SAVE OUR LAKE
LAKE PONTCHARTRAIN BASIN FOUNDATION

Biloxi Marsh Land Bridge - South

(Pontchartrain Coastal Lines of Defense Program)

Lake Pontchartrain Basin Foundation – Coastal Sustainability Program

The Biloxi Marsh Land Bridge – South is one of ten priority project areas within the Pontchartrain Coastal Lines of Defense Program for the Pontchartrain Basin **(Figure 1).** All projects within this program provide significant habitat restoration and flood protection. The Biloxi Marsh Land Bridge – South is the outer marsh on the eastern edge of the Biloxi marsh. A major element of this marsh is the remnant ridge and marsh of abandoned St. Bernard delta distributaries along Fishing Smack Bay. This marsh and remnant ridge prevent the coalescence of Chandeleur Sound with the interior bays such as Bay Boudreaux. Sustainable restoration of the outer marsh can only be achieved through aggressive restoration of oyster beds and structural reefs. Shoreline protection and some marsh creation is also necessary, but oyster productivity can armor the marsh and provide detritus for vertical accretion. Therefore, success of this project is dependent on re-establishment of the historic habitats as proposed through the Bayou la Loutre ridge restoration and Violet Reintroduction projects. These goals are consistent with Mississippi's coastal restoration objectives.

The Pontchartrain Coastal Lines of Defense Program represents an integrated set of projects which is based on the highly vetted Comprehensive Habitat Management Plan for the Pontchartrain Basin (2006). The CHMP was developed over two years by a team of qualified engineers, biologists and physical scientists including representation from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, University of New Orleans, Southeastern University, LA Department of Nature Resources, Pontchartrain Institute for Environmental Sciences and LSU AgCenter. The plan was peer-reviewed by representatives from National Marine Fisheries Service, Natural Resource Conservation Service, LSU, U.S. Geological Survey, LA Geological Survey, The Nature Conservancy, and EPA Gulf of Mexico Program Office and the Coalition to Restore Coastal Louisiana.

The final CHMP is a federally approved plan by the EPA Region VI office. The Coalition to Restore Coastal Louisiana and the Louisiana Wildlife Federation have passed resolutions endorsing both the Comprehensive Habitat Management Plan and the Pontchartrain Coastal Lines of Defense Program. Since its release, the Pontchartrain Coastal Lines of Defense Program has been presented to numerous parish, state and federal officials. It is also publicly accessible on the web.

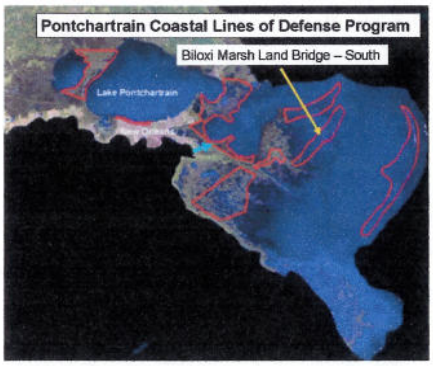

Figure 1: Location of the Biloxi Marsh Land Bridge - South. Project includes shoreline protection, oyster reef bed and reef construction through salinity management and reef augmentation. This project is one ten projects in the Pontchartrain Coastal Lines of Defense Program.

Lake Pontchartrain Basin Foundation, 2006, Comprehensive Habitat Management Plan for the Pontchartrain Basin, http://www.saveourlake.org/wetlands.htm on April 2006

Lake Pontchartrain Basin Foundation, 2006, Pontchartrain Coastal Lines of Defense Program, http://www.saveurlake.org/wetlands.htm on April 2006

Lopez, J. A., 2006, The Multiple Lines of Defense Strategy to Sustain Coastal Louisiana, white paper, Lake Pontchartrain Basin Foundation

Fact Sheet – Biloxi Marsh Land Bridge – South

Project Name: Biloxi Marsh Land Bridge - South

Coastal Planning

- Comprehensive Habitat Management Plan – endorsed by CRCL and LA Wildlife Federation
- Nominated through the ESF-14 planning process
- St. Bernard Parish coastal plans have generally had stabilization with reefs including the most recent plans
- Oyster restoration is also proposed by the U. S. Army Corps of Engineers, 1984, Mississippi and Louisiana Estuarine areas: Freshwater Diversion to Lake Pontchartrain Basin and Mississippi Sound- Feasibility Study- New Orleans District

Project Location : Region 1, Pontchartrain Basin, St. Bernard Parish

Problem

Due to the historical and continuing wetland loss, the integrity of the outer Biloxi marsh is under threat of significant deleterious change. Opening of passes into Chandeleur and Mississippi Sound threatens the bay system internally and allows increasing volumes of tidal and storm surge water to pass thorough the estuary **(Figure 2).** Increasing the opening from sounds to bays will fundamental alter the landscape regionally and threaten the collapse of the entire eastern half of the Biloxi marsh. The Biloxi marsh in general is a hydrologic barrier to maintain the estuarine gradient and to reduce storm surge. Although the rates of loss are not high the remnant marsh is reaching a critical level of integrity **(Figure 3).**

Proposed Project Features

- Restore historic reef beds and oyster reefs with salinity and structural augmentation (1000 acres)
- Armor shoreline on narrow reaches of the land bridge (30,000 feet)
- Local marsh creation to replace marsh landbridge (200 acres)

Goals

- Develop high productivity of oyster to stabilize marsh and for commercial harvest
- Restore historic structural oyster reefs
- Stabilize the land bridge and tidal exchange through passes

Preliminary Project Benefits

The project will protect or restore 140 acres of brackish marsh and optimize productivity of 2,000 to 3,000 acres of oyster beds. Oyster harvest should increase at least 100% over current levels.

Identification of Potential Issues

Oyster lease issues

Preliminary Construction Costs

The estimated construction cost is $50M ($15M armoring & $30M reef augmentation, $5M marsh creation)

Preparers of Fact Sheet

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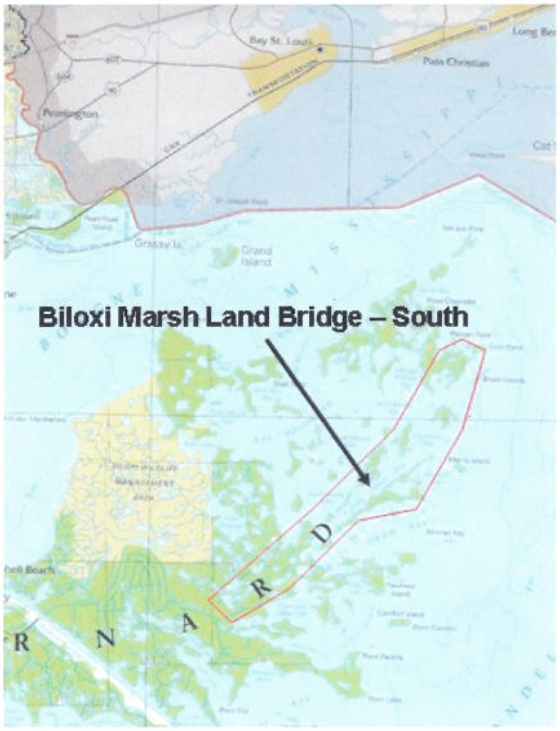

Figure 2: Biloxi Marsh Land Bridge – South

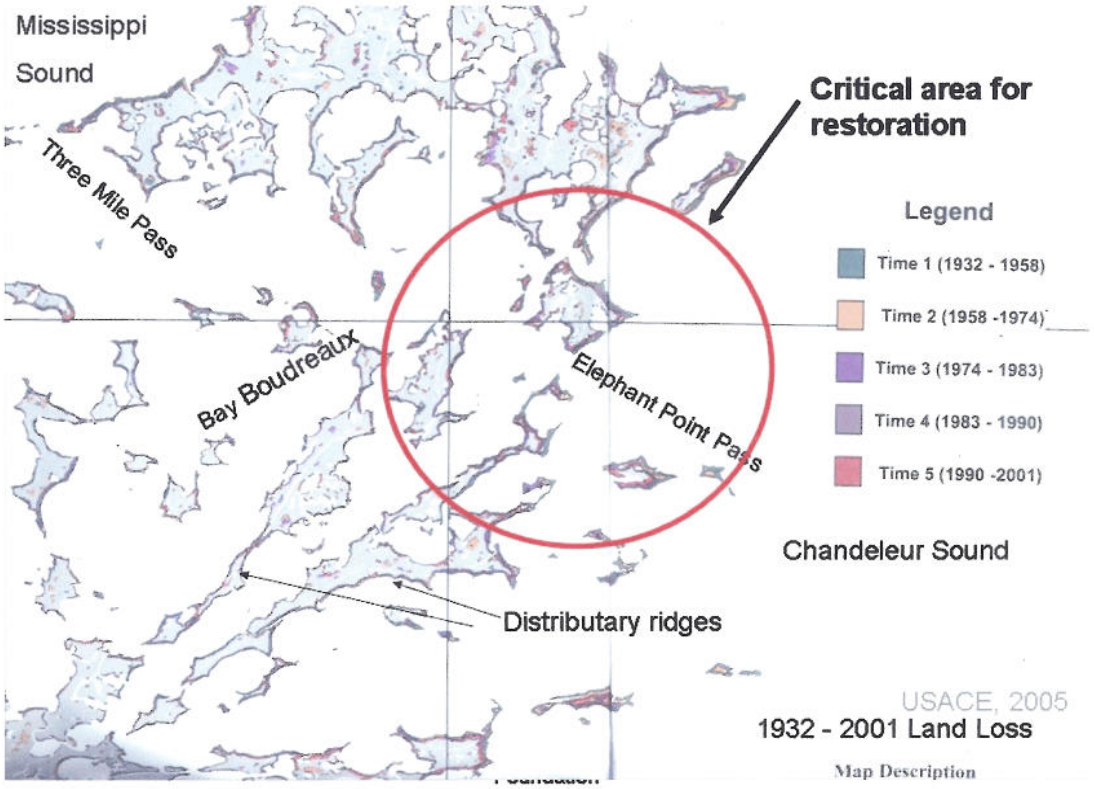

Figure 3: Land loss map of the Biloxi Marsh area. Circle indicates area where cumulative loss is threatening to open passes between Bay Boudreaux and Chandeleur Sound