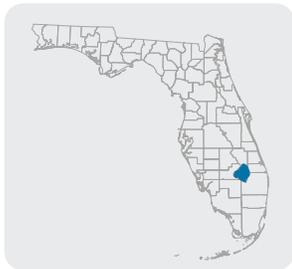


Lake Okeechobee Spoil Island Enhancement

Lake Okeechobee, FL



Introduction

Spanning 468,000 acres, Lake Okeechobee is one of the largest freshwater lakes in the continental United States. In the past several decades, changes in hydrology and increased nutrient input have caused increased buildup of organic sediment, or muck, degrading habitat within the lake. In the late 1990's, during a period of high

water, a seven-mile long muck berm began to form on the edge of the lake's northwest marsh and started to restrict water flow to the interior marsh. In 2001, during a drought, the Florida Fish and Wildlife Conservation Commission (FWC) hired contractors to use heavy equipment to remove this berm and created six in-lake islands, between 2.3 and 5.5 acres in size. Creating in-lake islands instead of removing the material from the lake results in tremendous cost savings. To transform these new spoil islands into suitable wildlife habitat, the FWC has begun implementing a project to establish native plants on them.

Objectives

- Plant and establish native plants on each island to prevent erosion and provide habitat
- Prevent invasive plant species from becoming established on the islands
- Increase biodiversity and improve nesting and foraging opportunities for wildlife

Approach

Between 2001 and 2011, FWC staff planted native trees and shrubs to determine which species would survive best on the islands at each elevation. The islands are a harsh environment for



Contractors planting on one of the islands.



Tin House —First Plantings, 2012



Tin House—November, 2016

plants with a variety of soil types and rapidly changing water levels near the edges. On each island, plants range from wetland to scrub species. Staff and contractors also removed invasive plant species found on the islands to improve survivability of native plants. Between 2012 and 2020, staff from the FWC's Aquatic Habitat Conservation and Restoration Section mainly used contractors to initiate large scale plantings on the islands. As of May 2020, over 11,200 trees, shrubs and ferns within 56 native species have been planted on five islands. FWC staff plan to keep working on this project until plantings on all islands are completed.

Benefits

Plantings have prevented erosion of the spoil islands and have resulted in vertical structure that provides nesting and foraging opportunities for various wildlife, such as birds, alligators, rabbits, raccoons, bobcats, deer, snakes, amphibians and turtles. This mosaic of naturally fragmented forest patches within the Lake Okeechobee marsh has produced a landscape that supports both forest and marsh birds. A short-term banding project captured and banded thirty-five bird species and documented another thirty-four species over two years on one island alone. Multiple birds, including migratory species such as Eastern phoebe and Northern waterthrush, have been recaptured more than one year after initial banding, suggesting the island contains desirable habitat conditions for many bird species.



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