



Louisiana Coastal Area Small Diversion at Convent / Blind River - Feasibility Study

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LCA WRDA 2007 TITLE VII PROJECTS



STUDY AUTHORITY

Title VII of the Water Resources Development Act 2007: (Public Law 110-114, 121 STAT. 1270) authorizes the Louisiana Coastal Area (LCA) program. The *Louisiana Coastal Area, Louisiana Ecosystem Restoration Study* was recommended to Congress by a Chief of Engineers report dated January 31, 2005, which called for a coordinated, feasible solution to the identified critical water resource problems and opportunities in coastal Louisiana.

The goal of the LCA Plan is to reverse the current trend of degradation of the coastal ecosystem using restoration strategies that: reintroduce historical flows of river water, nutrients, and sediment to coastal wetlands; restore coastal hydrology to minimize saltwater intrusion; and maintain the structural integrity of the coastal ecosystem. The Small Diversion at Convent/Blind River project was identified in the LCA 2005 report as a critical near term restoration project.

SIGNIFICANCE TO LOUISIANA

The Maurepas Swamp is one of the largest remaining tracts of coastal freshwater swamps in Louisiana. The Blind River flows from St. James Parish, through Ascension Parish and St. John the Baptist Parish, and then discharges into Lake Maurepas.

The Maurepas Swamp serves as a buffer between the open water areas of Lakes Maurepas and Pontchartrain and developed areas along the Interstate 10 (I-10)/Airline Highway corridor. Land use along the I-10/Airline Highway corridor in this area includes residential, commercial, and industrial developments. The Maurepas Swamp is used for fishing, hunting, and other recreational activities and has considerable cultural significance since it is the largest contiguous tract of bald cypress-tupelo swamp near the New Orleans metropolitan area.

PROBLEM

The Mississippi River levee system has cut off the Maurepas Swamp from the natural periodic flooding by the Mississippi River and past construction of logging trails, drainage channels, pipelines and roads through the swamp has disrupted the natural flow and drainage patterns, impacting the biological productivity of the swamp.

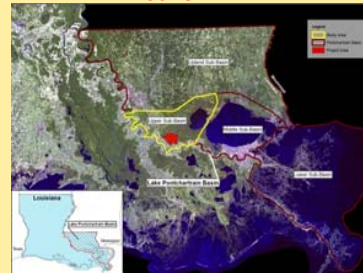
PURPOSE

This study investigated alternatives to reverse the current decline of the Maurepas Swamp and to prevent the transition of the freshwater swamp into freshwater marsh and subsequently open water. Reversing this decline will aid development of a more sustainable wetland ecosystem that will serve to protect the local environment, economy and culture.

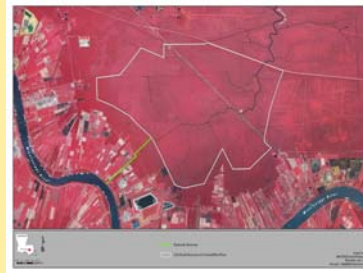
STUDY OBJECTIVES

- Promote water distribution in the swamp.
- Facilitate swamp building at a rate greater than swamp loss due to subsidence and sea level rise.
- Establish water fluctuation in the swamp.
- Improve bald cypress and tupelo productivity, seedling germination, and survival.
- Improve fish and wildlife habitat in the swamp and Blind River.

PROJECT AREA



RECOMMENDED PLAN



WITHOUT ACTION

Without action, the freshwater swamp habitat would:

- Continue to degrade;
- Continue to experience hydro periods in the swamp that are not conducive to the health and regeneration of several native tree species, including baldcypress and water tupelo, and;
- Continue to experience limited vertical accretion occurring from sediment input.



SOLUTION

The Recommended Plan proposes to construct a freshwater diversion in the vicinity of Romeville, Louisiana. This project would construct a 3,000 cfs gated culvert diversion structure on the Mississippi River and a transmission canal into the swamp. It will restore and improve the existing swamp drainage system, install control structures at strategic locations in the swamp, and add new culverts under U.S. HWY 61. This proposed design would bring freshwater, sediment, and nutrients to the Maurepas Swamp at strategic times during the year to maximize benefits and to reverse the current trend of deterioration.

- Restore the Maurepas Swamp which is one of the largest remaining tracts of coastal freshwater swamps in Louisiana.
- Improve and protect 21,369 acres of cypress swamp habitat.
- Promote the germination and survival of the seedlings of bald cypress trees.
- Increase biological productivity and accretion.
- Improve habitat for many fish and wildlife species including migratory birds, bald eagles, American Alligator, Gulf Sturgeon, and the West Indian Manatee.
- Protect culturally important habitat used for hunting, fishing, and recreational activities.

