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## South Florida Water Management District

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### **BIG CYPRESS BASIN BOARD MEETING AGENDA**

August 25, 2023

11:00 AM

Collier County Government Center

Commission Chambers, 3rd Floor

3299 Tamiami Trail East, Naples, FL 34112

FINAL

1. Call to Order - Charlette Roman, Chair, Big Cypress Basin Board
2. Pledge of Allegiance
3. Oath of Office Administered to New Board Members
4. Agenda Revisions - Lisa Koehler
5. Agenda Item Abstentions by Board Members
6. Consider Approval of the Minutes of the April 28, 2023 Meeting
7. Basin Administrator's Report - Lisa Koehler
  - Collier County Cooperative Agreement
  - Communication Tower Update
8. General Public Comment
9. Conservancy of Southwest Florida: Filter Marsh Expansion for Improved Water Quality - Rob Moher, President and CEO (Staff contact, Sean Murphy)
10. Proposed 16th Street NE Bridge Variance (Staff contact, Rich Virgil)
11. Basin Modeling Program Overview (Staff contact, Brad Jackson)

12. Fiscal Year 2023-2024 Budget Presentation (Staff contact, Candida Heater)

A Resolution No. BCBB 2023 - 0801 A Resolution of the Big Cypress Basin Board of the South Florida Water Management District approving the submittal of the millage rate (0.0978 mill) for Fiscal Year 2023-2024; requesting the Governing Board of the South Florida Water Management District to levy ad valorem taxes within the Big Cypress Basin based on that rate to finance Basin functions contained in the Fiscal Year 2023-2024 Basin budget; providing an effective date.

A Resolution No. BCBB 2023 - 0802 A Resolution of the Big Cypress Basin Board of the South Florida Water Management District submitting the Fiscal Year 2023-2024 Basin budget in the amount of \$15,124,815 to the Governing Board of the South Florida Water Management District for inclusion in the District budget; providing an effective date.

BCB Resolution No. BCBB 2023-0801 (Staff contact, Candida Heater)

**Agenda Item Background:**

[Resolution No. BCBB 2023-0801](#)

BCB Resolution No. BCBB 2023-0802 (Staff contact, Candida Heater)

**Agenda Item Background:**

[Resolution No. BCBB 2023-0802](#)

13. Board Comment

**Technical Reports**

14. Field Station Activity Report - Andrew Wolf

15. Water Conditions Report - Brad Jackson

**Staff Reports**

16. Monthly Financial Report - Candida Heater

17. General Public Comment

18. Board Comment

19. Adjourn

Presentations for agenda items: 9, 10, 11, 12, 14, and 15 (Staff contact, Lisa Koehler)

**Agenda Item Background:**

[09 Conservancy of Southwest Florida](#)

[10 Proposed 16th Street NE Bridge Variance](#)

[11 Basin Modeling Program](#)

[12 Fiscal Year 2023-2024 Budget](#)

14 Field Station Activity Report  
15 Water Conditions Report

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
**BIG CYPRESS BASIN**  
**RESOLUTION NO. BCBB 2023-0801**

**A Resolution of the Big Cypress Basin Board of the South Florida Water Management District approving the submittal of the millage rate (0.0978 mill) for Fiscal Year 2023-2024; requesting the Governing Board of the South Florida Water Management District to levy ad valorem taxes within the Big Cypress Basin based on that rate to finance Basin functions contained in the Fiscal Year 2023-2024 Basin budget; providing an effective date.**

**WHEREAS**, Section 373.0697, Florida Statutes provides that Basins may, pursuant to s. 9(b), Art. VII of the State Constitution, by resolution request the Governing Board of the District to levy ad valorem taxes within such Basin; and

**WHEREAS**, upon receipt of such request, the Governing Board of the District shall levy a Basin tax to finance statutory Basin functions; and

**WHEREAS**, the Big Cypress Basin Board of the South Florida Water Management District (District), by the passage of this resolution, hereby requests the Governing Board of the District to levy ad valorem taxes within the Basin to finance statutory basin functions reflected in the Fiscal Year 2023-2024 Basin budget; and

**WHEREAS**, the gross taxable value for the operating purposes not exempt from taxation within the Big Cypress Basin of the District has been certified by the Collier and Monroe County Property Appraisers to the District as \$138,775,424,931; and

**WHEREAS**, the Big Cypress Basin Board of the District has determined that a tax levy of nine hundred seventy-eight ten thousandths mill (0.0978 mill) (\$0.0978 per \$1,000 of assessed value) upon all property lying within the Big Cypress Basin subject to the Basin's tax in the amount of \$13,572,237 is necessary to provide funds for Big Cypress Basin budgeted expenditures as set forth in the tentative budget; and

**WHEREAS**, the Big Cypress Basin Board conducted a public meeting on August 25, 2023 on this resolution and provided an opportunity for the public to be heard regarding the proposed levy of taxes and the proposed millage rate.

**NOW THEREFORE, BE IT RESOLVED BY THE BIG CYPRESS BASIN BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:**

**Section 1.** The Big Cypress Basin Board of the District hereby requests the Governing Board of the District to levy ad valorem taxes within the Basin to finance statutory basin functions at the millage rate set forth in Section 2 of this resolution.

**BIG CYPRESS BASIN**  
**Resolution No. BCBB 2023-0801**

**Section 2.** The Big Cypress Basin Board hereby approves a tax levy of nine hundred seventy-eight ten thousandths mill (0.0978 mill) (\$0.0978 per \$1,000 of assessed value) upon all property lying within the Basin subject to the Basin's tax in the amount of \$13,572,237 in order to provide funds for Basin budgeted expenditures and is hereby submitted to the Governing Board of the District for final adoption.

**Section 3.** This resolution shall take effect immediately upon adoption.

**PASSED** and **ADOPTED** this 25<sup>th</sup> day of August, 2023.

BIG CYPRESS BASIN OF THE SOUTH FLORIDA  
WATER MANAGEMENT DISTRICT, BY ITS  
GOVERNING BOARD

By:

\_\_\_\_\_  
Chair

ATTEST:

Approved as to form:

By:

\_\_\_\_\_  
Office of Counsel

\_\_\_\_\_  
Deputy District Clerk/Secretary

Print name:  
\_\_\_\_\_

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT  
BIG CYPRESS BASIN**

**RESOLUTION NO. BCBB 2023-0802**

**A Resolution of the Big Cypress Basin Board of the South Florida Water Management District submitting the Fiscal Year 2023-2024 Basin budget in the amount of \$15,124,815 to the Governing Board of the South Florida Water Management District for inclusion in the District budget; providing an effective date.**

**WHEREAS**, Section 373.0695, Florida Statutes, provides that a Basin board prepare the annual budget for the basin and submit the budget to the Governing Board of the District for inclusion in the District budget; and

**WHEREAS**, the Big Cypress Basin Board has prepared a budget for Fiscal Year 2022-2023, a copy of which is attached to this resolution; and

**WHEREAS**, the Big Cypress Basin Board conducted a public meeting on August 25, 2022 on the budget and provided an opportunity for the public to be heard regarding the budget; and

**WHEREAS**, the Big Cypress Basin Board has determined that it is necessary, proper and in the public interest to submit the attached budget to the Governing Board of the South Florida Water Management District (District) for inclusion in the District budget.

**NOW THEREFORE, BE IT RESOLVED BY THE BIG CYPRESS BASIN BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:**

**Section 1.** The attached Fiscal Year 2023-2024 budget for the Big Cypress Basin is approved and is hereby submitted to the Governing Board of the District for inclusion in the District budget.

**Section 2.** This Resolution shall take effect immediately upon adoption.

*This space intentionally blank.*

**BIG CYPRESS BASIN**  
**Resolution No. BCBB 2023-0802**

**PASSED** and **ADOPTED** this 25<sup>th</sup> day of August, 2023.

BIG CYPRESS BASIN OF THE SOUTH FLORIDA  
WATER MANAGEMENT DISTRICT, BY ITS  
GOVERNING BOARD

By:

\_\_\_\_\_

Chair

ATTEST:

Approved as to form:

By:

\_\_\_\_\_

Office of Counsel

\_\_\_\_\_  
Deputy District Clerk/Secretary

Print name:

\_\_\_\_\_



# Big Cypress Basin Filter Marsh Expansion Project Update

Sean Murphy, Staff Engineer

Big Cypress Basin Board Meeting – August, 2023

# Filter Marsh Expansion



## Regional Partnership Program

- Big Cypress Basin Strategic Plan
- Local governments, public/private water providers and other entities
- Program objectives:
  - Water quality
  - Ecosystem restoration



# Filter Marsh Expansion



## Filter Marsh Expansion Project

- The Big Cypress Basin provided funding through the Regional Partnership Program
- Project was selected for cost-share funding based on improving water quality
- The Big Cypress Basin Board approved partnership funding for \$196,200 or 40%
- The Conservancy's Filter Marsh Expansion Project consisted of two phases



# Filter Marsh Expansion



## ➤ Phase 1 (\$150,000)

- Included a 62.7% expansion of their Filter Marsh and wet detention area
- Extension of their littoral shelf along the western boundary of the wet detention pond

## ➤ Phase 2 (\$46,200)

- Collected monthly water quality samples 1-year post construction
- Final water quality report
- Big Cypress Board presentation



# Filter Marsh Expansion



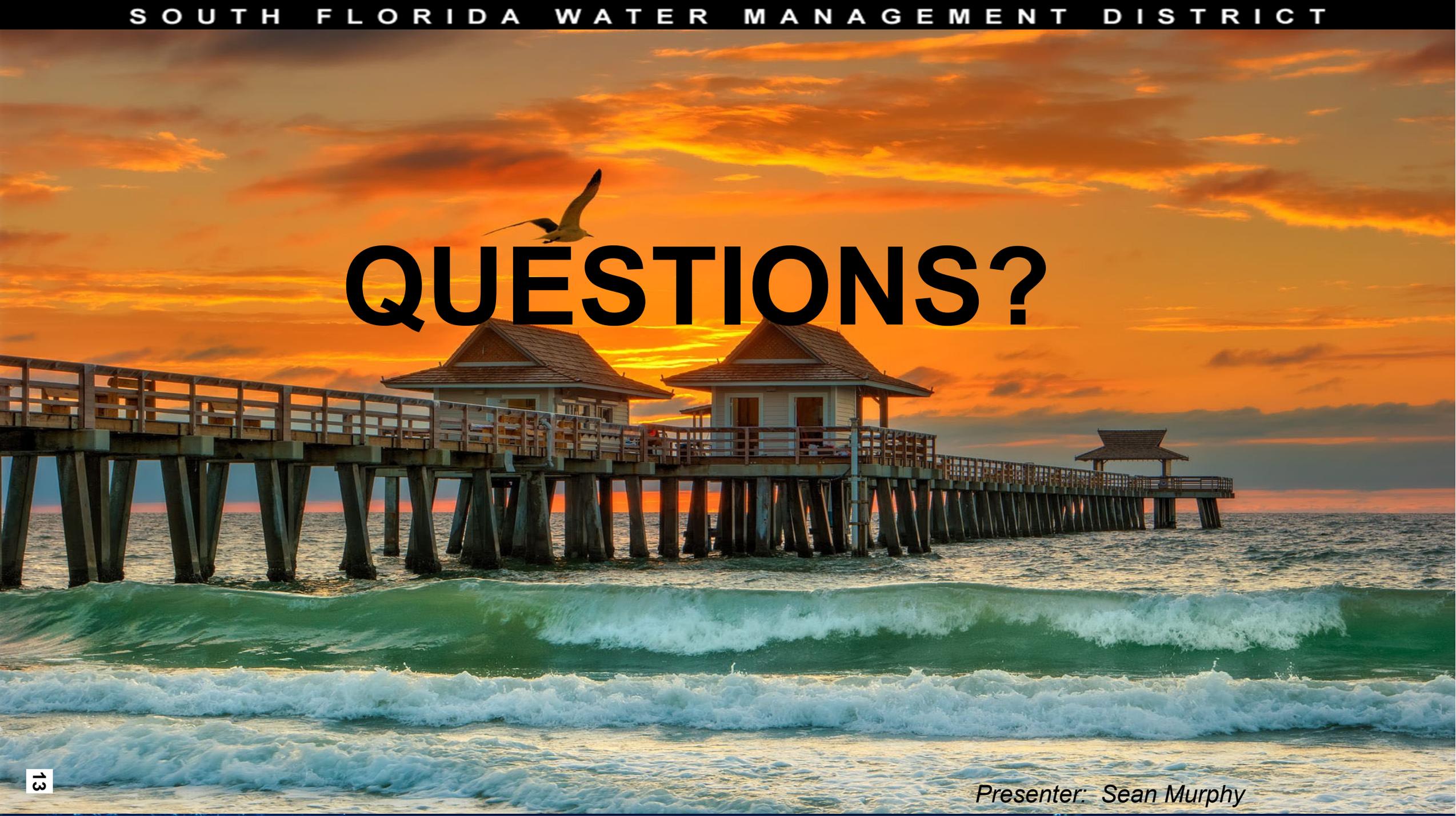
## Filter Marsh Expansion Project

### ➤ Objectives

- Improve water quality for Naples Bay
- Expand the existing filter marsh
- Increase stormwater treatment
- Provide additional uptake of nutrients



# QUESTIONS?



# Conservancy Filter Marsh Expansion Project SFWMD Agreement No: 4500119573

*This project was made possible by a partnership between the Conservancy of Southwest Florida & the South Florida Water Management District for construction and implementation of water quality, stormwater management and alternative water supply projects that meet objectives of the South Florida Water Management District, Big Cypress Basin's mission, and Big Cypress Basin's Strategic Plan.*



*Kathy Worley*



2008

*Ditch*

*Future  
Filter Marsh  
Site*

*Gordon River*

Google Earth

Image U.S. Geological Survey

400 ft



**CONSERVANCY**  
of Southwest Florida  
OUR WATER, LAND, WILDLIFE, FUTURE.

# Major Construction Completed

SEPT 2009

Original Filter Marsh Site

Water flows down the ditch, into the filter marsh and then into the Gordon River.

Ditch

Conservancy Nature Center



Kathy Worley

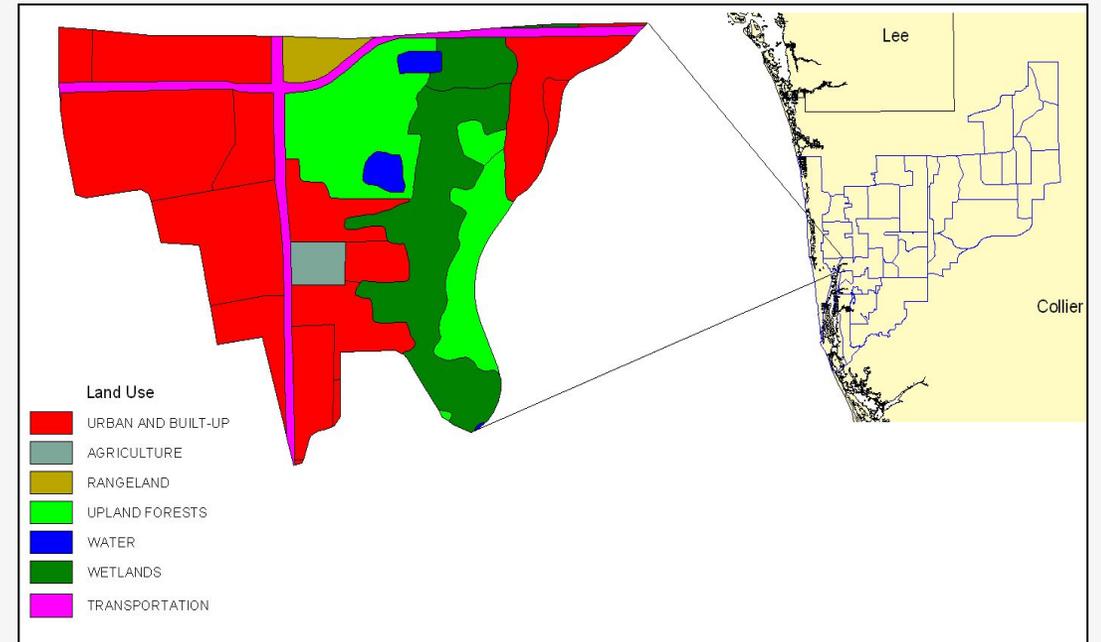
072109-9531

# Stormwater Runoff

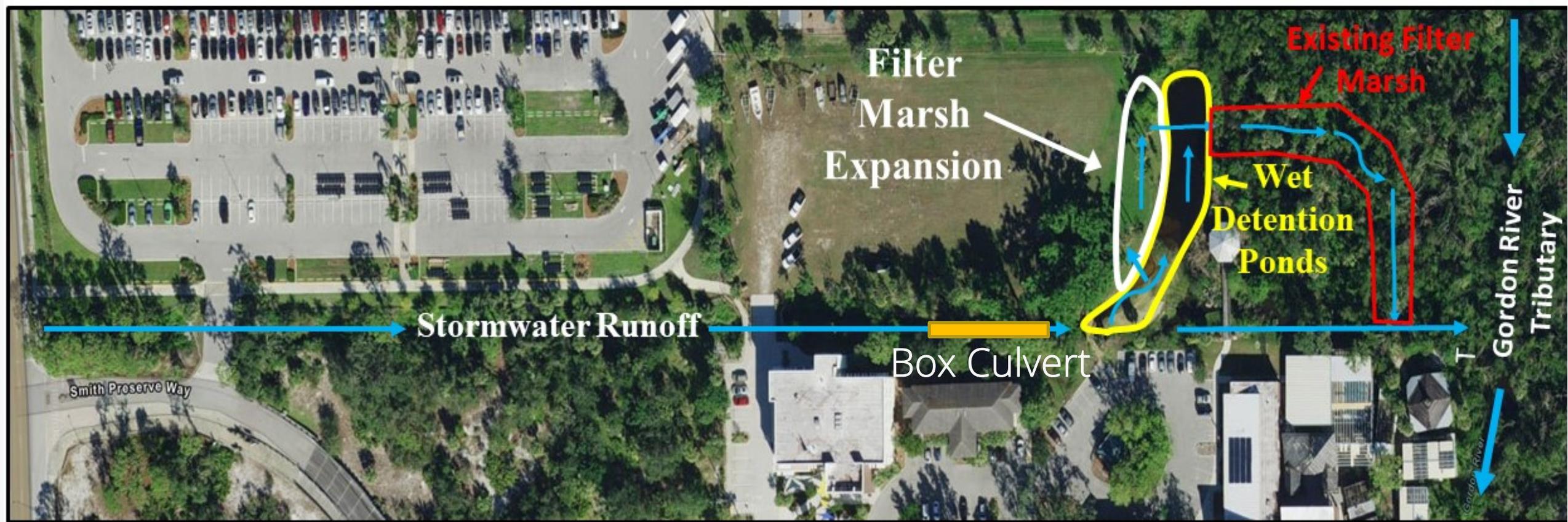


## Gordon River South Subbasin

## Naples Bay Watershed



# Filter Marsh Expansion Project



- Objectives:
- 1) Offset loss of treatment caused by the addition of the box culvert
  - 2) Improved stormwater treatment capacity
  - 3) Increased wetland species diversity & biological productivity
  - 4) Increased greenspace.



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OUR WATER, LAND, WILDLIFE, FUTURE.

# Groundbreaking



*Kathy Worley*

# Box Culvert Installation



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OUR WATER, LAND, WILDLIFE, FUTURE.

# Wet Detention Area & Filter Marsh Expansion



# Monitoring Stations

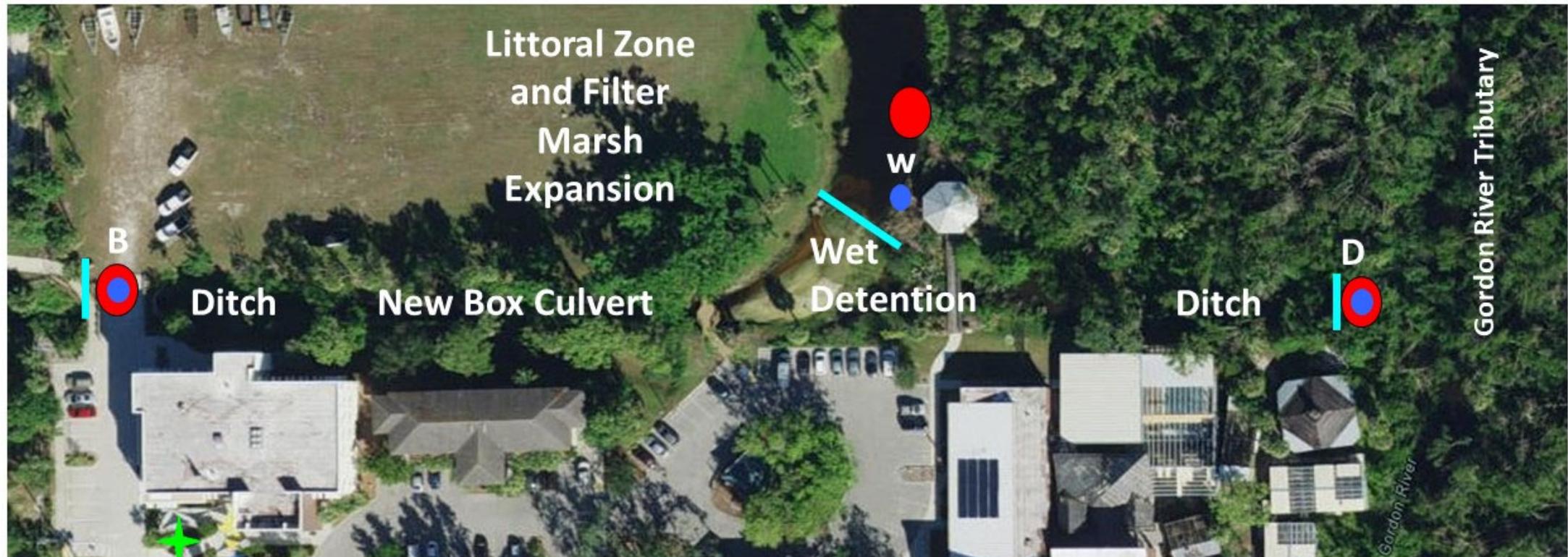
-  **Weather Station**
-  **Water Level Monitoring Station**
-  **Water Quality Station**
-  **Flow Meter Transect**

## Stations

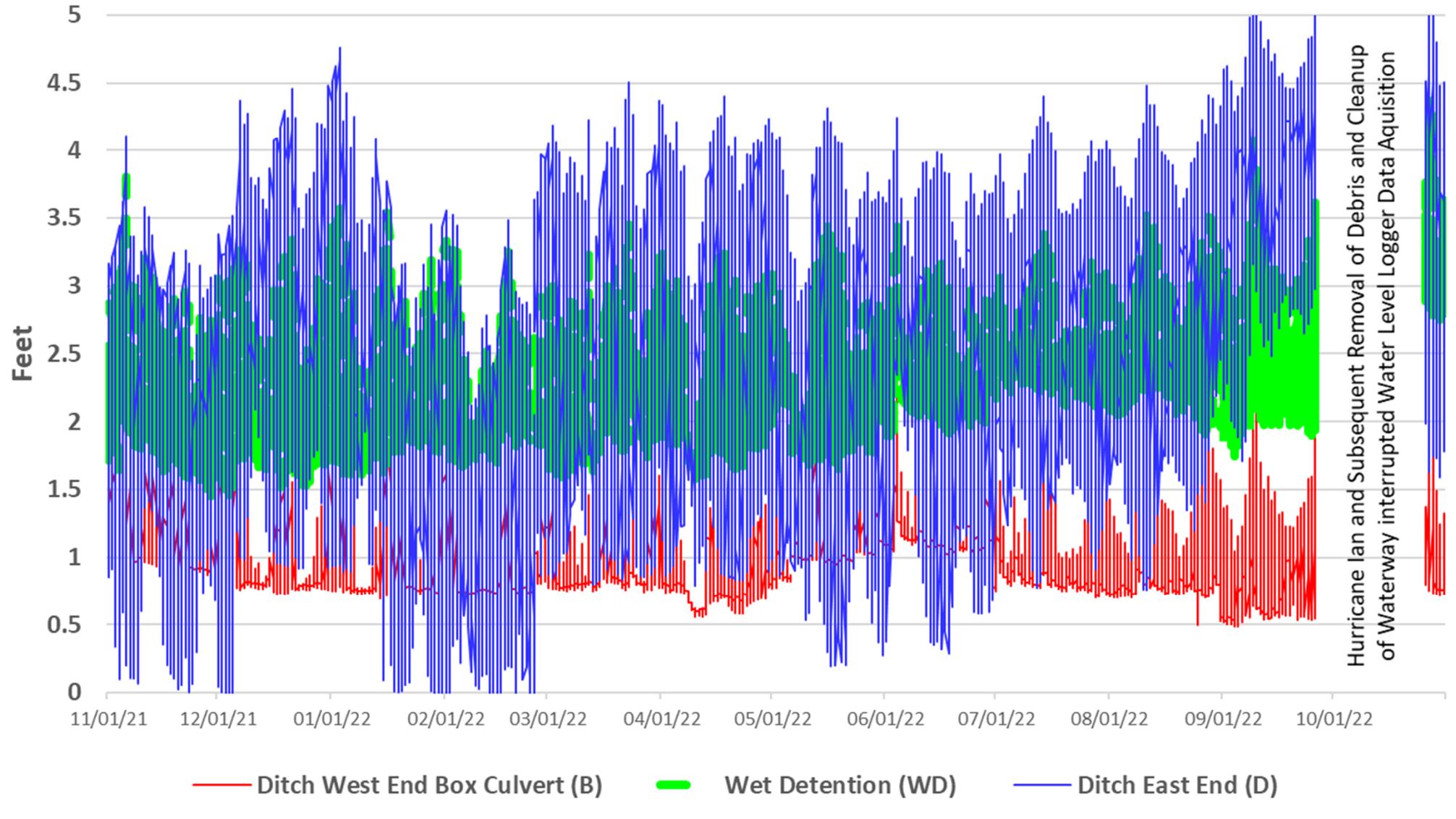
**D = Ditch East End**

**B = Box Culvert**

**W = Wet Detention**



# Water Levels November 2021 – October 2023





## Key Takeaways from the Monitoring

- Stormwater treatment area increased by 62.7%
- Flow velocity decreased significantly within the constructed wetland.
- More pollutant removal through sedimentation in the expanded wet detention pond
- More pollutant assimilation by plants in the added littoral zone.
- The outgoing flow had a lower concentration of total nitrogen in comparison to the inflow.
- Increased refugia for aquatic species.



# Educational Opportunities



Kathy Worley



*The Conservancy of Southwest Florida would like to thank the South Water Management District for its contributions and assistance in bring this project to fruition.*

*Special Thanks to Charlette Roman.  
Lisa Koehler & Shawn Meyer*



# 16th Street N.E. Bridge Crossing the Golden Gate Main Canal



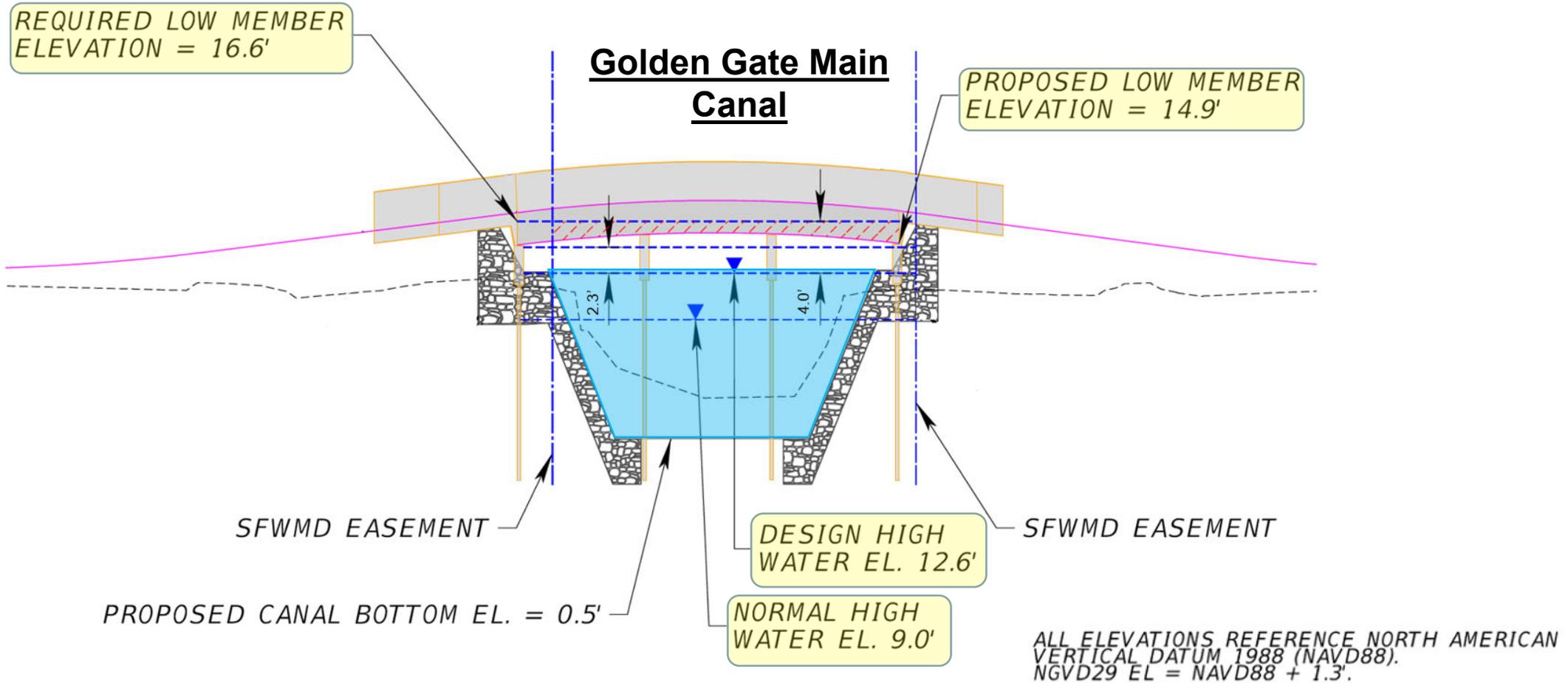
**Rich Virgil, P.E., PMP - Field Operations Division Director  
Big Cypress Basin Board Meeting  
August 25, 2023**

# General Location and Request

- Collier County is requesting a ROW Permit to construct a two-lane vehicle bridge crossing Golden Gate Main Canal.
- District criteria requires the bridge to have a minimum vertical clearance of 4.0 feet above the design water surface elevation.
- Collier County is requesting a waiver of criteria to construct the bridge with a vertical clearance of 2.3 feet, resulting in a waiver of 1.7 feet.

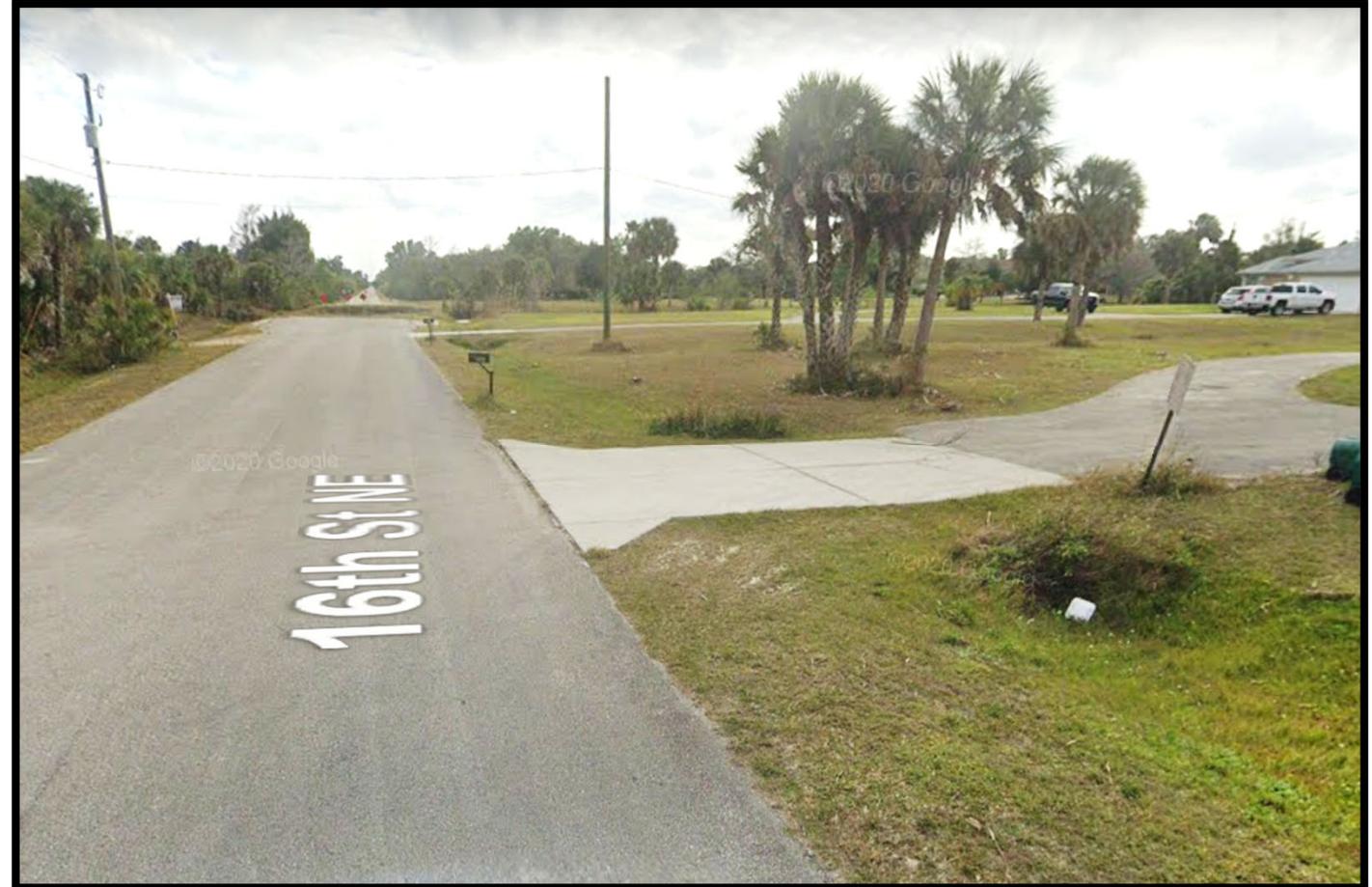


# Proposed Bridge Profile



## Justification for Waiver

- For a waiver to be granted, an applicant must demonstrate a hardship that prevents it from compliance with criteria.
- The County asserts to raise the bridge elevation 2 feet to meet District criteria would require reconstruction of roadway for a distance of approximately 260 feet on each side of the canal in order to meet roadway standards.



*Looking south towards Golden Gate Main Canal, showing driveways that would be negatively impacted by raising of the roadway to elevate the proposed bridge.*

# Vertical Clearance and Maintenance

- Vertical clearance is required so that District boats and equipment can travel and/or reach under the bridge to perform routine maintenance and emergency operations.
- At this location, Field Operations has determined the proposed vertical clearance elevation will not hinder the District's ability to perform its duties.



*District staff removes vegetation from BCB canals when necessary to ensure proper canal function.*

# Permitting

- To mitigate for the lower bridge, the County will construct a maintenance access point for District use at a location near the bridge (to be determined by District staff).
- Construction of the maintenance access point will be a condition of the ROW Permit.
- The request for a waiver to the vertical clearance requirement will be considered by the District's Governing Board at its September 14, 2023 meeting.



*Example of County-constructed maintenance access point for District use. North side of the Cocohatchee Canal, west of Collier Boulevard.*

# Discussion



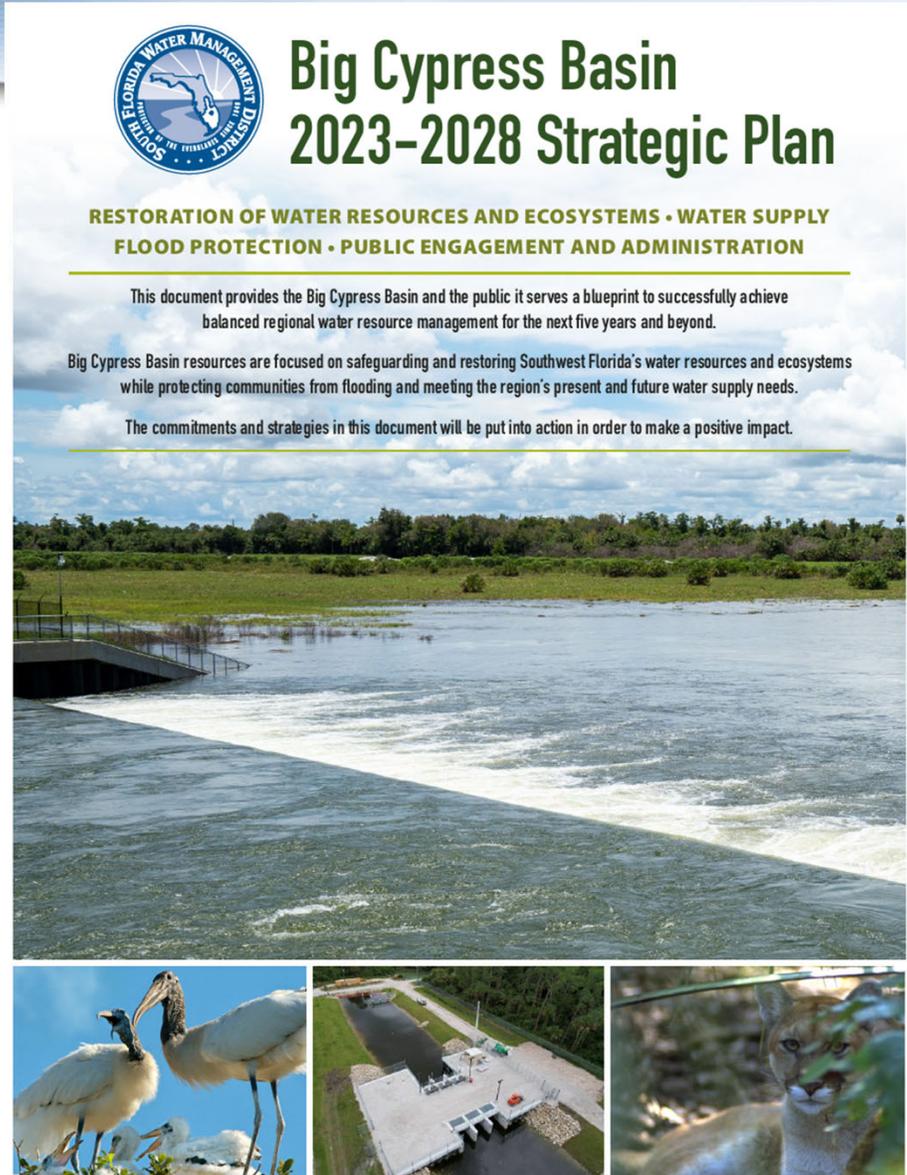
# Basin Modeling Program Overview

Big Cypress Basin Board Meeting  
August 25, 2023

Brad J Jackson, P.E., CFM  
Big Cypress Basin – Principal Engineer



# Overview - Core Mission Support



**Big Cypress Basin  
2023-2028 Strategic Plan**

**RESTORATION OF WATER RESOURCES AND ECOSYSTEMS • WATER SUPPLY  
FLOOD PROTECTION • PUBLIC ENGAGEMENT AND ADMINISTRATION**

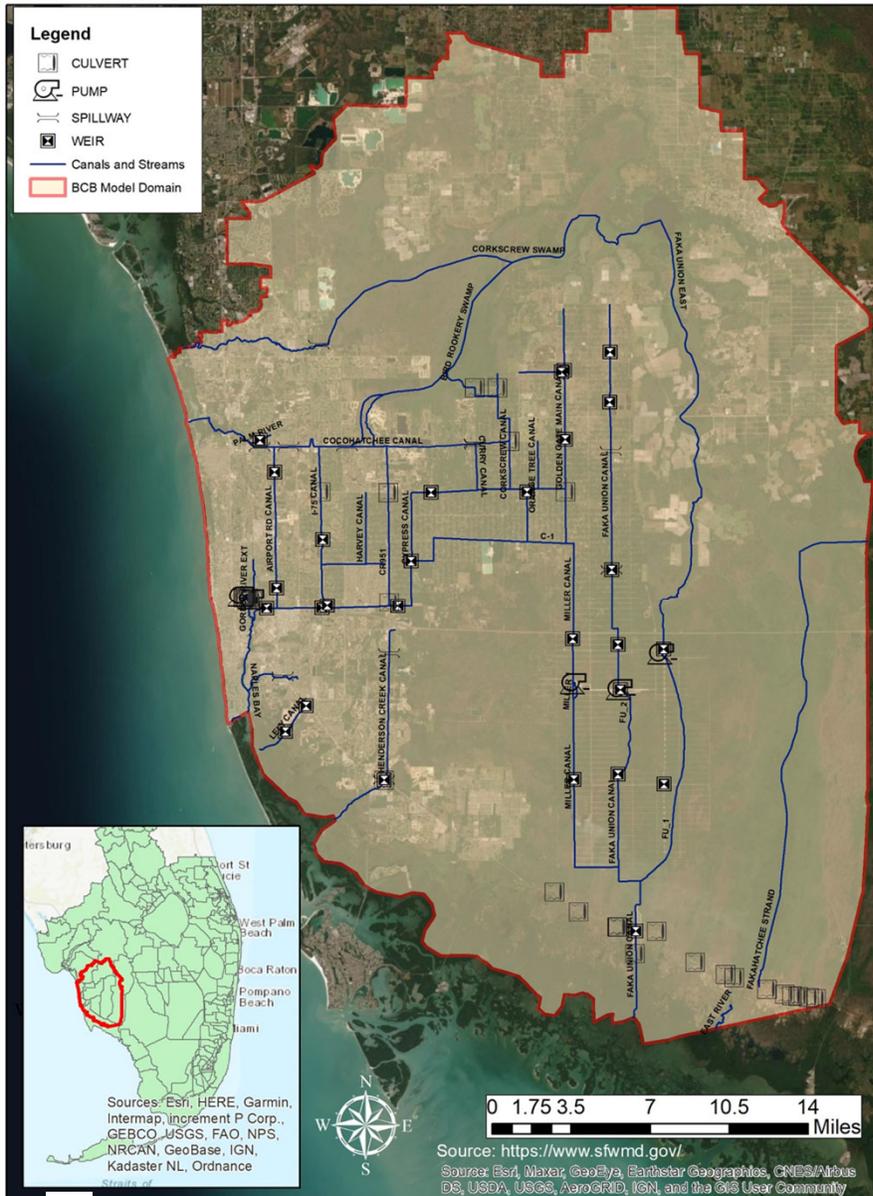
This document provides the Big Cypress Basin and the public it serves a blueprint to successfully achieve balanced regional water resource management for the next five years and beyond.

Big Cypress Basin resources are focused on safeguarding and restoring Southwest Florida's water resources and ecosystems while protecting communities from flooding and meeting the region's present and future water supply needs.

The commitments and strategies in this document will be put into action in order to make a positive impact.

- Hydrologic & Hydraulic Modeling Program Overview
- Supports BCB Primary Core Missions
  - Restoration of Water Resources & Ecosystems
    - Corkscrew Watershed Initiative
  - Water Supply
  - Flood Control
    - Canal system operational criteria
    - Capital improvement program support

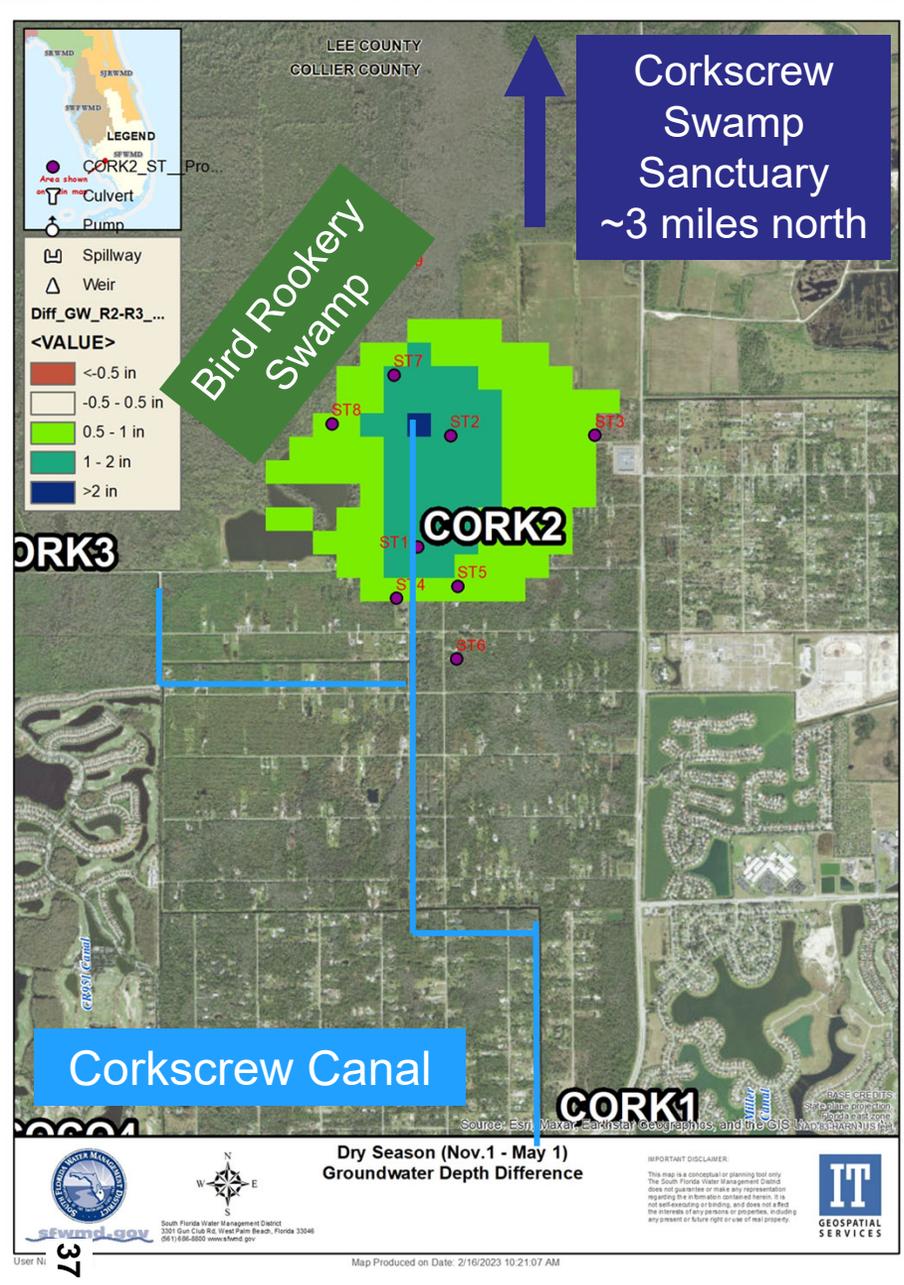
# Restoration of Water Resources & Ecosystems



- **BCB Regional Watershed Model Update**
  - Started September 2021
  - Presentation of initial modeling tool - October 2023
  - Scheduled completion Winter 2023-2024
- **Corkscrew Watershed Initiative**
  - Initiate regional comprehensive Corkscrew study (2024 – 2026)
    - Following completion of model update
    - Commence 3-year public planning project (2024)
  - Identify and evaluate projects and restoration concepts (2025 – 2027)
  - Early restoration project implementation (2026 – 2028+)
  - Corkscrew Headwater Improvements Construction (2027 - 2029)

# Restoration of Water Resources & Ecosystems

- Corkscrew Canal Operational Improvements (Ongoing)
  - Goal to reduce discharge and increase water levels upstream of CORK2 through operational changes
  - Maintain existing flood control levels
  - Show no adverse impact to existing septic systems
  - Initial results – Slightly increased groundwater in early dry season
  - Operations change showed no effect in later dry season
  - Next steps
    - Incorporate additional operational changes during Corkscrew Watershed Initiative
    - Continue to maximize water levels through real-time Corkscrew canal operations



Presenter: Brad Jackson

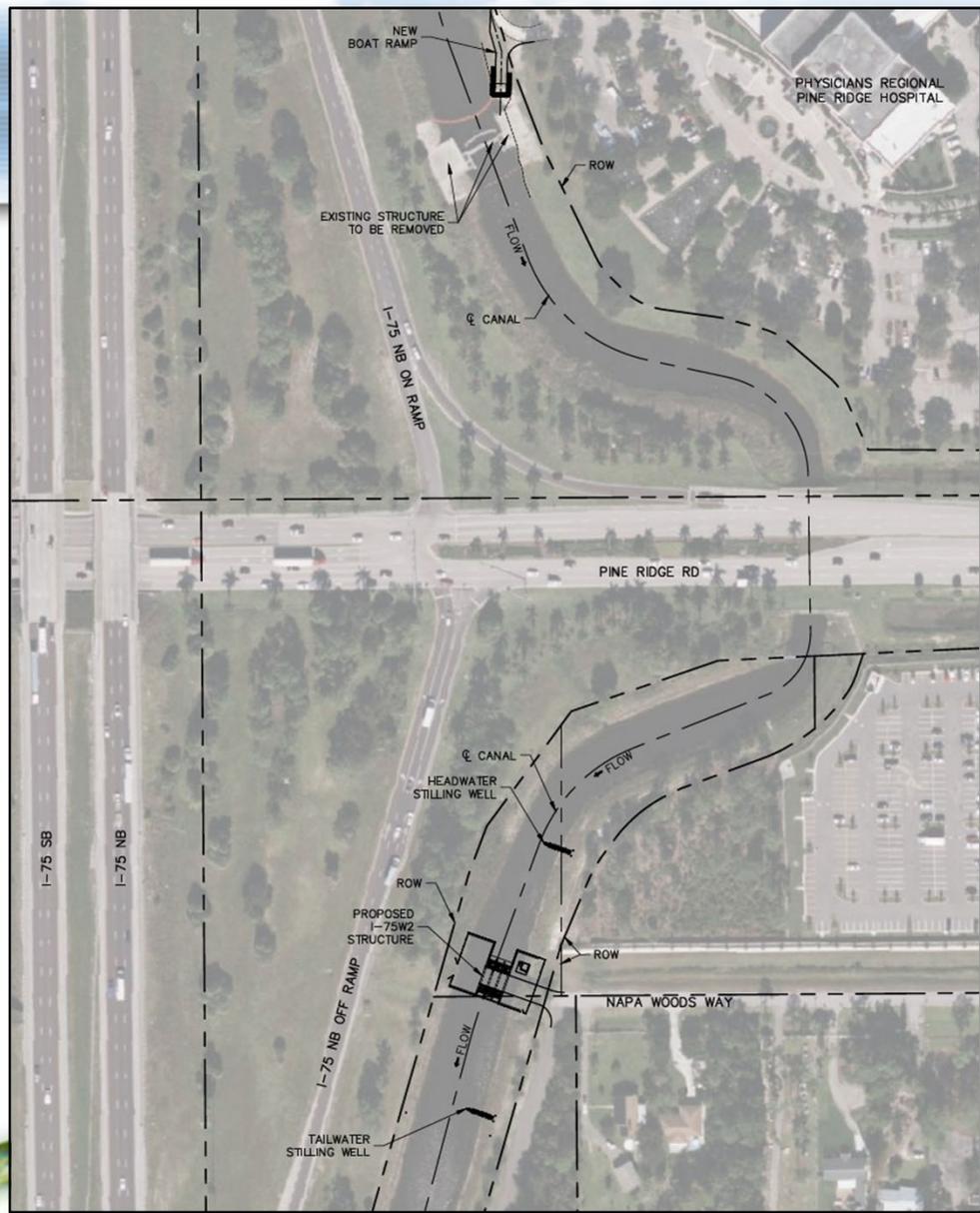
# Restoration of Water Resources & Ecosystems



Faka Union Canal at Golden Gate Blvd looking North  
May 2008

- Faka Union Dry Season Operational Improvements (upcoming)
  - Utilize new modeling tool for testing new operations
  - Portions of Faka Union canal historically dry out completely during peak of dry season during dry and drought years
  - Determine sensitivity of surface & surficial water levels by altering:
    - Structure Operations and/or Water Users
- Upper Faka Union Improvements (upcoming)
  - Utilize new modeling tool to develop replacement locations and styles of 3 water control structures
  - Goals
    - Increase hydroperiod & depth for wetlands & increase aquifer recharge
    - Eliminate redundant and obsolete infrastructure
    - Improve flood control and operational flexibility

# Flood Control – Mission Support



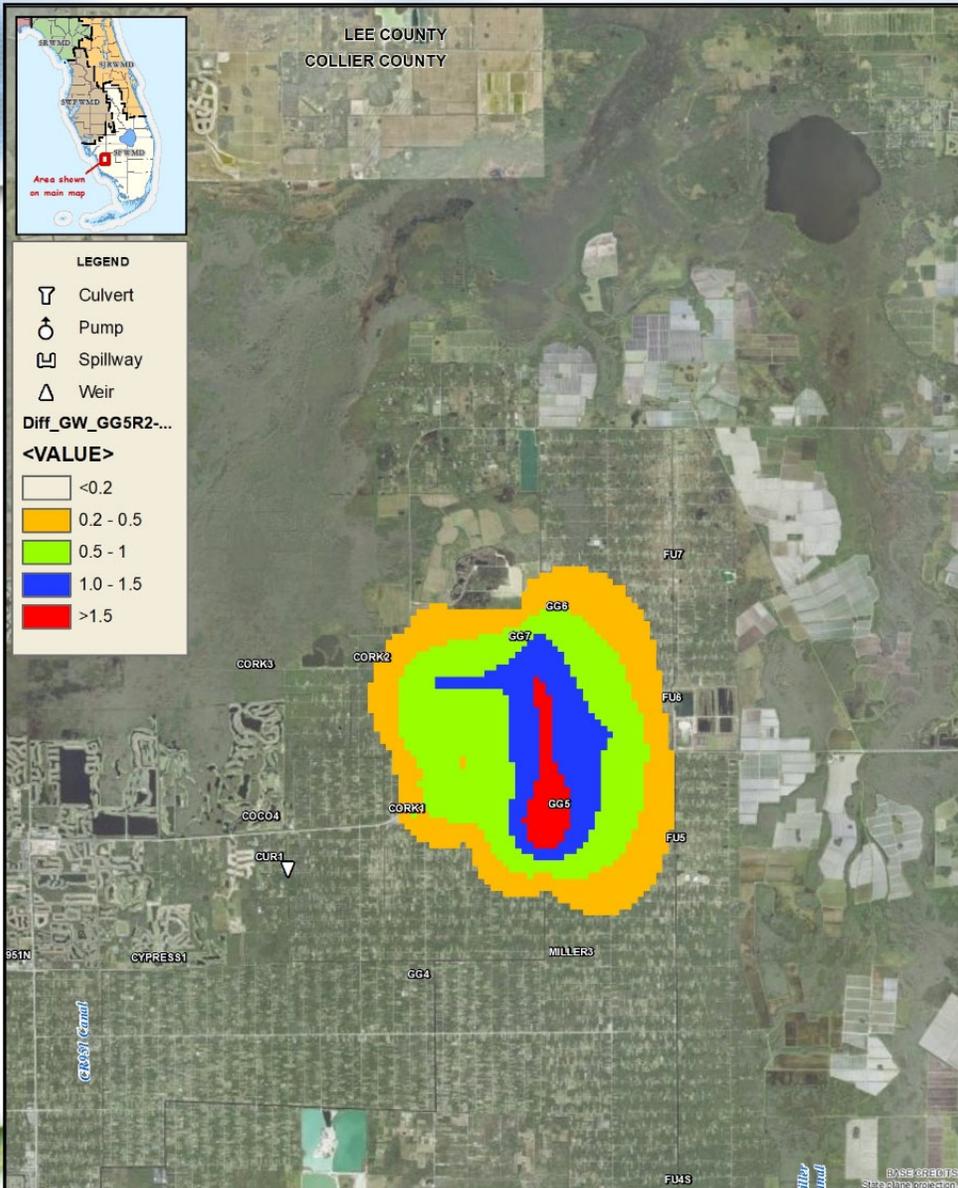
I-75W2 Replacement Concept

- I-75 Weir 2 Replacement – H&H Modeling (ongoing)
  - Recommended optimal location for replacement structure
  - H&H Goals & Constraints
    - Maintain existing flood control level of service
    - Increase surface and surficial aquifer water levels when hydrologically appropriate
    - Reduce over-drainage of watershed
    - Reduce discharges to Naples Bay
    - Increase canal system response to intense and frequent rainfall



# Flood Control – Mission Support

- GG5 Replacement H&H Study (ongoing)
  - Identified optimized location for replacement structure
    - Rapid growth & development in region accelerated need to identify replacement location
  - Existing structure – limited ability to stop over-drainage
  - H&H Goals & Constraints
    - Maintain or improve existing flood control level of service
    - Increase surface and surficial aquifer water levels when hydrologically appropriate
    - Reduce over-drainage of watershed
    - Reduce discharges to Naples Bay
    - Improve canal system response to intense and frequent rainfall
    - Technical H&H study completed in house reduces future design costs and schedules



GG5 Replacement Dry Season Groundwater Improvement

# Flood Control – Mission Support



- BCB Flood Protection Level of Service (FPLOS)
  - Provide technical and local expertise for SFWMD Right of Way permits and Environmental Resource Permits (ERP)
    - Review applications bridges, drainage connections, discharge flows, and construction work in all BCB canals
    - Provide Collier County with similar technical assistance with secondary canal system
- Canal Improvement Program
  - Provide required design parameters for canal conveyance improvements
  - Provide roadmap for work priorities
    - Cypress, I-75, Green & Faka Union canals

# BCB Canal System Improvements over Time

- Original structures inherited from developers
  - Most built between 1960's & 1980's
  - Provided extremely limited flood draw down abilities and operations
  - Significantly contributed to over-drainage which allowed for development of region



GG1 post-2003



GG1 pre-2003

- BCB Capital Program
  - Replaced, upgraded, or added almost 20 water control structures since mid 1990's
  - Significantly reduced the flood control response time
  - Significantly reduced over-drainage of freshwater while protecting wetlands and promoting aquifer recharge

# BCB Canal System Improvements over Time



Old COCO1



Current COCO1

- Goal
  - Compare historic BCB system in 2000 vs up to date system in 2021
  - Produce visualization maps to demonstrate increased water conservation
  - Demonstrate average volume of water conserved inland
  - Illustrate that BCB's strategic capital improvements have decreased the average annual flow to Naples Bay
  - Presentation of results to BCB Board in 2024
- Development of historic BCB H&H model
  - Representation of BCB system in 2000
  - Remove new structures and incorporate old structures
  - Apply old structure operational rules
  - Extremely time consuming and challenging project

# Basin Modeling Program Overview



QUESTIONS ?



Big Cypress Basin Field Station



Henderson Creek Structure 2



Faka Union Pump Station



Golden Gate Structure 3  
(GG3)

# Fiscal Year 2023-2024 Budget Presentation

## Final Millage and Budget Approval



Candida Heater  
Administrative Services Division Director  
August 25, 2023

# Today's Presentation

- Fiscal Year 2023-24 Big Cypress Basin Millage Rate
- Fiscal Year 2023-24 Budget Revenues & Expenses Overview
- Fiscal Year 2023-24 Budget Highlights
- Motions to Approve a Request to the District Governing Board:
  - Fiscal Year 2023-24 Millage Rate
  - Fiscal Year 2023-24 Budget



*Cypress 1*

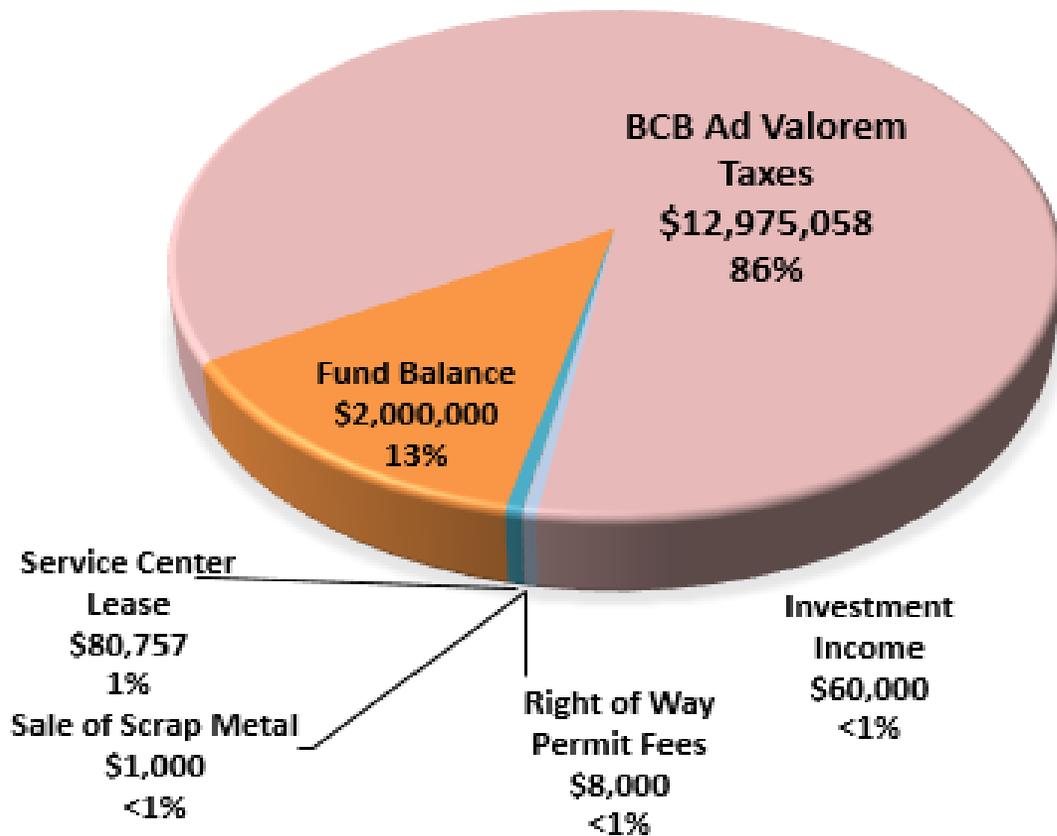
# Fiscal Year 2023-24 Proposed Millage Rate

- **FY2023-24 Proposed Millage Rate is 0.0978 mills**
- **\$9.78 per \$100,000 of Taxable Value**
- **A Homeowner in Collier County with an Average Home Valued at \$500,000 Would Pay an Estimated \$48.90 for the Year.**
- **Examples of Services Received for the \$48.90 Per Year:**
  - **Flood Control Protection**
  - **Capital Infrastructure Improvements in Support of Flood Control**
  - **Canal Maintenance and Vegetation Removal**
  - **Future Water Supply**
  - **Land Management Activities**
  - **Ecosystem Restoration**
  - **Modeling for Sea Level Rise and Ecosystem Restoration**

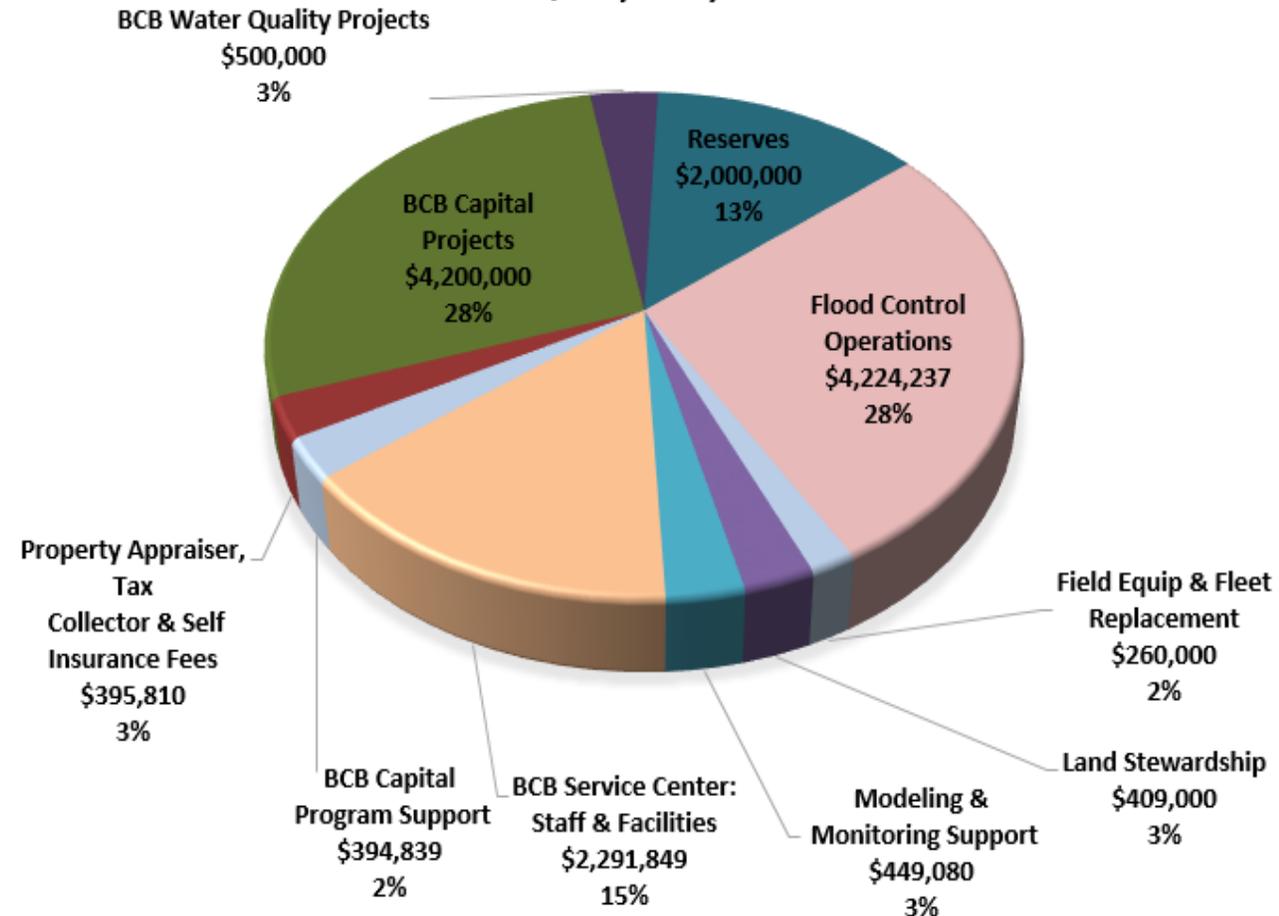
*The Millage Rate is applied to the Taxable Value of the Property as Determined by the Property Appraiser Annually (Assessed Value – Exemptions = Taxable Value)*

# Fiscal Year 2023-24 Budget - \$15,124,815

## FISCAL YEAR 2023-24 REVENUES \$15,124,815



## FISCAL YEAR 2023-24 EXPENDITURES \$15,124,815



# Budget Highlights of Who Accomplishes the Work

## ➤ **Administrative Services & Executive Offices - \$187,676**

- General Services & Facilities – Service Center maintenance
- District Headquarters Control Room Water Management Oversight

## ➤ **Big Cypress Basin - \$2,643,793**

- Water Quality Projects
- Canal Restoration/Improvement Faka Union Canal
- Enhanced Monitoring Corkscrew Headwaters
- Outreach & Communication
- Basin Water Management Staff
- Basin Modeling Staff



*Faka Union #4*

# Budget Highlights of Who Accomplishes the Work

## ➤ Engineering, Construction and Modeling Division- \$5,193,975

- Required maintenance of Basin's flood protection system:
  - BCB Communications System Improvements (Tower)
  - Canal Improvements based on Level-of-Service Study
  - SCADA Additions and Replacements
  - I-75 #2 Weir Replacement Design
  - Corkscrew Canal Headwater Improvements
  - Structure Inspection Program
- Modeling efforts to effectively manage the Basin's flood protection system
  - BCB Regional Watershed Model Update
  - Corkscrew Swamp Modeling

# Budget Highlights of Who Accomplishes the Work

## ➤ **Field Operations & Land Management Division (BCB Field Station & Land Management) - \$4,440,289**

- Manage the network of 134 miles of primary canals, 34 water control structures providing flood control and three water conservation pumps protecting regional water supplies and environmental resources from over-drainage during the dry season
- Land Management activities for the Collier County portion of the CREW Lands

## ➤ **Information Technology - \$263,272**

- Operating the SCADA System and Telemetry Base Stations which includes security monitoring, microwave tower maintenance and inspections
- Basin Board Meeting Support

## ➤ **Reserves/Debt/Fees/Charges - \$2,395,810**

- Hurricane/Emergency Reserves
- Property Appraiser & Tax Collector Fees
- Self-Insurance Programs such as Workers Compensation, General Liability, Auto Liability



# Governing Board Next Steps

## ➤ September

- **September 14 at District Headquarters in West Palm Beach, FL and a Virtual Meeting via Zoom. Link will be provided at <https://www.sfwmd.gov/news-events/meetings>**
  - Governing Board Regular Meeting Fiscal Year 2023-24 Tentative Budget Update.
  - 5:15 PM Public hearing to consider Fiscal Year 2023-24 Tentative Millage Rates, Agricultural Privilege Tax Roll, and Budget.
  
- **September 26 at District Headquarters in West Palm Beach, FL and a Virtual Meeting via Zoom. Link will be provided at <https://www.sfwmd.gov/news-events/meetings>**
  - 5:15 PM Public hearing to adopt Fiscal Year 2023-24 Final Millage Rates and Budget.

# Motion to Approve

- **BCBB 2023-0801** – A Resolution of the Big Cypress Basin Board of the South Florida Water Management District approving the submittal of the millage rate (0.0978 mills) for Fiscal Year 2023-2024; requesting the Governing Board of the South Florida Water Management District to levy ad valorem taxes within the Big Cypress Basin based on that rate to finance Basin functions contained in the Fiscal Year 2023-2024 Basin budget.



*Corkscrew Swamp Sanctuary Restoration*

# Motion to Approve

- **BCBB 2023-0802** – A Resolution of the Big Cypress Basin Board of the South Florida Water Management District submitting the Fiscal Year 2023-2024 Basin budget in the amount of \$15,124,815 to the Governing Board of the South Florida Water Management District for inclusion in the District budget.



*Faka Union Canal Bank Repair*



Big Cypress Basin Field Station



Henderson Creek Structure 2



Faka Union Pump Station



Golden Gate Structure 3  
(GG3)

# Discussion

# Big Cypress Basin Field Station Activity Report



**Andrew Wolf**  
**Superintendent BCB Field Station**  
**August 25, 2023**

# Overview

- **Field Station Operations**
- **Maintenance Activities**
- **Three Month Outlook**



# Big Cypress Basin Field Station Dedicated 2016

3875 City Gate  
Blvd. North,  
Naples FI 34117



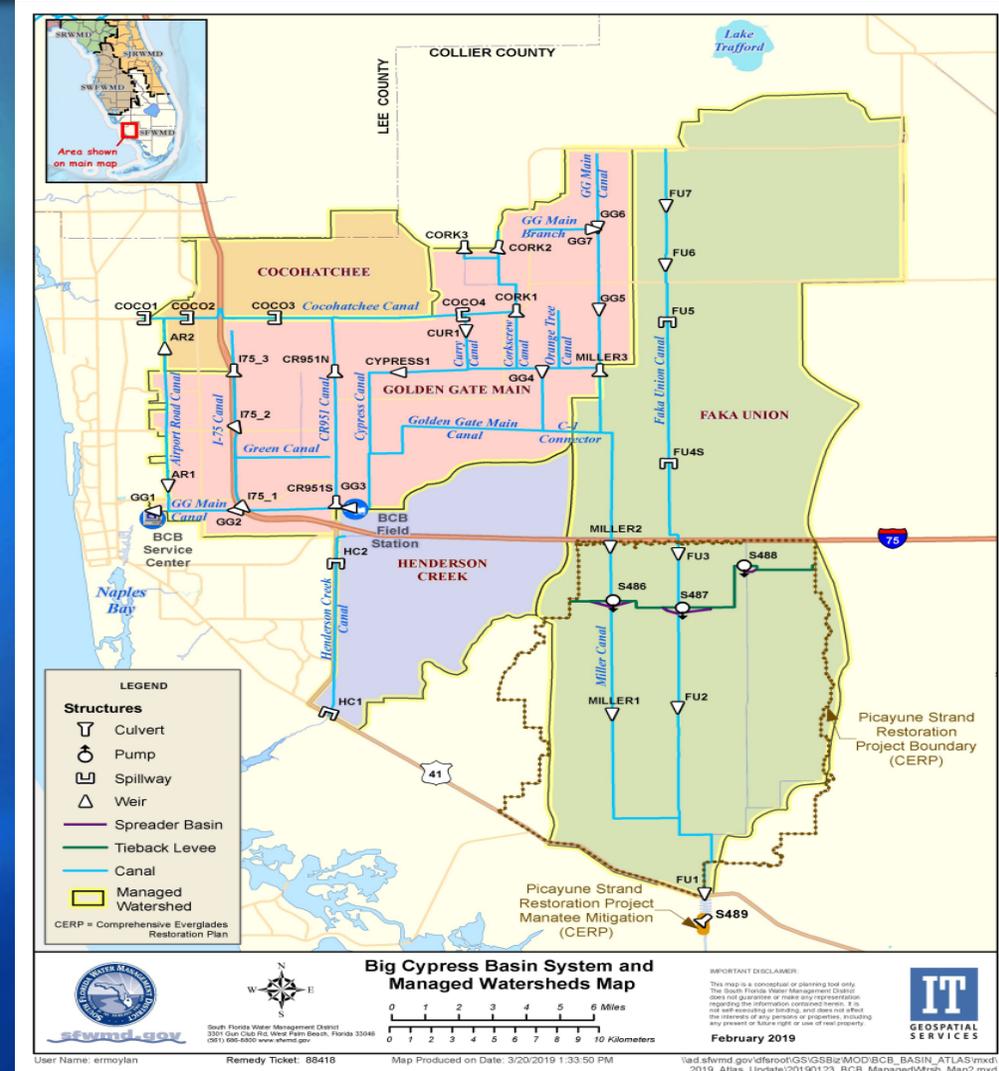
# Big Cypress Basin Field Station

## Operation and Maintenance of Primary Canals:

- 134 Miles of Canals
- 34 Water Control Structures, 16 Automated
- 8 Field Employees
- 4 Administrative Employees

## Comprehensive Everglades Restoration Project (CERP)

- 3 Major Pump Stations
- 1 Water Control Structure
- 9 Miles of Levees
- 8 Employees



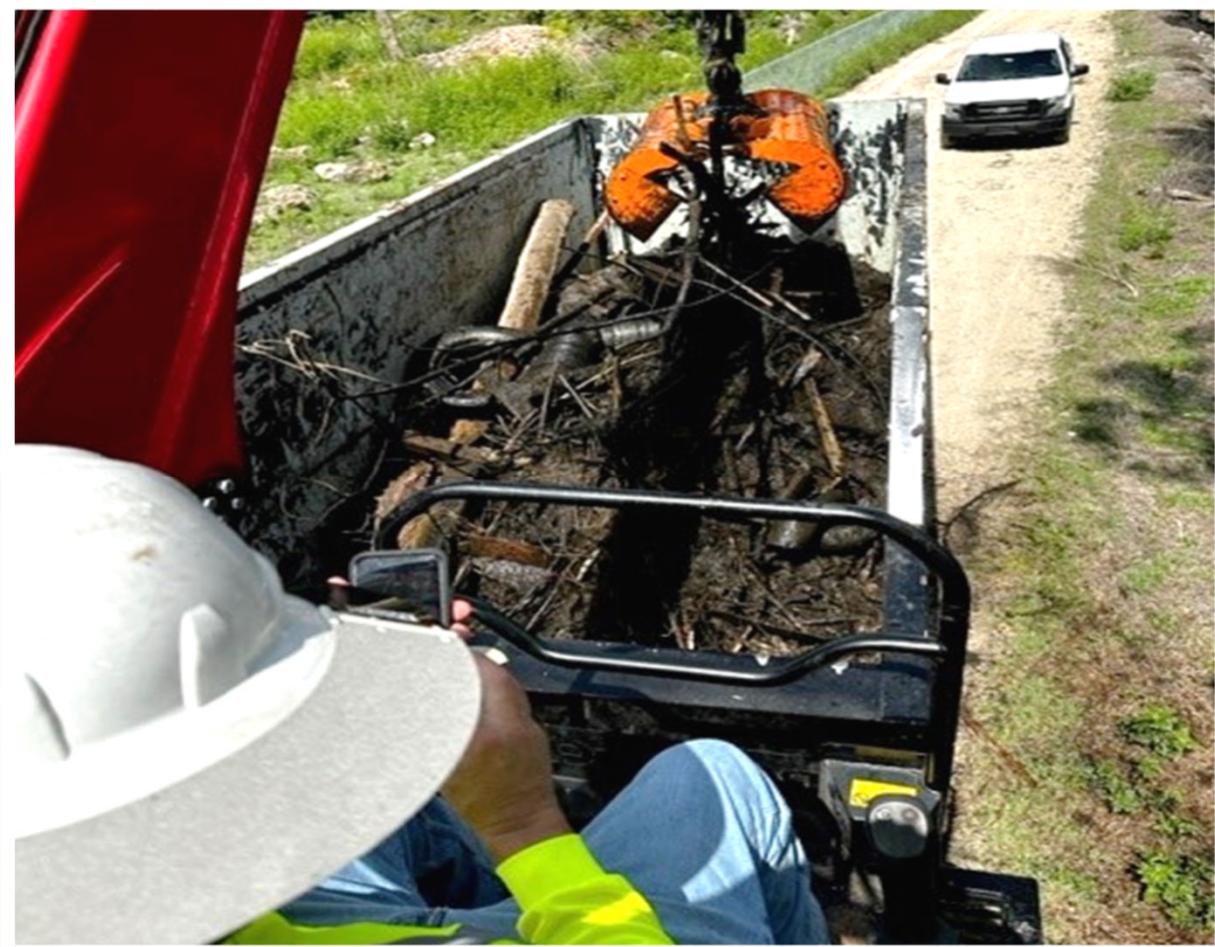
# Maintenance Activities

## Removing Debris in Green Canal



# Maintenance Activities

## Cleaning Debris From C-1 Connector



# Maintenance Activities

## Clearing Litter and Vegetation from 951 and Henderson Creek Canals



# Maintenance Activities

## Automation of Cork 1 Structure



# Maintenance Activities

## Gearbox Inspection I-75 #2 Structure



# Maintenance Activities Structures



Back Flushing  
Stilling Well GG-1

PM on Air  
Compressor GG-2



Replacing Stem  
Boot at Coco-2

# Three Month Outlook

- **Canal Maintenance:** Address any bank washouts. Remove vegetation in canals.
- **Structure Maintenance:** Continue performing preventative maintenance.
- **System Operations:** Continue supporting wet season operational orders (AVO's).





MERRITT Pump Station  
PS-488



FAKA Union Pump Station  
PS-487



MILLER Pump Station  
PS-486

# Comprehensive Everglades Restoration Projects (CERP) Activity Report

# Pump Station Spreader Basin

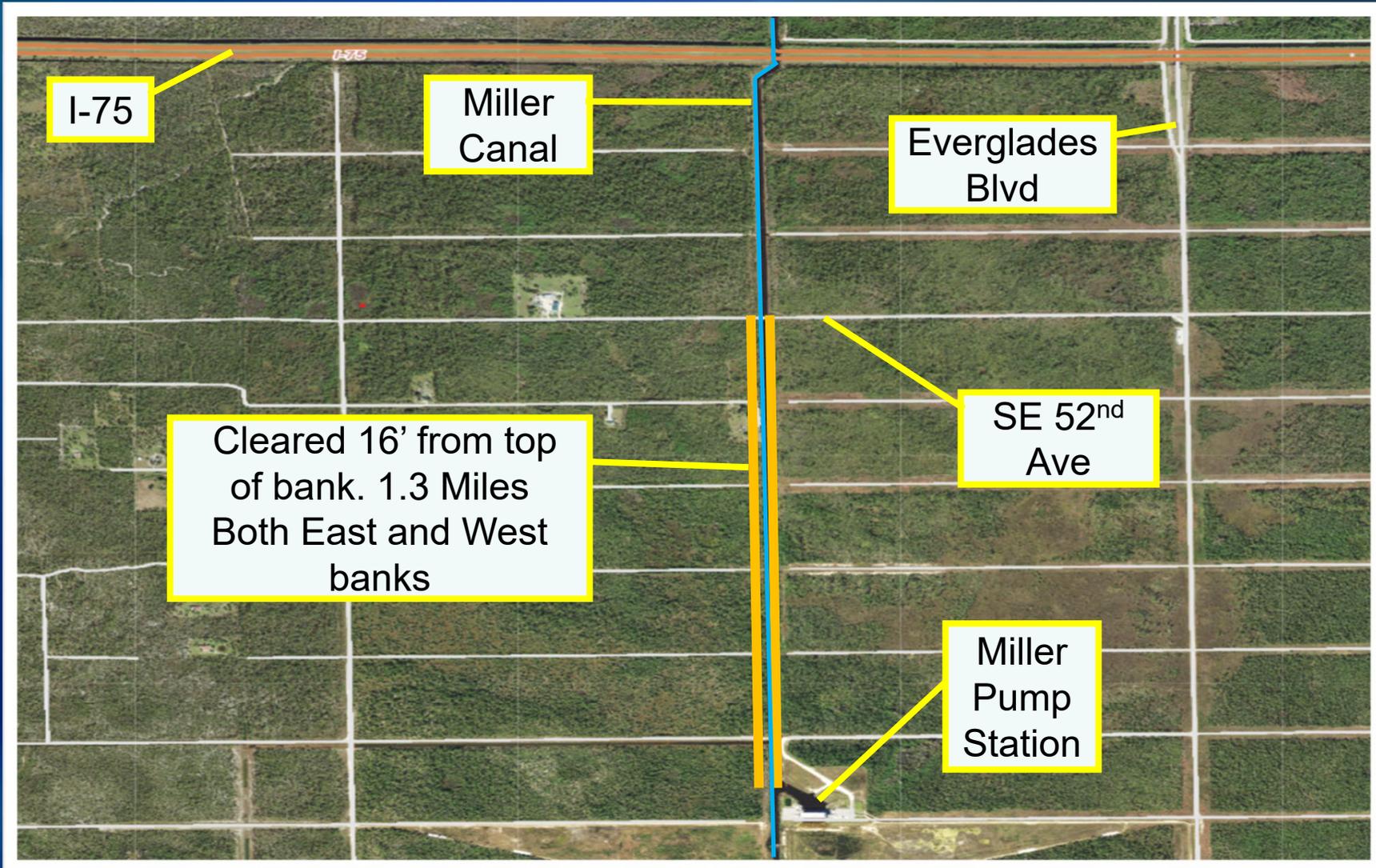


# Pump Station Maintenance

- Completing monthly preventative maintenance
- Rebuilt a coolant water distribution pump Merritt.
- Completed the reassembly of Pump #3 with new pump shaft at Merritt Pump Station.



# Miller Canal Tree Removal Project



# Miller Canal Tree Removal Project

Before

After

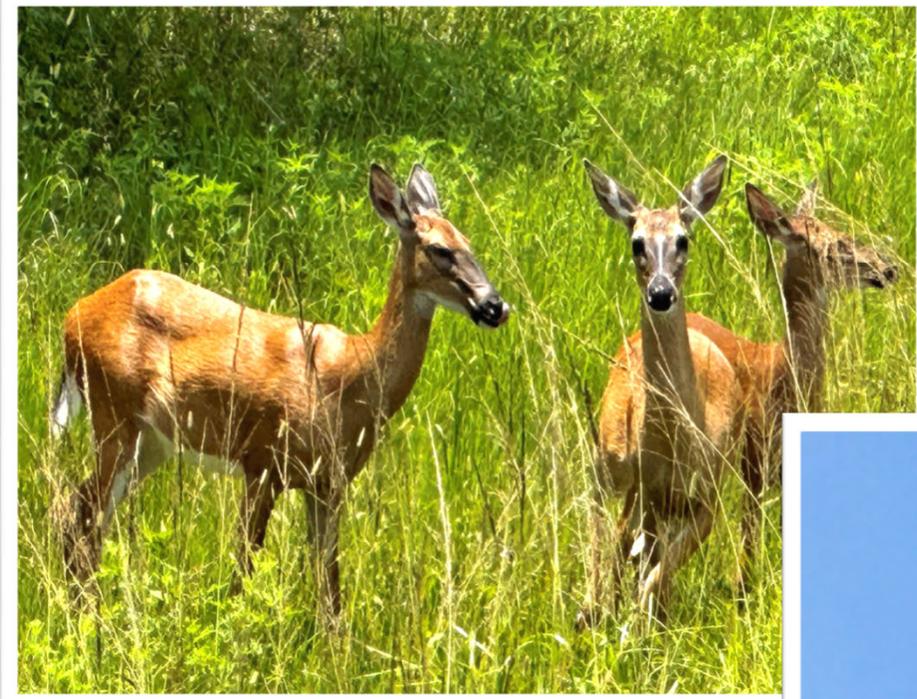


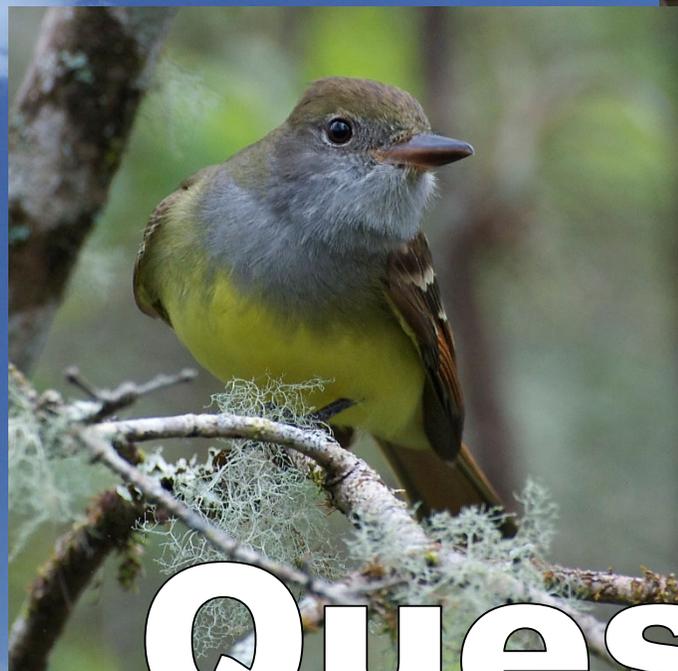
# Three Month Outlook

- Respond to wet season pump orders and issues.
- Housekeeping, preventative maintenance.
- Training three new employees on pump station operations.



# Picayune Strand Wildlife





# Questions



# BIG CYPRESS BASIN BOARD MEETING

BCB WATER CONDITIONS REPORT  
August 25, 2023

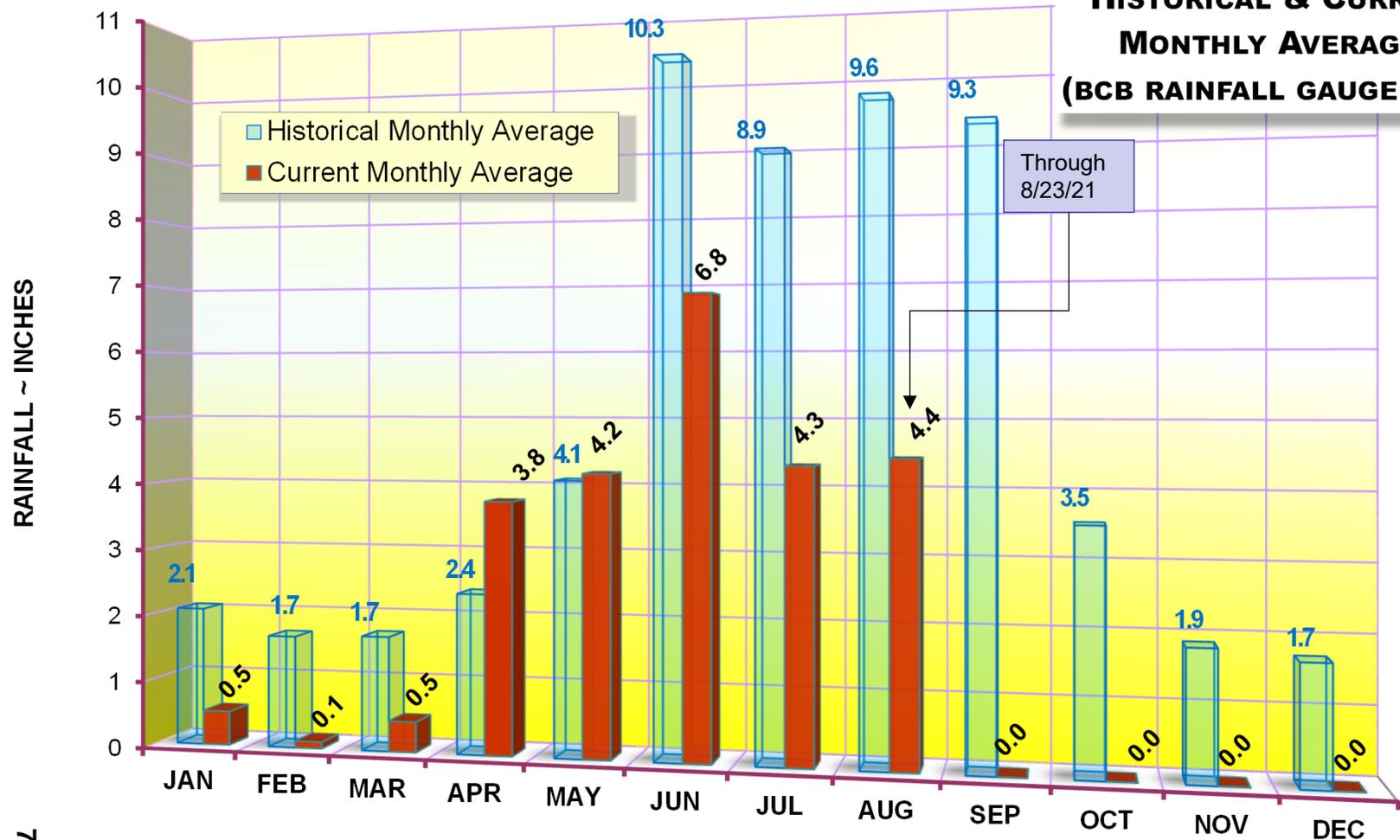


Brad J Jackson, P.E., CFM  
Principal Engineer  
Big Cypress Basin

# Hydrologic Conditions ~ BCB Gauge Rainfall

## 2023 MONTHLY SUMMARY

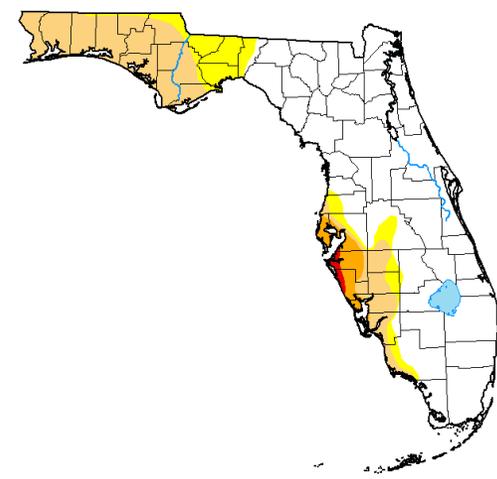
**BCB ANNUAL RAINFALL HISTORICAL & CURRENT MONTHLY AVERAGES (BCB RAINFALL GAUGE DATA)**



- 2023 YTD TOTAL = 24.6 IN
- BASIN AVG TOTAL = 38.3 IN
- 64% OF NORMAL YTD
- 13.7" RAINFALL DEFICIT

U.S. Drought Monitor  
Florida

August 22, 2023  
(Released Thursday, Aug. 24, 2023)  
Valid 8 a.m. EDT



**Intensity:**

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

**Author:**  
David Simeral  
Western Regional Climate Center

USDA NDMC NOAA droughtmonitor.unl.edu

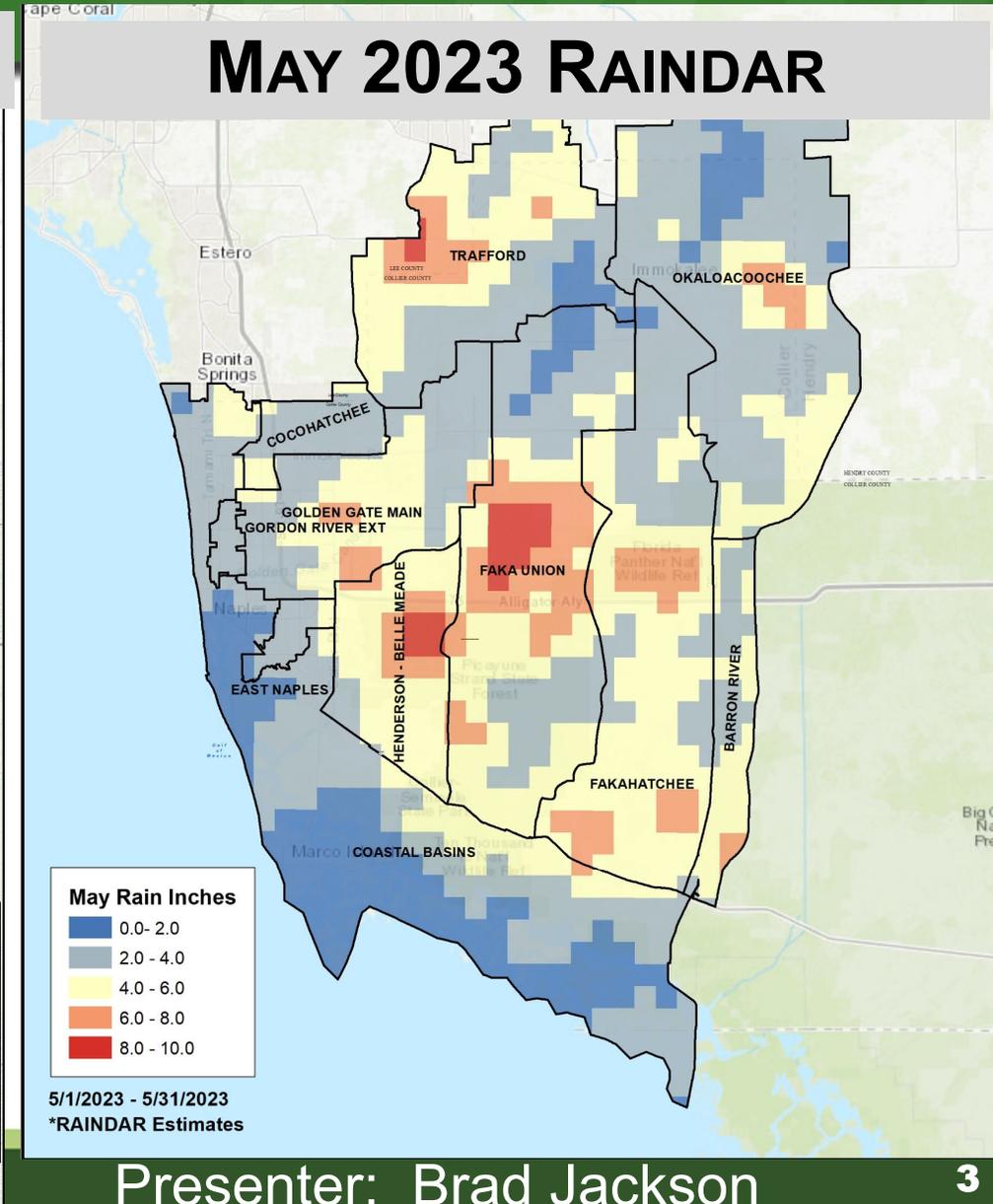
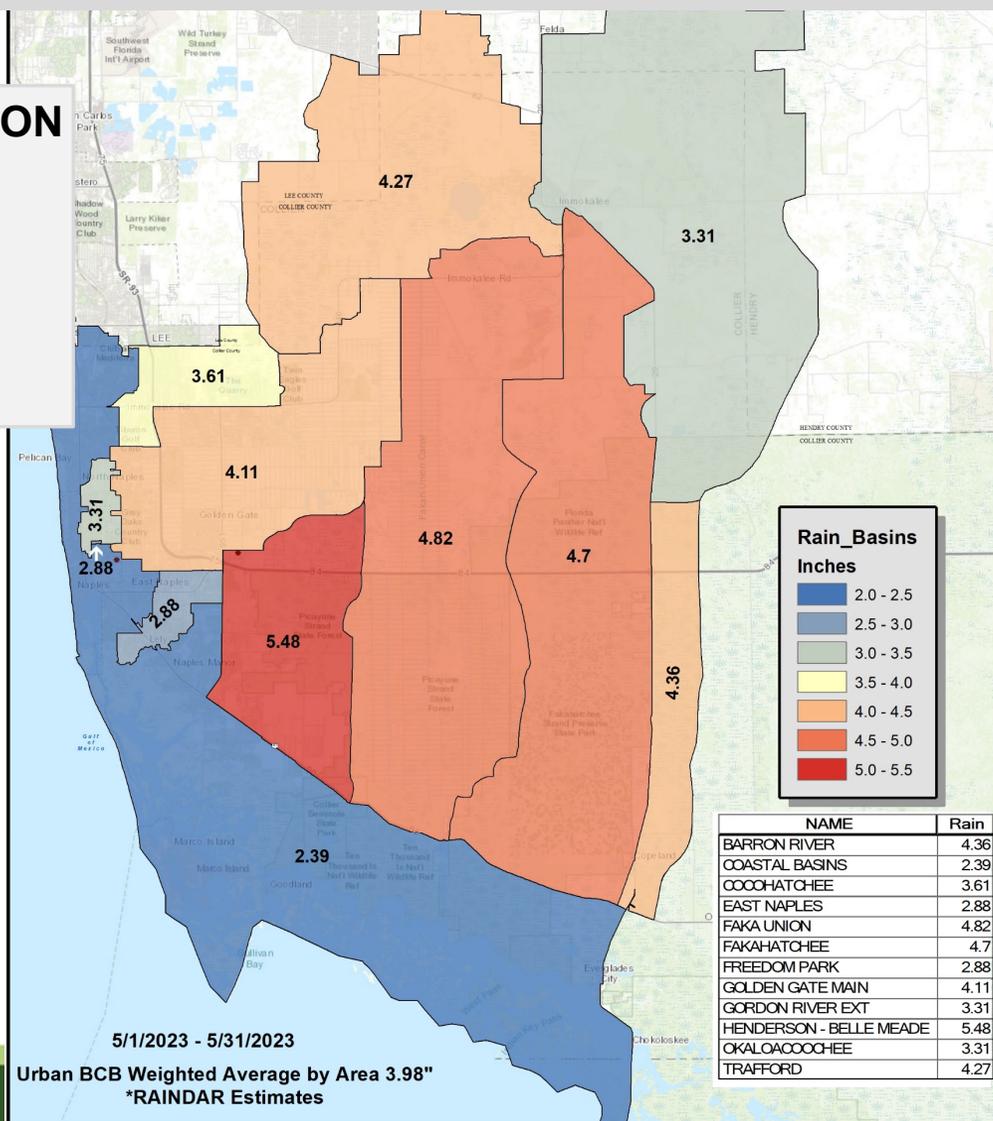
**NOTE: COVERAGE FOR LOCALITIES WITHIN BCB GAUGE NETWORK ONLY**

# Hydrologic Conditions ~ BCB Rainfall

## MAY 2023 BY BASIN

## MAY 2023 RAINDAR

**HISTORICAL COMPARISON**  
**2023: 4.2"**  
**HIGH: 9.1" (2018)**  
**LOW: 0.5" (1992)**  
**AVG: 4.1"**



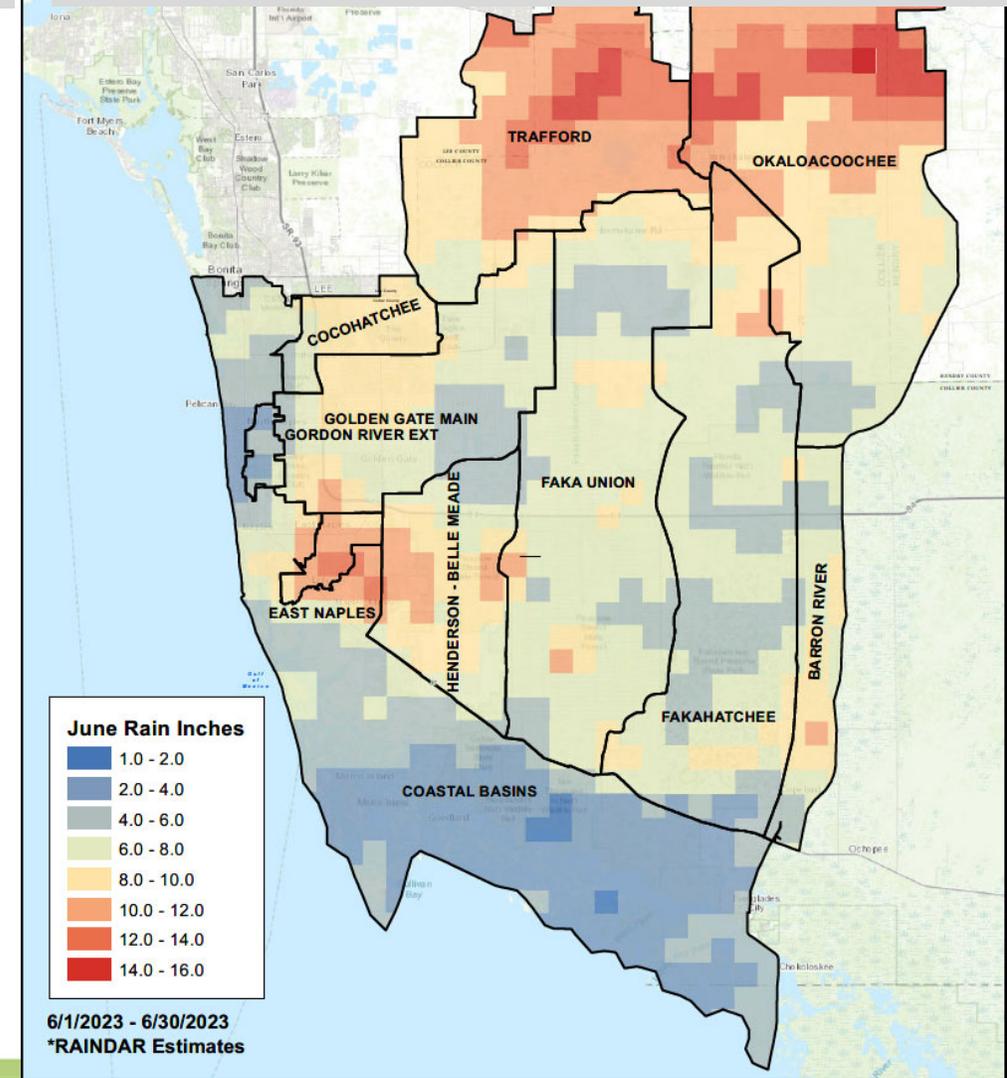
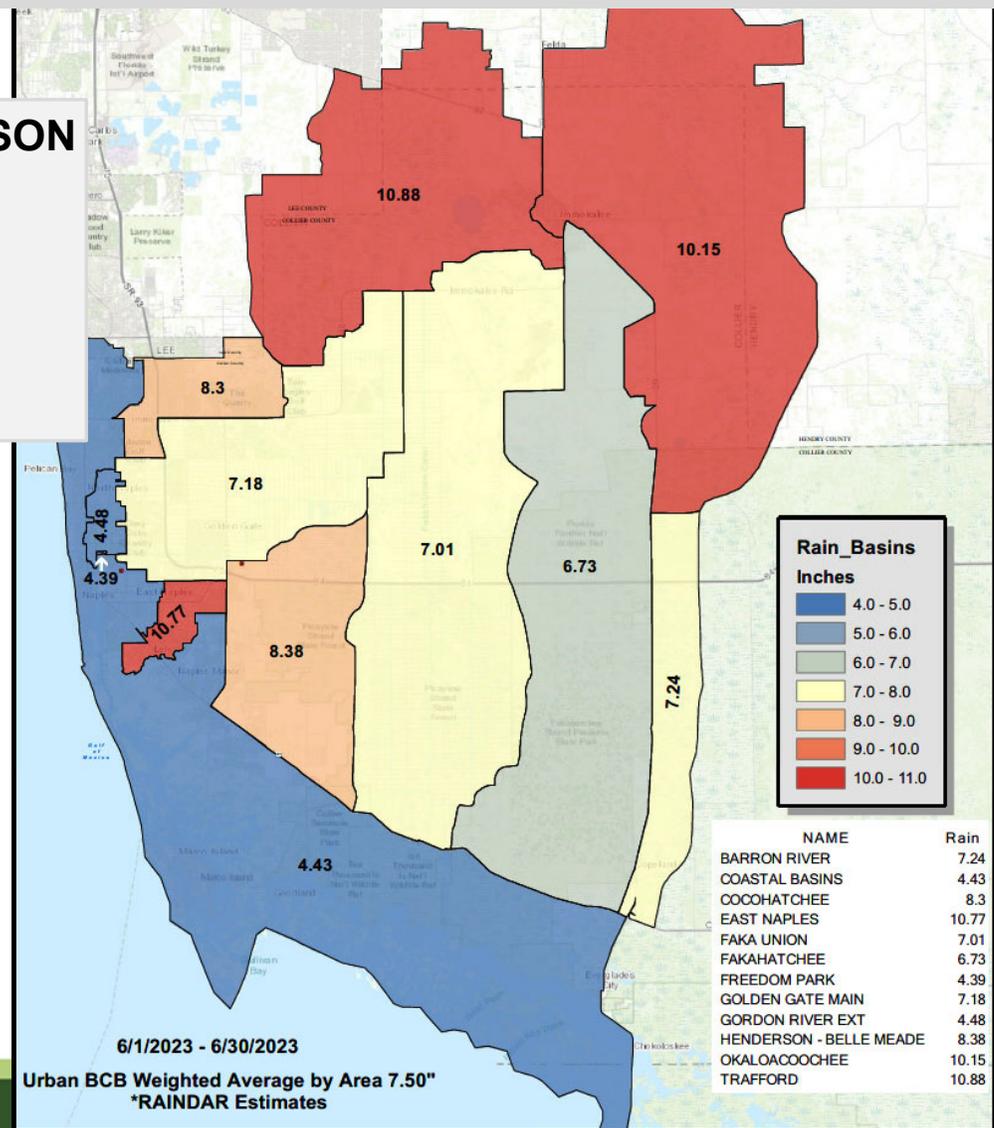
# Hydrologic Conditions ~ BCB Rainfall

## JUNE 2023 BY BASIN

## JUNE 2023 RAINDAR

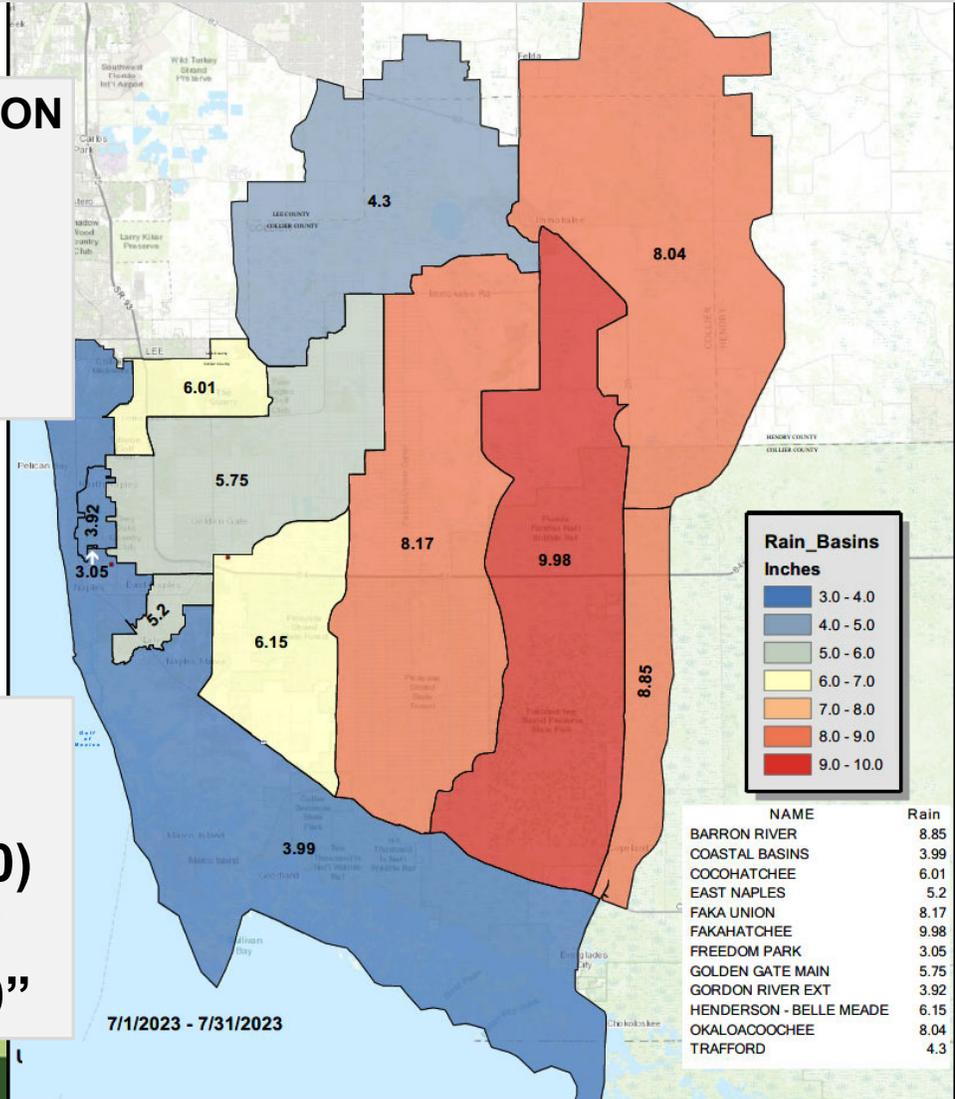


**HISTORICAL COMPARISON**  
 2022: 6.8"  
 HIGH: 21.3" (2017)  
 LOW: 4.5" (1998)  
 AVG: 10.3"

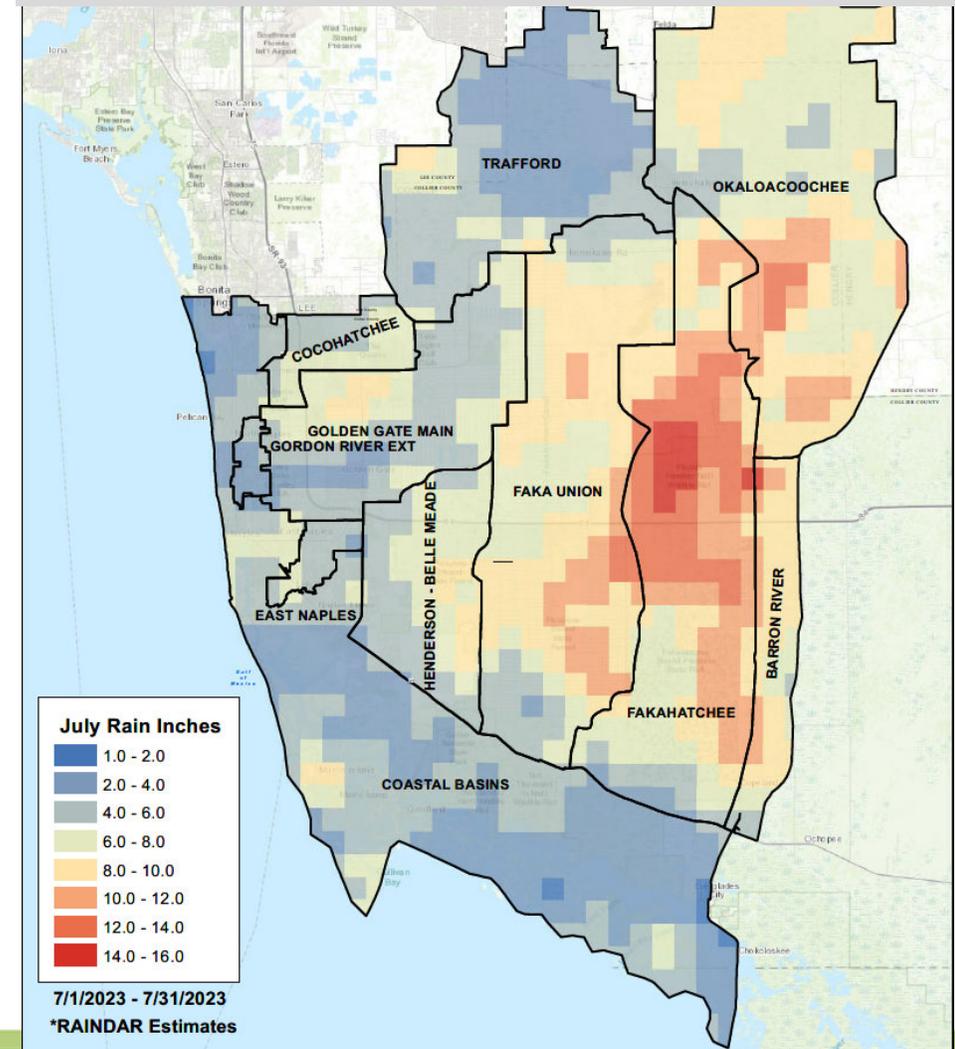


# Hydrologic Conditions ~ BCB Rainfall

## JULY 2023 BY BASIN



## JULY 2023 RAINDAR



**HISTORICAL COMPARISON**  
 2023: 4.3"  
 HIGH: 14.6" (2001)  
 LOW: 4.3" (2023)  
 AVG: 8.9"

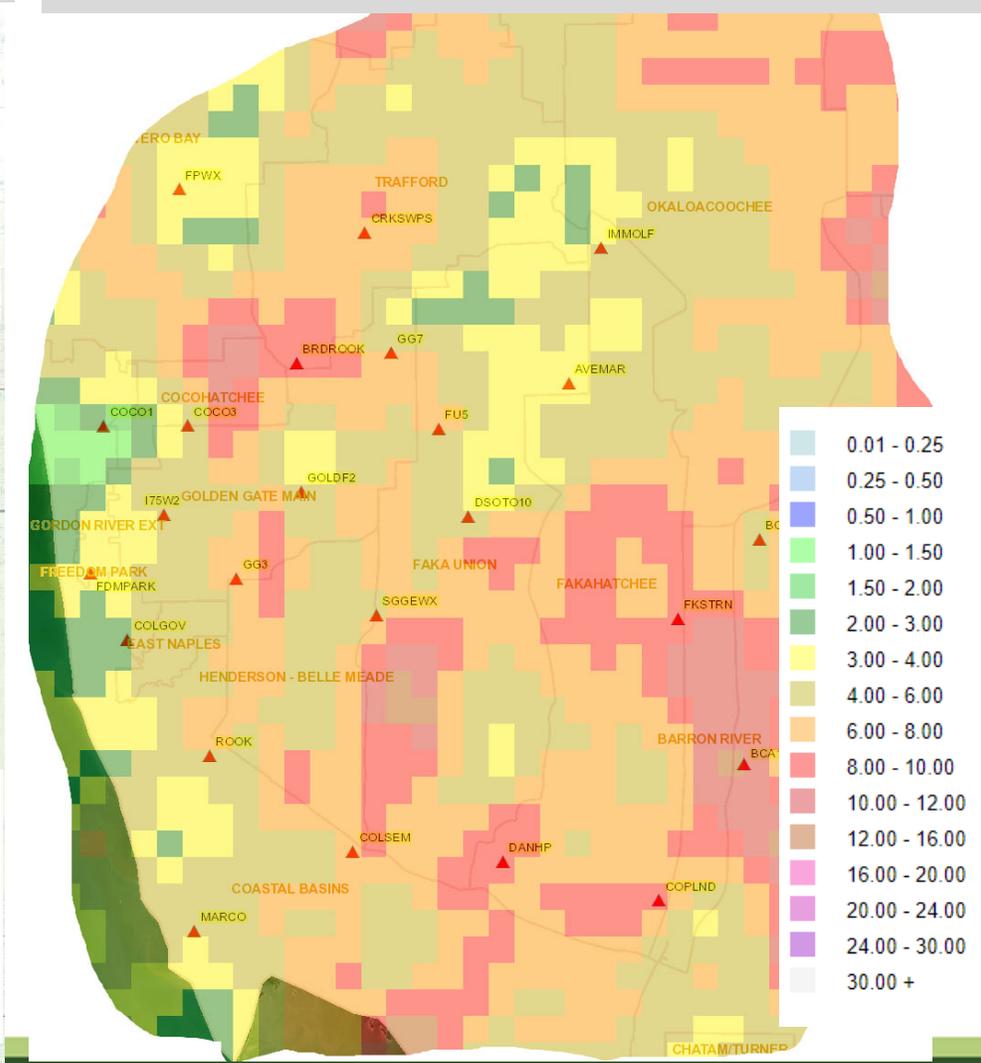
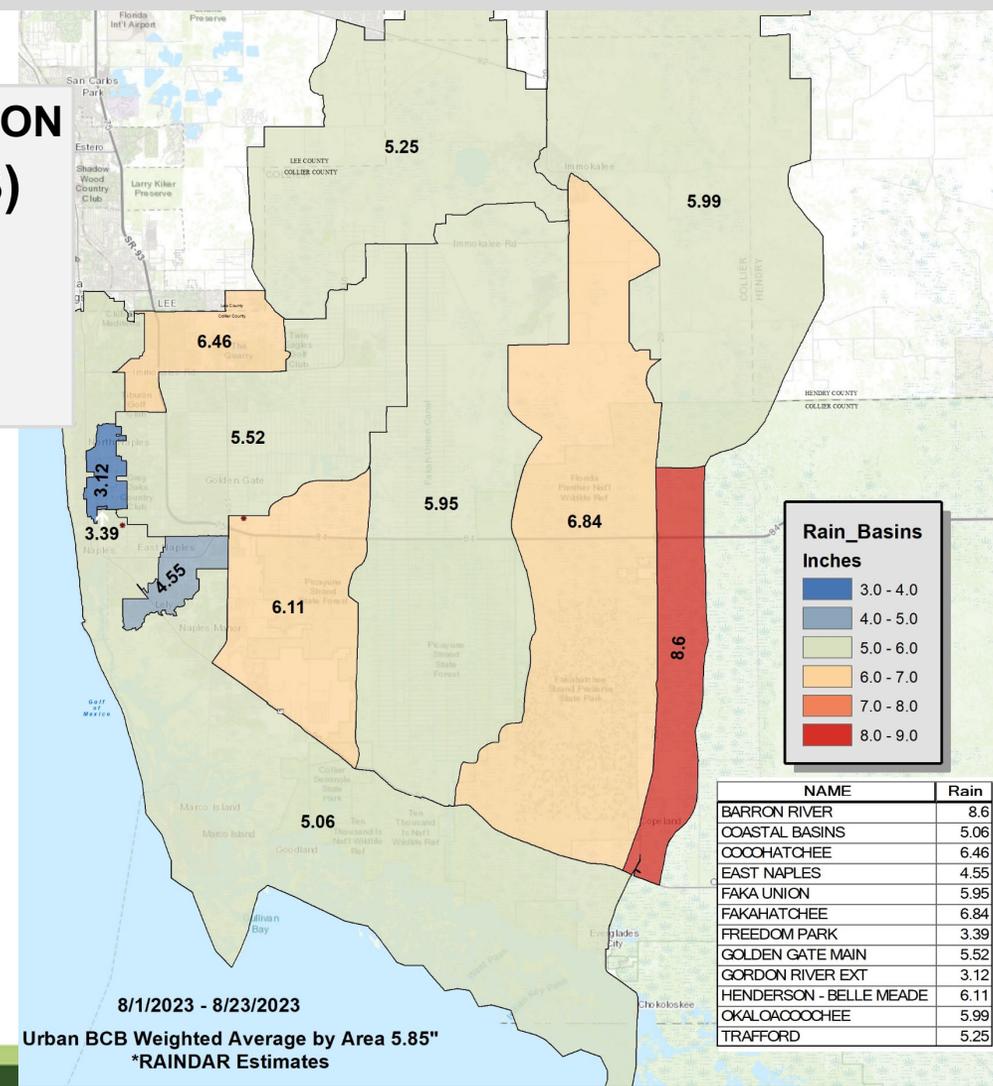
**DRIEST JULY**  
 IN BCB RECORDS  
 (SINCE AT LEAST 1990)  
 ROOKERY BAY – 1.8"  
 FREEDOM PARK – 2.0"

# Hydrologic Conditions ~ BCB Rainfall

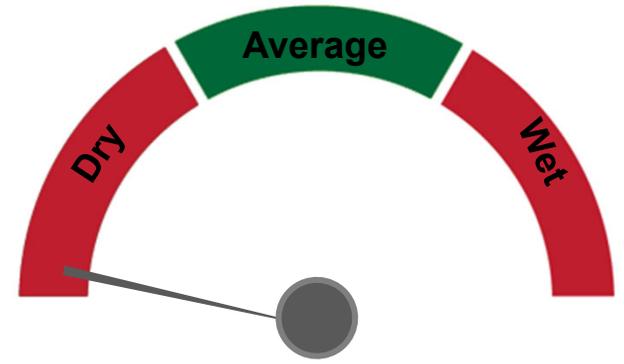
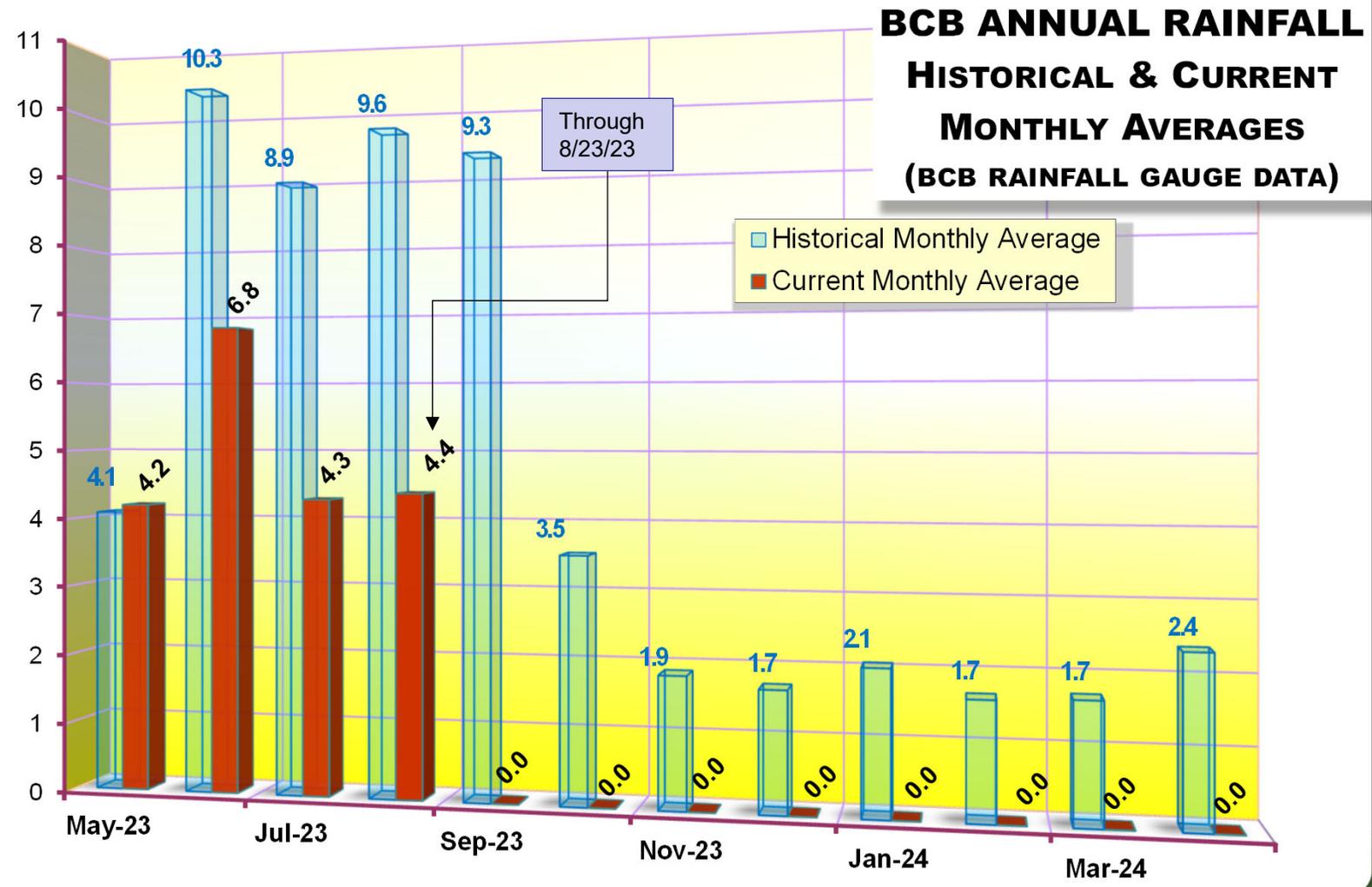
## AUGUST 2023 BY BASIN

## AUGUST 2023 RAINDAR

**HISTORICAL COMPARISON**  
**2023: 4.4" (THRU 8/23)**  
**HIGH: 14.6" (2001)**  
**LOW: 5.1" (1996)**  
**AVG: 9.6"**



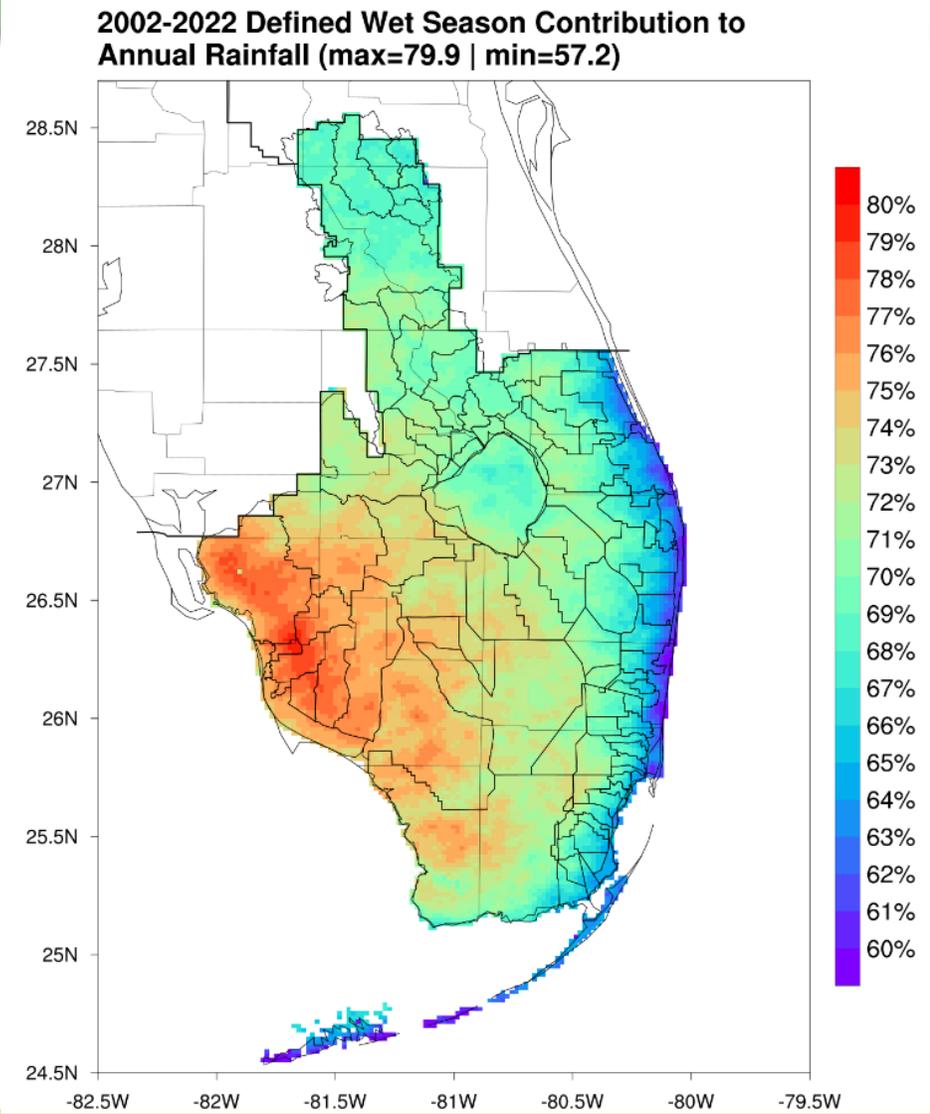
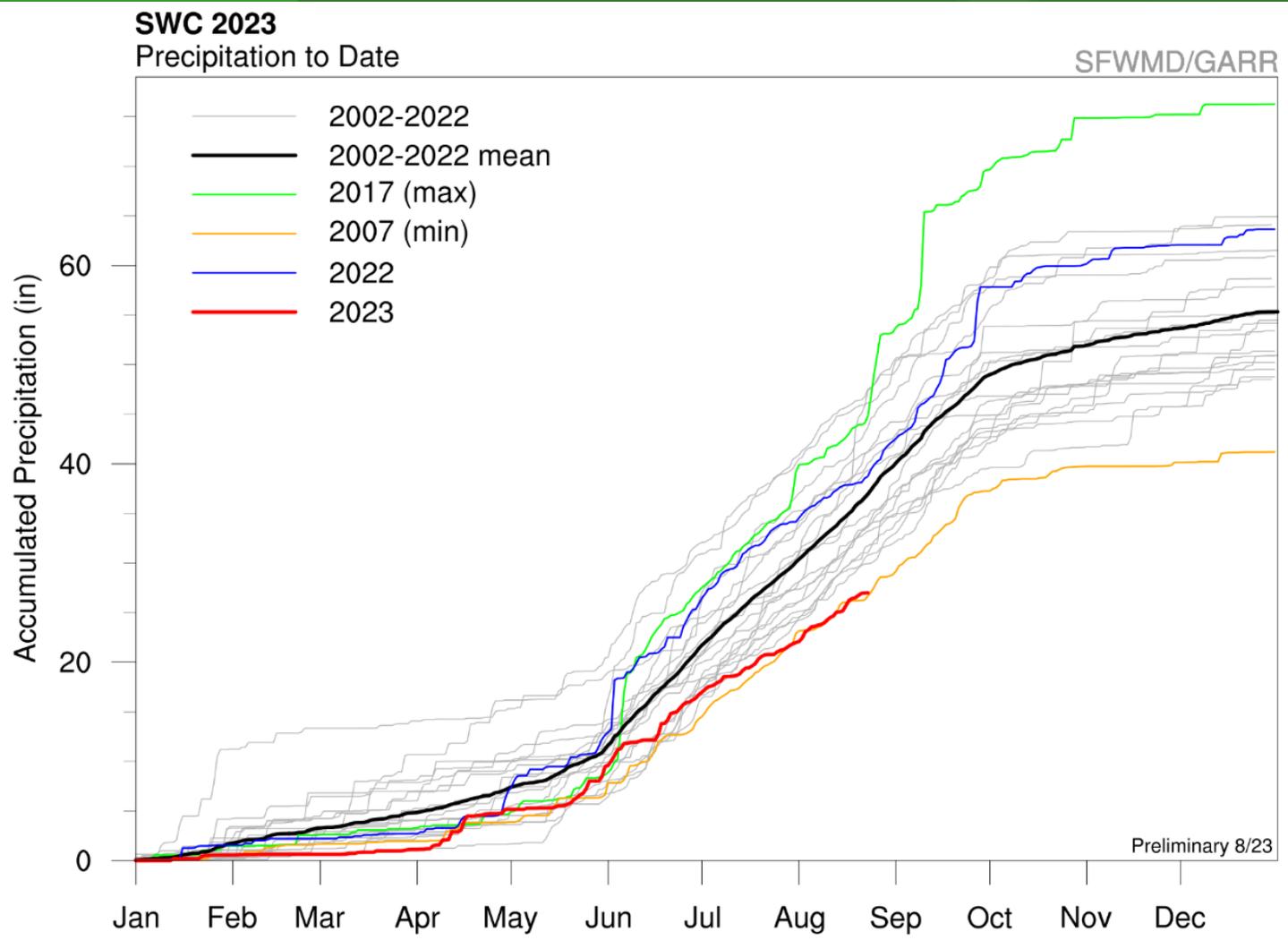
# BCB Water Year Summary



**Water Year Rainfall**  
**May 1, 2023 –**  
**August 23, 2023**  
**BCB Total Rainfall: 19.7"**

- 64% of average
- Approx. 11" deficit
- Wet Season Start - May 14, 2023

# BCB Wet Season Rainfall Contribution

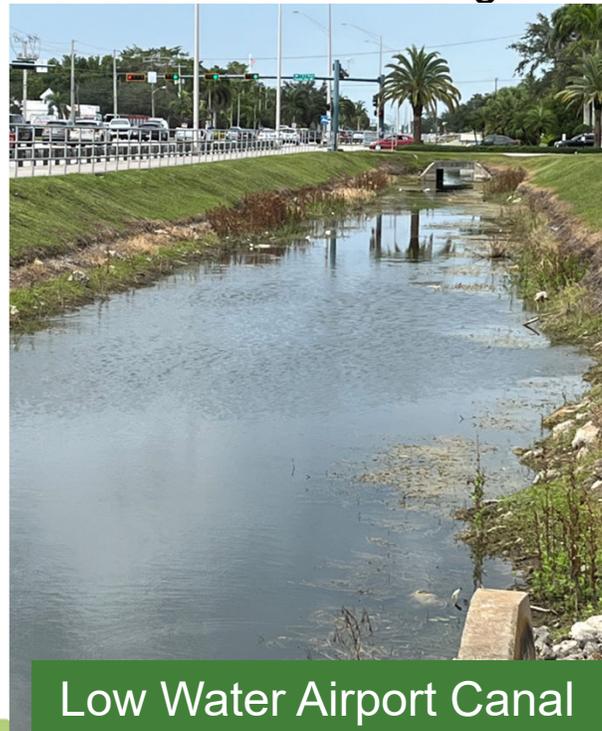
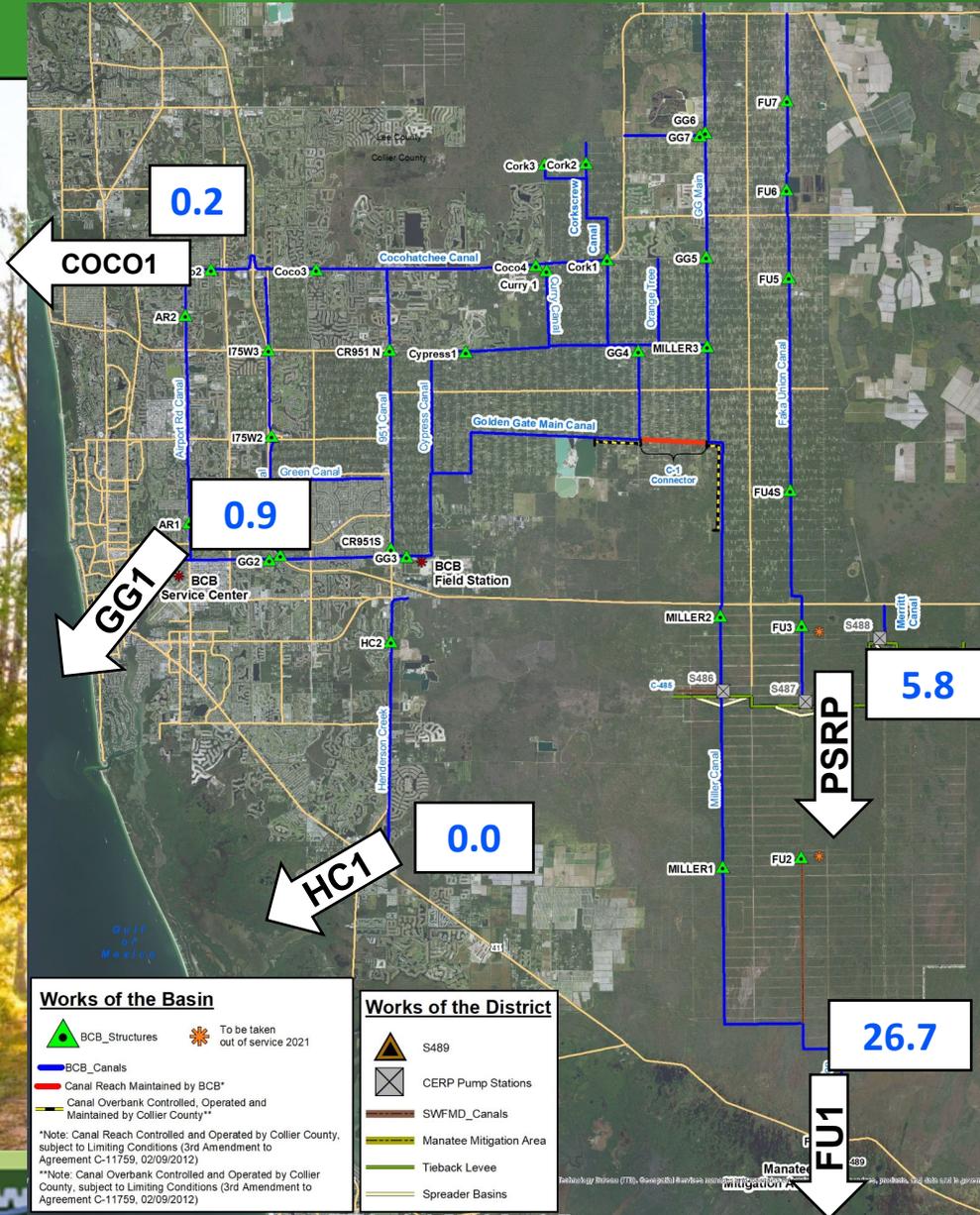


# BCB - Outflow Volumes

**BCB – Release Volumes**  
(volumes in 1,000 acre-feet)

**Wet Season Discharge - 05/01/23 – 08/23/23**

Coastal discharge volumes – near zero  
GG1 discharge volume - 1% of average volume

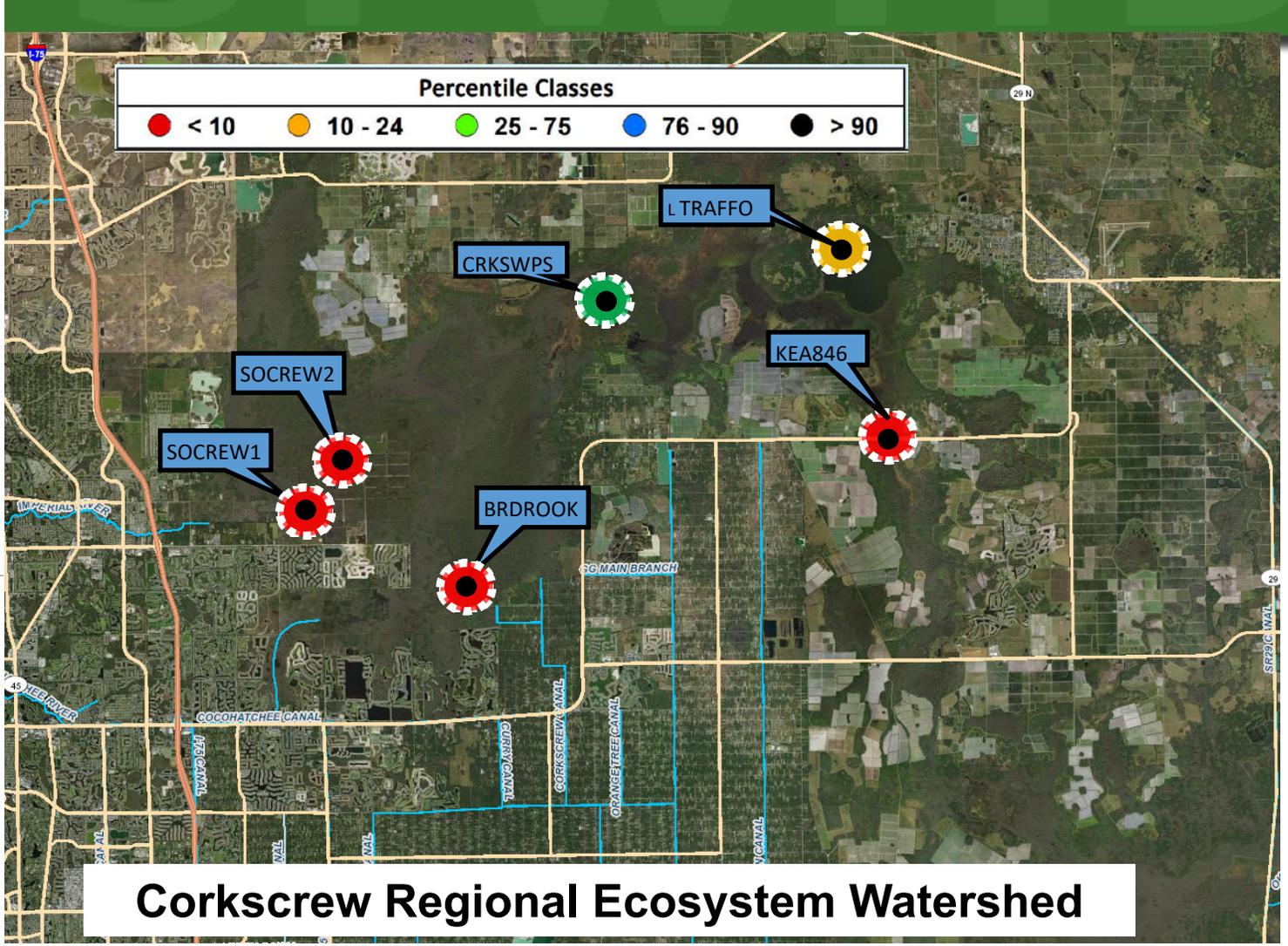
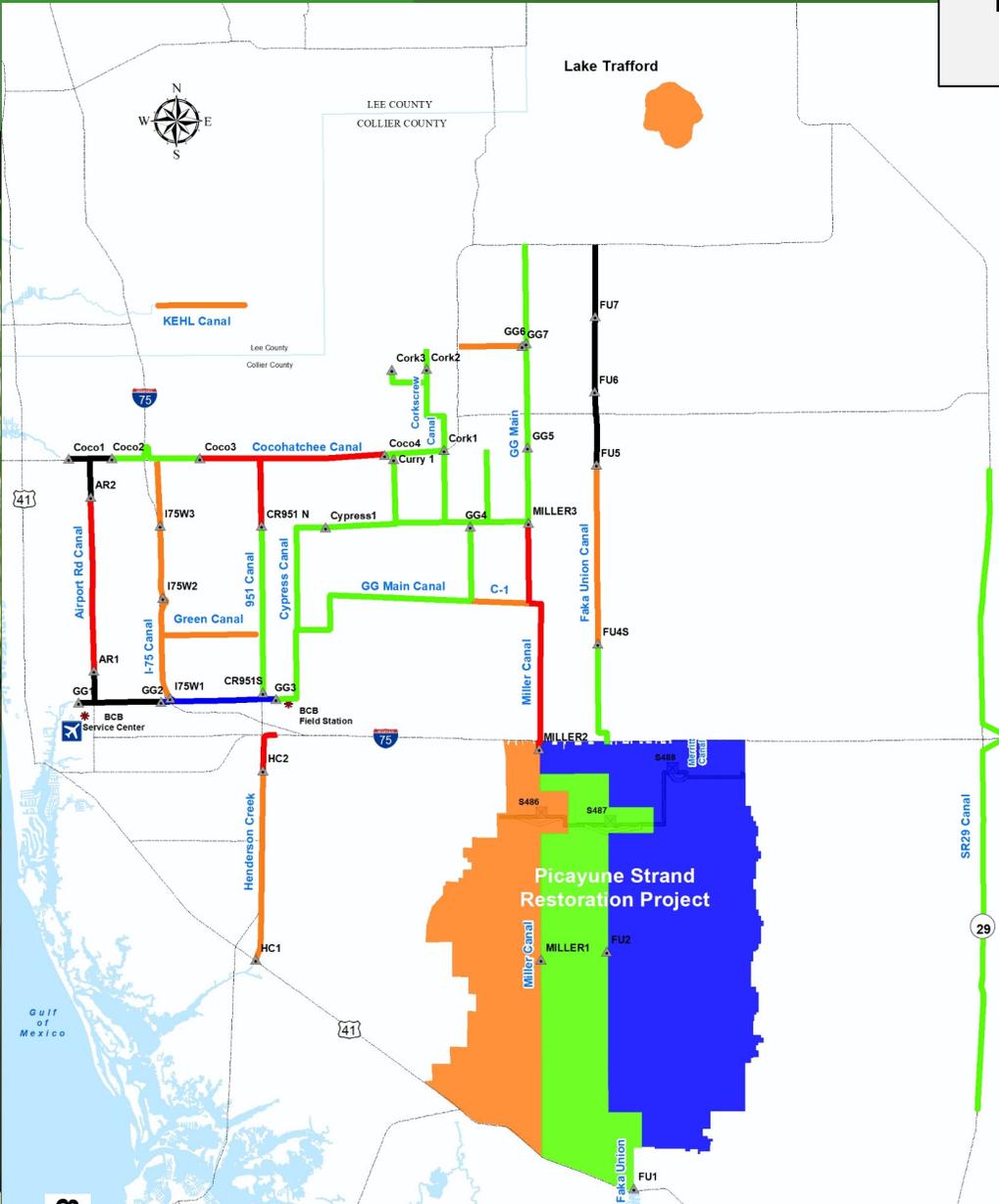


Low Water Airport Canal



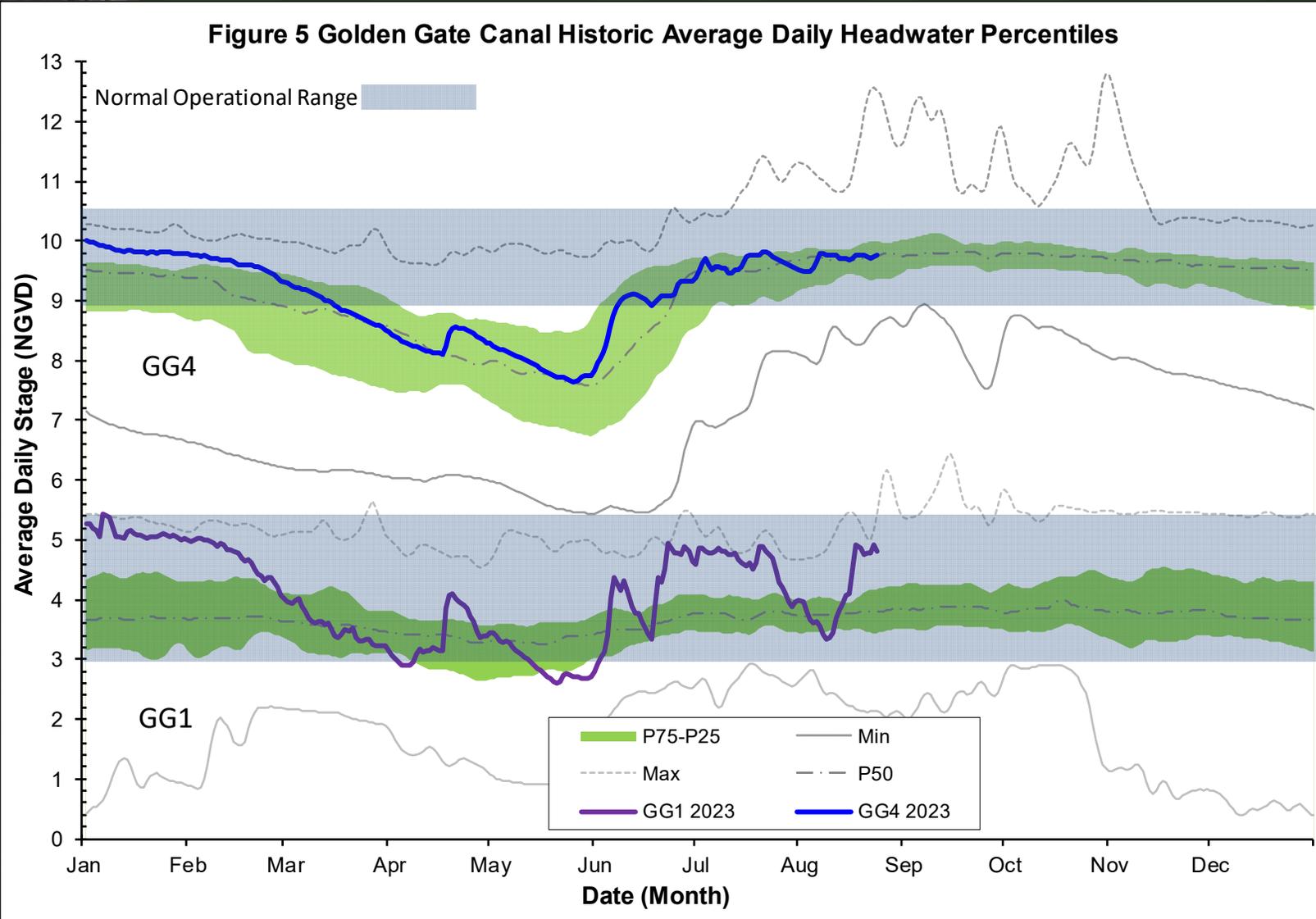
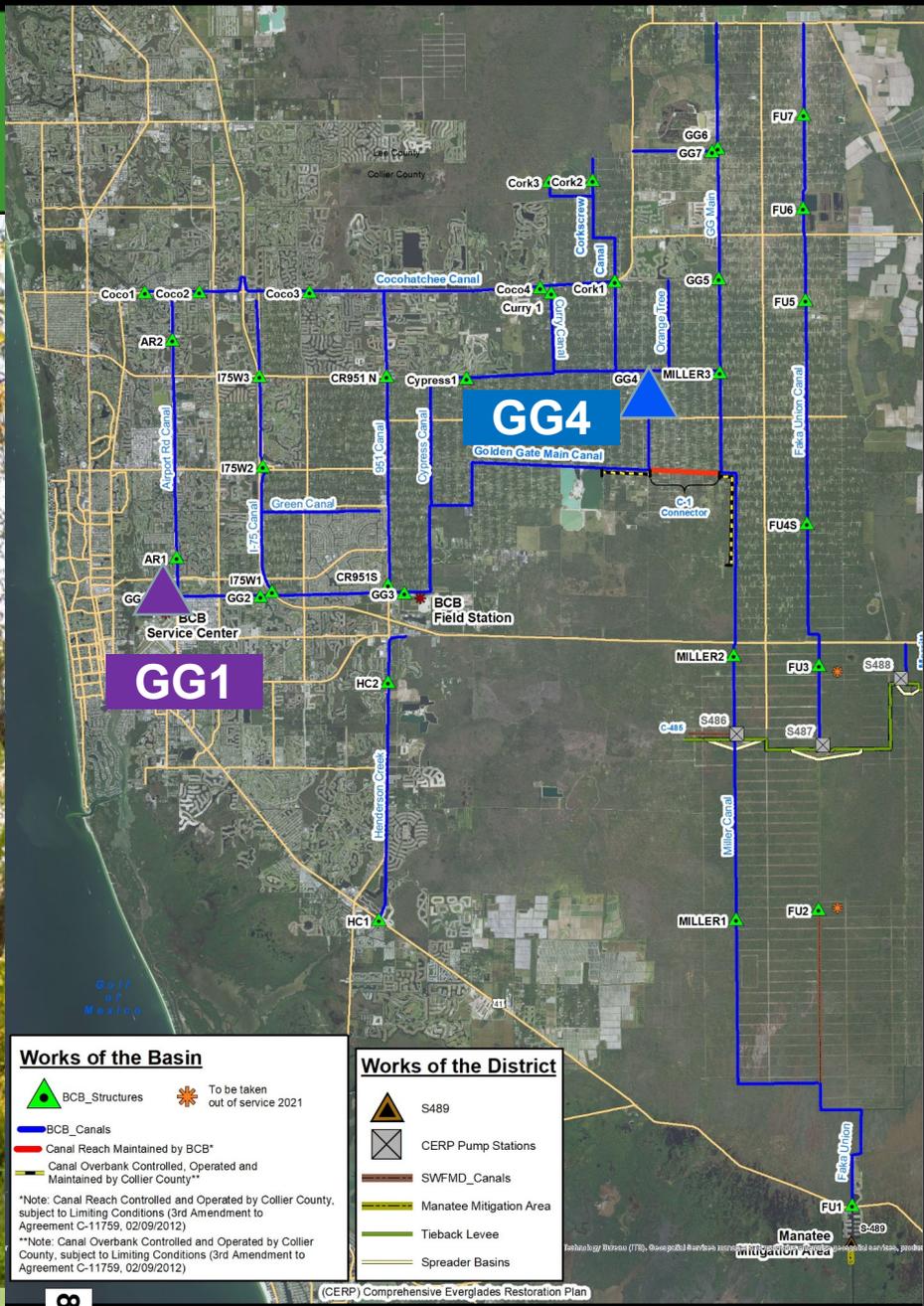
Low Water CORK3

# Big Cypress Basin Hydrologic Conditions as of 8/23/2023



Corkscrew Regional Ecosystem Watershed

# BCB Golden Gate Canal



**Works of the Basin**

- BCB Structures
- BCB Canals
- Canal Reach Maintained by BCB\*
- Canal Overbank Controlled, Operated and Maintained by Collier County\*\*

\*Note: Canal Reach Controlled and Operated by Collier County, subject to Limiting Conditions (3rd Amendment to Agreement C-11759, 02/09/2012)  
\*\*Note: Canal Overbank Controlled and Operated by Collier County, subject to Limiting Conditions (3rd Amendment to Agreement C-11759, 02/09/2012)

**Works of the District**

- S489
- CERP Pump Stations
- SWFMD Canals
- Manatee Mitigation Area
- Tieback Levee
- Spreader Basins

# BCB Cocohatchee Canal

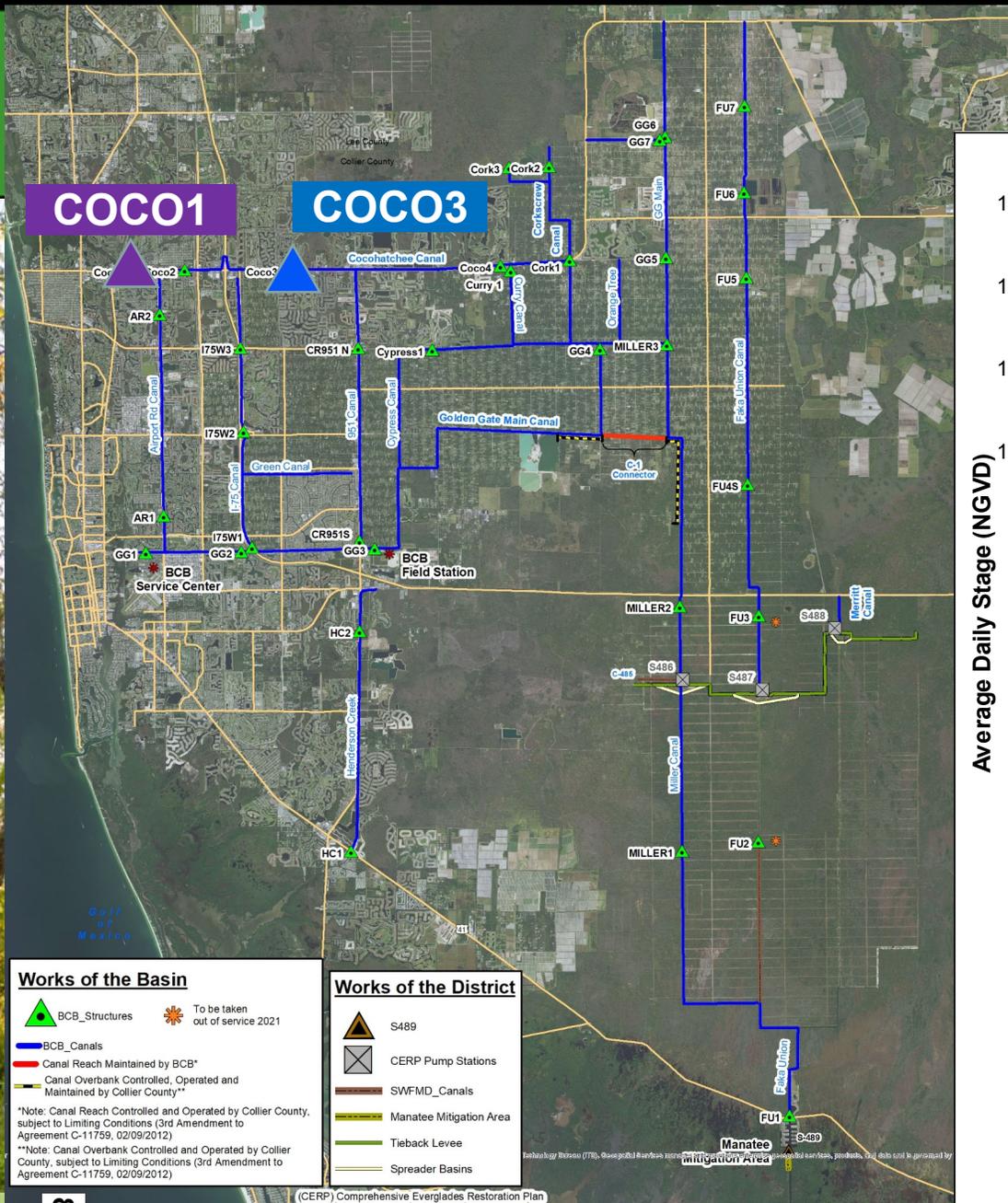
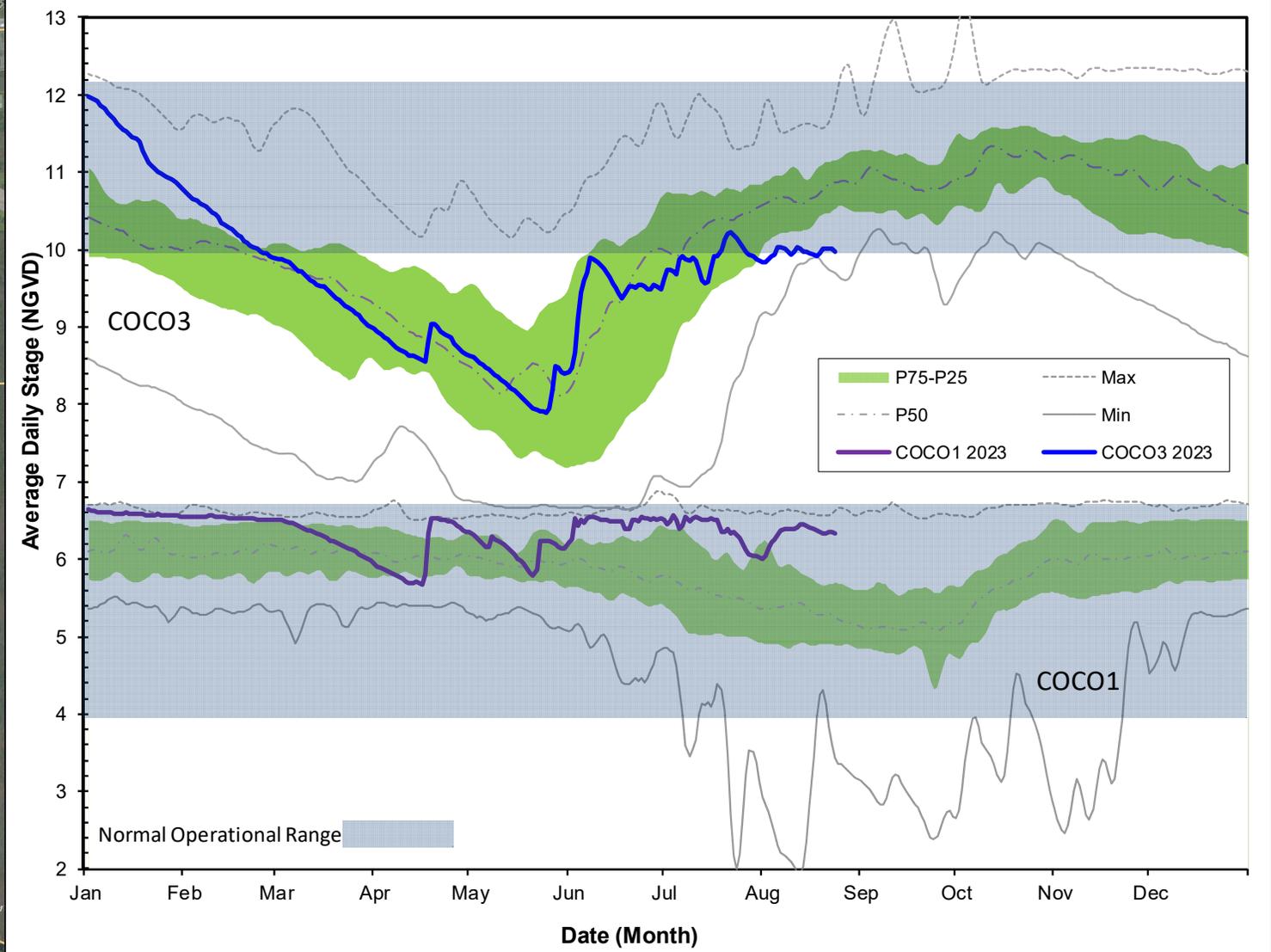


Figure 6A Cocohatchee Canal Historic Average Daily Headwater Percentiles



**Works of the Basin**

- BCB\_Structures
- To be taken out of service 2021
- BCB\_Canals
- Canal Reach Maintained by BCB\*
- Canal Overbank Controlled, Operated and Maintained by Collier County\*\*

\*Note: Canal Reach Controlled and Operated by Collier County, subject to Limiting Conditions (3rd Amendment to Agreement C-11759, 02/09/2012)  
\*\*Note: Canal Overbank Controlled and Operated by Collier County, subject to Limiting Conditions (3rd Amendment to Agreement C-11759, 02/09/2012)

**Works of the District**

- S489
- CERP Pump Stations
- SWFMD\_Canals
- Manatee Mitigation Area
- Tieback Levee
- Spreader Basins

# BCB Faka Union Canal

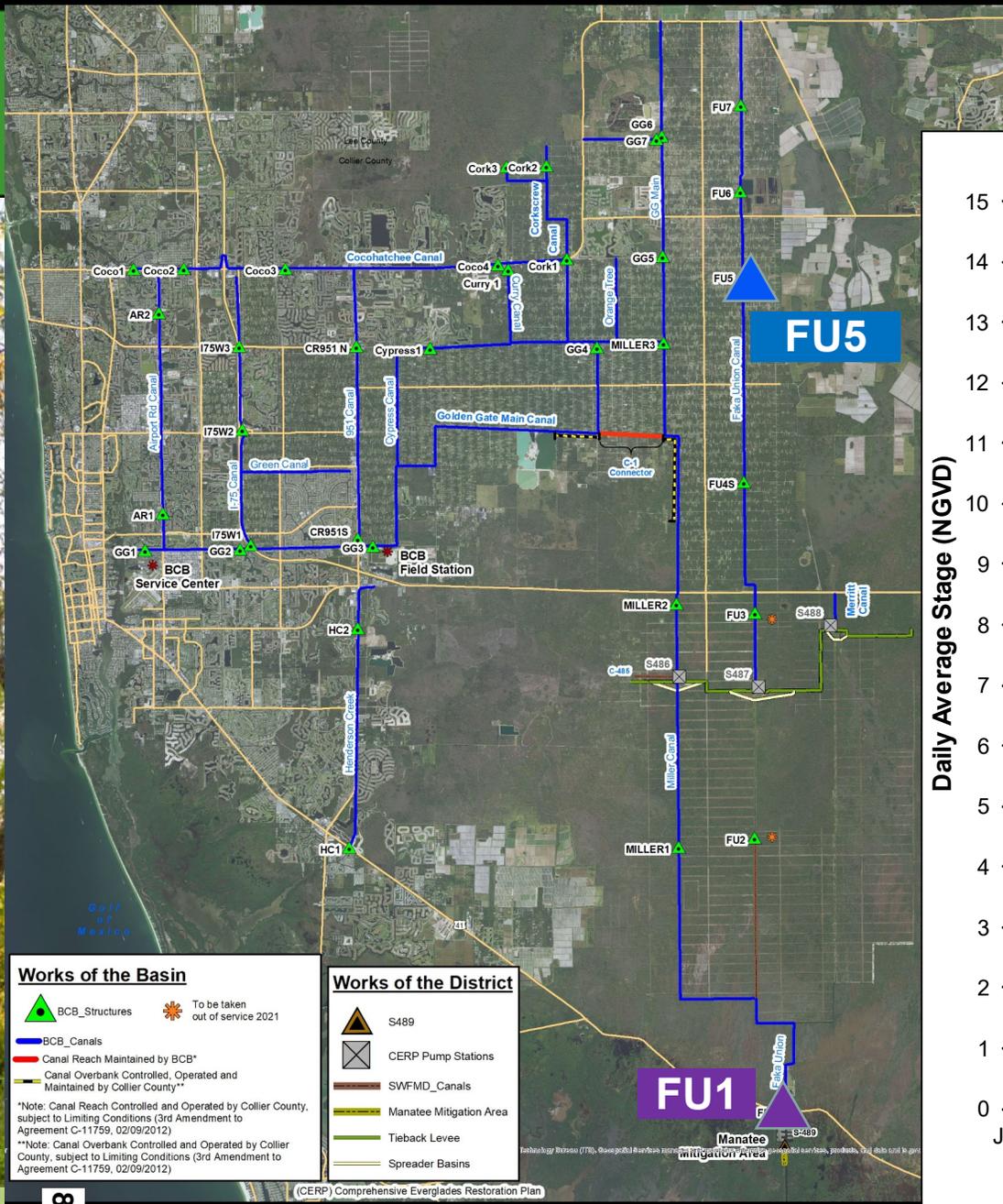
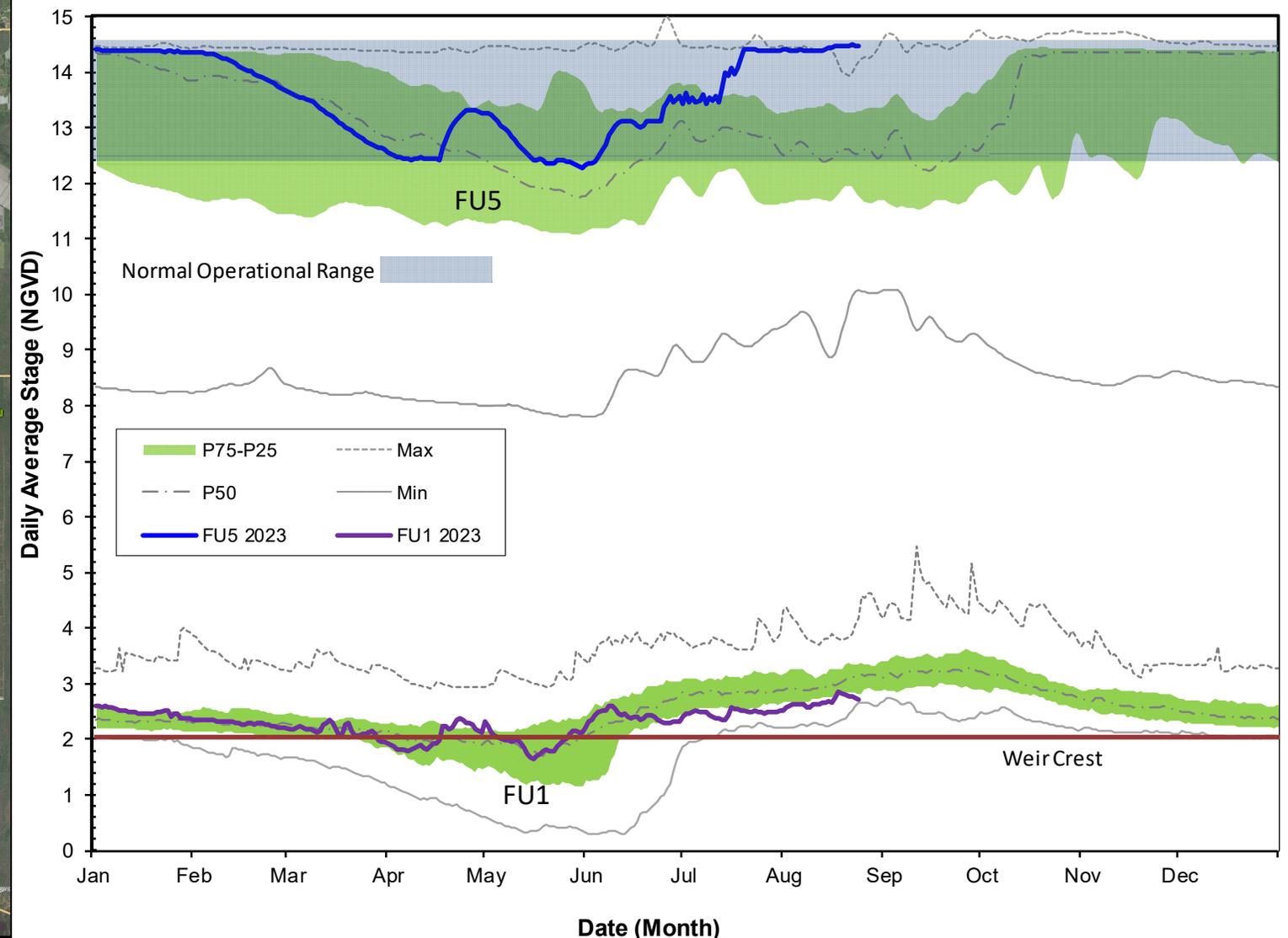


Figure 7A Faka Union Canal Historic Average Daily Headwater Percentiles



**Works of the Basin**

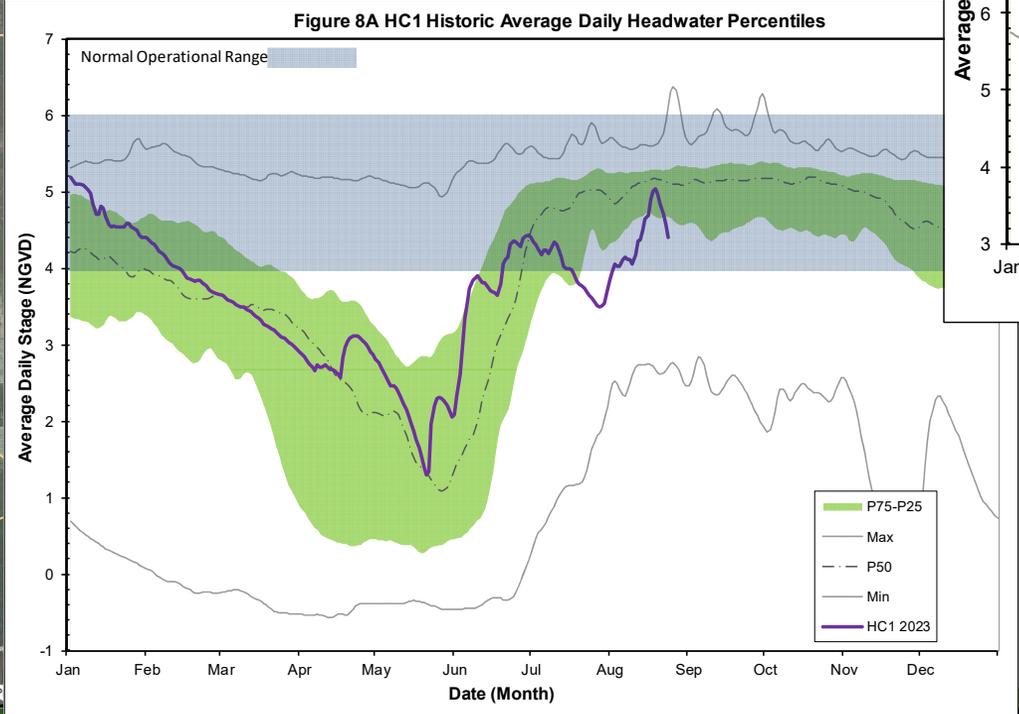
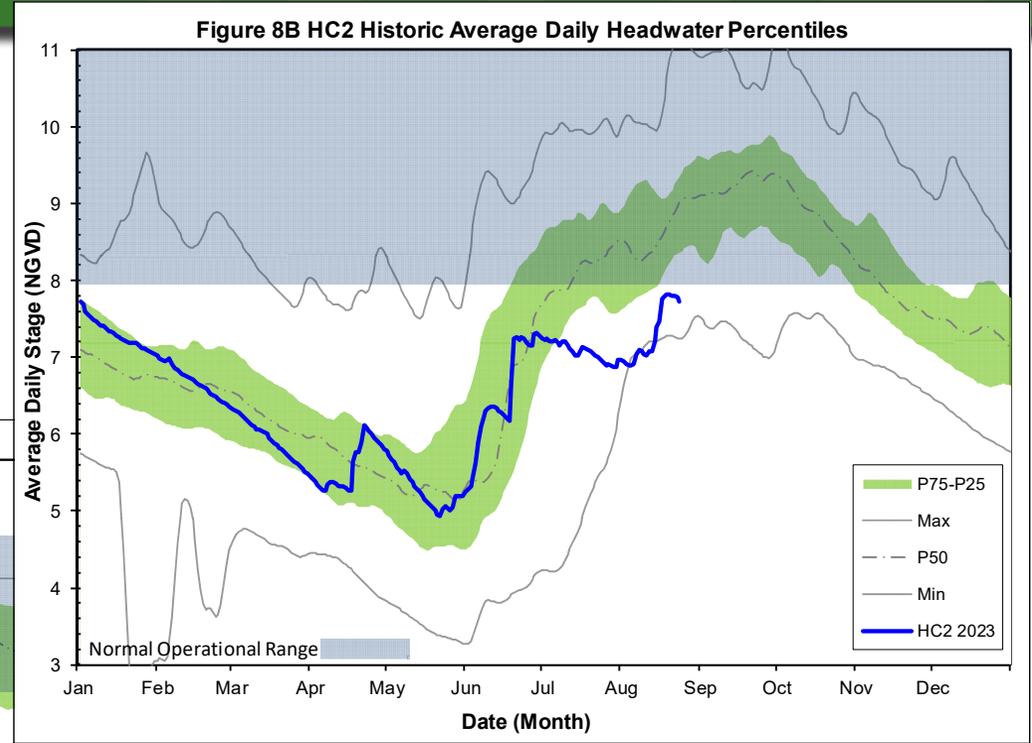
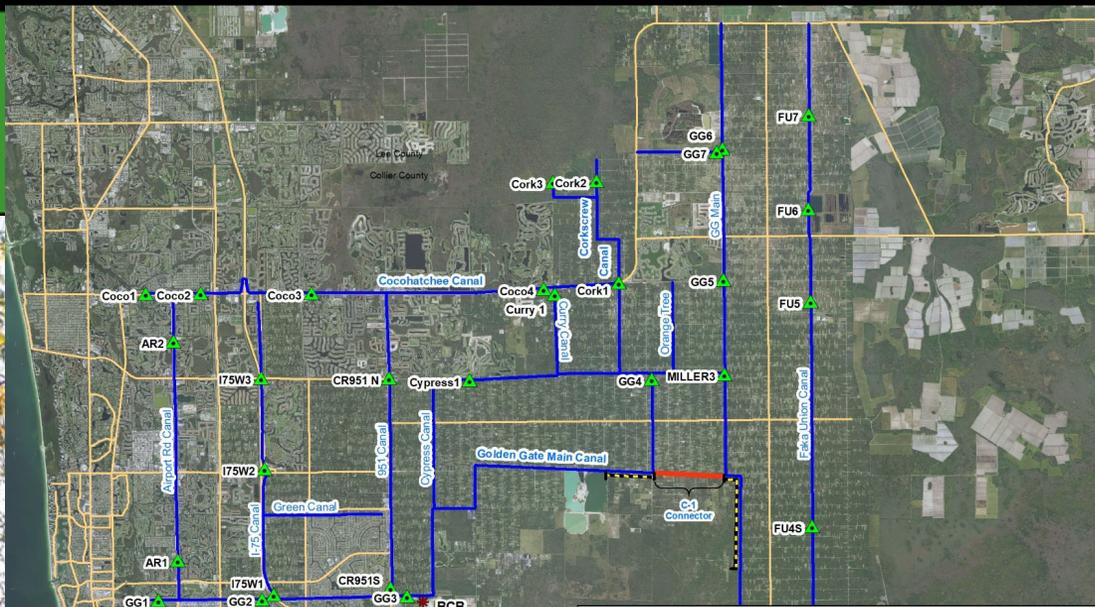
- BCB Structures
- To be taken out of service 2021
- BCB Canals
- Canal Reach Maintained by BCB\*
- Canal Overbank Controlled, Operated and Maintained by Collier County\*\*

\*Note: Canal Reach Controlled and Operated by Collier County, subject to Limiting Conditions (3rd Amendment to Agreement C-11759, 02/09/2012)  
\*\*Note: Canal Overbank Controlled and Operated by Collier County, subject to Limiting Conditions (3rd Amendment to Agreement C-11759, 02/09/2012)

**Works of the District**

- S489
- CERP Pump Stations
- SWFMD Canals
- Manatee Mitigation Area
- Tieback Levee
- Spreader Basins

# BCB Henderson Creek Canal



**HC2**

**HC1**

**Works of the Basin**

- BCB Structures
- To be taken out of service 2021
- BCB Canals
- Canal Reach Maintained by BCB\*
- Canal Overbank Controlled, Operated and Maintained by Collier County\*\*

**Works of the District**

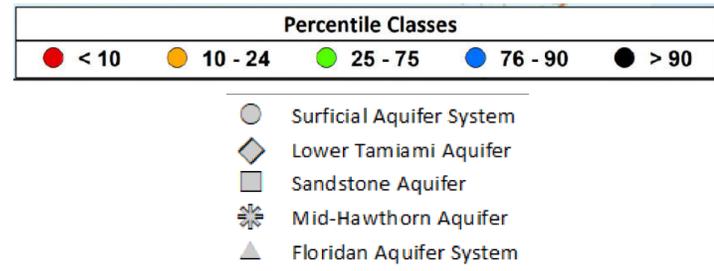
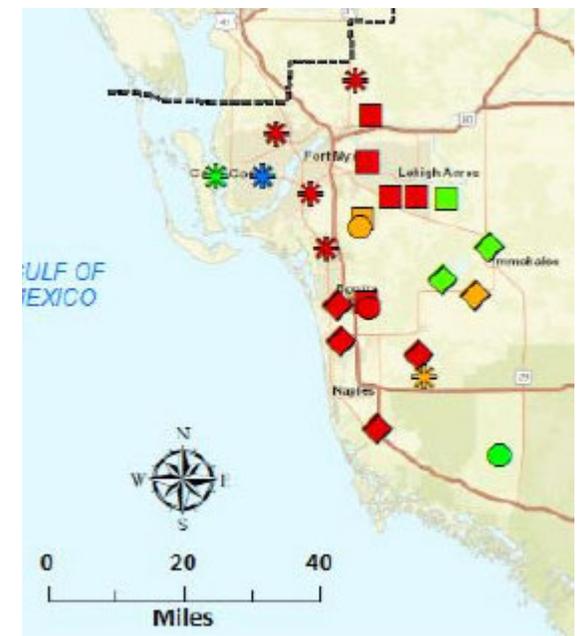
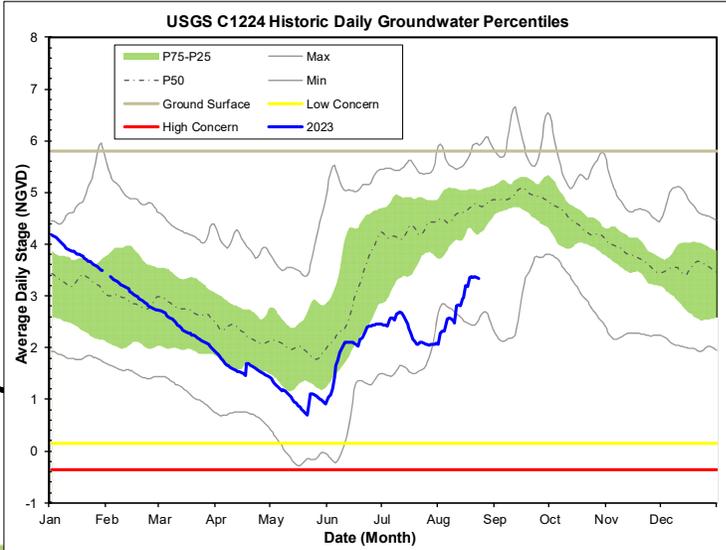
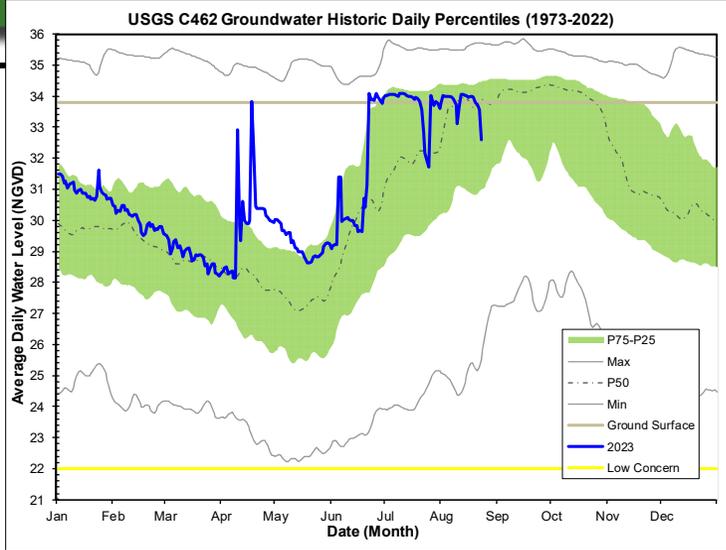
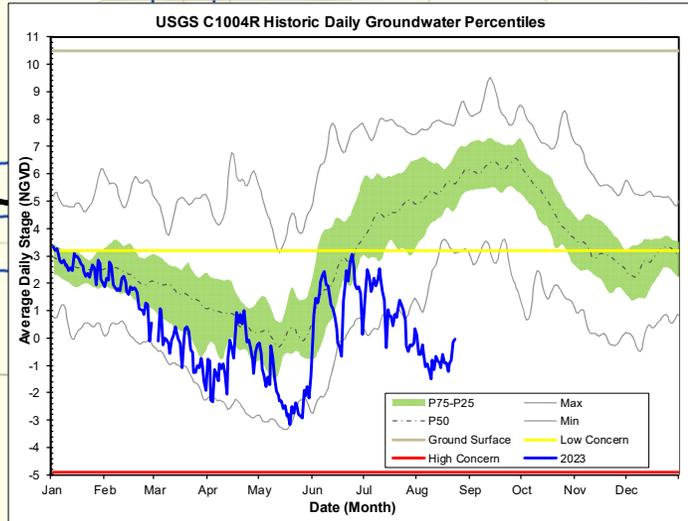
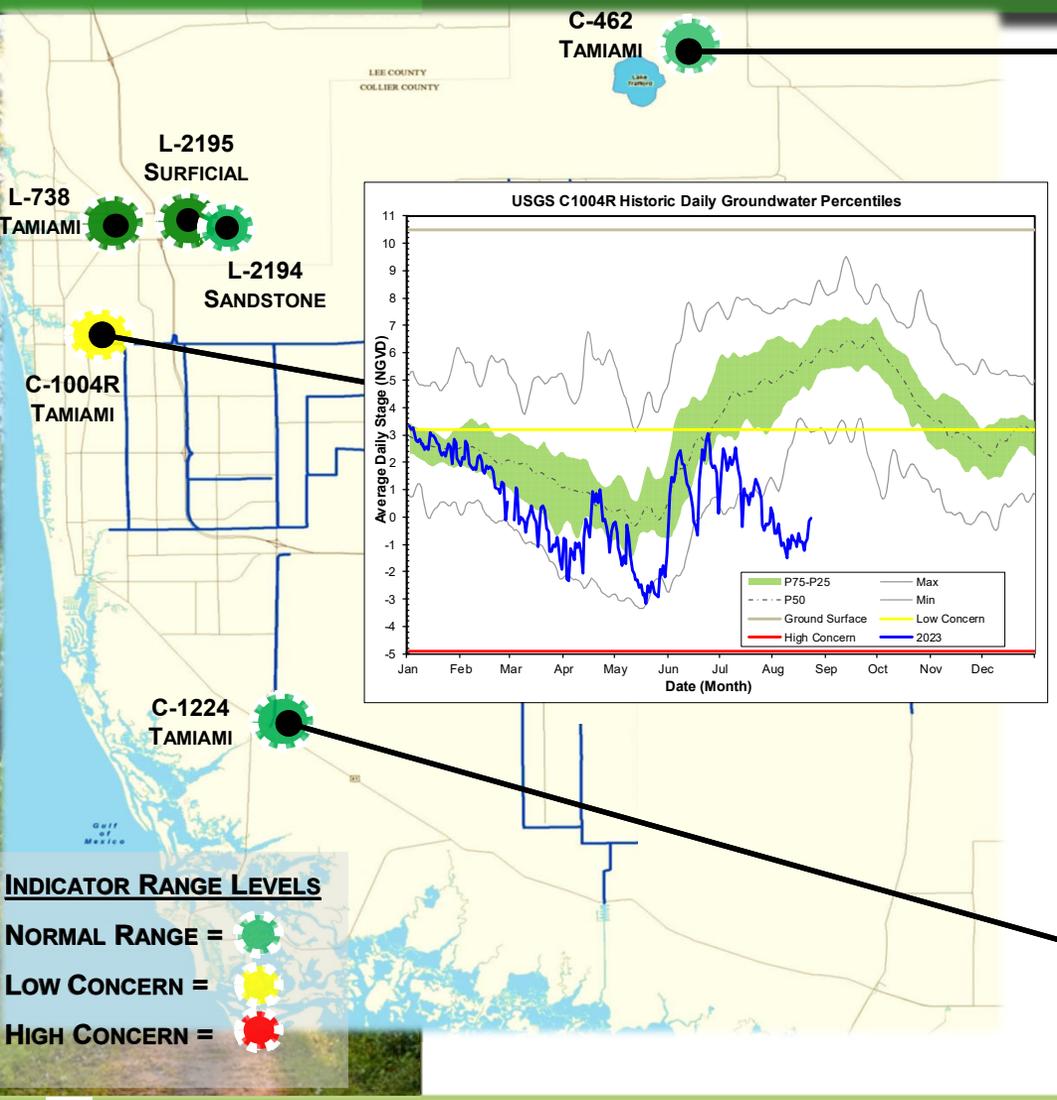
- S489
- CERP Pump Stations
- SWFMD Canals
- Manatee Mitigation Area
- Tieback Levee
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\*Note: Canal Reach Controlled and Operated by Collier County, subject to Limiting Conditions (3rd Amendment to Agreement C-11759, 02/09/2012)  
\*\*Note: Canal Overbank Controlled and Operated by Collier County, subject to Limiting Conditions (3rd Amendment to Agreement C-11759, 02/09/2012)

(CERP) Comprehensive Everglades Restoration Plan

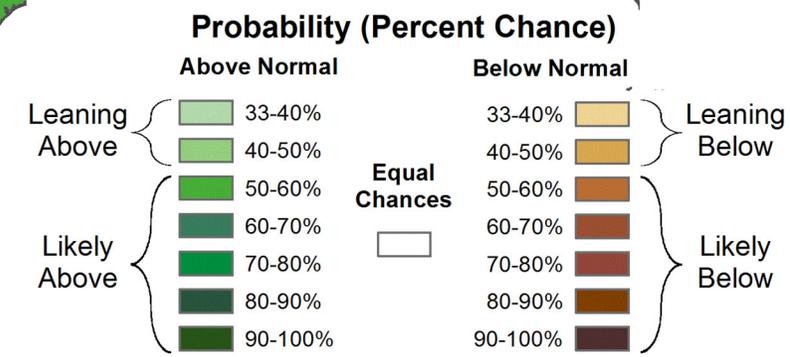
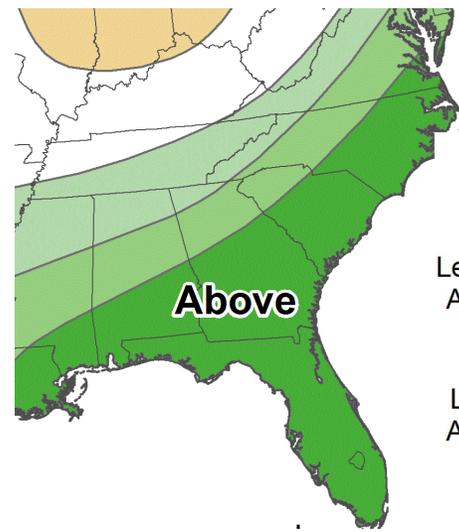
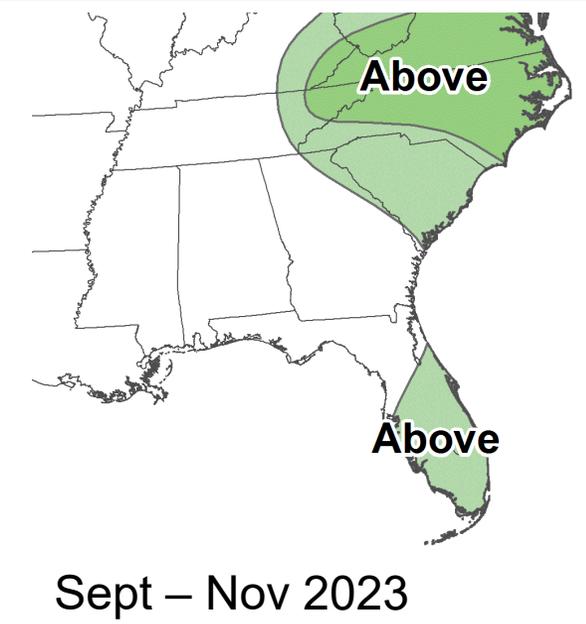
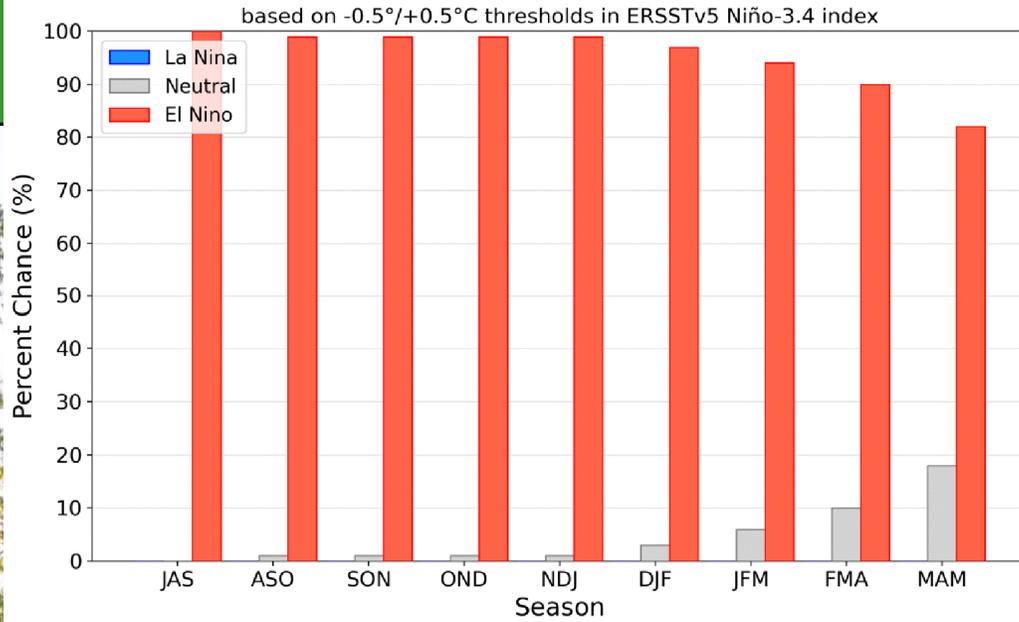


# Groundwater Level Trends



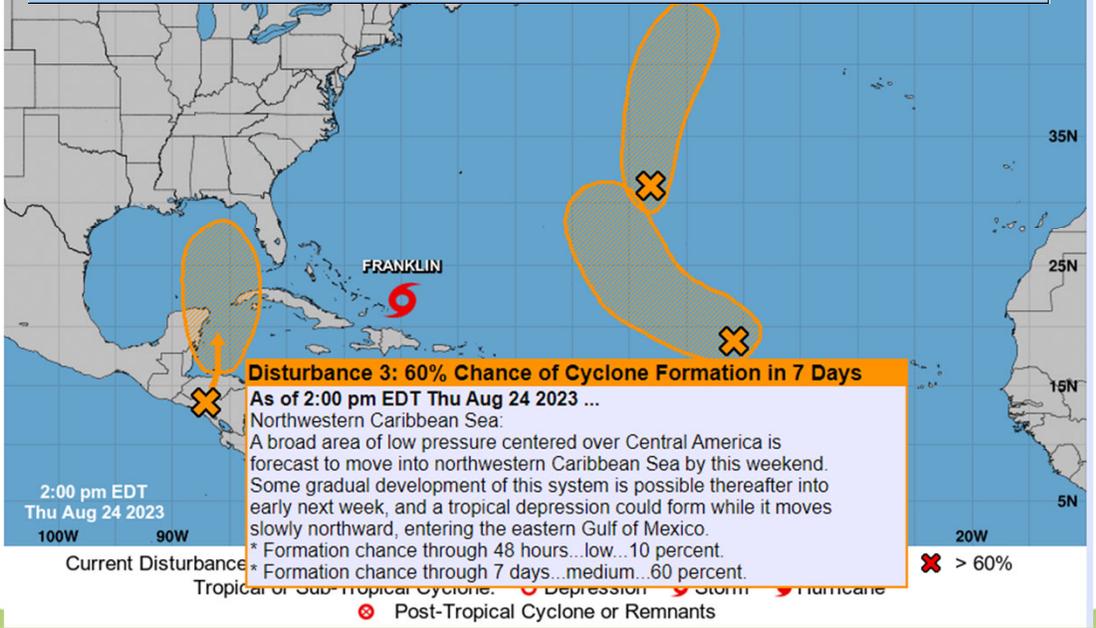
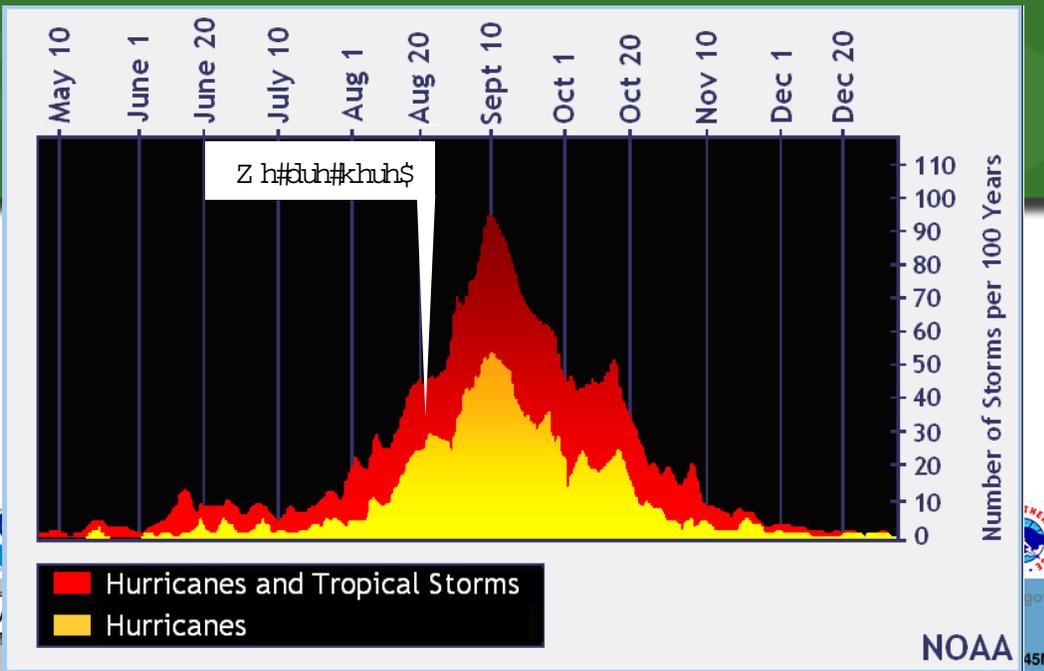
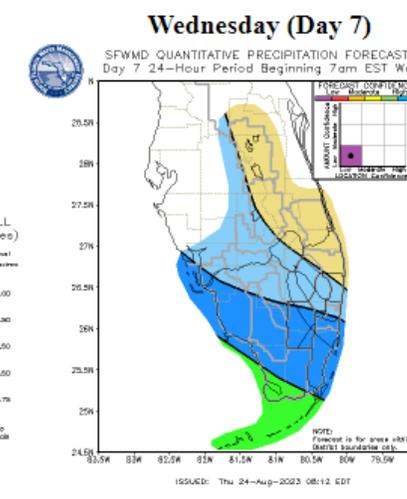
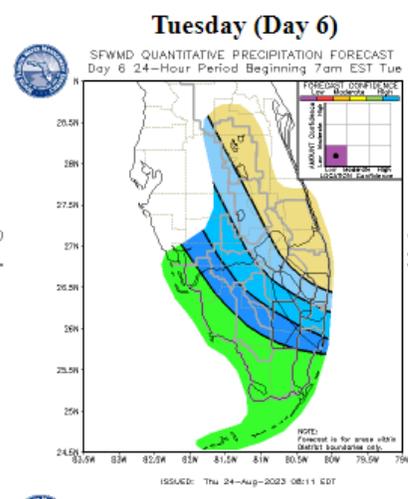
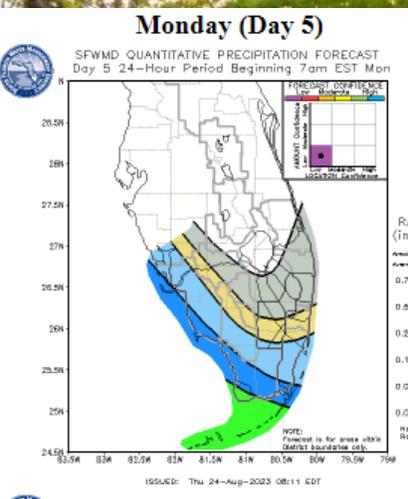
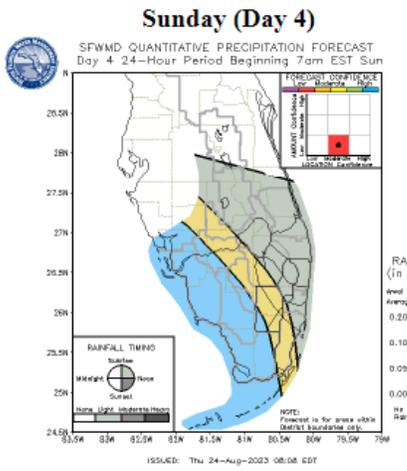
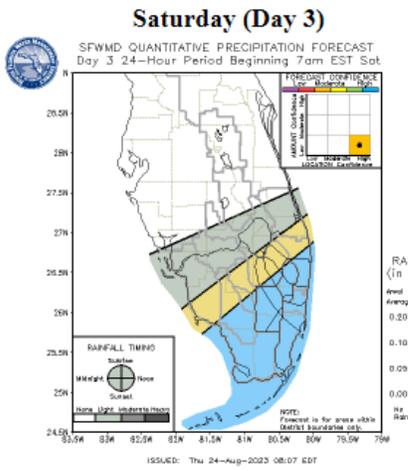
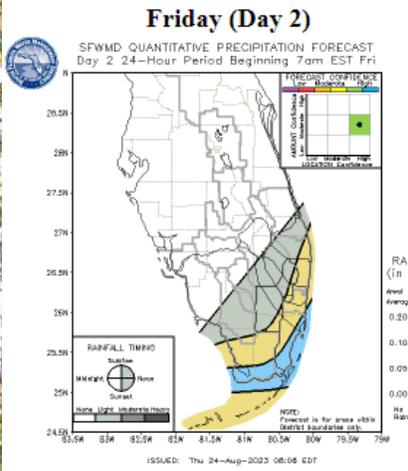
# Long-Range Precipitation Outlook

Official NOAA CPC ENSO Probabilities (issued Aug. 2023)



- Rare 3 year La Nina event transitioned to neutral conditions spring 2023 and El Nino in summer 2023
- El Nino conditions to continue at least through Spring 2024
- How El Nino effects climate in Florida
  - Winter – Generally wetter & cooler than average

# Short Term Forecast



# BCB Water Conditions Report

QUESTIONS ?



## Public Comment on Item #15

If you're participating in person –  
please fill out a comment card

If you're participating via Zoom – use  
the Raise Hand feature

If you're participating via Phone –

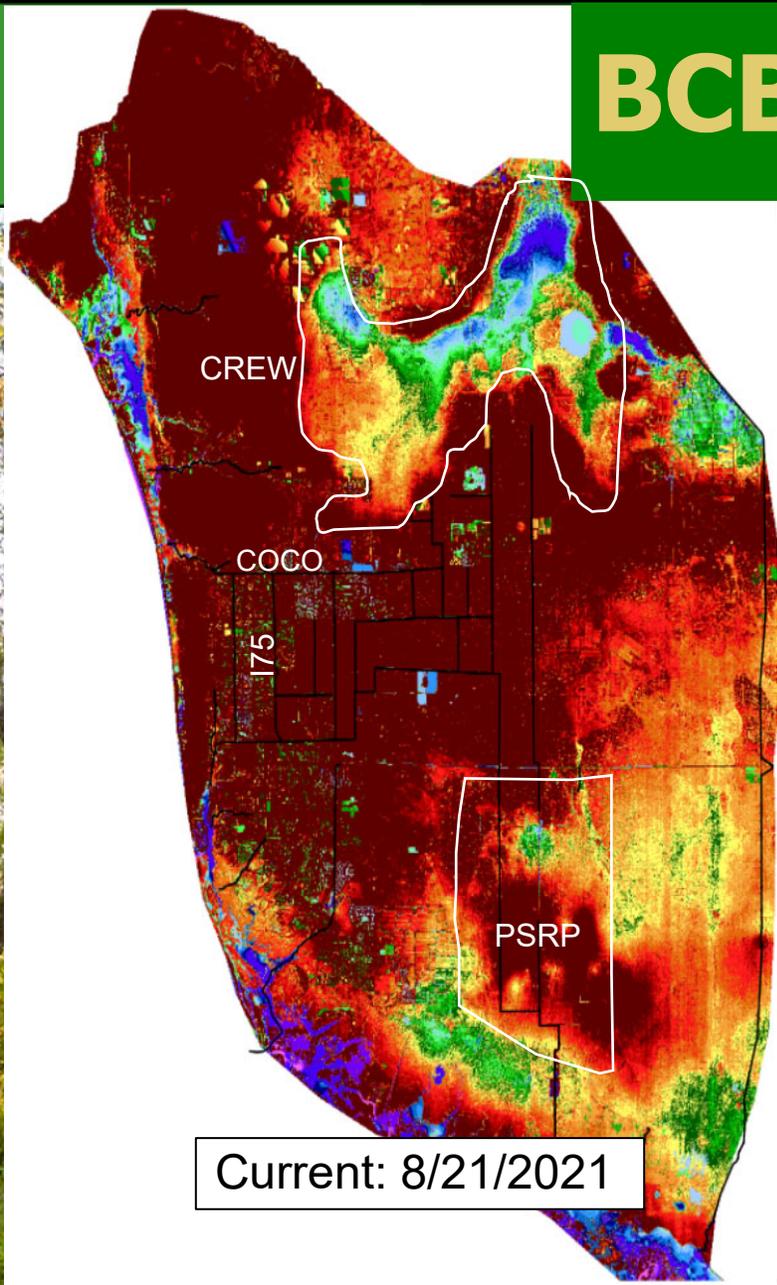
\*9 Raises Hand

\*6 Mutes/Unmutes

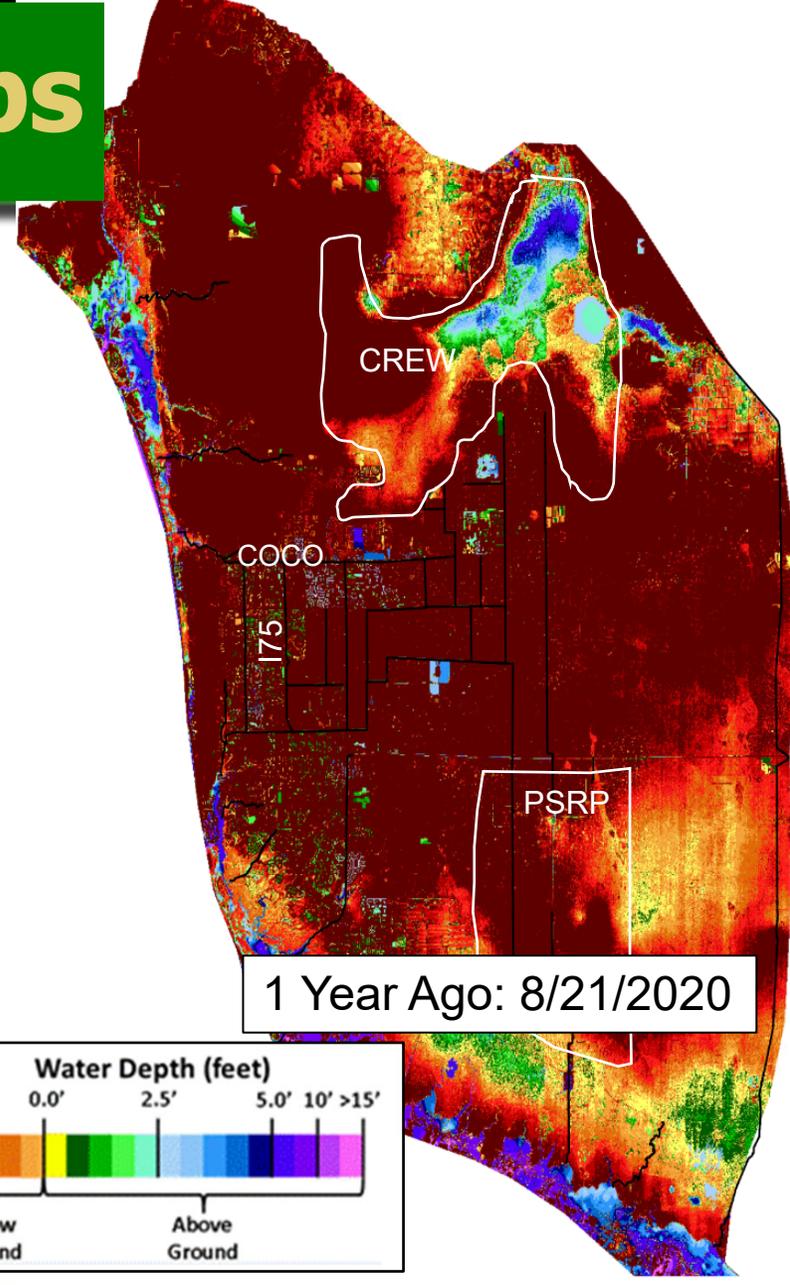
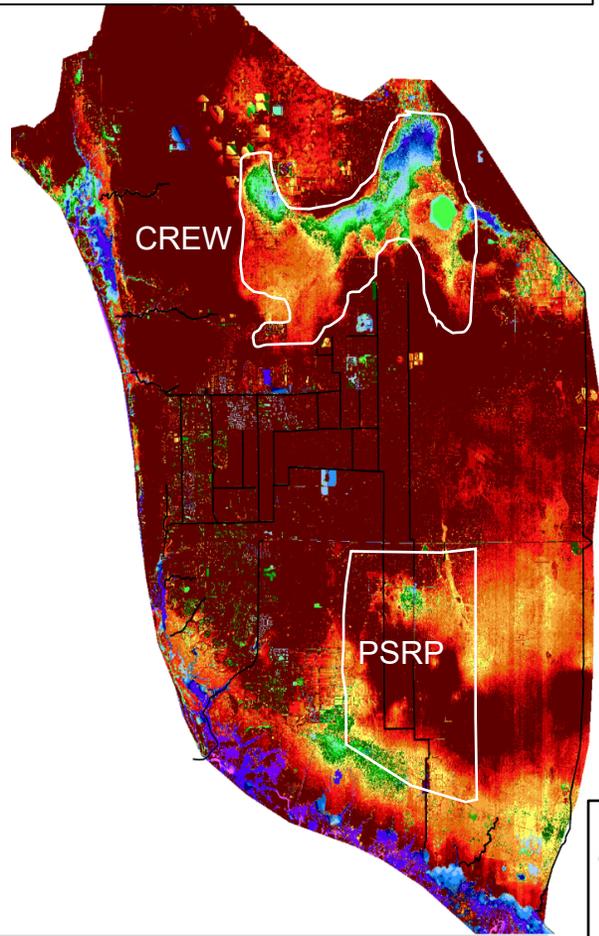


# BCB Water Depth Maps

1 Month Ago: 7/21/2021



Current: 8/21/2021



1 Year Ago: 8/21/2020

SOURCE: WATER DEPTH ASSESSMENT TOOL (SFWDAT)  
ALL WDAT PRODUCTS BASED ON PROVISIONAL DATA

