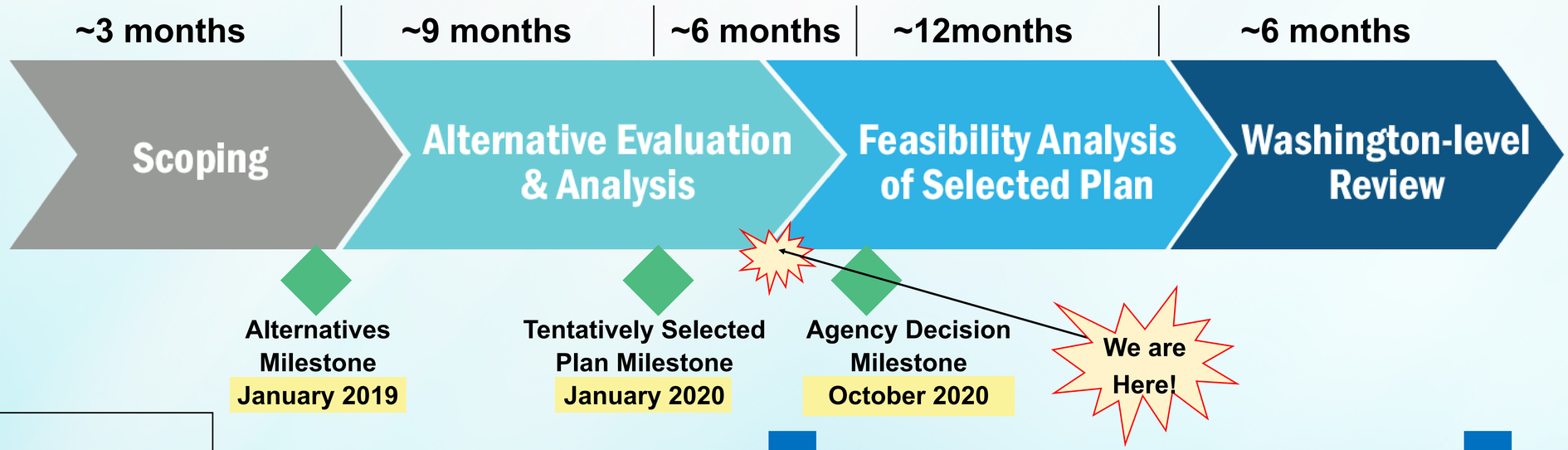
MIAMI-DADE BACK BAY COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY

THE FEASIBILITY STUDY PROCESS: KEY DECISION & PRODUCT MILESTONES



Focus on alternatives identification and evaluation to identify a recommended plan for more detailed design

Focus on scaling the measures and features for the recommended plan

US Army Corps of Engineers
Norfolk District

MIAMI-DADE COUNTY

The Draft Integrated Report / Programmatic Environmental Impact Statement was released on 5 June 2020 and public comments will be accepted until 20 July 2020.

PUBLIC REVIEW AND INPUT

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National Environmental Policy Act (NEPA)

- One of the nation's oldest environmental laws.
- Applies to federal agencies.
- Requires federal agencies to consider and disclose the environmental effects of their proposed actions in a public document.
- Encourages federal agencies to make environmentally responsible decisions.
- The U.S. Army Corps of Engineers has prepared an integrated Feasibility Report and Programmatic Environmental Impact Statement (EIS).
- Programmatic indicates this is a broad or high-level NEPA document. Future site-specific NEPA documents are anticipated.
- The EIS will result in a Record of Decision document.

Resource Areas Evaluated

- Aesthetics and Visual Resources
- Air Quality
- Bathymetry, Hydrology, and Tidal Processes
- Benthic Resources
- Cultural Resources
- Essential Fish Habitat, Fish and Fishery Resources
- Floodplains
- Geology, Physiography, and Topography
- Hazardous, Toxic, and Radioactive Materials and Wastes
- Land Use
- Navigation
- Noise and Vibration
- Plankton
- Recreational Resources
- Special Status Species
- Safety
- Socioeconomics
- Transportation
- Utilities
- Water Quality
- Wetlands and Mangroves
- Wildlife and Terrestrial Habitat

How can I provide comments?

Submit comments electronically to:

MDBB-CSRMStudy@usace.army.mil

or

http://arcg.is/fm0Xe

Or in writing to:

USACE Norfolk District

ATTN: Justine Woodward

Planning and Policy Branch

803 Front Street

Norfolk, VA 23510

For additional inquiries please contact Justine Woodward at:

757- 201-7728 or

MDBB-CSRMStudy@usace.army.mil

Public Comments are due by:

July 20, 2020

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MIAMI-DADE COUNTY

PROBLEMS, OPPORTUNITIES, OBJECTIVES AND CONSIDERATIONS

PROBLEMS

- The geographic location, low elevation, and high population of Miami-Dade County make it vulnerable to storm surge from hurricanes and tropical storms.
- Increasing high tides and king tides resulting from sea level rise result in recurrent flooding to roads and properties.
- Increasing groundwater elevations from sea level rise result in flood risks to inland areas.
- Increasing flooding from rain events due to the higher groundwater elevations and higher tailwater elevations from sea level rise threaten properties and infrastructure and exacerbate coastal storm risk.

OPPORTUNITIES

- Reduce the risk to human life and health due to coastal flooding, high flooding events or infrastructure failure.
- Reduce coastal storm-related economic damage and improve economic resiliency of the local economy and communities, particularly low-income communities and vulnerable populations.
- Increase resiliency, structural integrity, and reliability of critical infrastructure.
- Reduce transportation impacts due to high flooding events.
- Utilize available natural areas and open spaces for improving wave attenuation, water retention, and/or water storage.

OBJECTIVES

- Increase the resiliency of Miami-Dade County to function effectively before, during, and after coastal storm events by decreasing the vulnerability of critical infrastructure to flooding damage from storm surge with consideration for sea level rise.
- Reduce economic damage to structures in communities vulnerable to severe flooding damage from storm surge with consideration for sea level rise.
- Incorporate natural and nature based features to reduce flood damage and complement the recommended nonstructural and structural measures.

CONSTRAINTS AND CONSIDERATIONS

- Avoid creating or exacerbating flooding within the project area, to other local municipalities, and to local military installations.
- Avoid flooding solutions for the study area that would induce increased flooding issues in locations outside of the study area.
- Avoid and/or minimize impacts to existing environmental and cultural/historic resources in the study area and nearby (e.g. Biscayne Bay National Park, Miami Circle National Historic Landmark).
- Cannot exacerbate saltwater intrusion which will negatively impact fresh water for drinking and agriculture.

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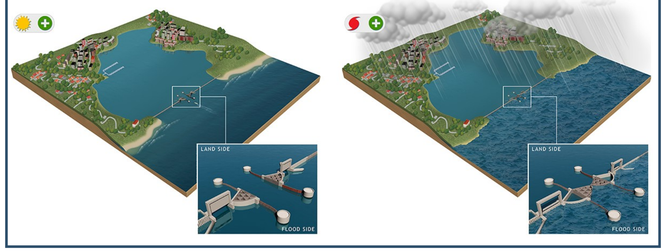
MANAGEMENT MEASURES FOR CONSIDERATION

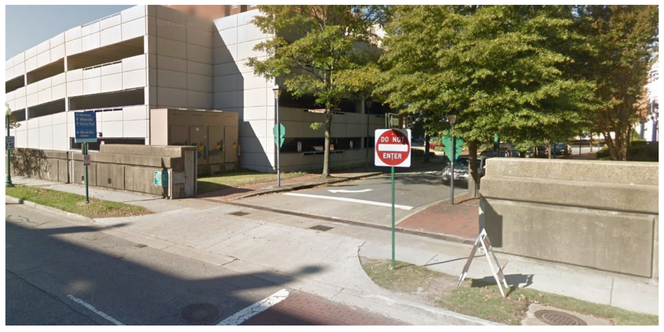
Structural

Structural coastal storm risk management measures are engineering solutions to manage flood risk and reduce damage from coastal storms by physically limiting flood water inundation.

Storm Surge Barrier



Examples



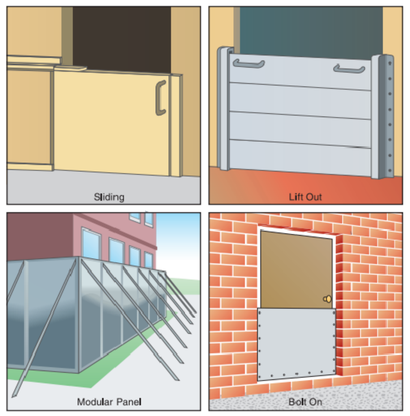
Floodwall with road closure, Norfolk, Virginia

Bayou Bienvenue Sector Gate, Louisiana

Nonstructural

Nonstructural measures are permanent or contingent measures applied to a structure and/or its contents that prevent or provide resistance to damage from flooding. They differ from structural measures in that they focus on reducing the consequences of flooding instead of focusing on reducing the probability of flooding.

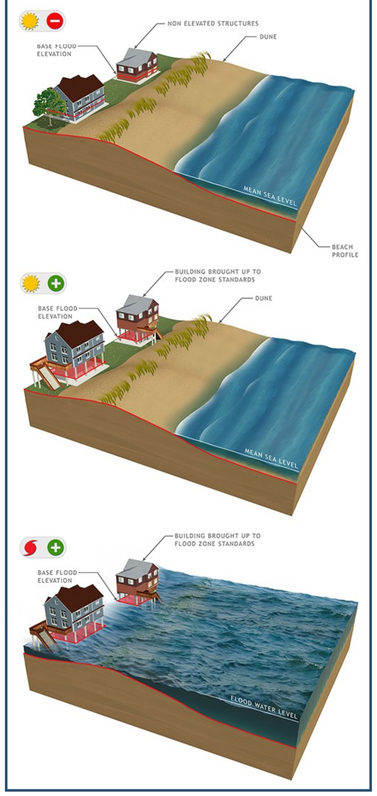
Floodproofing



Types of Flood Shields

Application of waterproof membrane on exterior wall (left) and fiber-reinforced polymer wrap applied to interior wall (right)

Elevation



Examples

Removable flood barriers of an office, Bothell, Washington

Elevated home with drive under garage, New Orleans, Louisiana

Natural and Nature-Based Features

Mangrove Planting and Restoring

Mangroves may contribute to reducing damage to property from storms and cyclones as they reduce the impacts of waves, storm surges and high winds.

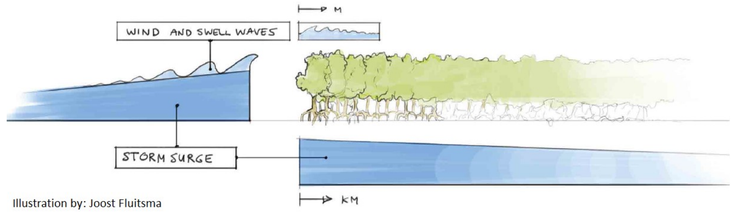


Illustration by: Joost Fluitsma

Illustration showing storm surge reduction due to mangroves.

Mangroves offer critical nursing environments for juveniles of thousands of species.

Mangroves from Salinas, Puerto Rico.

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