### AGENDA

### Rule Development Workshop Rule 40E-10 and Section 3.11 of the Basis of Review for Water Use Reservation of Water Identified for Protection by the CERP Biscayne Bay Coastal Wetlands (Phase 1) Project

March 5, 2012 – 10:00 A.M. Biscayne National Park Headquarters 9700 SW 328th Street Homestead, FL 33033-5634

- 1. Introductions (10 Min.)
- 2. Scope and Purpose Don Medellin (10 min.)
- 3. Biscayne Bay Coastal Wetlands Project (Ph. 1) Background John Shaffer (10 min.)
- 4. Overview of Water Reservations Rulemaking Process Beth Lewis (10 min.)
- 5. Draft Technical Document Overview and Water to be Reserved Rick Alleman (10 min.)
- 6. Initial Concepts for Rule Language Beth Lewis/ Steven Memberg (15 min.)
- 7. Public Discussion on Concepts for Rule Language All
- 8. Next Steps Don Medellin (5 min.)

#### THIS WORKSHOP IS OPEN TO THE PUBLIC

#### COMMENTS ON THE PRESENTATIONS AND DRAFT RULE CONCEPTS ARE REQUESTED TO BE SUBMITTED BY MARCH 23, 2012, TWO WEEKS BEFORE THE NEXT WORKSHOP SCHEDULED FOR APRIL 6, 2012 TO:

Jan Sluth, Senior Paralegal, Office of Counsel, South Florida Water Management District, P.O. Box 24680, West Palm Beach, FL 33406; (800) 432-2045, ext. 6299; (561) 682-6299; jsluth@sfwmd.gov or submit comments directly to the Rule Development Forum of the SFWMD web conferencing board available at: <a href="http://sfwmd.websitetoolbox.com/">http://sfwmd.websitetoolbox.com/</a>



Water Reservation for the Biscayne Bay Coastal Wetlands Phase I CERP Project

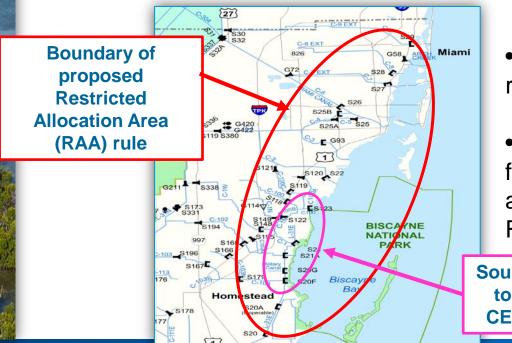
# **Scope and Purpose**

### **Don Medellin**

Principal Scientist Coastal Ecosystems, Applied Sciences Bureau

### History of Water Reservation for the Biscayne Bay Coastal Wetlands Project (Ph. 1)

- Governing Board authorized Notice of Rule Development for Biscayne Bay in December 2010
- Staff began investigating options to:



• Meet CERP project requirements

•To protect existing canal flows for Biscayne Bay using a Restricted Allocation Area Rule

Source of flows to Bay from CERP project

### History of Water Protection for Biscayne Bay

- In November 2010, the Florida Legislature enacted amendments to the Florida Administrative Procedures Act which established new requirements for rulemaking
- In January 2011, Office of Fiscal Accountability and Regulatory Reform (OFARR) established to review all District existing rules and ongoing rule development activities
  - Required submittal of Regulatory Plan by July 1, 2011 identifying proposed new and ongoing rule developments
  - Regulatory Plan timely submitted by the District
  - Governing Board direction to be sought before rule development workshops could continue after coordination with OFARR

### History of Water Protection for Biscayne Bay

- In October and November 2011, District staff undertook series of educational presentations to prepare Governing Board for direction on scope of water protection
  - Coordination with the Water Resources Advisory
     Commission also took place in November 2011
- In December 2011, the Governing Board considered the following factors in determining the scope of the water protection for Biscayne Bay

# **OPTIONS – Considered by GB for Biscayne Bay Water Protection**

Factors	CERP Project Only Reservation	Reservation	Restricted Allocation Rule			
Fish & Wildlife Linkages –Hydro/Sci	PIR – Science work Completed	Ongoing studies & data collection	Resource issues identified			
Modeling	PIR - Completed	Multiple models	Regulatory models			
Peer Review	Peer review of PIR completed	Peer review anticipated	Rulemaking Review Process			
Regulatory implications	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 )			
SERC Issues	Limited economic effect on regulated entities/ small business	Potential economic issues and affected entities TBD	Potential economic issues and affected entities TBD			
Legislative Ratification	Not Anticipated	Anticipated	Anticipated			
Timeline	meline 9 -12 months		24 - 36+ months			

# **Scope and Purpose**

- Governing Board directed staff at December 2011 meeting to proceed with water reservation for the CERP project as a first phase for protecting water for the Biscayne Bay Coastal Wetlands Phase I CERP Project
- Purpose of this rule development process is to reserve water identified to be protected for the natural system as identified in the Biscayne Bay Coastal Wetlands (Phase I) Project Implementation Report



# **Discussion / Questions?**

Water Reservation for the

**Biscayne Bay Coastal Wetlands Phase I CERP Project** 

**Scope and Purpose** 

**Don Medellin** 

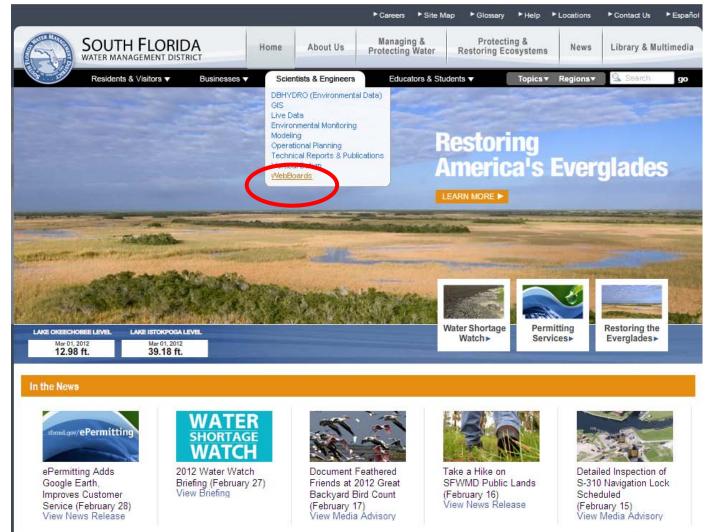
Principal Scientist Coastal Ecosystems, Applied Sciences Bureau



# Next Steps

# **Next Steps**

- Website provides information for your review
  - www.evergladesplan.org OR
  - http://www.evergladesplan.org/pm/projects/ docs\_28\_biscayne\_bay\_pir.aspx
- Provide comments on the proposed rule concepts
  - Contact information on agenda



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DRAFT South Florida Environmental Report (SFER)

This WebBoard provides annual Peer Review and Public comment on the draft SFER. The South Florida Environmental Report provides an annual update of agency reporting on Everglades, Lake Okeechobee, Kissimmee Basin and Coastal Ecosystems. http://sfwmd.websitetoolbox.com/?forum=174527

#### SFWMD Annual Permit Reports

This WebBoard provides for annual review and comment on the SFWMD permit reports. Annual Permit Reports are included as Volume III of the draft SFER.

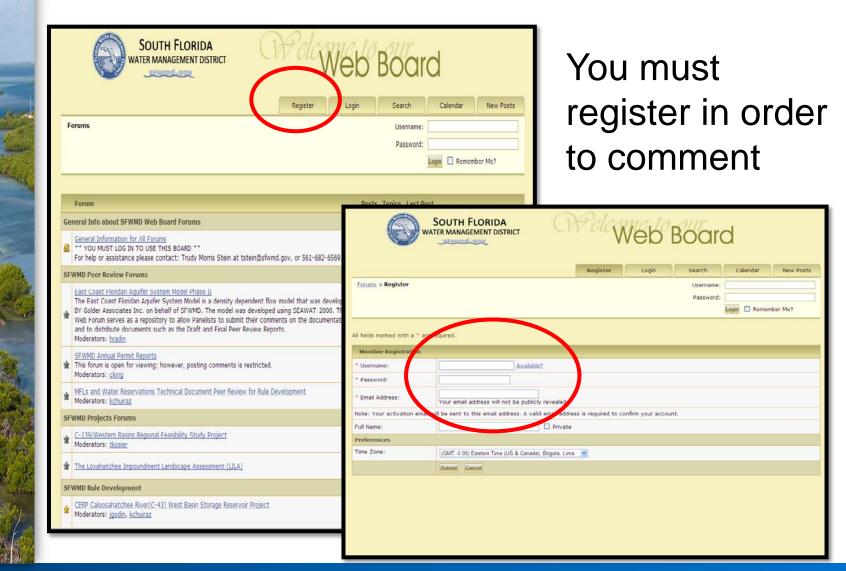
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#### \* MFLs and Water Reservations Technical Document Peer Review for Rule Development

This WebBoard serves as a nexus of communication between independent scientific peer review panelists, stakeholders and SFWMD staff. It provides the public with the opportunity to observe and participate in the review of the technical documents, data, modeling and assumptions used to draft rules that will protect natural system waters. Scientific peer review panels are convened to review technical information used to support the establishment of a minimum flow and level or a water reservation rule. Members of the public are encouraged to participate in this process and may ask questions or present relevant scientific data to the peer review panelist during their evaluations. All such comments will be included in the rule development record. http://sfwmd.websitetoolbox.com/?forum=174677

#### East Coast Floridan Aquifer System Model

The East Coast Floridan Aquifer System Model is a density dependent flow model that was developed by Golder Associates Inc. on behalf of SFWMD. The model was developed using SEAWAT-2000. The Web Forum serves as a repository to allow Panelists to submit their comments on the documentation and to distribute documents such as the Draft and Final Peer Review Reports. http://sfwmd.websitetoolbox.com/?forum=181740







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# **Important Dates**

- <u>March 23<sup>rd</sup></u> Public Comments Due on Presentations and Rule Concepts from Workshop
- March 26<sup>th</sup> Distribution of DRAFT
   Document to Support Rule
- April 6<sup>th</sup> Workshop #2
  - Same Time and Location
  - Main topics draft document and proposed rule language will be discussed



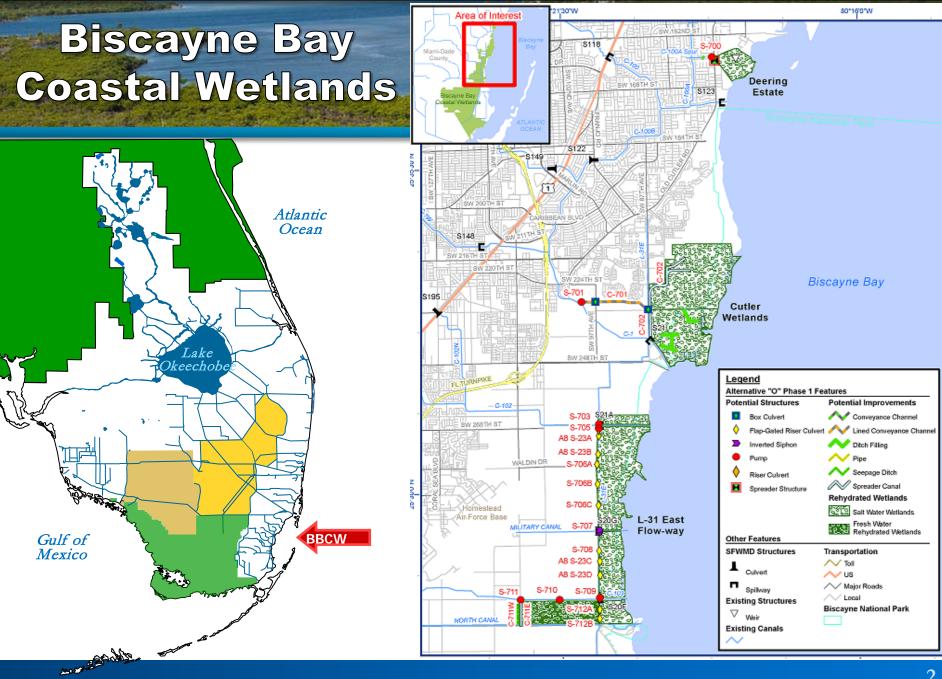


### Water Reservation for the Biscayne Bay Coastal Wetlands Phase I CERP Project

# **Project Overview and Status**

John Shaffer

Senior Environmental Analyst Everglades Policy & Coordination



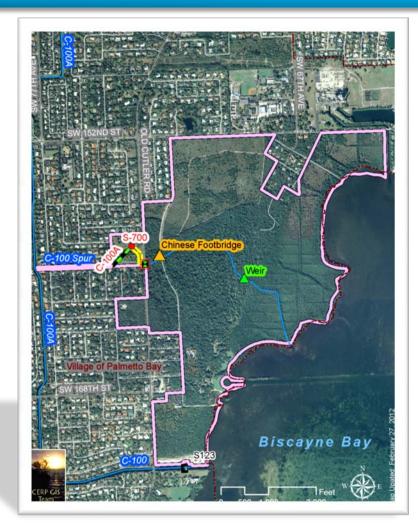
## **Goals and Objectives**

- Improve quantity, quality, timing and distribution of freshwater to Biscayne Bay
- Redistribute freshwater flow and minimize point source discharges
- Improve near shore and saltwater wetland salinity regimes
- Re-establish productive nursery habitat
- Preserve and restore natural coastal glades habitat
- Re-establish connectivity between the coastal and adjacent wetlands



# **Deering Estate Features**

- 500' long extension of the C-100A Spur Canal
- 100 CFS (S-700) Pump Station
- 540' of 60" underground pipe
- 42' wide concrete spreader structure to distribute flows to Biscayne Bay Coastal Wetlands including the historic Cutler Creek



# **Cutler Flow Way Features**

- 400 CFS Pump Station (S-701) on the C-1 Canal
- 1.3 mile long lined conveyance canal to deliver water east to Biscayne Bay Coastal Wetlands
- Culverts under SW 97 Avenue, SW 87 Avenue and L-31E
- 2-mile-long spreader canal to distribute flows to Biscayne Bay Coastal Wetlands
- Backfilling remnant mosquito ditches



# **L-31E Flow Way Features**

- Five pump stations
  - S-703 (50 cfs)
  - S-705 (100 cfs)
  - S-709 (40 cfs)
  - S-710 (40 cfs)
  - S-711 (40 cfs)
- Inverted siphon (S-707)
- Ten 36" culverts to distribute water from L-31E to Biscayne Bay Coastal Wetlands
- 425 +/- acre freshwater wetland between C-103 Canal and North Canal



# **Expedited L-31E Culverts**



# **Expedited Deering Estate Components**

### Current Project Implementation Report (PIR) Schedule

- Publish PIR/FEIS in Federal Register
   Dec 2011
- Chief's Report Signed
   Mar 2012
- Assistant Secretary of the Army Review Jun 2012
- Office and Management Budget Approval Aug 2012
- Record of Decision Signed
   Aug 2012
- Chief's Report to Congress
   Sep 2012



# **Questions?**

### Water Reservation for the Biscayne Bay Coastal Wetlands Phase I CERP Project **Project Overview and Status**

### **John Shaffer**

Senior Environmental Analyst Everglades Policy & Coordination



### Water Reservation for the Biscayne Bay Coastal Wetlands Phase I CERP Project **Overview of Water Reservations** and Rulemaking Process

Beth Lewis Senior Specialist Attorney Office of Counsel

# **Presentation Overview**

- What is a Water Reservation?
- How is a Reservation Established?



# What is a Water Reservation?

A water reservation is a legal mechanism to restrict water for the protection of fish and wildlife or the public health and safety (authority: F.S. 373.223(4))

# What is a Water Reservation?

- "The Governing Board or the department, by regulation, may reserve from use by permit applicants, water in such locations and quantities, and for such seasons of the year, as in its judgment may be required for the protection of fish and wildlife or the public health and safety.
- Such reservations shall be subject to periodic review and revision in the light of changed conditions.
- However, all presently existing legal uses of water shall be protected so long as such use is not contrary to the public interest." s. 373.223(4), Fla. Stat.

# What is a Water Reservation? (cont.)

- Withholds water from allocation for consumptive use
  - Protection of existing condition
  - Protection of waters contributing toward a restored system
- Water quantities reserved have a location and timing component based on natural system needs

# Why is a Water Reservation Needed?

- The Rule is acceptable to U.S. Army Corps of Engineers (Corps) to demonstrate water provided by Comprehensive Everglades Restoration Plan projects is protected
- The Rule must be effective in order for the District to enter into a Project Partnership Agreement to obtain construction funding for the Biscayne Bay Coastal Wetlands Phase 1Project



# What Does a Water Reservation Do?

- Prevents new consumptive uses from accessing reserved water
- Existing legal uses that are not contrary to the public interest are protected

# What a Water Reservation Does Not Do

- x Establish an operating regime
- x Drought proof the natural system
- x Ensure wildlife proliferation





# How is a Water Reservation Established?

By Administrative Rule – Public Process

- Rule Development Phase
  - Notify Office of Fiscal Accountability and Regulatory Reform about proposed rule
  - Work with stakeholders to identify issues of concern
  - Draft and refine rule language
  - Draft Statement of Estimated Regulatory Costs (SERC)
  - Draft Technical Report identifying the water to be reserved
  - Intent is to resolve issues prior to Governing Board considering the rule for adoption

### How is a Water Reservation Established? (cont.)

- Proposed Rule
  - Governing Board authorizes publication of proposed rule and final SERC
  - Rule sent to Florida Department of Environmental Protection (DEP), Joint Administrative Procedures Committee (JAPSC), Small Business Regulatory Advisory Council and Department of Economic Opportunity for Review
  - Notices sent to all interested parties
  - After 21 days, consider any additional comments and proposals for lower regulatory cost alternatives (LCRA) to the proposed rule

### How is a Water Reservation Established? (cont.)

- Rule Adoption
  - Rule is presented to Governing Board at public hearing
    - Additional opportunity for public input
    - Board notified of any changes made since publication
    - Additional changes can be made at the public hearing
    - If no changes made since publication, rule becomes effective 20 days after filing with the Department of State unless rule requires ratification by the Florida Legislature
    - If changes made, additional coordination required with JAPSC, FDEP and with any person who submitted a LCRA
      - SERC must be revised to show whether LCRA are adopted or rejected

## How is a Water Reservation Established? (cont.)

#### Legislative ratification required if:

- 1. Rule is likely to have an adverse impact on economic growth, private sector job creation or employment, or private sector investment in excess of \$1 million in the aggregate within 5 years after the implementation of the rule;
- 2. Rule is likely to have an adverse impact on business competitiveness, including the ability of persons doing business in the state to compete with persons doing business in other states or domestic markets, productivity, or innovation in excess of \$1 million in the aggregate within 5 years after the implementation of the rule; or
- 3. Rule is likely to increase regulatory costs, including any transactional costs, in excess of \$1 million in the aggregate within 5 years after the implementation of the rule.

# What Does the Rule Look Like?

- 40E-10, F.A.C. Water Reservations
  - Chapter containing reservations by geographic area
- Section 3.11 Water Reservations in the "Basis of Review for Water Use Permit Applications"
  - Contains any specific criteria developed as part of the rulemaking process that consumptive use permit applicants must meet to demonstrate compliance with each water reservation

# Questions?



#### Water Reservation for the Biscayne Bay Coastal Wetlands Phase I CERP Project Document to Support Rule and Water Quantification

**Rick Alleman** 

**Lead Scientist** 

**Coastal Ecosystems, Applied Sciences Bureau** 

### **Supporting Document**

- The supporting document is based on information contained in the Project Implementation Report (PIR)
- Documents how the quantification of water was derived
- Identifies water to be reserved

#### Development of the Document to Support the Rule

- Summary of the selected sections from the PIR
- Only the sections that support the State water reservation rulemaking are included
- No new analysis performed
- PIR information is available at the following links:
  - www.evergladesplan.org OR
  - http://www.evergladesplan.org/pm/projects/d ocs\_28\_biscayne\_bay\_pir.aspx

#### Overview of the Document to Support Rule

- Introduction
  - Purpose
- Basis for the Reservation
- Project Area and Scope
  - Goals & Objectives
  - Project Features
  - Operational Strategy

#### Overview of the Document to Support Rule (cont.)

- Description of the Watershed
  - Hydrology
  - Description of the Estuary
- Fish and Wildlife
- Project Benefits
- Quantification of Water
- Literature Cited



#### Water Reservation for the Biscayne Bay Coastal Wetlands Phase I CERP Project

# Water Quantification

# **Freshwater is Critical to Project Objectives**

- 1. Reestablish productive nursery habitat along the shoreline
- 2. Redistribute freshwater flow to minimize point source discharges to improve freshwater and estuarine habitat
- 3. Restore and improve quantity, quality, timing, distribution of freshwater to the bay, including Biscayne National Park
- 6. Restore nearshore and saltwater wetland salinity regimes

# **Salinity Habitat Required**

verage Salinity, Aug 97 - Oct 97 (ppt)

33.0 30.0 27 0

15.0 12.0 9.0

6.0 3.0

#### **Evaluation Criterion 3.A.:**

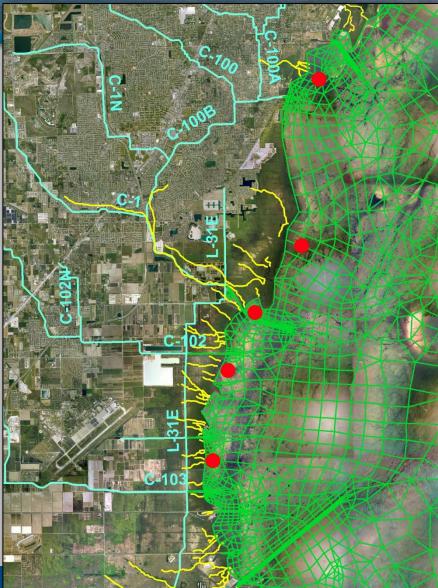
Nearshore salinity patterns exhibit a broader area and extended duration of mesohaline conditions.

"Create a persistent positive salinity gradient from freshwater wetlands into the bay with an average bottom salinity of **20**."

Incorporated into alternative plans benefit evaluation

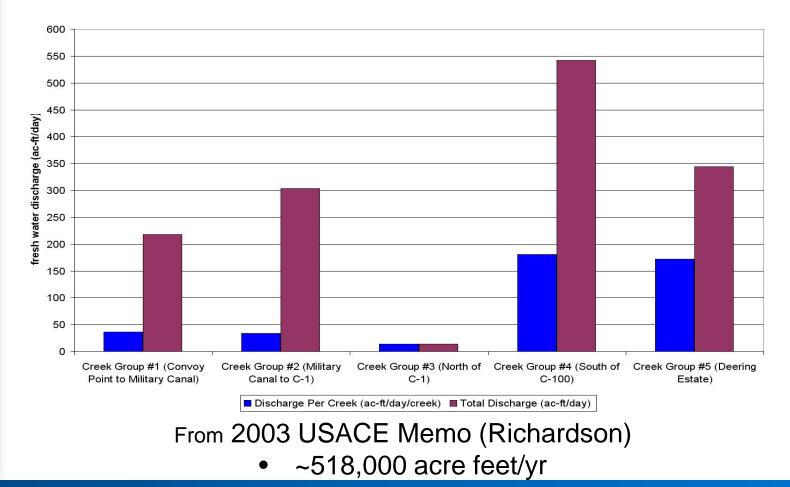
# **How Much Water is Needed?**

- Biscayne Bay TABS-MDS hydrodynamic model was run for one year simulation
- Salinity maintained at 20 nearshore target
- Freshwater added through creeks simulating BBCW project



# Water Estimated by Creek Group

Minimum Annual Average Freshwater Discharge Required to Maintain a Viable Nearshore Estuarine Environment

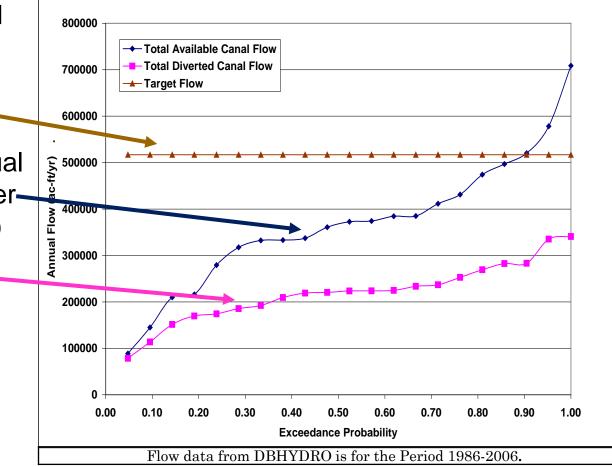


# **Determination of Diverted Water**

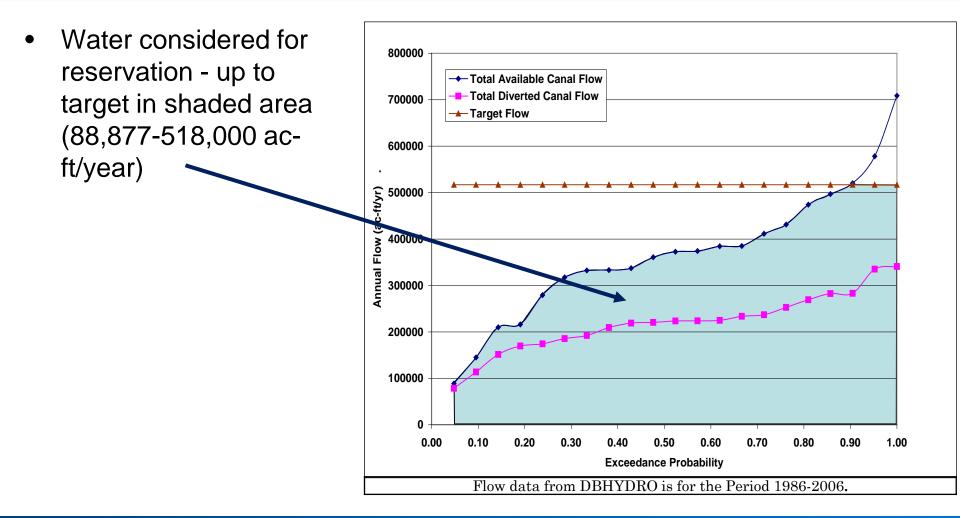
- Available water was determined by comparing how much water historically flowed from each canal (1986-2006) daily. Results are from SFWMD's DBHYDRO database.
- The daily flows were compared to project pump capacities located on each canal.
- Flows up to the pump capacity were assumed to be diverted into wetlands.
- Daily flows greater than pump capacity are discharged through the canal into the bay directly.

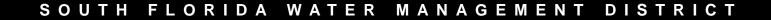
### **PIR Compared Annual Water Needs to Actual and Diverted**

- Brown line estimated water for nearshore target annually (~518,000 ac-ft)
- Blue line actual annual flows or available water— (88,877-708,649 ac-ft)
- Pink line estimated water that project will divert annually into wetlands (78,413-340,968 ac-ft)



### **Water Considered for Reservation**





# **Questions?**

Water Reservation for the Biscayne Bay Coastal Wetlands Phase I CERP Project

### **Water Quantification**

#### **Rick Alleman**

Lead Scientist Coastal Ecosystems, Applied Sciences Bureau



Water Reservation for the Biscayne Bay Coastal Wetlands Phase I CERP Project

## **Rule Language Concepts**

**Beth Lewis** 

Senior Specialist Attorney Office of Counsel

- 62-40.474, F.A.C. FDEP Water Resources Implementation Rule provides programmatic guidance for water reservations
- Water reservations for the protection of fish and wildlife may be used to:
  - Aid in the restoration of natural systems that provide fish and wildlife habitat
  - Prevent withdrawals in any other circumstance required to protect fish and wildlife
- Project objectives are consistent with programmatic guidance

- District considering how to protect surface water flows as identified in the Project Implementation Report
  - Total Diverted Canal Flows
  - Total Available Canal Flows
  - Flows are being identified by reaches with the following canals:
    - C-100, C-1, C-102, Military and C-103
- Flows exceeding restoration target are not being considered for reservation

- District to develop implementation criteria for the "Basis of Review for Water Use Permit Applicants"
  - Identify how to protect reserved water
    - Direct withdrawals from canal reaches
    - Indirect withdrawals from canal reaches
  - Identify uses that do not withdraw reserved water
    - Example: Permit renewals
  - Identify criteria for applicants to demonstrate how to access water in excess of restoration target when available
- Permitted users existing prior to effective date of rule to be protected

- Basis for reservation developed from information taken from approved CERP Project Implementation Report (PIR)
  - PIR subject to U.S. Army Corps of Engineers Independent Peer Review process was completed on December 1, 2009 by a team of experts external to the Corps in accordance with procedures described in U.S. Army Corps of Engineers Engineer Circular (1165-2-209)
- Scientific Peer Review
  - District has the discretion to determine whether to conduct scientific peer review on technical information supporting the water reservation

# **Questions?**

Water Reservation for the Biscayne Bay Coastal Wetlands Phase I CERP Project

#### **Rule Language Concepts**

#### **Beth Lewis**

Senior Specialist Attorney Office of Counsel