

NEW JERSEY BACK BAYS COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY

Virtual Public Meeting

Study Briefing

January 2025

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USACE Philadelphia District



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Mantoloking, NJ

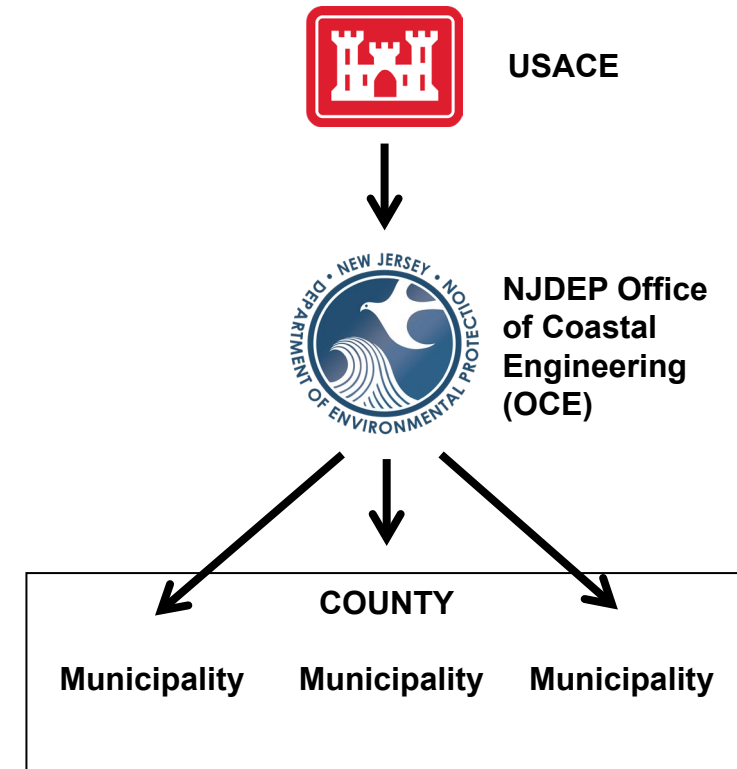


Long Beach Island, NJ

Office of Coastal Engineering's Role w/ USACE



- All USACE projects and studies require a non-federal sponsor
- OCE is non-fed sponsor on most major USACE Coastal Storm Risk Management (CSRM) construction projects and feasibility studies in NJ, along with respective partners at the county and municipal level.
- Most USACE projects and studies span multiple municipalities; OCE serves as the liaison between USACE and the municipalities



Office of Coastal Engineering's Role w/ USACE



FEASIBILITY STUDIES

- 50/50 Fed/Non-Fed Cost Share
- OCE funds 100% of non-fed share; no cost to municipalities
- Final Output: Chief's Report

BEYOND THE CHIEF'S REPORT

- USACE to Obtain Construction Funding
- Execute Project Partnership Agreement (PPA)
 - Outlines Roles & Responsibilities
 - Based On Implementation Guidance
 - Real Estate
 - Funding
 - Future Maintenance



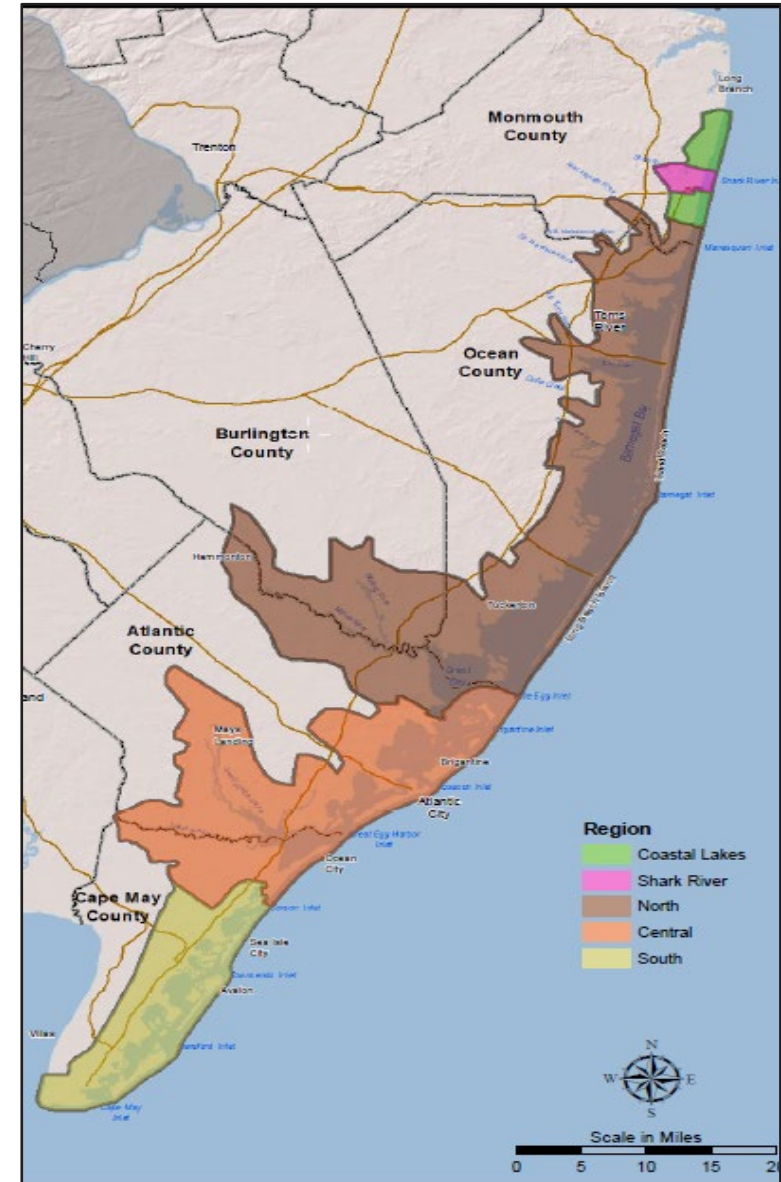
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AGENDA

- Project location.
- Brief history of prior study.
- Decisions to modify the study.
- Current plan for the project.
- Schedule.
- Questions.





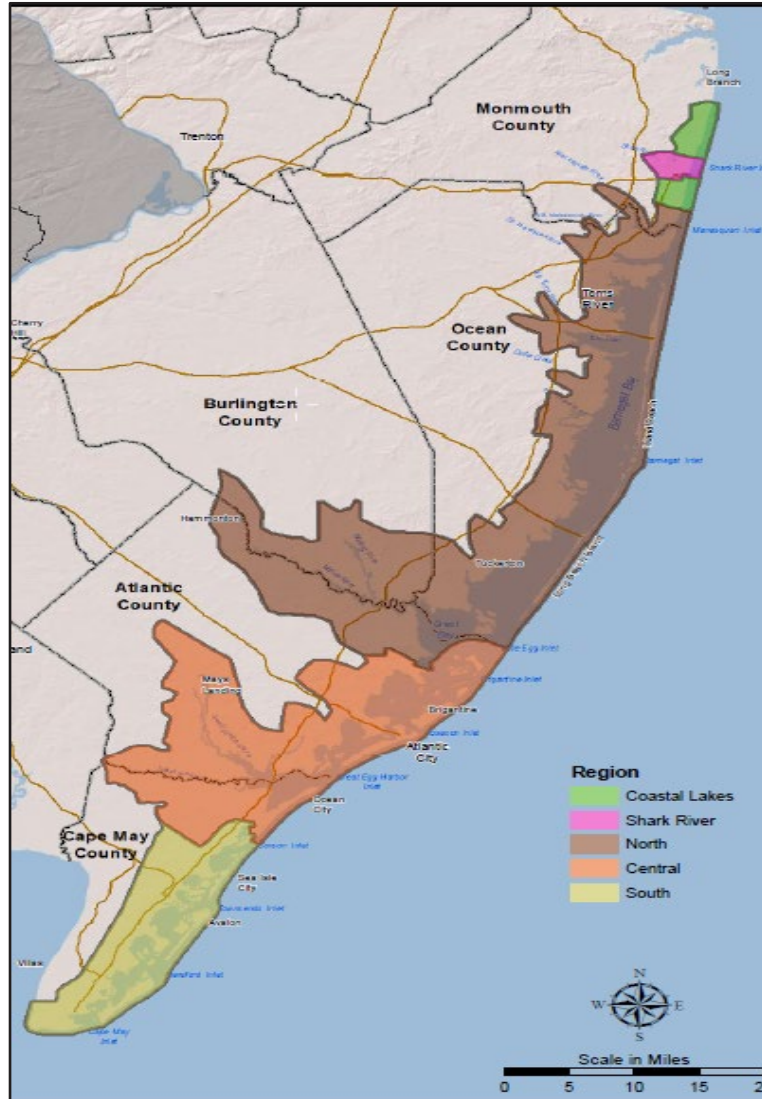
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STUDY AREA

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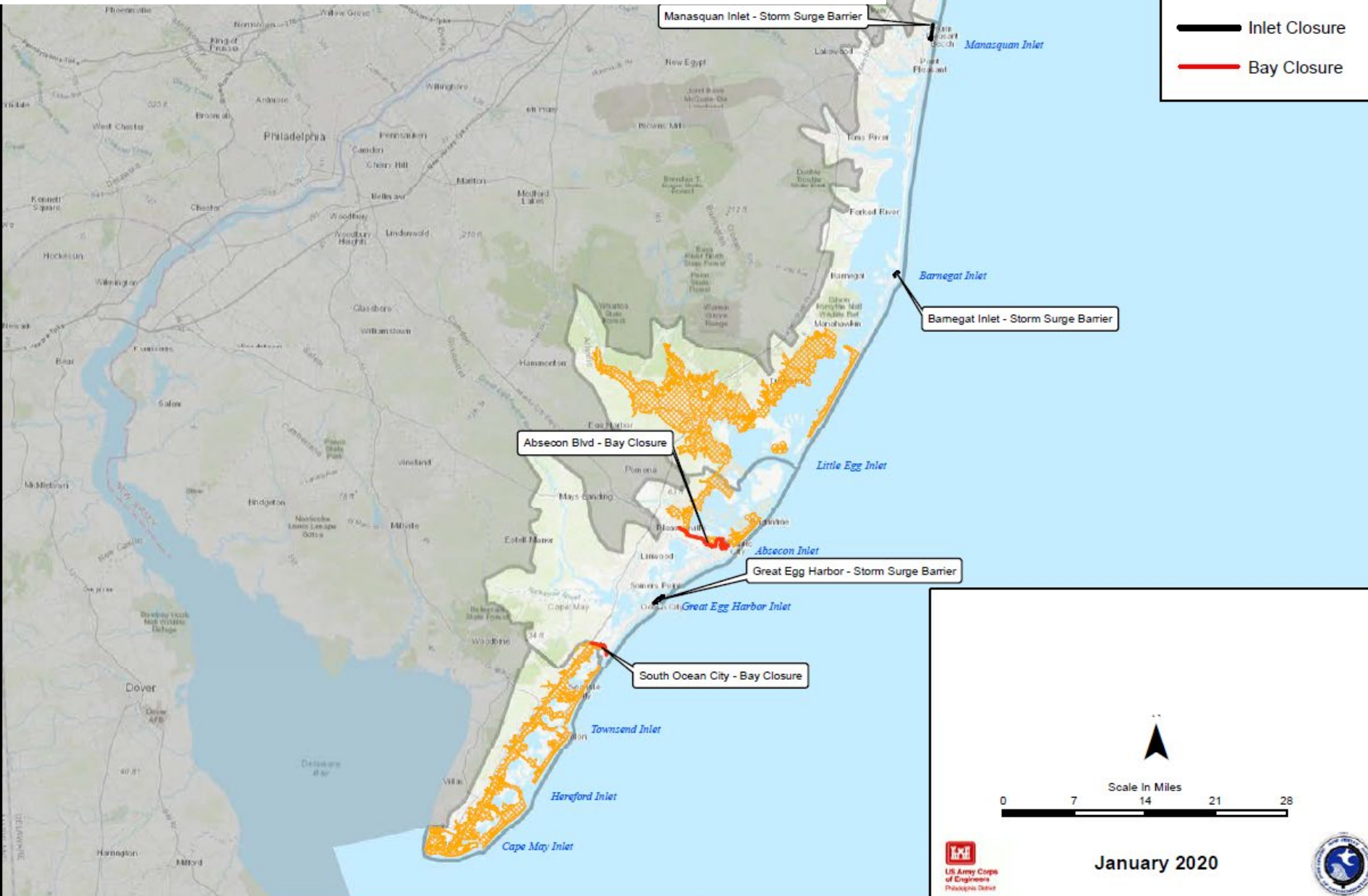


- The bays and river mouths landward of the barrier islands and Atlantic Ocean-facing coastline in the State of New Jersey.
- More than **950 square miles**, and **3,500 linear miles of shoreline** from Long Branch at the northern study area boundary to Cape May Point at the southern boundary.
- Portions of **89 municipalities** and **5 counties**
- Inventory of 172,000 + structures = \$72B
- Primarily residential with public, apartment, high rise, industrial, and commercial structures
- **Without Project Average Annual Damages = \$2.6B**

BRIEF HISTORY OF NEW JERSEY BACK BAYS STUDY

- Previous Feasibility Report released for review in August 2021.
- The 2021 report presented a combination of structural measures and nonstructural measures to address coastal flood risk management for the study area.
- The structural measures consisted of 3 Inlet Storm Surge Barriers, 2 Cross-Bay Storm Surge Barriers, and Nature-Based Solutions.
- The nonstructural measures consisted of elevation of residential structures and flood-proofing of commercial/industrial (critical infrastructure) structures.
- The nonstructural measures were designed to protect areas that the structural measures would not protect during large storms.

Former August 2021 Feasibility Report
Not included in interim WRDA 2026 recommendation
Further evaluation in subsequent feasibility efforts



Key components

- 3 inlet Storm Surge Barriers
- 2 Cross Bay Storm Surge Barriers
- 18,800 elevations and floodproofing

Summary Project Numbers

- 3,500 Linear miles of shoreline
- 5 Counties
- Initial Construction - \$16B
- OMRR&R - \$196M
(Operation, maintenance, repair, replacement, and rehabilitation)
- Benefit Cost Ratio – 1.8
(BCR)



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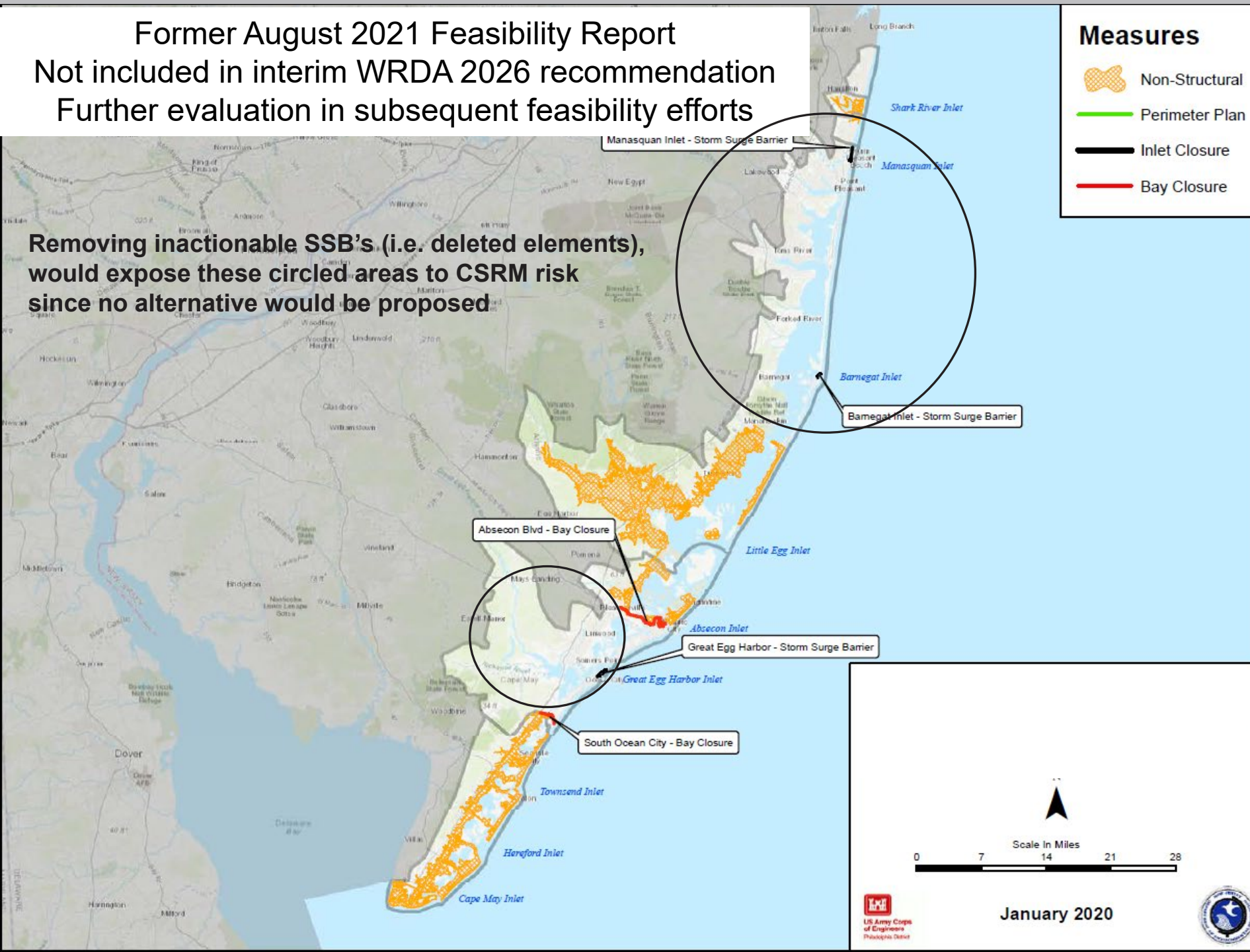
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Summary of Decisions – Post Aug 2021

- A significant number of comments were received on the storm surge barriers proposed in the 2021 Draft Feasibility Report/EIS.
- USACE and NJDEP recognize the importance of these comments, specifically as they relate to the potential impact of the storm surge barriers on the environment.
- USACE determined that a project of this size would require a significant amount of additional research and study before the project could move forward.
- Fully vetting the potential environmental impacts related to the structural measures would delay the project and delay actionable items.
- Therefore, the team took a step back to identify what parts of the 2021 plan could be done in the immediate future (early actionable elements) to help manage risk to the New Jersey Back Bay communities against larger coastal storms, while continuing to study the larger structural features.

Former August 2021 Feasibility Report
Not included in interim WRDA 2026 recommendation
Further evaluation in subsequent feasibility efforts

Removing inactionable SSB's (i.e. deleted elements),
would expose these circled areas to CSRM risk
since no alternative would be proposed



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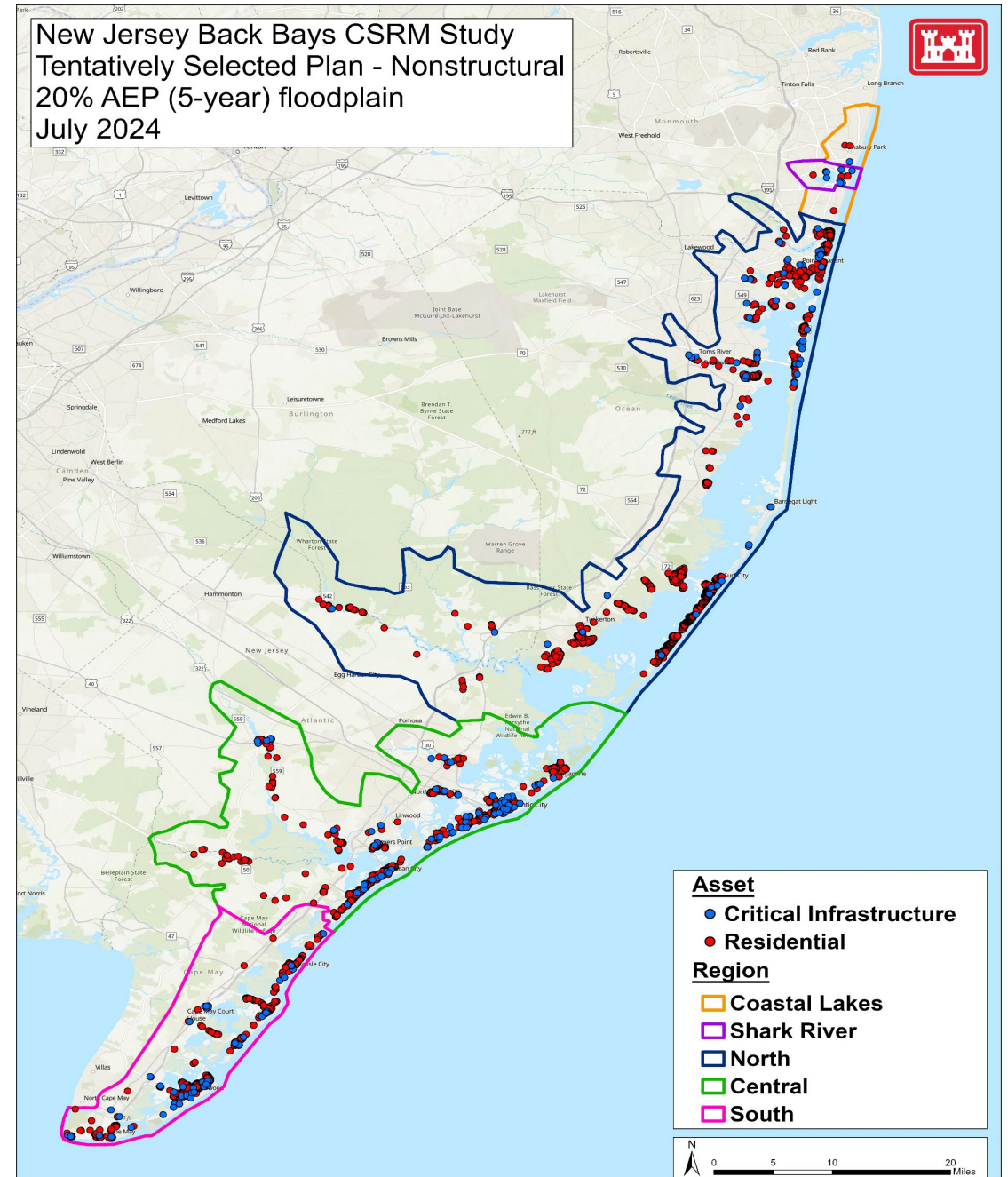
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Tentatively Selected Plan (TSP - SEPTEMBER 2024) – Home Elevations 20% (5yr) + Critical Infrastructure + Nature Based Solutions

Elevation of ~6,421 residential structures within the 20% annual exceedance probability (5-year) floodplain to the 1% base flood elevation in 2080 accounting for intermediate rates of sea level rise

Floodproofing of ~279 Critical Infrastructure elements (Police, Fire, ambulance, hospital, pharmacy)

Nature Based Solutions (NBS) with dredged material to restore degraded salt marsh habitat at approximately 7 locations in the back bay area





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2020 AND 2024 TENTATIVELY SELECTED PLAN COMPARISON

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Measure	2020 TSP	2024 TSP
Structural	3 Surge Barriers	Deferred
Structural	2 Cross-bay Barriers	Deferred
Non-Structural	Elevation ~ 16,000	Elevation ~ 6,421
Non-Structural	Flood Proofing (CI) ~ 2,800	Flood Proofing (CI) ~ 279
Structural	General Nature-Based Solutions	Small-Scale Nature-Based Solutions



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DISTRIBUTION OF NONSTRUCTURAL MEASURES

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REGION	ELEVATIONS	FLOOD PROOFING
Coastal Lakes / Shark River	9	9
North Region	3,598	102
Central Region	1,378	105
South Region	1,436	63



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MAP OF 5-YEAR (20% AEP) FLOODPLAIN

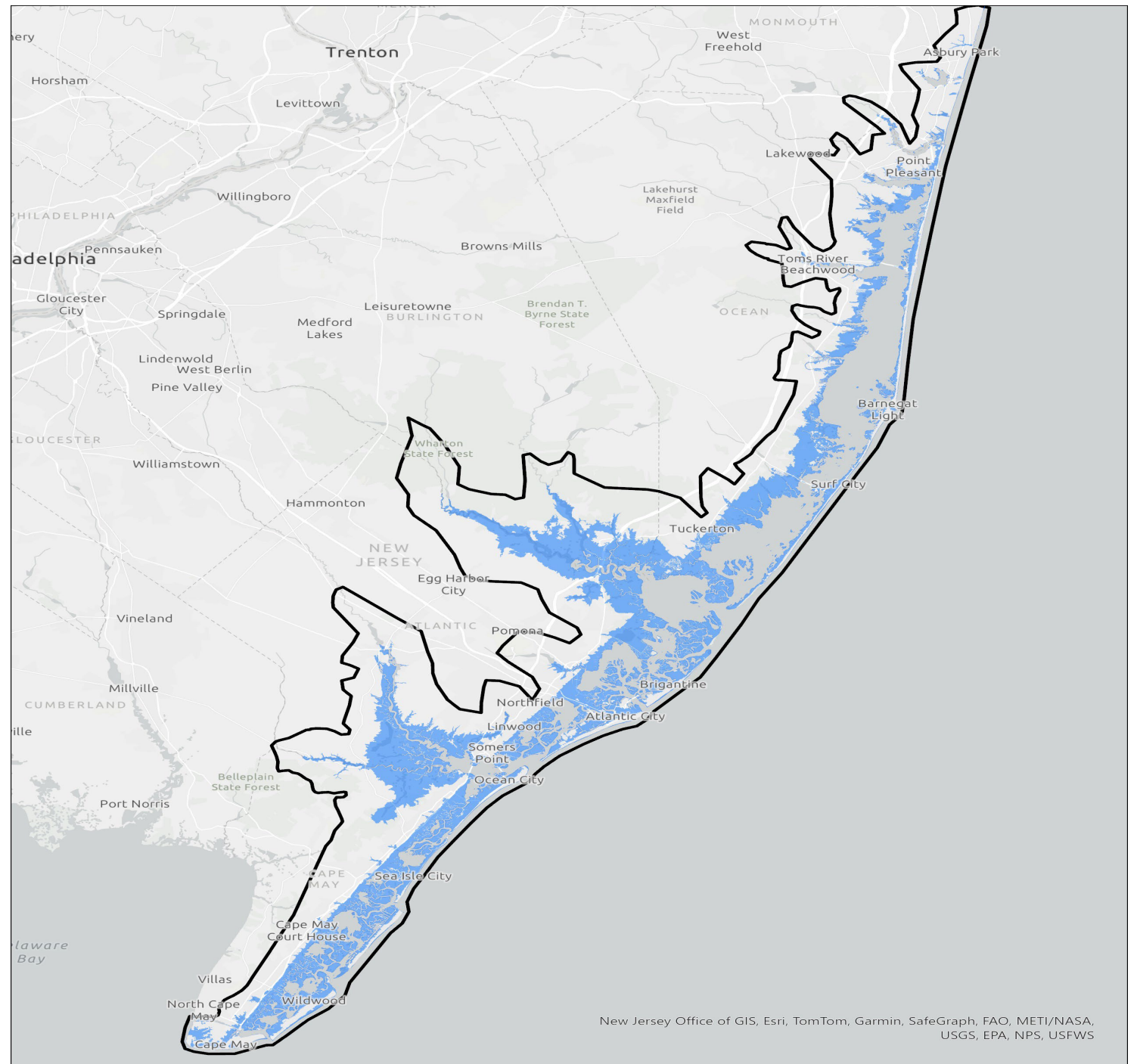
LEGEND



Outline of study area .



5 – year floodplain (20% AEP)
– area for proposed elevations
and flood proofing.





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PROCESS FOR DETERMINING ELIGIBILITY

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FLOOD PLAIN INUNDATION CRITERIA

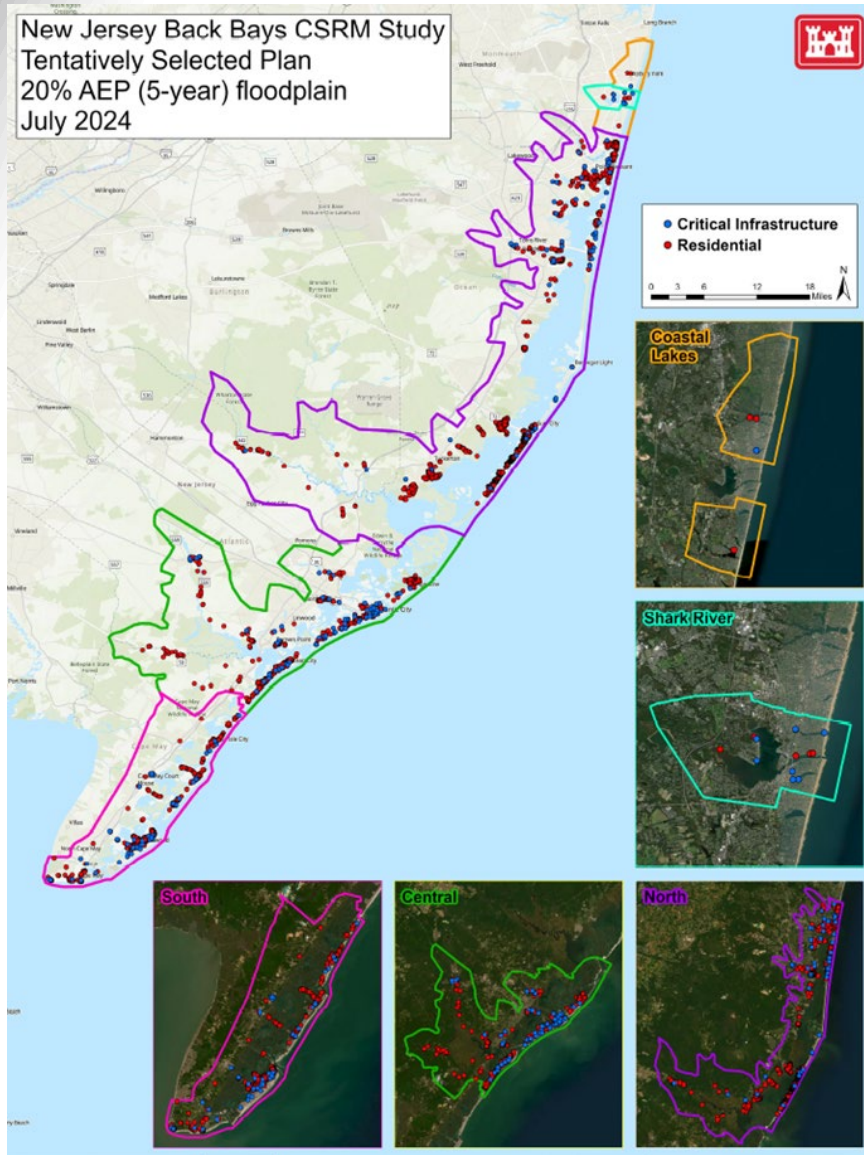
1. Determine if the structure is located in the 5-year (20% AEP) flood plain (feasibility).
2. Determine if the elevation of the lowest floor of living space is below the level of inundation of a 5-year event [Feasibility and Pre-construction engineering design (PED)].
3. If yes to 1 and 2 above – Homeowner application process. Right of access granted. (PED)
4. Structure by structure survey to determine:
 - a) Precise elevations.
 - b) Type of foundation.
 - c) Condition of structure. Is it structurally sound enough to be elevated or flood proofed.

MAP OF LOCATIONS FOR PROPOSED NATURE- BASED SOLUTIONS



IMPLEMENTATION PLANNING

New Jersey Back Bays CSRM Study
Tentatively Selected Plan
20% AEP (5-year) floodplain
July 2024



Study team assumes multi-year Implementation Plan and phased funding

Study Area Hydraulic units can be broken out for phased Implementation Planning

Each Area could be organized by selecting natural aggregates of Elevations or Floodproofing

These aggregates would then be prioritized for implementation based on study team/VT criteria related to;

- Risk Level
- Size
- Need
- Benefits
- Economic/Environmental Justice



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HOMEOWNER RESPONSIBILITIES

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Homeowner Responsibilities are laid out in Implementation Plan

- Hazardous or contaminated soils.
- Restoration, replace, or repair work of the structure.
- Additions to the structure (that is not required to elevate the structure).
- Additional elevation beyond that of the recommended plan.
- Elevating detached structures (sheds, detached decks).



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EXAMPLE OF HOME ELEVATION





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EXAMPLE OF FLOOD PROOFING





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SCHEDULE

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	<u>NJBB Schedule - July 2024</u>	
Task #	Task	Baseline Date
1	TSP Meeting	9/18/2024
2	Draft FR/EIS Public/ATR/IEPR/NFS Review Release	12/20/2024
3	Agency Decision Milestone	3/14/2025
4	Complete design	6/2/2025
5	Final FR/EIS Internal Review and NJDEP Review	12/9/2025
6	Final FR/EIS Complete (Final Report Ready for Review - CW160)	1/20/2026
7	State and Agency Technical Review Start	2/25/2026
8	State and Agency Technical Review Complete	3/27/2026
9	Final Report Public Release Period Complete	4/29/2026
10	Chiefs Report - CW270	5/28/2026
11	WRDA 26 Deadline/Study Expiration	5/28/2026



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ACCESS TO THE FR/EIS

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New Jersey Back Bays Coastal Storm Risk Management Study

SUPPLEMENTAL DRAFT
INTEGRATED FEASIBILITY REPORT
AND ENVIRONMENTAL IMPACT
STATEMENT (DECEMBER 2024)

STUDY BACKGROUND

FLOODING PROBLEM OVERVIEW

DRAFT REPORT & TIER 1
ENVIRONMENTAL IMPACT
STATEMENT
August 2021

DRAFT REPORT TECHNICAL
APPENDICES
August 2021

INTERIM REPORT (MARCH 2019)

ENVIRONMENTAL
COORDINATION

The U.S. Army Corps of Engineers, Philadelphia District, is issuing the New Jersey Back Bays (NJBB) Supplemental Draft Integrated Feasibility Report and Environmental Impact Statement and appendices. The draft report outlines an updated plan (The Tentatively Selected Plan or "TSP"), which includes the elevation of approximately 6,400 residential structures; floodproofing 279 critical infrastructure facilities (police, fire, ambulance, hospitals); and the implementation of nature-based solutions (NBS) (using dredged material to enhance 217 acres of salt marsh habitat vulnerable to sea level change at 7 locations in the back bay area).

- [Public Notice](#)
- [News Release](#)
- [Supplemental Draft Integrated Feasibility Report and Environmental Impact Statement](#)

Appendices

- [Appendix A - Plan Formulation](#)
- [Appendix B - Engineering](#)
- [Appendix C - Economics](#)
- [Appendix D - Non-Structural Implementation Plan](#)
- [Appendix E - Cost Engineering](#)
- [Appendix F1 - Environmental, Map Figures](#)
- [Appendix F2 - Environmental, Essential Fish Habitat Assessment](#)
- [Appendix F3 - Environmental, Endangered Species Act Biological Assessment](#)
- [Appendix F4 - Environmental, Clean Water Act Section 404\(b\)\(1\) Evaluation](#)
- [Appendix F5 - Environmental, Clean Air Act Evaluation](#)
- [Appendix F6 - Environmental, Wild and Scenic Rivers Section 7\(a\) Evaluation](#)
- [Appendix F7 - Environmental, Coastal Zone Management Federal Consistency Evaluation](#)
- [Appendix F8 - Environmental, Cultural Resources Phase 1A Investigation and Correspondence](#)
- [Appendix G1 - Nature Based Solutions](#)
- [Appendix G2 - Nature Based Solutions II](#)
- [Appendix H - Real Estate Plan](#)
- [Appendix I - Communication and Correspondence](#)
- [Appendix J - Environmental Justice Plan](#)
- [Appendix K - Climate Assessment](#)

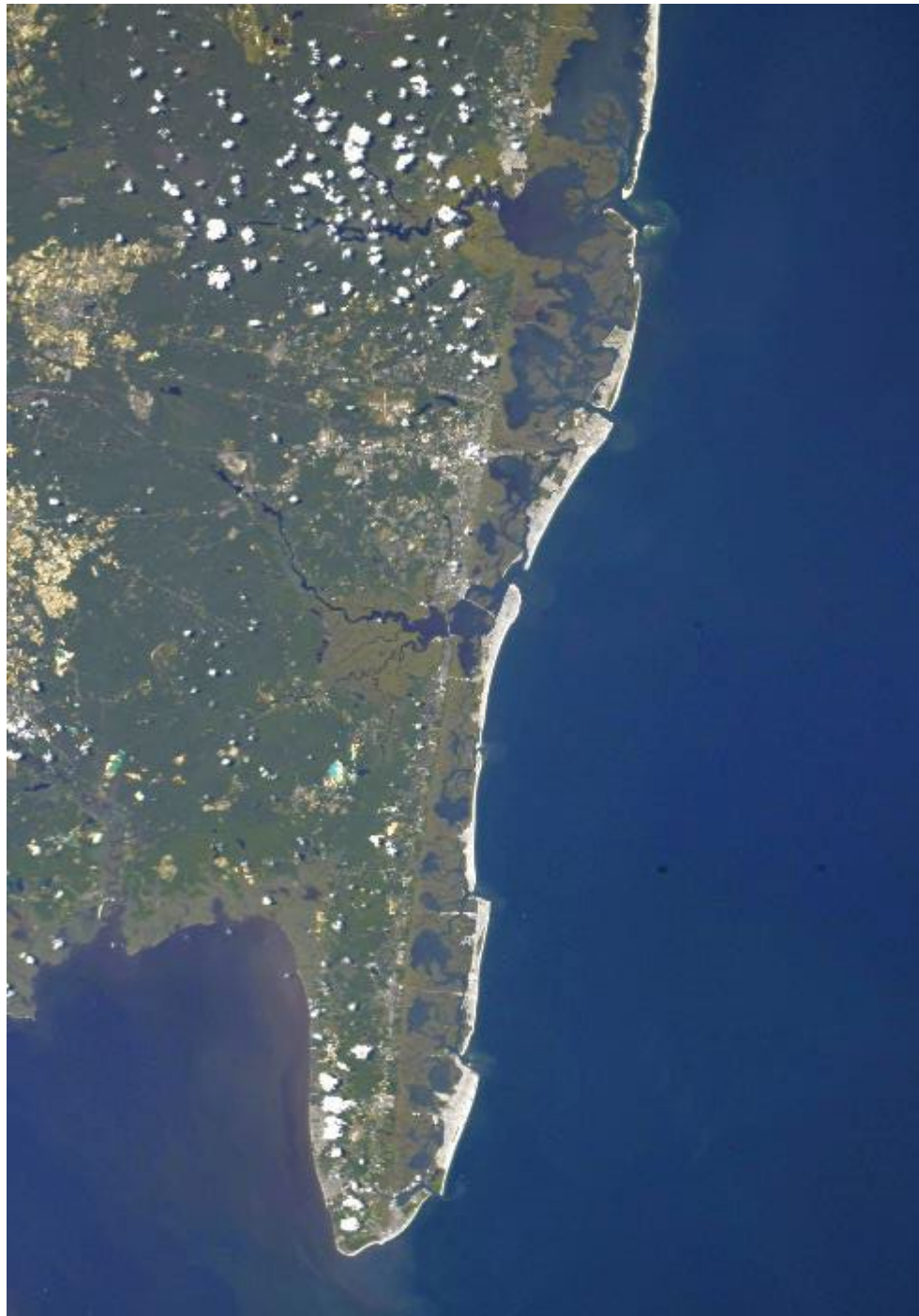
<https://www.nap.usace.army.mil/Missions/Civil-Works/New-Jersey-Back-Bays-Study>



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Questions & Discussion

Comments and questions can be submitted by means of the instructions provided in the Feasibility Report and the public notice.

