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

National Environmental Policy Act (NEPA) SCOPING MEETING

U.S. Army Corps of Engineers, New York District
New Jersey Department of Environmental Protection
New York State Department of Environmental Conservation in partnership with the New York City Office of Recovery and Resiliency

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."

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New York-New Jersey Harbor and Tributaries Coastal Storm Risk Management Feasibility Study

AGENDA

Evening Session

- 6:00-6:15 Welcome/sign-in
- 6:15-6:45 Presentation by the study team
- 6:45-8:00 Comment Card Question and Answer and Poster session

*The **scoping poster session** is time for participants to ask questions and have follow-on discussion with the study team, as well as provide input/comments into the scoping process.*

This intent is provide face-to-face time with the study team to facilitate meaningful discussion and input from the community and stakeholders.

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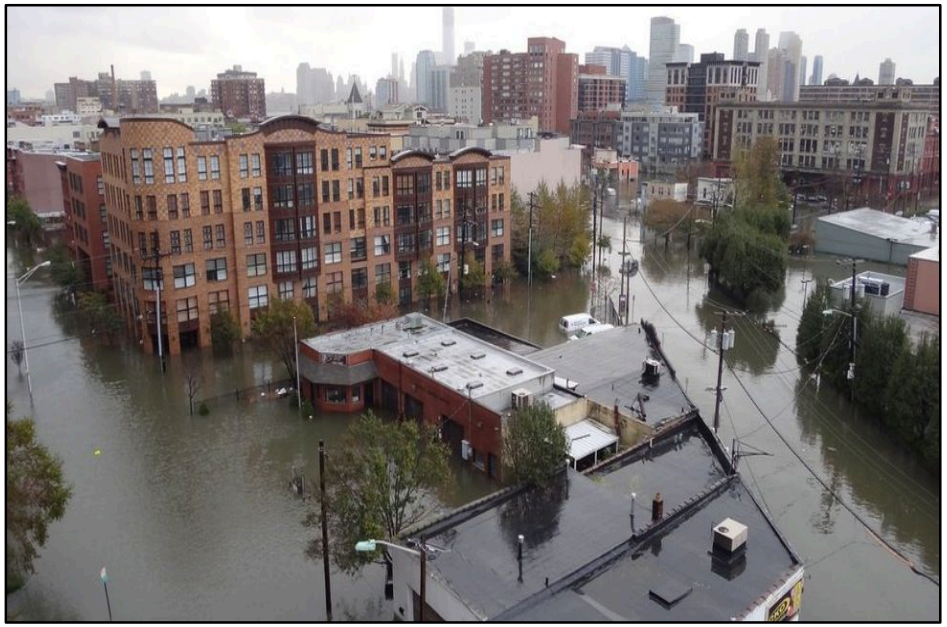
Presentation Agenda

- Study Overview and Background
- Alternative Formulation Process
- NEPA Overview
- Next Steps
- Study Schedule
- Contact Information



Flooding in Hoboken, NJ October 2012

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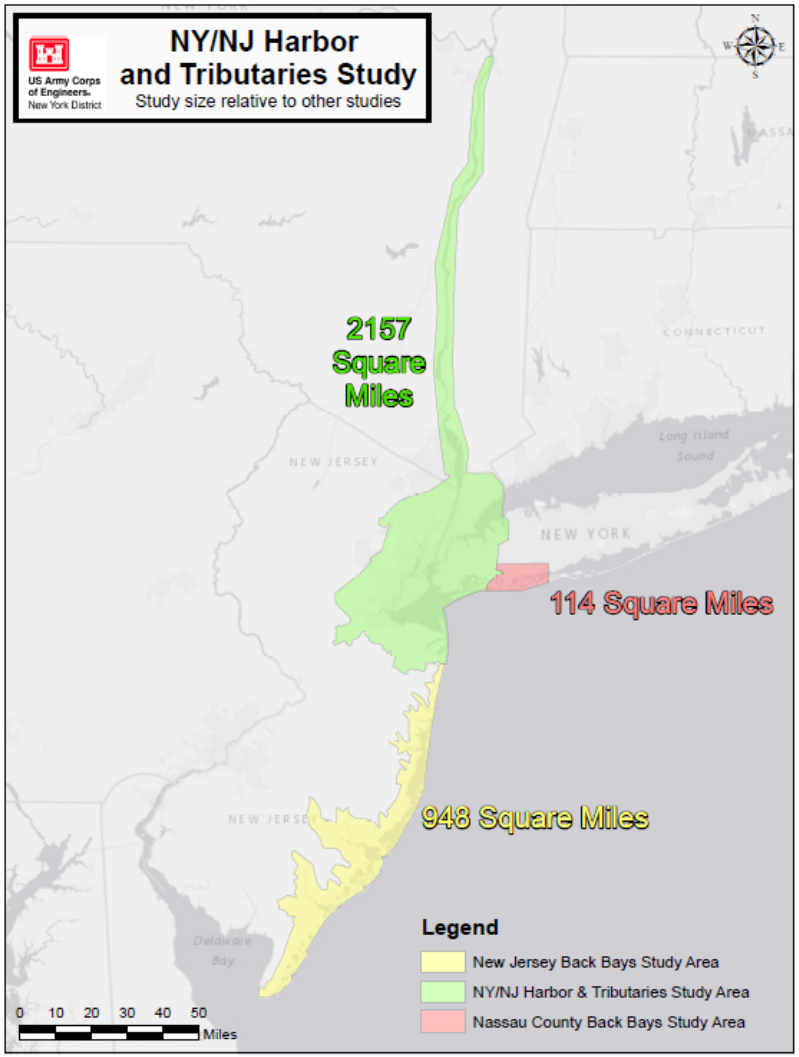

STUDY AREA (in green)

- The largest and most densely populated of the 9 high-risk focus areas identified in the North Atlantic Coast Comprehensive Study (NACCS)
- Area covers 2,150+ square miles and 900+ miles of affected shoreline
- 25 counties in New York & New Jersey
- Affected population of roughly 16 million people, including New York City and the six most populated cities in New Jersey

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STUDY INFORMATION & HISTORY

- **Objective**: Manage the risk of coastal storm damage in the study area, while contributing to the resilience of communities, critical infrastructure, and the environment
- **Study Authority**: Public Law 84-71, Chapter 140
- **Non-Federal Sponsors**: A Feasibility Cost Sharing Agreement was signed with the New Jersey Department of Environmental Protection (NJDEP) and the New York State Department of Environmental Conservation (NYSDEC) (in partnership with the City of New York) in 2016.
- **September 2017:** Identified preliminary alternatives
- **Current status:** Scoping the study and areas of analysis in order to better screen alternatives, with input from public and resource agencies. Evaluation and comparison will be used to identify the *Tentatively Selected Plan* (TSP).

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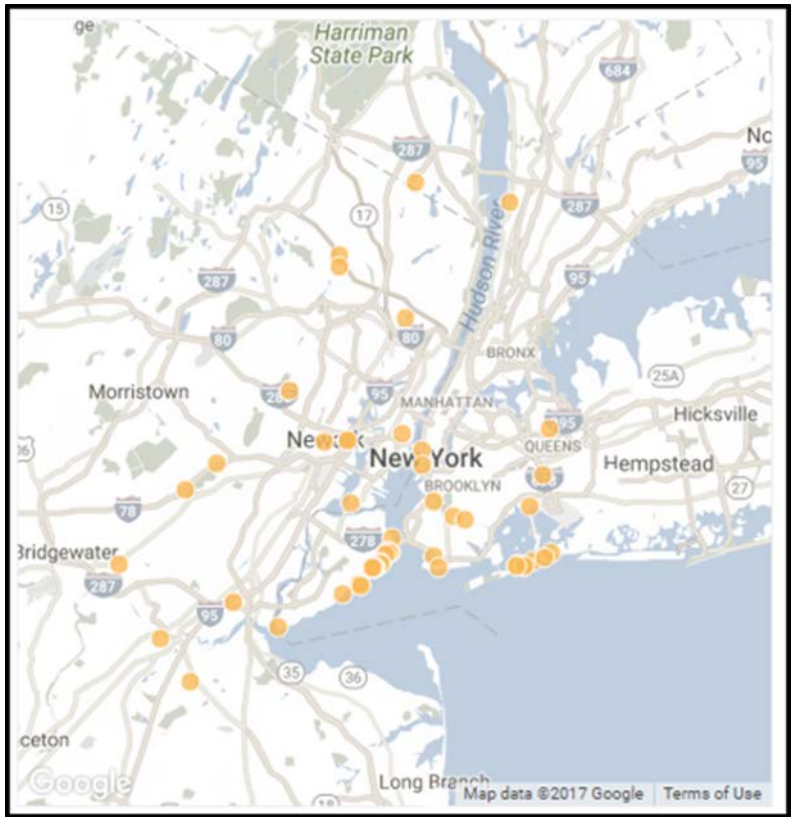
FEDERAL INTEREST AND PAST FLOODING



Location of fatalities caused by Hurricane Sandy in the study area. Source: NY Times, accessed on November 2017.

- Recurring impacts from coastal flooding has resulted in significant economic, environmental, and community impacts
- 60 Hurricane Sandy fatalities
- $15.7 billion federal investment in post-Hurricane Sandy recovery and resilience projects
- Critical infrastructure: 3 major airports, 5 major rail systems, largest port on east coast, largest refined petroleum port on U.S., hospitals, police, fire, evacuation routes, rail/subway infrastructure
- Includes New York City metropolitan area, with Gross Metropolitan Product (GMP) of over $1.66 trillion (2016)

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COASTAL STORM RISK MANAGEMENT (CSRM)

- No CSRM project can eliminate the risk of flooding.
- Given time, every design will be exceeded.
- CSRM reduces the frequency and/or severity of flooding and provides additional time to respond.
- CSRM is a shared responsibility and a collaborative approach is required to reduce damages and to save lives (USACE, FEMA, State, County, Local Gov., Emergency Personnel, Residents)
    - Physical features
    - Insurance
    - Zoning
    - Emergency Action Plan (EAP)
    - Communication

Bulldozers move sand for a USACE CSRM project in Westhampton, NY.

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CORPS OF ENGINEERS PLAN FORMULATION PROCESS

- Identify problems and opportunities
- Inventory and forecast conditions
- Formulate alternatives to manage the risk of flooding from coastal storms
- Evaluate alternatives
  - Plans are screened for *completeness, effectiveness, efficiency, and acceptability*
  - Compare reduced damages of proposed alternatives against without project conditions to *determine benefits*
  - Perform an initial evaluation of *environmental impacts*
  - *Compare* benefits to costs for each alternative
    - To be economically justified a plan must have a *benefit-to-cost ratio* (BCR) greater than one
- Compare alternatives
- Select alternative

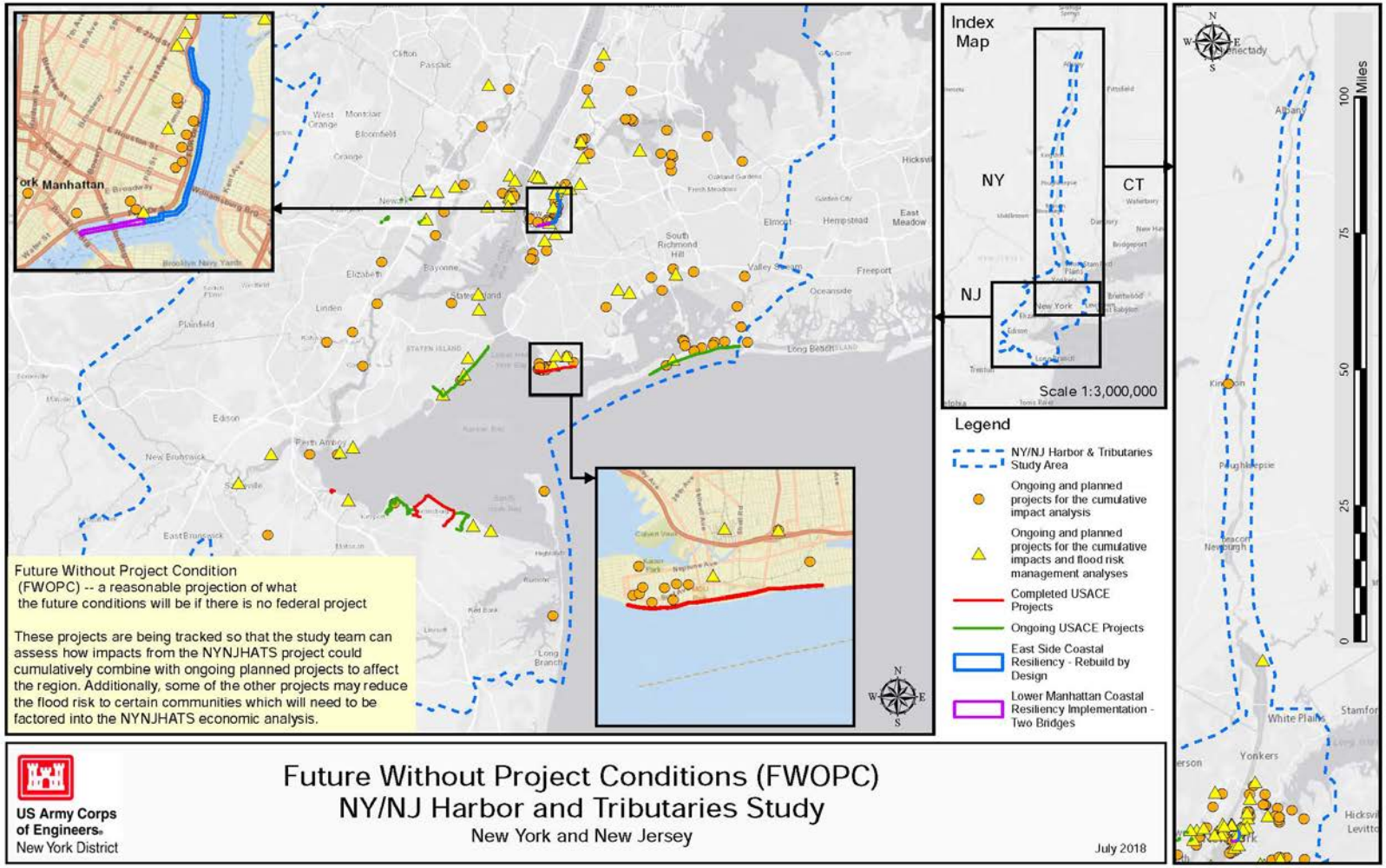
New York-New Jersey Harbor and Tributaries
Coastal Storm Risk Management Feasibility Study

ALTERNATIVES OVERVIEW

- Alternative 1: No Action
- Alternative 2: Harbor Wide Gate and Beach Restoration
- Alternative 3A/3B: Multiple Bay/Basin Gate and Floodwalls & Levee Systems
- Alternative 4: Single Waterbody Gate and Floodwalls & Levees
- Alternative 5: Perimeter Only

New York Harbor.

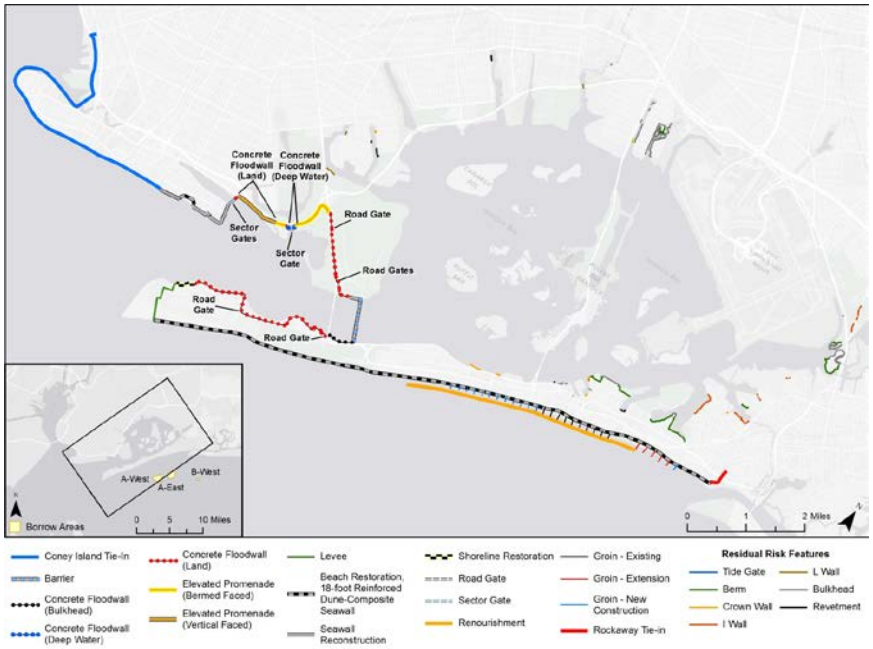
ALTERNATIVE 1: NO ACTION (FUTURE WITHOUT PROJECT CONDITIONS)



ROCKAWAY AND JAMAICA BAY REFORMULATION FOR COASTAL STORM RISK MANAGEMENT ALONG THE ATLANTIC SHOREFRONT AND JAMAICA BAY

- The *Tentatively Selected Plan* for Rockaway included a storm surge gate across Rockaway Inlet with tie-ins to high ground at either end which could be closed during large storm events or hurricanes to prevent storm surge from entering Jamaica Bay and inundating the surrounding communities.
- There was overwhelming public and agency feedback that this element needed further analysis before it could be implemented, mainly on:
  - Environmental impacts
  - How it would operate
  - Where it would be sited and aesthetic impacts to coastal communities
- Rockaway Gate cost would exceed the Hurricane Sandy construction budget, so new authority and funding would be needed to implement

Rockaway Tentatively Selected Plan, which included the Storm Surge Gate



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ROCKAWAY BARRIER MOVED TO NYNJHAT STUDY

- Due to the scale, complexity, and cost of the proposed storm barrier, and the need for additional study (and appropriation) for construction, the barrier is now moved to New York/New Jersey Harbor and Tributaries Feasibility Study (NYNJHATS)
- Alternative 2 in NYNJHATs (a large storm surge gate from Sandy Hook, New Jersey to Breezy Point) would obviate the need for the proposed Rockaway storm surge gate, so better to study Rockaway Gate under NYNJHATs
- Remaining elements of the Rockaway TSP (Atlantic Shorefront and smaller features to address high frequency flooding in and around Jamaica Bay) are Recommended Plan to move forward with Sandy funding
- Rockaway Recommended Plan is not comprehensive for addressing risk to Back-Bay from large storms, needs a Rockaway Gate or Alt 2 for comprehensive risk management
- High Frequency Flooding Risk Reduction Features (HFFRRFs, formerly 'Residual Risk Features') are designed to complement a potential future storm surge barrier

Rockaway Reformulation Status

Rockaway Reformulation team released a Revised Draft General Reevaluation Report & EIS on August 31, 2018 which details the revised Recommended Plan and the decision to move the Rockaway Storm Surge Gate to the NYNJHAT Study.

Public review period of the Rockaway Report is until October 22nd.

Upcoming Public Meetings

(6 PM – 8:15 PM)

Thursday, October 4, 2018

Rockaway Waterfront Alliance RISE Center,

58-03 Rockaway Beach Blvd., Far Rockaway (Arverne), NY 11692

Wednesday, October 10, 2018

Village of Cedarhurst Hall,

200 Cedarhurst Avenue

Cedarhurst, NY 11516

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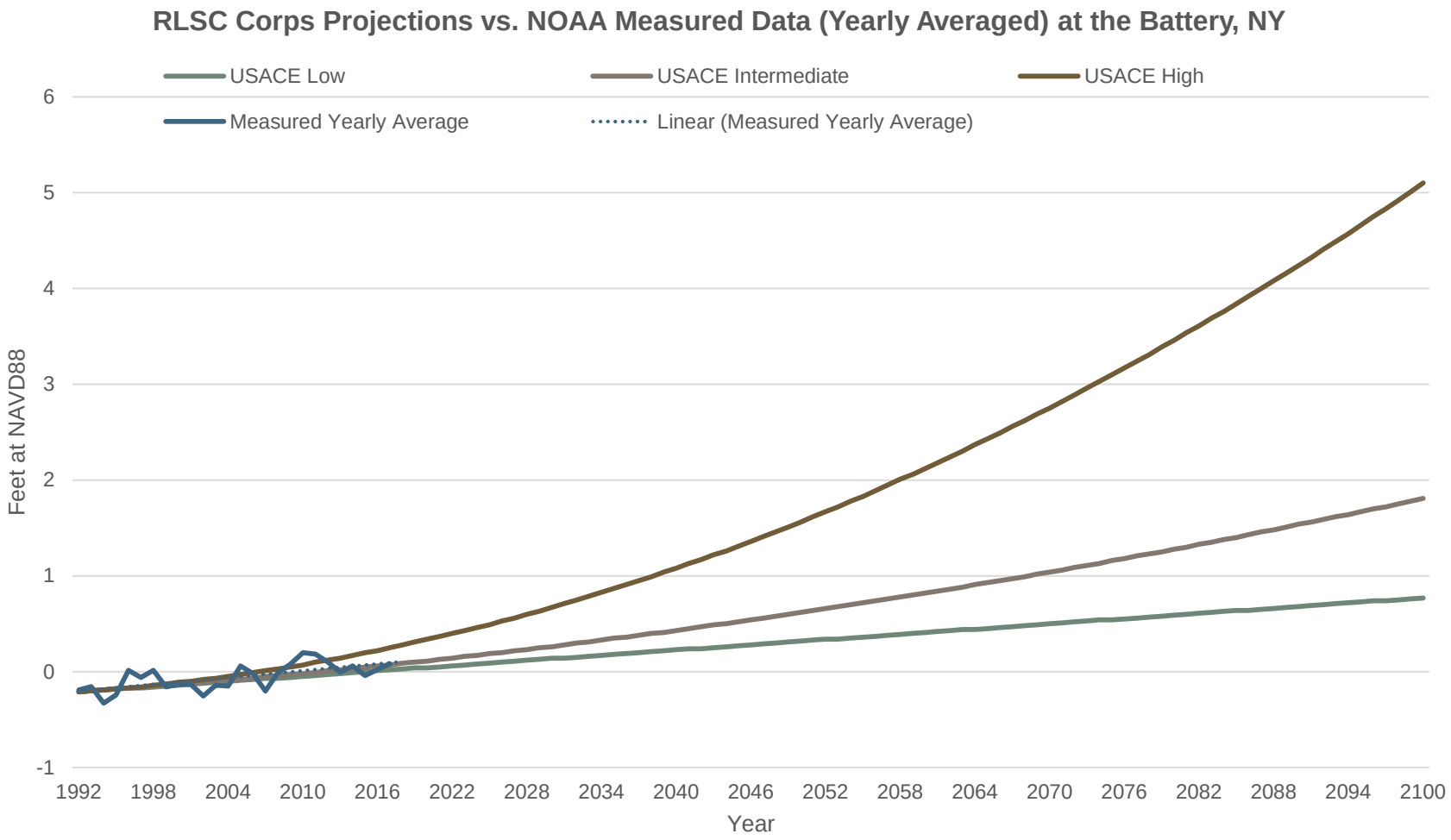
ALTERNATIVE 1: NO ACTION (FUTURE WITHOUT PROJECT CONDITIONS)



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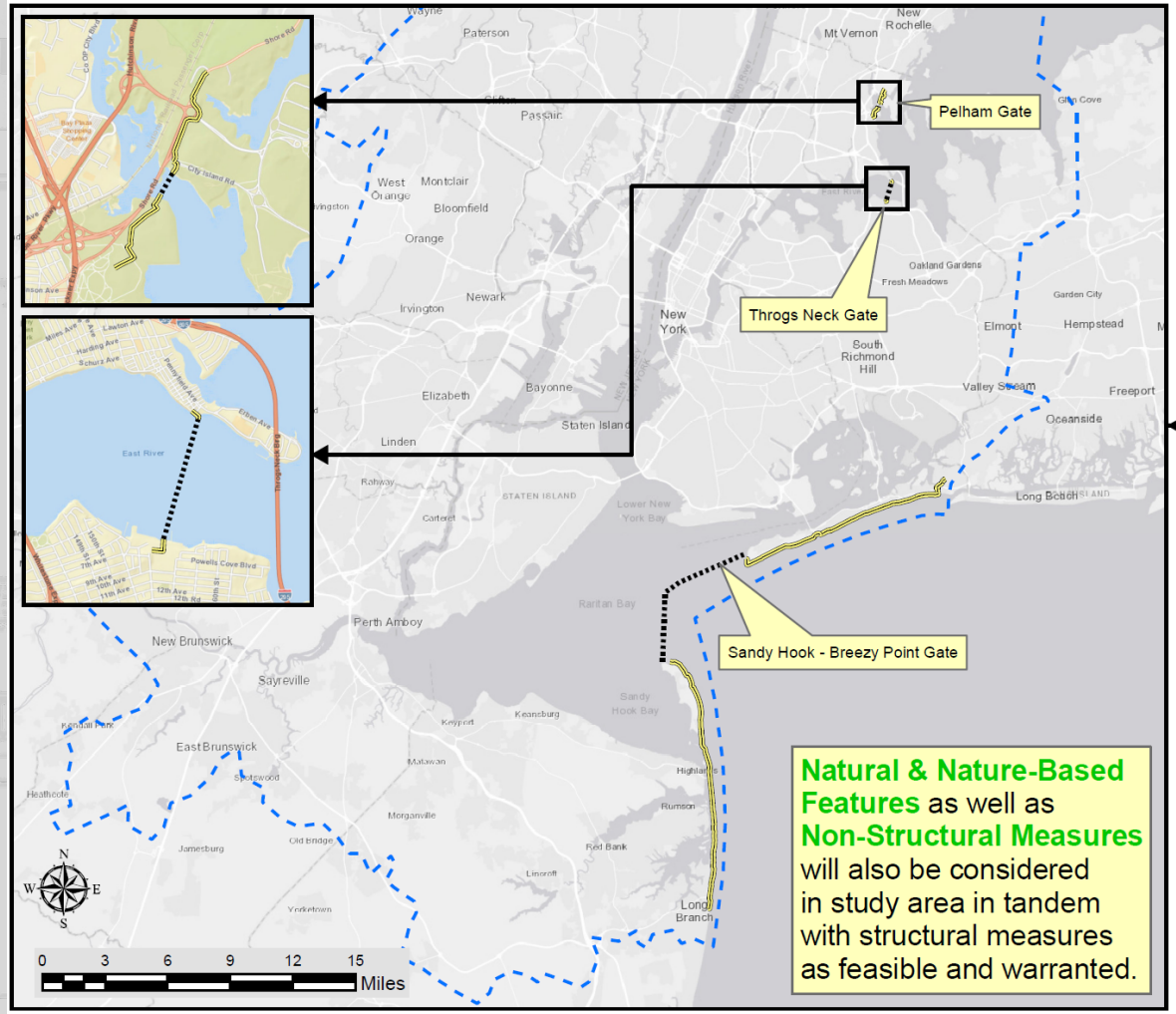

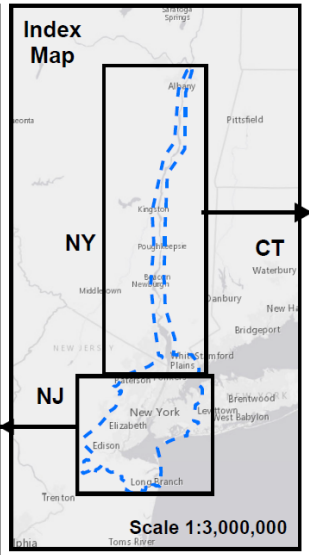

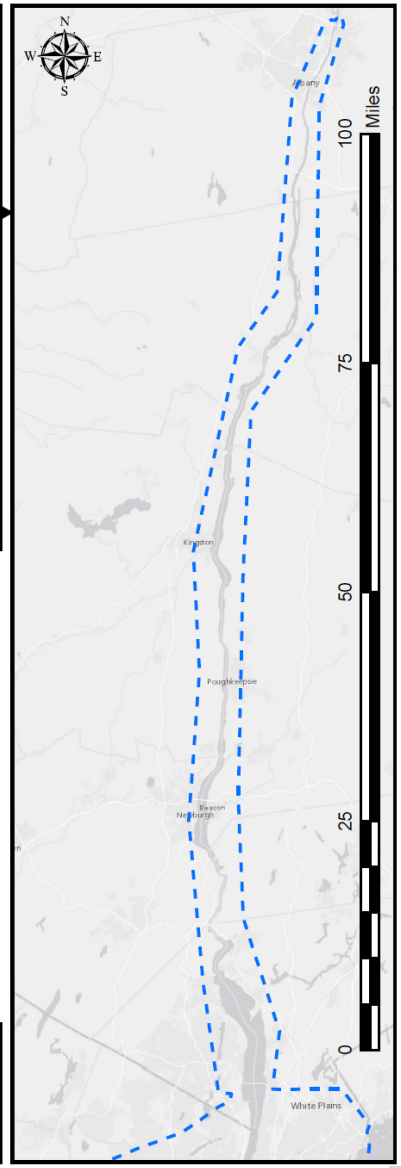

Legend

- Conceptual Surge Gate
- Conceptual Shoreline Based Measure (SBM)
- NY/NJ Harbor & Tributaries Study Area

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New York District

Alternative #2 - NY/NJ Harbor Wide Gate/Beach Restoration
NY/NJ Harbor and Tributaries Study

New York and New Jersey

September 2018

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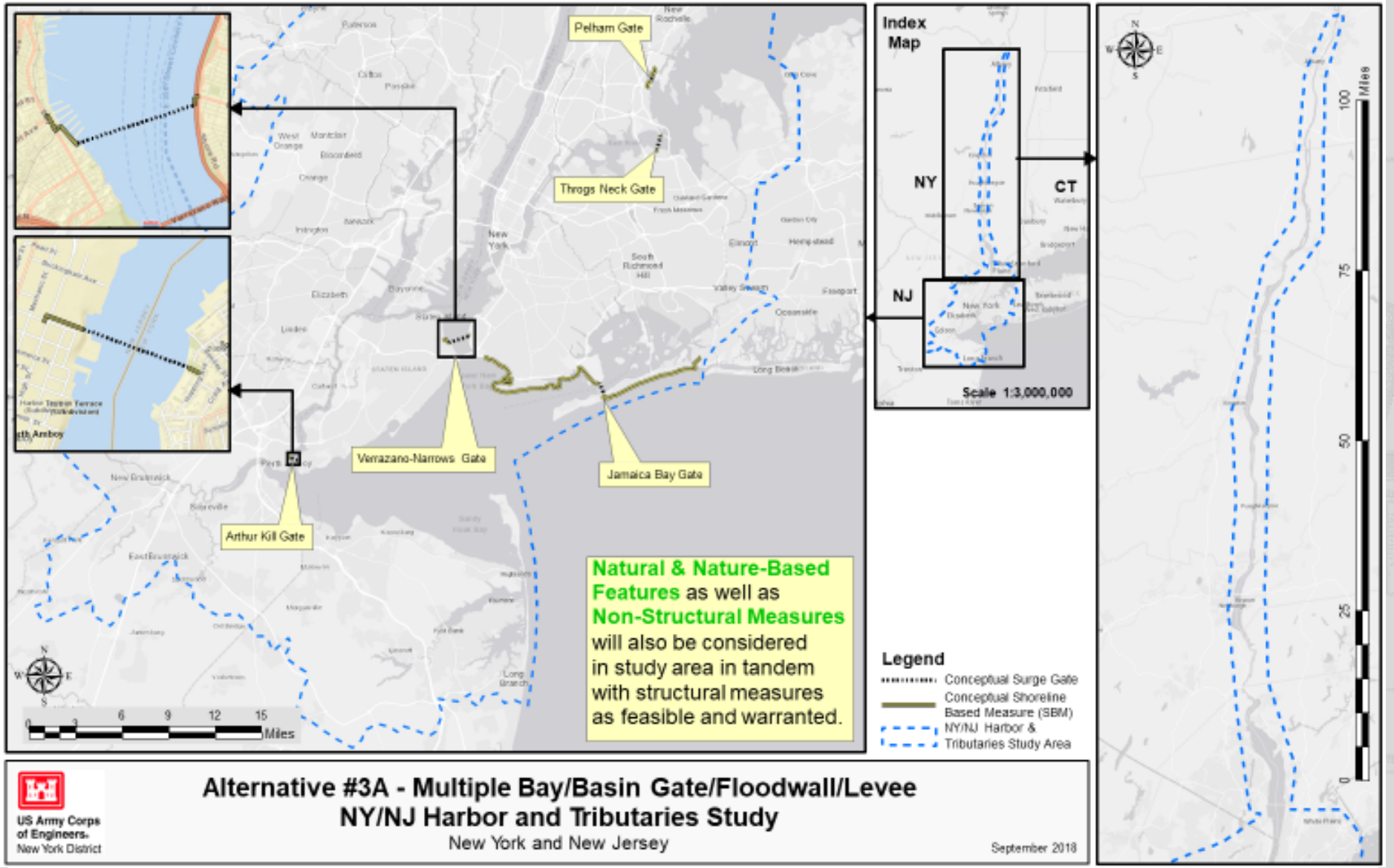

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New York District

Alternative #3A - Multiple Bay/Basin Gate/Floodwall/Levee
NY/NJ Harbor and Tributaries Study

New York and New Jersey

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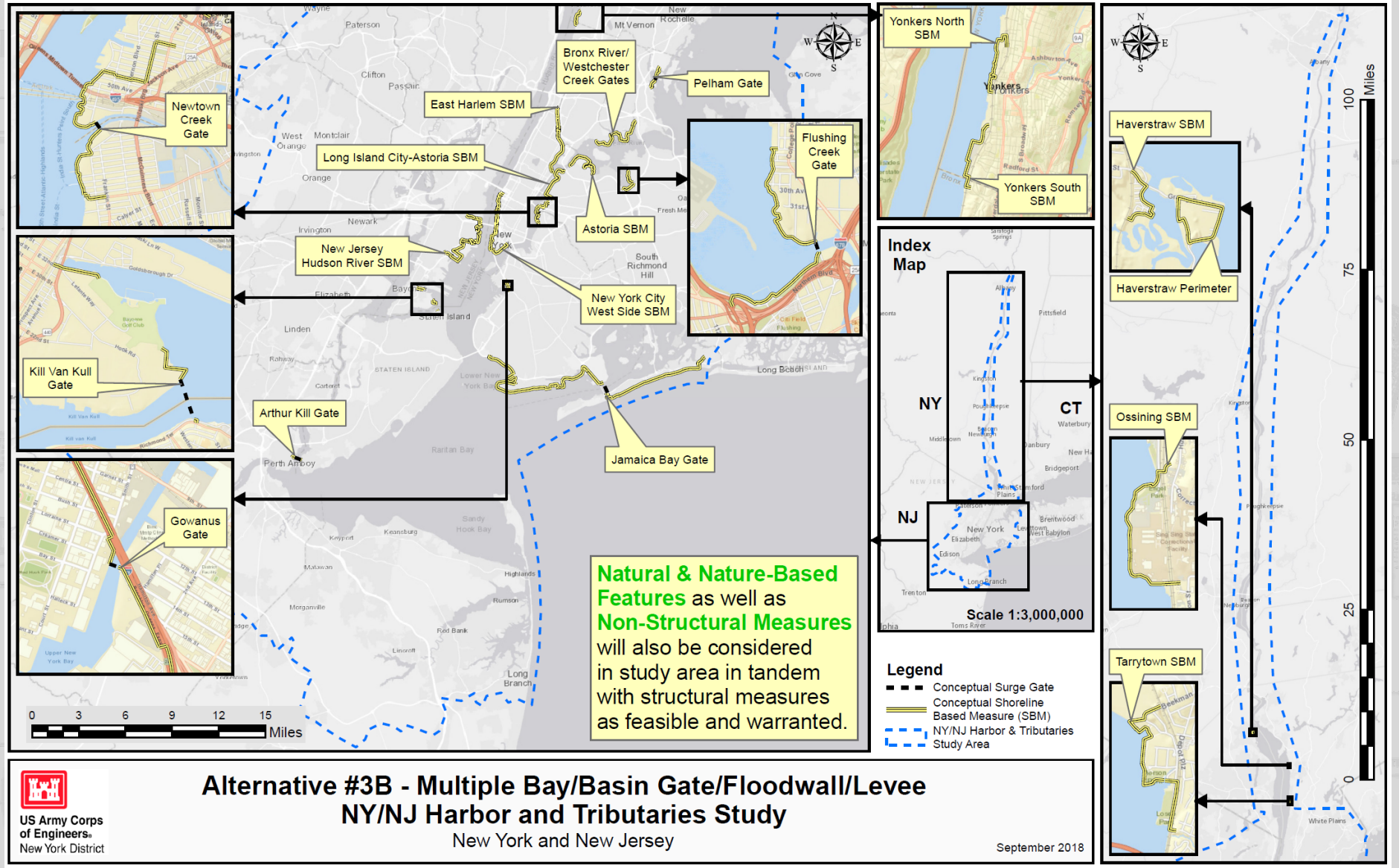

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Alternative #3B - Multiple Bay/Basin Gate/Floodwall/Levee
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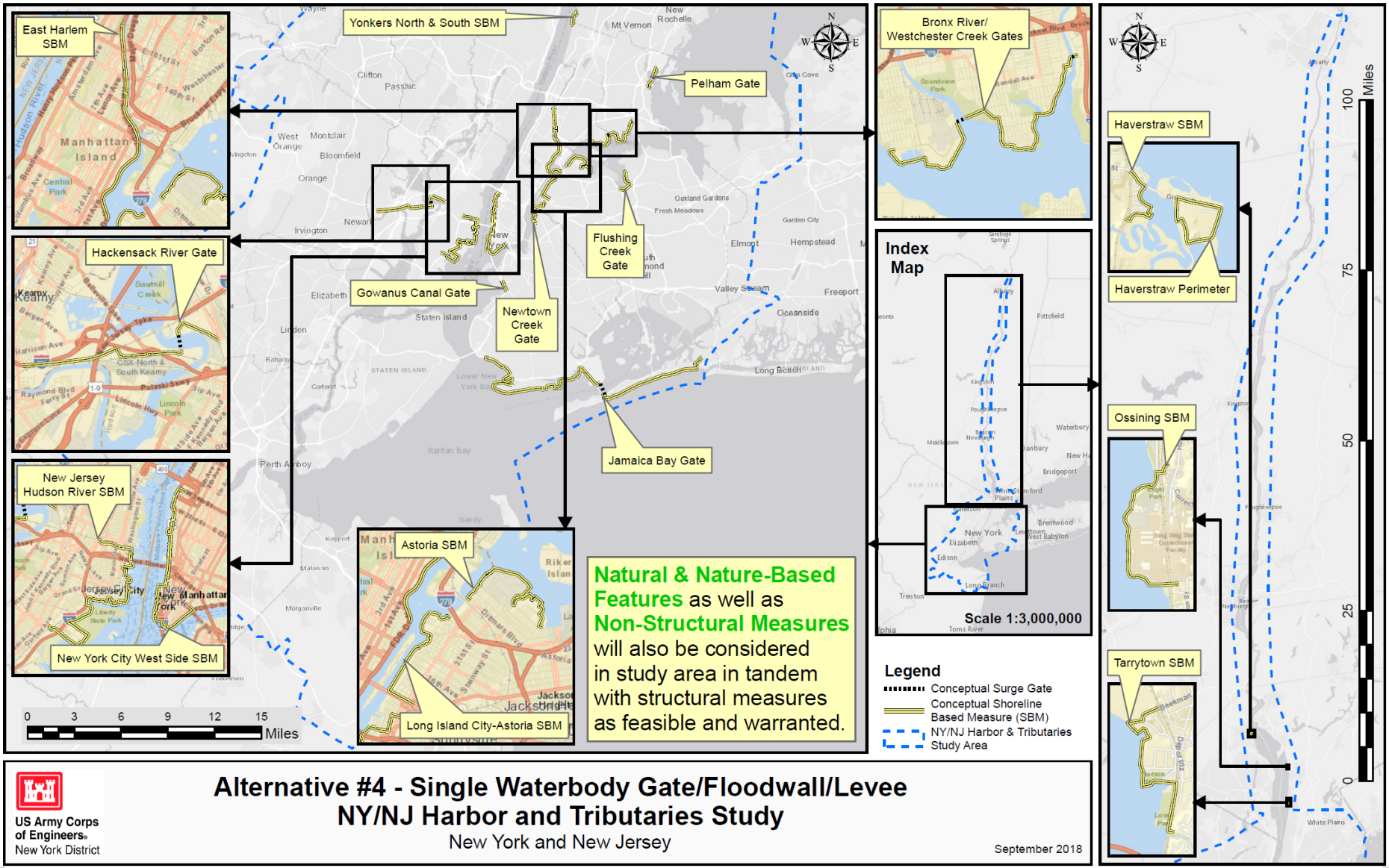

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Alternative #4 - Single Waterbody Gate/Floodwall/Levee
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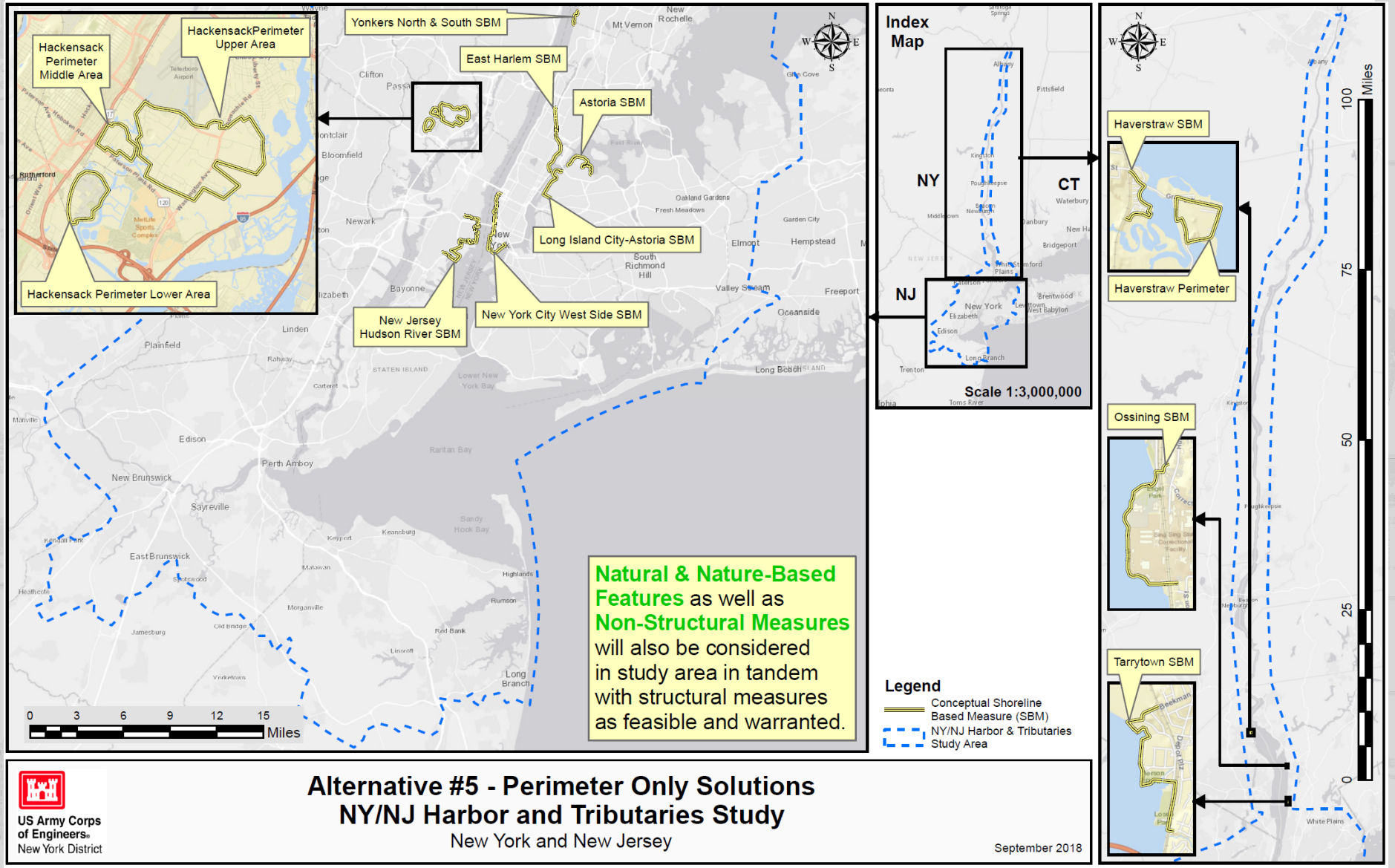

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Alternative #5 - Perimeter Only Solutions
NY/NJ Harbor and Tributaries Study
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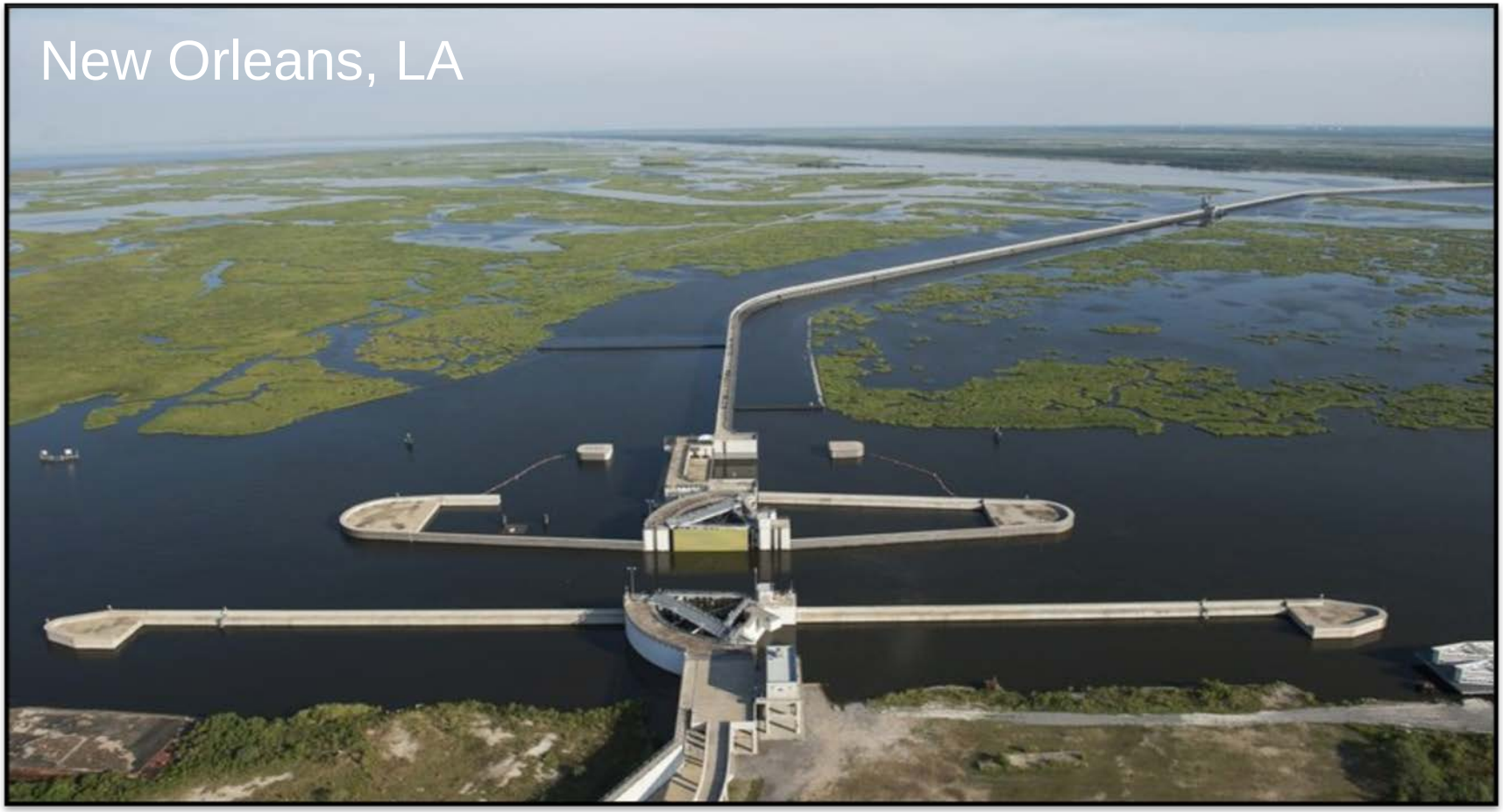
STRUCTURAL MEASURE EXAMPLES Gates



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STRUCTURAL MEASURE EXAMPLES Gates

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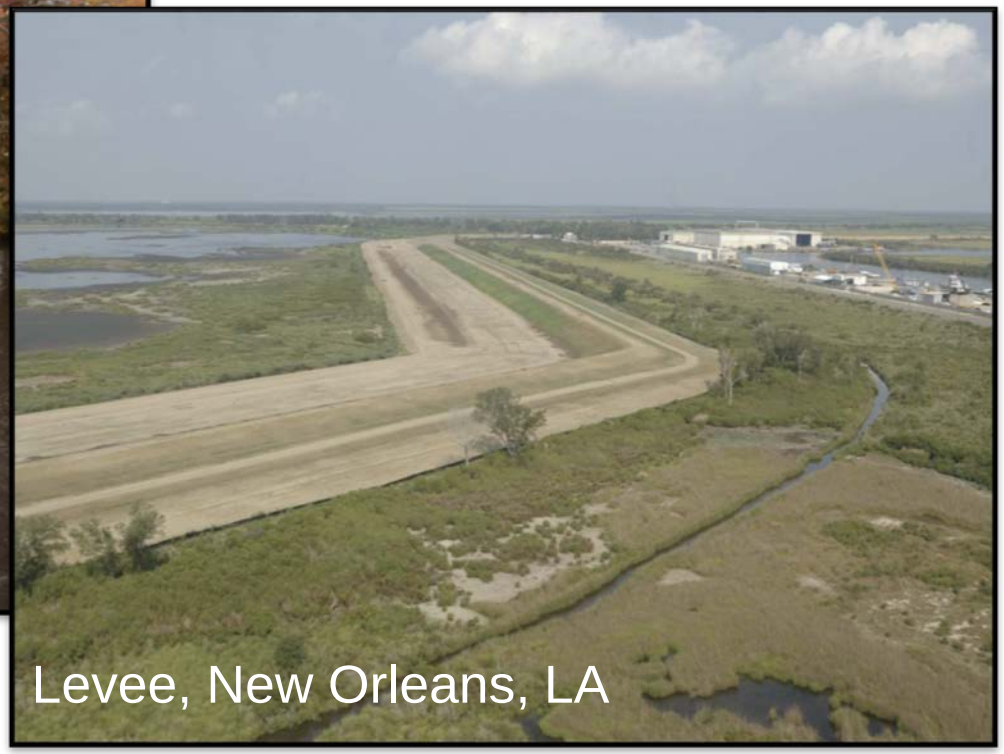
STRUCTURAL MEASURE EXAMPLES Gates

STRUCTURAL MEASURE EXAMPLES

Shoreline Features

Floodwall, Green Brook, NJ



Levee, New Orleans, LA

STRUCTURAL MEASURE EXAMPLES
Shoreline Features

Seawall, Martha's Vineyard, MA

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NONSTRUCTURAL MEASURE EXAMPLES

Structure Elevation

Dry Floodproofing

Wet Floodproofing

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NATURAL AND NATURE-BASED FEATURE EXAMPLES

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NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

- Federal agencies are required to determine and consider the "effect of their actions on the human environment" during planning and decision making.
- Federal Actions that can trigger NEPA:
  - Funding
  - Permits
  - Construction
- NEPA is about <u>disclosure</u>
- Consequences to:
  - Social
  - Economic
  - Natural Resources
  - Historic Properties
- Responsibility to <u>avoid, minimize, and mitigate for any impacts</u>

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

Multiple laws, executive orders and regulations are considered as part of the NEPA process.

- National Historic Preservation Act, as amended
  - *Preserves historic and archaeological sites*
- Clean Water Act
  - *Prevents water pollution*
- Endangered Species Act
  - *Protects plants and animals from extinction*
- Clean Air Act
  - *Prevents air pollution*
- Environmental Justice
  - *Addressing the disproportionately high adverse environmental effects on minority and low-income populations as well as disproportionate concentration of environmental goods, like parks or open space, in affluent or mostly white communities*
- State laws

Piping Plover.

Atlantic Sturgeon.

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TYPES OF NEPA ANALYSIS

Council on Environmental Quality (CEQ) regulations provide three types of NEPA analysis based upon potential for significant impact:

- Categorical Exclusion
- Environmental Assessment (EA)
- Environmental Impact Statement (EIS)
- Tiered Environmental Impact Statement (EIS)

Given the complexity and scale of this study, the timeline for design details to be known once a *Tentatively Selected Plan* is identified is expected to be longer than the typical Corps of Engineers study. Therefore, due to the large scope and scale of this study and the significance of potential impacts, the study team will be preparing a Tier 1 EIS, with a Tier 2 EIS to be developed once design details are better known. The Tier 1 EIS will assess potential impacts more broadly, using all available information, and the Tier 2 EIS will include the site-specific detailed design information. No plan can be constructed until the full Tier 2 EIS has been completed and all permits have been obtained.

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ENVIRONMENTAL CONSIDERATIONS

- Changes to tidal range/regime, flow velocity, salinity concentrations, sedimentation rates, scour, and elevation
- Water quality, dissolved oxygen, nutrients, and phytoplankton biomass (i.e. eutrophication), and pathogenic bacteria
- Anadromous/catadromous fish migration and aquatic species
- Marsh inundation
- Air quality
- Transportation (marine vessels, etc.)
- Aesthetics and recreation
- National Historic Landmarks and Historic Properties
- Listed species and critical habitat
- Noise and vibration
- Bay bottom impacts, as well as landside impacts
- Location of Superfund, National Priority List, and other contaminated sites

Jamaica Bay, New York City

ADDRESSING SEA LEVEL RISE

- Two main ways to address sea level rise / global climate change
  1. Reduce sources
  2. Adapt to changing conditions

USACE can help to address sea level rise by helping our non-federal sponsors and the communities at risk adapt to future conditions. Our study incorporates analysis of how to adapt to increased future sea level in its design and analysis, including an assessment of risk and uncertainty based on uncertain future conditions and how inherent adaptability can be added to make the recommendation resilient in the face of uncertainty.

- Reducing greenhouse gas emissions is outside the scope and authority of this study. The USACE has no authority when it comes to enacting public policy or regulating greenhouse gas emissions. This is the purview of Congress, the office of the President, as well as State legislative bodies, and some local agencies for local standards.
- The Environmental Protection Agency regulates air pollutants, including greenhouse gases since 2009 under the Clean Air Act.
- "*Even if we stopped emitting greenhouse gases today, global warming would continue to happen for at least several more decades if not centuries. That's because it takes a while for the planet (for example, the oceans) to respond, and because carbon dioxide – the predominant heat-trapping gas – lingers in the atmosphere for hundreds of years. There is a time lag between what we do and when we feel it.*" - NASA (https://climate.nasa.gov/faq/)
- Thus, regardless of the progress for #1, adaptation (#2) will still be needed.

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NEPA SCOPING PROCESS

- Required when preparing an EIS
- Identify people or organizations who are interested in the proposed action
- Identifies any information sources that might be available to analyze and evaluate impacts
- Assists with plan formulation process
- Identifies significant resources to be evaluated
- Local communities and stakeholders have valuable local knowledge and expertise and the scoping process is intended to help gather that for inclusion in the analysis

NEPA Scoping Document: http://www.nan.usace.army.mil/Missions/Civil-Works/Projects-in-New-York/New-York-New-Jersey-Harbor-Tributaries-Focus-Area-Feasibility-Study/

Citizens Guide to NEPA: Having Your Voice Heard: http://energy.gov/nepa/public-participation

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NEXT STEPS & FURTHER OPPORTUNITY FOR PUBLIC INVOLVEMENT

- Scoping Period through November 5th
- Release of the Draft Report – Fall 2018
- Public and Agency Reviews
  - Including Public Meetings
- Optimization of the Selected Plan
- Final Feasibility Report and NEPA Documentation
- Chief's Report
- Public Involvement during Pre-Construction Engineering and Design Phase—Tier 2 EIS

*The red boxes indicate the best opportunities for the public to provide input to the study.

The scoping period extends until **November 5, 2018.** Comments and input can be submitted until that time and will be used to help identify the Tentatively Selected Plan (TSP).

Once the Draft Report is released, the public and agencies will have a chance to review and submit comments and public meetings will be held as part of the public review period. The comments are used to inform the agency decision on whether to confirm the TSP, or whether more analysis is needed to arrive at a *Recommended Plan*.

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STUDY SCHEDULE

Milestones	
Milestones	**Dates***
Release of Draft Report**	Fall 2018
Final Report	Spring 2021
Chief's Report (for Congress)	Summer 2022

* The schedule is contingent upon available funding, non-federal partner support, and concurrence by Corps higher-authority offices.

** Based on agency and public comments and subject to Corps higher-authority approval, additional draft documents may be released subsequent to the initial Draft Report.

New York-New Jersey Harbor and Tributaries Coastal Storm Risk Management Feasibility Study

HOW TO STAY INVOLVED

Scoping Comments

Send any questions and/or comments to NYNJHarbor.TribStudy@usace.army.mil

OR

Fill out and submit a comment card at a scoping meeting

Scoping Comment Period open through **November 5, 2018**

Project Webpage

http://www.nan.usace.army.mil/Missions/Civil-Works/Projects-in-New-York/New-York-New-Jersey-Harbor-Tributaries-Focus-Area-Feasibility-Study/

Stakeholder Mailing List

Email NYNJHarbor.TribStudy@usace.army.mil if you would like to join our mailing list and receive periodic updates.

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