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RECOVERING THE GULF OF MEXICO:
Restoration and Decision Support

Zach Ferdaña- The Nature Conservancy and many others

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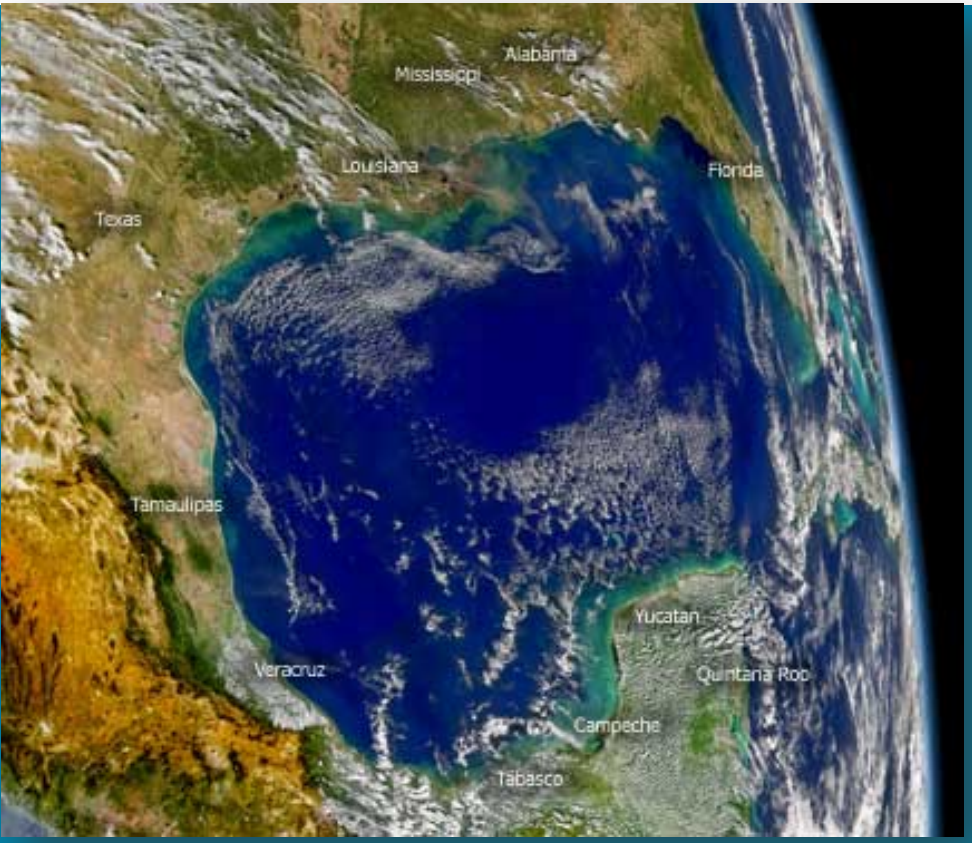
Gulf of Mexico Restoration decision support project



A project to inform the identification of restoration projects with maximum socio-economic and ecological benefits

Generous support from the Packard and Walton Family Foundations

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

marine map

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America's Third Coast

- Fisheries: 1.3 billion pounds of annual seafood ($661 million) – second only to Alaska
- Tourism and recreation: 600,000 jobs and $9 billion in wages annually
- Energy: 50% of the nation's domestic oil/gas

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America's Third Coast

- 4,000 linear miles of coastline
- 47,000 miles of land/sea contact
- 5,000,000 acres - 50% US wetlands
- 2,500,000 acres - 90% US seagrass
- 647,417 acres - >95% US mangroves
- 35% of US coral reefs

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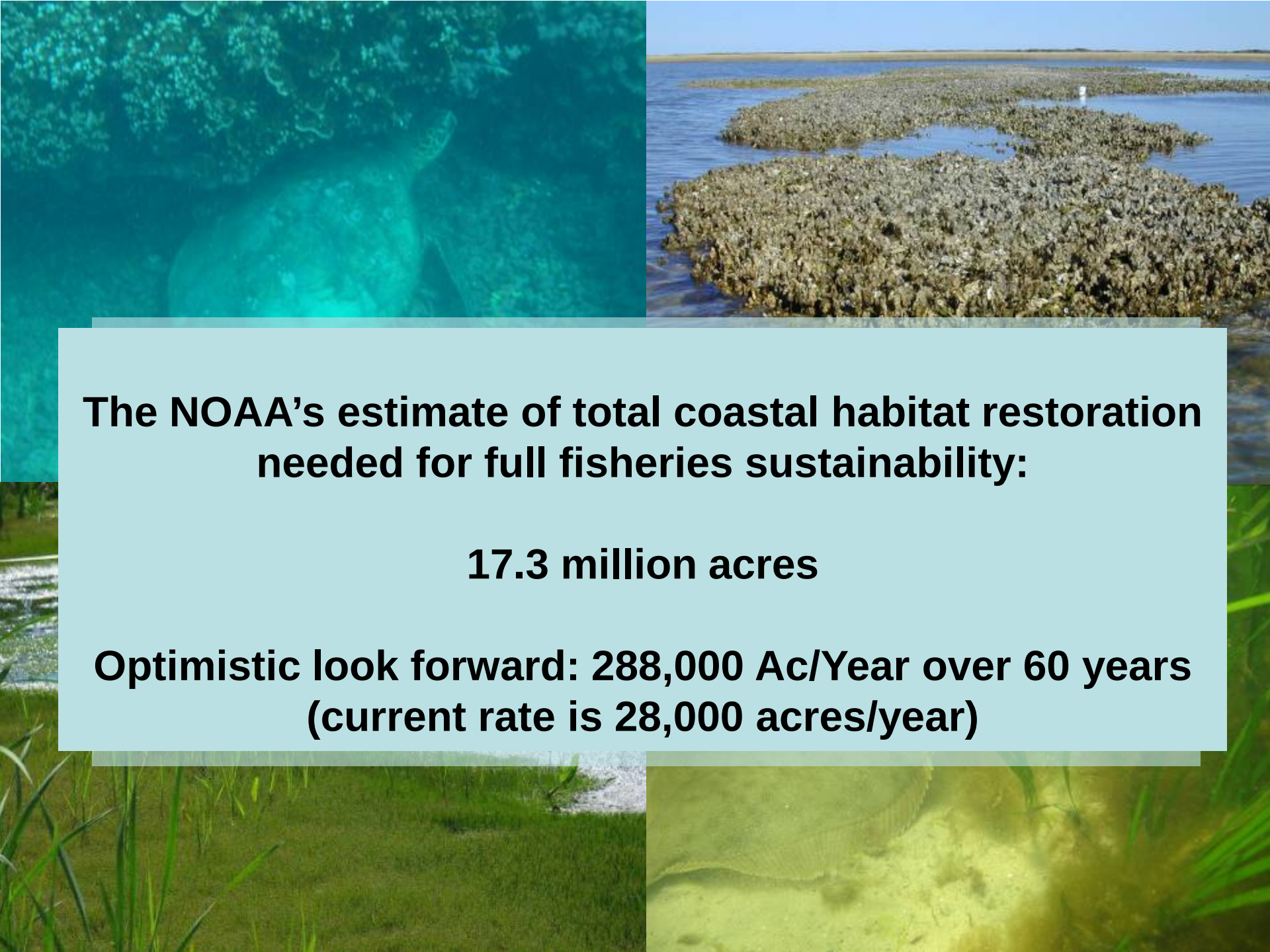
Coastal Habitats and Ecosystems at Risk

- 50% of the Gulf's inland and coastal wetlands
- Up to 60% of seagrass beds
- 50% of oyster reefs
- Up to 33% of mangrove forests

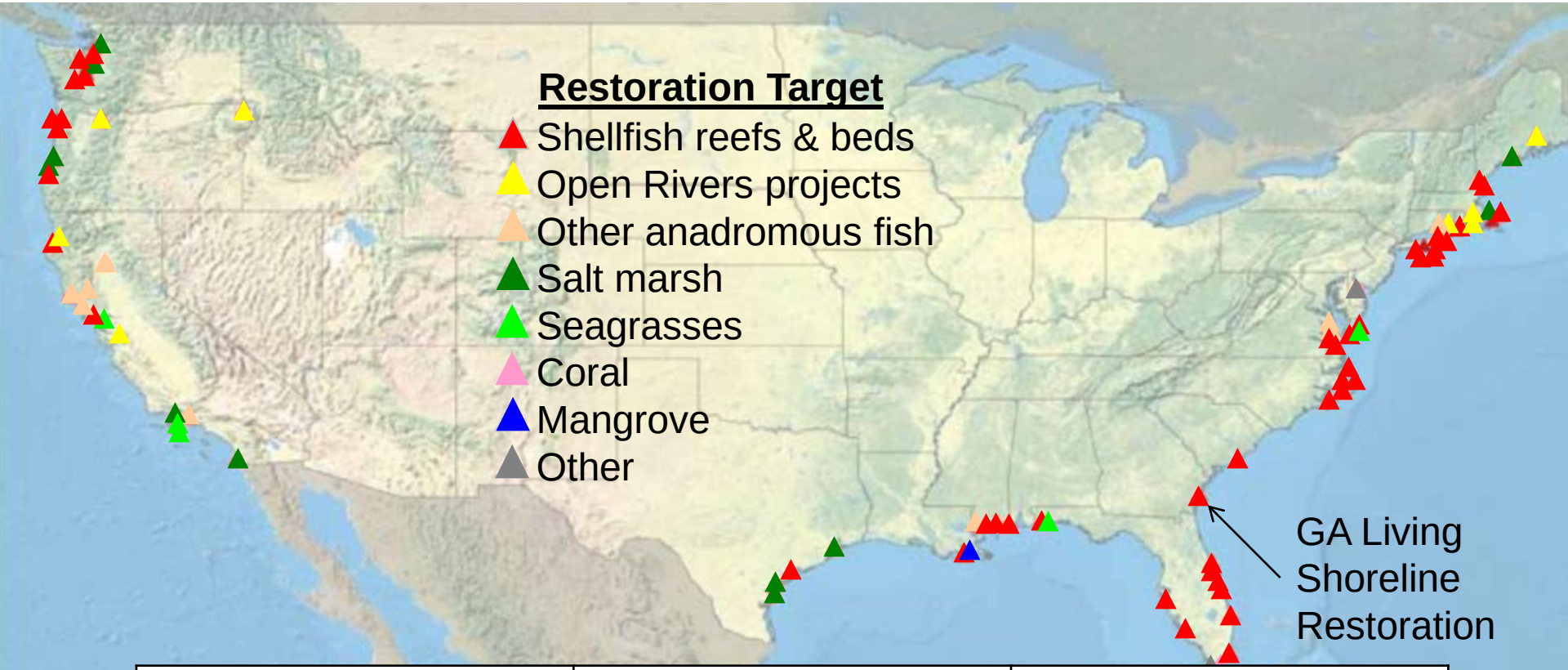


The NOAA's estimate of total coastal habitat restoration needed for full fisheries sustainability:

17.3 million acres

Optimistic look forward: 288,000 Ac/Year over 60 years (current rate is 28,000 acres/year)

Ninety five projects funded through 3 National Partnerships: 2001 - 2010



	Partnership total	GoM Total
# Projects	109	19
NOAA $$	$6,532,200	$930,000
Leverage $$	$8,594,200	$976,600
Total $$	$15,126, 400	$1,906,600
# of states and territories	21	5

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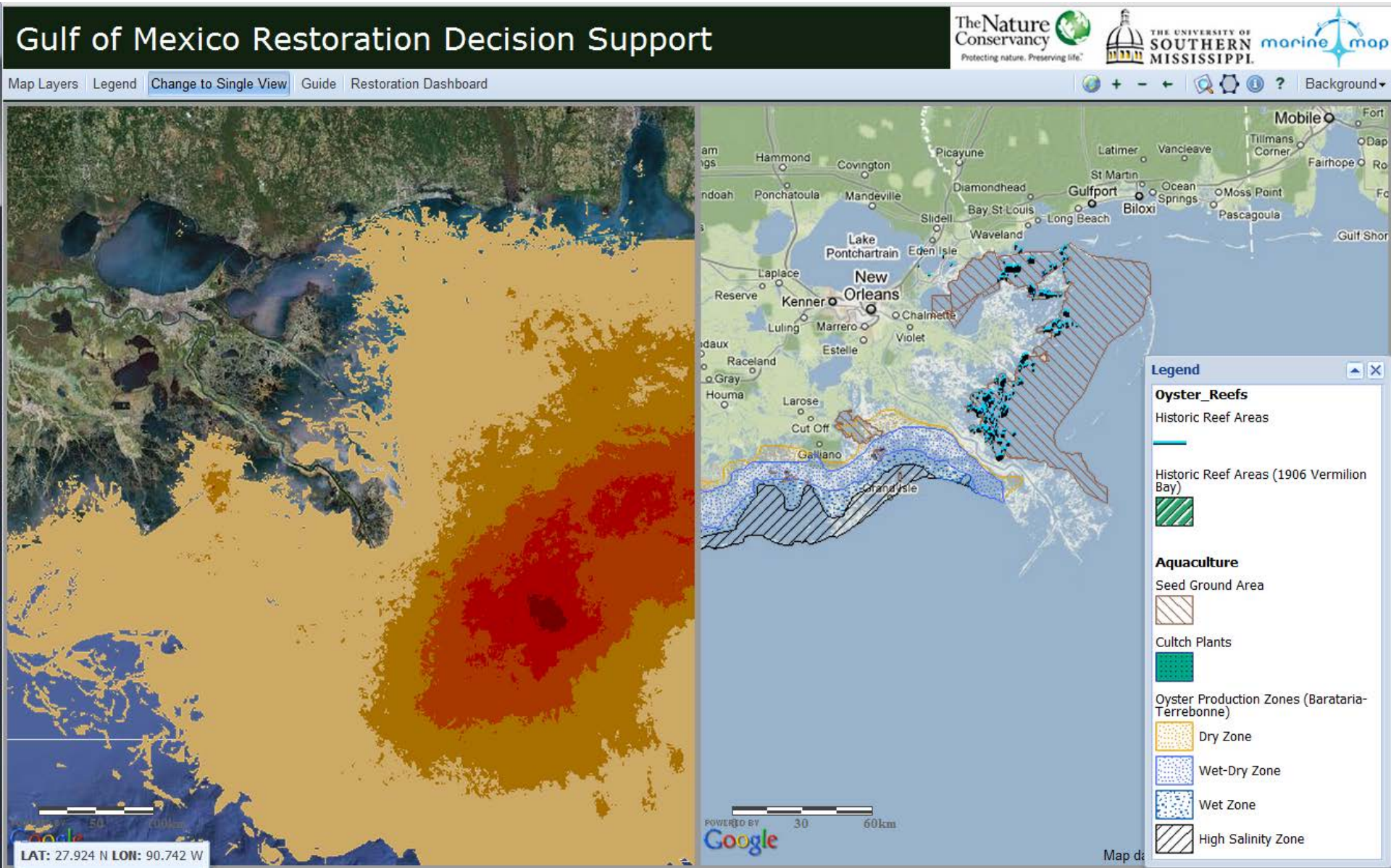
Ecological, Social and Economic Decision Support Application



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Restoration Suitability: Mobile Bay, Alabama

Gulf of Mexico Restoration Decision Support

The Nature Conservancy · The University of Southern Mississippi · marine map

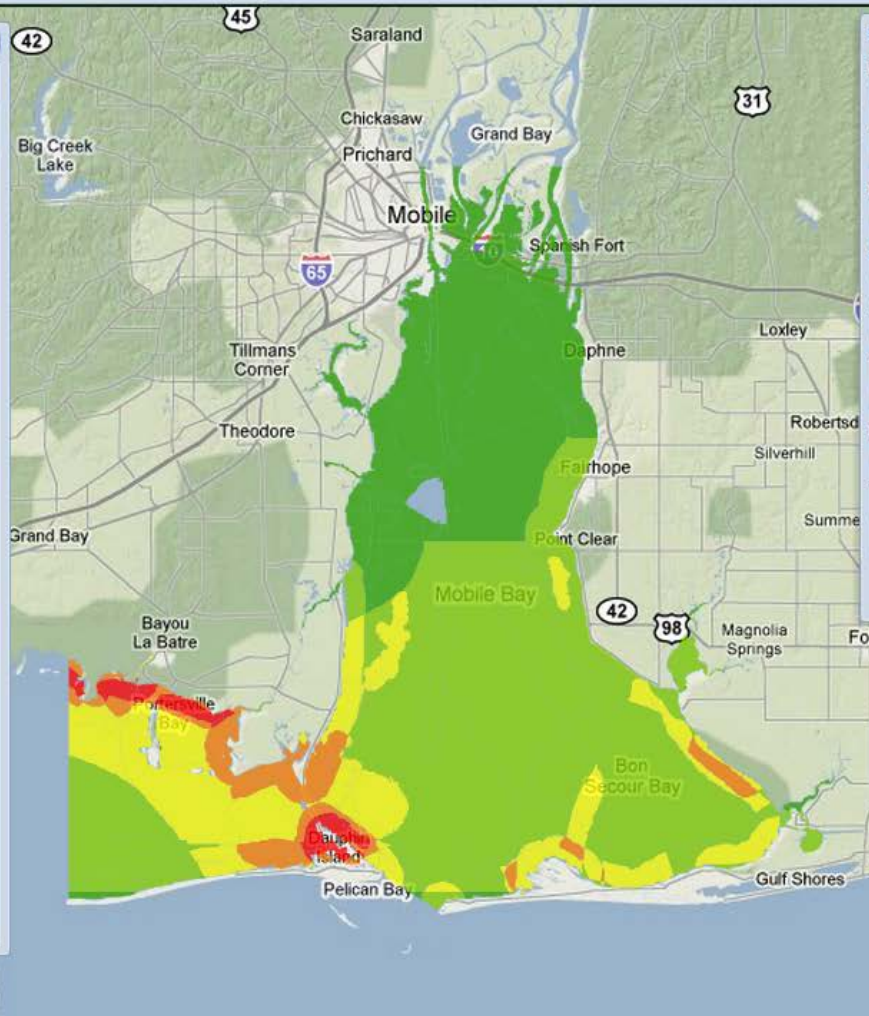
Map Layers | Legend | Change to Split View | Guide | Restoration Dashboard | Background

Map Layers

Left Map | Right Map

Clear All | Synch Maps

- Florida
- Alabama
  - Oyster Restoration Site Selection
    - Site Suitability- Ecology
    - Site Suitability- Ecology & Economy
    - Depth Score
    - Salinity Score
    - Historic Reefs
    - Spat Settlement Score
    - Shoreline Erosion Score
    - Nat. Resource Job Dependence Sco
    - Project Permit Feasibility Score
  - Restoration Projects
  - Oyster Reefs
  - Bathymetry
    - Bathymetry (cm)
    - Mobile Bay bathymetry
  - Salinity
  - Submerged Vegetation
  - Coastal Access
  - Coastal Hazards
  - Social and Economic
- Mississippi
- Louisiana



Restoration Dashboard

- Depth Score
- Salinity Score
- Historic Reefs
- Spat Settlement Score
- Shoreline Erosion Score
- Nat Resource Job Dependence Score
- Project Permit Feasibility Score
- Transparancy:

Update

Legend

Suitability - Alabama

- Low
- Medium
- High
- others

10 20km

LAT: 30.123 N LON: 88.469 W

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Scaling-up Restoration in the Gulf

100-1000 RESTORE COASTAL ALABAMA

A public-private partnership to build 100 miles of oyster reefs and plant/promote 1,000 acres of marsh/seagrass in Alabama

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Socioeconomics of Restoration

550 volunteers showed up
January 22 and 23, 2011
to place 16,000 bags of oyster shells

Aerial Photos by JoeBay Aerials

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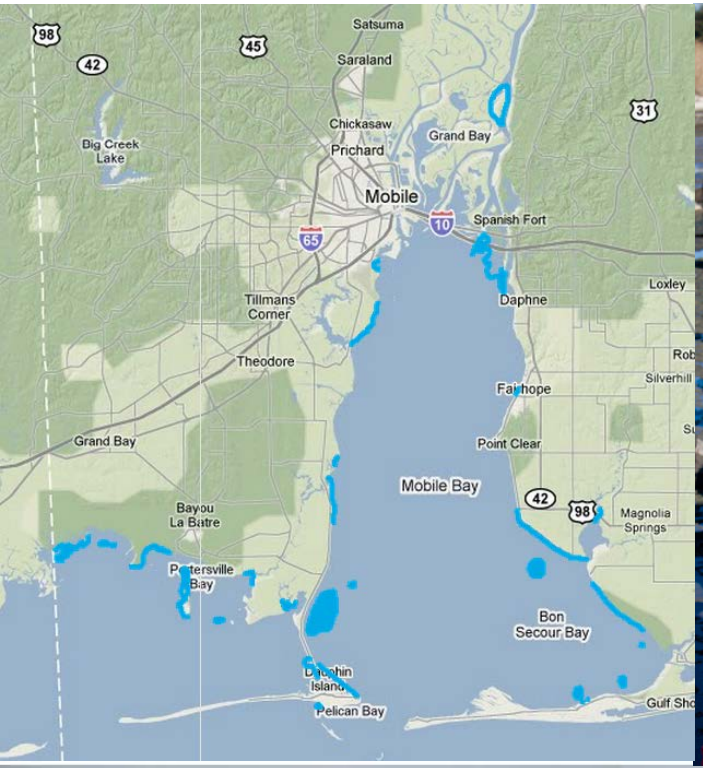
Ecological, Social, Economic Benefits



Questions?

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Global Marine Initiative – nature.org/marine

Zach Ferdaña, Senior Marine Conservation Planner
zferdana@tnc.org