

# Protecting Water for Natural Systems and Rulemaking

**November 10, 2011**

**Governing Board Meeting**

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# Presentation Overview

- Legal Authority for Water Reservations and Restricted Allocation Area Rules
- Technical Basis for Rule Development
- How Rules are Implemented in the Consumptive Use Permitting Program
- Options for Rule Application to Biscayne Bay and the Caloosahatchee Estuary



# Types of Natural System Waterbodies

- Isolated wetlands
  - Public or private ownership
- Sub-regional systems
  - Public ownership (local government/state)
    - Grassy Waters Preserve, Pal- Mar
- Regional systems of statewide concern
  - Public ownership (state/federal)
  - Diverse/competing water needs
    - Kissimmee River, Everglades

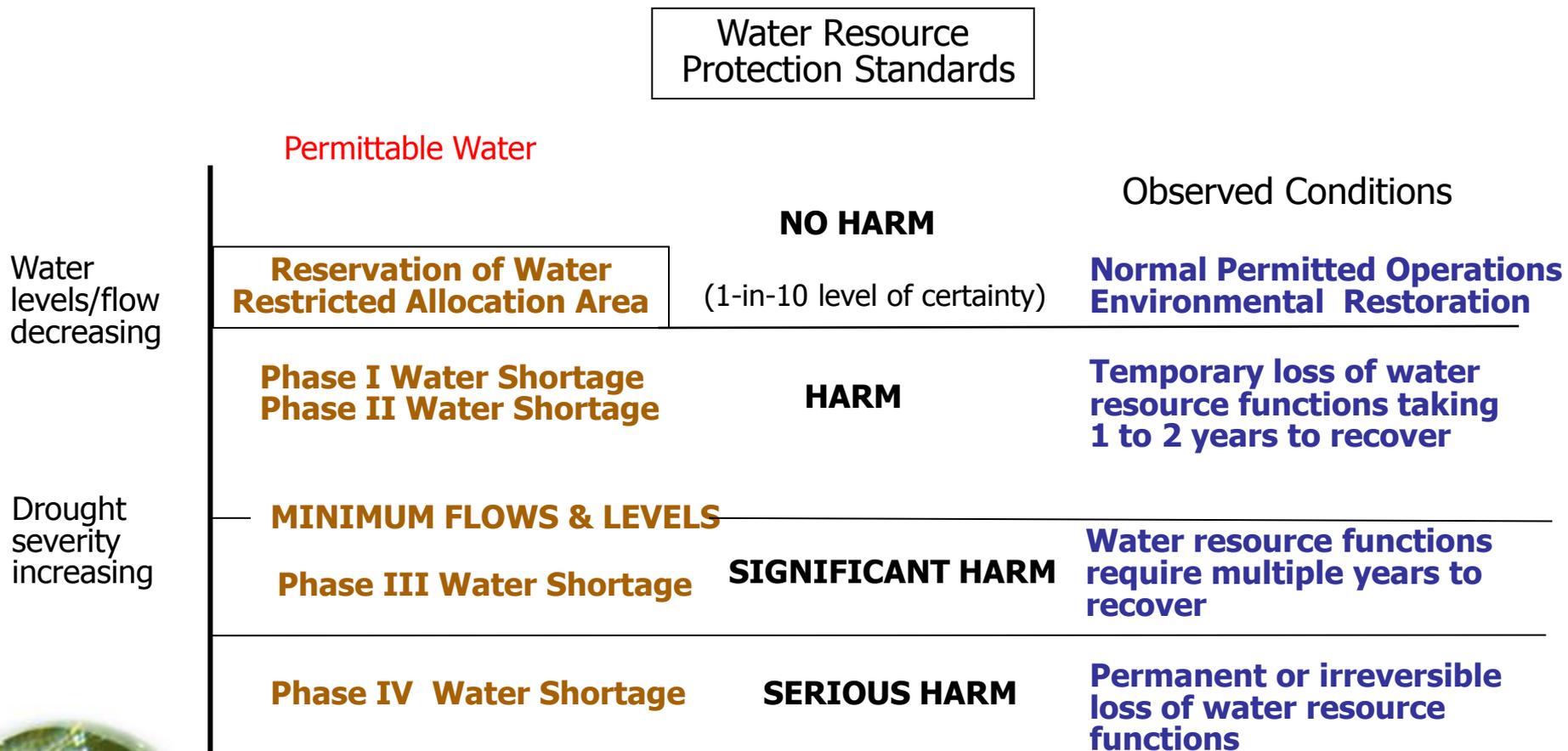


# Regulatory Tools for Protecting Water for the Natural System

- CUP Permitting Criteria - protect wetlands/surface waters from harm
- Minimum Flows and Levels – identify significant harm and establish prevention/recovery strategies
- **Water Reservations** - no harm – preservation, enhancement or restoration
- **Restricted Allocation Areas** – no harm – preserve existing condition



# Conceptual Relationship Among the Water Resource Protection Standards



# Protecting Natural System Water- Water Reservations



- Conditions for CUPs- 373.223(4)
- Set aside water for “protection of fish and wildlife or for public health and safety”
- Existing legal uses protected, unless contrary to the public interest



# Statutory Framework- Water Reservations

- Existing legal users protected unless contrary to the public interest
- Considerations:
  - Existing demands part of analysis for fish and wildlife
  - Minimum Flow and Level – 40E-8.431, F.A.C.- consistency with prevention/recovery strategy
  - CERP reservations – assurances provision in 373.1501, F.S.



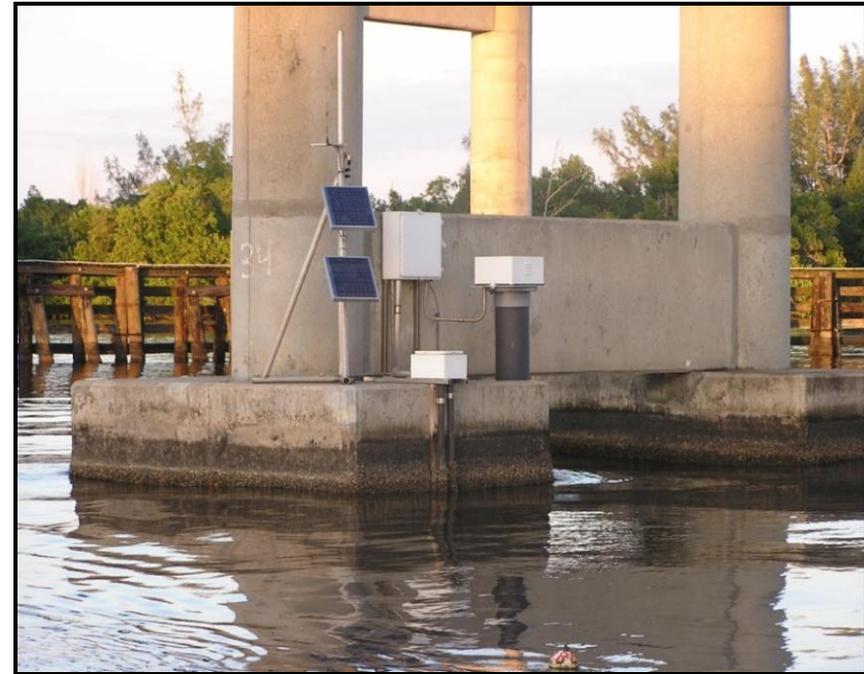
# Statutory Framework – Water Reservations

- Protection of water supply for CERP
  - Reservation or allocation of water must be complete before seeking federal funding for construction - 373.470, F.S.
  - Water Resources Development Act of 2000 requires reservation or allocation to be executed under State law prior to commitment of federal funding for construction – P.L. 106-541, Sec. 601(h)(4)



# Rule Guidance – Water Reservations

- Department of Environmental Protection Rule 62-40.474, F.A.C.- guidance for programmatic consistency
  - Protection of Fish and Wildlife/Public Health and Safety categories defined
  - Prospective Reservations
  - Scientific Peer Review



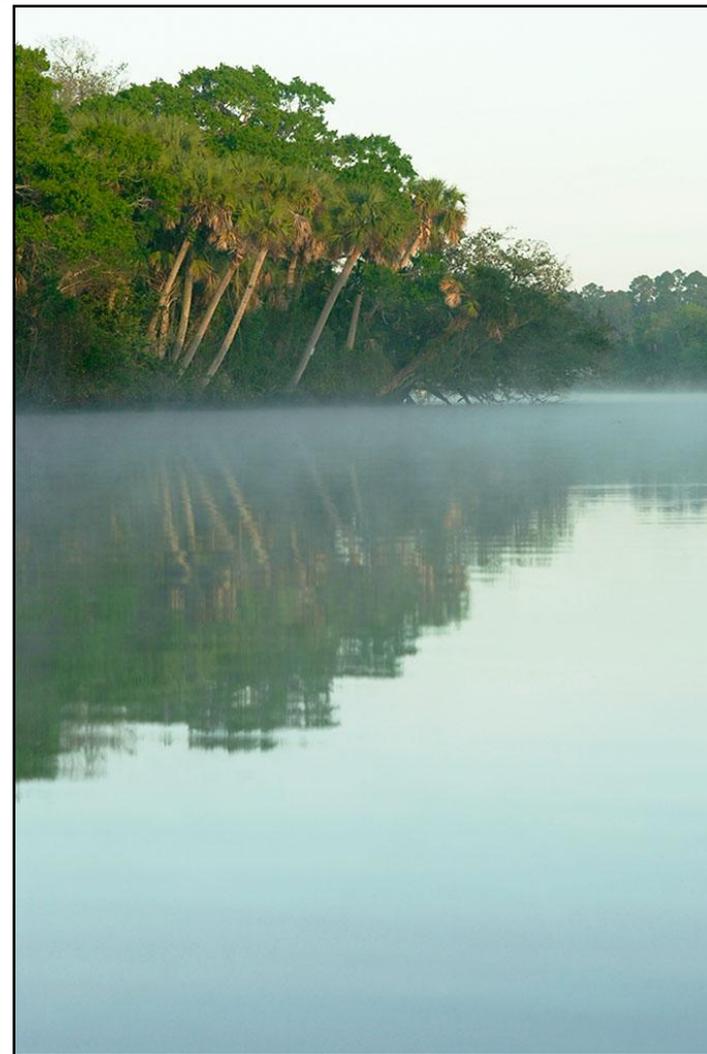
# Rule Guidance - Protection of Fish and Wildlife

- Protection of Fish and Wildlife
  - MFL recovery/prevention strategies
  - Restoration of natural systems
  - Protect flows or levels before harm occurs
  - Protect fish and wildlife in an Outstanding Florida Water or an Aquatic Preserve
  - Prevent withdrawals under any other circumstances required to protect fish and wildlife



# Rule Guidance – Prospective Reservation

- Prospective Reservation – water for fish and wildlife will not be available until CERP project operational
  - Identify when water is anticipated to become available
  - Explain how the reservation will be adjusted if actual water made available is different than the quantities anticipated



# Rule Guidance – Scientific Peer Review

- District makes the determination whether to conduct independent scientific peer review
  - Substantially affected person can request; District must take request into consideration
  - All scientific and technical data, methodologies and models are subject to peer review



# Why Choose a Water Reservation?

- Defined component of a complex ecosystem
  - Picayune Strand
- Clear linkage to representative fish and wildlife species or habitat that is target for protection
- Existing documentation (such as CERP Project Implementation Report) quantifies benefits to fish and wildlife
- Ability to present sound scientific arguments to peer review if needed
- User certainty - identification of water that is not available for allocation



# Protecting Natural System Water - Restricted Allocation Area Rules

## ■ Sources of Authority

- Criteria for permit issuance - 373.223(1), F.S.
  - Reasonable-beneficial - "economic and efficient utilization"
  - Does not interfere with presently existing legal use
  - Consistent with the public interest
- Protection/restoration of natural areas found in the public interest - Sections 373.1501 and 373.470, F.S.
- Component of recovery strategies for minimum flows and levels – 373.042, F.S.



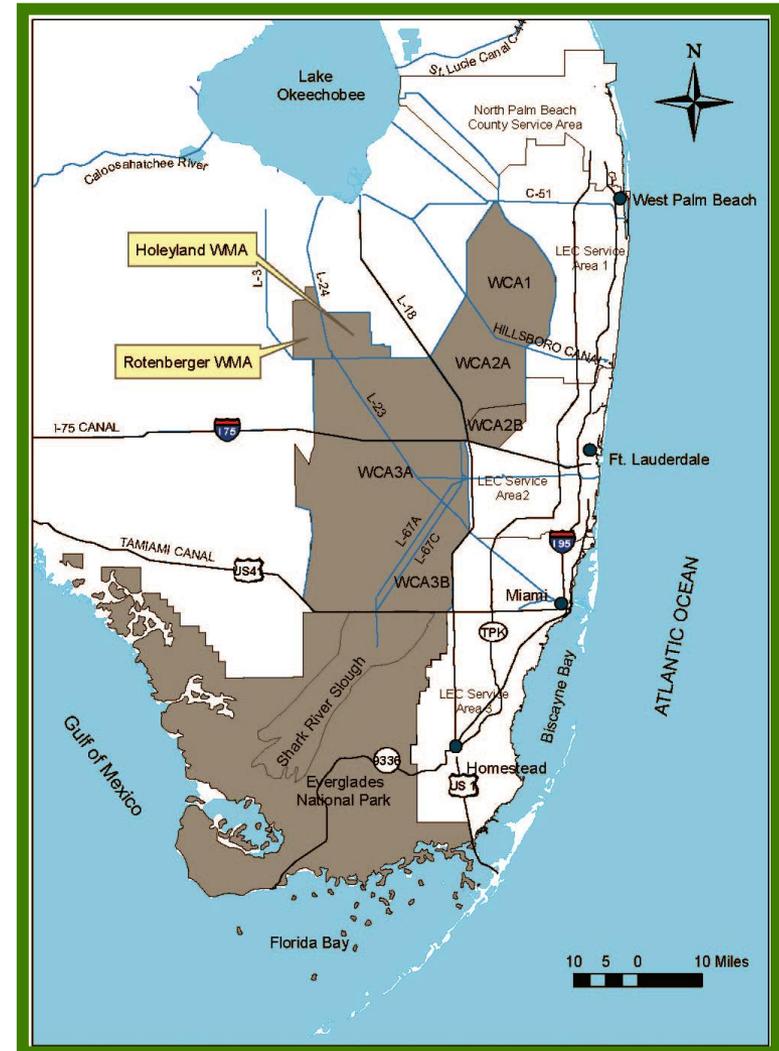
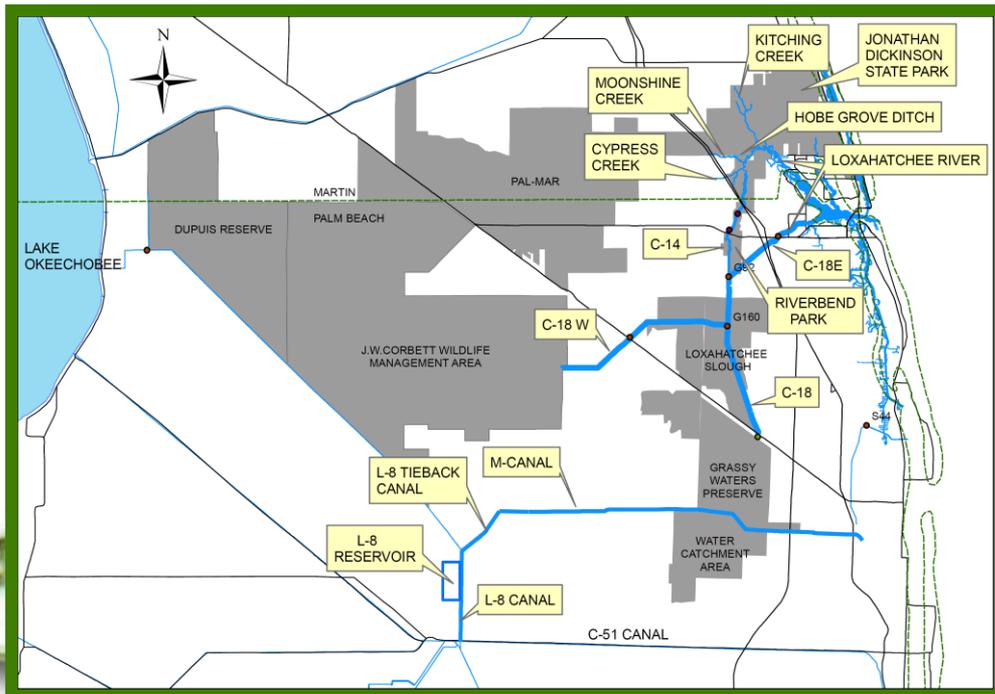
# Why Identify Restricted Allocation Areas?

- Ecosystems are complex
  - Applicable to large spatial area covering multiple ecosystems with many potential representative species or habitats
- Preserve the existing condition for natural system and users
- Component of minimum flow and level recovery strategy
- User certainty – identification of water
  - That is not available for allocation
  - Circumstances under which water may be available



# Restricted Allocation Areas

- **Lower East Coast Everglades and North Palm Beach County / Loxahatchee River Watershed**



# Rulemaking Process Issues

- Rulemaking is subject to the requirements of the Florida Administrative Procedure Act (APA) - Chapter 120, F.S.
- Florida Legislature approved changes to the APA on November 17, 2010
- Agencies must prepare a Statement of Estimated Regulatory Cost (SERC) if a proposed rule will have an adverse impact on small business or is likely to directly or indirectly increase regulatory costs in excess of \$200,000 within one year of rule implementation – 120.54, 120.541, F.S.



# Rulemaking Process Issues

- SERC must include analysis showing whether:
  - the rule directly or indirectly is likely to have an adverse impact on economic growth in excess of 1 million dollars aggregated over 5 years;
  - the rule is likely to have an adverse impact on business competitiveness in excess of 1 million dollars aggregated over 5 years;
  - Is likely to increase regulatory costs, including transactional costs in excess of 1 million dollars aggregated over 5 years – 120.541(2), F.S.
- If any of these criteria are exceeded, the Legislature must ratify the rule and it will not take effect until ratification occurs – 120.541(3), F.S.



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# Water Reservation – Technical Process

- Staff develops technical basis for reservation
  - Identify habitats sensitive to low flows of water
  - Identify fish and wildlife resources to be protected
  - Identify performance measures and link to hydrologic target
  - Quantify water that contributes to meeting hydrologic targets
  - Identify quantity of water to be reserved to protect fish and wildlife



# Water Reservation- Technical Process (cont.)

- Conduct scientific peer review
- Present results of peer review at public workshops, WRAC and Governing Board meetings
- Revise technical document based on peer review and public comments; publish final document
- Findings from technical document become basis for draft rule language



# CERP Project Reservation- Technical Approach

- Utilize information from Project Implementation Report to develop technical document
- Project Implementation Reports subject to public process and are compliant with National Environmental Policy Act and Endangered Species Act
- Additional Scientific Peer review may not be necessary



# Restricted Allocation Area Rules – Technical Process

- Rule support based on technical information from a variety of District programs
  - Consumptive Use
  - Regional Water Supply Planning
  - Restoration initiatives
- Public interest driven approach



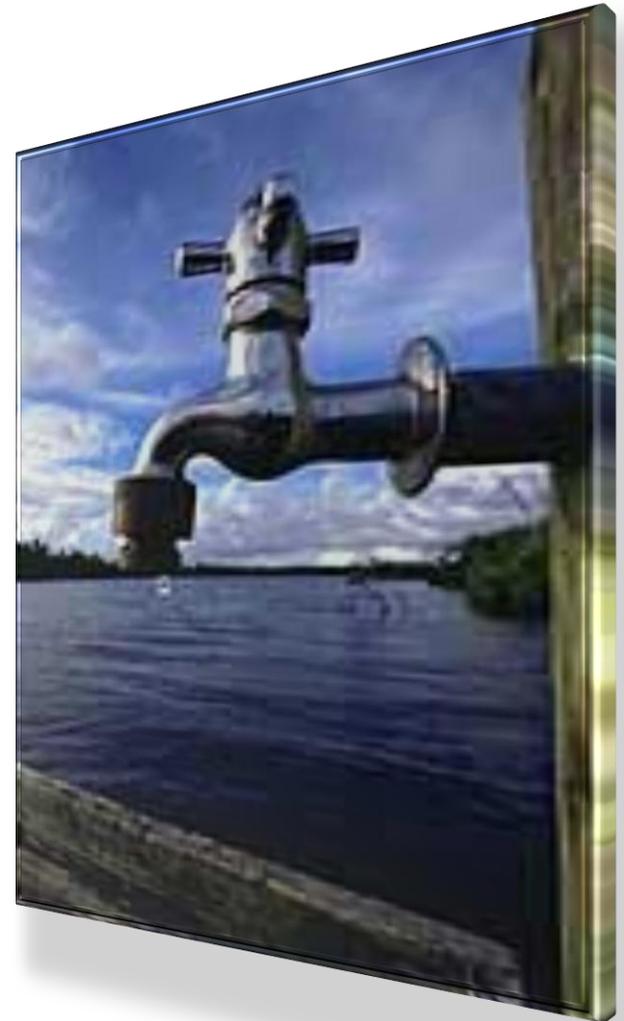
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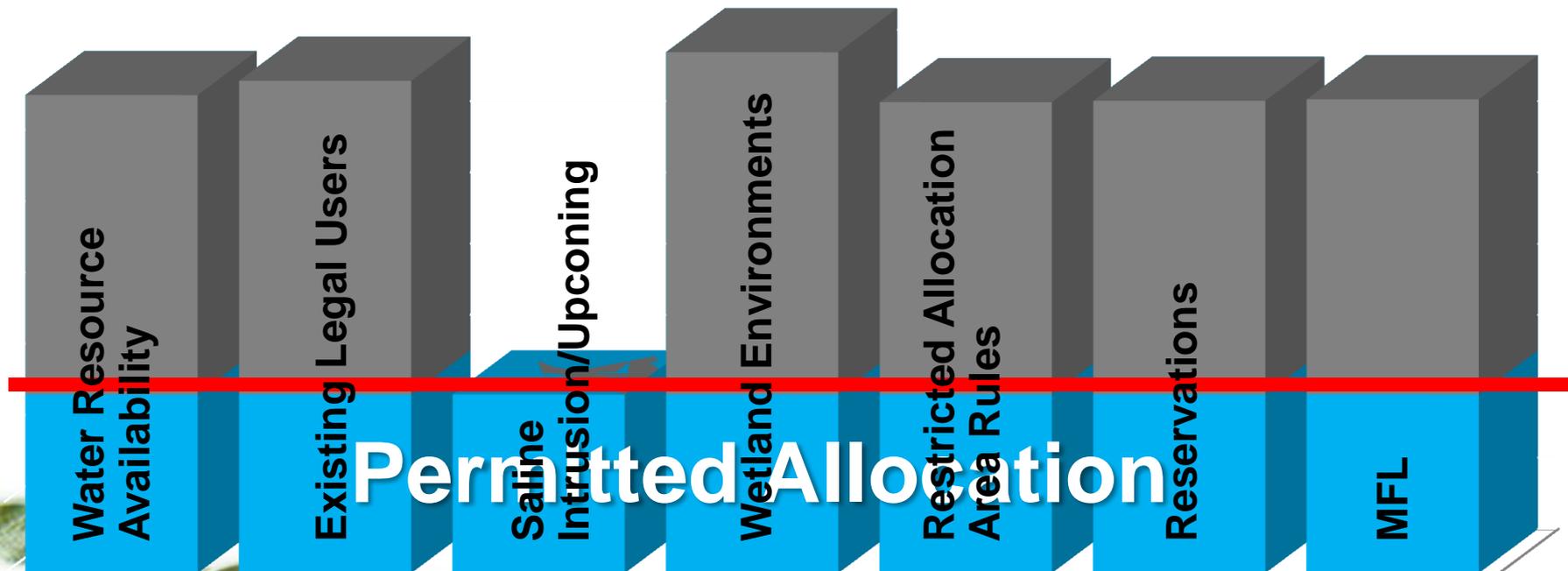
# Implementation in Water Use Permits

- Water Resource Availability
- Saline Intrusion/Upconing
- Wetland Environments
- Contamination Movement
- Existing Legal Users
- Off-site Land Use
- Maximum Developable Limits
- Restricted Allocation Areas
- Minimum Flows and Levels
- Reservations



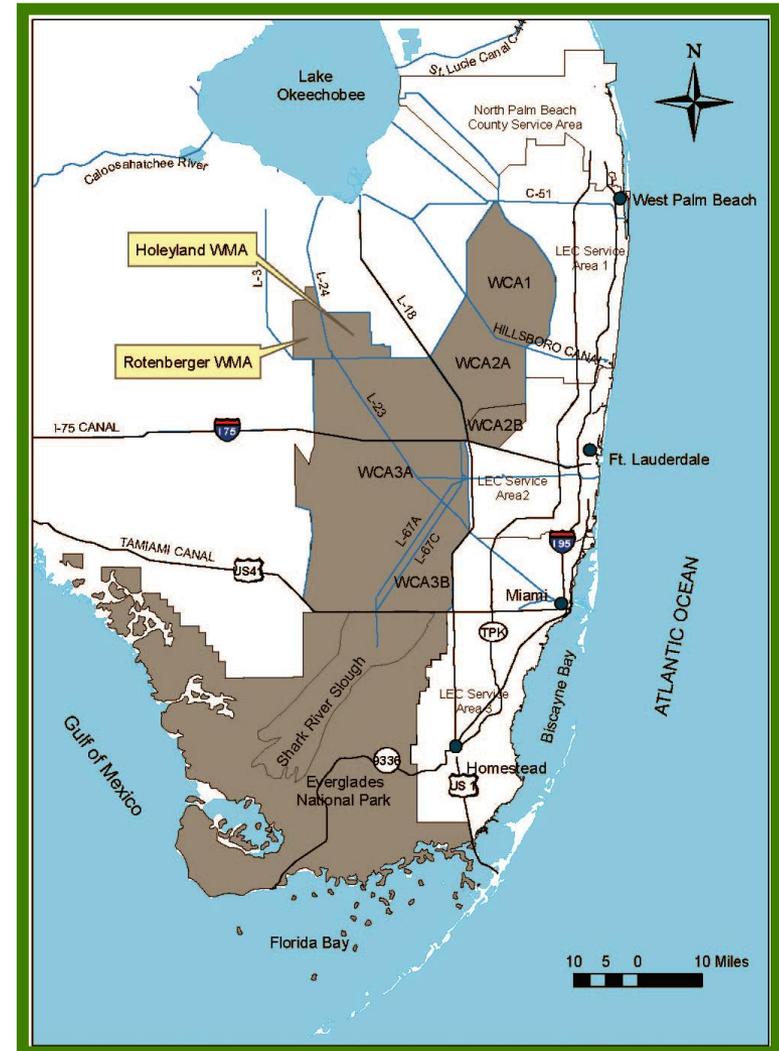
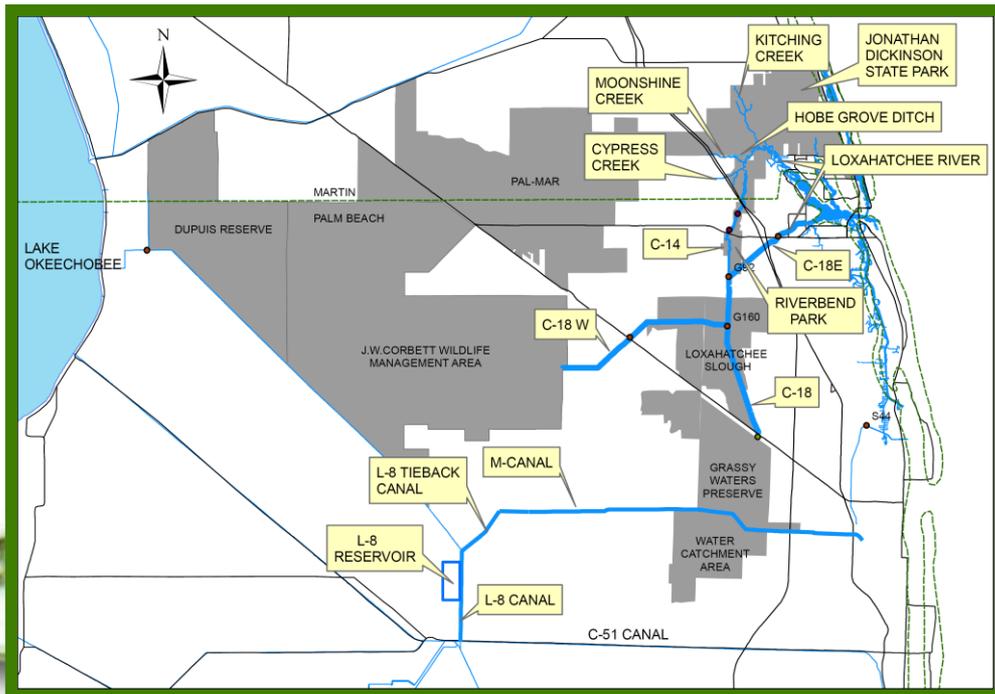
# Implementation in Water Use Permits

- Permits are issued based on the most restrictive resource protection criteria



# Restricted Allocation Areas

- Lower East Coast Everglades and North Palm Beach County / Loxahatchee River Watershed**



# Restricted Allocation Areas

## “Regional Water Availability Rule”

- Prevent additional impacts on natural system
- Allows for additional allocations that do not increase withdrawals from Waterbodies or:
  - Offset increase use – recharge systems /seepage barriers
  - Alternative Water Supply development
  - Terminated or reduced base condition – previous use may be reallocated
  - Wet season water – available seasonally, not needed by restoration projects



# Water Reservations

- Prevents impacts on natural system from consumptive use
- Criteria developed to establish what uses do not withdraw reserved water
  - Criteria are reservation specific
  - Example – Picayune Strand/Fakahatchee Estuary
    - Withdrawals from specific aquifers
    - Permit modifications that do not change the source, increase the allocation or change withdrawal locations
      - e.g., crop changes that do not change the timing of use



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# Background – Protecting Water for Biscayne Bay – 2003 to 2007

- District evaluated different approaches to establish rules to protect minimum flows and levels for freshwater entering the Central Biscayne Bay.
  - Initiated studies and held workshops
  - Compiled bibliography and literature reviews
  - Results are documented in series of reports
  - No clear link between biological resources and salinity (freshwater inflows) were identified in order to define “significant harm” threshold for MFL



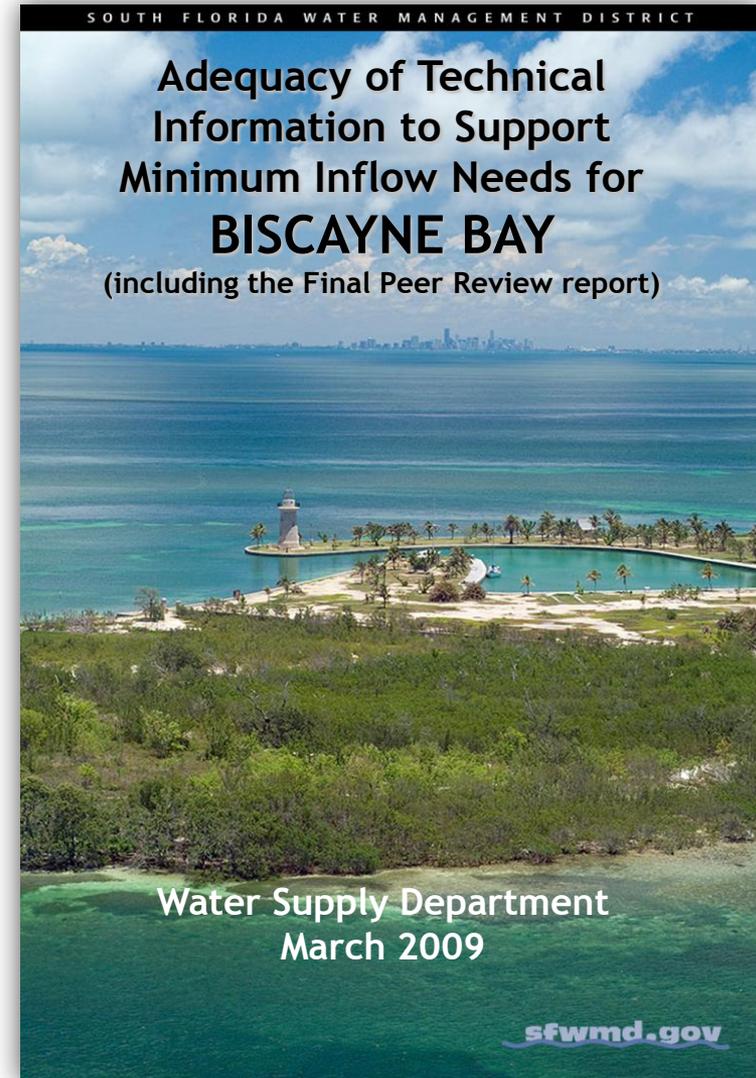
# Background – Protecting Water for Biscayne Bay – 2003 to 2007

- Other concerns raised-
  - The “rest of the bay” should be protected
  - Need to protect restoration-type flows
  - Estimated flows to achieve restoration are greater than existing conditions
  - CERP Biscayne Bay Coastal Wetlands Project flows to bay must be legally protected



# Background – Protecting Water for Biscayne Bay – 2008 to 2009

- Protection efforts refocused:
  - Evaluate freshwater flows for entire Bay
  - Measures to achieve restoration
- Compiled technical document to assess available science
  - Held Peer Review (Oct. 2008)
  - Additional salinity data evaluation needed

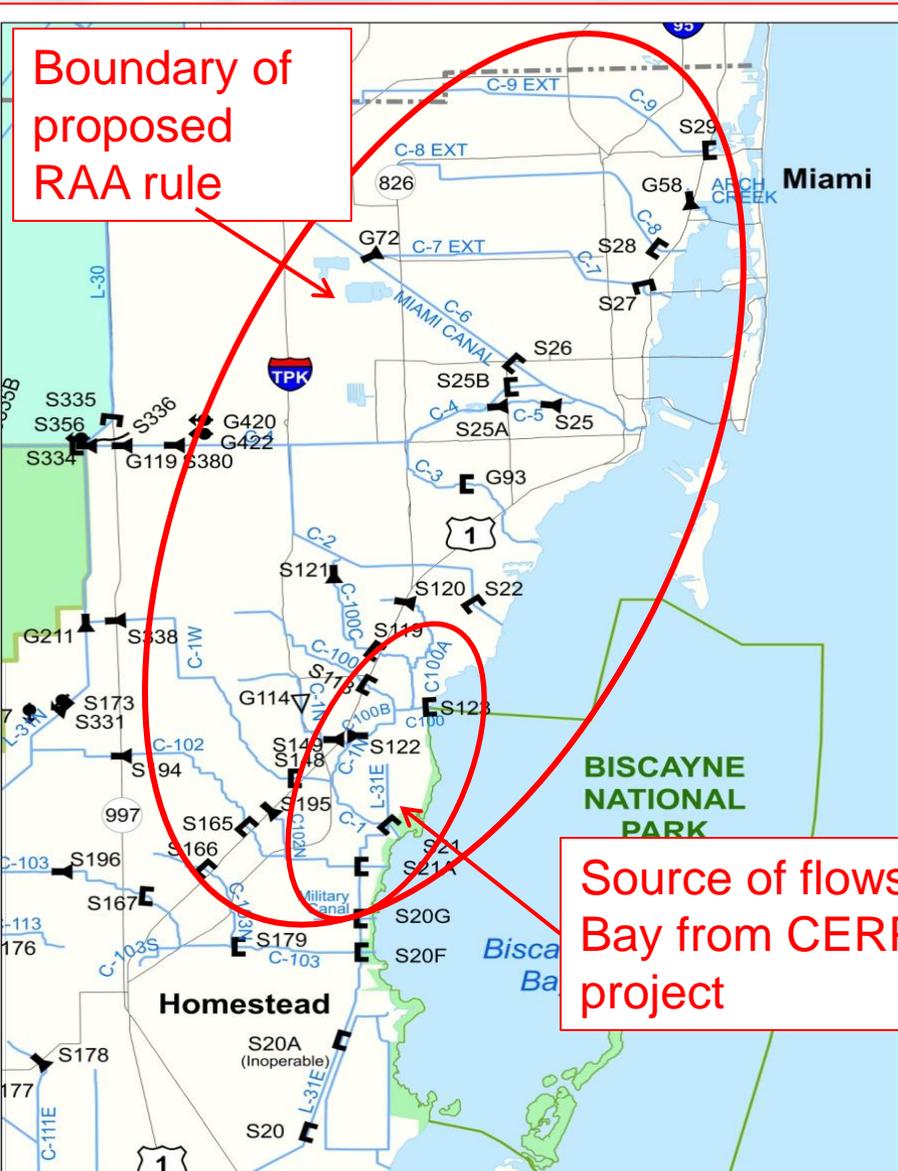


# Protecting Water for Biscayne Bay – Current Considerations

- Protect water for the CERP Biscayne Bay Coastal Wetlands Project
- Protect existing surface water flows to Biscayne Bay
- Phased approach possible



# Options for Biscayne Bay Water Protection



- Protect the existing surface water flows from the S-29 at C-9 Canal South to S-22
- Tool: Restricted Allocation Area Rule



# Options – Biscayne Bay Water Protection

Factors	CERP Project Only Reservation	Reservation	Restricted Allocation Rule
<b>Fish &amp; Wildlife Linkages –Hydro/Sci</b>	PIR – Science work Completed	Ongoing studies & data collection	Resource issues identified
<b>Modeling</b>	PIR - Completed	Multiple models	Regulatory models
<b>Peer Review</b>	Peer review of PIR completed	Peer review anticipated	Rulemaking Review Process
<b>Regulatory implications</b>	Project water protected; limited effect on permit applicants	Surface water flows from large geographic area protected; potential effects on permit applicants	Surface water flows from large geographic area protected; potential effects on permit applicants; (OR SW & GW flows )
<b>SERC Issues</b>	Limited economic effect on regulated entities/ small business	Potential economic issues and affected entities TBD	Potential economic issues and affected entities TBD
<b>Legislative Ratification</b>	Not Anticipated	Anticipated	Anticipated
<b>Timeline</b>	9 -12 months	24 - 36+ months	24 - 36+ months

# Background: Protecting Water for the Caloosahatchee Estuary

- Proposed 2012 MFL Priority Water Body List
  - District committed to update Caloosahatchee MFL
  - Process dependent upon completion of the following additional scientific studies:
    - Quantify the habitat of *Vallisneria* in 2013
    - Continue data collection/analysis for Tidal Basin & its tributaries; develop model to understand sources and contribution to Estuary - through 2014.
    - Investigate effects of MFL flows on oysters, benthic macrofauna zooplankton, ichthyoplankton and phytoplankton - through 2014.
    - Apply hydrodynamic/salinity/*Vallisneria* models and develop a return frequency to improve the existing MFL criteria for the Caloosahatchee River and Estuary - through 2015.
    - Complete technical analysis & documentation for peer review in 2016.

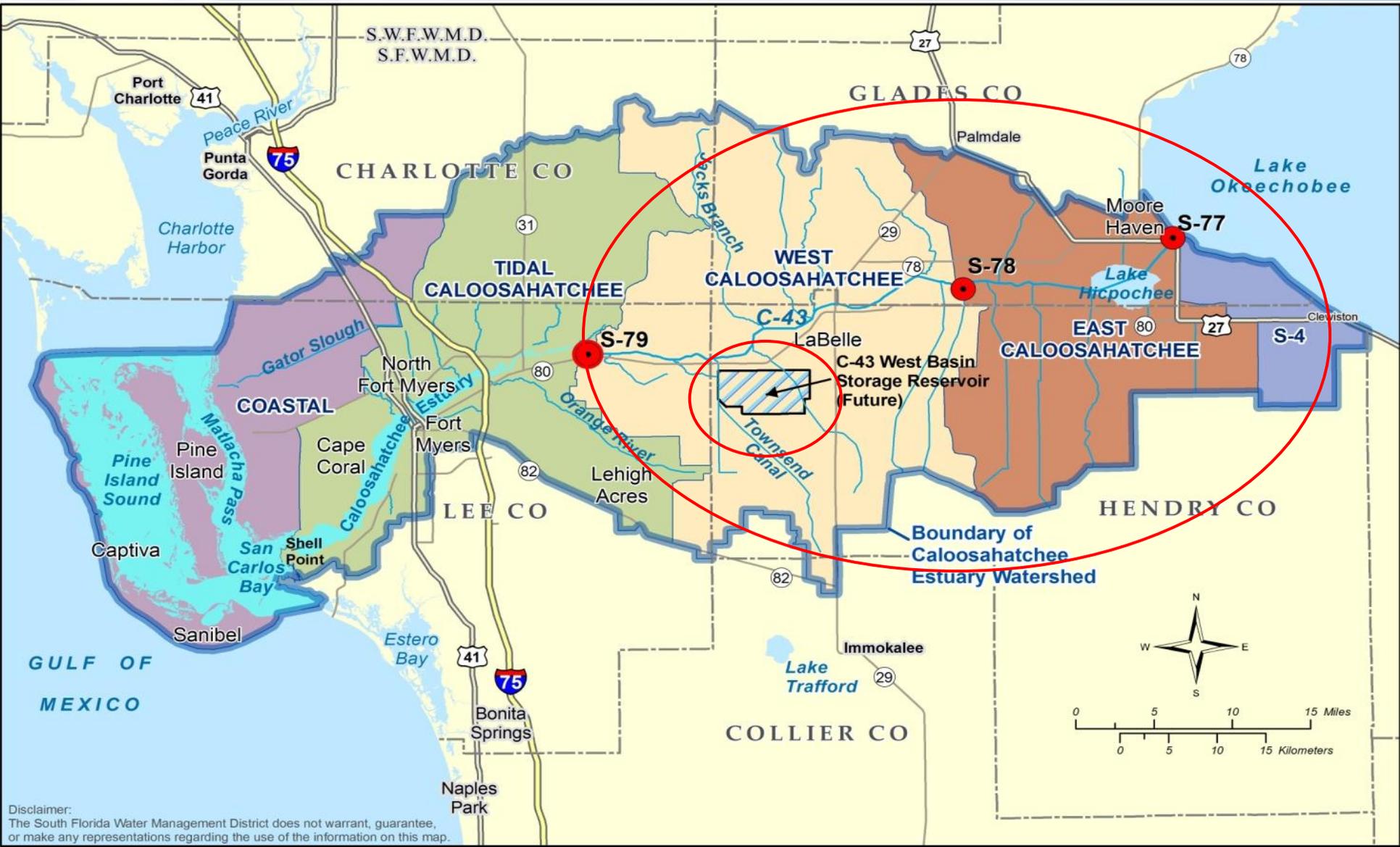


# Protecting Water for the Caloosahatchee Estuary – Current Considerations

- Protect water for the CERP Caloosahatchee River (C-43) West Basin Storage Reservoir Project
- C-43 key component of MFL recovery strategy
- Evaluate existing local basin runoff & linkage to fish and wildlife protection from the Caloosahatchee East, West and S-4 Basins



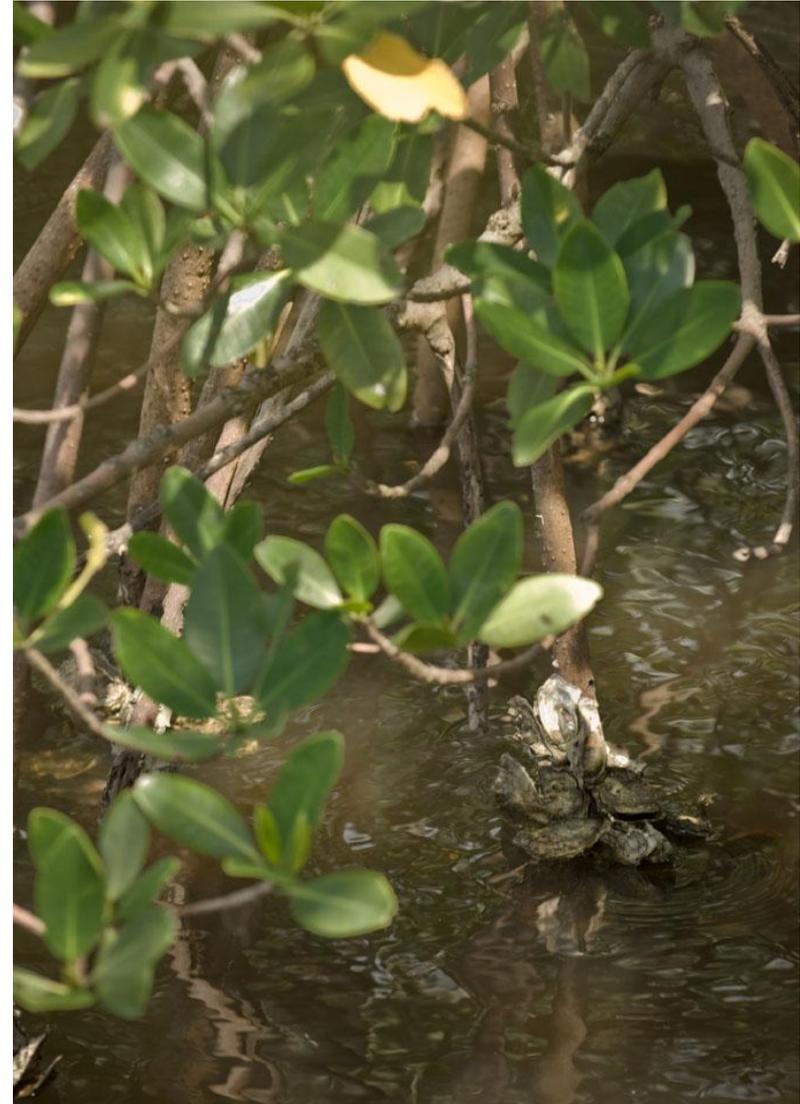
# Overview of Caloosahatchee Watershed



Disclaimer: The South Florida Water Management District does not warrant, guarantee, or make any representations regarding the use of the information on this map.

# Options for Caloosahatchee River Water Protection

- Protect all water from the C-43 Reservoir as identified in CERP project
- Protect local basin runoff from the Caloosahatchee East, West and S-4 basins; in addition to the CERP project water
- Possible phased approach



# Options – Caloosahatchee Water Protection

Factors	CERP Project Only Reservation	Reservation
<b>Fish &amp; Wildlife Linkages – Hydrology / Science</b>	PIR – Science work completed	Ongoing studies & data collection
<b>Modeling</b>	PIR - Completed	Multiple Models
<b>Peer Review</b>	Public and agency review process completed	Peer review anticipated
<b>Regulatory Implications</b>	Project water protected; no effects on permit applicants	Surface water flows from large geographic area protected; potential effects on permit applicants
<b>SERC Issues</b>	Limited economic effects on regulated entities/small business	Potential economic issues and affected entities TBD
<b>Legislative Ratification</b>	Not anticipated	Anticipated
<b>Timeline</b>	9 – 12 months	24 – 36+ months

# WRAC Feedback

# WRAC Meeting – Discussion Summary – Biscayne Bay Water Protection

- Many members stated District should move forward with CERP project reservation
  - Phased approach to protecting water recommended
- Biscayne National Park concerned that protection of CERP project water not adequate to meet needs of Bay as a whole & additional protection is needed
- Environmental community concerned about District's commitment to protect water for Bay as a whole if a phased approach is used.



## WRAC Meeting – Discussion Summary – Protecting Water for Caloosahatchee Estuary

- Many members stated the District should move forward with CERP project reservation
  - Phased approach to protecting water recommended
- Environmental community would like a water reservation for the Caloosahatchee Estuary that protects water in addition to water identified for the CERP project
- Agricultural community would like District to focus on CERP project reservation and then evaluate need for additional protection



# Discussion / Questions?