

US EPA ARCHIVE DOCUMENT

# Recommendations for Gulf Ecosystem Restoration

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North America Region

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# Community Resilience



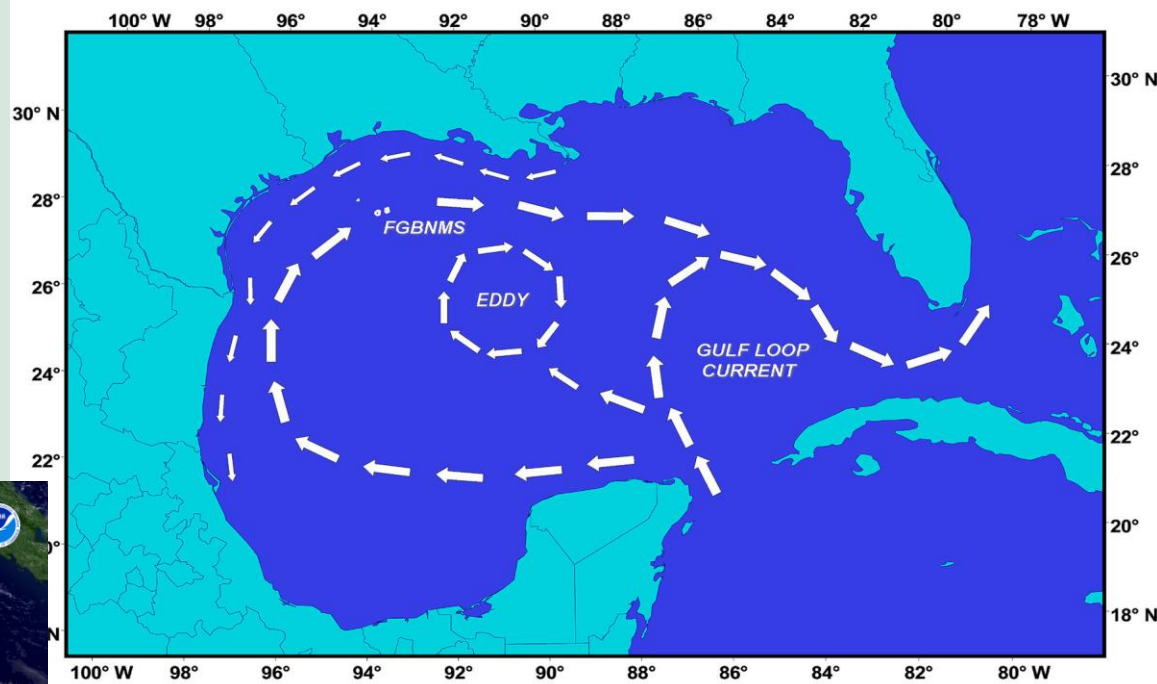
# Vision for a Healthy Gulf

- Sustained biodiversity
- Productive habitats
- Healthy populations of commercial species
- Access for the public
- Fishable, swimmable beaches and rivers
- Thriving cities and towns
- Citizen stewards



# Ecosystem Drivers

- Loop Current
- Freshwater Inflow
- Hurricanes and Tropical Storms
- Ecological Buffers and Filters



# Impacts to the Gulf

- Agricultural runoff
- Development impacts
- Channelization and dredging of rivers
- Damaging fishing techniques
- Endocrine disruptors
- Climate change
- Harmful Algal Blooms
- Invasive species
- Nutrients
- Sea level rise



already lost in the Gulf...

**50%**

inland and  
coastal wetlands

over

**50%**

oyster reefs

up to

**60%**

seagrass beds

up to

**33%**

mangrove forests



# Essential Priorities

A scenic landscape featuring a body of water in the foreground, a dense field of reeds in the middle ground, and a line of trees in the background under a bright blue sky with scattered white clouds. The water reflects the sky and the surrounding vegetation.

1. Recover Habitat

2. Sustain Fish and Wildlife

3. Get the Water Right

4. Conserve Special Places

# Recover Habitat - Categories

- Wetlands
- Oyster Reefs
- Seagrasses
- Barrier Islands and Beaches
- Coral Reefs
- Mangroves
- Deep Water Ocean Habitats

# Recover Habitat Sample Outcomes

- Wetlands: Restore hydrological of Miss. River by capturing 80% of the sediment coming down the river
- Oyster reefs: Restore at 50% of historical area of oyster reefs Gulf-wide
- Seagrasses: Restore 500,000 acres
- Beaches: Increase percentage of beaches using best management practices

# Sustain Fish & Wildlife - Categories



Fish

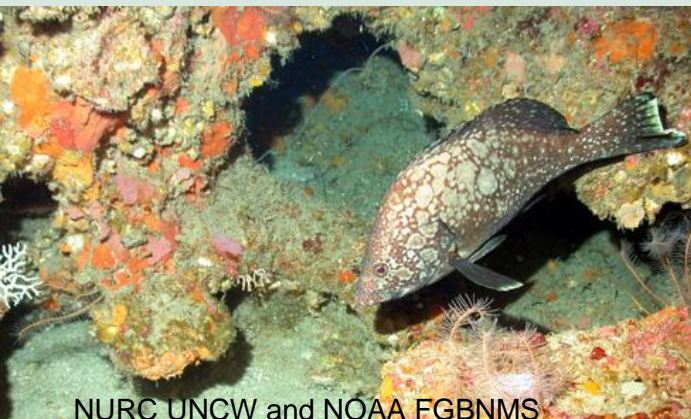
Birds

Marine Mammals

Sea Turtles and Terrapins

# Fish & Wildlife Sample Outcomes

- Fish: All federally managed species are managed at optimum yield
- Birds: Protect colonially and beach nesting bird sites
- Sea turtles: Recover endangered and threatened (E & T) sea turtles sufficient to remove them from federal E & T list



# Get the Water Right - Categories

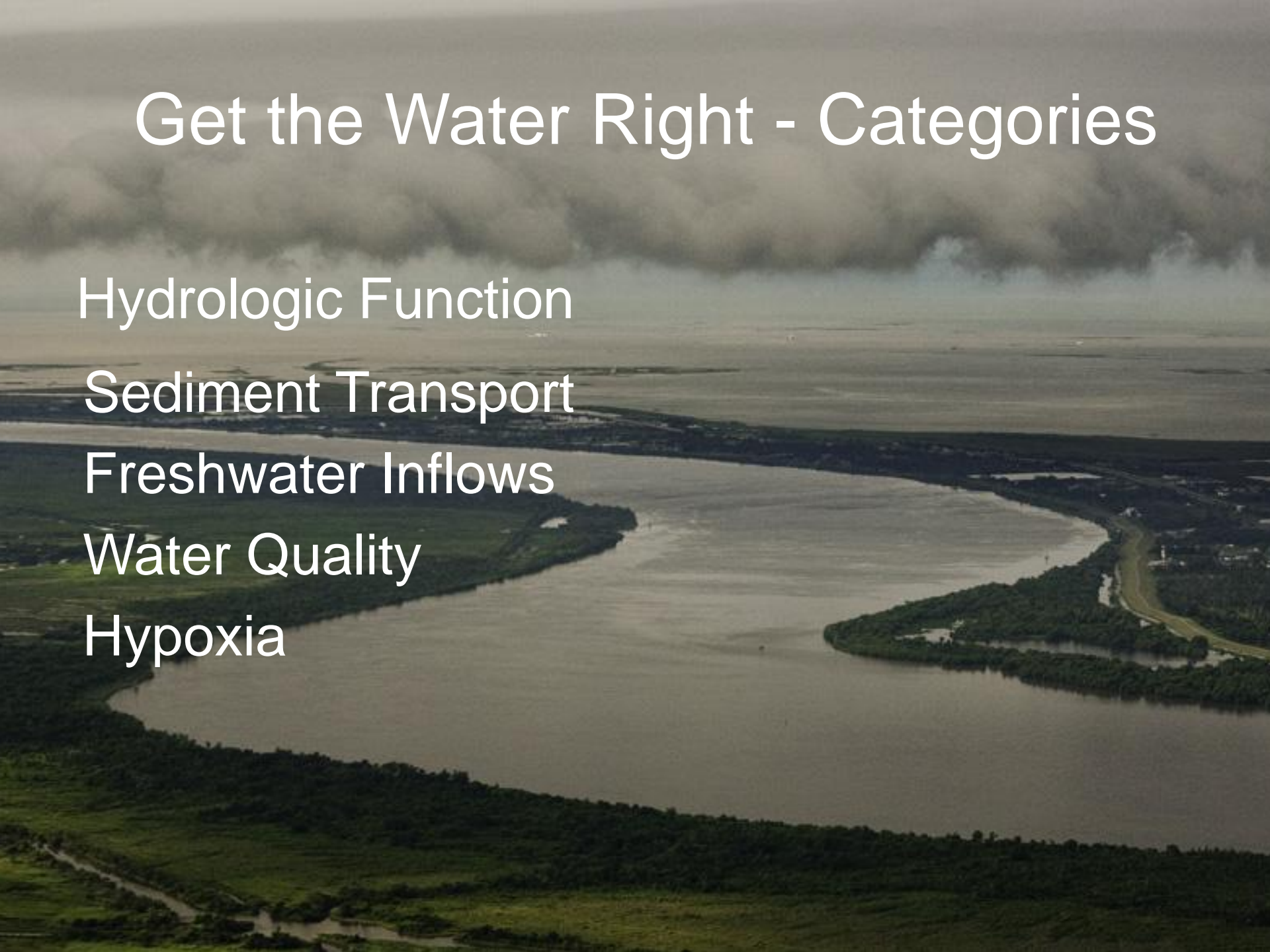
Hydrologic Function

Sediment Transport

Freshwater Inflows

Water Quality

Hypoxia



# Get the Water Right

## Sample Outcomes

- **Quality:** Meet water quality standards for pathogens and nutrient load reduction using TMDLs
- **Quantity:** Establish scientifically sound flow regimes for each bay and estuary
- **Hydrologic Function:** Improve sediment transport to reduce rate of wetland loss

# Conserve Special Places

- Ensure connectivity of special places to conserve biodiversity
- Sample Outcomes:
  - Form and empower local and regional partnerships to promote conservation of special places
  - Identify key areas of ecological connectivity and promote their conservation



# Supporting Activities

- Develop Environmental Report Card and Long-term Monitoring Plan
- Strengthen Science-based Adaptive Management
- Incorporate Impacts from Climate Change
- Develop Market-based Solutions to Help Protect Value of Nature
- Promote Citizen Science and Stewardship through Environmental Education





a national  
destination



productive fisheries





an economic  
engine





# Gulf of Mexico Restoration Decision Support



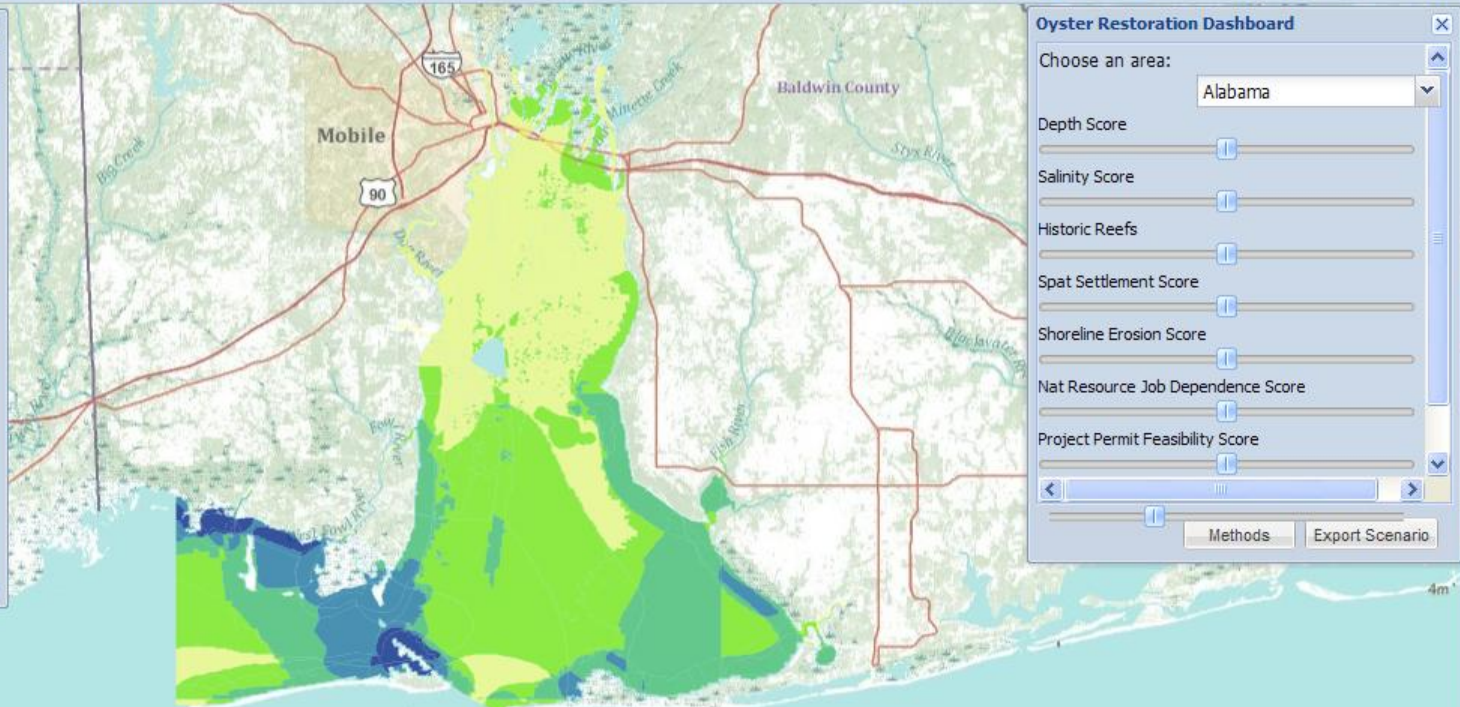
Map Layers | Legend | Change to Split View | Guide | Restoration Dashboard

**Map Layers**

Left Map | Right Map

Clear All | Synch Maps | Set Transparency

- Florida
- Alabama
  - Oyster Restoration Site Selection
  - Restoration Projects
  - Oyster Reefs
  - Bathymetry
  - Salinity
  - Submerged Vegetation
  - Coastal Access
  - Coastal Hazards
  - Social and Economic
- Mississippi
- Louisiana
- Texas
- Gulf of Mexico
  - Ecological
  - Socioeconomic



**Oyster Restoration Dashboard**

Choose an area: Alabama

Depth Score

Salinity Score

Historic Reefs

Spat Settlement Score

Shoreline Erosion Score

Nat Resource Job Dependence Score

Project Permit Feasibility Score

Methods | Export Scenario



LAT: 30.494 N LON: 88.195 W

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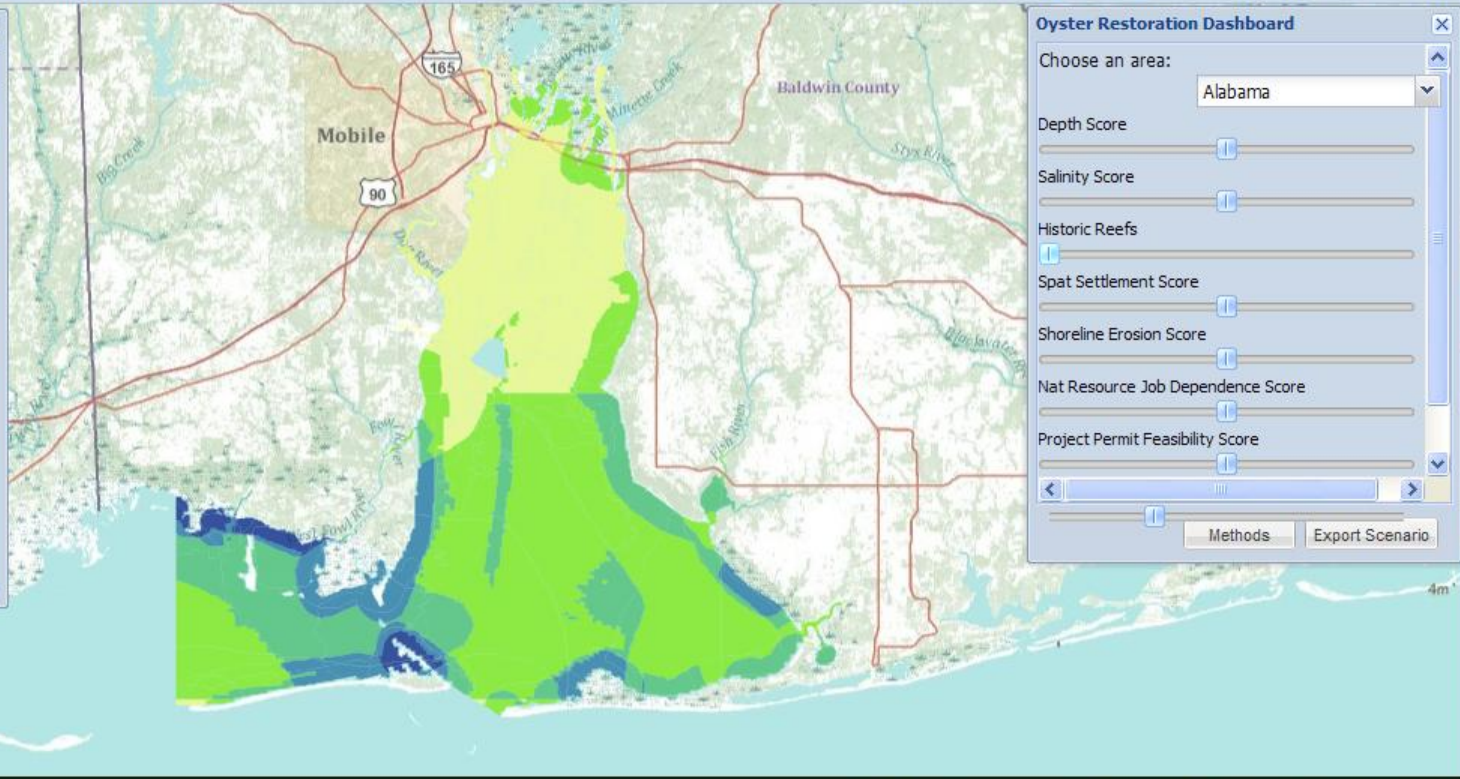
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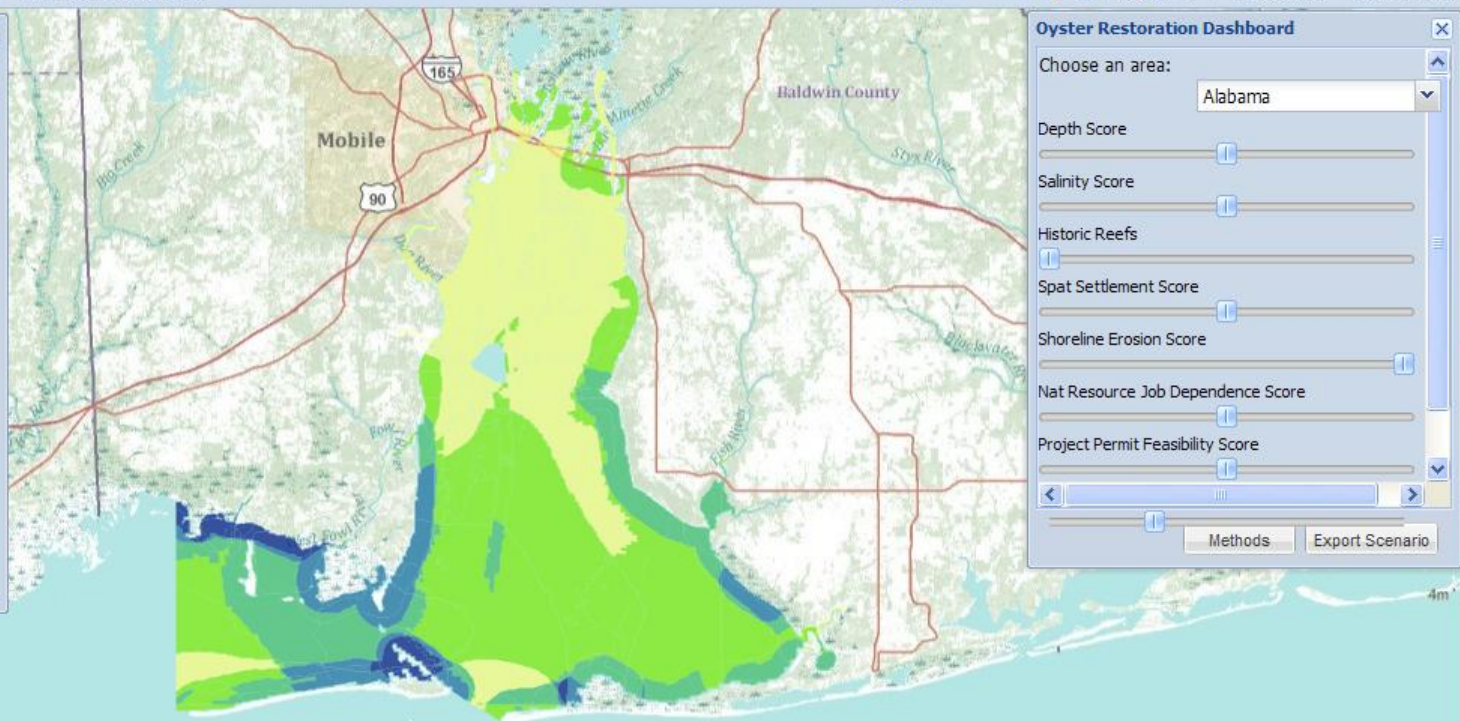
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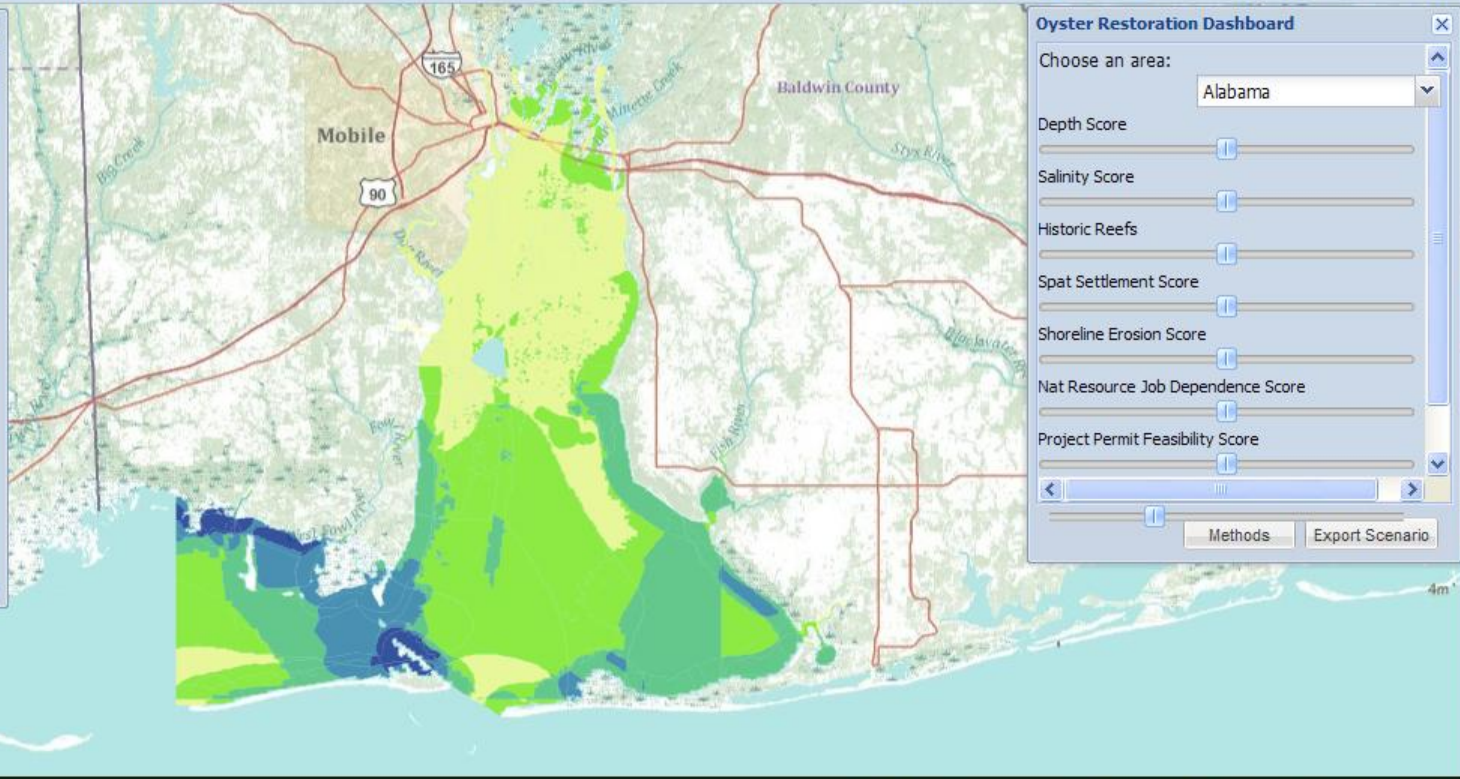
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