Project Status
Approved Date: 2004  Project Area: N/A
Approved Funds: $0.70 M  Total Est. Cost: $0.70 M
Net Benefit After 20 Years: N/A
Status: Constructed

Project Type: Demonstration: Shoreline Protection
PPL #: 13

Location
The project is located along the southern shoreline of White Lake, from Will’s Point to the western shore of Bear Lake, north of Pecan Island in Vermilion Parish, Louisiana.

Problems
Poor soil conditions in coastal Louisiana limit the cost effectiveness of shoreline protection dikes because of higher consolidation and settlement rates. This results in frequent and expensive project maintenance.

Restoration Strategy
The goal of this project is to investigate foundation improvement methods to reduce rock dike settlement. Shoreline protection in some areas is currently challenged in terms of cost effectiveness over a 20-year project life cycle because of poor soil conditions. The objective is to determine if a sand base can improve rock dike-bearing capacity and consolidation settlement design tolerance.

The demonstration project consists of over 5,400 linear feet of dike and will include two replicates of the test design. The test design will include two different foundation improvement treatments and a control. Each replicate will include three 900-linear-foot sample sections as follows: a control section consisting of unimproved dike; an improved section consisting of a sand foundation that would displace soft near-surface material; and an improved section consisting of a sand foundation with soft near-surface material removed via dredging. Each sample section is instrumented with four sets each of crown, front, and rear settlement plates, inclinometers, and extensometers at approximately 180-foot intervals, which will be monitored, recorded, and analyzed to determine the effects of the foundation improvements. Geotechnical borings were taken at each of the six sample sections during construction to more accurately determine underlying soil conditions.

Progress to Date
The Louisiana Coastal Wetlands Conservation and Restoration Task Force approved funding for this demonstration project at the January 2004 meeting and gave their approval to begin construction at their October 2004 meeting. Construction was completed on August 30, 2006.

For more project information, please contact:

Federal Sponsor:
U.S. Army Corps of Engineers
New Orleans, LA
(504) 862-1597

Local Sponsor:
Coastal Protection and Restoration Authority
Baton Rouge, LA
(225) 342-4736