

The Baltimore Coastal Storm Risk Management Study

Expanding our Coordination on Resiliency Planning

February 10, 2020

Presented by: Sandy Hertz

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION

**Comprehensive Strategy
for Reducing Maryland's
Vulnerability to Climate Change;
Phase I: Sea Level Rise and Coastal Storms**



Statewide Coordination

- Critical Area Commission (1984)
- Maryland Climate Change Commission (2007)
 - Scientific and Technical
 - Adaptation and Response (Resiliency)
- Coast Smart Council (2014)



MARTIN O'MALLEY, Governor

Chapter 415
(House Bill 615)

AN ACT concerning

Climate-Risk-Reduction-Act
Coast Smart Council

FOR the purpose of establishing a Coast Smart Council in the Department of Natural Resources; providing for the membership, chair, and staffing of the Council; establishing the membership term for certain members of the Council; prohibiting certain members of the Council from receiving certain compensation, but authorizing the reimbursement of certain expenses; providing for the duties of the Council; authorizing the chair of the Council to establish subcommittees under certain circumstances; requiring certain structures to be constructed in accordance with certain siting and design criteria established by the Council; requiring the Council, in consultation with the Department, to develop certain criteria in accordance with certain requirements on or before a certain date; declaring the intent of the General Assembly; requiring the Departments of Budget and Management, General Services, and Natural Resources to review and incorporate certain criteria established by the Council into certain instructions and policies; providing for the application of certain provisions of this Act; defining certain terms; and generally relating to the application of certain siting and design criteria related to sea level rise and coastal flood impacts to the construction or reconstruction of certain capital projects and the Coast Smart Council.

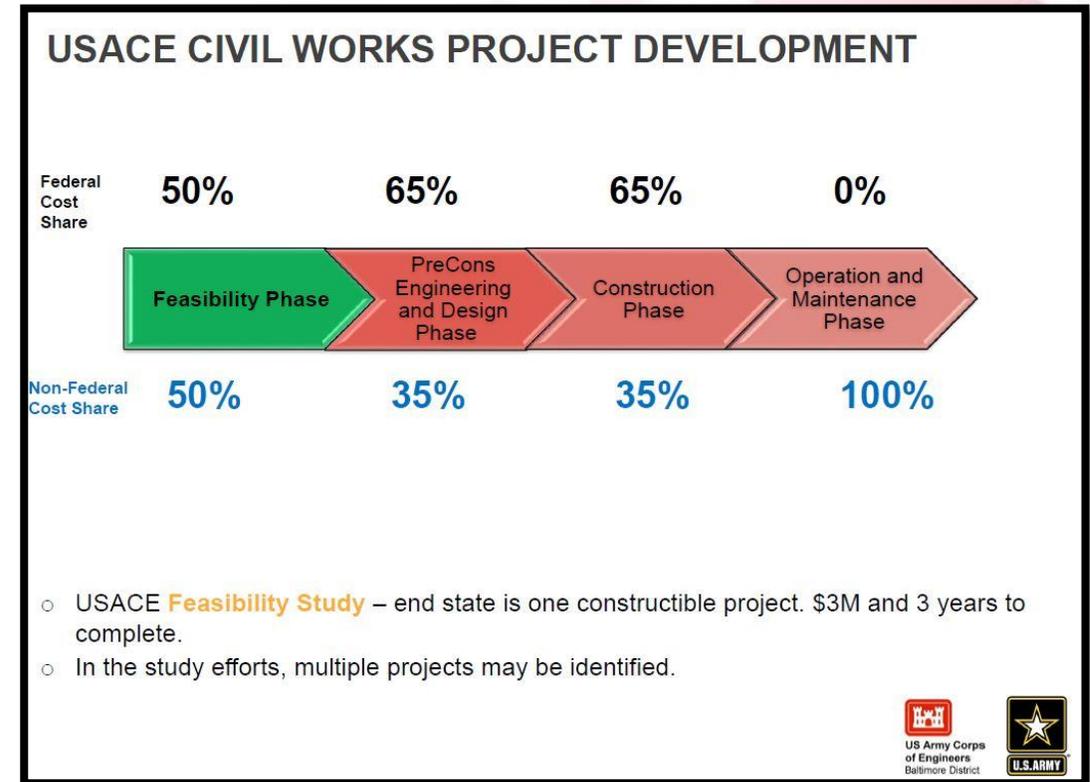
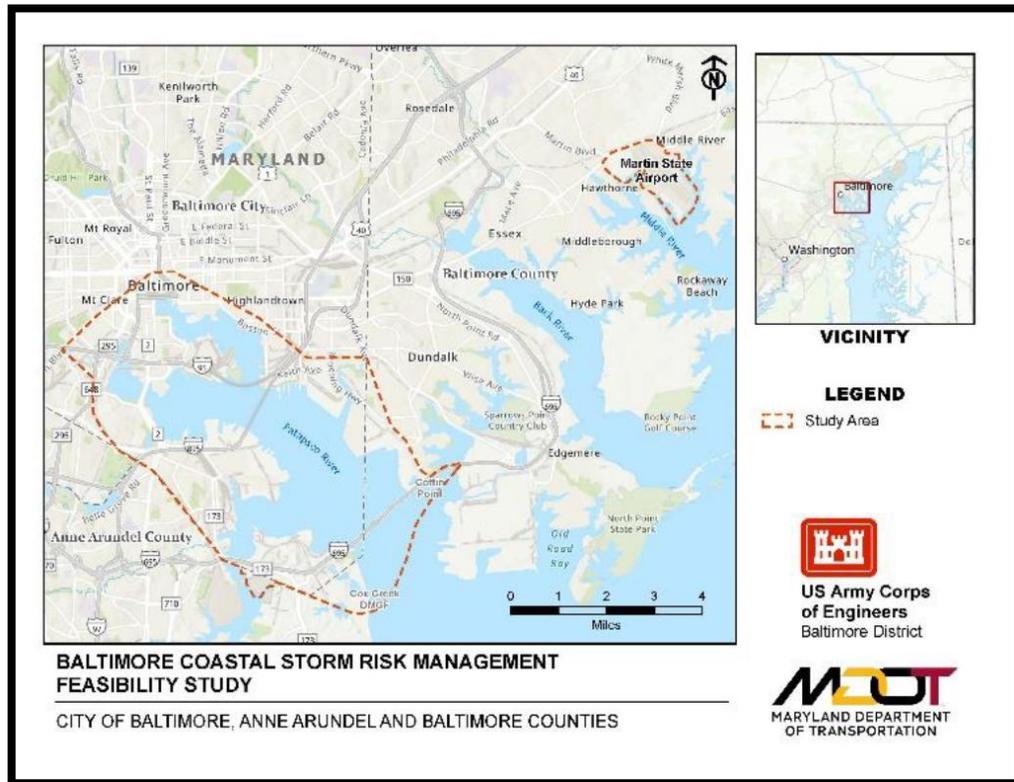
BY adding to
Article – Natural Resources
Section 3–1001 through 3–1004 to be under the new subtitle “Subtitle 10. Coast Smart Council”
Annotated Code of Maryland
(2012 Replacement Volume and 2013 Supplement)

BY adding to
Article – State Finance and Procurement
Section 3–602.3
Annotated Code of Maryland
(2009 Replacement Volume and 2013 Supplement)

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND, That the Laws of Maryland read as follows:

Housing&CommunityDevelopment
StateSuperintendentOfSchools
LocalJurisdiction
EasternShoreLandConservancy
InformationTechnology Agriculture
JointGlobalChangeResearchInstitute
MarylandInsuranceAdministration GeneralAssembly
GeneralServices Environment
Health MEMA
County UMBC
Commerce UMCP Energy
ConservationFund
Transportation
DBM TowsonUniversity
Treasurer
Consultants Planning
CriticalAreaCommission UMCES
MarylandSeaGrant
NaturalResources

Going Dutch on Coastal Risk Management



The Baltimore Coastal Storm Risk Management Feasibility Study



**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



MARYLAND
DEPARTMENT OF
NATURAL RESOURCES



**MARYLAND DEPARTMENT
OF TRANSPORTATION**

- Interagency Cost Sharing Agreement (DNR/MDOT) – 5/22/ 2019
- USACE/MDOT Feasibility Cost Sharing Agreement – 8/5/2019
- Project Scoping Meeting Held – 9/23/2019

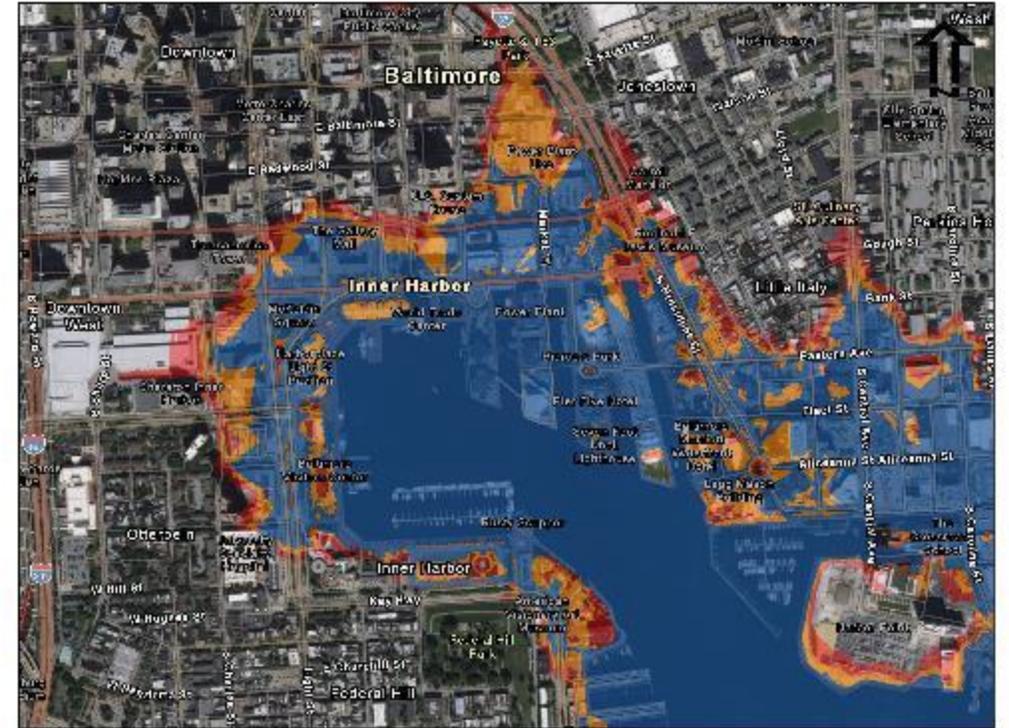
Study Strategy

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)

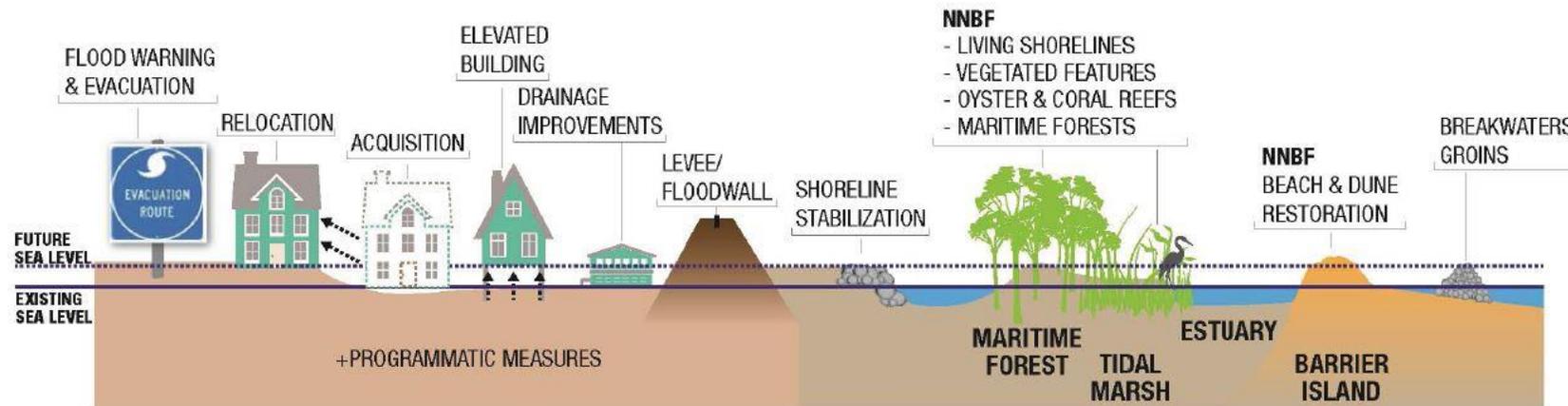


Example – flood inundation overlaid on structure/infrastructure maps

Study Strategy

Recommend 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 leads to congressional authorization for cost-shared engineering and construction of a 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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Thank You

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