



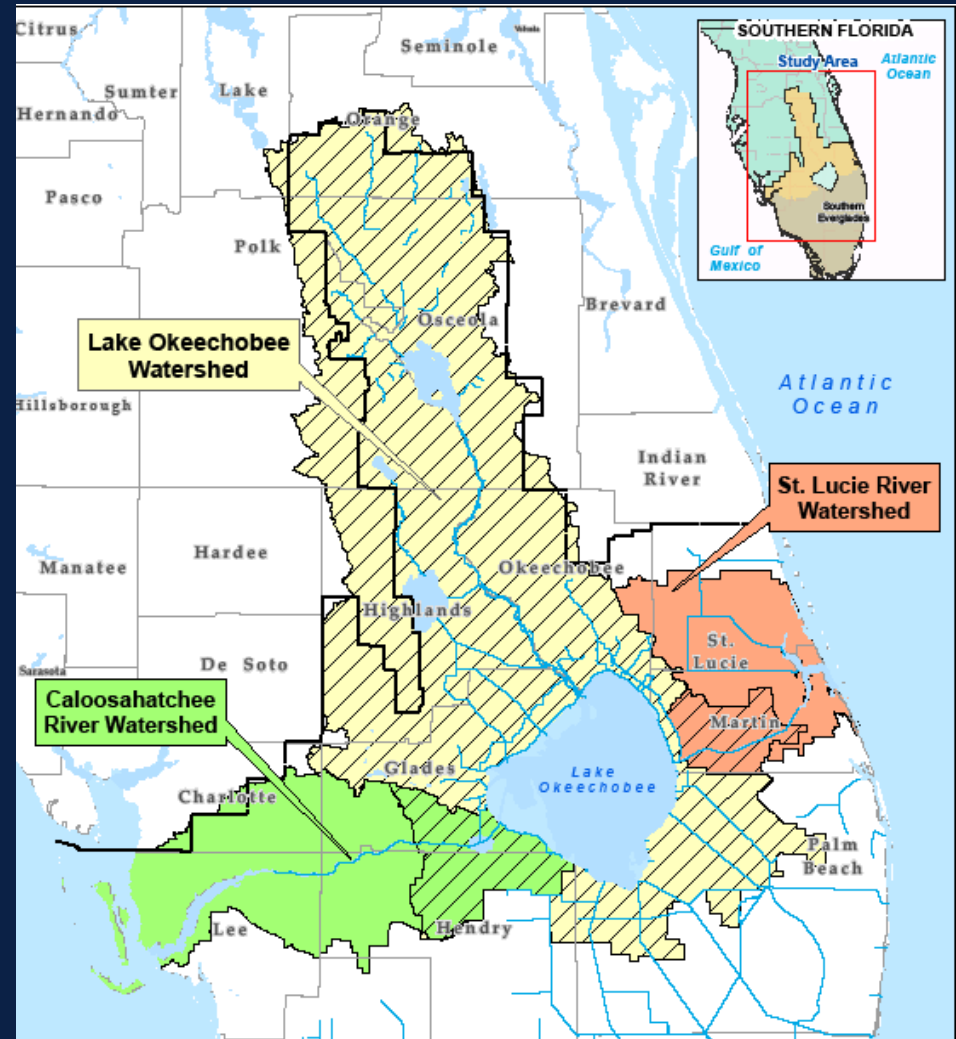
## Northern Everglades- Draft St. Lucie River Watershed Protection Plan

Temperince Morgan – Northern Everglades Program Manager



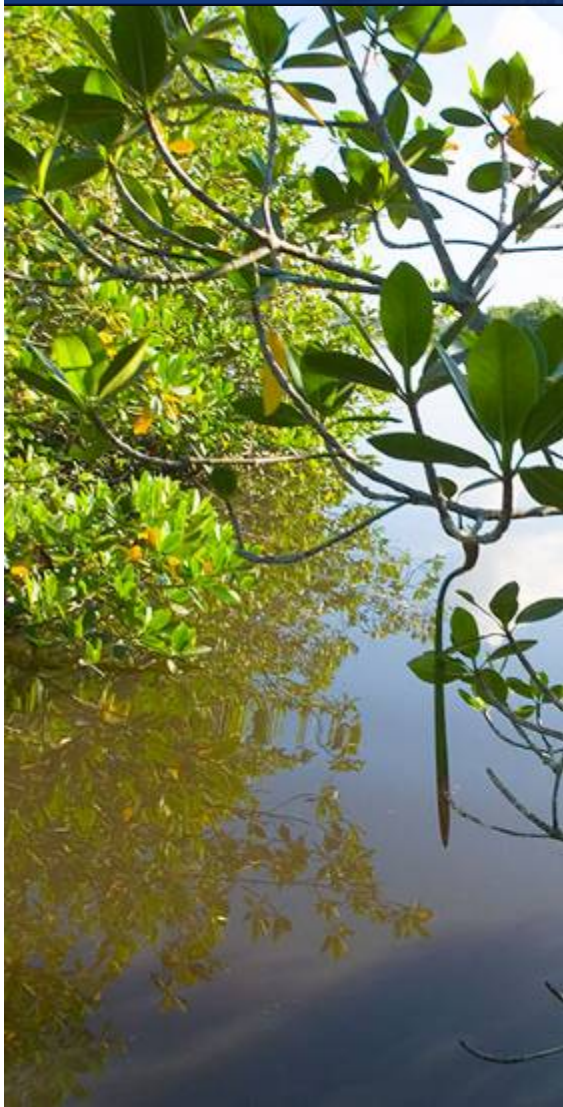
# Northern Everglades and Estuaries 2007 Legislation

- Requires development of **Caloosahatchee** and **St. Lucie River Watershed Protection Plans** to identify water quality and storage projects
  - Due by January 1, 2009
  - Developed by SFWMD, in cooperation with
    - Coordinating Agencies (FDEP and FDACS)
    - Lee, Martin, and other affected counties and municipalities





## River Watershed Protection Plans- Objectives



- **Nutrient load reductions to achieve adopted Total Maximum Daily Loads**
- **Reduce frequency and duration of undesirable salinity ranges in estuary, while meeting other water-related needs of the region**



## River Watershed Protection Plans- Elements



- **Watershed Pollutant Control Program**
- **Watershed Construction Project**
- **Watershed Research and Water Quality Monitoring Program**



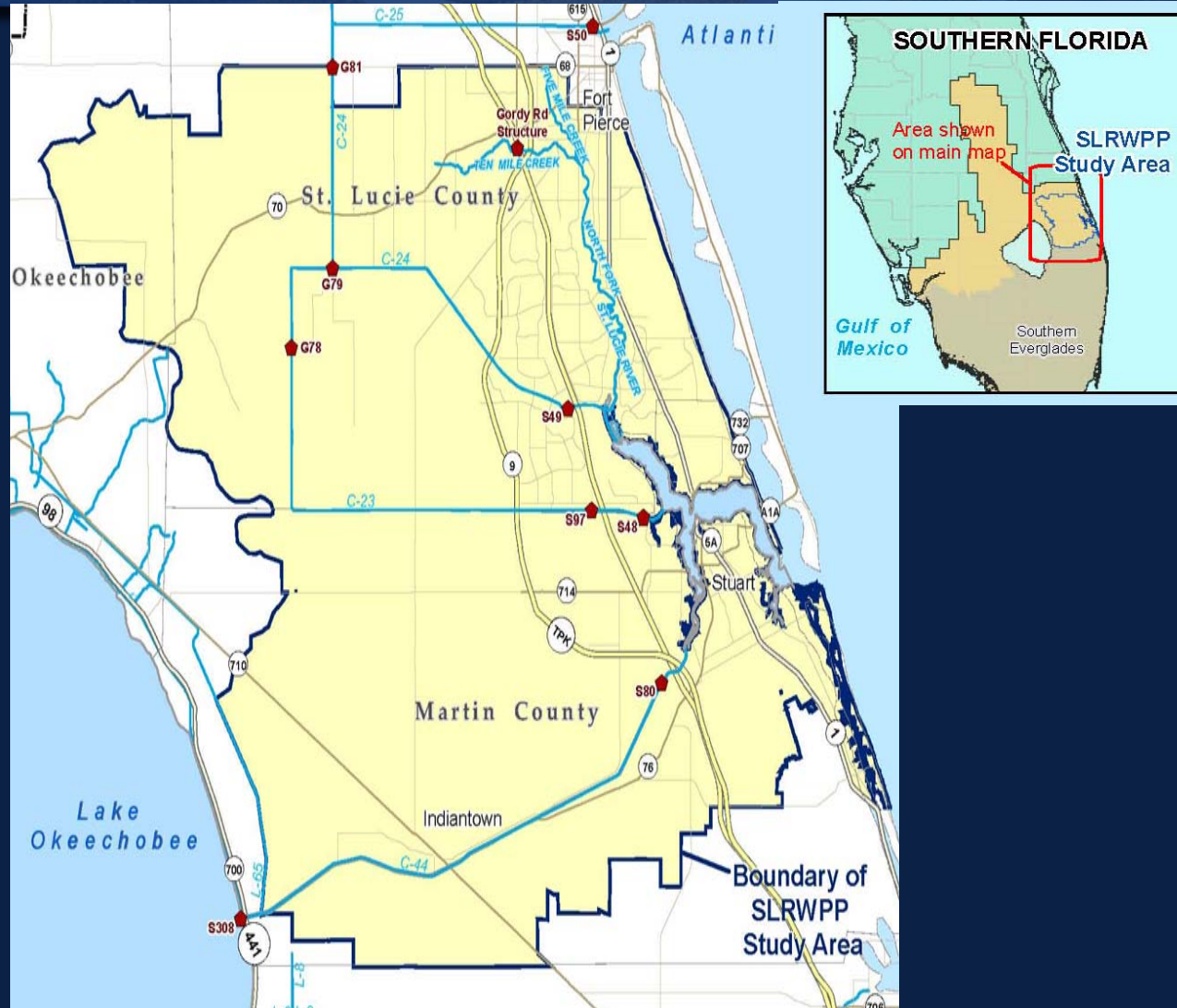
## Alternative Formulation and Evaluation



- **Formulated alternatives using management measures**
- **Four alternatives were evaluated for-**
  - **Nitrogen and phosphorus load removal**
  - **Water quantity performance**
- **Alternative 4 was selected as Preferred Plan**



# St. Lucie River Preferred Plan- Results





## Watershed Pollutant Control Program

- **Implementation of Agricultural and Urban Best Management Practices**
- **Revisions to Regulatory Programs**
  - **Environmental Resources Permitting (ERP) Program**
    - **Statewide Stormwater Rule**
    - **Northern Everglades Basin Rule**
  - **40E-61 Regulatory Source Control Program in Estuaries**



## Watershed Construction Project- Results

- **Nutrient load reductions to the estuary**
  - Total Phosphorus- 56%
  - Total Nitrogen- 55%
- **Removal of ~250,000 cubic yards of muck**
- **Approximately 200,000 acre-feet of watershed storage:**
  - Including IRL-S (C-44, C23/24, and Natural Lands Storage) and Ten Mile Creek Water Preserve Area
  - In addition to the 900,000 acre-feet of storage in the Okeechobee Watershed (Lake Okeechobee Technical Plan-Phase 2)



## Watershed Construction Project- Results (cont.)

### High Flows

- A 75% improvement in high flow events between 2000 and 3000 cfs
- A 50% improvement in high flow events greater than 3000 cfs

### Low Flows

- Improved performance- low flow is not a significant issue for the St Lucie Estuary

### Ecological Assessment

- 45% improvement in number of years with oyster mortality
- Reduction in months with detrimental high flows from 15% to 9.7%



## Watershed Research and Water Quality Monitoring Program



- Existing estuarine and watershed monitoring programs are sufficient
  - Recommended to continue with future optimization
- 4 research projects identified



# Preferred Plan Summary

## St. Lucie Preferred Plan

- **IRL-S**
- **BMPS/Regulatory Programs**
- **Additional regional phosphorus treatment in C-23/24 basin**
- **Local quality/quantity/habitat projects (e.g., stormwater retrofits; septic conversions; Alternative Water Storage Facilities; muck removal)**

## Summary

- **~200,000 ac-ft/yr storage (IRL-S and Ten Mile Creek)**
- **Nutrient treatment**



# Plan Implementation Strategy



- **Multiple Phases**
  - **Phase I- projects initiated 2009-2012**
  - **Phase II- projects initiated 2013-2018**
  - **Phase III- projects initiated beyond 2018**



# St. Lucie RWPP- Phase I

		Initiated	Completed
Construction Project	Alternative Water Storage Facilities- Indiantown Citrus Growers Association Phase I and II		✓
	Florida Ranchlands and Environmental Services Projects (Alderman-Deloney complete)	✓	✓
	CERP-IRL South: C-44 Reservoir/STA	✓	
	CERP-IRL South: Allapattah Complex- Natural Storage and Water Quality Area	✓	
	Alternative Water Storage Facilities-Indiantown Citrus Growers Association- Phase III, Dupuis, Waste Management St Lucie Site, Caulkins	✓	
	Hybrid Wetland Treatment Technology Pilot Project	✓	
	Local-Stormwater Projects (e.g., retention/detention ponds, treatment wetlands, conveyance and structural improvements)	✓	✓
	Local-Wastewater Projects (e.g., sludge disposal management, sewage treatment and disposal systems)		✓
	Local- Habitat Restoration (e.g., muck removal, oyster balls)	✓	✓
	Florida Ranchlands and Environmental Services Projects	✓	
Farm and Ranchland Protection Program	✓		



# Cost Categories

- **Non-CERP Cost**
  - Costs to be paid from State, SFWMD, and/or local sources
- **CERP Cost**
  - State CERP costs are eligible for 50 percent cost share with the federal government; may also include local cost share
- **Local Cost**
  - Costs that will be covered entirely by local government or may be cost shared with local government and State or SFWMD sources
  - \$5M per River Watershed per year was used for Phase I estimates (covers local projects and Alternative Water Storage Facilities)



## St. Lucie RWPP- Phase I Costs

		CERP	Non-CERP	Local
Construction Project		\$504-694M		\$15M <sup>a</sup>
Pollutant Control Program	Agricultural		\$1.64-2.0M <sup>b</sup>	
	Urban		\$393-479M <sup>c</sup>	
Research and Water Quality Monitoring			\$2.7M <sup>d</sup>	

**a** \$15M reflects state's contribution

**b** Assumes 50% state contribution for capital costs only; all BMPs implemented by 2015

**c** Includes total capital costs

- No cost share assumptions included, but most costs will be borne by local and state programs and only a fraction of these costs will likely be borne by RWPPs
- No phasing assumptions included

**d** Reflects research and additional monitoring not ongoing monitoring



## Next Steps

- **Complete Public Review Process**
  - Draft Plan is available online between Oct 1 and Oct 31 at <https://my.sfwmd.gov/northerneverglades>
  - Comments can be submitted via
    - Website (web board)
    - US Mail to- Mike Voich, c/o SFWMD, MS 7640 3301 Gun Club Road, West Palm Beach, FL 33406
- **Final Plan delivery to the Legislature by Jan 1, 2009**
- **Annual progress reports and three year plan updates**
- **Public involvement throughout plan updates and revisions**

<https://my.sfwmd.gov/northern-everglades>



Questions?

