

BALTIMORE COASTAL STORM RISK MANAGEMENT STUDY, OPEN HOUSE

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US Army Corps
of Engineers®



MARYLAND DEPARTMENT
OF TRANSPORTATION



OPEN HOUSE AGENDA



OPENING REMARKS

Sandy Hertz, Maryland Department of Transportation

PRESENTATION

Trevor Cyran, U.S. Army Corps of Engineers

OPEN HOUSE GOALS

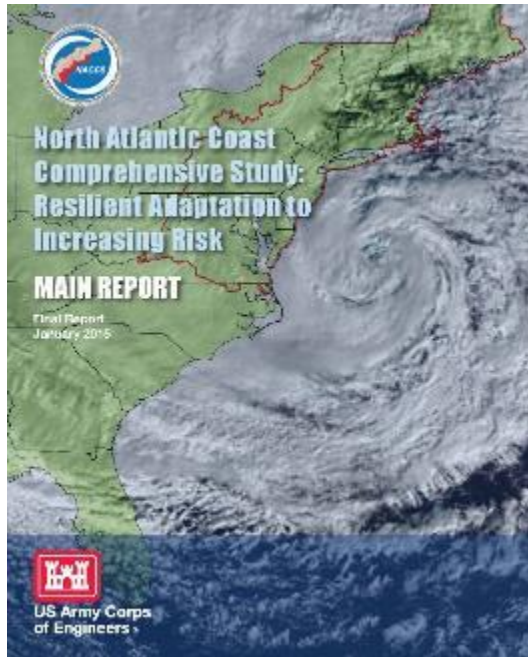
1. Introduce the study to the public
2. Discuss the study schedule and future opportunities for input
3. **Obtain public input into problems and opportunities**

WE NEED YOUR INPUT

- Comment cards
- Maps / Post-it notes for problems and opportunities identification
- Email address: CENAB-CC@usace.army.mil
- Website: <https://www.nab.usace.army.mil/missions/civil-works/baltimore-coastal-study/>



NORTH ATLANTIC COAST COMPREHENSIVE STUDY



NACCS (2015) was a detailed study to evaluate coastal storm risk vulnerability to populations, property, ecosystems, and infrastructure affected by Hurricane Sandy in the North Atlantic.

- Identified 9 areas particularly vulnerable to coastal storms, including the Baltimore Metropolitan area
- Developed a framework for coastal storm risk management



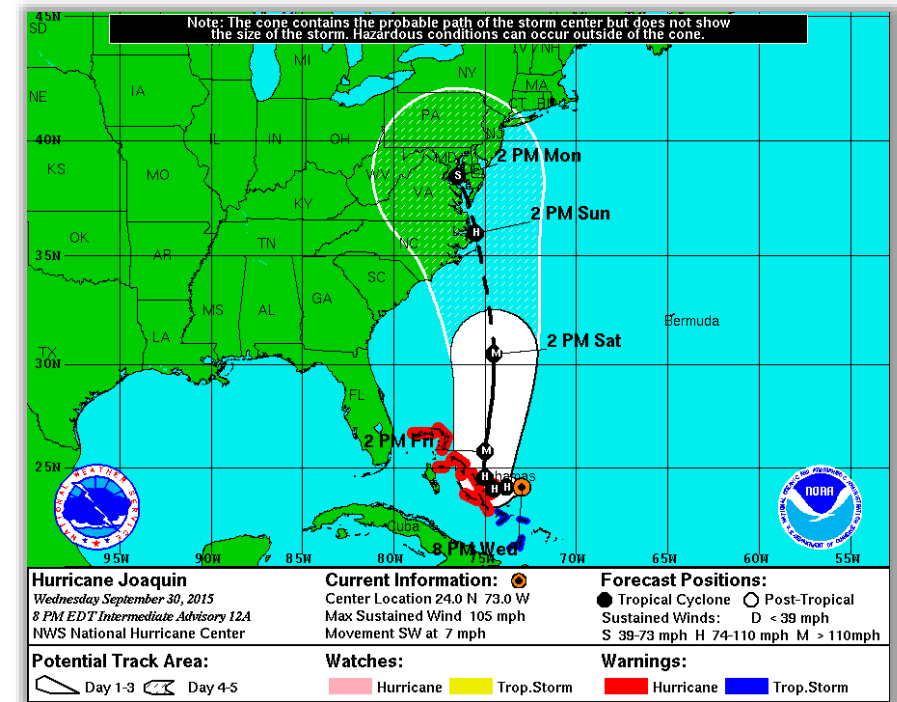
STUDY GOALS



Recommend flood risk management options to reduce coastal flood risk to vulnerable populations, properties, infrastructure, and environmental and cultural resources considering future climate and sea level change scenarios to support resilient communities in Baltimore.

Focus is on critical infrastructure to include:

- Port Terminals
- Highways (evacuation routes)
- Local airport authority facilities
- Hospitals
- Public utilities



Hurricane Joaquin preliminary storm track (September 2015)



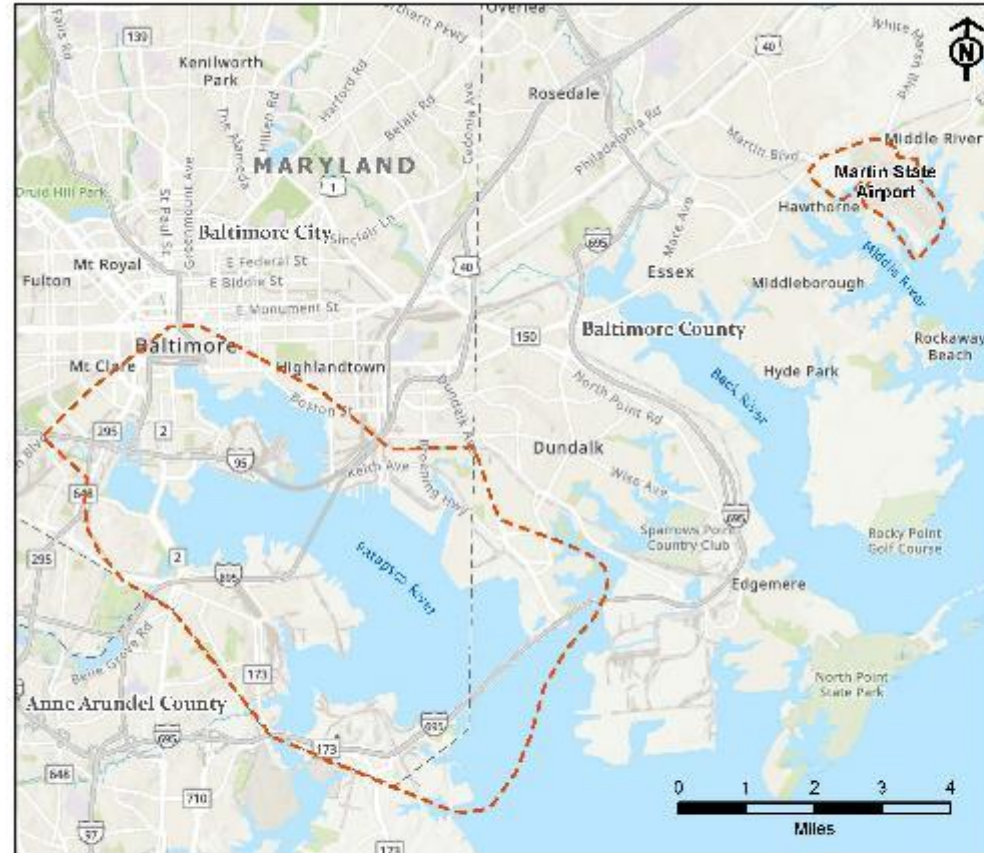
STUDY AREA



Defined by Category 4 storm

Identifying High Risk Areas:

- NACCS vulnerable areas
- Early stakeholder and sponsor input




**BALTIMORE COASTAL STORM RISK MANAGEMENT
FEASIBILITY STUDY**

CITY OF BALTIMORE, ANNE ARUNDEL AND BALTIMORE COUNTIES



VICINITY

LEGEND

 Study Area



**US Army Corps
of Engineers
Baltimore District**



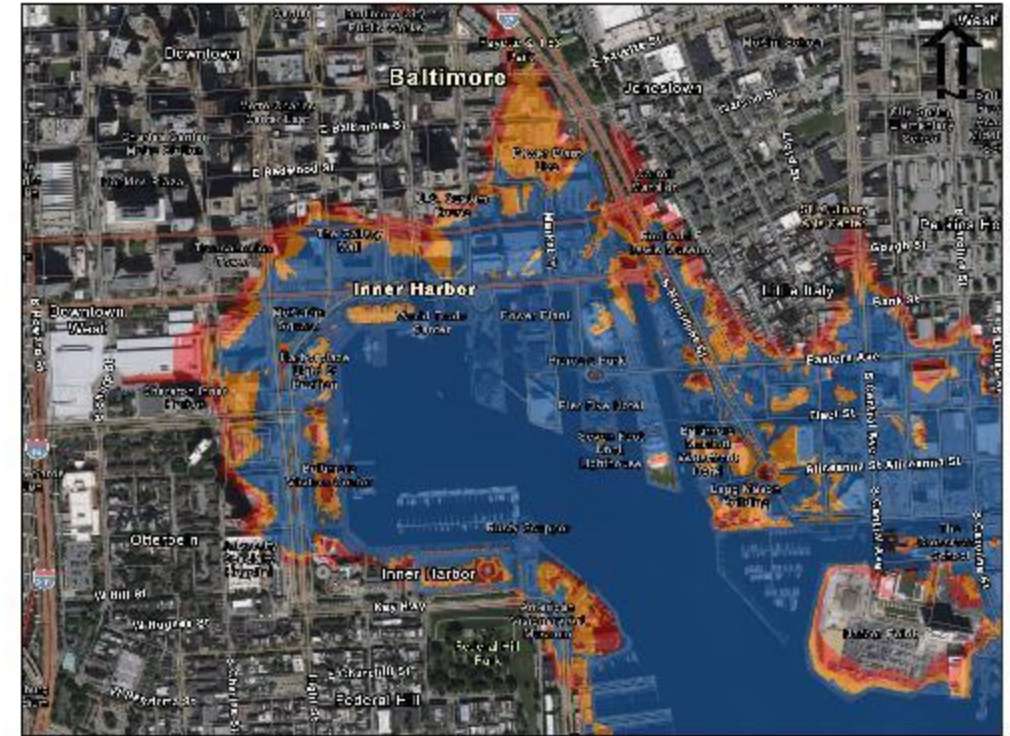
STUDY STRATEGY

Analyze risk & vulnerability:

- Determine economic damages from coastal flooding.
 - Structure inventory
- Identify critical infrastructure & weakness
- Evaluate vulnerable populations
- Identify environmental & cultural resources
- Determine future conditions (e.g., sea level rise)

Identify & evaluate a range of possible solutions:

- **Structural** (e.g., breakwaters, jetties, levees)
- **Non-Structural** (e.g., structure elevation, flood proofing)
- **Natural and Nature-Based Features** (e.g., marsh restoration, oyster reefs)



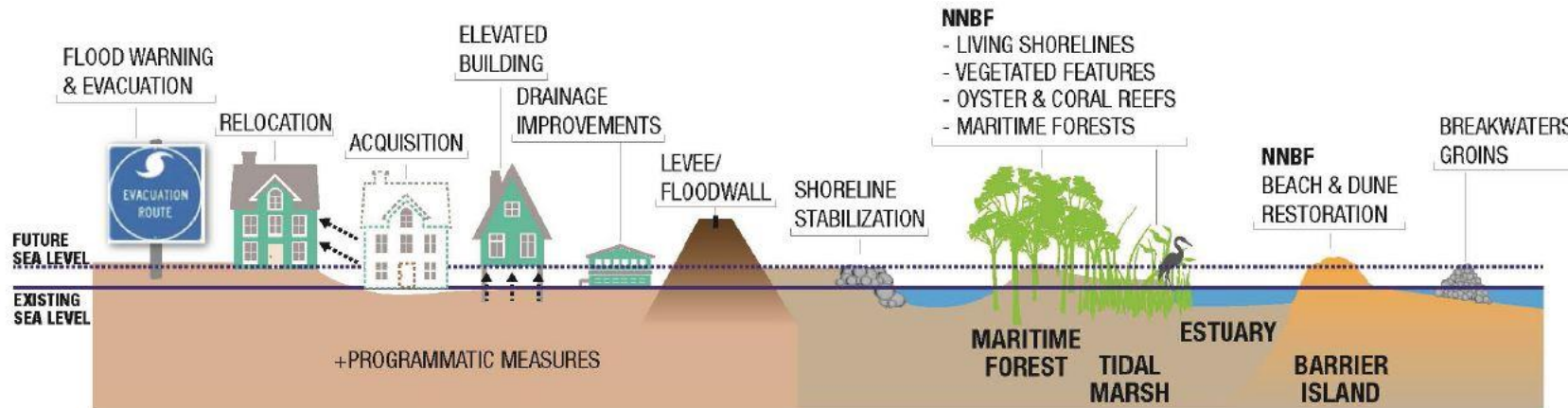
Example – flood inundation overlaid on structure/infrastructure maps



STUDY STRATEGY

Recommend a Solution:

- Calculate damages and the reduction in risk by implementing various solutions
- Calculate a Benefit to Cost Ratio (BCR) – benefits of the recommended plan compared to costs to construct & maintain
- Analyze environmental and cultural impacts of the recommendation
- Consider social acceptability of the recommendation





STUDY PRODUCTS



- Flood Inundation Mapping
- Damage Assessment (structures and infrastructure vulnerability)
- **Study Report**
 - Recommendation for a plan to reduce coastal flood damages
 - Designs & Costs for Recommended Plan
 - May lead to congressional authorization for a cost-shared engineering and construction project
- **Environmental Impact Statement**



STUDY SCHEDULE



Milestone Name	Date
Study Start	August 2019
Public Open House	September 2019
Public Meeting on Proposed Recommendation	Mid-2020
Release Draft Report for Public Review	September 2020
Chief's Report (Submit report to Congress)	August 2022



STUDY POINTS OF CONTACT



Study Website: <https://www.nab.usace.army.mil/missions/civil-works/baltimore-coastal-study/>

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