

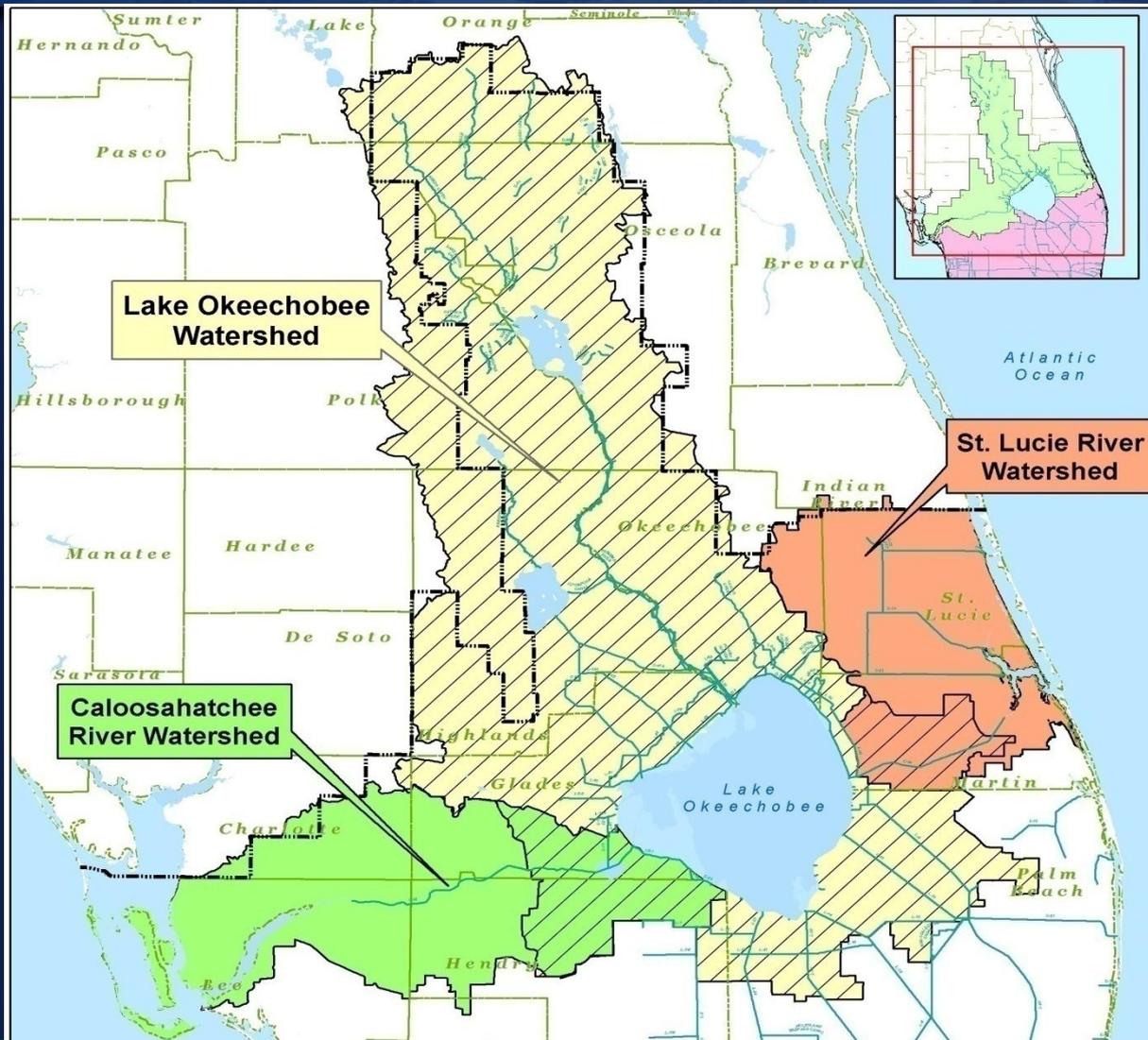
Northern Everglades and Estuaries Protection Program

CARES Meeting - 10/08/09

***Temperince Morgan, Northern Everglades Program
Implementation Manager***



The Northern Everglades



Lake Okeechobee Watershed

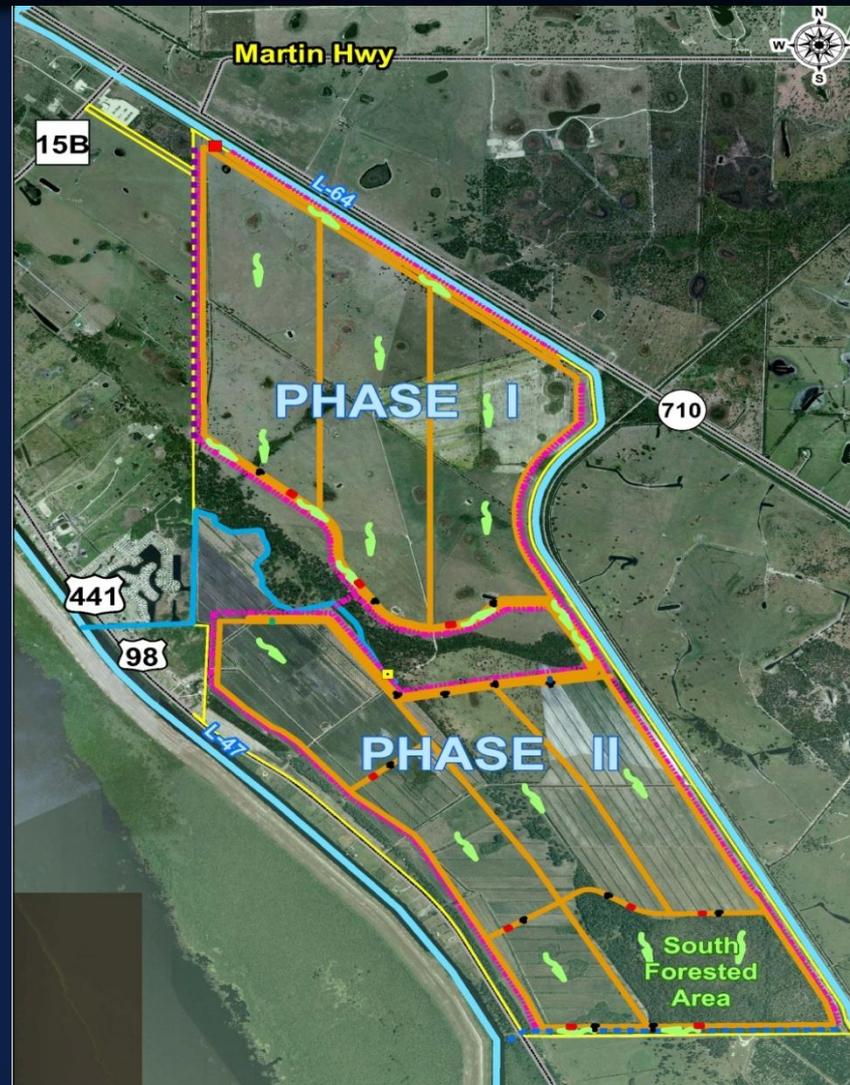
Caloosahatchee River Watershed

St. Lucie River Watershed



Lakeside Ranch Stormwater Treatment Area (STA)

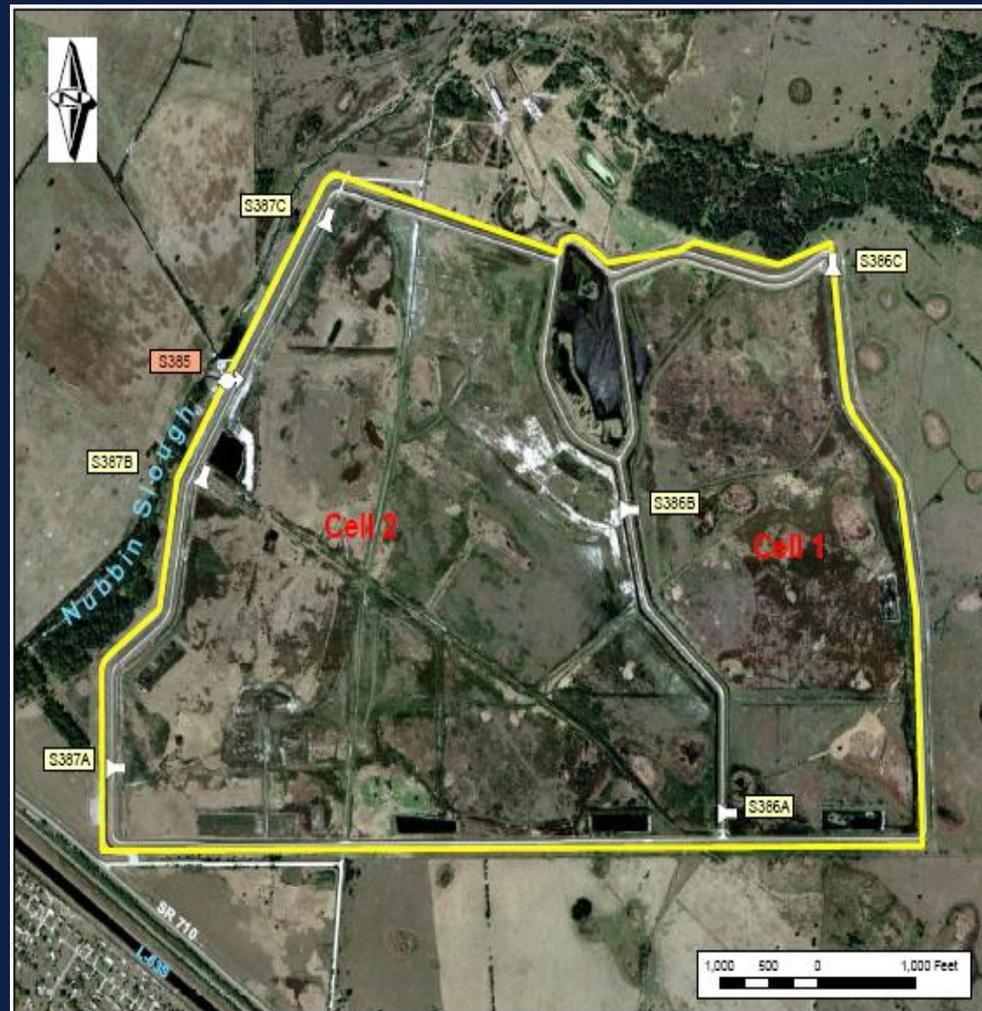
- Project is designed in two phases:
 - Phase 1: 925-acre STA, S-650 pump station and canal improvements
 - Phase 2: 1,050-acre STA and S-191A pump station
- Phase I construction is under way
- Phase II design is under way; construction is contingent on additional funding





Nubbin Slough STA

- 780-acre STA constructed by Corps as part of the “Lake Okeechobee Water Retention/Phosphorus Removal” critical restoration project
- Purpose is to divert and treat the majority of runoff from Nubbin Slough





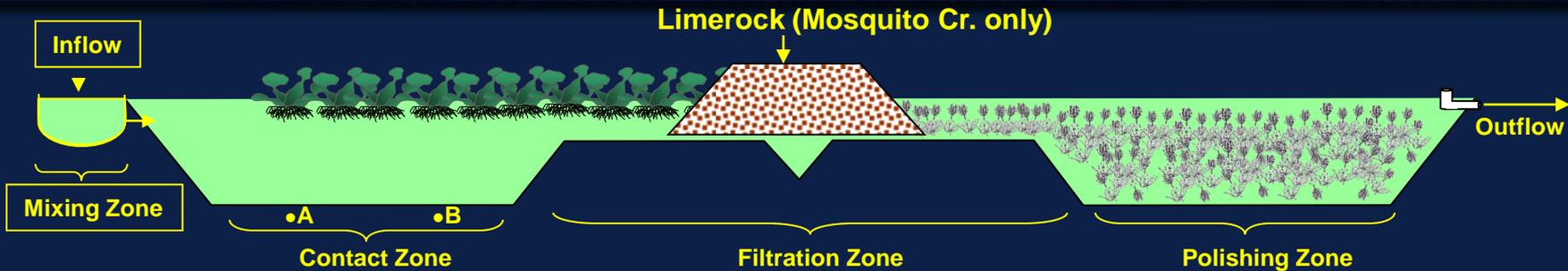
Taylor Creek STA

- 190-acre STA
- Purpose is to divert and treat about 10% of the water flow from Taylor Creek
- Flow through operation initiated on June 26, 2008
- TP load removal from June 2008 - February 2009: 1.35 mt
- Currently repairing culvert at outfall structure

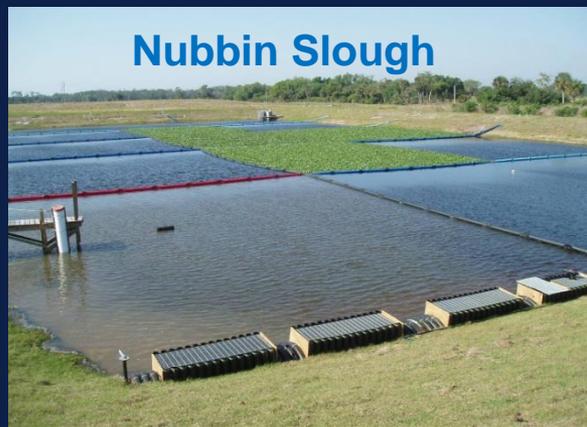
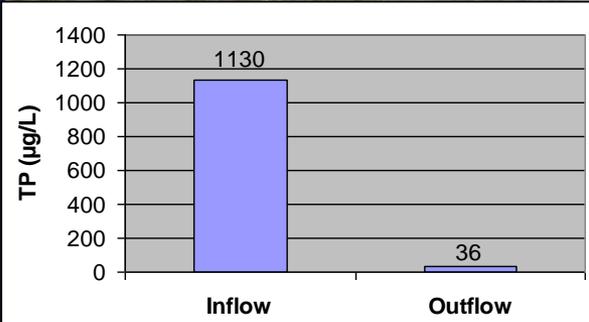




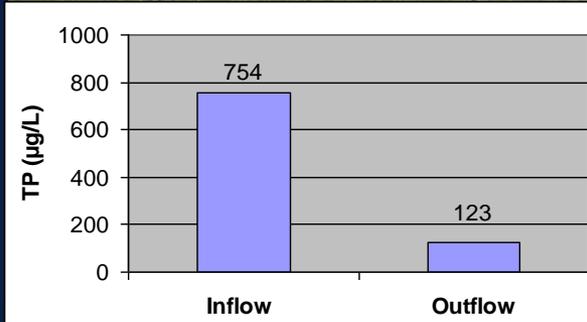
Hybrid Wetland Treatment Technology



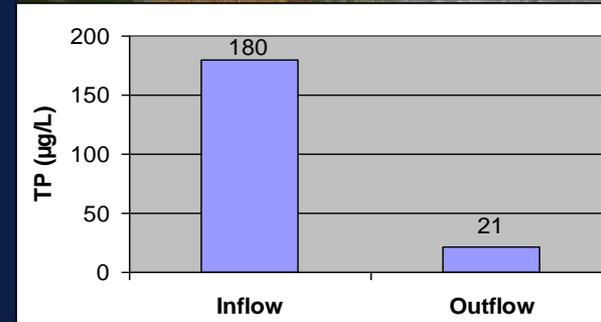
Mosquito Creek



Nubbin Slough



Ideal 2 Grove - Ft. Pierce





Hybrid Wetland Treatment Technology Lemkin Creek





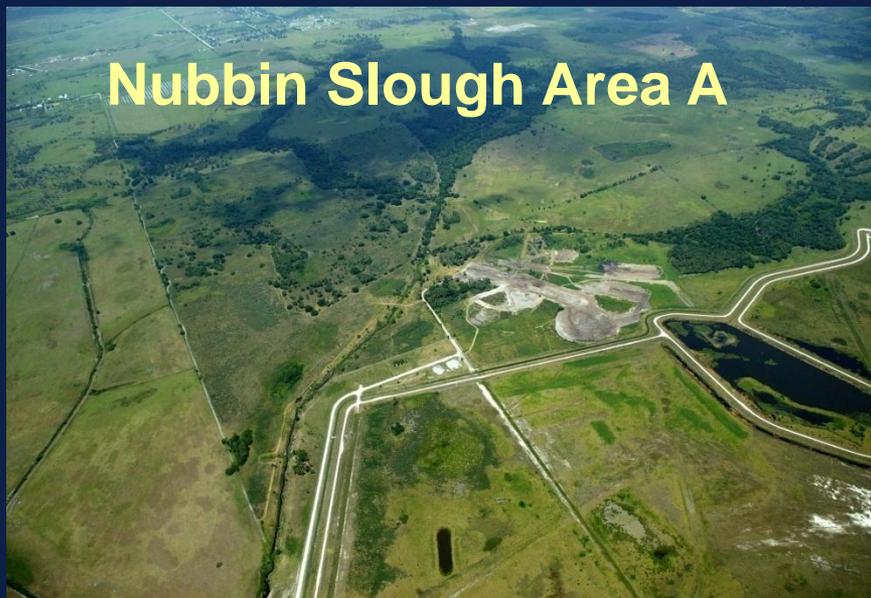
Isolated Wetland Restoration Projects



Eckerd Youth Center



**Lemkin Creek
Wetland Restoration**



Nubbin Slough Area A



Former Dairy Remediation Projects

- **Objectives:** To reduce P runoff by intercepting and binding high P runoff from the old dairy High Intensity Areas, and develop a stormwater management system to provide runoff detention and water quality improvements
- **Examples:**
 - McArthur Dairy Barn #5
 - Lamb Island
 - Candler Ranch
 - Mattson Farm



Former Dairy Remediation McArthur Dairy Barn #5





Former Dairy Remediation Lamb Island Dairy

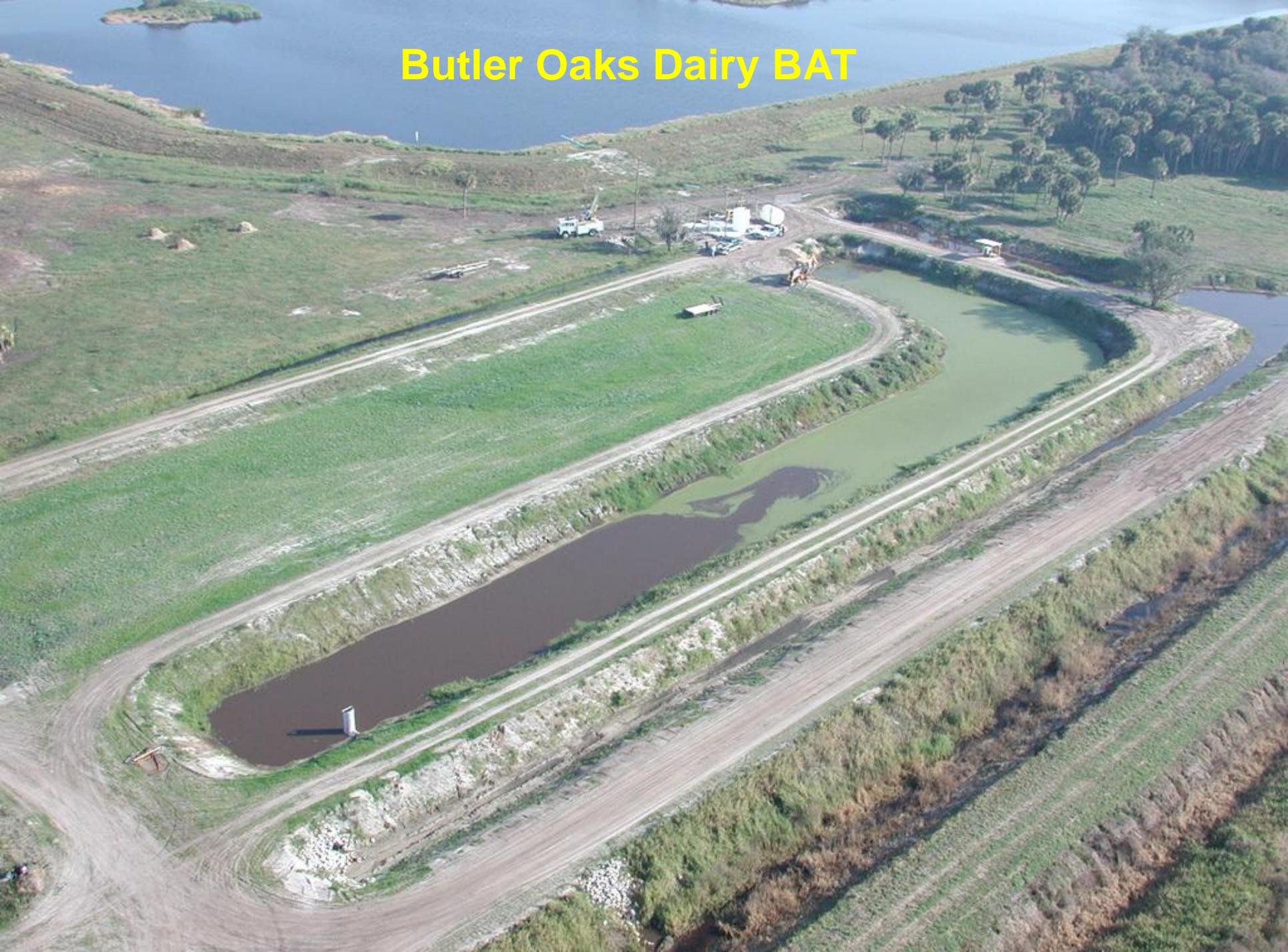




Dairy Best Available Technologies

- **Objective: Reduction of Phosphorus Loading from Dairies using Edge of Farm Chemical Treatment of Surface Water Runoff**
- **Examples:**
 - **Butler Oaks**
 - **Dry Lake**

Butler Oaks Dairy BAT



Dry Lake Dairy BAT





Dispersed Storage and Treatment

- **Definition- Shallow water distributed across parcel landscapes using relatively simple structures**
- **Approaches**
 - **Easements**
 - **Payment for Services**
 - **Cost Share**





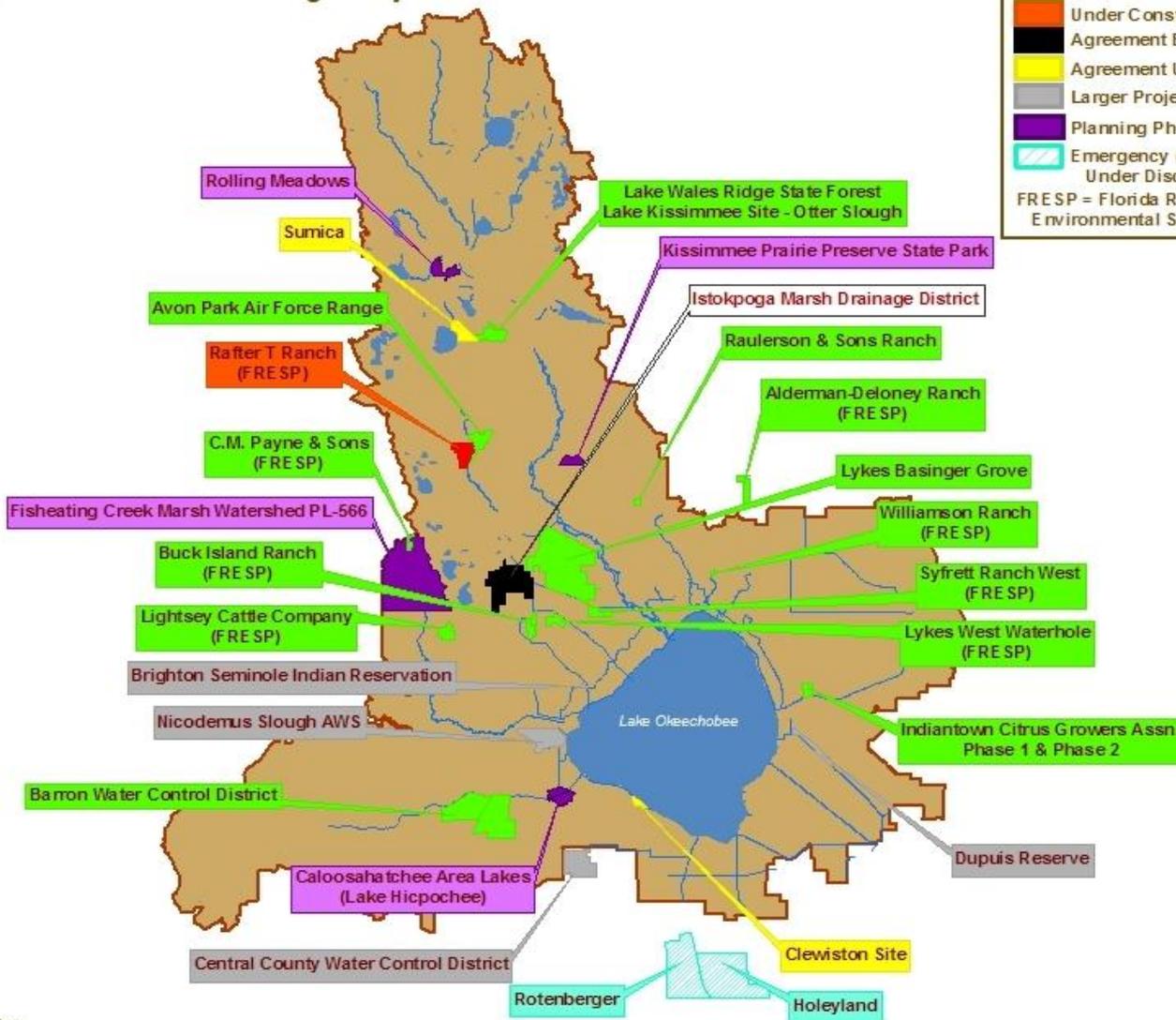
Dispersed Storage and Treatment Projects

Lake Okeechobee and Estuary Recovery
Ongoing Alternative Water Storage Projects

Legend

- Construction Complete
- Under Construction
- Agreement Executed
- Agreement Under Development - FY10
- Larger Project Under Discussion
- Planning Phase
- Emergency (temporary) projects Under Discussion

FRESP = Florida Ranchlands Environmental Services Program



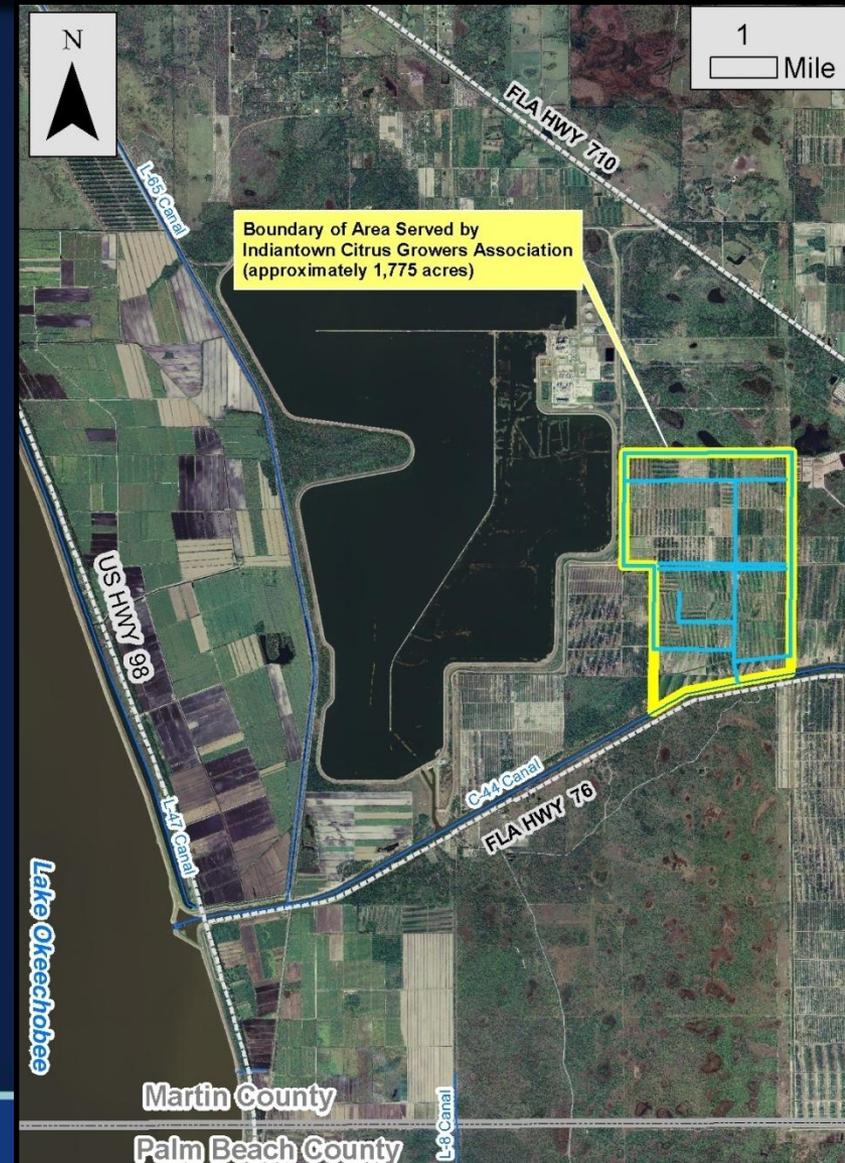
20

Miles



Dispersed Storage and Treatment Indiantown Citrus Growers Assoc.

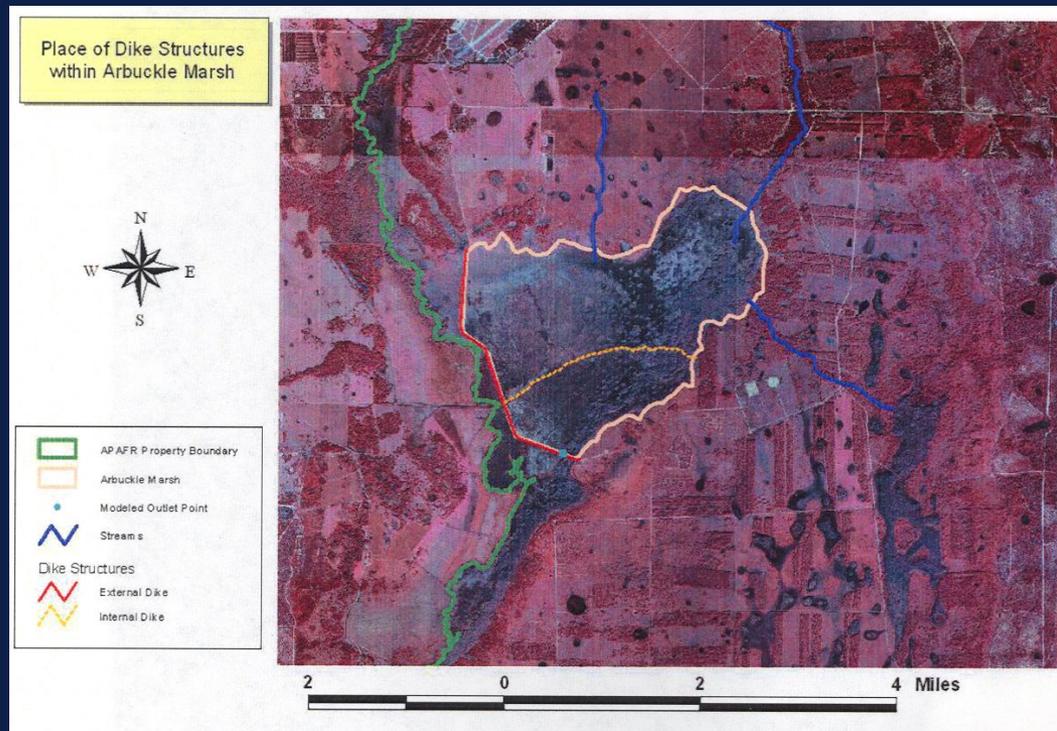
- 1,775 of agricultural land within service area
- Phase I: Pump rehabilitation (complete)
- Phase II: Internal canal widening (FDACS – complete)
- Phase III: Internal structures 60+ (NRCS, SLRIT – complete)
- Storage within system:
 - 7,000 acre-feet
- Volume from St. Lucie Canal during LO regulatory releases:
 - 3,550 acre-feet





Dispersed Storage and Treatment Avon Park Air Force Range

- 106,073 acres of range complex
- 30,000 acres of marsh/impoundment
- Restoration of existing perimeter levee (under construction) and replacement of water control structures (complete)
- Storage within marsh system:
 - 10,000 acre-feet





Caloosahatchee River Watershed- Water Quality Treatment & Testing Facility

- Objective: Develop, design and build a testing facility to provide total nitrogen treatment
- Several major tasks completed:
 - Cultural resources assessment survey; phase I/II environmental site assessments; total nitrogen reduction technologies review; topographic survey
- Others under way:
 - C-43 water quality project plan development and design
- Next Step: Complete design of test cells





Caloosahatchee River Watershed Powell Creek Algal Turf Scrubber

- Pilot construction completed and operation begun in October 2008
- Data collection under way
 - Pilot unit is growing algae and generally working as expected
- Next steps - Completion of monitoring and final report by January 2010





Pollutant Control Program

- **Implementation of agricultural and urban Best Management Practices (BMPs)**
- **Revisions to regulatory programs**
 - **Environmental Resource Permit (ERP) Program**
 - **Statewide Stormwater Rule - Water Quality (FDEP)**
 - **Northern Everglades ERP Basin Rule - Water Quantity (SFWMD)**
 - **District's Source Control Program Regulatory Rule (Chapter 40E-61)**
 - **Works of the District Regulatory Phosphorus Source Control Program**
- **Phosphorus control projects**

<https://my.sfwmd.gov/northerneverglades>



Questions

