



quick facts on...

Lake Trafford Restoration

...a Critical Ecosystem Restoration Project

August 2006

*The **South Florida Water Management District** is a regional, governmental agency that oversees the water resources in the southern half of the state. It is the oldest and largest of the state's five water management districts.*

Our mission is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems and water supply.

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BACKGROUND

Lake Trafford is a shallow, 1600-acre lake that is the headwaters of the Corkscrew Swamp-Imperial and Cocohatchee River watersheds and the Camp Keais Strand-Panther Preserve watershed that drains to the 10,000 Islands. Lake Trafford is the largest lake south of Lake Okeechobee in South Florida. It is an important ecotourism resource for recreational boating and fishing.

ISSUE

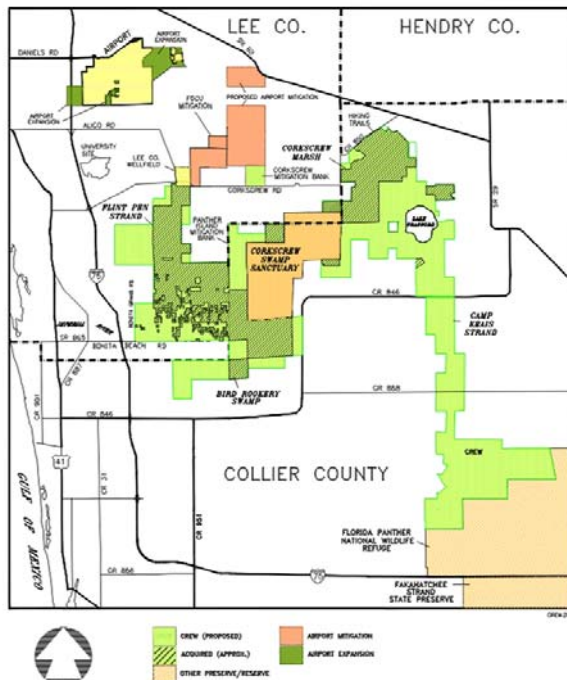
At one time the lake was sand bottomed. However, nutrient runoff from agriculture and urban development in the watershed resulted in a shift from native aquatic vegetation to dense mats of exotic *hydrilla*. The *hydrilla* was controlled using herbicides. Dead plant material accumulated on the bottom of the lake, releasing nutrients, triggering algae blooms and degrading prime spawning habitat for native fish species. Reduced dissolved oxygen levels have resulted in periodic fish kills. To improve the health of the lake, the muck must be removed.

OBJECTIVES

- The Lake Trafford Restoration Project:
- Has removed approximately 6 feet of muck from the lake bottom
 - Has deposited sediment in a spoil area approximately 1 mile north of the lake
 - Has returned water to the lake through a series of wetland treatment areas, removing excess nutrients and suspended solids
 - Will restore the littoral zone by removing +/- 2 feet of muck from the lake edge
 - Restore native fisheries and the lake ecosystem to its condition prior to urban and agricultural development in the watershed
 - Develop a Watershed Protection Plan to reduce future nutrient inputs

PROJECT PARTNERS

The Lake Trafford Environmental Restoration is an excellent example of the unity of local citizens, public agencies and private organizations to restore a precious resource. Restoration of Lake Trafford was initiated by the Immokalee Chamber of Commerce. A Lake Trafford Task Force was later jointly sponsored by the Big Cypress Basin (BCB) of the South Florida Water Management District and Collier County, with support from the Florida Department of Environmental Protection, the Florida Fish and Wildlife Conservation Commission and the US Army Corps of Engineers. Environmental interest organizations, such as the Audubon Society and the Conservancy of Southwest Florida, have supported the project. The Task Force and the Friends of Lake Trafford (a grassroots group) mobilized the users of the lake to support development of a lake restoration plan.



PROJECT PHASES:

The project was divided into two phases:

PHASE I - ~3,500,000 yds³ of muck – the central portion of the lake (completed)

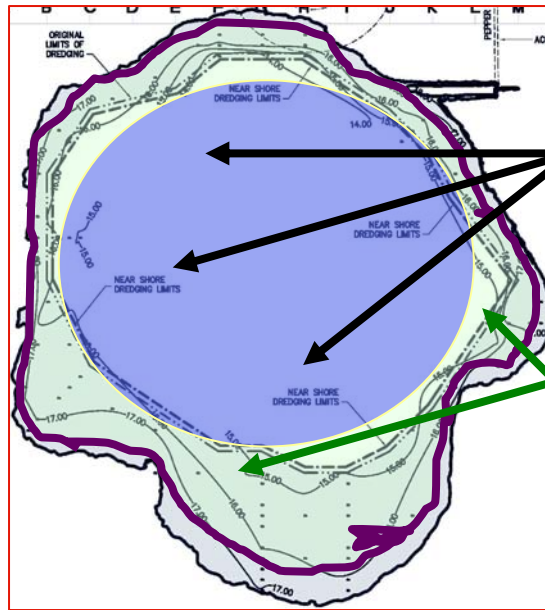
PHASE II – ~1,000,000 yds³ of muck – the littoral zone around the edge of the lake

PROJECT COST:

PHASE I – \$10,300,000
Completed Spring 2006

PHASE II – \$5,100,000
To Begin Fall 2006

TOTAL - \$15,400,000



**Phase I
Lake Dredging**

**Phase II
Littoral/Shoreline
Dredging**



FUTURE PLANS

The Restoration of Lake Trafford will not end with the littoral zone dredging. Other plans to maintain the health of the Lake include:

- Reestablishing native submerged aquatic vegetation, such as *Vallisneria*, through littoral plantings
- Developing a site demonstration using equipment to enhance lake circulation, promote muck reduction and support lake sustainability
- Monitoring the longterm health of the lake through water quality parameters (especially dissolved oxygen), environmental parameters and the recovery of native fish assemblages
- Promoting additional studies to develop best management practices to control nutrient runoff and the resultant establishment of invasive aquatic vegetation



Big Cypress Basin
6089 Janes Lane
Naples, FL 34109
239-597-1505