

Draft Integrated Interim Response  
Feasibility Report and Environmental  
Assessment for Actionable Elements

**NEW YORK-NEW JERSEY  
HARBOR AND TRIBUTARIES  
COASTAL STORM RISK MANAGEMENT  
FEASIBILITY STUDY**

**SUBAPPENDIX A-2D  
HARLEM RIVER  
ACTIONABLE ELEMENT SITE  
SEAWARD AND LANDWARD  
COASTAL ZONE MANAGEMENT ACT**

July 2025

## Table of Contents

1	Introduction -----	3
1.1	Project Purpose and Need -----	3
1.2	Coordination and consultation history -----	4
2	Study Area -----	6
2.1	Comprehensive Plan -----	6
2.2	Actionable Element – Harlem River -----	7
2.3	Actionable Element Project Description -----	7
3	Existing Conditions-----	9
4	Coastal Zone Management Act Evaluation -----	10
4.1	New York State Coastal Zone Management Act Policies -----	10
4.2	Development Policies (numbered and italicized) -----	15
4.3	Fish and Wildlife Policies -----	16
4.4	Flooding and Erosion Hazards Policies-----	17
4.5	Public Access Policies -----	18
4.6	Recreation Policies-----	19
4.7	Historic and Scenic Resources Policies-----	19
4.8	Energy and Ice Management Policies-----	20
4.9	Water and Air Resources Policies -----	20
4.10	New York City Waterfront Revitalization Program (WRP) -----	23
5	Effects and consequences-----	28
5.1	Adverse Effects -----	28
5.2	Beneficial Effects -----	28
6	coastal zone Management act consistency Determination-----	29

# 1 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), New York District, has prepared this assessment to evaluate consistency with the New York State and New York City coastal zone management policies for the New York New Jersey Harbor and Tributaries (NYNJHAT) Coastal Storm Risk Management (CSRM) Feasibility Study, Integrated Interim Response Feasibility Report and Environmental Assessment on Actionable Elements.

The NYNJHAT Study was authorized as a result of the findings in the January 2015, USACE North Atlantic Coast Comprehensive Study (NACCS) which identified high-risk areas on the Atlantic Coast for warranting further investigation of flood and coastal storm risk management solutions including the NYNJHAT study. In February 2019, a NYNJHAT Feasibility Study Interim Report (Interim Report) was completed to document existing information and assumptions about the future, and to identify knowledge gaps that warranted further investigation because of their potential to affect plan selection. The Interim Report states the impacts from Hurricane Sandy highlighted the National need for a comprehensive and collaborative evaluation to manage risk for vulnerable populations within the North Atlantic region. In September 2022, a Draft Integrated Feasibility Report and Tier 1 (Programmatic) Environmental Impact Statement for the Comprehensive Plan was released detailing the additional analyses conducted following the Interim Report (2019) and what additional information was needed in the future for the remainder of Tier 1 and Tier 2 of the programmatic process.

The Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. 1451 et seq.) was enacted by Congress to balance the competing demands of growth and development with the need to protect coastal resources. Its stated purpose is to, "...preserve, protect, develop, and, where possible to restore or enhance, the resources of the nation's coastal zone...". The primary means of achieving this balance is through coastal zone management programs adopted by the states and designed to regulate land use activities that could affect coastal waters. The CZMA offers incentives to encourage the coastal states and territories to exercise their full authority over coastal areas through development of coastal zone management programs, consistent with the minimum federal standards. The Coastal Zone Act Reauthorization Amendments of 1990 strengthened the CZMA by requiring the state programs to focus on controlling land use activities, and on the cumulative effect of activities in coastal zones.

The National Oceanic and Atmospheric Administration (NOAA) maintains federally mapped CZMA boundaries, the New York Department of State (DOS) Office of Planning and Management maintains New York State (NYS) mapped CZMA boundaries present within New York State, and New York City maintains mapped boundaries for Waterfront Revitalization Program.

The purpose of this CZMA appendix is to: (1) present the District's consistency determination, pursuant to 15 CFR Part 930 Subpart C, regarding the consistency of the activity with the NYS Coastal 5 Management Plan (NYSCMP) including New York City (NYC) Waterfront Revitalization Program (WRP); (2) enable New York State to consider the effects of the Interim Response Actionable Elements on the land and water uses and natural resources of its coastal area; and (3) to provide information that New York State requires to concur with the New York District's Consistency Determination pursuant to 15 CFR Part 930 Subpart C.

This document focuses on the Harlem River Actionable Element Site, comprised of a CSRM with nature-based features to the NYNJHAT Study Comprehensive Plan.

## 1.1 Project Purpose and Need

Storms have historically severely impacted the NY/NJ Harbor region, including Hurricane Sandy most recently, causing loss of life and extensive economic damages.

In 2012, Hurricane Sandy caused considerable loss of life, extensive damage to property, and massive disruption to the North Atlantic Coast. The effects of this storm were particularly severe because of its tremendous size and

the timing of its landfall during high tide. Twenty-six states were impacted by Hurricane Sandy, and disaster declarations were issued in 13 states. NY and NJ were the most severely impacted states, with the greatest damage and most fatalities in the NY Metropolitan Area. For example, a storm surge of 12.65 feet above normal high tide was reported at Kings Point on the western end of Long Island Sound and 9.4 feet at the Battery on the southern tip of Manhattan. Flood depths due to the storm tide were as much as nine feet in Manhattan, Staten Island, and other low-lying areas within the NY Metropolitan Area. The storm exposed vulnerabilities associated with inadequate CSRM measures and lack of defense to critical transportation and energy infrastructure.

The January 2015, North Atlantic Coast Comprehensive Study (NACCS) identified high-risk areas on the Atlantic Coast for warranting further investigation of flood risk management solutions. In February 2019, a NYNJHAT Feasibility Study Interim Report was completed to document existing information and assumptions about the future conditions, and to identify knowledge gaps that warranted further investigation because of their potential to affect plan selection. The Interim Report states the impacts from Hurricane Sandy highlighted the national need for a comprehensive and collaborative evaluation to manage risk for vulnerable populations within the North Atlantic region. To address the impacts and concerns associated with devastating storms, the New York District has proposed measures to manage coastal storm risk in the NYNJ Harbor and its tributaries.

In response, the New York District is investigating measures to manage future flood and coastal storm risk in ways that support the long-term resilience and sustainability of the coastal ecosystem and surrounding communities, and reduce the economic costs and risks associated with flood and storm events for the NYNJHAT Study Area (USACE 2019). The alternative concepts proposed would help the region manage flood risk that is expected to be exacerbated by relative sea level rise.

The scope of the Interim Response Actionable Element builds upon the September 2022 Draft Integrated Feasibility Report (FR) and Tier 1 (Programmatic) Environmental Impact Statement (EIS), as an interim action while the overall Comprehensive Plan continues to be studied, subject to future funding and appropriations. The Comprehensive Plan is a programmatic assessment described as containing two tiers, with September 2022 Draft Report initiating the Tier 1, or broad-level assessment, with plans for a future Tier 2 containing the detailed site-specific analyses including any design refinements and reasonable alternatives. This Report is not a Tier 2, but rather an Interim Response to the Comprehensive Plan responsive to the larger Coastal Storm Risk Management (CSRM) authorization to assess a 2,500+ square mile radius in the New York-New Jersey Metropolitan Area. This interim response, like Tier 2, assesses the measures at a site-specific level, completing enough design maturity and analyses to disclose the potential effects of the Alternatives, and complete full environmental compliance. Interim responses often arise during the progress of a programmatic study, of which purpose and need is to respond to an immediate need for CSRM where able in the interim and corresponding with future legislative cycles (e.g. Water Resources Development Act (WRDA), while the more complex measures of the larger NYNJHAT Study require additional analysis, modeling, public engagement, and design maturity to complete.

## **1.2 Coordination and consultation history**

Coordination with stakeholders has been a critical component of the NYNJHAT study. Since early 2017. The New York District held many workshops and meetings with Cooperating and Participating Agencies and other stakeholders to share information on the study scope and purpose and formulation of alternatives, and to exchange ideas and information on natural and marine resources within the Study Area.

The New York District announced the preparation of an Integrated Feasibility Report/Tiered EIS for the NYNJHAT study feasibility in the February 13, 2018, Federal Register pursuant to the requirements of Section 102(2)(C) of NEPA. The NEPA scoping period initially spanned 45 days from July 6 – August 20, 2018, but was extended to 120 days due to numerous requests from the public. The New York District held a total of nine public scoping meetings during the public scoping period. In 2019, four NYBEM workshops were held on January 3, March 11, June 6, and November 14 to help inform the NYBEM model set up to be used as a tool for assessing

some direct and indirect effects of agency actions on regional ecosystems including the NYNJHAT Study, among others.

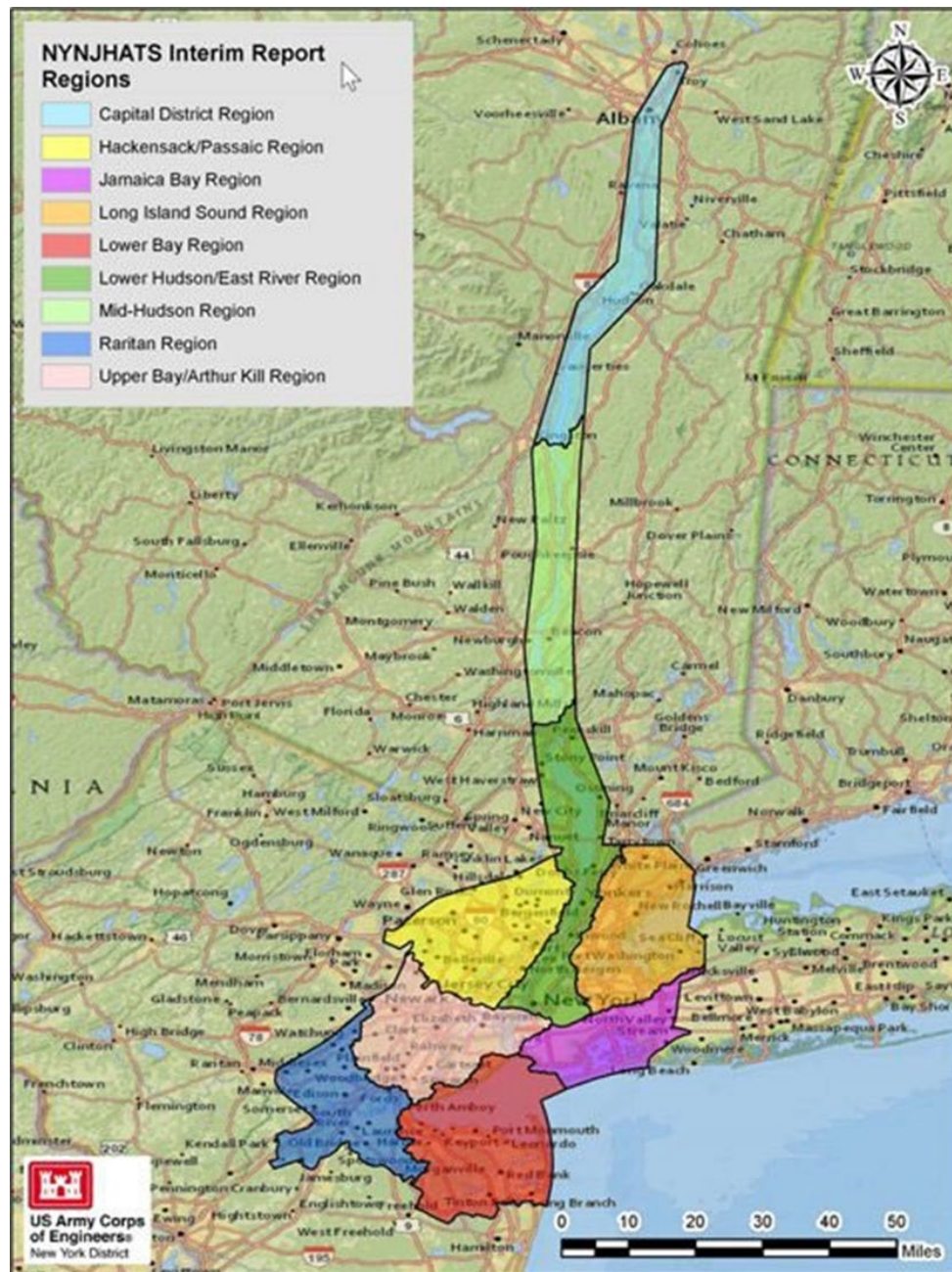
In February 2020, the NYNJHATS paused until October 2021 due to a lack of Federal funding. Following study resumption, the New York District held several Cooperating Agency meetings to facilitate open communication, share study progress, status updates, and data as it became available, including an Engineering presentation on the study alternatives, a presentation on the TSP, and a presentation on the NYBEM development progress. In September 2022, a Draft Integrated FR/Tier 1 (Programmatic) EIS was released for stakeholder, agency, and public review and comment. Following a substantial public review period of 175+ days, and approximately 2,700 comments received, many comments required a need for, among other requests, more consideration for Nature-Based Solutions to be incorporated into the Study. Ultimately, these comments informed the future of the NYNJHAT Study and introduced the need for further coordination with public and resource agencies as the Study progresses.



## 2 STUDY AREA

### 2.1 Comprehensive Plan

The Study Area of the NYNJHAT Study includes the NY Metropolitan Area, including New York City (NYC) which is the most densely populated city in the United States, and five of the six largest cities in New Jersey by population. The shorelines of some of the NYNJHAT Study Area is characterized by low elevation areas, developed with residential and commercial infrastructure, and is subject to tidal flooding during storms. The Study Area covers more than 2,150 square miles and comprises parts of 25 counties in New Jersey and New York, including Bergen, Passaic, Morris, Essex, Hudson, Union, Somerset, Middlesex, and Monmouth Counties in New Jersey; and Rensselaer, Albany, Columbia, Greene, Dutchess, Ulster, Putnam, Orange, Westchester, Rockland, Bronx, New York, Queens, Kings, Richmond, and Nassau Counties in New York.



## 2.2 Actionable Element – Harlem River

The Harlem River Actionable Element Site is located in and near Harlem, New York County, Manhattan, New York, within the Lower Bay Planning Region of the NYNJHAT Study Area. The location is characterized by mixed residential/commercial uses and open space and includes Holcombe Rucker Park, Frederick Johnson Tennis Courts, Macomb's Bridge Library, Harlem Lane Playground NYCHA's Ralph J. Rangel Houses and Polo Grounds Towers, the Macombs Dam Bridge, and Harlem River Dr.

## 2.3 Actionable Element Project Description

The Harlem River Actionable Element Site is a Coastal Storm Risk Management (CSRM) with complimentary nature-based features (NBF) to the NYNJHAT Study Overall Comprehensive Plan, managing high-frequency flood risk via a NBF, serving as a multi-line of defense to the Harlem River section of Manhattan.

### **No Action Alternative:**

Under the No Action Alternative, the U.S. Army Corps of Engineers will not construct the CSRM project along the Harlem River. The Actionable Element Site would remain as is and would continue to flood.

**Action Alternative:** The proposed action includes two potential layouts: (1) Seaward Floodwall Alignment; or (2) Landward Floodwall Alignment. See Figure 1 for comparison of the alignments.

### **Seaward Floodwall Alignment:**

This alternative alignment proposes approximately 320 linear feet (LF) of floodwall, two 40 LF each deployable flood barriers – vehicle gates, 3,636 LF anchored combi wall, and 155 LF tunnel span. The top of the floodwall elevation is approximately 17 ft NAVD88, which corresponds to approximately 6 ft higher than the existing barrier along the north bound section of the Harlem River Drive. The CSRM protection is approximately 25 ft in water from the existing Harlem River Drive barrier and 5 ft wide. Backfill will fill in the space between the roadway barrier and the floodwall. This alternative will include NBF such as oyster reefs, tidal wetlands, tide pools, and seawall panels, armor blocks, and or pile encapsulations that support aquatic marine organism growth.

### **Landward Floodwall Alignment:**

This alternative alignment proposes approximately 2,700 LF of floodwall and five 40 LF each deployable flood barriers. The top of the floodwall elevation is approximately 17 ft NAVD88 which corresponds to 0 - 12 ft above the existing ground level. The floodwalls and barriers will be approximately 5 ft wide. Also included is approximately 1 acre (AC) of invasive vegetation species management and replacement with native species.



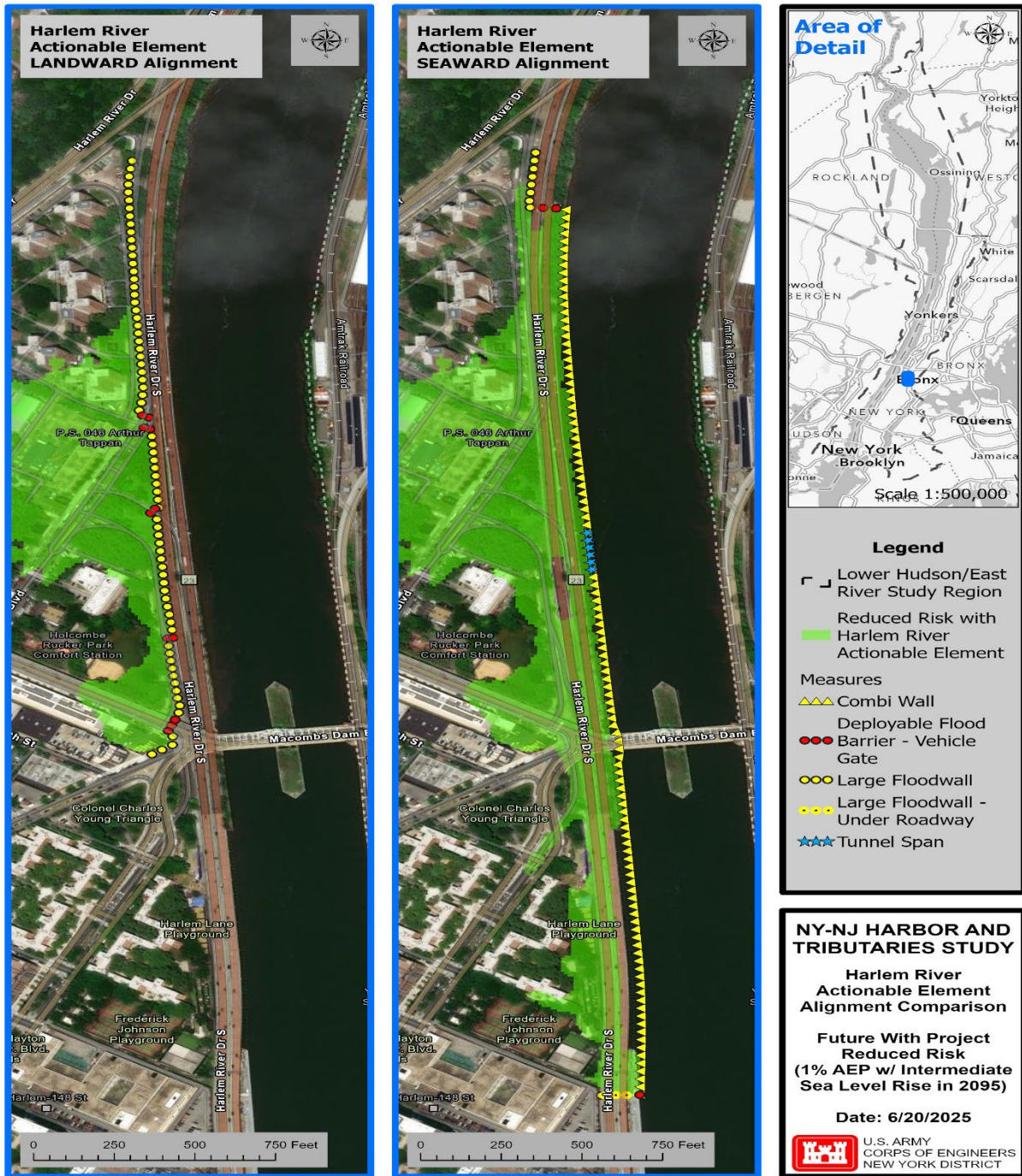


Figure 1: Harlem River CSRM Alignment Alternatives



### 3 EXISTING CONDITIONS

The entire coastline of the Harlem River is designated as a Federal CZMA boundary. The New York State CZMA boundary includes all shorelines of NY (NYSDOS 2022). The NYC Waterfront Revitalization Plan (WRP), which supplements the NYS CZMA, encompasses the shorelines and waterfronts of NYC.



Figure 2 Harlem River CZMA and LWRP Boundary

## 4 COASTAL ZONE MANAGEMENT ACT EVALUATION

### 4.1 New York State Coastal Zone Management Act Policies

The State of NY currently administers its federally approved coastal zone program (N.Y. Executive Law §910 et seq. [Consol. 1996]) through the NY State Department of State (NYSDOS). Pursuant to the Federal Coastal Zone Management Act (CMZA), NY State has defined its coastal zone boundaries and the policies to be utilized to evaluate projects occurring within the designated zones. In 1981, NY State adopted the Waterfront Revitalization and Coastal Resources Act, creating the NY State Coastal Management Program (CMP). The CMP embodies 44 policy statements supportive of the intent of the CMZA to promote a balance between economic development and coastal resource preservation and optimization.

*Table x. NY State CZMA Policies and their Applicability to the Harlem River Actionable Element Site*

Policy	Statement	Lower Hudson/East River Planning Region	
		Landward Alignment	Seaward Alignment
1	Restore, revitalize, and redevelop deteriorated and underutilized waterfront areas for commercial, industrial, cultural, recreational, and other compatible uses.	Y	Y
2	Facilitate the siting of water dependent uses and facilities on or adjacent to coastal waters.	N/A	N/A
3	Further develop the State's major ports of Albany, Buffalo, NY, Ogdensburg, and Oswego as centers of commerce and industry, and encourage the siting, in these port areas, including those under the jurisdiction of State public authorities, of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people.	N/A	N/A
4	Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities which have provided such areas with their unique maritime identity.	N/A	N/A
5	Encourage the location of development in areas where public services and facilities essential to such development are adequate.	N/A	N/A
6	Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.	N/A	N/A
7	Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.	Y	Y
8	Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants	Y	Y

Policy	Statement	Lower Hudson/East River Planning Region	
		Landward Alignment	Seaward Alignment
	which bio-accumulate in the food chain, or which cause significant sublethal or lethal effect on those resources.		
9	Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources, supplementing existing stocks, and developing new resources.	N/A	N/A
10	Further develop commercial finfish, shellfish, and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing onshore commercial fishing facilities, increasing marketing of the State's seafood products, maintaining adequate stocks, and expanding aquaculture facilities.	N/A	N/A
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.	N/A	N/A
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.	N/A	N/A
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.	N/A	N/A
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.	N/A	N/A
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.	N/A	Y
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	N/A	N/A

Policy	Statement	Lower Hudson/East River Planning Region	
		Landward Alignment	Seaward Alignment
	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		
17	Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.	N/A	N/A
18	To safeguard the vital economic, social and environmental interests of the State and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the State has established to protect valuable coastal resource areas	Y	Y
19	Protect, maintain, and increase the level and types of access to public water related recreation resources and facilities.	N/A	N/A
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.	N/A	N/A
21	Water dependent and water enhanced recreation will be encouraged and facilitated and will be given priority over non-water-related uses along the coast.	N/A	N/A
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.	N/A	N/A
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.	Y	Y
24	Prevent impairment of scenic resources of statewide significance.	N/A	N/A
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.	Y	Y
26	Conserve and protect agricultural lands in the State's coastal area.	N/A	N/A



Policy	Statement	Lower Hudson/East River Planning Region	
		Landward Alignment	Seaward Alignment
27	Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location.	N/A	N/A
28	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.	N/A	N/A
29	The development of offshore uses and resources, including renewable energy resources, shall accommodate NY'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 NY.	N/A	N/A
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.	Y	Y
31	State coastal area policies and management objectives of approved local Waterfront Revitalization Programs will be considered while reviewing coastal water classifications and while modifying water quality standards; however, those waters already overburdened with contaminants will be recognized as being a development constraint.	N/A	N/A
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.	N/A	N/A
33	Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.	Y	Y
34	Discharge of waste materials into coastal waters from vessels subject to State jurisdiction will be limited so as to protect significant fish and wildlife habitats, recreational areas and water supply areas.	N/A	N/A
35	Dredging and filling in coastal waters and disposal of dredged material will be undertaken in a manner that meets existing State dredging permit requirements, and protects significant fish and wildlife habitats, scenic resources,	N/A	Y

Policy	Statement	Lower Hudson/East River Planning Region	
		Landward Alignment	Seaward Alignment
	natural protective features, important agricultural lands, and wetlands.		
36	Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur.	N/A	N/A
37	Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.	Y	Y
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.	N/A	Y
39	The transport, storage, treatment and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreation areas, important agricultural land, and scenic resources.	N/A	N/A
40	Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards	N/A	N/A
41	Land use or development in the coastal area will not cause national or State air quality standards to be violated.	Y	Y
42	Coastal management policies will be considered if the State reclassifies land areas pursuant to the prevention of significant deterioration regulations of the Federal Clean Air Act.	Y	Y
43	Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.	Y	Y
44	Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.	N/A	Y

Notes: Y – policy is applicable to Actionable Element and project will be compliant; N – policy is applicable to Actionable Element and project will not be compliant; N/A – policy is not applicable to the Actionable Element.

## 4.2 Development Policies (numbered and italicized)

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

### Landward Alignment

The Actionable Element is consistent with this policy because it supports managing coastal storm risk for the Harlem River waterfront area from impacts associated with sea level rise, storm surges, and coastal flooding through the implementation of a floodwall and deployable barriers. The proposed alignment would reduce risk to the environment, life, property, and infrastructure from the impacts of coastal storms in the area. A visual impact assessment was conducted (see Appendix A-1C of the EA) and concluded that while the alignment produced limited measurable occlusion in terms of area, its location, elevation, and character produce substantial visual effects within Harlem's historic environment. These visual impacts were assessed as moderate to high adverse severity. This Actionable Element Site is consistent and compatible with the character of the area, will not cause further deterioration of the shoreline, and will support reduced adverse impacts to the community from potential future coastal storms like Hurricane Sandy.

### Seaward Alignment

The Actionable Element is consistent with this policy because it supports the management of coastal storm risk for the Harlem River waterfront area from impacts associated with sea level rise, storm surges, and coastal flooding through the implementation of a floodwall, deployable barriers, and combi wall. The proposed alignment would reduce risk to the environment, life, property, and infrastructure from the impacts of coastal storms in the area. A visual impact assessment was conducted (see Appendix A-1C of the EA) and concluded that the alignment would have minimal effects to the visual character of the area and that the potential for adverse visual effects would be low due to the offshore siting of the features. The seaward alignment is located adjacent and parallel to a major highway and there is currently no access to the waterfront that would allow for use of the waterfront. This Actionable Element Site 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 support reduced adverse impacts to the community from potential future storms like Hurricane Sandy.

- (2) *Facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters.*

The Actionable Element is not applicable to this policy.

- (3) *Further develop the State's major ports of Albany, Buffalo, New York, Ogdensburg, and Oswego as centers of commerce and industry, and encourage the siting, in these port areas, including those under the jurisdiction of State public authorities, of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people.*

The Actionable Element is not applicable to this policy.

- (4) *Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities that have provided such areas with their unique maritime identity.*

The Actionable Element is not applicable to this policy.

- (5) *Encourage the location of development in areas where public services and facilities essential to such development are adequate.*

The Actionable Element is not applicable to this policy.

- (6) *Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.*

The Actionable Element is not applicable to this policy.

#### **4.3 Fish and Wildlife Policies**

- (7) *Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored to maintain their viability as habitats.*

Neither alignment of the Actionable Element is located within a NYSDEC-designated Critical Environmental Area (CEA) nor a Significant Coastal Fish and Wildlife Habitat. The Actionable element will reduce damages from coastal storms like Hurricane Sandy, which is in direct accord with this policy. This policy requires that a narrative be provided to aid in consistency determination. The following is a narrative for each alignment proposed at the Actionable Element site, noting the five required items.

##### **Landward Alignment**

The Actionable Element is located in New York County, NY and will manage coastal storm risk related to sea level rise and storm surges.

Many different types of vegetative, fish, bird, and other wildlife species are potentially present in the area; these species are discussed in Section 3.1 of the Harlem River Environmental Assessment.

Physical, biological, and chemical parameters that will be improved and/or increased by the Actionable Element include reduced risk of damage wildlife, their habitats, and erosion control from coastal storms. These parameters are discussed in the Harlem River Environmental Assessment.

Excavation during construction of the floodwall would impact the existing habitat and may result in temporary effects to wildlife as they may be displaced or impacted by the noise, vibrations, and disturbances of construction activities. Operations and maintenance activities (i.e. mowing) may temporarily impact pollinator species. However, all work will utilize best management practices to limit the impacts to wildlife. Beneficially, the floodwall may deter wildlife from Harlem River Drive, decreasing incidents with traffic. Additionally, the degraded greenspace may be replaced by native, pollinator friendly species, which would improve the existing wildlife habitat and promote success of native plantings through removal of invasive species.

A comprehensive assessment of potential impacts to threatened and endangered species was completed and is documented in Section 3.2 of the Harlem River Environmental Assessment.

##### **Seaward Alignment**

The Actionable Element is located in New York County, NY and will manage coastal storm risk related to sea level rise and storm surges.

Many different types of vegetative, fish, bird, and other wildlife species are potentially present in the area; these species are discussed in Section 3.1 of the Harlem River Environmental Assessment.

Physical, biological, and chemical parameters that will be improved and/or increased by the Actionable Element include reduced risk of damage wildlife, their habitats, and erosion control from coastal storms. These parameters are discussed in the Harlem River Environmental Assessment.

Dredging and excavation during construction of the Actionable Element would impact the riverine habitat and the required filling of the alignment features may impact nearshore benthic and fish habitat. Fish species may be temporarily displaced by the noise, vibrations, and disturbance of active construction but are expected to avoid construction and utilize nearby areas of suitable habitat; it was determined the effects



to fish would be a low impact. Wildlife is expected to be similarly impacted by construction and would also be expected to return to the area when construction is completed. However, all work will utilize best management practices to limit the impacts to wildlife. Additionally, the incorporation of NBFs would create habitat for fish and benthic fauna.

A comprehensive assessment of potential impacts to threatened and endangered species was completed and is documented in Section 3.2 of the Harlem River Environmental Assessment.

Under either alignment, the potential impacts to fish and wildlife habitats will be avoided and minimized to the extent possible by employing construction Best Management Practices (BMPs) and a site-specific Stormwater Pollution Prevention Plan (SWPPP) to maintain their viability. The Harlem River Environmental Assessment provides a detailed evaluation of each alignment. Therefore, the Actionable Element would be undertaken in a manner consistent with this policy.

- (8) *Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bio-accumulate in the food chain or which cause significant sublethal or lethal effect on those resources.*

Either alignment of the Actionable Element site is consistent with this policy because it provides features that manage the risk of severe storm damage to the surrounding urbanized area which reduces the risk of petroleum and/or hazardous substances release, the spread of historical contaminated soils and sediment, and potential hazardous and toxic waste exposure, which could otherwise be impacted by sea level rise, storm surges, and coastal flooding.

As described in the Harlem River Integrated Environmental Assessment Appendix, potential construction adverse effects, such as excavating and associated soil erosion and sedimentation, will be minimized by employing construction BMPs and a site-specific SWPPP.

- (9) *Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources, supplementing existing stocks, and developing new resources.*

This Actionable Element is not applicable to this policy.

- (10) *Further develop commercial finfish, shellfish, and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing on-shore commercial fishing facilities, increasing marketing of the State's seafood products, maintaining adequate stocks, and expanding aquaculture facilities.*

The Actionable Element is not applicable to this policy.

#### **4.4 Flooding and Erosion Hazards Policies**

- (11) *Buildings and other structures will be sited in the coastal area to minimize damage to property and the endangering of human lives caused by flooding and erosion.*

The Actionable Element is not applicable to this policy.

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

The Actionable Element is not applicable to this 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.*

The Actionable Element is not applicable to this 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.*

The Actionable Element is not applicable to this 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.*

#### **Landward Alignment**

The landward alignment of the Actionable Element is not applicable to this policy.

#### **Seaward Alignment**

The seaward alignment of the Actionable Element is consistent with this policy because construction of CSRM features would be temporary. Where excavation or dredging is necessary to construct a feature, the duration and area of construction would be limited to avoid significantly interfering with natural coastal processes. The Harlem River Integrated Environmental Assessment assessed the impacts to inland hydrology, coastal hydrology, and tidal exchange and determine that the potential impacts were negligible or nonexistent. Sediments may be temporarily resuspended locally during construction, however, the implementation of BMPs such as sediment barriers will minimize sediment transport.

- (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.*

The Actionable Element is not applicable to this policy.

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

The Actionable Element is not applicable to this policy.

- (18) *To safeguard the vital economic, social and environmental interests of the State and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the State has established to protect valuable coastal resource areas.*

This Actionable Element Site is consistent with this policy, because it provides features that manage the risk of damage to valuable coastal resource areas from impacts associated with sea level rise, storm surges, and coastal flooding. The Draft Integrated FR/Tier 1 (Programmatic) EIS considered how the Comprehensive Plan Alternatives and TSP measures impact the social, cultural, economic, and environmental interests of the region and their citizens and avoid adversely affecting the valuable coastal resource areas. The Harlem River Integrated Environmental Assessment also addresses these interests.

#### **4.5 Public Access Policies**

- (19) *Protect, maintain, and increase the level and types of access to public water- related recreation resources and facilities.*

The Actionable Element is not applicable to this 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.*

The Actionable Element is not applicable to this policy.

#### **4.6 Recreation Policies**

- (21) *Water-dependent and water-enhanced recreation will be encouraged and facilitated and will be given priority over non-water-related use along the coast.*

The Actionable Element is not applicable to this 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.*

The Actionable Element is not applicable to this policy.

#### **4.7 Historic and Scenic Resources Policies**

- (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.*

##### **Landward Alignment**

This Actionable Element alignment is consistent with this policy because it provides features that manage risk for structures or sites that are of historic, archaeological, architectural, or cultural significance, from impacts associated with sea level rise, storm surges, and coastal flooding. Potential adverse impacts to below-ground archaeological resources are moderate, particularly in the small, vegetated segment of the alignment. The implementation of monitoring and appropriate testing would minimize these impacts to the extent practicable. Coordination with NYSHPO is ongoing.

##### **Seaward Alignment**

This Actionable Element alignment is consistent with this policy because it provides features that manage risk for structures or sites that are of historic, archaeological, architectural, or cultural significance, from impacts associated with sea level rise, storm surges, and coastal flooding. Potential adverse impacts to submerged archaeological resources are minimal, due to the narrow construction footprint and past disturbance by dredging, bulkhead construction, and other marine activities. However, there is potential for buried shipwrecks or waterfront structures to be present, which will be determined by a remote sensing survey to be conducted prior to construction. Coordination with NYSHPO is ongoing.

- (24) *Prevent impairment of scenic resources of statewide significance.*

The Actionable Element is not applicable to this 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.*

##### **Landward Alignment**

The Actionable Element is consistent with this policy because it provides features that manage risk related to the scenic resources from impacts associated with sea level rise, storm surges, and coastal flooding. A visual impact assessment was conducted (see Appendix A-1C of the EA) and concluded that while the alignment produced limited measurable occlusion in terms of area, its location, elevation, and character produce substantial visual effects within Harlem's historic environment. These visual impacts were assessed as moderate to high adverse severity. The Viewshed/Historic Setting Qualitative Rating score card (see section 4.1.16.1 of the Harlem River Integrated Environmental Assessment) scored the landward alignment's adverse effects as a -6 and the beneficial effects as a +2 for a net score of -3 (moderate impact).

## Seaward Alignment

The Actionable Element is consistent with this policy because it provides features that manage risk related to the scenic resources from impacts associated with sea level rise, storm surges, and coastal flooding. A visual impact assessment was conducted (see Appendix A-1C of the EA) and concluded that the alignment would have minimal affects to the visual character of the area and that the potential for adverse visual effects would be low due to the offshore siting of the features. The Viewshed/Historic Setting Qualitative Rating score card (see section 4.1.16.1 of the Harlem River Integrated Environmental Assessment) scored the landward alignment's adverse effects as a -2 and the beneficial effects as a +6 for a net score of +4 (moderate-high benefit).

(26) *Conserve and protect agricultural lands in the State's coastal area.*

The Actionable Element is not applicable to this policy.

## 4.8 Energy and Ice Management Policies

(27) *Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location.*

This Actionable Element is not applicable to this policy.

(28) *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.*

This Actionable Element is not applicable to this policy.

(29) *Encourage the development of energy resources on the outer continental shelf, in Lake Erie and in other water bodies, and ensure the environmental safety of such activities.*

This Actionable Element is not applicable to this policy.

## 4.9 Water and Air Resources Policies

(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.*

## Landward Alignment

The landward alignment of the Actionable Element is consistent with this policy, as the action does not involve the discharge of toxic or hazardous substances. Construction of the CSRM features would require BMPs and SWPPP to minimize soil erosion and sedimentation of run-off. The alignment will prevent urban runoff from flowing into the river, however this is anticipated to be a minimal or negligible beneficial impact. Additionally, construction would not affect the water classification or water quality standards in the project area, as determined by the 404(b)(1) evaluation provided in the CWA Sub-Appendix.

## Seaward Alignment

The seaward alignment of the Actionable Element is consistent with this policy, as the action does not involve the discharge of toxic or hazardous substances. Construction of the CSRM features would require BMPs such as sediment barriers to minimize sediment transport during construction activities. The construction of NBFs may have beneficial local water quality impacts, however this anticipated to be a minimal beneficial impact. The alignment may also prevent urban runoff from flowing into the river, however this is anticipated to be a minimal or negligible beneficial impact. Additionally, construction would not affect the water classification or water quality standards in the project area, as determined by the 404(b)(1) evaluation provided in the CWA Sub-Appendix.



- (31) *State coastal area policies and management objectives of approved local waterfront revitalization programs will be considered while reviewing coastal water classifications and while modifying water quality standards; however, those waters already overburdened with contaminants will be recognized as being a development constraint.*

The Actionable Element is not applicable to this 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.*

The Actionable Element is not applicable to this policy.

- (33) *Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.*

#### **Landward Alignment**

The landward alignment of the Actionable Element is consistent with this policy because construction activities of the CSRM features will include BMPs and a site-specific SWPPP, which minimizes impacts to coastal waters from soil erosion and sedimentation of run-off.

#### **Seaward Alignment**

The seaward alignment of the Actionable Element is consistent with this policy because construction activities of the CSRM features will include BMPs such as sediment barriers, which minimizes impacts to coastal waters from soil erosion and sedimentation of run-off.

- (34) *Discharge of waste materials into coastal waters from vessels subject to State jurisdiction will be limited so as to protect significant fish and wildlife habitats, recreational areas and water supply areas.*

The Actionable Element is not applicable to this policy.

- (35) *Dredging and dredge material placement in coastal waters, as applicable and permitted, will be undertaken in a manner that meets existing state dredging permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands*

#### **Landward Alignment**

The landward alignment of the Actionable Element is not applicable to this policy, as there would not be dredging or dredge material placement activities as part of construction.

#### **Seaward Alignment**

The Actionable Element is consistent with this policy because any dredging and dredge material placement associated with construction would be performed in compliance with state dredging permit requirements. Potential short-term impacts to significant fish and wildlife habitats associated with the Actionable Element are described in section 3.1 of the Harlem River Integrated Environmental Assessment. These temporary impacts primarily result from the short-term disturbance of bottom sediment associated with construction activities. These impacts would be further minimized by implementing BMPs such as sediment barriers.

- (36) *Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur.*

The Actionable Element is not applicable to this policy.

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

**Landward Alignment**

The landward alignment of the Actionable Element is consistent with this policy as previously described, will include the use of best management practices and erosion control measures, as well as the development of a SWPPP to prevent discharges and minimize erosion during construction.

**Seaward Alignment**

The seaward alignment of the Actionable Element is consistent with this policy as previously described, will include the use of best management practices such as sediment barriers to prevent discharges, minimize erosion, and sediment suspension during construction.

- (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.*

**Landward Alignment**

The landward alignment of the Actionable Element is not applicable to this policy.

**Seaward Alignment**

The seaward alignment of the Actionable Element is consistent with this policy as previously described; it will include the use of best management practices such as sediment barriers to protect water quality during construction.

- (39) *The transport, storage, treatment and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreation areas, important agricultural land, and scenic resources.*

The Actionable Element is not applicable to this policy.

- (40) *Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards.*

The Actionable Element is not applicable to this policy.

- (41) *Land use or development in the coastal area will not cause national or State air quality standards to be violated.*

Either alignment of the Actionable Element will produce temporary localized emission increases from the diesel-powered equipment used during construction. The localized emission increases from the diesel-powered equipment will last only during the project's construction period; any potential impacts will be temporary in nature. The Actionable Element's General Conformity-related annual emissions are below the de minimis threshold levels for the relevant pollutants. Therefore, by rule (40 CFR §93.153 (b)), the Actionable Element is considered de minimis and will have only a temporary impact around the construction activities with no long-term impacts and no negative effects on the applicable State Implementation Plan (SIP). Therefore, the Actionable Element is compliant with the Clean Air Act and this policy.

- (42) *Coastal management policies will be considered if the State reclassifies land areas pursuant to the prevention of significant deterioration regulations of the federal Clean Air Act.*

See response to Policy 41. The Actionable Element Site considers current coastal management policies and will be in compliance with the Clean Air Act and this policy (see CAA Sub-Appendix).

- (43) *Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.*

See response to Policy 41. The Actionable Element Site considers current coastal management policies and will be in compliance with the Clean Air Act and this policy (see CAA Sub-Appendix).

- (44) *Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.*

#### **Landward Alignment**

The landward alignment of the Actionable Element is not applicable to this policy, as there are no wetlands present.

#### **Seaward Alignment**

The seaward alignment is consistent with this policy as the existing wetlands are in the river and would not be adversely impacted by construction. The alignment would create NBF such as oyster reefs, tidal wetlands, tide pools, seawall panels, armor blocks, and/or pile encapsulations that support marine organism growth, which would have a minimal beneficial impact to wetlands in the action area.

### **4.10 New York City Waterfront Revitalization Program (WRP)**

In addition, NYC has established a coastal zone under the Waterfront Revitalization Program (WRP). The WRP includes 10 policy statements applicable to the City's Coastal Zone. The table below lists each NYC WRP policy and their applicability to the Actionable Element within each planning region.

*Table B1-1. NY City WRP Policies and their Applicability to the TSP within Each Applicable City Planning Region*

Policy	Statement	Lower Hudson/East River Planning Region	
		Landward Alignment	Seaward Alignment
1	Support and facilitate commercial and residential redevelopment in areas well-suited to such development.	N/A	N/A
2	Support water-dependent and industrial uses in NYC coastal areas that are well-suited to their continued operation.	N/A	N/A
3	Promote use of NYC's waterways for commercial and recreational boating and water-dependent transportation centers.	N/A	N/A
4	Protect and restore the quality and function of ecological systems within the NYC coastal area.	Y	Y
5	Protect and improve water quality in the NYC coastal area.	Y	Y
6	Minimize loss of life, structures and natural resources caused by flooding and erosion and increase resilience to future considerations created by climate change.	Y	Y

Policy	Statement	Lower Hudson/East River Planning Region	
		Landward Alignment	Seaward Alignment
7	Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials and industrial materials that may pose risks to the environment and public health and safety.	Y	Y
8	Provide public access to and along NYC's coastal waters.	N/A	N/A
9	Protect scenic resources that contribute to the visual quality of the NYC coastal area.	Y	Y
10	Protect, preserve and enhance resources significant to the historical, archaeological, and cultural legacy of the NYC coastal area.	Y	Y

Notes: Y – policy is applicable to Planning Region and project will be compliant; N – policy is applicable to Planning Region and project will not be compliant; N/A – policy is not applicable to the proposed NYNJHAT study.

- (1) *Support and facilitate commercial and residential redevelopment in areas well-suited to such development.*

The Actionable Element is not applicable to this policy.

- (2) *Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.*

The Actionable Element is not applicable to this policy.

- (3) *Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.*

The Actionable Element is not applicable to this policy.

- (4) *Protect and restore the quality and function of ecological systems within the New York City coastal area.*

#### **Landward Alignment**

The Actionable Element is consistent with this policy because it provides features that manage risk of impacts related to the quality and function of ecological systems from impacts associated with sea level rise, storm surges, and coastal flooding. There are no Special Natural Waterfront Areas, Significant Coastal Fish and Wildlife Habitats, Ecologically Sensitive Maritime and Industrial Areas, Recognized Ecological Complex, or wetlands present in the Actionable Element site.

A description of the fish and wildlife potentially present at the site is presented in Section 3.1 of the Harlem River Integrated Environmental Assessment. Excavation during construction of the floodwall would impact the existing habitat and may result in temporary effects to wildlife as they may be displaced or impacted by the noise, vibrations, and disturbances of construction activities. Operations and maintenance activities (i.e. mowing) may temporarily impact pollinator species. However, all work will utilize BMPs to limit the impacts to wildlife. Beneficially, the floodwall may deter wildlife from Harlem River Drive, decreasing incidents with traffic. Additionally, the degraded greenspace may be replaced by native, pollinator-friendly species, which would



improve the existing wildlife habitat and promote success of native plantings through removal of invasive species.

### **Seaward Alignment**

The Actionable Element is consistent with this policy because it provides features that manage the risk of impacts related to the quality and function of ecological systems from impacts associated with sea level rise, storm surges, and coastal flooding. There are no Special Natural Waterfront Areas, Significant Coastal Fish and Wildlife Habitats, Ecologically Sensitive Maritime and Industrial Areas, or Recognized Ecological Complex present in the Actionable Element site. Wetlands would not be adversely impacted by the seaward alignment, rather, the alignment will create NBF such as oyster reefs, tidal wetlands, tide pools, seawall panels, armor blocks, and/or pile encapsulations that support marine organism growth and have a minimal beneficial impact to wetlands within the action area.

A description of the fish and wildlife potentially present at the site is presented in Section 3.1 of the Harlem River Integrated Environmental Assessment. Dredging and excavation during construction of the CSRM features would impact the riverine habitat and the required filling of the alignment may impact nearshore benthic and fish habitat. Fish species may be temporarily displaced by the noise, vibrations, and disturbance of active construction but are expected to avoid construction and utilize nearby areas of suitable habitat; it was determined that the effects to fish species would be minimal. Wildlife is expected to be similarly impacted by construction and would also be expected to return to the area when construction is completed. However, all work will utilize BMPs to limit the impacts to wildlife. Additionally, the incorporation of NBFs would create habitat for fish and benthic fauna.

- (5) *Protect and improve water quality in the New York City coastal area.*

### **Landward Alignment**

The Actionable Element is consistent with this policy as it will include the use of BMPs and erosion control measures, as well as the development of a SWPPP, to prevent discharges and minimize erosion during construction.

### **Seaward Alignment**

The Actionable Element is consistent with this policy as it will include the use of BMPs such as sediment barriers to prevent discharges, minimize erosion, and sediment suspension during construction. Temporary short-term disturbance of bottom sediment associated with construction activities would be minimized by the implementation of these BMPs.

- (6) *Minimize loss of life, structures and natural resources caused by flooding and erosion and increase resilience to future considerations created by climate change.*

The Actionable Element is consistent with and promotes this policy because it provides features that manage the risk for life, structures, and natural resources from impacts associated with sea level rise, storm surges, and coastal flooding.

- (7) *Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials and industrial materials that may pose risks to the environment and public health and safety.*

### **Landward Alignment**

The landward alignment of the Actionable Element is consistent with this policy, as the action does not involve the discharge of toxic or hazardous substances. Construction of the CSRM features would require BMPs and SWPPP to minimize soil erosion and sedimentation of run-off. The alignment will prevent urban runoff from flowing into the river, however this is anticipated to be a minimal or negligible beneficial impact. Additionally,

construction would not affect the water classification or water quality standards in the project area, as determined by the 404(b)(1) evaluation provided in the CWA Sub-Appendix.

### **Seaward Alignment**

The seaward alignment of the Actionable Element is consistent with this policy, as the action does not involve the discharge of toxic or hazardous substances. Construction of the CSRM features would require BMPs such as sediment barriers to minimize sediment transport during construction activities. The construction of NBFs may have beneficial local water quality impacts, however this anticipated to be a minimal beneficial impact. The alignment may also prevent urban runoff from flowing into the river, however this is anticipated to be a minimal or negligible beneficial impact. Additionally, construction would not affect the water classification or water quality standards in the project area, as determined by the 404(b)(1) evaluation provided in the CWA Sub-Appendix.

- (8) *Provide public access to and along New York City's coastal waters.*

The Actionable Element is not applicable to this policy.

- (9) *Protect scenic resources that contribute to the visual quality of the New York City coastal area.*

### **Landward Alignment**

The Actionable Element is consistent with this policy because it provides features that manage the risk related to the scenic resources from impacts associated with sea level rise, storm surges, and coastal flooding. A visual impact assessment was conducted (see Appendix A-1C of the EA) and concluded that while the alignment produced limited measurable occlusion in terms of area, its location, elevation, and character produce substantial visual effects within Harlem's historic environment. These visual impacts were assessed as moderate to high adverse severity. The Viewshed/Historic Setting Qualitative Rating score card (see section 4.1.16.1 of the Harlem River Integrated Environmental Assessment) scored the landward alignment's adverse effects as a -6 and the beneficial effects as a +2 for a net score of -3 (moderate impact).

### **Seaward Alignment**

The Actionable Element is consistent with this policy because it provides features that manage the risk related to the scenic resources from impacts associated with sea level rise, storm surges, and coastal flooding. A visual impact assessment was conducted (see Appendix A-1C of the EA) and concluded that the alignment would have minimal effects to the visual character of the area and that the potential for adverse visual effects would be low due to the offshore siting of the features. The Viewshed/Historic Setting Qualitative Rating score card (see section 4.1.16.1 of the Harlem River Integrated Environmental Assessment) scored the landward alignment's adverse effects as a -2 and the beneficial effects as a +6 for a net score of +4 (moderate-high benefit).

- (10) *Protect, preserve and enhance resources significant to the historical, archaeological, and cultural legacy of the New York City coastal area.*

### **Landward Alignment**

This Actionable Element alignment is consistent with this policy because it provides features that manage the risk for structures or sites that are of historic, archaeological, architectural, or cultural significance, from impacts associated with sea level rise, storm surges, and coastal flooding. Potential adverse impacts to below-ground archaeological resources are moderate, particularly in the small, vegetated segment of the alignment. The implementation of monitoring and appropriate testing would minimize these impacts to the extent practicable. Coordination with NYSHPO is ongoing.

## **Seaward Alignment**

This Actionable Element alignment is consistent with this policy because it provides features that manage risk for structures or sites that are of historic, archaeological, architectural, or cultural significance, from impacts associated with sea level rise, storm surges, and coastal flooding. Potential adverse impacts to submerged archaeological resources are minimal, due to the narrow construction footprint and past disturbance by dredging, bulkhead construction, and other marine activities. However, there is potential for buried shipwrecks or waterfront structures to be present, which will be determined by a remote sensing survey to be conducted prior to construction. Coordination with NYSHPO is ongoing.

## 5 EFFECTS AND CONSEQUENCES

### 5.1 Adverse Effects

#### **Landward Alignment**

Direct impacts of construction would result in temporary impacts within the CZMA zone to wildlife and potentially to below-ground archaeological resources. These impacts would be minimized by the implementation of BMPS and appropriate monitoring and testing. Permanent moderate impacts to the visual resources due to the height of the floodwall are anticipated, however, the protection provided to the existing resources from the CSRM features from the impacts of coastal storms minimize these impacts. The Actionable Element in itself is consistent with the spirit and intent of the CZMA to “preserve, protect, develop and where possible, to restore or enhance the resources of the [N]ation’s coastal zone.” After construction of the CSRM features, the project fulfills two of the programs’ objectives in the long-term.

The only direct impact from operations and maintenance activities would include temporary impacts to pollinator species during mowing.

#### **Seaward Alignment**

Direct impacts of construction would result in temporary impacts within the CZMA zone to fish and wildlife and potentially to submerged archaeological resources. These impacts would be minimized by the implementation of BMPS and appropriate monitoring and testing. Permanent low impacts to the visual resources due to the height of the floodwall are anticipated, however, the protection provided to the existing resources from the CSRM features from the impacts of coastal storms minimize these impacts. Dredging and excavation during construction would result in temporary resuspension of sediments but the implementation of BMPS would minimize sediment transport. The Actionable Element in itself is consistent with the spirit and intent of the CZMA to “preserve, protect, develop and where possible, to restore or enhance the resources of the [N]ation’s coastal zone.” After construction of the CSRM features, the project fulfills two of the programs’ objectives in the long-term.

No direct or indirect adverse effects from operation and maintenance of the Site are anticipated to CZMA.

### 5.2 Beneficial Effects

The Actionable element will manage the coastal storm risk for the Harlem River waterfront area from the impacts associated with sea level rise, storm surges and coastal flooding. The alignment would reduce risk to the environment, life, property, and infrastructure from the impacts of coastal storms in the area.

#### **Landward Alignment**

The landward alignment of the Actionable element would remove invasive species from the degraded greenspace and replace them with native, pollinator-friendly species, which would improve the existing wildlife habitat and promote the success of native plantings.

#### **Seaward Alignment**

The seaward alignment of the Actionable element would incorporate NBFs such as oyster reefs, tidal wetlands, tide pools, seawall panels, armor blocks, and/or pile encapsulations that support marine organism growth and would create habitat for fish and benthic fauna.

## **6 COASTAL ZONE MANAGEMENT ACT CONSISTENCY DETERMINATION**

This CZMA consistency evaluation considered the implementation of the Actionable Element Site Action, the applicability of Federal, State, and Local CZMA regulations in order to make a consistency determination. This Actionable Element site is consistent with all applicable policies of New York State CZMA and NYC WRP.