rev. August 2013
Cost figures as of: February 2023

Enhancement of Barrier Island Vegetation Demonstration (TE-53)

Project Status

Approved Date: 2006 **Project Area:** N/A
Approved Funds: $0.59 M **Total Est. Cost:** $0.59 M
Net Benefit After 20 Years: N/A
Status: Completed
Project Type: Demonstration: Barrier Island Vegetative Enhancement
PPL #: 16

Location

This project involved greenhouse studies and the testing of technologies at two previously planted CWPPRA project sites. The CWPPRA projects involved were New Cut Dune and Marsh Restoration (TE-37) and Whiskey Island Back Barrier Marsh Creation (TE-50). Both sites are located in Terrebonne Parish in the Isles Dernieres Barrier Island area.

Whiskey Island Back Barrier Marsh Creation (TE-50) vegetative plantings test site.

Problems

Barrier Islands provide critical habitat and are the first line of defense to not only day-to-day coastal erosion but also to the destructive forces of major storm events. There remains a critical need to develop cost-effective improvements to existing restoration methodologies that will enhance the successful establishment and spread of vegetation in these important restoration projects. Developing methodologies to enhance vegetation establishment and growth in barrier island restoration projects is important in this very stressful environment because healthy vegetative cover traps, binds, and stabilizes sand and sediment, thereby improving island integrity during storm and overwash events.

Restoration Strategy

The purpose of this demonstration project was to test several technologies and/or products to enhance the cost-effective establishment and growth of key barrier island and salt marsh vegetation. Humic acid and broadcast fertilization regimes were applied. The humic acid amendment and broadcast fertilization regime techniques are intended to "jump start" and facilitate the rapid establishment and expansion of vegetation. Humic acid benefits were demonstrated in both intertidal and supratidal plantings, whereas broadcast fertilization benefits were only demonstrated in supratidal plantings.

Each product (humic acid and fertilizer) is commercially available and off-the-shelf. Enhancing the establishment of woody vegetation (black mangrove and groundsel bush) was achieved via high-density dispersal techniques of propagules and seeds, a cost-saving alternative to planting container-grown transplants. All treatment test sections and reference planting areas were visually inspected and sampled quarterly (plant and soil variables) and compared to the reference area in order to develop recommendations for future planting projects.

Progress to Date

The project has been completed.

This project is on Priority Project List 16.

For more project information, please contact:

Federal Sponsor:
U.S. Environmental Protection Agency
Dallas, TX
(214) 665-6608

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