



THE NATIONAL WILDLIFE FEDERATION'S RECOMMENDED PROJECTS

Mississippi Sound

MISSISSIPPI SOUND is fed by several rivers including the Pascagoula, the largest undammed river in the lower 48 states. The coast loses 200 acres of wetlands every year to erosion — with some parts of Mississippi Sound creeping inland as much as 30 feet a year. Collectively, coastal erosion, wetlands loss and poor water quality harm the health of the sound, affect the coastal economy and leave communities increasingly vulnerable to storm surge and rising seas.

Urbanization, nutrient pollution from agriculture, failing septic and sewer systems, altered waterways, and stormwater runoff have degraded Mississippi Sound's water quality over the last 20 years. Seventeen streams that feed the estuary are listed as "impaired" under the Clean Water Act. As a result, the Mississippi Beach Monitoring Task Force issues advisories or closures due to high bacterial counts an average of 28 days a year. Habitats that support the coast's diverse wildlife and marine life have also been lost. Oyster reefs

have declined by approximately 90 percent while seagrass beds have declined by 80 percent. Coastal properties, particularly those with water access, face significant development pressures. As Mississippi Sound has significant ecological connections with other coastal waters — Mobile Bay in Alabama, Lakes Pontchartrain and Borgne and the Chandeleur Sound in Louisiana, and Mississippi's Bay St. Louis and Back Bay of Biloxi — restoring the health of Mississippi Sound will bring tremendous benefits to the Gulf region.

MISSISSIPPI SOUND

Recommended Projects

HABITAT PROTECTION

Grand Bay Land Acquisition

The Grand Bay National Wildlife Refuge and Grand Bay National Estuarine Research Reserve collectively protect a diversity of important coastal habitats, including some of the last remaining wet pine savanna in the country. This project will add up to an additional 1,686 acres identified by the U.S. Fish and Wildlife Service and the State of Mississippi as critical for acquisition and long-term management to these protected lands. This acreage contains a diversity of habitats including wet pine savanna, maritime forests, tidal and non-tidal wetlands, salt marshes, salt pannes, bays, and bayous. This expansion could help support federally threatened and endangered species including the gopher tortoise, sandhill crane, and the manatee as well as hundreds of species of migrating birds and aquatic wildlife.

PROJECT COST: \$2,000,000

LEAD ORGANIZATION: The Conservation Fund

PARTNERS: MS Department of Marine Resources, USFWS, NOAA

Additional Benefits:

- + 1,600+ Acres Available for Recreation
- + 13,800+ Potential Population Benefited
- + 8 Critical Facilities in Vicinity

HABITAT PROTECTION

Jourdan River Coastal Preserve

This effort seeks to permanently protect lands adjacent to the Jourdan River Coastal Preserve. The project would add 1,472 acres to the preserve's existing 573 acres, adding frontage along the Bay of St. Louis and the Jourdan River. This would allow for the improved management of coastal wetlands and adjacent upland areas. The targeted acres lie within the Coastal Preserve boundary in Hancock County. The property consists of open saline marshes containing saltgrass, needle rush, and cordgrass; maritime forests; and tidal brackish marsh. The area is a feeding, resting, and overwintering ground for a variety of migratory birds and would benefit coastal and freshwater aquatic species.

PROJECT COST: \$2,000,000

LEAD ORGANIZATION: The Conservation Fund

PARTNERS: MS Department of Marine Resources

Additional Benefits:

- + 1,400+ Acres Available for Restoration
- + 25,000+ Potential Population Benefited
- + 10,000+ Socially Vulnerable Benefited
- + 6 Critical Facilities in Vicinity
- + 3,350 Tons/Year Carbon Storage



HABITAT PROTECTION

Graveline Bayou Land Protection

This project proposes the purchase of properties in Jackson County that are under significant development pressure and that are within the acquisition boundary of Graveline Bay Coastal Preserve. These properties include palustrine wetlands, estuarine wetlands, upland shrubs, and evergreen forests. These habitats support wintering and migratory birds as well as numerous coastal and estuarine species, including economically important species of fish and shellfish. Protecting these habitats will also increase coastal resilience by allowing for the natural dispersal of storm surge.

LEAD ORGANIZATION: Land Trust for the Mississippi Coastal Plain

PARTNERS: MS Department of Marine Resources

Additional Benefits:

- + 800+ Acres Available for Recreation
- + 19,500+ Potential Population Benefited
- + 6,700+ Socially Vulnerable Benefited

HYDROLOGIC RESTORATION

Headwater Hydrologic Restoration: Jackson Marsh & Grand Bayou

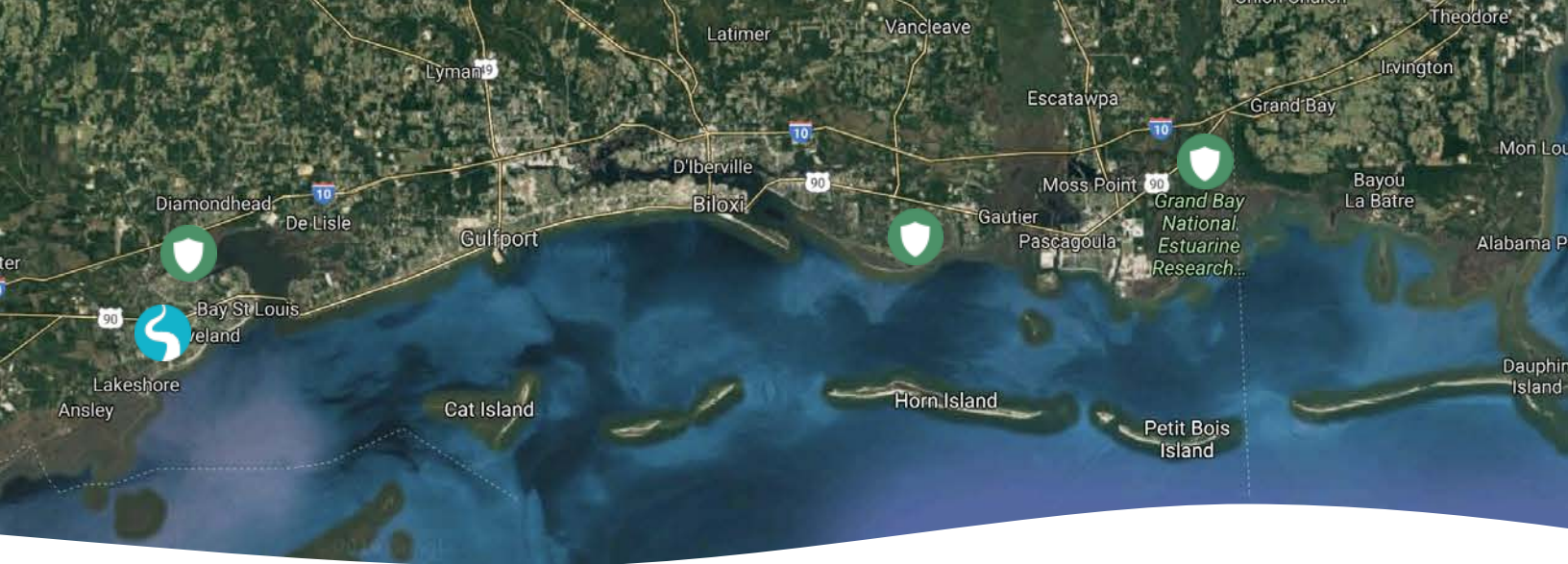
This effort will restore the natural hydrology of streams, bayous and drainages flowing into the Gulf through Jackson Marsh and Grand Bayou on 2,734 total acres adjacent to Buccaneer State Park. All the project elements will be designed to restore flows to create riparian and aquatic wildlife migration corridors while maximizing ecosystem services. The project would redesign and retrofit Wavelands' existing stormwater infrastructure to improve the volume and timing of discharges to Grand Bayou and Jackson Marsh. This will include rehabilitating and expanding Idlewood Pond and possibly adding a new retention pond on city property. The project will also use low impact approaches, such as trash and sediment removal, to restore and rehabilitate a degraded stream channel.

LEAD ORGANIZATION: The City of Waveland

PARTNERS: MS Department of Marine Resources

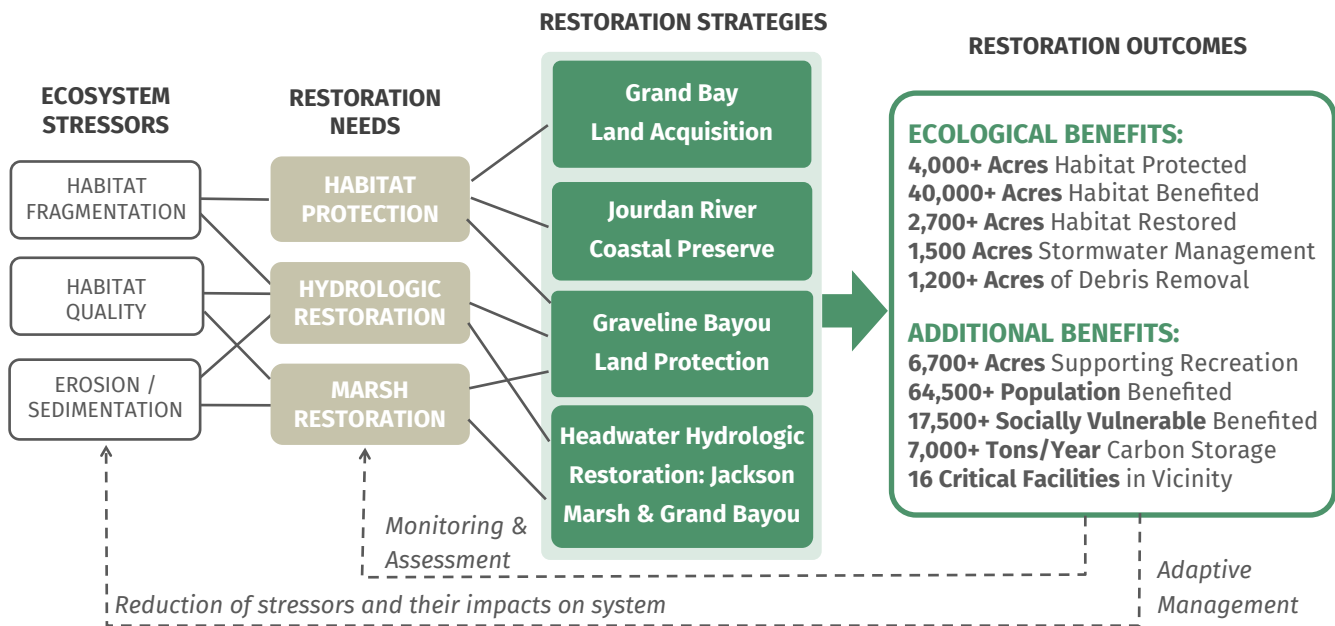
Additional Benefits:

- + 2,700+ Acres Supporting Recreation
- + 6,000 Potential Population Benefited
- + 2 Critical Facilities in Vicinity



Our Approach to Project Evaluation

The National Wildlife Federation’s Gulf of Mexico Restoration Program developed a science-based and systematic approach to evaluate estuarine restoration needs. This approach assesses critical stressors, identifies focal areas, determines restoration needs, and establishes restoration targets to make recommendations. The diagram below illustrates the application of this process for Mississippi Sound and demonstrates the benefits that the suite of restoration projects could collectively achieve.



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