LPBF
SAVE OUR LAKE
SAVE OUR COAST
LAKE PONTCHARTRAIN BASIN FOUNDATION

Coastal Sustainability Program

Bayou St. John Wetland Creation Project

In the summer of 2013, the Lake Pontchartrain Basin Foundation (LPBF) and Restore the Earth Foundation built a half acre of wetlands at the mouth of Bayou St John in New Orleans, Louisiana. Planted with seven species of native marsh grasses, this pocket of native habitat in the city's ten-mile seawall will be a nursery for fish, a refuge for birds and an outdoor classroom for experiencing nature in an urban area.

LPBF partnered with Orleans Levee District to use dredge material from a channel being dredged through the sand bar that hindered water flow into the bayou. A portion of the dredged sand and mud were piled behind retaining walls along the sides of the cove outside the flood wall, at the right elevation to support marsh plant growth.

New marsh takes shape on both sides of the bayou just inside the Lakeshore Drive

Bayou St. John is rich in history and remains a treasured resource. The dredging and marsh creation projects are part of a long term effort to improve the bayou's health, including the recent removal of a nearby dam by LA Dept. of Wildlife and Fisheries. LPBF hopes that the new marsh will draw the community to enjoy and embrace the area, and help focus international attention on Louisiana's rich but imperiled environment.


Close-up of the retaining wall filled with dredge material and newly planted marsh grass

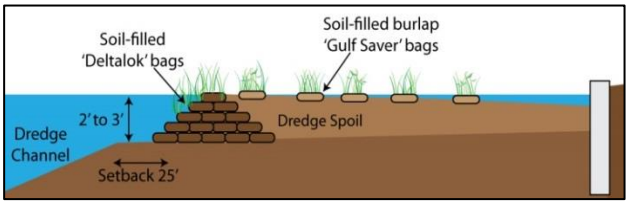
Why Restore Wetlands at Bayou Saint John?

- Creates habitat for fish, crab and waterfowl
- Improves fishing, bird watching and recreational values
- Provides a living classroom for experiencing nature in an urban area
- Enhances the historic waterway and the Lafitte Corridor
- Demonstrates new nature-based technologies that can help restore the Louisiana coast
- Protects bulkhead and levee from erosion

The waterway's history and environmental status are summarized in the *Bayou St. John Comprehensive Management Plan:*
http://saveourlake.org/PDF-documents/habitat/BSJ_CMP.pdf

Innovative Solutions for Building Wetlands

Volunteers build sandbag wall, led by EMS Green of Belle Chasse, LA



Piled sand bags contain the dredged mud, and plant roots hold it together.

This project used a new approach to build retaining walls using the dredged material. Unlike more common rock or rip-rap construction, this project used 'Deltaok' (sandbags) made of durable plastic fabric and held together by spiked plastic plates. The fabric is structurally strong but allows plants to grow through, forming a "living wall" that blends with the environment. The two containment dikes total 560 linear feet with an average height of three feet, and contain 7,400 bags with a total of 185 tons of sand. Much of the filling, moving and placement of bags was done by hand, with over 100 volunteers contributing more than 750 hours in the hot summer.

This photomosaic taken from a kite shows GulfSaver bags deployed and ready for planting
(Photo courtesy Scott Eustis)

Volunteers planted over 3,000 plugs of 7 grass and sedge species in the new marsh. 1,000 were planted in 'GulfSaver' bags filled with fertilized soil, which give the plants a head start and then break down.

Wetland Planting Species List

Saltmeadow cordgrass	*Spartina patens*
Smooth cordgrass	*Spartina alterniflora*
Bullrush	*Schoenoplectus californicus*
Common rush	*Juncus effusus*
Dwarf spike-rush	*Eleocharis parvula*
Seashore crown grass	*Paspalum vaginatum*
Swamp sawgrass	*Cladium jamaicense*

Felix Cretini of LPBF plants salt-meadow cordgrass in a GulfSaver bag