Restoration of the Northern Tip of Mon Louis Island:

Surmounting Challenges to Project Implementation Through Teamwork

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AL Water Resources Conference
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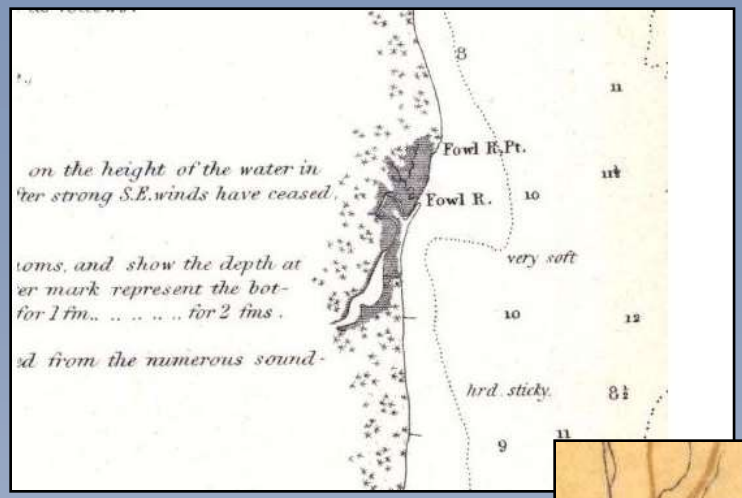
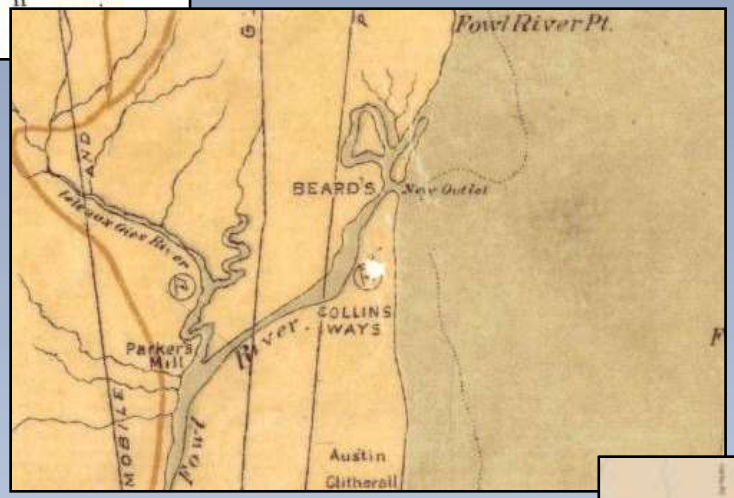


1852 U. S. Coast Survey



1889 Reference Map

2015 Google Maps

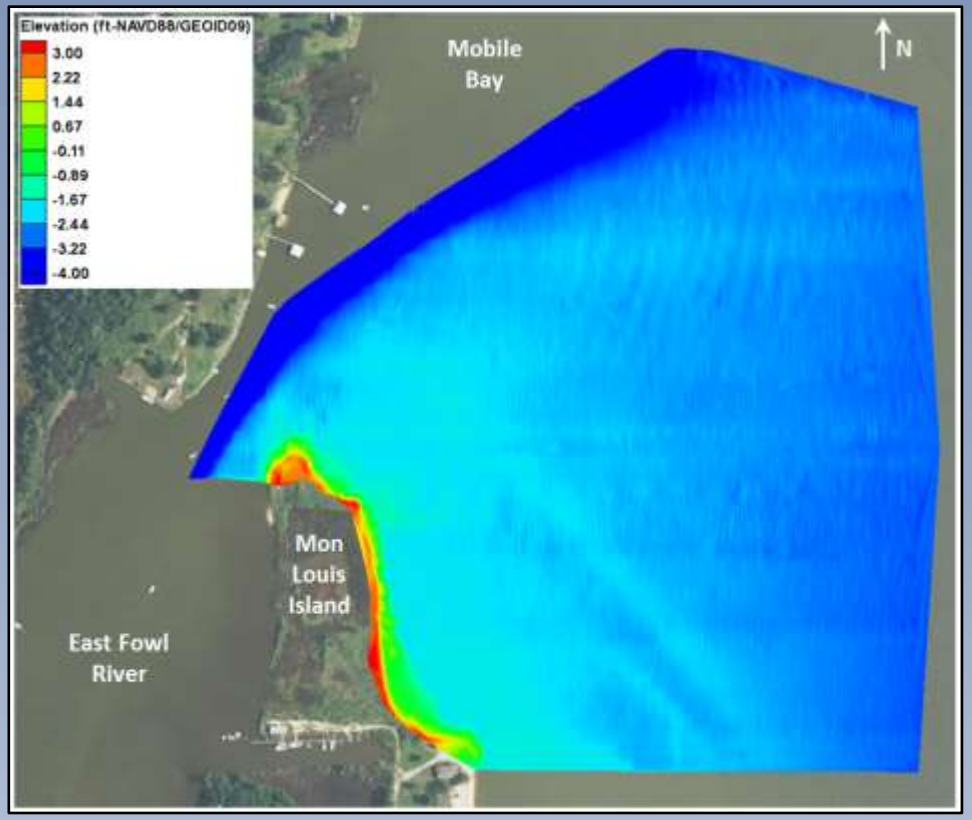

LEGEND
1979 Shoreline
1997 Shoreline
2006 Shoreline
2011 Shoreline

Project Purpose: To address immediate threats to a critical portion of Mon Louis Island adjacent to the mouth of East Fowl River, the most downstream portion of the Fowl River Watershed.

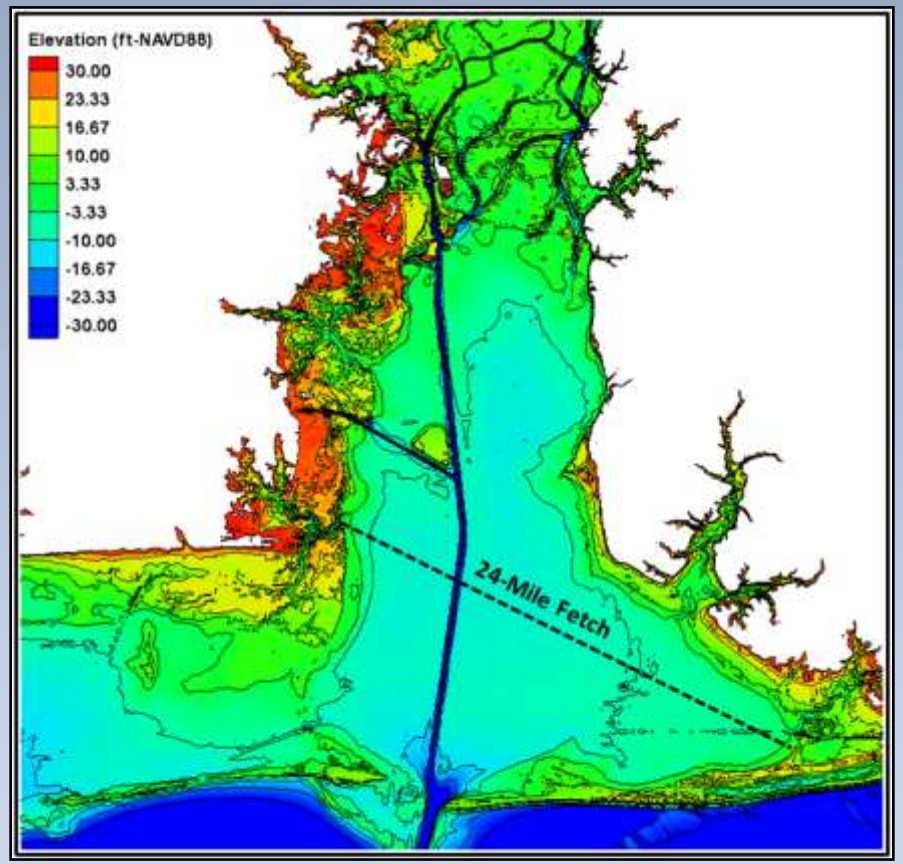
Project Goals:

- Stabilize the Mobile Bay shoreline of the northern tip of Mon Louis Island using practical habitat-friendly measures.
- Create/enhance aquatic, wetland, and upland habitats to the extent possible.

Photo: Sam St. John

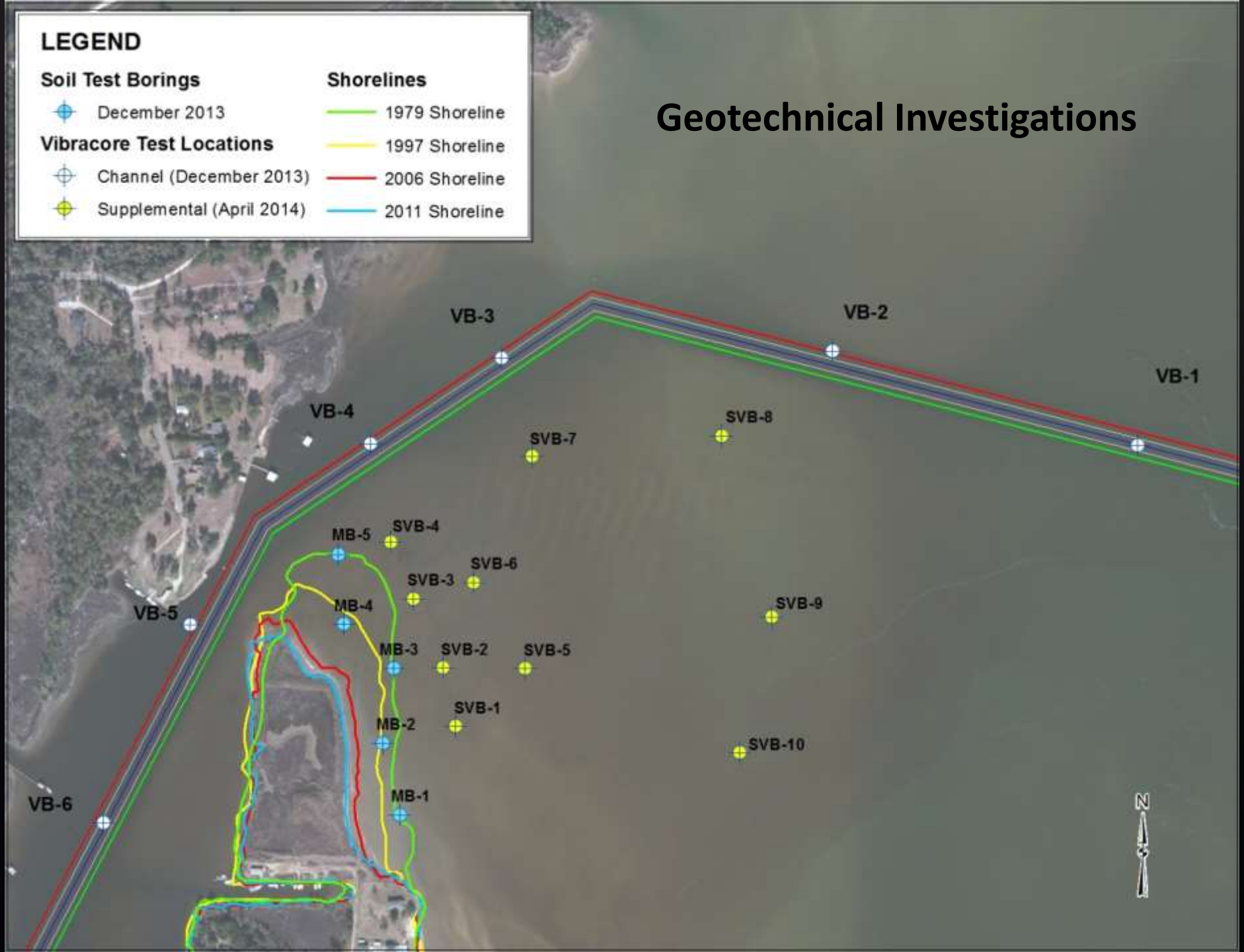


Hydrographic and Topographic Surveys



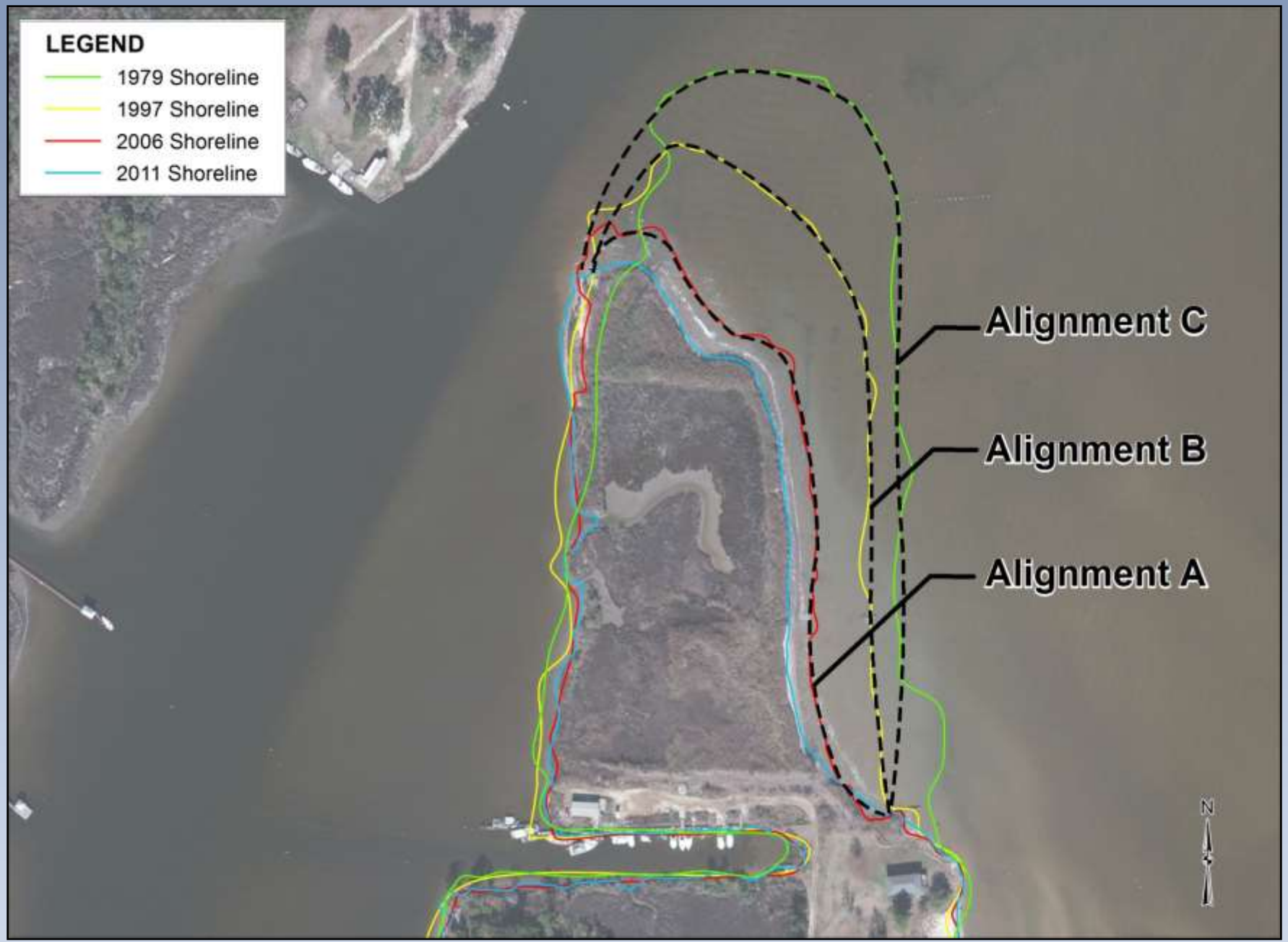
Coastal Processes Evaluation

Geotechnical Investigations



Alternatives Evaluation – June, 2014

Alternate Alignments for Shoreline Stabilization



Shoreline Stabilization Measures

Alternative Breakwater / Living Shoreline Concepts Evaluated:

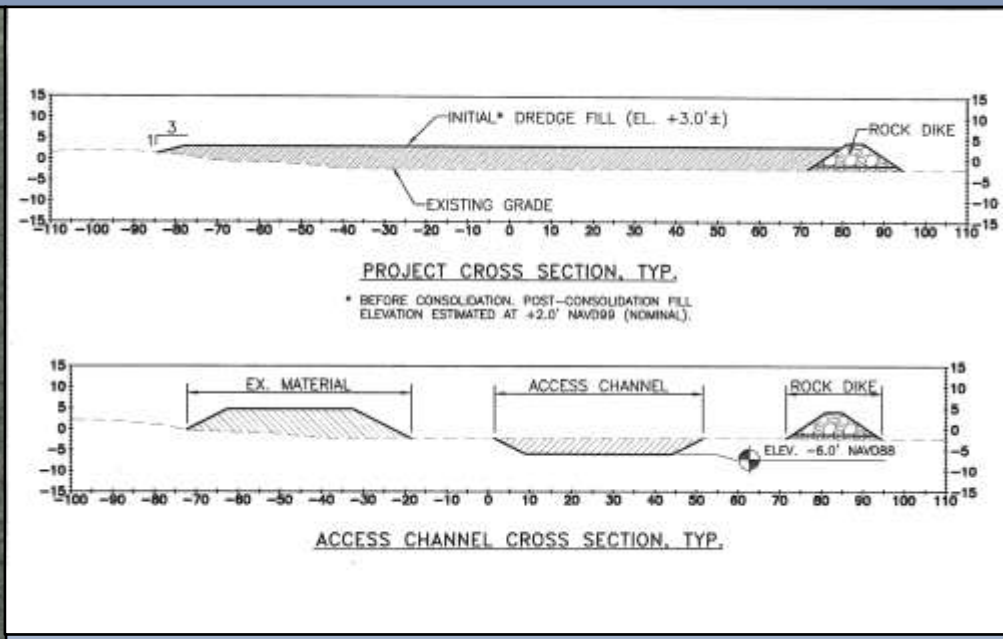
- Alternative 1 Continuous Rock Dike Breakwater
- Alternative 2 Segmented Rock Dike Breakwaters
- Alternative 3 Continuous Oyster Break™ Breakwater

Selected Alternative - Continuous Rock Dike Breakwater - Why?

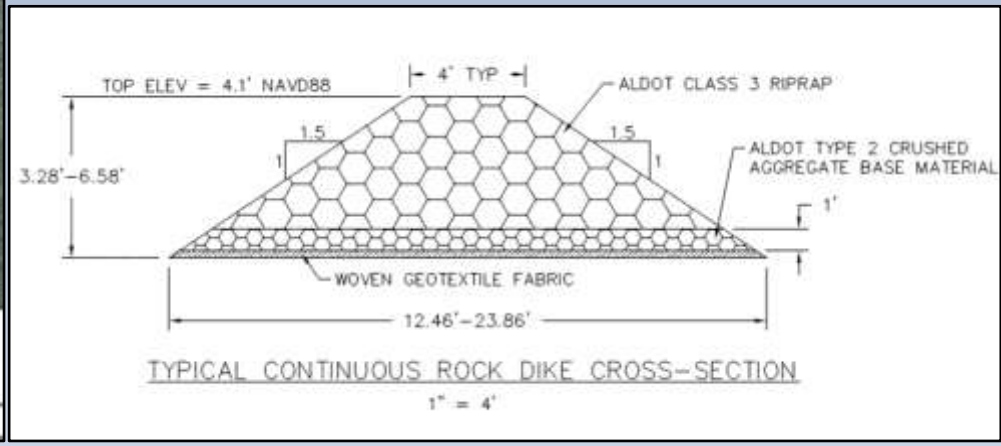
- "Tried and true" measure for stabilizing shorelines in areas of high wave energy.
- Demonstrated longevity and durability.
- Aesthetics and public acceptance.

Sources of Fill for Marsh Creation

- Fowl River navigation channel – sediments unsuitable.
- Transport and delivery to site by truck or barge (with mechanical unloading).
  - Beneficial use dredge material sites – Fowl River Disposal Site – unsuitable. ASPA Disposal Site – Suitable quality and volume.
  - Costs estimated at ~$30-$45 per cubic yard
- Sandier material was identified in surficial sediments at Vibracore locations SVB-7, 8, 9, and 10, so the use of this area as a hydraulic dredging borrow source was recommended.
  - This source was discouraged by the USACE.



Design Strategy



Combine MLI Restoration with Channel Maintenance Funding?

Evaluation of Sediments from Fowl River Open Water Disposal Area (April 2015)

Combine MLI Restoration with Channel Maintenance Funding?

Advantages:

- Mobilize one dredge for marsh creation fill and for channel maintenance dredging (cost savings).
- Environmental regulatory clearances already exist for Fowl River Open Water Disposal Area.
- Potential impacts of open water borrow area “hole” (water quality and wave climate) can be avoided by replenishment with channel sediments.
- Navigation channel maintenance coordinated with hazard mitigation and habitat creation.

Application for Supplemental Funding ($800,000) through AL Deepwater Horizon Incident Grant

Requested April, 2015. **Approved May, 2015.**

Next Steps:

- Regulatory Coordination and Individual Permit
- Finalize Engineering Design
- Bidding and Procurement
- Construction
- Monitoring

Thanks to our funders:
National Fish and Wildlife Foundation
Senator Bill Hightower

More Information?

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