US ARMY CORPS OF ENGINEERS NEW JERSEY BACK BAYS FEASIBILITY STUDY

Public Meeting

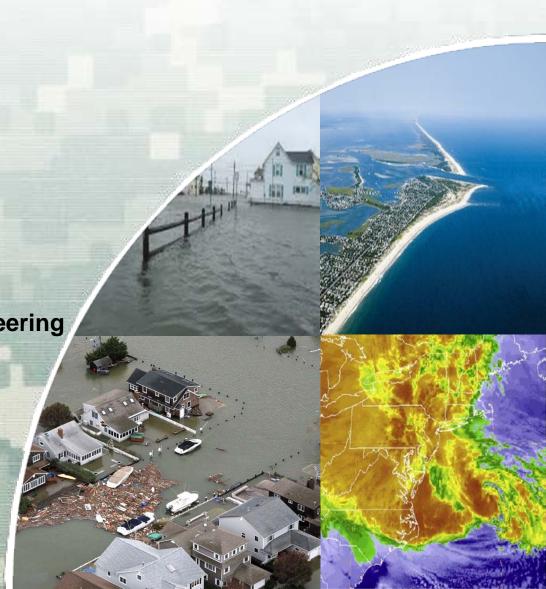
Stockton University December 1, 2016

USACE Philadelphia District, NJDEP Bureau of Coastal Engineering



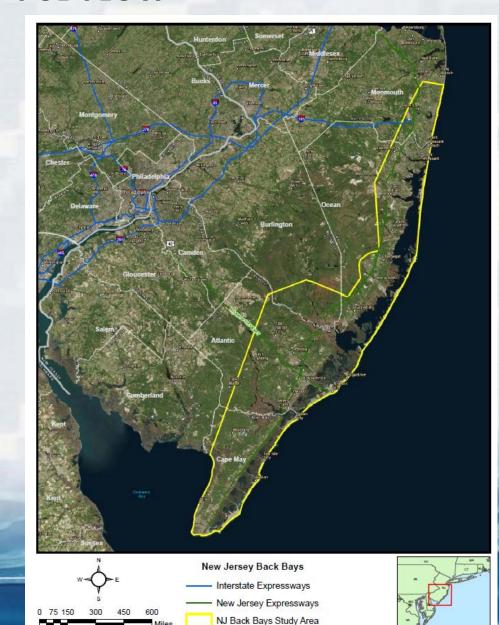


US Army Corps of Engineers
PLANNING SMART
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New Jersey Back Bays CSRM Feasibility Study Study Overview

- Sandy Comprehensive Study Focus Area
- Coastal Flooding and Sea Level Rise Risk Management
- Army Corps/NJDEP Agreement Executed April 2016
- Three-Year Study Length





New Jersey Back Bays CSRM Feasibility Study Study Specifics

- Hurricane Sandy Impacts
- Flood Risk Management Feasibility Study
 - NEPA Compliance
- Comprehensive System-Wide Solutions
- Scaled, Incremental Opportunities
- Agency and Stakeholder Alignment
- Public Involvement



The New Jersey Back
Bays study area
encompasses
five counties,
89 municipalities,
approximately 950
square miles of land
and water and nearly
3500 miles of coastline.



Study Area outlined in yellow

Study Premise

The region experienced major impacts and devastation during Hurricane Sandy and subsequent costal events owing to the low elevation areas and highly developed residential and commercial infrastructure along the back bays coastline.



Philadelphia District





Study Result

Feasibility report with integrated NEPA compliance documentation recommending phased and scaled flood risk management design and construction opportunities.

Assess the feasibility of implementing system-wide

solutions such as structural, non-structural, natural

Implement comprehensive coastal flooding strategies

to increase resilience and to reduce risk from future storms and impacts of sea level change (SLC).

and nature-based features, and policy/programmatic

- Alignment with broader climate change adaptation, community resilience planning, and sustainability principles towards a shared climate change adaptation vision for the region amongst the USACE and
- Recommendations for non-USACE entities including floodplain management, Community Rating System, and hurricane evacuation plan enhancement opportunities



- A written comment form may be filled out at this meeting and placed in the comment box.
- Comments may be emailed or mailed to:

U.S. Army Corps of Engineers Attn. Public Affairs Office 100 Penn Square East Wanamaker Building, 7th Floor South Philadelphia, PA 19107

Email: PDPA-NAP@usace.army.mil

Phone Number 215-656-6500



New Jersey Back Bay Project Delivery Process

(Repeat initial five steps for each Tier 1, 2, and 3 Evaluations)

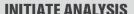




STEPS COMPLETED AT A CONCEPTUAL LEVEL BY THE NACCS







Identify Stakeholders, Partners, and Authorities Identify Constraints and Opportunities Formalize Goals Determine Spatial and Temporal Scale of Analysis

CHARACTERIZE CONDITIONS

Define Physical and Geomorphic Setting Compile Flood Probability Data Establish Baseline Conditions and Forecast Future Conditions

ANALYZE RISK AND VULNERABILITY

Map Inundation and Exposure Assess Vulnerability and Resilience Determine Areas of High Risk

IDENTIFY POSSIBLE SOLUTIONS

Assess Full Array of Measures Consider Blended Solutions Develop Performance Metrics Establish Decision Criteria

EVALUATE AND COMPARE SOLUTIONS

Develop Cost Estimates Assess Benefits









SELECT PLAN

DEVELOP IMPLEMENTATION PLAN

Complete Pre-construction Engineering and Design Consider Operation and Maintenance Issues Establish Adaptation Thresholds Develop Strategic Monitoring Plan

EXECUTE PLAN

MONITOR AND ADAPT

Measure Performance and Benefit Production Assess Resilience Adaptively Manage







- Managing coastal storm risk is a shared responsibility and requires shared tools and a common methodology that all parties can follow together to address risk and identify solutions. This methodology is the New Jersey Back Bays Project Delivery Process.
- ➤ The Framework is a nine-step process that is **customizable** for any coastal watershed and is repeatable at regional, state and **local scales**.



MANAGEMENT MEASURES FOR CONSIDERATION



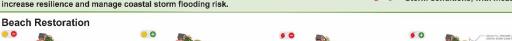


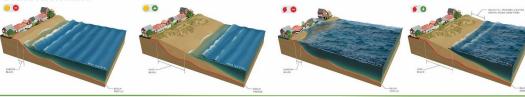
Natural and Nature Based Features (NNBF)

NNBF are defined in the North Atlantic Coastal Comprehensive Study (NACCS) to include elements that are created and evolve over time through the actions of physical, biological, geologic, and chemical properties operating in nature and elements that mimic characteristics of natural features but are created by human design, engineering, and construction to provide specific services such as coastal storm risk management. NNBF measures considered in the NJBB study include Living Shorelines, Reefs, Wetland Restoration, Submerged Aquatic Vegetation (SAV) restoration, and Green Stormwater Management. Improved implemented of NNBF throughout the NJBB CSRM Feasibility Study area presents a significant opportunity to increase resilience and manage coastal storm flooding risk.

Key to Figures:

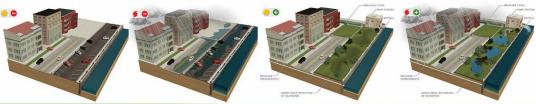
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- Storm conditions, no measure
- Storm conditions, with measure

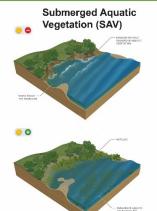


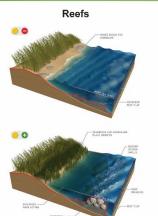


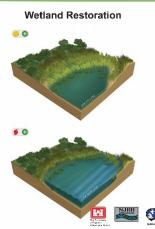
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Green Stormwater Management

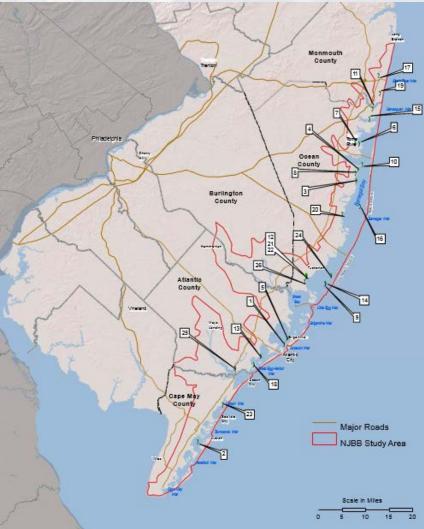








Natural and Nature-Based Features

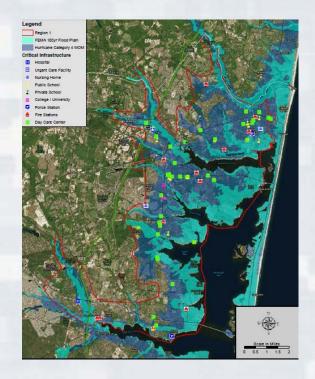


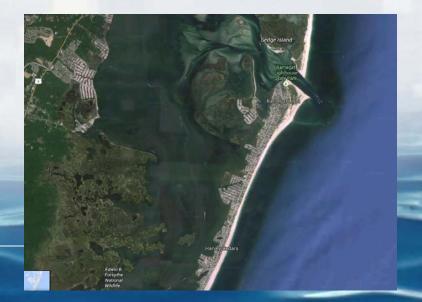


New Jersey Back Bays Study Coastal Inundation Mapping Northern Region









Please complete the Coastal Flooding Problem Identification Form and

leave your comments as you depart or email them to PDPA-NAP@usace.army.mil

U.S. Army Corps of Engineers New Jersey Back Bays Coastal Storm Risk Management Study Coastal Flooding Problem Identification (Leave forms at Table 3, or e-mail to PDPA-NAP@USACE ARMY.MIL)
Contact Information (OPTIONAL):
LOCATION (Describe the location of the problem)
PROBLEM (Define the problem)
CONSTRAINTS (Discuss any universal, study-specific or legal/policy constraints):
SUGGESTED SOLUTION: (Discuss any management measures which may be implemented):

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