



Beneficial Use in Mississippi, the Master Plan, the BU Law, a Decade Progress

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Presentation Outline

- Beneficial Use (BU) in Mississippi
 - History of BU Program
 - The BU Law
 - Master Plan
 - Deer Island Background
 - Location and History
 - Habitat and Structure
 - Deer Island Marsh Restoration Project
- Collaborative Success Story*
- Future of BU in Mississippi

History of BU Program

2001

Corps and DMR identify potential BU sites

2002

DMR develops the Long-Term Comprehensive Master Plan for Beneficial Uses of Dredged Material along Coastal Mississippi
Deer Island identified as a pilot project for future BU sites

2008

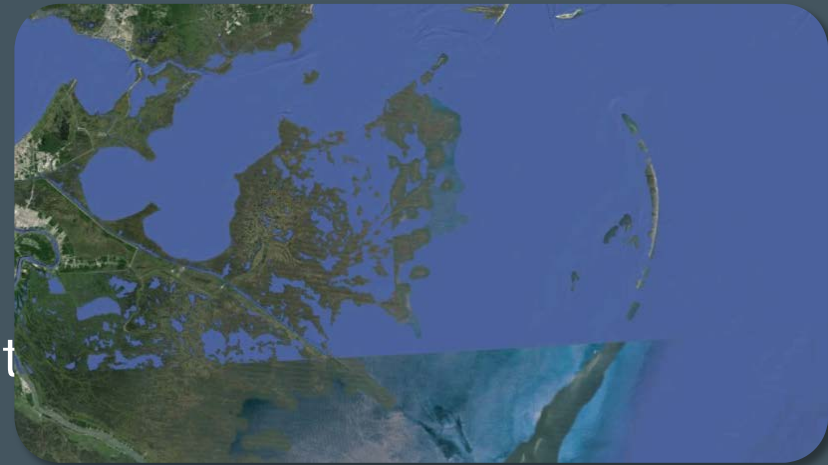
Beneficial Use Group (BUG) formed
State and federal agencies, co-facilitated by DMR and the Corps,
Mobile District
Private stakeholders (e.g., local ports)

2010

BUG recommends revised legislation
House Bill 1440 passed March 2010
Coastal Wetlands Protection Act § 49-27-61, effective July 1, 2010

2010 BU Law

- Requires BU for materials from Mississippi bottoms
- Applicable if $> 2,500$ cubic yards are removed
- Exemptions
 - Projects conducted by an exempt governmental agency
 - Projects conducted under governmental grant or bond proceeds
 - Less than 2,500 cy from a permitted wetland area



FINAL

Master Plan for the Beneficial Use of Dredged Material for Coastal Mississippi

Prepared by CH2M HILL for the
**Gulf of Mexico Alliance/Habitat Conservation
and Restoration Team**

in cooperation with
Mississippi Department of Marine Resources

Submitted to the
Gulf of Mexico Foundation

in accordance with
National Oceanic Atmospheric Administration
Cooperative award # NOAA GOMA 2003





2011 BU Master Plan Update

- Guided by the DMR and BUG
- Mississippi Coastal Improvements Program study quantified sediment transport rates in the the Sound
- Provides potential BU sites and concepts
- Outlines permitting regulations (state and federal)
- Provides sediment testing protocols
 - Based on Corps and USEPA guidance
 - Simplified analytical, toxicity, and chemical testing
- BUG initiates permitting actions for BU sites across the coast

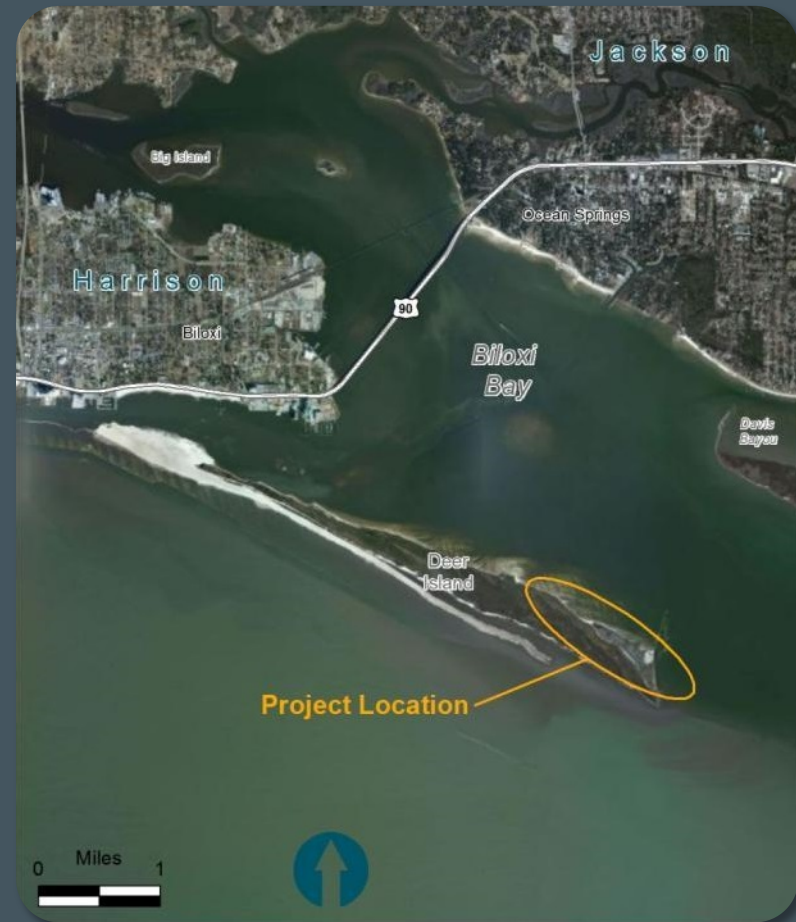
Deer Island History

- Harrison and Jackson County, off the coast of Biloxi
- Remnant of nearshore area
- Native American population
- Europeans arrive in early 1700s
- Farming and fishing communities established
- Last residents left in 1969, following Hurricane Camille
- Purchased by the State in 2003 as part of the Coastal and Estuarine Land Conservation Program



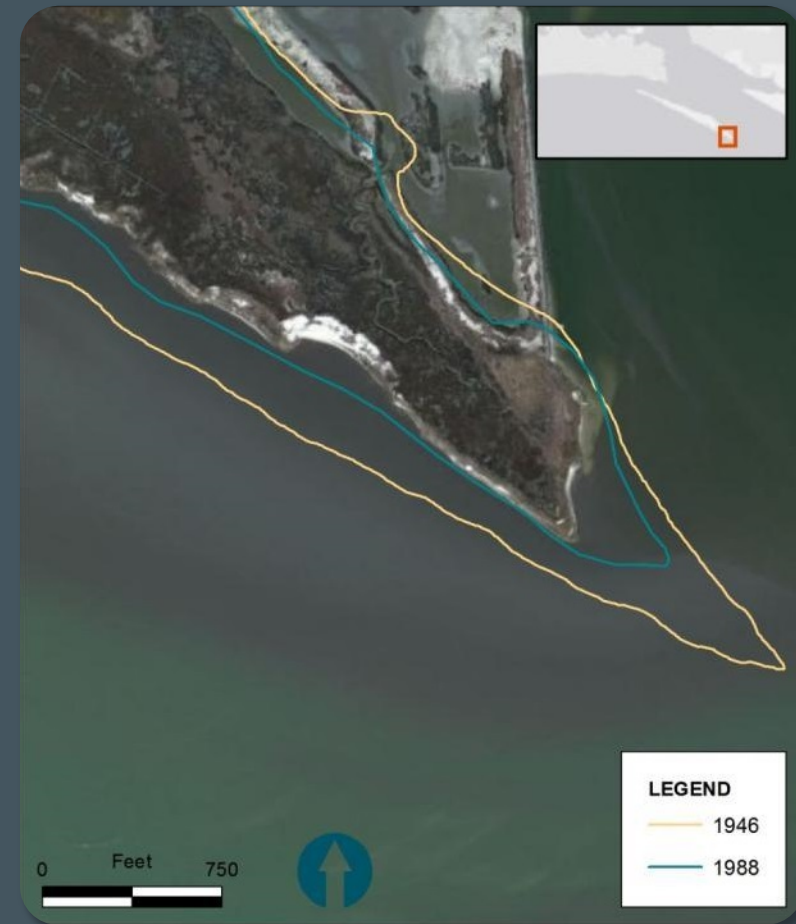
Deer Island Habitat and Structure

- Varies from sandy beaches to marsh interior
- Vast expanses of pine trees inhabited the island
- Habitats damaged by tropical storms
- Tree loss and lack of fires encouraged brush and shrubs to spread
- Decaying root structure provides an erosion pathway



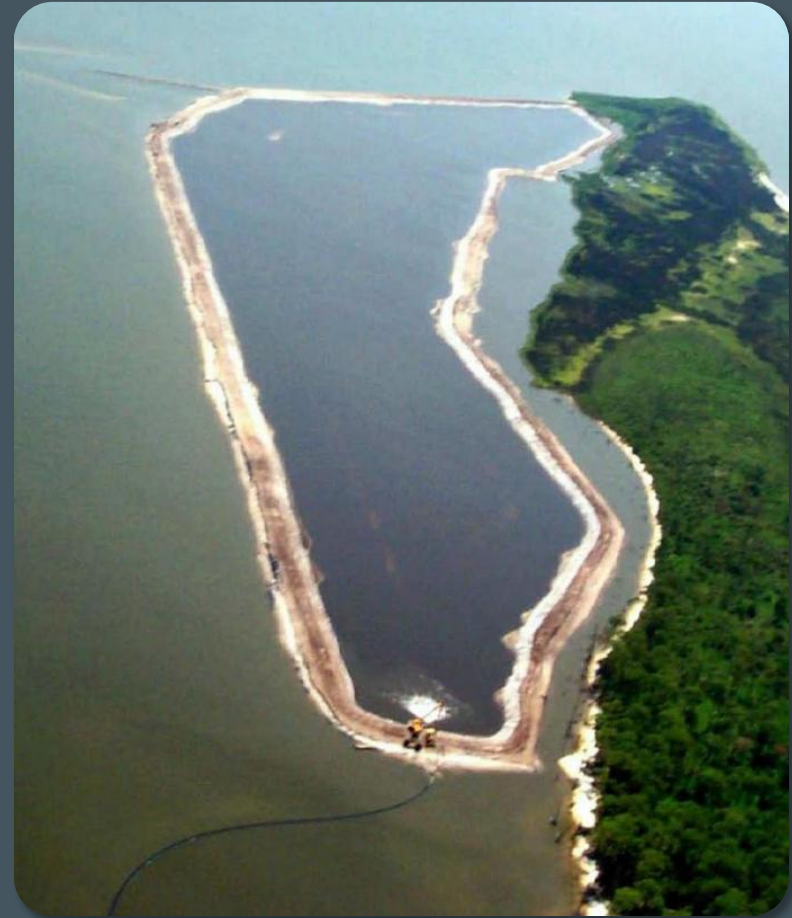
Habitat and Structure

- Land loss estimated at 2 acres per year
- Island has decreased 30% to 50% since the mid-1800s
- Eastern portion, "Little Deer," is not visible at low tide



Deer Island Marsh Creation Project 2001 – 2003

- Components:
 - 7 to 8-foot high dike
 - Easterly wing dike
 - Flash board riser weirs
 - Offset to provide bayou
- Dredged material from Biloxi Lateral Channel
- Approximately 40 acres were filled with 365,000 cy of sediment





Pre-Katrina



Post-Katrina



Deer Island Restoration Project

NOAA 2010

- Restoration in the northeast corner of the island
- Deployed to protect approximately 800 feet of shoreline
- Oyster bags for stabilization and habitat
- Promotes intertidal circulation

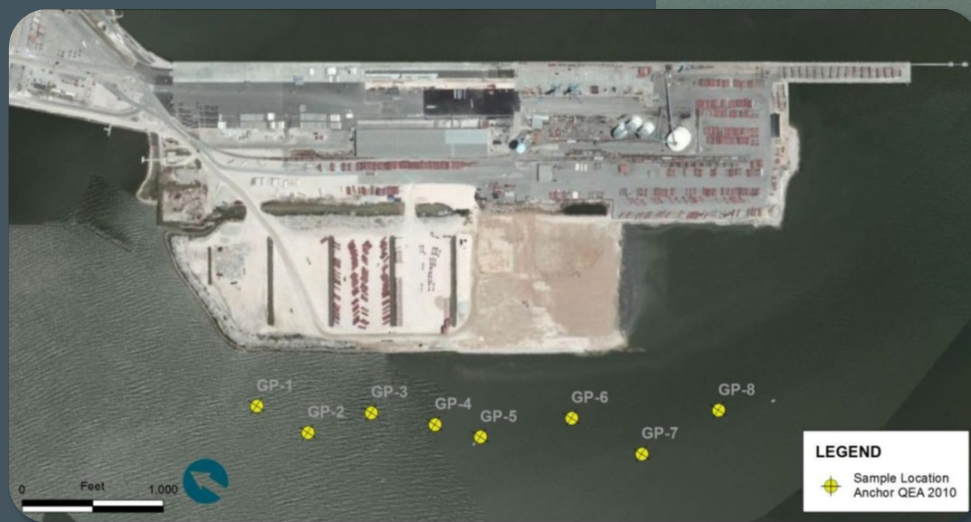
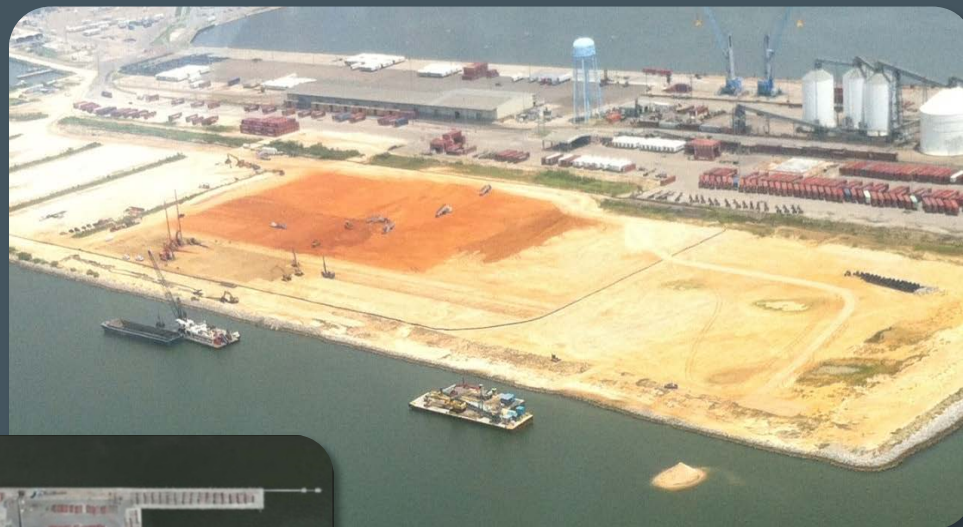


Deer Island BU and Port of Gulfport 2012

- Designed with DMR, Port, and Stakeholders
- Corps rebuilt existing cell under MsCIP
- Refill existing BU cell and construct additional expansion area BU cell
 - Open at the western end to encourage circulation and habitat development
 - Can be expanded for additional material
 - Mimics the historic 1850s footprint
 - Intertidal plant species
 - Chenier for nesting



Port of Gulfport – 2012 Restoration



Deer Island Plan View



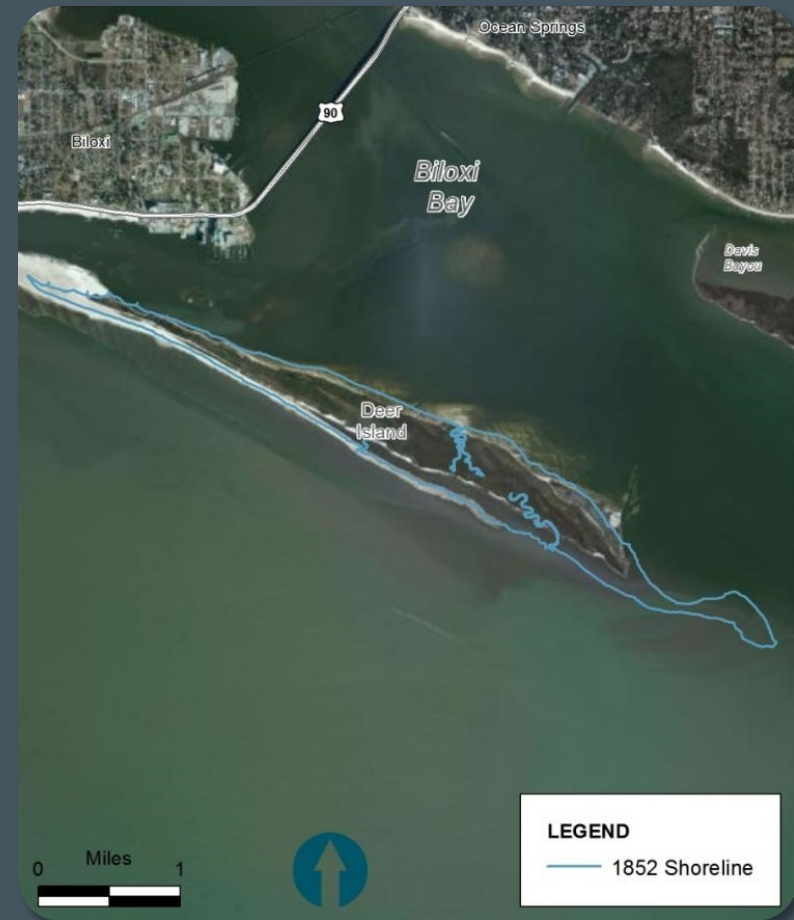


Hurricane Impacts During Construction



Future Deer Island

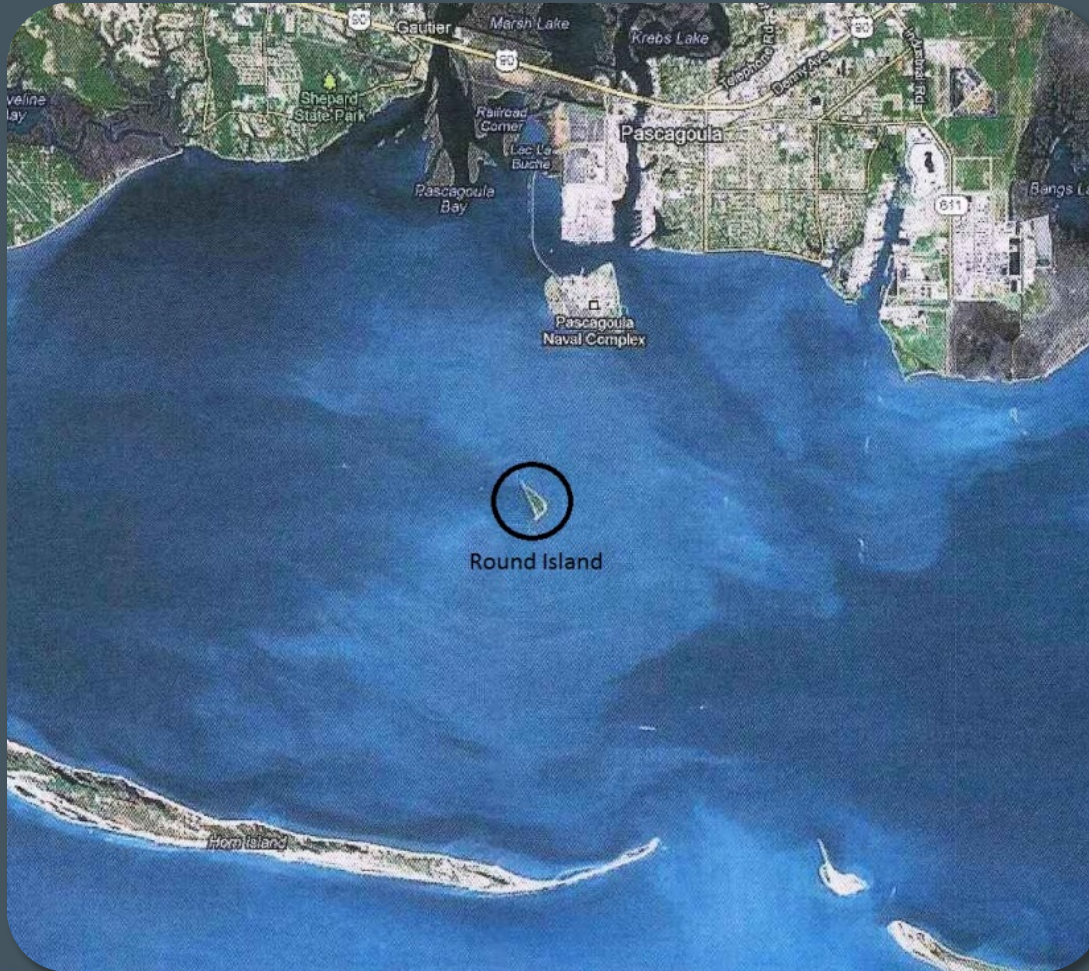
- Restore 1850s footprint
 - 1.1 million cy in place needed for restoration
- Enhance habitats
- Dampen coastal storms
- Enhance and protect MS coastal resources into the future by conserving our sediments



Future State BU Program

Restore Round Island

East Bayou Casotte



Future - Enhance Biloxi Marsh



Questions ??

Comments.....

Applause !!!