

**R1 –PO 12 Conkey Cove Marsh Creation and
Shoreline Protection Project**

RE-1 PO12 NMFS
Map file

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PPL17 PROJECT NOMINEE FACT SHEET
January 11, 2006

Project Name:

Conkey Cove Marsh Creation and Shoreline Protection

Coast 2050 Strategy:

Coastwide Common Strategies:

- Dedicated dredging, to create, restore, or protect wetlands
- Maintenance of gulf, bay and lake shoreline integrity
- Maintain, protect, or restore ridge functions

Regional Ecosystem Strategies:

- 12. Shoreline protection of Biloxi marshes

Project Location:

Region 1, Pontchartrain Basin, St. Bernard Parish, outer edge of Biloxi marsh located between Bay Boudreaux and Chandeleur Sound

Problem:

Due to the historical and continuing wetland loss, the integrity of the outer Biloxi marsh is under threat of substantial deleterious change. The 1983 to 1990 loss rates for the Biloxi marsh is 0.31%/yr. The 2000 to 2005 loss rate likely is much higher, but completion of that analysis is pending at this time. Historic and recent land change analyses show shoreline erosion and synoptic interior wetland loss to be primary short term causes of wetland loss. Opening of passes into Chandeleur Sound threatens the ridge and bay system of the Biloxi marshes and allows increasing volumes of tidal and storm surge water to pass through the estuary. Increasing the openings from sounds to bays will fundamentally alter the regional landscape and threaten the collapse of the 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 (Figure 1).

Goals :

- Stabilize a key landform – an old distributary ridge separating Bay Boudreaux from Chandeleur Sound – by creating and protecting marsh
- Implement a CWPPRA scale first step to restore the Biloxi marsh
- Aid in maintaining a first line of defense of protection from shoreline erosion and storm surge reduction
- Place substrate (cultch) for oyster reef establishment

Proposed Solutions:

Approximately 180 acres of marsh would be created/restored to re-establish the structure and function of Conkey Cove. Sediment would be mined from Chandeleur Sound for the marsh creation. A 4,700-ft shoreline protection structure would be constructed to protect the sound side of the cove and restore the alignment of Live Oak Bayou and Ridge. The structure would be a combination of a riprap revetment or dike with a relatively large crushed limestone apron. The purpose of the crushed limestone apron is to serve as cultch for establishment of oyster reefs for additional shoreline protection in conjunction of the revetment. Based on discussions with the

Louisiana Department of Wildlife and Fisheries the general area near Three Mile Pass has been producing well in recent years including after the hurricanes.

Preliminary Project Benefits:

1) Approximately 1,200 acres of marsh and open water cove would be benefited both directly and indirectly by the project. 2) The project would create/protect a net of approximately 169 acres over the 20-year project life (based on 83-90 data). 3) There is an expected 50-74% expected loss reduction. 4) The project would create and maintain a bay rim and bayou ridge. 5) The project is not expected to have an effect on critical and non-critical infrastructure. 6) Although there are no constructed projects in the area, this project would be the first to build upon with future synergistic opportunities under CWPPRA, or planned LaCPR and CPRA projects identified for the Biloxi marsh.

Identification of Potential Issues:

The proposed project has the following potential issues: oysters

Preliminary Construction Costs:

The estimated construction cost is \$16.1M including 25% contingency.

Preparer(s) of Fact Sheet:

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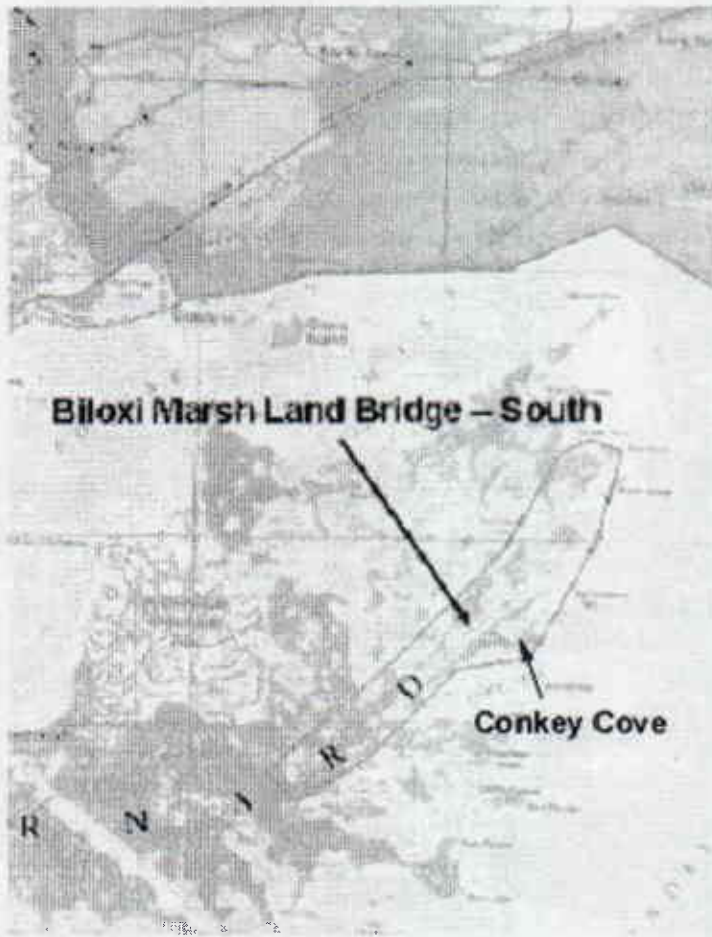
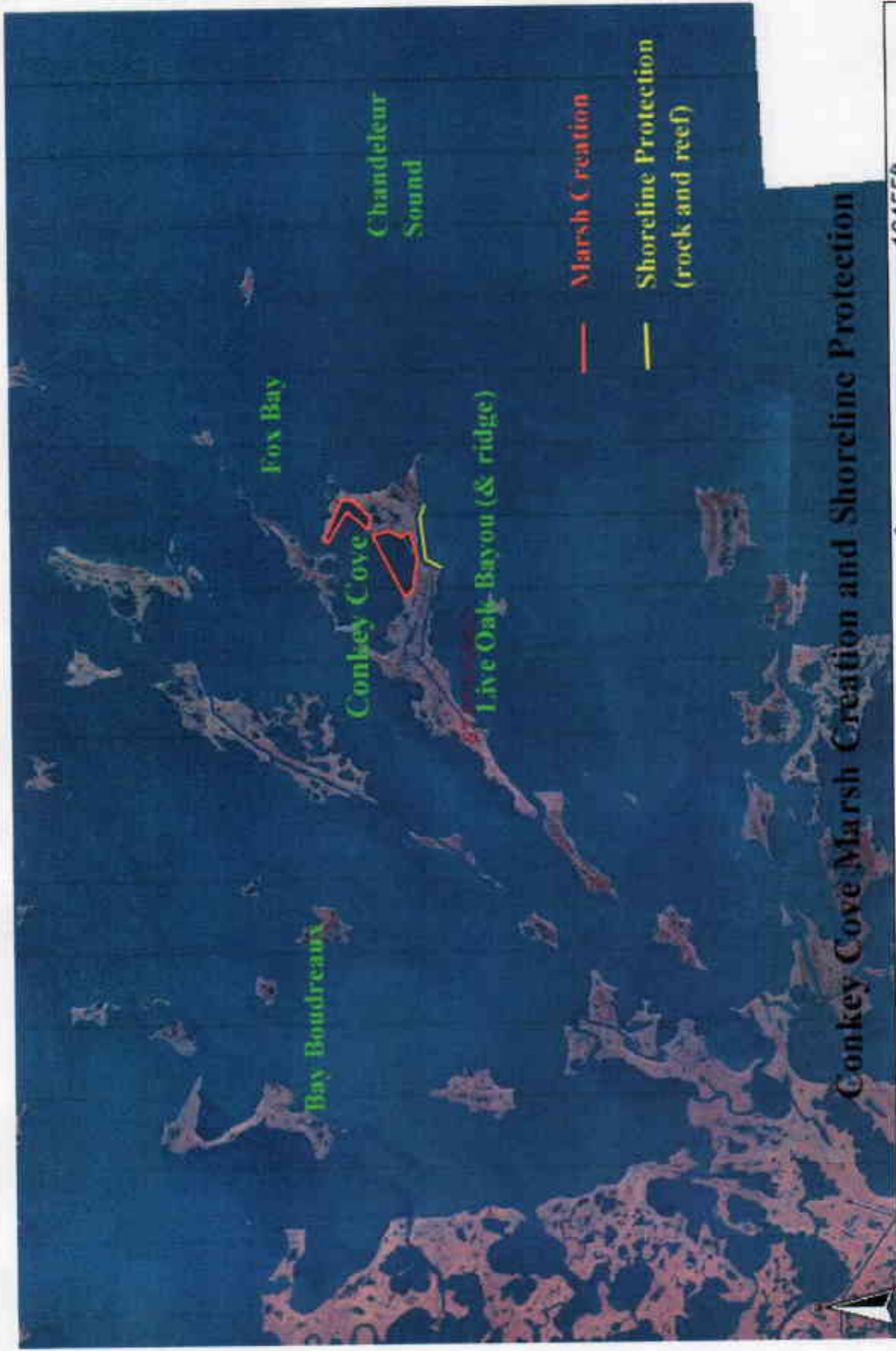


Figure 1. Outer Biloxi marsh landbridge and first line of defense.



Fox Bay

Chandeleur Sound

Bay Boudreaux

Conkey Cove

Live Oak Bayou (& ridge)

Marsh Creation

Shoreline Protection (rock and reef)

Conkey Cove Marsh Creation and Shoreline Protection

0 16455ft

