Vegetative Plantings, Timbalier Island Demonstration (TE-18)

Project Status
Approved Date: 1991  Project Area: N/A
Approved Funds: $0.30 M  Total Est. Cost: $0.30 M
Net Benefit After 20 Years: N/A
Status: Completed July 1996
Project Type: Demonstration: Barrier Island Restoration and Vegetative Planting
PPL #: 1

Location
The project features are built in sections in various locations along Timbalier Island, which is located about 36 miles southeast from Cocodrie in Terrebonne Parish, Louisiana. Timbalier Island is bordered by Little Pass Timbalier to the east, Caillou Pass to the north, Cat Island Pass to the west, and the Gulf of Mexico to the south.

Problems
Timbalier Island has decreased in size by roughly 60% over the last century, and between 1978 and 1988, the island's width also decreased by 50%. In addition, its highest dunes are less than seven feet above sea level, making the island susceptible to wave erosion, storm overwash and breaching.

Restoration Strategy
Sand dune fencing segments totaling approximately 7,390 linear feet was constructed to trap sand and increase elevation on several bare-beach or overwash sites. A total of 18,900 marshhay cordgrass (*Spartina patens*) and Atlantic panicgrass (*Panicum amarum* var. *amarulum*) plants were planted the following year on the created dunes in selected segments.

The project's goals are to help maintain the integrity of the barrier island through use of the sand fencing and vegetation to help prevent loss of elevation, breaching of the island and erosion from wave action, especially during tropical storms and hurricanes.

Progress to Date
Dune height increased at an average rate of 0.9 feet/year during the first 2 years after construction. However, since 1995, the project has been impacted by numerous storm events. By 1999, the westernmost site was the only segment to remain undamaged.

Preliminary monitoring indicated good initial survival of both Atlantic panicgrass and marshhay cordgrass plantings. Although information from the three-year monitoring period showed reduced survival on the gulfside plots of the remaining dune segment, coverage increased as other species naturally colonized the site.

The final monitoring period ended in the fall of 2001. This project is on Priority Project List 1.