

BREVARD COUNTY, FLORIDA Mid-Reach

HURRICANE AND STORM DAMAGE REDUCTION PROJECT

A Planning Perspective

February 10, 2011

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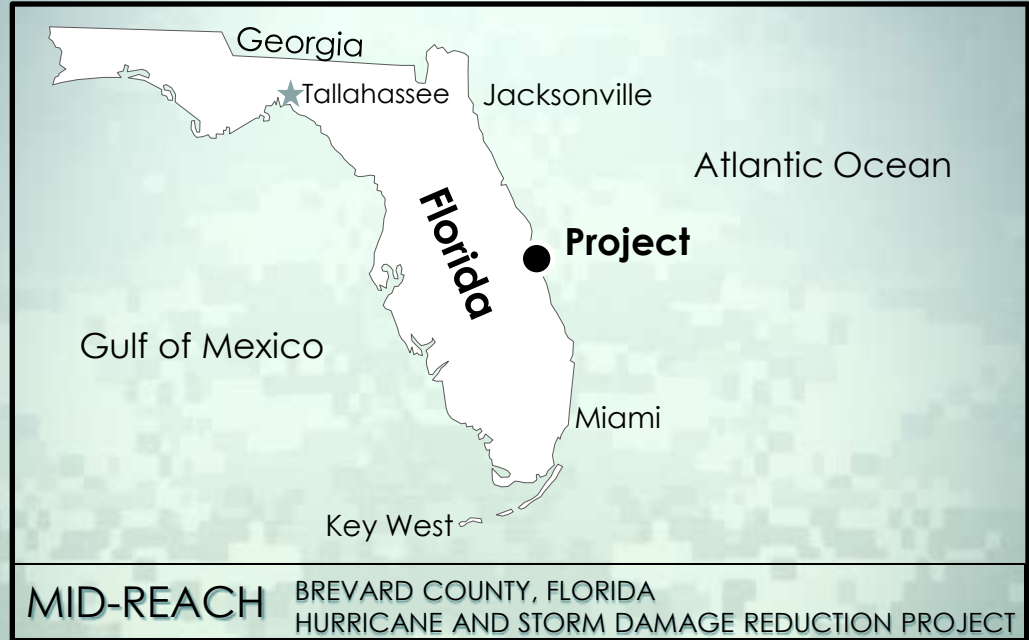
Agenda

- Background
- Plan Formulation
- The Recommended Plan
- The Corps Process
- Summary



Background

PROJECT LOCATION:



HISTORY:

A Feasibility Study was completed in 1996 leading to the authorization of the North and South Reaches.

The Mid-Reach was removed.



Environmental Background

Nearshore Rock Habitat



10
miles
rock

← 72 miles of sand and dune →
Brevard County



Essential
Fish Habitat

Other Species of Concern



Mid-Reach
Project Area
7.8 miles



Manatees



Sea Turtles



Whales



Shorebirds



The Mid-Reach Study



Purpose

- Hurricane and Storm Damage Reduction

Objectives

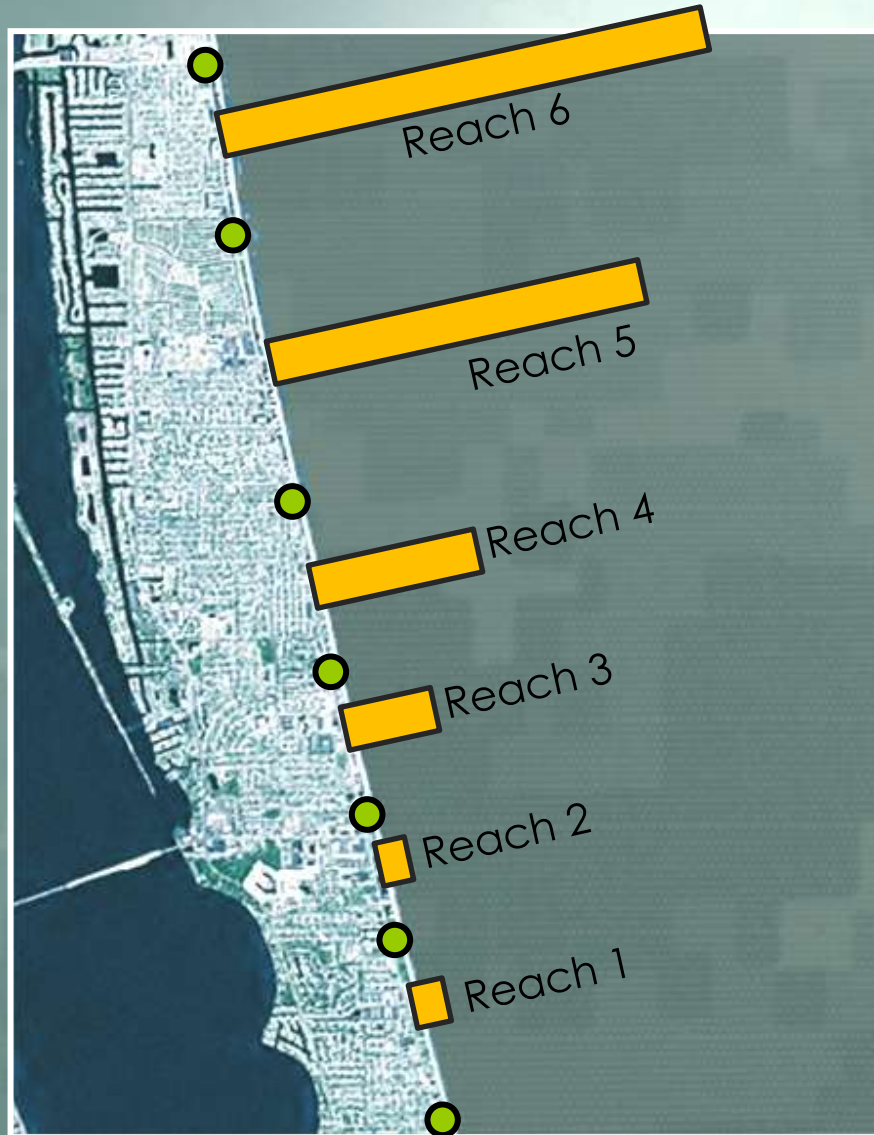
- Reduce storm damages to shorefront structures
- Maintain environmental integrity of beach and nearshore area
- Maintain recreational beach



Mid-Reach
Project Area
7.8 miles



Incremental Analysis



6 sub-Reaches were identified based on the acreage of hardbottom present

 Acres of Hardbottom



ALTERNATIVES CONSIDERED

- No Action (future without)
- Beach Fill (10, 20, 30-foot beach widths)
- Conventional Fill (20 to 160-foot beach widths)
- Dune and Vegetation
- Other Structural and Non-Structural Alternatives were formulated but were screened out prior to the development of the final array

Pineda Causeway

Flug Avenue



Formulation Strategy

- Initial Alternatives Screening
- 6 reaches x 12 measures = 72 measures and over 4 million alternatives
- Need a strategy!



Economics

Project Costs

Rough order
of magnitude



Primary Benefits

Storm Damage Reduction



Secondary Benefits

Recreation



**NET
BENEFITS = BENEFITS - COSTS**



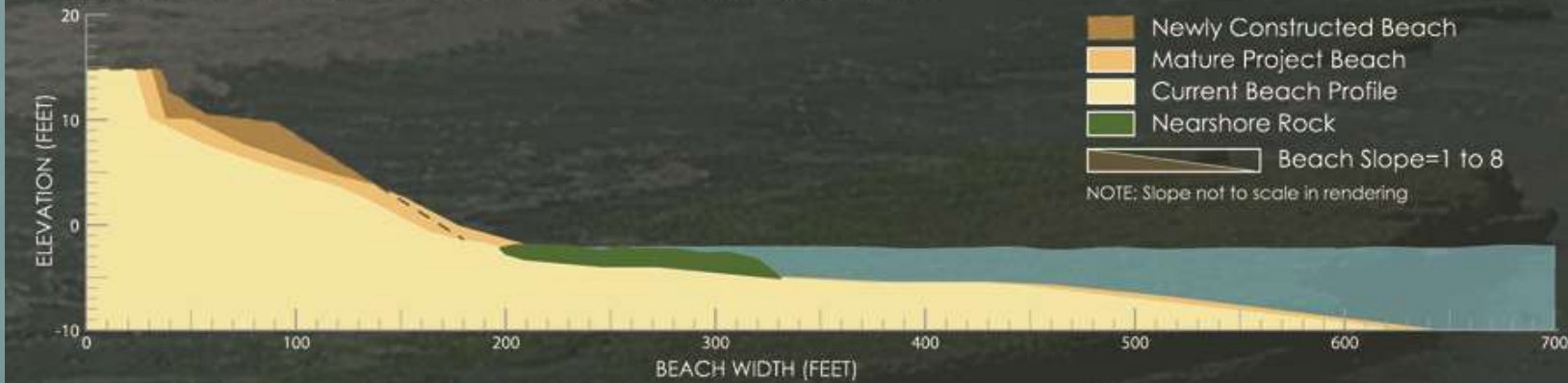
Pineda Causeway

Flug Avenue

Hardbottom Impact



CURRENT AND FUTURE BEACH PROFILE



Mid-Reach
Project Area
7.8 miles

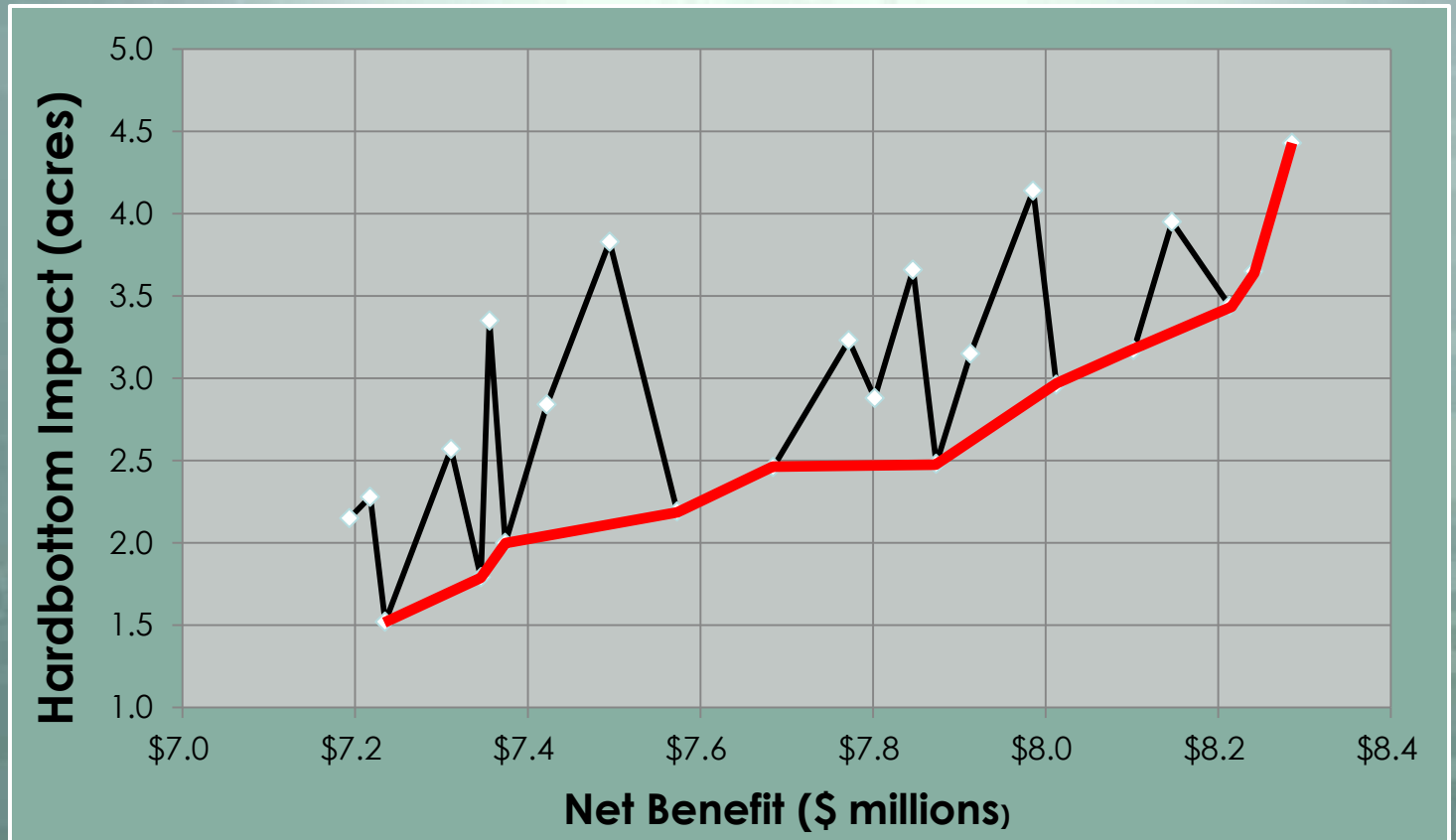


Existing shoreline 10 foot extension 20 foot extension



Cost Effectiveness Screening

- Net Benefit vs. Hardbottom Impact
- Each sub-Reach and complete alternatives



The Corps Process

- Model Certification
- Independent External Peer Review
- Multiple reviews – since draft report dated Oct 2009, 8 reviews



Public Involvement

- Scoping letter
- Scoping meeting
- Notice of Availability (draft report)
- Public workshop (draft report)



Locally Preferred Plan

- Similar but different plan
- Requires approval by ASA
- 2 designs, 2 costs, then compare
- Submittal package separate from main report



Current Status

- In Corps HQ under review
- Scheduled for Washington level review by State and Agencies spring 2011
- Directors' Report (in lieu of Chief's Report)
- Engineering & Design 2012
- Construction 2013



The Recommended Plan (7.8 miles)



Mitigation

- Avoided and minimized impacts to the nearshore rock habitat to maximum extent practicable
- Developed mitigation reef design for unavoidable impacts in Reaches 1 – 5 (approximately 10% of total rock)
 - Consists of articulated concrete mats embedded with coquina placed in a water depth of 14 to 16 feet



Mid-Reach
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7.8 miles



Mitigation Materials



Testing



The Secret to Success

- Persistence
- The same planner, engineer, biologist and project manager
- Consistent funding
- Transparency in reviews

