NEW YORK DISTRICT

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

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Actions Achieving the Vision of a World Class Harbor Estuary

NYNJHAT STUDY HISTORY SLIDE

- Feasibility Cost-Sharing Agreement with NYSDEC and NJDEP (jointly and severally) non-federal sponsors executed 15 July 2016

- Alternatives Milestone Meeting – 28 September 2017
  - Followed extended NEPA scoping occurring earlier in the year
  - VT Endorsement of Developing Interim Report, Prior to Draft Report
  - VT Endorsement of Tier 1 EIS with Draft and Final Reports and basis for Chief of Engineer's Final Report

- USACE Approval of increased study funding (3-year schedule with $6M total study funding)

- First Additional Resource Request Approval – 31 October 2018
  - Increased Approved Study Cost to $19.4M
  - Increased Study Time to 6 years, with revisit of schedule planned at ADM in September 2020

- Substantial Federal Funding Increase -$2.8M in November 2018 USACE Work Plan

- Release of Interim Report – February 2019
  - Followed by Extended Public Outreach

- Federal Funding Cessation in USACE FY 2020 Work Plan (February 2020) and FY 2021

NYNJHAT STUDY HISTORY SLIDE (CONTINUED)

- Congressional Reprogramming Planned for Federal Funding Resumption in July 2021
- Second Additional Resource Request Approved – 7 April 2021
  - Extended study schedule two additional years, at same approved $19.4M cost
- Federal Funding Resumed October 2021
- Funding Converted from Cost-Shared to 100% Federal Funding (from Disaster Relief Supplemental Appropriations Act) in FCSA Amendment – June 2022
- TSP Milestone held July 2022
- Draft Feasibility Report Released September 2022
  - Followed by Extended Public Outreach to 31 March 2023
- New HQUSACE Guidance fall 2023-spring 2024
  - Requiring Complete NEPA Analysis for Chief of Engineer Report construction authorization recommendations (changed from AMM)
  - **New guidance to develop early actionable measures for possible Interim Chief of Engineer's Report by May 2026**
  - **Third Additional Resources Request submitted due to unforeseen schedule impacts and new study requirements**

OVERVIEW

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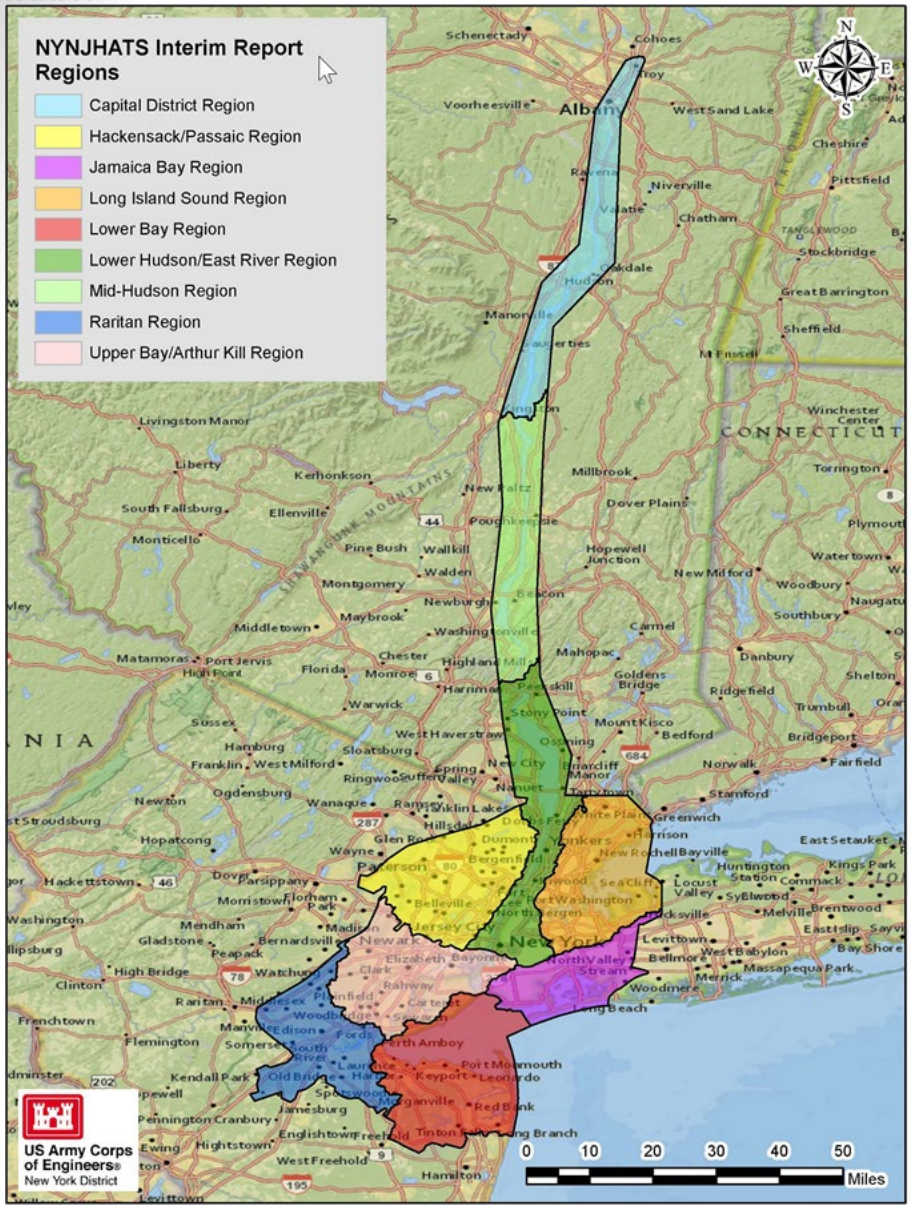


STUDY AREA

- Area covers 2,150+ square miles and 900+ miles of affected shoreline
- Affected population of roughly 16 million people, including New York City and the six most populated cities in New Jersey

COASTAL STORM RISKS & DAMAGES

- Significant Life/Safety Risk and over 275,000 Structures in Potential Impact Area
- Incorporates Dozens of Other Ongoing and Planned CSRM Projects in Study Area
- Present Value Damages for 100-Year Storm Range from $100+B for Intermediate Sea Level Rise to over $350B for High Sea Level Rise Projection

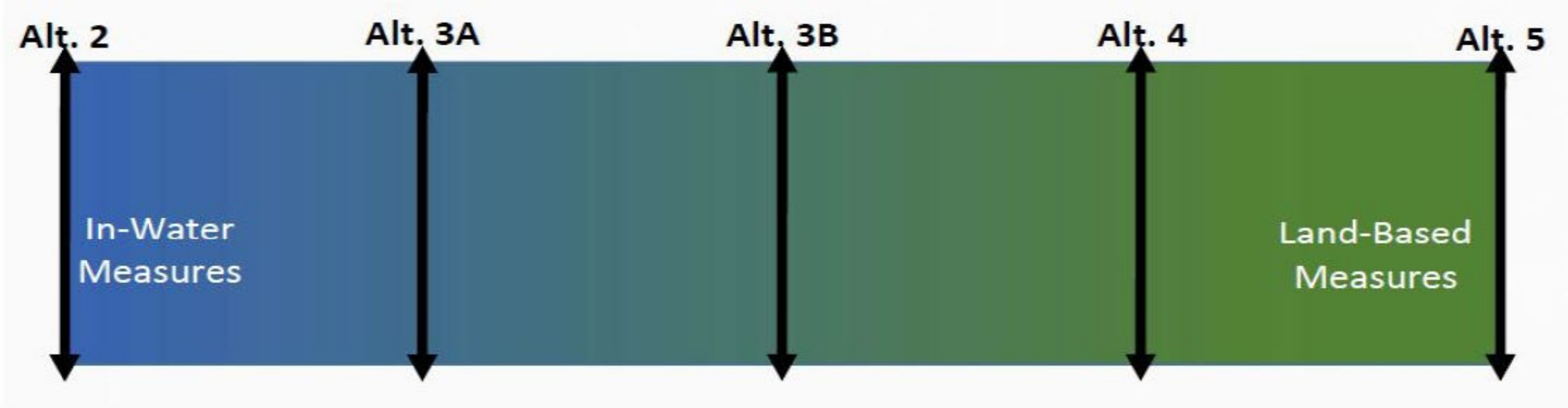
STUDY SCOPE

- **Study Cost:** $19.4M, cost-shared 50/50 with NYSDEC and NJDEP thru July 2022, and 100% federal thereafter.
- **Funding:** Federal funding ($1.45M) resumed in October 2021 following lapses in fiscal years 2020 and 2021. Study also received $6.724M DRSAA funding.
- **Study Scope:** WRDA 2020 & 2022 allows for possible scope expansions under consideration.

STUDY SCHEDULE

- Draft Feasibility Report and integrated Tier 1 Environmental Impact Statement Released for extended public day review in September 2022 with meetings held throughout area. Comment closing date was March 31, 2023. Approximately 2,800 comments received.
- See WWW.NAN.USACE.ARMY.MIL/NYNJHATS for Draft Report and all appendices.
- **Early Action Elements (EAEs) WRDA 2026**
- **Technical Analysis Report WRDA 2028**

ALTERNATIVE PLANS – PROS & CONS WITH EACH



Alternative 1: No action
Alternative 2: Harbor-wide storm surge barrier + shore-based measures
Alternative 3A: Multi-basin storm surge barriers + shore-based measures
Alternative 3B: Multi-basin storm surge barriers + shore-based measures
Alternative 4: Single-basin storm surge barriers + shore-based measures
Alternative 5: Shore-based measures only

- Alternatives span spectrum from large in-water storm surge gates to numerous shoreline-based structures. Alternatives also have (or will have) complementary non-structural and natural and nature-based features (where feasible).
- Best Solution Appears to Involve Multiple, Layered Features
- Possible Phased Implementation:

1) Short-term: Construct Actionable Features,
2) Mid-Term: Further Evaluate, Design and possibly Construct Complex Features,
3) Long-Term: Adapt and expand features due to further sea level rise and climate change

ALTERNATIVE 1 – NO ACTION (FUTURE WITHOUT PROJECT CONDITION)

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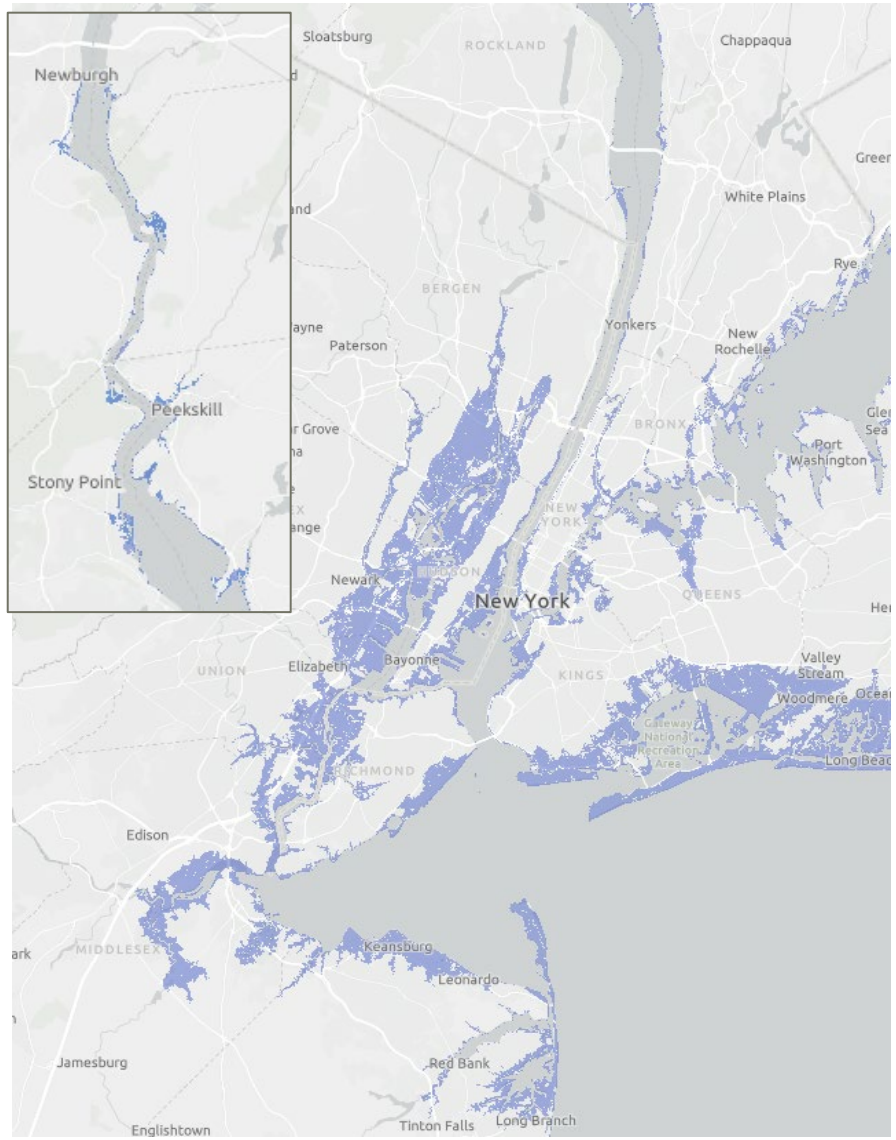
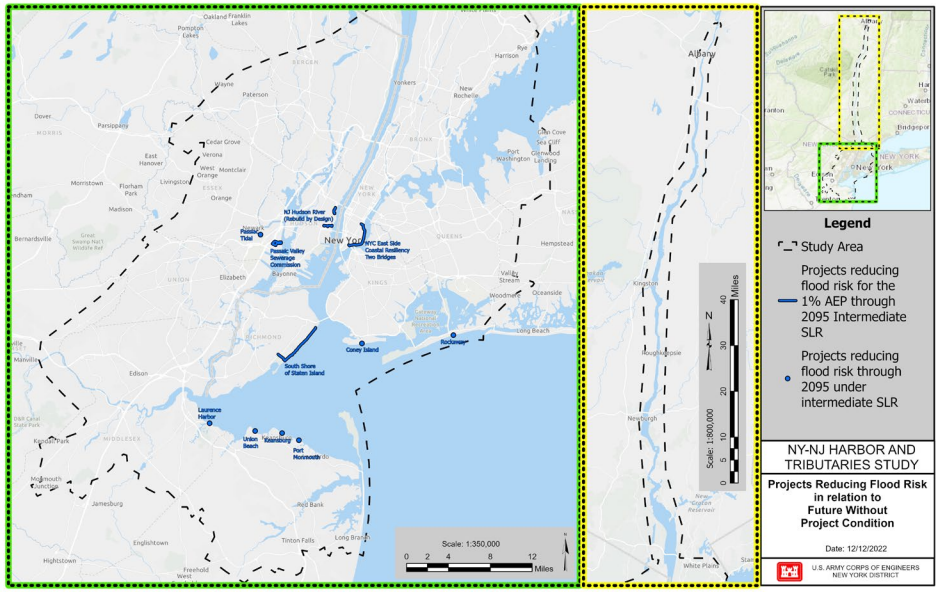
All alternatives are <u>currently</u> focused on evaluating possible actions to lessen impacts from severe, infrequent coastal storms with intermediate sea level rise

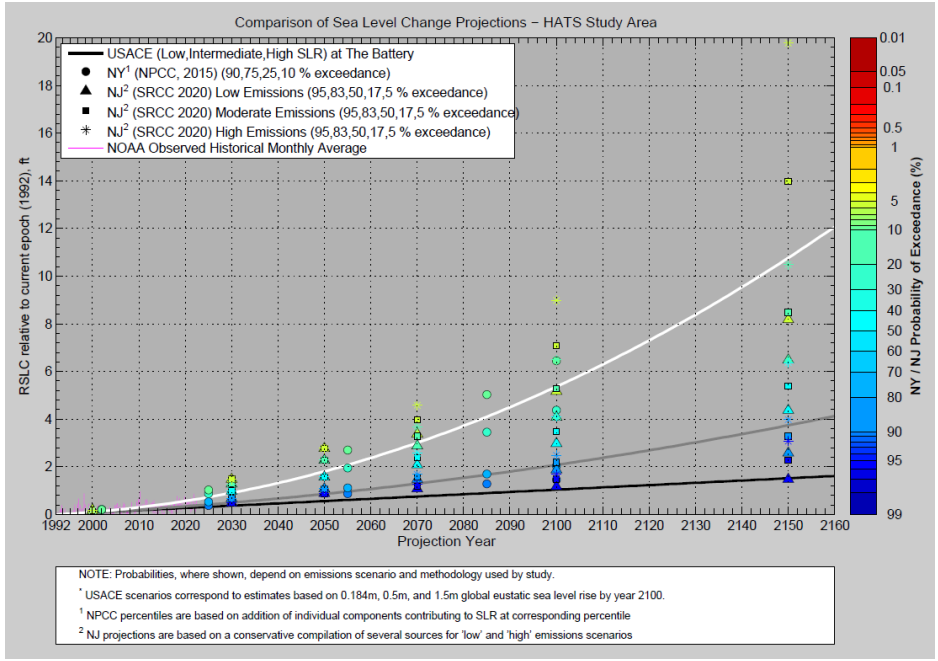


1% flood extent (with intermediate RSLC)

Alternative 1 Includes Other Existing and Ongoing Coastal Storm Risk Management Projects



Study is evaluating wide range of possible sea level rise



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KEY METRIC COMPARISON OF ALTERNATIVES

Alternative	Percentage of Area at Reduced Risk	Years to fully Construct	First Cost ($B)	Average Annual Cost	Average Annual Benefits*	Net Benefits	Benefit to Cost Ratio
2	96%	32	$112.3	$5.0B	$4.6B	$-0.5B	0.91
3A	87.1%	24	$76.9	$3.2B	$6.4B	$3.2B	1.99
3B	**63%**	**14**	**$52.7**	**$2.6B**	**$6.3B**	**$3.7B**	**2.45**
4	45.9%	14	$43.0	$2.1B	$5.0B	$2.9B	2.39
5	3.3%	5	$16.0	$0.9B	$1.9B	$1.0B	2.21

* Benefits currently based on estimated damages avoided to structures in study area. Critical infrastructure and other possible benefits under refinement and have not been included in the net benefit calculations at this time.

ALTERNATIVE 3B – THE TENTATIVELY SELECTED PLAN

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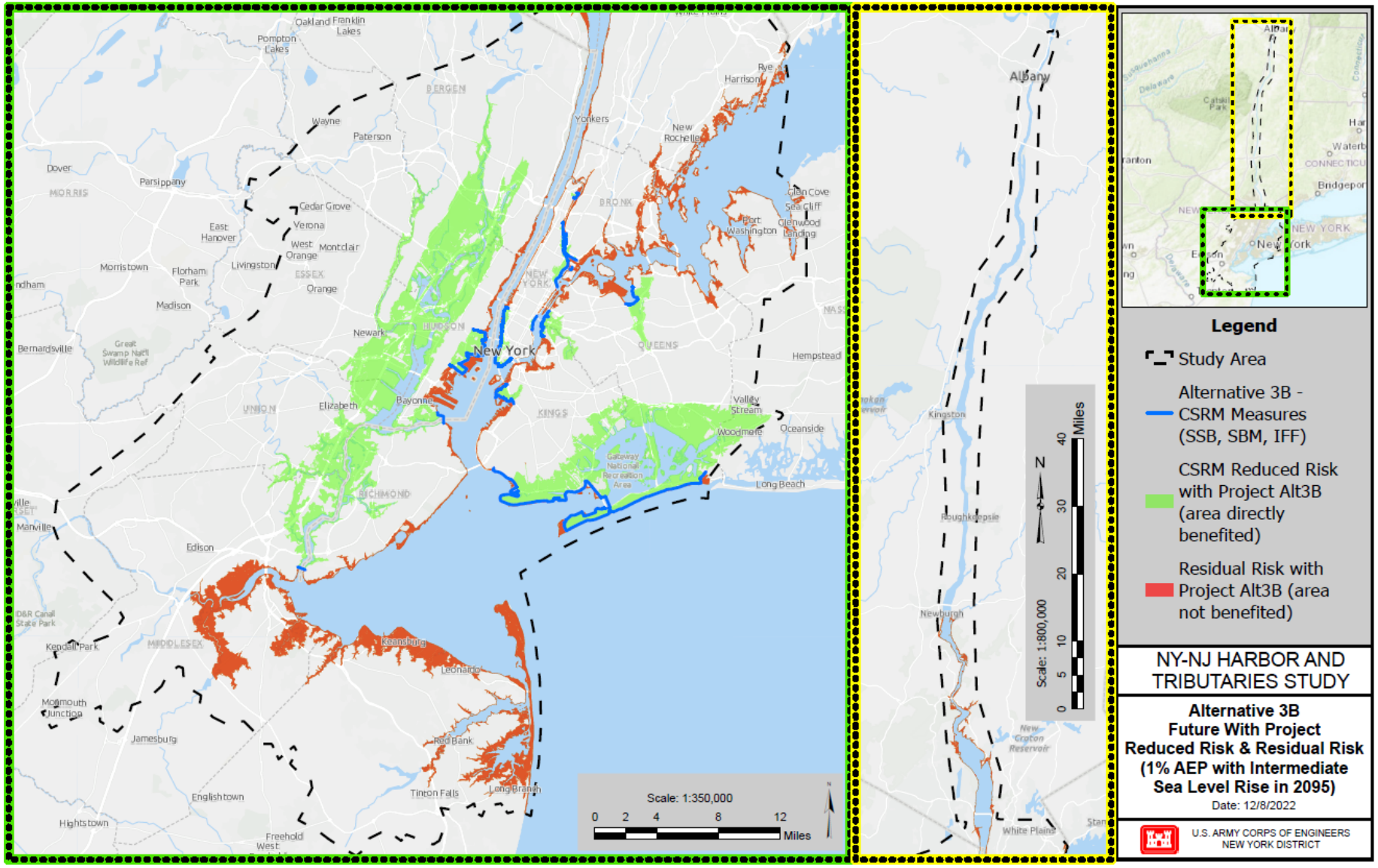
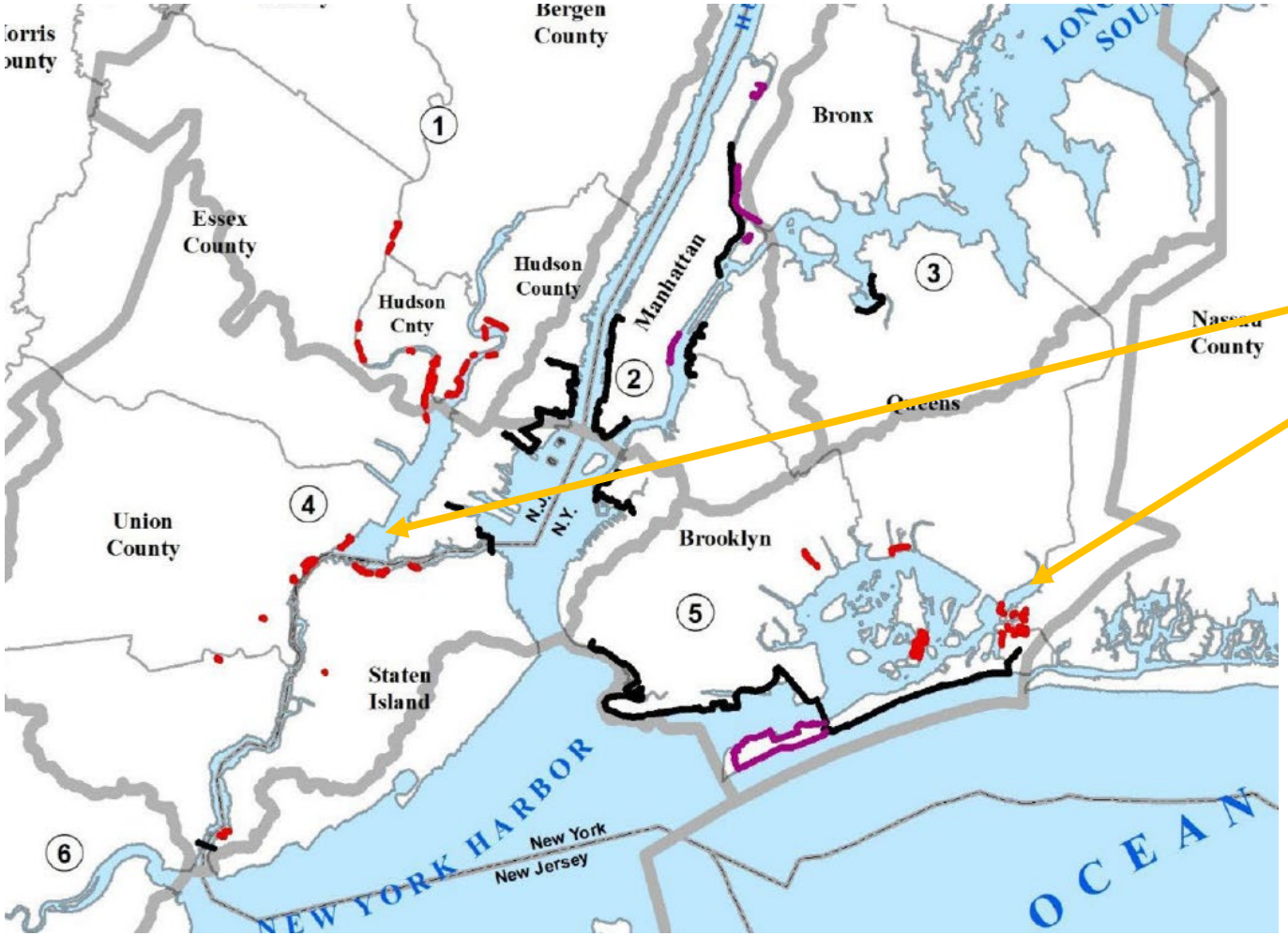
63.0% Study Area at Direct Risk Benefited

Feature Type	Approx. Miles
Storm Surge Barriers	2.2
Shoreline Based Measures	50.6
Induced Flooding-Mitigation Features	11.8
HFFRRF (not shown)	18.7

Alternative	
First Cost ($B):	$ 52.7
Total Present Value Cost ($B):	$ 76.2
Estimated Construction Duration (years):	14



TENTATIVELY SELECTED PLAN FEATURES IN DETAIL



Note High Frequency Flood Risk Reduction Features behind Storm Surge Barriers

Black lines – Primary structural features approximately 15-25 ft. NAVD88
Purple lines – Structural induced flooding mitigation features also approx. 15-25 ft. NAVD 88
Red lines – High Frequency Flood Risk Reduction Features approximately 10 ft. NAVD88

PUBLIC ENGAGEMENT

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Who do we engage?

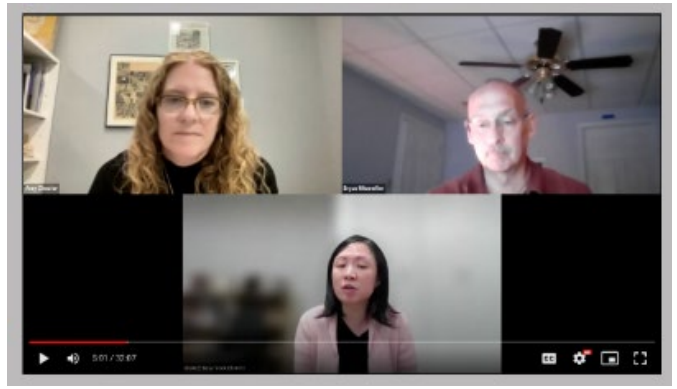
- Elected officials
- Local government
- Non-governmental organizations
- Academic institutions
- Private entities

Over 80 meetings.. and counting

- 23 public meetings
  - 12 hybrid, 4 in-person, 7 virtual
  - Held throughout study area
- 63 Stakeholder Engagements
  - 1 hybrid, 12 in-person, 50 virtual
  - Hosted by elected officials, local government, non-governmental organizations

Engagements 24 SEP 22 – 22 MAY 23

Brochures, meeting advertisements, and other public information materials are made available in six languages: English, Spanish, Chinese (Simplified), Chinese (Traditional), Arabic, and Russian.



Top: Media interview along the Manhattan waterfront, 15 DEC 23. Middle: Rebuild by Design NYNJHATS Teach-In (25JAN 23). Bottom: Congresswoman Velazquez NYNJHATS Town Hall (23 FEB 23).

PUBLIC COMMENTS

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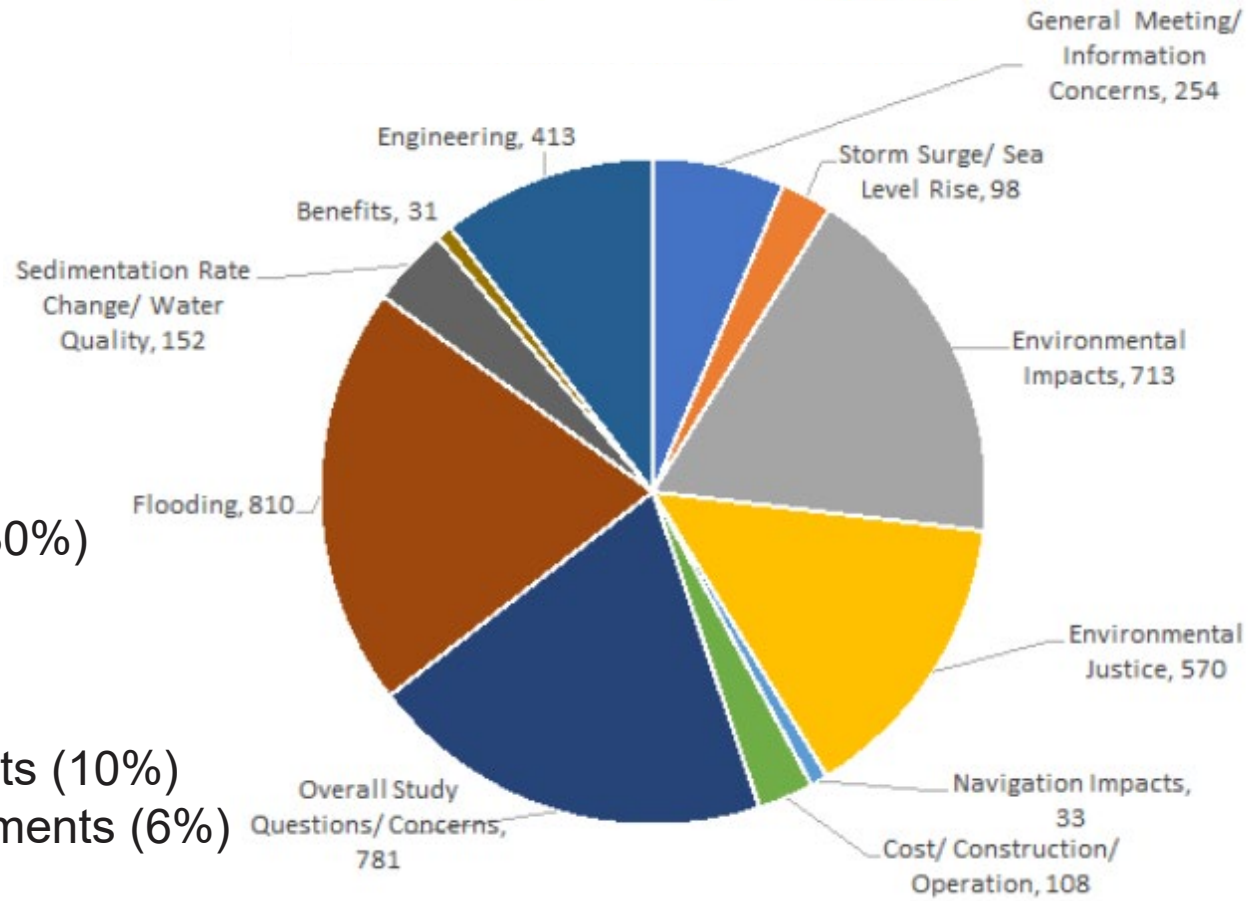
2,767 comments received

- Elected officials
- Local government
- Non-governmental organizations
- Academic institutions
- Private entities
- Individuals

Breakdown by Theme

- Flooding: 810 comments (31%)
- Overall Study Questions/Concerns: 781 comments (30%)
- Environmental Impacts: 713 comments (27%)
- Environmental Justice: 570 comments (22%)
- Engineering: 413 comments (16%)
- General Meeting/Information Concerns: 254 comments (10%)
- Sedimentation Rate Change/Water Quality: 152 comments (6%)
- Cost/Construction/Operation: 108 comments (4%)
- Storm Surge/Sea Level Rise: 98 comments (4%)
- Navigation Impacts: 33 comments (1%)
- Benefits: 31 comments (1%)



Note: Some comments included more than one theme, so total percentage adds up to >100%

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PUBLIC COMMENTS: MAIN THEMES

- Need for further agency and public engagement on plan going forward, especially in disadvantaged communities
- Need for greater incorporation of natural and nature-based features (more “green”) and nonstructural measures when possible
- Need for more refined, more detailed environmental impact analyses, especially of water quality and ecological impacts from storm surge barriers
- Need for greater integration of proposed structural measures into existing neighborhood waterfronts to reduce impacts on aesthetics, viewsheds and recreation
- Concern for remaining areas with existing coastal storm risk unaddressed by current plan features
- Request for evaluating more combined flood risks & interior drainage issues as may be caused by rainfall fluvial/pluvial impacts coincident with coastal storms
- Concern regarding long time needed for design and construction (6 and 14 years, respectively). Need to accelerate implementation of less complex features as quickly as possible for highly flood prone areas
- Concern that advancing the plan to construction may be delayed or stopped altogether due to HTRW issues, lack of non-federal sponsor support, Congressional authorization, funding, etc.
- Concerns on the future prioritization and sequencing of construction of the plan features
- Concern regarding funding and assurance that the plans features will be properly operated and adequately maintained into the future

ENVIRONMENTAL JUSTICE

Defining Disadvantaged Communities (DAC):

- 23.59% or more of the population below the federal poverty level
- 51.1% or more of the population identify as minority

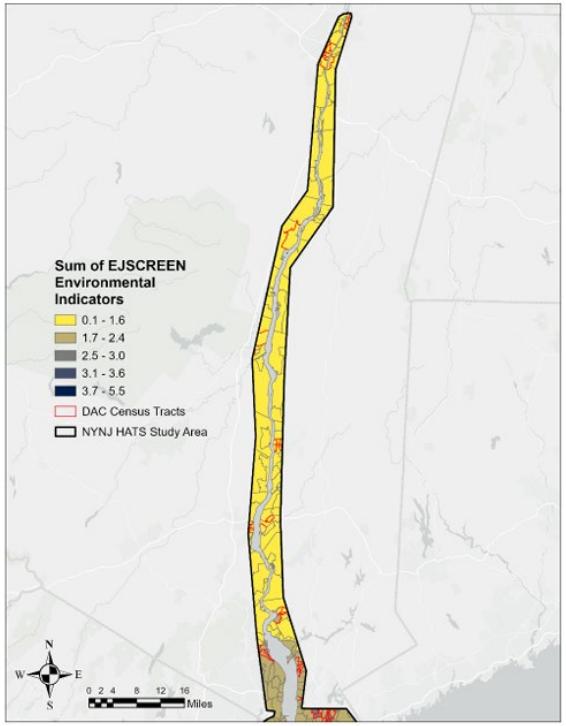
Environmental Burdens:

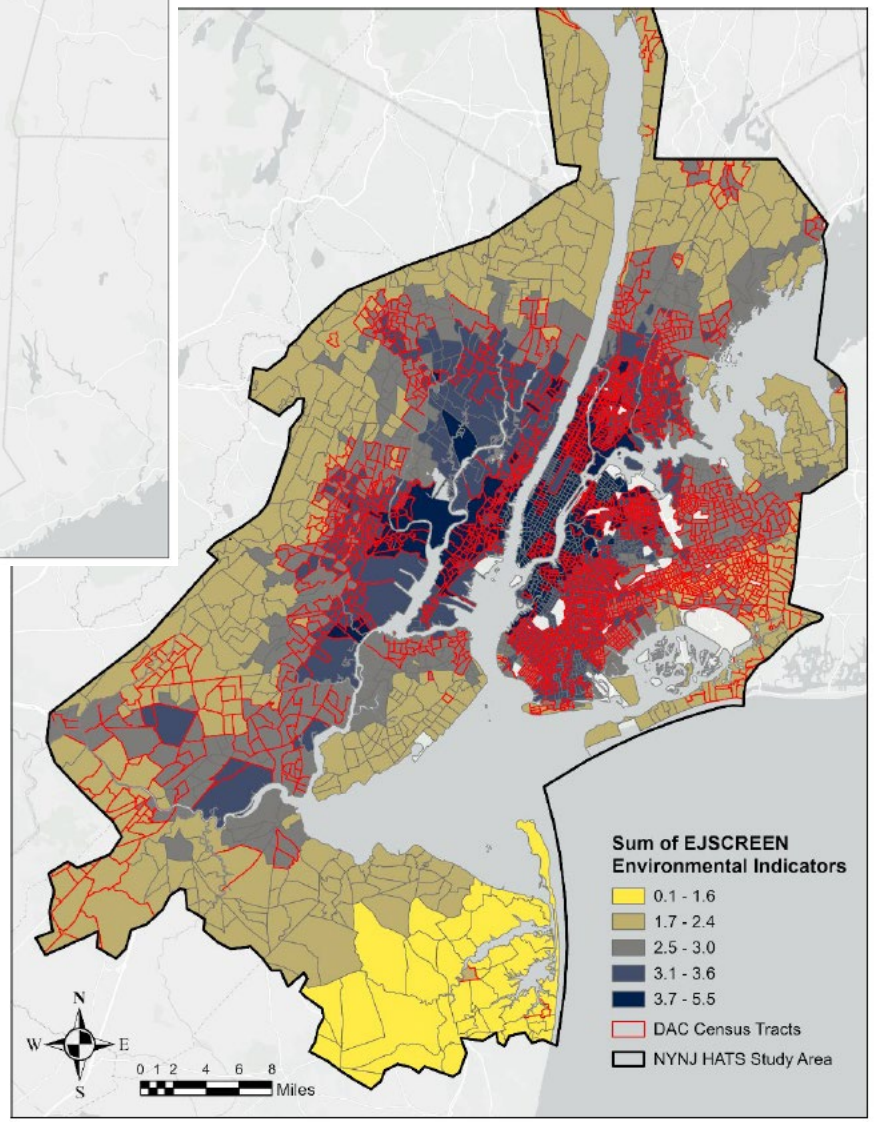
- EPA's EJ Screen

Additional Vulnerability Factors Considered:

- Elderly/Very young
- Disabled
- Single parent households
- English Proficiency

EJ and the TSP/Alternative 3B
63% of census tracts in the Reduced Risk Areas meet the criteria for DAC
63 census tracts in the construction footprint meet the criteria for DAC
Virtually every feature of the Tentatively Selected Plan touches a DAC





TYPES OF NEPA ANALYSIS

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

TIER 1 – Consists of a broad-scale review of the Alternatives.

TIER 2 – Consists of subsequent more detailed reviews as the designs are further refined (during the preconstruction engineering and design phase).

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SCHEDULE (AS CURRENTLY APPROVED)

Action/Milestone	Date
Execute Feasibility Cost-Sharing Agreement (study start)	✅ **15 July 2016**
Release Interim Report	✅ **19 February 2019**
Delay due to lack of Federal funding	✅ **February 2020 – September 2021**
FCSA Amendment Execution (converting to 100% DRSAA federal funding)	✅ **28 June 2022**
Release Draft Integrated Feasibility Report and Tier 1 EIS	✅ **Late September 2022 (175+ day review period)**
Public Meetings for Draft Report	✅ **October 2022 – March 2023**
Public Comment Closing Date	✅ **March 31, 2023**
3rd ARR Package submitted	✅ **December 2023**
3rd ARR Revised Package Resubmitted	✅ **August 2024**
Third Additional Resource Request Approval	TBD*

DIRECTION / STRATEGY

The direction given by the vertical team from the OASA(CW) is to refocus efforts into finding early actionable elements (EAEs) to study independently, in advance of the TSP, while further refining the comprehensive plan.

Early Actionable Elements will:

- Avoid HTRW
- Must not require implementation of Comprehensive plan to be functional;
- Be incrementally economically justified
- Seek to benefit Environmental Justice or otherwise disadvantaged communities
- Seek to address critical infrastructure that have substantial unaddressed coastal storm risk
- Minimize adverse impacts to the environment
- Be fully NEPA compliant
- Will not predispose the decision on the comprehensive plan
- If authorized to be then included as FWOPC in every reasonable alternative

The team is working with ERDC, non-federal partners, & municipalities within the study area to find qualifying early actionable elements.

THANK YOU

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