



# Northern Everglades- Draft Caloosahatchee River Watershed Protection Plan

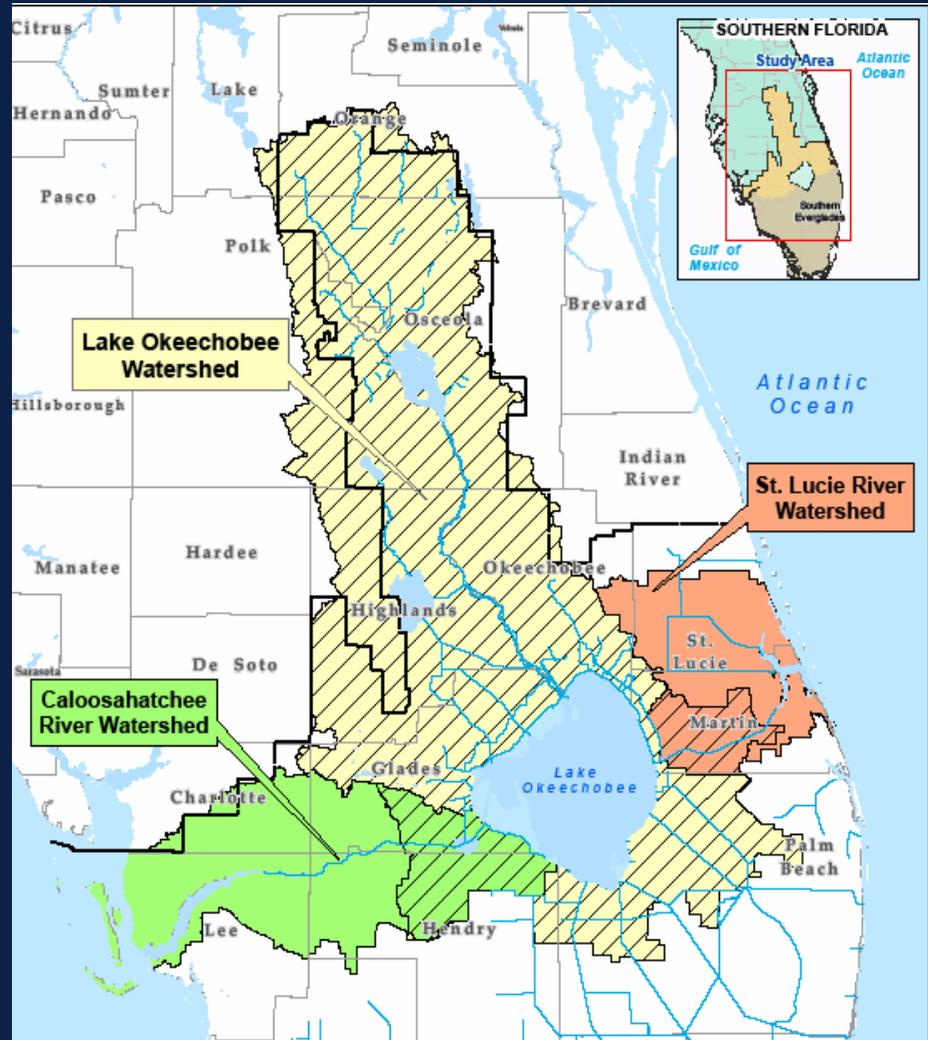


Southwest Florida Regional Planning Council Meeting – 11/20/08  
Phil Flood – Director of the Lower West Coast Regional Service Center



# 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
    - Working team





## 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**



# Caloosahatchee 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 Nitrogen- 38%**
  - **Total Phosphorus- 39%**
- **Approximately 400,000 acre-feet of watershed storage:**
  - **Including the C-43 West Basin Storage Reservoir and additional storage in freshwater basins**
  - **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

- Reduces high flow events caused by watershed alone by more than half (from 48 to 20 events)

### Low Flows

- Reduces low flow events from 189 events to 4 events

### Ecological Assessment

- Target Flow Distribution- 84% improvement over current conditions
- Reduction in months with detrimental flows from 62% to 11%



## Watershed Research and Water Quality Monitoring Program

- **West of S-79**
  - Existing estuarine monitoring programs are sufficient- with minor refinements
- **East of S-79**
  - Additional watershed monitoring (water quality and flow) is needed
- **5 research projects identified**



# Preferred Plan Summary

## Caloosahatchee Preferred Plan

- **BMPs/Regulatory Programs**
- **Regional water quality projects-emphasis on nitrogen**
- **C-43 West Reservoir**
- **Additional storage in freshwater basins**
- **Local quality/quantity projects (e.g., stormwater retrofits; septic conversions- Lehigh, Cape Coral; Alternative Water Storage Facilities)**
- **Additional watershed monitoring**

## Summary

- **~400,000 ac-ft/yr storage (including C-43 West Reservoir)**
- **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**



# Caloosahatchee RWPP- Phase I

		Initiated	Completed
Construction Project	Powell Creek Algal Turf Scrubber		✓
	Alternative Water Storage Facilities- Barron Water Control District		✓
	Caloosahatchee Area Lakes Restoration (Lake Hicpochee)	✓	
	C-43 Water Quality Treatment Demonstration Project (BOMA)	✓	
	Spanish Creek/Four Corners Environmental Restoration Phase I	✓	
	C-43 West Reservoir	✓	
	Local-Stormwater Projects (e.g., treatment wetlands, conveyance and structural improvements, and stormwater recovery projects)	✓	✓
	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)



# Caloosahatchee RWPP- Phase I Costs

		CERP	Non-CERP	Local
Construction Project		\$524-781M	\$117-175M	\$15M <sup>a</sup>
Pollutant Control Program	Agricultural		\$3.3-4.0M <sup>b</sup>	
	Urban		\$663-809M <sup>c</sup>	
Research and Water Quality Monitoring			\$5.2M <sup>d</sup>	

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

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

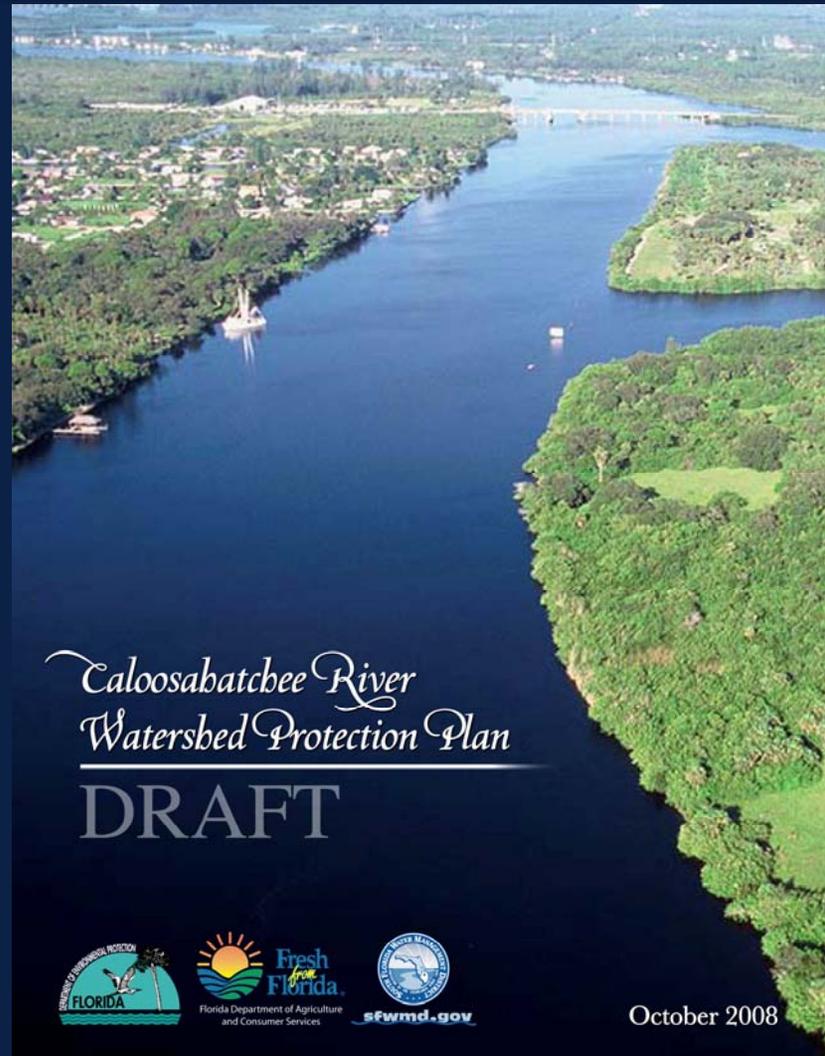
**c** Includes total capital costs

- 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

# Milestones

- Completed Draft Protection Plan
- Conducted Public Review process between Oct 1-Oct 31<sup>st</sup>
- Presented the Draft Plans at multiple meetings and briefings





## Outreach Activities

- **Glades County Commission** Oct 14
- **Southwest Florida Watershed Council** Oct 14
- **Florida Heartlands REIDI** Oct 20
- **Public Meeting** Oct 27
- **Lee County Commission** Oct 28
- **Hendry County Commission** Oct 28
- **Southwest Florida Regional Planning Council** Nov 20



## Next Steps

- **Final Plan delivery to the South Florida Water Management District Governing Board in December 2008 and Florida Legislature by January 1, 2009**
- **Annual progress reports and three year plan updates**
- **Public involvement throughout plan updates and revisions**

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



Questions?