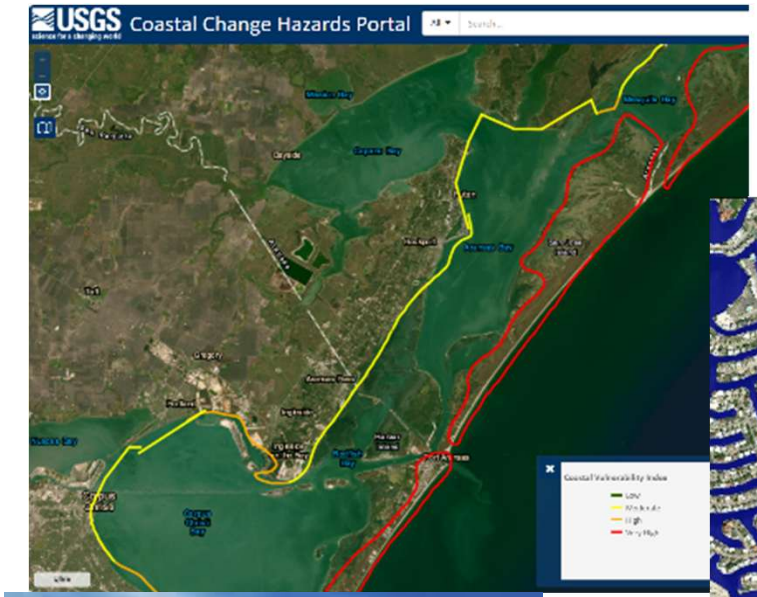
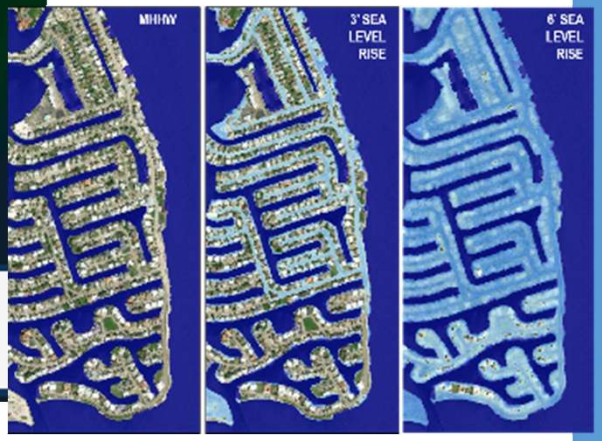
Strengthening our Coast:
Marsh Creation and Sediment Management Practices

Stephanie Rogers

Balancing Coastal Vulnerability & Community

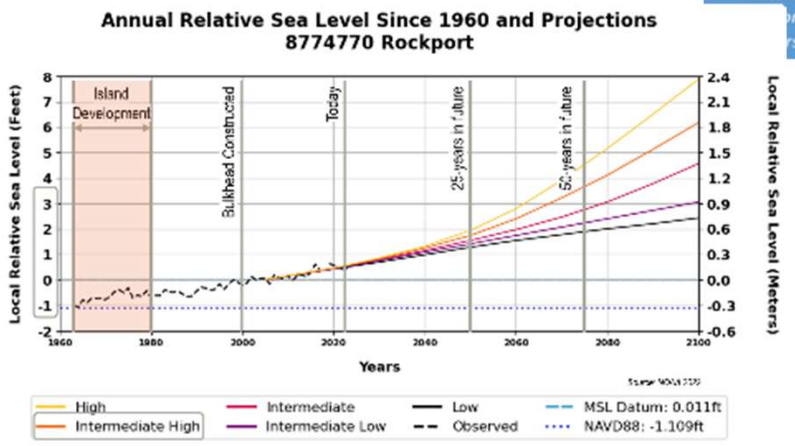


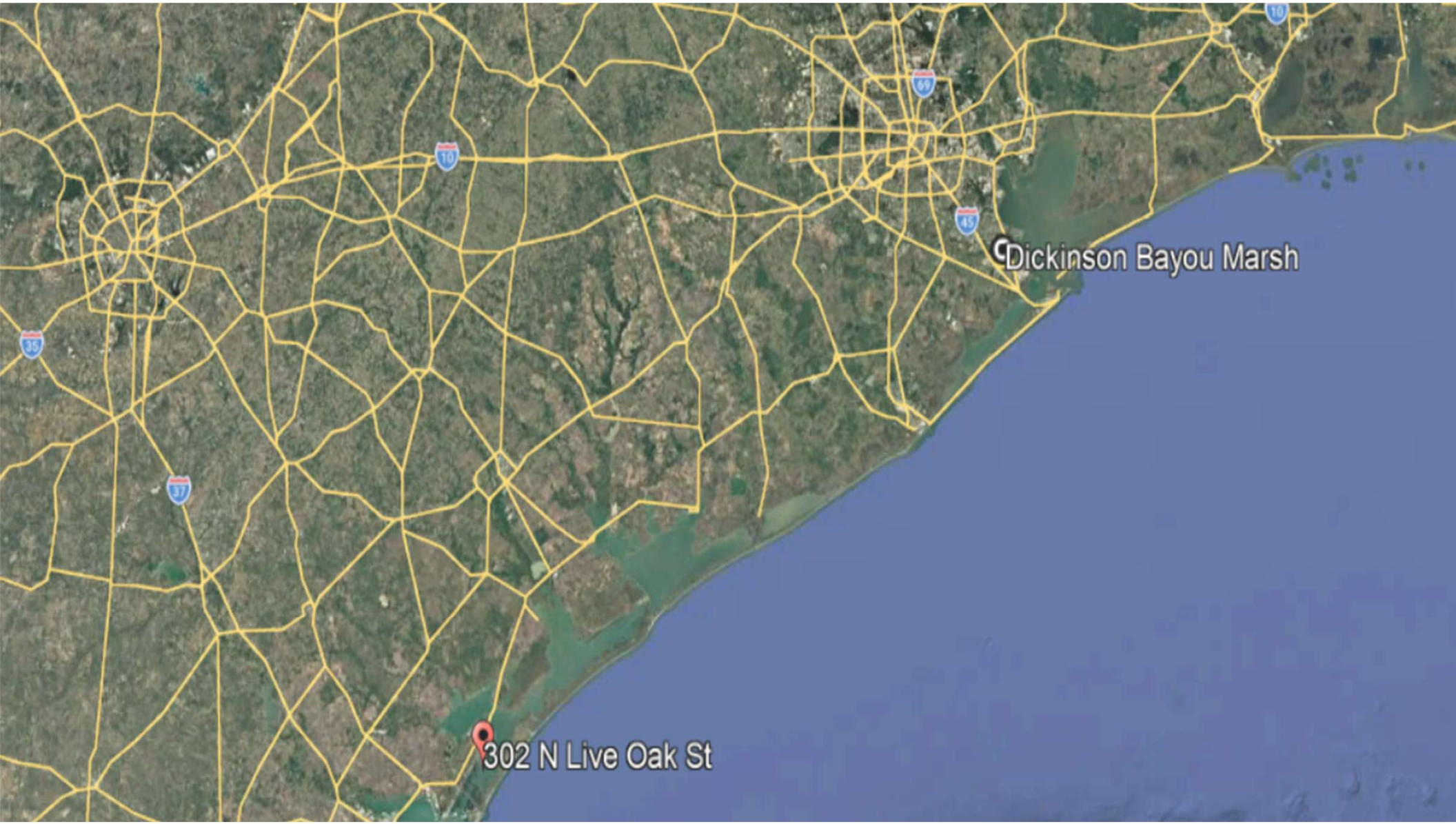


An Assessment of Little Bay Water Quality and Seagrass Monitoring Program

Mission-Aransas National Estuarine Research Reserve
The University of Texas at Austin Marine Science Institute
750 Channel View Drive
Port Ara

Water Q




Dickinson Bayou Marsh
302 N Live Oak St
10
45
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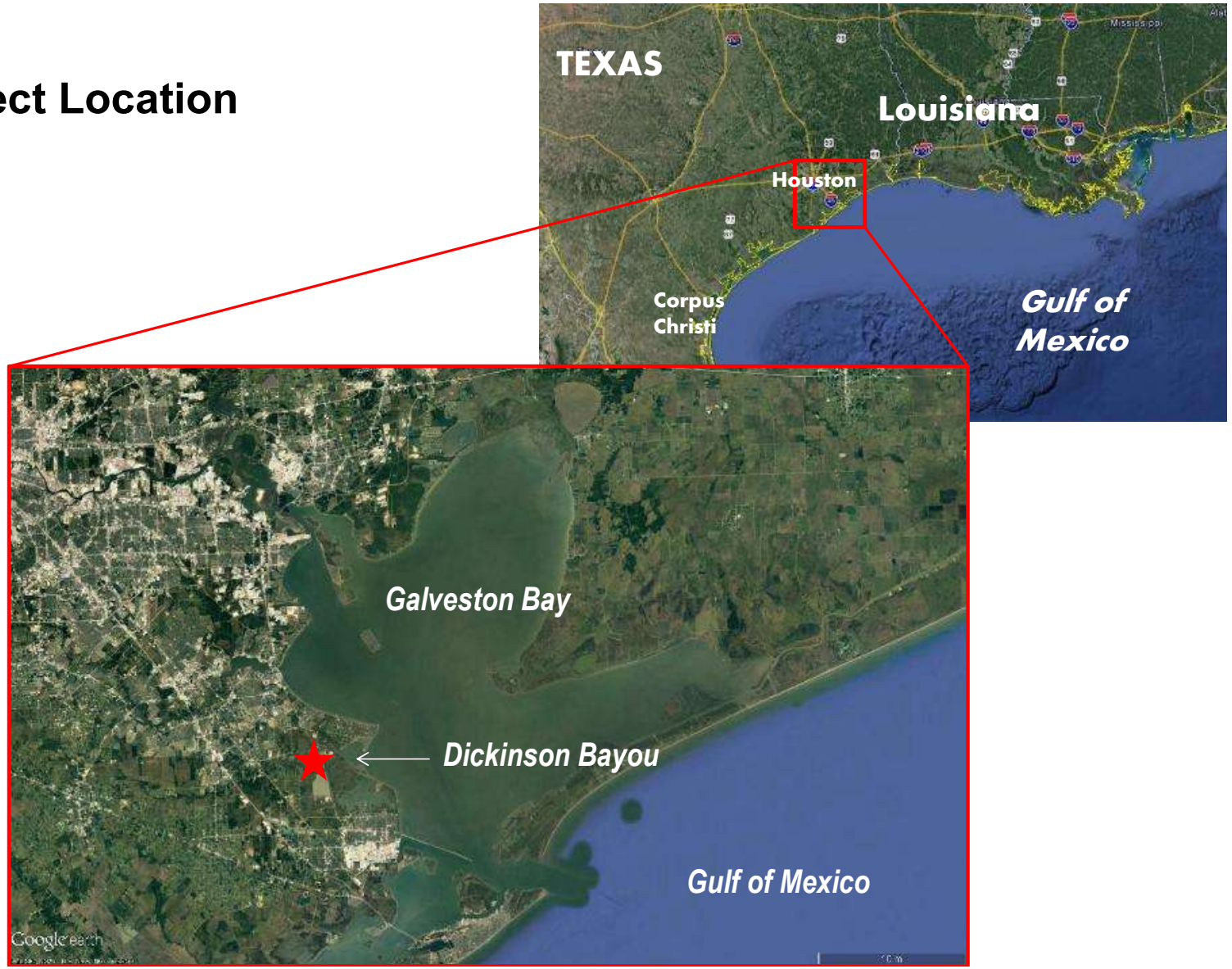
From Mud to Marsh:
Restoring Lost Marsh Habitat in the Soft Soils of Dickinson Bayou, TX

Credit: Philip Blackmar

Project Partners

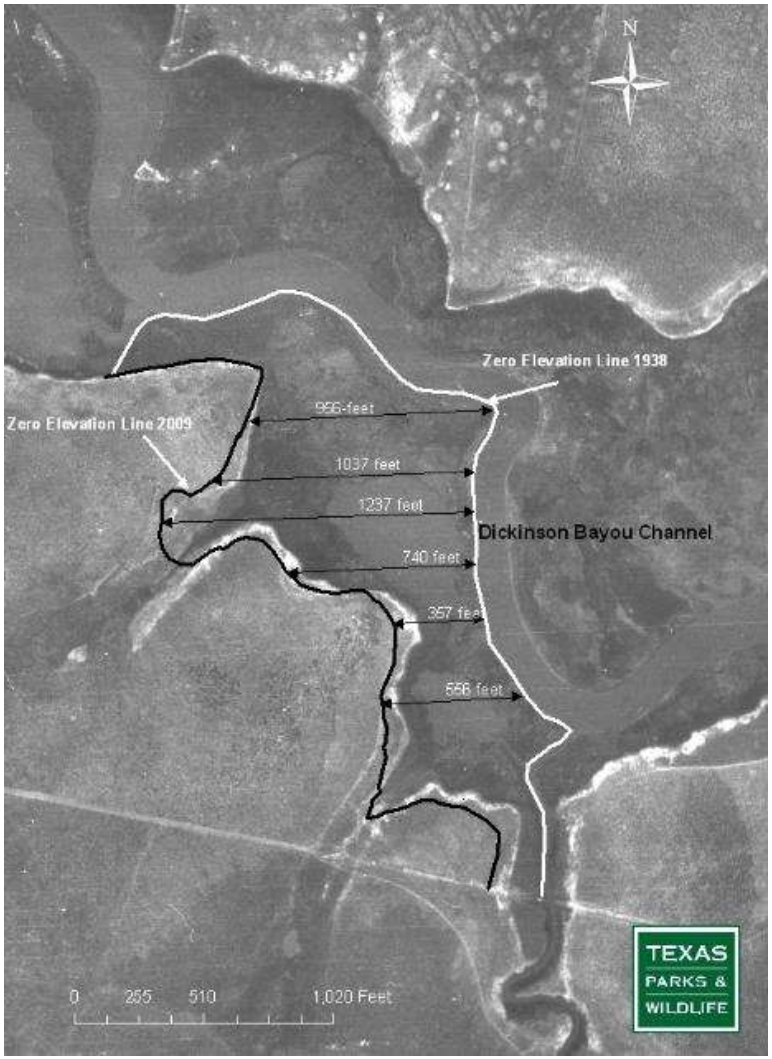
Project Location

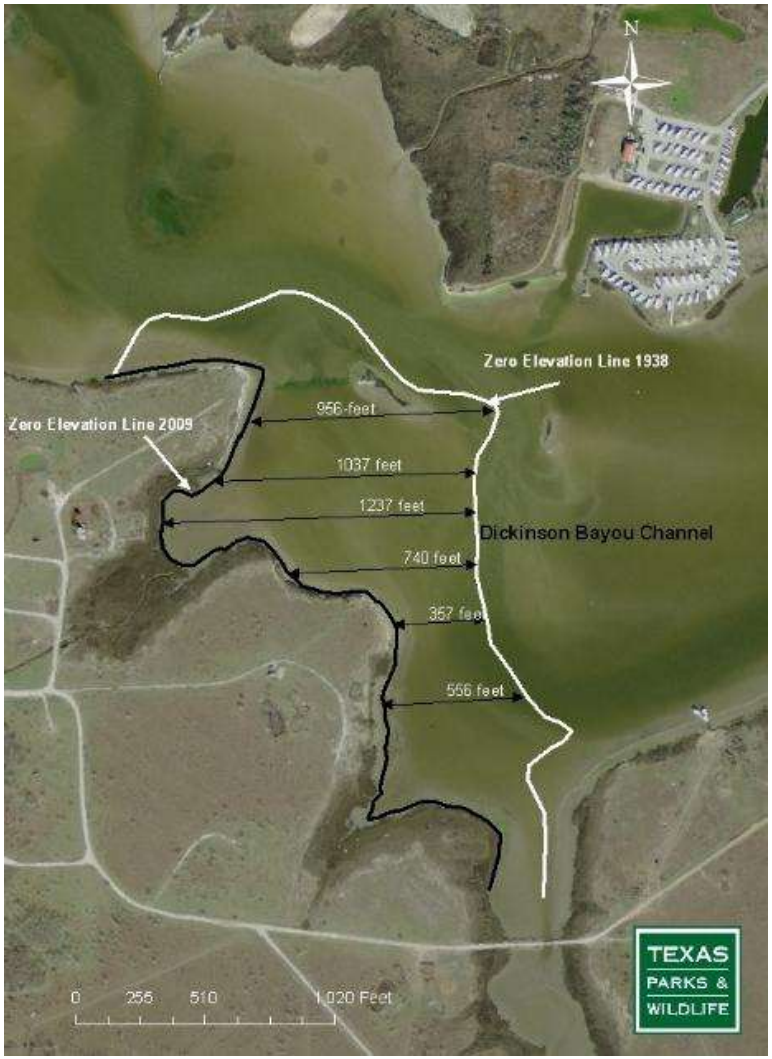


Project Location

Project Need

- Marsh Loss
- Shoreline Retreat
- Water Quality
- Impact to Fishing
- Impact to Navigability





Images courtesy of Texas Parks and Wildlife and Tobin Imagery

Project Challenges

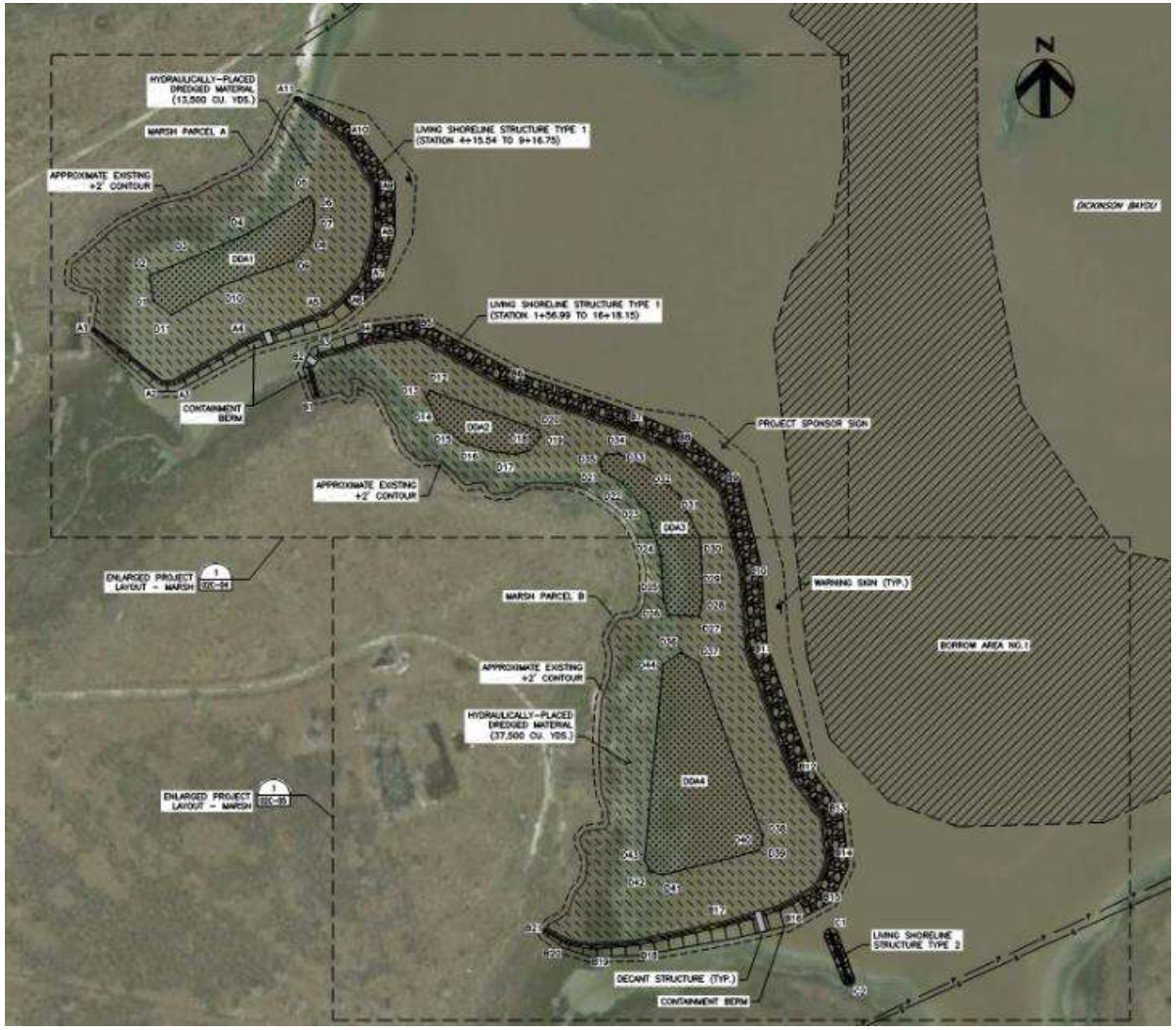
- Extremely Soft Soils
- Limited construction funds

Project Advantages

- Project location in close proximity to industry and construction yards
  - Potential for lower mobilization costs and competitive bids
- Motivated project team

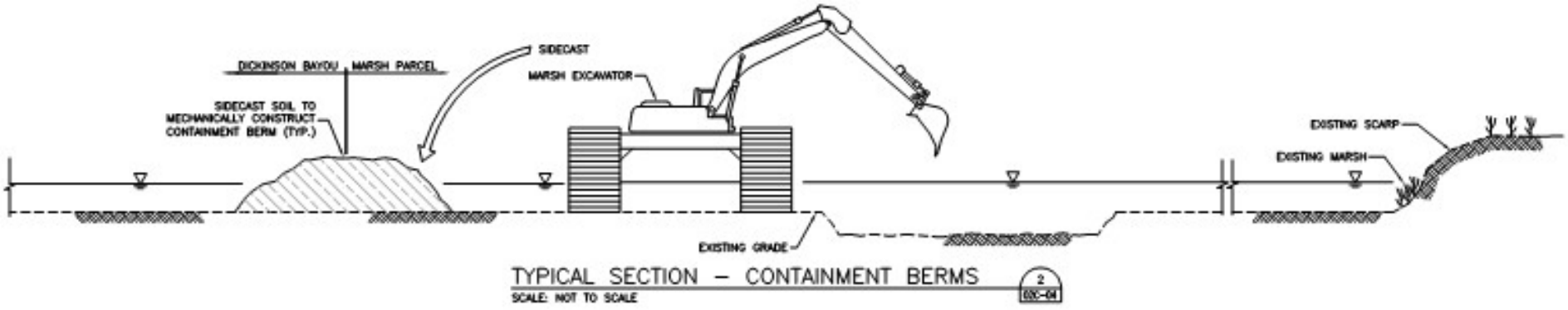
Project Layout

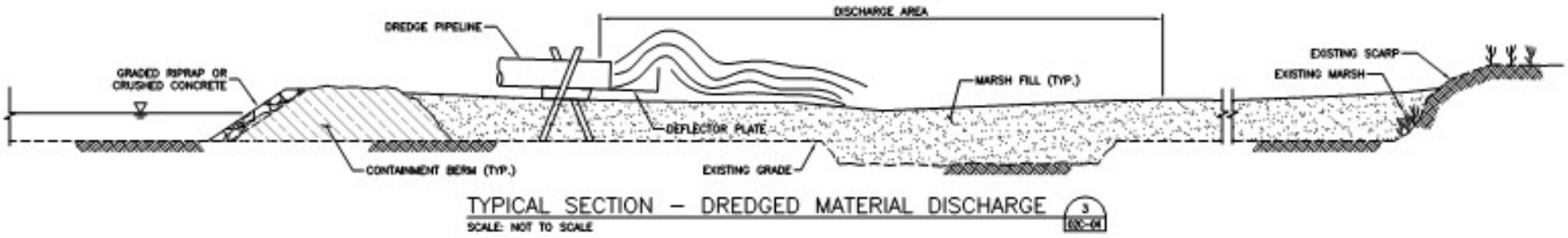
- **Goals**
  - Create 10 acres of marsh complex
  - Protect 17 acres of existing marsh
- **Components**
  - 2 marsh parcels
  - 1 separate living shoreline structure
  - Borrow areas focused on natural channel that has silted in in recent years.
- **Solutions [Cost Efficiency]**
  - Do our homework
  - Provide contractor flexibility
  - Alternative Materials



Methods

- Utilize containment berms and existing shoreline to contain the soft dredge soils
- Dredge marsh fill from natural flow channel
- Construct living shoreline structures to protect constructed and existing marsh





Containment Berm Construction

Dredging for Marsh Construction

& Decanting

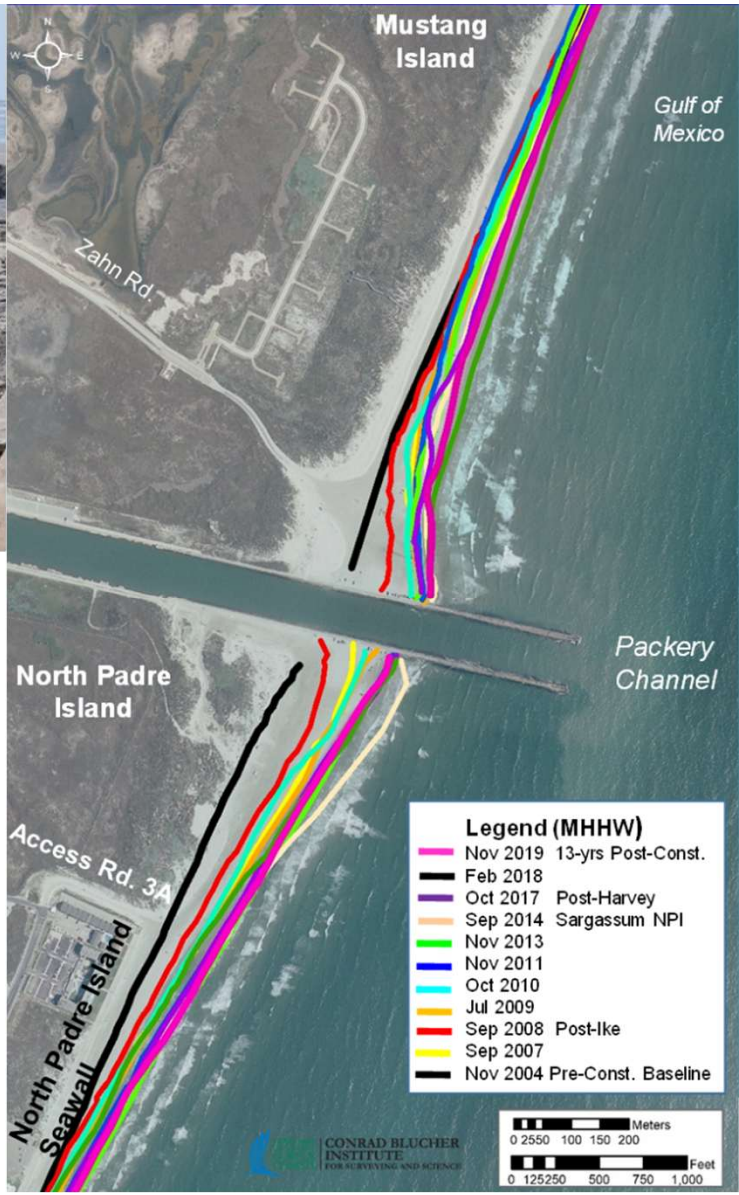
Living Shoreline

Contractor used crushed concrete option


Post-Construction

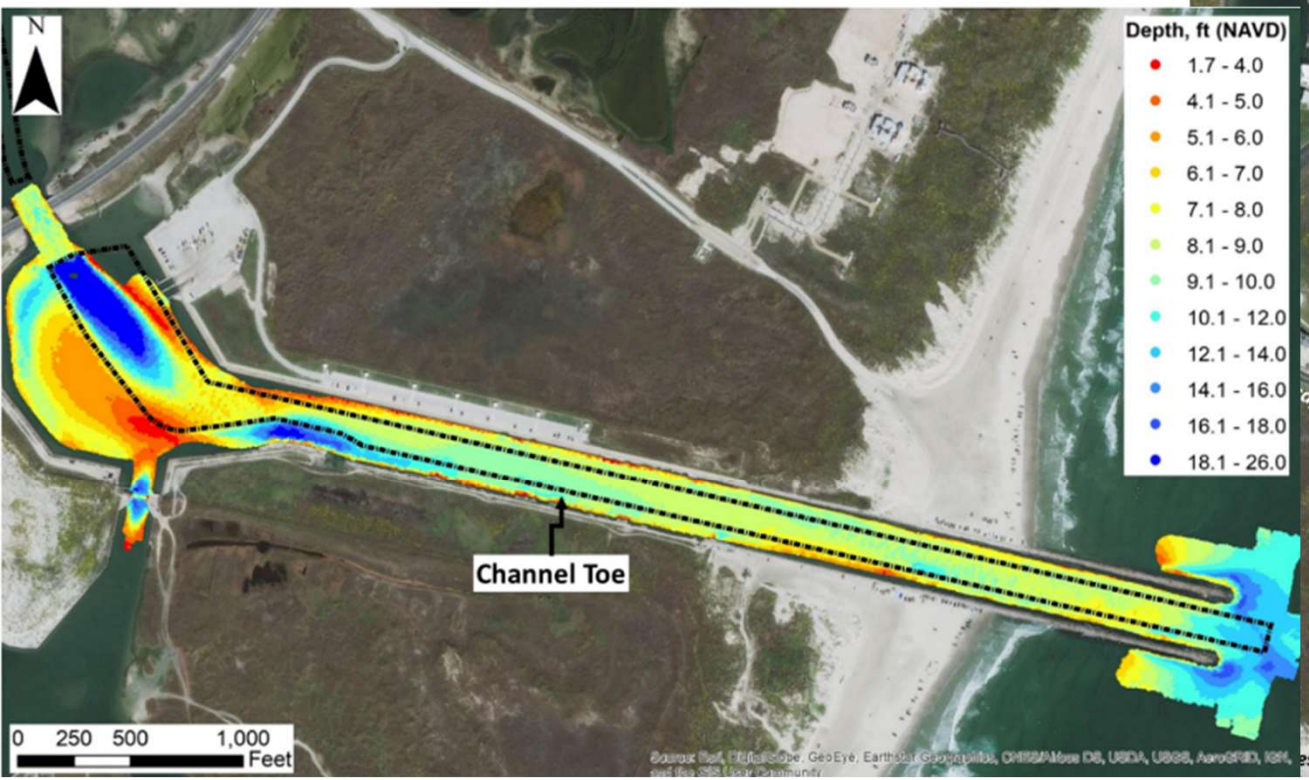
Packery Channel

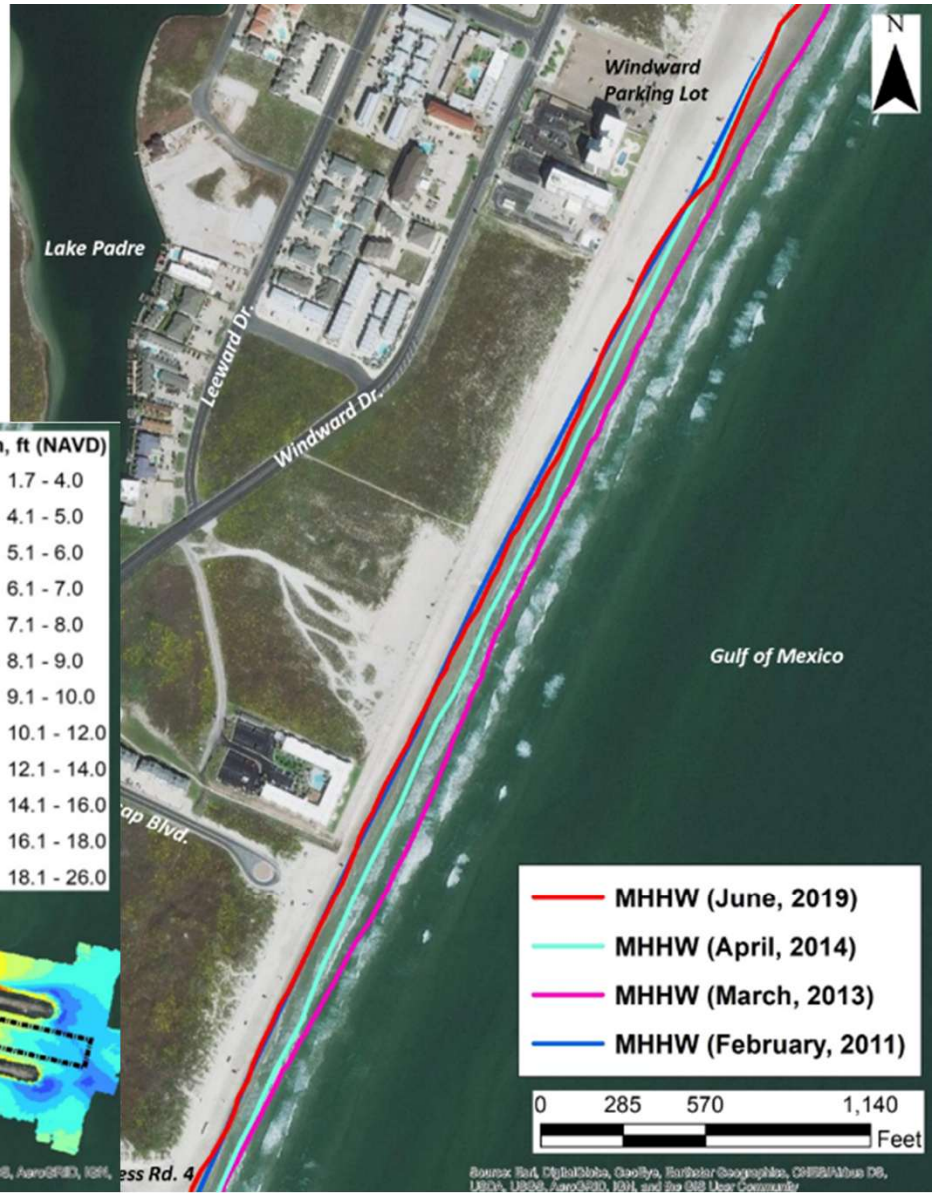
- Dredging is essential routine maintenance, not optional
- It ensures safe navigation, environmental health, and economic vitality
- Provides both short-term usability and long-term coastal protection



History

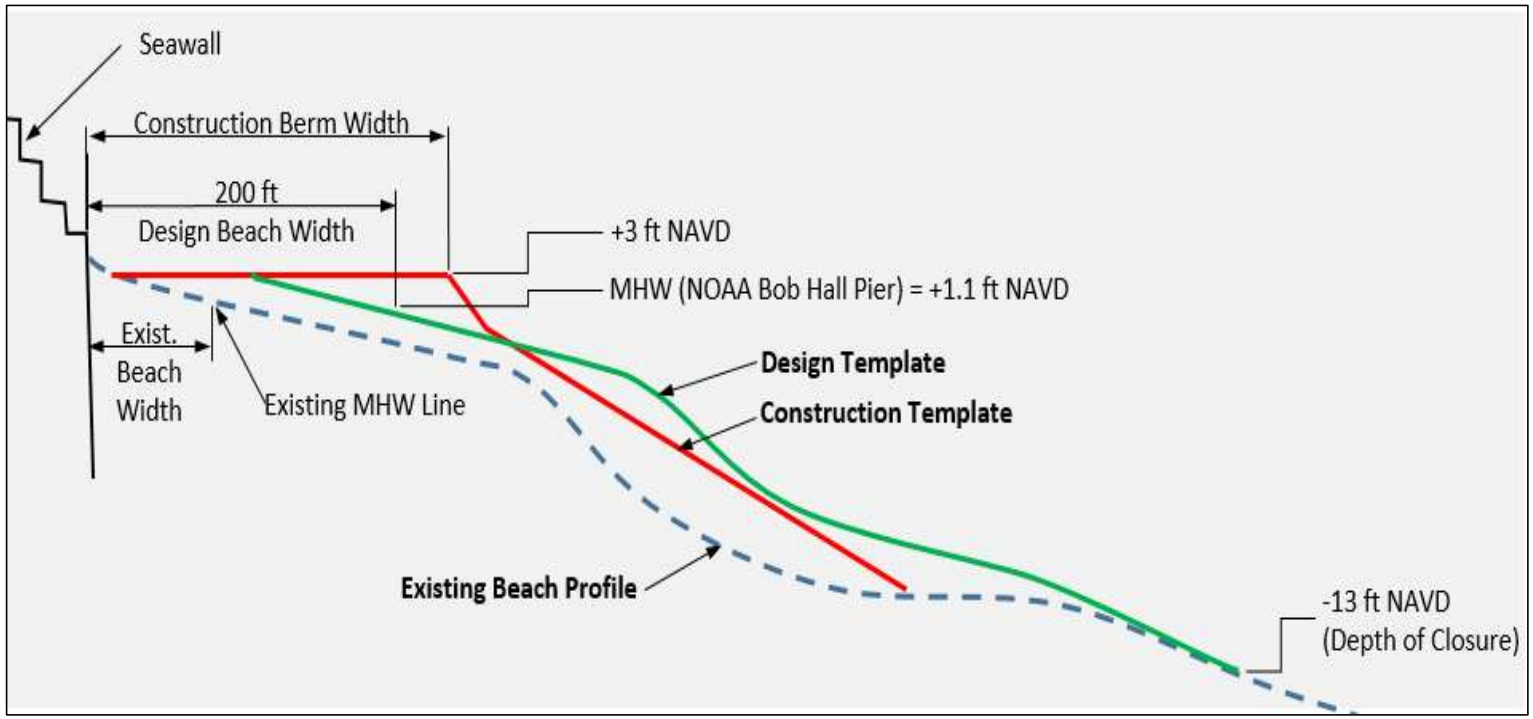
- Initial Opening: 2005 – 2006
- Maintenance Cycle: 2011
- Maintenance Cycle: 2023





Nourishment Design

- 200-foot berm width
- Maintenance Cycle: 2011
- Maintenance Cycle: 2023




CAUTION

Thank you!

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