

# **APPENDIX N**

## **COASTAL ZONE MANAGEMENT**

# **East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Integrated Hurricane Sandy General Re-evaluation Report/Environmental Impact Statement (HSGRR/EIS)**

---

## **New York (and New York City Local Waterfront Development Plan) Coastal Zone Management Program Federal Consistency Determination**

As required under the Federal Coastal Zone Management Act, the USACE reviewed the Atlantic Ocean Shorefront Coastal Storm Reduction Management Unit (CSRMU) of the Tier 1 component of the Tentatively Selected Plan in relation to the applicable policies of the New York State Coastal Zone Management Program. A number of questions under Part C of the New York State Coastal Management Program (NYS CMP) Federal Consistency Assessment Form (New York State Department of State (NYSDOS), Division of Coastal Resources (DCR), 2003b) were answered in the affirmative; therefore, as stated under Part D, number two, it is necessary to analyze the Project in more detail with respect to its consistency with the *State Coastal Policies* (NYSDOS DCR, 2003c) of the NYS CMP, as well as New York City's *The New Waterfront Revitalization Program* (WRP) (New York City Department of City Planning, 1999b). Following is a list of the State and local policies in question and a brief statement of how the Project is consistent with each of these policies. Policies that are not listed were answered in the negative with respect to this Project (the Atlantic Shorefront CSRMU).

### **DEVELOPMENT POLICIES**

#### **Policy 1**

**Restore, revitalize, and redevelop deteriorated and underutilized waterfront areas for commercial, industrial, cultural, recreational, and other compatible uses. (Question 1c)**

The Project will restore deteriorated waterfront areas along the Atlantic shorefront on Rockaway peninsula. The project will protect the environment and development around Jamaica Bay, as well as coastal resources of Kings, Queens, and Nassau counties. Doing so will enhance existing and anticipated recreational uses in the future, namely the use of Rockaway Beach and the recently improved Rockaway Boardwalk. The Project will renourish the beachfront and improve existing groins to further reduce the type of damage to waterfront areas that occurred during Hurricane Sandy. Accordingly, the Project is consistent and compatible with the character of the area, will not adversely affect adjacent and upland views, will not cause further deterioration of the shoreline, and will reduce the extent of adverse impacts to the economic base of the community from potential future coastal storms similar to Hurricane Sandy.

#### **Policy 2**

**Facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters. (Questions 1b and 3a)**

The Project includes flood and erosion protection structures that will physically alter more than two acres of land along the shoreline and under coastal waters, and requires siting along the Atlantic shorefront on the Rockaway peninsula and the inlet of Jamaica Bay. The Project will not preempt the reasonably foreseeable development of water-dependent uses. The Project is designed to add to the public use and enjoyment of the water's edge, as well as reducing the extent of damage to coastal resources that occurred during Hurricane Sandy. The guidelines for site choices listed under this policy apply to this Project as follows:

1. **Competition for space:** The Project will provide increased protection to water-dependent activities as well as to existing and reasonably foreseeable development located inland of the CSRMs. There is no competing use for the CSRMU locations.
2. **In-place facilities and services:** Existing in-place facilities and service will be sufficient to support this Project.

## **East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Integrated Hurricane Sandy General Re-evaluation Report/Environmental Impact Statement (HSGRR/EIS)**

---

3. Access to navigational channels: Shipping, fishing, and boating activities are not planned for the Project site. The Project will not prevent access to existing navigation channels, except during a coastal storm event when the Hurricane Barrier and sector gates would be closed.
4. Compatibility with adjacent uses and protection of other coastal resources: The Project is compatible with adjacent properties and will enhance the surrounding community and environmental quality of Rockaway by protecting coastal resources from damaging coastal storms similar to Hurricane Sandy.
5. Preference to underutilized sites: Not applicable to the Project. However, the Project protects underutilized sites from coastal storm damage.
6. Providing for expansion: The Project does not prevent current or reasonably foreseeable future water-dependent uses. The CSRMUs are designed to provide 50-years of coastal storm protection with a minimal footprint such that long-term space needs and future demand for land are not limited.

### **FISH AND WILDLIFE POLICIES**

#### **Policy 7**

**Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats. (Question 2c)**

The Project will affect and be located in the NYSDEC-designated Critical Environmental Area. The Project involves dredging and excavation, physical alteration of shore area through beach renourishment and construction of shore structures (groins, sea walls)—actions which will affect significant coastal fish and wildlife habitats. However, the Project will protect coastal habitat and reduce damage from coastal storms similar to Hurricane Sandy, which is in direct accord with this policy, as well as the direction of *The New Waterfront Revitalization Program* regarding Special Natural Waterfront Areas (SWNA); the western portion of the Rockaway peninsula is a proposed SNWA as of October 30, 2013. Accordingly, the Project will increase the quality and quantity of the physical, biological, and chemical parameters along the Atlantic shorefronts of the Rockaway Peninsula and Jamaica Bay.

This policy requires that a narrative for each significant habitat be provided to aid in consistency determination. As stated above, the Project area has been identified by NYSDEC as a CEA and by NYC as a proposed SWNA. Following is a narrative for the Project site, noting the five required items.

- (1) The Project is located in Kings and Queens counties, and will provide protection to coastal areas in these counties as well as southwestern Nassau County.
- (2) The Jamaica Bay Ecological Restoration and Research Team reports (Tanacredi et al, 2002) observed many different types of vegetative, fish, bird, and other wildlife species. These species are discussed in the Draft Integrated General Reevaluation Report and Environmental Impact Statement (DGRR/EIS) in section 2.3
- (3) Physical, biological, and chemical parameters that will be improved and/or increased by the Project include protection of coastal habitat and associated wildlife and habitat and erosion control.
- (4) Dredging would be a potential activity to impact offshore coastal habitat, while beachfront renourishment, groins, and seawalls will require filling along the coastline and may impact nearshore benthic and fish habitat. However, all work will utilize best management practices to limit impacts to offshore benthic and fish communities.
- (5) The quantitative basis used to rate the habitat is provided in the DGRR/EIS section 7.0.

### **FLOODING AND EROSION HAZARDS POLICIES**

**Policy 11**

**Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion. (Questions 1a, 1b, and 2b)**

The Project will result in large physical changes to more than two acres of the Atlantic shorefronts of Rockaway and Jamaica Bay. The Project is also located in a federally-designated flood hazard area. However, the Project is designed to protect coastal resources in these areas through a combination of constructed seawalls, groins, and beach renourishment. Therefore, the Project will minimize damage to property and endangerment of human lives caused by flooding and erosion from coastal storms similar to Hurricane Sandy.

**Policy 12**

**Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs. (Question 1b and 2b)**

The Project will require physical alteration of more than two acres of the onshore and offshore coastal area; is located in flood and erosion hazard areas; and will affect beaches, dunes, and barrier islands. However, the coastal resources this policy is intended to protect will be protected by the Project, which will reduce damage to these coastal resources from coastal storms similar to Hurricane Sandy.

**Policy 13**

**The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs. (Question 3c)**

The Project requires construction of flood and erosion control structures (seawalls, groins, beach renourishment). These CSRMs are designed to provide 50-years of protection from coastal storms similar to Hurricane Sandy. The Project includes procedures for scheduled maintenance to ensure the CSRMs remain effective over this time frame. Should the magnitude of coastal storms increase above conditions predicted for the next 50 years, USACE will assess how best to upgrade the CSRMs to provide increased protection from such coastal storm events.

**Policy 14**

**Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations. (Question 3c)**

The Project requires construction of flood and erosion control structures (seawalls, groins, beach renourishment). The design of these structures accounts for subsequent changes that will occur to littoral transport of sediment to adjacent shorelines; these design elements are described in the DGR/EIS section 5.0. Accordingly, construction and operation of the Project CSRMs will not increase erosion or flooding at the site or at other locations.

**Policy 15**

**Mining, excavation or dredging in coastal waters shall not significantly interfere with the natural coastal processes which supply beach materials to land adjacent to such waters and shall be undertaken in a manner which will not cause an increase in erosion of such land. (Question 1h)**

## **East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Integrated Hurricane Sandy General Re-evaluation Report/Environmental Impact Statement (HSGRR/EIS)**

---

The Project will result in dredging from a borrow source located approximately 3-4 miles south of the Rockaway Atlantic shorefront. Dredging near this area for other borrow source material has occurred for several USACE-led beachfront renourishment projects; these prior dredging activities have not reduced the natural regenerative powers of the shoreland. In fact, the natural regenerative powers of the shoreland have decreased such that renourishment, groins, and seawalls are necessary to limit further loss of shoreline sediment due to coastal storms and normal coastal hydrodynamics. The Project will also result in minor seafloor disturbance within Rockaway Inlet during piling construction of the Hurricane Barrier.

### **Policy 16**

**Public funds shall only be used for erosion protective structures where necessary to protect human life, and new development which requires a location within or adjacent to an erosion hazard area to be able to function, or existing development; and only where the public benefits outweigh the long term monetary and other costs including the potential for increasing erosion and adverse effects on natural protective features. (Question 3c)**

The Project requires construction of flood and erosion control structures (seawalls, groins, hurricane barrier, beach renourishment). The economic impacts associated with construction and operation of these CSRMs are significantly lower than the cost to repair damages reasonably anticipated to occur from coastal storms similar to Hurricane Sandy. Economic models are presented in the DGR/EIS appendix D. Accordingly, the public benefits outweigh the cost to construct and operate the Project CSRMs.

### **Policy 17**

**Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible. (Question 2b)**

The Project will affect and will be located in flood and erosion hazard areas. The CSRMs will provide flood and erosion control through beach renourishment, seawalls, groins, and hurricane barrier. The beach renourishment would be considered a non-structural measure. However, beach renourishment alone is not sufficient to minimize damage to natural resources and property from flooding and erosion that this policy seeks to ensure. The DGR/EIS appendix C includes the results of the analysis showing that non-structural measures alone are insufficient. Accordingly, structural measures (groins, seawall and hurricane barrier) are necessary to minimize damage to these coastal resources from coastal storms similar to Hurricane Sandy.

## **PUBLIC ACCESS POLICIES**

### **Policy 19**

**Protect, maintain, and increase the level and types of access to public water-related recreation resources and facilities. (Yes to Question 2h; no to Question 1d)**

The Project will affect and will be located adjacent to State, County, and local parks. The CSRMs will protect these resources from damage caused by coastal storms similar to Hurricane Sandy. Additionally, the CSRMs will not reduce access to public water-related recreation resources or facilities. In fact, the CSRMs will reduce damage to the transportation systems, parking areas, and pedestrian walkways that occurred during Hurricane Sandy. Additionally, the Project will prevent a decrease in access to and use of recreational areas (e.g. Rockaway Beach and Jamaica Bay) that is predicted to otherwise occur if the Project is not implemented.

### **Policy 20**

**Access to the publicly-owned foreshore and to lands immediately adjacent to the foreshore or the water's edge that are publicly-owned shall be provided and it shall be provided in a manner compatible with adjoining uses. (Questions 1b and 2h; no to Question 1d)**

## **East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Integrated Hurricane Sandy General Re-evaluation Report/Environmental Impact Statement (HSGRR/EIS)**

---

The Project will physically alter more than two acres of land along the shoreline, land under water, and in coastal waters. These alterations are necessary for the construction of CSRMs that will protect coastal land areas from damage caused by coastal storms similar to Hurricane Sandy. These CSRMs will not reduce existing or potential public access to the foreshore and to lands immediately adjacent to the foreshore or the water's edge.

### **RECREATION POLICIES**

#### **Policy 21**

**Water-dependent and water-enhanced recreation will be encouraged and facilitated, and will be given priority over non-water-related used along the coast. (Question 3a)**

The Proposed Project requires CSRMs along the waterfront. The CSRMs will not prohibit access to waterfront sites. Additionally, the Project will prevent a decrease in the use of waterfront recreational areas (e.g. Rockaway Beach and Jamaica Bay) that is predicted to otherwise occur if the Project is not implemented (NED Report referenced in the DGRR/EIS 6.6). Additionally, the CSRMs will reduce damage to coastal resources from coastal storms similar to Hurricane Sandy.

#### **Policy 22**

**Development, when located adjacent to the shore, will provide for water-related recreation, whenever such use is compatible with reasonably anticipated demand for such activities, and is compatible with the primary purpose of the development. (Questions 1a and 3a)**

The Project will result in large physical changes within a coastal area, and the Project will require an EIS. Additionally, the Project is located along waterfront sites. The CSRMs will not restrict passive water-related recreational uses or diminish scenic views of the coastal shoreline. The beachfront renourishment along the Atlantic shoreline provides greater area for recreational activities. Additionally, the groins seawall and hurricane barrier reduce damage to coastal resources (e.g. Jamaica Bay) caused by coastal storms similar to Hurricane Sandy.

### **HISTORIC AND SCENIC RESOURCES POLICIES**

#### **Policy 23**

**Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology or culture of the state, its communities, or the nation. (Question 2i)**

The Project will affect and be located adjacent to National and NYC historic resources. However, the Project will have a beneficial impact on these resources by protecting them from damage caused by coastal storms similar to Hurricane Sandy. USACE has closely coordinated the project design with the NY SHPO and Federally-recognized Native American Tribes (a record of coordination is provided in the DGRR/EIS appendix L).

#### **Policy 25**

**Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area. (Question 1a)**

The Project will require a large physical change to sites within the coastal area which will require the preparation of an EIS. However, by reducing damage to natural and man-made resources from coastal storms similar to Hurricane Sandy, the Project will ultimately protect and enhance the overall scenic quality of the coastal area.

### **ENERGY AND ICE MANAGEMENT POLICIES**

#### **Policy 28**

## **East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Integrated Hurricane Sandy General Re-evaluation Report/Environmental Impact Statement (HSGRR/EIS)**

---

**Ice management practices shall not interfere with the production of hydroelectric power, damage significant fish and wildlife and their habitats, or increase shoreline erosion or flooding. (Question 1b)**

The Project will physically alter more than two acres of land along the shoreline, land under water, and in coastal waters. These alterations are necessary for the construction of CSRMs that will protect coastal land areas from damage caused by coastal storms similar to Hurricane Sandy. Ice management practices are not anticipated to be necessary for these CSRMs.

### **WATER AND AIR RESOURCES POLICIES**

#### **Policy 30**

**Municipal, industrial, and commercial discharge of pollutants, including but not limited to, toxic and hazardous substances, into coastal waters will conform to state and national water quality standards. (Question 3d)**

The Project will require State water quality permits or certifications. However, the Project is not anticipated to result in pollutant discharge during construction or operation of the CSRMs.

#### **Policy 32**

**Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities. (Question 1a)**

The Project will require a large physical change to sites within the coastal area which will require the preparation of an EIS. These alterations are necessary for the construction of CSRMs that will reduce damage to coastal resources caused by coastal storms similar to Hurricane Sandy. The Project will have no impact on the use of alternative or innovative sanitary waste systems in small communities.

#### **Policy 35**

**Dredging and filling in coastal waters and disposal of dredged material will be undertaken in a manner that meets existing State permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands. (Questions 1b, 1h, and 1i)**

The Project will physically alter more than two acres of land along the shoreline, land under water, and in coastal waters. These alterations are necessary for the construction of CSRMs that will reduce damage to coastal resources caused by coastal storms similar to Hurricane Sandy. The Atlantic shorefront CSRMs will require dredging in a borrow area in coastal waters located approximately 3 miles south of the Rockaway peninsula. Additionally, beach renourishment, construction of seawalls, groin and hurricane barrier will require placement of constructed elements in submerged coastal areas. The USACE has analyzed the impact from constructing these CSRMs on the resources in question, and has concluded there will be no adverse significant impact on these resources. The methods and results of the analyses are presented in the DGRR/EIS section 5.2.2.1.

#### **Policy 37**

**Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters. (Question 1a)**

The Project will require a large physical change to sites within the coastal area which will require the preparation of an EIS. These alterations are necessary for the construction of CSRMs that will reduce



## **East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Integrated Hurricane Sandy General Re-evaluation Report/Environmental Impact Statement (HSGRR/EIS)**

---

damage to coastal resources caused by coastal storms similar to Hurricane Sandy. Accordingly, the Project will reduce the non-point discharge of soils that otherwise may have been eroded and discharged into coastal waters during coastal storms.

### **Policy 38**

**The quality and quantity of surface water and groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply. (Questions 1a and 3d)**

The Project will require a large physical change to sites within the coastal area which will require the preparation of an EIS. These alterations are necessary for the construction of CSRMUs that will reduce damage to coastal resources caused by coastal storms similar to Hurricane Sandy. The Project will require State water quality permits or certifications. However, the Project CSRMUs will not encounter bedrock aquifers or surface water drinking water resources. Therefore, the Project will have no impact on surface water or groundwater supplies.

### **Policy 41**

**Land use or development in the coastal area will not cause national or state air quality standards to be violated. (Questions 1a and 3e)**

The Project will require a large physical change to sites within the coastal area which will require the preparation of an EIS. These alterations are necessary for the construction of CSRMUs that will reduce damage to coastal resources caused by coastal storms similar to Hurricane Sandy. Construction of the Project will exceed the General Conformity *de minimis* Air Quality Thresholds for nitrogen oxides (NOx) DGR/EIS appendix P.

### **Policy 43**

**Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates. (Questions 1a and 3e)**

The Project will require a large physical change to sites within the coastal area which will require the preparation of an EIS. These alterations are necessary for the construction of CSRMUs that will reduce damage to coastal resources caused by coastal storms similar to Hurricane Sandy. However, construction of the Project will exceed the General Conformity *de minimis* Air Quality Thresholds for nitrogen oxides (NOx) DGR/EIS appendix P.

## **WETLANDS POLICY**

### **Policy 44**

**Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas. (Questions 1b and 2a)**

The Project will physically alter more than two acres of land along the shoreline, land under water, and in coastal waters. The Project will also affect and be located adjacent to tidal wetlands. These alterations are necessary for the construction of CSRMUs that will reduce damage to coastal resources caused by coastal storms similar to Hurricane Sandy. Accordingly, the Project will ultimately improve degraded tidal ecosystems (e.g. Jamaica Bay), improve habitat for wildlife and fish, and provide erosion, flood, and storm control.