

Working with Nature on the Northern Gulf of Mexico

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“Working with Nature”

Definition:

- Alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental, and social benefits through collaborative processes

Key Goals:

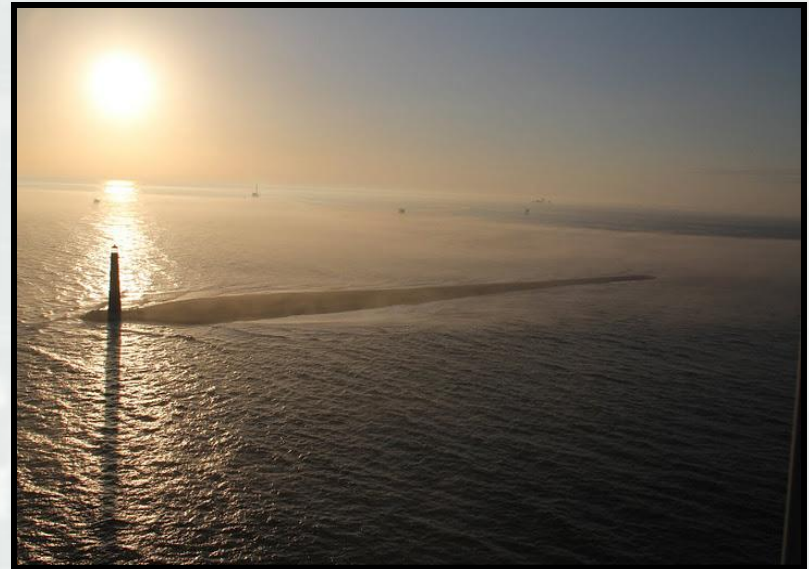
- Beneficial use
- Produce operational efficiencies that support sustainable delivery of project benefits
- Use natural processes to maximize benefits
- Broaden base of benefits
- Collaborate



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Working with Nature Opportunities

- Beneficial use of dredge material in strategic locations
- Utilize natural processes to create habitat and reduce cost
- Optimize use of natural systems to reduce effects of storm processes
- Science-based communication processes to improve stakeholder collaboration
- Increased buy-in of stakeholders (ownership)



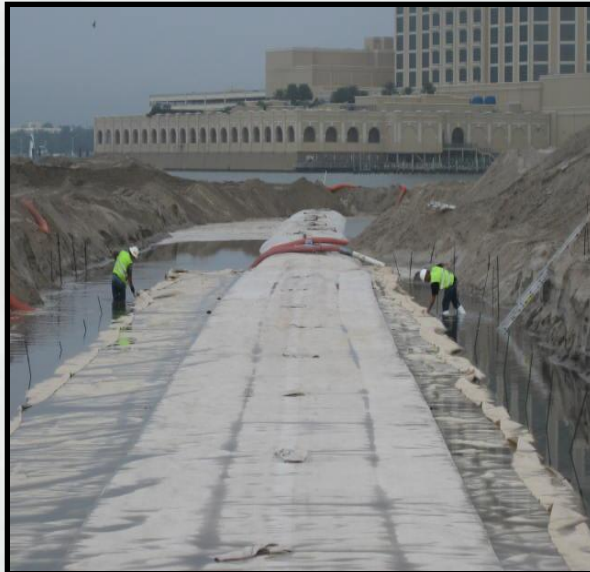
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Example #1: Restoration of Deer Island



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An aerial photograph showing a coastal area. In the top left, a map overlay shows a street grid with labels: 'Estero Blvd', 'Bliss Water St', 'Shell St', '3RD St', 'Howard Ave', and 'Beach Blvd'. A yellow arrow points from the 'West End Breach' label to a dark, irregular shape in the water. Another yellow arrow points from the 'Grand Bayou' label to a long, narrow, light-colored land feature. A third yellow arrow points from the '204 Site' label to a specific point on the land feature. The label 'Deer Island' is at the bottom right, pointing to the end of the land feature.



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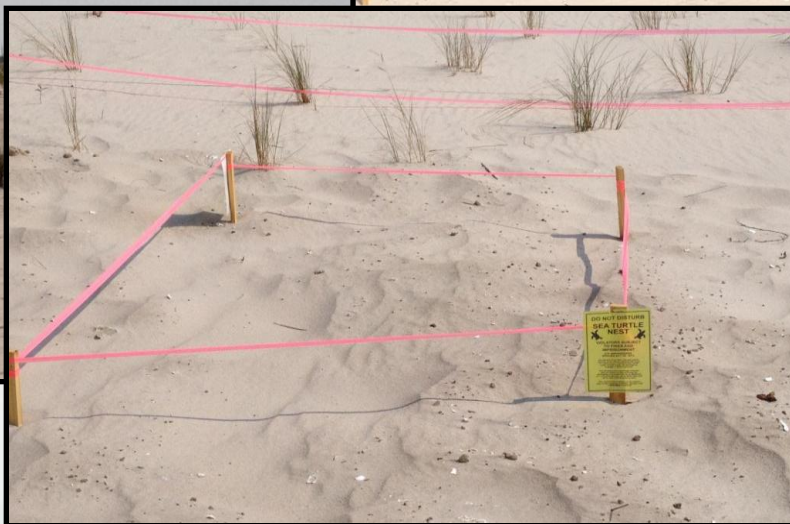
Deer Island Restoration Benefits

- Created beneficial use areas for dredge material disposal
- Provided habitat for nesting shorebirds and sea turtles
- Reduced wave energy on mainland
- Created recreational area for locals
- Promoted collaboration with the State of Mississippi and local residents



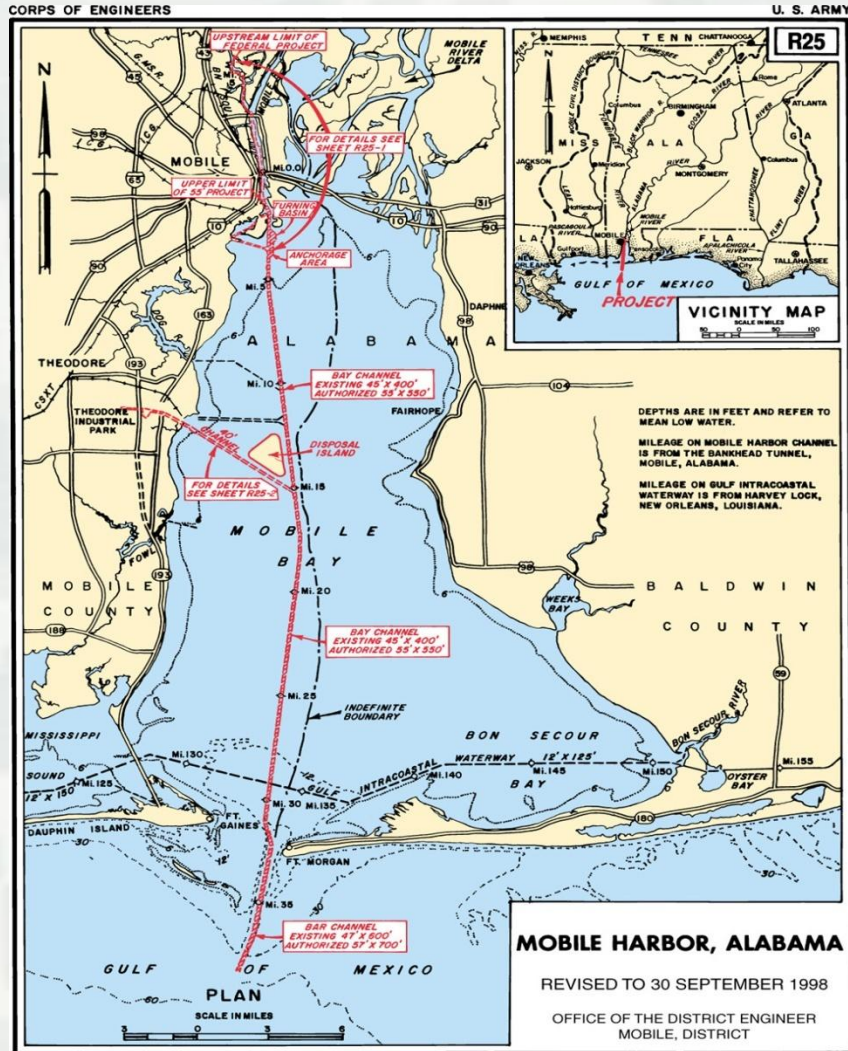
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Working with Nature Benefits



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Example #2: Sand Island Oil Mitigation Berm



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Sand Island Oil Mitigation Berm

- Intent :
 - ▶ Construct a mitigation berm to minimize submerged oil from entering Mobile Bay estuary system
- Benefits:
 - ▶ Beneficial use of approximately 1.5 million cubic yards of sand to construct berm
 - ▶ Created capacity in the disposal area that the Mobile District uses to dispose of sandy material
 - ▶ Sand used for berm will eventually transport westward and feed Dauphin Island
 - ▶ Promoted collaboration with the State of Alabama and local residents



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Evolution of Sand Island Project Features



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Lessons Learned & Recommendations

- Active communication with the stakeholders and general public is critical
- Approach holistically to ensure that environmental, economic, and social factors are included in the decision making process
- Pursue projects that serve multiple purposes and provide benefits to an extended base



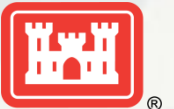
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Continuing Efforts - Round Island



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Continuing Projects - Greenwood island



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Questions????

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