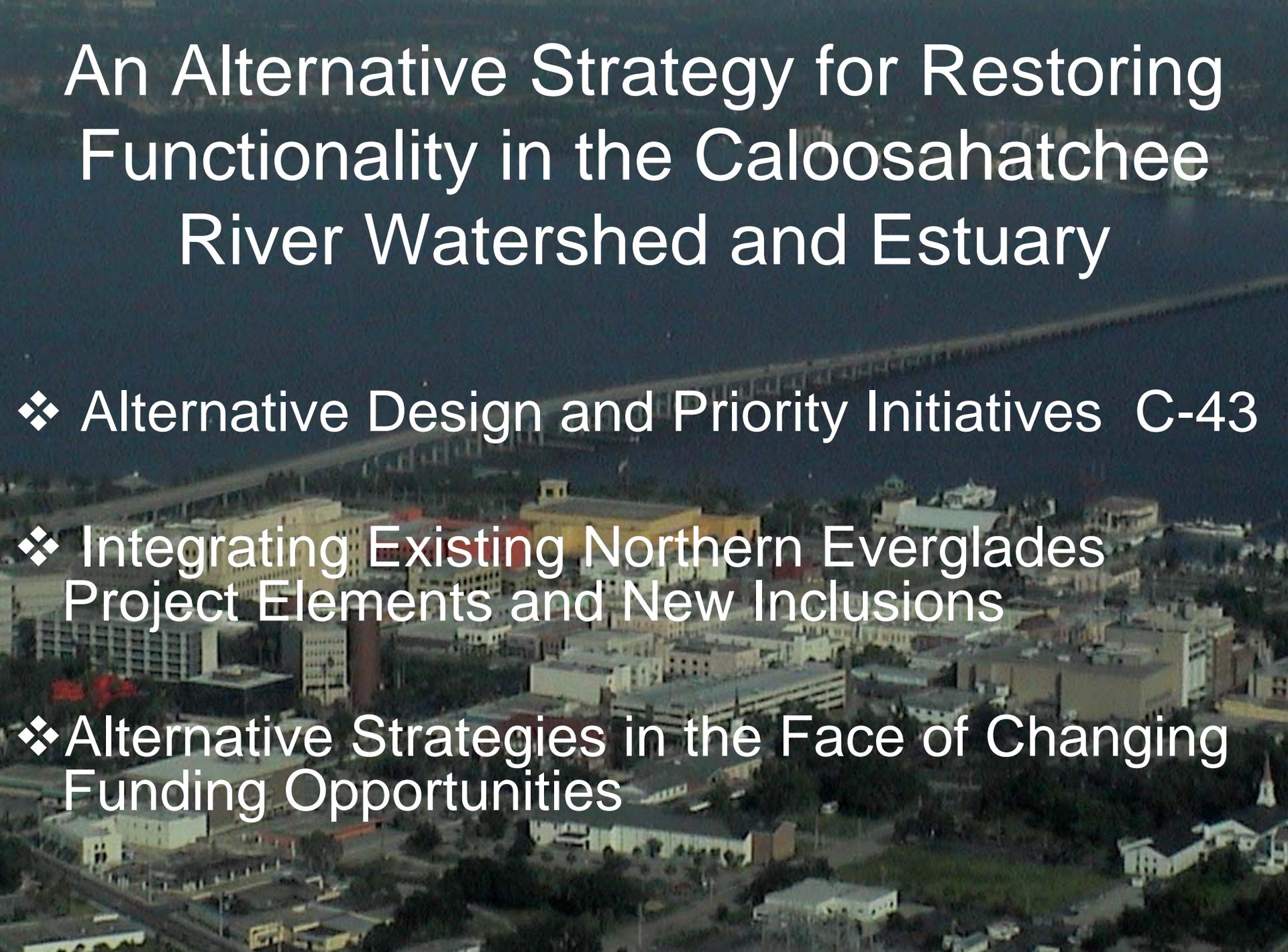
An aerial photograph of a river estuary. The water is dark and calm, with a small white boat on the left side. The banks are lush with green trees and vegetation. In the upper part of the image, there are several buildings, including a large yellow one, and a parking lot. The overall scene is a mix of natural and developed areas.

An Alternative Strategy for Restoring Functionality in the Caloosahatchee River Watershed and Estuary

October 2, 2008 SFWMD WRAC Presentation by
Bill Hammond, Ph.D.
Greg F. Rawl, P.G.

An aerial photograph of a city, likely Gainesville, Florida, showing a large river (the Caloosahatchee River) and a long bridge crossing it. The city buildings are visible in the foreground and middle ground, with greenery interspersed. The text is overlaid on the top half of the image.

An Alternative Strategy for Restoring Functionality in the Caloosahatchee River Watershed and Estuary

- ❖ Alternative Design and Priority Initiatives C-43
- ❖ Integrating Existing Northern Everglades Project Elements and New Inclusions
- ❖ Alternative Strategies in the Face of Changing Funding Opportunities

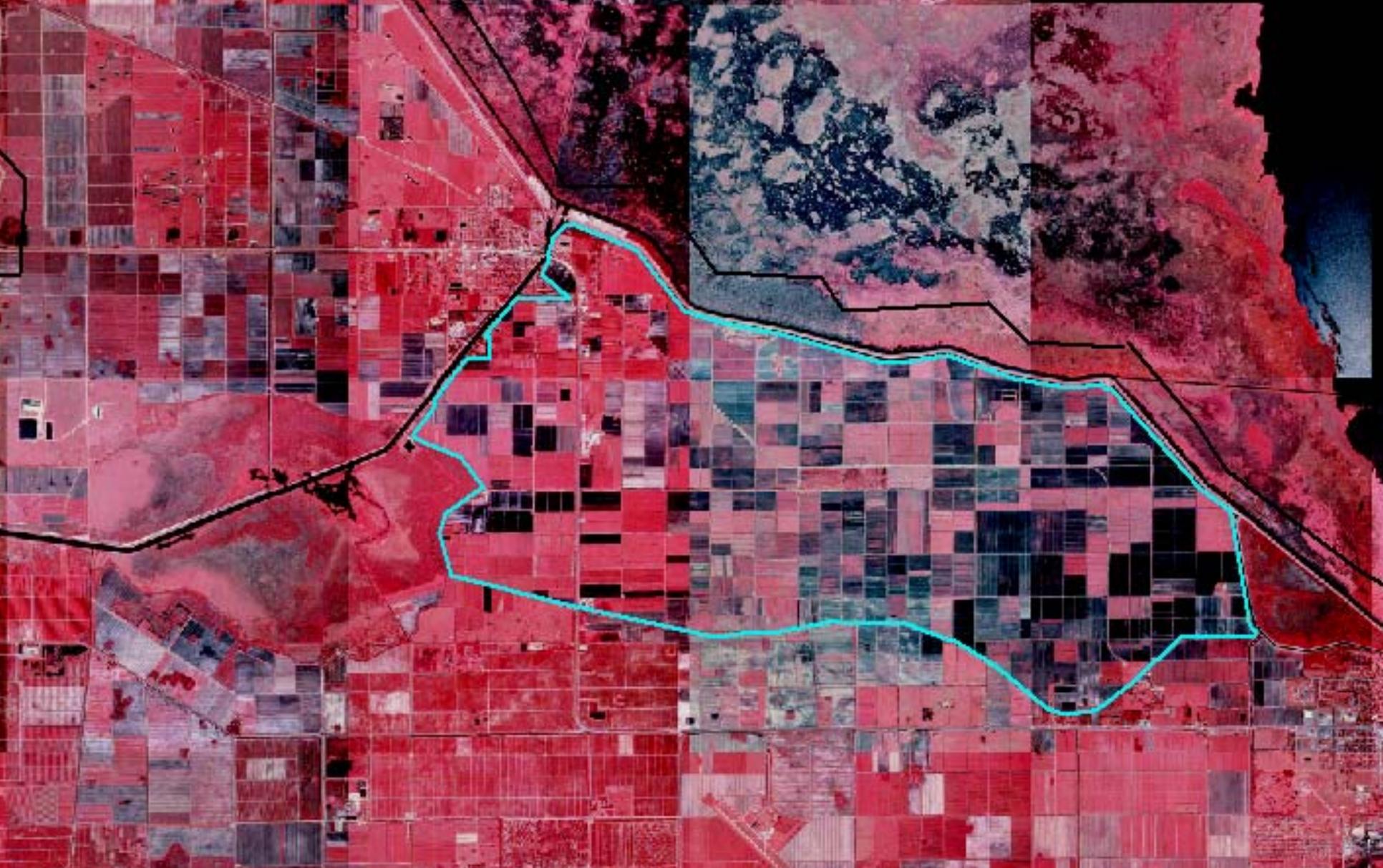


Key Goals for Caloosahatchee Improvements

1. Create Additional Storage for Attenuation of Lake “O” Discharges
2. Improve Water Quality Flowing to the Estuaries
3. Implement Elements that are Cost Effective and Low in Operations and Management Costs
4. Design Elements Should Mimic Natural Systems
5. Design Blends Constructed Central Elements and Distributed Elements for Storage and Water Quality
6. Designs Should Increase Economic and Recreational Opportunities and Benefits
7. Reduce the Size of Construction, Operations and Management Costs to Increase Feasibility of Implementation in times of Financial Stress

Key Elements of Alternative Concept Plan

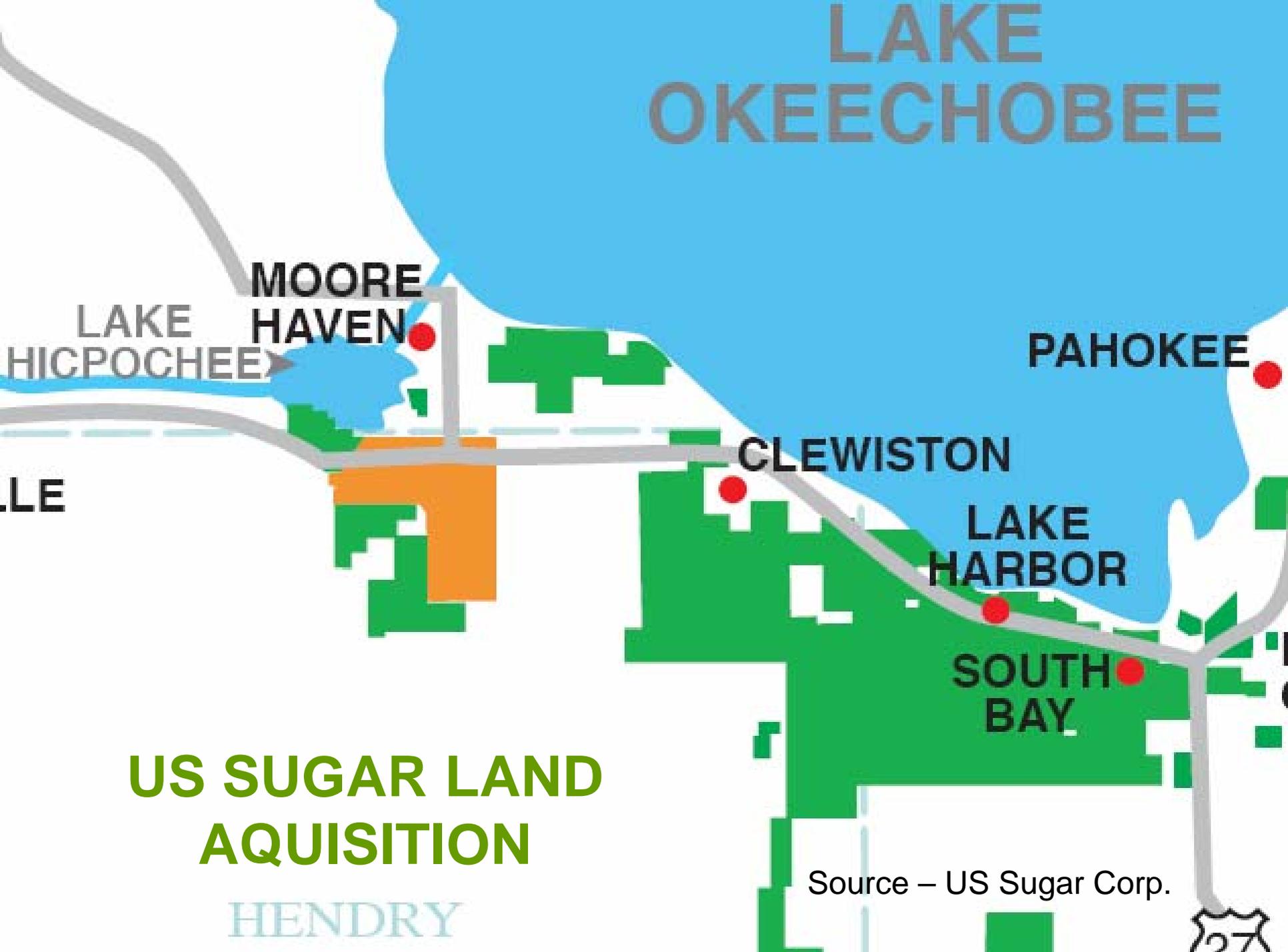
- Creation of an STA on the Disston Island Property Adjacent to Lake Okeechobee
- The STA can be gravity supplied and has the potential for significantly reducing suspended solids from Lake “O” water before they travel down the Caloosahatchee River
- Potential acquisition as an component of the U.S. Sugar acquisition concept plan along with potential SFWMD land swapping option



DISSTON ISLAND CONSERVANCY DISTRICT

Total Area – 18,407 ac.

Irrigated Area – 16,422 ac.



LAKE
OKEECHOBEE

LAKE
HICPOCHEE

MOORE
HAVEN

PAHOKEE

CLEWISTON

LAKE
HARBOR

SOUTH
BAY

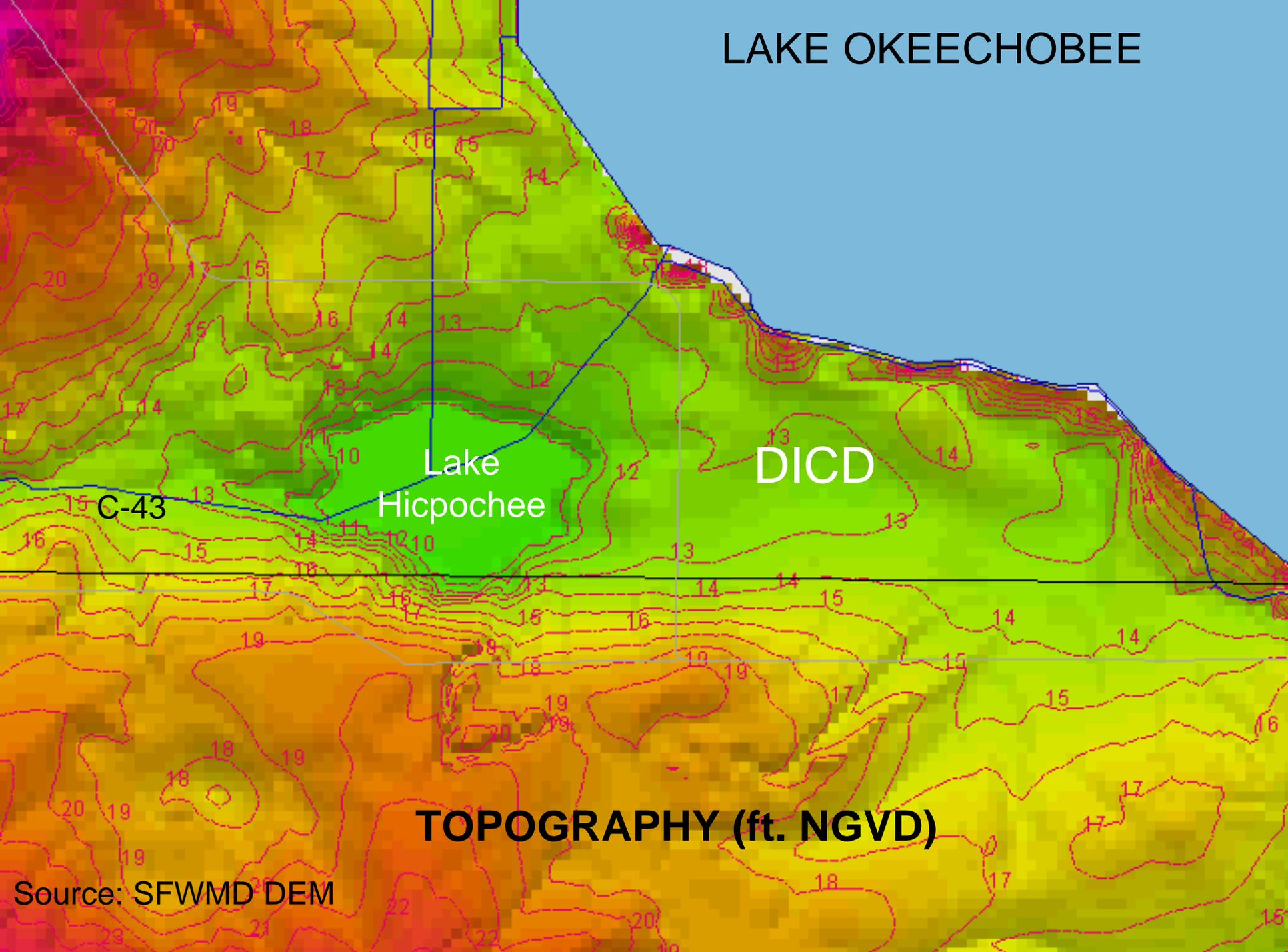
US SUGAR LAND
AQUISITION

HENDRY

Source - US Sugar Corp.



LAKE OKEECHOBEE



Lake Hicpochee

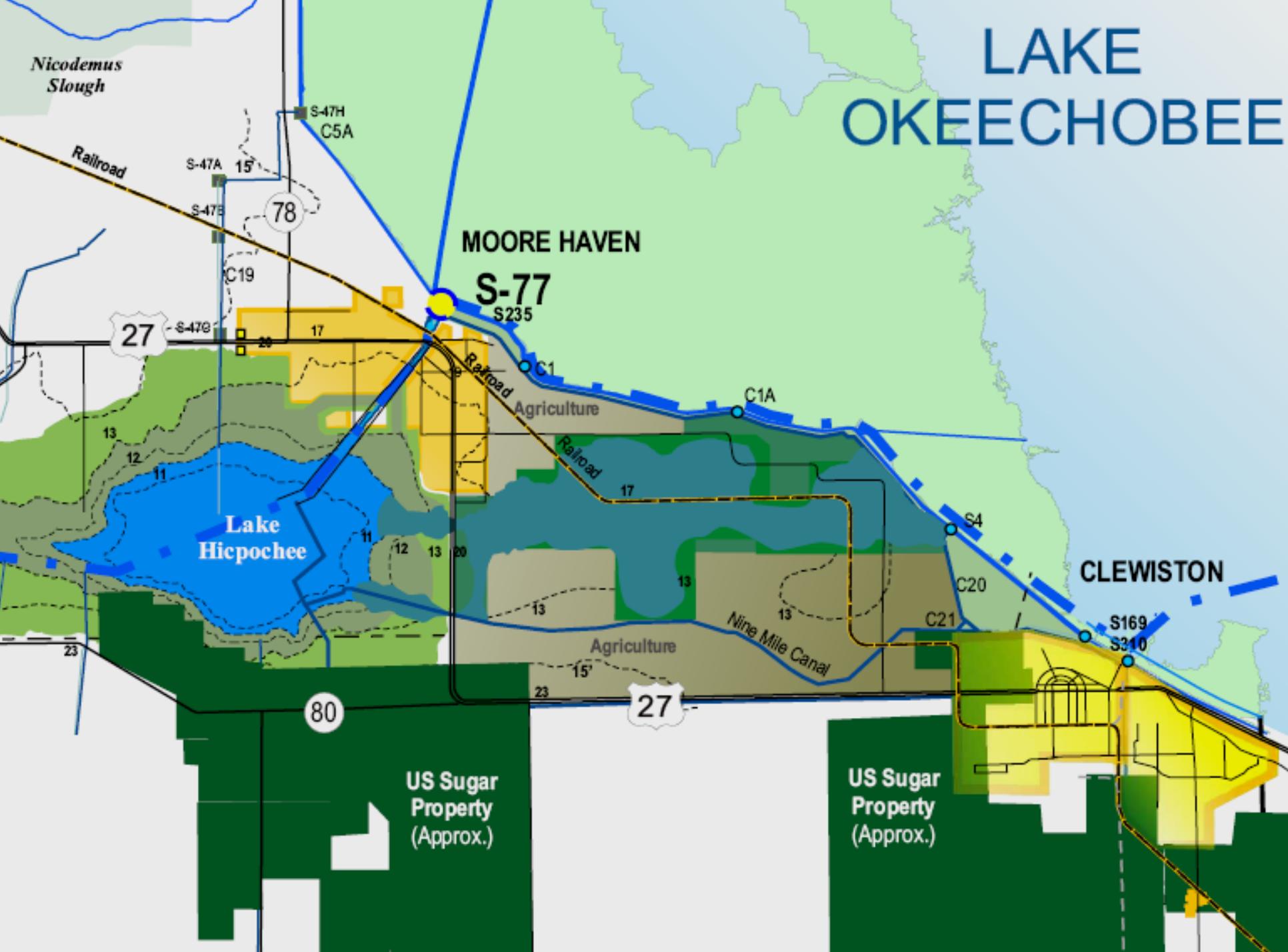
DICD

C-43

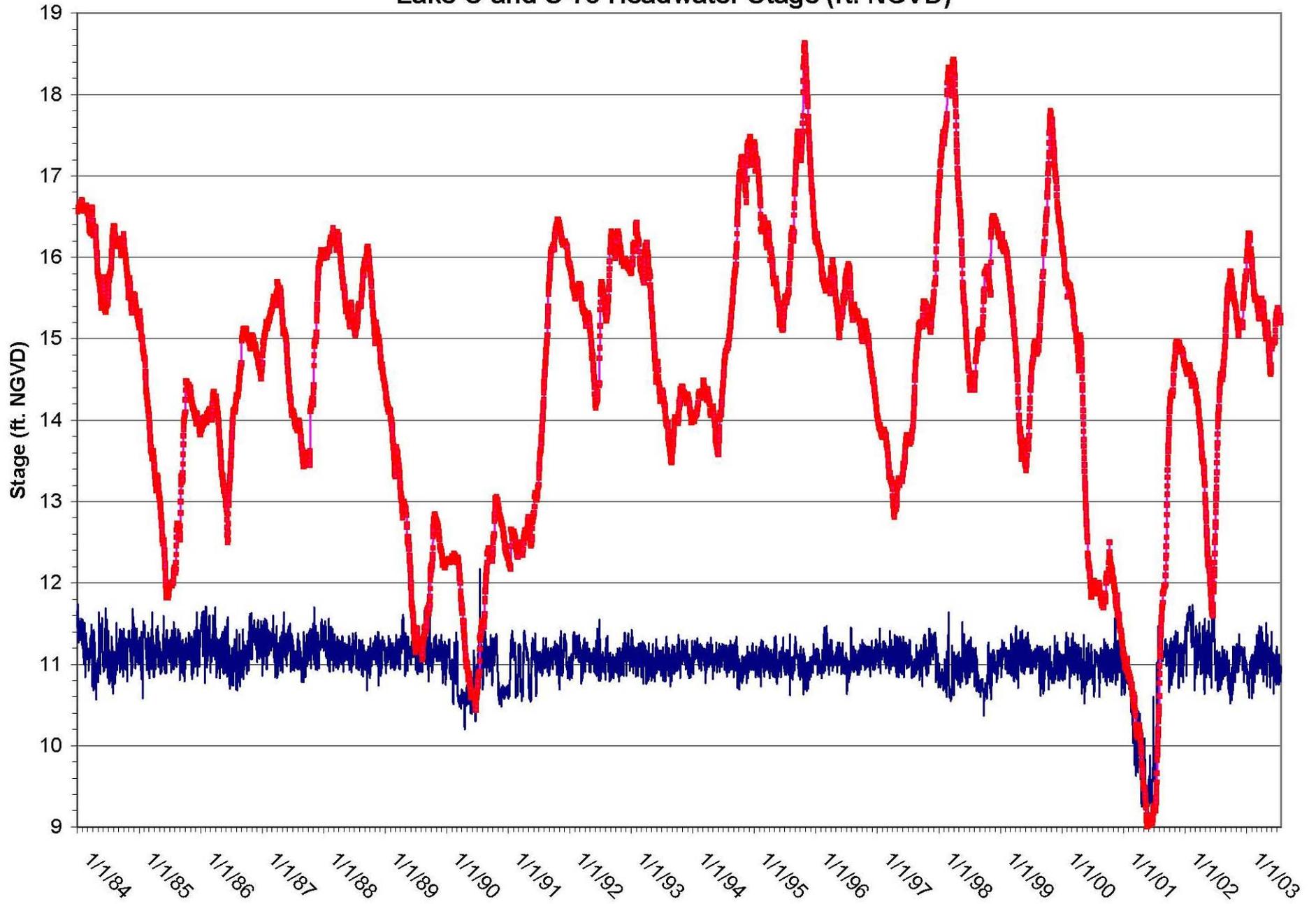
TOPOGRAPHY (ft. NGVD)

Source: SFWMD DEM

LAKE OKEECHOBEE



Lake O and S-78 Headwater Stage (ft. NGVD)



Acquisition and Restoration of Lake Hicpochee

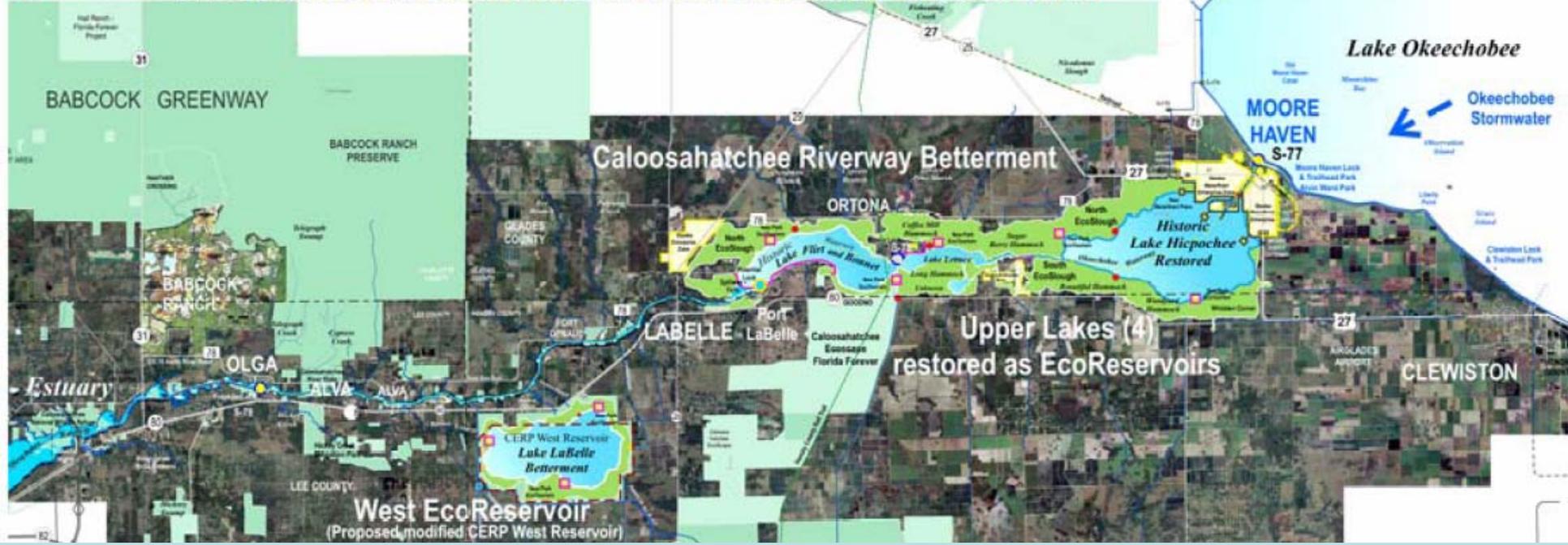
- Acquire Lake bottom and buffer.
- Restore hydrology and hydrological functions to the optimal extent possible.
- Develop compatible wildlife and recreational enhancements which also generate economic opportunities.
- Water Quality and Storage gains are implemented.

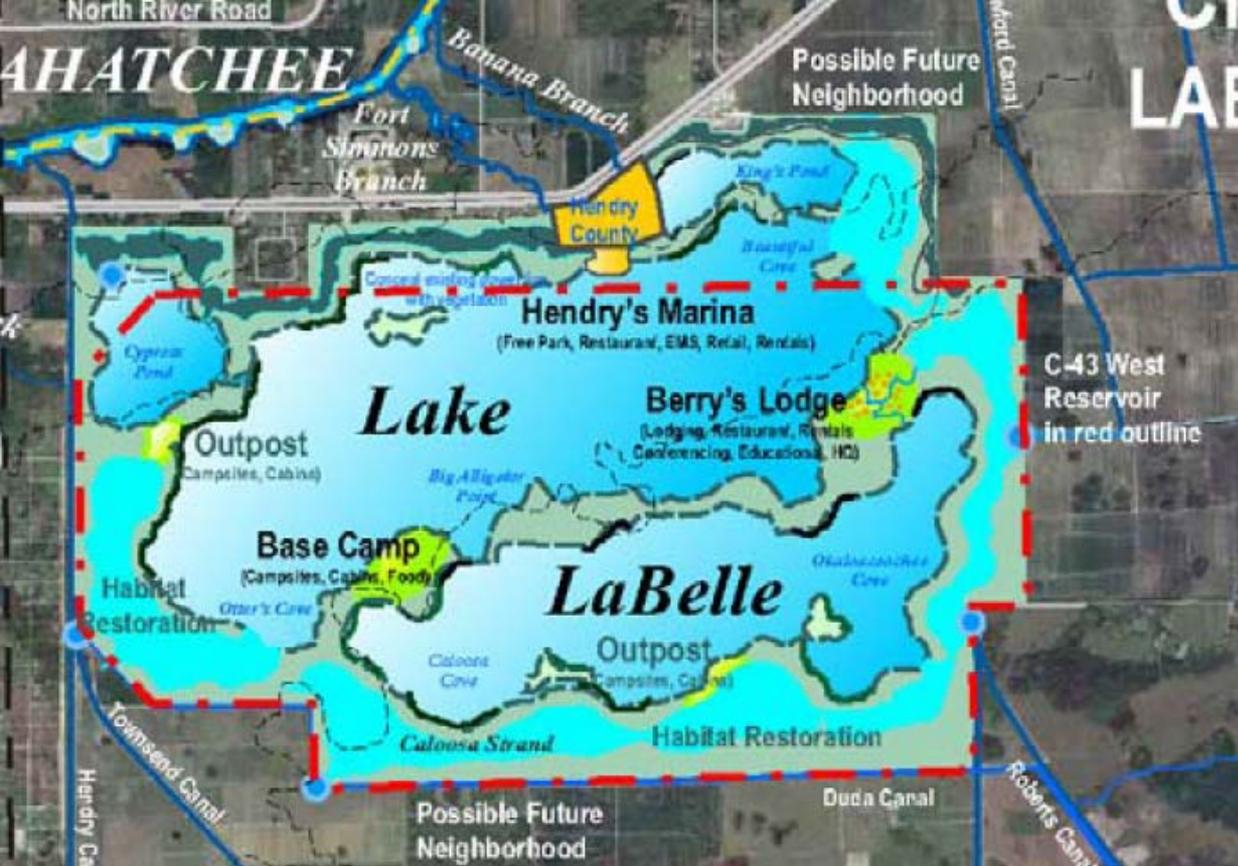


Creation of "Lake LaBelle" on the C-43 Reservoir Land Acquisition Site

CaloosaHatchee Riverway Lake Okeechobee to the Gulf Estuaries
Ecosystems, navigation, stormwater management, agriculture, parks and commerce

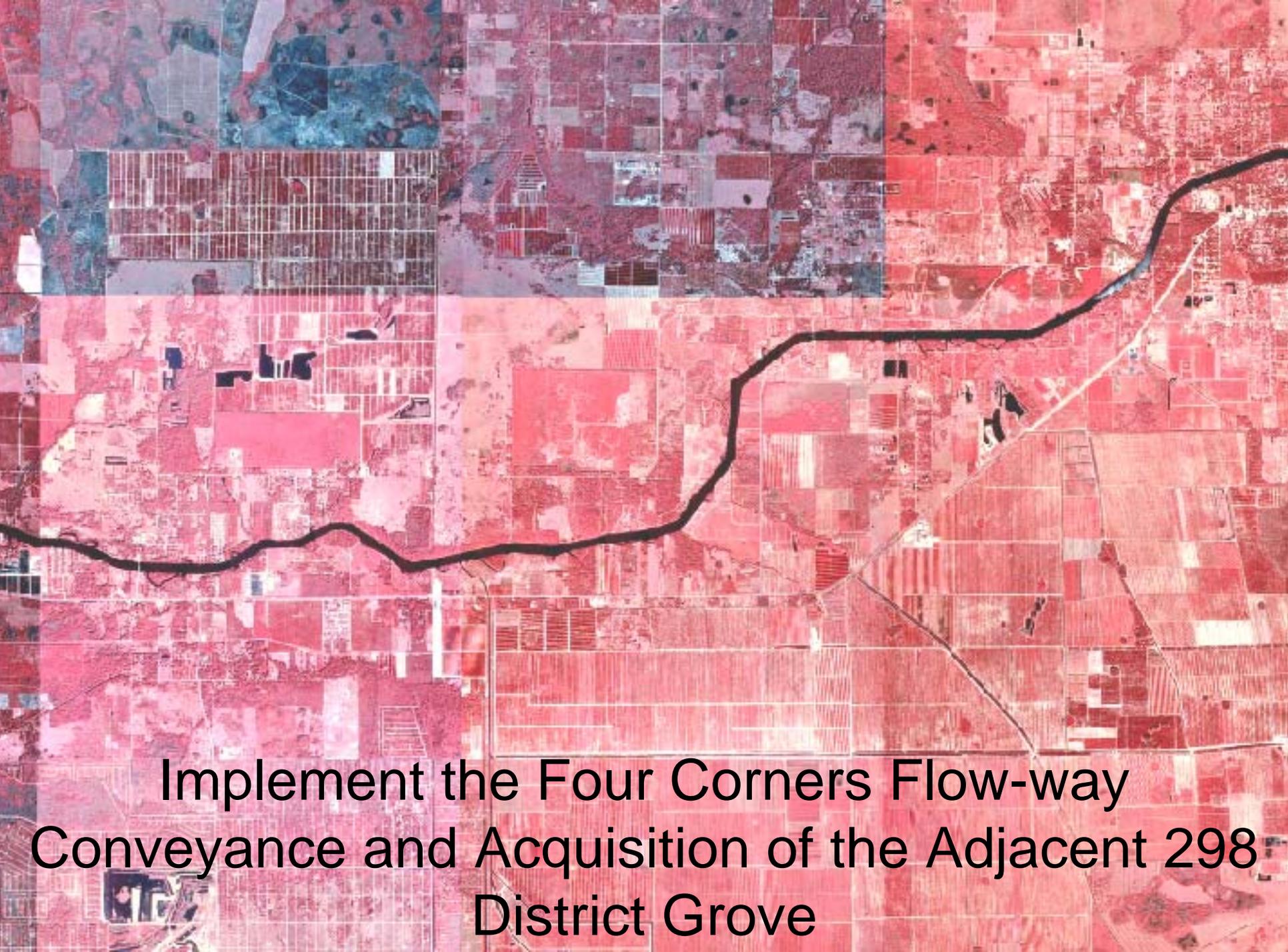
IN PROGRESS DIAGRAM FOR DISCUSSION - NOT CURRENTLY ENDORSED BY THE GOVERNMENT





- Design and Create a Multi-Lake Complex that provides significant storage, water quality treatment, staging that also facilitates recreational facilities and economic opportunities (residential, commercial & ecotourism)

- Design, Construction, Operations and Management Costs significantly reduced in comparison to existing plans



Implement the Four Corners Flow-way
Conveyance and Acquisition of the Adjacent 298
District Grove

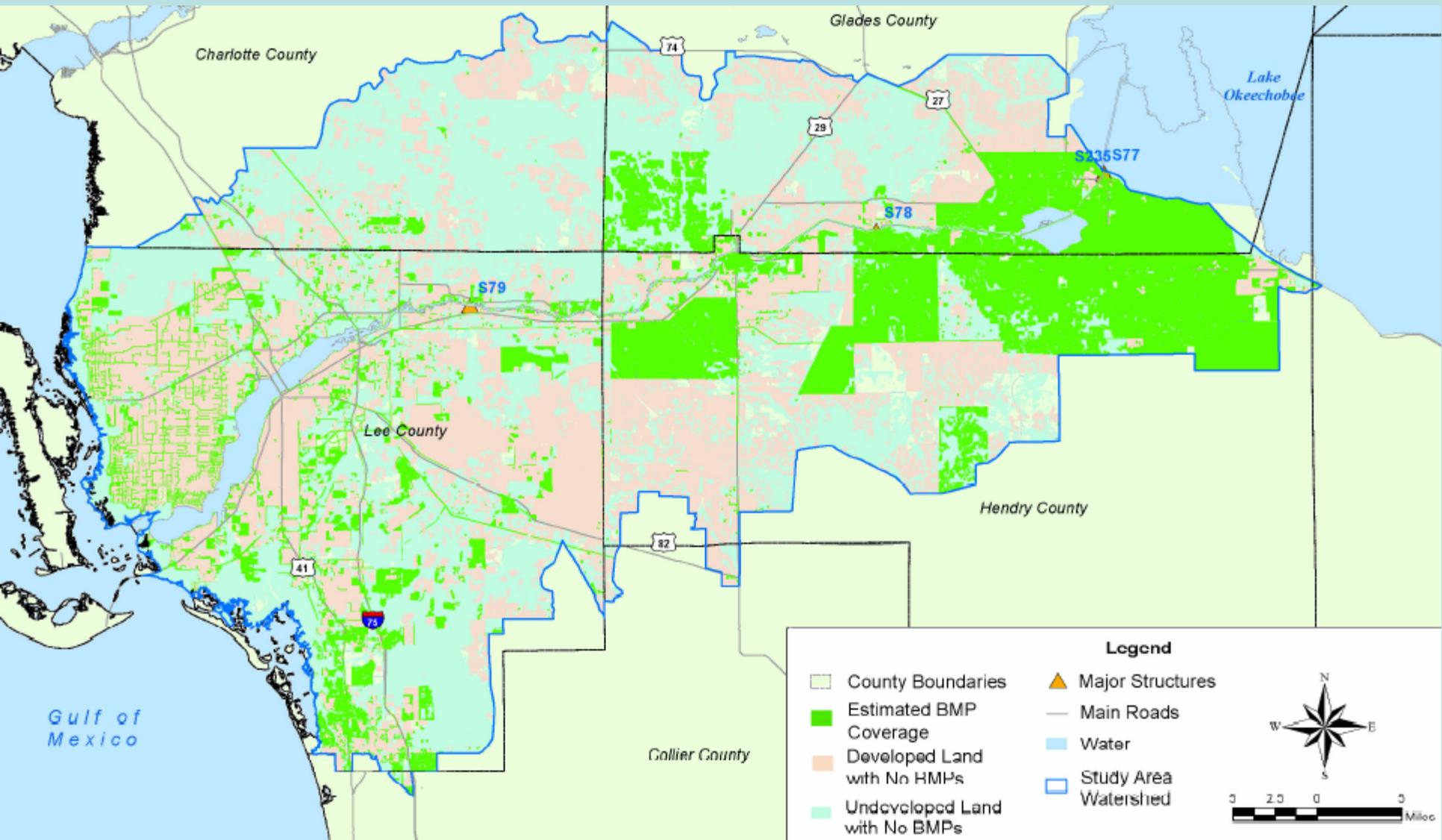
An aerial photograph showing a grid of agricultural fields, likely rice paddies, with varying shades of green and brown. A dark, winding river or canal runs along the bottom edge of the image. The text is overlaid on the left side of the image.

Implementation of
the Long Planned
Four Corners
Conveyance and
Adjacent Grove
Property Will
Facilitate
Restoration Toward
Historic Flows and
Improvement of
Water Quality
Options Flowing to
the Caloosahatchee

Can be
Achieved
Through Land
Swaps,
Purchases or
Use
Agreements or
a Combination
of These
Options.



Implement a Distributed Storage System through Change in Permitting Conditions and Management of Public and Private Lands



- Allow growers to utilize stored water in their impoundment systems during fall draw down for irrigation. Reduce fall/winter Caloosahatchee pumping (\$)
- Allow utilization of high water storage in existing wetland systems based upon ecological criteria on both public and private lands (e.g. “OK Slough” Hendry County)
- Reductions in drainage pumping to the River during the high water fall period reduces estuary impacts when Lake “O” releases are being made simultaneously
- Increase Caloosahatchee Basin Storage

Typical Citrus Grove Reservoir



Source: UF/IFAS

A map of the Caloosahatchee River Basin in Florida, showing county boundaries for Charlotte, Glades, and Lee counties. The map highlights various land parcels in green, representing water quality mitigation banks. Major roads like US-74, US-78, and I-75 are also visible.

Work with River Basin Landowners on Alternative Land Uses that Contribute to Storage and Water Quality

- If TMDL implementation stays on schedule we have the potential for a variety of agribusiness and other land owners to set up Water Quality Mitigation Banks on properties along the Caloosahatchee.
- A careful inventory of SFWMD properties in the Caloosahatchee River Basin should be assessed for potential utilization of water storage and water quality applications and/or for potential land trades for properties that have better potential for these functions.



Caloosahatchee River Watershed Action Plan Summary

- ❖ Disston Island STA
- ❖ Lake Hicpochee Acquisition & Restoration
- ❖ Lake La Belle Concept on the C-43 Reservoir Site
- ❖ Four Corners Conveyance & Grove
- ❖ Distributed Storage & Water Quality Implementation
- ❖ Caloosahatchee Basin Land Assessment (TMDL's) Storage and Water Quality Partnerships



Next Steps...

- Work with SFWMD staff and other regional experts, land owners and government leaders to evaluate a variety of technical feasibility questions critical to plan implementation related to other major regional plans underway
- Work to include key elements particularly in the Upper Caloosahatchee (Disston Island, Lake Hicpochee) in the regional thinking influenced by the U.S. Sugar acquisition conceptual alternatives
- Provide WRAC with a more in-depth update and analysis presentation in early spring