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-2E HARLEM RIVER ACTIONABLE ELEMENT SITE CLEAN WATER ACT

July 2025

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1 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), New York District, has prepared this assessment to evaluate consistency with the Clean Water Act (CWA) 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 reduce risk to 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.

Section 401 of the CWA requires every applicant for a Federal license or permit for any activity that may result in a discharge into navigable waters to obtain a State Water Quality Certificate or a waiver that the proposed activity will comply with the state water quality standards. NYSDEC and NJDEP issue Section 401 Water Quality Certificates for activities within each respective State (in New Jersey via the Waterfront Development Permits and CAFRA Permits processes).

Section 402 of the CWA prohibits the discharge of pollutants to the waters of the United States from any point source unless the discharge follows a National Pollutant Discharge Elimination System (NPDES) Permit (SPDES in New York and NJPDES in New Jersey). Storm water discharges associated with any activity that involves earth disturbances that exceed one acre also require a NPDES permit.

Section 404 of the CWA regulates the discharge of dredge or fill materials into the waters of the Unites States, including wetlands, at specific disposal sites. The selection and use of disposal sites must be in accordance with guidelines development by the U.S. EPA in conjunction with the Secretary of the Army and published in 40 CFR Part 230 (also known as the 404(b)(1) guidelines). Under Section 404(b)(1) USACE shall examine practicable alternatives to the proposed discharge and permit only the Least Environmentally Damaging Practicable Alternative (LEDPA). Both Section 404 and 33 C.F.R. 336(c)(4) and 320.4(b) require USACE avoid, minimize, and mitigate impacts to wetlands.

The purpose of this CWA Section 404(b)(1) assessment is to ensure that the Actionable Element Site will not cause or contribute to significant degradation of the waters of the United States.

This document focuses on the Harlem River Actionable Element Site, Seaward Alignment, as a complementary feature 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 coastal storm risk management (CSRM) measures and lack of defense to critical transportation and energy infrastructure.

The January 2015, USACE 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 reduce risk to vulnerable populations within the North Atlantic region. To address the impacts and concerns associated with devastating storms, the USACE 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. Interim responses often arise during the progress of a programmatic study, as in this case, to respond to an immediate CSRM need 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. The purpose and need of this action is to manage risk to critical infrastructure in local areas of high susceptibility to storm surge and at-risk communities. This Interim Response action addresses a critical need for CSRM measures in Harlem River, New York, East Riser, New Jersey, and Oakwood Beach, New York.

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

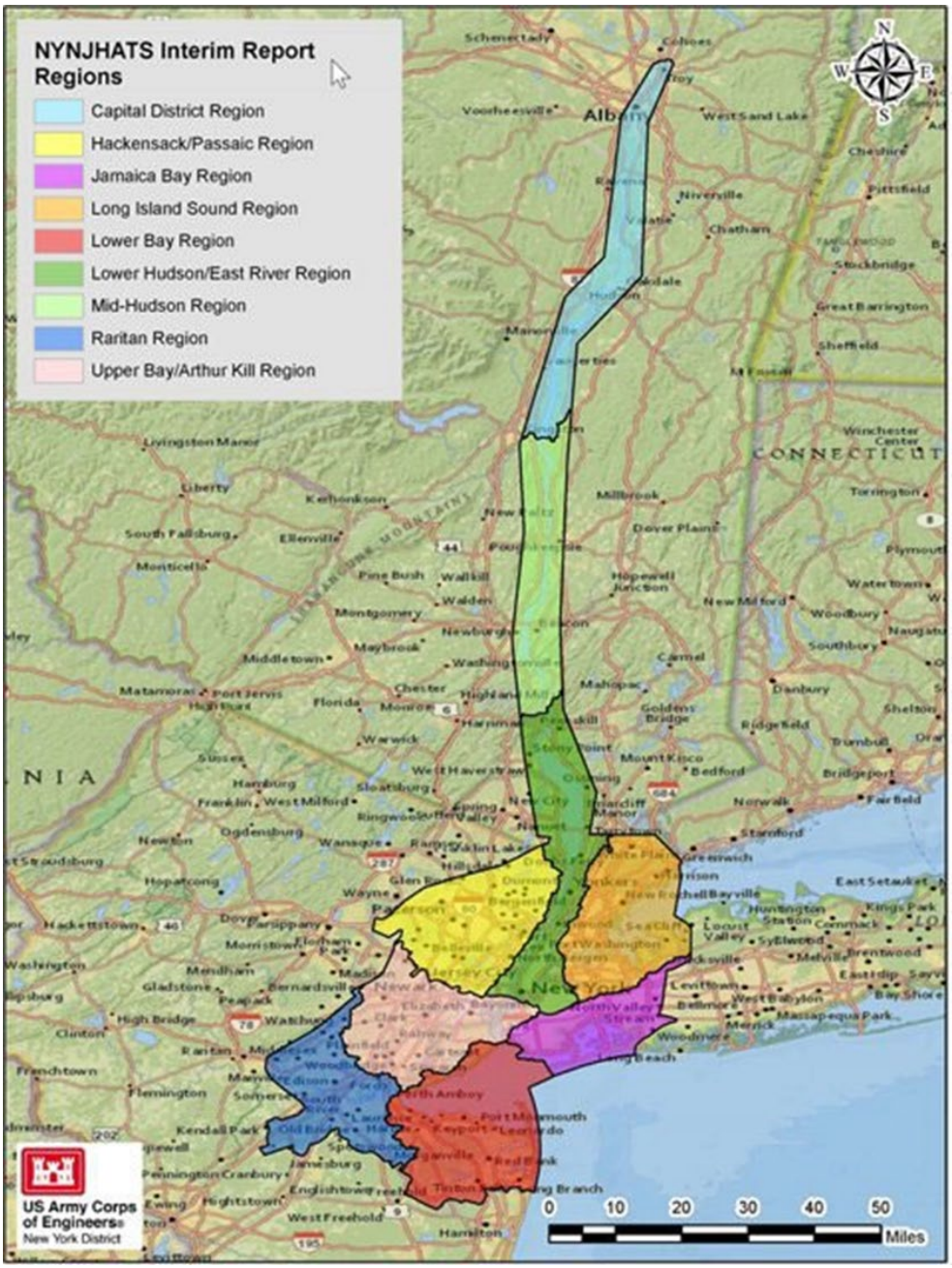
public scoping meetings during the public scoping period. In 2019, four NYBEM workshops were held on January 3, March 11, June 6, and November 14 to help inform the NYBEM model set up to be used as a tool for assessing some direct and indirect effects of agency actions on regional ecosystems including the NYNJHAT Study, among others.

In February 2020, the NYNJHAT Study 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.

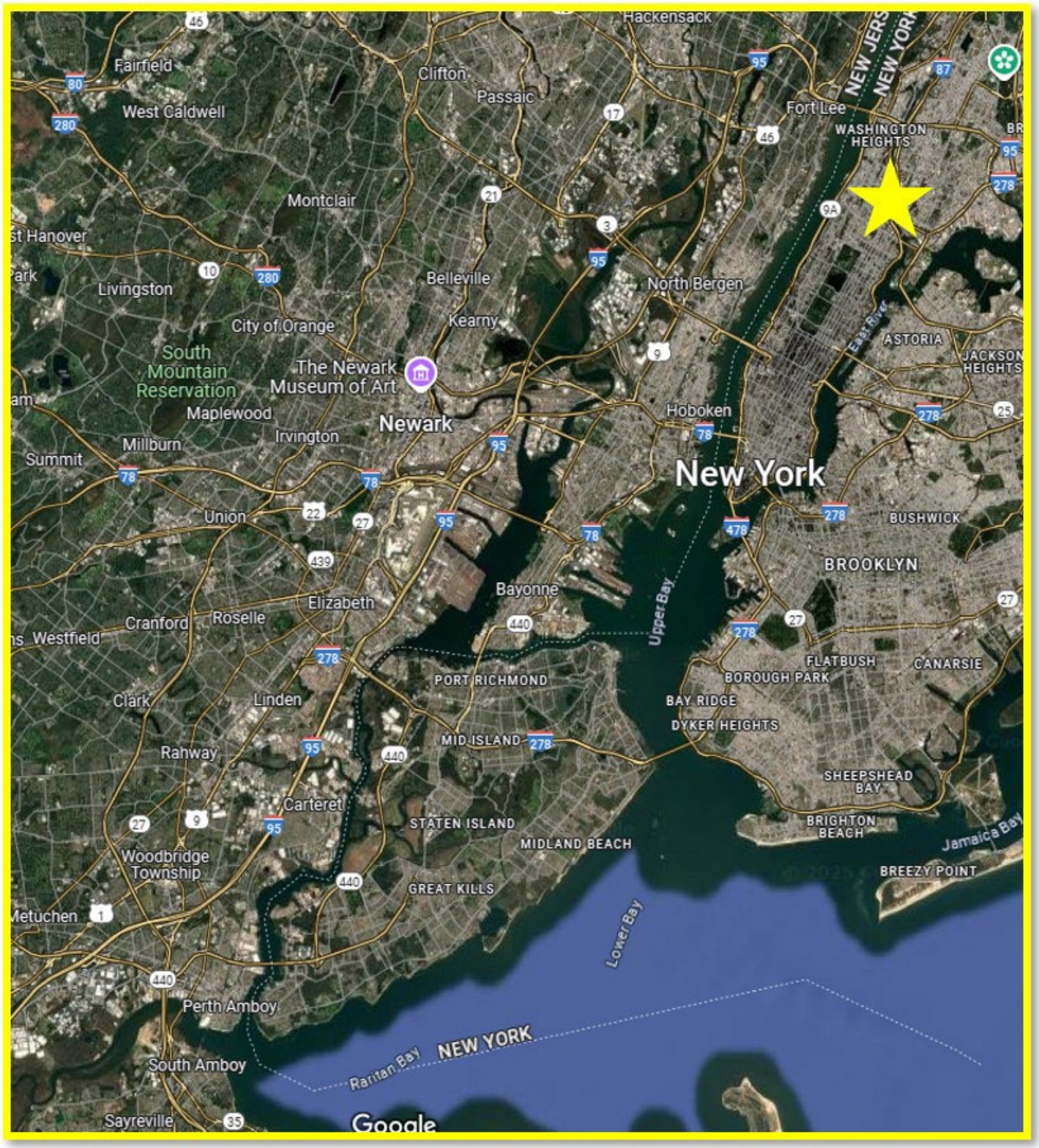


2.2 LOWER HUDSON/EAST RIVER PLANNING REGION

The Lower Hudson/East River Region is based on the 8-digit HUC for the Lower Hudson subbasin in the Watershed Boundary Dataset (USGS 2018). Surface waters flow from land into the Hudson River through hundreds of tributaries (rivers and streams) from the north, east, and west. The Hudson River is the most dominant surface water feature in this region, originating at Lake Tear of the Clouds in the Adirondack Mountains at an elevation 4,322 feet above mean sea level, and extending south approximately 315 miles to New York City, New York. Many tributaries are present throughout these regions, several of which drain to the Hudson River from portions of Connecticut, Massachusetts, New Jersey, and Vermont (USACE 2020a). The Hudson River channel runs linear north-south except for a few sharp bends observed in the Hudson Highlands. From Troy to Newburgh, the river is generally less than three quarters of a mile wide. The river widens at Newburgh Bay, narrows again through the Hudson Highland Gorge, becomes its widest through the shallow bays of Haverstraw Bay and the Governor Mario Cuomo Bridge and subsequently remains narrow until converging with the upper New York Harbor (USACE 2020a). The Hudson River primarily flows south but is tidally influenced with dual flow directions, extending north as far as Troy, New York (USACE 2022a). Located in the Lower Hudson/East River Region is the East River, a tidal strait connecting Long Island Sound and Upper Bay. The Hudson River and the East River connect in the Upper Bay near Jersey City, New Jersey and Manhattan and Brooklyn, New York; however, the Hudson River first converges with the East River via the Harlem River further north near Inwood, New York. The Bronx River watershed and a portion of the Northern Long Island watershed both drain into the East River. (USACE 2020a).

2.3 ACTIONABLE ELEMENT – HARLEM RIVER

The Actionable Element Site identified within the Study Area for this consistency determination is identified as Harlem River. 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. This Actionable Element Site is located within the Lower Hudson/East River Planning Region of the overall Comprehensive Plan.


Hackensack
Fairfield
Clifton
Passaic
West Caldwell
Fort Lee
WASHINGTON HEIGHTS
Montclair
Belleville
North Bergen
Livingston
City of Orange
Kearny
ASTORIA
South Mountain Reservation
The Newark Museum of Art
Maplewood
Newark
Hoboken
Millburn
Irvington
Summit
New York
Union
BUSHWICK
BROOKLYN
Bayonne
Elizabeth
Cranford
Roselle
Westfield
Upper Bay
FLATBUSH
BOROUGH PARK
CANARSIE
PORT RICHMOND
Clark
Linden
BAY RIDGE
DYKER HEIGHTS
MID ISLAND
Rahway
SHEEPSHEAD BAY
Carteret
STATEN ISLAND
BRIGHTON BEACH
MIDLAND BEACH
Woodbridge Township
Jamaica Bay
BREEZY POINT
GREAT KILLS
Metuchen
Lower Bay
Perth Amboy
Raritan Bay
NEW YORK
South Amboy
Sayreville
Google

3 ACTION ALTERNATIVE

The Harlem River Actionable Element is a Coastal Storm Risk Management (CSRM) structural measure with complementary nature-based solution (NBS) features to the NYNJHAT Study Overall Comprehensive Plan, providing high-frequency flood risk management, and serves as a multi-line of defense to the NYNJHAT Study, Harlem River section of Manhattan. This Site includes two separate alignments for public consideration: (1) a Seaward Alignment consisting of an in-water measure (combination seawall and tunnel span structure), shore-based tie-in measures (e.g. floodwall), deployable vehicular gates, and complementary NBS; and, (2) a Landward Alignment consisting of entirely on-land measures (e.g. floodwalls), several deployable vehicular gates, and invasive vegetation species management for replacement with native species and other potential complementary NBS to be identified.

No Action:

Under the No Action Alternative, the U.S. Army Corps of Engineers will not construct the CSRM project, therefore, he proposed Actionable Element Site would remain as is and would continue to be exposed to flood risks.

Action (two alternative alignments):

Seaward Alignment:

This alternative 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 CSRM line of protection 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 Dr. The CSRM protection is approximately 25 feet in water (seaward) from the existing Harlem Rive Drive barrier and 5 feet wide. Backfill will fill in the space between the roadway barrier and the seawall, and will include NBSs such as oyster reefs, tidal wetlands, tide pools, and seawall panels, armor blocks, and or pile encapsulations that support aquatic marine organism growth for wave attenuation. This alignment also includes some invasive vegetation species management and replacement for the tie-ins.

Landward Alignment:

This alternative proposes approximately 2,700 LF of floodwall and five 40 LF each deployable flood barriers. approximately 17 ft NAVD88 which corresponds to 0 - 12 ft above ground. 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.

Legend

- Lower Hudson/East River Study Region
- Reduced Risk with Harlem River Actionable Element

Measures

- Combi Wall
- Deployable Flood Barrier - Vehicle Gate
- Large Floodwall
- Large Floodwall - Under Roadway
- Tunnel Span

NY-NJ HARBOR AND TRIBUTARIES STUDY

Harlem River Actionable Element Alignment Comparison

Future With Project Reduced Risk (1% AEP w/ Intermediate Sea Level Rise in 2095)

Date: 6/20/2025

U.S. ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

3.1 ALTERNATIVES CONSIDERED:

The consideration of reasonable alternatives is required in accordance with the National Environmental Policy Act (NEPA; 42 United States Code [USC] § 4321 *et seq.*), President's Council on Environmental Quality (CEQ) NEPA Regulations (40 Code of Federal Regulations [CFR] §§ 1500–1508), and Engineering Regulations (ER) 200-2-3 "Environmental Analysis of Army Actions" as promulgated by 32 CFR Part 651. Site selection standards were developed for the Action and used to identify, compare, and evaluate reasonable alternatives. The selection standards were developed to be consistent with the purpose and need for the Action and to address pertinent mission, environmental, safety, and health factors.

No Action Alternative: Under the No Action Alternative, the U.S. Army Corps of Engineers will not advance the Actionable Element Site.

Action Alternative: The Actionable Element Site for the Action Alternative has two potential alignments for consideration and public feedback, identified as the Seaward Alignment and Landward Alignments.

4 EXISTING CONDITIONS

The surface water systems located throughout the NYNJHAT Study Area are subject to water quality concerns including salinity variances, low dissolved oxygen, presence of pathogens, contaminants, and nutrient depletion. Potential water quality degradation sources vary between waterway, but generally are associated with known contaminated sites, Superfund Sites, wastewater treatment effluents, combined sewer outfalls, storms, and stormwater runoff from the highly urban surrounding environment (USACE, 2022). The NJDEP and NYSDEC have established classification systems for the best intended uses of surface water quality within the Study Area (e.g. Surface Water Quality Standards, *New Jersey Administrative Code* (N.J.A.C.) 7:9B and Water Quality Regulations, 6 NYCRR Parts 700-705). These classifications are based on the extent to which these surface waters will attain the Clean Water Act goals of aquatic life support and swim-ability, and the designated uses outlined by each State.

The following briefly discusses the quantitative and qualitative water quality data taken from various sources, including a high-level overview inclusive of salinity, dissolved oxygen, nitrogen, fecal coliform, and chlorophyll-a trends in these dominant surface water bodies. Reference is specifically made to the Harbor-Wide Water Quality Monitoring Report (HWQMR) 2021 completed by the Hudson River Foundation as a part of the NY/NJ Harbor and Estuary Program. The report contains data on dissolved oxygen, pathogenic bacteria (fecal coliform and Enterococcus), nitrogen, and chlorophyll-a that was collected from 2010-2017 in many of the waterbodies in the Study Area. Those data are discussed frequently throughout this section. Much of this information is also presented in the New York New Jersey Harbor and Tributaries Draft Integrated Feasibility Report and Tier 1 Environmental Impact Statement, which encompasses much of the same Study Area as this, supplemented by the New York City Department of Environmental Protection 2022-2023 Harbor Survey Report (NYC DEP, 2024).

The USEPA defines salinity as "...the dissolved salt content of a body of water...[that] can be a chemical stressor in the aquatic environment as fluctuating levels of salinity can affect aquatic biological organisms which are adapted to prevailing salinity concentrations." Salinity concentrations can vary depending on a variety on conditions including location, tidal influence, weather, storms, and floods, etc. Salinity conditions are generally categorized as follows: tidal fresh (<0.5 parts per thousand [ppt]); oligohaline (0.5-5.0 ppt), mesohaline (5.0-18.0 ppt); polyhaline (18.0-30.0 ppt); and euhaline (>30.0 ppt).

The HWQMR utilized the USEPA's nationally recognized standards for dissolved oxygen, nitrogen, fecal coliform, and chlorophyll-a to compare the recorded values, as follows:

- **Dissolved Oxygen:** there are two threshold values for hypoxia: acute hypoxia, the dissolved oxygen level at which marine life has a greater potential to die, is indicated when water has less than 2.3 milligrams of dissolved oxygen per liter (mg/L); and chronic hypoxia, the continuous level at which dissolved oxygen hinders growth of marine life and is indicated by dissolved oxygen levels less than 4.8 mg/L.
- **Nitrogen:** levels of total nitrogen exceeding 1.2 milligrams per liter (mg/L) is considered poor, and levels found equal to, or less than 0.4 mg/L is considered good.
- **Chlorophyll-a:** a threshold of greater than 20 micrograms per liter (µg/L) to indicate poor quality while considering values of less than 5 µg/L as supportive of healthier habitats for fish survival and propagation. High Chlorophyll-a concentrations can be indicative of an algal bloom.
- **Fecal Coliform:** fecal coliform levels should not exceed a geometric mean of 200 cfu/100mL. No more than 10% of all samples taken in a 30-day period should exceed 400 cfu/100 mL (Da Silva et al. 2021).

Details regarding potential for contaminants are discussed in the Hazardous, Toxic, Radioactive Waste Section SubAppendix.

The Harlem and East Rivers are classified as Class 1: Fishing and Boating. The NYSDEC has proposed reclassification of the Harlem River from Class I to SB; swimmable and fishable, with limited suspension of standards protective of swimming during wet weather events. Below are water quality data from the Harlem and East Rivers

- **Salinity:** Salinity levels in the East River are reported to fluctuate a small amount between approximately 22.11 and 27.43. The small fluctuation can be attributed to the fact that the East River has limited freshwater input (Li and Meseck).
- **Dissolved Oxygen**: DO levels in the East and Harlem Rivers are not overly depleted, and fish in this region are not consistently stressed. In 2012, there were uncharacteristically low levels of DO recorded. Between 2010 and 2017, the percent of time DO samples were less than 4 mg/L was between 0-28% for surface DO and 0-22% for bottom DO (Da Silva, Dujardin, White, Christiana, Pirani, Strehlau 2021).
- **Nitrogen and Chlorophyll-a:** In the HWQMR, between 2010 and 2017, the summer means for total nitrogen were reported to range between 0.39 and 2.62 mg/L, fluctuating in and out the threshold for healthy levels. Chlorophyll- a in this region showed concentrations below 5 µg/L, which indicates conditions for healthy habitat for fish survival.
- **Contamination/ Pathogens:** Major contamination sources in the East and Harlem Rivers include CSO, contaminated sediments, industrial point source discharges, municipal discharges/WWTPs, spills/unpermitted discharges, and stormwater runoff. According to the HWQMR the average geomean for fecal coliform in this region is 70.7 cfu/100mL (Da Silva, Dujardin, White, Christiana, Pirani, Strehlau 2021).

4.1 ACTION ALTERNATIVE

Adverse Effects

Minor direct and indirect adverse effects from the seaward alternative are anticipated. During construction sediment will be resuspended locally. Best Management Practices such as sediment barriers will minimize sediment transport.

No direct or indirect adverse effects from operation and maintenance of the site are anticipated to water quality.

Beneficial Effects

Minor direct and indirect beneficial effects from the seaward alternative are anticipated. The construction of the NBF may have beneficial local water quality impacts however that impact is anticipated to be minimal. The alignment will also prevent urban runoff from flowing into the river by physically stopping it however that impact is anticipated to be minimal if at all.

No direct or indirect adverse effects from operation and maintenance of the site are anticipated to water quality.

4.2 FACTUAL DETERMINATION

Review of Compliance: Section 230.10(a)-(d)	Yes	No
a. The discharge represents the least environmentally damaging practicable alternative and, if in a special aquatic site, the activity associate with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose.	X	
b. The activity does not appear to: 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of	X	

Federally-listed threatened and endangered species or their habitat; and 3) violate requirements of any Federally designated marine sanctuary.		
c. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic and economic values.	X	
d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.	X	

Technical Evaluation Factors (Subparts C-F)	**Adverse Effects Determination**		
Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C)	**Not Applicable**	**Significant**	**Not Significant**
1) Substrate			X
2) Suspended particulates/turbidity			X
3) Water column impacts			X
4) Current patterns and water circulation			X
5) Normal water circulations			X
6) Salinity gradients			X
Potential Impacts on Biological Characteristics of the Aquatic Ecosystem (Subpart D)	**Not Applicable**	**Significant**	**Not Significant**
1) Threatened and endangered species			X
2) Fish, crustaceans, mollusks, and other organisms in the aquatic food web			X
3) Other wildlife (mammals, birds, reptiles, and amphibians)			X
Potential Impacts on Special Aquatic Sites (Subpart E)	**Not Applicable**	**Significant**	**Not Significant**
1) Sanctuaries and refuges	X		
2) Wetlands			X
3) Mud Flats			X
4) Vegetated Shallows	X		
5) Coral Reefs	X		
6) Riffle and pool complexes	X		
Potential Effects on Human Use Characteristics (Subpart F)	**Not Applicable**	**Significant**	**Not Significant**
1) Municipal and private water supplies	X		
2) Recreational and commercial fisheries			X
3) Water-related recreation			X
4) Aesthetic impacts			X
5) Parks, national and historic monuments, national seashores, wilderness areas, research sites and similar preserves			X

Evaluation and Testing – Subpart G		
A. The following information has been considered in evaluating the biological availability of possible contaminants in dredge or fill material:	**YES**	**NO**
1) Physical characteristics	X	
2) Hydrology in relation to known or anticipated sources of contaminants	X	

3) Results from previous testing and the material or similar material in the vicinity of the project	X	
4) Known, significant sources of persistent pesticides from land runoff of percolation	X	
5) Spill records of significant introduction of contaminates	X	
6) Public records of significant introduction of contaminants from industries, municipalities or other sources	X	
7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities	X	
8) Other sources (specify)		X
B. An evaluation of the appropriate information factors in 3a above indicates that there is reason to believe the proposed dredge material is not a carrier of contaminants, or that levels of contaminants are substantively similar at extraction and disposal sites and not likely to require constraints.	X	

Actions to Minimize Adverse Effects (Subpart H)	**YES**	**NO**
All appropriate and practicable steps have been taken, through application of recommendation of Section 230.70-230.77 to ensure minimal adverse effects of the proposed discharge.	X	

Factual Determination – Section 230.11	**YES**	**NO**
A review of appropriate information, as identified in items 2-5 above, indicates there is minimal potential for shore or long term environmental effects of the proposed discharge as related to:	X	
a. Physical substrate at the disposal site (review Section 2a, 3, 4, and 5 above)	X	
b. Water circulation, fluctuation and salinity (review Sections 2a, 3, 4, and 5)	X	
c. Suspended particulates/turbidity (review Sections 2a, 3, 4, and 5)	X	
d. Contaminant availability (review Sections 2a, 3, and 4)	X	
e. Aquatic ecosystem structure, function, and organisms (review Sections 2b, 2c, 3 and 5)	X	
f. Proposed disposal site (review Section 2, 4, and 5)	X	
g. Cumulative effects on the aquatic ecosystem	X	
h. Secondary effects on the aquatic ecosystem	X	

Findings of Compliance or Non-Compliance	**YES**	**NO**
The proposed disposal site for discharge of dredged or fill material complies with Section 404(b)(1) guidelines.	X	

In summary, this Actionable Element Site's purpose is to manage coastal storm risk related to storm surges, sea level rise and flooding that involves placement and/or beneficial use of clean sand and/or dredged material, which will be coordinated with or directed by the affected state and:

- Will have no significant adverse effects of the discharge of pollutants on human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites.

- Will have no significant adverse effects of the discharge of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and spread of pollutants or their byproducts outside of the disposal site through biological, physical, and chemical processes.

- Will have no significant adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability.

- Will have no significant adverse effects of discharge of pollutants on recreational, aesthetic, and economic values.

5 LIST OF PREPARERS AND CONTRIBUTORS

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