart Growth Environmental Protection Fund planning grant program for counties to develop resiliency plans with Smart Growth and sustainable development in mind. Resiliency plans will include a countywide risk assessment, resilience strategies, and accompanying recovery projects and actions to address areas in the counties that have been most affected by past storm damages; specifically, counties that were not included in the prior New York Rising Community Reconstruction program (2013). Awards were made to Albany, Genesee, Orange, Sullivan and Tompkins Counties in this round.
- iii) **Evolving Local Waterfront Revitalization Program:** In early 2019, DOS updated their Local Waterfront Revitalization Program (LWRP) planning guidance for communities. Updates include recommendations for consideration of climate change and community resilience when preparing an LWRP, along with updates related to cumulative and secondary impacts, resource protection issues, economic development, and more.

- iv) **Coastal Lakeshore Economic and Resiliency (CLEAR) Plan:** The Coastal Lakeshore Economy and Resiliency planning process will address community vulnerability and exposure to changes in lake levels through forward looking approaches that are complementary to economic development. The intention is to help transition communities to more resilient and adaptable approaches to development that will reduce the recurrence of painful events experienced in 2017 and 2019. This planning effort will build off the REDI process (see REDI under Hazard Mitigation) and focus on community engagement and longer-term visioning for a more resilient community.
- v) **NYS Flood Risk Management Guidance:** This draft guidance (released June 20, 2018) provides recommendations for state agencies to consider flood risk for projects involving new or substantially improved structures or repair of structures. This guidance incorporates possible future conditions, including the greater risks of coastal flooding presented by sea-level rise and enhanced storm surge, inland flooding expected to result from increasingly frequent extreme-precipitation events and the increasing risk of compound flooding, resulting from simultaneous storm surge and heavy precipitation.  
This was a deliverable under the 2014 Community Risk and Resiliency Act

**b) CZM or 309-driven change:**

- i) **Model Local Laws:** CZM staff worked with partner agencies to develop this resource. This is a requirement under the Community Risk and Resiliency Act. This was a CZM-driven change.
- ii) **Countywide Resiliency/Smart Growth Planning Grant Program:** CZM staff worked with the DOS Office of Smart Growth to develop this program. This was a CZM -driven change.
- iii) **Evolving LWRP:** Yes, this was a 309-driven change.
- iv) **CLEAR:** Yes, this was a 309-driven change.
- v) **NYS Flood Risk Management Guidance:** CZM staff participated in the development of this Guidance. This is a requirement under the 2014 Community Risk and Resiliency Act. This was a CZM-driven change.

**c) Outcomes:**

- i) **Model Local Laws:** DOS anticipates engaging in further outreach and education on the Model Local Laws and we expect more communities to adopt local laws that consider risk reduction.
- ii) **Countywide Resiliency/Smart Growth Planning Program:** DOS anticipated another round of these planning grants. Communities that engage in this planning program will be more aware of their risks and can identify

- projects and strategies to reduce that risk. The strategies and recommendations in the plans shall support the principles of smart growth and shall be incorporated into existing land use and infrastructure plans, policies and ordinances where feasible.
- iii) **Evolving LWRP:** This guidance will help communities preparing or updating an LWRP to better consider hazards and think about resilience when they are completing elements of the LWRP, such as developing a vision for their waterfront and identification of strategies to manage their waterfront.
  - iv) **CLEAR:** There are several goals attached to the CLEAR planning process, listed below. The plans will be designed to connect to existing State programs and funding sources so that communities can continue to plan their transition, focus their efforts, and begin implementation.
    - (1) Vibrant communities that continue to thrive in changing and variable lake levels and conditions.
    - (2) Rebuilding efforts that embrace the connectivity of the coastal environment through innovative designs and adaptive uses.
    - (3) A deeper understanding and appreciation for the important role every shoreline property owner plays in their communities' resilience.
    - (4) Coastal development patterns that provide continued opportunities for existing and new recreation and employment.
    - (5) Local governments, organizations, and leaders who are empowered to protect their communities and create new, more resilient paths for community growth.
  - v) **NYS Flood Risk Management Guidance:** This guidance serves as an interim step in the ongoing incorporation of climate change-related considerations and requirements into relevant DEC and other agency regulatory and funding programs. DEC intends that this guidance will inform development of all subsequent guidance prepared pursuant to the Community Risk and Resiliency Act (CRRRA), as well as any program-specific changes made to incorporate additional consideration of flood risk. The recommended flood risk management guidelines are intended primarily for consideration in determination of the suitable location for construction of a proposed structure or other regulated activity, given future physical risks, within a permit's jurisdictional area. The guidance may also be used as a technical resource in development of program-specific guidance for state or local regulatory or funding programs not covered by CRRRA, but for which flooding is a concern.

## **Under Hazards Mapping or Modeling Programs or Initiatives**

### **1) Sea Level Rise or Great Lakes Level Change**

#### **a) Significance of the change:**

- i) **DOS Lake Ontario Risk Area Maps:** In response to extreme flooding along the southern shore of Lake Ontario in 2017, DOS began the process of updating the DOS Coastal Risk Area Maps for applicability along the southern shore of Lake Ontario, including the St. Lawrence River. Since the Lake

Ontario environment is different than the marine coast, along with differing datasets, DOS developed new methodology to create the extreme, high, and moderate risk zones. The risk area map, when used in conjunction with the DOS developed risk assessment tool, help communities understand and identify areas and assets of varying levels of risk. These Risk Area Maps were used in the REDI program and will be used in the CLEAR program as well. Communities along the Lake that are preparing or updating an LWRP can also use the maps to help assess risk to community assets. The Risk Area Maps are available on the DOS Geographic Information Gateway.

- ii) **Hudson River Flooding Decision Support Tool:** This online mapping tool was developed with funding from the New York State Energy Research and Development Authority, allows users to assess the impacts of flood inundation posed by sea level rise, storm surge and rain events on communities bordering the lower Hudson River. Flood simulations merge all sources of flooding. The resulting 5-year to 1000-year flood zone maps are applied to newly created social and critical infrastructure vulnerability layers, to measure and map flood risk for the Hudson River coastal region. The customized mapping tool allows users to select a particular region of interest with predicted flood scenarios and then visualize the impact on community resources. Users can download maps and summary statistics on structures, populations and critical facilities affected by specific predicted flood events.
- iii) **Coastal NY Future Floodplain mapper:** Developed by the New York State Energy Research and Development Authority, this mapper provides information for seven sea level rise scenarios for the tidally influenced shoreline of New York State, with the exception of New York City. The mapper provides the following flood hazard information for each sea level rise scenario: future coastal floodplain extents and summaries, extent of structurally damaging wave action, building exposure, and chance of flooding.

**b) CZM or 309-driven change:**

- i) **DOS Lake Ontario Risk Maps:** Yes, this was a 309-driven change.
- ii) **Hudson River Flooding Decision Support Tool:** CZM staff participated in agency review and provided comments on draft versions of the tool. This was a CZM-driven change.
- iii) **Coastal NY Future Floodplain mapper:** CZM staff participated in agency review and provided comments on the development of the mapper. This was a CZM-driven change.

**c) Outcomes:**

- i) **DOS Lake Ontario Risk Maps:** These new maps will be used in the forthcoming CLEAR (see above) planning process. With the release of these new maps, communities along the southern shore of Lake Ontario can visualize

flood and erosion risk on the landscape. In the future, these maps can be updated as new information is released.

- ii) **Hudson River Flooding Decision Support Tool:** This mapping and visualization tool has been utilized by Hudson communities undergoing resilience-related planning or implementation activities. By using this tool, communities can better plan for flood-related hazards. DOS includes this tool in community outreach materials.
- iii) **Coastal NY Future Floodplain mapper:** This mapping and visualization tool can help communities in Long Island and the lower Hudson better understand flood-related hazards. DOS includes this tool in community outreach materials.

### Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

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

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

The enhancement area that was identified as the highest priority among stakeholders was coastal hazards (16/30 respondents). The number of respondents that indicated coastal hazards as their top priority was well above the selection of other enhancement areas as their top priority (see graph below). Most respondents identified challenges related to management for coastal hazards such as sea level rise, climate change, resilience, coastal development, and human health and safety. Opportunities to address coastal hazards included reducing construction/rebuilding in hazardous areas, managed retreat programs, improved zoning/local laws, and improved risk communication.

Coastal wetlands ranked high among stakeholder as well. Most of the respondents that indicated coastal wetlands was their top priority relate challenges to climate change and resilience, which is tied closely to coastal hazards.

Overall, coastal hazards remain a high priority for coastal communities, particularly as climate change continues to exacerbate impacts. For example, sea level rise is a hazard, but it also will cause coastal flooding to reach further inland over time. The Coastal Management Program, in collaboration with other state agencies, continues to develop new tools, guidance, and regulations to help reduce impacts from coastal hazards and strengthen the resilience of our communities.

## Coastal Hazards Phase II Assessment

### In-Depth Resource Characterization:

*Purpose: To determine key problems and opportunities to improve the CMP's ability to prevent or significantly reduce coastal hazard risks by eliminating development and redevelopment in high-hazard areas and managing the effects of potential sea level rise and Great Lakes level change.*

1. Based on the characterization of coastal hazard risk, what are the three most significant coastal hazards<sup>4</sup> within your coastal zone? Also indicate the geographic scope of the hazard, i.e., is it prevalent throughout the coastal zone, or are there specific areas most at risk?

	Type of Hazard	Geographic Scope (throughout coastal zone or specific areas most threatened)
Hazard 1	High water levels	Throughout the coastal zone: High water levels are applicable in tidal areas (including impacts from sea level rise, such as tidal flooding), riverine areas, and Great Lakes regions (particularly long-standing inundation from high lake levels)
Hazard 2	Coastal/extreme storms	Throughout the coastal zone, including both storm surge impacts and extreme precipitation events.
Hazard 3	Erosion	Throughout the coastal zone.

2. Briefly explain why these are currently the most significant coastal hazards within the coastal zone. Cite stakeholder input and/or existing reports or studies to support this assessment.

High water levels, and associated impacts, are a significant risk throughout the coastal zone. Low lying areas in Long Island and NYC, such as Mastic Beach in Brookhaven and Broad Channel in Queens, experience regular high tide flooding—typically during spring high tides. Combined with strong onshore winds or a cloudburst event, this tidal flooding may occur more frequently than just during spring high tides. As sea levels rise, these high tides events will reach further inland and occur more frequently. In the Great Lakes region, record high water levels in 2017 and 2019 have caused devastating damage to communities along New York's Lake Ontario shoreline and embayments. Unlike storm surge flooding that comes and goes with a tidal storm event or extreme precipitation, high water levels and flooding along Lake Ontario are long term events lasting for several weeks. With the entire Great Lakes Basin experiencing all time high water levels, New York

<sup>4</sup> See list of coastal hazards on pg. 24 of this assessment template.



lakeshore communities are at continued and elevated risk for future floods. NOAA projected (for 2019) that locations across the Northeast US expected to see a 140% increase in tidal flooding (flooding that occurs on a high tide) compared to typical tidal flooding in 2000.

Increased frequency and intensity of coastal and extreme storm events, such as nor'easters and cloudburst events, have challenged NY with several damaging events post Irene, Lee and Sandy. Examples include the 2013 summer rains that flooded Niagara County with several inches of rain in one afternoon as well as multiple nor'easters striking Suffolk County in the fall of 2019. Storm events are exacerbated by high water and this has been problematic along Lake Ontario's southern shore. Storms dumping snow in the Lake basin, intense spring precipitation events, and sustained high north winds all combine to push water into Lake Erie and Lake Ontario coastal areas.

Erosion continues to occur and increase throughout the State's coastal area. Loss of bluffs and dunes along Lake Ontario's coast and embayments and entire public beaches washed away has led to nearshore sediment transport deficiencies and homes and community assets at risk of falling into the Lake. Winter storms have caused accelerated erosion on the north shore of Long Island, and recent storms that have removed massive amounts of sand resulting in total beach loss in locations like Montauk and along the south shore Long Island barrier system. Significant and costly erosion events have gone from notably infrequent to a regular occurrence.

3. Are there emerging issues of concern, but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

Emerging Issue	Information Needed
<p>Great Lakes water level variations influenced by climate change and an ill-conceived existing water level management plan (Plan 2014) for Lake Ontario. In 2017 and 2019, Lake Ontario south shore communities experienced devastating flooding. In order to better prepare for future conditions, communities need more accurate projections of future conditions, and techniques to mitigate more extreme changes in water levels. Lake Erie is vulnerable to erosion and loss of sand from bluffs.</p>	<p>Projections of water levels based on historic and current/recent trends is desperately needed. Old models ending in annual data going back 15 or more years is no longer relevant. The weather trends in the last 15 years need to be used in models. Sub-basin retention and conveyance models should be developed to better prepare communities and help to reduce flood duration and impacts.</p>
<p>Cumulative impacts of increased shoreline armoring (e.g., increased hardening/natural process manipulation along Lake Ontario in response to high water levels); Cost benefit analysis of alternative shoreline treatments is lacking and slowing progress on alternative shoreline treatments. NNBF criteria for locating and designing effective treatment across a range of environments is slowing progress for piloting NNBFs and monitoring to develop and refine those criteria.</p>	<p>Effects of shoreline armoring on the natural environment, sediment movement/coastal processes, and adjacent areas needs documentation, monitoring and characterization at a local scale. Projections on Lake behavior based on an all-time high-water level in the Great Lake basin is needed. Modifications to Lake level management should be explored and modeled. Cost benefit analysis should be developed and integrated into state and federal decision-making. Studies to characterize and categorize which NNBF treatments are appropriate is needed. Refinement and implementation of NNBF monitoring needs to be expanded in order to develop sufficient baseline data to detail effectiveness, longevity, construction and maintenance costs, and social acceptability. Community-based social marketing to inform and build a broad coalition of interest and support for NNBF is needed.</p>
<p>The need for regular updates to base flood elevations (BFEs) that consider climate change effects (like sea level rise), development patterns (including impervious surfaces). While BFE +2</p>	<p>Statewide floodplain modeling that takes climate change, changes in land use and flood conveyance infrastructure into account.</p>

Refining the three vulnerability responses – elevate, armor, or retreat – to coastal hazards needs greater attention and support. Effects of resiliency projects on surrounding area/community/watershed and the net benefits of several adjacent landowners working together to address resiliency challenges.	Project level resiliency planning and assessment criteria need refining. communication and outreach approaches that aim to influence social and behavior change, such as CBSM, is crucial to bring communities and landowners up to speed on options, cost and longevity.
Sediment availability analyses and sediment management is a growing need from policy reform to regulatory changes.	Information on the location of sediment resources offshore for storm response/nourishment. Dredging methods, placement and impacts. Community based marketing to inform the public about CDFs, containment islands, and beneficial use of dredged material.
Tidal exchange projects (cuts in barrier, pipes, pumps, etc.) and coastal storm risk reduction projects (storm surge tide gates,)	Water quality impacts, hydrodynamic modeling, and coastal processes integrity need analysis and guidance for agencies and the public.

**In-Depth Management Characterization:**

*Purpose: To determine the effectiveness of management efforts to address identified problems related to the coastal hazards enhancement objective.*

1. For each coastal hazard management category below, indicate if the approach is employed by the state or territory and if there has been a significant change since the last assessment.

**Significant Changes in Coastal Hazards Statutes, Regulations, and Policies**

Management Category	Employed by State/Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Change Since the Last Assessment (Y or N)
Shorefront setbacks/no build areas	Y	Y	N
Rolling easements	N	N	N
Repair/rebuilding restrictions	Y	Y	N
Hard shoreline protection structure restrictions	Y	Y	N
Promotion of alternative shoreline stabilization	Y	Y	N

<b>Management Category</b>	<b>Employed by State/Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Change Since the Last Assessment (Y or N)</b>
methodologies (i.e., living shorelines/green infrastructure)			
Repair/replacement of shore protection structure restrictions	Y	Y	N
Inlet management	Y	Y	N
Protection of important natural resources for hazard mitigation benefits (e.g., dunes, wetlands, barrier islands, coral reefs) (other than setbacks/no build areas)	Y	Y	N
Repetitive flood loss policies (e.g., relocation, buyouts)	Y	Y	Y
Freeboard requirements	Y	N	Y
Real estate sales disclosure requirements	N	N	N
Restrictions on publicly funded infrastructure	Y	Y	N
Infrastructure protection (e.g., considering hazards in siting and design)	Y	Y	Y
Other (please specify)			

**Significant Changes to Coastal Hazard Management Planning Programs or Initiatives**

<b>Management Category</b>	<b>Employed by State/Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Change Since the Last Assessment (Y or N)</b>
Hazard mitigation plans	Y	N	Y
Sea level rise/Great Lake level change or climate change adaptation plans	Y	Y	Y
Statewide requirement for local post-disaster recovery planning	N	N	N
Sediment management plans	N	Y	N
Beach nourishment plans	Y	N	N
Special Area Management Plans (that address hazards issues)	Y	Y	Y
Managed retreat plans	N	NY	Y *
Other (please specify)			

\*DOS contributed to the mapping and identification of coastal areas at the greatest risk where buyouts might be appropriate. The NYS Governor’s Office of Storm Recovery used the DOS maps to help guide locations for their buyout program in Staten Island.

**Significant Changes to Coastal Hazard Research, Mapping, and Education Programs or Initiatives**

<b>Management Category</b>	<b>Employed by State/Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Change Since the Last Assessment (Y or N)</b>
General hazards mapping or modeling	Y	Y	Y
Sea level rise mapping or modeling	Y	Y	N
Hazards monitoring (e.g., erosion rate, shoreline change, high-water marks)	N	N	Y
Hazards education and outreach	Y	Y	N
Other (please specify)			

2. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state's management efforts in addressing coastal hazards since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state's management efforts?

Several factors can be considered in determining the effectiveness of the Coastal Program in addressing coastal hazards, including the effective use of tools and resources developed in ongoing activities to identify and address hazards. Since 2015, the Program has updated the DOS risk assessment tool and coastal risk maps for the Lake Ontario region. The risk assessment and maps were utilized in the Governor's Resiliency and Economic Development Initiative (REDI) in 2019-2020. Lake Ontario municipalities utilized the tool and map to better understand potential risk from flooding and erosion to identified assets. Results were considered in the selection and design of risk reduction measures.

Starting in 2016, our Local Waterfront Revitalization Program (LWRP) funding program through the Environmental Protection Fund (EPF) has included updating an LWRP to mitigate future physical climate risk as an eligible activity. Types of planning activities include assessment of risk associated with flooding and erosion, identification of strategies related to adaptation, and identification of opportunities for modifying existing or development new laws, regulations, policies and practices to reduce a community's vulnerability to hazards. Since 2016, the Program has funded over 25 planning and implementation projects geared towards improving resilience.

In 2019, the Coastal Program released Model Local Laws for Resilience, a requirement under the Community Risk and Resiliency Act. These model local laws are intended to be adapted and adopted by communities to help improve their resilience to sea level rise, storm surge, and flooding.

The Coastal Program received funding under the Project of Special Merit FY2016 competition to develop shoreline monitoring protocols to assess the performance of various shoreline management measures. Coastal managers, shoreline property owners, state agencies, and other shoreline stakeholders are interested in understanding the ability of natural and nature-based features (NNBF) to provide benefits such as risk reduction, ecological function, and community well-being. Establishment of statewide monitoring protocols will allow for more consistent comparison across projects to improve decision making for shoreline measures. The project process included robust stakeholder engagement and feedback to date has been supportive of the effort and continued investment in monitoring and data analysis.

### **Identification of Priorities:**

1. Considering changes in coastal hazard risk and coastal hazard management since the last assessment and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CMP to improve its ability to more effectively address the most significant hazard risks. (Approximately 1-3 sentences per management priority.)

*Management Priority 1: Develop resiliency guidance for coastal community planning and implementation*

*Description: Development of resiliency guidance will provide a more consistent and holistic approach for coastal communities that are undertaking resiliency planning and project development. The resiliency guidance will be based on foundational concepts for community resilience and resiliency principles, with a specific focus on risks from flooding and erosion.*

*Management Priority 2: Develop a statewide/regional shoreline characterization that links shoreline types and forces with upland use to inform shoreline management planning, implementation and decision making*

*Description: This action is a high priority for New York with potential benefits to many stakeholders including conservation interests, developers, investors, homeowners, and government decision makers (coastal consistency). This work builds off the last 309 assessment that included shoreline reach characterizations. Without adequate regionwide data, we completed an in-house examination and comparison of various existing shoreline datasets to look for commonalities in terms of quality, spatial extent, and typologies. In addition, coastal risk areas that incorporated some of this shoreline data were developed for Lake Ontario. This shoreline characterization will include coastal forces acting upon the shoreline, as well as upland uses. It will build off of the prior analysis completed by DOS as well as consider new datasets, such as NOAA's hardened shoreline classification for the Great Lakes. A shoreline characterization can help improve coastal decision making by identifying locations where certain management measures are more effective, reasonably priced, and long lived, and environmentally beneficial.*

*Management Priority 3: Build a constituency and programming with partners for a statewide NNBF monitoring rollout*

*Description: Building on our NNBF Monitoring Protocols Framework, rollout a statewide effort across the four main coastal regions (Great Lakes, Hudson River, NYC, and Long Island) to refine and expand NNBF monitoring. Develop data storage and analysis priorities and partner with organizations to manage local efforts and report back results to as central repository maintained by DOS.*

- Identify and briefly explain priority needs and information gaps the CMP has for addressing the management priorities identified above. The needs and gaps identified here should not be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.

Priority Needs	Need? (Y or N)	Brief Explanation of Need/Gap
Research	Y	Engineering expertise on shoreline management measures appropriate under certain shoreline conditions, including engineering and design standards for natural and nature-based approaches
Mapping/GIS/modeling	Y	Regional down-scaled climate change projections
Data and information management	Y	Current shoreline data, including erosion rates, existing structures, land use, etc. for NYS coastal areas
Training/Capacity building	Y	DOS staff training in: resiliency principles and guidance, model local laws for resilience, best management practices for resilience, social marketing, risk communication
Decision-support tools	Y	Communication and outreach approaches that aim to influence social and behavior change, such as CBSMto enhance and bolster decision support capacity to communities and citizens; and catalyze behavioral changes that reflect climate effects and trends. Lack of cost-benefit
Communication and outreach	Y	Outreach to coastal communities on risk management and resilience, behavior change, and best management practices for resilience
Other (specify)		

**Enhancement Area Strategy Development:**

- 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.

In response to impacts from natural hazards, recent storms, other climate stressors and existing management measures, DOS is developing guidance and programs to help bring awareness to communities on options to improve resilience and reduce negative impacts of hazards and climate change impacts. This includes coastal program



changes, coordination with other state agencies, and supporting local government efforts to plan and implement actions and strategies to increase resilience to natural hazards and climate events.

## Public Access Phase I Assessment

**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.

### Phase I (High-Level) Assessment:

#### Resource Characterization:

- 1) Use the table below to provide data on public access availability within the coastal zone.

#### Public Access Status and Trends

Type of Access	Current number <sup>5</sup>	Changes or Trends Since Last Assessment <sup>6</sup> (↑, ↓, -, unkown)	Cite data source
Beach access sites	571	Small increase	SCORP 2019
Shoreline (other than beach) access sites	1,620	No significant change	SCORP 2019
Recreational boat (power or nonmotorized) access sites	1,430	No significant change	SCORP 2019
Number of designated scenic vistas or overlook points	178	No significant Change	SCORP 2019
Number of fishing access points (i.e. piers, jetties)	643	No significant change	SCORP 2019

<sup>5</sup> Be as specific as possible. For example, if you have data on many access sites but know it is not an exhaustive list, note "more than" before the number. If information is unknown, note that and use the narrative section below to provide a brief qualitative description based on the best information available.

<sup>6</sup> If you know specific numbers, please provide. However, if specific numbers are unknown but you know that the general trend was increasing or decreasing or relatively stable or unchanged since the last assessment, note that with a ↑ (increased), ↓ (decreased), – (unchanged). If the trend is completely unknown, simply put "unkwn."

Type of Access	Current number <sup>5</sup>	Changes or Trends Since Last Assessment <sup>6</sup> (↑, ↓, -, unknown)	Cite data source
Coastal trails/ boardwalks <i>(Please indicate number of trails/ boardwalks and mileage)</i>	443 Trails 1,086 Miles	No significant change	SCORP 2019
Number of acres parkland/open space	257,320	Small loss in acreage	SCORP 2019
Access sites that are Americans with Disabilities Act (ADA) compliant <sup>7</sup>	unknown		
Other (please specify)			

The demand for public access increases annually. To put this in perspective, it is important to note that visitors to Niagara Falls and New York City skew our assessment of demand for coastal access with extraordinary visitor numbers. Best estimates for Niagara Falls State Park, based on paid attendance, parking lot usage, and patron counts at the Niagara Falls Visitor Center, show 8.7 million park users visited in each of the past two years. NYC had a population of 8.2 million residents in 2010 and the city hosted 50.9 million domestic and international non-business visitors that year. By 2013 this increased to 54.3 million non-business visitors, creating a crushing demand for public access in Manhattan, Brooklyn, Queens, and the Bronx.

DOS 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 state agencies. However, we can show <sup>8</sup>that population is increasing in the coastal counties (*projected population increase through the year 2020 for New York's*

<sup>7</sup> For more information on ADA see [www.ada.gov](http://www.ada.gov).

<sup>8</sup> <https://www.dec.ny.gov/lands/98720.html>

*coastal counties is five percent*). This is consistent with historical population increase of six percent for the period from 1970 – 2010.

OPRHP and DEC are the state entities responsible for outdoor recreation and conservation in the State. DEC's primary coastal focus is on fishing and natural resources, while OPRHP directs its efforts to the full range of cultural resources, recreational boating, and water recreation. The lands, facilities and programs administered by the Canal Corporation, Department of Transportation (DOT), Office of General Services (OGS) and other New York State agencies also contribute to the State's outdoor recreation system. The role of the State in providing natural, cultural and recreational opportunities also includes EPF LWRP grants to municipalities from DOS for improvements to local access and recreation. In addition, there are hundreds of coastal access sites maintained by counties, towns and park districts for a variety of recreation activities.

**2. Briefly characterize the demand for coastal public access and the process for periodically assessing demand. Include a statement on the projected population increase for your coastal counties.**

The SCORP is the principal tool used in determining outdoor recreation trends in New York State. The plan assesses existing and future recreation demands, evaluates the current recreational opportunities relative to the population trends, and estimates future needs. SCORP is updated every five years by OPRHP. The DEC, the DOS, and other State agencies assist in the preparation of SCORP updates. The most recent SCORP update was made available in 2014 and serves as a status report and as a 2014-2019 guide for statewide recreation resources preservation, planning and development in New York.

The New York State Open Space Conservation Plan<sup>3</sup>, released in draft format in October 2014, indicates that, between 2011 and 2040, New York State's overall population is expected to grow by 12.5%, from 19.6 million residents to 22 million. Within the population itself are significant structural changes, such as the continuing trend of urbanization, the growth of suburban poverty, and the continuing needs of those living below the poverty level, as well as an aging population. The senior segment (65+) of the population is forecast to grow by 75% in the next 30 years in New York State due to an increase in life expectancy. By 2040, 1 in 5 New York State residents (20.9%) will be above the age of 65. New York is the third most populous state in the nation, with 87.5% of the population living in "urban" areas.

Based on the demographic trends described above for the entire state, and the fact that the major urban areas are located within coastal counties, it would be safe to estimate that *the population within the state's coastal shoreline counties is projected to also increase by approximately 12.5% between 2011 and 2040*, and present the same trends as the projections for the state's overall population. It's possible that with an aging population retiring to coastal counties that the rate of increase may even exceed the anticipated statewide growth.

Based on these demographic trends, SCORP<sup>4</sup> concludes that the quantity and types of outdoor recreation taking place within New York State will accommodate the aging population. The same report estimates that the needs for passive recreation facilities will change, and the anticipated increase in attendance and use of trails, fishing areas, scenic areas, and parks facilities will cause increased impacts on the environment and the recreation facility infrastructure. It also estimates that all recreation areas will require greater adherence to the Americans with Disabilities Act (ADA) standards in order to provide further enjoyment and adequate services.

In addition to the statewide recreation trends that also impact the State's coastal area, the two most visited areas of the State's coastal area, Niagara Falls and New York City skew the demand for coastal access with extraordinary visitor numbers. Best estimates for Niagara Falls State Park (based on paid attendance, parking lot usage, and patron counts at the Niagara Falls Visitor Center) show that 8.7 million park users visited in each of the past two years. The Western New York Regional Economic Development Council, in its 2014 Strategic Plan<sup>5</sup>, is proposing the improvement of the Niagara Falls Parks Programming to increase the number of visitors and boost the tourism economy and extending the stays of vacationers. This in turn will trigger improvement of the capacity and services offered by the Niagara Falls Park and adjacent waterfront parks. Most of New York City's outdoor recreation facilities are located along its waterfront, and each one of the 8,405,837<sup>6</sup> residents is a potential user of the local waterfront. In 2011, the number of domestic and international non-business visitors hosted by the City was 50.9 million<sup>7</sup>. Only two years later, in 2013, the number of non-business visitors to New York City had increased to 54.3 million, creating a crushing demand for coastal access in Manhattan and Brooklyn. New York City's current agenda of increasing tourism facilities and local jobs is strongly complemented by state-supported efforts to increase existing city-wide open space and parks.

Overall, the demand for public access to the coastal area of the State will continue to increase. The existing public access sites will need to be expanded and enhanced to accommodate an increased number of users and activities tailored for the predominant demographic segments.

**3. If available, briefly list and summarize the results of any additional data or reports on the status or trends for coastal public access since the last assessment.**

**Community Health and Outdoor Activities**

The latest *Renewable Resources Planning Act Assessment* produced by the Forest Service of the U.S. Department of Agriculture, a national assessment of trends in outdoor recreation participation across the United States, found that the youth outdoor physical activity with the second highest participation encompasses biking, jogging, walking, skate boarding, or similar activity.

New York's natural and cultural resources support a tremendous diversity of land, water, and mixed-use trails, connecting inland and/or coastal areas, such as the 90-mile-long Genesee Valley Greenway<sup>8</sup>, the 40-mile-long continuous pedestrian and cyclist Brooklyn-Queens Greenway<sup>9</sup>, the 200-mile-long Long Island<sup>10</sup> network of biking and hiking trails, the 46-mile-long Harlem Valley Rail-to-Trail multi-use paved pathway, and the 271-mile-long riverside trail within the Hudson River Valley Greenway.

The *2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*<sup>11</sup> found that 5.5 million New Yorkers, residents and nonresidents, 16 years old and older fished, hunted, or wildlife watched in New York. Of the total number of participants in this survey, 1.9 million fished and 4.2 million participated in wildlife-watching activities, which includes observing, feeding, and photographing wildlife.

DEC's 2014 Great Lakes: Interim Action Agenda<sup>12</sup> iterated a goal to enhance recreation and tourism opportunities that capitalize on the rivers and lakes, scenic beauty, and natural and cultural resources that define the character of the Great Lakes-St. Lawrence region.

### **Environmental Justice**

The *Demographic Summary of Aggregated Coastal Shoreline Counties* presented in the NOAA's *National Coastal Population Report*<sup>13</sup> for population trends from 1970 to 2020, shows that 14% of the New York State coastal population lived in poverty in 2010. The 2014 SCORP mentions that the *economic gap between the affluent and the poor continues to increase and environmental justice must be an overarching goal in providing recreational facilities and services* responding to the needs of underserved communities. In the urban areas of the state, the remaining coastal developable lands are mostly brownfields located in low-income waterfront communities.

Through funding and technical assistance, DOS is actively supporting the planning for cleaning and redevelopment of brownfields to create development opportunities and increase the open space and recreation areas available to the low-income neighborhoods. Also in 2014, as part of the "Helping People Enjoy, Protect and Revitalize the River and its Valley" initiative, the Hudson River Estuary Management Advisory Committee<sup>14</sup> reports that NYSDEC, in partnership with New England Interstate Water Pollution Control Commission (NEIWPC), awarded four grants to help provide access to the river and its tributaries for underserved communities in the cities of Albany, Kingston, New York City, and Yonkers.

### **Management Characterization:**

1. Indicate if the approach is employed by the state or territory and if there have been any significant state- or territory-level management changes (positive or negative) that could impact the future provision of public access to coastal areas of recreational, historical, aesthetic, ecological, or cultural value.

## Significant Changes in Public Access Management

Management Category	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y	Y	N
Operation/maintenance of existing facilities	Y	N	N
Acquisition/enhancement programs	Y	N	N

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
  - a. Describe the significance of the changes;
  - b. Specify if they were 309 or other CZM-driven changes; and
  - c. Characterize the outcomes or likely future outcomes of the changes.

There have been no significant changes since the last assessment.

3. Indicate if your state or territory has a publicly available public access guide. How current is the publication and how frequently it is updated?<sup>9</sup>

## Publicly Available Access Guide

Public Access Guide	Printed	Online	Mobile App
State or territory has? (Y or N)	Y	Y	Y
Web address (if applicable)	New York Camping Guide, <a href="http://www.nxtbook.com/nxtbooks/nysparks/ny_campingguide2014/#/34">http://www.nxtbook.com/nxtbooks/nysparks/ny_campingguide2014/#/34</a> Places To Go: Finding State Recreation Lands	<a href="http://www.iloveny.com/">http://www.iloveny.com/</a>	I Love NY mobile application <a href="https://itunes.apple.com/us/app/i-love-ny/id712337013?mt=8">https://itunes.apple.com/us/app/i-love-ny/id712337013?mt=8</a>

<sup>9</sup> Note some states may have regional or local guides in addition to state public access guides. Unless you want to list all local guides as well, there is no need to list additional guides beyond the state access guide. You may choose to note that the local guides do exist and may provide additional information that expands upon the state guides.

Public Access Guide	Printed	Online	Mobile App
	<a href="http://www.dec.ny.gov/outdoor/82098.html">http://www.dec.ny.gov/outdoor/82098.html</a> OPRHP site system <a href="http://parks.ny.gov/regions/default.aspx">http://parks.ny.gov/regions/default.aspx</a>		
Date of last update			
Frequency of update	NA	NA	NA

**Enhancement Area Prioritization:**

1. What level of priority is the enhancement area for the coastal management program?

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

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

Public access to the coast for recreational, historical, aesthetic, ecological, or cultural value continues to be an important facet of the State’s CMP. Although not necessarily the highest priority, some stakeholders found public access to be a particularly important issue in regards to the State’s long term vision of allowing non-waterfront as well as waterfront property owner’s access to the water for both passive and in-water recreation.

New York is making significant progress through LWRPs, SAMPs, 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.



## Marine Debris Phase I Assessment

**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. §309(a)(4)

**Phase I (High-Level) Assessment:** *(Must be completed by all states.)*

*Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.*

### Resource Characterization:

1. In the table below, characterize the existing status and trends of marine debris in the state's coastal zone based on the best-available data.

### Existing Status and Trends of Marine Debris in Coastal Zone

<b>Source of Marine Debris</b>	<b>Significance of Source</b> (H, M, L, unknown)	<b>Type of Impact<sup>10</sup></b> (aesthetic, resource damage, user conflicts, other)	<b>Change Since Last Assessment</b> (↑, ↓, -, unknown)
Beach/shore litter	M-H	Resource damage (entanglement/ ingestion hazard for marine life, birds, and other wildlife; habitat impairment); Water quality impairment and aesthetic impairment and their associated impacts (such as conflicts with other coastal uses, recreation, economic); other impacts (human safety; economic – cost of cleanup, etc.)	<based on American Littoral Society reporting, 2011-2013>  Volunteer attendance (decreasing);  Miles cleaned (decreasing)  Lbs. of debris (decreasing)
Land-based dumping	L	“	constant

<sup>10</sup> You can select more than one, if applicable.

<p>Storm drains and runoff</p>	<p>Unknown – estimated H, due to large contributing area</p>	<p>“</p>	<p>constant-Best management practices for floatables include booms and other collection devices. NYS DEC Priority Waterbody List identifies waterbodies with impacts related to floatables and /aesthetics in relation to potential stormwater infrastructure issues.</p>
<p>Land-based fishing (e.g., fishing line, gear)</p>	<p>M</p>	<p>“</p>	<p>Unknown, however measures to capture broken and used line have been instituted at popular fishing areas with collection receptacles</p>

<p>Ocean/Great Lakes-based fishing (e.g., derelict fishing gear)</p>	<p>Unknown – estimated M</p>	<p>“</p>	<p>decrease, measures to capture broken and used lines have been instituted at popular fishing areas and launches. Cornell Cooperative Extension manages an effort to remove abandoned lobster pots and has removed over 375 metric tons of the derelict gear.</p> <p>Municipalities primarily run the fishing receptacles programs and do not keep usage statistics”</p>
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Derelict vessels	L	“	constant - local agencies identify and in some cases the State is able to litigate for removal. However, New York does not have a formal program for removing and disposing of abandoned or derelict vessels, or any general laws that specifically address ADVs.  while no data is readily available of derelict vessel locations, complaints are limited”
Vessel-based (e.g., cruise ship, cargo ship, general vessel)	L	“	Decrease – since the last assessment vessel discharge rules have strengthened
Hurricane/Storm	H	Navigational hazard and human health & safety; additional potential water quality impairments	Increased, due to Superstorm Sandy (2012) and subsequent unnamed weather events (nor’easters etc.)
Tsunami	n/a	n/a	n/a

Other (please specify) Microplastics	Unknown	Ingestion and chemical leaching; water quality impairments; infrastructure damage; human health and safety	Unknown. Microplastic studies are fairly new but have been conducted, many in freshwater systems (Finger Lakes, Mohawk River and North Country rivers). UCONN, Long Island Sound Study, and the NY/NJ Harbor are continuing studies.
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2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends or potential impacts from marine debris in the coastal zone since the last assessment.

Not Available

**Management Characterization:**

1. Indicate if the approach is employed by the state or territory and if there have been any significant state- or territory-level management changes (positive or negative) for how marine debris is managed in the coastal zone.

**Significant Changes in Marine Debris Management**

<b>Management Category</b>	<b>Employed by State/Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
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<p>Marine debris statutes, regulations, policies, or case law interpreting these</p>	<p>Yes – 2009 legislation – Title 27, ECL – NYS Plastic Bag Reduction, Re-use, and Recycling Act; and amendment to the “Bottle Bill” or NYS Returnable Containers Act (to include bottled waters)</p> <p>Article 27 of the Environmental Conservation Law (ECL) Title 28: The New York State Bag Waste Reduction Act -effective March 1, 2020, prohibits the distribution of plastic carryout bags by any person required to collect New York State sales tax</p> <p>Microbead-Free Waters Act of 2015  · banned addition of plastic microbeads in personal care products  · introduced in Senate by Gillibrand (NY)  · signed by President Obama on 12/28/2015</p> <p>Banning the Distribution and Use of Styrofoam Part PP Title 30  <u>Chapter 58 of Laws of New York 2020,</u>  <u>effective date 1/1/2022</u></p>	<p>n/a</p> <p>No</p>	<p>No</p> <p>Yes</p> <p>Yes</p>
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Marine debris removal programs	1) Jamaica Bay Clean Sweep/ Floyd Bennett Field (American Littoral Society w/NOAA and other federal and local partners)	No	Yes – no similar undertakings are noted prior to Sandy
	2) NYS OPRHP/ NOAA removal of large debris from Sandy at 10 Long Island sites	No	Yes – no similar undertakings are noted prior to Sandy
	3) Operation SPLASH including waterway clean-ups; storm drain cleaning; clean marina programs, debris traps		
	4) (NOAA grant) Community-based Marine Debris Removal Grant - removal of derelict lobster traps in Central Long Island (Cornell Cooperative Extension Marine Program and NOAA Marine Debris Program)	Yes	Continued cleanup events; education and outreach; and monitoring
	5) MARCO initial Marine Debris Assessment in the five state Mid-Atlantic region	No	Yes –2017-2020- no similar undertakings are noted prior
	6) MARCO Joyful Sendoff Community Based Social Marketing campaign to change	No	Yes 2016 no similar undertakings are noted prior

	balloon release behavior and website <a href="https://joyfulsendoff.org/">https://joyfulsendoff.org/</a>	No	Yes 2018 no similar undertakings are noted prior
	7) Community based marine debris/ beach cleanup programs (some funded through State funds)	Yes	No

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:

- a. Large sized debris removal projects have been a direct result of Hurricane/Superstorm Sandy impacts. This is a relatively new category of recognized marine debris and appears to be receiving more immediate attention compared to the various other sources. While New York does not have specific laws/reg on derelict vessels or gear (often the source of large sized debris), there is a definition of “wreck” (under N.Y. Nav. Law § 130) which can include abandoned and/or derelict vessels. Under Article 10, the county sheriff has the authority to take possession of wrecked property in the name of the state. There is a greater sense of urgency with this type of debris.
- b. These were not CZM driven changes, but rather are driven by the availability of federal funding for the type of project since Sandy. The changes are largely driven by the federal Disaster Relief Appropriations Act, 2013 and the federal Sandy Recovery Improvement Act (SRIA), 2013 as well as FEMA hazard mitigation planning. The efforts have integrated assistance from non-profit organizations, volunteers, and local partners.
- c. The large debris removal projects may raise awareness of marine debris in general. It is likely that future funding would be available for similar projects in response to future disasters.

**Enhancement Area Prioritization:**

1. What level of priority is the enhancement area for the coastal management program?

**High** \_\_\_\_\_

**Medium**   X  

**Low**       

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

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 is largely unknown, but at a start it 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. Marine debris offers an opportunity to engage the public in coastal stewardship and will be encouraged to be addressed at the local level. Despite the effects marine debris has on our coastal systems, this enhancement area was not identified as a high priority by the stakeholders interviewed.

## Cumulative and Secondary Impacts Phase I Assessment

**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. §309(a)(5)

**Phase I (High-Level) Assessment:** *(Must be completed by all states.)*

*Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.*

### Resource Characterization:

1. Using National Ocean Economics Program Data on population and housing, [www.oceaneconomics.org/Demographics/PHresults.aspx](http://www.oceaneconomics.org/Demographics/PHresults.aspx), please indicate the change in population and housing units in the state's coastal counties between 2012 and 2017. You may wish to add additional trend comparisons to look at longer time horizons as well (data available back to 1970), but at a minimum, please show change over the most recent five-year period data is available (2012-2017) to approximate current assessment period.

### Trends in Coastal Population and Housing Units

	2012	2017	Percent Change (2012-2017)
Number of people	16,635,942	16,699,220	0.38%
Number of housing units	6,777,650	6,904,187	1.87%

2. Using provided reports from NOAA's Land Cover Atlas,<sup>12</sup> please indicate the status and trends for various land uses in the state's coastal counties between 1996 and 2016. You may use other information and include graphs and figures, as appropriate, to help illustrate the information. Note that the data available for the islands may be for a different time frame than the time periods reflected below. In that case, please specify the time period that the data represent. Also note that Puerto Rico currently only has data for one time point so will not be able to report trend data. Instead, Puerto Rico should just report current land use cover for developed areas and impervious surfaces.

### Distribution of Land Cover Types in Coastal Counties

Land Cover Type	Land Area Coverage in 2011 (Acres)	Gain/Loss Since 2006 (Acres)
Developed, High Intensity	202103	7002

Distribution of Land Cover Types in Coastal Counties		
Land Cover Type	Land Area Coverage in 2011 (Acres)	Gain/Loss Since 2006 (Acres)
Developed, Low Intensity	593024	16953
Developed, Open Space	407415.	5277
Grassland	120769	813
Scrub/Shrub	329742	12534
Barren Land	42465	-4559
Open Water	1995380.	0
Agriculture	2772320	-14980
Forested	6099747	-34343
Woody Wetland	1057496	-1975
Emergent Wetland	199046	1689

\*Note: Data sourced from the 2016 land cover data. New York does not have updated land cover data to augment supplement.

- Using provided reports from NOAA's Land Cover Atlas,<sup>13</sup> please indicate the status and trends for developed areas in the state's coastal counties between 1996 and 2016 in the two tables below. You may use other information and include graphs and figures, as appropriate, to help illustrate the information. Note that the data available for the islands may be for a different time frame than the time periods reflected below. In that case, please specify the time period the data represents. Also note that Puerto Rico currently only has data for one time point so will not be able to report trend data. Unless Puerto Rico has similar trend data to report on changes in land use type, it should just report current land use cover for developed areas and impervious surfaces.

#### Development Status and Trends for Coastal Counties

	2006	2011	Percent Net Change
Percent land area developed	9.16%	9.41%	2.72%
Percent impervious surface area	3.83%	3.95%	3.13%

#### How Land Use Is Changing in Coastal Counties

#### How Land Use Is Changing in Coastal Counties

Land Cover Type	Areas Lost to Development Between 2006-2011 (Acres)
Barren Land	5886.76
Emergent Wetland	692.09
Woody Wetland	1369.95
Open Water	537.75
Agriculture	18063.73
Scrub/Shrub	1168.90
Grassland	1211.83
Forested	12242.79

*\* Note: Islands likely have data for another time period and may only have one time interval to report. If so, only report the change in land use for the time period for which high-resolution C-CAP data are available. Puerto Rico and the Northern Mariana Islands do not report.*

- Briefly characterize how the coastal shoreline has changed in the past five years due to development, including potential changes to shoreline structures such as groins, bulkheads and other shoreline stabilization structures, and docks and piers. If available, include quantitative data that may be available from permitting databases or other resources about changes in shoreline structures.

Shoreline Types	
Surveyed Shoreline Type	Percent of Shoreline
Armored	24
Beaches	18
Flats	29
Rocky	2
Vegetated	26

- Briefly summarize the results of any additional state- or territory-specific data or reports on the cumulative and secondary impacts of coastal growth and development, such as water quality, shoreline hardening, and habitat fragmentation, since the last assessment.

#### **Long Island Nitrogen Action Plan (LINAP)**

LINAP is a multiyear initiative to reduce nitrogen in Long Island's surface and ground waters by DEC, the Long Island Regional Planning Council (LIRPC), and Suffolk and Nassau counties, with input from multiple partners and stakeholders. LINAP focuses on how best to reduce nitrogen loading to groundwater and surface water through technical, management, and regulatory/policy actions. Nitrogen is the leading cause of water quality deterioration in Long Island's estuaries. Excess nitrogen causes toxic algal blooms that lead to low oxygen conditions, fish kills, and degraded wetlands and marine habitats. Nitrogen also

contaminates the groundwater which is the sole source of Long Island's drinking water. Five established workgroups focus on primary sources/issues: Fertilizer management; water reuse; nutrient bioextraction; and subwatershed planning groups for Suffolk and Nassau counties.

Stemming from LINAP, the Suffolk County subwatershed working group developed the Reclaim Our Waters: Suffolk County Wastewater Plan. According to this plan “the source of nitrogen from onsite wastewater systems originates from the estimated 360,000 residential on-site wastewater disposal systems (“OSDS”) and the estimated 18,700 commercial OSDS that are not designed to remove nitrogen”. Additional nitrogen load components for Suffolk County include OSDS (63.6%); Fertilizer (26.9%); Atmospheric Deposition (4.4%); Pets (3.9%) and Sewage Treatment to Groundwater (1.2%). As development increases (population increased in Suffolk found by 4.3%), the number of OSDS increase, as well as impervious cover which increase additional stormwater runoff volumes.

Data show an increase of 54.4% of nitrogen concentration in untreated water samples from the upper glacial aquifer since 1987 to 2017; 94% increase in untreated water samples from Magothy aquifer since 1987 to 2017; and overall a 10% increase in nitrogen in marine waters over the last 10years. As a result, Suffolk County has experienced an increase of Harmful Algal Blooms (HABs); beach closures; shellfish closure; and loss of submerged aquatic vegetation.

#### **NYS DEC Priority Waterbodies List (WI/PWL)**

The NYS Department of Environmental Conservation completes a statewide inventory of the waters of New York to track water quality impairment of water uses, overall assessment water quality, causes and sources of water quality impact/impairment, and the status of restoration, protection and other water quality activities and efforts. This data is used to identify those water quality issues that may arise from increased development and associated impacts, evaluates need for project funding, monitors water quality improvement, and record and report changes over time.

#### **Management Characterization:**

1. Indicate if the approach is employed by the state or territory and if there have been any significant state-level changes (positive or negative) in the 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, since the last assessment.

#### **Significant Changes in Management of Cumulative and Secondary Impacts of Development**

<b>Management Category</b>	<b>Employed by State or Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
Statutes, regulations, policies, or case law interpreting these	Y	Y	Y
Guidance documents	Y	Y	Y
Management plans (including SAMPs)	Y	Y	Y

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
  - a. Describe the significance of the changes;
  - b. Specify if they were 309 or other CZM-driven changes; and
  - c. Characterize the outcomes or likely future outcomes of the changes.

## **Policies**

### *New York State Coastal Policies.*

- a. On September 16, 2016, the New York State Department of State (DOS) submitted a Routine Program Change to the federal Office for Coastal Management (OCM) in the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce. The changes to the New York State Coastal Management Program covered by this request were the rewording of New York State's Coastal Policy #29 with an updated explanation; an update to the state authorities supporting the Coastal Management Program's implementing and enforceable forty-four policies based on recent state laws and regulations; conforming edits to update policy language to reflect current New York State policy, and removal of typographical errors within New State's York's Coastal Management Plan.
- b. Pursuant to 15 C.F.R. § 923.84(b)(4), OCM concurred on May 7, 2017 with the DOS determination that our program changes do constitute a Routine Program Change and approved the changes as a component of the New York Coastal Management Program with the exception of the addition of New York State Law Article 2, Section 7-a: Jurisdiction and Ownership of Offshore Waters and Lands Thereunder.
- c. The text of enforceable Coastal Policies # 1-28 and 30-44 and the Long Island Sound Coastal Policies # 1-13 that DOS uses for federal consistency decision-making remain unchanged. OCM has approved the modified language to Coastal Policy # 29 to now read as:

The development of offshore uses and resources, including renewable energy resources, shall accommodate New York's long-standing ocean and Great Lakes



industries, such as commercial and recreational fishing and maritime commerce, and the ecological functions of habitats important to New York. The following State authorities are incorporated into the New York Coastal Management Program.

- New York State Environmental Conservation Law Article 6: State Smart Growth Public Infrastructure Policy Act
- New York State Energy Law Article 6: Energy Planning
- New York State Energy Plan
- New York State Public Service Law Article 10: Siting of Major Electric Generating Facilities
- New York State Environmental Conservation Law Article 13, Title 7: Seagrass Protection Act
- New York State Environmental Conservation Law Article 14: New York Ocean and Great Lakes Ecosystem Conservation Act
- New York State Environmental Conservation Law Article 15, Title 15: New York Water Resources Protection Act of 2011
- Community Risk and Resiliency Act (Chapter 355 of the Laws of 2014)
- New York Codes, Rules and Regulations Title 6, Chapter IV, Subchapter H, Part 487: Analyzing Environmental Justice Issues in Siting of Major Electric Generating Facilities Pursuant to Public Service Law Article 10
- New York Codes, Rules and Regulations Title 9, Subtitle BB, Chapter III, Subchapter B, Parts 7844-7852: State Energy Planning Procedures
- New York Codes, Rules and Regulations Title 16, Chapter X, Subchapter A, Parts 1000-1002 Regulations Implementing Article 10 of the Public Service Law as Enacted by Chapter 388, Section 12, of the Laws of 2011
- New York State Public Service Commission Order Adopting a Clean Energy Standard (Cases 15-E-0302 and 16-E-0270 - Issued and Effective August 1, 2016)
- :
- Section 923 of Article 42 of the Executive Law (Waterfront Revitalization of Coastal Areas and Inland Waterways) [repealed effective March 30, 2012]

Incorporated laws and statutes above are all 309 driven changes.

Strengthening the policies that implement the State's CMP will result in improved management of cumulative and secondary impacts associated with coastal uses.

#### Climate Leadership and Community Protection Act (CLCPA)

- a. On July 18, 2019, Governor Cuomo signed into law the Climate Leadership and Community Protection Act through Chapter 106 of the laws of 2019- the most aggressive climate policy for a major global economy. The CLCPA,

among other things, increases the stringency of the state's long-term economy-wide greenhouse gas reduction goal to 85 percent below 1990 levels by 2050 and establishes a new goal to achieve net-zero emissions economy-wide by 2050. The Act directs the development of a scoping plan, by the Climate Action

Council, that identifies and recommends regulatory measures and other state actions that will ensure the attainment of the state's 100 percent net-zero goal and establishes a process for the consideration of the social and economic transitions needed to ensure that the state's most vulnerable communities are not disproportionately impacted. This Law also amends the Community Risk and Resiliency Act (CRRA) by requiring agency promotion of adaptation and resilience actions.

- b. This is not a 309 or CZMA driven change
- c. Requiring state agencies to identify climate related risks, assess their probability of occurrence, and take measures to mitigate those risks, including through cost- benefit analysis, will result in improved management of cumulative and secondary impacts associated with coastal uses.

#### Environmental Conservation Law (ECL) amendment to Article 54 Environmental Protection Act §54-1101

- a. A legislative update to section 54-1101 (1) of the ECL effective 4/12/2016 added to the language, “The secretary is authorized to provide on a competitive basis, within amounts appropriated, state assistance payments to municipalities toward the cost of any local waterfront revitalization program, including planning projects to mitigate future physical climate risks and updates to existing local waterfront revitalization program plans to mitigate future climate risks. Eligible costs include planning, studies, preparation of local laws, and construction projects.” This language was added by a budget bill that, in this section, was implementing the goals of the Community Risk and Resiliency Act (CRRA) (Ch. 355 of the Laws of 2019) which requires state agencies to consider future physical climate risks, etc. in funding and regulatory decisions.
- b. This is not a 309 or CZMA driven change
- c. Providing state assistance payments to municipalities toward planning projects to mitigate future physical climate risks and updates to existing local waterfront revitalization program plans to mitigate future climate risks will result in improved management of cumulative and secondary impacts associated with coastal uses.

#### Guidance

##### 2019 Coastal Hazards Language:

- a. **Adoption of State Sea Level Rise projections:** In early 2017, NYS adopted sea level rise (SLR) projections (6 NYCRR Part 490) under a requirement from the Community Risk and Resiliency Act (CRRA). The adopted

projections are based on peer-reviewed research conducted by scientists at Columbia University, Cornell University, and Hunter College as part of the New York State ClimAID study, which included consideration of the possibility of rapid melt of land-based ice on Antarctica and Greenland. Recently published research confirms that such rapid melting of land-based ice is occurring and could result in high rates of SLR, especially if greenhouse gas emissions continue unabated. The adopted regulation includes high projections of approximately six feet of SLR by 2100. This is the first time the State has adopted SLR projections for use by named (in the CRRA) permitting and funding agencies.

- b. This is not a 309 or CZMA driven change
- c. Adopting sea level rise projections and applying them to agency permitting and funding decisions will result in improved management of cumulative and secondary impacts associated with coastal uses.

### Management Plans

New Lake Ontario Water Level Management Plan:

- a. The International Joint Commission (IJC) approved Plan 2014 in December 2017 (effective January 7, 2017), a new plan for managing water levels and flows in Lake Ontario and the St. Lawrence River. The previous water management plan, Plan 1958D, with deviations Plan 1958DD, had unintended negative impacts on coastal ecosystems by not including enough water level variation. The new plan allows for more natural variation in water levels, including an increase to the maximum Lake Ontario water level by 2.4 inches. In addition to coastal ecosystem benefits, the new Plan change would slightly increase hydropower energy production, and while Plan 2014 still maintains protection to coastal development from damage that would occur without regulation, damages under Plan 2014 may occur sooner and there may be a slight increase to costs for maintenance of coastal structures due to erosion compared to Plan 1958DD.
- b. This was not a 309 or CZM-driven change.
- c. A new Lake Ontario water level management plan that allows for more natural variation in water levels will result in improved management of cumulative and secondary impacts associated with coastal uses.

### Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

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

Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

As identified in the resource characterization above, the population of New York's coastal counties is increasing and many land cover types are being lost to development. 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, extreme weather events, and inappropriately sited and/or designed development. 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 greatly amplified. Assessment of cumulative impacts is of importance in understanding effects of coastal infrastructure (especially shoreline stabilization structures) on natural resources coastal processes, public access, and other coastal policy issues, and in applying these understandings to improving coastal resilience through new planning and regulatory guidance and programs. By giving this enhancement area a high priority rating, DOS can take important steps towards developing a strategy that will identify, analyze, and address the variety of cumulative and secondary impacts in order to provide better protection to the State's coastal resources.

## Cumulative and Secondary Impacts Phase II Assessment

### In-Depth Resource Characterization:

*Purpose: To determine key problems and opportunities to improve the CMP's ability to address cumulative and secondary impacts of coastal growth and development.*

1. What are the three most significant existing or emerging cumulative and secondary stressors or threats within your coastal zone? Indicate the geographic scope of the stressor, i.e., is it prevalent throughout the coastal zone, or are there specific areas that are most threatened? Stressors can be coastal development and impervious surfaces; polluted runoff; agriculture activities; forestry activities; shoreline modification; or other (please specify). Coastal resources and uses can be habitat (wetland or shoreline, etc.); water quality; public access; or other (please specify). When selecting significant stressors, also consider how climate change may exacerbate each stressor.

	<b>Stressor/Threat</b>	<b>Coastal Resource(s)/Use(s) Most Threatened</b>	<b>Geographic Scope</b> (throughout coastal zone or specific areas most threatened)
Stressor 1	Shoreline modification including cuts, fill, and erosion or flood control structures	Habitats, wetlands, beaches and dunes, public/recreational access, adjacent properties	All coastal areas.
Stressor 2	Docks and over-water structures	Habitats, SAV, wetlands, beaches and dunes, public/recreational access	All coastal areas.
Stressor 3	Open water disposal of dredged material	Open water and benthic habitats, human health	All coastal areas

2. Briefly explain why these are currently the most significant cumulative and secondary stressors or threats from coastal growth and development within the coastal zone. Cite stakeholder input and/or existing reports or studies to support this assessment.

DOS's consistency review unit determined that shoreline modifications, docks, and open water disposal of dredged materials are the three most prevalent types of projects. On their own, these individual projects may not have a recognizable detrimental effect upon the State's coastal resources, however when there are 300-

500 shoreline modification projects in any given year, their cumulative effects are considerable. Below is an explanation of why these types of projects are currently the most significant stressors in the coastal zone.

**Shoreline Modification:** Beaches, dunes, barrier islands, bluffs, wetlands, and other natural protective features help safeguard coastal lands and property from damage by dissipating wave energy and providing flood storage capacity. Shoreline modifications can lead to the weakening or destruction of those landforms by interfering with sediment transport and reflecting wave energy which deprives these landforms of their natural regenerative powers. Tidal marshes and beaches in front of bulkheads and revetments are often lost due to the reflected wave action and an inability to retreat landward with rising sea levels. Bulkheads and revetments provide a sharp divide between upland and wetlands habitats where an integrated vegetative buffer would have provided a more gradual transition. Ultimately, these structures sever the connections between the aquatic and terrestrial habitats, preventing the movement of wildlife. In addition to the physical changes, the loss of riparian buffer and wetlands can lead to degradations in water quality and fisheries habitat due to increased runoff. Sea level rise and extreme weather events associated with climate change introduce higher water levels and increase the frequency of storms which cause flooding and erosion of these lands. Structures also interfere with the ability of wetlands, beaches and dunes to migrate landward as may be necessary with rising seas or Lake levels.

**Docks:** Residential docks have coastal effects related to public access infringement, occupation/privatization of public lands, fragmentation of wetland systems, shading of low/high marsh and potential Submerged Aquatic Vegetation (SAV), proliferation of non-water dependent uses like excessive size and length leading to the mooring of vessels inappropriate to a waterbody. This can lead to an increase in requests for new dredging to accommodate larger vessels.

**Dredging/Excavation:** Increasing development and climate change impacts are likely to change or increase navigational dredging needs, with their attendant consequences. In addition, the dramatically increased need for beach renourishment supplies is leading development of offshore sand resources, the consequences of which are not well understood. Maintenance dredging of previously authorized navigation channels are typically consistent with coastal policy, however, there is concern, and difficulty, regarding the placement of that material. Inlets and navigation channels tend to trap sediment that would normally pass by. It has become increasingly difficult to locate upland locations for placement of this material and it cannot go back in the water. New dredging in areas that were previously undisturbed has significant coastal effects by removing or destroying habitat, changing bottom contours that can affect hydrology, can increase, or decrease sedimentation to adjacent areas, and can introduce new uses to an area that may not be able to support those new uses.

Open water disposal of Dredged Material: Open water and benthic habitat communities form the base of coastal ecosystems. Continuing open water disposal practices and increasing amounts of dredge material disposal will likely affect water quality and open water habitats that rely on that water quality. Open water dumping smothers benthic communities and can expose organisms to hazardous/toxic material.

3. Are there emerging issues of concern, but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

Emerging Issue	Information Needed
Offshore dredging for beach nourishment.	Large volumes of sand have been increasingly sought out off of the Atlantic coast (within state waters) for beach nourishment. Sand source surveys and environmental analyses have not been completed to date to adequately satisfy concerns regarding these sources and what effects to natural processes and resources are occurring due to its removal.
Tracking of maintenance dredging for private applicants (“small dredgers”), as well as large navigation projects.	DOS has had no means to date, to track how much material is actually being removed, dredging frequency, and ultimate disposal or placement locations of volumes of material placed upland. There is an urgent need to develop a method for tracking how much is removed and where this material is placed or used to better aid in the management of dredged material.
Lack of State regulations to support beneficial re-use of dredged material such as CDFs and containment islands.	There is a need to better manage how dredged material is being used. An analysis and alignment of State and interstate regulations governing the use/re-use and placement options for this type of material is needed.

**In-Depth Management Characterization:**

*Purpose: To determine the effectiveness of management efforts to address identified problems related to the cumulative and secondary impacts (CSI) enhancement objective.*

1. For each additional cumulative and secondary impact management category below that is not already discussed as part of the Phase I assessment, indicate if the

approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) have occurred since the last assessment.

**Significant Changes to Management of Cumulative and Secondary Impacts of Development**

<b>Management Category</b>	<b>Employed by State or Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
Methodologies for determining CSI impacts	N	N	N
CSI research, assessment, monitoring	N	N	N
CSI GIS mapping/database	Y	Y	N
CSI technical assistance, education and outreach	N	N	N
Other (please specify)			

2. For management categories with significant changes since the last assessment, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information.
  - a. Describe significant changes since the last assessment;
  - b. Specify if they were 309 or other CZM-driven changes; and
  - c. Characterize the outcomes or likely future outcomes of the changes.
  
3. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state’s or territory’s management efforts in addressing cumulative and secondary impacts of development since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state and territory’s management efforts?

**Identification of Priorities:**

1. Considering changes in cumulative and secondary impact threats and management since the last assessment and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CMP to improve the effectiveness of its management effort to better assess,



consider, and control the most significant threats from cumulative and secondary impacts of coastal growth and development. (*Approximately 1-3 sentences per management priority.*)

*Management Priority 1:* Develop guidance on the use of natural resources, natural processes and nature-based shoreline treatments to reduce cumulative and secondary impacts from shoreline armoring and modification. This action will help improve resilience through incorporation of natural resources and natural processes in decision making and planning. The guidance will also support integrating community resilience with management of natural protective features into coastal planning and decision making.

*Management Priority 2:* Advance regional planning initiatives to identify and help reduce cumulative and secondary impacts from storm recovery, flood and erosion response, and new development. This initiative will build on regional planning frameworks utilizing common landscape forms and features, development patterns, sediment transport systems, and shoreline character. It will utilize DOS' existing LWRP authority to extend the planning program to communities and make use of the information in the consistency review database to help characterize the predominant threats and stressors for each identified region or sub-region.

2. Identify and briefly explain priority needs and information gaps the CMP has to help it address the management priorities identified above. The needs and gaps identified here do not need to be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.
- 3.

<b>Priority Needs</b>	<b>Need? (Y or N)</b>	<b>Brief Explanation of Need/Gap</b>
Research	Y	Research the most effective measurable indicators for tracking cumulative and secondary impacts and levels of acceptable change.
Mapping/GIS	Y	Shoreline conditions/structures inventory, particularly south shore of NYC, Nassau and Suffolk Counties and Great Lakes region.
Data and information management	Y	Ability to identify, collect, and store coastal resource baseline data (shoreline characterization, extent

		and condition of tidal wetlands including SAV).
Training/Capacity building	Y	Community-based social marketing to inform and learn from stakeholders and identify local actions for tracking and assessing cumulative and secondary impacts.
Decision-support tools	Y	Guidance on climate change vulnerability assessments for planning and project identification purposes. Identification of measures for tracking coastal effects
Communication and outreach	Y	Community-based social marketing to inform and learn from stakeholders and identify effective outreach and technical assistance needs to help municipalities understand appropriate shoreline management options.
Other (Specify)		

**Enhancement Area Strategy Development:**

1. Will the CMP develop one or more strategies for this enhancement area?  
**Yes**   
**No**
2. Briefly explain why a strategy will or will not be developed for this enhancement area.

Cumulative and secondary impacts of development is a major issue in New York but is intertwined with many other issues. CSI will be a component of most of the other strategies we are developing, including Special Area Management Plans, Enhancing Coastal Consistency, Ocean Planning, and Resiliency, but we will not be developing a stand-alone strategy for cumulative and secondary impacts.

## Special Area Management Planning Phase I Assessment

**Section 309 Enhancement Objective:** Preparing and implementing special area management plans for important coastal areas. §309(a)(6)

The Coastal Zone Management Act 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.”

**Phase I (High-Level) Assessment:** *(Must be completed by all states and territories.)*

*Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.*

### Resource Characterization:

1. In the table below, identify geographic areas in the coastal zone subject to use conflicts that may be able to be addressed through a SAMP. This can include areas that are already covered by a SAMP but where new issues or conflicts have emerged that are not addressed through the current SAMP.

Geographic Area	Opportunities for New or Updated Special Area Management Plans Major conflicts/issues
Long Island Sound	Residential and commercial development along shorelines impacts ecosystems, limits public recreational access to the shoreline, and effects scenic resources. Development along the waterfront and in the watershed, have led to water quality issues - especially non-point pollution from stormwater runoff, and point sources such as storm sewer discharge, inadequate wastewater treatment systems outfalls.

Geographic Area	<b>Opportunities for New or Updated Special Area Management Plans</b> Major conflicts/issues
	<p>Open water disposal of dredge materials has yet to be appropriately addressed. The Dredged Material Management Plan (DMMP) for Long Island Sound was completed in late 2015 and the site designations for Western and Central Long Island Sound Disposal sites were finalized with several conditions. One being that a Regional Dredging Team be formalized to implement the recommendations of the DMMP. NYS is currently working with the other federal and State agencies to formalize the RDT and fulfill the conditions of the site designations for Central and Western disposal sites. An additional Eastern Long Island Sound disposal site was also designated despite NYS' objection, and is currently under litigation</p>
South Shore of Long Island	<p>Shoreline management structures effect habitats and ecosystems and can result in conflict between public/private rights and uses.</p>
	<p>Accelerated sea level rise and extreme precipitation events will increase risk of losses of development, infrastructure and coastal wetlands in the future.</p>
	<p>Residential and commercial development along shorelines has impacted ecosystems, limited public access to the water, and effected scenic resources.</p>
	<p>Harmful algal blooms threaten shellfish beds and water quality.</p>
	<p>Development along the waterfront and in the watershed, have led to water quality issues- especially non-point pollution from stormwater runoff, and point sources such as storm sewer discharge, inadequate wastewater treatment systems outfalls.</p>
	<p>While a Dredged Material Management Plan (DMMP) has been developed for the South Shore, a tracking plan to facilitate dredged material management is lacking a host and resources for implementation.</p>
	<p>Shoreline management structures affect habitats and ecosystems, reduce littoral transport resulting in localized down-cutting or scour negatively effecting regional beaches and can result in conflict between public/private rights and uses.</p>
<p>Climate change driven sea level rise is 1) increasing the risk of damage to development and infrastructure; 2) drowning shoreline marshes; 3) causing saltwater migration into</p>	

Geographic Area	<b>Opportunities for New or Updated Special Area Management Plans</b> Major conflicts/issues
	<p>freshwater streams; 4) predicted to result in saltwater intrusion into the aquifer, threatening the water supply of 10's of thousands of Long Islanders.</p> <p>Climate change is negatively affecting the coastal economy, infrastructure and natural resources through increased total annual rainfall, higher incidence of extreme precipitation events, increased intensity of storms and greater probability of extreme weather, and periodic drought.</p> <p>Climate change-related ocean temperature increases may affect fish and shellfish species and in turn affect commercial and recreational fisheries. Increased ocean temperatures may also increase the occurrence of brown/red tides and exacerbate ocean acidification.</p>
Hudson River Valley	<p>Residential and commercial development along shorelines has impacted ecosystems, limited public access to the shoreline, and affected scenic and historic resources.</p> <p>Rail ROWs along both shores of the Hudson River limit public access to the River.</p> <p>Shoreline management structures affect habitats and ecosystems and can result in conflict between public/private rights and uses.</p> <p>Development and other land uses along the River and in the watershed, have led to water quality issues - especially non-point pollution from stormwater runoff, and point sources such as storm sewer discharge, inadequate wastewater treatment systems outfalls.</p> <p>Placement of utility transmission lines in the Hudson River may affect habitats and ecosystems and can result in conflict between public/private rights and uses.</p> <p>Significant increases in water withdrawal for uses such as water supply and power production may result cumulative effects to aquatic ecosystems in the River.</p> <p>Climate change is negatively affecting the coastal economy, infrastructure and natural resources through increased total annual rainfall, higher incidence of extreme precipitation events, increased intensity of storms and greater probability of extreme weather, and periodic drought.</p> <p>Location of emergency tanker anchorages may have negative impacts on Hudson River habitat and its environs</p>

Geographic Area	<b>Opportunities for New or Updated Special Area Management Plans</b> Major conflicts/issues
Great Lakes	Off-shore wind turbine development may affect ecosystem, historic and/or scenic resources.
	Shoreline management structures affect habitats and ecosystems, reduce littoral transport resulting in localized down-cutting or scour negatively effecting regional beaches and can result in conflict between public/private rights and uses.
	Invasive species continue to be one of foremost issues in the Great Lakes.
	Carbon sequestration, through the injection of carbon into underground strata may result in numerous yet-to-be-determined effects.
	Open water disposal of dredged material offshore affects offshore habitats and water quality.
	Significant increases in water withdrawal for out-of-watershed water supplies, and commercial withdraws such as nuclear power plants, bottled water, and hydraulic fracturing may result in cumulative effects to groundwater hydrology and groundwater dependent ecosystems, such as streams and near shore habitats.
	Climate change is negatively affecting the coastal economy, infrastructure and natural resources through increased total annual rainfall, higher incidence of extreme precipitation events, increased intensity of storms and greater probability of extreme weather, and periodic drought.
	Water quality impairments associated with storm water runoff, exacerbated by extreme rainfall due to climate change, result in negative secondary effects such as Harmful Algal Blooms, reduced tourism and recreational fishing, and exposure of residents and their pets to potential health hazards.
	Past practices for regulation of water levels on Lake Ontario have severely impacted regional wetlands, diminishing a variety of plant and animal species and their associated biological communities. Management actions will need to be coordinated with Plan 2014, the water level regulation plan developed over 14 years and approved by the International Joint Commission (IJC) in December 2016 after concurrence by the U.S. and Canadian governments on amendments to the IJC's order of approval earlier that year.
	Water levels on Lake Ontario and the Upper St. Lawrence River have caused major flooding in 2017 and 2019,

Geographic Area	<b>Opportunities for New or Updated Special Area Management Plans</b> Major conflicts/issues
	<p>impacting local communities damaging shorelines, marinas, local roads, and bridges. The 2020 water levels for several Great Lakes have started higher than the record-high January level.</p>
St. Lawrence River Valley	<p>Shoreline development along the St. Lawrence Seaway, especially in the Thousand Islands region, negatively affects natural, historic and scenic resources.</p>
	<p>Shoreline management structures affect habitats and ecosystems and can result in conflict between public/private rights and uses.</p> <p>Past practices for regulation of water levels on Lake Ontario have severely impacted regional wetlands, diminishing a variety of plant and animal species and their associated biological communities. Management actions will need to be coordinated with Plan 2014, the water level regulation plan developed over 14 years and approved by the International Joint Commission (IJC) in December 2016 after concurrence by the U.S. and Canadian governments on amendments to the IJC's order of approval earlier that year.</p> <p>Water levels on Lake Ontario and the Upper St. Lawrence River have caused major flooding in 2017 and 2019, impacting local communities damaging shorelines, homes, marinas, local roads, and bridges.</p>
Niagara River	<p>Lack of access and connections to the region's natural, cultural, recreation, scenic and heritage resources. However, NYS has committed \$70 Million to Niagara Falls State Park revitalization of the major falls viewing areas, plus \$2.1 Million to "Restore the Gorge" by removing invasive species and planting native trees along the Niagara River gorge and rim areas.</p>
Harlem and East Rivers	<p>Significant residential and commercial shoreline developments continue to impact ecosystems. Progress has been made through LWRP Updates and DOS-funded implementation projects for incorporation of stormwater capture, retention and filtration infrastructure into project design, native habitat and wetland restoration. Targeted waterfront rezoning beginning in 2005 mandate developers of waterfront residential and commercial projects to construct public waterfront esplanade, contributing to</p>

Geographic Area	<b>Opportunities for New or Updated Special Area Management Plans</b> Major conflicts/issues
	buildout of continuous public waterfront esplanade along the post-industrial waterfront. Industrial developers are encouraged to provide public access and kayak/canoe boat access to the water where practicable. This can all be addressed through new or updated SAMPs.
	Development along the waterfront and in the watershed, have led to water quality issues - especially non-point pollution from stormwater runoff, and point sources such as storm sewer discharge, inadequate wastewater treatment systems outfalls.
	Shoreline management structures affect habitats and ecosystems and can result in conflict between public/private rights and uses. City agencies construct new and continue to repair and replace existing shoreline infrastructure with resilience designs to mitigate flooding and storm surge, consistent with new waterfront flood zoning post-Superstorm Sandy.

2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends of SAMPs since the last assessment.

While no reports on the status/trends of SAMPs have been prepared since the last assessment, there have been reports and studies which support the need for further analysis and focus on the development or update of special area management plans. Specific information can be referenced in the Coastal Hazard, Cumulative and Secondary Impact, and Ocean and Great Lakes assessments. Plans/studies include the Great Lakes Action Agenda, New York Ocean Action Plan, Community Risk and Resiliency Act (Natural and Nature Based Feature Guidance), DOS Lake Ontario Risk Maps, New Lake Ontario Water Level Management Plan (Plan 2014). Together, these studies/reports provide further justification for more study and understanding on the impacts to our coastal counties on both a regional and site specific level. As mentioned in the Cumulative and Secondary Impact Assessment, the population of New York's coastal counties is increasing and many land cover types are being lost to development. As noted, developed areas in coastal counties increased 2.7% and impervious areas increased 3.1% between 2006 and 2011. This inappropriately sited development and shift to hardened surfaces along with sea-level rise and extreme weather events are compounding to negatively impact our shorelines. Unfortunately, this leads to additional shoreline modifications which can further weaken or destroy natural features. As we have seen in both Long Island and the Great Lakes, extreme weather events associated with climate change



introduce higher water levels and increase the frequency of storms which cause flooding and erosion of these lands.

**Management Characterization:**

1. Indicate if the approach is employed by the state or territory and if there have been any significant state- or territory-level management changes (positive or negative) that could help prepare and implement SAMPs in the coastal zone.

**Significant Changes in Special Area Management Planning**

<b>Management Category</b>	<b>Employed by State or Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
SAMP policies, or case law interpreting these	Y	Y	N
<b>SAMPs</b>			
Resiliency Plans	Y	Y	Y
Watershed Management Plans	Y	Y	Y
Waterfront Redevelopment Plans	Y	Y	Y
Natural Area Plans	Y	Y	N
Local Waterfront Revitalization Programs	Y	Y	Y
Regional Economic Development Council Strategic Plans	Y	Y	Y

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
  - a. Describe the significance of the changes;
  - b. Specify if they were 309 or other CZM-driven changes; and
  - c. Characterize the outcomes or likely future outcomes of the changes

**SAMPs**

**Resiliency Planning**

- a. Since 2016 the EPF LWRP grant program has included a category to integrate resilience planning into LWRPs as that is the most efficient and effective way for coastal communities to prepare for extreme weather. When planning for coastal resilience is included as part of the LWRP inventory and analysis, the community identifies key regional and community assets within their planning boundary, and evaluates flooding and erosion risks to those community or regional assets. The community then assembles and prioritizes a set of management measures that establish effective adaptation to changing conditions on the coast and along waterways.

As a result of coastal resilience planning, more resilient communities understand which of their assets and populations are at risk. Understanding which assets and populations are vulnerable to hazards, currently and in the future, allows communities to take coordinated, informed, and deliberate measures to reduce those risks. Understanding risk on the landscape also enables communities to better understand where proposed development is at the greatest or least risk from flooding and erosion hazards. Resilience planning as part of the LWRP preparation process better equips communities with the information needed to implement both short- and long-term strategies for handling severe weather events.

More resilient communities are better able to withstand and recover from severe weather events. The LWRP helps achieve resilience through planning. The recommended management measures resulting from the planning process can aid communities in withstanding stresses without suffering permanent or long-term loss of community functions, devastating damage to assets, diminished productivity or quality of life.

- b. LWRPs are CZM 306 driven changes.
- c. As stated above, we are currently working with over 55 coastal communities to develop or update LWRPs. As these communities do so, they are encouraged to incorporate resiliency planning measures. These LWRPs will conduct an asset inventory, assess their risk, prepare a needs and opportunities assessment and prepare strategies for investment and action to improve community resilience. The plans and actions will not only benefit the communities themselves, but will likely have a cumulative benefit for preparing the surrounding region to be more resilient as well.

On June 10 2019, Governor Cuomo convened the Lake Ontario Resiliency and Economic Development Initiative (REDI) Commission to launch an intensive 3-month “action-planning” process that involves local leaders in identifying immediate projects communities can undertake to bolster resiliency and the economy without adversely impacting other critical resources. Within the three-

month first phase of the planning process, community needs and critical infrastructure were assessed and inventoried. Initial response projects were identified to protect and adapt infrastructure along the Lake Ontario and St. Lawrence River waterfronts while strengthening the region's local economies. The work then shifted to a community engagement second phase that will help transition the communities to more resilient and stronger economic development through long-term opportunities. The product developed during the planning phase is intended to meet DOS resiliency standards and incorporate recently completed asset inventory and project identification.

## **Watershed Management Plans**

Supported by Environmental Protection Fund resources 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 (as described in the Watershed Enhancement Area assessment). This program has been highly successful throughout the state and has worked with 474 communities to prepare and implement watershed management plans. These planning and implementation efforts cover 24,257 square miles within the Coastal Nonpoint Pollution Control Program Management Area.

To effectively manage watershed planning throughout the State, the DOS in partnership with the DEC meets regularly to discuss the status and priority watersheds in New York. While the DOS funds a variety of watershed planning models, the DOS and DEC work together with communities on the development of 9-element planning and coordinate efforts related to monitoring and modeling of nonpoint source pollution. DOS coordinates with agency partners on a regular basis through participation on the State Soil and Water Conservation Committee, the Water Managers Advisory Committee, Water Quality Rapid Response Team, and the Interagency Source Water Protection Workgroup.

- a. These are 306 driven changes.
- b. Since 2015, DOS funded and worked with communities through the EPF LWRP grant program in the preparation of the following watershed management plans:  
Ongoing:

- Cayuga County - Owasco Lake Watershed Management Plan Implementation - Incorporation of the EPA Nine Key Elements
- Franklin County- St Lawrence River Watershed Revitalization Plan
- Town of Geneva- Seneca Lake Watershed Nine Element Plan (Update)
- Madison County- Oneida Lake Nine Element Watershed Management Plan

- New York City- Harlem River Watershed Plan
- New York City- Bronx River Watershed Management Plan Update
- Town of Skaneateles- Skaneateles Watershed Nine Element Plan
- Village of Wappingers Falls- Wappinger Creek Watershed Revitalization Plan
- Erie County – Regional Niagara River Lake Erie Watershed

Completed:

- City of Canandaigua- Canandaigua Lake Watershed Management Plan Update
- Town of Ithaca- Review and Update of the Cayuga Lake Watershed Restoration and Protection Plan
- Town of Livonia- Wilkins Creek SubWatershed Stormwater Study
- City of Kingston- Watershed Planning for the Tidal Rondout Creek
- Village of Malone- Salmon River Watershed Management Plan
- New York City- Watershed Planning and Restoration in the Alley Creek Watershed

### **Waterfront Redevelopment Plans**

- a. Community and waterfront revitalization often focus on specific areas of concentrated development within a community, notably hamlets, downtowns and formerly developed urban waterfronts. Redevelopment of these areas is essential for successful communities, encouraging consumers and investors to live, work, shop, recreate and invest in the community and to improve their physical and economic characteristics, in the context of the regional setting. DOS, working with other state agencies, provides both financial and technical assistance to prepare and implement revitalization strategies for hamlets, downtowns and urban waterfronts, with an emphasis on: spurring appropriate economic activity in previously-developed hamlet, downtown and waterfront areas; catalyzing appropriate economic activity through development of water-dependent and water-enhanced uses and activities; redeveloping underutilized abandoned buildings and brownfield sites; improving the recreational, cultural, environmental and economic value and quality of waterfronts; linking downtowns and hamlets with nearby waterfronts; or creating a positive image of a hamlet center, downtown commercial district, and/or waterfront.
- b. These plans are CZM 306 driven changes.
- c. Since 2015, DOS has funded and worked with communities through the EPF LWRP grant program in the preparation of the following waterfront redevelopment plans:

Ongoing:

- City of Albany - Downtown Revitalization Plan
- Village of Ardsley - Saw Mill River Revitalization Plan
- City of Beacon- Mid-Hudson Regional Downtown Initiative
- City of Long Beach – Downtown Long Beach Resilient Connections
- City of Oswego- Waterfront Feasibility Study
- Town of Southold – Southold Prosperity – Comprehensive Plan Update
- City of Watertown- Watertown Downtown Revitalization Plan

Completed:

- City of Beacon- Transit Oriented Development Plan
- Town of Hammond- Preparation of Thousand Island Regional Assessment

### **Local Waterfront Revitalization Programs**

- LWRPs are land and water use plans as well as strategies to implement the plans, and, as such, each one serves as a 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. The planning documents associated with the 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.
- These are CZM 306 driven changes.
- The DOS continues to work with communities throughout the State to develop LWRPs. DOS is also advancing and encouraging LWRPs to incorporate issues such as physical risk from climate change, sea-level rise, energy development, etc. Over recent years there has been an increased trend in the development of LWRPs in some regions and DOS is currently working on developing over 55 coastal LWRPs. Due to staff shortages, currently 6 staff members work on coastal LWRPs, the rate of completion has slowed. To tackle these issues, DOS is in process of reviewing the development process and making improvements to streamline and improve approval times.

Since 2015 the following LWRPs in the coastal area have been developed or updated and have been approved by the NYS Secretary of State (first date in the list below) and concurred by NOAA (second date in the list below). LWRPs are geographically organized by Regional Economic Development Council (REDC) regions.

### Finger Lakes

Town of Huron – 5/15/2017 – 10/11/17

Town of Penfield (Update) - 5/26/15 – 8/21/15

City of Rochester (Update) - 8/17/18 – 10/11/19

### New York City

New York City (Update) – 02/03/16 – 6/9/16

### Western New York

City of Buffalo – 4/5/2019 – Pending Submission to OCM

## **Regional Economic Development Council Strategic Plans**

- a. In 2011, Governor Cuomo redesigned the State’s economic development strategy through creation of the Regional Economic Development Councils (REDC). New York State’s traditional top-down development strategy was replaced with a bottom-up, innovative approach that empowers regional stakeholders to establish pathways to prosperity, mapped out in regional strategic plans. Through the REDCs, community, business, and academic leaders and members of the public in each region of the state put to work their unique knowledge and understanding of local priorities and assets to help direct state investment in support of job creation and economic growth.

Each Regional Council has become the voice of the region, advising agencies on the programs and projects most valuable to the region which overlap to some degree with the State’s coastal area. What started as an initiative focused on economic investments has blossomed into a program that invests in people and communities. This year the REDCs will prioritize child-care, environmental justice, and strategic community investment to give all New Yorkers the tools needed to improve their economic security and overcome significant barriers to career advancement.

Since its inception, the REDCs have awarded over \$6.1 billion to more than 7,300 projects across the state. The REDCs have also played a critical role in identifying where to spend \$300 million in 30 Downtown Revitalization Initiative (DRI) communities. The DRI is a community planning and implementation process where each participating community develops the key ingredients needed for successful downtown revitalization.

- b. These are not CZM/309 driven changes, however coastal staff are involved in providing input and feedback on regional strategy development.
- c. In 2011, each Regional Council was charged with developing a five-year Strategic Economic Development Plan that emphasized their region’s unique assets and provided strategies to harness local resources, both human and

capital, to stimulate regional economic development and create jobs statewide. The Strategic Economic Development Plans continue today with annual updates to address emerging state and regional challenges and opportunities, as well as updates that reflect priorities. Each region has a unique set of strategies to achieve greater economic prosperity and each have identified key regional industry clusters and priority projects which complement coastal economic priorities - such as aquaculture strategies and projects on Long Island.

**Enhancement Area Prioritization:**

1. What level of priority is the enhancement area for the coastal management program?

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

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

The SAMP enhancement area was given a high priority rating as approved SAMPs, particularly the LWRPS, 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, use conflicts, and climate change impacts identified throughout the coastal zone, DOS 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., use conflicts, energy development, water quality issues, sea level rise, and development conflicts).

## Special Area Management Planning Phase II Assessment

### **In-Depth Resource Characterization:**

*Purpose: To determine key problems and opportunities regarding the preparation and implementation of special area management plans for important coastal areas.*

1. What are the one to three most significant geographic areas facing existing or emerging challenges that would benefit from a new or revised special area management plan (SAMP) or better implementation of an existing SAMP? For example, are there areas where existing management approaches are not working and could be improved by better coordination across multiple levels of government? What challenges are these areas facing? Challenges can be a need for enhanced natural resource protection; use conflicts; coordinating regulatory processes or review; additional data or information needs; education and outreach regarding SAMP policies; or other (please specify). When selecting significant challenges, also consider how climate change may exacerbate each challenge.



	<b>Geographic Scope</b> (within an existing SAMP area (specify SAMP) or within new geographic area (describe new area))	<b>Challenges</b>
Geographic Area 1	Great Lakes – and the St. Lawrence River Valley	<ul style="list-style-type: none"> <li>- Water Level Fluctuation have impacted shoreline stabilization and, has resulted in flooding which impact local communities.</li> <li>-Open water disposal of dredged material offshore affects offshore habitats and water quality.</li> <li>-Climate change is negatively affecting the coastal economy, infrastructure and natural resources through increased total annual rainfall, higher incidence of extreme precipitation events, increased intensity of storms and greater probability of extreme weather, and periodic drought.</li> <li>-Shoreline management structures affect habitats and ecosystems, reduce littoral transport resulting in localized downcutting or scour resulting in reduced natural protective features and can result in conflict between public/private rights and uses.</li> </ul>
Geographic Area 2	Long Island Sound	<p>Shoreline management structures effect habitats and ecosystems causing a reduction of natural protective features, shifts in sediment transport and sand budgets, and risk to shoreline stabilization and use conflicts.</p> <ul style="list-style-type: none"> <li>-Open water disposal of dredged material has yet to be appropriately addressed.</li> <li>-Residential and commercial development along shorelines impacts ecosystems, limit public recreational access to the shoreline, and effects scenic resources.</li> <li>-Reduction of natural protective features causing increased risk to shoreline stabilization.</li> </ul>

Geographic Area 3	Overall New York State coastal zone	<p>-Potential impacts from development can cause impacts including visual impacts from increased energy development (SASS); water quality and use conflicts related to important coastal agricultural lands</p> <p>-Offshore wind turbine development may affect ecosystem, historic and/or scenic resources.</p> <p>-Water quality impairments associated with storm water runoff, exacerbated by extreme rainfall due to climate change, result in negative secondary effects such as Harmful Algal Blooms, reduced tourism and recreational fishing.</p>
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2. Briefly explain why these are currently the most significant challenges that may require developing a new SAMP or revising or improving implementation of an existing SAMP. Cite stakeholder input and/or existing reports or studies to support this assessment.

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

The cumulative effects of periodic water level changes, development in unsafe locations, reduced sediment availability due to shoreline armoring and defenses, and water level regulation continue to be a concern as they have not been addressed in any comprehensive manner. Compounding these issues, climate change effects including extreme precipitation aggravate flood risks - as has been evident in the past few years. With the recent increase in risk, new modeling and forecast data are needed to better guide future management and development.

On June 10 2019, Governor Cuomo convened the Lake Ontario Resiliency and Economic Development Initiative (REDI) Commission to launch an intensive 3-month “action-planning” process that involves local leaders in identifying immediate projects communities can undertake to bolster resiliency and the economy without adversely impacting other critical resources. Within the three-month first phase of the planning process, community needs and critical infrastructure were assessed and inventoried. Initial response projects were identified to protect and adapt infrastructure along the Lake Ontario and St. Lawrence River waterfronts while strengthening the region’s local economies. The work then shifted to a community engagement second phase that will help transition the communities to more resilient and stronger economic development through long-term opportunities. The product developed during the planning phase is intended to meet DOS resiliency standards

and incorporate recently completed asset inventory and project identification.

### Long Island Sound

Completed in 1999, the Long Island Sound Coastal Management Program recognized that these special areas are the foundation for not only preservation of the Sound’s environment and man- made assets but also for positive change in where and how develop occurs. Development pressures continue to impact the Sound’s natural coastline. With increased storm intensities, sea level rise, and increased pressures on dredge material management impact decision making capability at the state and local levels. Coastal communities continue to deal with shifting shorelines and shifting sediment transport which make comprehensive planning and decision making difficult. Understanding how sediments move, how shoreline treatments effect wetlands and ecosystems will support and strengthen the Local Waterfront Revitalization Programs.

### Overall NYS Coastal Zone Area

Data and supporting documentation are critical to strong implementable Local Waterfront Revitalizations Programs, regional SAMPs, and subsequent informed decisions on proposed actions. Without up-to-date information, decisions can only be based on obsolete data.

3. Are there emerging issues of concern, but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

Emerging Issue	Information Needed
Risk to communities on the Lake Ontario shoreline from continued flooding.	Additional assessment of assets; risks and vulnerabilities, monitoring data on shoreline impacts; new data and modeling needed to forecast water levels, waves, and sediment; needs and opportunities
Impact on significant habitats from continued flooding	Identify habitats at risk; current conditions and assessments of impacts; invasive species invasions;
Limited capacity of coastal communities to undertake/complete full LWRPs	Priority issues from community perspective; local land use regulations and policies

### In-Depth Management Characterization:

*Purpose: To determine the effectiveness of management efforts to address identified problems related to the special area management planning enhancement objective.*

1. For each additional SAMP management category below that was not already

discussed as part of the Phase I assessment, indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) have occurred since the last assessment.

**Significant Changes Related to Special Area Management Planning**

<b>Management Category</b>	<b>Employed by State or Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
SAMP research, assessment, monitoring	Y	Y	N
SAMP GIS mapping/database	Y	Y	N
SAMP technical assistance, education, and outreach	Y	Y	N
Other (please specify)			

2. For management categories with significant changes since the last assessment, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information.
  - a. Describe significant changes since the last assessment;
  - b. Specify if they were 309 or other CZM-driven changes; and
  - c. Characterize the outcomes or likely future outcomes of the changes.
  
3. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state’s or territory’s special area management planning efforts since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state’s or territory’s management efforts?

**Identification of Priorities:**

1. Considering changes with coastal resource protection or coastal use conflicts within defined geographic areas, special area management planning activities since the last assessment, and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CMP to improve their ability to prepare and implement special area management plans to effectively manage important coastal areas. *(Approximately 1-3 sentences per management priority.)*

*Management Priority 1: Coastal Resilience Plans*

*Description:* Coastal resilience planning is a means of developing community plans that address climate change risks and vulnerabilities associated with an increase in frequency and severity of storm and precipitation events, sea-level rise, storm surge, and flooding. Resilient communities understand which of their assets are at risk, take coordinated and informed measures to reduce those risks, and facilitate a quick response and effective long-term strategy following a severe weather event. NYS's CMP will work with coastal communities through regional planning to identify resiliency opportunities that consider past damages, future threats, and potential economic opportunities. The resultant plans will ensure that the reconstruction and revitalization efforts to strengthen community vitality and reduce future weather related damages are integrated into our CMP as guidance.

#### *Management Priority 2: Regional Plans*

*Description:* In concert with coastal resilience planning, NYS's CMP will continue developing guidance for preparing SAMPs at a regional scale. This approach will move beyond developing SAMPs based solely on issues within a single municipality to developing regional or multi-jurisdictional SAMPs which identify regional scale resources and needs, and multi-jurisdictional actions and projects for addressing issues that go beyond a single municipality's boundaries.

#### *Management Priority 3: Significant Area Designations*

*Description:* Continued updates of Significant Coastal Fish and Wildlife Habitat (SCFWH) statewide and designation of scenic and agricultural areas of significance are critical to resource protection. These designations directly provide 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 designation of geographic location descriptions (also discussed in the Ocean and Great Lakes assessment and strategy) is an additional tool for state to describe an area outside the coastal zone in which an activity would have reasonably foreseeable coastal effects. Once approved federal consistency review would apply if the activity occurs outside of the states coastal zone but within a GLD.

2. Identify and briefly explain priority needs and information gaps the CMP has to help it address the management priorities identified above. The needs and gaps identified here do not need to be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.

Priority Needs	Need? (Y or N)	Brief Explanation of Need/Gap
Research	N	
Mapping/GIS	Y	The existing GIS information for the NY's coastal areas, including Mean Higher High Water (MHHW) marks and existing shoreline types/conditions, is insufficient for regional and local resilience planning; information on in-water structures is especially lacking. Decision-makers need accurate maps and shore condition information to depict potential impacts of various sea level rise scenarios, predict future shoreline positions and inundation areas, identify potential damage to assets and the ecosystem health. Appropriate mapping necessary to justify SCFWH and GLD designations and appropriately identify natural resource and use data.
Data and information management	Y	An efficient way to track and disseminate information on progress, benefits, and results of coastal implementation projects such as a project management program and/or database.
Training/Capacity building	Y	CMP staff would benefit from continued training on risk assessment and coastal resilience to greater inform and expand the comprehensive LWRP planning process.
Decision-support tools	N	
Communication and outreach	Y	A way to disseminate information on resilience measures and other revitalization for coastal communities (especially Great Lakes communities) and ways to protect natural protective features is needed. Communication and outreach approaches that aim to influence social and behavior change, such as CBSM may be tools to use in order to effect behavior shifts to incorporate resilience measures for long term planning. Broader communication and outreach (both virtual and in-person) will be critical in reaching residents (full/part-time) disseminating and gathering information related to CLEAR, Lake Ontario Sanctuary efforts, offshore wind, and other
Other (specify)		

**Enhancement Area Strategy Development:**

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

**Yes**              X  

**No**                       

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

Multiple strategies will be developed that cover this enhancement area in addition to others, including coastal hazards, cumulative and secondary impacts and ocean and Great Lakes resources. Given the extreme weather events that New York has been experiencing, predominantly in the Great Lakes during this assessment period, there is a need to develop SAMPs, policies and guidance documents to enable coastal communities to prepare or adapt to future climate impacts to be more resilient on a regional basis. Similarly, there are opportunities to explore SAMPS for offshore ocean and Great Lakes uses such as wind energy development and designation of a National Marine Sanctuary, as well as the designation of a geographic location description (GLD). These issues are further explored in the Ocean Great Lakes Resources assessment.

## Ocean and Great Lakes Resources Phase I Assessment

**Section 309 Enhancement Objective:** Planning for the use of ocean [and Great Lakes] resources. §309(a)(7)

**Phase I (High-Level) Assessment:** *(Must be completed by all states and territories.)*

*Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.*

### Resource Characterization:

1. Understanding the ocean and Great Lakes economy can help improve management of the resources it depends on. Using Economics: National Ocean Watch (ENOW),<sup>14</sup> indicate the status of the ocean and Great Lakes economy as of 2015 (the most recent data) in the tables below. Include graphs and figures, as appropriate, to help illustrate the information. Note ENOW data are not available for the territories. The territories can provide alternative data, if available, or a general narrative, to capture the value of their ocean economy.

### Status of Ocean and Great Lakes Economy for Coastal Counties (2015)

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<sup>14</sup> [www.coast.noaa.gov/digitalcoast/tools/enow.html](http://www.coast.noaa.gov/digitalcoast/tools/enow.html). If you select any coastal county for your state, you are directed to various data displays for that county. In the upper left of the screen, click the "State" box, to the left of the county box so that the state name will be highlighted. Now the data will reflect statewide data for all of the state's coastal counties. Make sure "2015" is selected for the year (top right corner). You can then click through the sector types by selecting the icons along the top and the type of economic data (employment, wages, GDP, etc), by clicking through the icons on the left.



	All Ocean Sectors	Living Resources	Marine Construction	Ship & Boat Building	Marine Transportation	Off-shore Mineral Extraction	Tourism & Recreation
Employment (# of Jobs)	374,484	4,293	3076	758	27,630	638	338,089
Establishments (# of Establishments)	21,457	482	201	38	664	134	19,938
Wages (Millions of)	\$12.7 billion	\$97.80	\$248.10	\$49.90	\$1.9 billion	\$20.90	\$10.4 billion
GDP (Millions of)	\$26.5 billion	\$270.90	\$471.50	\$115.20	\$3.6 billion	\$51.80	\$22.0 billion

**Change in Ocean and Great Lakes Economy for Coastal Counties (2005-2015)<sup>15</sup>**

	All Ocean Sectors	Living Resources	Marine Construction	Ship & Boat Building	Marine Transportation	Offshore Mineral Extraction	Tourism & Recreation
Employment (# of Jobs)	117,894	620	391	-29	2,905	-201	114,208
Establishments (# of Establishments)	5,920	15	15	-2	92	-25	5,825
Wages (Millions of)	\$5.5 billion	\$46.7	\$127.4	\$15	\$300	\$5.7	\$5 billion
GDP (Millions of)	\$10.6 billion	\$151.4	\$227.6	\$10	\$1.2 billion	\$9	\$9 billion

- Understanding existing uses within ocean and Great Lakes waters can help reduce use conflicts and minimize threats when planning for ocean and Great Lakes resources. Using Ocean Reports<sup>16</sup>, indicate the number of uses within ocean or Great Lakes waters off of your state. For energy uses (including pipelines and cables, see the “Energy and Government Facility Siting” template following). Add additional lines, as needed, to include additional uses that are important to highlight for your state. Note: The Ocean Reports tool does not include data for the Great Lakes states. Great Lakes states should fill in the table as best they can using other data sources.

### Uses within Ocean or Great Lakes Waters

Type of Use	Number of Sites
Federal sand and gravel leases <i>(Completed)</i>	None
Federal sand and gravel leases <i>(Active)</i>	None
Federal sand and gravel leases <i>(Expired)</i>	None
Federal sand and gravel leases <i>(Proposed)</i>	None (BOEM looking to identify sites through Cooperative Agreement with NYS)
Beach Nourishment Projects	95
Ocean Disposal Sites	40
Principle Ports <i>(Number and Total Tonnage)</i>	Ocean: Two principal ports with total of 140,053,267 tonnage/year (Albany, NY: 6,656,435 tonnage/year; NY and NJ, NY: 133,396,832 tonnage/year) Great Lakes: Four ports handle more than 2.2 million tons of inbound and outbound cargo annually (Buffalo, NY: 1,581,000 tonnage/year, Ogdensburg, NY: 152,000 tonnage/year, Oswego, NY: 536,000 tonnage/year)
Coastal Maintained Channels	196
Designated Anchorage Areas	Ocean: 152 Great Lakes: 10
Danger Zones and Restricted Areas	Ocean: 2 Great Lakes: 0
Other (please specify)	

<sup>16</sup> [www.coast.noaa.gov/digitalcoast/tools/ort.html](http://www.coast.noaa.gov/digitalcoast/tools/ort.html). Go to “Quick Reports” and select the “state waters” option for your state or territory. Some larger states may have the “Quick Reports” for their state waters broken into several different reports. Use the icons on the left hand side to select different categories: general information, energy and minerals, natural resources and conservation, oceanographic and biophysical, transportation and infrastructure, and economics and commerce. Then scroll through each category to find the data to complete the table.

- In the table below, characterize how the threats to and use conflicts over ocean and Great Lakes resources in the state’s or territory’s coastal zone have changed since the last assessment.

**Significant Changes to Ocean and Great Lakes Resources and Uses**

<b>Resource/Use</b>	<b>Change in the Threat to the Resource or Use Conflict Since Last Assessment</b> (↑, ↓, -, unknown)
Benthic habitat (including coral reefs)	Increase
Living marine resources (fish, shellfish, marine mammals, birds, etc.)	increase
Sand/gravel	Increase
Cultural/historic	No change
Other (please specify)	No change
Transportation/navigation	No change
Offshore development <sup>17</sup>	Unknown
Energy production	No change
Fishing (commercial and recreational)	No change
Recreation/tourism	No change
Sand/gravel extraction	No change
Dredge disposal	unknown
Aquaculture	No change
Other (please specify)	No change

- For the ocean and Great Lakes resources and uses in the table above that had an increase in threat to the resource or increased use conflict in the state’s or territory’s coastal zone since the last assessment, characterize the major contributors to that increase. Place an “X” in the column if the use or phenomenon is a major contributor to the increase.

**Major Contributors to an Increase in Threat or Use Conflict to Ocean and Great Lakes Resources**

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<sup>17</sup> Offshore development includes underwater cables and pipelines, although any infrastructure specifically associated with the energy industry should be captured under the “energy production” category.

	Land-	Offshore	Polluted	Invasive	Fishing	Aquaculture	Recreation	Marine	Dredging	Sand/Mine	Ocean	Other
<i>Example: Living marine resources</i>		X	X	X	X	X		X	X			
Benthic habitat (including coral reefs)		X									?	
Living marine resources (fish, shellfish, marine mammals, birds, etc.)		X		X					X	?	?	
Sand/gravel		X										
Cultural/historic		X										
Transportation/navigation		X										
Offshore development												
Energy production		X										
Fishing (commercial and recreational)		X										
Recreation/tourism		X	X									
Sand/gravel extraction		X										
Dredge disposal		X	X		X		X		X		X	

5. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends of ocean and Great Lakes resources or threats to those resources since the last assessment to augment the national data sets.

Since the last assessment, numerous efforts have been underway to collect ocean resources data at both the state and regional levels.

### State Offshore Atlantic Ocean Study

DOS's 2013 Offshore Atlantic Ocean Study (Study), the first comprehensive study on the physical, biological, wildlife and geographic characteristics of the Atlantic Ocean impacting New Yorkers continues to inform much of the state's offshore ocean planning efforts including the development of renewable wind energy.

Highlights of the Study include:

- Information procured from over a third of New York's active federally-

licensed commercial anglers, indicating offshore areas that are significant to sustaining New York's fishing industry.

- Data garnered from New Yorkers who use the ocean for recreation, providing insight that can be utilized for regulatory reviews, planning and other needs.
- Original data on offshore natural resources predicting where species of potential concern may be located, such as seabirds, which were relatively unknown and difficult to study, yet are important in understanding where to potentially locate offshore wind projects.
- Information to help identify trends and patterns across seasons and groups of species.

## **Geographic Information Gateway**

An online tool created by DOS that facilitates the public availability of geospatial information, including data developed for and included in the Study, the Geographic Information Gateway (Gateway) is a state-of-the-art website providing data, real-time information, interactive tools, and expert knowledge. Launched in October 2015, it includes access to over 700 datasets related to the Atlantic Ocean and community resilience, a map viewer, and interactive stories describing how the Office uses geospatial information in its planning and development efforts.

## **Region**

Regionally, DOS has developed partnerships with neighboring states and federal agencies that advance the collection of ocean resource data.

## **Mid-Atlantic Regional Council on the Ocean (MARCO)**

In 2009, the Department led the formation and early development of the Mid-Atlantic Regional Council on the Ocean (MARCO), the federally recognized regional ocean partnership (ROP) for the Mid-Atlantic region, which works on issues that benefit from interstate collaboration and coordinated problem solving including ocean planning.

MARCO hosts the Mid-Atlantic Ocean Data Portal ( <http://portal.midatlanticocean.org/> ), an ocean planning resource center, and the Marine Planner, an Interactive mapping tool that makes many regional ocean resources datasets publicly available.

### **Representative datasets on the MARCO portal include:**

- Benthic habitat-sediment grain size, modeled coral habitat, coral observations and canyons and a variety of living resource data including birds, fish, marine mammals, sea turtles.
- Communities-at-Sea – integrates Vessel Trip Report (VTR) and permit information to create a new database that links fishing port communities to the places at sea where they spend the most time.
- Marine transportation-AIS shipping data, aids to navigation, anchorage grounds, maintained channels, separation lanes, pilot boarding areas, shipwreck density, and

routing measures.

- Marine Life – marine mammal, sea bird, and sea turtle distribution and predicted abundance models developed by Duke University’s Marine-life Data and Analysis Team (MDAT)
- Offshore development- planning and lease areas, permitted projects and those under review, electric substations and transmission lines and wind speed

**Management Characterization:**

1. Indicate if the approach is employed by the state or territory and if any significant state- or territory-level changes (positive or negative) in the management of ocean and Great Lakes resources have occurred since the last assessment?

**Significant Changes to Management of Ocean and Great Lakes Resources**

<b>Management Category</b>	<b>Employed by State or Territory (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
Statutes, regulations, policies, or case law interpreting these	Y	Y	Y
Regional comprehensive ocean/Great Lakes management plans	Y	Y	Y
State comprehensive ocean/Great Lakes management plans	Y	N/A	Y Ocean and Great Lakes Ecosystem Conservation Act  Seagrass Protection Act
Single-sector management plans	Y	N/A	N

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
  - a. Describe the significance of the changes;
  - b. Specify if they were 309 or other CZM-driven changes; and
  - c. Characterize the outcomes or likely future outcomes of the changes.

**Statutes, regulations, policies, or case law interpreting these**

The New York Ocean and Great Lakes Ecosystem Conservation Act (New York State Environmental Conservation Law Article 14)

- a. Adopted in 2006, the New York Ocean and Great Lakes Ecosystem Conservation Act (Act), **Article 14 (pdf)** of the Environmental Conservation Law, establishes an interagency framework to conserve, maintain, and restore coastal ecosystems. The New York Ocean and Great Lakes Ecosystem Conservation Council, advances the understanding, protection, restoration, and enhancement of New York's ocean and Great Lakes ecosystems while promoting sustainable and competitive economic development and job creation. This is not a 309 or CZM driven change.
- b. To address environmental threats faced by New York's valuable and unique ocean and Great Lakes the Act established ecosystem-based management (EBM) as the framework to better manage human activities that affect New York's coastal ecosystems. By taking an integrated management approach that considers the entire ecosystem, including humans, we will be better able to protect, restore, and sustain our ecosystems so they can provide the services people need. The Act was developed using state funds.

The Community Risk and Resiliency Act (Chapter 355 of the Laws of 2014)

- a. Adopted in 2014, the Community Risk and Resiliency Act (CRRA) requires state agencies and applicants to consider future physical climate risks, including storm surge, sea-level rise, and flooding, and extreme weather events in certain permitting, funding, and regulatory actions. It requires DOS to consult with DEC as the latter develops guidance on the use of natural resources and natural processes to enhance community resiliency. In cooperation with DEC, model local laws that include consideration of future risk due to sea-level rise, storm surge and/or flooding. These model local laws must be based on available data predicting the likelihood of extreme-weather events, including hazard-risk analysis.
- b. This is not a 309 or CZM driven change.
- c. The Community Risk and Resiliency Act (CRRA) requires consideration of climate change and, though it does not demand any particular outcome, it makes climate impacts an important part of the decision-making process. CRRA was developed using state funds.

The Seagrass Protection Act (Environmental Conservation Law Article 13, Title 7)

- a. Adopted in 2012, New York State Seagrass Protection Act (Act) restricts activities that may threaten seagrass areas, such as mechanically powered fishing gear, and granted the New York State Department of Environmental Conservation (DEC) the authority to develop and adopt a seagrass management plan to further protect at risk areas.

- b. This is not a 309 or CZM driven change.
- c. The Seagrass Protection Act helps preserve and protect this valuable resource which is vital to the health of the State's bays, providing a habitat for many valuable species of fish and shellfish as well as stabilizing the bay bottom sediments. The Act was developed using state funds.

## **State comprehensive ocean/Great Lakes management plans**

### **Great Lakes Action Agenda**

- a. The New York Great Lakes Action Agenda is a guide to promote successful ecosystem-based management through existing programs and partnerships involving state and federal agencies, municipalities, academic institutions, non-profits, and other stakeholders in New York's Great Lakes basin. The action agenda was developed using state funds, though implementation likely will require a mix of state, federal, and non-governmental resources.
- b. This is not a 309 or CZM driven change.
- c. The action agenda identifies pressing problems and actions needed to protect natural resources, environmental quality and resilient communities. It helps focus federal and state programs on key challenges faced by this region of the state. Most importantly, it is a tool that agencies, communities and organizations can use to help plan, fund and track projects that help achieve our shared vision for the conservation, restoration and protection of New York's Great Lakes basin. The action agenda brings together new priorities, as well as existing environmental, social and economic goals previously identified for New York's Great Lakes region, using an ecosystem-based management approach. The action agenda's ten priority goals guide conservation, restoration and protection efforts in New York's Great Lakes basin. DOS is leading or co-leading many of the activities related to the following priorities:
  - Enhance community resiliency and ecosystem integrity
  - Promote smart growth, redevelopment and adaptive reuse
  - Enhance recreation and tourism opportunities
  - Plan for energy development

### **Ocean Action Plan**

- a) The New York Ocean Action Plan (OAP) is a coordinated and inclusive effort focused on improving the health of our ocean ecosystems and their capacity to provide sustainable benefits to New Yorkers. Together, scientists, resource managers, and a wide range of stakeholders take stock of New York's ocean-related activities and programs. Through a ten-year action plan, the goal of the OAP is to achieve better-managed and healthier ocean ecosystems that will benefit people, communities, and the natural world. Grounded in short-term



actions to reach long-term goals, the OAP helps guide State government funding, research, management, outreach, and education choices. DOS is partnering with the DEC to lead this effort. The plan was developed using state funds, though implementation likely will require a mix of state, federal, and non-governmental resources. This is a CZM driven change.

- b) The OAP outlines the following four interconnected goals that reflect New York's priorities for immediate action:
- Ensure the ecological integrity of the ocean ecosystem;
  - Promote economic growth, coastal development and human use of the ocean in a manner that is sustainable and consistent with maintaining ecosystem integrity;
  - Increase resilience of ocean resources to impacts associated with climate change;
  - Empower the public to actively participate in decision making and ocean stewardship.

The corresponding long-term objectives and specific actions outlined in the OAP were developed through a stakeholder process with a diverse array of stakeholders, many of whom serve as partners and take the lead in implementing the identified actions.

See above description of the Offshore Atlantic Ocean Study (Resource Characterization #5). The study relied on state funds for completion and was conducted in close partnership and coordination with federal and NGO partners.

### **Regional comprehensive ocean/Great Lakes management plans**

- a) In 2009, DOS led the formation and early development of the Mid-Atlantic Regional Council on the Ocean (MARCO), a regional ocean partnership (ROP) working on issues that benefit from interstate collaboration and coordinated problem solving including ocean planning.

MARCO provides a valuable forum to pursue mutual goals shared by the Mid-Atlantic states, improve responses to ocean management challenges and opportunities, and collaborate with agencies, key partners and stakeholder groups to jointly address the region's needs.

MARCO operates via in-kind state staff time with project implementation covered by a mix of state, federal, and non-governmental resources.

DOS has also taken a regional leadership role in the Mid-Atlantic starting in July, 2019 when it took over as Chair of MARCO for a two year term and, in 2020, will begin hosting the portal for a period of three years.

DOS also participates in the Northeast Regional Ocean Council (NROC) as an ex-officio member. This is not a 309 or CZM driven change.

- b) ROPs leverage existing efforts underway by states and regional entities and engage stakeholders and technical experts at every key step.

Because of the significant amount of existing offshore planning efforts and activities in the region, MARCO continues to provide a regional extension of the ongoing work by DOS to plan for offshore wind development and habitat protection.

Primarily, NYS shares in data acquisition and analysis activities with the other NROC States because of the shared waters of Long Island Sound. In the Great Lakes, interstate coordination has also continued.

- 3. Indicate if your state or territory has a comprehensive ocean or Great Lakes management plan.

<b>Comprehensive Ocean/ Great Lakes Management Plan</b>	<b>State Plan</b>	<b>Regional Plan</b>
Completed plan (Y/N) (If yes, specify year completed)	Y (New York Ocean Action Plan 2017, New York Great Lakes Action Agenda, 2014)	Y (Mid-Atlantic Regional Ocean Action Plan 2016)
Under development (Y/N)	-	-
Web address (if available)	<a href="https://www.dec.ny.gov/docs/fish_marine_pdf/nyoceanactionplan.pdf">https://www.dec.ny.gov/docs/fish_marine_pdf/nyoceanactionplan.pdf</a>	<a href="https://www.boem.gov/Mid-Atlantic-Regional-Ocean-Action-Plan/">https://www.boem.gov/Mid-Atlantic-Regional-Ocean-Action-Plan/</a>
Area covered by plan	Offshore Atlantic Ocean waters out to the continental shelf/slope, from Montauk Point to New York City	Offshore Atlantic Ocean waters (primarily federal waters) from NY to VA

**Enhancement Area Prioritization:**

- 1. What level of priority is the enhancement area for the coastal management program?

High  X  
 Medium  \_\_\_\_\_

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

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

There continues to be a need and opportunity for New York to better identify, plan for, and develop offshore uses and resources that are directly tied or may be tied to the State's coastal communities, including its economic well-being.

Since the last assessment period, the mid-Atlantic coastal regional has been the focus of state government and companies interested in developing offshore wind farms with several areas leased and projects being reviewed.

Increased emphases in the Atlantic and Long Island Sound will focus on better understanding the movement of sediment (particularly sand and dredge disposal) within these water bodies, as a critical component of coastal resilience and water quality, respectively. In the Great Lakes, recent changes to the Lake Ontario water level regime by the International Joint Commission has had significant effects on commercial navigation, energy production, and coastal resilience.

## Ocean and Great Lakes Resources Phase II Assessment

### In-Depth Resource Characterization:

*Purpose: To determine key problems and opportunities to enhance the ability of state CMP to better address ocean and Great Lakes resources.*

1. What are the three most significant existing or emerging stressors or threats to ocean and Great Lakes resources within your coastal zone? Indicate the geographic scope of the stressor, i.e., is it prevalent throughout the coastal zone, or are specific areas most threatened? Stressors can be land-based development; offshore development (including pipelines, cables); offshore energy production; polluted runoff; invasive species; fishing (commercial and/or recreational); aquaculture; recreation; marine transportation; dredging; sand or mineral extraction; ocean acidification; or other (please specify). When selecting significant stressors, also consider how climate change may exacerbate each stressor.

	<b>Stressor/Threat</b>	<b>Geographic Scope</b> (throughout coastal zone or specific areas most threatened)
Stressor 1	Offshore energy development	Federal waters south of Long Island
Stressor 2	Coastal storms and sea level rise; interface between offshore processes and coastal communities at-risk	Federal waters south of Long Island; Great Lakes coastlines

	<b>Stressor/Threat</b>	<b>Geographic Scope</b> (throughout coastal zone or specific areas most threatened)
Stressor 3	Identification and protection of areas important to the State's economy	Throughout State and federal ocean and Great Lakes

2. Briefly explain why these are currently the most significant stressors or threats to ocean and Great Lakes resources within the coastal zone. Cite stakeholder input and/or existing reports or studies to support this assessment.

The waters offshore New York are facing increased pressure from new and existing uses. Federal activities that have begun or increased in the last several years include offshore wind permitting, planning and lease sales led by the U.S. Department of the Interior, U.S. Coast Guard's ongoing Port Access Route Studies of navigation trends for specific ports along the East Coast and potential adjustments to existing fairways or traffic separation schemes (TSS), DOI's 2019-2024 Proposed National Oil and Gas Program's inclusion of the Mid-Atlantic, ongoing federal and state research into patterns of large marine mammal movements and population trends, recent federal expeditions using NOAA Ocean Exploration program resources into the offshore canyons, and private industry and public project proposals for natural gas pipelines, telecommunications cables, and scientific research.

3. Are there emerging issues of concern, but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

<b>Emerging Issue</b>	<b>Information Needed</b>
Great Lakes water level changes	New data collection as high-water levels continue to break records; trends analysis to begin to predict changes to multi-decadal cycle of highs and lows; more refinement to climate models to understand the long-term implications of climate change on Lake hydrodynamics
Ocean acidification	Long-term and deep water impacts of increased carbon dioxide levels on offshore systems
Aquaculture	Private business interest, permitting processes in State and federal waters

Emerging Issue	Information Needed
	that will govern new aquaculture development
Offshore energy development in the Great Lakes	A project proposal for Lake Erie waters is likely to become more solidified; project details to date are still relatively fluid

**In-Depth Management Characterization:**

*Purpose: To determine the effectiveness of management efforts to address identified problems related to the ocean and Great Lakes resources enhancement objective.*

1. For each of the additional ocean and Great Lakes resources management categories below that were not already discussed as part of the Phase I assessment, indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) have occurred since the last assessment.

**Significant Changes in Management of Ocean and Great Lakes Resources**

Management Category	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Ocean and Great Lakes research, assessment, monitoring	Y	N	Y
Ocean and Great Lakes GIS mapping/database	Y	N	Y
Ocean and Great Lakes technical assistance, education, and outreach	Y	Y	Y
Other (please specify)			

2. For management categories with significant changes since the last assessment, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information.
  - a. Describe significant changes since the last assessment;
  - b. Specify if they were 309 or other CZM-driven changes; and

- c. Characterize the outcomes or likely future outcomes of the changes.
- a) During the previous 309 period, New York accelerated its plans for new offshore wind development, with the Governor increasing the State's goal to 9,000 MW of new offshore wind-generated electricity by 2035. With no installed capacity at this time, the State's achievement of this goal will require significant new investment and the acceleration of existing project development.

In 2017 and again in 2019, Lake Ontario experienced record water levels, creating significant hardship for coastal communities and prompting an intensive State-wide effort to develop more resilient infrastructure. DOS continues to be called on by the State to help implement funding programs to help communities rebuild. This issue is closely connected to the Hazards program in 309 and is expected to necessitate development of new guidance, and local and regional resilience and adaptation strategies.

Also, in 2017, the Counties along Eastern Lake Ontario and the City of Oswego joined in submitting a nomination to NOAA for a National Marine Sanctuary to protect maritime heritage resources in Lake Ontario. In April 2019 NOAA proposed the site for designation, launching the process for designation and development of a management plan in concert with the State.

For all categories, the most significant change since the last assessment is the offshore actions of the state as informed by DOS's Offshore Atlantic Ocean Study along with the implementation of the New York Ocean Action Plan, released in 2017, and the Great Lakes Action Agenda. See the Phase I assessment for more detail on these efforts and the related Geographic Information Gateway that provides an enhanced GIS mapping/database platform.

- b) The 2015-2020 309 helped drive State outreach to Lake Ontario flooding but our proposed planning efforts were superseded/delayed by the flooding events.

There was no 309 focused on offshore wind in 2015-2019 but the CZM program has been heavily involved in identifying potentially eligible sites for project development and in the review of proposed projects.

The initiation of the Sanctuary in Lake Ontario occurred during the previous 309 phase.

- c) The State's focus on offshore wind is likely to increase, pending the pace of federal review of projects and continued private interest in project development.

The continued flooding issues in Lake Ontario will likely create additional pressure for implementation of new more resilient project infrastructure and continued guidance on effective, more resilient approaches.

3. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state's or territory's management efforts in planning for the use of ocean and Great Lakes resources since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state's or territory's management efforts?

The summary finding of the Offshore Atlantic Ocean Study is that the State's interests and equities, as anticipated, extend well beyond the State's territorial 3-mile boundary. As a follow-on to the Study, New York's Great Lakes Action Agenda and Ocean Action Plan identify and prioritize study and related management efforts that can help address knowledge gaps and vulnerabilities to State coastal uses and resources. See the Phase I assessment for more information on these two action plan documents.

In 2019 the State finalized a Cooperative Agreement with BOEM, managed by DOS in partnership with SUNY Stony Brook, that began to model and identify potential sand resources in federal waters that could be used for coastal resiliency. DOS anticipate future study work on offshore (federal and state) sand resources important to New York's ongoing and future coastal rebuilding efforts.

#### **Identification of Priorities:**

1. Considering changes in threats to ocean and Great Lakes resources and management since the last assessment and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CMP to improve its ability to effectively plan for the use of ocean and Great Lakes resources. (*Approximately 1-3 sentences per management priority.*)

*Management Priority 1: Offshore wind siting and transmission*

*Description:* DOS continues to identify the most appropriate potential areas for offshore wind development – including construction, generation, and transmission activities - in concert with state and federal agencies, utilizing existing interagency workgroups and a growing body of knowledge of existing uses and resources and issues of potential compatibility

*Management Priority 2: Resiliency planning*

*Description:* With the advent of increasing coastal storms, renewed emphasis is being placed on readiness for ongoing and future rebuilding needs. New York is working to understand the relationship between coastal areas and their risk and resiliency, and the ongoing changes in Ocean and Great Lakes. The Program must continue to work with partners at the local, State, and federal levels and with private interests to identify risks, trends, and appropriate responses. In particular, the need



to address the community interests in economic development and resiliency will require new approaches and strategies around the State.

*Management Priority 3:* Identification and protection of areas important to the State's economy

*Description:* The increased spatial pressures on state ocean and Great Lakes areas accompanying new uses and demands (wind development, resiliency) require New York to continue its efforts to identify those areas already important to New York's Ocean and Great Lakes uses and resources (e.g., fishing, shipping). Additionally, the proposed designation of a new National Marine Sanctuary in Lake Ontario presents an important incentive for New York to identify the coastal uses and resources within State waters that may be impacted by the designation. While the State supports the Sanctuary and its focus on protection of historic shipwrecks and maritime heritage, the development of a management plan for the Sanctuary will require additional effort to both leverage the economic opportunity for the region and safeguard important existing uses.

2. Identify and briefly explain priority needs and information gaps the CMP has to help it address the management priorities identified above. The needs and gaps identified here do not need to be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.

Priority Needs	Need? (Y or N)	Brief Explanation of Need/Gap
Research	Y	Continued research and data processing and projection models of important uses and resources that can facilitate siting of offshore wind, the States' resiliency planning efforts, and the designation of a new National Marine Sanctuary
Mapping/GIS	Y	Continued and improved coordination at the State, interstate, and federal levels of existing data and making it available for State uses and to the public
Data and information management	N	See research above
Training/Capacity building	Y	Community-based Social Marketing to inform and build support for offshore wind development and reduction of fossil fuels. Also, community roles in capitalizing on a marine sanctuary in the Great Lakes that enhances water-related and water dependent businesses and how to access and promote the Sanctuary as a regional asset.
Decision-support tools	Y	Improved technical documents and guidance that will help the State, municipalities, and federal partners identify appropriate locations for new uses, e.g., mapping programs, planning approaches.
Communication and outreach	Y	Continued engagement of NY coastal stakeholders to understand their concerns related to ongoing sea level rise, coastal flooding, and energy needs.
Other (specify)		

**Enhancement Area Strategy Development:**

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

Yes   Y  

No       

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

New York's current and growing focus on offshore renewable energy development and changing ocean conditions are requiring new approaches and strategies that can help refine and adapt CMP implementation. The urgency and widespread nature of these needs, coupled with a related increased emphasis by federal government entities and private developers and the research community at-large, compel New York to continue taking a proactive approach to planning for new uses and identifying those existing

uses and resources important to the State's coastal economy and communities. These existing uses include fishing, shipping, and recreation, which together support the State's marine economy.

The ongoing designation of a National Marine Sanctuary in Lake Ontario is similarly compelling the State to evaluate existing uses and resources and develop internal and external guidance for state regulators and communities respectively.

As flooding of Great Lakes coastlines continues, DOS also will be working to establish forward looking, regional guidance for coastal resiliency (see discussion in Hazards Assessment for more information).

## Energy and Government Facility Siting Phase I Assessment

**Section 309 Enhancement Objective:** 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. §309(a)(8)<sup>18</sup>

**Phase I (High-Level) Assessment:** *(Must be completed by all states and territories.)*

*Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.*

### Resource Characterization:

1. In the table below, characterize the status and trends of different types of energy facilities and activities in the state's or territory's coastal zone based on best-available data. If available, identify the approximate number of facilities by type. For ocean-facing states and territories (not Great Lakes states), Ocean Reports<sup>19</sup> includes existing data for many of these energy facilities and activities.

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<sup>18</sup> CZMA § 309(a)(8) is derived from program approval requirements in CZMA § 306(d)(8), which states:

"The management program provides for adequate consideration of the national interest involved in planning for, and managing the coastal zone, including the siting of facilities such as energy facilities which are of greater than local significance. In the case of energy facilities, the Secretary shall find that the State has given consideration to any applicable national or interstate energy plan or program."

NOAA regulations at 15 C.F.R. § 923.52 further describe what states need to do regarding national interest and consideration of interests that are greater than local interests.

<sup>19</sup> [www.coast.noaa.gov/digitalcoast/tools/ort.html](http://www.coast.noaa.gov/digitalcoast/tools/ort.html). Select "Quick Reports" and then enter your state. Select the Quick Reports for "coastal waters" off of your state. Depending on the size of the state, there may be more than one "coastal waters". If so, you will need to add the data from all reports to complete the table. Click on the wind turbine icon on the left ("Energy and Minerals") for information on energy facilities. While outside your coastal zone, you may also want to consider facilities/activities in "Federal Waters" that may have effects on your coastal zone.

## Status and Trends in Energy Facilities and Activities in the Coastal Zone<sup>20</sup>

Type of Energy Facility/Activity	Exists in Coastal Zone (# or Y/N)	Change in Existing Facilities/Activities Since Last Assessment (↑, ↓, -, unknown)	Proposed in Coastal Zone (# or Y/N)	Change in Proposed Facilities/Activities Since Last Assessment (↑, ↓, -, unknown)
Pipelines	y	increase	y	No change
Electrical grid (transmission cables)	y	unknown	y	increase
Ports	y	unknown	y	increase
Liquid natural gas (LNG)	n	No change	n	No change
Other (please specify)	-	No change	-	No change
Oil and gas	70	increase	3	decrease
Coal	5	decrease	-1	decrease
Nuclear	4	No change	-1	decrease
Wind	2	increase	6	No change
Wave	0	No change	0	No change
Tidal	1	increase	1	No change
Current (ocean, lake, river)	0	No change	0	No change
Hydropower	14	increase	0	No change
Ocean thermal energy conversion	0	No change	0	No change
Solar	6	increase	3	No change
Biomass	5	increase	0	No change
Other (please specify)	-	-	-	-

2. If available, briefly list and summarize the results of any additional state- or territory-specific information, data, or reports on the status and trends for energy facilities and activities of greater than local significance in the coastal zone since the last assessment.

New York State is in the midst of an update to the State's Energy Plan for 2020 and beyond. Since 2015, New York State has been advancing its Reforming the Energy Vision (REV) agenda that focuses on reducing costs of renewable energy and energy efficiency and increasing their adoption in a more equitable, cost-effective

<sup>20</sup> Includes activities in federal waters with anticipated landfall in NYS, such as new electric transmission cables and offshore wind facilities.

way. REV has established a New Clean Energy Standard (CES), the Clean Energy Fund (CEF), the NY-SUN initiative, the energy storage initiative, and other programs that have resulted in significant energy load-reductions. Additional information on the State's progress towards achieving the REV goals are described in NYSERDA's 2017 Biennial Report to the 2015 State Energy Plan.<sup>21</sup>

New York took several meaningful actions have occurred since the last assessment, including:

- Cease operation of the Indian Point nuclear facility by 2021, which would close the two remaining operating reactors 14 years ahead of schedule, while replacing lost electricity with clean energy and energy efficiency.
- Increasing the state's offshore wind target from 2,400 megawatts by 2030 to 9,000 MW by 2035;
- Authorizing the Climate Leadership and Community Protection Act (CLCPA), setting New York on a path to achieve a carbon free electricity system by 2040 and 85% reduction in greenhouse gas emissions by 2050.
- Awarding the State's inaugural offshore wind procurement to 2 projects that, collectively, will generate 1,700 megawatts, enough energy to power over 1 million homes.

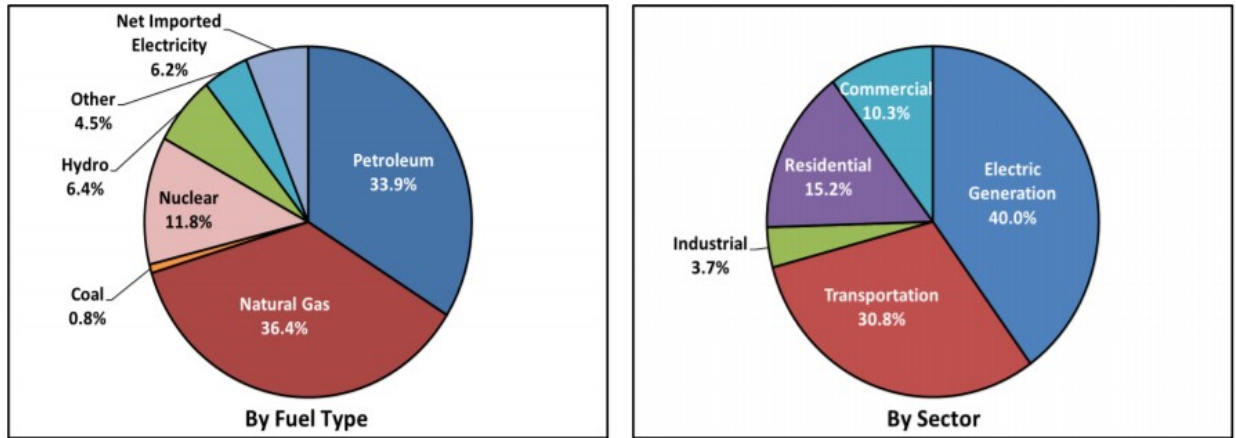
In addition to the REV agenda, State agencies and entities routinely publish status updates on the state of the energy system in New York. These include the New York State Energy Research and Development Authority's (NYSERDA) "Patterns and Trends" analyses and the New York Independent System Operator's Load and Capacity Data "Gold Book" on system-wide transmission.

Key findings from the 2019 Patterns and Trends review include:

- New York State ranks eighth nationally in energy consumption.
- The State has the second lowest per capita energy usage in the U.S., accounting for 3.8% of the nation's total primary energy consumption. New York State accounts for 6.1% of the nation's population.
- Renewable resources accounted for 10.9% of the State's primary energy consumption compared to 10.5% for the U.S. in 2016.
- Coal consumption represents 0.8% of the State's energy use compared to 15.8% nationally.

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<sup>21</sup> <https://energyplan.ny.gov/Plans/2015-Update>



**Figure X.** New York State Primary Consumption of Energy by Fuel Type and Sector, 2016. Source: NYSERDA. 2019. Patterns and Trends New York Energy Profiles: 2002–2016.<sup>22</sup>

A summary of the electrical system capacity from the 2019 Gold Book:<sup>23</sup>

“The Total Resource Capability in the NYCA for the Summer of 2019 is 42,056 MW, which is a decrease of 201 MW compared to the information provided for Summer 2018 in the 2018 Gold Book. ... The existing NYCA generating capability includes renewable resources totaling 6,351 MW. This total includes wind generation (1,739 MW), hydro (4,253 MW), large-scale solar PV (32 MW), and other renewable resources (327 MW). ... Beyond 2019, the resource capability in the NYCA will be affected by additions of new generation, re-rates of currently operating units, and the deactivation of existing generators. ... [T] the proposed facilities that have completed, are enrolled in, or are candidates to enter a Class Year Interconnection Facilities Study, or have met other comparable milestones. Of the total reported, the proposed summer capability of these resources is:

- 5,894 MW of natural gas or dual-fuel projects;
- 4,746 MW of wind turbine projects;
- 734 MW of non-wind renewable energy projects; and
- 385 MW of energy storage.”

3. Briefly characterize the existing status and trends for federal government facilities and activities of greater than local significance<sup>24</sup> in the state’s coastal zone since the last assessment.

The status of government facilities is relatively unchanged since the previous assessment. There have been minor disposals of federal property. A major facility, the DHS-operated Plum Island Animal Disease Center, together with its associated

<sup>22</sup> Available at: <https://www.nyserdera.ny.gov/About/Publications/EA-Reports-and-Studies/Patterns-and-Trends>

<sup>23</sup> Available at: <https://www.nyiso.com/documents/20142/2226333/2019-Gold-Book-Final-Public.pdf/>

<sup>24</sup> The CMP should make its own assessment of what Government facilities may be considered “greater than local significance” in its coastal zone, but these facilities could include military installations or a significant federal government complex. An individual federal building may not rise to a level worthy of discussion here beyond a very cursory (if any at all) mention).

support site on the mainland used for docking facilities and parking, while still operating, is slated for sale at some point in the future. The center is scheduled to be shut down in 2022. The DOS continues to monitor the proposed sale closely.

Coordination between NYS and applicable state and federal regulatory and planning agencies has continued regarding on-going maintenance dredging of federal navigation channels, a backlog of small harbor dredging needs, and open-water disposal site management. DOS plays an active role with agency partners in addressing dredging and dredge disposal needs for Long Island, NYC, Hudson River, and Great Lakes regions. Notable federal activities in the planning stages that DOS is actively engaged in includes:

- Fire Island to Montauk Point Reformulation (FIMP) Study: The U.S. Army Corps of Engineers (USACE) is completing its assessment of storm-related flooding and erosion damage to communities across a large portion of the south shore of Long Island.
- New York/New Jersey Harbor and Tributaries Study (HATS): USACE and its non-federal partners are developing a comprehensive plan for managing future potential coastal storm risks facing the NY/NJ Harbor region, including those from predicted sea level and extreme weather events.
- NY/NJ Harbor Anchorages: USACE is proposing to increase the available anchorage area and ensure that anchorages are capable of safely accommodating vessels larger than 1,100 foot length overall.
- New York Bight Wind Energy Area (WEA): The Bureau of Ocean Energy Management (BOEM) is in the process of designating new WEAs in the New York Bight.

#### **Management Characterization:**

1. Indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) that could facilitate or impede energy and government facility siting and activities have occurred since the last assessment.

#### **Significant Changes in Energy and Government Facility Management**



Management Category	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y	Y	Y
State comprehensive siting plans or procedures	Y	Y	Y

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
- Describe the significance of the changes;
  - Specify if they were 309 or other CZM-driven changes; and
  - Characterize the outcomes or likely future outcomes of the changes.

*Statutes, regulations, policies, or case law interpreting these*

- New York State has initiated a number of state-driven changes to energy statutes and policies. As introduced in #2 above, the CLCPA requires the State to achieve a carbon free electricity system by 2040 and reduce greenhouse gas emissions 85% below 1990 levels by 2050, setting a new standard for states and the nation to expedite the transition to a clean energy economy. Relatedly, the New York State Public Service Commission has issued orders to:
  - Adopt a Clean Energy Standard (CES) that is divided into a Renewable Energy Standard (RES) and a Zero-Emissions Credit (ZEC) requirement (Case 15-E-0302).
  - Adopt an Offshore Wind (OSW) Standard with an initial procurement of ORECs associated with approximately 800 MW of offshore wind (Case 18-E-0071).

In 2019, New York also signed legislation to bar the state from granting permits for drilling, or oil or gas exploration in offshore areas controlled by the State (S.2316/A.2572).

Regarding government facilities, New York filed a lawsuit in 2017 challenging the U.S. Environmental Protection Agency's (EPA) decision to designate a 3<sup>rd</sup> new permanent open water disposal site in Long Island Sound. The lawsuit is ongoing.

- These were not 309 driven changes.

- c. These initiatives are anticipated to prioritize renewable energy planning and development at the state and local levels, spur private investments, and provide New Yorkers' with clean and reliable energy choices. The CLCPA will drive investment in clean energy solutions such as wind, solar, energy efficiency and energy storage. Importantly, it will also target investments to benefit disadvantaged communities, create tens of thousands of new jobs, and improve public health and quality of life. Such energy planning is entirely consistent with, and supportive of, increasing community resiliency, as energy generation and delivery are particularly vulnerable to climate change and severe weather events under the current system.

*State comprehensive siting plans or procedures*

- a. On January 29, 2018, NYSERDA released the New York State Offshore Wind Master Plan, which presents a comprehensive roadmap to encourage the development of 2,400 MW of offshore wind by 2030.<sup>25</sup> It contains 20 studies and benefited from over a year's worth of outreach with stakeholders such as commercial and recreational fishermen, consumer advocates, elected officials, labor and business leaders, Long Island and New York City communities, non- governmental organizations, the offshore wind energy industry, and State and federal agencies. The Master Plan also initiated four Technical Working Groups for Maritime, Jobs and Supply Chain, Commercial Fishing, and Environmental that have been convening to develop best practices specific to offshore wind development in this region.
- b. These were not 309 driven changes.
- c. The Master Plan laid out the groundwork for New York's offshore wind solicitations, stakeholder engagement, additional research, and investments in infrastructure, transmission, and workforce training. These actions will continue to provide greater certainty to offshore wind developers, reduce renewable energy costs, address potential impacts of offshore wind development, and ensure the process remains coordinated and responsive to stakeholders.

**Enhancement Area Prioritization:**

1. What level of priority is the enhancement area for the coastal management program?

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

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<sup>25</sup> <https://www.nyserda.ny.gov/All-Programs/Programs/Offshore-Wind/Offshore-Wind-in-New-York-State-Overview/NYS-Offshore-Wind-Master-Plan>

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

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

## Energy and Government Facility Siting Phase II Assessment

### In-Depth Resource Characterization:

*Purpose: To determine key problems and opportunities relating to the siting of energy and government facility siting and other activities that may be of greater than local significance.*

1. What are the three most significant existing or emerging challenges to facilitating energy and government facility siting and activities within your coastal zone? Indicate the geographic scope of the challenge, i.e., is it prevalent throughout the coastal zone or are specific areas most threatened? Challenges can be conflicting uses; coastal resource impacts; coordinating regulatory processes or review; insufficient data; natural disasters; national security; or other (please specify). When selecting significant challenges, also consider how climate change may exacerbate each challenge.

	<b>Challenges</b>	<b>Geographic Scope</b> (throughout coastal zone or specific areas most threatened)
Challenge 1	State energy policy changes	Statewide
Challenge 2	Offshore wind development	Federal waters south of Long Island
Challenge 3		

2. Briefly explain why these are currently the most significant challenges to facilitating energy and government facility siting and activities within the coastal zone. Cite stakeholder input and/or existing reports or studies to support this assessment. The passage of the State Climate Leadership and Community Preparedness Act is compelling State agencies to consider the climate impacts of most major regulatory and funding decisions.  
The State's commitment to renewable energy generation has led to a recent push for significant offshore wind development. The State's current goal is 9 GW by 2035, a nation-leading goal that will require a dramatic increase in scaling up the industry. As one of, if not the, most significant remaining large utility-scale renewable energy generation opportunities for New York, offshore wind's development potential will require continued planning and policy support.
3. Are there emerging issues of concern, but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

Emerging Issue	Information Needed
Regional dredged sediment management	Federal-interstate dialogue to identify and commit to the development of alternatives to open water disposal – CDFs and containment islands,

**In-Depth Management Characterization:**

*Purpose: To determine the effectiveness of management efforts to address identified problems related to the energy and Government facilities enhancement objective.*

1. For each additional energy and government facilities management category below that was not already discussed as part of the Phase I assessment, indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) have occurred since the last assessment.

**Significant Changes to Energy and Government Facility Management**

Management Category	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Energy and government facility/activity research, assessment, monitoring	Y	N/A	N
Energy and government facility/activity GIS mapping/database	Y	N/A	Y
Energy and government facility siting technical assistance, education, and outreach	Y	Y	N
Other (please specify)			

2. For management categories with significant changes since the last assessment, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information.
  - a. Describe significant changes since the last assessment;
  - b. Specify if they were 309 or other CZM-driven changes; and
  - c. Characterize the outcomes or likely future outcomes of the changes.

The most significant development related to GIS mapping and databases is the creation of the Geographic Information Gateway. See discussion in the **Ocean and Great Lakes Resources** section.

3. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state's or territory's management efforts in facilitating energy and government facility siting and activities since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state's or territory's management efforts?

Because the State has only just begun CLCPA implementation and related policies, new findings and analysis are anticipated in the near future that will help clarify how existing programs can effectively support the CLCPA. See the Ocean and Great Lakes Resources section for specific issues related to offshore wind.

### **Identification of Priorities:**

1. Considering changes in energy and government facility siting and activities, the management of these facilities and activities since the last assessment, and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CMP to improve its ability to facilitate the siting of energy and government facilities and activities to address the most significant energy and government facility siting and activity challenges identified. *(Approximately 1-3 sentences per management priority.)*

*Management Priority 1: State energy planning and policy changes*

*Description:* Ongoing identification of opportunities within the existing CMP and affiliated programs (e.g., Ocean/Great Lakes program, South Shore Estuary Reserve, and Local Waterfront Revitalization Programs) to help shape and refine emerging State policy goals through technical assistance to municipalities and collaboration with federal agencies.

*Management Priority 2: Offshore wind siting*

*Description:* There is continued federal and private developer interest and strong stakeholder support in New York for offshore wind development. DOS will continue its offshore wind planning effort to streamline the permitting process by identifying potential issues upfront and addressing them in the context of state-federal consultation.

*Management Priority 3: Regional Dredging Management*

*Description:* The Dredged Material Management Plan (DMMP) for Long Island Sound was completed in late 2015. NYS is currently working with the other federal and State agencies to formalize the Regional Dredging Team and fulfill the conditions of the site designations for Central and Western disposal sites. An

additional Eastern Long Island Sound disposal site was also designated despite NYS' objection, and is currently under litigation.

- Identify and briefly explain priority needs and information gaps the CMP has to help it address the management priorities identified above. The needs and gaps identified here do not need to be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.

Priority Needs	Need? (Y or N)	Brief Explanation of Need/Gap
Research	Y	Continued research into appropriate policy mechanisms and goals, through the existing state administrative proceeding (outside the CMP)
Mapping/GIS	Y	Continued support for the Geographic Information Gateway
data and information management	Y	Opportunities to increase knowledge of existing uses and impacts of new energy technology; applicability to CZM reviews and State planning for energy facilities,
Training/Capacity building	N	
Decision-support tools	Y	Improved planning and guidance documents that can be used in existing work with municipalities, e.g., model local laws
Communication and outreach	Y	Continued engagement with municipalities, state energy entities, private developers
Other (specify)		

**Enhancement Area Strategy Development:**

- 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.

With the focus on offshore wind development and the overall emphasis on reduction of greenhouse gases, the need for DOS expertise in planning and provision of technical assistance is expected to be addressed through the Ocean and Great Lakes strategy. Given the State's significant coastal development and increasingly limited space for new coastal and offshore facilities, DOS needs to increase its planning efforts to keep pace with the need.

## Aquaculture Phase I Assessment

**Section 309 Enhancement Objective:** Adoption of procedures and policies to evaluate and facilitate the siting of public and private aquaculture facilities in the coastal zone, which will enable states to formulate, administer, and implement strategic plans for marine aquaculture. §309(a)(9)

### **Phase I (High-Level) Assessment:**

*Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.*

### **Resource Characterization:**

1. In the table below, characterize the existing status and trends of aquaculture facilities in the state's coastal zone based on the best-available data. Your state Sea Grant Program may have information to help with this assessment.<sup>26</sup>

### **Status and Trends of Aquaculture Facilities and Activities**

Type of Facility/Activity	Number of Facilities <sup>27</sup>	Approximate Economic Value	Change Since Last Assessment (↑, ↓, -, unknown)
Mollusks	31	unknown	Facilities: increase
Food fish, trout	6	\$8,000	Facilities: increase↑
Food fish (excel. Catfish & trout)	6	\$19,000	Facilities: increase
Ornamental fish	1	unknown	Facilities: no change
Crustaceans	N/A	N/A	no change
<b>Total – 2017 USDA Census Data</b>	58	\$9,756,000	increase

This summary was developed using the U.S. Department of Agriculture's Natural Agricultural Statistics Service's "Quick Stats" data for New York's coastal counties (Suffolk, Nassau, and Queens). The most recent aquaculture data available at the county level for New York State were 2017 census data. The number of facilities reported was taken from the Quick Stats data field for the total number of aquaculture operations with sales and distribution. In most instances, the economic value data is the Quick Stats database which recorded as being withheld to avoid

<sup>26</sup> While focused on statewide aquaculture data rather than just within the coastal zone, the *Census of Aquaculture* ([www.aqcensus.usda.gov/Publications/Census\\_of\\_Aquaculture/](http://www.aqcensus.usda.gov/Publications/Census_of_Aquaculture/)) may help in developing your aquaculture assessment. The census is conducted every 10 years and the last report was released in 2013. The report provides a variety of state-specific aquaculture data to understand current status and recent trends.

<sup>27</sup> See narrative for specific information on permitted facilities as per the New York State Department of Environmental Conservation (NYSDEC)



disclosing data for individual operations. This was true for all economic value subtotals by facility/activity type, and for subtotals by county for 2 of the 3 coastal counties.

The NYS Department of Environmental Conservation (NYSDEC) Division of Marine Resources reported that in 2019 they had 80 permitted On/Off Bottom Culture permit holders from Nassau (n=1) and Suffolk (n=79) counties. Of the 80 permit holders in 2019, 50 reported sales from shellfish and the 30 remaining were inactive or not reporting. The estimated minimum value of shellfish sold (i.e., oysters and clams) was \$4.274M in 2019; however, NYSDEC cautioned that this was likely underestimated. No reported sales were received from a marine hatchery permit holder in Westchester County producing hybrid striped bass. Similarly, one marine hatchery permitted in Columbia County that is still in the research and development phase for Pacific White Shrimp and Yellow Amberjack reported no sales. One marine hatchery in Suffolk County was permitted for multiple finfish species but only produced small amounts of Striped Bass.

The reported numbers are the result of agency authority differences between the NYSDEC and the NYS Department of State.

Determining the trend since the last assessment involved comparing 2017 data with 2012 data from the Quick Stats database query performed in April 2020 for New York's coastal counties. All facility/activity type data categories were similar for 2012 and 2017 data, making this comparison possible. From 2012 to 2017, the total number of aquaculture facilities per each facility type has either remained the same or increased. The total number of "mollusks" facilities increased from 20 to 31 facilities within this timeframe. This change since the last assessment might be due to historic underreporting. Aquaculture facilities increased by over 50%, from 28 to 58 facilities between 2012 and 2017 for the coastal counties. The approximate economic value of aquaculture activity in New York State's coastal counties increased from \$9.294M in 2012 to \$9.756M in 2017. Note that the assessment of the change of USDA data is not necessarily a direct comparison with the dataset used for the previous 309 assessment.

2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends or potential impacts from aquaculture activities in the coastal zone since the last assessment.

Suffolk County Shellfish Aquaculture Lease Program in Peconic Bay and Gardiners Bay: 2010 Annual Report. This report describes and summarizes the status of the Suffolk County Shellfish Aquaculture Lease Program covering the Peconic Bay and Gardiners Bay. The report has recommendations on how the Lease Program should be implemented when the annual acreage cap limit expires after 2019. As of February 2020 the Suffolk County Shellfish Aquaculture Lease Program has forty nine plots leased at equal ten acres a piece. Three plots that are leased

that are greater than ten acres. The program has one pending ten-acre plot and one pending plot that is greater than ten acres.

Overview of the Suffolk County Program can be found at the following link:  
<https://www.suffolkcountyny.gov/Departments/Economic-Development-and-Planning/Planning-and-Environment/Environmental-Planning-and-Aquaculture/Shellfish-Aquaculture-Lease-Program>

Town of Babylon Bay & Shellfish Management Website ( <http://www.townofbabylon.com/index.aspx?nid=140> ) The Town of Babylon conducts an annual Hard Clam Survey of the Town’s 10,000 acres of underwater land and uses this survey to determine the abundance and distribution of clams and their predators. The Spawner Sanctuary is an area stocked with clams at high densities with the hope of enhancing reproduction

**Management Characterization:**

- I. Indicate if the approach is employed by the state or territory and if there have been any state- or territory-level changes (positive or negative) that could facilitate or impede the siting of public or private aquaculture facilities in the coastal zone.

**Significant Changes in Aquaculture Management**

Management Category	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Aquaculture comprehensive siting plans or procedures	Y	N	N
Other aquaculture statutes, regulations, policies, or case law interpreting these	Y	N	N

**Enhancement Area Prioritization:**

- 1. What level of priority is the enhancement area for the coastal management program?

High    
 Medium

Low

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

Currently aquaculture is a high priority as far as management of New York State's coastal resources because interest in this subject is likely to significantly increase over the next five years. Extension specialists, municipal resource managers, industry associations, aquaculture business owners and other concerned stakeholders continue to play a role in the needs of New York State's aquaculture industry. The State's coastal policies and existing regulations provide appropriate guidance. The stakeholders surveyed for this assessment did not identify aquaculture as a priority enhancement area.

## Aquaculture Phase II Assessment

### In-Depth Resource Characterization:

*Purpose: To determine key problems and opportunities for facilitating the siting of aquaculture facilities in the coastal zone.*

1. What are the three most significant existing or emerging challenges to facilitating the siting of aquaculture facilities within the coastal zone? Indicate the geographic scope of the challenge, i.e., is it prevalent throughout the coastal zone or are specific areas most threatened? Challenges can be conflicting uses; coastal resource impacts; coordinating regulatory processes or review; insufficient data; natural disasters; or other (please specify). When selecting significant challenges, also consider how climate change may exacerbate each challenge.

	<b>Challenges</b>	<b>Geographic Scope</b> (throughout coastal zone or specific areas most threatened)
Challenge 1	Shellfish Restoration	All tidal waters of the State
Challenge 2	Promoting Aquaculture	Throughout coastal zone
Challenge 3	Climate effects	Throughout coastal zone

2. Briefly explain why these are currently the most significant challenges to facilitating the siting of aquaculture facilities in the coastal zone. Cite stakeholder input and/or existing reports or studies to support this assessment.
  - a. Shellfish restoration is a State priority. Monitoring and understanding restoration success is crucial to restoring self-sustaining and growing shellfish beds. Scallop populations were devastated in 2019. Research is needed to understand causal relationships and how to best begin to restore populations or enhance any surviving populations. Successful aquaculture programs, particularly shellfish hatcheries and nursery sites, are needed to satisfy shellfish production targets in the State. In New York City, what started as a grassroots effort to restore oysters has grown into a regional network of oyster restoration, research, and outreach programs supported by local governments, non-profits, restaurants, and academia all working together to restore this iconic species. In the South Shore Estuary and coastal waters of both Nassau and Suffolk Counties, millions of dollars are being spent as part of the Long Island Shellfish Restoration Project on hard clam and oyster restoration to create sanctuary sites. Low recruitment, unsuitable habitat, harmful algal blooms (HABs), and overall poor water quality are slowing or stopping the successful establishment of shellfish beds in NYS.

- b. Culturing fish and seaweed is expected to increase across different areas of the coastal zone. Community-based social marketing for seaweed consumption, shellfish sales, and the environmental and economic benefits of stronger aquaculture and aquaculture programming is needed. For the first time in 2019, seafood producers could join the “NYS Grown & Certified Program” that promotes local agriculture. This program allows producers to brand their products with a seal that assures consumers they are buying locally grown and responsibly-sourced products. This is a good step, but more can be done to promote local businesses. Opportunities for emerging markets and job creation exist, but work is needed on methods and establishing a regulatory pathway. Stakeholders want healthy seafood, and others need to be made aware of the value of local seafood in their diets.
  - c. Climate change effects are both an impediment to and a reason for accelerating aquaculture programming. Uncertainty in water quality conditions including temperature, nutrients, pathogens, pollutants, sediment chemistry, invasive species, and HABs all contribute to the need to understand climate trends and develop appropriate mitigative actions to support aquaculture. Shellfish can be used to enhance shorelines and create nature-based features that can be more resilient in the face of sea level rise and increasing storm intensity. Restoring native shellfish populations to coastal waters can also bolster the economies and resiliency of coastal communities.
3. Are there emerging issues of concern, but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

Emerging Issue	Information Needed
<b>WQ impairments</b> (temperature, DO, HABs, clarity, nutrients, pathogens)	WQ monitoring station retrofits and expansion; HAB research
<b>Poaching</b> (spawner sanctuaries, enforcement)	Methods for protecting spawner sanctuaries, community-based enforcement, remote enforcement
<b>Public perception</b> (seafood safety, pollution)	Community-based social marketing to understand public perception and garner support and participation from the public. Addressing cost and availability of fresh, uncontaminated seafood options, especially in urban areas where reliance on subsistence fishing results in certain populations

Emerging Issue	Information Needed
	consuming harmful levels of contaminants.
<b>Market readiness</b> (not just food: biofuel, cosmetics, nutritional supplements, agricultural uses (soil, feed, fertilizers))	Market development, marketing studies, costs, scaling, supply chain, infrastructure.
<b>Invasives &amp; Diseases</b> (oyster drills, conch, skate, mitten crabs, QPX)	NY tidal embayments are under siege and studies are needed to understand the best methods for invasive species control, eradication, harvest, and removal. Ecosystem effects and food chain effects need study.
<b>SAV distribution and health</b>	SAV beds provide irreplaceable ecosystem services but are in decline and severely threatened by poor water quality and anthropogenic disturbances. As shellfish production increases, the potential for conflicts with suitable SAV habitat increases. Studies are needed on SAV environmental requirements, bed loss, anthropogenic impacts, reproduction, restoration methods, monitoring health and population, and regulatory protections.
<b>Artificial reefs and oyster reefs</b>	NYS has (re)launched an artificial reef program and New York City continues its large-scale oyster restoration efforts. The location, design, substrate, and monitoring and management would all benefit from further studies to better understand how to manage existing reefs and where and how to construct new ones.

**In-Depth Management Characterization:**

*Purpose: To determine the effectiveness of management efforts to address identified problems related to the aquaculture enhancement objective.*

1. For each additional aquaculture management category below that was not already discussed as part of the Phase I assessment, indicate if it is employed by the state and if significant state- or territory-level changes (positive or negative) have occurred since the last assessment.

**Significant Changes to Aquaculture Management**

<b>Management Category</b>	<b>Employed by the State (Y or N)</b>	<b>CMP Provides Assistance to Locals that Employ (Y or N)</b>	<b>Significant Changes Since Last Assessment (Y or N)</b>
Aquaculture research, assessment, monitoring	Y	Y	Y
Aquaculture GIS mapping/database	N	N	N
Aquaculture technical assistance, education, and outreach	Y	N	Y
Other (please specify) Marketing and Industry regulation	N	N	N

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

- a. Describe significant changes since the last assessment;
 

While aquaculture has not been included in New York’s prior 309 Phase II assessments, the State has been investing more in recent years in aquaculture and shellfish restoration for its many benefits to local businesses, environmental enhancements, and combating the effects of climate change. The most significant change in state investment has been initiating the Long Island Shellfish Restoration Project. This project, which was first announced in 2017, commits to investing \$10.4 million to establish five new sanctuary sites in Suffolk and Nassau counties to transplant seeded clams and oysters and expand public shellfish hatcheries in the two counties through a dedicated grant program. The Project also includes outreach and education programs to volunteers, students, and nursery site hosts.
- b. Specify if they were 309 or other CZM-driven changes; and
 

These were not 309 or CZM-driven changes, but the CMP does provide assistance that indirectly supports the aquaculture industry.
- c. Characterize the outcomes or likely future outcomes of the changes.
 

The State is increasingly focused on promoting self-sustaining shellfish beds, expanding existing beds, encouraging locally- and sustainably-sourced seafood products, and employing a multi-pronged approach to increasing resilience in the face of climate change. These programs will continue to grow with targeted investments and outreach. By elevating aquaculture as a high priority management area in the State’s 5-year strategy, we will be able to undertake

research and promote new markets and restoration opportunities in the State. An example of this is seaweed farming, in which farmed kelp is increasingly being used to manufacture high-value products like cosmetics and nutritional supplements.

3. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state's or territory's management efforts to facilitate the siting of aquaculture facilities since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state's or territory's management efforts?

Because this is the first time that NYS has elevated aquaculture to a high-priority management area in its coastal program, we do not have adequate information to compare the state's management efforts since the last assessment. As outlined in #3 on emerging issues (above), there is a substantial number of research and data needs to inform the State's aquaculture strategy moving forward. The anticipated studies may facilitate the siting of new facilities; however, in most cases, the emerging threats that our communities will need to overcome are centered on environmental, social, and economic issues.

#### **Identification of Priorities:**

1. Considering changes in aquaculture activities, the management of these activities since the last assessment, and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CMP to improve the effectiveness of its management effort to better respond to the most significant aquaculture challenges. (*Approximately 1-3 sentences per management priority.*)

*Management Priority 1: Restoring shellfish*

*Description:* Successful shellfish hatcheries and nursery sites are needed to satisfy shellfish production targets in the State. Research and monitoring are also needed to understand causal relationships to ensure self-sustaining and growing shellfish beds for the long-term.

*Management Priority 2: Promoting aquaculture*

*Description:*

Develop stronger aquaculture programming may include:

- Community-based social marketing and other promotions for seaweed consumption, shellfish sales, and the environmental and economic benefits



- Working with shoreside businesses and commercial fishermen to establish grow out areas. Although most NYS fisheries are healthy now, uncertainty in prices, regulations, and a changing climate make the coast vulnerable.
- Conducting market research to overcome challenges of selling farmed fish, shellfish, and macroalgae products in the US.
- Strengthen partnerships with the NYS Division of Ag and Markets and others in the agricultural industry to promote the “NYS Grown & Certified Program” and crosswalk this with “Taste NY Farm Markets” and other promotional marketing.

*Management Priority 3: Understanding Climate effects on aquaculture and restoration*

*Description:* Climate effects are creating new challenges that the aquaculture industry and restoration specialists will need to overcome. For example, HABs increase in occurrence when the water warms early in the spring; increases in storm frequency and intensity has uprooted and destroyed SAV beds and allowed for strong pulses of nutrients and pathogens that have impacted shellfish beds. Ocean acidification, and changes in diseases, invasive species and predation patterns also have the potential to effect aquaculture.

2. Identify and briefly explain priority needs and information gaps the CMP has to help it address the management priorities identified above. The needs and gaps identified here do not need to be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.

<b>Priority Needs</b>	<b>Need? (Y or N)</b>	<b>Brief Explanation of Need/Gap</b>
Research	Y	See table on Emerging Issues (above)
Mapping/GIS	Y	See table on Emerging Issues (above)
Data and information gathering	Y	See table on Emerging Issues (above)
Training/Capacity building	N	
Decision-support tools	N	
Communication and outreach	Y	See table on Emerging Issues (above)
Other (specify)		

**Enhancement Area Strategy Development:**

1. Will the CMP develop one or more strategies for this enhancement area?  
**Yes**                      **X No**

\_\_\_\_\_

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

An aquaculture strategy will be developed to address current and emerging trends in shellfish restoration and management. Additionally, aquaculture is a timely emergent issue that NYS is moving forward with to promote local markets and water quality benefits such as improved clarity, nutrient uptake, and habitat value. Strengthening the State's aquaculture programming will provide another tool by bolstering the economies and resiliency of coastal communities.

## STRATEGIES

### SAMPs Strategy

#### I. Issue Area(s)

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

- |  |  |
|--|--|
| <input type="checkbox"/> Aquaculture                                 | <input checked="" type="checkbox"/> Cumulative and Secondary Impacts |
| <input type="checkbox"/> Energy and Government Facility Siting       | <input 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. Strategy Description

A. The proposed strategy will lead to, or implement, the following types 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. Strategy Goal:** *Develop and implement regional refinements to the CMP in order to address the unique needs of New York's coast and coastal communities. SAMPs will be assessed and developed to protect the natural, cultural, and economic resources of these important areas.*

**C.** Describe the proposed strategy and how the strategy will lead to and/or implement the program changes selected above. 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 Department of State will work with federal, state and academic institutions as well as local constituents to assess the feasibility and development of regional SAMPs which will describe significant coastal resources, natural and cultural, found along NYS Coastal Area.

## **1. Regional Coastal Management Program**

Neighboring coastal communities often join to assess and manage shared coastal resources to create a more consistent and comprehensive approach to determining appropriate uses along their connected waterfront. Because individual communities must adopt the LWRP separately and individually, joint plans can be cumbersome during the adoption and future revision phases. The Department will explore ways communities can more easily join to comprehensively plan for waterfront revitalization through the development of regional based programs.

As such, the Department will assess the feasibility of the development of a Regional Coastal Management Program(s)(RCMP) . Over the last year, New York State has invested significant resources to the Lake Ontario region to address the flooding events of 2019. The Lake Ontario Resiliency and Economic Development Initiative (REDI) included an intensive 3-month “action-planning” process that involves local leaders in identifying immediate projects communities can undertake to bolster resiliency and the economy without adversely impacting other critical resources. This work has shifted to a second phase that will help transition the communities to more resilient and stronger economic development through long-term opportunities. The product developed during the planning phase is intended to meet DOS resiliency standards and incorporate recently completed asset inventory and project identification. The Department will therefore, use these efforts to form the foundation of the development of an RCMP for Lake Ontario to address the findings in the long-term planning effort.

The RCMP will address local and regional issues through coastal policies to reflect common resources and use concerns in order to amend and refine the NYS Coastal Management Program. The RCMP will be based on public consensus and consultation with state agencies whose program and activities affect the coast and will include public engagement, assessments of demographic, regulatory, and programmatic data, as well as assessments of risks and vulnerabilities. This effort will integrate capabilities of state and local government to create an enforceable program for Lake Ontario. Throughout the development and feasibility phase of the RCMP, the Department will assess the appropriate scale and reach for the program and make recommendations for changes to the CMP.

## **2. Significant Resource Designation**

Three main mechanisms exist to designate significant resources along NY’s coast and provide a more detailed assessment and determination of potential impacts:

significant coastal fish and wildlife habitats (SCFWHs), scenic areas of statewide significance (SASS), and agricultural lands of statewide significance.

Significant Coastal Fish and Wildlife Habitats are crucial to decision making during Federal consistency review processes which activates Policy 7 of the CMP. Policy 7 states: *Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.* Having up-to-date and comprehensive data to support impact assessments is key to making well informed consistency decisions. Many of the State's SCWFH have not been updated since their original designations in 1987 and 1994, for the Great Lakes and St. Lawrence River areas respectively. The Department will work towards updating and developing new designations in partnership with NYSDEC.

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 refined impact assessment language for the Great Lakes and St. Lawrence regions. 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.

This program change will also include the completion of documentation updates for State designation and federal concurrence. Narratives will be prepared for each significant habitat which will: (1) identify the location of the habitat; (2) describe the community of organisms which utilize the habitat; (3) identify the biological, physical and chemical parameters which should be considered when assessing the potential impacts of a project on that habitat; (4) identify activities which would most likely create significant impacts on the habitat; and (5) provide the quantitative basis used to rate the habitat.

In addition to designated SCFWHs the NY CMP also identifies significant areas of great scenic and agricultural values. With only 2 designated SASS areas and no designated agricultural lands, the Department will work with the Department of Agriculture and Markets to identify critical agricultural areas in order to formally designate important agricultural lands to further apply Policy 26- Conserve and protect agricultural lands in the State's coastal area.

New York State has identified a need not only to assure these designations and refinements are based on current conditions, but to assure the mechanisms for doing so are reasonable, appropriate, and achievable. Therefore, the Department will utilize 19 NYCRR Part 602, designation procedures and criteria to identify, map, and designate significant coastal fish and wildlife habitats as well as important agricultural lands and scenic areas of statewide significance.

### **3. Coastal Boundary Amendment**

NY's current coastal boundary primarily takes advantage of manmade and municipal features that were reflective of the state's management objectives at the time they were developed. Current land management and planning more broadly recognizes the need to expand the coastal zone boundary and consider utilizing physical boundaries, such as watersheds, or expansions to include full municipalities like towns or counties, to more effectively manage coastal resources. The Department will work with partner agencies to review the current coastal boundary, related and relevant planning documents (LWRPs, watershed plans, regional CMPs, etc.), and coastal uses and resources to identify new coastal area boundaries.

### **III. Needs and Gaps Addressed**

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

The cumulative effects of periodic water level changes, development in unsafe locations, reduced sediment availability due to shoreline armoring and defenses, and water level regulation continue to be a concern as they have not been addressed in any comprehensive manner. Compounding these issues, climate change effects including extreme precipitation aggravate flood risks - as has been evident in the past few years. Combined, these stressors cause cyclical impacts on coastal communities, including impacts on wetlands and natural protective features potentially causing increased flooding which again causes increased impacts. All this reduces the capacity of communities to continually address and problem solve these issues along their shorelines.

The assessment and development of regional CMP will address:

- Assessment of assets; risks and vulnerabilities of coastal communities
- Identify needs and opportunities for shoreline and community resilience
- Assess local land use regulation and policies
- Identify habitat current conditions and assessment of impacts
- Identify priority issues and critical needs.

These strategies will address the findings within the coastal hazards, cumulative and secondary impacts, ocean and great lakes resources, and special area management planning enhancement areas.

### **IV. Benefits to Coastal Management**

Discuss the anticipated effect of the strategy, including the scope and value of the strategy, in advancing improvements in the CMP and coastal management, in general.

The development of Regional CMP(s), updated designations of areas of significance, and updated regulations and procedures directly advance improvements to the State's Coastal Management Program, Section 8- Special Management Areas, specifically Local Waterfront Revitalization Programs, Regionally Important Areas, and Areas for Preservation and Restoration.

Local waterfront programs and regional SAMPs must be consistent with and work toward the achievement of policies contained within the CMP and Article 42, Section 912. These policies, generally, are to:

- achieve a balance between economic development and preservation that will permit the beneficial use of coastal resources, while preventing the loss of living marine resources, wildlife, open space areas or public access to the waterfront; increased shoreline erosion, impairment of scenic beauty, or permanent adverse changes to ecological systems
- To minimize damage to natural resources and property from flooding and erosion, including proper location of new land development, protection of beaches, dunes, barrier islands, bluffs and other critical coastal features and use of non-structural measures, whenever possible
- To encourage the restoration and revitalization of natural and human-made resources.
- To conserve and protect coastal agricultural lands as valued natural and ecological resources which provide for open spaces, clean air sheds and aesthetic value; in addition to the economic contributions from goods and services provided by agriculture.

These strategies will assist coastal communities to address major policies by providing new and updated information and data on critical coastal resources but will also assess and assist community capacity to promote better decision making of appropriate uses along their shorelines.

Significant Coastal Fish and Wildlife Habitat (SCFWH) narratives and maps are used by the Coastal Management Program for consistency determinations and by Department of Environmental Conservation permit reviewers, municipal governments, consultants, educators, and others developing plans or making management decisions that protect listed species, robust species guilds, rare ecological communities, and important human uses associated with the habitat. Updating the existing SCFWH narratives and designating potential new habitats, including supporting data and impact assessment language is the most appropriate method for addressing this priority need because current habitat documentation 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 that ensure impacts are minimized or avoided.

NY's current coastal boundary primarily takes advantage of manmade and municipal features that were reflective of the state's management objectives at the time they were developed. Current land management and planning more broadly recognizes the need to expand the coastal zone boundary and consider utilizing physical boundaries, such as watersheds, or expansions to include full municipalities like towns or counties, to more effectively management coastal resources.

## **V. Likelihood of Success**

Discuss the likelihood of attaining the strategy goal and program change (if not part of the strategy goal) during the five-year assessment cycle or at a later date. Address the nature and degree of support for pursuing the strategy and the proposed program change, as well as 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.

This strategy is likely to succeed.

As mentioned above, the Lake Ontario Resiliency and Economic Development Initiative (REDI), has kick-started planning efforts within the Lake Ontario region. Within the three-month first phase of the planning process, community needs and critical infrastructure were assessed and inventoried. Initial response projects were identified to protect and adapt infrastructure along the Lake Ontario and St. Lawrence River waterfronts while strengthening the region's local economies. This work is transitioning to identify long term strategies and opportunities for local municipalities to become more resilient. This work is intended to form the foundation of the development of a regional CMP to address the findings in the long-term planning effort. While a full regional CMP may not be achieved during the entire 5-year assessment/strategy cycle, we will achieve significant progress on the groundwork of data collection and documentation, as the State works with local communities in their long-term planning.

The Department of State continues to receive requests and inquiries about data supporting existing significant coastal fish and wildlife areas and feedback on new and current data which would result in a change in the impact assessments and related potential decision making. Recent activities, including work towards designating a National Marine Sanctuary, flooding along Lake Ontario, and offshore 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 Department of State would partner with regional stakeholders and agencies to collect and analyze current data and update documentation as appropriate.

Education and outreach are critical to effecting shifts in sustainable behavior, including garnering interest in developing and implementing local waterfront revitalization programs; instituting appropriate local land use regulations; and building local capacity for achieving sustainable management measures. Using communication and outreach approaches that aim to influence social and behavior change, such as CBSM, New York hopes to not only educate but change behavior resulting in a more restored, protected, and resilient New York coast.

## **VI. Strategy Work Plan**

Using the template below, provide a general work plan that includes the major steps that will lead toward or achieve a program change or implement a previously achieved program change. For example, even if the final adoption of the program change is outside of the CMP's control, what steps will be included in the work plan so the CMP ensures the program change is considered, reviewed, and hopefully adopted by the outside entity? Who are the other stakeholders or elected officials that need to be engaged, and how and when during the strategy development process? What is the decision-making or voting process that is involved in the adoption of the program change, and how will the CMP interact with this process to ensure that the proposed program change is considered? If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. The plan should identify a schedule for completing the strategy and include major projected milestones (key products, deliverables, activities, and decisions) 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 milestones are a useful guide to ensure the strategy remains on track, OCM recognizes that they may change somewhat over the course of the five-year strategy due to unforeseen circumstances. The same holds true for the annual budget estimates. Further detailing and adjustment of annual activities, milestones, and budgets will be determined through the annual cooperative agreement negotiation process.

**Strategy Goal:** *Develop and implement regional refinements to the CMP in order to address the unique needs of New York's coast and coastal communities. SAMPs will be assessed and developed to protect the natural, cultural, and economic resources of these important areas resulting in a revised coastal boundary, new resource designations, and regional coastal management planning.*

**Total Years: Five**

**Total Budget: \$515,000**

## **Activity: Regional CMP (Lake Ontario)**

### **Year(s): 1-2 – Regional CMP (Lake Ontario) Planning**

**Description of activities:** Conduct public engagement and gather existing data and information to feed into Regional CMP (Lake Ontario). This phase will assess the scope and scale of planning areas and create an outline/framework for resiliency planning in the great lakes CMP structure.

#### **Major Milestone(s):**

##### Stakeholder Engagement

Research and conduct a suite of communication and outreach approaches that aim to influence social and behavior change, such as CBSM for local stakeholder engagement sessions that will inform, build support and gather information

##### Information Generation and Collection

- Establish intra-agency group
- Review existing promulgating legislation and procedural implementing regulations
- Review existing joint local waterfront revitalization programs assess successes and challenges,
- Assess potential risks
- Conduct vulnerability assessments
- Ensure appropriately scaled strategies and project design to address vulnerabilities
- Identify gaps, needs, opportunities
- Develop recommendations for framework developing regional CMP

**Budget:** \$55,650/yr

### **Year(s): 3-4 – Regional CMP (Lake Ontario) Data Collection and Assessment**

**Description of activities:** Generation and collection of demographic, regulatory and programmatic, and natural resource information and data to feed into the Regional CMP (Lake Ontario) assessment and area delineation.

#### **Major Milestone(s):**

##### Information Generation and Collection

- Collect existing information, or create information where there are data gaps, that will:
- Characterize the area's natural resources and ecological qualities
- Assess assets; risks and vulnerabilities
- Identify needs and opportunities for shoreline and community resilience
- Assess local land use regulation and policies
- Identify habitat current conditions and assessment of impacts
- Identify priority issues and critical needs

- Information Review: Bring information back out to stakeholders including scientists, State and multi-state agency partners, federal partners, first nations, regional government, local government and local businesses and residents for review of information, feedback and subsequent revisions based on stakeholder input.

**Budget:** \$55,650/yr

**Year(s): 5 – Regional CMP (Lake Ontario) Policy Guidance**

**Description of activities:** Compilation of previously gathered information to develop draft and final documents of the Regional CMP

**Major Milestone(s):**

Development of Regional CMP Documents

- Compile public and stakeholder engagement materials to incorporate into draft and final documents.
- Compile Findings and Recommendations
- Develop and refine regional coastal policies
- Create necessary maps and tables to accompany and support findings and recommendations
- Develop implementation strategy

**Budget:** \$55,650

**Activity: Significant Coastal Fish and Wildlife Habitats**

**Year(s): 1-2 – Significant Coastal Fish and Wildlife Habitats Data Collection and Assessment**

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

**Major Milestone(s):** Update and compile biological survey data and habitat boundary information for Great Lakes and St. Lawrence region.

- Ecosystem rarity – assess rarity and vulnerability of habitat sites
- population level - feeding grounds, nursery areas
- species vulnerability - species which are endangered, threatened or of special concern
- human use - significant commercial, recreational or educational use

**Budget:** \$36,050/yr

**Year(s): 3 – Significant Coastal Fish and Wildlife Habitats Mapping**

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

**Major Milestone(s):** Compile and complete impact assessment: types of human activities likely to affect the habitat, including assessment of:

- Physical parameters, such as living space, circulation, flushing rates, tidal amplitude, turbidity, water temperature, depth (including loss of littoral zone), morphology, substrate type, vegetation, structure, erosion and sedimentation rates;
- Biological parameters, such as community structure, food chain relationships, species diversity, predator/prey relationships, population size, mortality rates, reproductive rates, behavioral patterns and migratory patterns; and
- Chemical parameters, such as dissolved oxygen, carbon dioxide, acidity, dissolved solids, nutrients, organics, salinity, and pollutants (heavy metals, toxic and hazardous materials).
- Draft updated SCFWH narratives and boundary maps
- Draft new SCFWH narrative and create boundary maps

**Budget:** \$36,050

**Year(s): 4 – Significant Coastal Fish and Wildlife Habitats for the Great Lakes**

**Description of activities:** For the Great Lakes, conduct public information hearings and public meetings, and finalize SCFWH narratives.

**Major Milestone(s):**

- Public information meeting and hearings
- Final updated SCFWH narratives and boundary maps, for Great Lakes region
- Final new SCFWH narrative and boundary maps, for Great Lakes region

**Budget:** \$36,050

**Year(s): 5 – Significant Coastal Fish and Wildlife Habitats for the St. Lawrence River**

**Description of activities:** For the St. Lawrence region conduct public information hearings and public meetings and finalize SCFWH narratives.

**Major Milestone(s):**

- Public information meetings and hearings, for St. Lawrence region
- Final updated SCFWH narratives and boundary maps, for St. Lawrence region
- Final new SCFWH narrative and boundary maps, for St. Lawrence region

**Budget:** \$36,050

**Activity:** Coastal Area Boundary

**Year(s):** 3-5: Revise Coastal Area Boundary

**Description of activities:** Review coastal resources and uses, review and update boundary criteria, and submit boundary change.

**Major Milestone(s):**

- Establish intra-agency group
- Review existing boundary criteria
- Brainstorm new boundary criteria
  - Uses
  - Geographic boundaries
  - Political boundaries
  - Review other state CZ boundary
  - Review NOAA and NYS requirements for boundary amendments
- Submit boundary change

**Budget:** \$18,833/yr

## V. 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 CMP has made, if any, to secure additional state funds from the legislature and/or from other sources to support this strategy.

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

## VI. Projects of Special Merit (Optional)

If desired, briefly state what projects of special merit 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 projects of special merit and is simply meant to give CMPs the option to provide additional information if they choose. Project descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean

management planning). Do not provide detailed project descriptions that would be needed for the funding competition.

### **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. Generally, CMPs should only develop strategies for activities that the state intends to fund and work on given their anticipated level of Section 309 funding. However, in some circumstances, CMPs may wish to use the assessment and strategy development process as a broader strategic planning effort for the CMP. In that case, the CMP may elect to include additional strategies that exceed the state’s anticipated Section 309 funding over the five-year period. If the CMP chooses this approach, it should still clearly indicate which strategies it anticipates supporting with Section 309 funding and which strategies it anticipates supporting through other funding sources.

### **5-Year Budget Summary SAMP Strategy**

<b>Strategy Activities</b>	<b>Anticipate d Funding Source (309 or Other)</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>
Regional CMP (Lake Ontario)	309	\$ 56,650	\$ 56,650	\$ 56,650	\$ 56,650	\$ 56,650	\$283,250
Significant Coastal Fish and Wildlife Habitats	309	\$36,050	\$36,050	\$36,050	\$36,050	\$36,050	\$180,250
Boundary Amendments	309	0.00	\$ 0.00	\$ 18,833	\$ 18,833	\$ 18,834	\$ 56,500
<b>Total Funding</b>		\$103,000	\$103,000	\$103,000	\$103,000	\$103,000	\$515,000

## Enhancing Coastal Consistency

### I. Issue Area(s)

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

- |  |  |
|--|--|
| <input type="checkbox"/> Aquaculture Impacts                   | <input checked="" type="checkbox"/> Cumulative and Secondary |
| <input type="checkbox"/> Energy and Government Facility Siting | <input type="checkbox"/> Wetlands                            |
| <input checked="" 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. Strategy Description

A. The proposed strategy will lead to, or implement, the following types 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
- 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. Strategy Goal:** Update New York's CMP to incorporate new activities and authorities of NYS regulatory agencies to enhance consistency review and local planning including the effects of climate change and ways to improve resilience.

**C.** Describe the proposed strategy and how the strategy will lead to and/or implement the program changes selected above. 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.)

NY has identified the need for a comprehensive review and identification of the regulatory and agency workflow/practice changes that have been implemented in the past several years to provide for a more coordinated approach to coastal management by providing more clarity and direction to the public, and other state agency and Program Staff.

NY plans to review its implementing regulations with partner agencies to consider procedural changes that better incorporate current agency workflow procedures, incorporating these changes into written agency procedural documents, and developing and presenting training materials. A revised written procedural document would reflect new database software recently implemented by the Program. Additionally, expanded outreach to sister agencies to train staff on newly revised regulations and procedures will likely be necessary. Following revisions, a program amendment may be warranted.

NY intends to routinely update the CMP to incorporate new laws and regulations which will provide for both their better implementation and a more effective CMP.

### **III. Needs and Gaps Addressed**

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

NY's implementing laws provide broad discretion for the Secretary of State to implement the Program across State Agencies, irrespective of federal consistency authority. Implementing regulations, however, have been identified as a source of confusion by agency staff. Revising implementing regulations would benefit staff from multiple agencies and the public by addressing these procedural directions.

NY routinely passes new laws and develops new regulations, and updates existing laws and regulations, that would strengthen the Program. These new laws and regulations have not been added to the CMP on a recurring basis resulting in regulatory tools not being available to the Program. This 309 strategy will be in addition to NY's plan to undertake more routine updates as a 306 funded activity.

### **IV. Benefits to Coastal Management**



Discuss the anticipated effect of the strategy, including the scope and value of the strategy, in advancing improvements in the CMP and coastal management, in general.

Updated regulations will better integrate evolving agency procedures across multiple agencies into a more cohesive approach to coastal management as necessitated by the structure of our networked coastal management program. Updated procedural regulations require training and guidance documentation to ensure their successful implementation at the staff level. Training will increase cross agency staff interaction which will facilitate more efficient and effective regulatory reviews for project requiring multi-agency regulatory review, in-turn providing the public a quicker, more coordinated review.

Updates to legislation and regulations incorporated to the CMP will provide up to date and accurate information, as well as access to additional planning and regulatory tools for agency and Program Staff allowing more effective and coordinated consideration of climate change, resiliency, and emergency event response.

## **V. Likelihood of Success**

Discuss the likelihood of attaining the strategy goal and program change (if not part of the strategy goal) during the five-year assessment cycle or at a later date. Address the nature and degree of support for pursuing the strategy and the proposed program change, as well as 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.

This strategy is very likely to succeed. There is both interest and need to build on successes stemming from the latest 312 evaluation involving increased cross-agency coordination and collaboration by more permanently incorporating agency needs.

Recent legislative and executive interest in green infrastructure, clean energy, sea level rise, climate change, and resiliency have resulted in, and are expected to continue to, new statutes that provide valuable response tools that Program staff are actively seeking to employ.

## **VI. Strategy Work Plan**

**Strategy Goal:** Develop technical tools and guidance to inform consistency review and assist New York's coastal communities to address the impacts of climate change and improve resilience.

**Total Years:** 5 years

**Total Budget: \$270,375**

**Year(s): 1-5**

**Description of activities:** Regulation rewrite/interagency interaction (include state and federal procedure)

**Major Milestone(s):**

- Review existing procedural implementing regulations
- Identify gaps (DOS)
- Engage agency partners
- Identify gaps (agency partners)
- Review Administrative Procedures Act (APA) requirements
- Draft revised regulations
- Comply with APA requirements
- Implement Regulation
- Update consistency manual and other agency procedural documents
- Develop interagency trainings
- Finalize/undertake ongoing interagency coordination scheme

**Budget (in table below)**

**Year(s): 1-5**

**Description of activities:** Update CMP to reflect new laws and regulations

**Major Milestone(s):**

- Maintain ongoing list of relevant new laws and regulations
- Review list and search for additional pertinent laws/regulations at appropriate intervals
- Consult applicable agencies for upcoming regulatory actions
- Compile updated list and document appropriate policies that they would assist in implementing
- Submit program amendment as necessary

**Budget (in table below)**

## **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 CMP has made, if any, to secure additional state funds from the legislature and/or from other sources to support this strategy.

N/A

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

N/A

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

If desired, briefly state what projects of special merit 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 projects of special merit and is simply meant to give CMPs the option to provide additional information if they choose. Project descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not provide detailed project descriptions that would be needed for the funding competition.

**5-Year Budget Summary**

<b>Strategy Activities Enhancing Coastal Consistency</b>	<b>Anticipated Funding Source (309 or Other)</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>
Regulation rewrite/ interagency interaction (include state and federal procedure)	309	\$38,625	\$38,625	\$38,625	\$38,625	\$38,625	\$193,125
Update CMP to reflect new laws and regulations	309	\$15,450	\$15,450	\$15,450	\$15,450	\$15,450	\$77,250
<b>Total Funding</b>		\$54,075	\$54,075	\$54,075	\$54,075	\$54,075	\$270,375

## Community and Coastal Resiliency Strategy

### I. Issue Area(s)

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

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Aquaculture                 | <input checked="" type="checkbox"/> Cumulative and Secondary Impacts |
| <input type="checkbox"/> Energy and Government Facility Siting  | <input 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 Special Area                  |
| <input type="checkbox"/> Management Planning                    |  |

### II. Strategy Description

A. The proposed strategy will lead to, or implement, the following types 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. **Strategy Goal:** *Develop technical tools and guidance (statewide where practical – or regionally for Long Island, NYC, Great Lakes, and Hudson River) to inform decision making and provide New York coastal communities with tools to better understand options for improving resilience on the site, community, and regional scale.*

The proposed strategy will lead to new or refined tools and guidance for state agencies and communities in at least one of the four regions discussed (LI, HR, NYC, GL), providing new resources to empower and help communities make more informed decisions that improve the social, economic, and ecological resilience of their waterfronts. Specifically, the strategy components include:

- Development of a Statewide/Regional Shoreline Characterization that includes integration of shoreline conditions, forces, and land use to improve decision-making for coastal resilience strategies.
- Development of Resiliency Guidance for Planning and Implementation that provides a more consistent and holistic approach for coastal communities that are undertaking resiliency planning and project development, including integration of climate considerations. The resiliency guidance will be based on foundational concepts for community resilience and resiliency principles.
- Expansion and refinement of the FY2016 Project of Special Merit Monitoring Project by continuing stakeholder engagement, including intra- and inter-agency integration of products into programs, employing monitoring protocols in the field, refining protocols and database products, and exploring options for additional public-facing products.
- Updates to the DOS Risk Assessment Tool and associated guidance or resources that improve usability (such as a pre-populated list of assets) and enhance social vulnerability considerations.
- Research and target improvements to existing climate/hazard forecasting and better climate modeling to inform state agency decision-making and provide guidance for communities to incorporate scenario analyses and ecosystem services valuation into decision-making.
- Support community recovery efforts from storm or flooding events including, but not limited to general recovery planning, and project development/management.
- Expansion/refinement of existing Model Local Laws for Resilience
- Undertake communication and outreach approaches that aim to influence social and behavioral change, such as Community-Based Social Marketing, to understand and integrate community concerns to enhance their ability to consider activities such as NNBF, managed retreat, and improved resilience.

### **III. Needs and Gaps Addressed**

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

The priority needs and gaps for improving the resilience of coastal communities include research, mapping/GIS, and data/information management. While limited data exists in some regions on shoreline characterization, it is not available across New York nor is it up to date where available. For example, although erosion rate data exists for the south shore of Lake Ontario, it is outdated and does not consider recent flooding events in 2017 and 2019. This information is foundational to use

science and data for decision making on shoreline management measures.

Research related to engineering and design standards for NNBF across diverse environs is also needed. The Monitoring Protocols project is a step towards better understanding the performance of NNBF across coastal regions in NYS. As more data is collected through monitoring, trends can be extracted. The CMP is interested in moving the needle as it relates to decision-making that takes environmental values into account, as well as decision-support for appropriate shoreline management measures. Too often decisions on shoreline management are made with little information, and negative impacts may occur or the shoreline treatment may not provide the intended benefits. As coastal communities come to terms with climate impacts, there is a need to understand the variety of options that can be taken to reduce vulnerability and improve long-term resilience. Development of guidance, as well as education and outreach, on building long-term community resilience is anticipated to be of high importance over the next 5 years and beyond. Communication and outreach strategies that target behavioral change is needed to inform and support relocation out of hazardous areas or to develop a broader, more proactive managed retreat plan.

#### **IV. Benefits to Coastal Management**

Discuss the anticipated effect of the strategy, including the scope and value of the strategy, in advancing improvements in the CMP and coastal management, in general.

Working toward resilience and sustainability fosters mutual long-term prosperity and stability for people and the environment in New York's coastal regions. For New York's coastal communities to achieve sustainability within the context of climate change conditions, incorporating resilience measures will be essential, including the use of natural infrastructure and natural processes, and avoiding investments that are not highly adapted to a changing climate. The anticipated effect of this strategy is reduced risk to communities, people and infrastructure that will result in improved human safety, better expenditures of public funds, and a more resilient coast that adapts to climate effects.

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

Discuss the likelihood of attaining the strategy goal and program change (if not part of the strategy goal) during the five-year assessment cycle or at a later date. Address the nature and degree of support for pursuing the strategy and the proposed program change, as well as 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 strategy goal and program change is high. Stakeholder feedback on the prioritization of enhancement areas for the CMP identified coastal hazards as a top priority. In relationship to that prioritization, stakeholders also identified challenges related to hazards, including climate, sea level rise, and the

location/level of coastal development. Holistic resilience planning is supported, along with ideas about improved resources for local governments and improved communication/education. NYS is leading the way in climate adaptation and mitigation efforts through passage of the Community Risk and Resiliency Act (CRRA) and the Climate Leadership and Community Protection Act (CLCPA). DOS has played a large role in implementation of CRRA, such as development of our Model Local Laws for Resilience and the State's Natural Resilience Measures Guidance. DOS also will take on a large role in the implementation of the CLCPA. This strategy builds off existing momentum in the state and within DOS to foster improved decision making using the most up-to-date information to help communities become more resilient over time.

## **VI. Strategy Work Plan**

### **Strategy Goal: New Resiliency Tools/Guidance**

Resiliency tools and guidance will be developed to assist CZM staff and local governments improve planning and decision-making for resilience-related activities. Development of guidance will provide for a more consistent and holistic approach to community resiliency planning and implementation. Such tools and guidance include a shoreline characterization, guidance for community resilience planning, and internal guidance for resilience coastal policy revisions.

**Total Years: 5 yrs. Total Budget: \$721,475**

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

##### **Description of activities: Develop Shoreline Characterizations**

###### **Major Milestone(s):**

- Mapping of/identification of New York's coastal resources/coastal shoreline types and associated upland uses (regional and/or statewide)
- Engagement with partners to vet draft and final mapping product(s), such as NYSDEC, NOAA, FEMA and others.

**Budget: \$71,000/yr**

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

##### **Description of activities: Develop internal guidance to support coastal resilience strategy decision-making based on shoreline characterization**

###### **Major Milestone(s):**

- Creation of guidance document

**Budget: \$45,000/yr**

#### **Year(s): 1-5**

**Description of activities:** Resiliency Guidance for Planning/Implementation (including climate impacts on Coastal Communities)

**Major Milestone(s):**

- Creation of Guidance Document Engagement with local and state partners (e.g., NYSDEC, DHSES, local governments) as appropriate to review draft/final product.
- Creation of guidance document

**Budget:** \$33,625/yr **Year(s):** 1-2

**Description of activities: Data/Guidance/Decision Support (tool)**

**Major Milestone(s):**

- Conduct research on needs and opportunities related to integration of ecosystem services/values into decision-making
- Engagement with appropriate partners, such as academic institutions and state and federal partners, to develop scope of work for a contractor

**Year(s):** 3-5

- Solicit and retain contractor to develop data, guidance and/or tools supporting ecosystem service/values into decision-making

**Budget:** \$24,000 for year 3, \$34,000 for years 4-5

**Year(s):** 1-5

**Description of activities: Internal Guidance and/or Coastal Policy revision for resilience**

**Major Milestone(s):**

- Develop internal guidance for resilient coastal policies and/or policy revisions to deepen resilience concepts

**Budget:** \$20,000/yr.

**Strategy Goal: General Planning Activities**

As uncertainties exist in terms of the exact locations, magnitudes and impacts of future hazard events, resiliency requires the ability to be adaptive over time in response to changing conditions. While we do know that certain climate impacts are more likely than others, it is important that this strategy goal includes contingency recovery/resiliency planning for coastal communities. In addition, this strategy includes development of proactive social marketing campaigns to empower communities to adopt best management practices to improve resilience.

**Total Years:** 5 yrs.

**Total Budget:** \$166,606



**Year(s): 1-5**

**Description of activities: Behavioral and Social Change Outreach/Communication Strategy**

**Major Milestone(s):**

- Scope of work is developed and contracted
- Social/behavioral change communication professional retained
- Pilot social marketing campaigns are developed for select communities.
- Lessons learned are documented in a summary report.

**Budget:** \$97,767

**Year(s): 1-5**

**Description of activities: Coastal Event Recovery**

**Major Milestone(s):**

- Dependent on coastal storm events impacting New York

**Budget:** \$64,375

**Strategy Goal: Refinement of Existing Tools/Guidance**

Over the past several years, DOS has developed tools and guidance relevant to shoreline management, risk assessment, and local government land use for resilience. This strategy goal includes updates to these resources and/or development of supplemental material. This strategy goal also includes continued data collection and analysis for shoreline features using the products from the 2016 Project of Special Merit.

**Total Years:** 5 yrs.

**Total Budget:** \$516,294

**Year(s): 1-4**

**Description of activities: NNBF Monitoring Refinement and Implementation**

**Major Milestone(s):**

- Engagement with relevant stakeholders, agencies and organizations
- Scope(s) of work are developed and contractor(s) are retained
- Data collection
- Protocol and database refinement

**Budget:** \$75,000/yr.

**Year(s): 5**

**Description of activities: Data analysis of collected shoreline data to assess for trends and significant changes.**

**Major Milestone(s)**

- Data analysis

- Summary report

**Budget:** \$64,375

**Year(s):** 1-5

**Description of activities:** **Updating Risk Assessment Guidance and Tool**

**Major Milestone(s):**

- Engagement with appropriate local, state, and federal partners to vet draft and final products.
- Updated guidance/tool

**Budget:** \$74,606

**Year(s):** 1-5

**Description of activities:** **Guidance/Revisions for Resilience Model Local Laws**

**Major Milestone(s):**

- Updates to existing model local laws
- Case studies

**Budget:** \$70,463

## **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 CMP has made, if any, to secure additional state funds from the legislature and/or from other sources to support this strategy.

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

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

If desired, briefly state what projects of special merit 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 projects of special merit and is simply meant to give CMPs the option to provide additional information if they choose. Project descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not provide detailed project descriptions that would be needed for the funding competition.

**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. Generally, CMPs should only develop strategies for activities that the state intends to fund and work on given their anticipated level of Section 309 funding. However, in some circumstances, CMPs may wish to use the assessment and strategy development process as a broader strategic planning effort for the CMP. In that case, the CMP may elect to include additional strategies that exceed the state’s anticipated Section 309 funding over the five-year period. If the CMP chooses this approach, it should still clearly indicate which strategies it anticipates supporting with Section 309 funding and which strategies it anticipates supporting through other funding sources.

**5-Year Budget Summary  
Resilience Strategy**

<b>Resilience Strategy</b>	<b>Anticipated Funding Source (309 or Other)</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>
New Tools/ Guidance	309	\$153,800	\$153,800	\$148,825	\$132,625	\$132,625	\$721,475
Planning Activitie	309	\$32,875	\$32,875	\$22,875	\$38,642	\$38,339	\$165,606
Refinement of Existing Tools/ Guidance	309	\$105,300	\$105,300	\$101,642	\$101,875	\$102,177	\$516,294
<b>Total Funding</b>		\$291,975	\$291,975	\$273,142	\$273,142	\$273,141	\$1,403,375

## Offshore Planning

### I. Issue Area(s)

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

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Aquaculture                           | <input checked="" type="checkbox"/> Cumulative and Secondary Impacts |
| <input checked="" type="checkbox"/> Energy and 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 checked="" type="checkbox"/> Special Area Management Planning      |  |

### II. Strategy Description

A. The proposed strategy will lead to, or implement, the following types 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 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. Strategy Goal:** *Identify and promote improved management of the resources and uses in the areas offshore New York through the development of internal and external guidance for decision-making and program development in the Great Lakes and the Atlantic offshore spaces.*

The proposed strategy will lead to program changes through working with federal, State and local partners to identify important coastal uses and resources affected by new activities and new management in the offshore space. A main theme of the Strategy is the development of criteria for identifying important

resources and siting new or emerging uses in offshore spaces. This includes specific focus areas on: electrical transmission from offshore wind projects; potential aquaculture facilities; new sand borrow sites; and important offshore habitats. The Strategy will help in the development of guidance for areas identified as most appropriate for these new uses. The Strategy will also include the development and application of methodologies for identifying important habitats.

At a minimum, the identification of these areas would likely result in additional guidance to applicants on avoiding deleterious effects on NY coastal uses and resources. These analyses also will be helpful in identifying those offshore areas that appear appropriate for SAMP designation. This is particularly true for offshore transmission, which would be analyzed for a potential new SAMP showing points of entry through State coastal waters for transmission lines from projects in federal waters. Regardless of whether a SAMP is ultimately identified, the strategy will provide information that would result in refinements to new or existing geographic location descriptions including the Great Lakes, Long Island Sound and the Atlantic offshore area.

Another complementary theme of this Strategy is co-management with federal partners. This applies to the above topics where federal agencies have jurisdiction over uses or resources of interest to the State. For the Great Lakes the strategy will have an additional focus on identifying coastal uses and resources affected or co-managed by a marine sanctuary designation. We will work with state agencies to determine how to leverage sanctuary designation to protect existing uses and enhance ongoing co-management of the region's maritime heritage resources. This will result in long-term co-management strategies and implementation mechanisms, including guidance for state agency decision-making, communities, water-related businesses.

### **III. Needs and Gaps Addressed**

The strategy will address the need for more strategic planning and guidance for high-profile projects in process or planned for the next several years. These include offshore wind projects that are leased and beginning to develop construction and operations plans; and a marine sanctuary in the initial stages of designation and expected to be designated with a management plan during this 309 period. The strategy will address New York's critical needs for planning guidelines and protocols that allows for these activities while protecting and enhancing New York's existing coastal uses and resources.

### **IV. Benefits to Coastal Management**

Discuss the anticipated effect of the strategy, including the scope and value of the strategy, in advancing improvements in the CMP and coastal management, in general.

The strategy will enhance New York's ability to meet our renewable energy goals in a strategic manner utilizing guidance for siting and consistency reviews. Guidance for stakeholders is critical to success. Community-based social marketing will add value to the strategy and help refine stakeholder concerns and inform interested citizens about the efforts and how it will/may affect them.

## **V. Likelihood of Success**

Likelihood of success is high for this strategy. Support has been strong for the efforts described above and communities and residents are primed for learning more and becoming informed of what the technologies and programming is seeking to accomplish, and more importantly, give communities an opportunity to consider measures that can move offshore renewable energy forward efficiently. For the Great Lakes, tourism, access, and recreational boating, fishing and diving need more attention. Opportunity exists to engage stakeholders to participate, support and organize around a new opportunity for enhancing local economy and tourism.

## **VI. Strategy Work Plan**

### **Strategy Goal: Offshore Planning**

**Total Years: 5 yrs.**

**Total Budget: \$386,250**

**Year(s): 1-5**

**Description of activities: Energy Transmission Planning**

#### **Major Milestone(s):**

- Identify potential transmission needs and likely interconnection points, consistent with State goals and energy plans
- Identify potential use and resource constraints, available data, and key stakeholders to be consulted
  - State waters – commercial fishing, shipping. Recreation, sand borrow, public access, aesthetic and other considerations
  - Federal waters – commercial fishing, shipping, recreation
- Develop appropriate criteria for future corridor siting
- Apply criteria in partnership with stakeholders

**Budget: \$193,125**

**Year(s): 1-5**

**Description of activities: Marine Sanctuary Designation and Management**

**Major Milestone(s):**

- Establish key objectives of Sanctuary designation, affected stakeholders, targeted resources
- Work with affected constituencies to identify water dependent uses that may be affected by Sanctuary designation
- Develop long-term co-management strategies and implementation mechanisms
  - Consider changes to State coastal policies to reflect identified resources
  - Consider establishment of guidance that complements federal protective measures

**Budget: \$38,625**

**Year(s): 1-5**

**Description of activities: Offshore Habitat Identification**

**Major Milestone(s):**

- Identify key physical attributes that contribute to the health of State uses and resources
- Develop methodology to identify locations of these attributes, consult with stakeholders, other MARCO States, scientific experts and use existing Significant Coastal Fish and Wildlife Habitats
- Apply methodologies to existing data sets
- Evaluate potential for a future SAMP

**Budget: \$38,625**

**Year(s): 1-5**

**Description of activities: Aquaculture**

**Major Milestone(s):**

- Identify attributes that make locations more/less suitable for potential aquaculture operations
- Develop siting criteria with stakeholders, State experts (DEC, DOH, others)
- Apply criteria and evaluate as potential SAMP

**Budget: \$57,937.50**

**Year(s): 1-5**

**Description of activities: Sand and Sediment Management**

**Major Milestone(s):**

- Work with MARCO States to identify common sand needs, sediment management concerns
- Develop shared data needs, guidance, for sand borrow activities in shared federal waters

- Identify potential improvements to State regulatory reviews, federal decision processes, use of CDFs, beneficial reuse, and other best practices to reduce open water disposal

**Budget: \$57,937.50**

## **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 CMP has made, if any, to secure additional state funds from the legislature and/or from other sources to support this strategy.

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

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

If desired, briefly state what projects of special merit 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 projects of special merit and is simply meant to give CMPs the option to provide additional information if they choose. Project descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not provide detailed project descriptions that would be needed for the funding competition.

At the end of the strategy section, please include the following budget table summarizing your anticipated Section 309 expenses by strategy for each year. Generally, CMPs should only develop strategies for activities that the state intends to fund and work on given their anticipated level of Section 309 funding. However, in some circumstances, CMPs may wish to use the assessment and strategy development process as a broader strategic planning effort for the CMP. In that case, the CMP may elect to include additional strategies that exceed the state's anticipated Section 309 funding over the five-year period. If the CMP chooses this approach, it should still clearly indicate which strategies it anticipates supporting with Section 309 funding and which strategies it anticipates supporting through other funding sources.



**5-Year Budget Summary**

<b>Strategy Activities</b>	<b>Anticipated Funding Source (309 or Other)</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>
Energy Transmission Planning	309	\$38,625	\$38,625	\$38,625	\$38,625	\$38,625	\$193,125
Marine Sanctuaries	309	\$7,725	\$7,725	\$7,725	\$7,725	\$7,725	\$38,625
Offshore Habitats	309	\$7,725	\$7,725	\$7,725	\$7,725	\$7,725	\$38,625
Aquaculture	309	\$11,587	\$11,587	\$11,587	\$11,587	\$11,587	\$57,937
Sand and Sediment Management	309	\$11,587	\$11,587	\$11,587	\$11,587	\$11,587	\$57,937
<b>Total Funding</b>		\$77,250	\$77,250	\$77,250	\$77,250	\$77,250	\$386,250

**5-Year Budget Summary by Strategy**

<b>Strategy Title</b>	<b>Year 1 Fund-ing</b>	<b>Year 2 Fund-ing</b>	<b>Year 3 Fund-ing</b>	<b>Year 4 Fund-ing</b>	<b>Year 5 Fund-ing</b>	<b>TOTAL FUND-ING</b>
<b>Samps</b>	\$ 91,700.00	\$ 91,700.00	\$ 110,533.00	\$ 110,533.00	\$ 110,534.00	\$ 515,000.00
<b>Consistency</b>	\$ 54,075.00	\$ 54,075.00	\$ 54,075.00	\$ 54,075.00	\$ 54,075.00	\$ 270,375.00
<b>Resiliency</b>	\$ 291,975.00	\$ 291,975.00	\$ 273,142.00	\$ 273,142.00	\$ 273,141.00	\$ 1,403,375.00
<b>Offshore</b>	\$ 77,250.00	\$ 77,250.00	\$ 77,250.00	\$ 77,250.00	\$ 77,250.00	\$ 386,250.00
<b>Total</b>	\$ 515,000.00	\$ 515,000.00	\$ 515,000.00	\$ 515,000.00	\$ 515,000.00	

## Summary of Stakeholder and Public Comment

### Stakeholder Surveys

Approximately 30 stakeholders, including state and federal agency partners, local governments, regional planning organizations, non-governmental organizations, local businesses, and academia were surveyed as to what they felt should be the State's highest priority enhancement areas.

- The agencies contacted were: NYS Canal Corporation; Division of Homes and Community Renewal; Department of Environmental Conservation; Hudson River Estuary Program Hudson River National Estuarine Research Reserve; Department of Transportation; Office of Parks, Recreation and Historic Preservation; NYS Division of Homeland Security and Emergency Services; NYS Office of General Services; NYS Energy Research and Development Authority;; New York Port Authority, US Coast Guard and the US Army Corps of Engineers.
- The local governments contacted were the City of Kingston, New York City, City of Rochester, and the Town East Hampton.
- Regional planning organizations included Niagara River Greenway Commission, Hudson River Valley Greenway, and the Genesee Finger Lakes Regional Planning Council.
- The surveyed non-governmental organizations/Academia included the Maritime Association of the Port of New York and New Jersey, Cornell Cooperative Extension and Sea Grant.

These stakeholders were asked a set of questions using Microsoft Forms to determine which enhancement areas they considered as their top three priorities. In addition to identifying the priorities, they were asked to identify the greatest problems pertaining to the enhancement areas and the greatest opportunities for enhancing the state's CMP to address those problems. All of the nine enhancement areas were identified as being one of the top three priorities with coastal wetlands and coastal hazards clearly standing out from the rest as the highest priorities. A summary of the survey is below.

The input received from stakeholders was taken into consideration when determining the priority enhancement areas and whether or not strategies were developed for those particular enhancement areas.

Forms

NYSDOS- Coastal Assessment Survey - Saved



Preview

Theme

Share



Questions

Responses 32

# NYSDOS- Coastal Assessment Survey

Program details are in the attachment to the transmission e-mail.

1. Which of the nine enhancement areas below do you feel is the highest priority for the New York State coastal management program? \*

- Coastal Wetlands
- Coastal Hazards
- Public Access
- Marine Debris
- Cumulative and Secondary Impacts
- Development of Special Area Management Plans (SAMP)
- Ocean and Great Lakes
- Energy and Government Facilities
- Aquaculture

## Public Comment

The draft 309 Assessment and Strategies were made available to the public for a 30-day review and comment period commencing on May 1, 2020 and ending on June 1, 2020. The following public notice was published and on the NYS DOS website:

The Department of State announces the availability of New York State's draft Section 309 Combined Assessment and Strategy for 2021 to 2025, a public document pursuant to 15 CFR part 923 subpart K, for public review and comment. The Department of State prepared the Combined Assessment and Strategy as the administrator of the New York State Coastal Management Program (CMP), for approval by the National Oceanic and Atmospheric Administration's Office for Coastal Management, in order for the State to be eligible for federal Coastal Zone Management Act Section 309 funding in fiscal years 2021 to 2025.

The Section 309 Combined Assessment and Strategy for 2016 – 2020 is presented in two parts. The first part is an assessment section which describes the current status and associated accomplishments by New York State in each of nine federal "priority enhancement areas" (Wetlands, Coastal Hazards, Public Access, Marine Debris, Cumulative and Secondary Impacts, Special Area Management Planning, Ocean/Great Lakes Resources, Energy and Government Facility Siting, and Aquaculture) over the past five years, 2016 – 2020. The second part presents strategies and projects the Department of State will advance over the next five years using federal Section 309 funds. The goals of these identified strategies are:

- To develop and implement regional refinements to the CMP in order to address the unique needs of New York's coast and coastal communities. SAMPs will be assessed and developed to protect the natural, cultural, and economic resources of these important areas.
- To update New York's CMP to incorporate new activities and authorities of NYS's regulatory agencies to better provide a consistent and coordinated regulatory response to coastal issues enhance and maintain its regulatory authority to address current and evolving coastal issues including the effects of climate change and ways to improve resilience.
- To develop technical tools and guidance (statewide where practical – or regionally for Long Island, NYC, Great Lakes, and Hudson River) to inform decision making and provide New York coastal communities with tools to better understand options for improving resilience on the site, community, and regional scale.
- To identify and promote improved management of the resources and uses in the areas offshore New York through the development of internal and external

guidance for decision-making and program development in the Great Lakes and the Atlantic offshore spaces.

The draft Section 309 Combined Assessment and Strategy is available for review at <http://www.dos.ny.gov/opd/publicNotices/notices.html>. Comments on the draft document should be sent in writing via e-mail to [opd@dos.ny.gov](mailto:opd@dos.ny.gov). Please type 'Comments on Draft 309 Assessment and Strategy' in the e-mail's subject line. Comments are due no later than noon, Monday June 15, 2020.