

Don Pedro Island State Park Enhancement of Tidal Habitats and Hydrology

Placida, FL



Introduction

Don Pedro Island State Park straddles Lemon Bay, encompassing a 230-acre portion of Gulf barrier island on one side and a 100-acre land base providing access for hiking, paddle sports, concessions, and ferry services on the other. Prior to state acquisition of the land comprising the Park, material dredged from a canal neighboring

the Park was placed along its southern boundary. The resulting 12-foot tall spoil berm restricted natural tidal flows and wildlife access to the area's saltmarsh and mangrove habitats. The spoil berm became colonized by invasive exotic plants, such as Brazilian pepper, and the neighboring saltmarsh, pine flatwoods and coastal hammock habitats were invaded by exotic punk trees, Australian pine, Brazilian pepper, and cogon grass. The Florida Fish and Wildlife Conservation Commission (FWC), the Florida Department of Environmental Protection (FDEP) and the U.S. Fish and Wildlife Service-Coastal Program (USFWS) worked together to remove the spoiled berm and invasive exotic plants, restore marsh elevations, reconnect the marsh to the adjacent Lemon Bay Aquatic Preserve and replant the restored marsh with smooth cordgrass and mangroves beginning in 2016. This restoration effort was completed in September 2018.

Objectives

- Enhance 20 acres of fish and shellfish nursery habitat and wading bird foraging area
- Control exotic invasive plants
- Reconnect historically productive coastal marsh to the adjacent estuary
- Restore fish and wildlife habitats in 70 acres of coastal natural area
- Engage volunteers in hands-on learning and marsh planting events

Approach

Restoration of 20 acres of wetlands was achieved through hydrological reconnection and by removing 8,477 cubic yards (over 400 large dump trucks-worth) of dredge spoil along the 994-foot canal bank. The 2.79-acre area where spoil material was removed was replanted with native species found in the adjacent saltmarsh and mangrove habitats. In all, volunteers and nursery professionals planted 21,643 native coastal marsh plants, which create wildlife habitat and aid in stabilizing the marsh sediments. Further restoration of 70-acres of marsh, pine flatwoods, and coastal hammock was achieved by eradicating all exotic plant species on the adjacent marsh and associated uplands and preparing the property for a future



Volunteers planting saltmarsh grasses.



Aerial view before restoration.



Aerial view after restoration.

prescribed fire application by the Florida Park Service. The \$128,061 project was funded by the FWC's Marine and Estuarine subsection, FDEP and a grant from the USFWS.

Benefits

This project increased tidal exchange between the saltmarsh and the waters of Lemon Bay, both a state Aquatic Preserve and an Outstanding Florida Water. The restored tidal connection and enhanced habitats provide nursery and foraging areas for a variety of wildlife species, including: juvenile fish, wading birds, shorebirds, manatees, and shellfish, all which support the local economy and ecology of this coastal region. The enhanced saltmarsh habitat also benefits the golden leather fern, a rare saltmarsh plant listed as Threatened within Florida. This project within the State Park was part of a larger effort to restore the previously disturbed area to its natural condition and ecological function and remove all exotic invasive plants within all areas of Don Pedro Island State Park.

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