



The Pascagoula River Basin

Bennett Bayou Tidal Marsh Restoration Project

Project Partners



A newly created marsh area at Bennett Bayou is revegetated with sawgrass, a native tidal marsh plant. 12,000 sawgrass plants have already been planted, with an additional 8,000 planned.

Photo: Mark LaSalle

The Pascagoula River

Formed by the confluence of the Leaf and Chickasawhay Rivers, the Pascagoula River flows southward for eighty miles before emptying into the Gulf of Mexico. The 8,800-square mile river basin is the largest unimpeded river system in the lower forty-eight states, with bottomland hardwood forests, savannas, marshes, and other aquatic habitats supporting some twenty-two threatened or endangered species. The river's north-south forested corridor is a critical refueling and rest stop for birds during intercontinental migrations.



The Pascagoula River

Bennett Bayou Tidal Marsh

The Bennett Bayou Tidal Marsh is a unique tract of coastal habitat. It was purchased by the Land Trust for the Mississippi Coastal Plain in 2005 with the intent of protecting and restoring the devastated marsh, which is a gateway to the 11,000 acre Pascagoula River Marshes. Through the SARP's National Fish Habitat Initiative funding and the extraordinary efforts of project partners, this goal is becoming realized.

The Bennett Bayou Tidal Marsh has been severely impacted by a number of disturbances in recent years. During the construction of a canal, side-cast dredge material was deposited onto the marsh. Much of the filled area was then graded for use as a parking lot. Riprap was used for erosion control along the banks of the canal and basin, which further degraded the ecological function of the area. Then the devastating storm surge of Hurricane Katrina deposited debris and damaged the canopy structure of the bayhead swamp that extends along the property boundary. These disturbances combined have allowed exotic plant species to invade the entire area, seriously harming the integrity of the natural ecosystem found there.

As one of many projects under the National Fish Habitat Action Plan, the restoration of Bennett Bayou marks the beginning of an unprecedented effort to reverse the decline of aquatic habitats for fish and wildlife nationwide.





Project Accomplishments

Actions taken by project partners to achieve goals for the restoration of Bennett Bayou Tidal Marsh have included:

- Baseline quantitative data gathered on plant species and elevations from a nearby intact reference wetland on which to model restoration planning
- Invasive species treated and removed
- Riprap removed
- Existing fill removed and used to fill boat basin to reference wetland elevations
- Appropriate native tidal marsh plants installed to stabilize the banks and revegetate the newly created marsh area
- Existing channel maintained to allow deep water boat access for tourists and researchers from the property into the surrounding 11,000 acre Pascagoula River Marshes
- Existing deteriorated boat slip canopy structure removed

Next Steps

Important efforts continue in the restoration process:

- A wildlife viewing station will be constructed
- Additional native trees and shrubs will be planted in the bayhead swamp north of the canal
- Monitoring protocols and success criteria will be established for the site to track survival of reestablished native plants and control of invasive species
- Audubon Mississippi will incorporate the site into future on-going

Left: A series of photos document the tremendous progress made in the restoration of Bennett Bayou Tidal Marsh.

environmental education programs focused on marsh restoration, including site monitoring

- Project monitoring will be conducted for three years, with supplemental planting events and invasive species treatments conducted as necessary

Results

Upon project completion, Bennett Bayou will be restored to a fully functioning, intact tidal marsh that will benefit multiple Gulf species, including red drum, brown and white shrimp, Gulf sturgeon, speckled trout and Atlantic croaker. The efforts of partners working together at national, state, and local levels to improve these aquatic resources will create lasting economic and quality-of-life benefits for this and future generations.



Gulf sturgeon are just one of many species that will benefit from the Bennett Bayou Tidal Marsh restoration.

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