South Florida Water Management District

GOVERNING BOARD MONTHLY MEETING AGENDA

August 8, 2024
9:00 AM
District Headquarters - B-1 Auditorium
3301 Gun Club Road
West Palm Beach, FL 33406

FINAL- REVISED*
*Item 26 was revised

1. Call to Order - Chauncey Goss, Chairman, Governing Board

2. Pledge of Allegiance

3. Employee Recognitions
   - August 2024 Employee of the Month: Tibebe Dessalegne, Section Leader, Operational Hydraulics
   - August 2024 Team of the Month: Public Use and Recreation Team
   - 25-Year Service Award: Bahram Charkhian, Lead Environmental Scientist
   - 25-Year Service Award: Joel Arrieta, Superintendent, Clewiston Field Station
   - 35-Year Service Award: Thomas Colios, Section Leader, Water Supply
   - Good Samaritan Award: Indian River Kayaker Rescue
     - Ryan Carr, Science Technician 3
     - Ashley Colon Batista, Science Technician 3
     - Nevada Wagoner, Contract Worker Science Technician

4. Agenda Revisions

5. Agenda Item Abstentions by Board Members

6. Audit & Finance Committee Report - Jay Steinle, Chairman

7. Consider Approval of the Minutes for the July 11, 2024 Meeting

8. Executive Director's Report - Drew Bartlett

9. General Public Comment

10. Board Comment

11. Move Consent Agenda Items to Discussion Agenda

12. Public Comment on Consent Agenda Items

13. Board Vote on Consent Agenda

Consent Agenda

14. Land Acquisition, Shingle Creek Project, Orange County (Staff contact, Ray Palmer)

Agenda Item Background:
Shingle Creek is located in southern Orange County and is generally considered to be the headwaters for the Everglades. The District has been acquiring land on a willing seller basis to preserve and protect this resource. Staff is seeking Governing Board approval to acquire a total of 11.18 acres, more or less, from willing sellers for a cumulative purchase price of $563,000.

Recommended Action:
Resolution No. 2024-0801 Approve acquiring land interests containing 6.19 acres, more or less, in the amount of $313,500; and containing 2.47 acres, more or less, in the amount of $123,500; and containing 2.52 acres, more or less, in the amount of $126,000; all located in the Shingle Creek Project Area in Orange County, for which dedicated funds (Wetland Mitigation Fund) are budgeted.

Resolution No. 2024-0801
Resolution Exhibit A Map

15. Exchange Agreement, Atlantic Ridge Ecosystem Project, Martin County (Staff contact, Ray Palmer)

Agenda Item Background:
The District and the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Trustees) are co-owners of approximately 4,900 acres within the Atlantic Ridge Ecosystem Project in Martin County. The lands are operated and managed by the State's Division of Recreation and Parks as the Atlantic Ridge Preserve State Park. Pursuant to an Exchange Agreement, the District and the Trustees will convey to Discovery Hobe Sound Investors, LLC a 4.89-acre permanent water and sewer easement in exchange for the fee title conveyance of 8.6 acres adjacent to a southerly portion of the State Park, which contains improvements including a horse barn and a two-bedroom apartment. The exchange transaction also includes 20.17 acres of permanent access, drainage, and irrigation easements to the District and the Trustees that benefit the 8.6-acre fee title property and conveyance by the District and the Trustees of 9.02 acres of temporary construction easements to

Discovery Hobe Sound Investors, LLC for the purpose of construction of an upgraded replacement drainage ditch on the State Park property and staging during the construction of the access easements benefitting the 8.6-acre fee title property. The Exchange Agreement provides that for the purposes of the exchange the values of the respective fee and easement land interests are equal. The transaction is contingent on the Trustees separately approving and agreeing to join in the conveyances and the acquisitions.

Recommended Action:
Resolution No. 2024-0802 Approve declaring surplus for exchange and conveyance permanent easement interests containing 4.89 acres, more or less, and temporary easement interests containing 9.02 acres, more or less, in exchange for the acquisition of fee title land interests containing 8.6 acres, more or less, and permanent easement interests containing 20.17 acres, more or less, within the District's Atlantic Ridge Ecosystem Project, all in Martin County.

Resolution No. 2024-0802
Resolution Exhibit A Map

16. Land Exchange, L-20 Right of Way, Palm Beach County (Staff contact, Ray Palmer)

Agenda Item Background:
The District operates and maintains the L-20 right-of-way in Palm Beach County, Florida. The District will convey fee title land interests of approximately 0.26 acres currently within the L-20 right-of-way in exchange for acquisition of fee title land interests containing approximately 0.03 acres directly adjacent to the L-20 right-of-way. Using the Palm Beach County assessed value of the 0.03-acre parcel, the rounded value of the 0.03 acres is $1,000 and the rounded value of the 0.26 acres is $9,700. Therefore, the District will also be paid cash consideration of $8,700. The closing must occur on or before October 30, 2024.

Recommended Action:
Resolution No. 2024-0803 Approve declaring surplus for exchanging and conveyance fee title land interests containing 0.26 acres, more or less, within the District's L-20 right-of-way in exchange for the acquisition of fee title land interests containing 0.03 acres, more or less, all in Palm Beach County, together with the payment of $8,700 to the District and subject to satisfaction of certain terms, conditions and requirements.

Resolution No. 2024-0803
Resolution Exhibit A Map
Resolution Exhibit B

17. Request for Right of Way Occupancy Permit (Staff contact, Rich Virgil, P.E.)

Agenda Item Background:
The Florida Department of Transportation (Applicant) requests a Standard Right of Way Occupancy Permit Number 16970-R (ROW Permit) to construct a linear park within the south right of way of the C-12 Canal from N.W. 40th Avenue (SR-7/US 441) to N.W. 31st Avenue. The proposed linear park will include a 1.1-mile long, 10-foot-wide multi-use path for bicycles and pedestrians, existing native landscaping, access gates, removable bollards, and regulatory signage.

The Application has been reviewed by District Field Operations and the U.S. Army Corps of Engineers, which has granted Section 408 authorization. The permittee will be required to maintain the improvements and the entire right of way as a condition of the ROW Permit, which will relieve the District of mowing and maintenance responsibilities for this segment of the C-12 Canal right of way. District vehicles will be able to drive on and over the proposed multi-use path. If approved, the linear park and its related improvements will not interfere with or adversely impact the District's routine or emergency operations, maintenance, or future construction activities.

Recommended Action:
Approve issuance of Standard Right of Way Occupancy Permit Number 16970-R (Application No. 230307-37840).

Backup Presentation

18. Purchase, Rental, and Installation of Emergency Response Equipment for the 2024 Hurricane Season (Staff contact, Rich Virgil, P.E.)

Agenda Item Background:
The District has identified the need to purchase, rent, and install equipment required to respond to emergencies that could potentially occur in the event of a hurricane impacting the District's 16 county area of responsibility. The list of equipment includes, rental and installation of temporary pumps for the S-9 pump station, purchase of one 100-ton Link Belt Hydro Crane, one Caterpillar 336 Excavator, four Caterpillar 930 Loaders with grapple bucket, two 30-cubic-yard trash trucks, two 8" x 10" BBA trailer mount pumps with 550 feet of hose, and two Bell 407 helicopters. The S-9 temporary pump rentals are needed due to critical infrastructure failures and parts availability for the S-9 pump station. The replacement equipment is needed to increase reliability of critical tools essential to responding to emergencies.

Recommended Action:
Resolution No 2024-0804 Authorize entering into various contracts for the purchase, rental, and installation of emergency response equipment for the 2024 hurricane season in an aggregate amount not-to-exceed $10,749,744.80 for which Ad Valorem funds and dedicated funds (State Appropriations) are budgeted in Fiscal Year 2023-2024.

Resolution No. 2024-0804
Backup Presentation

19. Rocky Glades Public Small Game Hunting Area, Miami-Dade County (Staff contact, Rich Virgil, P.E.)

Agenda Item Background:
The restoration construction activities have been completed on the C-111 South Dade Project, located in Miami-Dade County. Therefore, the District proposes to authorize the Florida Fish and Wildlife Conservation Commission to add this area and adjacent District property, comprising a total of 5,617 acres, to the existing Rocky Glades Public Small Game Hunting Area. This will provide additional public hunting and recreation opportunities on District lands.

The Rocky Glades Public Small Game Hunting Area is managed in partnership with the Florida Fish and Wildlife Conservation Commission and is composed of parcels associated with the preservation and restoration of the eastern Everglades. Uses would include hunting, hiking, biking, fishing, wildlife viewing, and other outdoor nature-based recreational activities consistent with the purpose for which the land was acquired. This authorization will also allow for a consistent regulatory framework and provide resource protection measures for managing recreational use on the entire property.

The Florida Fish and Wildlife Conservation Commission is supportive of adding the Additional Property to the Rocky Glades Public Small Game Hunting Area and managing hunting activities on the property in accordance with State and Federal regulations. Information received from the Florida Fish and Wildlife Conservation Commission and comments received by District staff from recreational groups indicate there is a strong interest in incorporating these lands into the existing Rocky Glades Public Small Game Hunting Area.

Recommended Action:
Resolution No. 2024-0805 Authorize the Florida Fish and Wildlife Conservation Commission to establish District lands consisting of approximately 5,617 acres located in Miami-Dade County as part of the Rocky Glades Public Small Game Hunting Area.

Resolution No. 2024-0805
Resolution Exhibit A Map

20. C-25 Reservoir and Stormwater Treatment Area - Package 1 - Site Preparation Project, St Lucie County (Staff contact, Lucine Dadrian, P.E.)

Agenda Item Background:
As part of Comprehensive Everglades Restoration Plan, Indian River Lagoon-South (IRL-S) Restoration Project, the C-25 Reservoir and Stormwater Treatment Area Project (C-25 RSTA) Package 1 Site Preparation, located in St. Lucie County, will clear and grub, demolish existing agricultural features, and construct a construction village in preparation for the reservoir and STA construction in Package 2. The IRL-S Project includes several reservoirs, STAs, and natural lands features to support habitat restoration, reduced harmful discharges, and water quality improvements.

This project was authorized by Congress in Water Resources Development Act 2007. The reservoir is expected to capture runoff from the C-25 Basin and the STA is sized to remove 80% of the phosphorus entering the STA from the reservoir. The C-25 RSTA project includes an 810-acre area / 5,176-acre-foot reservoir and a 520-acre STA.

The lowest responsive and responsible bidder is recommended for award. In accordance with District policy and consistent with state law for Request for Bids procurements, this item was competitively bid through a sealed bid process. The bid opening for this project was on July 25, 2024.

Recommended Action:
Resolution No. 2024-0806 Authorize entering into a 410-day contract with Ryan

Incorporated Southern, the lowest responsive and responsible bidder, for the C-25 Reservoir and Stormwater Treatment Area – Package 1 – Site Preparation Project, in the amount of $16,187,500, for which dedicated funds (Land Acquisition Trust Fund and State General Revenue) in the amount of $600,000 are budgeted in Fiscal Year 2023-2024, and the remainder is subject to Governing Board approval of future years' budgets. (Contract No. 4600005048)

Resolution No. 2024-0806
Backup Presentation

21. Caloosahatchee (C-43) Reservoir Water Quality Treatment Project, Hendry County (Staff contact, Lucine Dadrian, P.E.)

Agenda Item Background:
The Caloosahatchee (C-43) Reservoir Water Quality Treatment Project, located in Hendry County, augments the Comprehensive Everglades Restoration Plan's infrastructure to suppress potential nuisance algal growth within the reservoir. The project consists of storage and delivery equipment to inject aluminum sulfate (alum) into the intake channels of the S-470 inflow pump station to enhance water quality and was identified as the most cost-effective treatment technology for improving water quality for discharges from the reservoir.

The alum will be dispensed into the pump station intake channels via alum feed pumps from five storage tanks located on the north bank of the pump station. Mixing of the alum will occur within the suction intake through the S-470 pumps and in the discharge piping of the pump station into the reservoir. This inline injection design of alum during reservoir filling is expected to provide beneficial reductions in algal growth within the reservoir.

The lowest responsive and responsible bidder is recommended for award. In accordance with District policy and consistent with state law for Request for Bids (RFB) procurements, this item was competitively bid through a sealed bid process. The bid opening for this project was on July 15, 2024.

Recommended Action:
Resolution No. 2024-0807 Authorize entering into a 330-day contract with Harry Pepper & Associates, Inc., the lowest responsive and responsible bidder, for Caloosahatchee (C-43) Reservoir Water Quality Treatment Project, in the amount of $5,955,924, for which $600,000 in dedicated funds (Land Acquisition Trust Fund) are budgeted in Fiscal Year 2023-2024 and the remainder is subject to Governing Board approval of future years' budgets. (Contract No. 4600005042)

Resolution No. 2024-0807
Backup Presentation

22. Lake Trafford Tower, Collier County (Staff contact, Lucine Dadrian, P.E.)

Agenda Item Background:
As part of the Big Cypress Basin (BCB) Capital Improvement Program, the Lake Trafford Tower Project, located in Collier County, will consist of the design and construction of a 300-feet communications tower, 290-feet of which shall consist of the structural steel lattice sections, IT building with associated connection to the tower and

emergency generator, LP tank, and fencing. The intent is to improve the communications between the Big Cypress Basin and the Control Room located at the District Headquarters in West Palm Beach by adding an interim tower between the Faka Union and C-43 towers. The Lake Trafford property is District-owned land that contains a perimeter berm that enables the property to be used as a depository site for the dredging of Lake Trafford, and the property location's upland area is ideally suited for this project.

The project will assist with the remote operations of the BCB's water control structures and pump stations by enabling real-time data transmission, monitoring, and operations, ensuring timely response to changing water levels during normal and emergency operations. This improves the efficiency and accuracy of flood control management and reducing the risk of flooding. The tower supports remote operations, minimizing the need for on-site personnel manually operating structures and lowers long-term operational costs.

The lowest responsive and responsible bidder is recommended for award. In accordance with District policy and consistent with state law for Request for Bids procurements, this item was competitively bid through a sealed bid process. The bid opening for this project was July 18, 2024.

Recommended Action:
Resolution No. 2024-0808 Authorize entering into a 674-day contract with Expert Construction Managers, Inc., the lowest responsive and responsible bidder, for the Lake Trafford Tower Project, in the amount of $6,686,000, for which $3,000,000 in Big Cypress Basin Ad Valorem funds are budgeted in Fiscal Year 2023-2024 and the remainder is subject to Governing Board approval of future years' budgets. (Contract No. 4600005043)

Resolution No. 2024-0808
Backup Presentation

23. Science and Technology Support Services Contracts (Staff contact, Cassondra Armstrong, Ph.D.)

Agenda Item Background:
The District has maintained a series of science and technology support services contracts with universities for several years, which are set to expire November 2024 (Florida International University and Florida Gulf Coast University) and January 2025 (University of Florida). This agenda item addresses the need to continue to have these services available to facilitate the delivery of the District's applied research and related projects conducted primarily in the Applied Sciences, Water Quality, Hydrology & Hydraulics, and Ecosystem Restoration bureaus. A Request for Proposals solicited technical proposals from qualified universities to provide support services in nine disciplines, including ecosystem and vegetation biology, soil sciences, wildlife biology, water quality monitoring, analytical laboratory services, data science, hydrology and hydraulics, permitting, and technical editing. Contract awards are requested for a duration of three years with the option of extending with two 1-year renewals. Assignments under each contract will be executed via work orders. The five universities selected for these contracts are University of Florida, Florida International University, Florida Atlantic University, University of Central Florida, and Florida Gulf

Coast University.

Five universities responded to the request for proposals. All five were deemed responsible and responsive. No oral presentations of proposals were given.

Recommended Action:
Resolution No. 2024-0809 Authorize the official ranking and entering into three-year contracts, with the option of executing two 1-year extensions, with each of the following universities: University of Florida, Florida International University, Florida Atlantic University, University of Central Florida, and Florida Gulf Coast University, subject to successful negotiations, to provide Scientific and Technology Support Services in an amount not-to-exceed $15,000,000 for the five contracts, which the Fiscal Year 2023-2024 budget includes approved Ad Valorem and dedicated funds (State Appropriations) and the remainder is subject to Governing Board approval of future years budgets; the District may proceed with negotiations with the five selected universities until contracts are successfully negotiated.

Contract No.	Vendor Name
4600005026	University of Florida
4600005025	Florida International University
4600005028	Florida Atlantic University
4600005029	University of Central Florida
4600005027	Florida Gulf Coast University

Resolution No. 2024-0809

24. Approval to Request Funds for Operations in Accordance with Senate Bill 1638 - Environmental Resource Management Chapter 2024-58 Laws of Florida, Section 15, House Bill 5001 GAA 1696D Chapter 2024-231 Laws of Florida, and an Executed Funding Agreement with the Florida Department of Environmental Protection (Staff contact, Candida Heater)

Agenda Item Background:
On April 4, 2024, Governor DeSantis signed into law Senate Bill 1638 - Environmental Resource Management Chapter 2024-58 Laws of Florida, Section 15, which appropriated $150,000,000 in nonrecurring funds from the General Revenue Fund in Aid to Local Governments - Grants and Aids and within the Operations appropriation category to the SFWMD for operations and maintenance responsibilities under the purview of the District. These responsibilities include all refurbishments, upgrades, operations, and maintenance of facilities, flood control and water supply structures, lands, and other works authorized by Chapter 373, Florida Statutes. Additionally, these funds are to cover the costs to conduct a study of the health and ecosystem of Lake Okeechobee with the Water School at Florida Gulf Coast University. As well, on June 12, 2024, Governor DeSantis signed into law House Bill 5001 Chapter 2024-231 Laws of Florida, which appropriated GAA 1696D in the amount of $2,000,000 for operations.

Recommended Action:
Resolution No. 2024-0810 Authorize the Executive Director of the South Florida Water Management District, or designee, to request distribution, transfer,

release, advance, and reimbursement of funds to cover the District operations pursuant to Senate Bill 1638 – Environmental Resource Management, Chapter 2024-58 Laws of Florida, Section 15, in the amount of $150,000,000, House Bill 5001 Chapter 2024-231 Laws of Florida, GAA 1696D in the amount of $2,000,000, and in accordance with an executed funding agreement with the Florida Department of Environmental Protection.

Resolution No. 2024-0810

Discussion Agenda

25. Final Project Implementation Report and Environmental Impact Statement for the Western Everglades Restoration Project (Staff contact, Jennifer Reynolds)

Agenda Item Background:
The Western Everglades Restoration Project (WERP) is a part of the Comprehensive Everglades Restoration Plan (CERP), a 50/50 cost-share program between the U.S. Army Corps of Engineers (USACE) and the South Florida Water Management District (District). The study area covers approximately 1,200 square miles in the western Everglades and includes parts of the Big Cypress Seminole Tribe of Florida Reservation, Big Cypress National Preserve (BCNP), and the Miccosukee Tribe of Indians of Florida Reservation. WERP is an Everglades restoration planning effort that aims to improve the quantity, quality, timing, and distribution of water in the western Everglades. This agenda item is for discussion and includes voting items.

The WERP Recommended Plan proposes to use a series of active and passive water management features and water quality features to reestablish sheetflow into BCNP and Water Conservation Area (WCA)-3A. The Recommended Plan will maintain existing levels of flood protection and ensure that inflows to the North and West Feeder canals meet applicable water quality standards. A Stormwater Treatment Area (STA) totaling approximately 3,600 acres and WERP implementation plan dependencies based on State water quality efforts within the Feeder Canal Basin Water Quality Program are included in the plan to improve water conditions in the Feeder Canal Basin prior to flowing downstream. The plan also includes implementation of canal modifications, the installation of levee tie-ins, the degradation of existing levees, the vegetation restoration of areas impacted by nuisance and exotic vegetation, the restoration of a historic tree island bisected by the Central & Southern Florida infrastructure, and the installation of water management structures (gated culverts, ungated culverts, weirs, etc.). The recommended Plan will reestablish ecological connectivity of wetland and upland habitats in BCNP and WCA3A with restored freshwater flow paths, seasonal hydroperiods, and historic distributions of sheetflow. Low nutrient conditions to reestablish and sustain native flora and fauna will also be restored. Reestablishing the hydrology will reduce wildfires that damage the underlying geomorphic condition of the western Everglades and will promote system-wide resilience considering future change, such as sea level rise and climate change.

Planning efforts were initiated in August 2016, under USACE's planning paradigm to develop a final plan, known as the Project Implementation Report and Environmental Impact Statement (PIR/EIS), for congressional authorization. District staff requests

Governing Board support on the proposed WERP Recommended Plan and to approve a resolution committing to collaborate with landowners in the development of solutions for water quality and retention within the Feeder Canal Basins that avoids adverse hydrologic impacts to private property and the use of eminent domain without Governing Board approval under State Law and funding from a State of Florida Budget. The Final PIR/EIS will be released in August 2024 followed by completion of the Chief's Report in September 2024 and submittal to Congress for authorization December 2024.

Recommended Action:
Resolution No. 2024-0811 Declare support for the restoration of the Western Everglades and a commitment to continued engagement with landowners in the Feeder Canal Basin to ensure the successful implementation of the Western Everglades Restoration Project (WERP) in a manner that achieves the ecological benefits to Big Cypress National Preserve, Everglades National Park, and the Big Cypress Seminole Indian Reservation Native Area while not adversely flooding private property; and to develop solutions for water quality and retention through State efforts relating to activities outlined within the WERP Project Implementation Report / Environmental Impact Statement (PIR/EIS) and as part of the Feeder Canal Basin Water Quality Program.

Resolutions No. 2024-0811
Map

26. Green Heart of the Everglades Project, Collier County (Staff contact, Rory Feeney)

Agenda Item Background:
The Fiscal Year 2022-2023 Florida Legislature appropriated funds and directed the District to acquire 11,053.44 acres, located in Collier County, known as the Green Heart of the Everglades Project (Property).

The District proposes to designate the Property as a "Management Area" in accordance with Public Use Rule 40E-7.521(27), Florida Administrative Code. A "Management Area" designation will allow the District to apply the rules codified in Chapter 40E-7, Florida Administrative Code, to manage public recreation within the Property to ensure a balance between public recreation, restoration and protection, consistent with the purpose for which the Property was acquired. These rules include establishing public access points and providing for a variety of recreational activities including hunting, frogging, crabbing, fishing, wildlife viewing, environmental education, and the use of non-motorized, and motorized watercraft, including airboats, that are compatible with the Property.

The District also proposes to adopt the Green Heart of the Everglades Interim Land Management Plan for the Property, in accordance with Section 373.1391, Florida Statutes, to provide for the conservation, preservation, and recreational use of the lands. The Green Heart of the Everglades Interim Land Management Plan is a five-year interim plan describing the historical, physical, and ecological aspects of the Property, existing and future public recreational opportunities, and the various land management goals and objectives to properly manage the area. The purpose of the interim management plan is to provide guidance to District land managers for the application of consistent and ecologically beneficial land management practices. Upon

completion of the five-year interim plan, the District will develop a ten-year General Land Management Plan.

Lastly, the District proposes to authorize the Florida Fish and Wildlife Conservation Commission to establish portions of the Property as a Public Small Game Hunting Area for the purpose of managing public hunting and recreational opportunities on the Property in accordance with Rule 40E-7.527, Florida Administrative Code. This will create the regulatory framework needed to provide resource protection measures for managing the Property's recreational use. The Florida Fish and Wildlife Conservation Commission supports establishing portions of the Property as a Public Small Game Hunting Area and managing hunting and recreation activities on the Property in accordance with State and Federal regulations. Information received from the Florida Fish and Wildlife Conservation Commission and comments received by District staff from recreational and interest groups indicate there is a strong interest in incorporating this portions of the Property into a Public Small Game Hunting Area.

Recommended Action:
Resolution No. 2024-0812 Designate the approximately 11,053.44-acre Green Heart of the Everglades Project, located in Collier County, as a "Management Area" as defined in Rule 40E-7.521(16), Florida Administrative Code; adopt the Green Heart of the Everglades' Interim Land Management Plan; and authorize the Florida Fish and Wildlife Conservation Commission to establish portions of the area as a Public Small Game Hunting Area.

Resolution No. 2024-0812
Resolution Exhibit A Map
Resolution Exhibit B Interim Land Management Plan

Technical Reports

27. Water and Ecological Conditions Report - John P. Mitnik, P.E., and Lawrence Glenn

Staff Reports

28. Monthly Financial Report - Candida Heater, Division Director - Administrative Services

29. General Public Comment

30. Board Comment

31. Adjourn

Final Presentations and Project Updates

Agenda Item Background:

25 Reynolds WERP
26 Feeney Green Heart of the Everglades
27 Mitnik Glenn Water and Ecological Conditions Report
CERP Project Update
NEEPP Project Update

Public Comment Procedure

The South Florida Water Management District Governing Board encourages the public to provide comment and input to the Governing Board. Public comment is accepted at the two dedicated General Public Comment periods at the beginning and the end of the meeting. Public comment is also accepted on the Consent Agenda and each Discussion Agenda item.

M E M O R A N D U M

TO: Governing Board Members

FROM: Ray Palmer, Real Estate

DATE: August 8, 2024

SUBJECT: Land Acquisition, Shingle Creek Project, Orange County

Agenda Item Background:
Shingle Creek is located in southern Orange County and is generally considered to be the headwaters for the Everglades. The District has been acquiring land on a willing seller basis to preserve and protect this resource. Staff is seeking Governing Board approval to acquire a total of 11.18 acres, more or less, from willing sellers for a cumulative purchase price of $563,000.

Additional Item Background:
Core Mission and Strategic Priorities:
The proposed acquisitions of privately-owned land within the Shingle Creek Project allow the District to achieve ownership consistent with its environmental goals. The acquisitions will consolidate District ownership with other District owned lands.

Funding Source:
The purchase prices are all below the respective appraised values. The closing costs will be paid by the sellers. All costs, including acquisition and associated costs, were or will be funded from the District's Wetland Mitigation Fund.

Staff Contact and/or Presenter:
Ray Palmer, rpalmer@sfwmd.gov, 561-682-2246

ATTACHMENTS:

Resolution No. 2024-0801

Resolution Exhibit A Map

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024-08XX

A Resolution of the Governing Board of the South Florida Water Management District to acquire land interests containing 6.19 acres, more or less, in the amount of $313,500, and containing 2.47 acres, more or less, in the amount of $123,500, and containing 2.52 acres, more or less, in the amount of $126,000, all located in the Shingle Creek Project Area in Orange County, for which dedicated funds (Wetland Mitigation Fund) are budgeted; providing an effective date.

WHEREAS, the South Florida Water Management District is currently acquiring land from willing sellers in connection with the implementation of the Shingle Creek Project in Orange County; and

WHEREAS, the South Florida Water Management District desires to purchase land interests containing 6.19 acres, more or less, in the amount of $313,500; containing 2.47 acres, more or less, in the amount of $123,500; containing 2.52 acres, more or less, in the amount of $126,000, for the Shingle Creek Project, as shown on the location map Exhibit "A," attached hereto and made a part hereof, and declare surplus, disposal of, and removal from the asset records, any such structures and improvements deemed unnecessary for the stated purpose for the original land acquisition; and

WHEREAS, all costs are to be funded from the District's Wetland Mitigation Fund for the acquisition and associated costs; and

WHEREAS, the South Florida Water Management District is authorized to acquire land, or interests or rights in land, pursuant to Section 373.139, Florida Statutes; and

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby authorizes the acquisition of land interests containing 6.19 acres, more or less, in the amount of $313,500; containing 2.47 acres, more or less, in the amount of $123,500; containing 2.52 acres, more or less, in the amount of $126,000, for the Shingle Creek Project in Orange County, together with associated costs, for which dedicated funds (Wetland Mitigation Fund) have been budgeted as follows:

This space intentionally left blank.

Owner	Tract No.	Interest	Acres	Appraised Value	Purchase Price
Grace Y. Chu, As Trustee for The Grace Y. Chu Revocable Trust, Dated September 16, 1992	26104-211	Fee	6.19	$370,000	$313,500
Marianne V. Mauterer	26103-253	Fee	2.47	$150,000	$123,500
Farooq A. Syed	26102-043	Fee	2.52	$150,000	$126,000
Total			11.18	$670,000	$563,000

Amount	Fund	Fund Center	Functional Area	GL Account #	Account Description
$ 563,000	409020	3510144000	AA05	580020	Acquisition

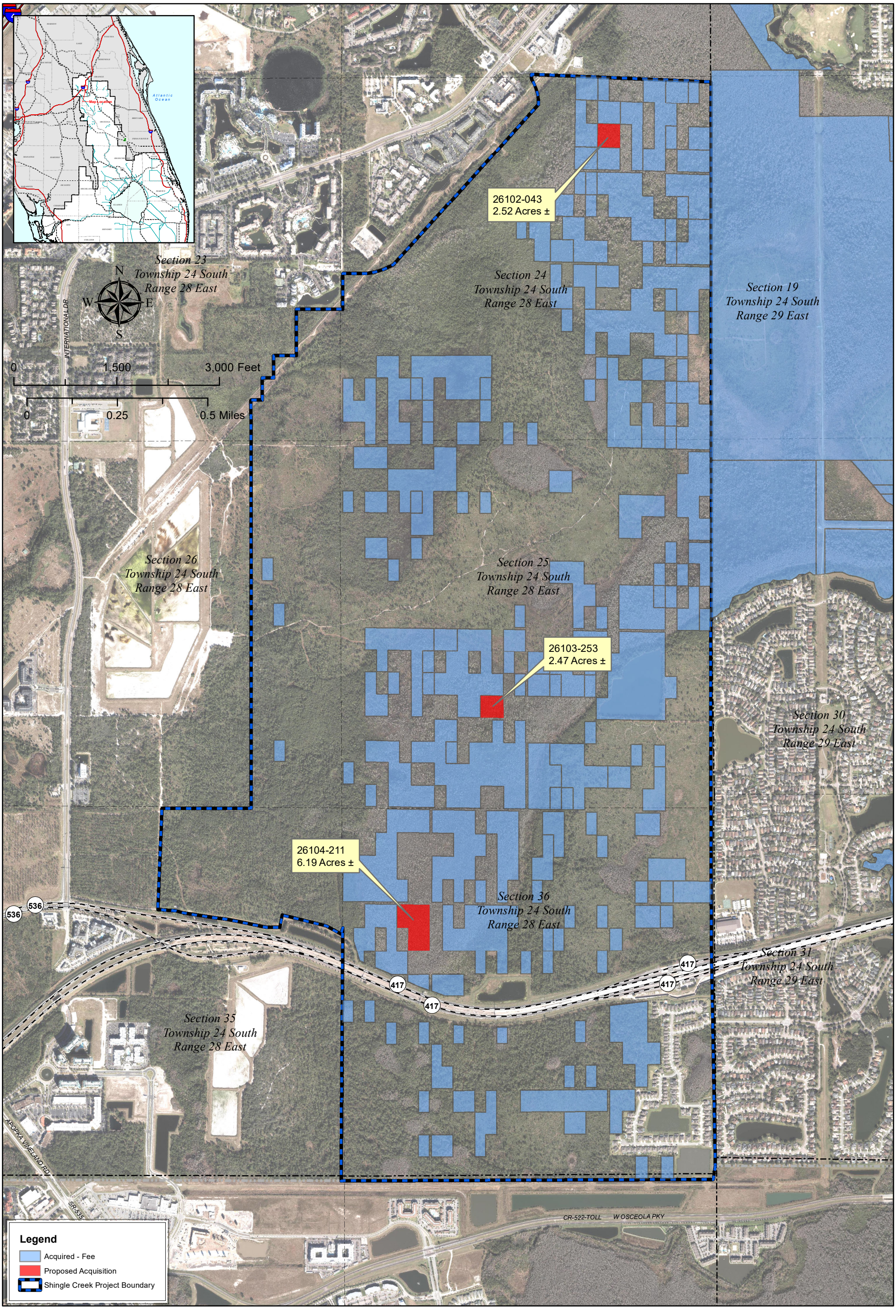
Section 2. The Governing Board of the South Florida Water Management District hereby further approves declaring surplus, disposal of and removal from the asset records, any such structures and improvements deemed unnecessary for the stated purpose of the original land acquisition.

Section 3. The Governing Board of the South Florida Water Management District hereby authorizes the Chairman or Vice Chairman to execute the Agreement for Sale and Purchase instrument. The Governing Board of the South Florida Water Management District hereby authorizes the Executive Director or the Executive Director's designee to make any determinations in connection with the transaction and execute all other documents necessary to consummate these transactions.

Section 4. This Resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 8th day of August, 2024.

Exhibit "A"



BASE CREDITS:
- Base map from South Florida Water Mgmt. District, February 2017
- State Plane Projection, Florida East Zone, NAD 83-HARN, US feet
- Orange County 2022 3IN 6IN Aerial

South Florida Water Management District
3301 Gun Club Rd, West Palm Beach, FL 33406
561-686-8800 - FL WATS 1-800-432-2045
P.O. Box 24680 - West Palm Beach, FL 33416-4680

Shingle Creek
26102-043, 26103-253 & 26104-211
Orange County, Florida

IMPORTANT DISCLAIMER:
This map is a conceptual or planning tool only.The South Florida Water Management District does not guarantee or make any representation regarding the information contained herein. It is not self-executing or binding, and does not affect the interests of any persons or properties, including any present or future right or use of real property.

Map Date: July 2024

User Name: jpadilla IRIS SR: 24RES-00309 Map Produced on Date: 7/1/2024 12:11:17 PM \\ad.sfwmd.gov\dfsroot\SFWMD\REAL_ESTATE\SHARE\RE-GIS\UPLK\Shingle\Mungers\26102-043\mxd\26102-043_26103-253_26104-211.m

M E M O R A N D U M

TO: Governing Board Members

FROM: Ray Palmer, Real Estate

DATE: August 8, 2024

SUBJECT: Exchange Agreement, Atlantic Ridge Ecosystem Project, Martin County

Agenda Item Background:
The District and the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Trustees) are co-owners of approximately 4,900 acres within the Atlantic Ridge Ecosystem Project in Martin County. The lands are operated and managed by the State's Division of Recreation and Parks as the Atlantic Ridge Preserve State Park. Pursuant to an Exchange Agreement, the District and the Trustees will convey to Discovery Hobe Sound Investors, LLC a 4.89-acre permanent water and sewer easement in exchange for the fee title conveyance of 8.6 acres adjacent to a southerly portion of the State Park, which contains improvements including a horse barn and a two-bedroom apartment. The exchange transaction also includes 20.17 acres of permanent access, drainage, and irrigation easements to the District and the Trustees that benefit the 8.6-acre fee title property and conveyance by the District and the Trustees of 9.02 acres of temporary construction easements to Discovery Hobe Sound Investors, LLC for the purpose of construction of an upgraded replacement drainage ditch on the State Park property and staging during the construction of the access easements benefitting the 8.6-acre fee title property. The Exchange Agreement provides that for the purposes of the exchange the values of the respective fee and easement land interests are equal. The transaction is contingent on the Trustees separately approving and agreeing to join in the conveyances and the acquisitions.

Additional Item Background:
Core Mission and Strategic Priorities:
The Atlantic Ridge Preserve State Park consists mostly of wet flatwoods and wet prairies. Access to the Park is limited. Its main attraction is 30 miles of hiking, bicycling, and equestrian trails. The acquisition of the 8.6-acre parcel, with the facilities and added access points, will allow the State's Division of Recreation and Parks to consider expansion of the Park's amenities and adding a public entrance to the southern portion of the Park. Additionally, the availability of the facilities, including the apartment, provide for equipment storage and the potential for the presence of law enforcement and/or a land manager.

Funding Source:
As this is an even exchange, there is no purchase price to fund. All costs of the transaction and all closing costs will be paid by Discovery Hobe Sound Investors, LLC.

Staff Contact and/or Presenter:
Ray Palmer, rpalmer@sfwmd.gov, 561-682-2246

ATTACHMENTS:

Resolution No. 2024-0802

Resolution Exhibit A Map

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024-08XX

A Resolution of the Governing Board of the South Florida Water Management District approving declaring surplus for exchange and conveyance permanent easement interests containing 4.89 acres, more or less, and temporary easement interests containing 9.02 acres, more or less, in exchange for the acquisition of fee title land interests containing 8.6 acres, more or less, and permanent easement interests containing 20.17 acres, more or less, within the District's Atlantic Ridge Ecosystem Project, all in Martin County; providing an effective date.

WHEREAS, the South Florida Water Management District acquired lands for the Atlantic Ridge Ecosystem Project ("Project") in Martin County, title to which lands are shared with the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida ("TIITF") and operated and managed by the State's Division of Recreation and Parks as the Atlantic Ridge Preserve State Park; and

WHEREAS, the District is authorized to exchange lands, or interests or rights in lands, pursuant to Section 373.089, Florida Statutes; and

WHEREAS, the District desires to enter into an Agreement for Exchange of Real Property Interests with Discovery Hobe Sound Investors, LLC, a Florida limited liability company ("Exchange Agreement") whereby the District will convey permanent easement interests containing 4.89 acres, more or less, and temporary easement interests containing 9.02 acres (the "District Exchange Interests"), in exchange for the acquisition of fee title land interests containing 8.6 acres, more or less, (the "Fee Parcel") and permanent easement interests containing 20.17 acres, more or less, (the "Easement Acquired Interests"), all as shown on Exhibit A; and

WHEREAS, as title to the District Exchange Interests is shared with TIITF, TIITF must agree to join in the conveyance of the District Exchange Interest and also share title with the District with respect to the Fee Parcel and Easement Acquired Interests; and

WHEREAS, the Exchange Agreement provides that for purposes of the exchange, the value of the District Exchange Interests is equal to the combined value of the Fee Acquired Lands and the Easement Acquired Interests; and

WHEREAS, the Governing Board has determined that it is in the public interest to declare the District Exchange Interests surplus; and

WHEREAS, pursuant to Section 373.089(6), Florida Statutes, the Governing Board shall be required, by at least a two-thirds (2/3) majority, to make a determination that the exchange is consistent with conservation purposes.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby approves declaring surplus for exchange and conveyance permanent easement interests containing 4.89 acres, more or less, and temporary easement interests containing a total of 9.02 acres, more or less, in exchange for the acquisition of fee title land interests containing 8.6 acres, more or less, and permanent easement interests containing a total of 20.17 acres, more or less, within the District's Atlantic Ridge Ecosystem Project, all in Martin County, subject to the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida approving of and joining in the conveyances and the acquisitions.

District Exchange Interests

Owner	Tract No.	Interest	Acres
South Florida Water Management District	X110E-004	Water and Sewer Easement	4.89
South Florida Water Management District	X110E-003	Temporary Construction Easement	2.92
South Florida Water Management District	X110E-002	Temporary Construction Easement	6.1

Fee Parcel

Owner	Tract No.	Interest	Acres
Discovery Hobe Sound Investors, LLC	X1100-046	Fee	8.6

Easement Acquired Interests

Owner	Tract No.	Interest	Acres
Discovery Hobe Sound Investors, LLC	X1100-047	Access Easement	8.56
Discovery Hobe Sound Investors, LLC	X1100-048	Access Easement	3.61

Discovery Hobe Sound Investors, LLC	X1100-049	Drainage and Irrigation Easement	8.0

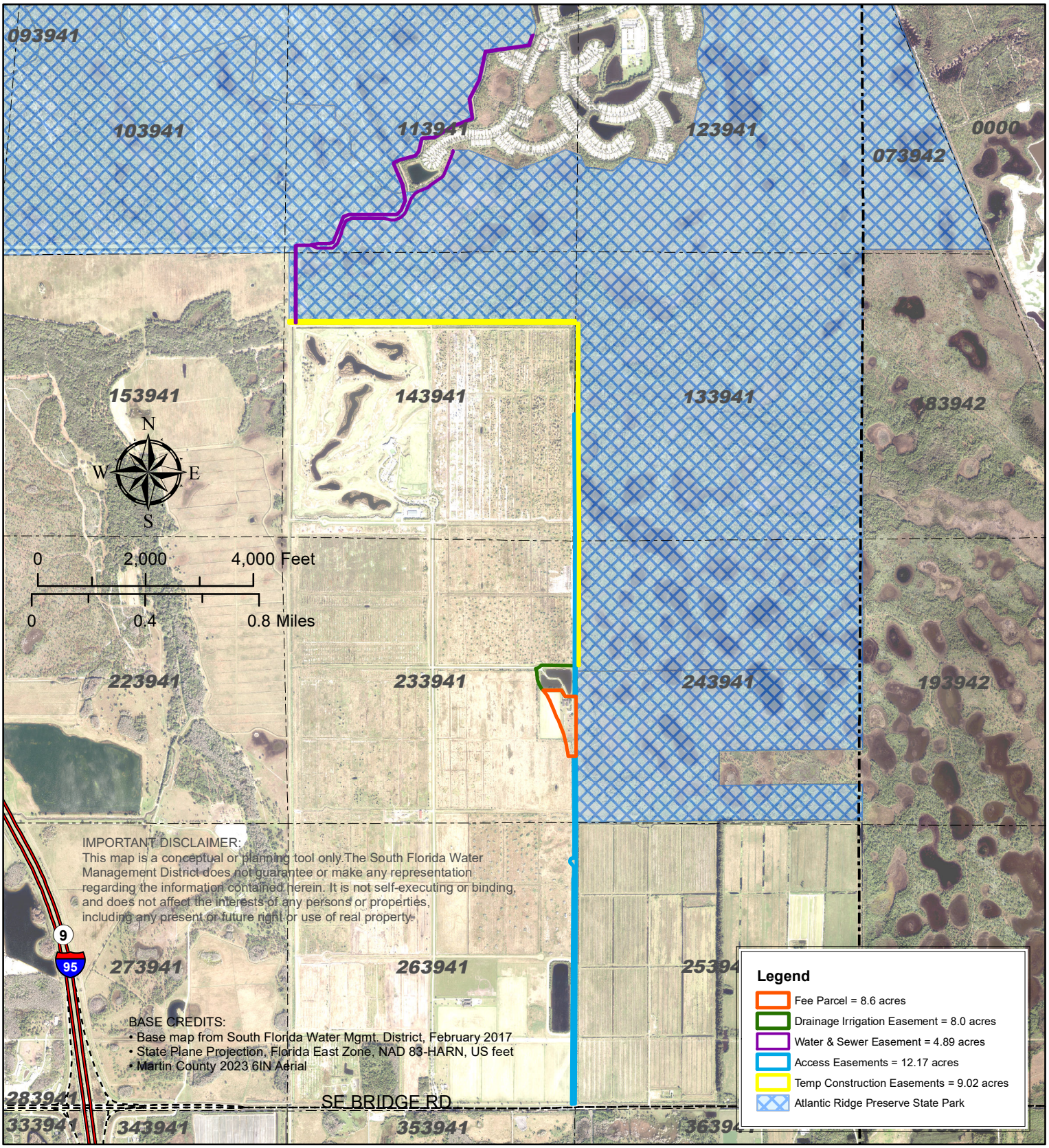
Section 2. Consistent with the requirements of Section 373.089(6), Florida Statutes, the Governing Board hereby determines that the surplus and exchange of the District Exchange Interests is consistent with the Project's conservation purposes, and this Resolution was approved by the Governing Board by at least a two-thirds (2/3) vote.

Section 3. The Governing Board hereby authorizes the Chairman or Vice Chairman to execute the Exchange Agreement and any instrument(s) of conveyance required to consummate the transaction contemplated therein. The Governing Board hereby authorizes the Executive Director or the Executive Director's designee to make any determination in connection with the transaction and execute all other documents necessary to consummate this transaction.

Section 4. This resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 8th day of August, 2024.

Exhibit A



Atlantic Ridge Ecosystem
Atlantic Ridge Preserve State Park
Land Interest Exchange
Martin County, FL

User Name: jpadilla IRIS SR: 24RES-00233 Map Date: 6/3/2024 \\ad.sfwmd.gov\dfsroot\SFWMD\REAL_ESTATE\SHARE\RE-GIS\ECT\ARE\ARE\mxd\Discovery.r

M E M O R A N D U M

TO: Governing Board Members

FROM: Ray Palmer, Real Estate

DATE: August 8, 2024

SUBJECT: Land Exchange, L-20 Right of Way, Palm Beach County

Agenda Item Background:
The District operates and maintains the L-20 right-of-way in Palm Beach County, Florida. The District will convey fee title land interests of approximately 0.26 acres currently within the L-20 right-of-way in exchange for acquisition of fee title land interests containing approximately 0.03 acres directly adjacent to the L-20 right-of-way. Using the Palm Beach County assessed value of the 0.03-acre parcel, the rounded value of the 0.03 acres is $1,000 and the rounded value of the 0.26 acres is $9,700. Therefore, the District will also be paid cash consideration of $8,700. The closing must occur on or before October 30, 2024.

Additional Item Background:
Core Mission and Strategic Priorities:
The L-20 right-of-way is operated and maintained as part of the District's flood control mission. The additional acquired area will enhance the District's ability to properly maintain the right-of-way, whereas the area conveyed by the District has no adverse effect or impact with respect to the operation and maintenance of the right-of-way.

Funding Source:
There is no expenditure of funds by the District. The District will receive $8,700. All costs associated with the transaction, including all closing costs, will be paid by the owner of the 0.03-acre parcel.

Staff Contact and/or Presenter:
Ray Palmer, Rpalmer@sfwmd.gov; 561-682-2246

ATTACHMENTS:

Resolution No. 2024-0803

Resolution Exhibit A Map

Resolution Exhibit B

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024-08XX

A Resolution of the Governing Board of the South Florida Water Management District approving declaring surplus for exchanging and conveyance fee title land interests containing 0.26 acres, more or less, within the District's L-20 right-of-way in exchange for the acquisition of fee title land interests containing 0.03 acres, more or less, all in Palm Beach County, together with the payment of $8,700 to the District and subject to satisfaction of certain terms, conditions and requirements; providing an effective date.

WHEREAS, the South Florida Water Management District operates and maintains the L-20 right-of-way in Palm Beach County; and

WHEREAS, the District desires to convey fee title land interests containing 0.26 acres, more or less, within the District's L-20 right-of-way (the "Exchange Lands"), in exchange for the acquisition of fee title land interests containing 0.03 acres, more or less, directly adjacent to the District's L-20 right-of-way (the "Acquired Lands"), all in Palm Beach County and as shown on Exhibit A; and

WHEREAS, the Governing Board has determined that the District has no present or apparent future use for the Exchange Lands and that it is in the public interest to declare the Exchange Lands surplus for exchange; and

WHEREAS, using the Palm Beach County assessed value of the Acquired Lands, the Acquired Lands have a rounded value of $1,000 and the Exchange Lands have a rounded value of $9,700, and therefore, the District will be paid cash consideration of $8,700; and

WHEREAS, the District is authorized to exchange lands, or interests or rights in lands, pursuant to Section 373.089, Florida Statutes; and

WHEREAS, pursuant to Section 373.096 of the Florida Statutes, the Governing Board of the District may release any easement or right of way interest for which it has no present or apparent future use under terms and conditions determined by the Board.

WHEREAS, pursuant to Section 373.089(6), Florida Statutes, the Governing Board shall be required, by at least a two-thirds (2/3) majority, to make a determination that the exchange is consistent with conservation purposes.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1: The Governing Board of the South Florida Water Management District hereby approves declaring surplus for exchange and conveyance land interests containing 0.26 acres, more or less, within the District's L-20 right-of-way, with respect to which the Governing Board has determined that the District has no present or apparent future use, in exchange for the acquisition of fee title land interests containing 0.03 acres, more or less, all in Palm Beach County, together with the payment of $8,700 to the District, provided that the closing of the exchange and conveyances of the respective land interests occurs on or before October 30, 2024 and that all of the following terms, conditions, and requirements are satisfied to the satisfaction of the District, in its sole and absolute discretion:

1. All costs associated with this transaction shall be paid for by the owner of the Acquired Lands, including but not limited to all recording, title insurance, and closing fees and costs, and under no circumstances shall the District be obligated to pay any amount in connection with this transaction.
2. The owner of the Acquired Lands shall pay at Closing all real property taxes accrued with respect to the 0.26 acre tract through the Closing Date in accordance with Florida Statute 196.295
3. The Quitclaim Deed attached as Exhibit "B" will be the required instrument of conveyance for the 0.26 acre tract and the 0.03 acre tract must be conveyed to the District by statutory warranty deed free and clear of all liens and encumbrances and of all matters of record the District deems unacceptable.
4. There are no environmental or other conditions with respect to the 0.03 acre tract deemed unacceptable by the District.

Owner	Tract No.	Interest	Acres	Exchange Value
Adely Castaneda & Rene M. Castaneda	CB100-006	Fee	0.03	$1,000
South Florida Water Management District	CB100-005	Fee	0.26	$9,700

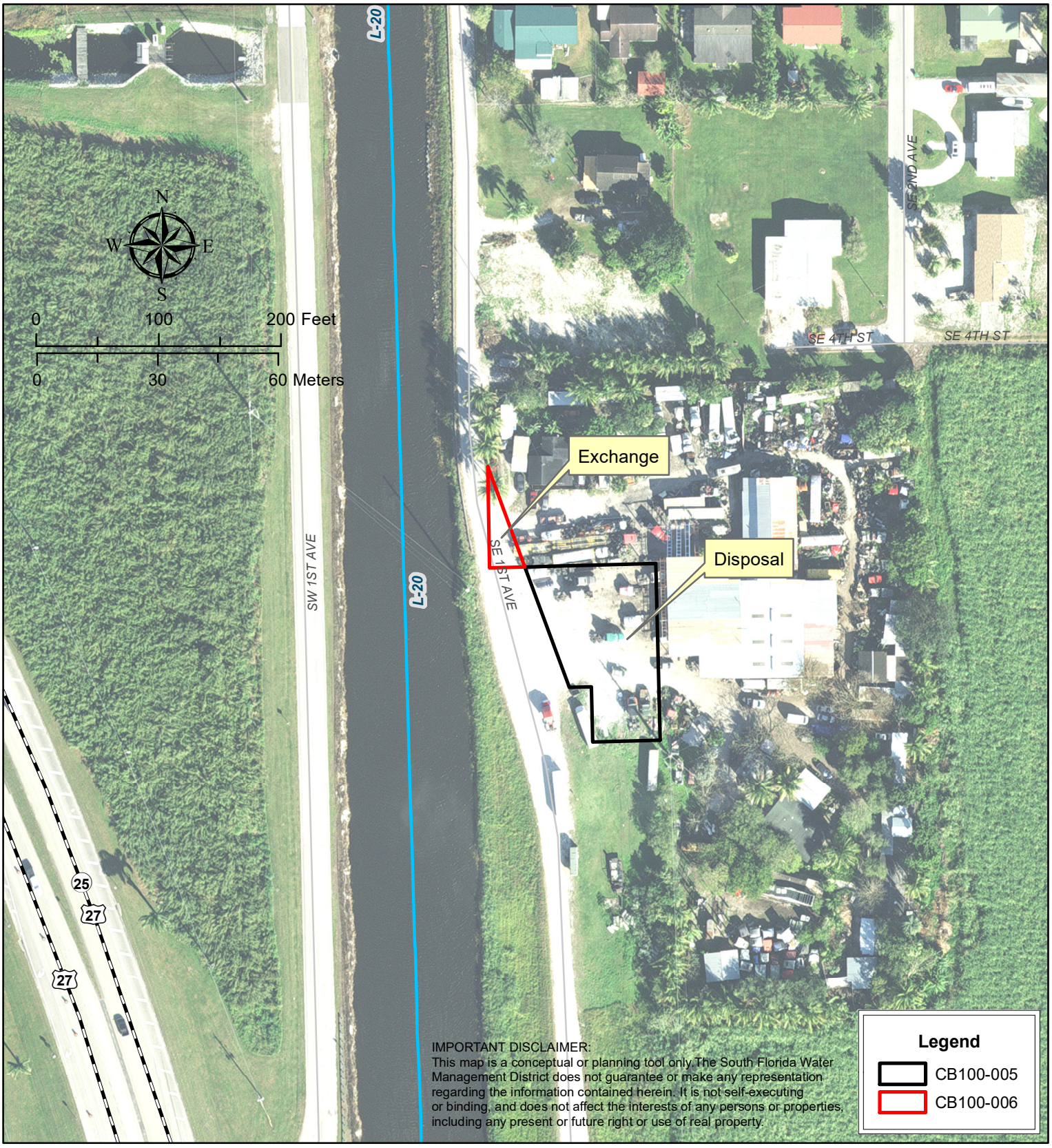
Section 2: The Governing Board of the South Florida Water Management District hereby authorizes the Chairman or Vice Chairman to execute any instrument of conveyance required to consummate the transaction contemplated therein. The Governing Board hereby authorizes the Executive Director or the Executive Director's designee to make any determination in connection with the transaction and execute all other documents necessary to consummate this transaction.

Section 3: Consistent with the requirements of Section 373.086, Florida Statutes, the Governing Board hereby determines that the ownership of the fee title land interests containing 0.26 acre, more or less, is not required by the District for present or future use and no longer needed for conservation purposes, and this Resolution was approved by the Governing Board by at least a two-thirds (2/3) vote.

Section 4: This resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 8th day of August, 2024.

Exhibit "A"



L-20 ROW Exchange
Palm Beach County, Florida

User Name: jpadilla IRIS SR: 24RES-00302 Map Date: 6/26/2024 \\ad.sfwmd.gov\dfsroot\SFWMD\REAL_ESTATE\SHARE\RE-GIS\WOD\L-20\L-20\mxd\CB100-005_CB100-006.r

Exhibit “B”

This instrument prepared by and return to:
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406
ATTN: REAL ESTATE, MSC#8810

Project: L-20
Tax Folio No.: (portion of 58-36-44-14-15-170-0050)
Tract No.: CB100-005

QUITCLAIM DEED

THIS INDENTURE made this _____ day of _____, 2024, **between SOUTH FLORIDA WATER MANAGEMENT DISTRICT**, a government entity created by Chapter 373, Florida Statutes, hereinafter referred to as the "Grantor", with its principal office at 3301 Gun Club Road, West Palm Beach, Florida 33406 and **ADELY CASTANEDA and RENE M. CASTANEDA**, hereinafter referred to as the “Grantee”, whose mailing address is 535 SE 1st Ave, South Bay, Florida 33493.

W I T N E S S E T H :

That said Grantor, for and in consideration of the sum of Ten Dollars ($10.00) and other valuable considerations in hand paid by the said Grantee, the receipt whereof is hereby acknowledged, by these presents does remise, release and quitclaim unto the said Grantee, its successors and assigns forever, the following described land, situate, lying and being in Palm Beach County, State of Florida, to wit:

See **Exhibit "A"** attached hereto and made a part hereof (hereinafter referred to as the “Premises”).

The Grantor makes no express or implied warranty or representation with respect to the title to the Premises or the condition or suitability of the Premises and/or any improvements located thereon for the Grantee’s intended use or otherwise (including without limitation, NO WARRANTY OF MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE OR RELATING TO THE ABSENCE OF LATENT OR OTHER DEFECTS) all of which are expressly disclaimed by the Grantor. The Grantee accepts the

Premises in its “AS IS”, “WHERE IS” and “WITH ALL FAULTS” condition, subject to all matters including but not limited to title, land use, zoning, restrictions, prohibitions and other regulations and/or requirements imposed by governmental authority, taxes, access, ingress or egress, value, operating history, physical conditions, cultural resources, suitability for use, environmental conditions, and conditions with respect to hazardous waste, hazardous substances, or pollutants (as defined or regulated under applicable law) that may be located on, under or adjacent to the Premises. The Premises shall be subject to all applicable rules, regulations, or requirements, including but not limited to all applicable Chapter 373, Florida Statutes and Chapter 40E, Florida Administrative Code permitting requirements, and the conveyance of the Premises by the Grantor to the Grantee shall not constitute a waiver by the Grantor of the obligation of the Grantee to comply with all applicable rules, regulations, or requirements, including but not limited to all Chapter 373, Florida Statutes and Chapter 40E, Florida Administrative Code permitting requirements and the Grantee acknowledges that there is no obligation on the part of the Grantor to approve the issuance of any required permits. The Grantor’s review process for any required permits will be done separately, independent and unfettered of the fact that the Grantor has conveyed the Premises to the Grantee and shall be in accordance with the Grantor’s applicable statutes and rules.

TO HAVE AND TO HOLD the same together with all and singular the appurtenances thereunto belonging or in anywise appertaining, and all the estate, right, title, interest and claim whatsoever of the said Grantor, either in law or in equity, to the only proper use, benefit and behoof of the said Grantee, its successors and assigns forever.

In consideration of the receipt of the Premises, together with other good and valuable consideration, the adequacy and receipt of which are hereby acknowledged, Grantee hereby agrees: (1) to take title to the Premises subject to and to assume all liability and responsibility for environmental conditions, and conditions with respect to hazardous waste, hazardous substances, and pollutants (as defined or regulated under applicable law) and (2) to defend, protect, release, hold harmless and indemnify the Grantor and its employees, officers, staff, attorneys, agents and Governing Board members, (collectively called the “Indemnitees”), from and against any and all loss, obligations (including removal and remedial actions), claims, damage (including natural resource damages, consequential damages and punitive damages), penalties, actions, judgments, suits, costs (including but not limited to reasonable attorneys fees and costs, and consultants’ fees and disbursements, at all levels of litigation), expenses, disbursements, and/or liability, of any kind or nature whatsoever that may at any time be incurred by, imposed on or asserted against such Indemnitees (directly or indirectly), incurred or arising directly, indirectly or proximately as a result of environmental conditions, and conditions with respect to hazardous waste, hazardous substances, or pollutants (as defined or regulated under applicable law).

By its execution of this Indenture below, Grantee agrees to accept the Premises and agrees to be subject to all of the terms, conditions, covenants and provisions contained herein.

IN WITNESS WHEREOF, the South Florida Water Management District has caused these presents to be executed in its name and its official seal affixed hereto by its Governing Board, acting by the Chairman of said Board and attested by its Secretary.

Grantor:
SOUTH FLORIDA WATER MANAGEMENT DISTRICT,
BY ITS GOVERNING BOARD

[Seal]

By:_____
Chauncey P. Goss, II, Chairman
3301 Gun Club Road
West Palm Beach, FL 33406

ATTEST:

_____
Molly Brown, Secretary/District Clerk

Legal Form Approved By:

_____
Office of Counsel

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of physical presence, this _____ day of _____, 2024 by Chauncey P. Goss, II and Molly Brown, as Chairman and Secretary/District Clerk of the Governing Board of the South Florida Water Management District, a government entity created by Chapter 373, Florida Statutes, on behalf of the South Florida Water Management District, who are personally known to me.

_____
Notary Public
Print: _____
My Commission Expires:

(seal)

IN WITNESS WHEREOF, this Quitclaim Deed has been executed by Grantee whose hand and seal are affixed hereto.

Grantee:

Witnesses (as to both parties)

_____ _____
Adely Castaneda

Print Name: _____
Address: _____
_____

_____ _____
Rene M. Castaneda

Print Name: _____
Address: _____
_____

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me by means of physical presence, this _____ day of _____, 2024 by Adely Castaneda and Rene M. Castaneda who are personally known to me or have produced _____ as identification.

_____
Notary Public
Print: _____
(seal) My Commission Expires:

M E M O R A N D U M

TO: Governing Board Members

FROM: Rich Virgil, P.E., Field Operations Division

DATE: August 8, 2024

SUBJECT: Request for Right of Way Occupancy Permit

Agenda Item Background:
The Florida Department of Transportation (Applicant) requests a Standard Right of Way Occupancy Permit Number 16970-R (ROW Permit) to construct a linear park within the south right of way of the C-12 Canal from N.W. 40th Avenue (SR-7/US 441) to N.W. 31st Avenue. The proposed linear park will include a 1.1-mile long, 10-foot-wide multi-use path for bicycles and pedestrians, existing native landscaping, access gates, removable bollards, and regulatory signage.

The Application has been reviewed by District Field Operations and the U.S. Army Corps of Engineers, which has granted Section 408 authorization. The permittee will be required to maintain the improvements and the entire right of way as a condition of the ROW Permit, which will relieve the District of mowing and maintenance responsibilities for this segment of the C-12 Canal right of way. District vehicles will be able to drive on and over the proposed multi-use path. If approved, the linear park and its related improvements will not interfere with or adversely impact the District's routine or emergency operations, maintenance, or future construction activities.

Staff Contact and/or Presenter:
Rich Virgil, P.E., rvirgil@sfwmd.gov, 561-682-6759

ATTACHMENTS:

Backup Presentation

RIGHT OF WAY OCCUPANCY PERMIT (ROW PERMIT) REQUEST

Applicant	Florida Department of Transportation
Application Number	230307-37840
Canal	C-12
Location	South Right of Way Between N.W. 40th Avenue (SR-7/US 441) and N.W. 31st Avenue
Proposed Improvements to be Authorized by Issuance of a Standard Permit	Linear park with a 1.1-mile multi-use path, existing native vegetation, access gates, removable bollards, and regulatory signage
ROW Permit Number (proposed)	16970-R

SUMMARY

The Florida Department of Transportation (Applicant) requests a Standard Right of Way Occupancy Permit Number 16970-R (ROW Permit) to construct a linear park within the south right of way of the C-12 Canal from N.W. 40th Avenue (SR-7/US 441) to N.W. 31st Avenue. The proposed linear park will include a 1.1-mile long, 10-foot-wide multi-use path for bicycles and pedestrians, existing native landscaping, access gates, removable bollards, and regulatory signage.

Linear parks can only be authorized by issuance of a Standard Right of Way Occupancy Permit, which is a permit type that must be approved by the District's Governing Board. The proposed linear park complies with all District requirements and no waivers of any rules are necessary.

The Application has been reviewed by District Field Operations and the U.S. Army Corps of Engineers, which has granted Section 408 authorization. The permittee will be required to maintain the improvements and the entire right of way as a condition of the ROW Permit, which will relieve the District of mowing and maintenance responsibilities for this segment of the C-12 Canal right of way. District vehicles will be able to drive on and over the proposed multi-use path. If approved, the linear park and its related improvements will not interfere with or adversely impact the District's routine or emergency operations, maintenance, or future construction activities.

RECOMMENDATION

Staff recommends **approval** of issuance of Standard Right of Way Occupancy Permit 16970-R (Application No. 230307-37840).

(Fee & Easement)

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

C-12 Linear Park

Florida Department of Transportation, Applicant

C-12 Canal – Broward County

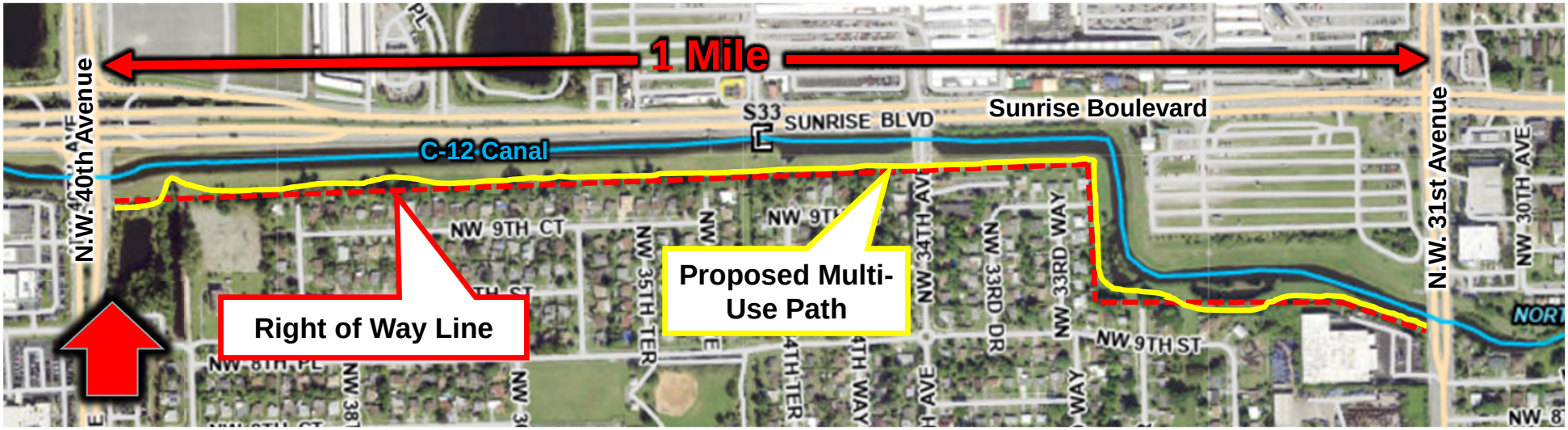
Right of Way Occupancy Permit No. 16970-R

John R. Hixenbaugh, J.D, AICP
Right of Way Section Administrator
South Florida Water Management District
Governing Board Meeting
August 8, 2024

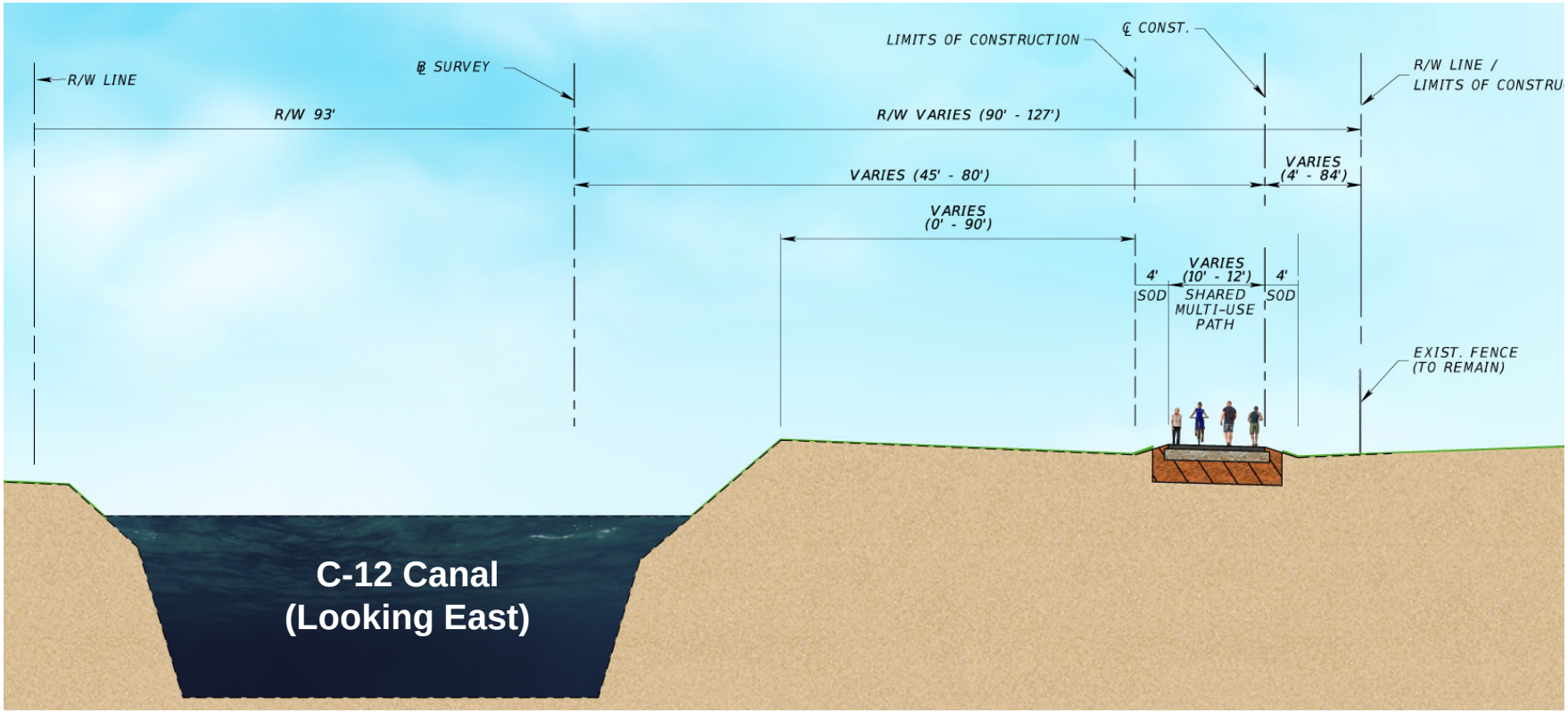
sfwmd.gov

Application Information and Location Map

- **Applicant:** Florida Department of Transportation
- **Permit No:** 16970-R
- **Application No:** 230307-37840
- **Canal:** C-12
- **Location:** Linear park within the south right of way beginning at N.W. 40th Avenue (SR-7/US 441) and continuing eastward to N.W. 31st Avenue.
- **Request:** Approval of Standard Right of Way Occupancy Permit Number 16970-R to allow construction of a linear park with a multi-use path, existing native vegetation, access gates, removable bollards, and regulatory signage.



Typical Path Section



District Gate Detail

Access at each end of the trail will be secured by removable bollards and a District gate.

Left: District gate and trail configuration installed at the entry to the Biscayne Trail located within the C-102 right of way in Homestead.

Project Details

- The linear park will include:
  - A 1.1-mile long, 10-foot-wide asphalt multi-use path for both bicycles and pedestrians;
  - Vehicle access barriers (e.g., removable bollards) and District gates;
  - Existing native vegetation (e.g., no new landscaping is proposed); and
  - Regulatory signage (e.g., Stop, Turn Ahead, etc.).
- No waiver of District criteria is required.

Project Impact on District Operations and Maintenance

- The permittee will be required to maintain the improvements and the entire right of way as a condition of the ROW Permit, which will relieve the District of mowing and maintenance responsibilities for this segment of the C-12 Canal right of way.
- District vehicles will be able to travel on and over the multi-use path.
- If approved, the linear park and its related improvements will not interfere with or adversely impact the District's routine or emergency operations, maintenance, or future construction activities.

Discussion

M E M O R A N D U M

TO: Governing Board Members

FROM: Rich Virgil, P.E., Field Operations Division

DATE: August 8, 2024

SUBJECT: Purchase, Rental, and Installation of Emergency Response Equipment for the 2024 Hurricane Season

Agenda Item Background:
The District has identified the need to purchase, rent, and install equipment required to respond to emergencies that could potentially occur in the event of a hurricane impacting the District's 16 county area of responsibility. The list of equipment includes, rental and installation of temporary pumps for the S-9 pump station, purchase of one 100-ton Link Belt Hydro Crane, one Caterpillar 336 Excavator, four Caterpillar 930 Loaders with grapple bucket, two 30-cubic-yard trash trucks, two 8" x 10" BBA trailer mount pumps with 550 feet of hose, and two Bell 407 helicopters. The S-9 temporary pump rentals are needed due to critical infrastructure failures and parts availability for the S-9 pump station. The replacement equipment is needed to increase reliability of critical tools essential to responding to emergencies.

Additional Item Background:
The crane loads/unloads equipment for deployment, places large temporary pumps, lifts structure gates, and removes vegetation/debris in hard-to-reach areas in and around pump stations and structures. The excavator is used for various items including but not limited to installation of temporary pumps, erosion repair and levee breach repairs. The loaders clear debris/vegetation from canal banks and load it into dump trucks. Loaders can also be used as a high-water vehicle. Trash trucks self-load and haul storm debris/vegetation to staging or disposal areas. Trailer mounted pumps provide quick response for movement of water in urban areas to mitigate rising waters. The helicopters provide quick recon of the regional system to identify highest risk areas to prioritize response. They can also be used to reach isolated staff or structures.

The rental and installation of the temporary pumps at pump station S-9 will augment the lost pumping capacity of one of three units being non-operational for the remainder of the hurricane season. The current operational units are not sufficient to handle high rain events that would cause severe flooding in portions of Broward County within the C-11 Basin. Risks associated with potential flooding event necessitate an emergency procurement that supersede a competitive process. The crane will replace the existing 12-year- old crane that has been problematic and unavailable for weeks at a time during past storm seasons. The excavator will replace an existing unit that is 17 years old with 10,700 hours. The loaders will replace 4 existing units that range from 17 to 26 years old with 8,100 to 12,000 hours. The trash trucks will replace 2 existing units that range from 20 to 23 years old with 113,000 to 165,000 miles. The trailer mounted pumps will augment the District's inventory of temporary pumps by providing greater flexibility to meet ever changing demands in urban and coastal areas. The District currently owns two Bell 407 helicopters which were purchased in 2006 and, therefore, are experiencing additional scheduled and condition-based maintenance costs that

are not providing for any increase trade-in value. At the proposed trade in time, the aircraft will have accumulated approximately 11,500 hours each.

District staff recommends acquisition of replacement of the 100-ton crane Link belt Hydro Crane, one Caterpillar 336 Excavator, four Caterpillar 930 Loaders, two 30-cubic-yard trash trucks, two 10" x 8" trailer mount pumps, and the District's two Bell 407 helicopters based on the following benefits:

- Increased ability to perform mission when critically needed
- Safety, performance, and reliability
- Minimize out of service down-time
- Lower operating costs
- Avoid costly overhaul and replacement of components
- Avoid the obsolescence and inability to obtain spare parts
- New equipment has 10 years of product upgrades over District's present equipment

Core Mission and Strategic Priorities
Emergency Operations is an essential component of the District mission. Proper maintenance and replacement of equipment at established industry and regulatory intervals must be implemented to ensure the safety and welfare of the public during emergency operations.

While unscheduled maintenance expenses and down-time become more of an issue as the equipment ages, we should ensure the ability to perform the District mission during emergencies. Operations and Maintenance staff oversee more than 2,175 miles of canals, 2,130 miles of levees/berms, 915 water control structures, 620 project culverts and 89 pump stations. They operate and maintain all the specialized equipment needed to keep this vast water management system ready for whatever nature sends our way, whether that's a typical summer rainstorm, a hurricane or drought. Moving water to meet varying conditions and needs is essential to sustaining South Florida's people, economy, and our environment. The Field Operations Division will be responsible for implementation of this purchase order agreements.

Funding Source:
Ad Valorem funds and dedicated funds (State Appropriations) are budgeted in Fiscal Year 2023-2024.

Staff Contact and/or Presenter:
Rich Virgil, P.E., rvirgil@sfwmd.gov, 561-682-6759

ATTACHMENTS:

Resolution No. 2024-0804

Backup Presentation

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024 - 08XX

A Resolution of the Governing Board of the South Florida Water Management District to authorize entering into various contracts for the purchase, rental, and installation of emergency response equipment for the 2024 hurricane season in an aggregate amount not-to-exceed $10,749,744.80 for which Ad Valorem funds and dedicated funds (State Appropriations) are budgeted in Fiscal Year 2023-2024; providing an effective date.

WHEREAS, the Governing Board of the South Florida Water Management District deems it necessary, appropriate and in the public interest to enter into various contracts with multiple vendors for the purchase of emergency response equipment pursuant to the District procurement process specifically including sole source acquisition.

WHEREAS, the procurement of services without competition for the S-9 pump station temporary pumps rental and installation is necessitated in order to respond to an immediate danger to the public health, safety, welfare or other substantial loss to the public for critical flood relief for portions of Broward County.

WHEREAS, the replacement equipment is needed to increase reliability of critical tools essential to responding to emergencies based on the following justifications: safety, performance, and reliability; minimize out of service down-time; lower operating costs; avoid costly overhaul and replacement of components; and to avoid the obsolescence and inability to obtain spare parts.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby authorizes entering into multiple contracts for the purchase of emergency response equipment in an aggregate amount not-to-exceed $10,749,744.80.

Section 2. The Governing Board of the South Florida Water Management District hereby authorizes the emergency procurement of services without competition for the S-9 pump station temporary pump rentals and installation, that the Governing Board hereby determines to be necessary, in order to respond to an immediate danger to the public health, safety, welfare or other substantial loss for critical flood relief for portions of Broward County.

Section 3. The Governing Board of the South Florida Water Management District hereby approves acquisition of emergency response equipment from a sole

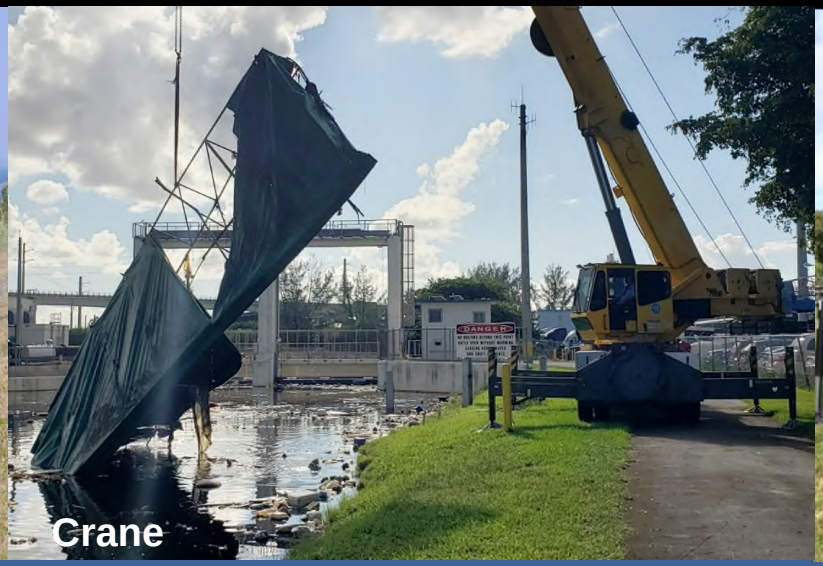
source, where applicable based on justifications such as safety, performance, and reliability of the equipment; to minimize out of service down-time; to lower operating costs; to avoid costly overhaul and replacement of components; and to avoid the obsolescence and inability to obtain spare parts.

Section 4. This resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 8th day of August 2024.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT


Loader


Crane


Trash Truck

Field Operations Division

Purchase of Emergency Response Equipment for the 2024 Hurricane Season

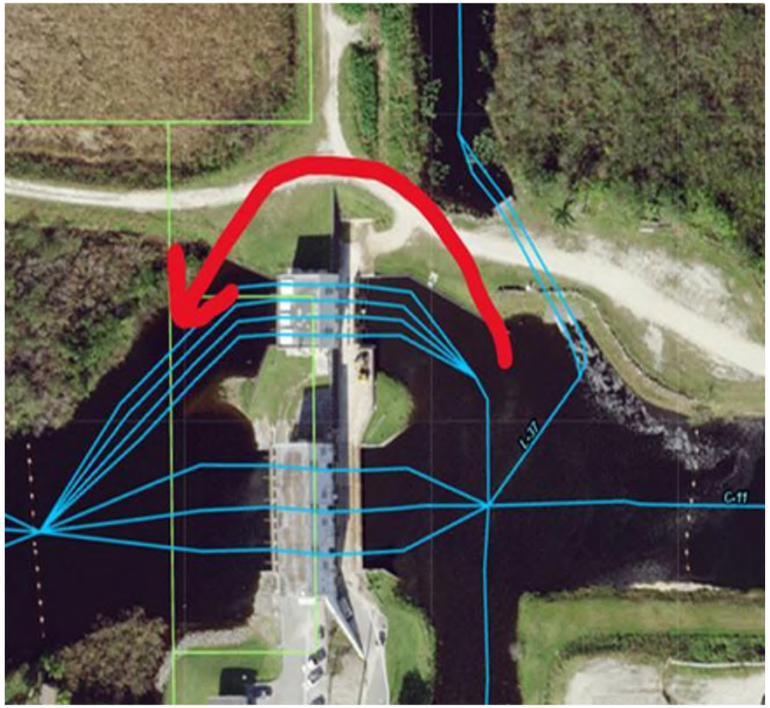
Governing Board Meeting

August 8, 2024

Need for Rental & Installation

- S9 engine #1 failed (11/22/2023), and it was determined that a complete overhaul of the pumping unit was needed.
- Work has progressed on the engine, and subsequent damage to the gearbox has not been competed due to unexpected long lead times on necessary parts.
- Unit #1 not expected to be available until the end of the Atlantic Hurricane Season, resulting in a loss of 1,000 cubic feet per second.

Need for Rental & Installation



- With one unit out, there are concerns of not being able to fully respond in a severe rain event. Another concern is the age of the units and the fact that we have a failure of one unit already. If there is a failure of a second unit while the first one is being overhauled, the area would be at risk.
- The solution to have temporary pumps installed with the ability to move at least 500 cubic feet per second if needed is being proposed.

Need for Replacement

- 100 Ton Link Belt Hydro Crane
- Replace Grove V10047507 (12-year-old) 1 of 4 cranes in District. Has been problematic and out od commission for weeks at a time during past storm seasons.
- Loads/unloads equipment for deployment, places large temporary pumps, lift's structure gates, removes vegetation in hard-to-reach areas in and around pump stations and structures.

Need for Replacement

- Caterpillar 930 Loader CAT
- Replace Caterpillar 930 V2272 (23 yrs-old/12,000 hours)
- Clears debris and vegetation from canal banks and loads vegetation into dump trucks, etc. Also, can be used as a high-water vehicle.

Need for Replacement

- Caterpillar 336 Excavator
- Replace John Deere 350D V2272 (23 yrs-old/16,000 hours)
- Used for various items including but not limited to installation of temporary pumps, erosion repair, and levee breach repairs.

Need for Replacement

- Caterpillar 930 Loader CAT
- Replace John Deere 544H V1956 (26 yrs-old/9,800 hours)
- Clears debris and vegetation from canal banks and loads vegetation into dump trucks, etc. Also, can be used as a high-water vehicle.

Need for Replacement

- Caterpillar 930 Loader CAT
- Replace John Deere 544H V2175 (25 yrs-old/8,300 hours)
- Clears debris and vegetation from canal banks and loads vegetation into dump trucks, etc. Also, can be used as a high-water vehicle.

Need for Replacement

- Caterpillar 930 Loader CAT
- Replace John Deere 544H (26 yrs-old/8,100 hours)
- Clears debris and vegetation from canal banks and loads vegetation into dump trucks, etc. Also, can be used as a high-water vehicle.

Need for Replacement

- Sterling Trash Truck
- Replace Sterling V2458 (20 yrs-old/113K miles)
- Self loads and hauls storm debris and vegetation to staging or disposal areas.

Need for Replacement

- Sterling Trash Truck
- Replace Sterling V2274 (23 yrs-old/165K miles)
- Self loads and hauls storm debris and vegetation to staging or disposal areas.

Need for Replacement

- BBA Pumps BA210H
- Purchase 8" x 10" trailer mount pump w/550' of nitrile lay flat hose
- Provides quick response for movement of water in urban areas to mitigate rising waters.

BA210H Diesel Driven
High Head Solids Handling Pump
Max. 3380 US GPM, Max. 363 ft. / 157 PSI

Pump specifications:

Type	BA210H D375
Max. flow	3380 US gpm (770 m3/hour)
Max. pressure	363 ft. / 157 PSI (110 mwc)
Discharge x suction	8" x 10" flanges
Solids handling	80 x 65 mm
Impeller type	Enclosed impeller
Priming system	BBA MP50
Engine	Volvo Penta TAD572VE
Emission standard	Tier 4 final
Canopy	M14-30
Sound level	Approx. 69 dB(A) at 33 ft.
Dry weight	8760 lbs. (3980 kg)

BBA Pumps®

Need for Replacement

- This request seeks approval for the purchase of two Bell new B407 helicopters to replace two Bell B407.
- Helicopters have been in use since 2006.
- Both helicopters have seen heavy use for the past 18 years.
- At the proposed trade in time, the aircraft will be approaching 20 years in service and 11,500 hours of flight.
- The effects of corrosion, visible and hidden, are of serious concern because of the airframes' age and South Florida's extremely corrosive climate.

Utilization

The District utilizes two 6 passenger Bell B407 Helicopters in support of operations including:

- Water Quality sampling and monitoring for EVPA.
- Vegetation survey, monitoring, cataloging, and analysis, such as STA conditions and needed attention
- Blue-green Algae Surveys
- Permit monitoring and enforcement
- Wildlife survey such as bird population and over-all status
- Data station maintenance and repair
- System status prior to storm season for hurricane preparedness
- Emergency management inspections for post storm, system condition and needed attention.
- State and federal partners such as Fish and Wildlife, USCOE, FDEP, State and Federal Legislative Representative, and others that have a need to view the water management system for assessment, planning, and funding

Scheduled and Condition Based Maintenance

Scheduled maintenance is generally tracked by calendar and by flight hours:

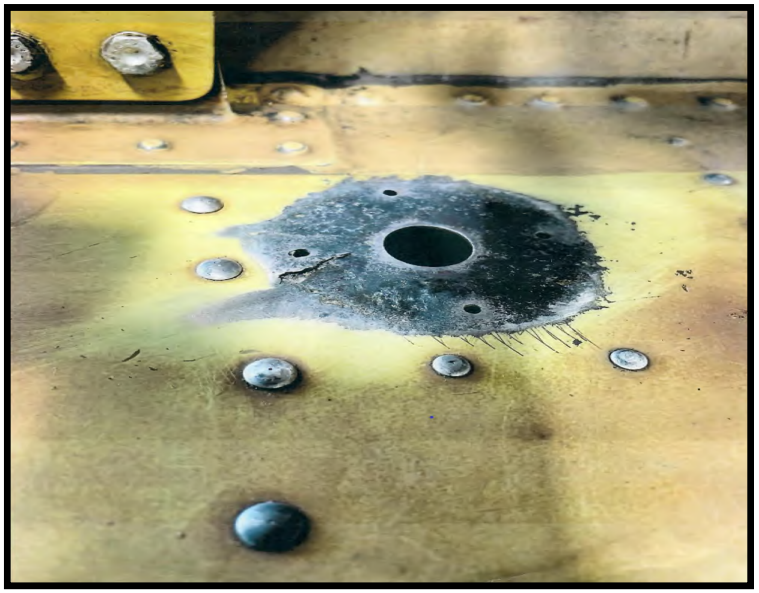
- Aircraft use per year totals approximately 1600 flight hours at an overall average per hour cost of $1,100 including, fuel, scheduled maintenance, salaries, rent, and insurance. Costs for unscheduled maintenance and overhauls are additional.
- Aircraft age for the two B407's is 18 years with approximately 10,000 hours of flight-time on each, flying an average of 550 hours per year.
- Examples of calendar/hours (5000 hours or 5 years) maintenance include gearbox, rotor-head, and turbine engine sections.

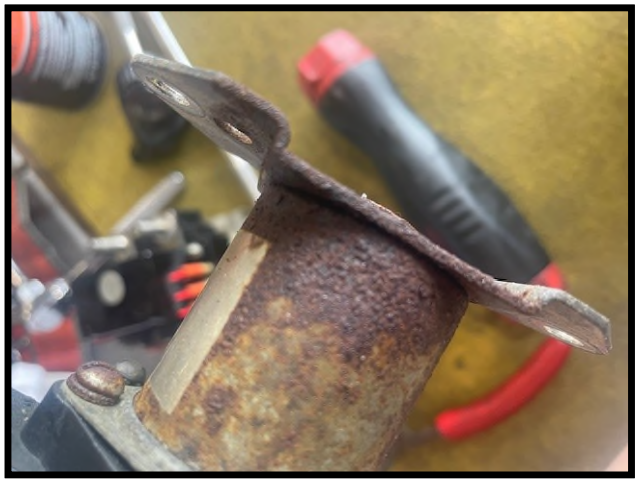
Component retirement is based on condition, as determined by scheduled inspections and pilot daily inspections:

- Examples of "on condition" component retirement are main rotor blades, tail rotor blades, tail booms, landing gear, and electrical system wiring and related components.

Increased Condition Based Maintenance

As we move into the 19th year of operation for these aircraft, airframe age becomes an increasing concern beyond scheduled maintenance expenses. Sections such as tail boom and stabilizers require more detailed and comprehensive monitoring due to increasing numbers of flex/stress events, the potential for corrosion, and disassembly/reassembly wear and tear.

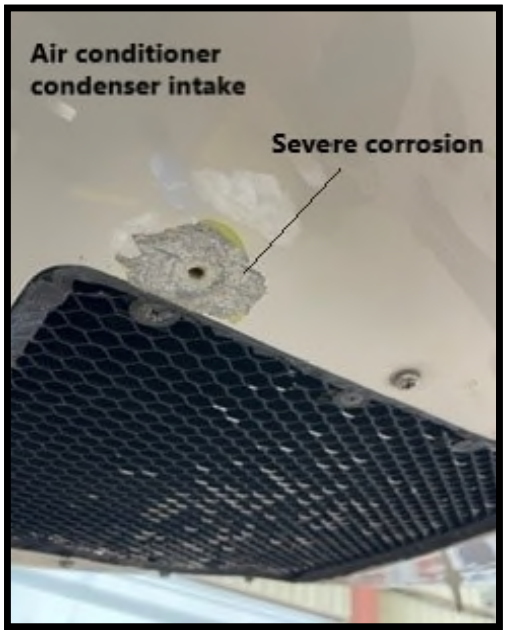


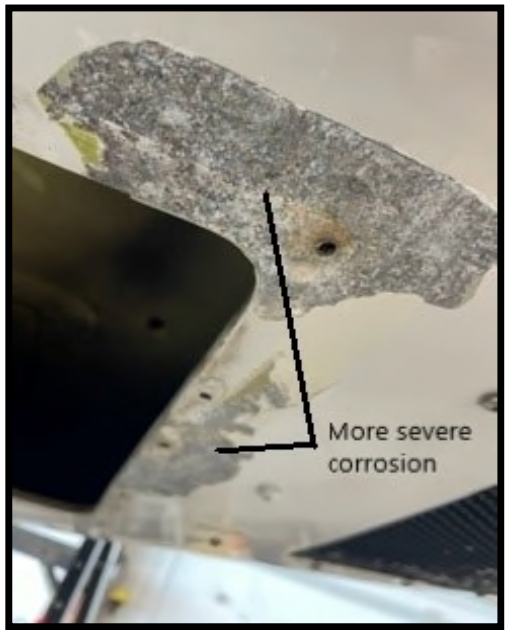


Fuselage Corrosion

Rusted Relays

Increased Condition Based Maintenance





Fuselage Corrosion

Increased Condition Based Maintenance

Bell N470WM: Corrosion on Mast

Increased Condition Based Maintenance

A few “on condition” assemblies/components that will require attention and expected costs are shown below.

Main Rotor Blades- cost $160,000 each (Quan: 8)	$1,280,000.00
Tail-boom Assembly- cost $100,000 each (Quan: 2)	$ 200,000.00
Horizontal Stabilizer- cost $60,000 each (Quan: 2)	$ 120,000.00
Vertical Fin Assembly- cost $20,113.40 each (Quan:2)	$ 40,226.80
Finlet Assembly- cost $6,781.10 each (Quan: 4)	$ 27,124.40
Blade Bolts- cost $3,791.45 each (Quan:16)	$ 60,663.20
Total costs: freight, paint and labor	**$1,728,014.40**

Additionally, out of service time becomes a larger issue, and in today’s supply chain environment delays are more frequent

Additional Considerations

- Safety aspect of 20-year-old airframes that operate in an extreme corrosive environment.
- Not discounting the safety of our District users, we also transport many high profile State and Federal Congressional Representatives, our Governor, our Director, and our Board Members. All deserve confidence in the safety and reliability the aircraft being used.
- Another consideration is the availability. As the aircraft age, maintenance requirements and associated down time increases, reducing the aircraft mission availability.

Aircraft Cost Breakdown

➢ Bell 407GXi Basic Aircraft	$3,905,000.00 x 2 =	$7,810,000.00
➢ Specific Electronics & Customization	$ 819,112.32 x 2 =	$1,638,224.64
▪ Including Training:		
• One 407 Field Maintenance		
• One 407 Integrated Avionics System Maintenance		
• One 407GXI Ground and Flight Initial Slot		
➢ Trade In Value		
▪ 2006 Bell 407 Serial No. 53706		($1,600,000.00)
▪ 2006 Bell 407 Serial No. 53708		($1,425,000.00)
▪ 1% Full payment Discount		($ 94,482.25)
Total for 2 Bell 407 Helicopters	**=**	**$ 6,328,742.30**

Bell Helicopter 407

Need for Replacement

Quantity	Item	Unit Cost	Total	Storm Response Function	Comments
1	S9 Temporary Pumps	$827,548.50	$827,548.50	Augments lost pumping capacity of pumping unit #1 at Pump Station S9, which will be out of commission for the duration of the Atlantic Hurricane Season.	Includes installation, 4 months rental and removal of 5 temporary pumps which will regain approximately 50 % (500 cubic feet per second) of the lost capacity of unit #1. Pump station S9A will handle the remaining lost capacity.
1	100 Ton Link Belt Hydro Crane w/ Clamshell Bucket	$1,261,346.00	$1,261,346.00	Loads/unloads equipment for deployment, places large temporary pumps, lift's structure gates, removes vegetation in hard-to-reach areas in and around pump stations.	Replace Grove Crane V10047507 (12-year-old) 1 of 4 cranes in District. Has been problematic and OOC for weeks at a time during past storm seasons.
1	CAT 930 Loader w/Grapple	$260,000.00	$260,000.00	Clears debris and vegetation from canal banks and loads vegetation into dump trucks, etc. Also, can be used as a high-water vehicle.	Replace CAT930 V2272 (23 yrs-old/16,000 hrs.)
1	Cat 336 Excavator	$355,340.00	$355,340.00	Used for various items including but not limited to installation of temporary pumps, erosion repair and levee breach repairs	Replace JD350D V10040819 (17 yrs-old/10,700 hrs.)
1	CAT 930 Loader w/Grapple	$260,000.00	$260,000.00	Clears debris and vegetation from canal banks and loads vegetation into dump trucks, etc. Also, can be used as a high-water vehicle.	Replace JD544H V1956 (26 yrs-old/9,800 hours)
1	CAT 930 Loader w/Grapple	$260,000.00	$260,000.00	Clears debris and vegetation from canal banks and loads vegetation into dump trucks, etc. Also, can be used as a high-water vehicle.	Replace JD544H V2077 (26 yrs-old/8,100 hrs.)
1	CAT 930 Loader w/Grapple	$260,000.00	$260,000.00	Clears debris and vegetation from canal banks and loads vegetation into dump trucks, etc. Also, can be used as a high-water vehicle.	Replace JD544H V2175 (25 yrs-old/8,300 hrs.)
1	Sterling 30 Cubic Yard Trash Truck	$269,440.00	$269,440.00	Self loads and hauls storm debris and vegetation to staging or disposal areas.	Replace Sterling V2274 (23 yrs-old/165K miles)
2	BBA 8" x 10" trailer mount pump w/550' of lay flat hose	$198,944.00	$397,888.00	Provides quick response for movement of water in urban areas to mitigate rising waters.	Purchase rapid deployment pumps for urban areas
1	Sterling 30 Cubic Yard Trash Truck	$269,440.00	$269,440.00	Self loads and hauls storm debris and vegetation to staging or disposal areas.	Replace Sterling V2458 (20 yrs old/113K miles)
2	Bell 407 GXI Helicopters	$3,164,371.15	$6,328,742.30	Provides quick recon of regional system to identify highest risk areas and items. Can also be used to reach isolated staff or structures.	Replace Bell N406WM & N407WM (18 yrs-old w/10,000 hrs.)
	TOTAL		**$10,749,744.80**		

Field Operations Division

M E M O R A N D U M

TO: Governing Board Members

FROM: Rich Virgil, P.E., Field Operations Division

DATE: August 8, 2024

SUBJECT: Rocky Glades Public Small Game Hunting Area, Miami-Dade County

Agenda Item Background:
The restoration construction activities have been completed on the C-111 South Dade Project, located in Miami-Dade County. Therefore, the District proposes to authorize the Florida Fish and Wildlife Conservation Commission to add this area and adjacent District property, comprising a total of 5,617 acres, to the existing Rocky Glades Public Small Game Hunting Area. This will provide additional public hunting and recreation opportunities on District lands.

The Rocky Glades Public Small Game Hunting Area is managed in partnership with the Florida Fish and Wildlife Conservation Commission and is composed of parcels associated with the preservation and restoration of the eastern Everglades. Uses would include hunting, hiking, biking, fishing, wildlife viewing, and other outdoor nature-based recreational activities consistent with the purpose for which the land was acquired. This authorization will also allow for a consistent regulatory framework and provide resource protection measures for managing recreational use on the entire property.

The Florida Fish and Wildlife Conservation Commission is supportive of adding the Additional Property to the Rocky Glades Public Small Game Hunting Area and managing hunting activities on the property in accordance with State and Federal regulations. Information received from the Florida Fish and Wildlife Conservation Commission and comments received by District staff from recreational groups indicate there is a strong interest in incorporating these lands into the existing Rocky Glades Public Small Game Hunting Area.

Additional Item Background:
Core Mission and Strategic Priorities:
This Governing Board item supports the District's core mission and strategic goals by allowing for public recreation consistent with Section 373.1391, F.S. The Land Resources Bureau within the Field Operations Division is responsible for implementing this item and administering public recreation on District lands.

Funding Source:
This item does not require the expenditure of District funds.

Staff Contact and/or Presenter:
Rich Virgil, P.E., rvirgil@sfwmd.gov, 561-682-6759

ATTACHMENTS:

Resolution No. 2024-0805

Resolution Exhibit A Map

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024- 08XX

A Resolution of the Governing Board of the South Florida Water Management District to authorize the Florida Fish and Wildlife Conservation Commission to establish District lands consisting of approximately 5,617 acres located in Miami-Dade County as part of the Rocky Glades Public Small Game Hunting Area; providing an effective date.

WHEREAS, pursuant to Section 140-73 of the South Florida Water Management District Policies Code, "District lands shall be open to public recreational access and use activities as is practicable and in a manner consistent with legislative directives, intended uses, legal considerations, and resources"; and

WHEREAS, the Rocky Glades Public Small Game Hunting Area is managed in partnership with the Florida Fish and Wildlife Conservation Commission to allow hunting, biking, fishing, wildlife viewing and other outdoor nature based recreational activities consistent with the purpose for which the land was acquired;

WHEREAS, the District owns certain lands located in Miami-Dade County south of SW 168th Street, west of the L-31N and C-111 rights of way, and east of Everglades National Park consisting of approximately 5,617 acres, which are located in the Everglades Region, as identified on Exhibit A attached hereto and incorporated herein by reference (collectively, the "Properties"); and

WHEREAS, pursuant to Rule 40E-7.527, Florida Administrative Code, the Governing Board of the South Florida Water Management District may authorize public hunting activities on District lands if such activities are regulated, administered, and enforced by the Florida Fish and Wildlife Conservation Commission, in cooperation with the District; and

WHEREAS, the Governing Board of the South Florida Water Management District deems it necessary, appropriate, and in the public interest to authorize the Florida Fish and Wildlife Conservation Commission to establish the Properties as a Public Small Game Hunting Area by adding them into the Rocky Glades Public Small Game Hunting Area for the purpose of hunting and other recreational uses on the Properties in accordance with Rule 40E-7.527, Florida Administrative Code;

NOW THEREFORE BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Section 1. The Governing Board of the South Florida Water Management District hereby authorizes the Florida Fish and Wildlife Conservation Commission to establish the Properties, as shown on Exhibit A attached hereto, as a

Public Small Game Hunting Area for the purpose of managing waterfowl and alligator hunting and other recreational activities on the Properties in accordance with Rule 40E-7.527, Florida Administrative Code, subject to all applicable laws, statutes, regulations, and other requirements.

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

PASSED and **ADOPTED** this 8th day of August, 2024.

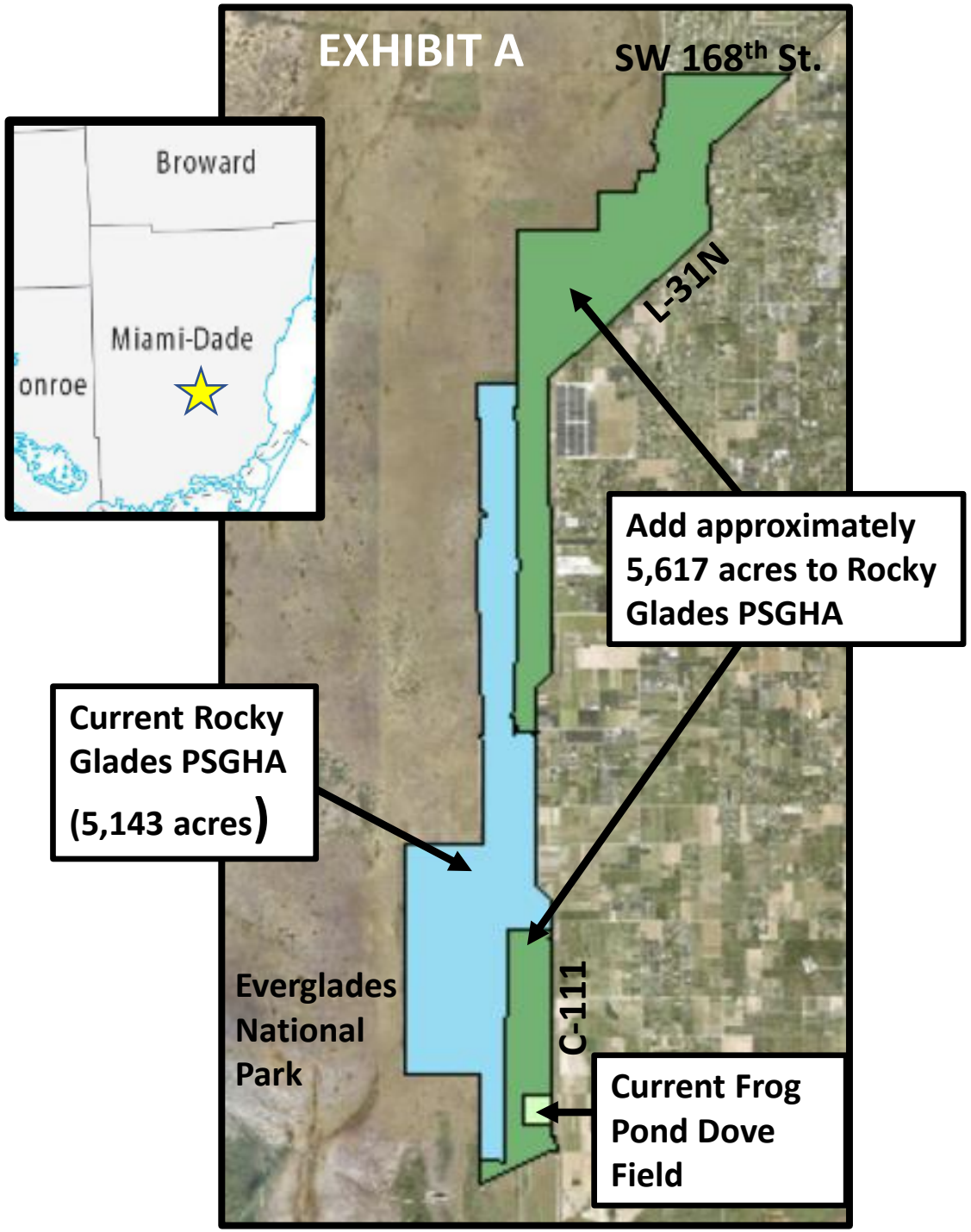


EXHIBIT A
SW 168th St.
Broward
Miami-Dade
onroe
L-31N
Add approximately 5,617 acres to Rocky Glades PSGHA
Current Rocky Glades PSGHA (5,143 acres)
Everglades National Park
C-111
Current Frog Pond Dove Field

M E M O R A N D U M

TO: Governing Board Members

FROM: Lucine Dadrian, P.E., Engineering, Construction & Modeling

DATE: August 8, 2024

SUBJECT: C-25 Reservoir and Stormwater Treatment Area - Package 1 - Site Preparation Project, St Lucie County

Agenda Item Background:
As part of Comprehensive Everglades Restoration Plan, Indian River Lagoon-South (IRL-S) Restoration Project, the C-25 Reservoir and Stormwater Treatment Area Project (C-25 RSTA) Package 1 Site Preparation, located in St. Lucie County, will clear and grub, demolish existing agricultural features, and construct a construction village in preparation for the reservoir and STA construction in Package 2. The IRL-S Project includes several reservoirs, STAs, and natural lands features to support habitat restoration, reduced harmful discharges, and water quality improvements.

This project was authorized by Congress in Water Resources Development Act 2007. The reservoir is expected to capture runoff from the C-25 Basin and the STA is sized to remove 80% of the phosphorus entering the STA from the reservoir. The C-25 RSTA project includes an 810-acre area / 5,176-acre-foot reservoir and a 520-acre STA.

The lowest responsive and responsible bidder is recommended for award. In accordance with District policy and consistent with state law for Request for Bids procurements, this item was competitively bid through a sealed bid process. The bid opening for this project was on July 25, 2024.

Additional Item Background:
Core Mission and Strategic Priorities:
The C-25 Reservoir and Stormwater Treatment Area) - Package 1 - Site Preparation project supports the District's core missions of water quality, flood control, and ecosystem restoration.

Funding Source:
C-25 Reservoir and Stormwater Treatment Area - Package 1 - Site Preparation Project will be funded through dedicated funds (Land Acquisition Trust Fund and State General Revenue).

Staff Contact and/or Presenter:
Lucine Dadrian, P.E., ldadrian@sfwmd.gov, 561-682-2685

ATTACHMENTS:

Resolution No. 2024-0806

Backup Presentation

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024 - 08XX

A Resolution of the Governing Board of the South Florida Water Management District to authorize entering into a 410-day contract with Ryan Incorporated Southern, the lowest responsive and responsible bidder, for the C-25 Reservoir and Stormwater Treatment Area – Package 1 – Site Preparation Project, in the amount of $16,187,500, for which dedicated funds (Land Acquisition Trust Fund and State General Revenue) in the amount of $600,000 are budgeted in Fiscal Year 2023-2024, and the remainder is subject to Governing Board approval of future years' budgets; providing an effective date. (Contract No. 4600005048)

WHEREAS, the Governing Board of the South Florida Water Management District deems it necessary, appropriate, and in the public interest to authorize entering into a contract with Ryan Incorporated Southern., the lowest responsive and responsible bidder, for the C-25 Reservoir and Stormwater Treatment Area – Package 1 – Site Preparation Project, in the amount of $16,187,500.

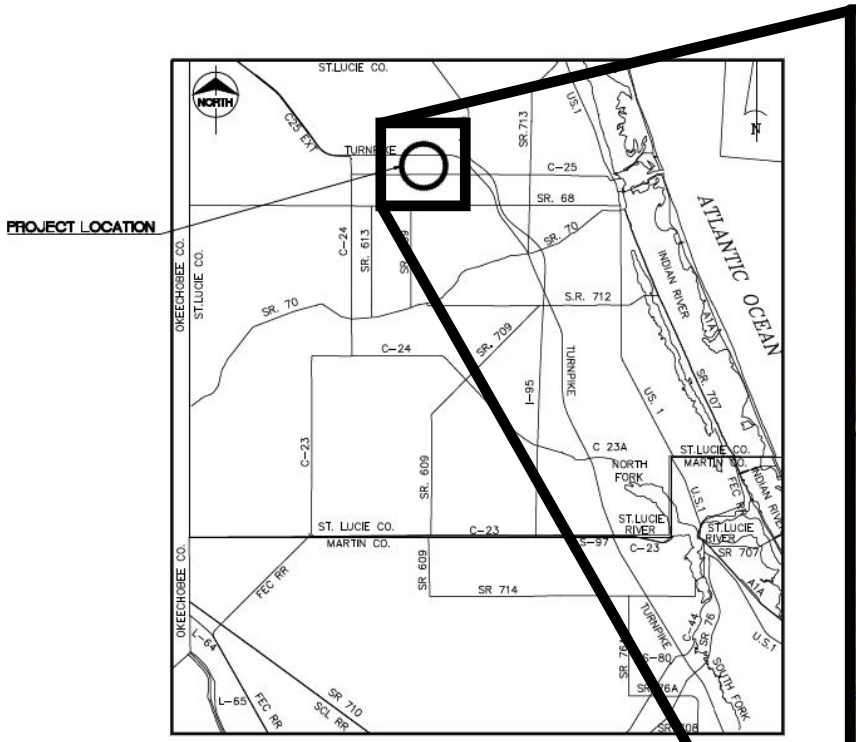
NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

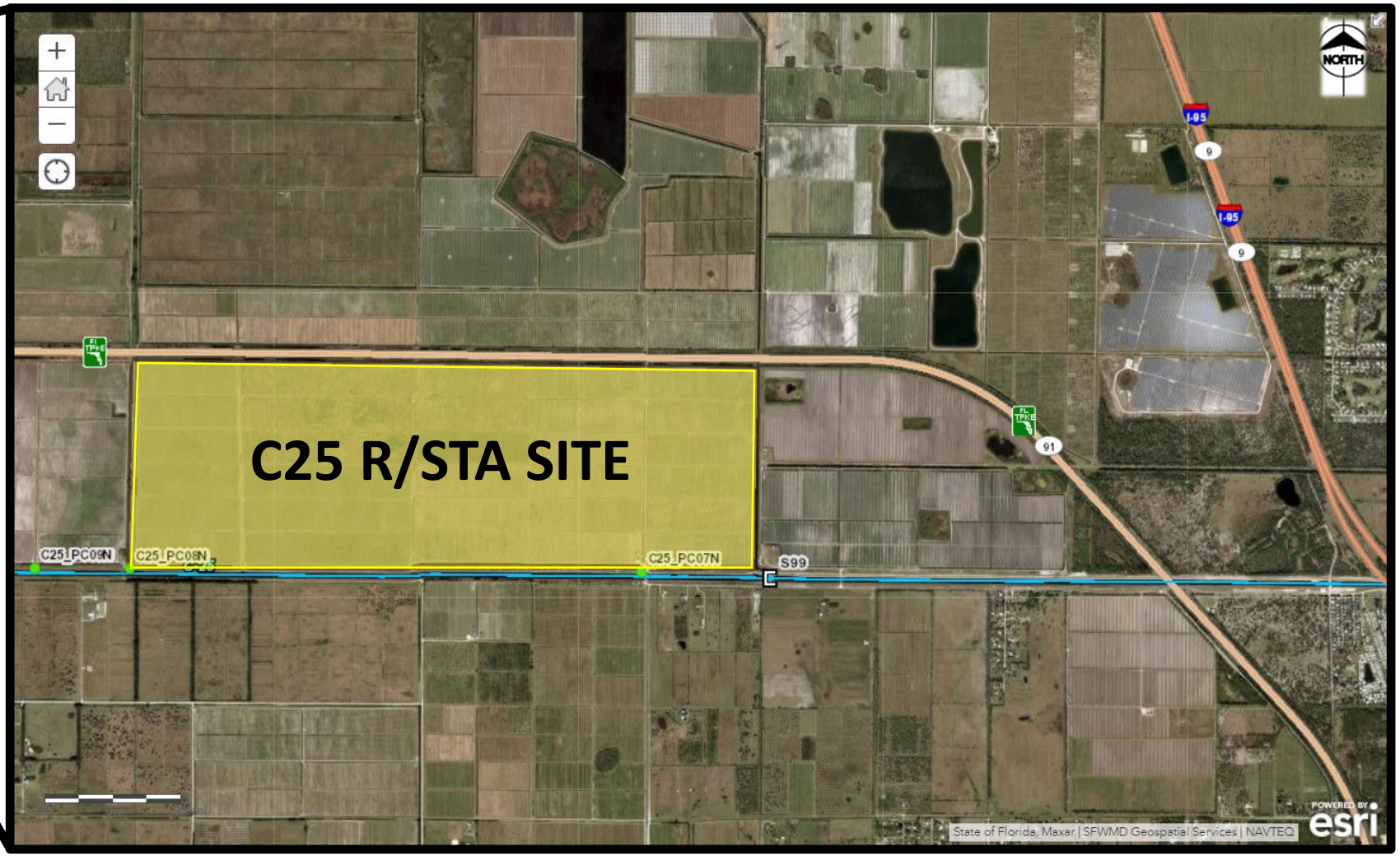
Section 1. The Governing Board of the South Florida Water Management District hereby authorizes entering into a 410-day contract with Ryan Incorporated Southern, the lowest responsive and responsible bidder, for the C-25 Reservoir and Stormwater Treatment Area – Package 1 – Site Preparation Project, in the amount of $16,187,500, for which dedicated funds (Land Acquisition Trust Fund and State General Revenue) in the amount of $600,000 are budgeted in Fiscal Year 2023-2024 and the remainder is subject to Governing Board approval of future years budgets (Contract No. 4600005048).

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

PASSED and **ADOPTED** this 8th day of August, 2024.

Location Map





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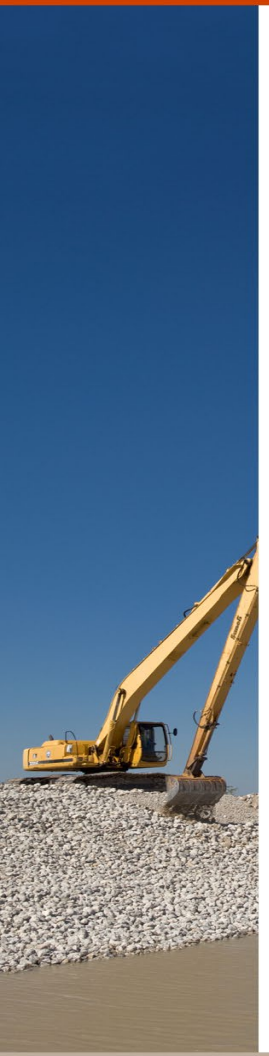
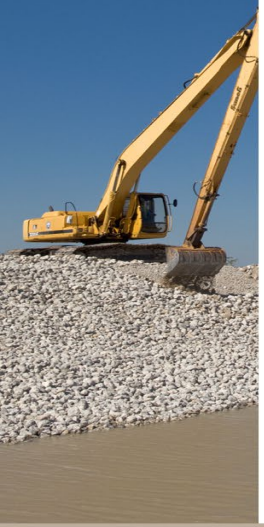


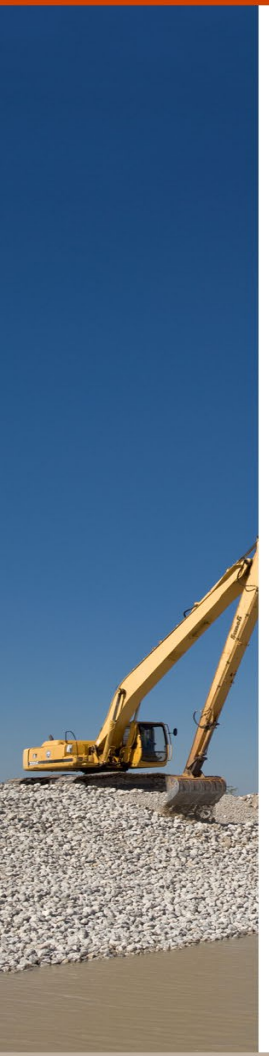
- The C-25 Reservoir and Stormwater Treatment Area Project (C-25 RSTA) was identified in the Indian River Lagoon-South Project Implementation Report (IRL-S PIR), with the Chief's Report completed in 2004 and Congressional Authorization in WRDA 2007.
- The District signed a Project Partnership Agreement (PPA) with the USACE in September 2010, with amendments in 2014, 2022, and 2024. The District is the lead for design and construction.
- The reservoir is expected to capture runoff from the C-25 Basin and the STA will be sized to remove 80% of the phosphorus entering the STA from the reservoir.
- The PIR authorized C-25 RSTA includes a 647-acre area/5,176-acre-foot storage above ground reservoir with a maximum depth of 8-feet and a 163-acre STA.

Background



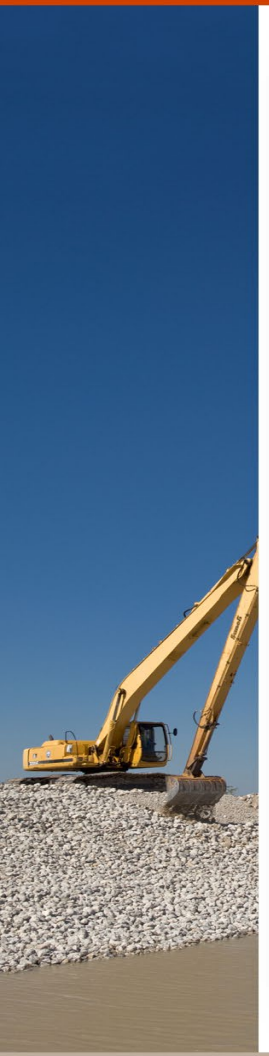
- The District acquired a larger site and has proposed Value Engineering changes including 810-acre area/5,176-acre-foot storage reservoir with a maximum depth of 6.3-feet and a 520-acre STA.
- The larger reservoir allows for the water stages to be lower, reducing risk to the project. The larger STA improves our ability to meet the phosphorus removal goals for the same or a lower cost. These changes will be authorized by an Engineering Design Report (EDR) currently being drafted.
- The C-25 RSTA project will include two construction contracts (Package 1 and Package 2) to expedite completion.
- Package 1 – Site Preparation includes work to prepare the site for the start of the construction of the Reservoir and STA and is the subject of this Agenda item.
- Package 2 – R/STA includes the work of the Reservoir and STA and is currently in Intermediate Design and expected to be Ready to Advertise in late 2025.

Scope



- The Project Site is a former citrus agricultural area and has a generally undulated topography including canals, ditches, and crop rows, and includes irrigation infrastructure.

Scope



- Clearing and grubbing
- Demolition of agricultural irrigation equipment and irrigation wells
- Perimeter road construction
- Construction Village with site office trailers, material storage areas, and temporary utilities
- Temporary C-25 bridge to provide 2-way site access

M E M O R A N D U M

TO: Governing Board Members

FROM: Lucine Dadrian, P.E., Engineering, Construction & Modeling

DATE: August 8, 2024

SUBJECT: Caloosahatchee (C-43) Reservoir Water Quality Treatment Project, Hendry County

Agenda Item Background:
The Caloosahatchee (C-43) Reservoir Water Quality Treatment Project, located in Hendry County, augments the Comprehensive Everglades Restoration Plan's infrastructure to suppress potential nuisance algal growth within the reservoir. The project consists of storage and delivery equipment to inject aluminum sulfate (alum) into the intake channels of the S-470 inflow pump station to enhance water quality and was identified as the most cost-effective treatment technology for improving water quality for discharges from the reservoir.

The alum will be dispensed into the pump station intake channels via alum feed pumps from five storage tanks located on the north bank of the pump station. Mixing of the alum will occur within the suction intake through the S-470 pumps and in the discharge piping of the pump station into the reservoir. This inline injection design of alum during reservoir filling is expected to provide beneficial reductions in algal growth within the reservoir.

The lowest responsive and responsible bidder is recommended for award. In accordance with District policy and consistent with state law for Request for Bids (RFB) procurements, this item was competitively bid through a sealed bid process. The bid opening for this project was on July 15, 2024.

Additional Item Background:
Core Mission and Strategic Priorities:
The C-43 West Basin Storage Reservoir Water Quality Component project supports the core mission of water quality and ecosystem restoration.

Funding Source:
The C-43 West Basin Storage Reservoir Water Quality Component project will be funded through dedicated funds (Land Acquisition Trust Fund) as part of the Northern Everglades Estuaries Protection Plan (NEEPP).

Staff Contact and/or Presenter:
Lucine Dadrian, P.E., ldadrian@sfwmd.gov, 561-682-2685

ATTACHMENTS:

Resolution No. 2024-0807

Backup Presentation

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024 - 08XX

A Resolution of the Governing Board of the South Florida Water Management District to authorize entering into a 330-day contract with Harry Pepper & Associates, Inc., the lowest responsive and responsible bidder, for Caloosahatchee (C-43) Reservoir Water Quality Treatment Project, in the amount of $5,955,924, for which $600,000 in dedicated funds (Land Acquisition Trust Fund) are budgeted in Fiscal Year 2023-2024 and the remainder is subject to Governing Board approval of future years' budgets, providing an effective date. (Contract No. 4600005042)

WHEREAS, the Governing Board of the South Florida Water Management District deems it necessary, appropriate, and in the public interest to enter into a 330-day contract with Harry Pepper & Associates, Inc., for the Caloosahatchee (C-43) Reservoir Water Quality Treatment project, in the amount of $5,955,924.

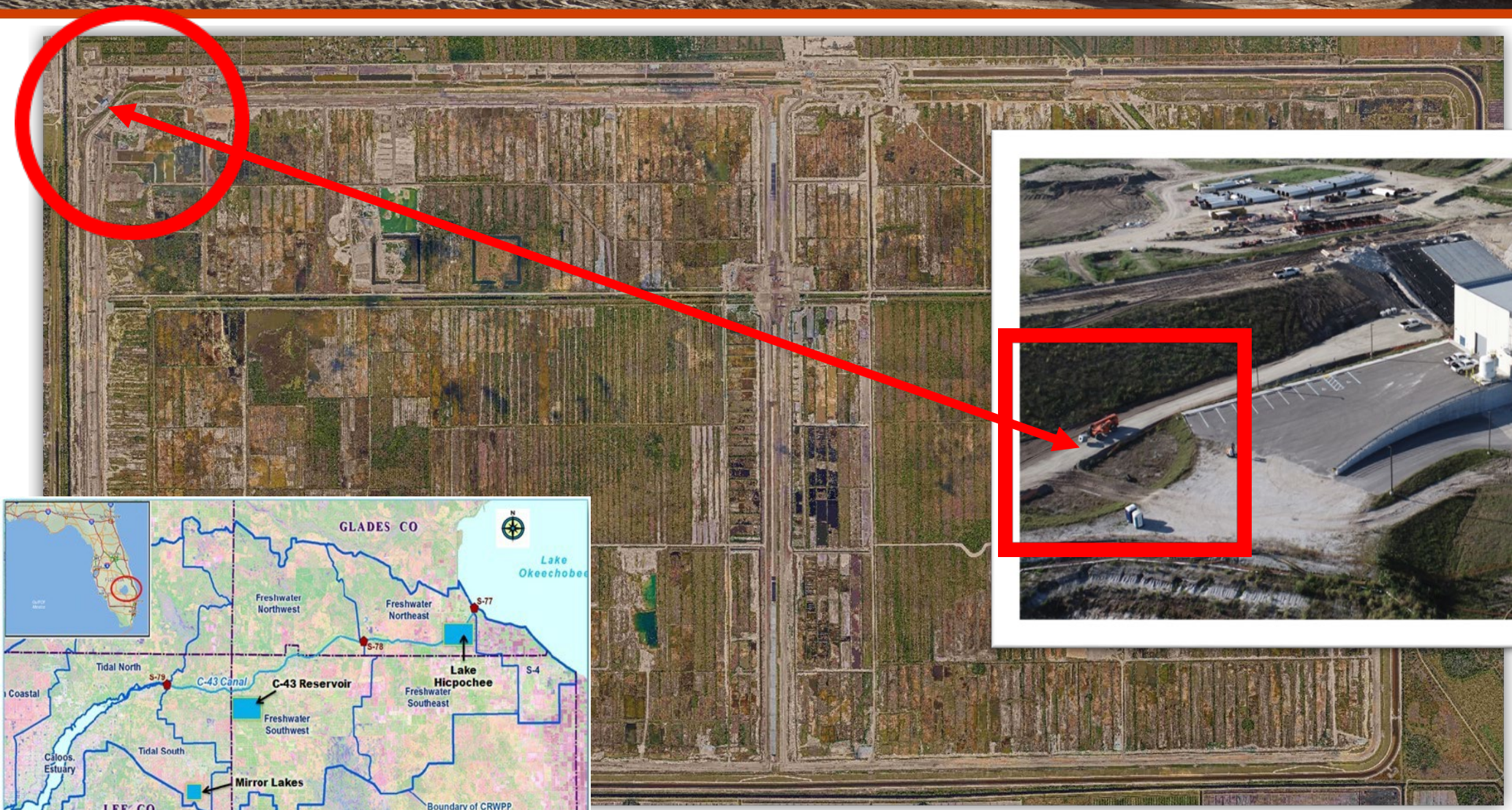
NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby authorizes entering into a contract with Harry Pepper & Associates, Inc. for the Caloosahatchee (C-43) Reservoir Water Quality Treatment project, in the amount of $5,955,924 for which $600,000 in dedicated funds (Land Acquisition Trust Fund) are budgeted in Fiscal Year 2023-2024 and the remainder is subject to Governing Board approval of future years' budgets. (Contract No. 4600005042)

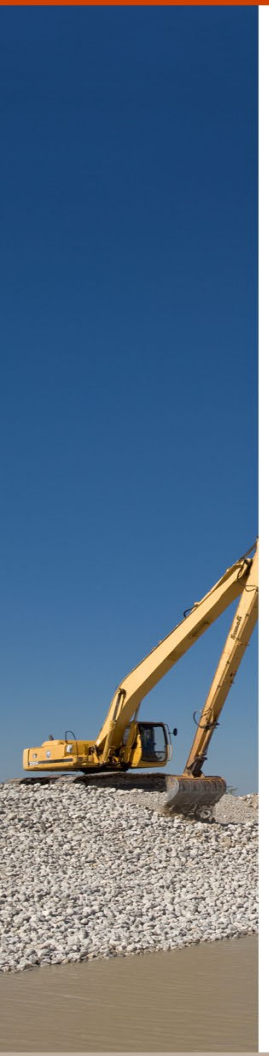
Section 2. This Resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 8th day of August, 2024.

Location Map

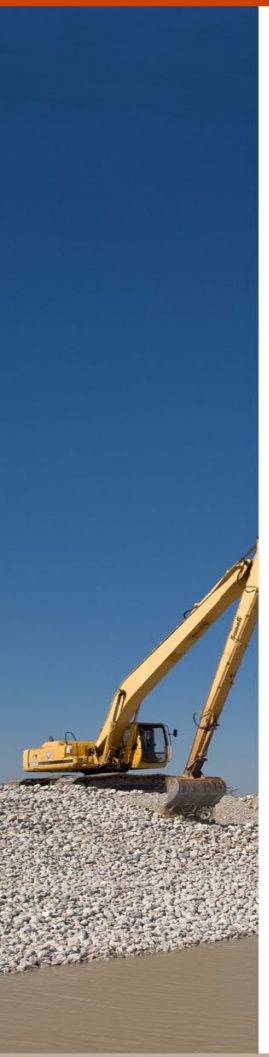


Background



- Governor Ron DeSantis signed Executive Order 19-12 to add a stormwater treatment project to the C-43 Reservoir to improve water quality of discharges leaving this “important water storage component”.
- SFWMD conducted a Water Quality Feasibility study to evaluate alternative treatment technologies for the C-43 Reservoir Treatment Project, engaging local, regional and state stakeholder to select Alum Treatment as the recommended Plan.
- SFWMD completed the design for the Alum Treatment project, co-located with the S-470 pump station in September 2021.
- SFWMD received Section 408 permit approval from the Corps of Engineers at the end of 2023.

Scope



- The Project Scope includes construction of an Alum Injection System, co-located with the S-470 Pump Station to treat stormwater inflows entering the C-43 Reservoir.
- Project includes metering pumps, piping and covered storage tanks and will be integrated into the S-470 pump station controls.
- Pumps will deliver the Alum dosage suitable to reduce nutrient concentrations in the Reservoir and will be monitored to assess performance of the treatment system. The system is designed for flexibility allowing adjustments as needed.

M E M O R A N D U M

TO: Governing Board Members

FROM: Lucine Dadrian, P.E., Engineering, Construction & Modeling

DATE: August 8, 2024

SUBJECT: Lake Trafford Tower, Collier County

Agenda Item Background:
As part of the Big Cypress Basin (BCB) Capital Improvement Program, the Lake Trafford Tower Project, located in Collier County, will consist of the design and construction of a 300-feet communications tower, 290-feet of which shall consist of the structural steel lattice sections, IT building with associated connection to the tower and emergency generator, LP tank, and fencing. The intent is to improve the communications between the Big Cypress Basin and the Control Room located at the District Headquarters in West Palm Beach by adding an interim tower between the Faka Union and C-43 towers. The Lake Trafford property is District-owned land that contains a perimeter berm that enables the property to be used as a depository site for the dredging of Lake Trafford, and the property location's upland area is ideally suited for this project.

The project will assist with the remote operations of the BCB's water control structures and pump stations by enabling real-time data transmission, monitoring, and operations, ensuring timely response to changing water levels during normal and emergency operations. This improves the efficiency and accuracy of flood control management and reducing the risk of flooding. The tower supports remote operations, minimizing the need for on-site personnel manually operating structures and lowers long-term operational costs.

The lowest responsive and responsible bidder is recommended for award. In accordance with District policy and consistent with state law for Request for Bids procurements, this item was competitively bid through a sealed bid process. The bid opening for this project was July 18, 2024.

Additional Item Background:
Core Mission and Strategic Priorities:
The Lake Trafford Tower Project supports the core missions of flood control, water supply, and ecosystem restorations.

Funding Source:
The Lake Trafford Tower Project will be funded with Big Cypress Basin Ad Valorem funds.

Staff Contact and/or Presenter:
Lucine Dadrian, P.E., ldadrian@sfwmd.gov, 561-682-2685

ATTACHMENTS:

Resolution No. 2024-0808

Backup Presentation

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024 - 08XX

A Resolution of the Governing Board of the South Florida Water Management District to authorize entering into a 674-day contract with Expert Construction Managers, Inc., the lowest responsive and responsible bidder, for the Lake Trafford Tower Project, in the amount of $6,686,000.00, for which $3,000,000.00 in Big Cypress Basin Ad Valorem funds are budgeted in Fiscal Year 2023-2024 and the remainder is subject to Governing Board approval of future years' budgets, providing an effective date. (Contract No. 4600005043)

WHEREAS, the Governing Board of the South Florida Water Management District deems it necessary, appropriate, and in the public interest to enter into a 674-day contract with Expert Construction Managers, Inc., for the Lake Trafford Tower Project, in the amount of $6,686,000.00.

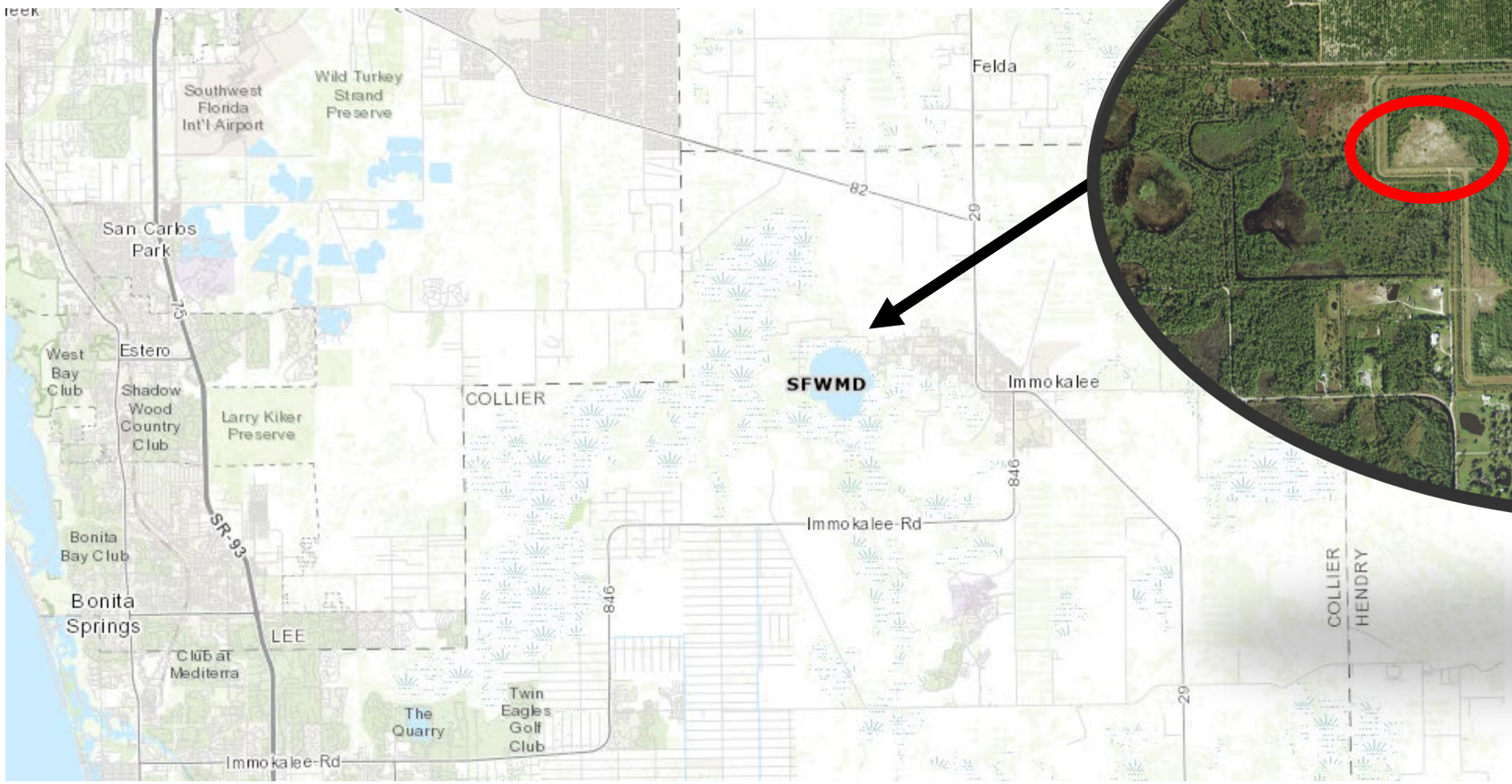
NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

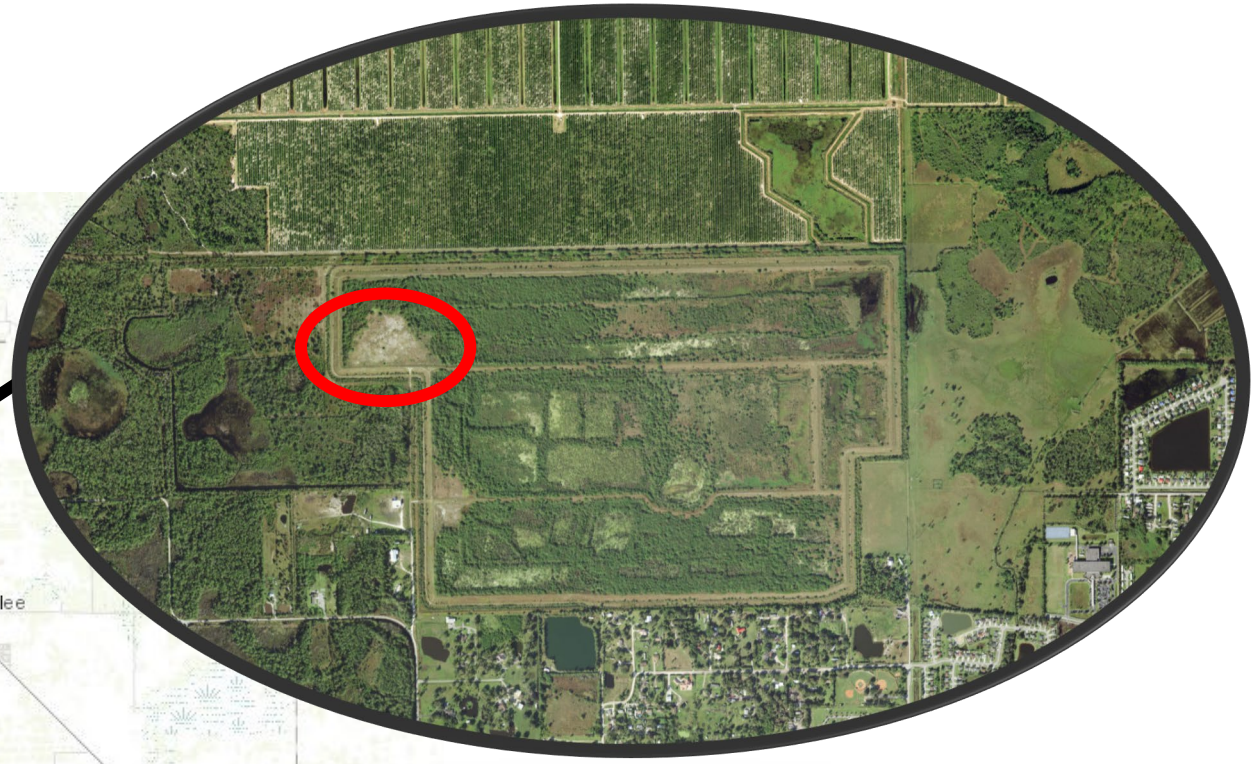
Section 1. The Governing Board of the South Florida Water Management District hereby authorizes entering into a contract with Expert Construction Managers, Inc., Inc. for the Lake Trafford Tower Project, in the amount of $6,686,000.00 for which $3,000,000.00 in Big Cypress Basin Ad Valorem funds are budgeted in Fiscal Year 2023-2024 and the remainder is subject to Governing Board approval of future years' budgets. (Contract No. 4600005043)

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

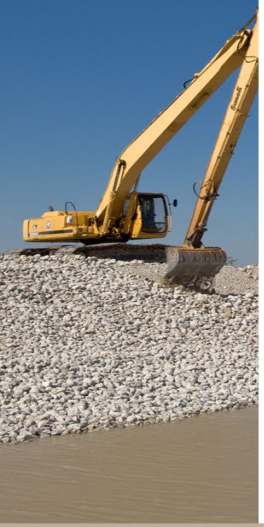
PASSED and **ADOPTED** this 8th day of August, 2024.

Location Map



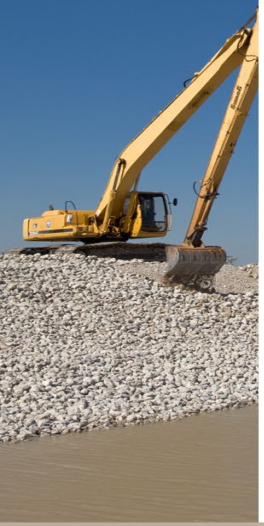


Background

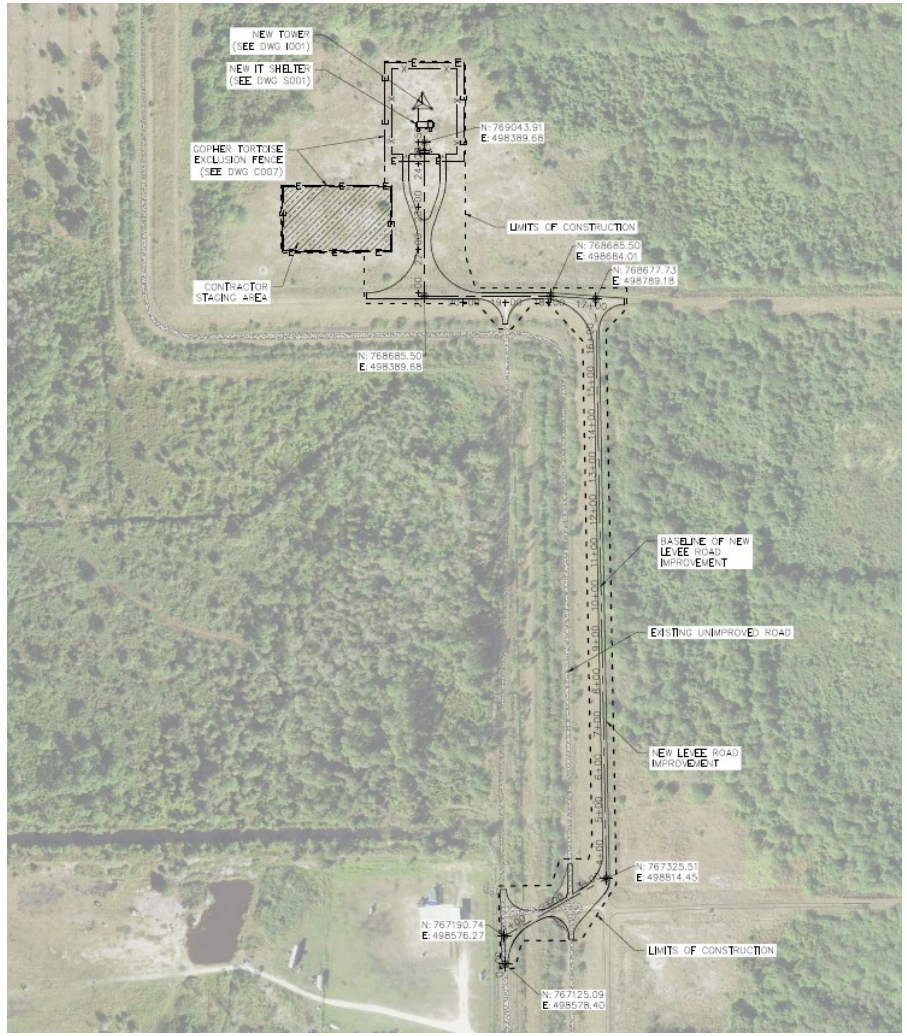


- The Lake Trafford Tower project is located near the northeast corner of Lake Trafford, in Collier County.
- Tower is one of the key structures that support the District's flood control mission within Big Cypress Basin (BCB).
- The primary purpose is to improve the communications between BCB and the Control Room at District Headquarters in West Palm Beach by adding an interim tower between the Faka Union (Picayune) and C-43 towers.
- This project will assist with the remote operations of water control structures and pump stations providing flood control by enabling real-time data transmission and monitoring, ensuring timely response to changing water levels.
- The tower supports remote operations, minimizing the need for on-site personnel manually operating structures and lowers long-term operational costs.

Scope



- The scope project includes:
  - 300 ft microwave tower
  - IT Building
  - Generator and LP tank
  - Site Civil Work and Fencing
  - Power to the site from a nearby service pole



M E M O R A N D U M

TO: Governing Board Members

FROM: Cassondra Armstrong, Ph.D., Water Resources Division

DATE: August 8, 2024

SUBJECT: Science and Technology Support Services Contracts

Agenda Item Background:
The District has maintained a series of science and technology support services contracts with universities for several years, which are set to expire November 2024 (Florida International University and Florida Gulf Coast University) and January 2025 (University of Florida). This agenda item addresses the need to continue to have these services available to facilitate the delivery of the District's applied research and related projects conducted primarily in the Applied Sciences, Water Quality, Hydrology & Hydraulics, and Ecosystem Restoration bureaus. A Request for Proposals solicited technical proposals from qualified universities to provide support services in nine disciplines, including ecosystem and vegetation biology, soil sciences, wildlife biology, water quality monitoring, analytical laboratory services, data science, hydrology and hydraulics, permitting, and technical editing. Contract awards are requested for a duration of three years with the option of extending with two 1-year renewals. Assignments under each contract will be executed via work orders. The five universities selected for these contracts are University of Florida, Florida International University, Florida Atlantic University, University of Central Florida, and Florida Gulf Coast University.

Five universities responded to the request for proposals. All five were deemed responsible and responsive. No oral presentations of proposals were given.

Additional Item Background:
Core Mission and Strategic Priorities:
These universities are selected to provide scientific and technologic support services that support the District's core mission of ecosystem restoration, resilience, water quality, and water supply.

Funding Source:
Both Ad Valorem and dedicated funds (State Appropriations) are eligible to be used to procure these services and will be provided by the organization requesting services.

Staff Contact and/or Presenter:
Cassondra Armstrong, Ph.D., cthomas@sfwmd.gov; 561-682-6716

ATTACHMENTS:

Resolution No. 2024-0809

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024 - XXXX

A Resolution of the Governing Board of the South Florida Water Management District authorizing the official ranking and entering into three-year contracts, with the option of executing two 1-year extensions, with each of the following universities: University of Florida, Florida International University, Florida Atlantic University, University of Central Florida, and Florida Gulf Coast University, subject to successful negotiations, to provide Scientific and Technology Support Services in an amount not-to-exceed $15,000,000 for the five contracts, which the Fiscal Year 2023-2024 budget includes approved Ad Valorem and dedicated funds (State Appropriations) and the remainder is subject to Governing Board approval of future years budgets; the District may proceed with negotiations with the five selected universities until contracts are successfully negotiated; providing an effective date.

Contract No.	Vendor Name
4600005026	University of Florida
4600005025	Florida International University
4600005028	Florida Atlantic University
4600005029	University of Central Florida
4600005027	Florida Gulf Coast University

WHEREAS, the Governing Board of the South Florida Water Management District deems it necessary, appropriate, and in the public interest to authorize the official ranking and entering into a three-year contract, with the option of executing two 1-year extensions, with University of Florida, Florida International University, Florida Atlantic University, University of Central Florida, and Florida Gulf Coast University, subject to successful negotiations to provide Scientific and Technology Support Services, in an amount not to exceed $15,000,000, which the Fiscal Year 2023-2024 budget includes approved Ad Valorem and dedicated funds (State Appropriations) and the remainder is subject to Governing Board approval of the future years budgets; the District may proceed with negotiations with the five selected universities until contracts are successfully negotiated.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby approves entering into a contract with the following universities subject to successful negotiations to provide Ecological and Environmental Scientific and Technology Support Services for the Permit Acquisition and Compliance Section and sections within the Water Resources Division, in

an amount not to exceed $15,000,000 for these six contracts; the District may proceed with negotiations with the five selected universities until contracts are successfully negotiated.

Contract No.	**Vendor Name**
4600005026	University of Florida
4600005025	Florida International University
4600005028	Florida Atlantic University
4600005029	University of Central Florida
4600005027	Florida Gulf Coast University

Section 2. This resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 8th day of August 2024.

M E M O R A N D U M

TO: Governing Board Members

FROM: Candida Heater, Administrative Services, Budget Bureau

DATE: August 8, 2024

SUBJECT: Approval to Request Funds for Operations in Accordance with Senate Bill 1638 - Environmental Resource Management Chapter 2024-58 Laws of Florida, Section 15, House Bill 5001 GAA 1696D Chapter 2024-231 Laws of Florida, and an Executed Funding Agreement with the Florida Department of Environmental Protection

Agenda Item Background:
On April 4, 2024, Governor DeSantis signed into law Senate Bill 1638 - Environmental Resource Management Chapter 2024-58 Laws of Florida, Section 15, which appropriated $150,000,000 in nonrecurring funds from the General Revenue Fund in Aid to Local Governments - Grants and Aids and within the Operations appropriation category to the SFWMD for operations and maintenance responsibilities under the purview of the District. These responsibilities include all refurbishments, upgrades, operations, and maintenance of facilities, flood control and water supply structures, lands, and other works authorized by Chapter 373, Florida Statutes. Additionally, these funds are to cover the costs to conduct a study of the health and ecosystem of Lake Okeechobee with the Water School at Florida Gulf Coast University. As well, on June 12, 2024, Governor DeSantis signed into law House Bill 5001 Chapter 2024-231 Laws of Florida, which appropriated GAA 1696D in the amount of $2,000,000 for operations.

Additional Item Background:
Core Mission and Strategic Priorities:
This action will secure funds for District activities that are consistent with our mission as well as the laws and regulations governing the use of the state funding.

Funding Source:
The State's appropriation within Senate Bill 1638 - Environmental Resource Management Chapter 2024-58 Laws of Florida, Section 15, in nonrecurring funds from the General Revenue Fund in the amount of $150,000,000 and House Bill 5001 Chapter 2024-231 Laws of Florida, GAA 1696D from General Revenue in the amount of $2,000,000.

Staff Contact and/or Presenter:
Candida Heater, cheater@sfwmd.gov, 561-682-6486

ATTACHMENTS:

Resolution No. 2024-0810

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024 – XXXX

A Resolution of the Governing Board of the South Florida Water Management District authorizing the Executive Director of the South Florida Water Management District, or designee, to request distribution, transfer, release, advance, and reimbursement of funds to cover the District operations pursuant to Senate Bill 1638 – Environmental Resource Management, Chapter 2024-58 Laws of Florida, Section 15, in the amount of $150,000,000, House Bill 5001 Chapter 2024-231 Laws of Florida, GAA 1696D in the amount of $2,000,000, and in accordance with an executed funding agreement with the Florida Department of Environmental Protection; providing an effective date.

WHEREAS, On April 4, 2024, Governor DeSantis signed into law Senate Bill 1638 – Environmental Resource Management, Chapter 2024-58 Laws of Florida, Section 15, which appropriated $150,000,000 in nonrecurring funds from the General Revenue Fund in Aid to Local Governments – Grants and Aids and within the Operations appropriation category to the SFWMD for operations and maintenance responsibilities under the purview of the district. These responsibilities include all refurbishments, upgrades, operations, and maintenance of facilities, flood control and water supply structures, lands, and other works authorized by Chapter 373, Florida Statutes; and

WHEREAS, On June 12, 2024, Governor DeSantis signed into law House Bill 5001 Chapter 2024-231 Laws of Florida, which appropriated GAA 1696D in the amount of $2,000,000 for operations; and

WHEREAS, the Executive Director of the South Florida Water Management District, or designee, is authorized to request distribution, transfer, release, advance, and reimbursement of funds, consistent with Florida Statutes including Chapter 216, Chapter 373, and Chapter 375; and

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District does hereby authorize the Executive Director of the South Florida Water Management District, or designee to request distribution, transfer, release, advance, and reimbursement of funds to cover the District operations pursuant to Senate Bill 1638 – Environmental Resource Management, Chapter 2024-58 Laws of Florida, Section 15, in the amount of $150,000,000, House Bill 5001 Chapter 2024-231 Laws of Florida, GAA 1696D in the amount of $2,000,000, and in accordance with an executed funding agreement with the Florida Department of Environmental Protection.

Section 2. This resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED,** this 8th day of August, 2024.

M E M O R A N D U M

TO: Governing Board Members

FROM: Jennifer Reynolds, Ecosystem Restoration & Capital Projects

DATE: August 8, 2024

SUBJECT: Final Project Implementation Report and Environmental Impact Statement for the Western Everglades Restoration Project

Agenda Item Background:
The Western Everglades Restoration Project (WERP) is a part of the Comprehensive Everglades Restoration Plan (CERP), a 50/50 cost-share program between the U.S. Army Corps of Engineers (USACE) and the South Florida Water Management District (District). The study area covers approximately 1,200 square miles in the western Everglades and includes parts of the Big Cypress Seminole Tribe of Florida Reservation, Big Cypress National Preserve (BCNP), and the Miccosukee Tribe of Indians of Florida Reservation. WERP is an Everglades restoration planning effort that aims to improve the quantity, quality, timing, and distribution of water in the western Everglades. This agenda item is for discussion and includes voting items.

The WERP Recommended Plan proposes to use a series of active and passive water management features and water quality features to reestablish sheetflow into BCNP and Water Conservation Area (WCA)-3A. The Recommended Plan will maintain existing levels of flood protection and ensure that inflows to the North and West Feeder canals meet applicable water quality standards. A Stormwater Treatment Area (STA) totaling approximately 3,600 acres and WERP implementation plan dependencies based on State water quality efforts within the Feeder Canal Basin Water Quality Program are included in the plan to improve water conditions in the Feeder Canal Basin prior to flowing downstream. The plan also includes implementation of canal modifications, the installation of levee tie-ins, the degradation of existing levees, the vegetation restoration of areas impacted by nuisance and exotic vegetation, the restoration of a historic tree island bisected by the Central & Southern Florida infrastructure, and the installation of water management structures (gated culverts, ungated culverts, weirs, etc.). The recommended Plan will reestablish ecological connectivity of wetland and upland habitats in BCNP and WCA3A with restored freshwater flow paths, seasonal hydroperiods, and historic distributions of sheetflow. Low nutrient conditions to reestablish and sustain native flora and fauna will also be restored. Reestablishing the hydrology will reduce wildfires that damage the underlying geomorphic condition of the western Everglades and will promote system-wide resilience considering future change, such as sea level rise and climate change.

Planning efforts were initiated in August 2016, under USACE's planning paradigm to develop a final plan, known as the Project Implementation Report and Environmental Impact Statement (PIR/EIS), for congressional authorization. District staff requests Governing Board support on the proposed WERP Recommended Plan and to approve a resolution committing to collaborate with landowners in the development of solutions for water quality and retention within the Feeder Canal Basins that avoids adverse hydrologic impacts to private property and

the use of eminent domain without Governing Board approval under State Law and funding from a State of Florida Budget. The Final PIR/EIS will be released in August 2024 followed by completion of the Chief's Report in September 2024 and submittal to Congress for authorization December 2024.

Staff Contact and/or Presenter:
Amanda McKenzie, ammckenz@sfwmd.gov, 561-682-2148

ATTACHMENTS:

Resolutions No. 2024-0811

Map

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024 - 0811

A Resolution of the Governing Board of the South Florida Water Management District to declare support for the restoration of the Western Everglades and a commitment to continued engagement with landowners in the Feeder Canal Basin to ensure the successful implementation of the Western Everglades Restoration Project (WERP) in a manner that achieves the ecological benefits to Big Cypress National Preserve, Everglades National Park, and the Big Cypress Seminole Indian Reservation Native Area while not adversely flooding private property; and to develop solutions for water quality and retention through State efforts relating to activities outlined within the WERP Project Implementation Report / Environmental Impact Statement (PIR/EIS) and as part of the Feeder Canal Basin Water Quality Program; providing an effective date.

WHEREAS, the South Florida Water Management District (District) is the local sponsor for the implementation of the Comprehensive Everglades Restoration Plan (CERP) which intends to restore the natural system including freshwater flow to the western Everglades; and

WHEREAS, the Governing Board is using this resolution to express its support for this project and to ensure a long-term District commitment to achieve the project objectives through the continued engagement and collaboration with interested parties during implementation; and

WHEREAS, WERP is a component of the CERP located in and north of Big Cypress National Preserve, and on the western side of the central Everglades and Everglades National Park, for the purpose of restoring freshwater flows to improve seasonal hydroperiods and sheet flow, reestablishing ecological connectivity and ecological resilience of the historic wetland/upland mosaic; restoring water levels to reduce wildfires associated with altered hydrology; improving water quality conditions; and promoting system-wide resilience and improved system-wide operational flexibility; and

WHEREAS, the WERP Recommended Plan includes features and canal modifications to redirect water into natural flow paths, but relies on future evaluations to determine the extent of impacts to private property; and

WHEREAS, the planning process for the development of the WERP PIR/EIS involved extensive coordination and input by the public and federal, state, tribal, and local resource management and regulatory agencies to ensure adherence with federal and state regulations, including those pertaining to water supply and flood control; and

WHEREAS, the District acknowledges that backfilling or plugging the Wingate Mill or Lard Can Canals would cause impacts to the properties that depend on those canals for water management; and

WHEREAS, the District currently operates multiple projects in the C-139, C-139 Annex, and Feeder Basins; and the project operating manual is developed over time as the details of the design of the WERP components are developed; and the District, in partnership with the U.S. Army Corps of Engineers (Corps), will coordinate project design and development of the project operating manual with all affected interests and implement the operations of any future WERP features in accordance with the project operating manual; and

WHEREAS, the Corps retains all operational control of any water control features following the project operating manual and will not conduct any operations that cause flood conditions to private property without first obtaining the consent of the affected parties; and

WHEREAS, the State is implementing enhanced water quality improvement efforts in the Feeder Canal Basins through the Feeder Canal Basin Water Quality Program, which also supports implementation of water storage, flow, and attenuation projects to mitigate harmful highwater events.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby supports the Western Everglades Restoration Plan for submittal and authorization in the Water Resources Development Act of 2024 with the understanding that the District will be the lead agency for design, construction, and implementation of the project components.

Section 2. The Governing Board of the South Florida Water Management District hereby commits the District to collaborate with the Seminole Tribe of Florida, the Miccosukee Tribe of Indians, and all landowners in the Feeder Basins to ensure WERP is implemented and operated in a way that achieves the project benefits and avoids adverse hydrologic impacts to private property.

Section 3. The District will collaboratively develop solutions for water quality and quantity management within the Feeder Canal Basins and implement canal modifications to the Wingate Mill and Lard Can Canals instead of installing a plug or backfilling the canals. Furthermore, the District will not use or request the federal government to use eminent domain to achieve any WERP objectives without Governing Board approval and using authority under state law and funding from a State of Florida Budget.

Section 4. This Resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 8th day of August, 2024.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT, BY ITS GOVERNING BOARD
By:

_____
Chauncey P. Goss, II
Chairman

Attest:

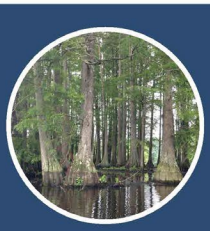
_____
District Clerk/Secretary

Legal form approved:
By:

_____
Office of Counsel

Print name:

_____



WERP RECOMMENDED PLAN

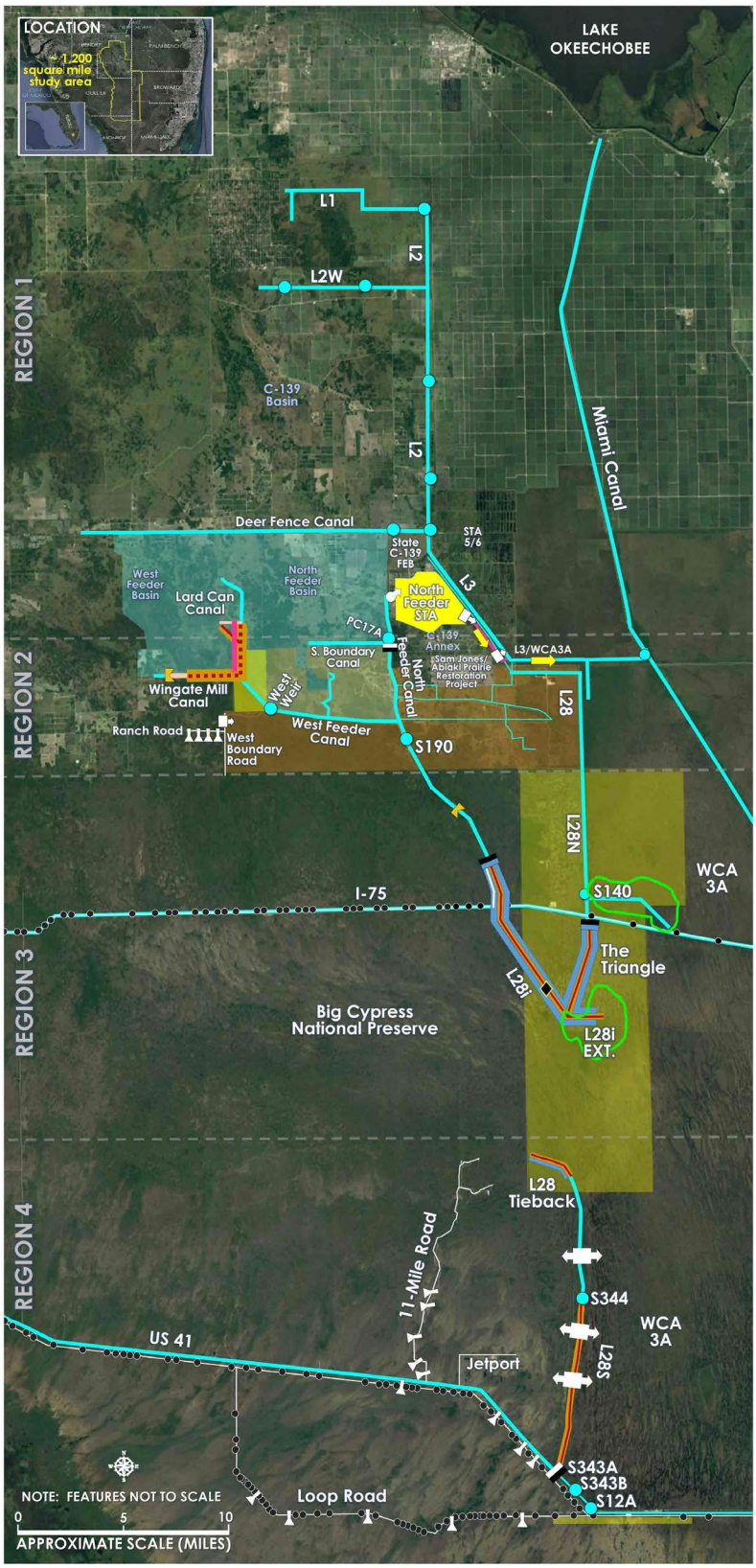
LEGEND

- Seminole Tribe of Florida
- Miccosukee Tribe of Indians
- South Florida Water Management District Feeder Canal Basin Water Quality Program
- Existing Culverts
- Existing Structures
- Existing Canals
- Existing Roads

WERP FEATURES

(not to scale; not representative of final placement)

- Water Treatment
- Treated Water
- Spreader Canal
- Embankment
- Canal Backfill
- Canal Backfill/ Degrade Levee
- Canal Modifications
- Plug
- Plug with Levee Tie-In
- Pump
- Inline Weir
- Gated Culvert
- Culvert
- Bi-Directional Control Structure
- Ditch Backfill
- McCormack's Landing Restoration
- Vegetation Restoration



WESTERN EVERGLADES RESTORATION PROJECT (WERP)

COMPREHENSIVE EVERGLADES RESTORATION PLAN PROJECT | FOR ADDITIONAL INFORMATION : WWW.SAJ.USACE.ARMY.MIL/WERP/ April 2024

M E M O R A N D U M

TO: Governing Board Members

FROM: Rory Feeney, Field Operations Division

DATE: August 8, 2024

SUBJECT: Green Heart of the Everglades Project, Collier County

Agenda Item Background:
The Fiscal Year 2022-2023 Florida Legislature appropriated funds and directed the District to acquire 11,053.44 acres, located in Collier County, known as the Green Heart of the Everglades Project (Property).

The District proposes to designate the Property as a "Management Area" in accordance with Public Use Rule 40E-7.521(27), Florida Administrative Code. A "Management Area" designation will allow the District to apply the rules codified in Chapter 40E-7, Florida Administrative Code, to manage public recreation within the Property to ensure a balance between public recreation, restoration and protection, consistent with the purpose for which the Property was acquired. These rules include establishing public access points and providing for a variety of recreational activities including hunting, frogging, crabbing, fishing, wildlife viewing, environmental education, and the use of non-motorized, and motorized watercraft, including airboats, that are compatible with the Property.

The District also proposes to adopt the Green Heart of the Everglades Interim Land Management Plan for the Property, in accordance with Section 373.1391, Florida Statutes, to provide for the conservation, preservation, and recreational use of the lands. The Green Heart of the Everglades Interim Land Management Plan is a five-year interim plan describing the historical, physical, and ecological aspects of the Property, existing and future public recreational opportunities, and the various land management goals and objectives to properly manage the area. The purpose of the interim management plan is to provide guidance to District land managers for the application of consistent and ecologically beneficial land management practices. Upon completion of the five-year interim plan, the District will develop a ten-year General Land Management Plan.

Lastly, the District proposes to authorize the Florida Fish and Wildlife Conservation Commission to establish portions of the Property as a Public Small Game Hunting Area for the purpose of managing public hunting and recreational opportunities on the Property in accordance with Rule 40E-7.527, Florida Administrative Code. This will create the regulatory framework needed to provide resource protection measures for managing the Property's recreational use. The Florida Fish and Wildlife Conservation Commission supports establishing portions of the Property as a Public Small Game Hunting Area and managing hunting and recreation activities on the Property in accordance with State and Federal regulations. Information received from the Florida Fish and Wildlife Conservation Commission and comments received by District staff from recreational and interest groups indicate there is a strong interest in incorporating this portions of the Property into a Public Small Game Hunting Area.

Additional Item Background:
Core Mission and Strategic Priorities:
This Governing Board item supports the District's core mission and strategic goals by allowing for public recreation consistent with Section 373.1391, Florida Statute. The Land Resources Bureau within the Field Operations Division is responsible for implementing this item and administering public recreation on District lands.

Funding Source:
This item does not require the expenditure of District funds.

Staff Contact and/or Presenter:
Rory Feeney, rfeeney@sfwmd.gov, 561-682-6976
Rich Virgil, P.E., rvirgil@sfwmd.gov, 561-682-6759

ATTACHMENTS:

Resolution No. 2024-0812

Resolution Exhibit A Map

Resolution Exhibit B Interim Land Management Plan

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024 - 0812

A Resolution of the Governing Board of the South Florida Water Management District to designate the approximately 11,053.44-acre Green Heart of the Everglades Project, located in Collier County, as a "Management Area" as defined in Rule 40E-7.521(16), Florida Administrative Code; adopt the Green Heart of the Everglades' Interim Land Management Plan; and authorize the Florida Fish and Wildlife Conservation Commission to establish portions of the area as a Public Small Game Hunting Area; providing an effective date.

WHEREAS, the District owns Tracts GU100-12, GU100-13, GU100-14, and GU100-15, located in Collier County consisting of approximately 11,053.44 acres known as the Green Heart of the Everglades Project and identified in Exhibit A, which is attached and incorporated into this resolution (collectively the "Properties"); and

WHEREAS, the Governing Board desires to designate the Properties as a "Management Area" as defined in Rule 40E-7.521(16), Florida Administrative Code, for the purpose of managing public recreation on the Properties in accordance with the District's Public Use Rules set forth in Chapter 40E-7, Florida Administrative Code; and

WHEREAS, Section 373.1391, Florida Statutes, directs the District to develop land management plans to provide for the conservation, preservation, and recreational use of lands titled to the District; and

WHEREAS, pursuant to Rule 40E-7.527, Florida Administrative Code, the Governing Board of the South Florida Water Management District may authorize public hunting activities on District lands if such activities are regulated, administered, and enforced by the Florida Fish and Wildlife Conservation Commission, in cooperation with the District; and

WHEREAS, the Governing Board of the South Florida Water Management District deems it necessary, appropriate, and in the public interest to authorize the Florida Fish and Wildlife Conservation Commission to establish the portions of the Properties as a Public Small Game Hunting Area for the purpose of managing public use hunting and other recreational uses on the Properties in accordance with Rule 40E-7.527, Florida Administrative Code.

NOW THEREFORE BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Section 1. The Governing Board of the South Florida Water Management District hereby designates the Properties, as identified in Exhibit A, which is attached and incorporated hereto, as a "Management Area," as defined in

Rules 40E-7.521(16), Florida Administrative Code, for the purpose of managing public access and recreational use.

Section 2. The Governing Board of the South Florida Water Management District hereby approves the Green Heart of the Everglades' Interim Land Management Plan (2024-2029), a copy of which is attached and incorporated hereto as Exhibit B.

Section 3. The Governing Board of the South Florida Water Management District hereby authorizes the Florida Fish and Wildlife Conservation Commission to establish portions of the Properties as a Public Small Game Hunting Area for the purpose of managing public hunting and other recreational activities on the Properties in accordance with Rule 40E-7.527, Florida Administrative Code, subject to all applicable laws, statutes, regulations, and other requirements.

Section 4. This Resolution shall take effect immediately upon adoption.

PASSED and **ADOPTED** this 8th day of August, 2024.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT, BY ITS GOVERNING BOARD
By:

_____
Chauncey P. Goss, II
Chairman

Attest:

_____
District Clerk/Secretary

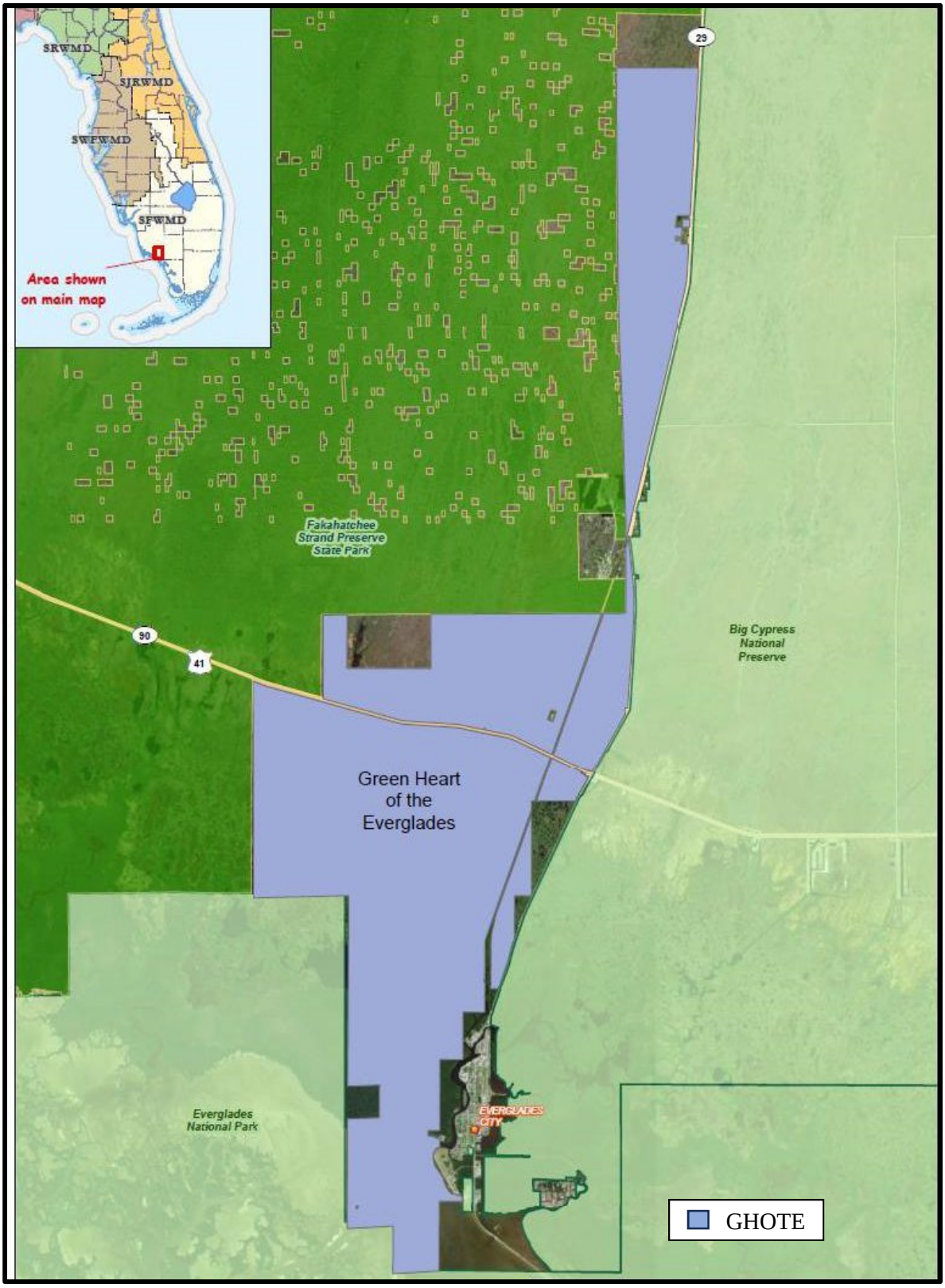
Legal form approved:
By:

_____
Office of Counsel

Print name:

_____

EXHIBIT A


SRWMD
SJRWMD
SWFWMD
SFWMD
Area shown on main map
29
Fakahatchee Strand Preserve State Park
90
41
Big Cypress National Preserve
Green Heart of the Everglades
Everglades National Park
EVERGLADES CITY
GHOTE

Green Heart of the Everglades
Interim Land Management Plan

Green Heart of the Everglades Management Area Interim Land Management Plan

(2024 through 2029)

August 2024

Land Stewardship Section
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Table of Contents

FIGURES

MAPS

TABLES

APPENDICES

ABBREVIATIONS

CARL	Conservation and Recreation Lands
District	South Florida Water Management District
FDHR	Florida Division of Historical Resources
FE	Federally-designated Endangered
FFS	Florida Forest Service
FISC	Florida Invasive Species Council
FNAI	Florida Natural Areas Inventory
FT	Federally-designated Threatened
FT(S/A)	Federally-designated Threatened because of similarity of appearance
FY	Fiscal Year
FWC	Florida Fish and Wildlife Conservation Commission
PSGHA	Public Small Game Hunting Area
SE	State-designated Endangered
ST	State-designated Threatened
TIITF	Board of Trustees of the Internal Improvement Trust Fund
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

1. EXECUTIVE SUMMARY

In 2023, the South Florida Water Management District (District) was authorized to use funds from the General Appropriations Act, §197 of Chapter 2022-156, Laws of Florida (House Bill 5001) to acquire environmentally sensitive lands to conserve and protect water resources in the region. The District used these funds to acquire fee title interest for 11,053 acres in Collier County. This area is known as the Green Heart of the Everglades (GHOTE) and will be managed by the District as the Green Heart of the Everglades Management Area (GHOTE MA).

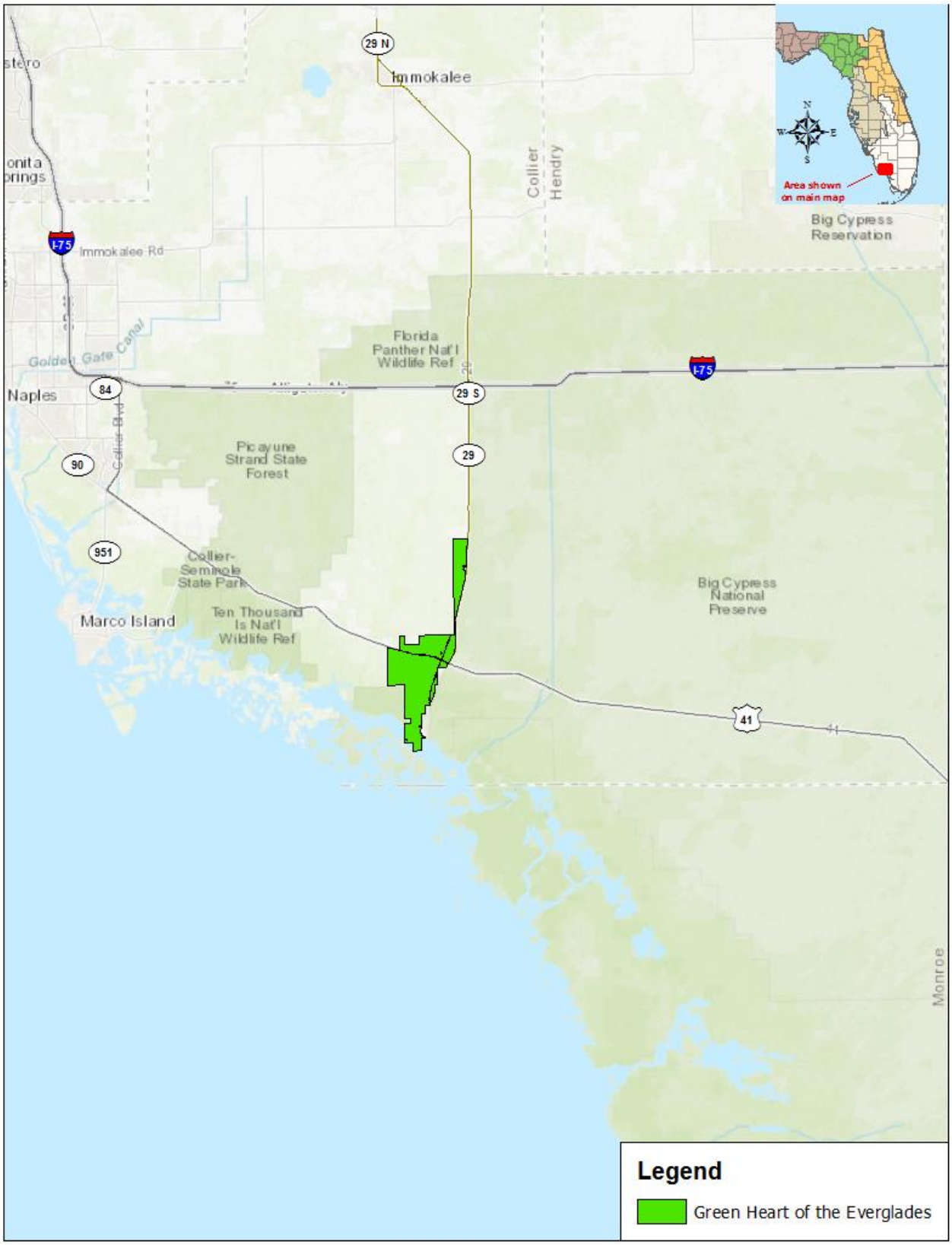
Pursuant to Section 373.1391, Florida Statutes, the District is charged with the responsibility of managing these lands. This Interim Land Management Plan guides the management of the GHOTE property through the 5-year period of 2024-2029 and was developed through stakeholder participation and approved by the District's Governing Board. Goals identified for the next 5 years include establishing the Management Area, developing a General Management Plan to replace the Interim Land Management Plan, identifying resource-based public use opportunities, and providing security and resource protection.

2. INTRODUCTION

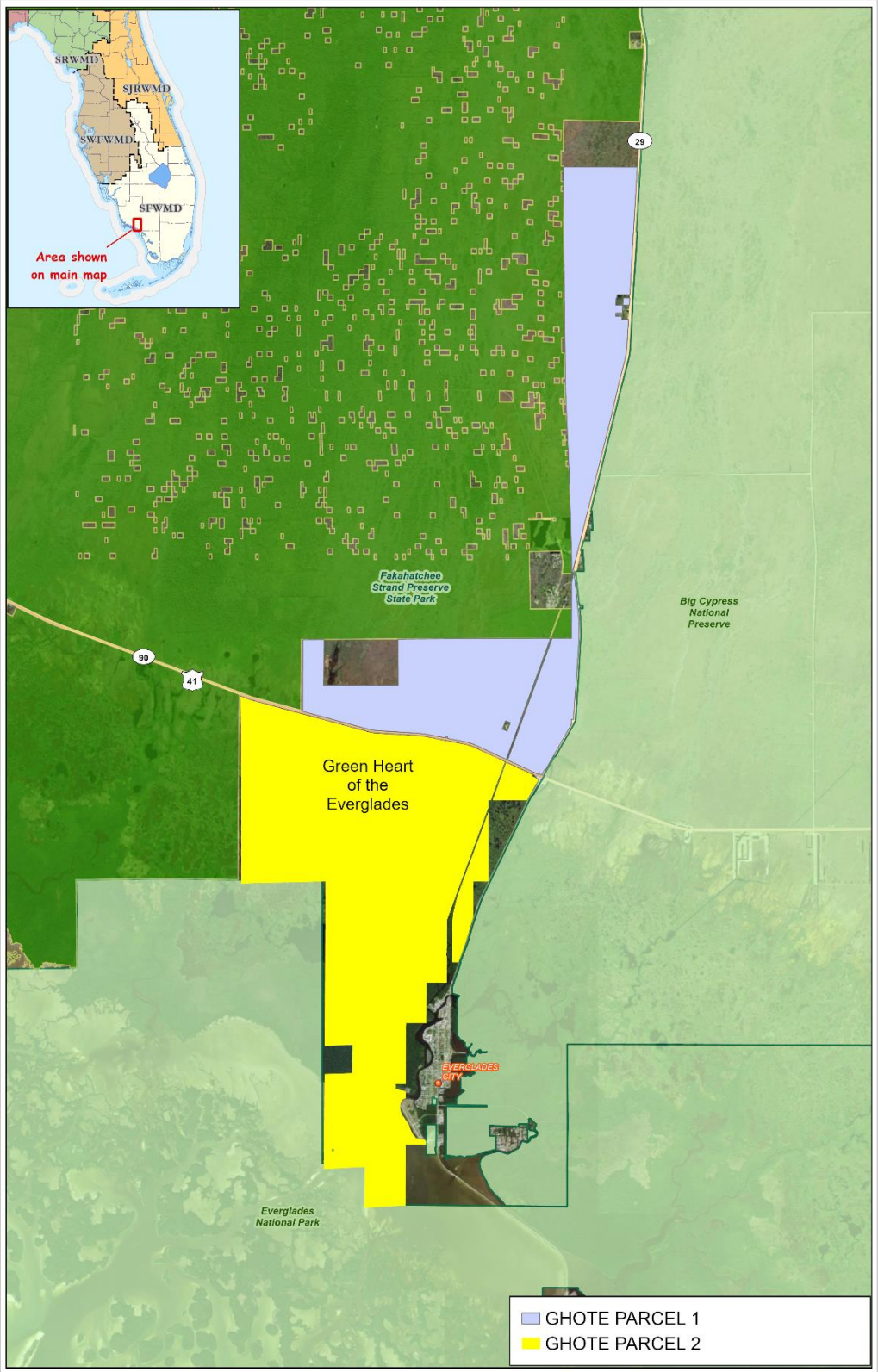
The GHOTE is located west of State Road 29 (S.R. 29) in Collier County, Florida. It is bisected by U.S. Highway 41 (**Map 1**). The property is surrounded by the Fakahatchee Strand Preserve State Park to the west, Big Cypress National Preserve to the east, Everglades National Park and Everglades City to the southeast, and Ten Thousand Islands to the south. The GHOTE is divided into (2) separate areas for management purposes: Parcels 1 and 2 (**Map 2**).

Parcel 1 encompasses 4,214 acres and is located at the northwestern intersection of U.S. 41 and S.R. 29. It is adjoined to the eastern boundary of the Fakahatchee Strand Preserve State Park and bisected from Big Cypress National Preserve by S.R. 29. This parcel historically housed the Carnestown industrial site and the Copeland Market, along with some historic house and packing house structures. An unregistered cattle dip vat site was also identified on the property.

Parcel 2 encompasses approximately 6,839 acres and is located at the southwestern intersection of U.S. 41 and S.R. 29. It is bordered by the Fakahatchee Strand Preserve State Park to the west, Big Cypress National Preserve to the east, Everglades City and Everglades National Park to the southeast, and Ten Thousand Islands to the south. This parcel contains an airboat tour facility, which leases approximately 850 square feet for a building, a dock, and an associated paved parking lot. The airboat facility also maintains and operates above-ground storage tanks to store fuel for the airboat operation.



Map 1. GHOTE location map.



Map 2. GHOTE Components.

2.1. Acquisition Purpose and Significance of the Area

The District purchased the GHOTE property to conserve and protect its unique habitat for the native or endangered and threatened species utilizing the region. The GHOTE property is the last remaining sizeable vacant land separating the Fakahatchee Strand Preserve State Park from the Big Cypress National Preserve and Everglades National Park. The acquisition of the GHOTE property supports the Florida Forever Act (§259.105(4), Florida Statutes), specifically the goals outlined in §259.105(4)(a)(3), 259.105(4)(c)(1), 259.105(4)(c)(4), 259.105(4)(c)(6), 259.105(4)(d)(2), 259.105(4)(e)(1), 259.105(4)(e)(2), and 259.105(4)(e)(3), Florida Statutes. WildLandscapes International, a Florida-based non-profit organization dedicated to working with diverse stakeholders and communities to conserve large, connected landscapes, entered into an agreement with the Collier companies to bring the GHOTE lands under public ownership to connect the surrounding state and federal conservation lands. This initiative by WildLandscapes to bring the landowners together under one agreement helped maximize transactional efficiency. It ensured a comprehensive closing, allowing the District to acquire and get these lands under public ownership. The purchase of the GHOTE also includes the mineral rights, which permanently precludes the property's oil, gas, and mineral exploration and extraction. Without conservation, this property would be subject to development.

The acquisition of the GHOTE property increases the acreage of conservation lands in the area, securing a critical corridor connecting adjacent conservation lands. Preserving the GHOTE in its current state supports a variety of rare and endangered species, including the Florida panther. The estuarine ecosystem of the Ten Thousand Islands area links the hydrology of the GHOTE and the Everglades. Presently, sheetflow in the watershed basin is diverted to the Barron River Canal, which channels most of the runoff that historically entered the GHOTE to Chokoloskee Bay. The Everglades and Ten Thousand Islands areas are prime examples of areas that experience nutrient-laden point source runoff and rapid drying out of the natural areas. Because of its capacity to redirect flows and disperse stormwater runoff, the GHOTE property provides a unique opportunity to improve hydrologic conditions for the natural areas to the south and east of the GHOTE property, including improving the beneficial flows to the estuarine ecosystem of the Ten Thousand Islands area to make the ecosystem more resilient. Diverting flows to the GHOTE property could enhance the water quality conditions downstream in the Ten Thousand Islands areas by reducing freshwater flows into Chokoloskee Bay. The potential for water quality improvements in the region also aligns with the goals of other Comprehensive Everglades Restoration Projects.

2.2. Legal Requirements of Management

Section 373.1391, Florida Statutes, requires the District to manage lands in such a way that maintains a balance between resource conservation and public recreational use. Any lease agreements shall be consistent with the purpose for which the lands were acquired in accordance with §373.093, Florida Statutes, and shall follow best management practices.

The Florida Aquatic Preserve Act was enacted by the Florida Legislature in 1975 and is codified in Chapter 258, Florida Statutes. The legislative intent for establishing aquatic preserves is to set aside state-owned submerged lands in areas with exceptional biological, aesthetic, and scientific value as aquatic preserves or sanctuaries for the benefit of future generations. The

Legislature provides a foundation for managing and preserving the natural conditions of areas designated as aquatic preserves.

The District has partnered with the Florida Fish and Wildlife Commission (FWC) to establish District properties as a Public Small Game Hunting Area (PSGHA) through their authority under Chapter 379, Florida Statutes. This partnership allows the FWC to promulgate rules under Chapter 68, Florida Administrative Code, in coordination with the District, to regulate public use on that portion of the property.

Public use on District lands is also governed by Chapter 40E-7, Florida Administrative Code, which allows the District to establish regulations governing public access and use. These regulations ensure that District lands are used for appropriate nature-based recreation and purposes that align with District objectives. As its steward, the Land Stewardship Section is responsible for protecting, enhancing, and restoring District lands for the benefit and enjoyment of existing and future generations.

The determination of compatible public uses on District lands is based on the following criteria:

- Consistency with the acquisition purposes, including protecting natural ecosystems.
- Restrictions by easements, leases, reservations, adjacent land ownership, or conditions of the purchase agreement.
- Existing infrastructure and facilities, including fences, gates, signage, access, trails, campsites, etc.
- Available funding.
- Limitations on use resulting from endangered species and sensitive natural or archeological resources.
- Public health, safety, and welfare.

3. MANAGEMENT AREA GOALS AND OBJECTIVES

The GHOTE primary functions and management priorities for 2024 - 2029 are outlined in the following goals and objectives:

Management of Wildlife and Habitats

Goal 1: Designate the land use and resource managers for the property.

Objectives:

- Designate the GHOTE property as a Management Area to allow compatible resource-based recreation and educational opportunities on the property in accordance with Chapter 40E-7, Florida Administrative Code.
- Authorize FWC to establish portions of the GHOTE MA as PSGHA.

- Coordinate with FWC on the development of area regulations, including the identification of hunting seasons, hunting and no-hunting zones, and access.

Goal 2: Maintain, improve, or restore floral and faunal resources.

Objectives:

- Assess the condition of the natural communities and develop a management strategy to enhance, manage, and restore the natural communities to their historic plant cover types.
- Implement a prescribed fire program and establish fire return intervals to maintain the marsh community within appropriate fire return intervals.
- Continue to collect opportunistic data on the occurrence of wildlife species.
- Identify habitat and wildlife monitoring needs and establish monitoring protocols for the GHOTE MA.

Nuisance and Invasive Species Management

Goal 3: Manage nuisance and invasive species to minimize their negative impacts on natural communities.

Objectives:

- Implement an integrated vegetation management program to control nuisance and invasive vegetation and systematically improve the natural communities on the property.
- Implement an Early Detection Rapid Response treatments of invasive plant species, as needed.
- Participate in local Cooperative Invasive Species Management Areas.
- Implement a wildlife damage management program to reduce impacts of invasive and nuisance species on the property.
- Identify land management and maintenance budgets annually to implement the vegetation management program.
- Identify operational and capital improvement budgets to maintain staff, equipment, and supply resources necessary to attain a level of responsible management as outlined in this Interim Land Management Plan.

Hydrological Management

Goal 4: Protect, enhance, and restore historic hydrological regime.

Objectives:

- Coordinate with regional partners on ongoing hydrologic improvement projects in the area.
- Investigate options to improve the water quality, quantity, and distribution of sheetflow discharging onto the GHOTE MA.

Public Access and Recreational Opportunities

Goal 5: Provide nature-based public use opportunities.

Objectives:

- Interim activities will include nature-based recreation consistent with the Management Area designation as described and allowed in accordance with Chapter 40E-7, Florida Administrative Code, such as hunting, frogging, crabbing, fishing, wildlife viewing, environmental education, and non-motorized and motorized watercraft use, including airboating.
- Provide resource-based ecotourism opportunities on the GHOTE MA, such as commercial airboating.
- Establish and post designated public access points to govern public access in accordance with Chapter 40E-7, Florida Administrative Code.
- Coordinate with FWC to establish hunting regulations and provide necessary law enforcement for managing the property as a PSGHA.
- Identify operational and capital improvement budgets for the infrastructure needed to provide additional public access opportunities to the property.
- Identify partners and funding sources to assist with developing recreational access and opportunities on the property.
- Identify on-site signage needs for resource protection, regulations, public information and education, and recreational opportunities.
- Provide public outreach and education through area brochures, websites, and presentations at the District's Recreational Forum meetings.
- Utilize volunteer and alternative workforce opportunities within the property.
- Periodically inspect recreation facilities and repair or replace posted signage as needed.
- Assess the effect of recreational uses on the natural communities.

Operation and Maintenance of Capital Facilities and Infrastructure

Goal 6: Maintain and improve facilities and infrastructure.

Objectives:

- Identify operational and capital improvement budgets to create public use facilities (e.g., signage and kiosks, boat ramps, parking areas, structures, etc.).
- Seek partnership and grant funding opportunities to maximize the capital improvement budget for creating public use facilities in the GHOTE MA.
- Maintain and manage the management area boundaries through posting and fencing.

- Complete an inventory of existing assets on the property to identify and quantify the infrastructure, including miles of roads and trails, number and type of boat ramps, culverts and water control structures (number, type, size, and location), facilities (number, type, and location of buildings, sheds, etc.), fences (length, type, and location), etc.
- Manage the asset inventory through the District's SAP System Database and develop a planning tool to track maintenance schedules, maintenance costs, and asset replacements/additions.

Cultural Resource Management

Goal 7: Protect existing cultural resources.

Objectives:

- Provide resource protection through partnerships with FWC and local law enforcement.
- Coordinate with the Florida Division of Historical Resources (FDHR) to determine the need for additional cultural resource surveys and ensure the findings are recorded in the FDHR Master Site file.
- Monitor, protect, and preserve all known/identified sites.
- Ensure at least 1 member of staff has attended the FDHR cultural resource training program.

4. AREA HISTORY

Since the late 1800s, the GHOTE area has consisted of agricultural, residential, industrial, and undeveloped natural land. Agriculture activities along the western banks of the Barron River included crops such as sugar cane, banana, avocado, date palms, cucumbers, eggplant, and tomatoes. Traces of the sugar cane and avocado farms are also noticeable on the southernmost end of the GHOTE.

In 1911, Barron Gift Collier, a wealthy streetcar advertising mogul and entrepreneur, visited Useppa Island in southwest Florida and purchased the property as a winter home. His interest in southwest Florida grew swiftly after his first acquisition. He began to acquire land in what was then southern Lee County, eventually acquiring about 1.3 million acres for his operations.

In 1921, Collier purchased the Deep Lake Grove and Railroad in Deep Lake, north of present-day Everglades City. He later purchased additional land south of Deep Lake and around Halfway Creek to expand his railroad for transporting agricultural freight. Collier acquired the Village of Everglade, including the GHOTE property, in 1922. At the time, the town consisted of a few houses on a narrow strip of land along the Allen River, currently the Barron River, the Rod and Gun Club on the original site of the Allen Home, a complex of warehouses, and a store. At that time, the surroundings comprised pine, cypress, marsh, and extensive swamp land. Towns such as Immokalee, Naples, Marco, Caxambas, Chokoloskee, Deep Lake, and Everglades were all small settlements separated by miles of inaccessible terrain. Collier successfully lobbied the 1923 Legislature to separate his inholdings from Lee County and establish a new county bearing his

name. In return, Collier promised to provide drainage, establish roads connecting the widely dispersed towns, and complete the final and most challenging stretch of the Tamiami Trail (a.k.a. U.S. 41) that would connect Tampa to Miami. Collier also planned to construct a road connecting Immokalee with the Village of Everglade and lobbied to get the Atlantic Coast Line to extend rail service from Immokalee south. Collier County was established in 1923. The Village of Everglade, later called the Town of Everglades, and presently known as Everglades City, became the county seat.

Collier assembled engineers and architects to begin planning the development of Everglades City. The development plan included the residential community and headquarters for the Collier companies within Everglades City and the industrial center north of the City within Port Dupont. Several houses, a school, and later the Bank of Everglades, Everglades Inn, and Juliet Carnes Collier Memorial Hospital were constructed in the residential center between 1922 and 1926. Collier also brought a trolley, electricity, a library, movie theatres, and a three-story department store to the City. The first sawmill facility was built in Port DuPont in 1922 before the designation of the town as the county seat. He later added a foundry and machine shops to support the industrial center.

During the construction of the Tamiami Trail, the industrial center was moved north from Port DuPont to Carnestown. The industrial site in Carnestown, which was located on GHOTE property, housed the largest warehouse on the southwest coast of Florida and served as the hub for ongoing construction activities. Collier dredged a canal and built a road from Port DuPont to Carnestown. He moved barges, machinery, and other equipment used in the construction of the Tamiami Trail from Port DuPont to Carnestown, where a new work camp with a warehouse, foundry, and machine shops was established. A series of canals along the north side of Tamiami Trail, visible in the 1940 aerial photograph, is thought to have been utilized for fill material to build roads. After the Tamiami Trail was completed in 1928, Carnestown was demolished, and associated machinery and housing were relocated to other areas of development.

Around the same time Tamiami Trail was completed, Collier pushed the construction of S.R. 29, connecting Everglades City to Immokalee. He also pushed for the extension of the Atlantic Coast Line Railroad. The dredge material from the Barron River Canal served as fill material for constructing the roadway and railway grade. In 1928, the Atlantic Coast Line Railroad began providing service to Everglades City, the southernmost point the Coast Line ever reached. The railroad was used to transport produce and lumber to Immokalee, and it ran through the GHOTE property. Railroad stations were located in Carnestown and Copeland, which is a town just north of Carnestown. The Atlantic Coast Line extended the railroad service from Immokalee to Deep Lake, where it connected to Collier's Deep Lake Railroad. During that time, an estimated 1,400 acres of the GHOTE were used for farming vegetable crops. The crops were then transported to packing houses in Copeland, where they were washed and shipped north on the Atlantic Coast Railway. The railroad was later removed in 1957. Agricultural production significantly decreased by the late 1960s, leading to the termination of farming operations on the GHOTE. Areas once cleared for cropland have since been overgrown with natural vegetation.

In 1953, the State legislature authorized a new town charter establishing the Town of Everglades as the City of Everglades. Afterward, the Collier companies began selling its properties

to the community. On May 19, 1959, Collier County held a referendum and voted to move the County seat to East Naples. In 1960, Hurricane Donna's strong winds and coastal flooding destroyed hundreds of homes in Collier County and hit Everglades City. In November of 1960, the Collier Corporation relocated its offices to Naples. Two years later, the Bank of Everglades moved to Immokalee. While the population of the City of Everglades declined, the community held on. In 1965, the area was renamed Everglades City, and fishing and tourism became the City's major economic factors.

Commercial fishing, independent of the Collier operations, had been ongoing throughout the area's history. Fisherman would sell their catch to local packing houses, which shipped to northern markets. In the 1950s, fishermen from North Carolina arrived in the area to work in the shrimping industry and later expanded into stone crabbing. As the fishing industry grew, the condition of the Everglades ecosystem and its adjoining bays were declining. The continued degradation of the Everglades ecosystem led to the eventual closure of the Everglades National Park to commercial fishermen. Although fishing remains a popular activity for tourists in Everglades City, the ban on commercial fishing, along with other influences, largely shifted the local economy to ecotourism. The locals began to run airboat tours, and air boating began developing into the popular Tamiami Trail tourist attraction that it is today. Several businesses along the Tamiami Trail now profit from taking tourists into the Everglades on airboats. Presently, several independently operated commercial airboat businesses utilize areas within the GHOTE.

A more in-depth discussion regarding historical land uses in the region before and during the 20th century is in **Appendix A**.

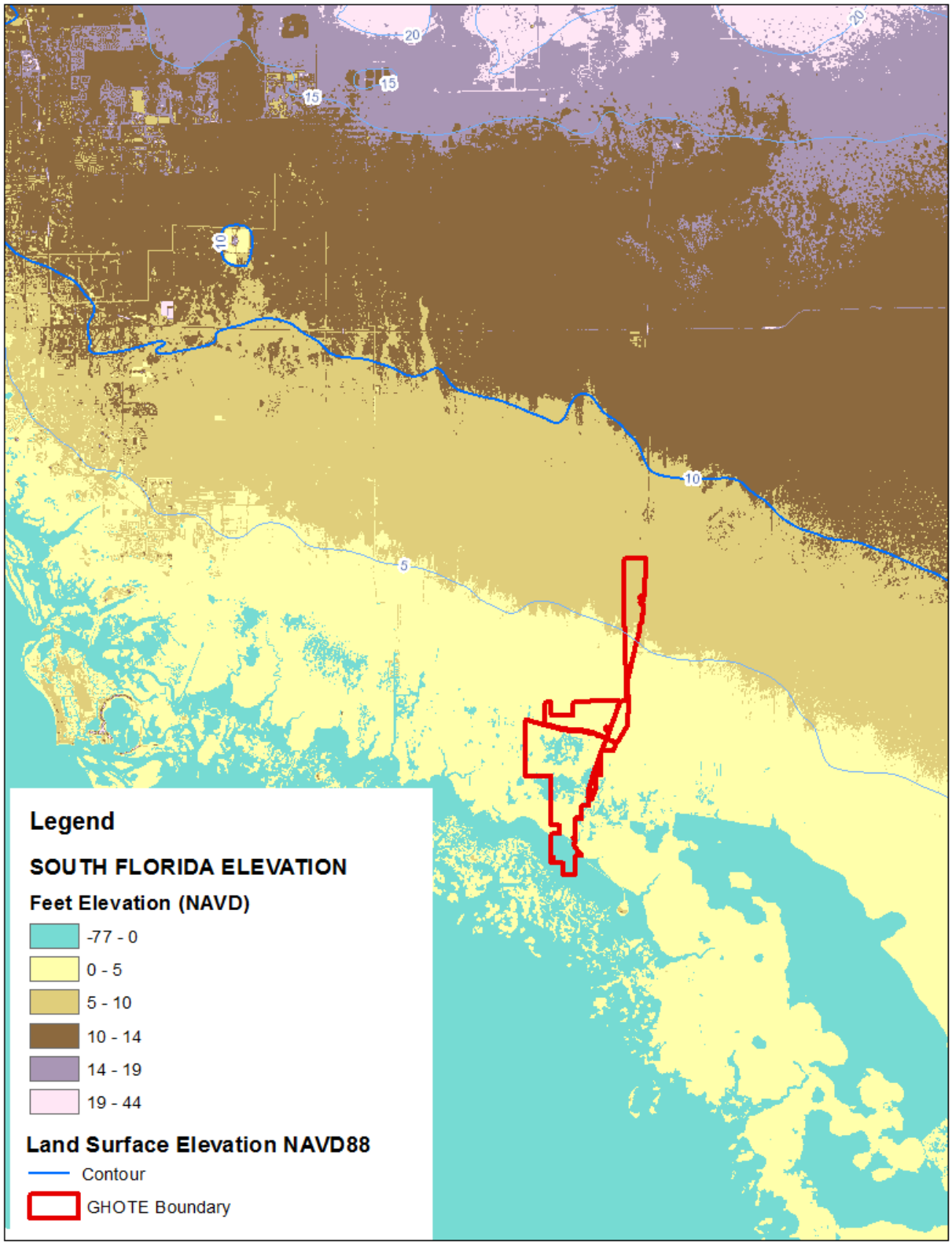
5. RESOURCE DESCRIPTION AND ASSESSMENT

Inventories of natural and historic resources are conducted to provide information for effective land management planning, natural community maintenance, and ecological restoration. Floral and faunal species are inventoried by Land Stewardship personnel, volunteers, or private contractors. The data helps District land managers with resource management planning.

5.1 Physiograph

Topography

Collier County's topography is very flat, with an average slope of one foot per mile. Collier County ranges from 3.3 feet relative to sea level in Everglades City to about 45 feet near Immokalee's high point. Tide levels in Collier County vary only 2-3 feet but can significantly influence the surface water flow by causing the freshwater/saltwater interface to extend miles inland.



Map 3. Regional topography.

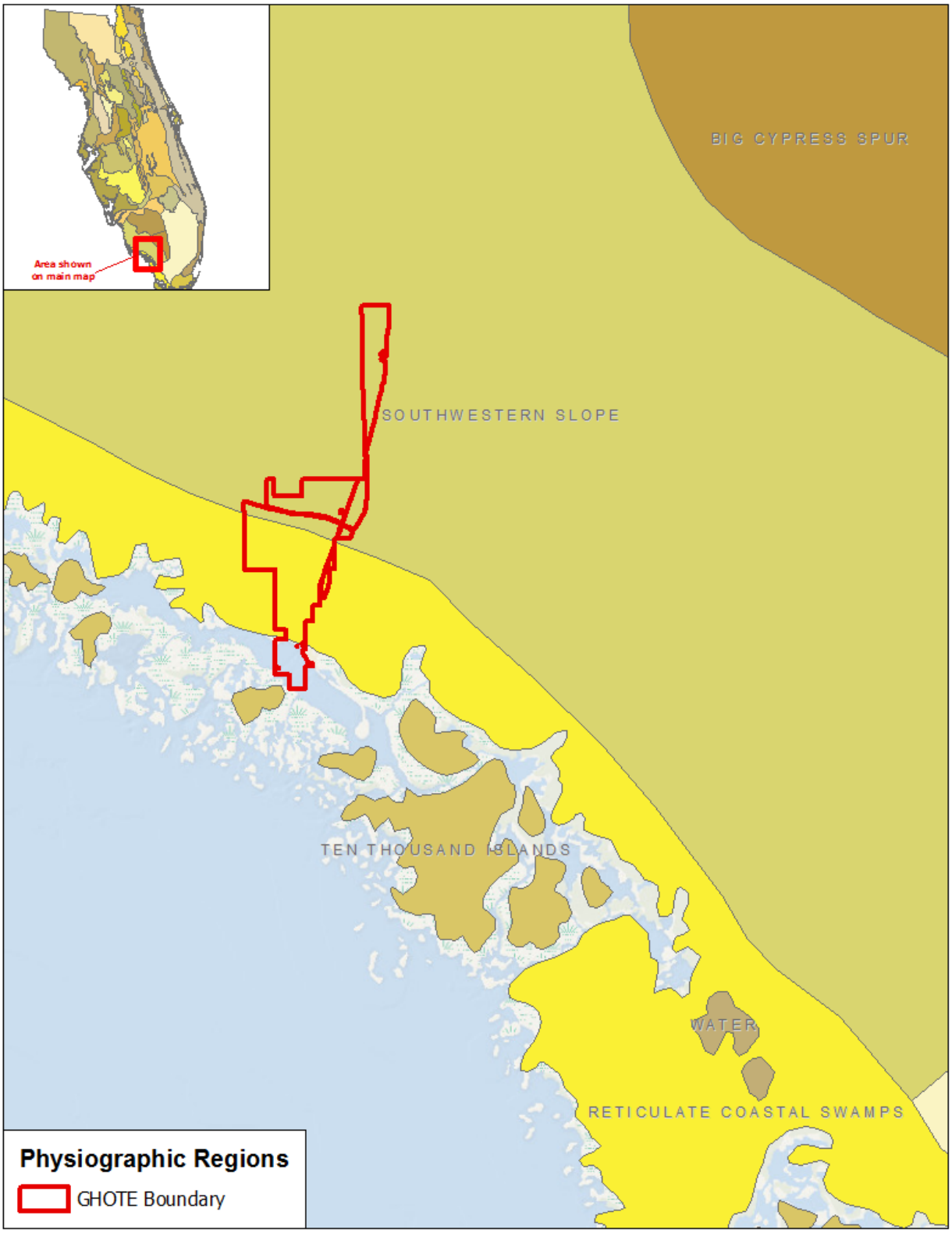
Geology

The GHOTE is located within the Coastal Lowlands of the Coastal Plain physiographic province of the eastern United States. This physiography includes several geomorphic features including the Atlantic Coastal Ridge, Big Cypress Spur, Big Cypress Swamp, Cape Sabal, Caloosahatchee Valley, De Soto Plain, Eastern Valley, Everglades, Gulf Coastal Lowlands, Immokalee Rise, Mangrove and Coastal Glades, Osceola Plain, Sandy Flatlands, Southern Slope Southwestern Slope, and the Reticulate Coastal Swamps. The GHOTE lies with the geomorphic features of the Southwestern Slope and Reticulate Coast Swamp (**Map 4**).

The Southwestern Slope is bordered on the east by the Big Cypress Spur, on the northeast by the Immokalee Rise, and on the west and southwest by the Reticulate Coastal Swamps. Elevations in this area range from two feet above mean sea level (MSL) at the southern boundary, with the coastal swamps up to 25 feet above MSL where the Slope joins the Immokalee Rise. The Reticulate Coastal Swamps are intricately channeled coastal marshes and mangrove swamps that form the southwest coastline of Collier County. These lowlands are less than five feet above mean sea level and subject to tidal action. Most of the Southwestern Slope geomorphic feature is a thinly coated sand overlying an eroded Tamiami Formation limestone surface. The Reticulate Coastal Swamps consist of thin organic and mar1y soils overlying the Tamiami limestone.

Mineral soils covering the rock and marl formations primarily comprise marine sands deposited during the Pleistocene period. During this period, the sand on the Talbot and Pamlico terraces was deposited by high sea levels of the Sangamon and Peorian interglacial ages. Other sand, marl, and peat were deposited on top of some of the Pamlico sand at the end of the Wisconsin glacial stage of the Pleistocene series.

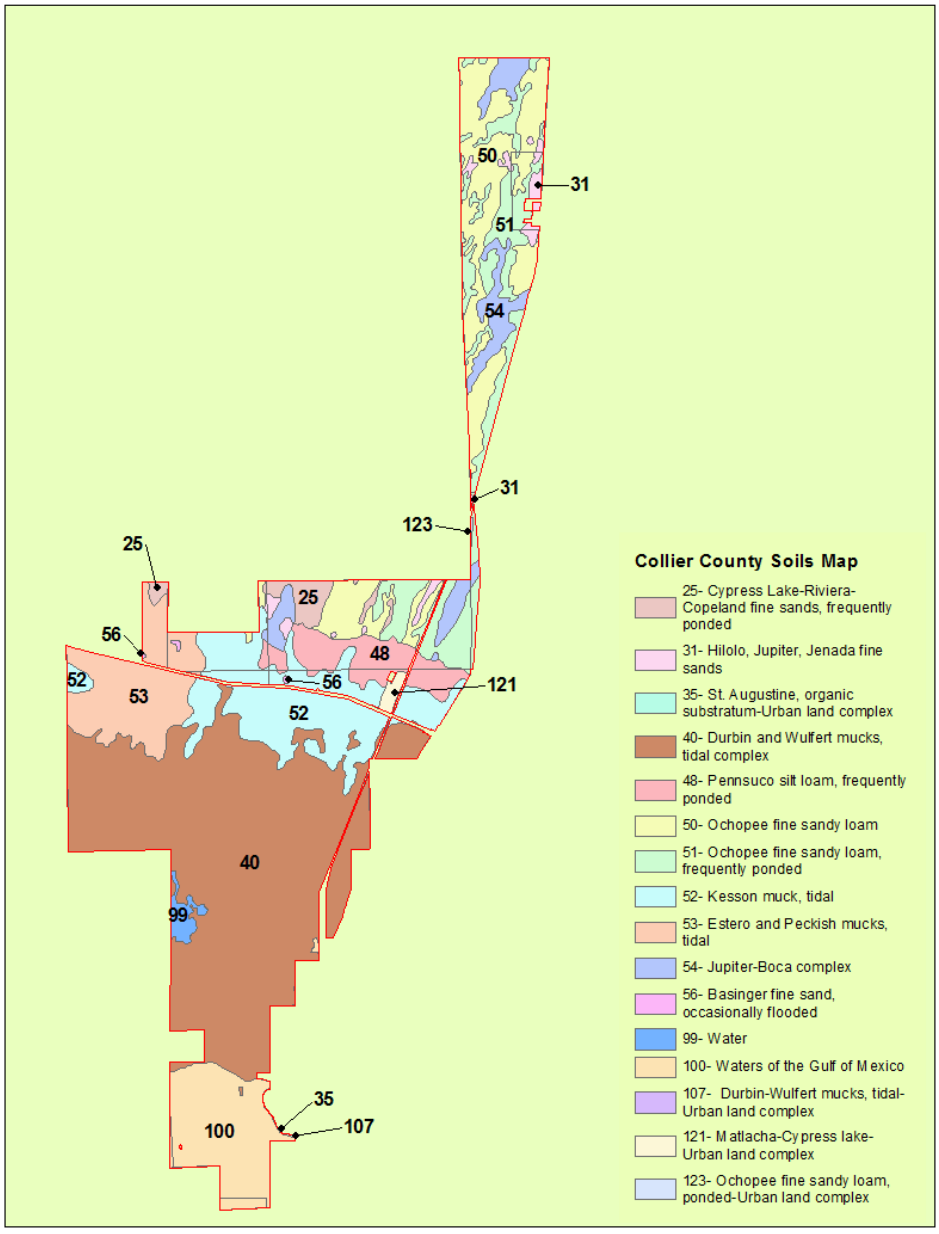
An extensive shallow aquifer underlies the Big Cypress Swamp and adjacent areas of southwest Florida. This aquifer is replenished primarily by infiltration from local rainfall and seepage from weir-operated drainage canals. The thickness of the aquifer is about 130 feet in western Collier County, where it consists of the Pamlico Sand and the Anastasia Formation of Pleistocene age and limestone of the Tamiami Formation of Miocene age. These formations are highly permeable in certain areas. Underlying the GHOTE is about 50 feet of the permeable shelly limestone of the unconfined aquifer. The shallow aquifer is a prime source of freshwater supplies in Collier County and adjoining parts of Lee and Hendry counties. However, it is not the direct source of municipal water supply due to its water quality and inadequate flows during the dry season. The shallow aquifer thins eastward and wedges near the Dade and Broward county boundary.



Map 4. GHOTE major geomorphic features.

Soils

A soil map encompassing the GHOTE **(Map 5**) was compiled using Collier County soil survey data from the U.S. Department of Agriculture and Natural Resources Conservation Service (NRCS). The upland soils comprised of St. Augustine organic substratum-urban land complex and Matlacha-Cypress lake-urban land complex, make up less than 1% of the underlying soils. The wetland soils, which encompass most of the soil profile, are dominated by Basinger fine sand, Cypress Lake-Riviera-Copeland fine sands, Durbin and Wulfert mucks tidal and urban complex, Estero and Peckish muck tidal, Jupiter-Boca complex, Hilolo Jupiter Jenada fine sands, Kesson muck, Ochopee fine sandy loam, and Pennsuco silt loam. NRCS updates its soil information periodically and is available through the NRCS Web Soil Survey.



Map 5. GHOTE NRCS soil classifications.

Hydrology

The GHOTE is in the West Collier Drainage Area within the Big Cypress Basin watershed. The property boundaries fall within three interconnected sub-basins (**Map 6**): Fakahatchee, Barron River, and the Coastal Basins sub-basins. The Fakahatchee and Barron River sub-basins are generally unaffected by tidal fluctuations except during extreme storm tides such as those associated with hurricanes. The Coastal Basins sub-basin is tidally influenced.

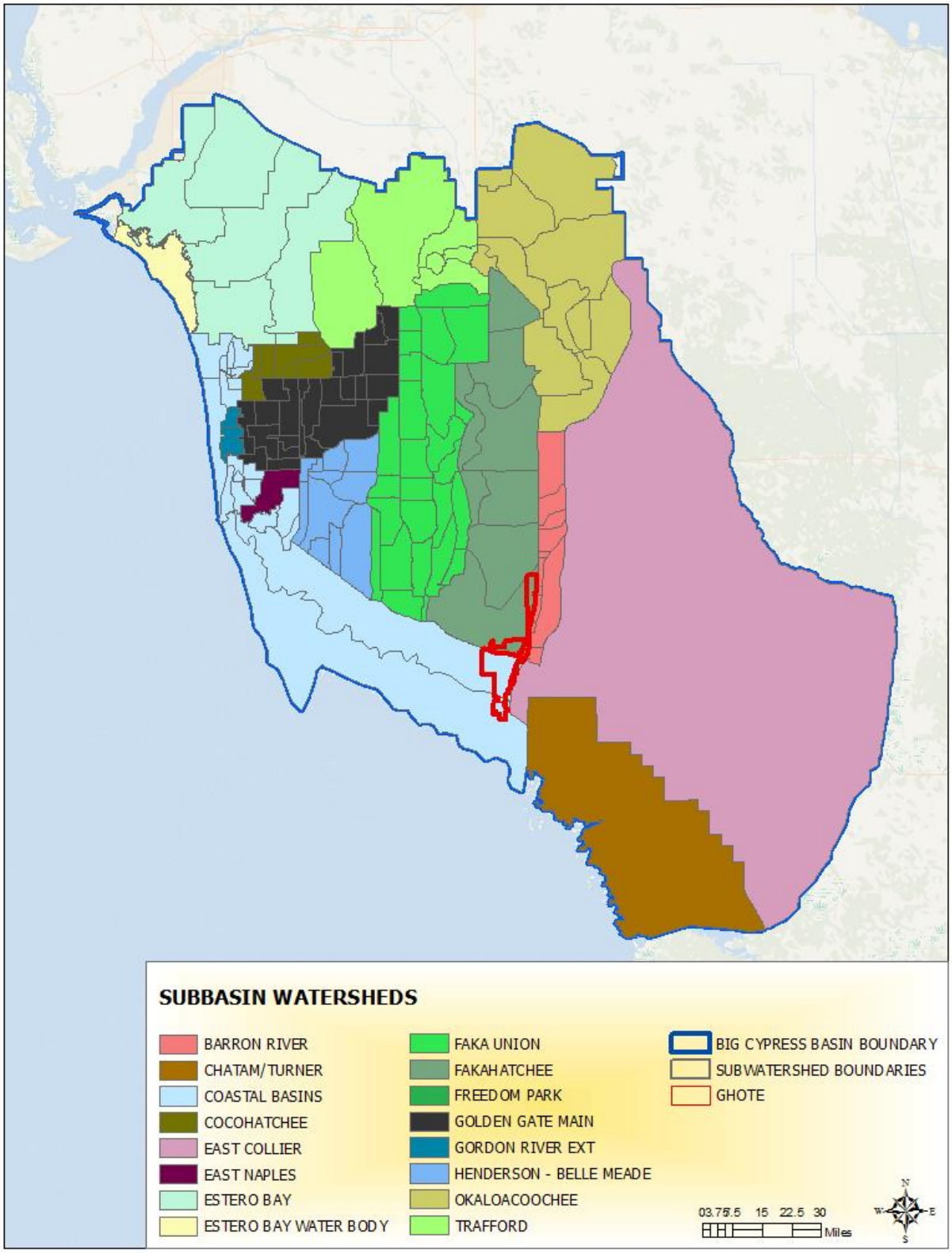
Drainage in Collier County is determined by topographic configuration and canals. The general pattern is south and southwesterly toward the coast. Historically, freshwater meandered south as sheetflow through natural sloughs, wetlands, and rivers, ultimately reaching the Ten Thousand Islands estuary. The completion of the Tamiami Trail created a block to the historical drainage. The Tamiami Canal intercepted the flow, and the intermittent bridges and culverts conveying sheetflow under the road were not all placed consistently to mimic historic flow patterns. As a result, the hydrology of the downstream wetlands and estuaries became affected by the uneven water distribution and changes to the natural flow pattern. The construction of the Barron River Canal along S.R. 29 also plays a significant role in reducing historic sheetflow across the landscape. The Barron River Canal artificially increased the amount of water discharging to the Barron River, resulting in a sizeable single-point discharge of freshwater to Ten Thousand Islands' Chokoloskee Bay.

The Tamiami Trail Culverts Project, completed in 2006, was one of the critical projects authorized by Congress in 1996 under the Water Resources Development Acts (WRDA). The project envisioned constructing 77 culverts in 30 locations along the western portion of Tamiami Trail. The initial culvert installation occurred between County Road 92 and S.R. 29 to restore sheetflow to the Picayune Strand. The U.S. Geological Survey (USGS) conducted a 4-year study (March 2006 through September 2010) to quantify the volume of freshwater flowing under the road in this area. The study area was divided into seven segments (sub-basins) demarcated by existing plugs in the Tamiami Canal on the north side of the road. The GHOTE boundaries extend within the easternmost two sub-basins of this study area. The study found that the Barron River Canal (Bridge 75), where flows bypass the GHOTE, accounted for 77–82% of the annual flow exiting via Barron River into the Ten Thousand Islands' Chokoloskee Bay during the study period. The remaining bridges and culverts with the potential for reaching the GHOTE in the Barron River section accounted only for 9–13% and 8–11% of the flow, respectively (Booth et al., 2014). One bridge (Bridge 73) contributed about 20% of the flow in the adjacent segment. In contrast, the remaining bridges and culverts contributed 3–8% and 1–3% of the total flow from the sub-basin, respectively (Booth et al., 2014).

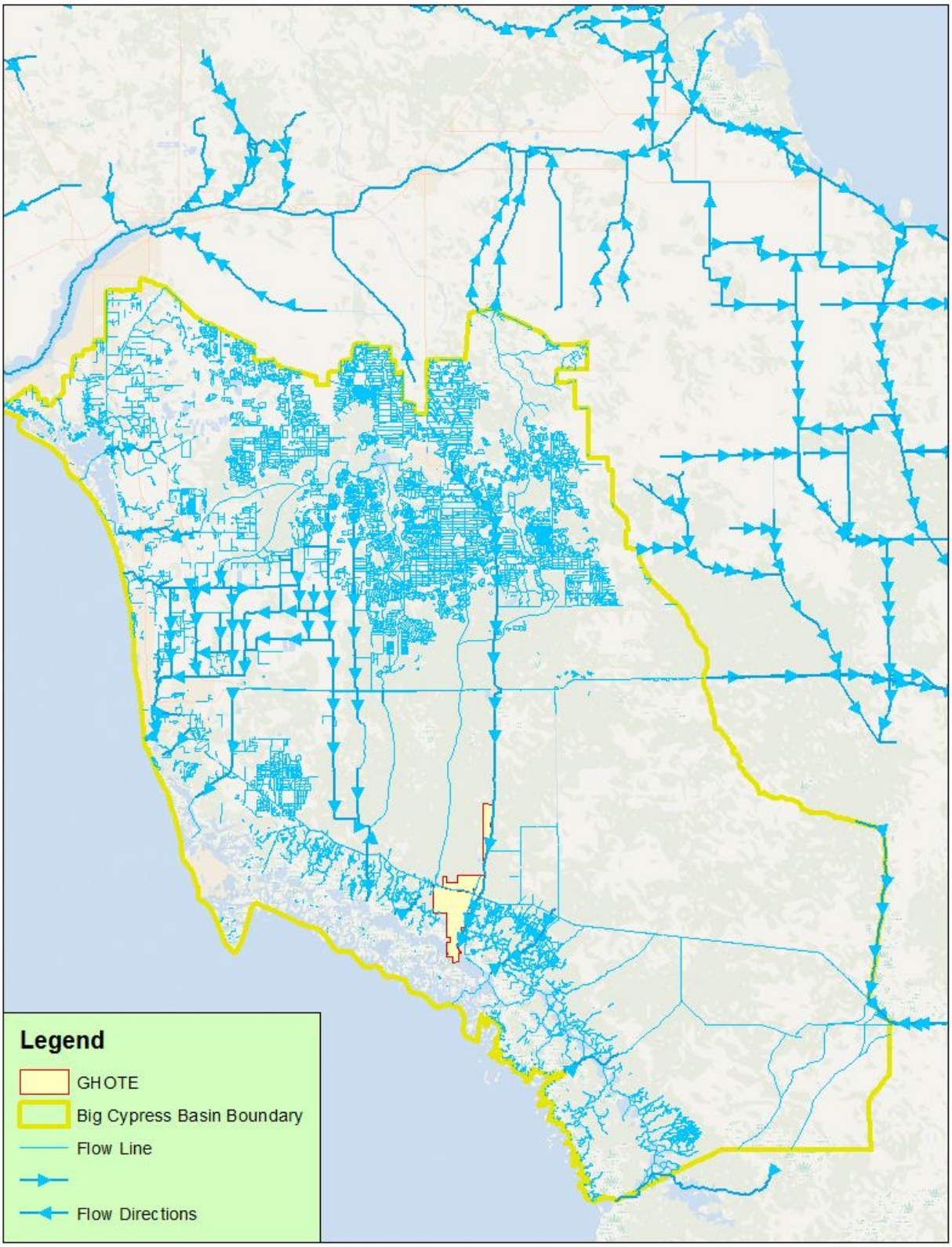
Although the volume of freshwater entering the GHOTE has not been directly quantified, water quality deterioration due to salinity changes in the GHOTE is evident in the notable shifts in the vegetative communities from salt marsh to mangroves. Saltwater intrusion is a long-term threat to coastal wetland vegetation and coastal morphology worldwide. In 2006, USGS initiated an ongoing study to assess salinity patterns in the Ten Thousand Islands estuary. A report published in 2010 characterized the seasonal and spatial distribution of freshwater flow and salinity in the Ten Thousand Islands area during 2007–2009. The study identified the entrapment of high-salinity water within the shallow inner bays and noted hypersaline conditions throughout the study area. Monitoring data collected during the peak of the 2007 and 2008 dry seasons suggested that the

lack of rainfall and high evaporation rates within the shallow estuaries prompted hypersaline conditions in the bays and canals. For example, salinity maps produced during the peak of the dry season for each year (2007-2009) indicated that hypersaline conditions were occurring throughout the entire estuary, including Faka Union Bay and Barron River (Booth et al., 2014). The monitoring data suggested that except during the peak of the dry season, freshwater discharge from the Barron River Canal reduced salinities in Barron River and Chokoloskee Bay, showing a correlation between freshwater input and salinity gradient. A more recent report focused on a study area extending from Blackwater River to East Rivers analyzed monitoring data collected up to 2019 (Booth et al., 2021). The data from the Barron River station was not analyzed in the report; however, a similar condition is expected based on the persisting salinity trend noted in the report. This report inferred that the negative trend in salinity in the Faka Union and East Rivers stations likely correlated with the increasing trends in freshwater observed from Faka Union and East Rivers. This overall trend in salinity patterns supports the need to restore historic hydroperiods and sheetflow patterns to distribute freshwater discharge more evenly and prolong it in the inner bays of the Ten Thousand Islands estuary.

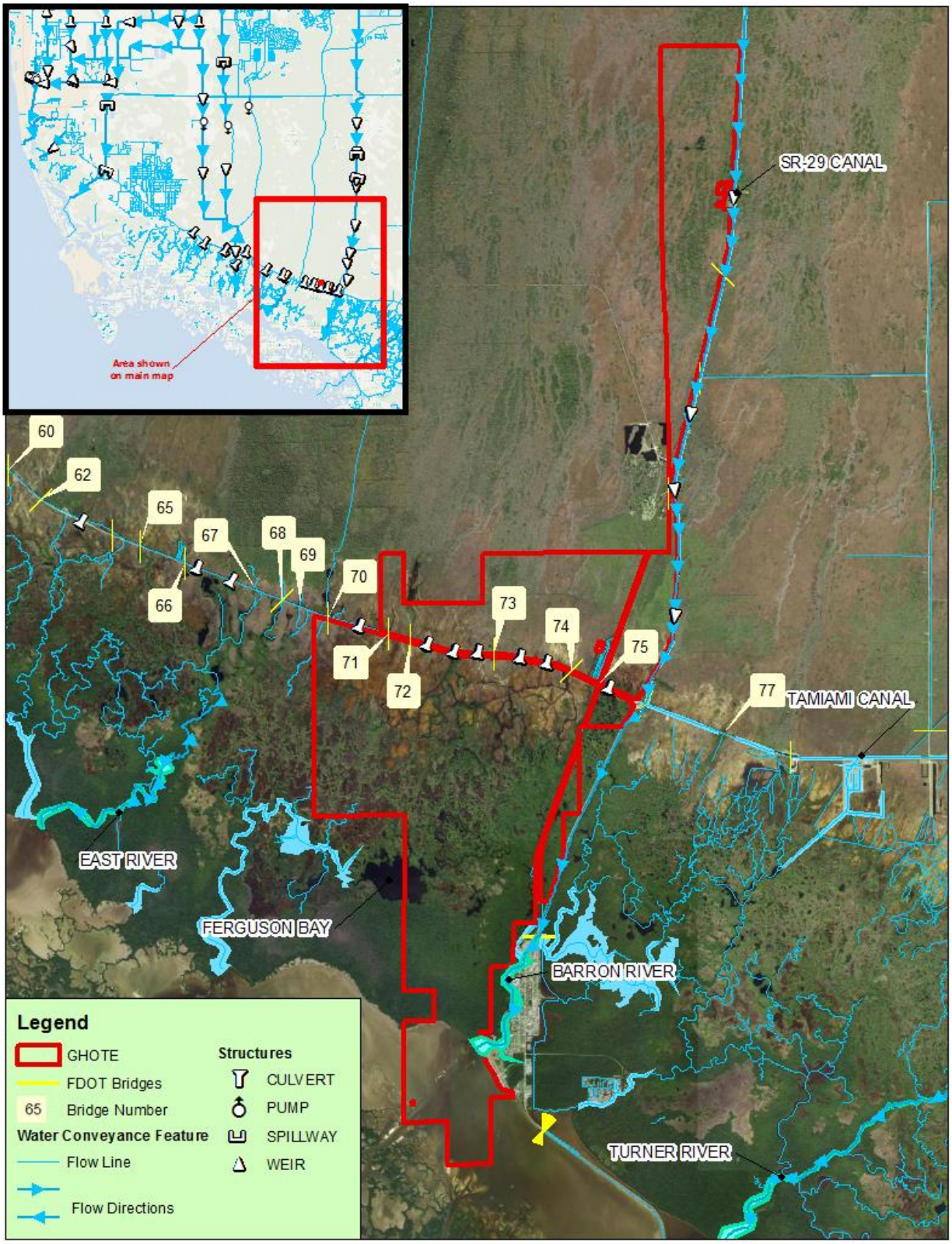
Tidal fluctuations influence the salt marsh system in the GHOTE MA, thus having higher soil salinity than the freshwater marsh community on the property. Alterations to the freshwater influx into the system are increasingly promoting the encroachment of more salt-tolerant species. As a result, mangroves are steadfastly migrating upstream into the traditional salt marsh system, particularly the northern portion of the GHOTE MA. Similar conditions reported in the Big Cypress National Preserve Hydrologic Restoration Management Plan Environmental Assessment (NPS, 2021) suggest a systematic problem within the Coastal Sub-Basin. Although sea level rise and high tide events associated with hurricanes play a role in the changes in mangrove coverage, the diversion of runoff into adjacent canals has exacerbated the encroachment problem, leaving the system unable to sustain its gradient of fresh, brackish, and salt-tolerant species assemblages. As mangroves continue to move upstream, they will displace the salt marsh communities. Without intervention, the mangrove system will eventually replace the remaining salt marsh community in the GHOTE. Although mangroves support a variety of wildlife, many species of waterbirds rely specifically on marshes as foraging habitat. Additional studies would be necessary to investigate further the spatial distribution of freshwater flow in this segment of the Tamiami Trail and identify available pathways for sheetflow restoration to restore the historic hydroperiods and sheetflow patterns in the GHOTE MA to the extent possible.



Map 6. Regional basin watersheds and subbasins.



Map 7. Regional hydrography.



Map 8. Location of water inflows to the GHOTE

5.2 Vegetation

Nine distinct natural community types exist within the GHOTE. The District groups natural community types based on the descriptions contained in the Florida Natural Areas Inventory Classification System (FNAI 2010) and the Florida Land Cover Classification System (Kawula & Redner 2018). The GHOTE is dominated by a mixture of salt and freshwater wetlands. Salt-tolerant communities are predominantly found on the south side of GHOTE due to the U.S. 41 bisection. A detailed description of the natural communities is provided in Appendix B.

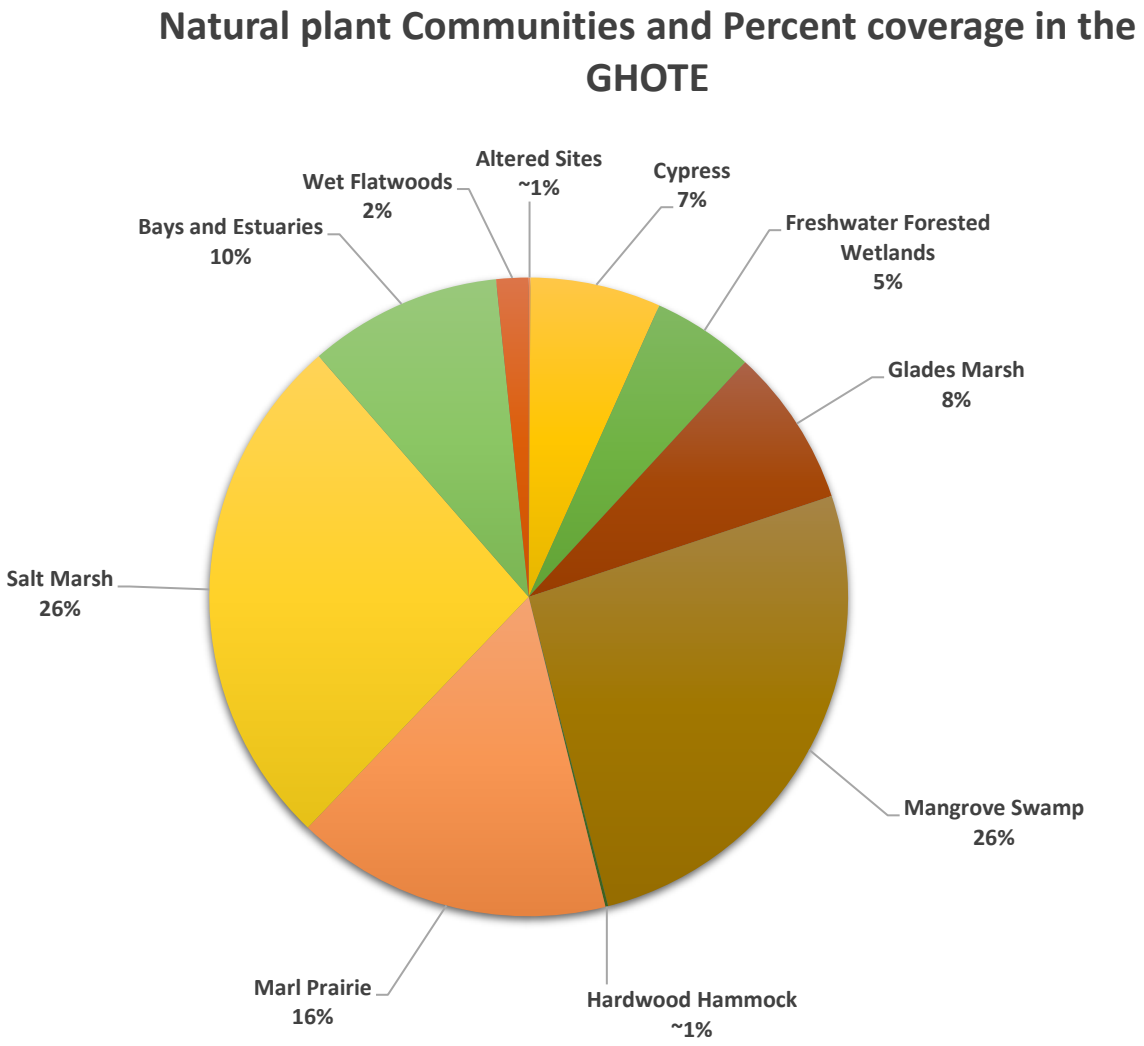
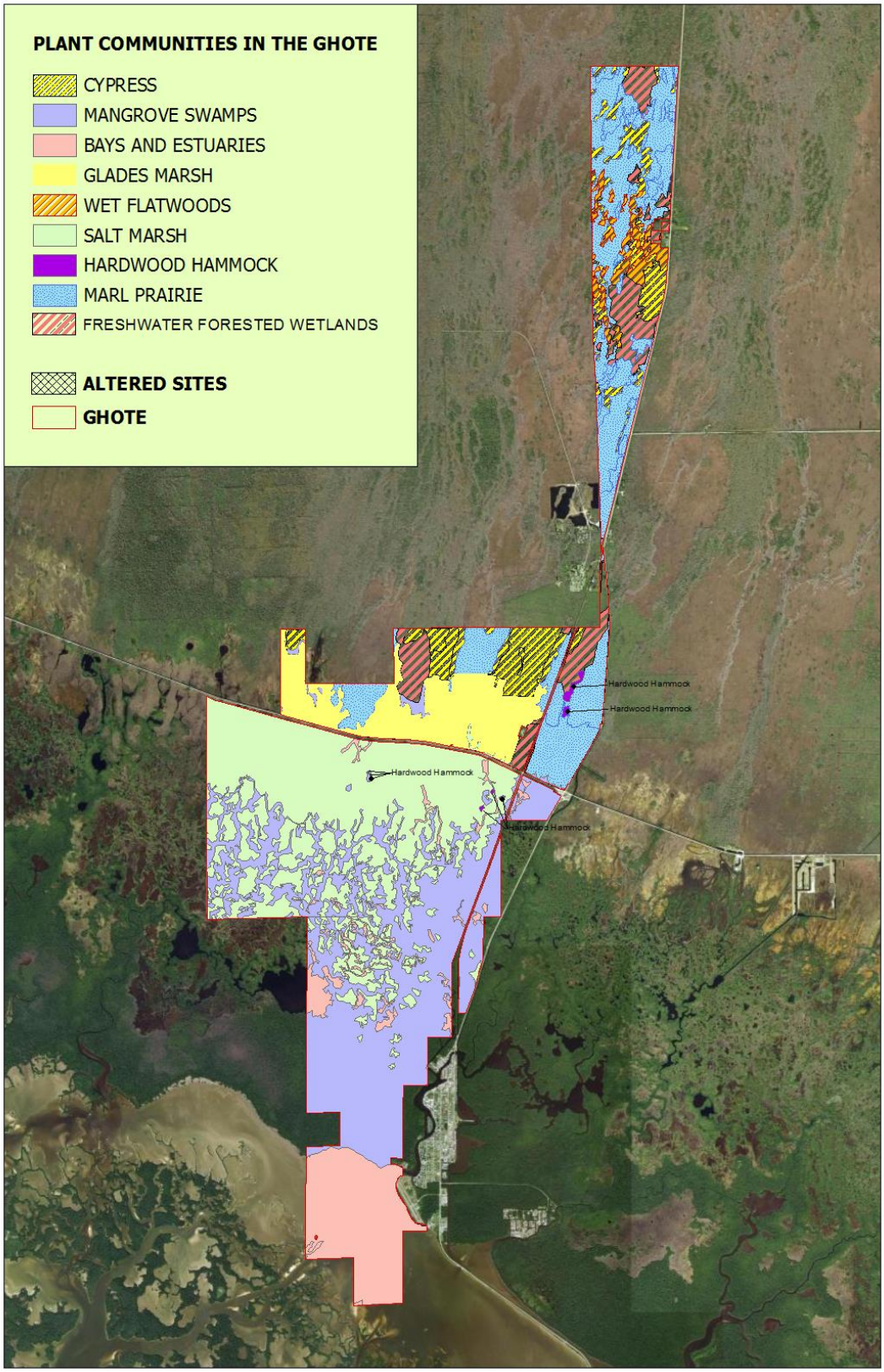


Figure 1. Natural plant community types and percent coverage in the GHOTE.



Map 9. Plant communities in the GHOTE.

Listed Species

Listed species include those plants and animals identified as rare, threatened, or endangered by the U.S. Fish and Wildlife Service (FWS), FWC, and the Florida Department of Agriculture and Consumer Services. Over 115 listed plant and animal species are recorded in the surroundings of the GHOTE. **Table 1** identifies those listed plant species known to occur within the GHOTE.

Table 1. Listed plant species on the GHOTE and status. [a,*]

Common Name	Scientific Name	Status
Balbis' Airplant	*Tillandsia balbisiana*	ST
Big-Mouth Star Orchid	*Epidendrum amphistomum*	SE
Cardinal Airplant	*Tillandsia fasciculata*	SE
Cypress peperomia	*Peperomia glabella**	SE
Florida clamshell orchid	*Prosthechea cochleate**	SE
Ghost Orchid	*Dendrophylax lindenii**	SE
Giant Airplant	*Tillandsia utriculata*	SE
Leatherleaf Airplant	*Tillandsia variabilis*	ST
Mullein Nightshade	*Solanum donianum*	ST
Paurotis Palm	*Acoelorraphe wrightii*	ST
Royal Palm	*Roystonea regia*	SE
Simpson's Stopper	*Myrcianthes fragrans*	ST
Small's flax	*Linum carteri var. smallii**	SE
Stiff Flower Star Orchid	*Epidendrum rigidum*	SE
Leafy vanilla	*Vanilla phaentha**	SE
Yellow Helmet Orchid	*Polystachya concreta*	SE

a. Key to abbreviations: Species listed by the State of Florida as State-designated Threatened (ST), State-designated Endangered (SE).
*Species likely to be present on or near the property based on habitat and species range models, but not observed.

Nuisance and Invasive Plant Species

The subtropical climate of South Florida offers an ideal environment for nuisance and invasive plants to spread rapidly and alter natural ecosystems. Among all the states, Florida is second only to Hawaii in the severity of threats posed by nuisance and invasive species to native habitats and species. The South Florida Water Management District is committed to reducing the proliferation of nuisance and invasive species to protect the ecological values of its management areas (SFWMD, 2020). However, changes in the surrounding environment and past land use have disrupted the balance of the natural ecosystem within the GHOTE, which has led to the colonization of invasive plants. If proper land management is not implemented, the expansion of nuisance and invasive plant species will continue to displace native plants and reduce wildlife utilization.

5.3 Wildlife

The natural communities within GHOTE provide habitat for numerous birds, reptiles, and mammal species. These diverse species are supported by the large interconnecting natural

communities within the region. **Appendix C** includes a detailed list of reptiles, amphibians, mammals, birds, fish, and invertebrates documented in the region that utilize the GHOTE communities and adjoining communities.

Game species

Some District lands provide quality habitat for game species. The District allows the public to use District lands for game, small game, and spring turkey season hunts as appropriate. The GHOTE area contains abundant wild turkey, waterfowl, and small game populations. The District will authorize FWC to begin the rulemaking process to establish the Management Area as a PSGHA and oversee the game management, and hunting and recreation activities on the GHOTE MA in accordance with State and Federal regulations.

Rare, Threatened and Endangered Listed Species

Several federally or state-listed species that have been documented in the vicinity utilize the GHOTE, including the Big Cypress Fox squirrel and Florida panther. Table 2 provides a list of these protected species that may be found on the GHOTE property.

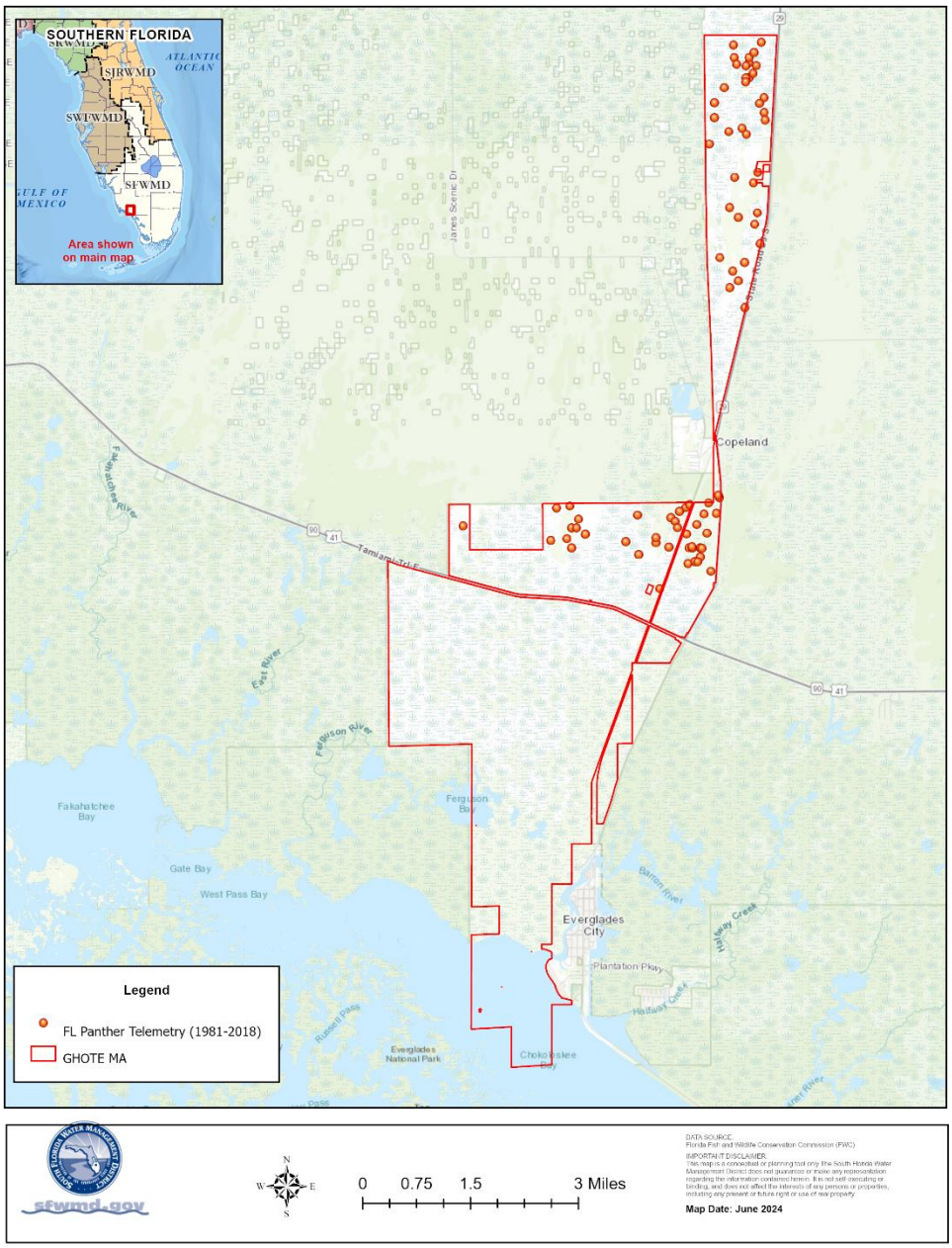
Table 2. Listed wildlife species utilizing the GHOTE area and status. [a,**]

Common Name	Scientific Name	Status
Herps		
American Alligator	*Alligator mississippiensis*	FT Due to Similar Appearance to A. Crocodiles
American Crocodile	*Crocodylus acutus**	FT
Eastern Indigo Snake	*Drymarchon couperi***	FT
Hawksbill Sea Turtle	*Eretmochelys imbricata***	FE
Smalltooth Sawfish	*Pristis pectinata*	FE
Mammals		
Big Cypress Fox Squirrel	*Sciurus niger avicennia*	ST
Everglades Mink	*Neovison vison evergladensis*	ST
Florida Bonneted Bat	*Eumops floridanus**	FE
Florida Panther	*Puma concolor*	FE
Sherman's Short-Tailed Shrew	*Blarina shermani*	ST
West Indian Manatee	*Trichechus manatus*	FT
Birds		
American Oystercatcher	*Haematopus palliatus*	ST
Black Rail	*Laterallus jamaicensis*	FT
Black Skimmer	*Rynchops niger*	ST
Crested Caracara	*Caracara cheriway*	FT
Florida Sandhill Crane	*Grus canadensis pratensis*	ST
Least Tern	*Sternula antillarum*	ST
Little Blue Heron	*Egretta caerulea*	ST
Red-Cockaded Woodpecker	*Picoides borealis***	FE
Reddish Egret	*Egretta rufescens*	ST

Table 2 (Continued). Listed wildlife species utilizing the GHOTE area. a,**

Common Name	Scientific Name	Status
Roseate Spoonbill	*Platalea ajaja*	ST
Snail Kite	*Rostrhamus sociabilis plumbeus*	FE
Tricolored Heron	*Egretta tricolor*	ST
White-Crowned Pigeon	*Columba leucocephala**	ST
Wood Stork	*Mycteria americana*	FT

a. Key to abbreviations: Species listed by the State of Florida as Federally-designated Endangered (FE), Federally-designated Threatened (FT).
**Species potentially present based on their known or predicted range, but not observed.



Map 10. Florida Panther radiotelemetry collected within the GHOTE from 1981-2018.

5.4 Cultural Resources

Archaeological and historic resources are protected by site identification and inter-agency coordination with the Florida Division of Historical Resources (FDHR). The Florida Master Site File, maintained by the FDHR, was searched for archaeological and historical sites known to exist on the property. Three prehistoric sites found on the property have been recorded in the FDHR Master Site File. The potential for additional cultural sites and other archeological targets to be located within or in the vicinity of the property is likely but has not been thoroughly investigated. The District will coordinate with FDHR to determine the need for additional cultural resources assessment surveys and discuss additional findings in the General Management Plan.

The District is committed to protecting the integrity of the cultural resource sites within the GHOTE MA. The management goal for cultural resources within the GHOTE MA is to preserve sites and objects representing Florida's cultural periods. Land managers focus primarily on prohibiting ground-disturbing activities in and around these archaeological sites. Vegetation management and prescribed burning activities are carefully conducted to reduce impacts on these resources.

6. PUBLIC USE

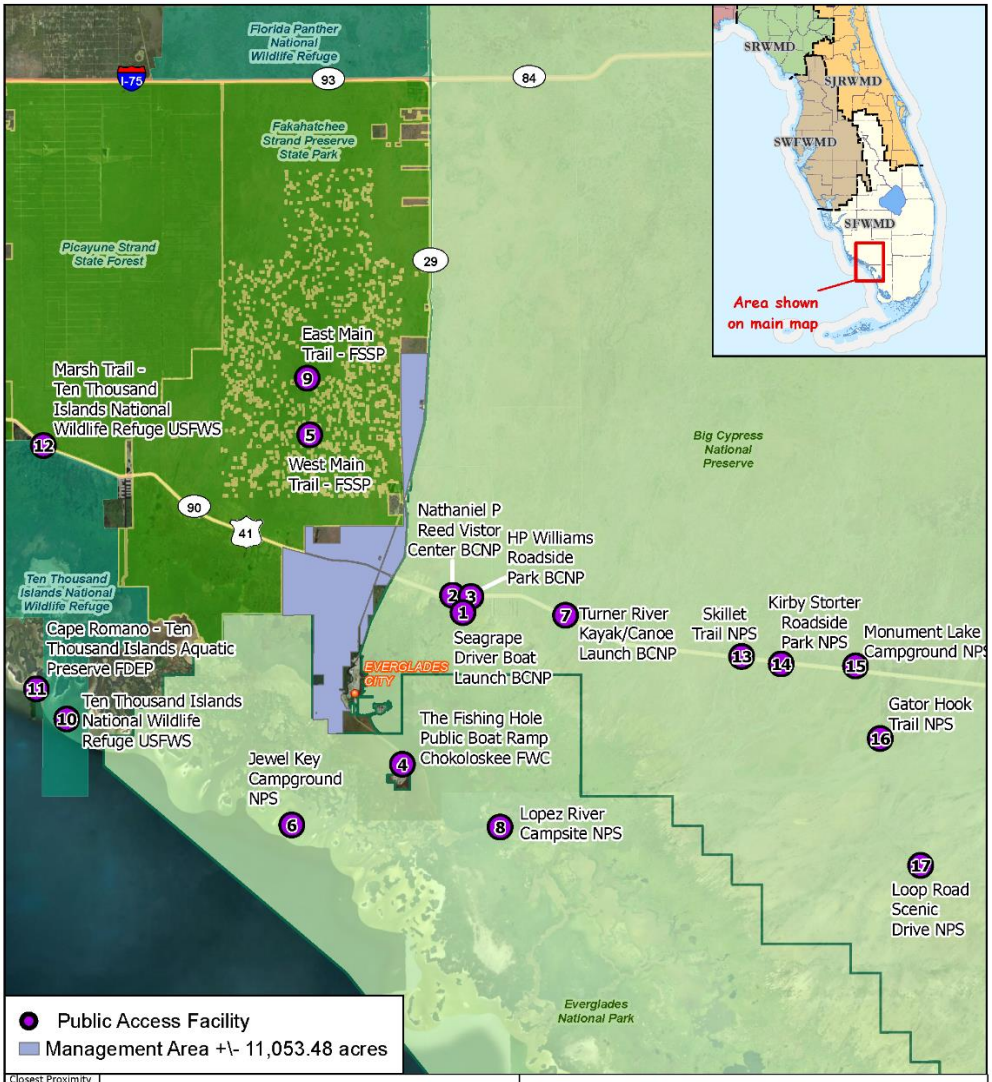
Section 373.1391(1)(a), Florida Statutes, states that the District shall manage and maintain, to the extent practicable, lands acquired to ensure a balance between public access, general public recreation, and restoration and protection. The District encourages public use of management areas for appropriate natural resource-based activities. District lands are generally available for public use, except in instances where the public use would be incompatible with the purposes for which these lands were acquired, there is no legal public access, or where construction activities prohibit public entry. Public input into the management of the area is solicited at the District's quarterly Recreational Forum Meetings. In coordination with partnering agencies, adjustments to public use opportunities are made on an ongoing basis through the Recreational Forum Meetings and rulemaking, if necessary. This plan describes the scope of public use opportunities available or planned as of the date of the interim plan. This interim plan is not intended to set public use policies through the plan period. Compatible recreation on District lands typically includes hiking, biking, hunting, fishing, frogging, horseback riding, canoeing, geocaching, boating, primitive camping, environmental education, wildlife viewing, nature photography, natural history study, and flora and fauna identification.

The District identified existing recreational opportunities available in the surrounding area (**Map 11**) from other agencies and recreation providers to determine the resources that can be best provided on the GHOTE MA. Community participation has been integral to recreational use planning for the GHOTE MA. To address public issues and concerns, the District solicited public input from stakeholders through public notices/news releases, established a dedicated email address to receive comments specifically for this project, conducted a public scoping meeting, and presented updates at the District's public Recreational Forum meetings. To date, public input mainly focused on the availability of recreational opportunities within GHOTE, including commercial and public airboat use, access to canoes, kayaks, and other vessels, and PSGHA for

waterfowl, frogging, and fishing. The District also received additional comments regarding protecting natural resources, noise reduction, and tribal rights.

The District finds hunting, frogging, crabbing, fishing, wildlife viewing, environmental education, and non-motorized and motorized watercraft use, including airboating, compatible with the GHOTE MA. However, since the necessary funding, infrastructure, staff, and resources to manage public use facilities on this property are not currently available, new facilities will not be constructed until these resources become available.

The GHOTE MA will be designated as a PSGHA in partnership with FWC and made available for recreational hunting when funding, staff, resources, or other opportunities become available to support public access. Although the GHOTE MA can support small game hunting, waterfowl hunting, frogging, crabbing, fishing, wildlife viewing, environmental education, and motorized and non-motorized watercraft use, public use is limited due to inadequate facilities and limited public access points needed to fully support public use. Existing navigable waters within the GHOTE MA will remain accessible to public use in accordance with state and federal law.



Closest Proximity to Green Heart	Name	Website
1	Big Cypress National Preserve - Seagrape Drive Picnic areas and Boat Launch	https://www.nps.gov/bicy/planyourvisit/canoetrails.htm
2	Big Cypress National Preserve - Nathaniel P. Reed Visitor Center	https://www.nps.gov/bicy/planyourvisit/npr-vc.htm
3	Big Cypress National Preserve - HP Williams Roadside Park	https://www.nps.gov/bicy/planyourvisit/hp-williams-roadside-park.htm
4	Florida Fish and Wildlife Conservation Commission - Fishing Hole Public Boat Ramp	https://myfwc.com/boating/boat-ramps-access/
5	Fakahatchee Strand Preserve State Park - West Main Trail	https://www.floridastateparks.org/parks-and-trails/fakahatchee-strand-preserve-state-park
6	Everglades National Park - Jewel Key Campground	https://www.nps.gov/places/jewell-key-campsite.htm
7	Big Cypress National Preserve - Turner River Kayak/Canoe Launch and Trail	https://www.nps.gov/places/turner-river-paddling-trail.htm
8	Everglades National Park - Lopez River Campsite	https://www.nps.gov/places/lopez-river-campsite.htm
9	Fakahatchee Strand Preserve State Park - East Main Tram Trail	https://www.floridastateparks.org/parks-and-trails/fakahatchee-strand-preserve-state-park
10	Ten Thousand Islands - National Wildlife Refuge	https://www.fws.gov/refuge/ten-thousand-islands
11	Ten Thousand Islands - Cape Romano Aquatic Preserve	https://floridadep.gov/rcp/aquatic-preserve
12	Ten Thousand Islands - National Wildlife Refuge - Marsh Trail	https://floridahikes.com/tenthousandislandsmarsh
13	Big Cypress National Preserve - Skillet Trail	https://www.nps.gov/bicy/index.htm
14	Big Cypress National Preserve - Kirby Storter Roadside Park	https://www.nps.gov/bicy/planyourvisit/kirby-storter-roadside-park.htm
15	Big Cypress National Preserve - Monument Lake Campground	https://www.nps.gov/bicy/planyourvisit/monument-lake-campground.htm
16	Big Cypress National Preserve - Gator Hook Trail	https://www.nps.gov/thingstodo/gator-hook-trail.htm
17	Big Cypress National Preserve - Loop Road Scenic Drive	https://www.nps.gov/bicy/planyourvisit/scenic-drives.htm

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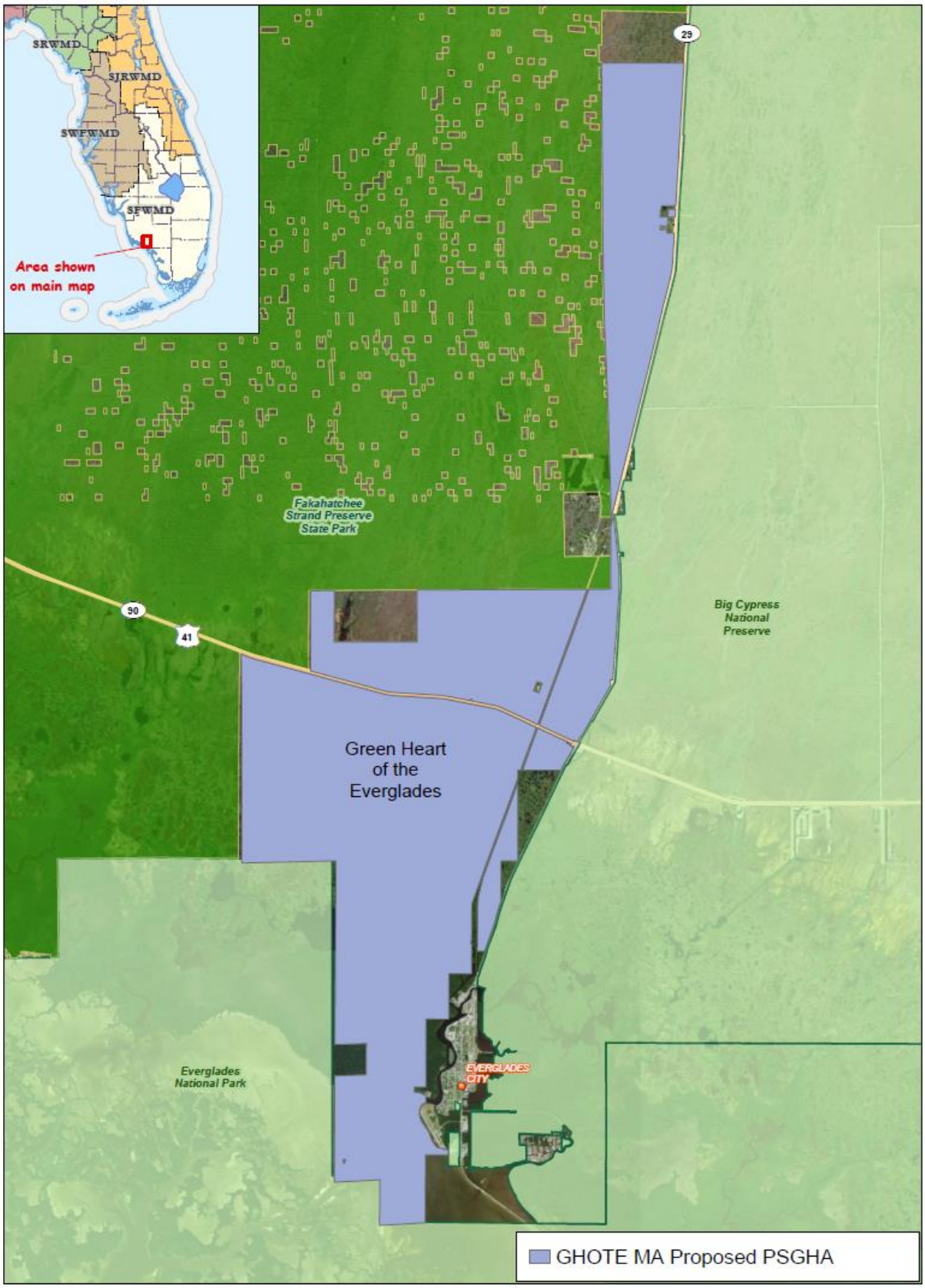
Map 11. Location of nearby public access.



Map 12. Areas being considered for PSGHA.

Resource Protection

The District contracts with FWC to provide law enforcement services through the "enhanced patrol" program. The program provides funding for additional law enforcement patrols throughout the year to perform targeted operations to address specific law enforcement needs. Law enforcement surveillance protects natural and cultural resources. It deters vandalism, dumping, poaching, and other illegal activities while safeguarding the public. The presence and continual maintenance of posted boundary signs also enhance resource protection.

The U.S. Coast Guard is the nation's lead maritime service, executing various marine safety and security missions inland, along the coasts, and in international waters. The U.S. Coast Guard has the authority to ensure vessel safety and protect the environment, the waterways, and surrounding infrastructure. The U.S. Coast Guard can control vessel traffic independently or holistically by creating vessel traffic systems, restricted navigation areas, safety zones, security zones, and anchorage areas. The U.S. Coast Guard's authority to regulate navigation expands from the nation's inland waters to the coastal waters and high seas, concurrently with State and local regulations where applicable and not otherwise preempted. The Submerged Lands Act confirmed the State of Florida's ownership of tidal lands, islands, sand bars, shallow banks, and lands waterward of the ordinary or mean high water line beneath navigable freshwater or tidally influenced waters (Thomas et al., 2015). Florida's authority to regulate activities on navigable waters has a proprietary and regulatory foundation. The State also delegates this power to local governments, allowing them concurrent regulatory control over waters within their jurisdiction.

Lease Administration

The District authorizes reservations, leases, or similar agreements on District lands or interest in land when such use is compatible with the purpose of the acquisition and the long-term use of the land. Historic property uses, such as agriculture, are allowed to continue on certain properties on an interim basis until the land is needed for construction or restoration. In the interim, the District will establish lease agreements to authorize compatible commercial airboat use of the property consistent with the management objectives.

7. NATURAL RESOURCE MANAGEMENT

To keep native plant communities healthy and productive, District land managers take appropriate actions to compensate for the loss of natural processes. Several land management practices are utilized to preserve the ecological health and function of the management areas. These practices include prescribed burning of fire-dependent plant communities with fire return intervals that mimic natural fire regimes; controlling nuisance and invasive vegetation through the selective use of herbicides and biological control agents; restoring the physical structure of plant communities and biological diversity through mechanical vegetation management including mowing, chopping, and shredding; and implementing hydrologic restoration activities where the natural hydrology has been altered through ditches, canals, and other surface water drainage features.

7.1. Fire

Fire has shaped the distribution of plants in Florida's ecosystems. Historically, wildfires reduced fuel loads in natural communities. Due to habitat fragmentation and human suppression efforts, these fires no longer naturally occur with historical frequency or extent, thus resulting in alteration to the natural community structure and function in fire-dependent communities. Most plant communities in Florida are adapted to periodic fires and rely on them to maintain their vegetative characteristics and biodiversity. Land Managers use prescribed burning to reduce hazardous buildup of vegetative fuel load, maintain plant species diversity, enhance wildlife habitat, and encourage restoration of native plant communities. Land Stewardship recognizes the importance of fire as a management tool and has integrated prescribed fire into its land management strategy.

Prescribed Fire Planning

The fire management program includes wildfire prevention, detection and suppression, and prescribed burning. Prescribed burn standards and procedures are outlined in the Land Stewardship's Wildlands Fire Manual, which also serves as a centralized resource for information on fire management on District lands. The manual outlines the procedures that must be followed to ensure compliance with statutory requirements in §590, Florida Statutes, and Rules 5I-2 & 62.256, Florida Administrative Code.

There is little history regarding the occurrence of fires within GHOTE MA prior to the District's acquisition. However, the incidence of past fires on and around the management area likely ranged from lightning to artificial fires for farming, hunting, and lumbering.

Prescribed fire is applied with different management objectives based on plant community needs, wildlife utilization, and specific species requirements. A prescribed burn program will be implemented for the GHOTE MA, and a fire-return frequency will be established to accomplish the herbaceous plant community's land and resource condition objectives. Prescriptions for these burns will identify the environmental conditions, return frequency, and ignition techniques to provide for mosaic burns that do not remove all vegetation while re-defining the boundaries of embedded plant communities that are not fire-dependent.

The marsh, wet flatwoods, and prairie communities within the GHOTE MA require periodic fire to maintain their vegetative characteristics and biodiversity. Land Stewardship will utilize prescribed fire to maintain the grassland structure and reduce the encroachment of mangroves and other woody species. Grasses and sedges constitute the principal ground cover in these communities, providing fine fuel that burns quickly when ignited. However, because the property consists mainly of wetlands, prescribed fire application is limited to the drier months when surface water recedes. Although burning in late summer and early fall is preferable to replicate historical fire patterns, late fall and spring burns are the most conducive for fire application within the GHOTE MA due to its high-water table and tidal influence. Prescribed fire will be applied in the marsh while the soil is saturated to achieve a patchy, low-intensity fire (cool burn) and prevent organic soil subsidence where present.

Challenges for the GHOTE MA's fire program include increased smoke management requirements near roads and population centers, shifting winds with afternoon sea breezes, and water levels that restrict most vehicles from accessing the burn unit. Smoke mitigation is particularly challenging due to the proximity of major roads and highways within the vicinity of the GHOTE MA and proximity to populated areas, such as the City of Everglades, Lee Cypress, Jerome, and Copeland.

Meeting the prescribed fire goals and objectives for fire-maintained communities largely depends on weather conditions, personnel, and statewide emergencies such as wildfires, hurricanes, and other natural disasters. Ideally, burn crews would consist of 6-8 or more individuals. However, with only 3 District Land Stewardship employees assigned to the West Coast Region, conducting prescribed burns requires outside assistance from other agencies (including FWC, local fire departments, and local counties), other District staff, and trained volunteers to ensure it is conducted safely and effectively.

Wildfire Suppression

Wildfires ignited by lightning are a common occurrence throughout Florida. The Florida Forest Service (FFS) is responsible for preventing, detecting, and suppressing wildfires in Florida (§590.01, Florida Statutes). Maintaining fire-dependent habitats with frequent prescribed burns is the main way the District limits the negative impacts of wildfires and increases the ability of the FFS to respond successfully to wildfire events. When a wildfire is detected, the land manager immediately notifies FFS while the Land Stewardship staff responds and, if appropriate, begins fire suppression efforts. Upon arrival, FFS takes command of the fire while the District continues to provide logistical and situational support as needed.

7.2. Control of nuisance and invasive plant species

The District's vegetation management program utilizes an Integrated Pest Management strategy to maintain nuisance and invasive populations at the lowest feasible level. Integrated Pest Management is an ecosystem-based strategy that focuses on the long-term prevention of pests and their damage through the combination of management techniques, including prescribed fire, herbicide application, mechanical treatment, biological control, and physical removal. The selection of control measures depends on species type, environmental factors, and the impacted natural communities.

Invasive plant control funding represents the largest item in the Land Stewardship Program's annual budget. Land managers have developed specific management area treatment strategies that optimize invasive plant control efforts. Although Category I and II species in the Florida Invasive Species Council (FISC) lists are invasive and threaten the function and ecological stability of the natural communities, achieving maintenance on all species identified on these lists is currently not feasible with existing budgetary resources. The primary goal of the Land Stewardship's invasive plant management program is to control the spread of 30 identified invasive species (**Table 3**), in addition to area-specific priority species based on early detection/rapid response and locally significant impacts or potential for impacts. The main species being targeted for treatment in the GHOTE MA are Brazilian pepper, Melaleuca, Australian pine, torpedo grass, and cattail.

Nuisance species treatment is primarily conducted by herbicide applicators contracted through the District's Vegetation Management Section. Supplemental efforts by District staff are also conducted on small or sporadically distributed infestations. Treatment areas are scheduled based on the severity of nuisance and invasive plant infestation, time since the last treatment, property access, groundwater conditions, avian nesting seasons, and public use. All treatments follow the District's best management practices for herbicide and use the best available science. Treatment dates, locations, and species treated are recorded in a GIS database. Herbicide use is recorded in the District's invasive plant control database.

Table 3. Land Stewardship Section invasive species control priority species.

Scientific Name	Common Name	FISC Category
Abrus precatorius	Rosary Pea	I
Acacia auriculiformis	Earleaf Acacia	I
Albizia julibrissin	Mimosa, Silk Tree	I
Albizia lebbeck	Woman's Tongue	I
Ardisia crenata	Coral Ardisia, Scratchthroat	I
Ardisia elliptica	Shoebutton Ardisia	I
Bischofia javanica	Bishopwood	I
Casuarina cunninghamiana	River Sheoak, Australian-Pine	I
Casuarina equisetifolia	Australian-Pine, Beach Sheoak	I
Casuarina glauca	Suckering Australian-Pine, Gray Sheoak	I
Colocasia esculenta	Wild Taro	I
Cupaniopsis anacardioides	Carrotwood	I
Dioscorea alata	Winged Yam	I
Imperata cylindrica	Cogon Grass	I
Leucaena leucocephala	Lead Tree	II
Lygodium japonicum	Japanese Climbing Fern	I
Lygodium microphyllum	*Old World Climbing Fern*	*I*
Melaleuca quinquenervia	*Melaleuca, Paper Bark*	*I*
Mikania micrantha	*Mile-A-Minute Vine*	*II*
Mimosa pigra	Catclaw Mimosa	I
Rhodomyrtus tomentosa	Downy Rose-Myrtle	I
Schefflera actinophylla	Schefflera, Australian Umbrella Tree; Octopus Tree	I
Schinus terebinthifolia	Brazilian Pepper	I
Senna pendula var. glabrata	Christmas Senna, Climbing Cassia, Christmas Cassia	I
Solanum diphyllum	Twoleaf Nightshade	II
Solanum tampicense	Wetland Nightshade, Aquatic Soda Apple	I
Solanum viarum	Tropical Soda Apple	I
Syzygium cumini	Jambolan-Plum, Java Plum	I
Triadica sebifera	Popcorn Tree, Chinese Tallow Tree	I

7.3. Wildlife Management

The District's wildlife management relies on active habitat management that addresses the needs of all species present. The Land Stewardship Program accomplishes this by:

- Performing land management activities that maintain and/or improve native wildlife habitat, including prescribed fire and nuisance and invasive plant control.
- Conducting specific management activities that benefit protected species when necessary.
- Following management guidelines for listed species protection as determined by the South Florida Multi-Species Recovery Plan, Volume 1 (U.S. Fish and Wildlife Service (USFWS) 1999).
- Maintaining species lists of confirmed and potential wildlife species.
- Working cooperatively with FWC to manage public hunts and address wildlife management issues.

Game Management

The District partners with FWC to manage game species and public hunting opportunities on District lands established as Wildlife Management Areas (WMAs), Wildlife Environmental Areas (WEAs), PSGHAs, and Public Use Areas. These designations allow FWC to utilize biological and law enforcement staff to assist in managing wildlife on District lands and enforce wildlife and public use rules for resource protection purposes. These designations also allow FWC to establish hunting seasons and promulgate rules regulating public activities in these areas. The District will coordinate with FWC to establish a PSGHA on the GHOTE MA.

7.4. Mechanical Vegetation Control

Prescribed fire is the most cost-effective and ecologically beneficial method of vegetation control for fire-maintained habitats in South Florida. However, in locations where prescribed fire cannot be used as a land management tool, such as urban interface zones, or when other constraints prohibit the use of prescribed fire, mechanical vegetation control is an alternative method for reducing vegetation coverage and fuel loads. Mechanical vegetation control can reduce woody plant growth and increase species diversity through mowing, chopping, and shredding. Mechanical treatment can improve the natural characteristics of disturbed habitats overgrown with nuisance and invasive vegetation.

7.5. Hydrologic and Habitat Restoration

Incorporating fire, invasive plant control, and mechanical vegetation management is integral to any restoration project on managed lands where appropriate. The initial restoration efforts on the GHOTE MA will focus on enhancing the plant communities to eliminate nuisance and invasive species on the property and implementing management strategies for the long-term management of the natural communities. The need for hydrologic improvement on the property will be evaluated as land managers continue to assess the property. As site investigations identify needs

for hydrological modification, a restoration project plan will be designed and implemented based on funding availability.

8. ADMINISTRATION

Administration of District lands is directed through the Land Stewardship Section within the Land Resources Bureau. Policy decisions, planning and budgeting, procurement of personnel and equipment, contract administration, and program development issues are administrative tasks coordinated through the Land Stewardship. Input is provided by regional land managers located over the 16-county area. Regional land managers handle regular administrative duties from their field locations to ensure quick response to local concerns and management issues. Administrative activities for GHOTE MA will be handled through the District's field office at the CREW MA and the District's headquarters in West Palm Beach.

8.1. Planning and Budgeting

Planning is a major component of the Land Stewardship Section and is critical to maintaining proper program focus, direction, and coordination with other agencies. This document forms the framework for prioritizing and creating targeted plans for the activities to be conducted within the appropriated budget during the next five years.

The District is assessing principal funding sources for land management operations on the GHOTE MA, which may include lease and ad valorem tax revenues. Overall funding availability determines management activities. Budget distribution among the District's five land management regions is based on a programmatic prioritization of management activities. Operational funds are distributed to accomplish each management area's objectives most effectively. The operation and maintenance of the GHOTE MA include costs to cover staffing, operational and land management expenses, and capital refurbishment of the infrastructure. Capital infrastructure needs are determined based on current conditions and anticipated serviceability. Priorities for capital refurbishment are made on a Districtwide basis.

Strategies are updated annually to prioritize prescribed fire planning, nuisance and invasive control, and public use, equipment, and infrastructure needs, including fencing, public use facilities, administrative structures, and hydrologic components. These strategies and budgets are developed in concert with District-wide operational priorities and budgetary cycles and are prioritized across all areas managed by the Land Stewardship Program. A land management strategy will be developed for the GHOTE.

Table 4. GHOTE MA estimated expenditures for fiscal year 2025-2030.

MANAGEMENT ACTIVITIES	FY2024-25	FY2025-26	FY2026-27	FY2027-28	FY2028-29	FY2029-30
Resource protection						
FWC Law Enforcement Support	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000
Resource Management						
Mechanical Vegetation Mgmt.		$400,000	$400,000	$200,000	$50,000	$50,000
Chemical Vegetation Mgmt.		$250,000	$250,000	$250,000	$250,000	$120,000
Wildlife and Environmental Monitoring	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000
Wildlife Damage Mgmt.		$5,000	$5,000	$5,000	$5,000	$5,000
Prescribed Burning/Site Prep	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Boundary Survey	$175,000					
Signage	$25,000	$25,000				
Solid Waste/Debris Removal	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Fencing		$50,000	$50,000			
Capital Improvements						
Rec. Facilities Engineering & Design		$1,000,000				
Rec. Facilities Construction				$10,000,000		
Rec. Facilities Maint.					$24,000	$24,000
Support & Administration						
Infrastructure Maint.	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Prescribed Burn PPE	$2,000			$2,000		
Land Mgmt. Spec SR	$64,625	$64,625	$64,625	$64,625	$64,625	$64,625
Land Mgmt. Tech 2	$43,742	$43,742	$43,742	$43,742	$43,742	$43,742
Vehicles	$120,000					
Vehicle Fuel & Maint.	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000

Table 4 (Continued). GHOTE MA estimated expenditures for fiscal year 2025-2030.

MANAGEMENT ACTIVITIES	FY2024-25	FY2025-26	FY2026-27	FY2027-28	FY2028-29	FY2029-30
Airboat		$80,000				
Airboat Fuel & Maint.		$3,000	$3,000	$3,000	$3,000	$3,000
Swamp Buggy		$80,000				
Swamp Buggy Fuel & Maint.		$3,000	$3,000	$3,000	$3,000	$3,000
Small Tools & Equipment	$5,000	$2,000	$2,000	$2,000	$2,000	$2,000
Total *	$672,367	$2,243,367	$1,058,367	$10,810,367	$682,367	$552,367

* Land management funding is dependent upon annual legislative appropriations and governing board authorization.

8.2. Personnel and Equipment

The Land Stewardship Program is separated into five geographic regions. Each region is assigned a Region Supervisor (Land Manager), one to three Land Management Technicians, and based on the need in some areas, a Land Management Assistant, Scientist III, and/or Scientist IV. A Section Leader provides direct oversight and supervision for the land managers. The Land Stewardship Section Administrator, Land Stewardship Senior Scientist, Wildlife and Public Use Section, Vegetation Management Section, and other support personnel from the District's headquarters in West Palm Beach and the Big Cypress Basin Field Station will provide additional leadership and assistance if needed. Management of the GHOTE MA property is the primary responsibility of the West Coast region's Supervisor, one Senior Land Management Assistant, and one Land Management Technician.

Staff have access to tools, supplies, four-wheel drive vehicles, fire suppression trucks, all-terrain vehicles, swamp buggies, and other heavy equipment. This equipment is maintained through the Clewiston Field Station. Equipment from other regions and leased equipment are also available if needed.

8.3. Volunteers

Section 373.1391, Florida Statutes, encourages the District to use volunteers for land stewardship and other services. The District recognizes the merits of volunteerism and welcomes participation in activities appropriate for public involvement. The Land Stewardship Section provides a range of volunteer opportunities for both individuals and groups. These opportunities include creating and maintaining public use trails, maintaining public use facilities and amenities, leading field interpretations and guided tours, organizing clean-ups of trails and waterways, conducting invasive plant sweeps, and helping with District-sponsored public events like Earth Day and Public Lands Day.

In Fiscal Year 2023, District Lands benefited from 14,493 volunteer hours or $426,239 worth of volunteer services (using a $29.41/hour Florida average for the value of volunteer service). Volunteer services include time performing functions such as waterway clean-ups, facility

maintenance and development, campground host activities, and providing environmental education programs. The District will assess opportunities within the GHOTE MA.

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Appendix A.

The GHOTE Area History

PREHISTORIC OVERVIEW

Within the interior wetlands of south Florida are small, palm tree-studded elevations resembling islands in a sea of grass that provided dry ground for Precolumbian settlements. Numerous archaeological sites left by the native inhabitants of Florida are still very much evident. Specific pottery designs and manufacturing techniques are most often used to identify cultural affiliation. Before 500 B.C., two major cultural traditions, Paleoindian and Archaic, are found throughout the state. Beginning around 500 B.C., specific cultural traits are recognized as belonging to distinctive cultural periods or traditions and are often correlated with environmental conditions or geographical regions.

Paleoindian (ca. 12,000 B.C. - 7,500 B.C.)

The earliest evidence of human occupation in Florida dates to around 12,000 years ago and is termed the Paleoindian Period. It is characterized by a fisher-hunter-gatherer population. Evidence from several sites indicates that Paleoindians hunted now-extinct Pleistocene megafauna (e.g., mammoth, bison) as well as species common today. They also fished and gathered wild plants and shellfish. The environmental conditions during Paleoindian times were different from the present day, as many of today's lakes, rivers, and estuaries had not yet developed, and freshwater sources were often limited to springs and sinkholes. Many Paleoindian sites are found around these water sources in areas of karstic, tertiary limestone formations. Our knowledge of the period is primarily limited to stone tools and the byproducts of stone tool production. While most Paleoindian sites are recorded in northern Florida, two important sites are found in Sarasota County. The Little Salt Spring and Warm Mineral Springs sites have provided a good deal of information about Paleoindians in southern Florida.

Archaic (ca. 7,500 B.C. - 500 B.C.)

The climatic and environmental changes that took place at the close of the Pleistocene epoch brought with them changes in the types and distribution of game animals available to prehistoric hunters. During the late Archaic Period, the Everglades and associated aquatic systems of southern Florida developed. Adapting to their new environment, the Archaic peoples became increasingly adapted to a much broader range of plant and animal sources for survival. Archaic peoples began to exploit a wider range of food sources, including smaller game, fish, mollusks and nuts, and became increasingly more sedentary than their predecessors. The tool kit used by these people became more varied and complex over time.

The Archaic epoch is traditionally divided into three periods – Early, Middle and Late – based upon stylistic changes in tools and the eventual presence of fiber-tempered pottery. Early Archaic period artifact assemblage suggests the early Archaic peoples initially shared similar lifestyles as the Paleoindians but adjusted to new environmental conditions since they were less constrained by water availability than in the Paleoindian period. Adapting to new conditions meant the Early Archaic peoples could hunt and collect from old Paleoindians and new site locations. It is surmised that the changes in their social organization and settlement patterns resulted in more efficient exploration of food resources and gave rise to more specialized tools. As Early Archaic cultures adjusted to new environmental conditions, they began to transition from the lanceolate projectile points from the Paleoindian period to a variety of stemmed tools. The Early Archaic cultures can be viewed as a population changing from nomadic Paleoindian subsistence pattern to the more settled coastal and riverine-associated regimes of the middle Archaic period.

During the Middle Archaic period, the vegetation community gradually changed, with oaks in some regions giving way to pines and mixed forests. The environmental conditions in certain locations were becoming increasingly drier and hotter, reducing the viability of upland habitats that supported the people's dependency on mast, deer, turkey, and other resources. Meanwhile, riverine habitat appeared to have improved as increased runoff from desiccated uplands enhanced the food potential along major rivers. The Middle Archaic artifact assemblage is characterized by several varieties of stemmed, broad-blade projectile points. It is surmised that if the Middle Archaic peoples were performing similar activities as Early Archaic peoples, they had to use a greater variety of tools. The implication is that the increase in seasonal sedentism led to them acquiring more specialized tools. Some tools were not easily transported in large numbers.

Early and Middle Archaic period sites in southwest Florida are relatively rare. The Bay West Site (8CR200) in Collier County provides one of the richest sources of Middle Archaic period traditions in this area of Florida. It is a mortuary site located in a cypress pond. The pond's peat preserved human remains, wooden tools and posts, botanical remains, antlers, lithics, and shells (Beriault et al., 1981).

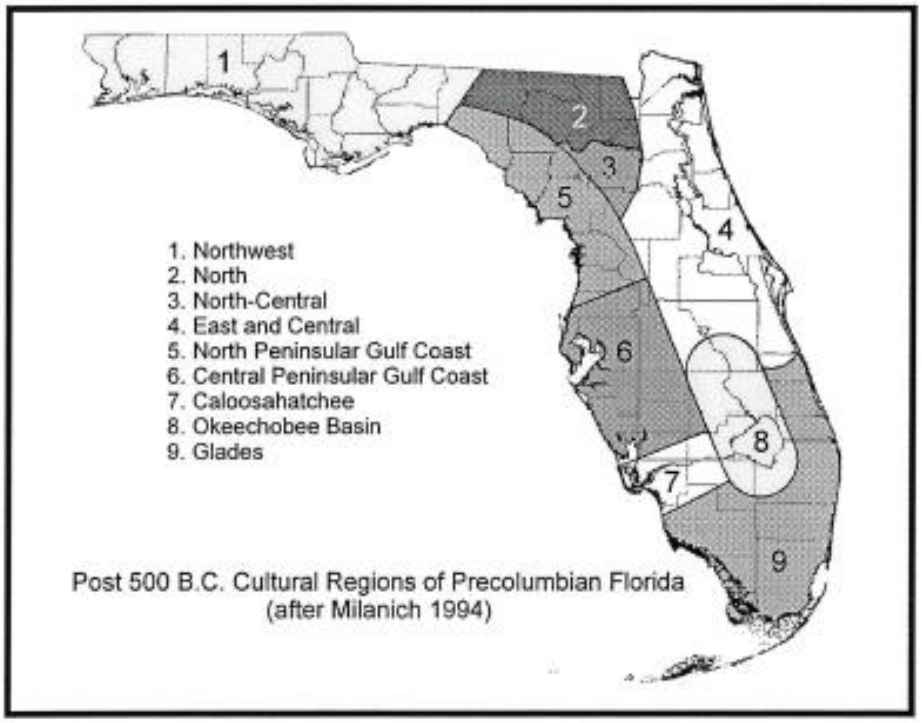
The earliest pottery, known as Orange, is a marker for the Late Archaic. Its diagnostic feature is a fibrous material used in the temper. The fiber was burned away during the firing process, leaving distinctive hollow areas visible on the vessel surface. The pottery appears at sites in Florida around 4,000 years ago. Late Archaic sites in southwest Florida that contain fiber tempered pottery include Marco Island, Horr's Island, and Cape Haze. These sites also possessed aceramic cultural material below Orange phase deposits, suggesting their occupation may have extended as far back as the Middle Archaic period (Dickel and Carr, 1991).

Post-500 B.C. Regional Cultures

By about 500 B.C., the introduction of ceramics and increased sedentism among aboriginal peoples made distinct regional cultures possible to develop. These cultures were highly adapted to distinctive ecological niches and could be distinguished archaeologically by differences in site location, subsistence strategies, belief systems, and ceramic types, among other differences.

Glades Region

Archaeologically, the GHOTE property is included within what has been termed the Glades culture region (**Map 1**). The Glades region is the largest of the South Florida regions in geographical extent, comprising all South Florida southeast of the Okeechobee and Caloosahatchee regions. This region includes the Everglades, Collier County, and the extensive saltwater marshes and mangrove forests once found along both coasts.



Map 1. Culture Areas of Florida (after Milanich 1994).

The Glades region is marked by sand-tempered pottery vessels, which are typically bowls with incurving walls and rim shaped using the coiling method. The Glades decorative motifs include linear and curvilinear incisions and rim ticking. The type Glades Tooled appears late in the Precolumbian period and exhibits elaborated lip treatments, either pinched to a piecrust-like edge, folded, or dowel impressed. The bodies of the carinated bowls are typically undecorated, and they are often extremely shallow. As typical in southern Florida, shell and bone were used as raw materials for tools. Shell picks, hammers, adzes, celts, gouges, chisels, awls, knives, scrapers, cups, and dippers were made from Busycon, Pleuroploca, and Strombus shells. Changes in pottery styles through time have enabled archeologists to divide the temporal range of the Glades tradition into several periods. This ceramic chronology, largely based on ceramic decorative motifs now recognized as applying to the Glades region, is summarized in Table 1.

Table 1. Glades Region Ceramic Chronology.

Period	Dates	Distinguishing ceramics
Glades IIIb	A.D. 1400 -1513	Almost no decorated ceramics; Glades Tooled rims. [a]
Glades IIIa	A.D. 1200 -1400	Appearance of Surfside Incised (parallel incised lines below lip); some lip-grooving; St. Johns Check Stamped and Safety Harbor sherds found in this and subsequent periods.
Glades IIc	A.D. 1100 -1200	Almost no decorated ceramics; some grooved lips; Plantation Pinched (lines of finger-pinched indentations below lip on rim).
Glades IIb	A.D. 900 -1100	Key Largo Incised still majority decorated type; some incision on rims and some lip grooving; Matecumbe Incised appears (cross-hatched incisions below lip on rim); more incurving bowls.
Glades IIa	A.D. 750 - 900	Appearance of Key Largo Incised (loops or arches incised below lip); Opa Locka Incised (half-circles or arches Incised below lip in vertical rows with open sides down); Miami Incised (diagonal parallel incised rims below lip on rim).
Glades I late	A.D. 500 -750	Appearance of decorated pottery (less than 10 percent of ceramics a t sites); Sanibel Incised (ticking to form running lines of inverted Vs below lip); Cane Patch Incised (incised looping line with stab-and-drag punctuations, below lip); Fort Drum Incised (vertical or diagonal ticking on lip or rim); Fort Drum Punctated (punctations around vessel below lip).
Glades I early	500 B.C.- A.D. 500	First appearance of sand-tempered pottery (Glades Plain or undecorated Glades Gritty Ware - both types subsumed under plain, sand-tempered, not separated as to type; no decoration.

a. Glades Tooled may appear slightly earlier in time, in period IIIA or the A.D. 1400 date for the beginning of period IIIB maybe earlier. (Archaeology of Precolumbian Florida)

A variety of wooden implements, like the types found in the Key Marco site on the Southeast Florida coast, have also been recovered in the Glades region, often as a result of construction activities, such as digging boat slips or dredging canals. The shell, bone, and wooden tool and weapon assemblages of the Glades culture are as varied as the artifact assemblages of northern Florida.

The variety of archaeological sites in the Glades region rivals that found in any region in northern Florida. Such sites include the Turner River site in Collier County, the Granada site on the Miami River, and Horr's Island in Collier County and Key Marco. Marine shells and earth

middens predominate along the coasts, especially in the estuaries. Earth middens, characterized by a dark color resulting from high organic content, are more commonly found than shell middens in some areas. Overall, the archaeological site distribution in the Glades region is densest along the coast and largest where rivers drain interior wetlands. The dependence of Glades people on wetland resources is reflected in the faunal and floral data collected from sites like Granada, site 8Cr201, Key Marco, and the freshwater wetland sites in the Big Cypress area. Various combinations of shellfish, marine or freshwater fish, and reptiles provided the bulk of the meat biomass for the Glades people. Many of these middens were probably used over many generations and may represent villages. Other middens represent likely campsites that were seasonally occupied for hunting and gathering resources. In some coastal and inland Glades sites, burials have been found in villages or camp middens.

HISTORICAL OVERVIEW

Three European nations (Spain, France, and Britain) settled and controlled all or parts of Florida during the Colonial Period (1513 - 1821).

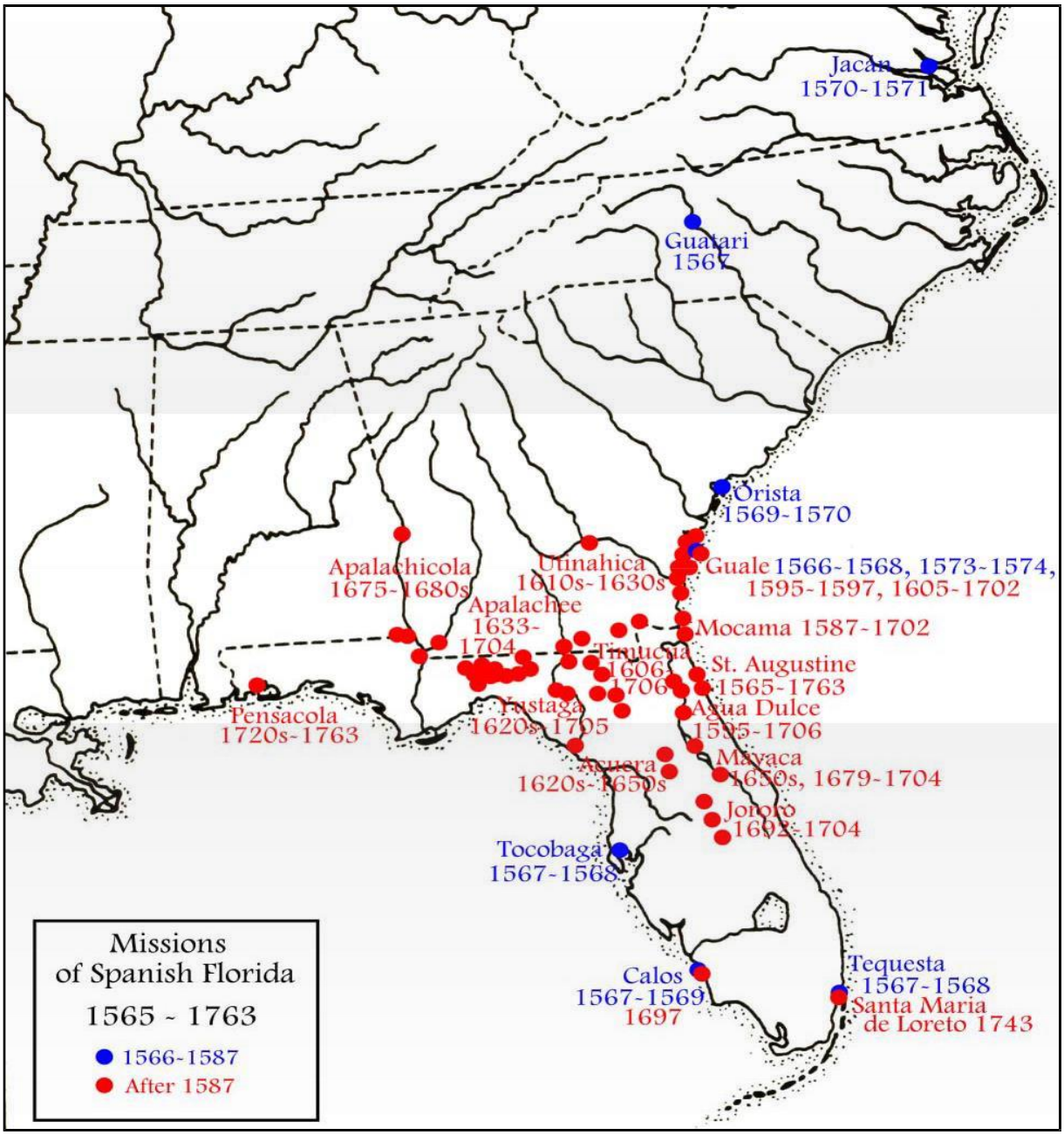
Table 2. Historical Chronology of Florida.

Period	Date Range
Colonial	
First Spanish	1513 - 1763
British	1763 - 1783
Second Spanish	1783 - 1821
American	
Territorial	1821 - 1845
Antebellum	1845 - 1860
Civil War	1860 - 1865
Late 19th/Early 20th Century	1865 - 1917
20th /21st Century	1917 -present

Colonial Period

After the initial European discovery of Florida by Ponce de Leon in 1513, several Spanish explorers traversed Florida, including Panfilo de Narvaez in 1528 and Hernando De Soto in 1539. Historical or archaeological evidence doesn't suggest that the early Spanish explorers visited the Collier County area, but their presence was undoubtedly known in South Florida (Hudson et al., 1989). Spanish chroniclers noted that encounters between the Spanish and native populations were often violent, as witnessed by apparent sword wounds on bones found in the Tatham Mound in Citrus County (Mitchem, 1989). Diseases introduced by the Spanish proved more destructive, however, decimating Indian populations throughout Florida.

The Spanish established the first permanent European settlement in Florida at St. Augustine in 1565 (Lyon, 1976). Shortly after the establishment of St. Augustine, Spanish missionaries began a mission system in Florida that would last until the siege of St. Augustine by the British and their Creek allies in 1702 (**Map 2**). All the missions were virtually destroyed by 1704 (McEwan, 1993).



Map 2. Spanish Missions in Florida [long-term Spanish missions were not established in southern Florida (UWF-Archaeology Dept.)]

It has been estimated that between 4,000 and 7,000 people lived in southwest Florida at the time of European contact. Estimates of 1,000 people living at Calos, what is believed to be the Calusa capital at Mound Key, and as many as 50 villages being subject to the rulers of the region are not unusual (Widmer, 1988). According to Widmer (1988), many of the cultural pattern characteristic of the Calusa sociopolitical system can be found as early as A.D. 800 in southwestern Florida. The presence of non-mortuary ceremonial mounds, evidence of a dense population, and indications of burial hierarchy all point to the existence of a chiefdom-level society.

By the 1600s, the native population had greatly reduced. Little trace of the original inhabitants could be found until the middle of the eighteenth century. At that time, the coastal area was inhabited by seasonal fishermen from Cuba and other areas. Fishing ranchos along the coast were established in areas such as Boca Grande, Useppa Island, Punta Rassa, and San Carlos Bay (Hammond, 1973).

The Calusa

Figure 1. A representation of the Calusa royal court in Mound Key, the exhibit is in the Florida Museum of Natural History in Gainesville.

At the time the Spanish arrived in SW Florida in 1513, they were met by the powerful and populous Calusa nation. The Calusa were forewarned of the Spanish plans of conquest by many refugees from present-day Cuba who had fled to SW Florida. The Calusa were spread over as much as 10,000 square miles in over 50 pueblos. These villages were concentrated heavily along the coast and were home to between 700 and 1000 people each. The interior settlements were much smaller, typically with less than 100 residents.

The Calusa were aggressively isolationist during the first 175 years of Spanish rule in Florida. For their part, the Spanish regarded South Florida as not being worth the trouble of subjugating either from a military or resource standpoint, so they did not press the issue. Spanish missions in South Florida typically did not last more than a year. The Calusa's isolation broke in 1688 when the Calusa chief converted to Christianity and allowed a group of his people to live near Havana for a year to evaluate the living conditions and to see how they would be treated. Visitation to Cuba by the Calusa increased through the 1690s. The timing proved fortuitous because Carolinian-allied, Yamasee Indians, began conducting slaving raids deep into Calusa territory in the early 1700s (**Map 3**). By 1711, most of the Calusa had evacuated to the Keys, including the Calusa Chief and most of his surviving vassals. Hundreds of the surviving Calusa evacuated to Cuba over the next few years and settled in the vicinity of La Cabaña, a small area northeast of downtown Havana, immediately across the harbor entrance.

Some Calusa may have been able to return to their homes in the interlude between the collapse of the Indian slave trade (1715) and the start of the Seven Years' War in 1756 (AKA the French and Indian War), when British-allied Creeks invaded and took over the interior of Florida, leading to the complete occupation of the peninsula. The remaining Calusa refugees in Key West evacuated to Cuba. After the British siege of Havana in 1762, most of the Calusa in Havana moved to Guanabacoa, Southeast of downtown Havana, to make room for the construction of the Castillo de La Cabaña that was constructed to defend the harbor entrance.

The commander's notes: H. Place where they swam over a Deep River [Caloosahatchee]. I. The same River is here Brackish. K. Place where they took 29 slaves. L. Here they took 6 slaves. M. Here they took and killed 33 Men at 1 o'clock the same day, numerous body of Indians came against them. They being but 33 men, yet put them presently to flight; they having no arms but Harpoons made of Iron and Fish bones; they were all painted.

Map 3. A map of a 1708 British-led Yamassee slave raid waged against Florida Indians and describing contact with the Calusa.

British Period 1763-1783

During the British period, beginning in 1763, the region saw a large in-migration of Creek. Many of the surviving members of the coastal tribes evacuated to Cuba with the Spanish when the British took over. In 1765, the Treaty of Picolata (today Palatka) recognized all the interior of Florida as belonging to the Lower Creeks. This territory would have followed a line from the west bank of the St. John's River to its source in St. Lucie County, then south to Cape Sabal on the southern tip of the Florida Peninsula. The coastal areas, defined by the landward extent of brackish water, were ceded by the Creeks to the British, with British law recognizing the interior of Florida being the legal possession of the Creeks. British law also held that the ultimate fee title to the property lay with the Crown. The Creeks were entitled to own, occupy, and enjoy the entirety of their possessions; however, they could not dispose of their property without having it cleared by the delegated authority of the Crown. Similarly, the British could not legally dispossess the Creeks of their property without their consent.

Throughout the second half of the 18th century, the Creeks who lived along the length of the Florida Peninsula (the Seminoles) grew culturally and politically distinct from the Alabama Creeks. The Seminoles incorporated large numbers of black refugees from the southern U.S. into their population. By the end of the British period, in 1783, the Creek Confederacy and Seminoles no longer had a cognizable political affiliation and were, by all accounts, distinct and independent tribes.

Second Spanish Period (retrocession) 1783-1821

Throughout the Second Spanish Period, following the post-revolution departure of the British, the Spanish Monarchy felt their hold on the territory was tenuous at best. They faced increasing unregulated migration from northern settlers and constant violations of their sovereignty by armed parties seeking the return of slaves, many of whom had found a home among the Seminoles or had been given legal asylum by the Spanish in their coastal cities after swearing an oath of loyalty to the Spanish Crown. The recognition by the British that the interior land belonged to the Seminoles was preserved by the Spanish through the Treaty of Pensacola in 1784 and the Treaty of Walnut Hills in 1793. Spanish law, at that time, recognized a tribal right to property on par with that of a young don who inherited an estate before coming of age. The Seminoles were the legal owner of the land but required Spanish permission to sell their land.

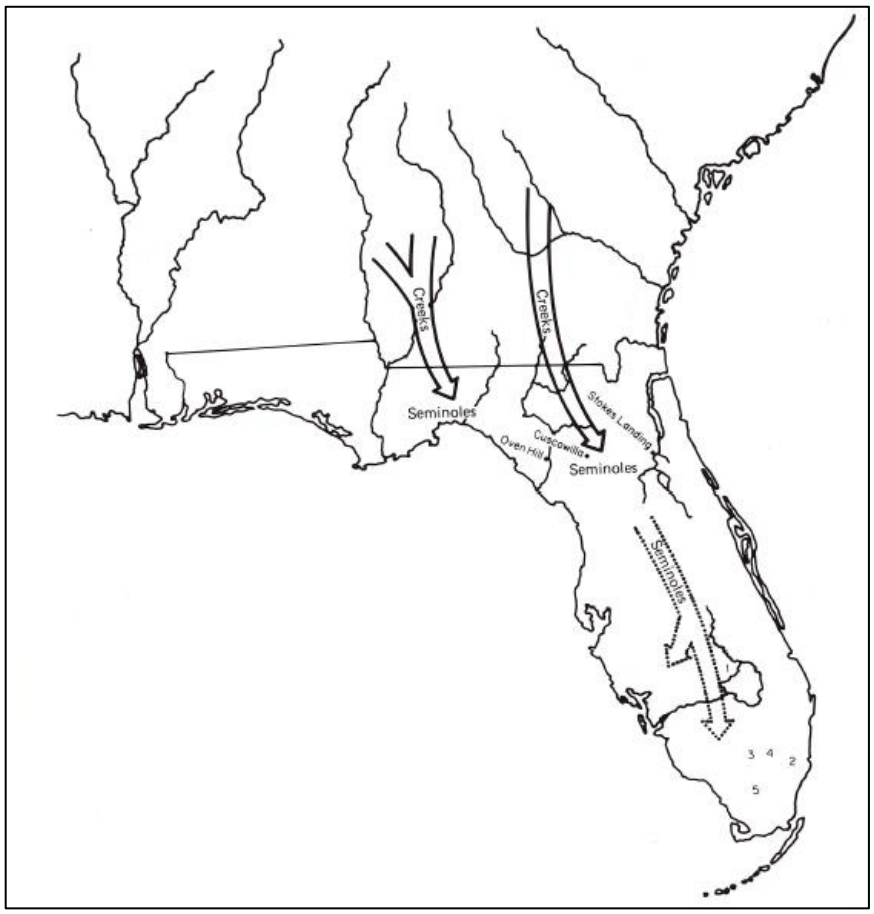
The post-revolution relationship between the U.S. and the Creeks quickly splintered and deteriorated. The U.S. signed a treaty with a faction of the Creeks in 1790, to which the Seminoles were not a party, that included a provision for the return of any former slaves or their children. Private Georgia militias used this treaty as a justification for raiding Seminole towns throughout northern Florida and abducting black Seminoles. The raids drove many bands of Seminoles south, where they settled in large numbers in the uplands. Their numbers swelled following the U.S. – Creek War in Alabama and Tennessee (1813-1814), which sent many Creek refugees to Florida.

Territorial/Early American Period

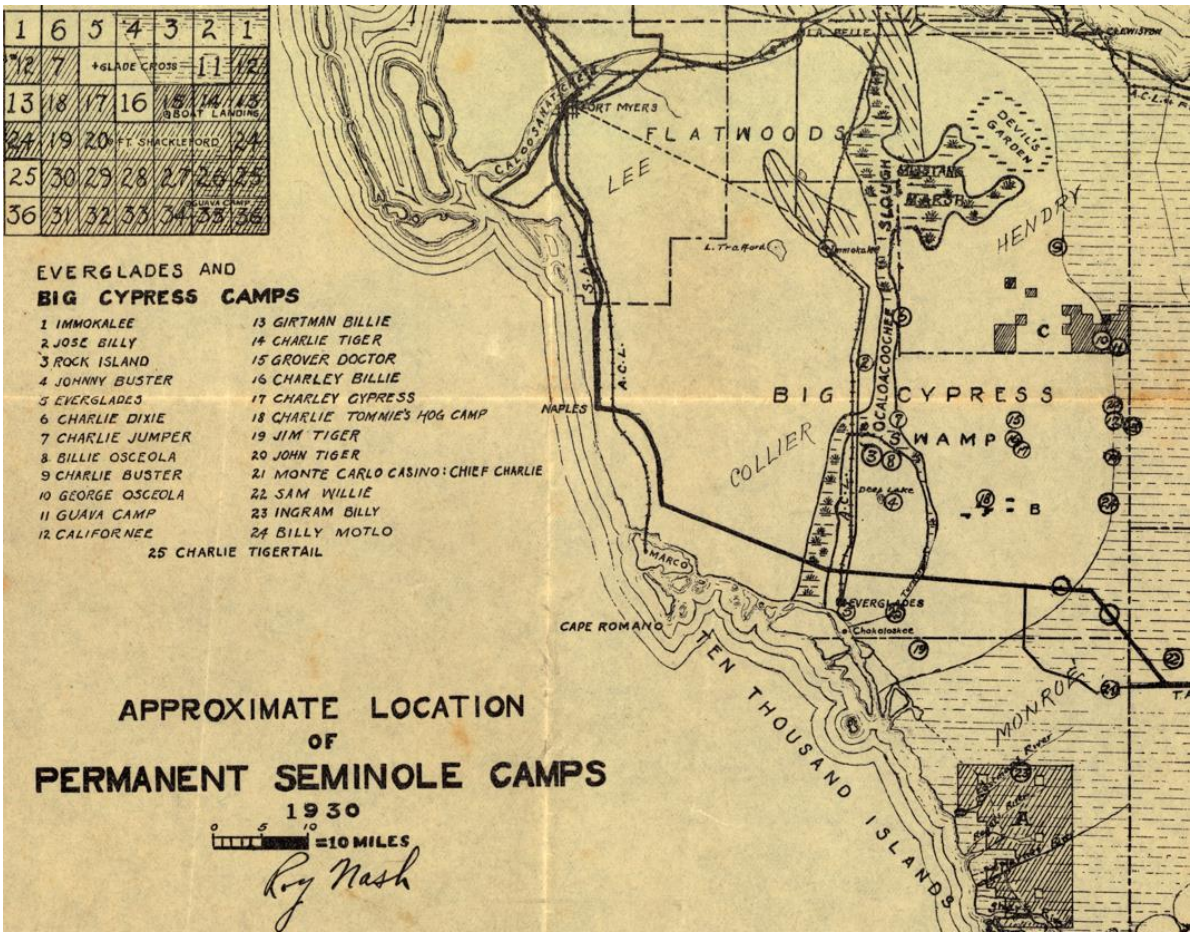
The Seminole Wars

Disputes between the Seminole Indians and white settlers led to three successive wars. The first took place predominately in the northern part of Florida between 1817 and 1818. Not long afterward in 1823, the Seminoles were encouraged to sign the Treaty of Moultrie Creek, which provided for the removal of the Seminoles to lands in the west. Some Seminoles did not agree with the terms of this treaty, however, and by 1835 the Florida territory again erupted with hostilities.

The Second Seminole War (1835-1842) took place primarily in southern Florida. In the years leading up to the Second Seminole War, there was a significant in-migration of Seminole Indians into the area. These were both Seminoles who had been living in Florida for many years as well as new arrivals following the Creek War of 1813-1814. After the First Seminole War, the Indians had been gradually pushed south of the Caloosahatchee River from north-central Florida (**Map 4**). Several forts, satellite camps, and temporary supply depots were established in present-day Lee and Collier counties at the onset of the second wave of hostilities.



Map 4. Movement of Creeks into Florida in the eighteenth century and of Seminoles into the southern part of the state in the nineteenth century. Numbers show modern settlements; (1) Brighton; (2) Dania; (3-4) Big Cypress federal and state reserves; (5) Tamiami Trail.



Map 5. Approximate location of permanent Seminole camps within Big Cypress (1930)

During the progression of the second Seminole war, the military established a series of frontier outposts, intended to be approximately 20 miles apart, as an attempt to effectively contain the Seminoles to areas south of Lake Okeechobee and away from the coasts. The military campaign against the Seminoles in Collier County intensified between November 1841 and February 1842 when Captain George Wright organized a series of river and land expeditions into the interior of the county. Starting from coastal points such as Goodland Point and Big Marco Pass, expeditions were initiated in search of any remaining Seminole Indians. Although the attempts to locate Seminole forces were unsuccessful, it allowed the U.S. government to explore the county's interior and coastal fringe for the first time (Tebeau, 1966). Following the unilateral cessation of the campaign by the U.S. Military, a few hundred Seminoles lived in the vicinity of Big Cypress, including Billy Bowlegs II's large band who were the focus of the short-lived Third Seminole war, and who relocated to Oklahoma following the end of that conflict in 1858.

Late 19th/Early 20th - Century Settlement

1850s – 1900

The latter half of the 19th century saw the region develop as an eclectic mix of outcasts, outlaws, deserters, Seminole Indians, and entrepreneur settlers. Homesteading settlers began trickling into the area during the 1860s and lived mainly off the land with their small vegetable plots. The government would grant 160-acre tracts to single men or heads of households through successive acts of Congress, such as the Armed Occupation Act of 1842. This act granted 160 acres to anyone who submitted a permit to the regional land office to build and live in a house on the parcel and cultivate at least 5 acres of it for at least 5 years. Many settlers were veterans of the Second Seminole War who had familiarized themselves with choice parcels during their routine patrols. However, these early settlers were few and far between, the U.S. Government had only authorized 1,250 homesteads for the entire peninsula south of Palatka. During the Civil War, the southern part of the Florida peninsula became home to many deserting Confederate soldiers. During this time, several Seminole families moved back into the area around Lake Trafford. In 1893, the Women's National Indian Association set up an outreach service in present-day Immokalee, where the Seminole Tribe of Florida still holds a small reservation.

The Widow McLean, emblematic of the eclectic mix of late 19th century settlement of the countryside around southwest FL. Standing over six feet tall, she was 200 pounds of pure orneriness. When asked if she had ever been scared living alone in the swamps and wilds she replied, "Never have been and I reckon it's too late to begin now."

Figure 2. The Widow McLean, a Late 19th century south Florida settler

Feather Trade

Near the end of the 19th century tens of millions of wild birds were killed to meet the demand for feather adornments on high-end clothing. Herons and egrets, with their long, delicate bridal veil breeding plumage were among the most prized for the fashion industry. The plumage hunters targeted the largest rookeries where they could take the greatest number of birds in their breeding plumage.

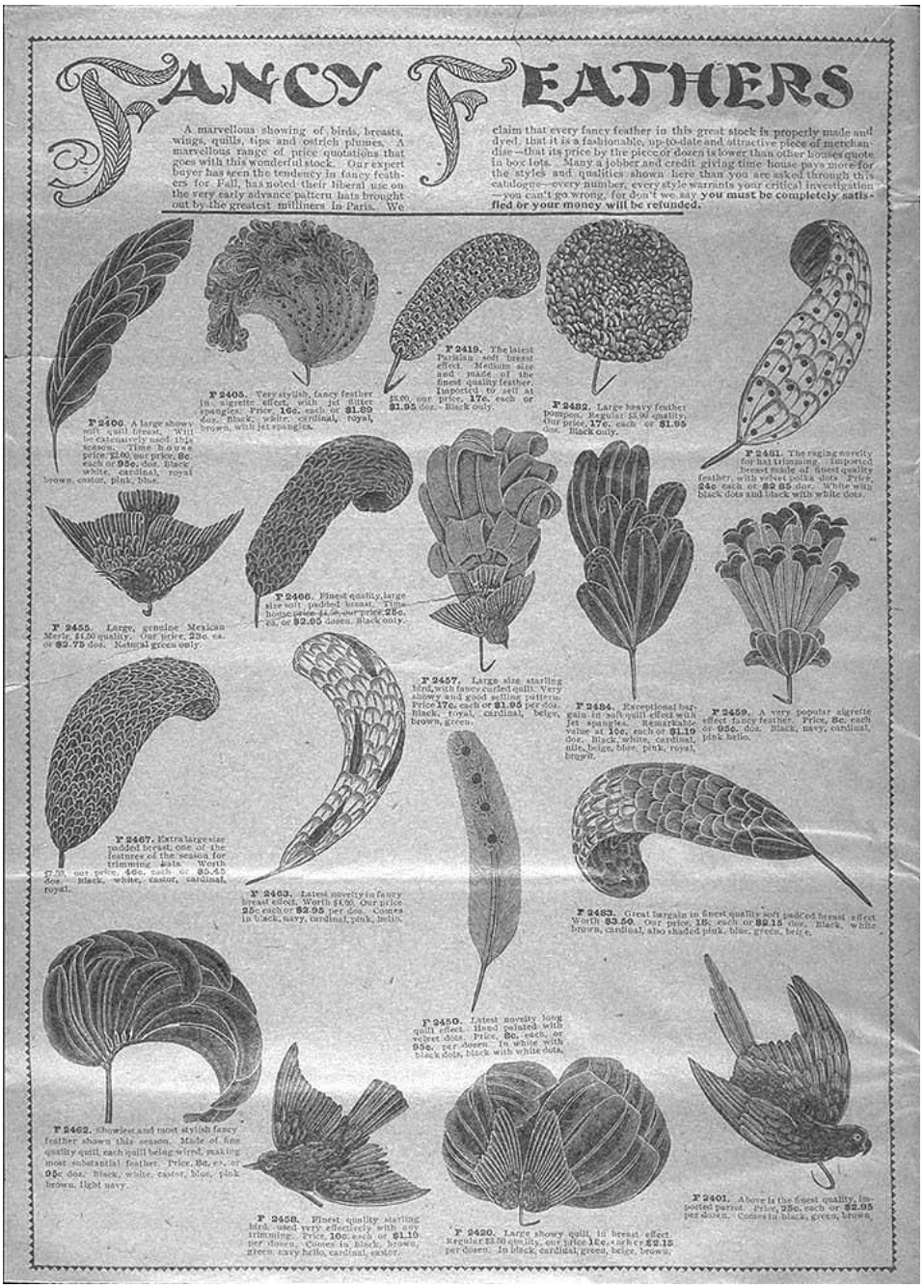


Figure 3. An advertisement from a 19th century feather accessory catalog.

20th Century

Audubon Wardens

By the turn of the century, the population of these plumage birds had collapsed, leading to the passage of the Weeks–McLean Migratory Bird Act in 1913 (which was held unconstitutional and later replaced by the Migratory Bird Treaty Act of 1918). Following the passage of the Weeks–McLean Act, the Audubon Society hired seasonal wardens to guard prominent rookeries, including the well-known bird rookery in Corkscrew.

Photo showing the warden camp at the Corkscrew Swamp rookery within a pine flatwood (foreground), marsh (intermediate), and the corkscrew cypress strand (background), illustrating the condition of the land before the large-scale land conversion of the 20th century. The knee-high palmettos, scorch marks on the pines, and lack of shrubs in the marsh are clear indicators of a landscape that burned frequently. Photographed by T. Gilbert Pearson in 1913.

Figure 4. Camp of Rhett Green, Warden of Corkscrew Rookery, Florida.

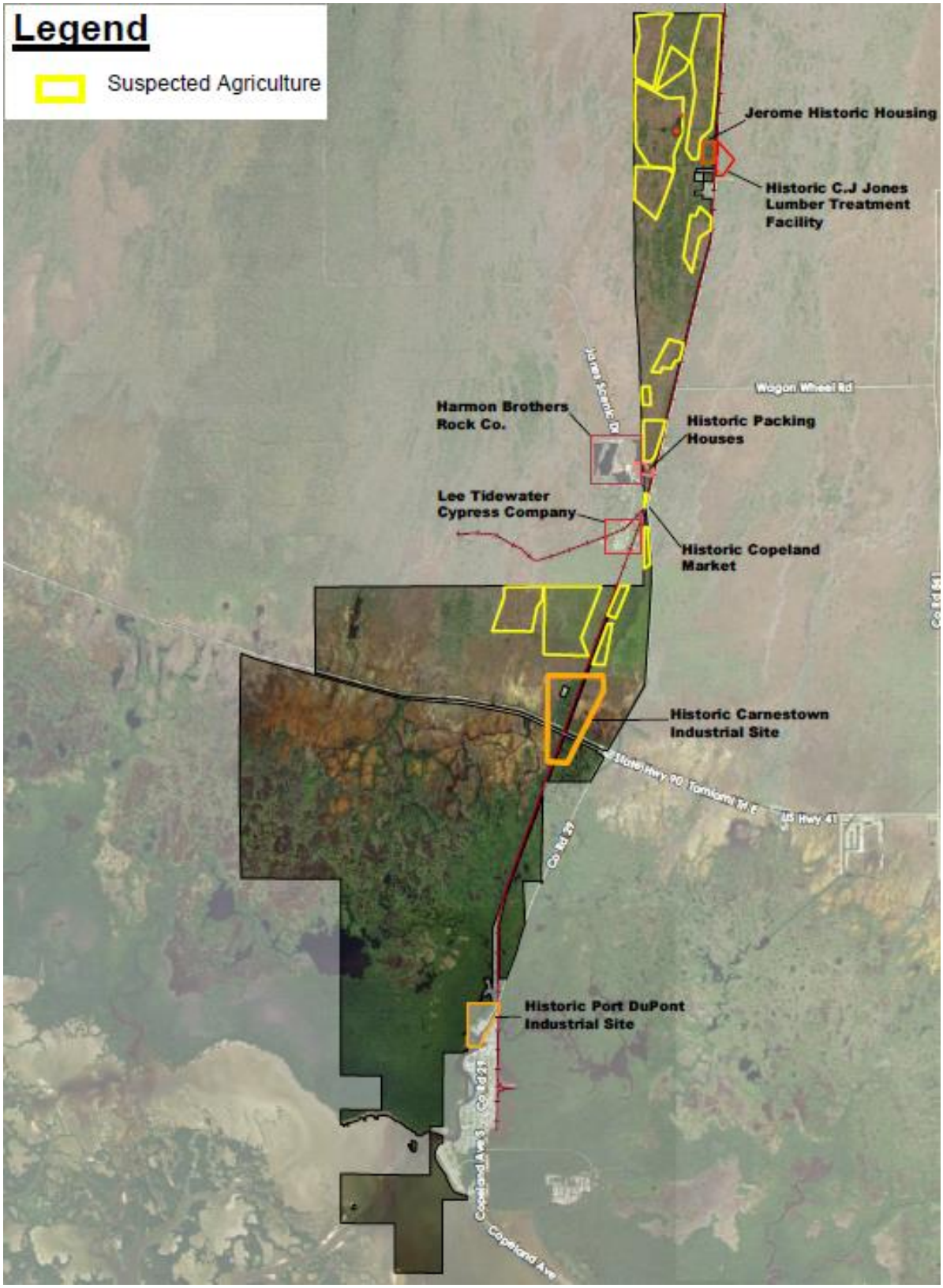
The 20th century brought additional alterations to the natural communities, including logging, cattle grazing, fire suppression, and urban and rural development in the surrounding landscape. The first commercial citrus groves were planted in the first years of the 20th century and were bearing fruit by 1915. Barron Collier acquired 1.3 million acres of land between 1911 and 1925, and the arrival of the Atlantic Coast Line railway in 1928 enabled the wholesale harvesting of hardwoods and virgin cypress. Much of the lumber from the historic Big Cypress Swamp was harvested under government and international contracts to help rebuild post-war Europe. In the latter half of the 20th century, commercial activities such as timber, oil exploration, and recreational hunting became

important in the region. Several cattle operations were in operation, including the Flint family cattle ranch in Flint Pen Strand. Other landowners, such as Alico and Collier, leased land for grazing and hunting. Florida's first commercial oil was produced from the Sunniland Oil Field in 1943, the first of 11 commercial oil fields. The West Felda oil field (1966) and Lake Trafford oil field (1969) are located north of the GHOTE.

Everglades City, Copeland, Jerome, and Lee-Cypress

Touted as Florida's Last Frontier, Everglades City is located forty-five minutes south of Naples. As in the olden days, this former county seat has remained relatively laid-back and unpretentious. While fishing and tourism are presently the major economic factors of this small town, the early years are marked by the agriculture and industrial centers that once flourished in this region. Numerous historical sites are located within walking distance of one another, with several situated around the town circle in Everglades City.

Barron Collier began acquiring properties in the area in 1922 and lobbied for Collier County to be established. Collier County was then created from his inholdings in 1923. The Village of Everglade became the county seat and was later incorporated as Everglades City. Collier made Everglades City his headquarters for the construction of the Tamiami Trail. Port DuPont, in Everglades City, served as the industrial center of the town and included a sawmill, foundry, and machine shop. A canal was dredged during the construction of the Tamiami Trail in the 1920s, and a road was constructed from Port DuPont to Carnestown. A series of dredged canals north of the Tamiami Trail can be identified in the 1940 aerial photograph and is posited to have been utilized for fill material during road construction. Barges, machinery, and equipment used to construct the Tamiami Trail were brought from Port DuPont to Carnestown. A work camp, warehouse, foundry, and machine shop were established for the work camp. For a period, Carnestown was home to the largest warehouse on the southwest coast of Florida and was the center of construction activities. After the Tamiami Trail was completed, Carnestown was demolished, and all associated machinery and housing were relocated to other areas of development. Around the same time the trail was completed, S.R. 29 was constructed and connected Everglades City to Immokalee. The Barron River Canal, located east of S.R. 29, served as a borrow canal to provide fill for the roadway and railway grade construction. As a result, the sheet flow from the Big Cypress Basin is diverted to the Barron River Canal and currently runoff to Chokoloskee Bay.



Map 6. Overview map showing significant industrial operations associated with the GHOTE.

In 1928, the Atlantic Coast Railway was completed to provide service to Everglades City from Immokalee and cities further north. A railroad station was constructed in Carnestown and another just in Copeland, just north of Carestown, to ship produce and lumber north to Immokalee. Copeland was originally a farming community established by Alfred D. Webb and the Janes brothers. Webb and J.B. Janes purchased 10 acres of undeveloped land in Copeland for tomato farming in 1932, and by the early 1940s, agricultural land had expanded to several thousand acres. The area became known as a tomato farming center. Other vegetable crops included peppers, cucumbers, and melons. Approximately 1,400 acres of the GHOTE tracts are estimated to have been farmed for vegetable crops. The produce grown on the site would be sent to packing houses in Copeland, where they were washed and shipped north on the Atlantic Coast Railway. Agricultural productivity was significantly diminished by the late 1960s, and the areas that were once cleared for cropland have since been overgrown with natural vegetation.

Small-scale lumbering in the Big Cypress began around 1900 with small sawmills at Everglades, Naples, and Immokalee. By 1930, eight small mills were operating within 20 miles of Immokalee (Tebeau, 1966). In the mid to late 1930s, lumber operations expanded. The peak lumbering period was from the 1940s through the mid-1950s. By the end of this time, most of the large south Florida slash pines and cypress had been removed. Early pine logging was completed by teams with oxen that would haul felled trees to small mill towns. In 1940, C.J. Jones built a sawmill and lumber treatment facility in Jerome, just north of Copeland, to process the slash pines that were being harvested from present-day Big Cypress National Preserve. The Jerome camp at the Jerome site was small but, included at least a dozen small buildings that were used to house the workers of the sawmill. Reports indicate the facility and housing structures accidentally caught on fire in 1955 and burned to the ground.

Copeland became a center of the local logging industry in the 1940s. During World War II, cypress was in heavy demand for manufacturing barrels and packing crates and coffins. Collier County had one of the country's largest remaining stands of virgin cypress and pine trees. These virgin stands in Collier County had reached heights upward of 130 feet or more. Lee Tidewater Cypress Company began logging operations in Collier County in 1944 and retired in April 1957. It was the only logging operation devoted exclusively to logging cypress. Tramways were constructed for the logging operation in the present-day Fakahatchee Preserve State Park and Bird Rookery Swamp. The main tramway leading from Lee-Cypress to the northwest later became a road and main entrance to the Fakahatchee Preserve State Park, known today as Janes Scenic Drive. Cypress lumber was transported from Lee-Cypress north on the Atlantic Coast Railway to Perry, Florida. By 1945, most of the narrow-gauge tram roads through the hardwood hammocks and cypress, which can still be explored from the Bird Rookery Swamp trailhead, had been constructed to make industrial scale logging possible. Lee Tidewater Cypress Company operated four steam engines through the swamps until the logging ceased, and many of the workers relocated because the economically harvestable stands had been depleted. The last steam locomotive used to carry timber is displayed at the Collier County Museum in Naples. The Lee Tidewater Cypress Company camp employed 1000 workers. The Company managed a self-contained community (Village of Lee-Cypress), creating its power plant, general store with a restaurant, repair shop and housing, and a Baptist church for the workers and their families at the height of the logging industry. Almost all functions in the camp were overseen by the Lee-Cypress

Company. As the industries closed, the town's population declined to just a few dozen homes.

Resource Preservation

In 1974, Big Cypress National Preserve was established as the nation's first national preserve to prevent the development of the world's largest Jetport in the heart of the Greater Everglades of south Florida. The concept of a national preserve was born from an exercise in compromise by the local conservations, sportsmen, environmentalists, Seminoles, Miccosukees, and many others who wanted to protect the Everglades but felt that national parks were managed in a restrictive manner and limited access to the swamp and feared Gladesmen's way of life would be lost. The first purchase of land creating Fakahatchee Strand Preserve State Park was made in 1974 with funds from the Environmentally Endangered Lands (EEL) program. It was the beginning of a continuous acquisition effort that is ongoing to this day through the Conservation and Recreation Lands (CARL) Program. In 1981, the Florida Legislature established the Save Our Rivers (SOR) program authorizing the five water management districts to acquire environmentally sensitive land. The legislation (373.59, Florida Statutes) produced the Water Management Lands Trust Fund and empowered the water management districts to acquire lands needed to manage, protect, and conserve the state's water resources. Once acquired, the lands are managed in an environmentally acceptable manner and support appropriate public use. SOR funds were used in the acquisition of the Picayune Strand State Forest to the west and the GHOTE MA. In 1989 The U.S. Fish and Wildlife Service acquired 26,270 acres for the Florida Panther National Wildlife Refuge through the Land and Water Conservation Fund (LWCF). The GHOTE was the last remaining large, contiguous tract of land not slated for development.

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Appendix B.

Green Heart of the Everglades Natural Communities

The Green Heart of the Everglades (GHOTE) property comprises nine distinct natural communities and two altered landcover types based on a combination of vegetation, landscape position, and hydrology (FNAI 2010). These communities will be managed through achieving and maintaining optimal fire return intervals for fire-dependent communities; control of non-native plant and animal species; maintenance of natural hydrological functions; maintenance of proper vegetative structure that represents the natural diversity of the community; maintenance of healthy populations of plant and wildlife species (including those that are imperiled or endemic); and maintenance of intact ecotones between natural communities across the landscape.

The following modifications to the FNAI classifications were made:

- Cypress – Originally classified as Cypress/Tupelo by FNAI. Better classified as Cypress due to lacking Tupelo (FNAI Natural Community Guide 2010 and Kawula and Redner 2018)).
- Bays and Estuaries – Originally classified as Marine and Estuarine Mineral Based by FNAI. Better classified as Bays and Estuaries Unconsolidated Substrate.
- Marl Prairie – Originally classified as Prairies and Bogs by FNAI. It is better classified as Marl Prairie. (FNAI Natural Community Guide 2010).

The habitats within the GHOTE are classified as follows:

- Hardwood Hammock
- Wet Flatwoods
- Freshwater Forested Wetlands
- Cypress
- Gades Marsh
- Marl Prairie
- Bays and Estuaries
- Salt Marsh
- Mangrove Swamps
- Altered Landcover

Hardwood Hammock (0.14%)

This community encompasses approximately 15 acres, subclassified as rockland and maritime hammocks.

In the GHOTE, the hardwood hammock community is represented by a couple of small rockland hammock islands intermixed with the cypress strands on the north side of the property and a few maritime hammocks that are surrounded by the mangroves and salt marshes on the south side of the property. Several islands of rockland hammock can also be found within the matrix of cypress and freshwater forested wetlands, but these smaller islands have not been quantified. Typical plants include cabbage palm (*Sabal palmetto*), royal palm (*Roystonea regia*), swamp laurel oak (*Quercus laurifolia*), live oak (*Quercus virginiana*), and gumbo limbo (*Bursera simaruba*). Hardwood hammocks have a sparse understory due to over-story shading. The typical understory vegetation includes wax myrtle (*Myrica cerifera*), marlberry (*Ardisia escallonioides)*, white stopper (*Eugenia axillaris*), wild coffee (*Psychotria nervosa*), beautyberry (*Callicarpa americana*), Simpson's stopper (*Myrcianthes fragrans*), Jamaican capertree (*Capparis cynophallophora*), Wingleaf Soapberry (*Sapindus saponaria*), gallberry (*Ilex glabra*), hog plum (*Ximenia americana*), common persimmon (*Diospyros virginiana*), Florida Bully (*Sideroxylon reclinatum*), myrsine (*Rapanea punctata*), and saw palmetto (*Serenoa repens*). Epiphytes, including orchids, ferns, and bromeliads can be found on larger trees. Nuisance and invasive species presence are minimal in this community.

Rockland hammocks are ranked second most endangered both statewide and globally (G2/S2), and maritime hammocks are ranked as globally vulnerable (G3/S2) (FNAI, 2010). Rockland hammocks have a very restricted range and are at high risk of extinction due to this. Maritime hammocks have a moderate range globally but are vulnerable due to a widespread decline.

Wet Flatwoods (2%)

This community encompasses approximately 180 acres and is found in the northern portion of the GHOTE intermixed with marl prairie and freshwater forested wetland communities.

In the GHOTE, the wet flatwoods are characterized by a moderate canopy of slash pine with an understory of low to dense shrub coverage and dense groundcover vegetation. Cabbage palm is also common in the canopy. Typical understory vegetation includes dahoon holly (*Ilex cassine*), cabbage palm, and wax myrtle, myrsine, and Carolina willow (*Salix caroliniana*). Small inclusions of saw palmetto are scattered in slightly elevated spots. Other plants associated with this habitat type include sawgrass (*Cladium mariscus jamaicense*), iris (*iris sp.)*, swamp fern (*Blechnum serrulatum)*, and gulfdune paspalum ((*Paspalum monostachyum*). The increase in shrub density in the wet flatwoods is linked to the exclusion of fire. Management of wet flatwoods in the GHOTE will include the appropriate prescribed fire rotation. The community is in fair condition with varying coverage of nuisance and invasive species.

Wet flatwoods provide valuable habitats for various wildlife, including Florida panthers, black bears, fox squirrels, white-tailed deer, tree-cavity-dependent species, and tree-nesting species. FNAI ranks wet flatwoods as apparently secure in its range globally and statewide (G4/S4).

Freshwater Forested Wetlands (5%)

The freshwater forested wetland community in the GHOTE is subclassified as mixed wetland hardwood, freshwater tidal swamp, and mixed hardwood-coniferous.

Mixed wetland hardwood encompasses approximately 97 acres and occurs as patches between the marl prairie and wet flatwoods communities in the northern portion of GHOTE. The canopy is dominated by cabbage palm, red maple *(Acer rubrum*), swamp bay (*Persea palustris*), and laurel oak. Cypress is also present but represents a relatively inconspicuous part of the flora. Typical understory vegetation includes wax myrtle, myrsine, Carolina willow, wild coffee, swamp fern, sawgrass (*Cladium jamaicense*), inundated beaksedge (*Rhynchospora inundata*), rush fuirena (*Fuirena scirpoidea*), saltmarsh umbrella-sedge (*Fuirena breviseta*), musky mint (*Hyptis alata*), arrowhead (*Sagittaria lancifolia*), and sand cordgrass (*Spartina bakeri*).

The freshwater tidal swamp community in the GHOTE is approximately 47 acres and is characterized by a mixture of freshwater and saltwater tolerant species. This area once represented a healthy mixed hardwood-coniferous swamp strand that extended from the Big Cypress National Preserve. The remnant community has been severed from the original mixed hardwood-coniferous swamp system by a canal and a series of ditches and berms (furrows). This area has since been recruited by the native vegetation and developed into a freshwater tidal swamp due to the influx of freshwater discharge from the adjacent canal and pulses of saltwater in response to tides. The canopy and sub-canopy contain red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*), buttonwood (Conocarpus erectus), and pond apple (Annona glabra). Groundcover vegetation includes swamp-lily (*Crinum americanum*), beaksedge (*Rhynchospora sp.),* needlegrass rush *(Juncus roemerianus*), and leather fern (*Acrostichum sp.*). Because of the disturbance from the remnant furrows and ditches from the previous industrial activities, nuisance and invasive species, including Australian pine, Brazilian pepper, and cattail, are prominent in the vegetation structure but are expected to be eradicated, and the natural floodplain swamp flora is expected to be restored with the implementation of the vegetation management program.

The mixed hardwood-coniferous swamp community encompasses approximately 424 acres and occurs between the marl prairies and cypress strands. Cabbage palm is prominent in the canopy, likely due to hydrologic alterations. Various canopy species, including cypress, pond apple, Carolina willow, swamp bay, dahoon holly, swamp laurel oak, and pop ash are found in this community. Typical understory vegetation includes buttonbush (*Cephalanthus occidentalis*), wax myrtle, swamp fern, sawgrass (*Cladium jamaicense*), beaksedge (*Rhynchospora sp.),* cattail (Typha sp.), sawgrass, pickerelweed (*Pontederia cordata*), alligator flag (*Thalia geniculata*), big floating heart (*Nymphoides aquatica*), duckweed (*Lemna sp*.), bladderwort (*Utricularia sp*.), and arrowhead.

The coverage of nuisance and invasive species in the freshwater forested wetlands within the GHOTE varies. FNAI ranks hydric hammocks and freshwater tidal swamps as apparently secure in their range globally and statewide (G4/S4). Mixed hardwood-coniferous swamps or canopied swamps are ranked as vulnerable globally and statewide (G3/S3) due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

Cypress 7%)

This community is subclassified as dome and strand swamps and encompasses approximately 732 acres.

Dome swamps in the GHOTE are scattered over the marl prairies and dominated by cypress, red maple, dahoon holly, pop ash (*Fraxinus caroliniana*), and pond apple (*Annona glabra*), with sawgrass, alligator flag, maidencane (*Hymenachne hemitomon*), arrowhead, and pickerelweed in the center. Other common plants include swamp bay, sweetbay, chain fern (Woodwardia sp.), floating heart, wild pine (*Tillandsia sp.*), royal fern (*Osmunda regalis*), Carolina willow, wax myrtle, orchids (Encyclia sp. and Epidendrum sp.), St. John's-wort, Mexican primrose willow (*Ludwigia octovalvis*), Virginia willow (*Itea virginica*), and swamp dogwood (*Cornus foemina*), and buttonbush.

The strand swamp is part of the elongated depressional strand that extends from Fakahatchee State Park. This community is represented by a closed canopy cypress-dominated wetland. Some remnant tram roads extending into the strand have become overground with hardwoods, forming artificial linear hammocks. Cabbage palms are also increasingly spreading in the strand due to the alterations in the hydrology. Maple is prominent in the understory, particularly in the transitional areas. Other variable woody understory include pond apple, swamp laurel oak, cabbage palm, strangler fig, swamp bay, sweet bay, Carolina willow, and buttonbush. The groundcover vegetation includes string-lily, giant leather fern, swamp fern (*Telmatoblechnum serrulatum*), royal fern, primrose willow (*Ludwigia sp.*), smartweed (*Polygonum sp.*), and sawgrass.

The cypress community is in fair condition with varying coverage of nuisance and invasive species. Dome Swamps are ranked statewide and globally as apparently secure (G4/S4), though it may be quite rare in parts of its range, especially at the periphery. Strand swamps are ranked the second most endangered level statewide and globally (G2/S2).

Glades Marsh (8%)

In the GHOTE, the glades marsh community is approximately 887 acres. It grades into the marl prairie, cypress strand, and saltmarsh communities. An old tram bed that severs the marl prairie habitat and the glades marsh restricts the hydrological connection between the marl prairie habitat and the glades marsh communities.

The glades marsh community is dominated by groundcover vegetation, including sawgrass, sand cordgrass, arrowhead, cattail, needlegrass rush, maidencane, musky mint, fireflag, pickerelweed, and iris sp.

Glades marshes are ranked as vulnerable statewide and globally (G3/S3).

Bays and Estuaries (10%)

The Bays and Estuaries community in the GHOTE encompasses 1,081 acres and is characterized by unconsolidated substrates and open water bays.

The unconsolidated substrate consists of unvegetated, open areas of mineral-based substrate surrounded by mangroves. This open-water habitat is underlain primarily by marl or very fine sand and silt/clay. This bottom provides habitat for various benthic invertebrates. When exposed during low water levels, these areas are used extensively by shore and wading birds as feeding and loafing areas. Included among the unconsolidated substrates are a few swamp lakes of varying depths. These are likely manmade features associated with the construction of adjacent roads. Although small, these areas provide refuge for American alligator (*Alligator mississippiensis*), river otter (*Lontra canadensis*), bottom-feeding fish, and various turtle and frog species. They also provide nesting and feeding habitats for black-crowned night herons (*Nycticorax nycticorax*), wood storks (*Mycteria americana*), purple gallinules (*Porphyrula martinica*), egrets, herons, and ibis.

The open water bay consists of an expansive marine bottom. These areas consist of widely unvegetated substrates with occasional pockets of submerged vegetation. Seagrass and algae in the open water bay provide shelter to numerous marine organisms, supporting a wide variety of commercially and recreationally important fish, crustaceans, and mollusks. Live bottom reefs of oysters may be scattered throughout. The GHOTE bay community is also very important to the federally threatened smalltooth sawfish (*Pristis pectinata*) and the endangered manatee.

Bays and Estuaries are ranked statewide and globally as secure (G5/S5).

Marl Prairie (16%)

In the GHOTE, this community encompasses approximately 1,771 acres.

The marl prairie community is dominated by groundcover vegetation intermixed with hammocks, cypress, and freshwater forested communities. The canopy is open with occasional occurrences of cabbage palm, cypress, dahoon holly, swamp bay, pop ash, laurel oak, and red maple. The understory is characterized by low to dense shrub coverage indicative of hydrologic alteration and fire exclusion. The sub-canopy vegetation is a mix of scattered to dense cabbage palm, cypress, wax myrtle, buckthorn, willow, red maple, saffron plum *(Sideroxylon celastrinum*), swamp dogwood (*Cornus foemina*), false-willow (*Baccharis angustifolia*), wild coffee, myrsine, and buttonbush. Dense pockets of nuisance and invasive shrub species dominate in more disturbed areas. The ground cover consists of gulfdune paspalum, sawgrass, inundated beaksedge, saltmarsh umbrella-sedge, rush fuirena, arrowhead, swamp fern, and sawgrass.

The marl prairie community is in poor condition due to the presence of dense shrubs and a high concentration of nuisance and invasive species. Signatures from the 1940s aerial photographs suggest that the marl prairie community within the GHOTE was used for agriculture. Nuisance and invasive species in this community range from scattered in less disturbed areas to monocultures in highly disturbed areas. The density of shrub species is expected to decrease, and the natural prairie flora restored with the implementation of the prescribed fire program. Manual

manipulation, such as mechanical and herbicide treatment, might be required in dense areas to restore the natural plant coverage in this community.

Prairies provide valuable habitat for white-tailed deer and numerous bird species. Management of the prairie system includes the appropriate application of prescribed fire, treatment of non-native invasive plant species, and mechanical treatments as needed.

Marl prairies are ranked as vulnerable statewide and globally (G3/S3).

Estuarine Mangrove Swamp (26%)

The mangrove community in the GHOTE encompasses approximately 2,886 acres of its southern boundary. Red and black mangroves dominate this community. Buttonwood is occasionally present. Within the mangrove are a few shell mounds high enough to support the maritime hammock. Once limited to the property's southern edge, the mangrove community has noticeably been migrating northward since the drainage canals and the construction of US 41 have reduced the freshwater pressure, allowing the tides to transport and distribute mangrove propagules farther north. Mangrove tree heights vary noticeably throughout the property, likely due to reoccurring loss of biomass associated with frequent storm events and hurricanes. The understory is generally open where tree heights have reached canopy stature. Saltmarsh species are occasionally found in the groundcover, particularly along the northern edge of the mangroves where the natural saltmarsh community is being displaced.

The mangrove swamps are of significant value to the estuarine system. The mangroves serve as protected habitats for nursery-stage fish, crustaceans, and shellfish and provide important habitats for nesting and roosting colonial water birds. The mangrove community in the GHOTE is also home to rare and endangered orchids.

Nuisance and invasive species coverage in the mangrove swamp is minimal. The mangrove swamp community is ranked as secure globally and apparently secure statewide (G5/S4).

Estuarine Salt Marsh (26%)

The salt marsh community is approximately 2,922 acres and represents the dominant vegetation community in the GHOTE. It is a brackish system and is periodically inundated at the higher tides and during storm events. The salt marsh grades into the mangrove swamp, forming overlapping zones where red mangrove and buttonwood become increasingly frequent. The canopy and sub-canopy are open, which is typical of an herbaceous community. Red mangroves are occasionally present within the salt marsh because of the landward progression of the mangrove infringement. The vegetation in the salt marsh is dominated by needlegrass rush (*Juncus roemerianus*), cattail, salt marsh cordgrass (*Spartina alterniflora*), and salt grass (*Distichlis spicata*).

These salt marshes are important feeding areas for many resident and migratory wading birds, waterfowl, raptors, and mammals. Limiting disturbance to vegetation in the salt marsh by limiting airboats and other vessels to designated trails and improving the hydrology is significant to maintaining this natural community type.

The salt marsh community is in good condition, with varying coverage of nuisance and invasive species. It is ranked globally and apparently secure statewide (G5/S4).

Altered Landcover Types (3%)

The altered landcover makes up approximately 10 acres of the GHOTE. These areas consist primarily of ditches, roads, and previously cleared areas bordering adjacent roads and dwellings. These areas will not be restored to their historic natural community but will be maintained for nuisance and invasive species in their altered states.

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Appendix C. Species List

Table 1. List of plants on the GHOTE and status. [a,*]

Scientific Name	Common Name	Listing Status
Acer rubrum	Red Maple	
Acmella repens	Oppositeleaf Spotflower	
Acoelorraphe wrightii	Paurotis Palm	ST
Acrostichum danaeifolium	Giant Leather Fern	
Albizia lebbeck	Lebbeck	non-native
Aletris lutea	Yellow Colicroot	
Alysicarpus vaginalis	White Moneywort	non-native
Amaranthus australis	Southern Amaranth	
Ambrosia artemisiifolia	Common Ragweed	
Ammannia latifolia	Pink Redstem	
Anemia adiantifolia	Pineland Fern	
Annona glabra	Pond Apple	
Ardisia escallonioides	Marlberry	
Asclepias incarnata	Swamp Milkweed	
Asclepias lanceolata	Fewflower Milkweed	
Asclepias longifolia	Longleaf Milkweed	
Asemeia grandiflora	Showy Milkwort	
Asparagus aethiopicus	Sprenger's Asparagus	non-native
Baccharis glomeruliflora	Silverling	
Baccharis halimifolia	Groundsel Tree	
Bacopa caroliniana	Carolina Water-Hyssop	
Bacopa monnieri	Herb-Of-Grace	
Berchemia scandens	Supplejack	
Bidens alba	White Beggarticks	
Boehmeria cylindrica	False Nettle	
Boltonia diffusa	Smallhead Doll's Daisy	
Buchnera floridana	Florida Bluehearts	
Bursera simaruba	Gumbo Limbo	
Campyloneurum phyllitidis	Long Strapfern	
Carex gigantea	Giant Sedge	
Cassytha filiformis	Love Vine	
Casuarina equisetifolia	Australian Pine	non-native
Casuarina glauca	Swamp Sheoak	non-native
Centella asiatica	Spadeleaf	
Centella erecta	American Coinwort	
Cephalanthus occidentalis	Buttonbush	
Cheiroglossa palmata	Hand Fern	

Table 1 (Continued). List of plants on the GHOTE and status. [a,*]

Scientific Name	Common Name	Listing Status
Chrysobalanus icaco	Cocoplum	
Cirsium horridulum	Bristle Thistle	
Citrus sp.	Citrus	
Cladium mariscus jamaicense	Jamaica Swamp Sawgrass	
Coelorachis rugosa	Wrinkled Jointtail Grass	
Conoclinium coelestinum	Blue Mistflower	
Coreopsis leavenworthii	Leavenworth's Tickseed	
Cornus foemina	Swamp Dogwood	
Crinum americanum	Southern Swamp Lily	
Cyperaceae sp.	Sedges	
Cyperus ligularis	Swamp Flatsedge	
Cyperus surinamensis	Tropical Flatsedge	
Dalbergia ecastaphyllum	Coinvine	
Dendrophylax lindenii*	Ghost Orchid	SE
Dendrophylax porrectus	Needleroot Airplant Orchid	
Desmodium incanum	Creeping Beggarweed	non-native
Dichanthelium caerulescens	Blue Witchgrass	
Dichanthelium strigosum var. glabrescens	Hairless Witchgrass	
Diodia virginiana	Virginia Buttonweed	
Diospyros virginiana	Common Persimmon	
Distichlis spicata	Saltgrass	
Dyschoriste angusta	Pineland Twinflower	
Echinochloa paludigena	Florida Cockspur Grass	Native endemic
Echinochloa sp.	Barnyard Grass	
Eleocharis cellulosa	Gulf Coast Spikerush	
Eleocharis interstincta	Knotted Spikerush	
Encyclia tampensis	Florida Butterfly Orchid	
Epidendrum amphistomum	Big-Mouth Star Orchid	SE
Epidendrum rigidum	Stiff Flower Star Orchid	SE
Erigeron quercifolius	Daisy Fleabane, Oakleaf Fleabane	
Eryngium yuccifolium	Rattlesnake Master	
Erythrina herbacea	Coral Bean	
Eugenia axillaris	White Stopper	
Eupatorium capillifolium	Dogfennel	
Eupatorium leptophyllum	False Fennel	

Table 1 (Continued). List of plants on the GHOTE and status. [a,*]

Scientific Name	Common Name	Listing Status
Eupatorium mikanioides	Semaphore Thoroughwort	Native endemic
Eupatorium serotinum	Late Boneset, Lateflowering Thoroughwort	
Euploca polyphylla	Pineland Heliotrope	
Eustachys petraea	Pinewoods Fingergrass	
Evolvulus sericeus	Silky Evolvulus	
Ficus aurea	Florida Strangler Fig	
Fimbristylis cymosa	Hurricanegrass	
Fimbristylis sp.	Fringe Rush	
Flaveria linearis	Narrowleaf Yellowtops	
Fraxinus caroliniana	Carolina Ash	
Funastrum clausum	White Twinevine	
Helenium pinnatifidum	Southeastern Sneezeweed	
Hippocratea volubilis	Medicine Vine	
Hymenachne hemitomon	Maidencane	
Hypericum limosum	Coastalplain St. John's Wort	
Hypericum sp.	St. John'd Wort	
Hyptis alata	Musky Mint	
Ilex cassine	Dahoon Holly	
Ipomoea hederacea	Ivy-Leaved Morning-Glory	non-native
Ipomoea sagittata	Saltmarsh Morning-Glory	
Iva microcephala	Piedmont Marsh Elder	
Juncus biflorus	Large Grass-Leaved Rush	
Juncus megacephalus	Bighead Rush	
Juncus scirpoides	Needlepod Rush	
Justicia angusta	Everglades Water-Willow	
Kosteletzkya pentacarpos	Saltmarsh Mallow	
Laguncularia racemosa	White Mangrove	
Lantana camara	Common Lantana	non-native
Leucaena leucocephala	White Leadtree	non-native
Leucobryum albidum	White Moss	
*Linum carteri var. smallii**	Small's flax	SE
Lobelia glandulosa	Glade Lobelia	
Ludwigia microcarpa	Smallfruit Primrose-Willow	
Ludwigia octovalvis	Mexican Primrose-Willow	
Ludwigia peruviana	Peruvian Primrose-Willow	non-native
Ludwigia repens	Creeping Primrose-Willow	
Lycium carolinianum	Christmas Berry	
Magnolia virginiana	Sweetbay Magnolia	
Mangifera indica	Indian Mango	non-native
Melaleuca quinquenervia	Broad-Leaved Paperbark	non-native
Melanthera angustifolia	Everglades Squarestem	

Table 1 (Continued). List of plants on the GHOTE and status. [a,*]

Scientific Name	Common Name	Listing Status
Melanthera nivea	Snow Squarestem	
Melothria pendula	Creeping Cucumber	
Mikania scandens	Climbing Hempvine	
Mitreola petiolata	Lax Hornpod	
Mitreola sessilifolia	Swamp Hornpod	
Morella cerifera	Wax Myrtle	
Muhlenbergia sericea	Gulf Muhly	
Myrcianthes fragrans	Simpson's Stopper	ST
Myrsine cubana	Colicwood, Myrsine	
Nekemias arborea	Peppervine	
Nephrolepis brownii	Brown's Sword Fern	non-native
Nephrolepis cordifolia	Fishbone Fern, Tuberous Sword Fern	non-native
Nephrolepis exaltata	Southern Sword Fern	
Oenothera simulans	Southern Beeblossom	
Osmunda spectabilis	American Royal Fern	
Packera glabella	Butterweed	
Panicum repens	Torpedo Grass	non-native
Panicum virgatum	Switchgrass	
Parthenocissus quinquefolia	Virginia Creeper	
Passiflora pallida	Corkystem Passionvine	
Peperomia glabella*	Cypress peperomia	SE
Persea palustris	Swamp Bay	
Persicaria hydropiperoides	Swamp Smartweed	
Persicaria punctata	Dotted Knotweed	
Phlebodium aureum	Golden Polypody	
Phragmites australis	Common Reed	non-native
Phyla nodiflora	Turkey Tangle Frogfruit	
Phytolacca americana	American Pokeweed	
Pinus elliottii densa	South Florida Slash Pine	
Piriqueta cistoides	Pitted Stripeseed	
Pithecellobium unguis-cati	Catclaw Blackbead	
Pleopeltis michauxiana	Resurrection Fern	
Pluchea baccharis	Rosy Camphorweed	
Polygala balduinii	Baldwin's Milkwort	
Polygonum sp.	Knotweeds	
Polystachya concreta	Yellow Helmet Orchid	SE
Pontederia cordata	Pickerelweed	
Proserpinaca palustris	Marsh Mermaidweed	
*Prosthechea cochleate**	Florida clamshell orchid	SE
Psilotum nudum	Whisk Fern	
Psychotria nervosa	Shiny-Leaved Wild Coffee	

Table 1 (Continued). List of plants on the GHOTE and status. [a,*]

Scientific Name	Common Name	Listing Status
Psychotria nervosa	Wild Coffee	
Psychotria tenuifolia	Velvet-Leafed Wild Coffee	
Pteridium aquilinum var. pseudocaudatum	Tailed Bracken Fern	
Pteridium caudatum	Southern Brackenfern	
Quercus laurifolia	Swamp Laurel Oak	
Quercus minima	Dwarf Live Oak	
Quercus virginiana	Southern Live Oak	
Randia aculeata	White Indigoberry	
Rhizophora mangle	Red Mangrove	
Rhynchospora colorata	Whitetop Sedge	
Rhynchospora inundata	Narrowfruit Horned Beaksedge	
Rhynchospora microcarpa	Southern Beaksedge	
Rhynchospora miliacea	Millet Beaksedge	
Rhynchospora odorata	Fragrant Beaksedge	
Rhynchospora sp.	Beaksedges	
Richardia grandiflora	Largeflower Mexican Clover	non-native
Roystonea regia	Royal Palm	SE
Rubus trivialis	Southern Dewberry	
Ruellia blechum	Browne's Blechum	non-native
Ruellia caroliniensis	Carolina Ruellia	
Sabal palmetto	Cabbage Palmetto	
Sabatia calycina	Coastal Rose Gentian	
Sabatia stellaris	Marsh Pink	
Saccharum giganteum	Sugarcane Plumegrass	
Sagittaria lancifolia	Lanceleaf Arrowhead	
Salix caroliniana	Carolina Willow	
Samolus ebracteatus	Limewater Brookweed	
Sansevieria hyacinthoides	Mother-In-Law's Tongue	non-native
Sapindus saponaria	Wingleaf Soapberry	
Schinus terebinthifolia	Brazilian Pepper	non-native
Serenoa repens	Saw Palmetto	
Sesuvium portulacastrum	Sea Purslane	
Setaria magna	Giant Bristlegrass	
Setaria parviflora	Knotroot Bristlegrass	
Sideroxylon reclinatum	Florida Bully	
Sisyrinchium angustifolium	Narrow-Leaved Blue-Eyed Grass	
Sisyrinchium sp.	Blue-Eyed Grass	
Smilax bona-nox	Saw Greenbrier	
Smilax laurifolia	Laurel-Leaf Greenbrier	
Solanum donianum	Mullein Nightshade	ST
Solidago mexicana	Southern Seaside Goldenrod	

Table 1 (Continued). List of plants on the GHOTE and status. [a,*]

Scientific Name	Common Name	Listing Status
Spermacoce neoterminalis	Everglades Key False Buttonweed	Native endemic
Spermacoce verticillata	Shrubby False Buttonweed	non-*native*
Sporobolus bakeri	Sand Cordgrass	
Stenandrium dulce	Sweet Shaggytuft	
Stenotaphrum secundatum	Saint Augustine Grass	
Stillingia sylvatica	Queen's Delight	
Symphyotrichum carolinianum	Climbing Aster	
Symphyotrichum dumosum	Bushy Aster	
Syngonium	Arrow-Head Vines	non-native
Syngonium podophyllum	Goosefoot-Plant	non-native
Syzygium cumini	Java Plum	non-native
Taxodium ascendens	Pondcypress	
Taxodium distichum	Baldcypress	
Telmatoblechnum serrulatum	Toothed Midsorus Fern	
Teucrium canadense	American Germander	
Thalia geniculata	Alligator Flag	
Thelypteris interrupta	Swamp Shield-Fern	
Thelypteris palustris	Marsh Fern	
Thespesia populnea	Portia Tree	non-native
Tiedemannia filiformis	Water Cowbane	
Tillandsia balbisiana	Balbis' Airplant	ST
Tillandsia fasciculata	Cardinal Airplant	SE
Tillandsia paucifolia	Potbelly Airplant	
Tillandsia setacea	Southern Needleleaf Airplant	
Tillandsia usneoides	Spanish Moss	
Tillandsia utriculata	Giant Airplant	SE
Tillandsia variabilis	Leatherleaf Airplant	ST
Toxicodendron radicans	Eastern Poison Ivy	
Typha	Cattails	
Urena lobata	Caesar Weed	non-native
*Vanilla phaentha**	Leafy vanilla	SE
Vicia acutifolia	Fourleaf Vetch	
Vigna luteola	Hairypod Cowpea	
Vitis cinerea	Graybark Grape, Florida Grape	
Vitis rotundifolia	Muscadine Grapevine	
Vittaria lineata	Shoestring Fern	
Waltheria indica	Sleepy Morning	
Woodwardia virginica	Virginia Chainfern	
Ximenia americana	Hog Plum	
Zizaniopsis miliacea	Giant Cutgrass	

a. Key to abbreviations: Species listed by the State of Florida as State-designated Threatened (ST), State-designated Endangered (SE).
* Species likely to be present on or near the property based on habitat and species range models, but not observed.

Table 2. List of bird species utilizing the GHOTE area and status.[a,**]

Scientific Name	Common Name	Status
Accipiter cooperii	Cooper's Hawk	
Accipiter striatus	Sharp-shinned Hawk	
Actitis macularius	Spotted Sandpiper	
Aglaius phoeniceus	Red-winged Blackbird	
Aix sponsa	Wood duck	
Anas clypeata	Northern shoveler	
Anas crecca	Green-winged Teal	
Anas fulvigula	Mottled duck	
Anas platyrhynchos	Mallard	
Anhinga anhinga	Anhinga	
Anthus rubescens	American Pipit	
Aramus guarauna	Limpkin	
Archilochus colubris	Ruby-throated Hummingbird	
Ardea alba	Great Egret	
Ardea herodias	Great Blue Heron	
Ardea herodias occidentalis	Great White Heron	
Arenaria interpres	Ruddy Turnstone	
Aythya affinis	Lesser Scaup	
Baeolophus bicolor	Tufted Titmouse	
Bombycilla cedrorum	Cedar Waxwing	
Botaurus lentiginosus	American Bittern	
Bubo virginianus	Great Horned Owl	
Bubulcus ibis	Cattle Egret	
Buteo brachyurus	Short-tailed Hawk	
Buteo jamaicensis	Red-tailed Hawk	
Buteo lineatus	Red-shouldered Hawk	
Buteo platypterus	Broad-winged Hawk	
Butorides virescens	Green Heron	
Calidris alba	Sanderling	
Calidris alpina	Dunlin	
Calidris melanotos	Pectoral Sandpiper	
Calidris minutilla	Least Sandpiper	
Calidris pusilla	Semipalmated Sandpiper	
Caprimulgus carolinensis	Chuck-will's-widow	
Caprimulgus vociferus	Whip-poor-will	
Caracara cheriway	Crested Caracara	FT
Cardinalis cardinalis	Northern Cardinal	
Cathartes aura	Turkey Vulture	
Catharus fuscescens	Veery	
Catharus guttatus	Hermit Thrush	
Catharus minimus	Gray-cheeked Thrush	
Catharus ustulatus	Swainson's Thrush	

Table 2 (Continued). List of bird species utilizing the GHOTE area and status.[a,**]

Scientific Name	Common Name	Listing Status
Charadrius semipalmatus	Semipalmated Plover	
Charadrius vociferus	Killdeeer	
Chen caerulescens	Snow Goose	
Chlidonias niger	Black Tern	
Chordeiles minor	Common Nighthawk	
Circus cyaneus	Northern Harrier	
Cistothorus palustris	Marsh Wren	
Cistothorus platensis	Sedge Wren	
Coccyzus americanus	Yellow-billed Cuckoo	
Coccyzus minor	Mangrove Cuckoo	
Colaptes auratus	Northern Flicker	
Colinus virginianus	Northern Bobwhite	
Columba leucocephala	White-crowned Pigeon	ST
Columbina passerina	Common Ground Dove	
Coragys atratus	Black Vulture	
Corvus brachyrhynchos	American Crow	
Corvus ossifragus	Fish Crow	
Cyanocitta cristata	Blue Jay	
Dolichonyx oryzivorus	Bobolink	
Dryobates pubescens	Downy Woodpecker	
Dryocopus pileatus	Pileated Woodpecker	
Dumetella carolinensis	Gray Catbird	
Egretta caerulea	Little Blue Heron	ST
Egretta rufescens	Reddish Egret	ST
Egretta thula	Snowy Egret	
Egretta tricolor	Tricolored Heron	ST
Elanoides forficatus	Swallow-tailed Kite	
Eudocimus albus	White Ibis	
Falco columbarius	Merlin	
Falco peregrinus	Peregrine Falcon	
Falco sparverius	American Kestrel	
Fregata magnificens	Magnificent Frigatebird	
Fulca americana	American Coot	
Gallinago delicata	Wilson’s Snipe	
Gallinula galeata	Common Gallinule	
Gavia immer	Common Loon	
Geothlypis trichas	Common Yellowthroat	
Grus canadensis pratensis	Florida Sandhill Crane	ST
Haematopus palliatus	American Oystercatcher	ST
Haliaeetus leucocephalus	Bald Eagle	Eagle Act Protected

Table 2 (Continued). List of bird species utilizing the GHOTE area and status.[a,**]

Scientific Name	Common Name	Listing Status
Helmitheros vermivorum	Worm-eating Warbler	
Himantopus mexicanus	Black-necked Stilt	
Hirundo rustica	Barn Swallow	
Icterus spurius	Orchard Oriole	
Ixobrychus exilis	Least Bittern	
Lanius ludovicianus	Loggerhead Shrike	
Larus argentatus	Herring Gull	
Larus delawarensis	Ring-billed Gull	
Laterallus jamaicensis	Black Rail	FT
Leucophaeus atricilla	Laughing Gull	
Limnodromus sp.	Dowitcher	
Lophodytes cucullatus	Hooded Merganser	
Megaceryle alcyon	Belted Kingfisher	
Megascops asio	Eastern Screech-owl	
Melanerpes carolinus	Red-bellied Woodpecker	
Meleagris gallopavo	Wild Turkey	
Melospiza georgiana	Swamp Sparrow	
Melospiza melodia	Song Sparrow	
Mergus serrator	Red-breasted Merganser	
Mimus polyglottos	Northern Mockingbird	
Mniotilta varia	Black-and-white Warbler	
Molothrus ater	Brown-headed Cowbird	
Molothrus bonariensis	Shiny Cowbird	
Mycteria americana	Wood Stork	FT
Myiarchus crinitus	Great Crested Flycatcher	
Nannopterum auritum	Double-crested Cormorant	
Nyctanassa violacea	Yellow-crowned Night Heron	
Nycticoras nycticorax	Black-crowned Night Heron	
Pandion haliaetus	Osprey	
Parkesia motacilla	Louisiana Waterthrush	
Parkesia noveboracensis	Northern Waterthrush	
Passerculus sandwichensis	Savannah Sparrow	
Passerina ciris	Painted Bunting	
Passerina cyanea	Indigo Bunting	
Pavo cristatus	Indian Peafowl	Non-native
Pelecanus erythrorhynchos	American White Pelican	
Pelecanus occidentalis	Brown Pelican	
Peucaea aestivalis	Bachman's Sparrow	
Picoides borealis	Red-cockaded Woodpecker	FE
Picoides villosus	Hairy Woodpecker	
Pipilo erythrophthalmus	Eastern Towhee	

Table 2 (Continued). List of bird species utilizing the GHOTE area and status.[a,**]

Scientific Name	Common Name	Listing Status
Piranga olivacea	Scarlet Tanager	
Platalea ajaja	Roseate Spoonbill	ST
Plegadis falcinellus	Glossy Ibis	
Pluvialis squatarola	Black-bellied Plover	
Podilymbus podiceps	Pied-billed Grebe	
Polioptila caerulea	Blue-gray Gnatcatcher	
Porphyrio martinica	Purple Gallinule	
Porzana carolina	Sora	
Progne subis	Purple Martin	
Protonotaria citrea	Prothonotary Warbler	
Quiscalus major	Boat-tailed Grackle	
Quiscalus quiscula	Common Grackle	
Rallus elegans	King Rail	
Rallus longirostris	Clapper Rail	
Recurvirostra americana	American Avocet	
Regulus calendula	Ruby-crowned Kinglet	
Riparia riparia	Bank Swallow	
Rostrhamus sociabilis plumbeus	Snail Kite	FE
Rynchops niger	Black Skimmer	ST
Sayornis phoebe	Eastern Phoebe	
Scolopax minor	American Woodcock	
Seiurus aurocapillus	Ovenbird	
Setophaga americana	Northern Parula	
Setophaga caerulescens	Black-throated Blue Warbler	
Setophaga coronata	Yellow-rumped Warbler	
Setophaga discolor	Prairie Warbler	
Setophaga dominica	Yellow-throated Warbler	
Setophaga palmarum	Palm Warbler	
Setophaga petechia	Yellow Warbler	
Setophaga pinus	Pine Warbler	
Setophaga ruticilla	American Redstart	
Setophaga striata	Blackpoll Warbler	
Sialia sialis	Eastern Bluebird	
Sitta pusilla	Brown-headed Nuthatch	
Spatula discors	Blue-winged Teal	
Sphyrapicus varius	Yellow-bellied Sapsucker	
Spinus tristis	American Goldfinch	
Stelgidopteryx serripennis	Northern Rough-winged Swallow	
Sterna forsteri	Forster's Tern	
Sterna hirundo	Common Tern	
Sternula antillarum	Least Tern	ST
Streptopelia decaocto	Eurasian Collared Dove	Non-native

Table 2 (Continued). List of bird species utilizing the GHOTE area and status.[a,**]

Scientific Name	Common Name	Listing Status
Strix varia	Barred Owl	
Sturnella magna	Eastern Meadowlark	
Sturnus vulgaris	European Starling	Non-native
Tachycineta bicolor	Tree Swallow	
Thalasseus maximus	Royal Tern	
Thalasseus sandvicensis	Sandwich Tern	
Thryothorus ludovicianus	Carolina Wren	
Toxostoma rufum	Brown Thrasher	
Tringa flavipes	Lesser Yellowlegs	
Tringa melanoleuca	Greater Yellowlegs	
Tringa semipalmata	Willet	
Tringa solitaria	Solitary Sandpiper	
Troglodytes aedon	House Wren	
Troglodytes hiemalis	Winter Wren	
Turdus migratorius	American Robin	
Tyrannus dominicensis	Gray Kingbird	
Tyrannus tyrannus	Eastern Kingbird	
Tyrannus verticalis	Western Kingbird	
Tyto alba	Barn Owl	
Vermivora celata	Orange-crowned Warbler	
Vermivora cyonoptera	Blue-winged Warbler	
Vireo altiloquus	Black-whiskered Vireo	
Vireo griseus	White-eyed Vireo	
Vireo olivaceus	Red-eyed Vireo	
Vireo solitarius	Blue-headed Vireo	
Zenaida macroura	Mourning Dove	

a. Key to abbreviations: Species listed by the State of Florida as Federally-designated Endangered (FE), Federally-designated Threatened (FT).
** Species potentially present based on their known or predicted range, but not observed.

Table 3. List of mammals utilizing the GHOTE area and status.

Scientific Name	Common Name	Status
Blarina shermani	Sherman's Short-tailed Shrew	ST
Canis latrans	Coyote	Non-native
Cryptotis parva	Least Shrew	
Dasypus novemcinctus	Nine-banded Armadillo	Non-native
Didelphis virginiana	Virginia Opossum	
Eumops floridanus	Florida Bonneted Bat*	FE
Glaucomys volans	Southern Flying Squirrel	
Lontra canadensis	River Otter	
Lynx rufus	Bobcat	
Mephitis mephitis	Striped Skunk	
Mustela frenata olivacea	Southeastern Weasel	
Neovison vison evergladensis	Everglades Mink	ST
Odocoileous virginianus	White-tailed Deer	
Oryzomys palustris	Marsh Rice Rat	
Perimyotis subflavu	Tricolored Bat	
Peromyscus gossypinus	Cotton Mouse	
Procyon lotor	Raccoon	
Puma concolor	Florida Panther	FE
Sciurus carolinensis	Eastern Gray Squirrel	
Sciurus niger avicennia	Big Cypress Fox Squirrel	ST
Sigmodon hispidus	Hispid Cotton Rat	
Spilogale putorius	Eastern Spotted Skunk	
Sus scrofa	Wild Pig	Non-native
Sylvilagus floridanus	Eastern Cottontail Rabbit	
Sylvilagus palustris	Marsh Rabbit	
Trichechus manatus	West Indian Manatee	FT
Tursiops truncatus	Atlantic Bottle-nosed Dolphin	Marine Mammal Protection Act
Urocyon cinereoargenteus	Gray Fox	
Ursus americanus	American Black Bear	Bear Conservation Rule
Vulpes vulpes	Red Fox	Non-native

Table 4. List of reptiles utilizing the GHOTE area and status. [a]

Scientific Name	Common Name	Status
Agama picticauda	Peter's Rock Agama	Non-native
Agkistrodon piscivorus	Florida Cottonmouth	
Alligator mississippiensis	American Alligator	FT(S/A)
Anolis carolinensis	Green Anole	
Anolis equestris	Knight Anole	Non-native
Anolis sagrei	Brown Anole	Non-native
Apalone ferox	Florida Softshell	
Cemophora coccinea	Florida Scarlet Snake	
Chelydra serpentina osceola	Florida Snapping Turtle	
Coluber constrictor priapus	Southern Black Racer	
Crocodylus acutus	American Crocodile	FT
Crotalus adamanteus	Eastern Diamondback Rattlesnake	
Deirochelys reticularia chrysea	Florida Chicken Turtle	
Diadophis punctatus	Southern Ringneck Snake	
Drymarchon couperi	Eastern Indigo Snake**	FT
Farancia abacura	Eastern Mud Snake	
Hemidactylus garnotii	Indo-Pacific Gecko	Non-native
Heterodon platirhinos	Eastern Hognose Snake	
Igauana iguana	Green Iguana	Non-native
Kinosternon baurii	Striped Mud Turtle	
Lampropeltis elapsoides	Scarlet Kingsnake	
Lampropeltis getulus floridana	Florida Kingsnake	
Leiocephalus carinatus	Norhern Curly-tailed Lizard	Non-native
Malaclemys terrapin macrospilota	Ornate Diamondback Terrapin	Protected by FWC from being collected in the field without a permit
Micrurus fulvius	Eastern Coral Snake	
Nerodia clarkia compressicauda	Mangrove Watersnake	
Nerodia fasciata pictiventris	Florida Watersnake	
Neroida floridana	Florida Green Watersnake	
Neroida taxispilota	Brown Watersnake	

Table 4 (Continued). List of reptiles utilizing the GHOTE area and status. [a]

Scientific Name	Common Name	Listing Status
Opheodrys aestivus	Rough Green Snake	
Ophisaurus ventralis	Eastern Glass Lizard	
Pantherophis alleghaniensis	Eastern Ratsnake	
Pantherophis guttatus	Corn Snake	
Plestiodon inexpecatus	Southeastern Five-lined Skink	
Pseudemys nelsoni	Florida Redbelly Turtle	
Python bivittatus	Burmese Python	Non-native
Regina alleni	Striped Crayfish Snake	
Salvator merianae	Argentine Black-and-white Tegu	Non-native
Seminatrix pygaea cyclas	Southern Florida swamp snake	
Sistrurus miliarius barbouri	Dusky Pigmy Rattlesnake	
Storeria victa	Florida Brown Snake	
Terrapene carolina baurii	Florida Box Turtle	
Thamnophis saurita	Ribbon Snake	
Thamnophis sirtalis	Eastern Garter Snake	

a. Key to abbreviations: Species listed by the State of Florida as Federally-designated Threatened because of similarity of appearance (FT(S/A)).

Table 5. List of amphibians utilizing the GHOTE area and status.

Scientific Name	Common Name	Status
Acris gryllus dorsalis	Florida Cricket Frog	
Amphiuma means	Two-toed Amphiuma	
Anaxyrus quercicus	Oak Toad	
Anaxyrus terristris	Southern Toad	
Eleutherodactylus planirostris	Greenhouse Frog	Non-Native
Gastrophryne carolinensis	Eastern Narrowmouth Toad	
Hyla cinerea	Green Treefrog	
Hyla gratiosa	Barking Treefrog	
Hyla squirrella	Squirrel Treefrog	
Lithobates grylio	Pig Frog	
Lithobates sphenocephala	Southern leopard frog	
Notophthalmus viridescens piaropicola	Peninsula Newt	
Osteopilus septentrionalis	Cuban Treefrog	Non-Native
Pseudacris nigrita	Southern Chorus Frog	
Pseudacris ocularis	Little Grass Frog	
Siren lacertina	Greater Siren	

Table 6. List of fish utilizing the GHOTE area and status.

Scientific Name	Common Name	Status
Belonesox belizanus	Pike Topminnon	Non-native
Centropomus undecimalis	Common Snook	
Cyprindon variegatus	Sheepshead Minnow	
Eucinostomus harengulus	Tidewater Morjarra	
Eugerres plumieri	Striped Mojarra	
Lepisosteus platyrhincus	Florida Gar	
Mayaheros urophthalmus	Mayan Cichlid	Non-native
Menidia berylina	Inland Silverside	
Mugil sp.	Common Mullet	
Oreochromis sp.	Tilapias	Non-native
Poecilia latipinna	Sailfin Molly	
Pristis pectinata	Smalltooth Sawfish	FE
Rubricatochromis letourneuxi	Letourneux's Jewel Cichlid	Non-native

Table 7. List of invertebrates utilizing the GHOTE area and status.

Scientific Name	Common Name	Status
Aculops rhois	Poison Ivy Leaf Mite	
Anartia jatrophae	White Peacock Butterfly	
Anaxipha sp.	Florida Carpenter Ant	
Beatis sp.	Halloween Pennant	
Camponotus floridanus	Double-lined Doryodes	
Celithemis eponina	Seaside Dragonlet	
Culicidea sp.	Mosquito	
Doryodes bistrilis	Water Scavenger Beetle	
Erythrodiplax berenice	True Oyster	
Gymnandrosoma punctidiscanum	Brown Trigs	
Hentzia sp.	Blue-winged Olives	
Herpetogramma bipunctalis	Small Ground Cricket	
Hydrophilidae sp.	Pearl Moth	
Leptoglossus phyllopus	Crane Fly	
Leucania incognita	Long-jawed Jumping Spiders	
Leucauge argyra	Spotted Orbweavers	
Leucauge argyrobapta	Dotted Gymnandrosoma Moth	
Libellula needhami	Southern Beet Webworm Moth	
Mangora placida	Eastern Leat-footed Bug	

Table 7 (Continued). List of invertebrates utilizing the GHOTE area and status.

Scientific Name	Common Name	Status
Marisa cornuarietis	Wainscot	
Mecaphesa celer	Orchard Orb Weaver	
Melogena corona	Mabel Orchard Orbweaver	
Melolonthinae sp.	June Beetle	
Metamasius callizona	Needham's Skimmer	
Neonemobious sp.	Tuft-legged Orbweaver	
Neoscona sp.	Giant Ramshorn Snail	Non-native
Ostreidae sp.	Swift Crab Spider	
Paroxya clavuligera	American Crowned Conch	
Penestola bufalis	Mexican Bromeliad Weevil	Non-native
Penestola sp.	Olive-green Swamp Grasshopper	
Planorbella trivolvis	Black Penestola Moth	
Polygyra cereolus	Marsh Ramshorn Snail	
Pomacea maculata	Southern Flatcoil	
Pomacea paludosa	Island Apple Snail	Non-native
Romalea microtera	Florida Apple Snail	
Samea castellalis	Florida Lubber	
Samea muliplicalis	Stained-glass Moth	
Selenops submaculosus	Wall Crab Spider	
Stagmomantis floridensis	Larger Florida Mantis	
Tetragnatha laboriosa	Silver Long-jawed Orbweaver	
Tortricinae sp.	Tortricine Leafroller Moth	

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Western Everglades Restoration Project

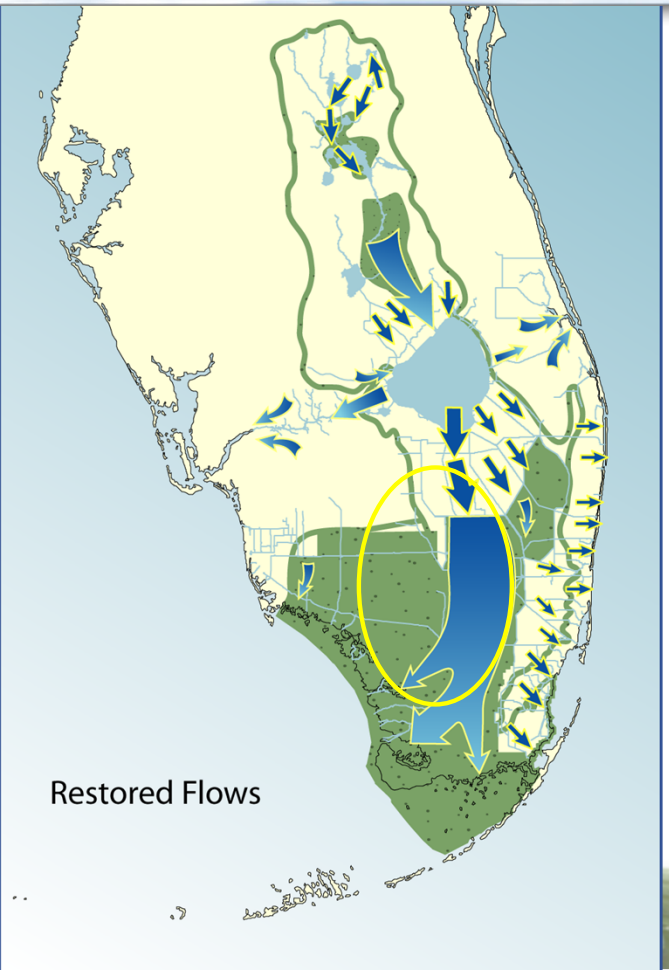
Governing Board

August 8, 2024

Jennifer Reynolds, Division Director
Ecosystem Restoration

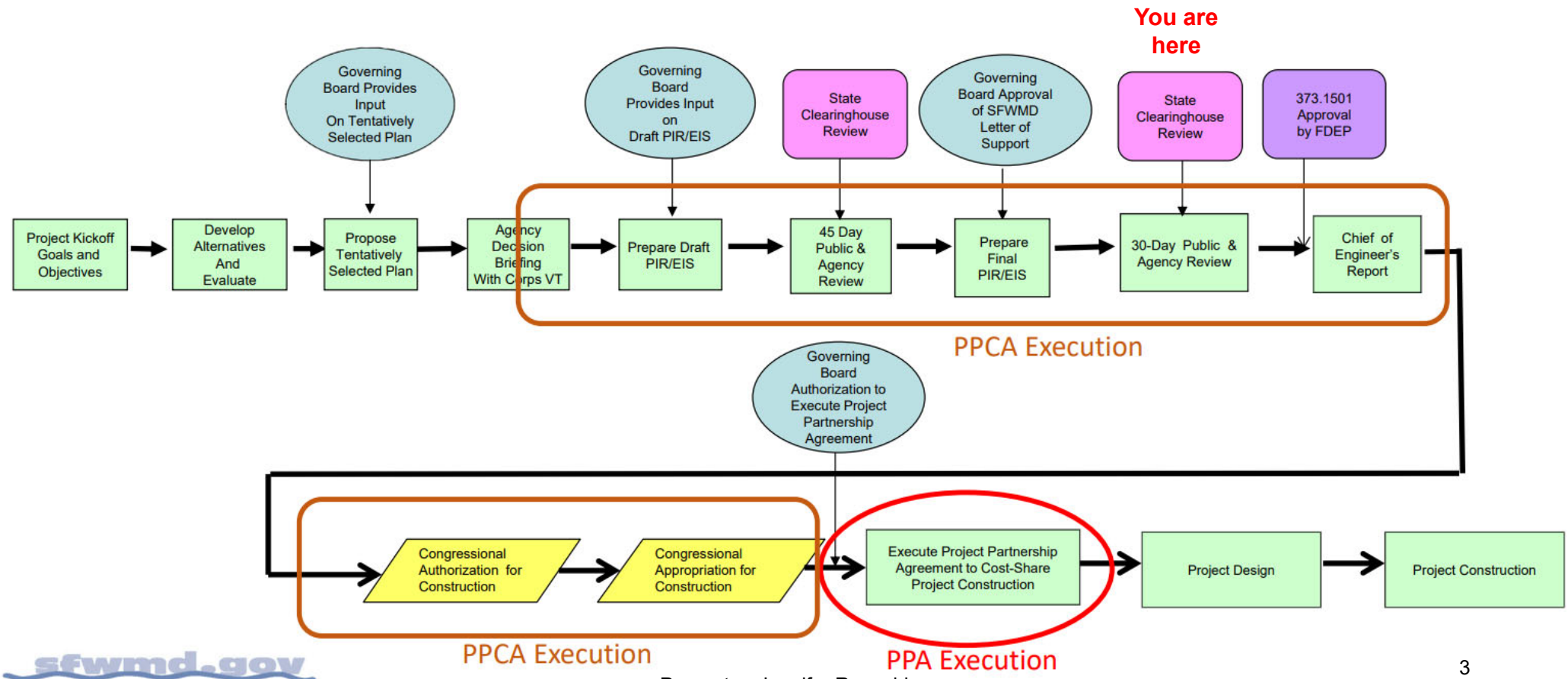
sfwmd.gov

Introduction



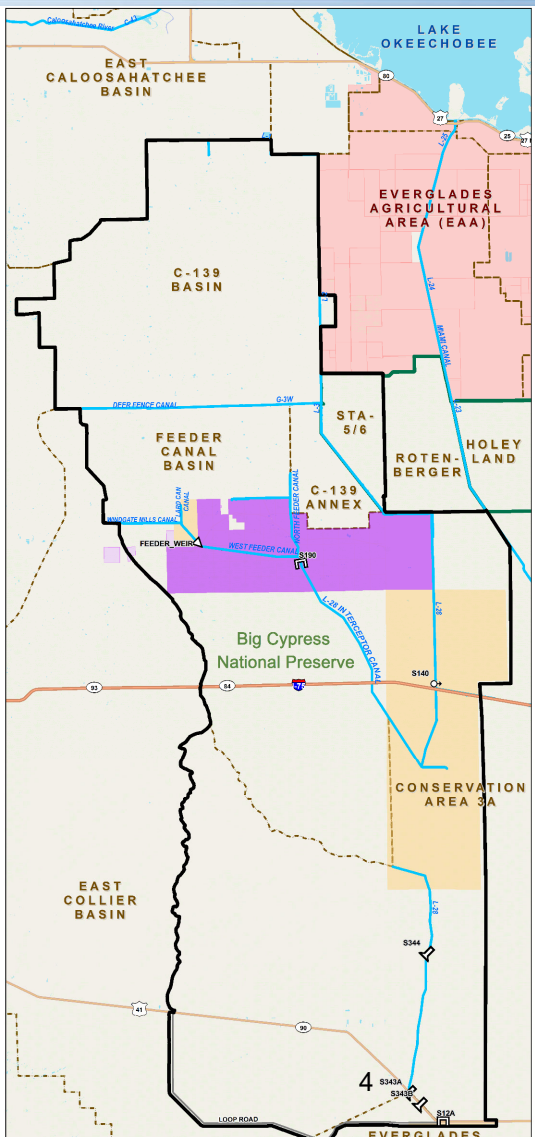
- A component of the Comprehensive Everglades Restoration Plan (CERP)
- Planning project
- Located on the western side of the central Everglades
- Restores flows on the western side of the Everglades, in Big Cypress National Preserve and Everglades National Park

CERP Planning Timeline



WERP Objectives

- Restore freshwater flows to improve seasonal hydroperiods and sheet flow
- Reestablish ecological connectivity and ecological resilience of the historic wetland/upland mosaic
- Restore water levels to reduce wildfires associated with altered hydrology
- Improve water quality conditions
- Promote system-wide resilience and improve system-wide operational flexibility



Seminole Tribe of Florida

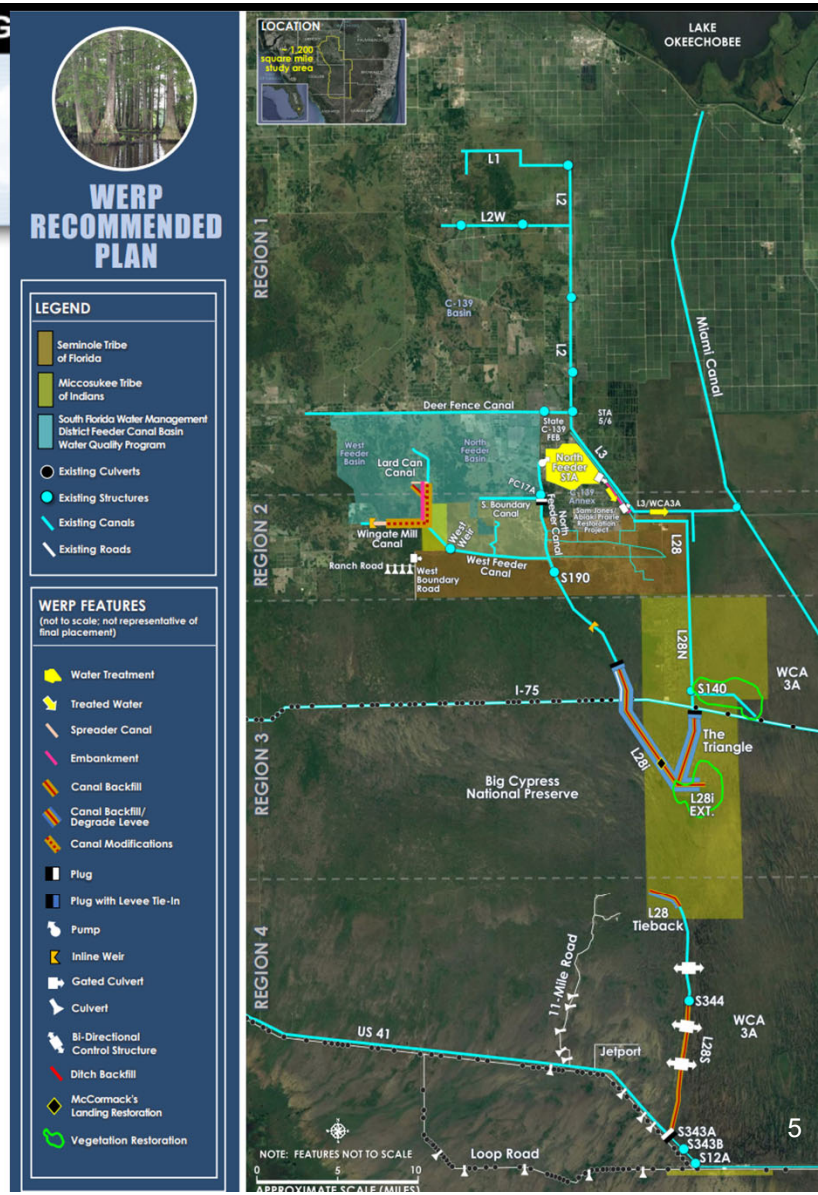
Miccosukee Tribe of Indians of Florida

Presenter: Jennifer Reynolds

Recommended Plan

ALTERNATIVE HYBRID NATURAL FLOW (HNFR)

- One Stormwater Treatment Area (roughly 3,600 acres) to improve water quality
- Canal Modifications
- Culverts & control structures
- Tree island and wetland vegetation restoration
- Weirs
- Not connected to Lake Okeechobee



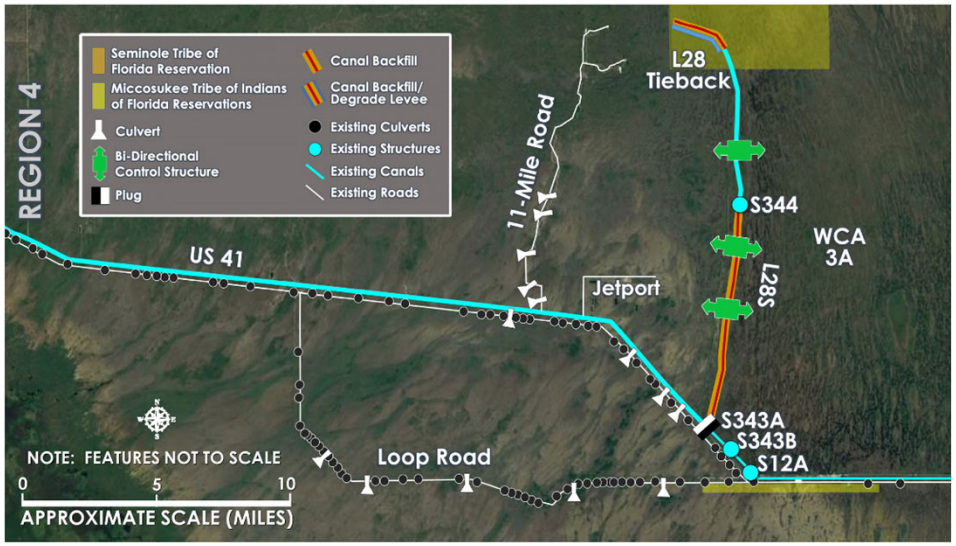
Presenter: Jennifer Reynolds

Expedited Project Features

REGION 4 CONVEYANCE FEATURES

Early benefits to southwest WCA-3A during high water

- Operable water control structures in L-28S
  - Under construction
- Conveyance under 11-mile road, US41 and Loop Road in Big Cypress National Preserve
  - In design



Presenter: Jennifer Reynolds

WERP Schedule – WRDA 2024

Milestone	Date
State and Agency Review of draft Chief's Report	July 23, 2024
Final Project Implementation Report/Environmental Impact Statement	**September 6, 2024**
Chief's Report Milestone (transmitted to Congress)	**September 30, 2024**

Resolution No. 2024 - 0811

A Resolution of the Governing Board of the South Florida Water Management District to declare support for the restoration of the Western Everglades and a commitment to continued engagement with landowners in the Feeder Canal Basin to ensure the successful implementation of the Western Everglades Restoration Project (WERP) in a manner that achieves the ecological benefits to Big Cypress National Preserve, Everglades National Park, and the Big Cypress Seminole Indian Reservation Native Area while not adversely flooding private property; and to develop solutions for water quality and retention through State efforts relating to activities outlined within the WERP Project Implementation Report / Environmental Impact Statement (PIR/EIS) and as part of the Feeder Canal Basin Water Quality Program; providing an effective date.

Presenter: Jennifer Reynolds

Resolution No. 2024 - 0811

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby supports the Western Everglades Restoration Plan for submittal and authorization in the Water Resources Development Act of 2024 with the understanding that the District will be the lead agency for design, construction, and implementation of the project components.

Section 2. The Governing Board of the South Florida Water Management District hereby commits the District to collaborate with the Seminole Tribe of Florida, the Miccosukee Tribe of Indians, and all landowners in the Feeder Basins to ensure WERP is implemented and operated in a way that achieves the project benefits and avoids adverse hydrologic impacts to private property.

Section 3. The District will collaboratively develop solutions for water quality and quantity management within the Feeder Canal Basins and implement canal modifications to the Wingate Mill and Lard Can Canals instead of installing a plug or backfilling the canals. Furthermore, the District will not use eminent domain to achieve any WERP objectives without Governing Board approval and using authority under State Law and funding from a State of Florida Budget.

Questions?

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Resolution No. 2024 - 0811

A Resolution of the Governing Board of the South Florida Water Management District to declare support for the restoration of the Western Everglades and a commitment to continued engagement with landowners in the Feeder Canal Basin to ensure the successful implementation of the Western Everglades Restoration Project (WERP) in a manner that achieves the ecological benefits to Big Cypress National Preserve, Everglades National Park, and the Big Cypress Seminole Indian Reservation Native Area while not adversely flooding private property; and to develop solutions for water quality and retention through State efforts relating to activities outlined within the WERP Project Implementation Report / Environmental Impact Statement (PIR/EIS) and as part of the Feeder Canal Basin Water Quality Program; providing an effective date.

WHEREAS, the South Florida Water Management District (District) is the local sponsor for the implementation of the Comprehensive Everglades Restoration Plan (CERP) which intends to restore the natural system including freshwater flow to the western Everglades; and

WHEREAS, the Governing Board is using this resolution to express its support for this project and to ensure a long-term District commitment to achieve the project objectives through the continued engagement and collaboration with interested parties during implementation; and

WHEREAS, WERP is a component of the CERP located in and north of Big Cypress National Preserve, and on the western side of the central Everglades and Everglades National Park, for the purpose of restoring freshwater flows to improve seasonal hydroperiods and sheet flow, reestablishing ecological connectivity and ecological resilience of the historic wetland/upland mosaic; restoring water levels to reduce wildfires associated with altered hydrology; improving water quality conditions; and promoting system-wide resilience and improved system-wide operational flexibility; and

WHEREAS, the WERP Recommended Plan includes features and canal modifications to redirect water into natural flow paths, but relies on future evaluations to determine the extent of impacts to private property; and

WHEREAS, the planning process for the development of the WERP PIR/EIS involved extensive coordination and input by the public and federal, state, tribal, and local resource management and regulatory agencies to ensure adherence with federal and state regulations, including those pertaining to water supply and flood control; and

Resolution No. 2024 - 0811

WHEREAS, the District acknowledges that backfilling or plugging the Wingate Mill or Lard Can Canals would cause impacts to the properties that depend on those canals for water management; and

WHEREAS, the District currently operates multiple projects in the C-139, C-139 Annex, and Feeder Basins; and the project operating manual is developed over time as the details of the design of the WERP components are developed; and the District, in partnership with the U.S. Army Corps of Engineers (Corps), will coordinate project design and development of the project operating manual with all affected interests and implement the operations of any future WERP features in accordance with the project operating manual; and

WHEREAS, the Corps retains all operational control of any water control features following the project operating manual and will not conduct any operations that cause flood conditions to private property without first obtaining the consent of the affected parties; and

WHEREAS, the State is implementing enhanced water quality improvement efforts in the Feeder Canal Basins through the Feeder Canal Basin Water Quality Program, which also supports implementation of water storage, flow, and attenuation projects to mitigate harmful highwater events.

NOW THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT:

Section 1. The Governing Board of the South Florida Water Management District hereby supports the Western Everglades Restoration Plan for submittal and authorization in the Water Resources Development Act of 2024 with the understanding that the District will be the lead agency for design, construction, and implementation of the project components.

Section 2. The Governing Board of the South Florida Water Management District hereby commits the District to collaborate with the Seminole Tribe of Florida, the Miccosukee Tribe of Indians, and all landowners in the Feeder Basins to ensure WERP is implemented and operated in a way that achieves the project benefits and avoids adverse hydrologic impacts to private property.

Section 3. The District will collaboratively develop solutions for water quality and quantity management within the Feeder Canal Basins and implement canal modifications to the Wingate Mill and Lard Can Canals instead of installing a plug or backfilling the canals. Furthermore, the District will not use or request the federal government to use eminent domain to achieve any WERP objectives without Governing Board approval and using authority under state law and funding from a State of Florida Budget.

Green Heart of the Everglades Project

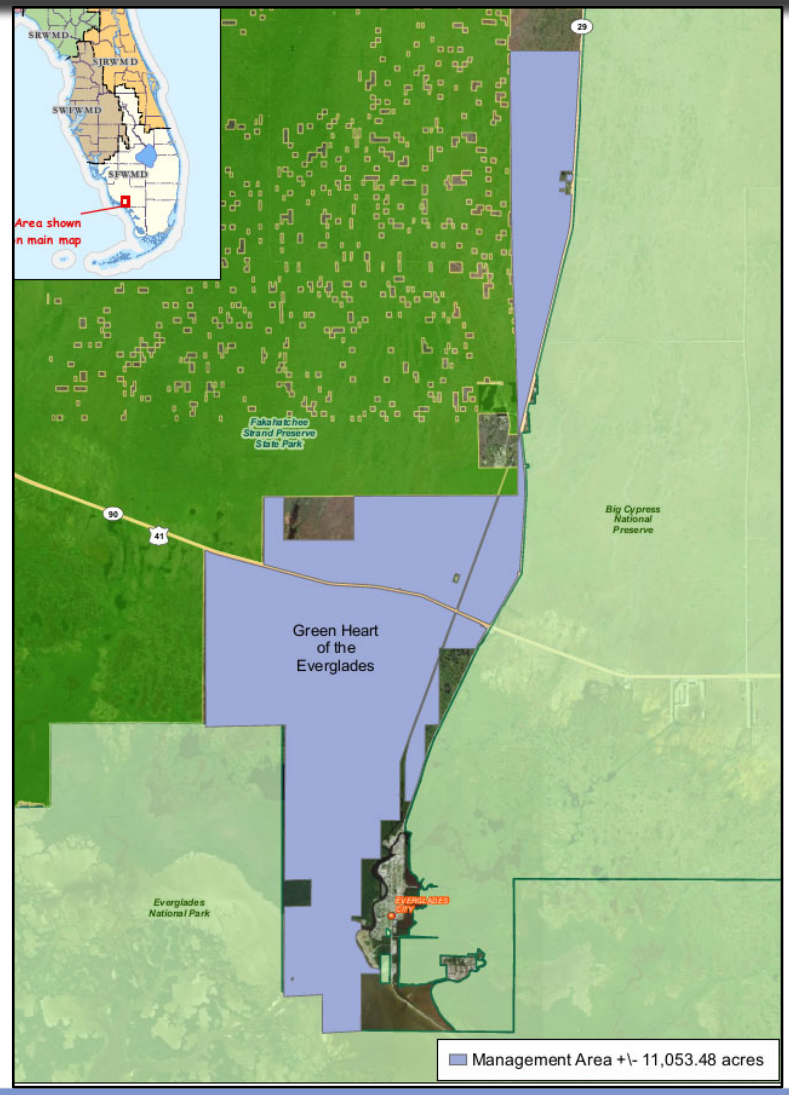
Rory Feeney
Land Resources Bureau Chief
Governing Board Meeting
August 8, 2024

Green Heart of the Everglades Project

Project Lands

- Approximately 11,053 acres

- Located near Everglades City, Everglades National Park, Big Cypress National Preserve, Ten Thousand Islands National Wildlife Refuge, Fakahatchee Strand Preserve State Park, Picayune Strand State Forest

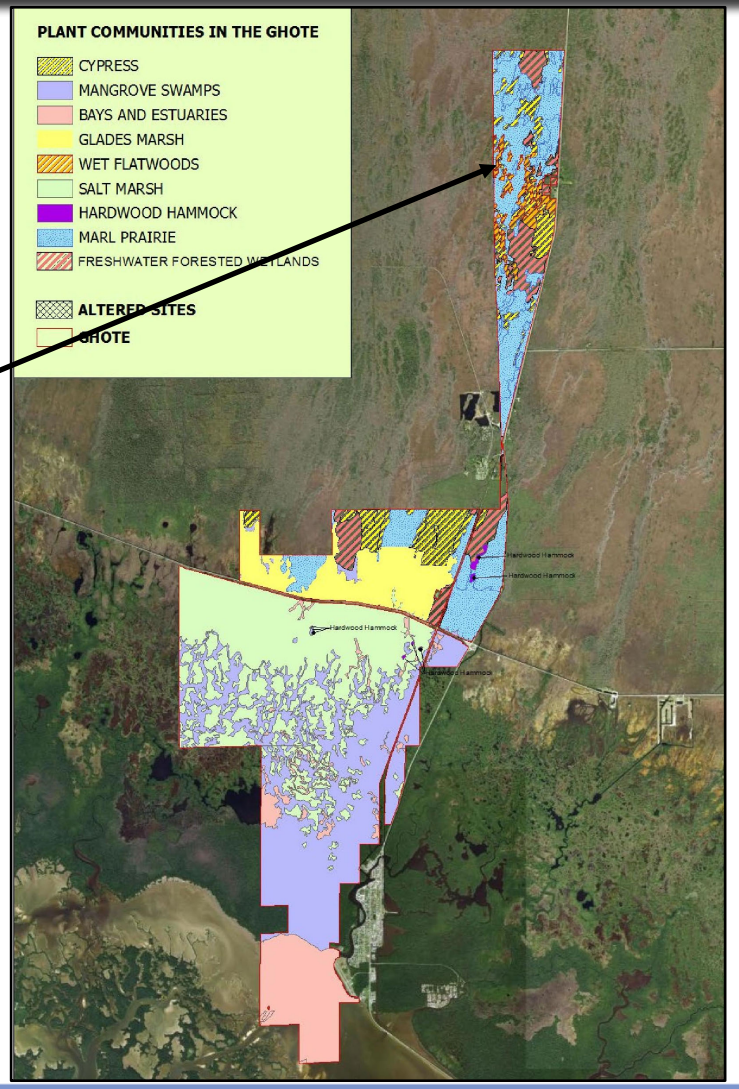


Green Heart of the Everglades Project

Project Lands

- There are nine distinct natural community types within the Green Heart of the Everglades including:

Cypress Forests

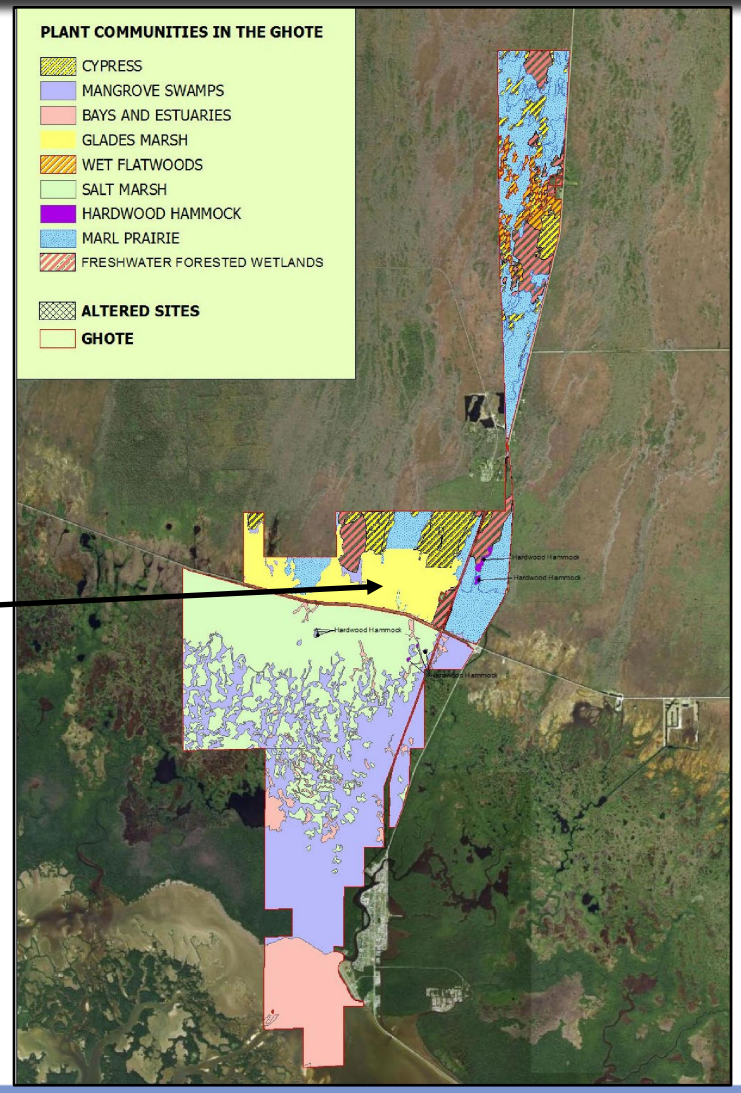


Green Heart of the Everglades Project

Project Lands

- There are nine distinct natural community types within the Green Heart of the Everglades including:

Wetland Prairies

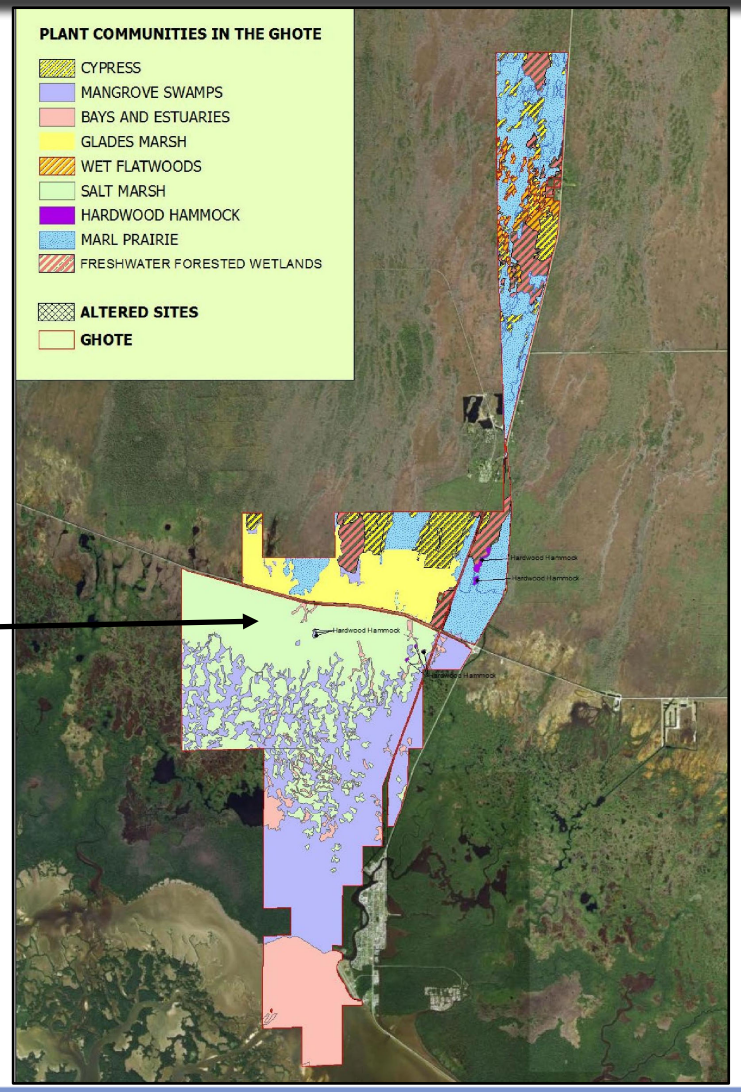


Green Heart of the Everglades Project

Project Lands

- There are nine distinct natural community types within the Green Heart of the Everglades including:

Coastal Marshes

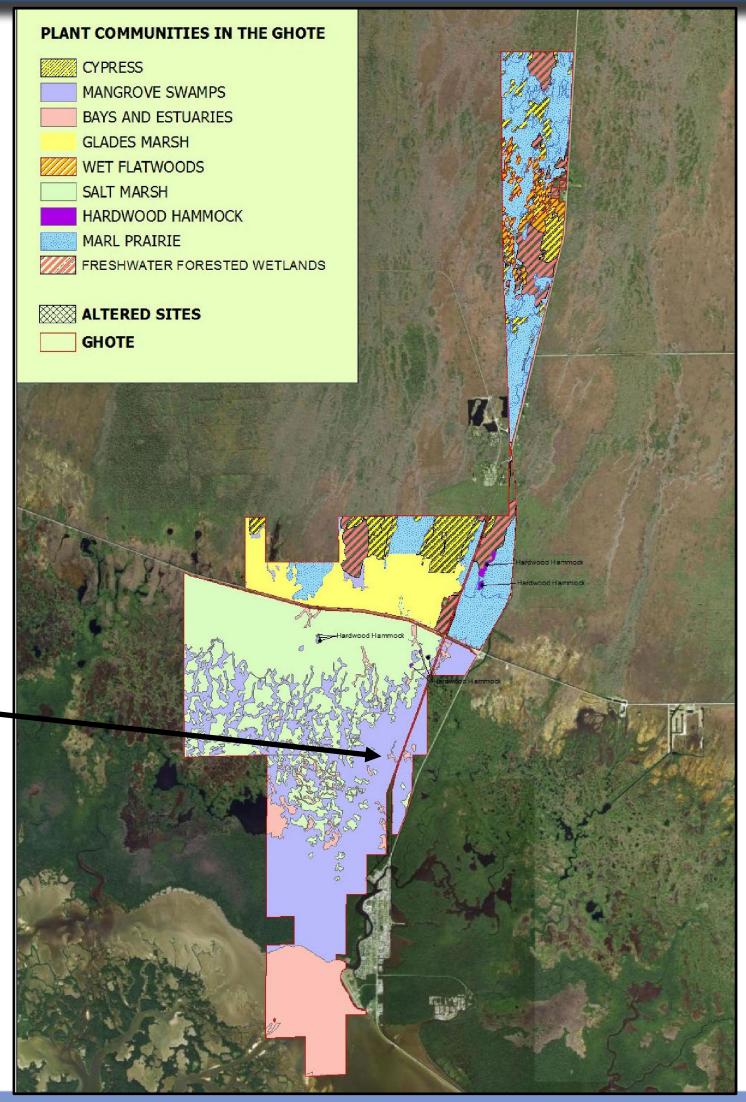


Green Heart of the Everglades Project

Project Lands

- There are nine distinct natural community types within the Green Heart of the Everglades including:

Mangrove Swamps



Green Heart of the Everglades Project

9 Federally Listed Animal Species

31 State Listed Animal Species

120 Florida State Listed Plant Species
- 36 Orchid Species

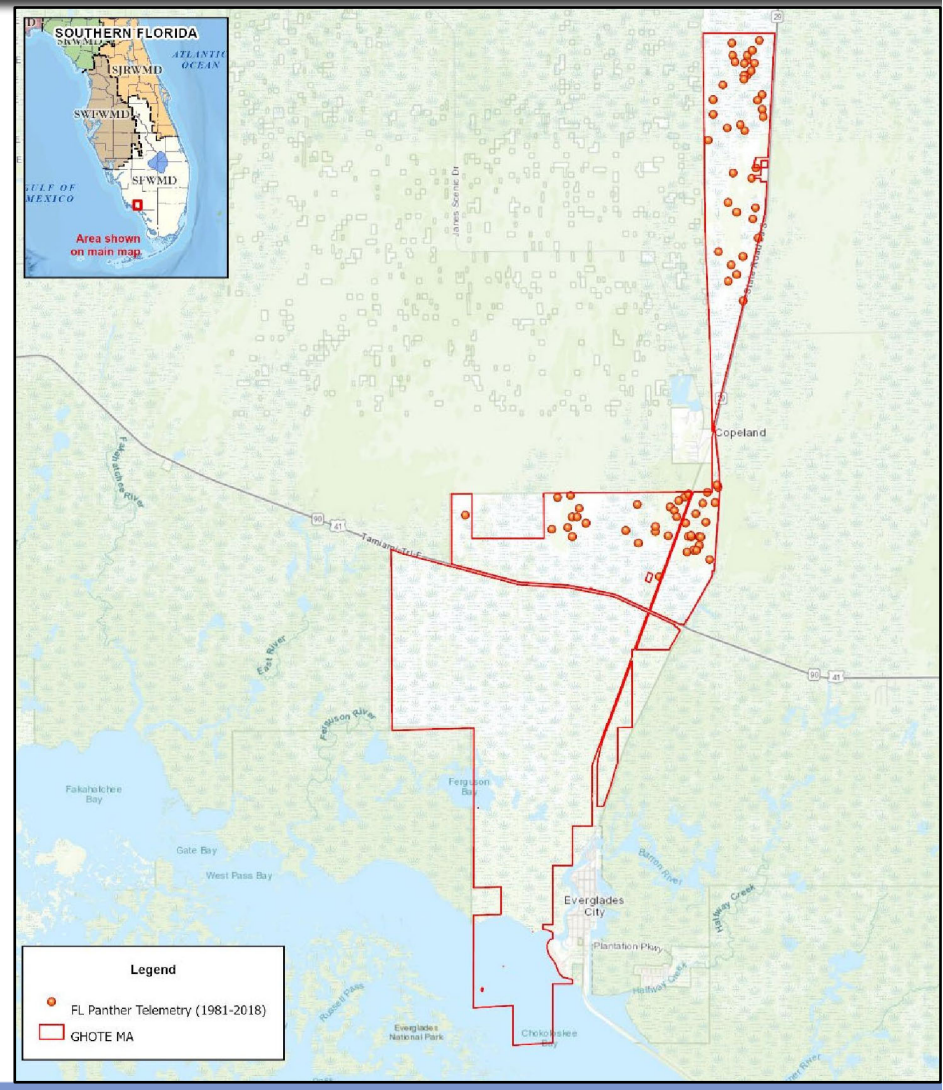
Snail Kite

Big Cypress Fox Squirrel

Ghost Orchid

Green Heart of the Everglades Project

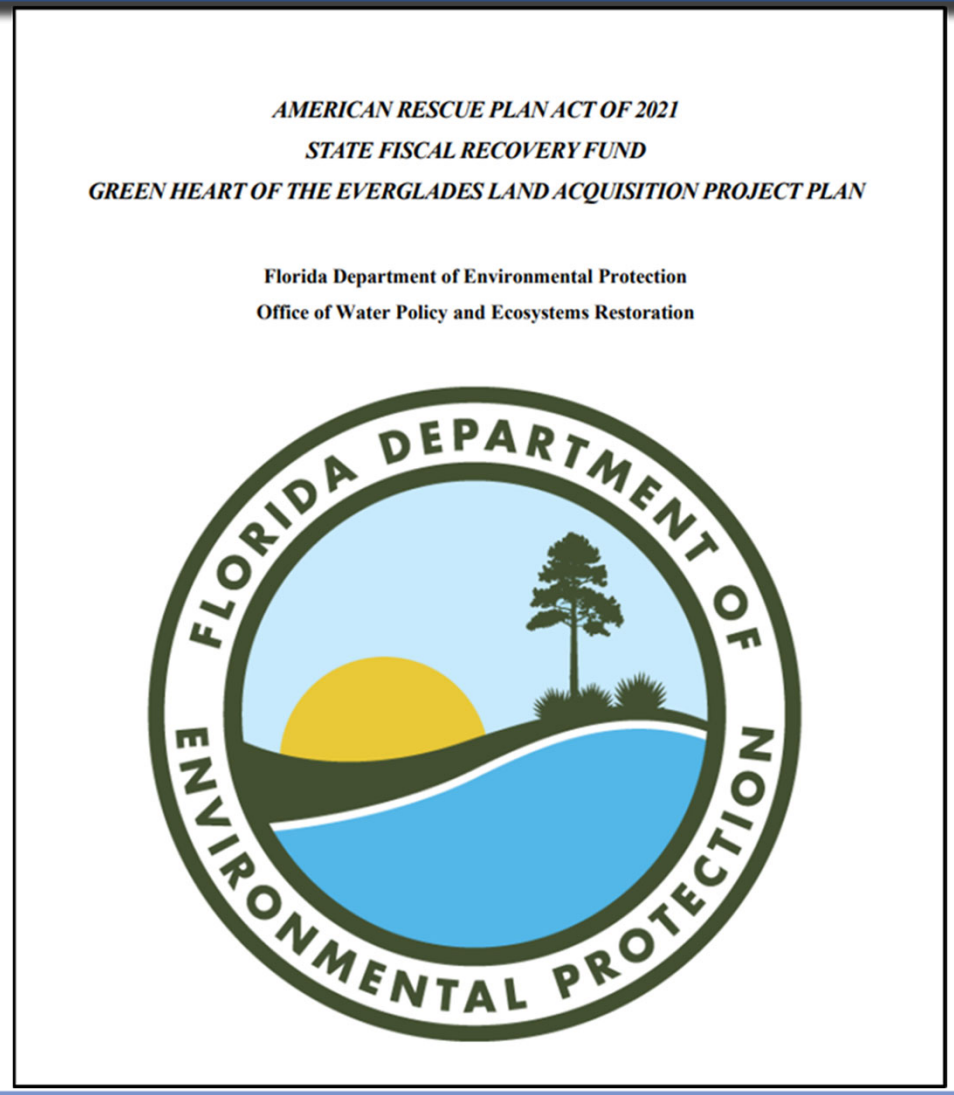
Florida Panther radiotelemetry collected within the Green Heart of the Everglades from 1981 - 2018



Green Heart of the Everglades Project

Land Acquisition Project Plan

- Florida Legislature 2022 Appropriation
- 11,053 Acres
- Purchase price $29,850,000
- Four different landowners
- Oil and mineral rights
- Enhance habitat connectivity
- Preserve exceptional Florida lands



AMERICAN RESCUE PLAN ACT OF 2021

STATE FISCAL RECOVERY FUND

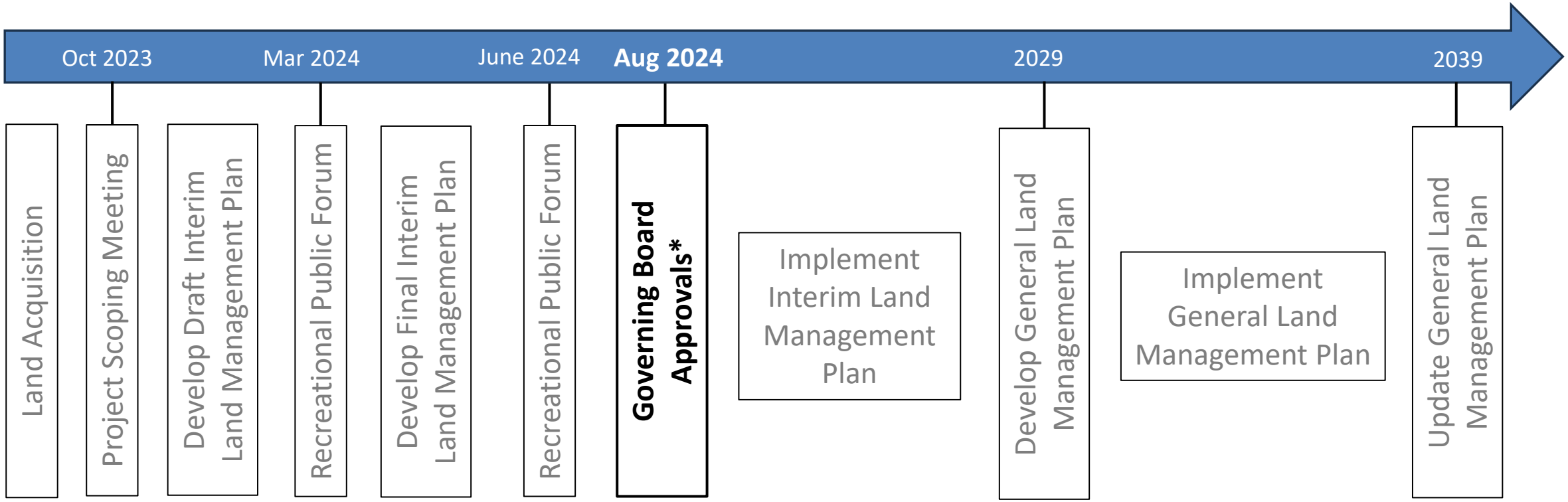
GREEN HEART OF THE EVERGLADES LAND ACQUISITION PROJECT PLAN

Florida Department of Environmental Protection

Office of Water Policy and Ecosystems Restoration

Green Heart of the Everglades Project

Interim Land Management Plan Development Process



**Management Area Designation, Adopt Interim Land Management Plan, Authorize FWC Public Small Game Hunting Area*

Green Heart of the Everglades Project

Extensive Public Input and Coordination

Governing Board Meeting - May 11, 2023

Initial Public Scoping Meeting - October 17, 2023

Recreational Forum - March 25, 2024

Recreational Forum - June 24, 2024

Green Heart of the Everglades Project

- ✓ South Florida Water Management District to retain all portions (north and south) of the Green Heart of the Everglades

Governing Board Actions Today:

1. Designation of the entire property as a Management Area
2. Adoption of the Interim Land Management Plan
3. Authorization for Florida Fish and Wildlife Conservation Commission to create a Public Small Game Hunting Area

One: Designate the Entire Property as a Management Area

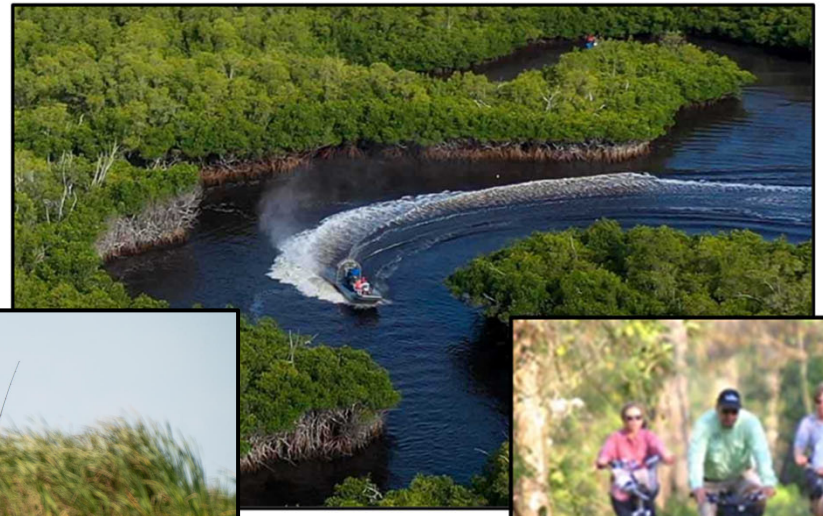
<u>What this means</u>:

- Accessible 24 hours a day, 7 days a week
- Fishing, boating, and passive recreational use allowed
- Navigable waters will remain accessible in accordance with State and Federal law

Two: Adoption of the Interim Land Management Plan

- Includes historical and resource inventory information, past land management activities, and identifies goals, objectives, and management strategies to be implemented over the next 5 years
- Characterizes the general features and resources on the property
- Incorporates resource protection, public education and recreational opportunities
- Allows opportunities for commercial airboat tours
- Secures land management and maintenance budget requirements
- “Interim Land Management Plan” is updated after 5 years

Recreation under the Interim Land Management Plan




Hiking/Kiosk/ Trailhead/


Bicycling


Airboating


Photography


Hunting*


Stargazing


Fishing

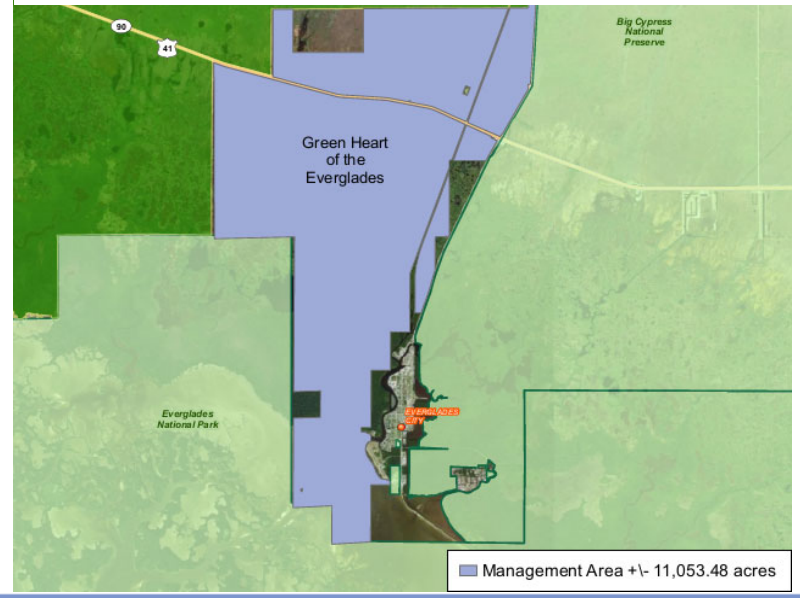

Bird Watching


Canoeing/ Kayaking


Wildlife Viewing

Three: Establish Area as a Public Small Game Hunting Area

Green Heart of the Everglades Public Small Game Hunting Area



Green Heart of the Everglades Project

What we will be working on in the coming year:

1. Identifying boundaries
2. Creating public access points
3. Determining other recreational use opportunities
4. DEP Cooperation related to adjoining lands
5. FWC Cooperation
   - Amend the existing contract
   - Develop hunting seasons and area regulations
   - Law Enforcement responsibilities

Resolution No. 2024 - 0812

A Resolution of the Governing Board of the South Florida Water Management District to designate the approximately 11,053.44-acre Green Heart of the Everglades Project, located in Collier County, as a "Management Area" as defined in Rule 40E-7.521(16), Florida Administrative Code; adopt the Green Heart of the Everglades' Interim Land Management Plan; and authorize the Florida Fish and Wildlife Conservation Commission to establish portions of the area as a Public Small Game Hunting Area; providing an effective date.

Green Heart of the Everglades Project

Thank You

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Water and Ecological Conditions Summary

South Florida Water Management District
Governing Board Meeting
August 08, 2024

John P. Mitnik, PE
Chief District Engineer
Assistant Executive Director

Lawrence Glenn
Division Director
Water Resources

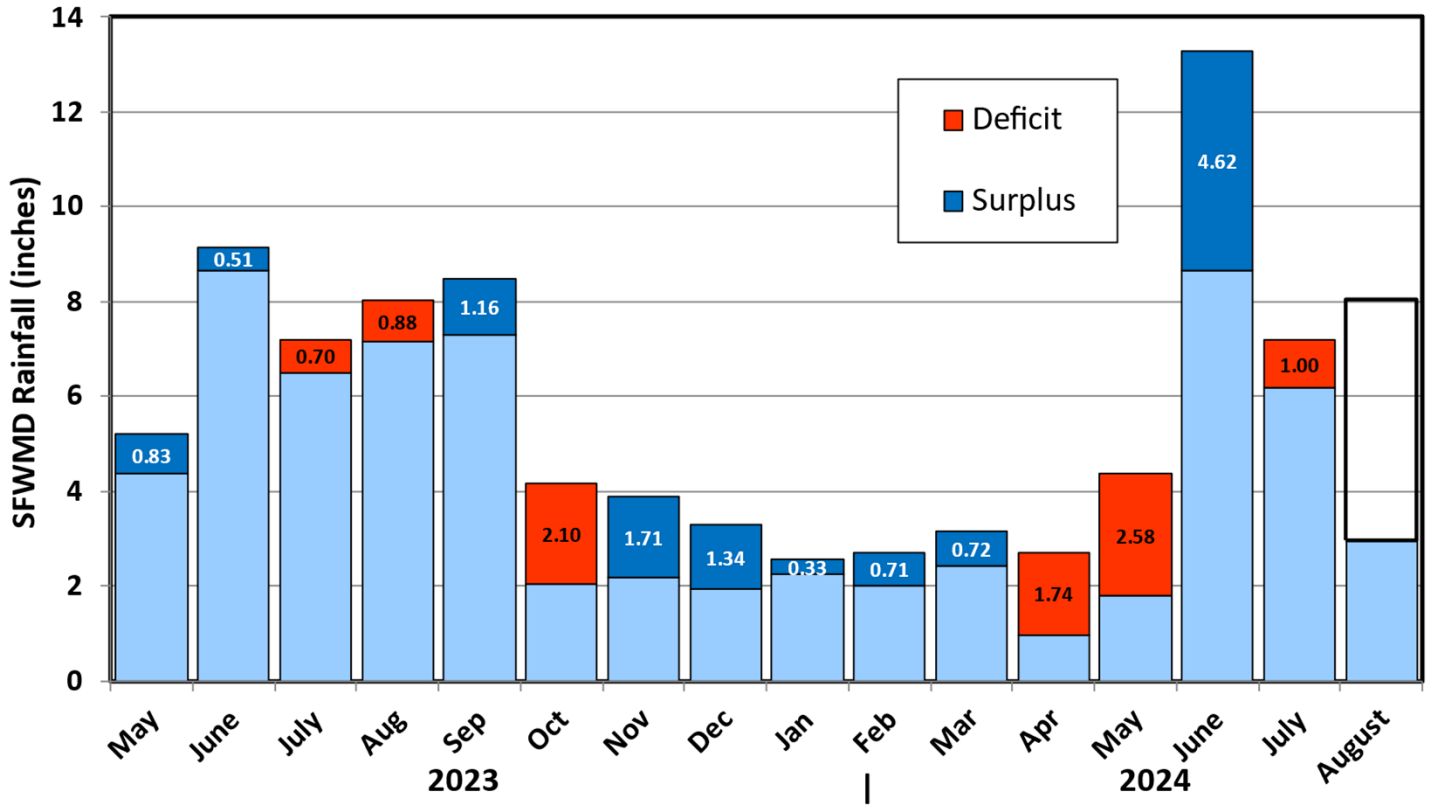
SFWMD Rainfall Distribution Comparison

(May 2023 - August 2024)

Dry-Season Rainfall

Total rainfall 98% of normal since the start of the 2023-24 dry season (*01 Oct*)

- **Oct was dry (~20th percentile)**
- **Nov – Mar were wet (avg. 70th percentile) due to a strong El Niño**
- **April was dry (~15th percentile)**



District Wide Average Rainfall

Month	Average (inches)
Jan	2.24
Feb	2.01
Mar	2.43
Apr	2.71
May	4.37
Jun	8.65
Jul	7.20
Aug	8.03
Sep	7.31
Oct	4.15
Nov	2.18
Dec	1.94

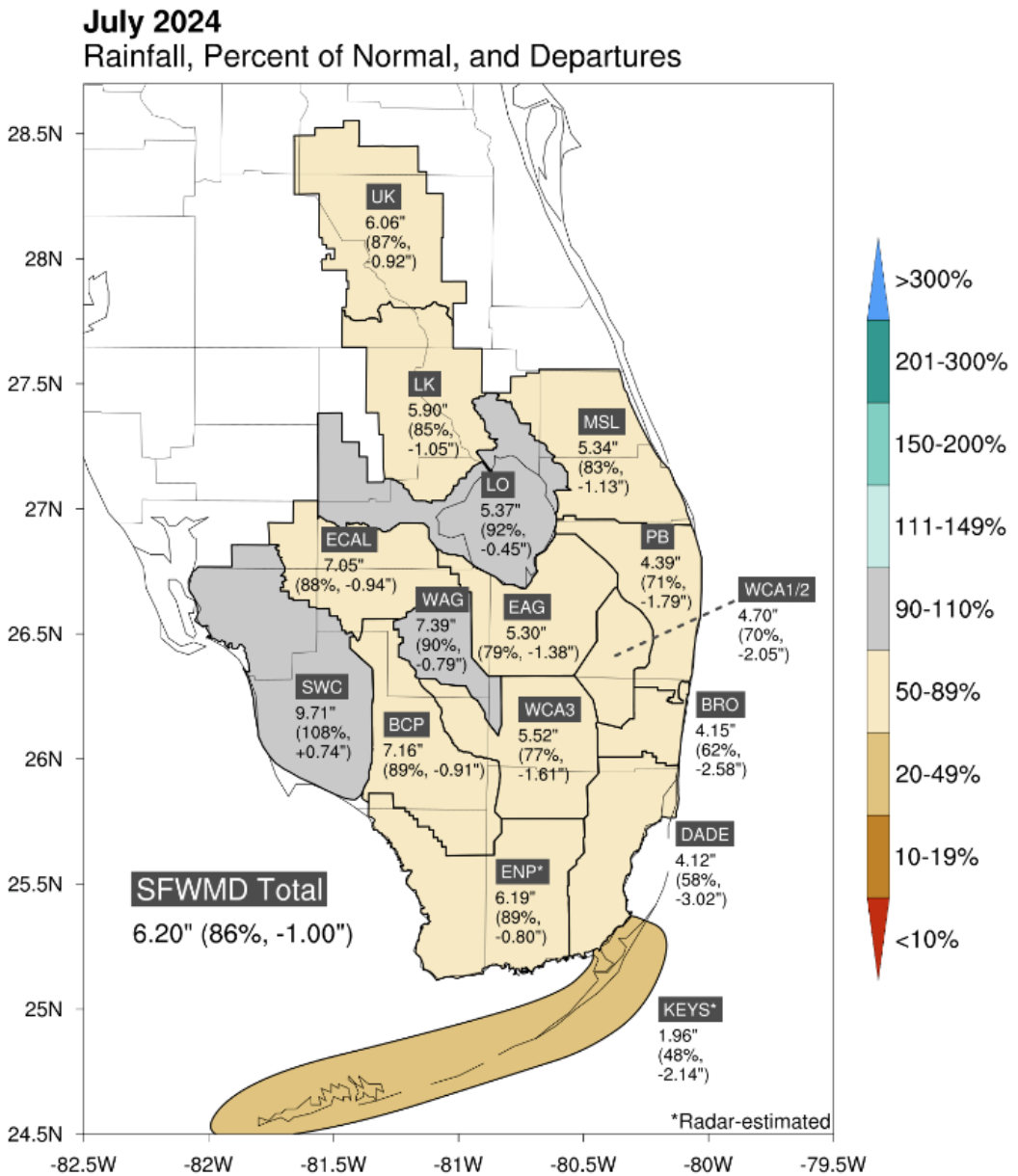
Wet Season

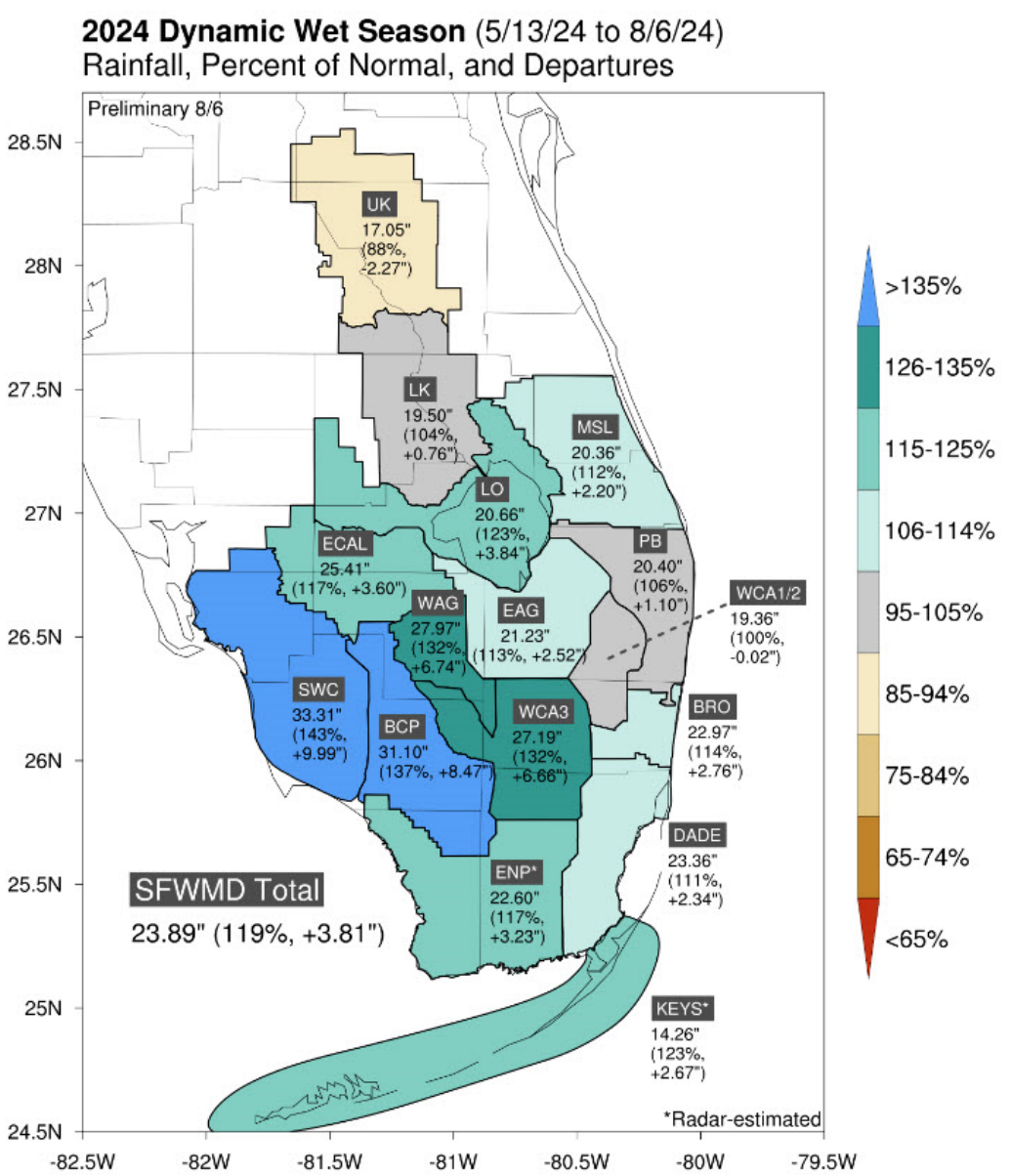
2023 WET SEASON
- Started 5/14/2023 ended 9/30/2023
- May, June and September were above Normal
- July and August were below Normal
- 8% above Normal overall

2023-2024 DRY SEASON
- Started 10/01/2023 ended 5/12/2024
- October 2023 and April 2024 were extremely dry
- Large isolated rainfall events November to March
- November 2023 through March 2024 above normal

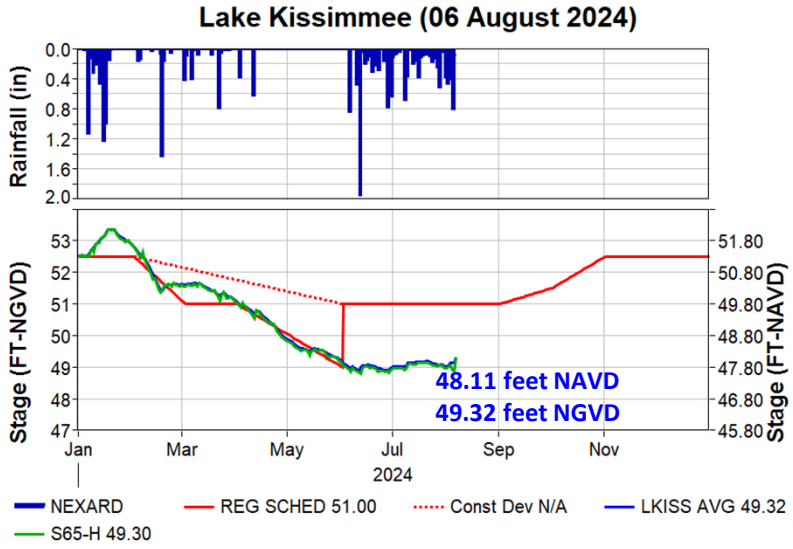
2023 WET SEASON
- Total rainfall 114% of normal (13 May – present)
- May rainfall under 10th percentile
- June finished above 90th percentile
- July finished near 30th percentile

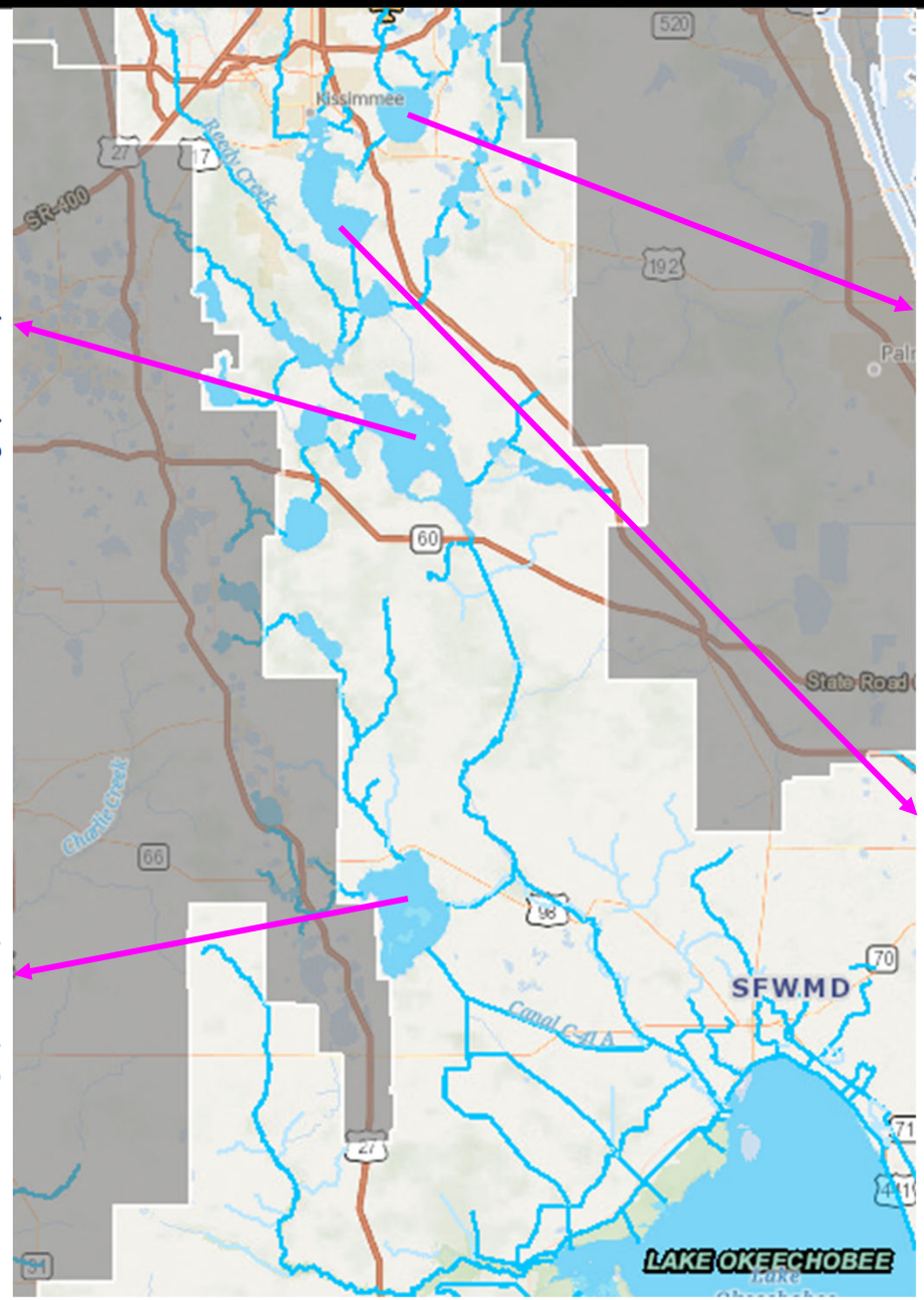
Presenter: John Mitnik

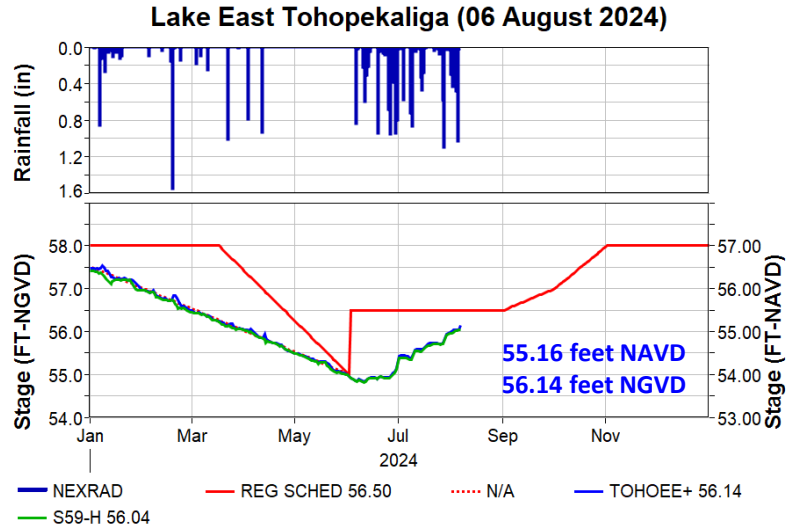


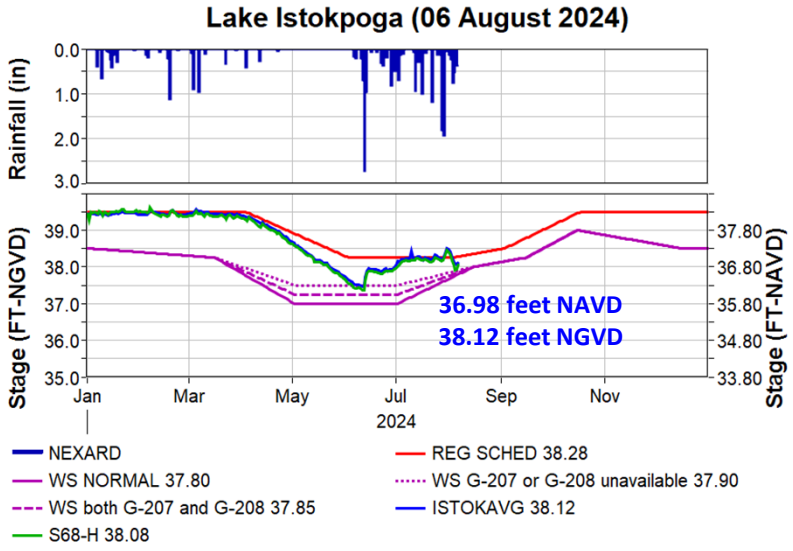


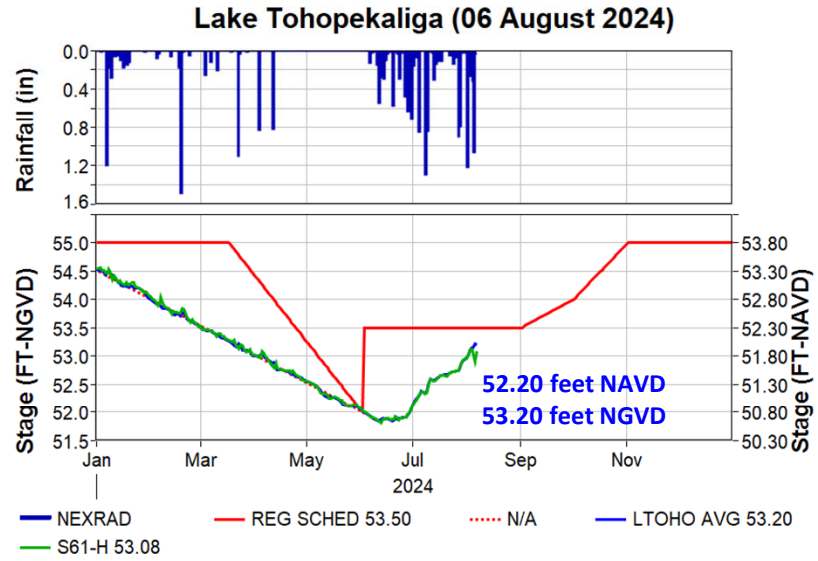
Presenter: John Mitnik





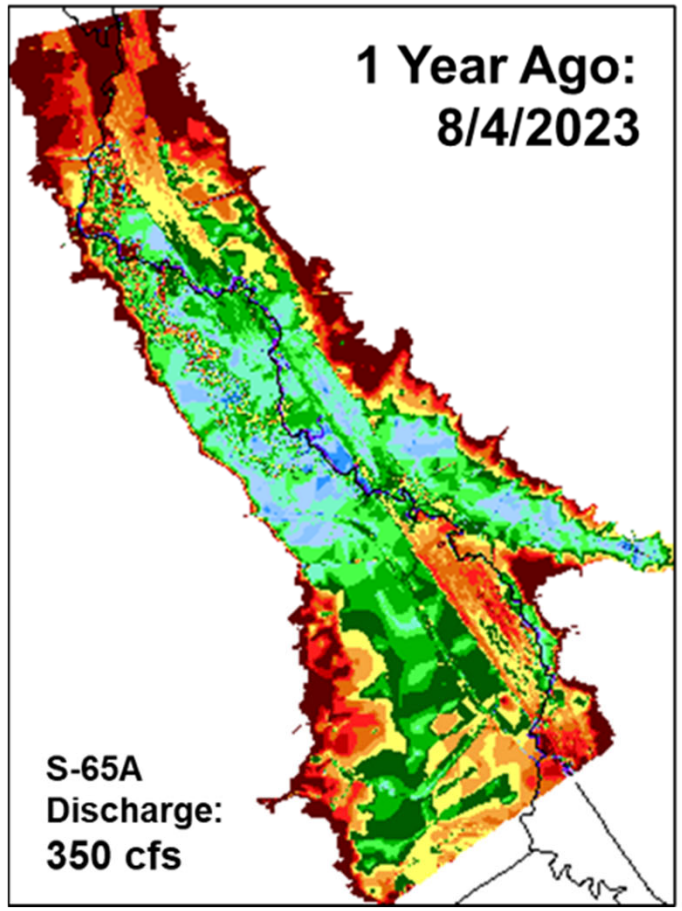


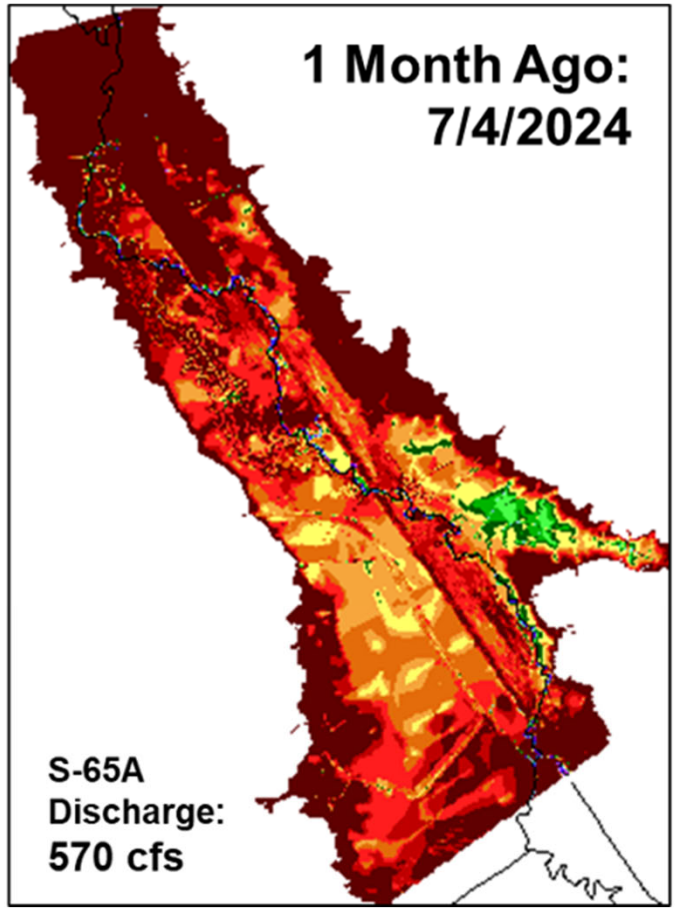


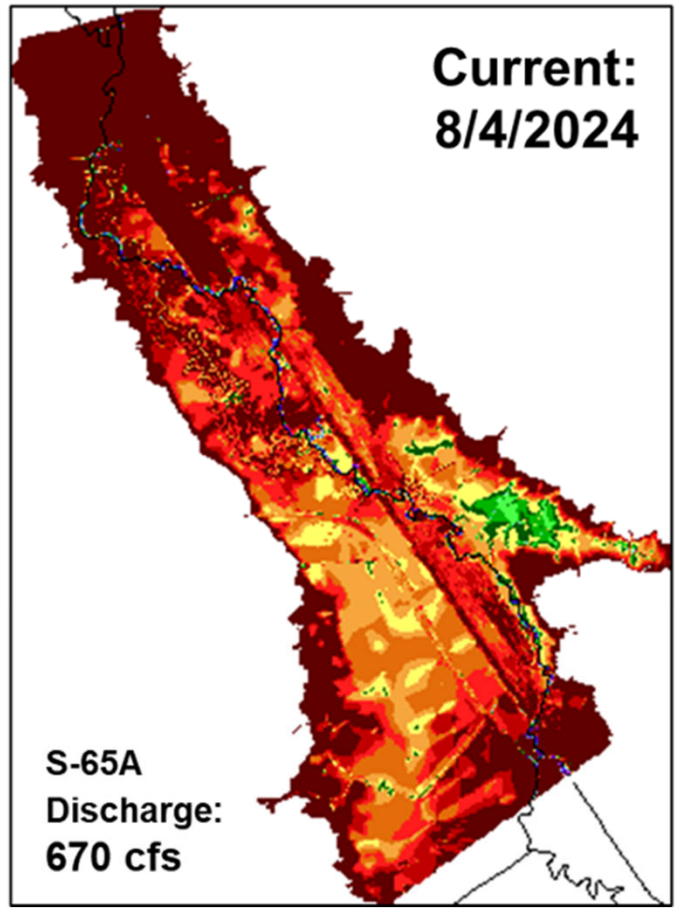


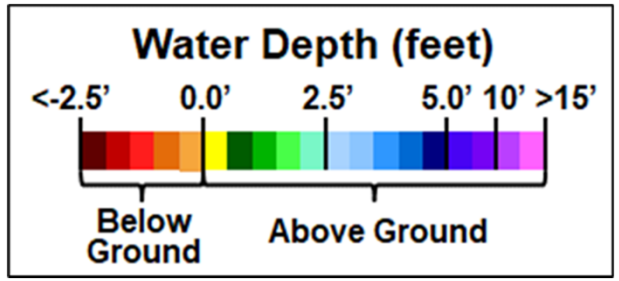
Presenter: John Mitnik

Kissimmee River Floodplain Inundation



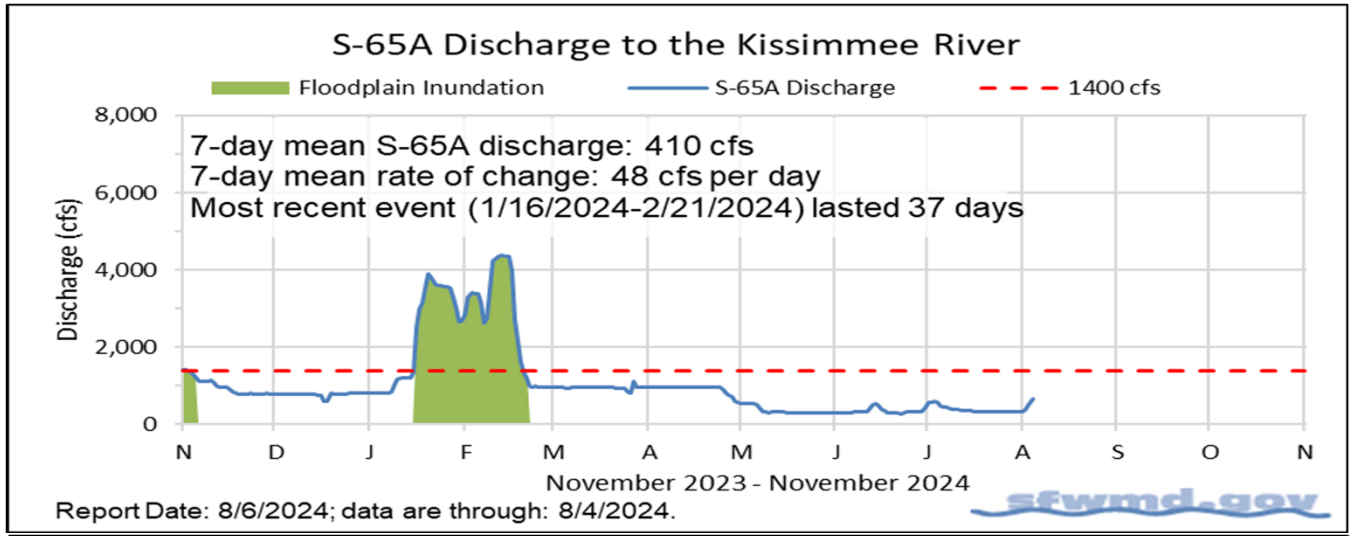


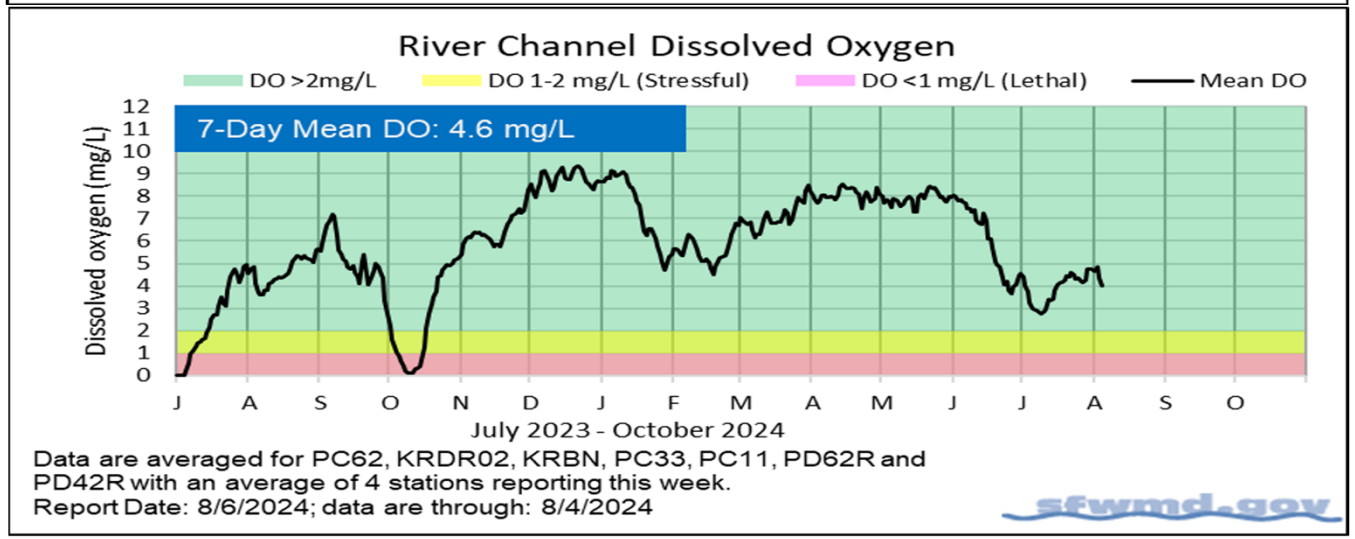




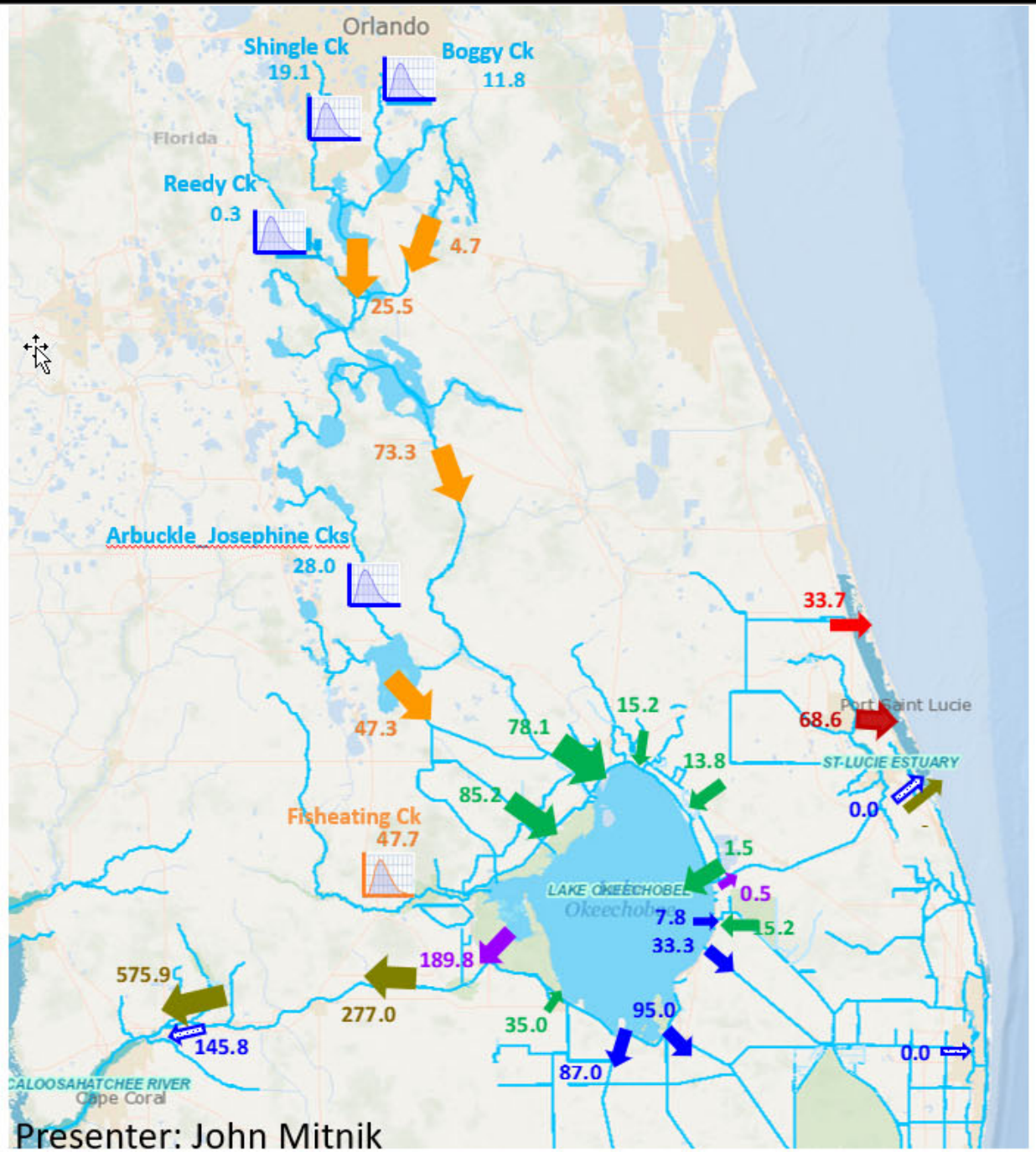
 Presenter: Lawrence Glenn

Kissimmee River Discharge and Dissolved Oxygen





 Presenter: Lawrence Glenn



SFWMD – Selected Release Volumes for the Period May 1, 2024 to August 6, 2024

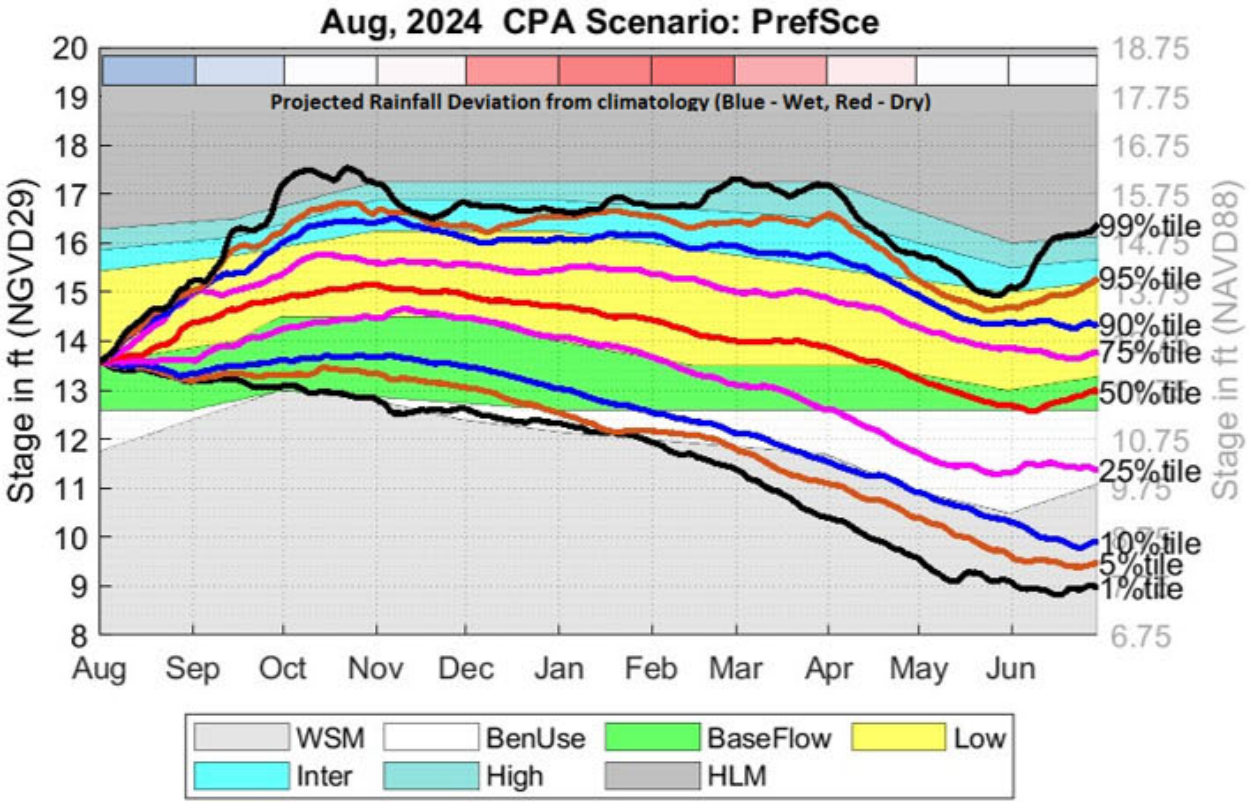
(volumes in 1,000 acre-feet)

Symbol	Description	Volume (1,000 acre-feet)	
		WYR 2025	Last Month
	Upper Kissimmee to Lower Kissimmee	73.3	24.1
	Inflows to Lake Okeechobee (including Fisheating Creek)	291.8	144.3
	Lake Releases and Basin Runoff	575.9	176.1
	Lake Releases East and West	190.3	24.4
	Lake Flood Control to Estuaries	145.8	23.6
	Total Lake Releases South	223.1	1.6
	Releases to Indian River Lagoon	33.7	16.7
	Upper East Coast discharges to St. Lucie Estuary	68.6	41.3
	Uncontrolled flows - Creeks (does not include Fisheating Creek)	59.3	37.8

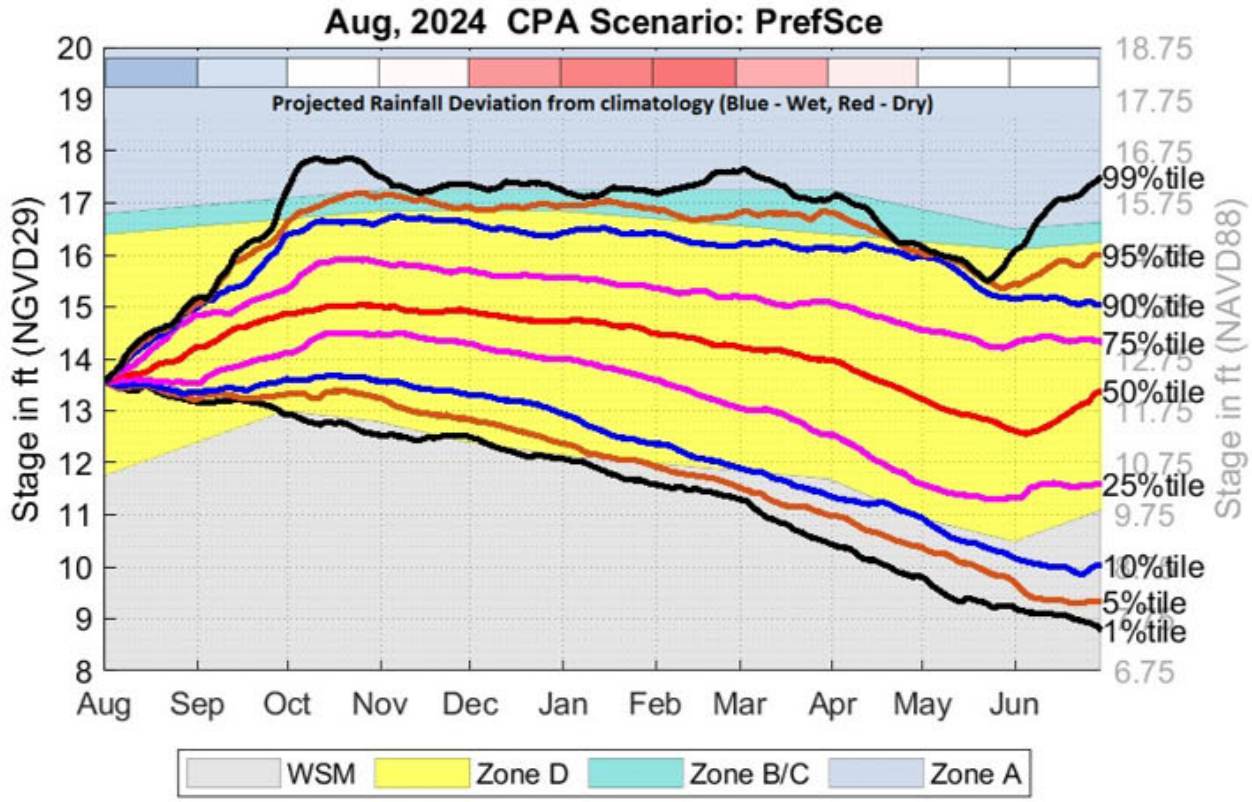
1,000 acre-feet = 325.9 Million Gallons

Presenter: John Mitnik

Conditional Position Analysis (CPA)



Current Lake Okeechobee Regulation Schedule (LORS2008)



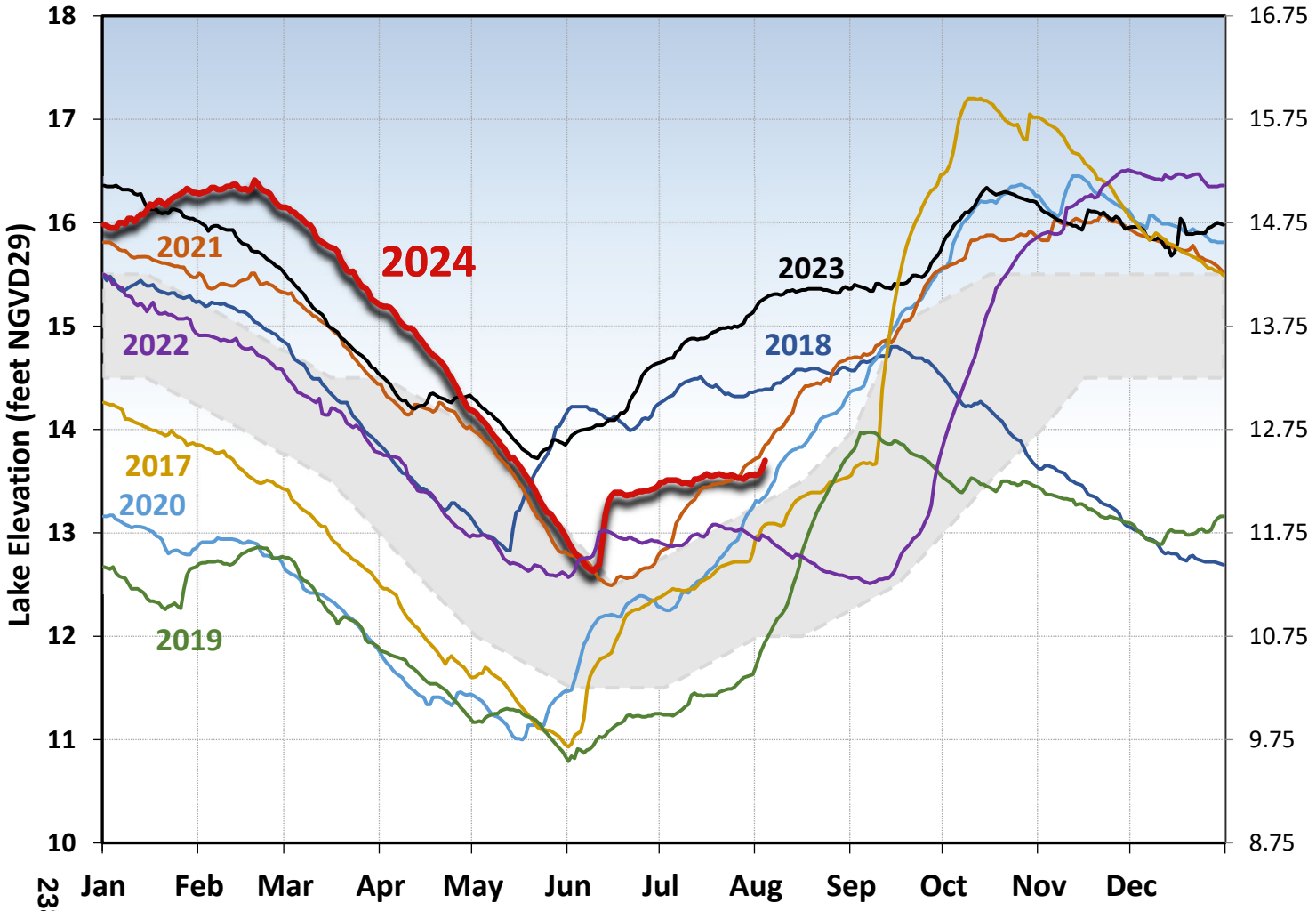
Provisional Tool Under Development for the Proposed July 2023 Water Control Plan (LOSOM PA25)

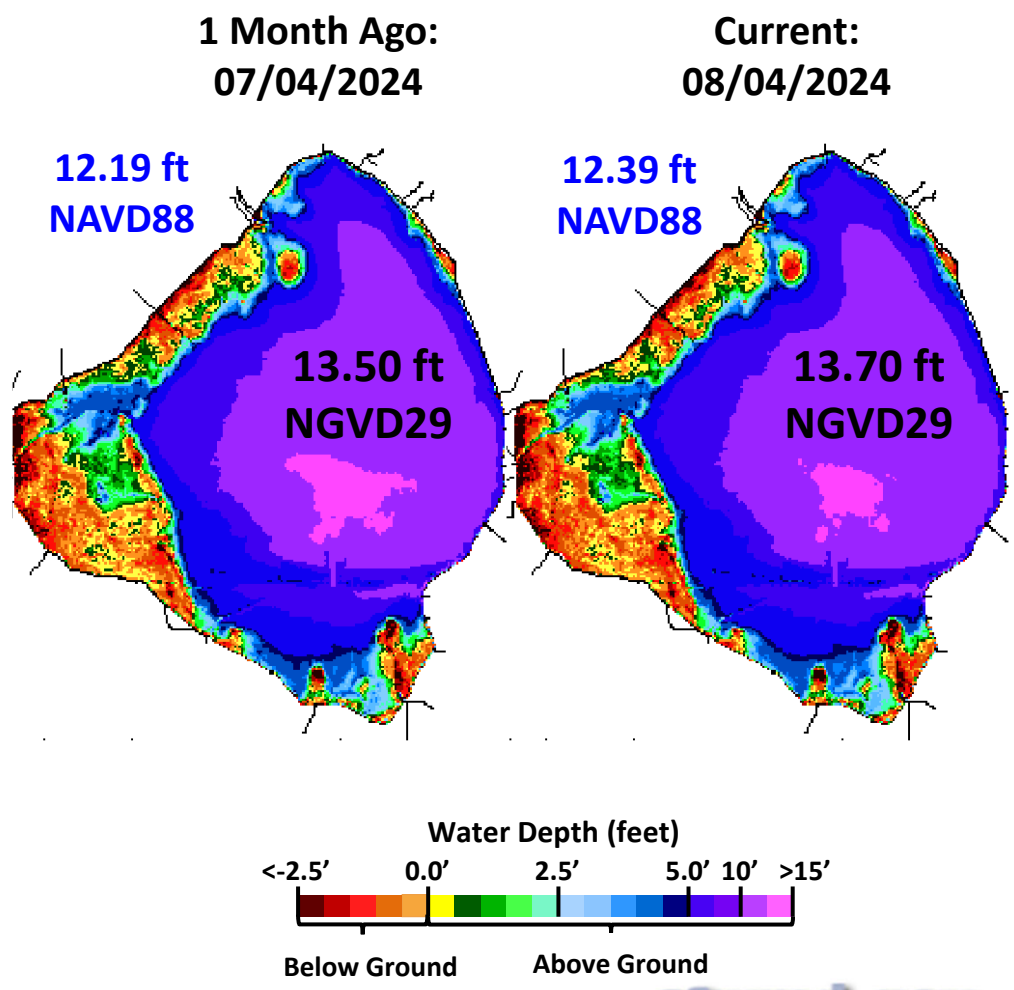
- Dynamic Position Analysis (DPA) forecasts stages in the system based on current operational protocols and historical rainfall.
- Conditional Position Analysis (CPA) improves DPA predicted stages by taking into account the anticipated rainfall conditions.
- Conditional Position Analysis (CPA) is a stochastic technique that utilizes robust and well-established approaches, such as Monte Carlo simulation and NonLinear Programming, to correctly apply the rainfall to stage Transition Probability Matrix and recognize non-unique solutions.

Presenter: John Mitnik

Ecological Envelope and Water Depths

Lake Okeechobee Stage vs Ecological Envelope



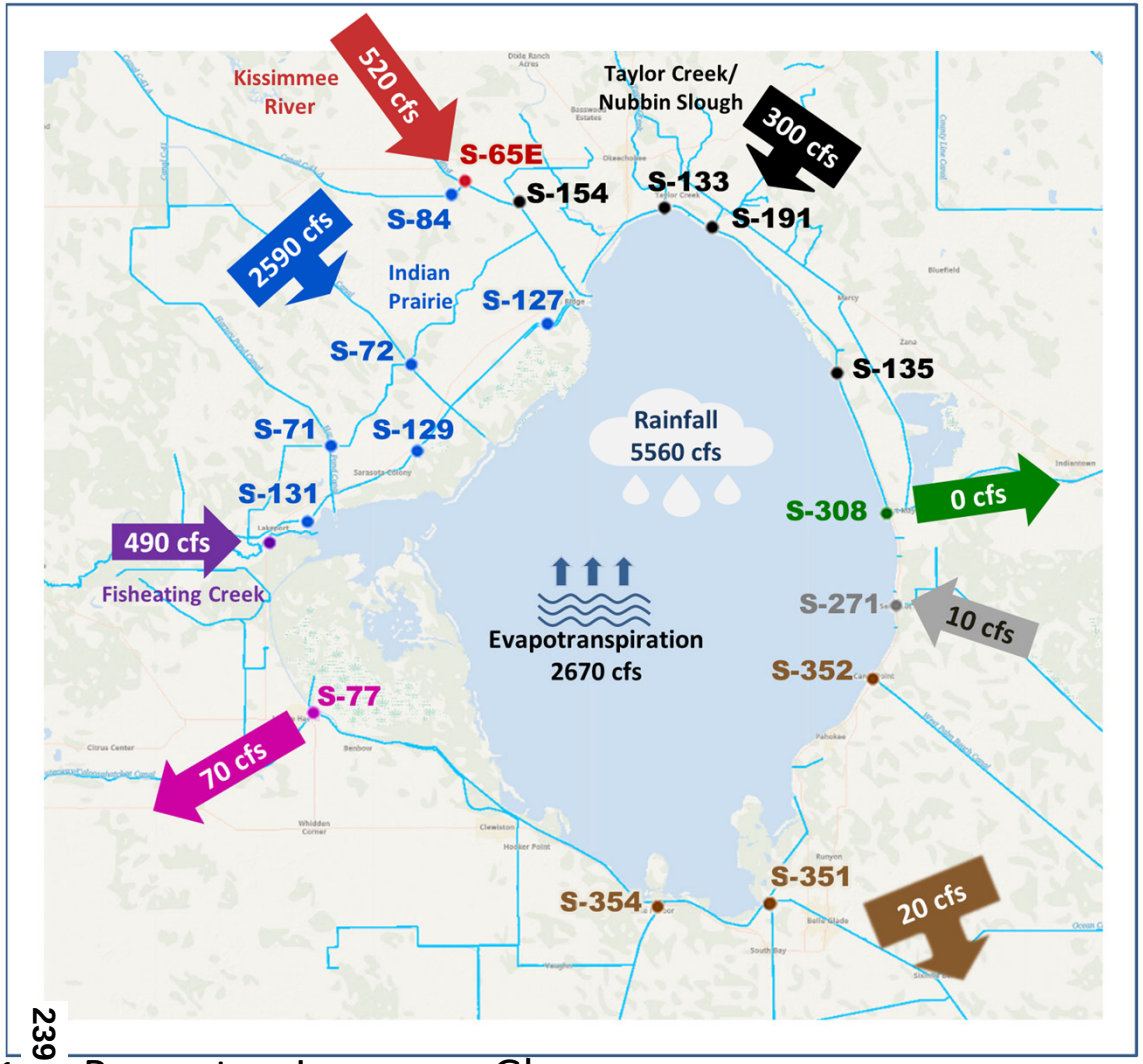


Presenter: Lawrence Glenn

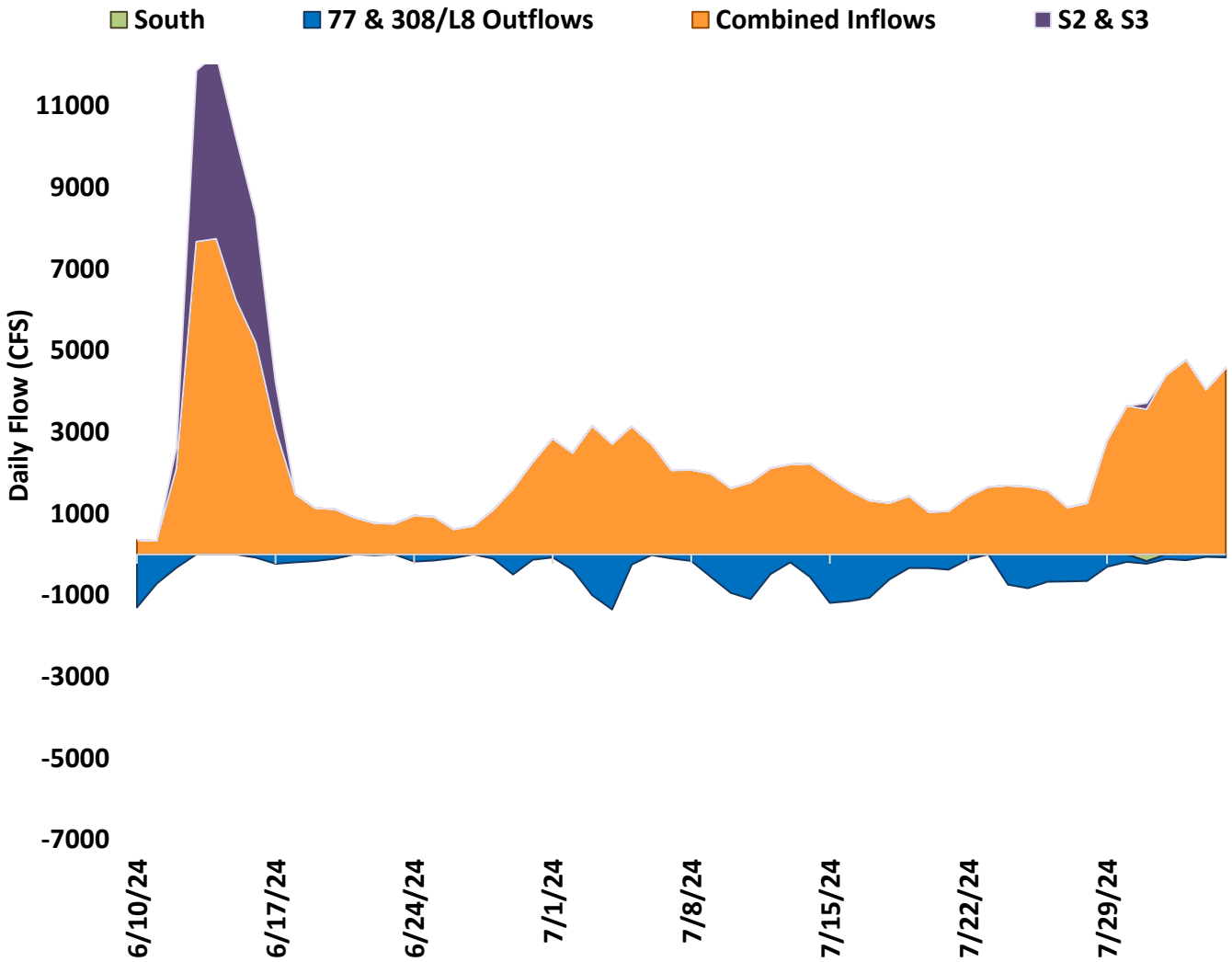
Lake Okeechobee Hydrology

(*Provisional Data)

July 29 – Aug 04, 2024 Inflows and Outflows



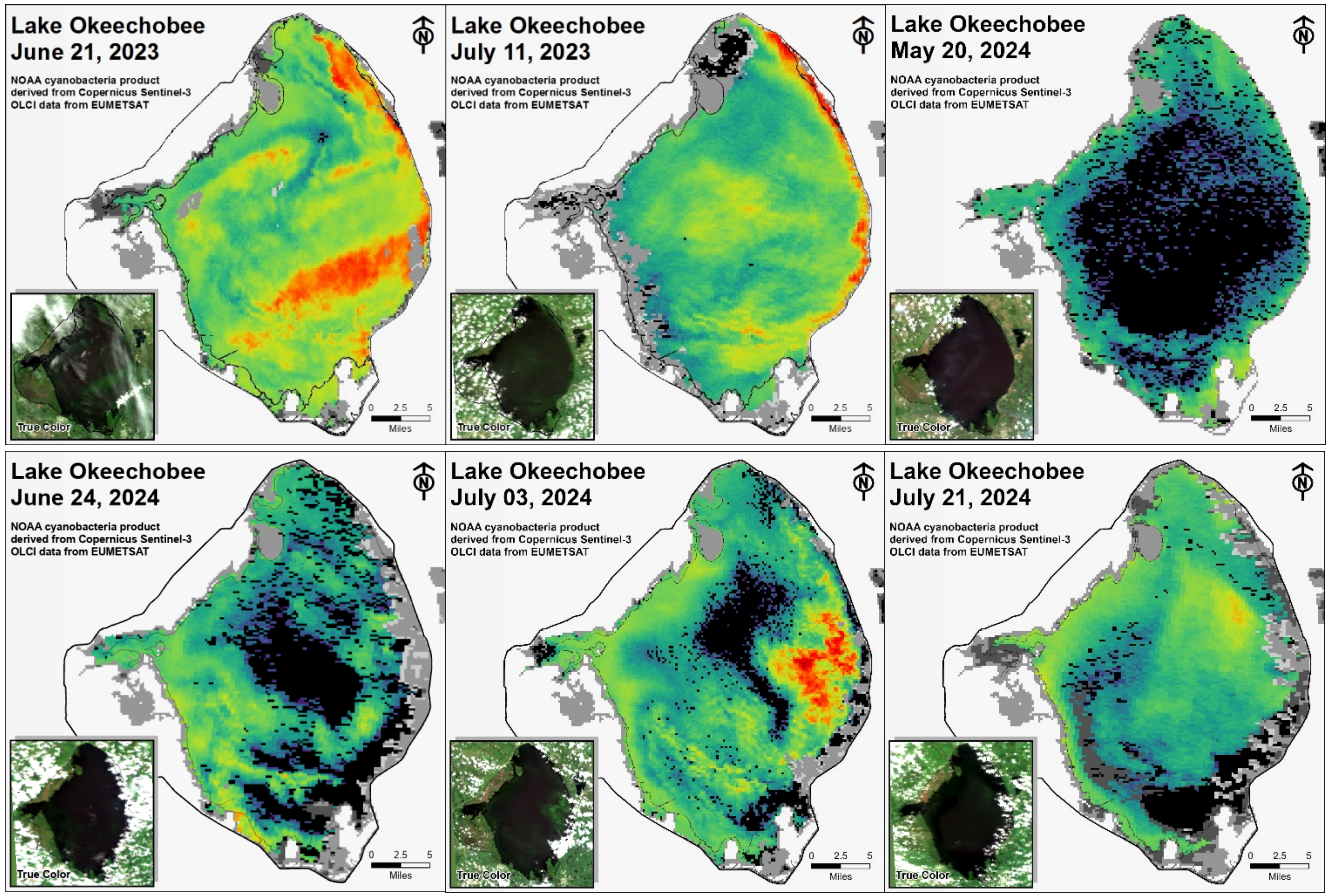
Prior 8 Weeks Inflows and Outflows

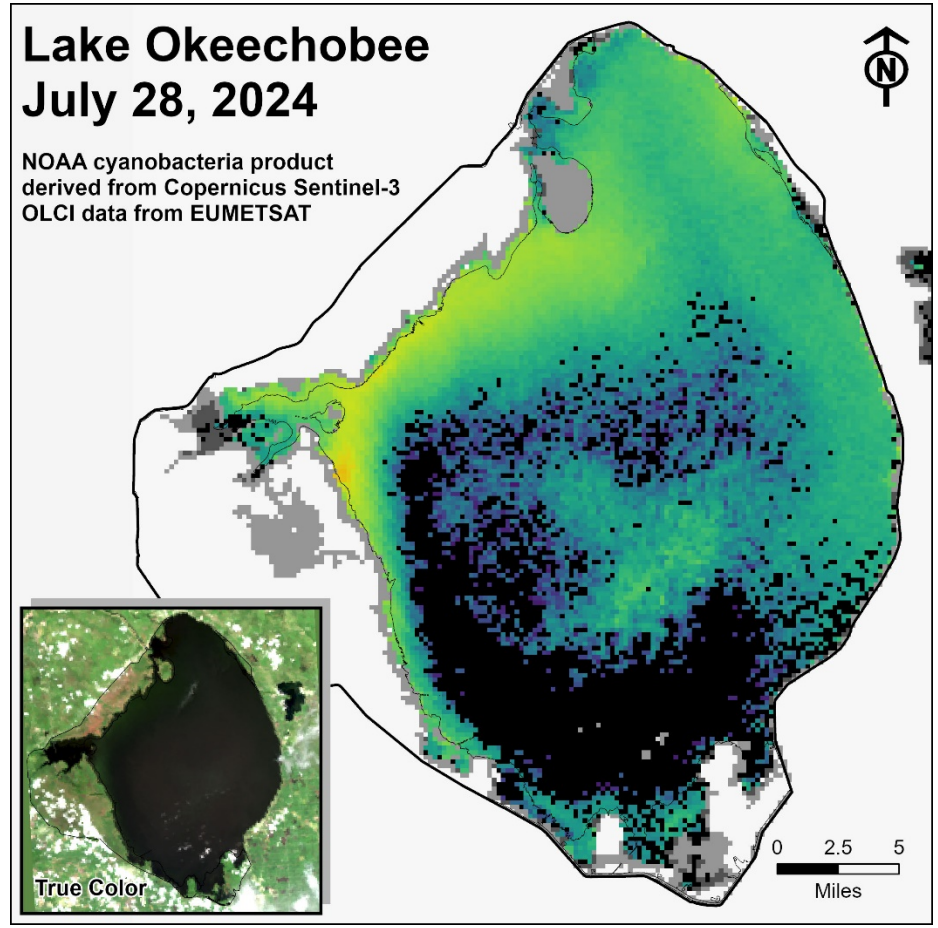


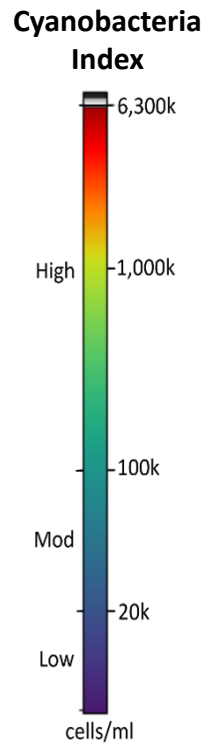
 Presenter: Lawrence Glenn

Lake Okeechobee

Cyanobacteria Bloom Distribution and Intensity



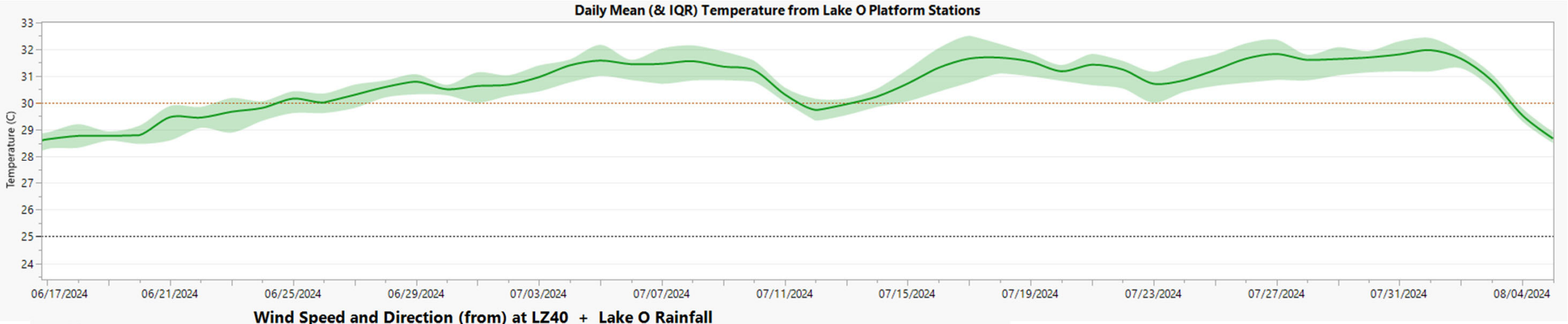


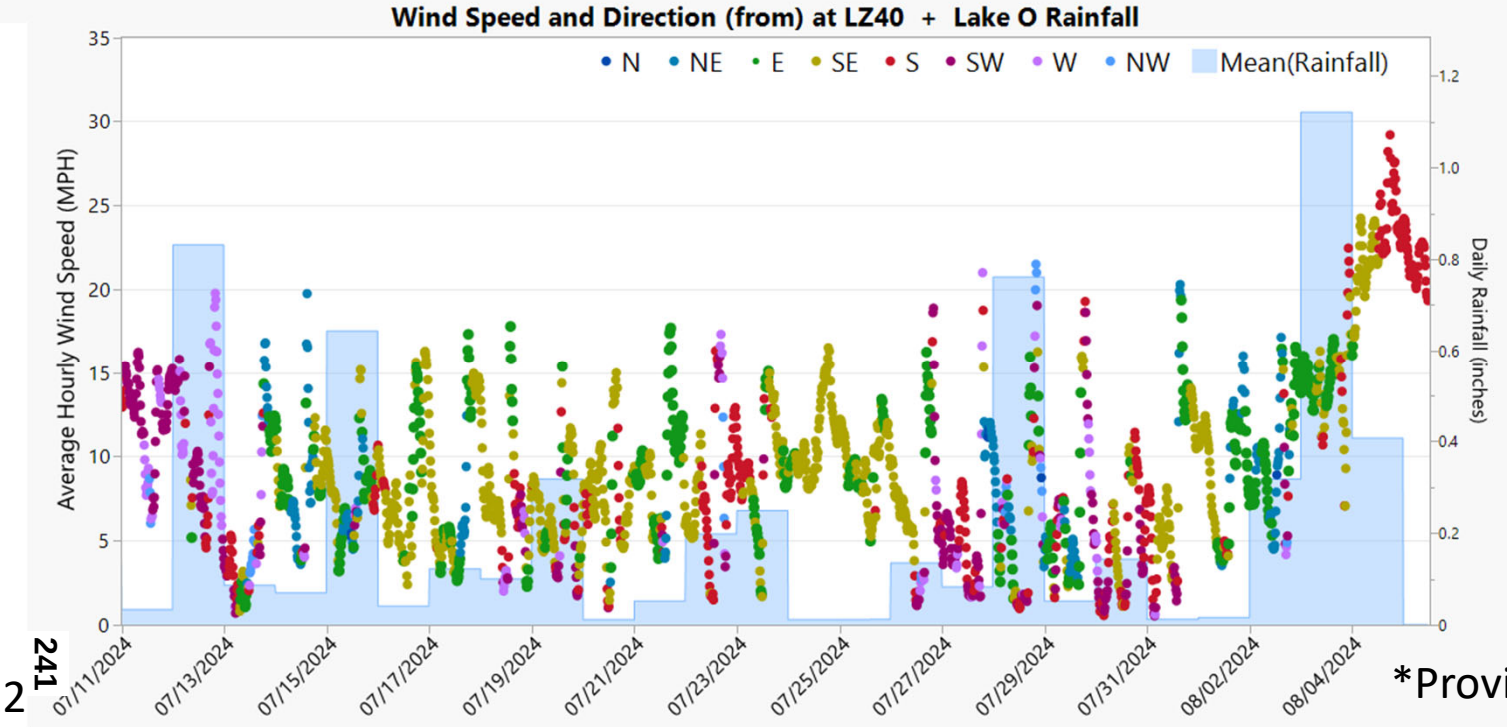


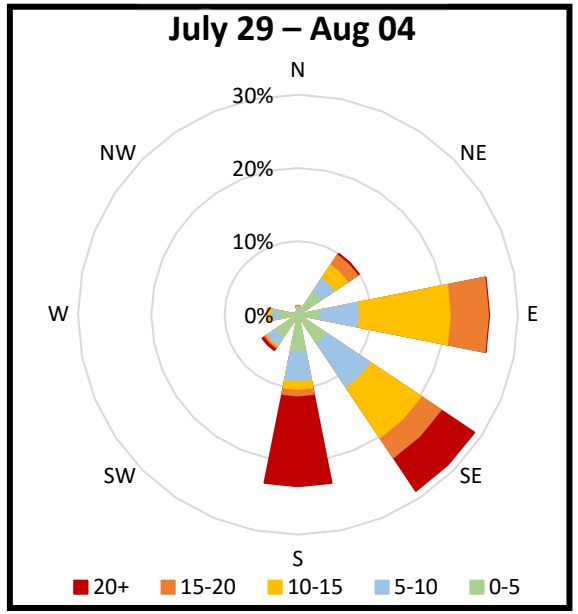
NOAA cyanobacteria product derived from Copernicus Sentinel-3 OLCI data from EUMETSAT

Presenter: Lawrence Glenn

Lake Okeechobee Wind, Precipitation, and Temperature Patterns







Provisional Data

Presenter: Lawrence Glenn

Lake Okeechobee

Chlorophyll *a*, Total Microcystins, and Dominant Taxa

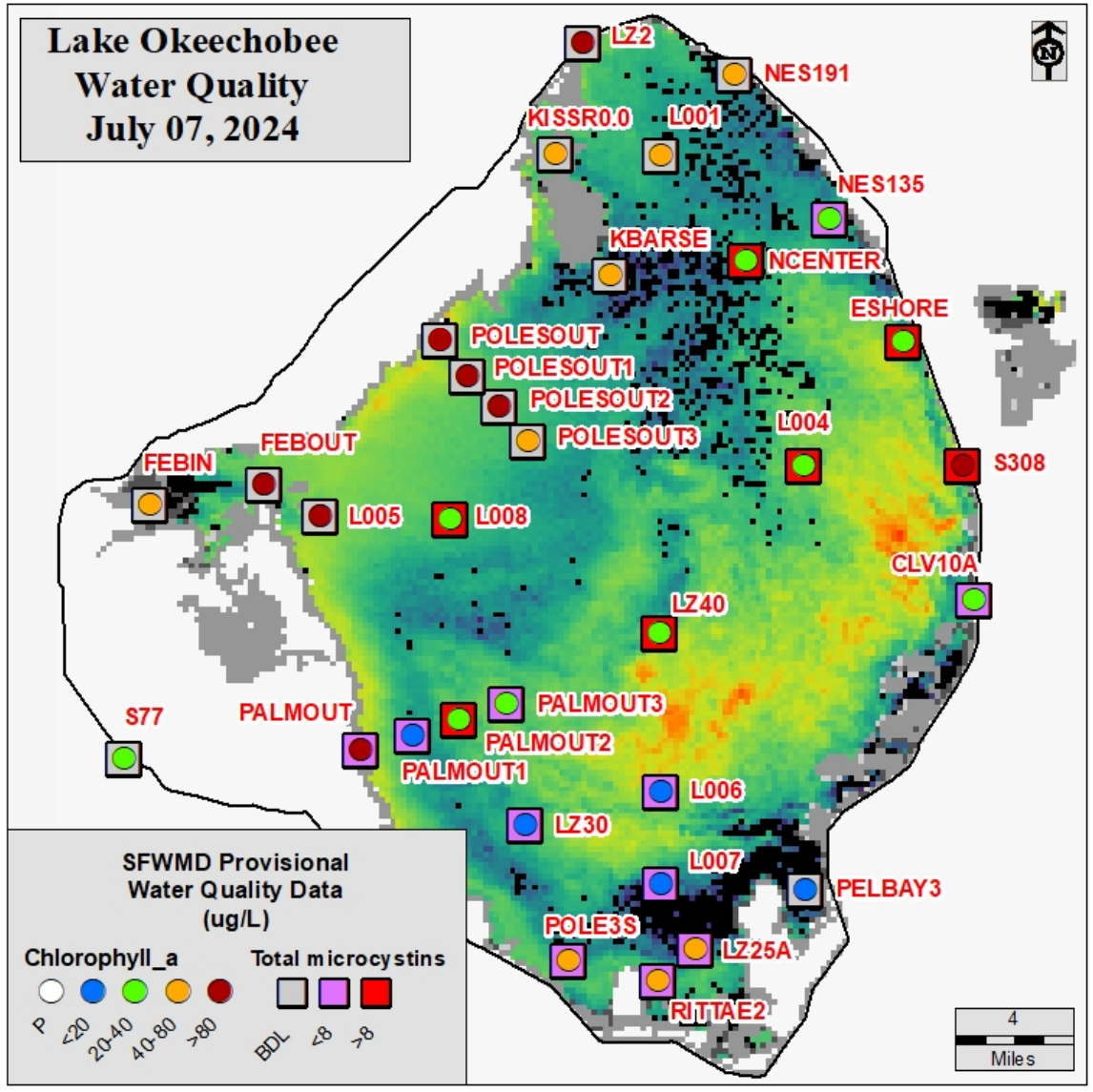
Collection Date: July 08-10, 2024

Station	CHL*a* (ug/L)	TOXIN (ug/L)	TAXA
FEBIN	68.7	BDL	*mixed*
FEBOUT	124	BDL	*mixed*
KISSR0.0	52.1	BDL	*mixed*
L005	121	BDL	*Dolic/Plank*
LZ2	80.3	BDL	*mixed*
KBARSE	41.7	BDL	*mixed*
RITTAE2	73.6	0.3	*Microcys*
PELBAY3	16.2	BDL	*mixed*
POLE3S	68.8	0.3	*Microcys*
LZ25A	72.9	0.5	*Microcys*
PALMOUT	82.0	0.3	*mixed*
PALMOUT1	17.2	2.4	*Micro/Pseud*
PALMOUT2	38.5	16	*Microcys*
PALMOUT3	23.8	6.8	*Microcys*
POLESOUT	191	BDL	*mixed*
POLESOUT1	88.1	BDL	*Microcys*
POLESOUT2	93.5	BDL	*Microcys*
POLESOUT3	66.5	BDL	*mixed*
EASTSHORE	34.4	10	*Microcys*
NES135	25.0	2.1	*Microcys*
NES191	44.9	BDL	*mixed*

Station	CHL*a* (ug/L)	TOXIN (ug/L)	TAXA
L001	56.9	BDL	*Microcys*
L004	38.1	8.7	*Microcys*
L006	14.4	6.3	*Microcys*
L007	11.8	0.4	*Microcys*
L008	39.3	16	*Microcys*
LZ30	14.7	4.8	*Microcys*
LZ40	22.4	15	*Microcys*
CLV10A	23.4	5.6	*Microcys*
NCENTER	25.4	44	*Microcys*

S308C	124	70	*mixed*
S77	36.2	BDL	*mixed*

- SFWMD considers >40 µg/L Chlorophyll *a* (Chl*a*) an algal bloom
- BDL – Below Detectable Limit of **0.25** µg/L
- ND – No Dominant taxa
- P – Pending (white squares)
- NS – Not Sampled
- Station bold font – crew observed possible BGA
- Chlorophyll *a* analyzed by SFWMD
- Toxin and Taxa analyzed by FDEP:
  Microcys = Microcystis; Cylindro = Cylindrospermopsis; Planktol = Planktolyngbya; Dolicho = Dolichospermum; Pseud = Pseudanabaena; Raphi = Raphidiopsis



13 Presenter: Lawrence Glenn

Lake Okeechobee

Chlorophyll *a*, Total Microcystins, and Dominant Taxa

Collection Date: July 22-24, 2024

Station	CHL*a* (ug/L)	TOXIN (ug/L)	TAXA
FEBIN			*NS*
FEBOUT			*NS*
KISSR0.0		BDL	*Raphidio*
L005		BDL	*Micro/Dolic*
LZ2		BDL	*mixed*
KBARSE		BDL	*NS*
RITTAE2		BDL	*Microcys*
PELBAY3		BDL	*mixed*
POLE3S		BDL	*mixed*
LZ25A		BDL	*Micro/Pseud*
PALMOUT		BDL	*Microcys*
PALMOUT1		1.3	*Microcys*
PALMOUT2		3.0	*Micro/Pseud*
PALMOUT3		3.1	*Microcys*
POLESOUT			*NS*
POLESOUT1			*NS*
POLESOUT2		BDL	*Micro/Dolic*
POLESOUT3		0.3	*Microcys*
EASTSHORE		0.5	*Microcys*
NES135		BDL	*mixed*
NES191		BDL	*mixed*

Station	CHL*a* (ug/L)	TOXIN (ug/L)	TAXA
L001		BDL	*mixed*
L004		22.0	*Microcys*
L006		1.3	*Microcys*
L007		BDL	*mixed*
L008		3.4	*Microcys*
LZ30		BDL	*Microcys*
LZ40		8.8	*Microcys*
CLV10A		1.2	*Microcys*
NCENTER		BDL	*Microcys*

S308C		0.4	*Microcys*
S77		BDL	*mixed*

- SFWMD considers >40 µg/L Chlorophyll *a* (Chl*a*) an algal bloom
- BDL – Below Detectable Limit of **0.25** µg/L
- ND – No Dominant taxa
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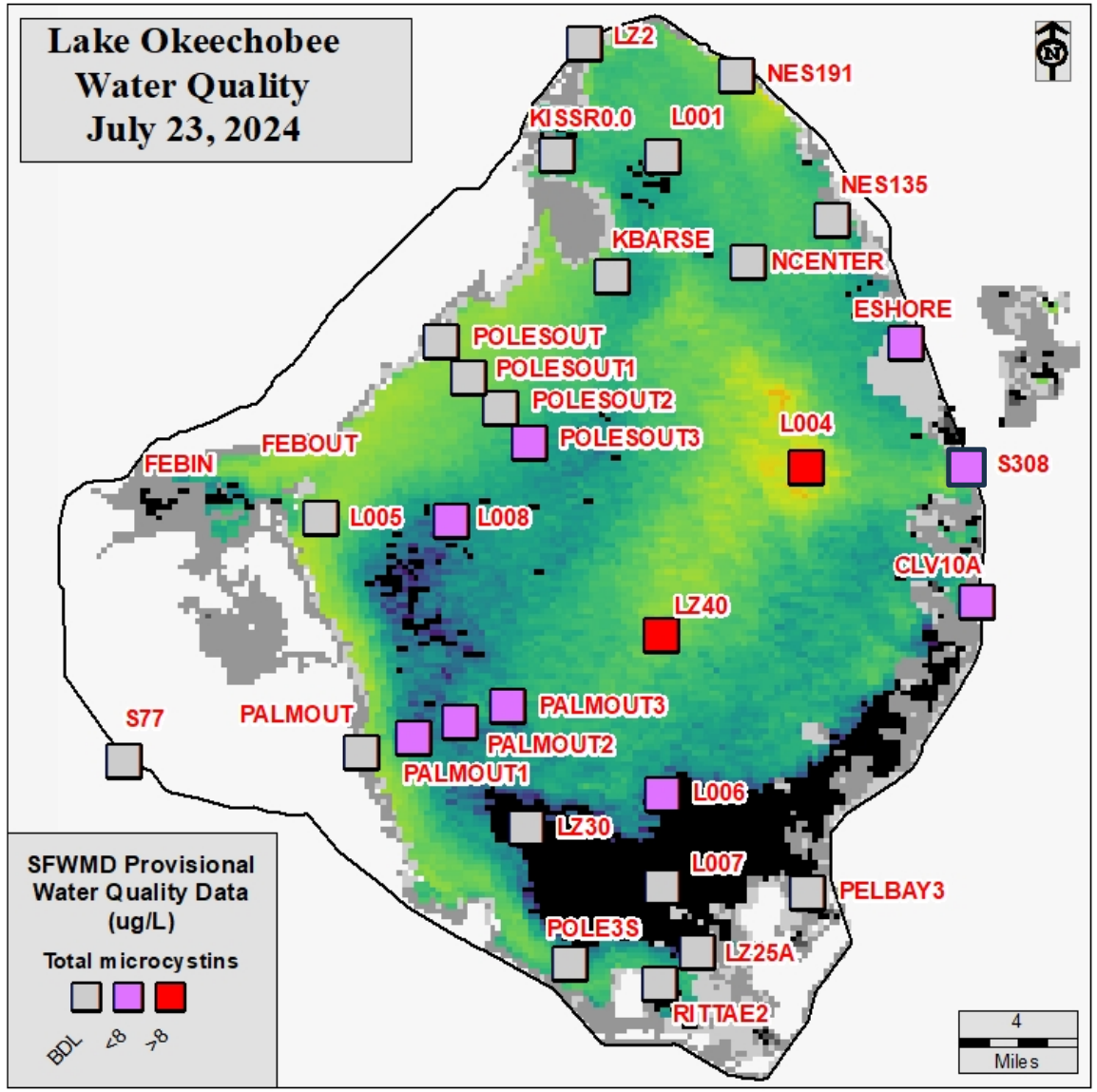
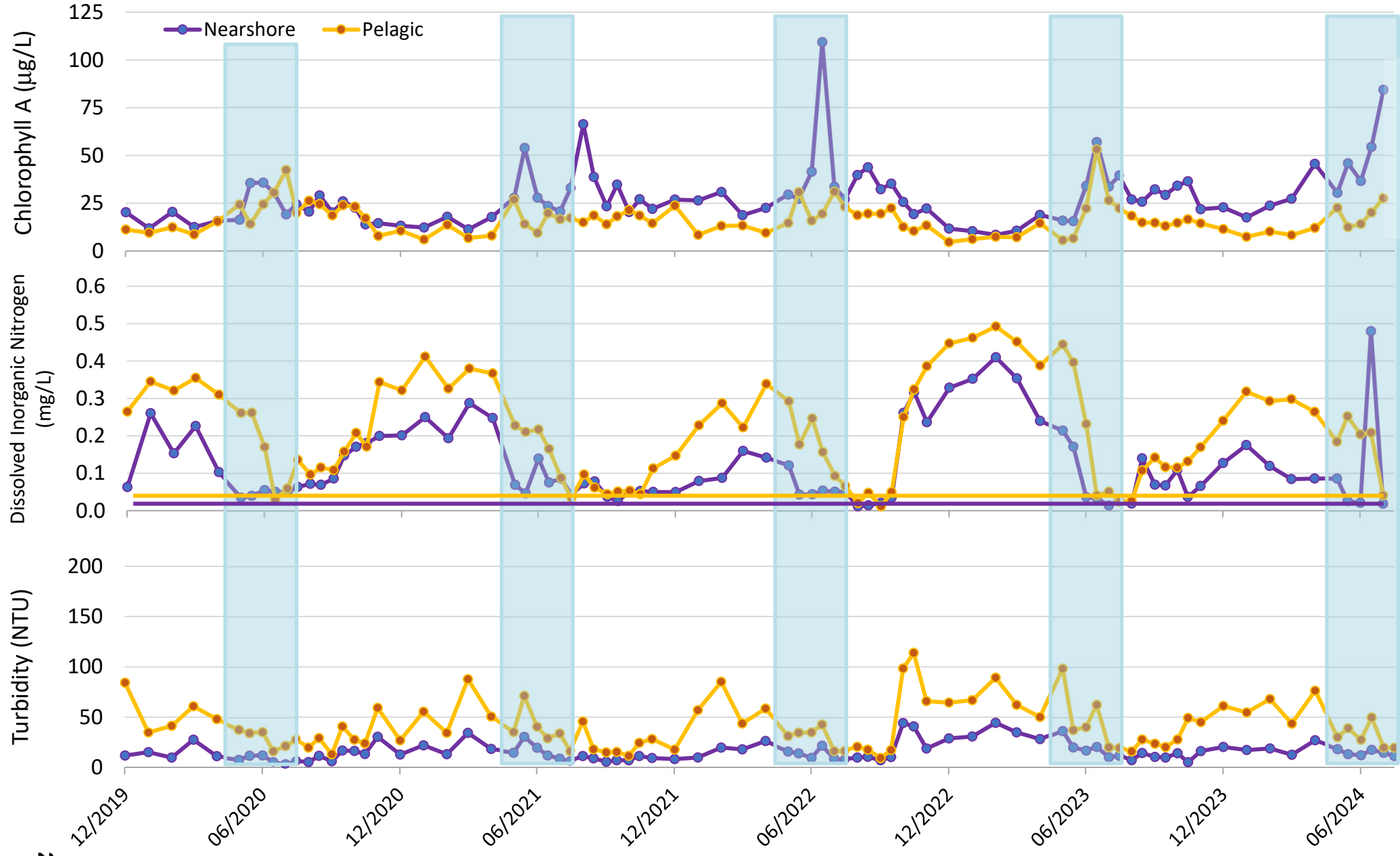
- NS – Not Sampled
- Station bold font – crew observed possible BGA
- Chlorophyll *a* analyzed by SFWMD
- Toxin and Taxa analyzed by FDEP:
  Microcys = Microcystis; Cylindro = Cylindrospermopsis; Planktol = Planktolyngbya; Dolicho = Dolichospermum; Pseud = Pseudanabaena; Raphi = Raphidiopsis





Lake Okeechobee Water Quality Time Series 2020-Present (Provisional Data)

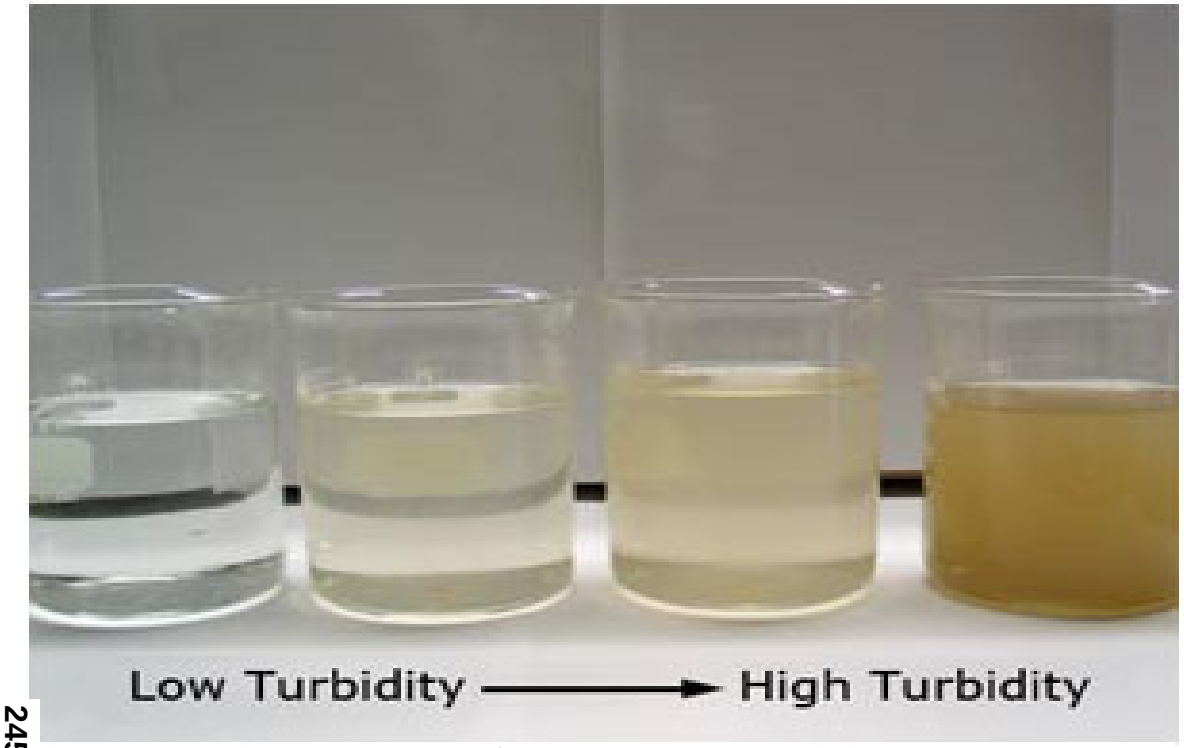
Current time period (May - July)

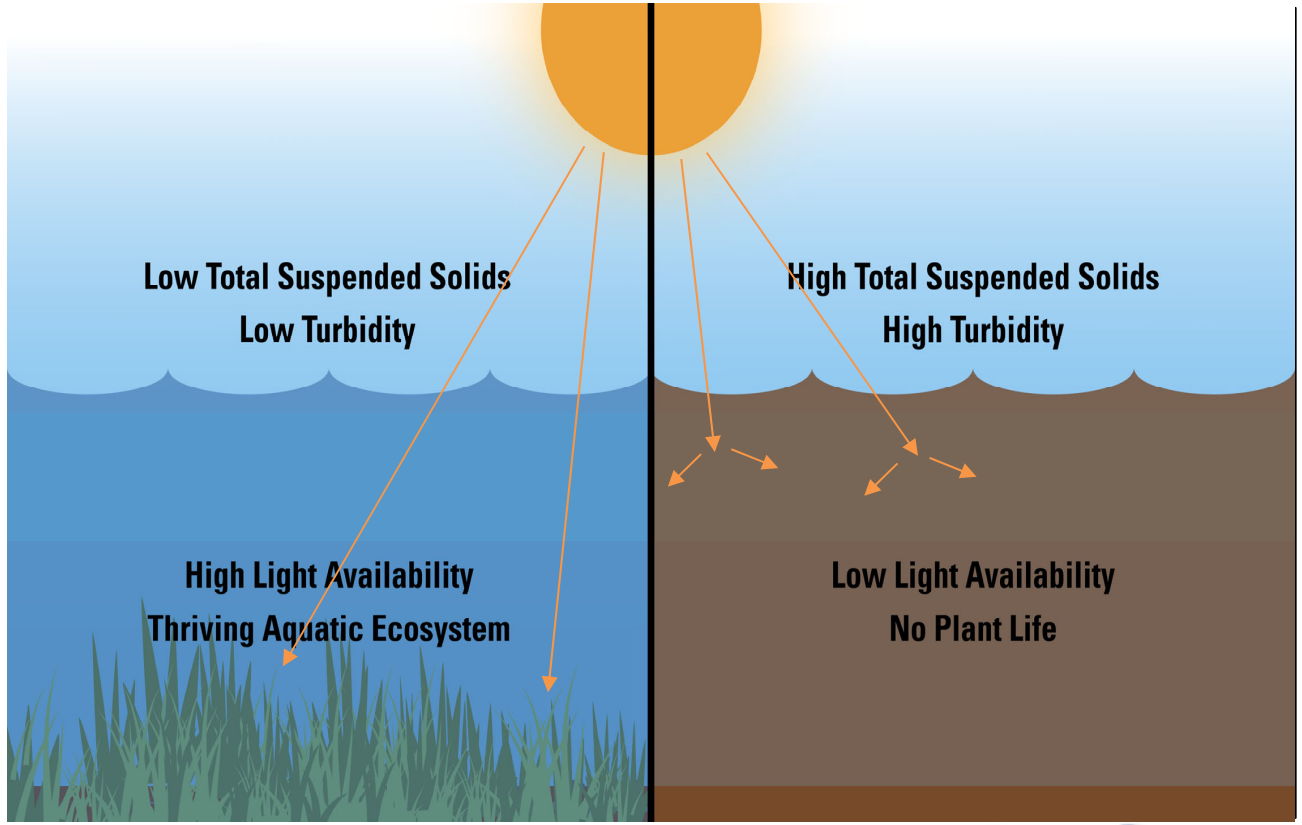
Presenter: Lawrence Glenn

Turbidity Curtain Project on Lake O

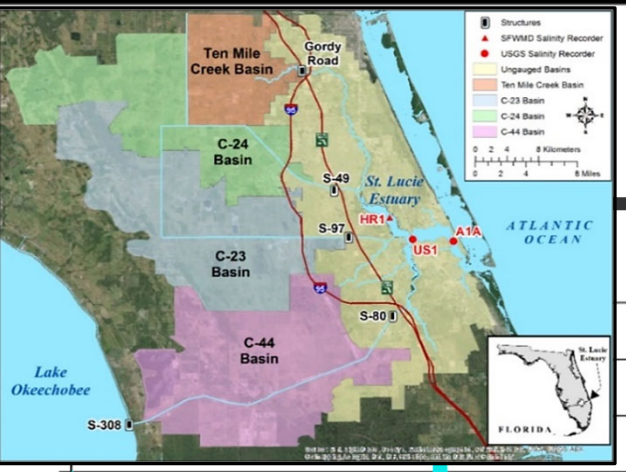
- Temporary turbidity curtain installations
  - Assessing feasibility, effects on turbidity & SAV
  - Up to one year deployment at 2 locations
  - Avoid yellow/orange buoys and floating booms north and south of Tin House Cove


Example Deployment

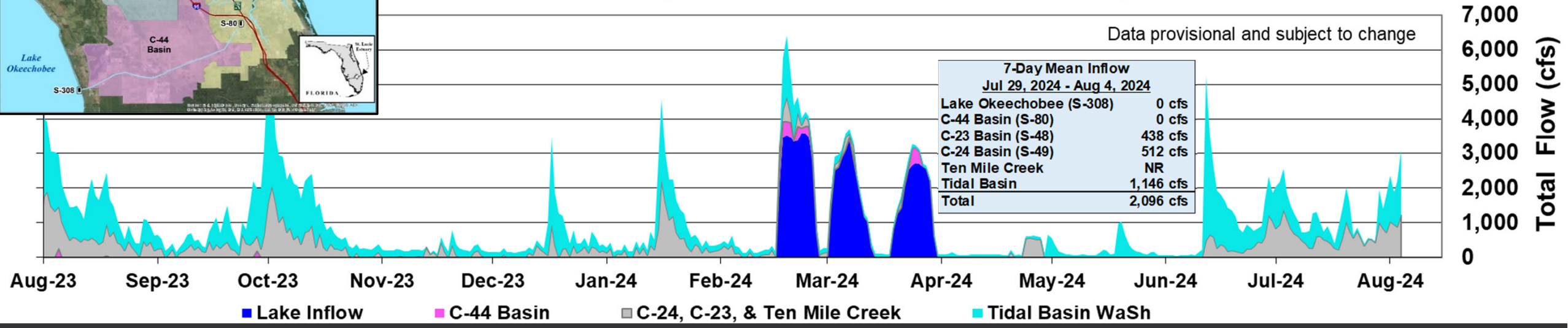


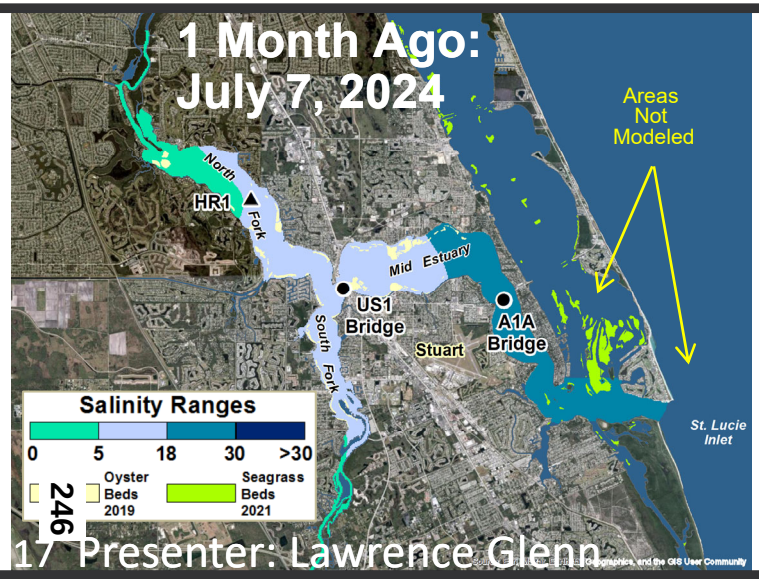


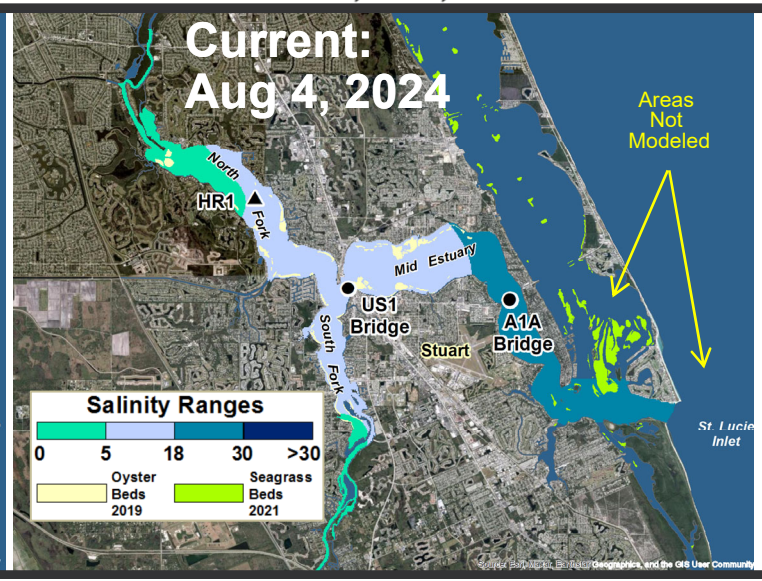
St. Lucie Inflows and Salinity Conditions

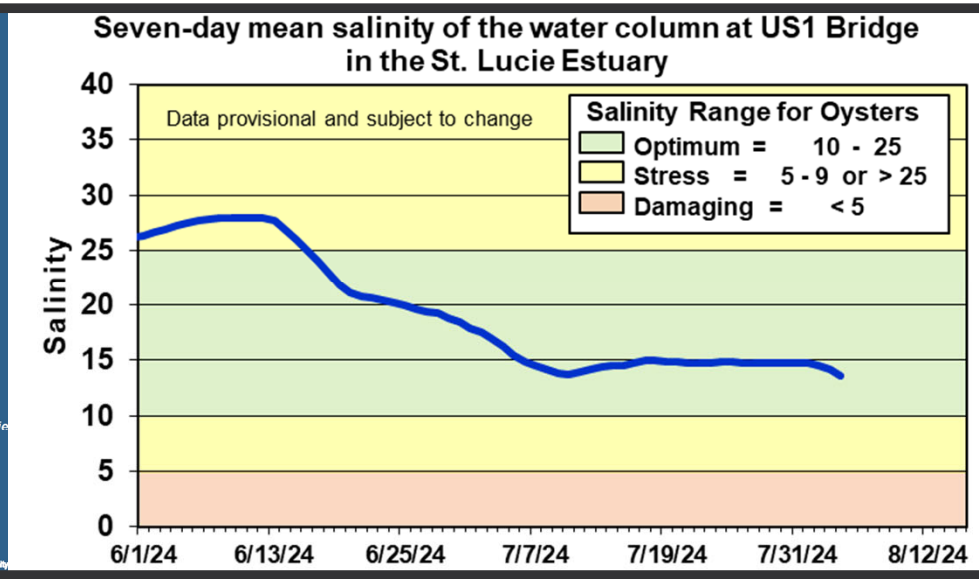


Total Daily Inflow into the St. Lucie Estuary



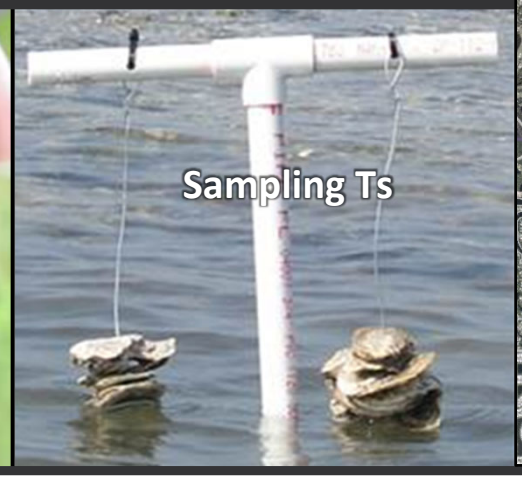


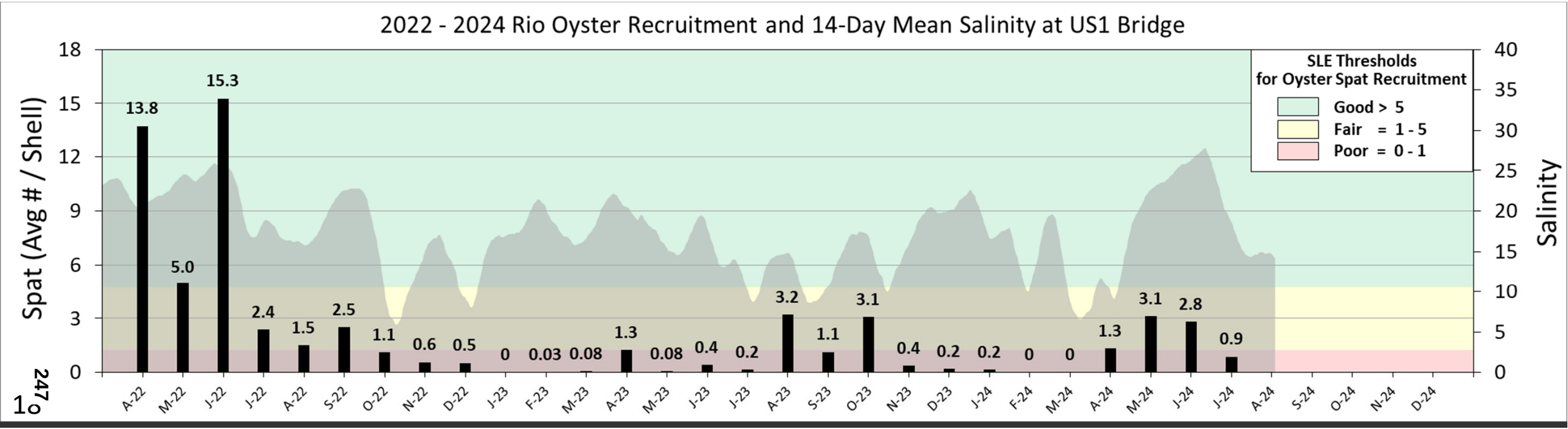




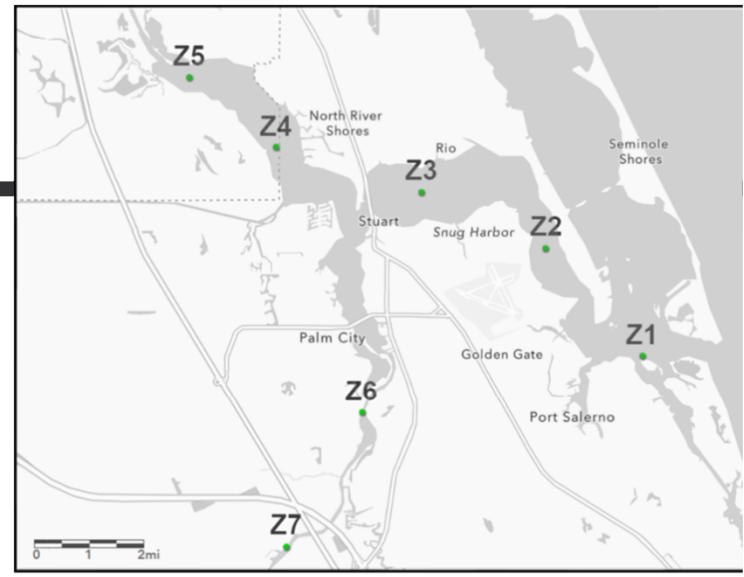
17 Presenter: Lawrence Glenn

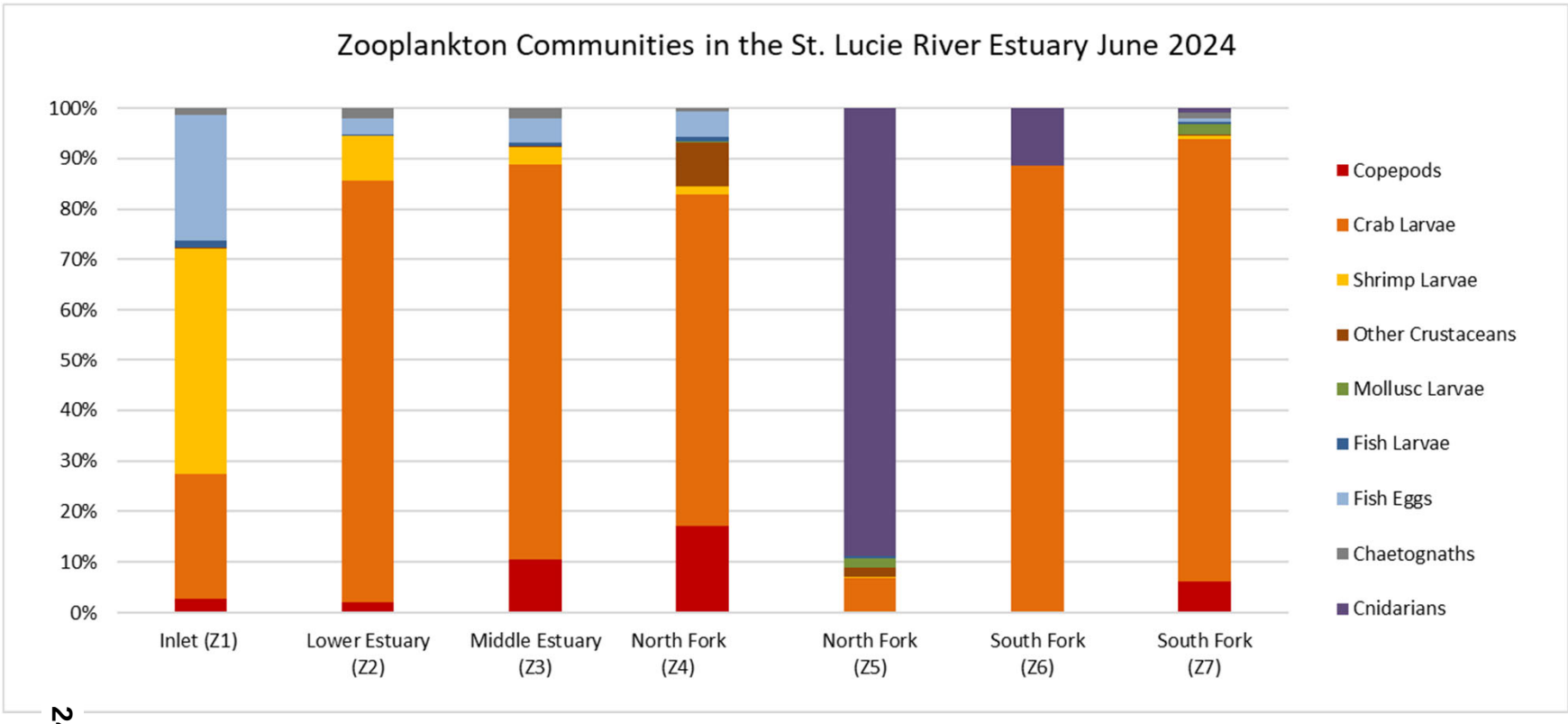
St. Lucie Estuary – Oyster Recruitment

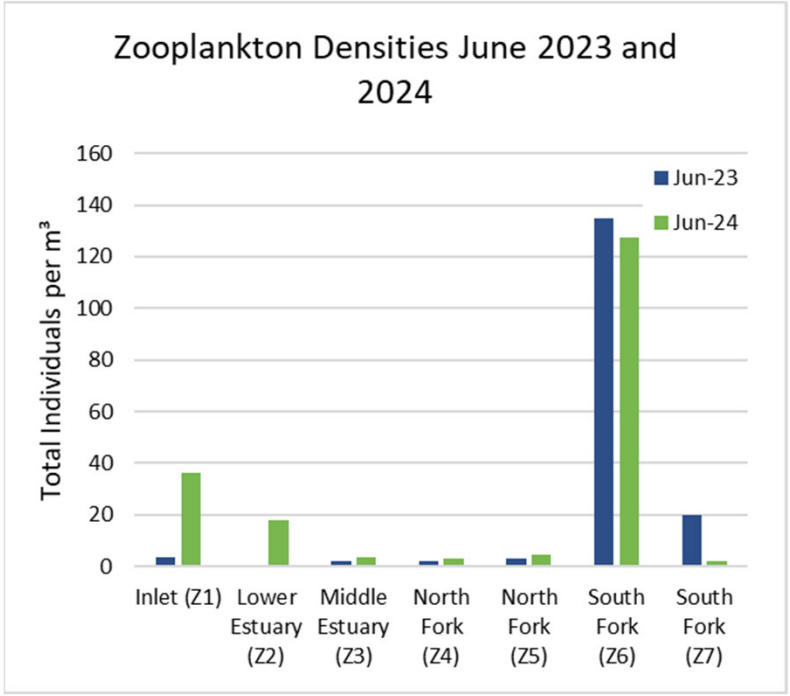




St. Lucie Estuary – Zooplankton Monitoring

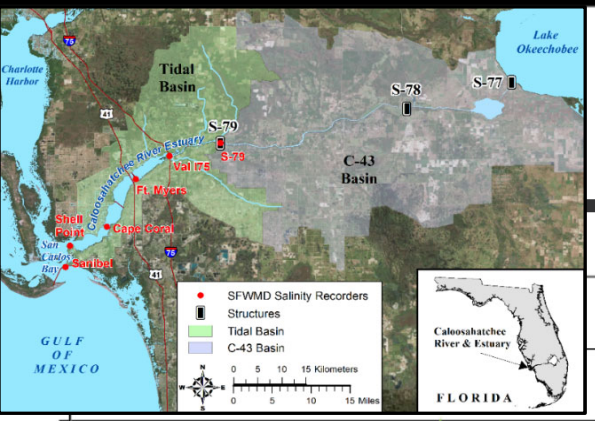






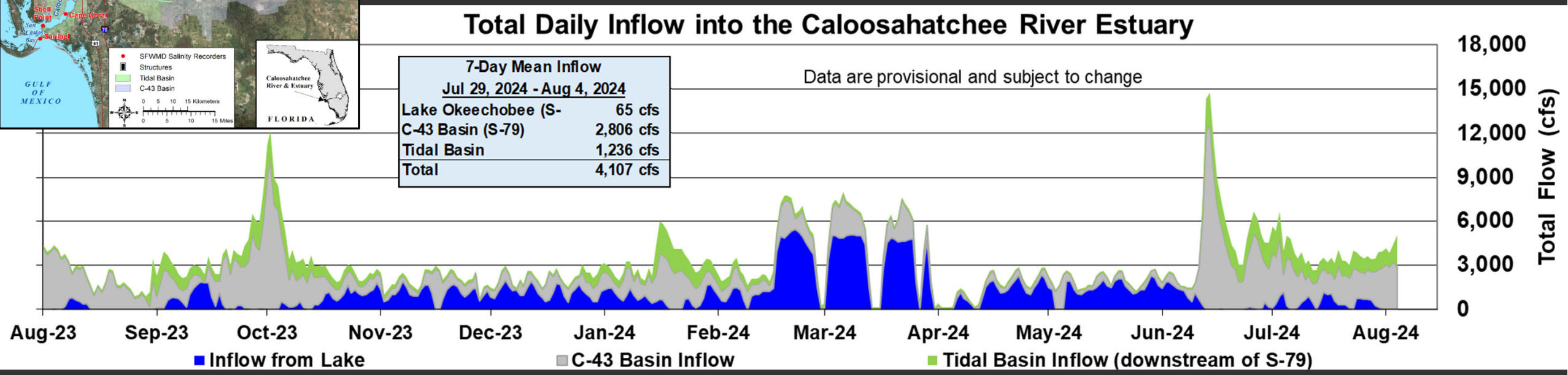
Presenter: Lawrence Glenn

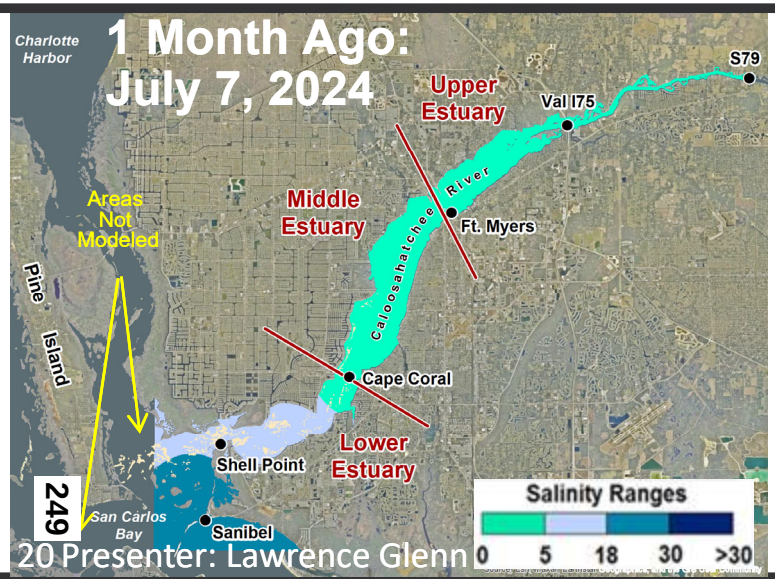
Caloosahatchee Inflows and Salinity Conditions

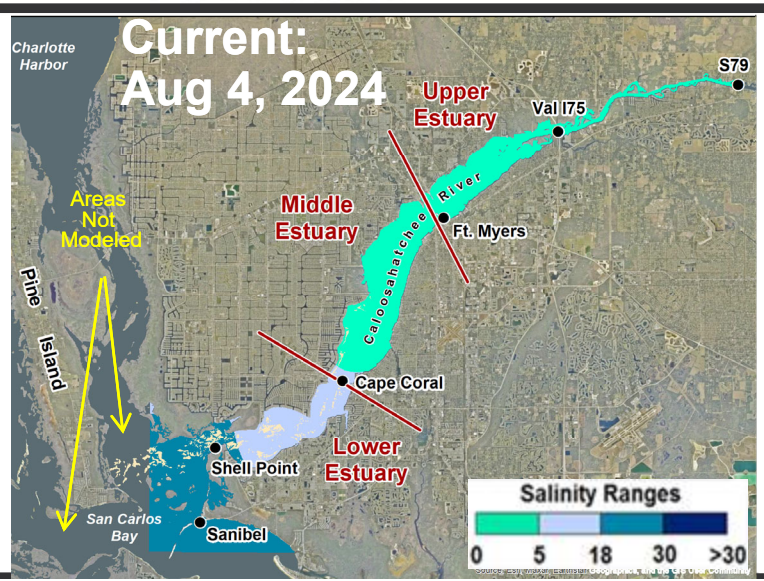


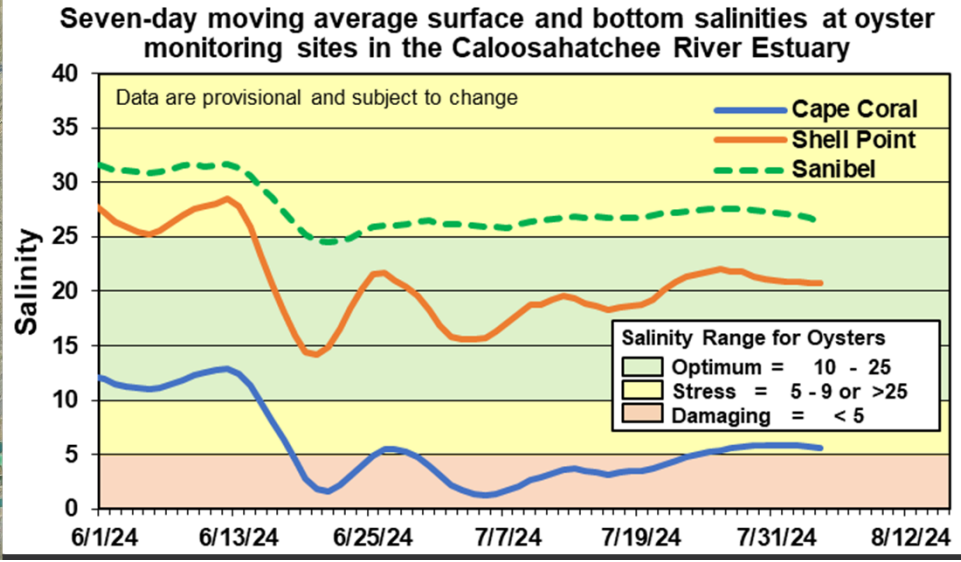
Total Daily Inflow into the Caloosahatchee River Estuary

7-Day Mean Inflow Jul 29, 2024 - Aug 4, 2024	
Lake Okeechobee (S-	65 cfs
C-43 Basin (S-79)	2,806 cfs
Tidal Basin	1,236 cfs
Total	4,107 cfs

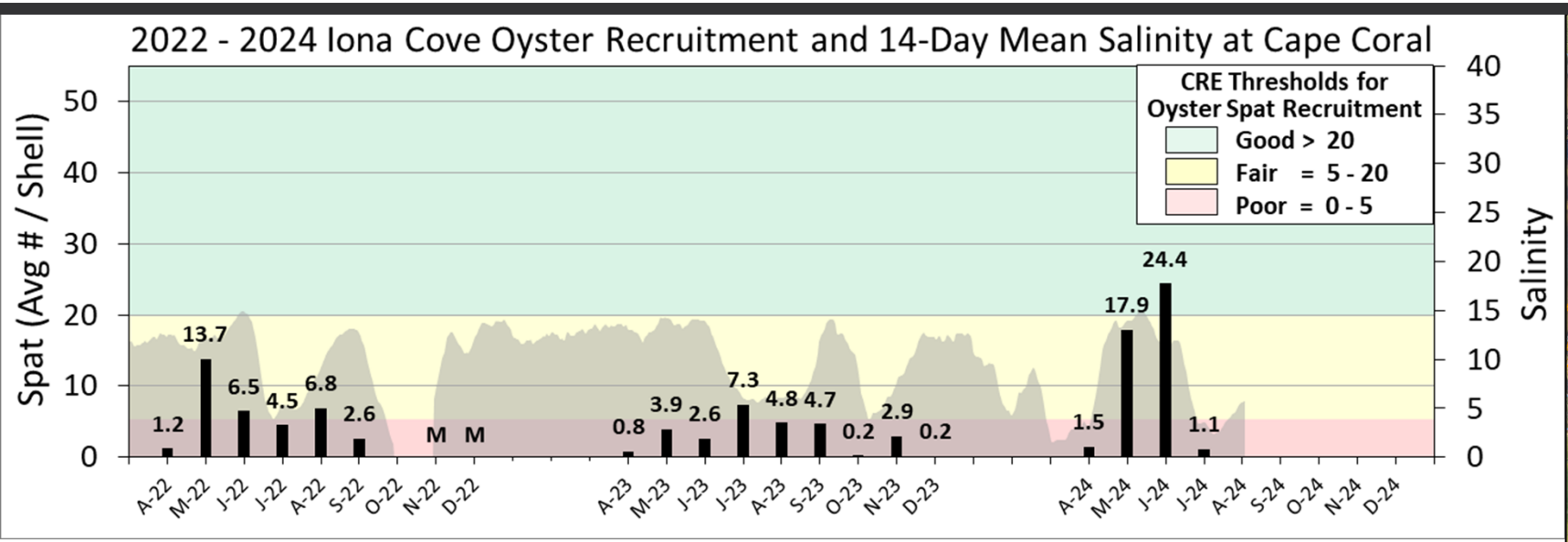


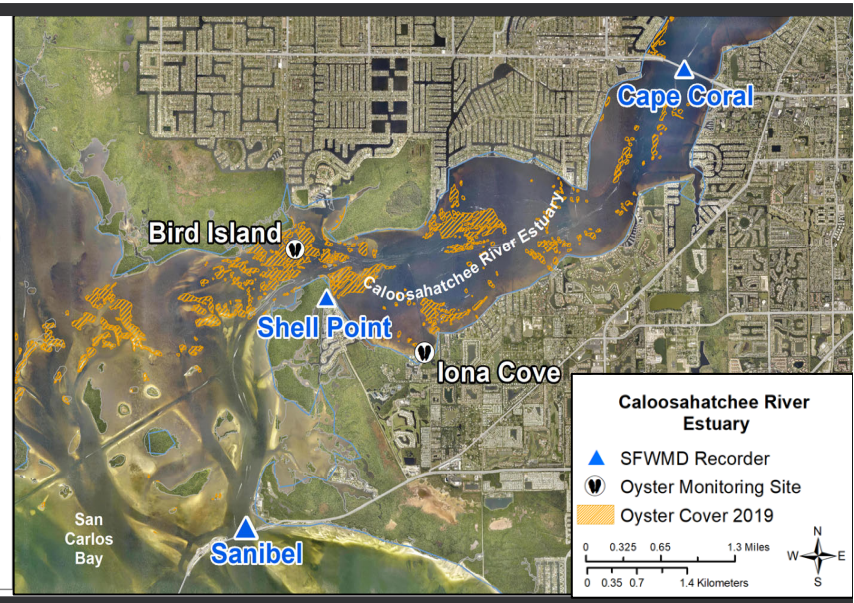


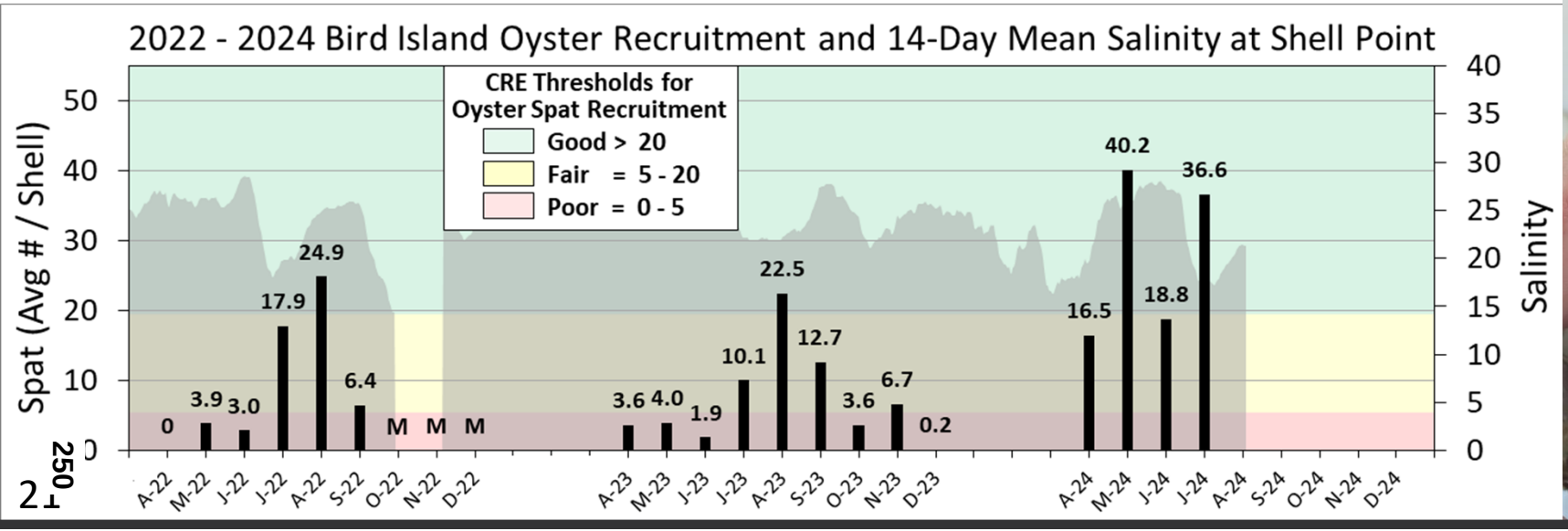




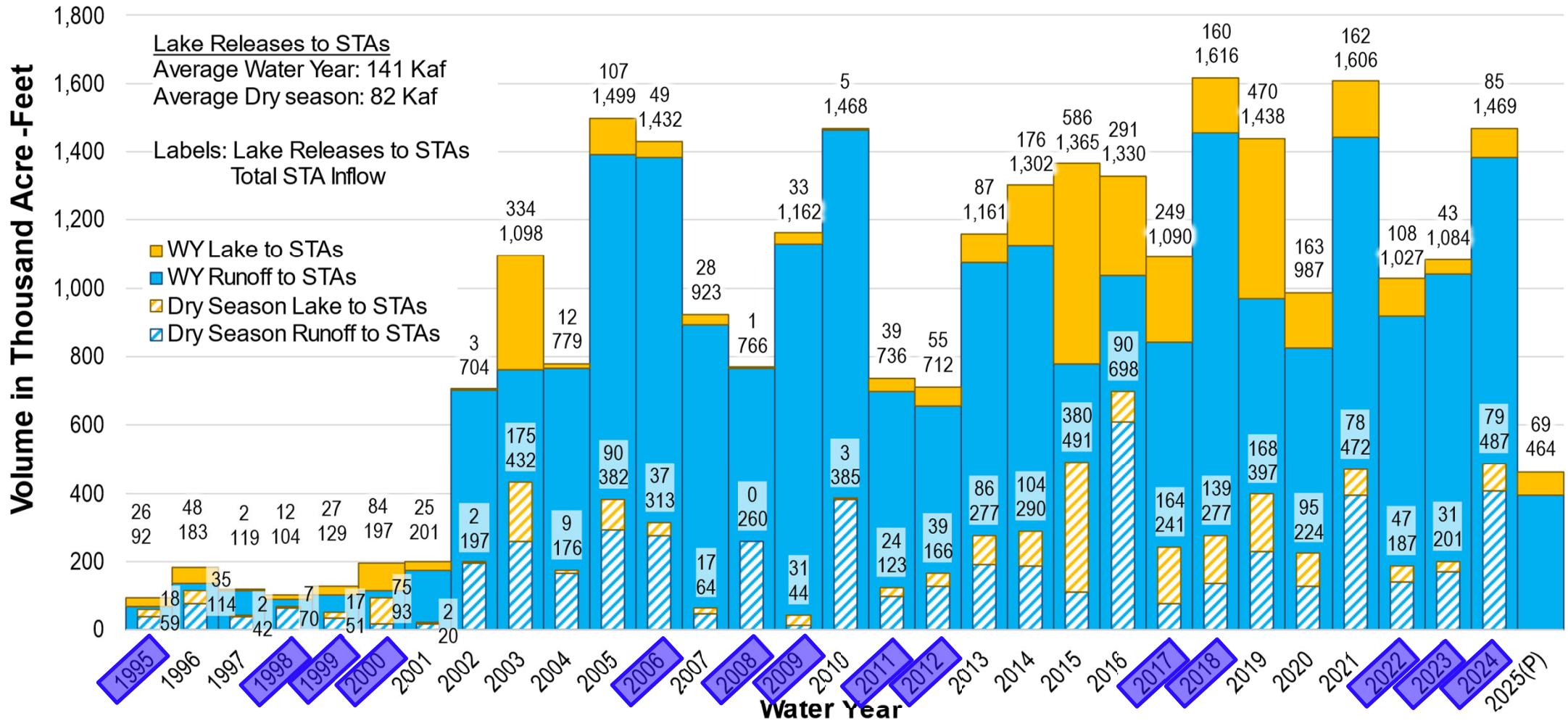
Caloosahatchee River Estuary – Oyster Recruitment







Total STA Inflow and Lake Releases to STAs



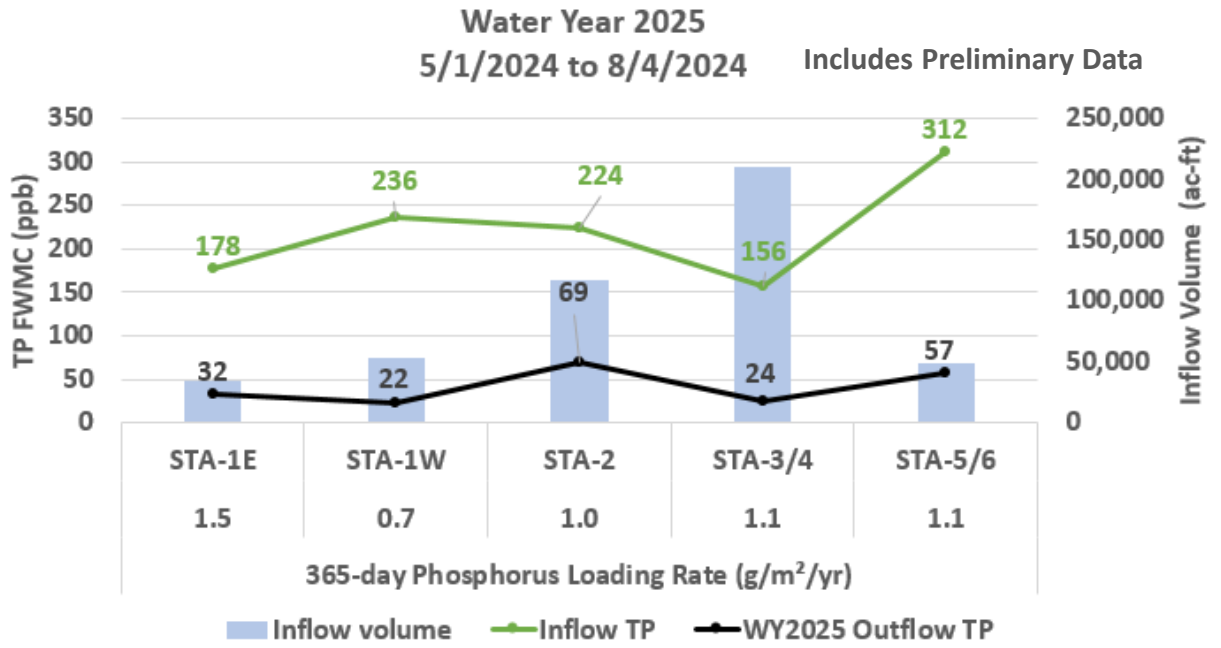
2025(p): Data from May 1, 2024 to August 4, 2024. Total STA Inflow includes inflows to STA -1E, STA-1W, STA-2, STA-3/4, and STA-5/6.

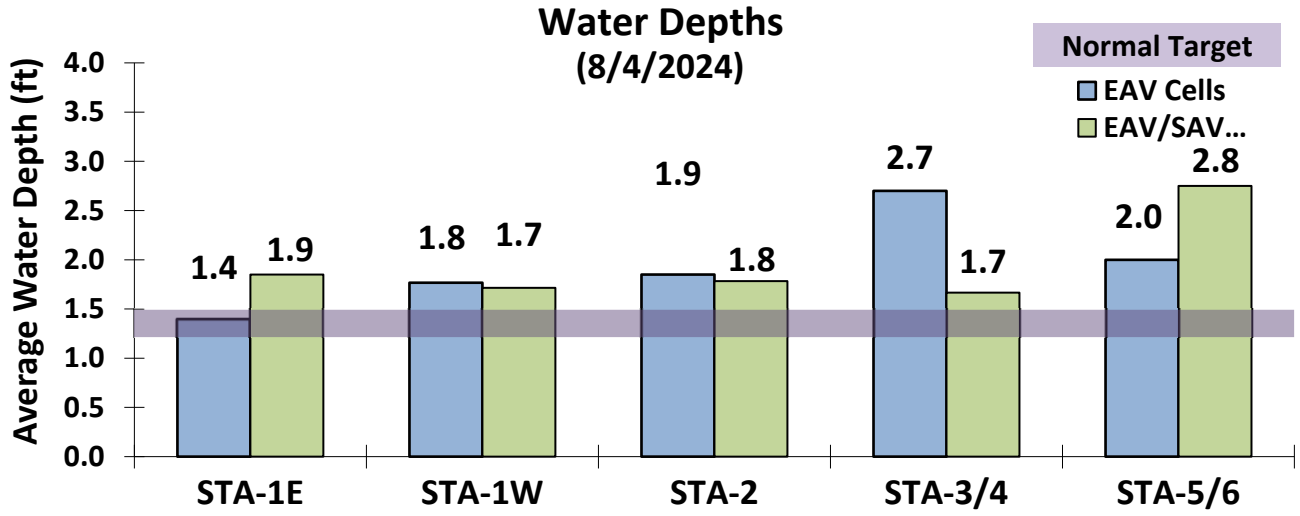
La Niña Water Years

Presenter: John Mitnik

Everglades Stormwater Treatment Areas - STAs

- STAs treated basin runoff in July
  - Total WY2025 inflows to STAs (5/1/2024 to 8/4/2024): ~463,600 ac-ft
  - Lake Okeechobee releases to FEBs/STAs in WY2025: ~68,900 ac-ft
- Extensive vegetation management activities underway to address stressed and highly stressed vegetation in EAV cells
- Most treatment cells are above target depth





Includes preliminary data; Emergent Aquatic Vegetation (EAV); Submerged Aquatic Vegetation

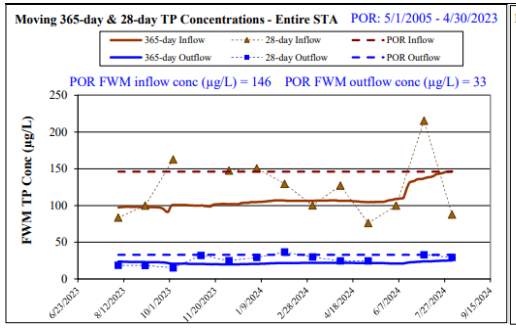
Presenter: Lawrence Glenn

Everglades Stormwater Treatment Areas - STAs

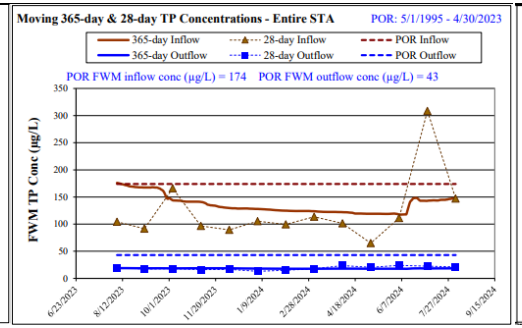
Declining Trend in Flow-Weighted Mean Concentrations

		STA 1E	STA 1W	STA 2	STA 3/4	STA 5/6
WYTD	Inflow	178	236	224	156	312
	Outflow	32	22	69	24	57
28d avg	Inflow	88	147	79	76	233
	Outflow	29	21	31	16	38
7d avg	Inflow	88	157	76	44	205
	Outflow	24	19	23	14	29

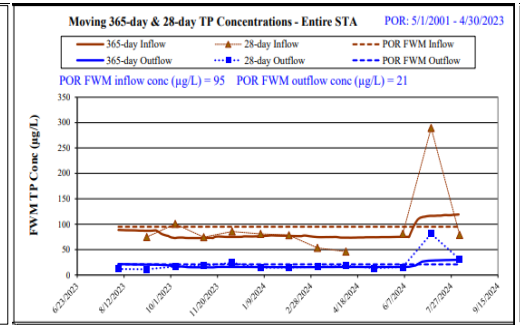
Storm Event Increases in Flow-Weighted Mean Concentrations



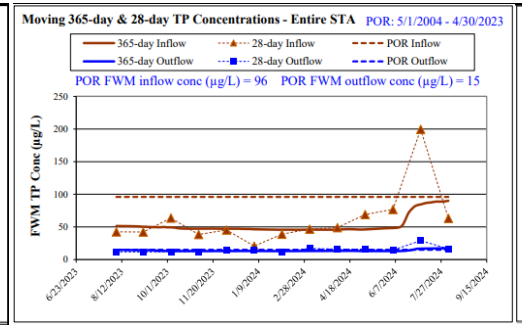
STA 1E



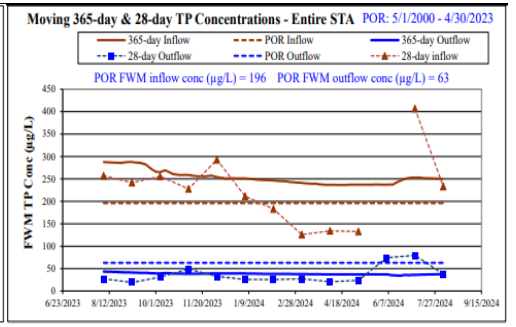
STA 1W



STA 2



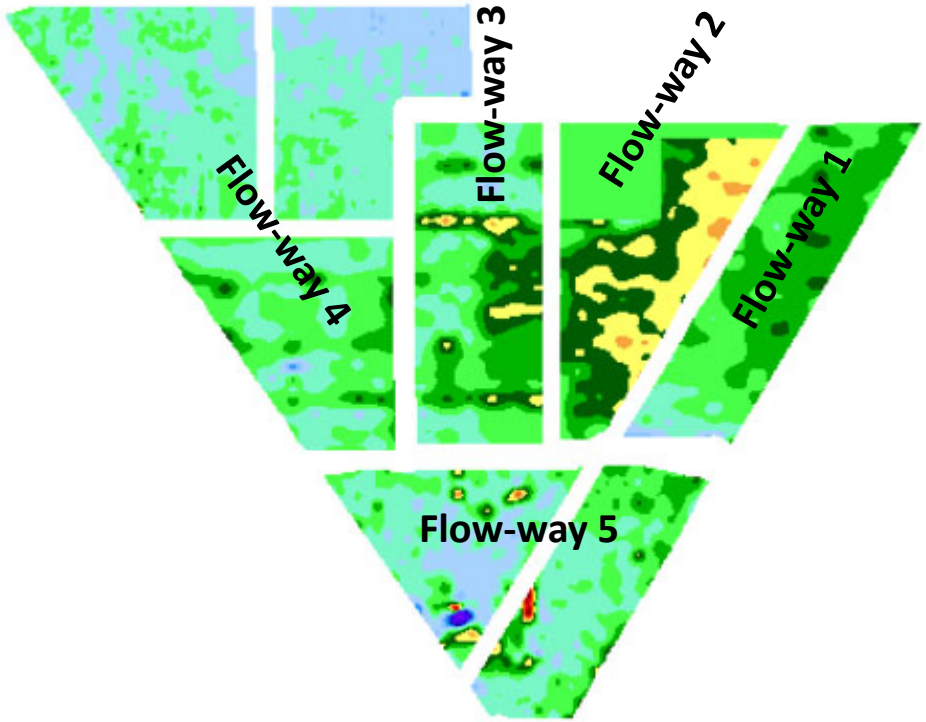
STA 3/4



STA 5/6

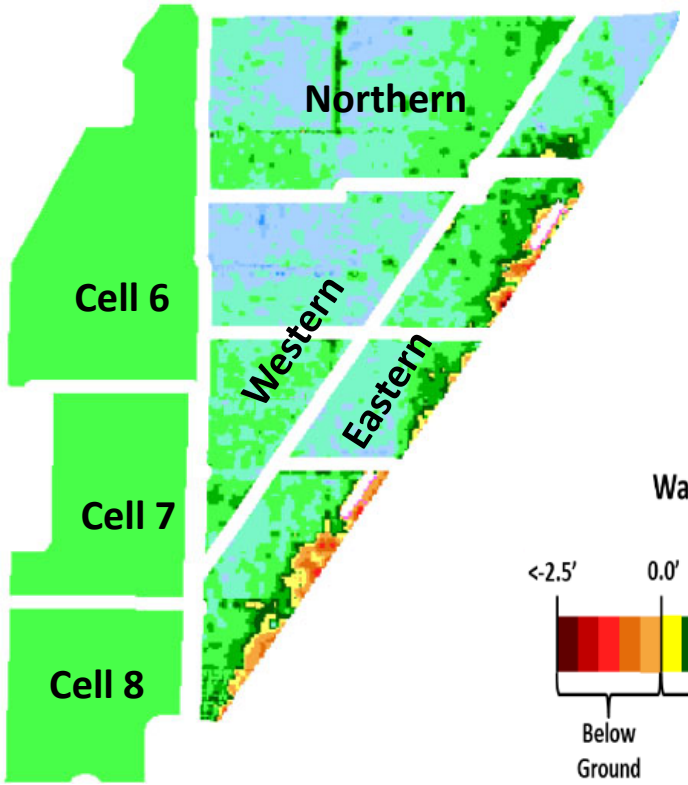
Presenter: Lawrence Glenn

Stormwater Treatment Areas Water Depths



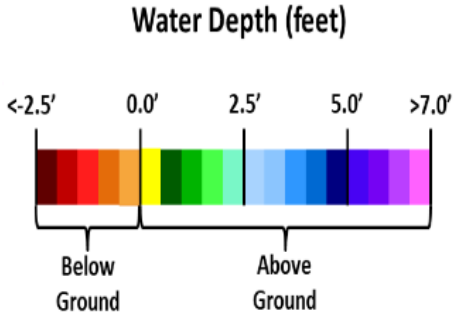
Flow-Way	Restrictions
1	On-line
2	On-line; vegetation management
3	On-line
4	On-line; vegetation management
5	On-line; construction activities

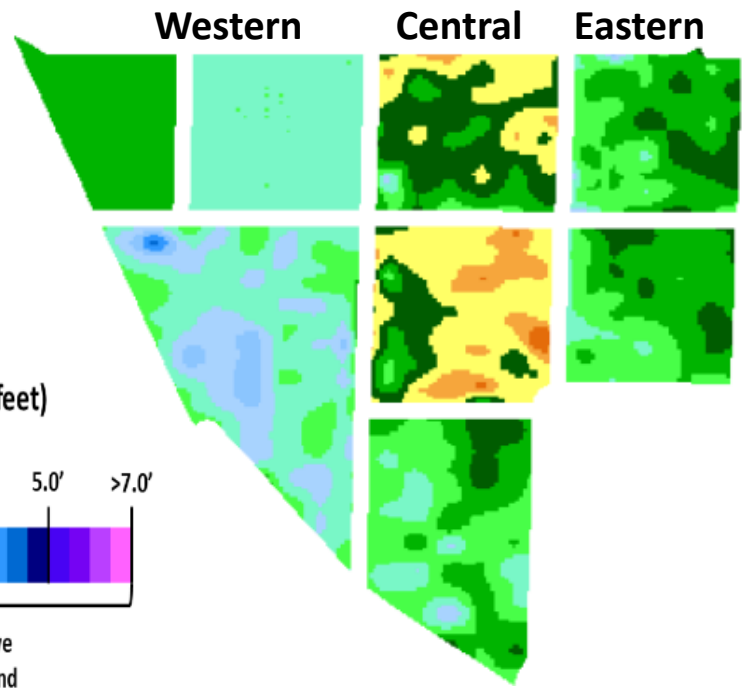
STA-2



Flow-way	Restrictions
Northern	On-line
Eastern	On-line
Western	On-line
Cell 6	On-line
Cell 7	On-line
Cell 8	On-line

STA-1W



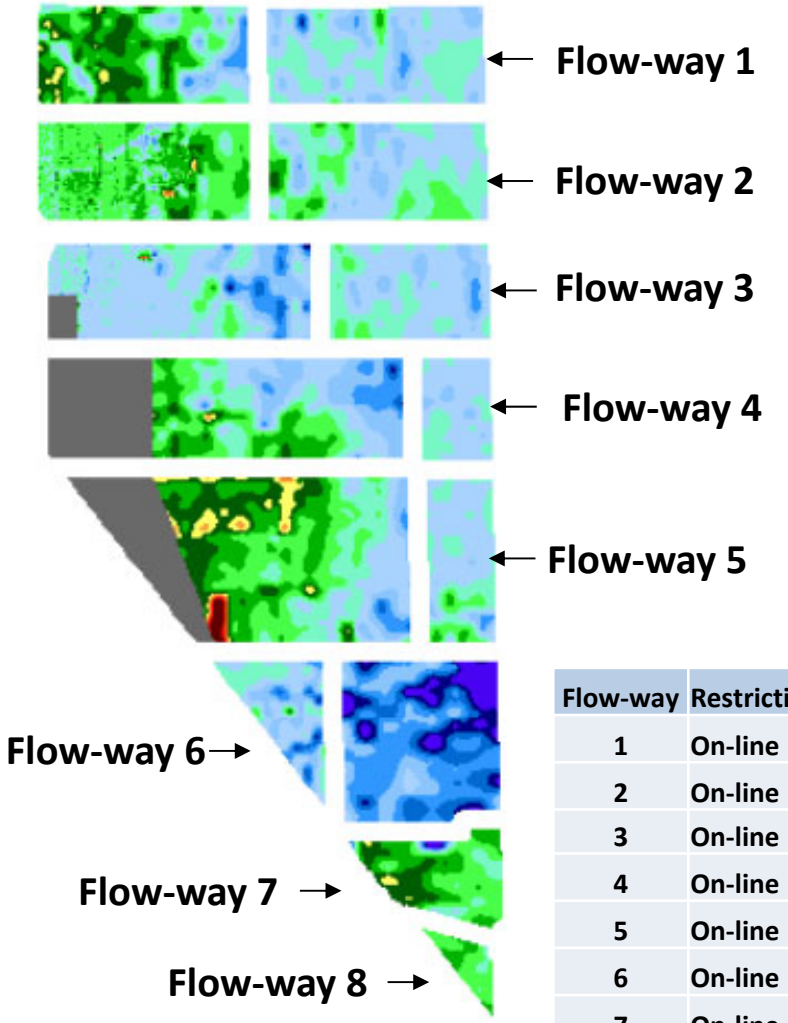


Flow-way	Restrictions	Back on-line
Western	On-line; post-construction grow in	
Central	Off-line; construction activities	TBD
Eastern	On-line; Cell 2 post-erosion repair vegetation grow-in	

STA-1E

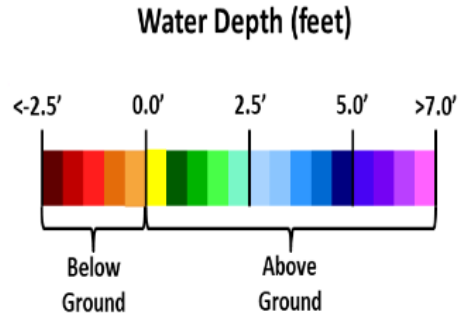
Presenter: Lawrence Glenn

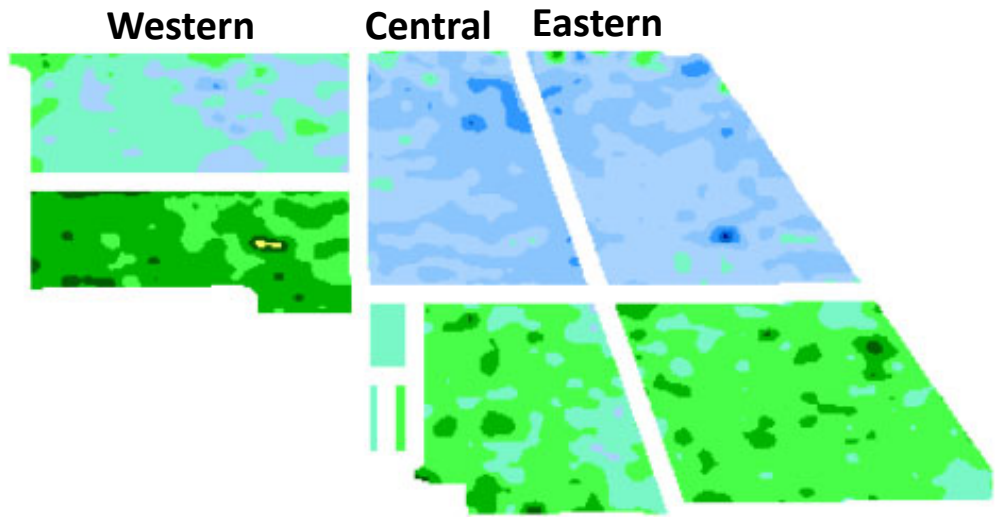
Stormwater Treatment Areas Water Depths



STA-5/6

Flow-way	Restrictions
1	On-line
2	On-line
3	On-line
4	On-line
5	On-line
6	On-line
7	On-line
8	On-line





Flow-way	Restrictions
Western	On-line
Central	On-line
Eastern	On-line; post-drawdown vegetation grow-in

STA-3/4

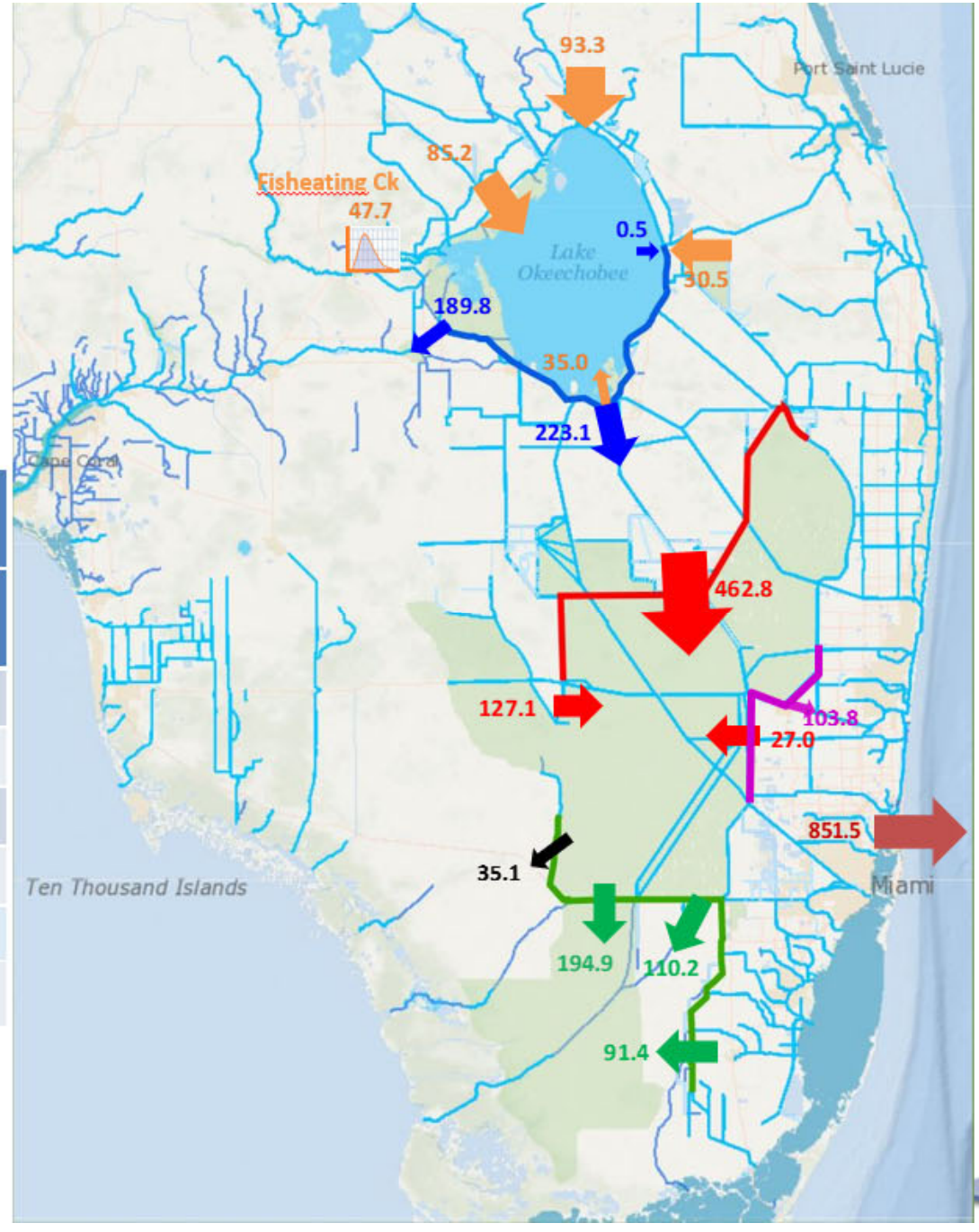
Presenter: Lawrence Glenn

SFWMD –Volumes Flowing Down the System for the Period May 1, 2024 to August 6, 2024

(volumes in 1,000 acre-feet)

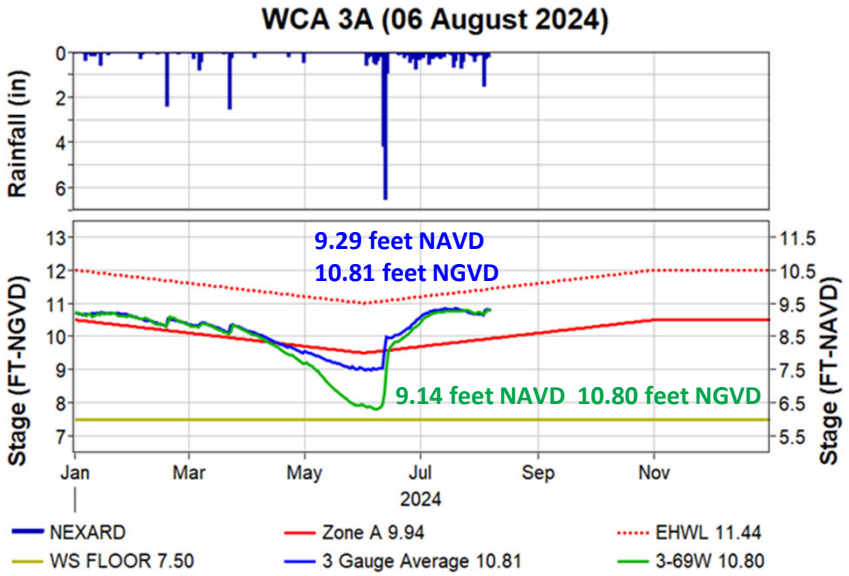
Symbol	Description	Volume (1,000 acre- feet)	
		WYR 2025	Last Month
→	Lake Okeechobee Inflows	291.8	144.3
→	Lake Okeechobee Outflows	413.4	26.0
→	WCAs Inflows	616.9	217.2
→	ENP / Detention Cell Inflows	396.5	190.3
→	WCAs to East	103.8	56.9
→	Flows to Intracoastal	851.5	270.5

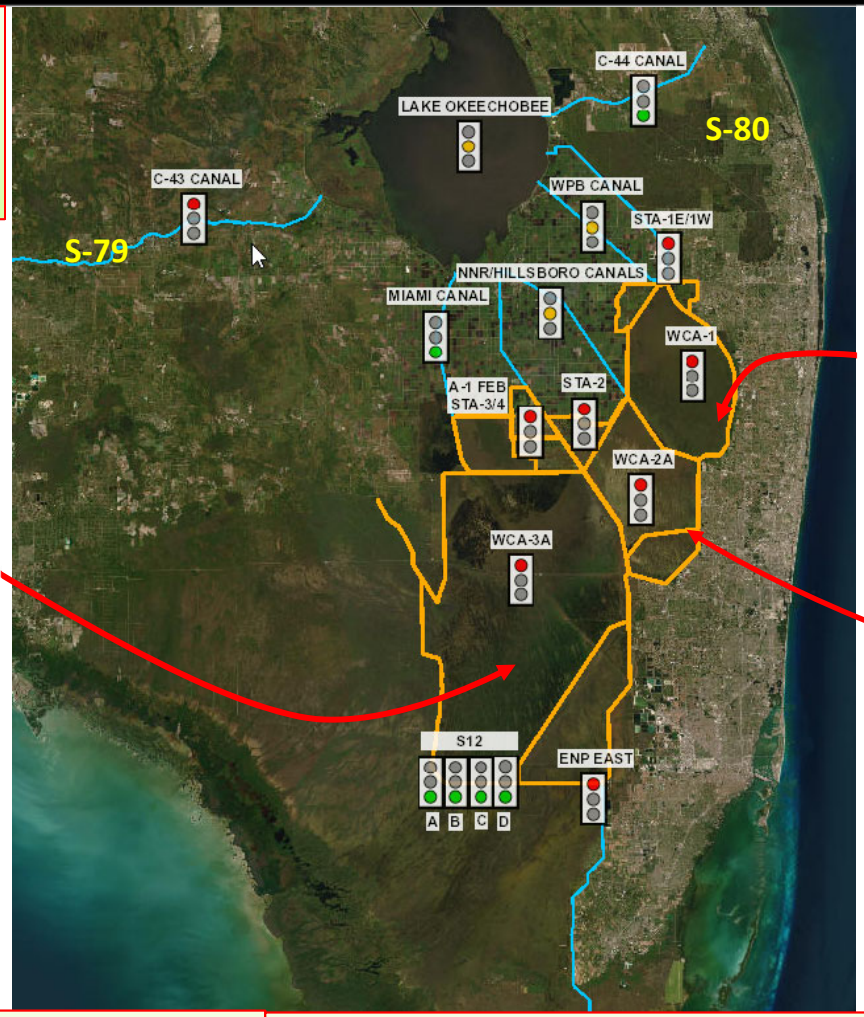
1,000 acre-feet = 325.9 Million Gallons

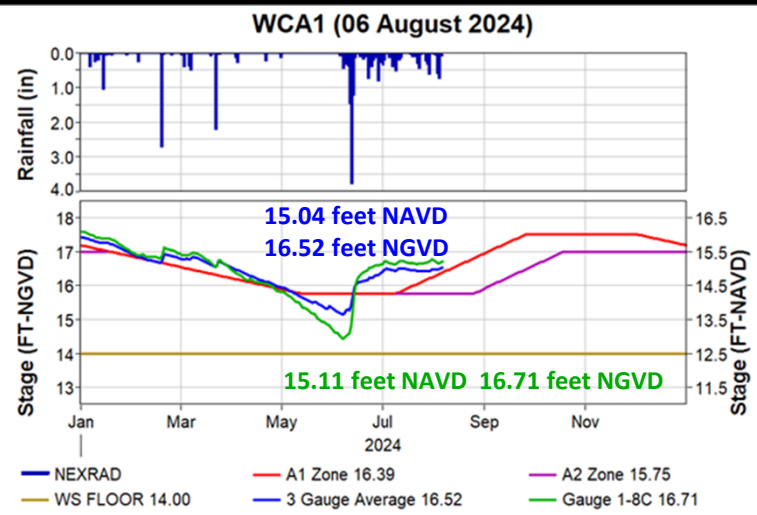


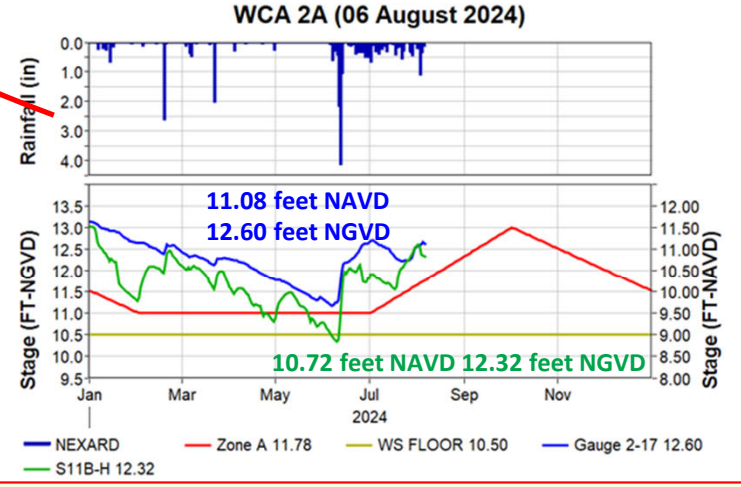
Presenter: John Mitnik

Lake Okeechobee stage is in the Low Sub-band of the LORS-2008 Regulation schedule. LORS release guidance Maximum Practicable Releases to the WCAs if desirable or with minimum Everglades impact; otherwise, no releases to the WCAs. S-79 up to 450 cfs and S-80 up to 200 cfs.





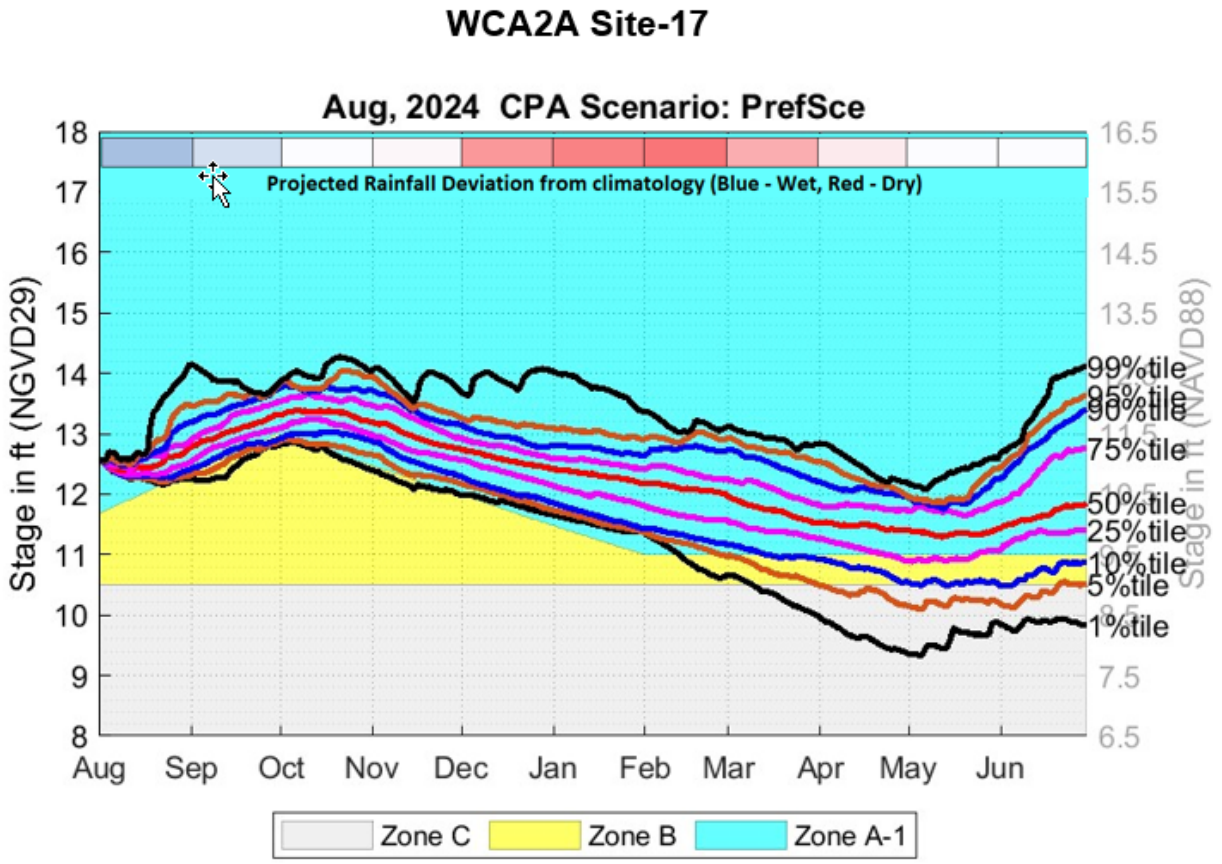


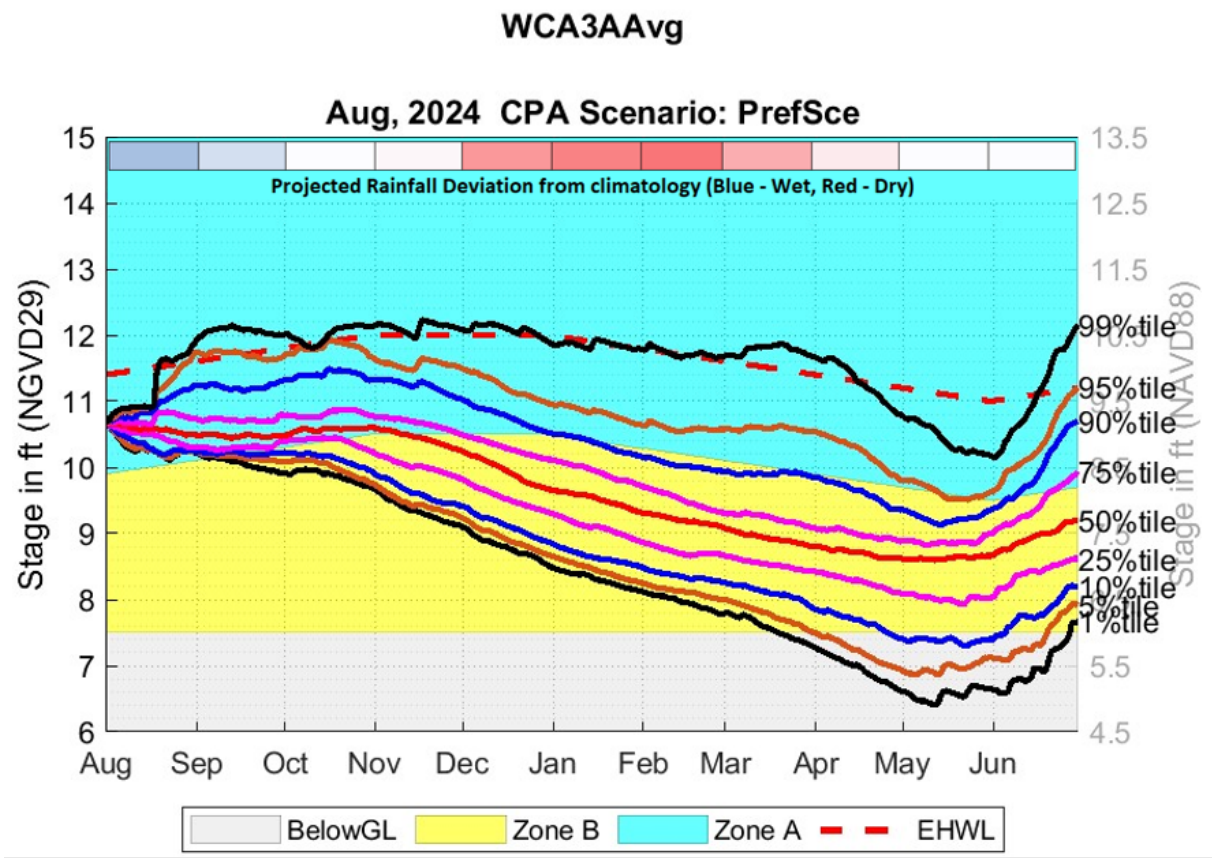


For this week, the Tamiami Trail Flow Formula calls maximum releases from WCA-3A to NESRS. Current L-29 stage constraint is at 7.0 feet NAVD (8.5 feet NGVD). South Dade Conveyance System is stable. S-335 and S-338 are open. S-356 is pumping. G-211 is closed. S-332B and D are pumping as needed. S-176 and S-177 are closed. S-18C is open and S-197 is closed. LPG-2 stage at 8.5 SMA is below ground. S-357 is pumping as needed to maintain stages 4.0 to 4.5 ft NGVD in the C-357 canal. S199 and S200 are pumping as needed to maintain the stage in the canal within range.

WCA-1 stage is above regulation schedule; WCA-2A stage is above regulation schedule; WCA-3A stage is above regulation schedule in Zone A. S-10s are closed. S11s are open~1800. S12A/B are opened ~600 on July 15th, and S12C/D are open ~ 1,400 cfs. S-333 and S-333N are passing ~ 300 cfs. S-343 A and B are opened ~400 cfs on July 15th. Interior structures to WCA-3A S-339 and S-340 are open. WCA-1 releases to tide S-39 through Hillsboro Canal ~500 cfs. WCA-2A reg releases through C-14 (S-38 ~400 cfs). WCA-3A to tide via S-151 (~200 cfs), S-31 (~300 cfs) into the C-6 canal and then S-26 (~600 cfs) and NNR (S-34E ~300 cfs).

Conditional Position Analysis (CPA)

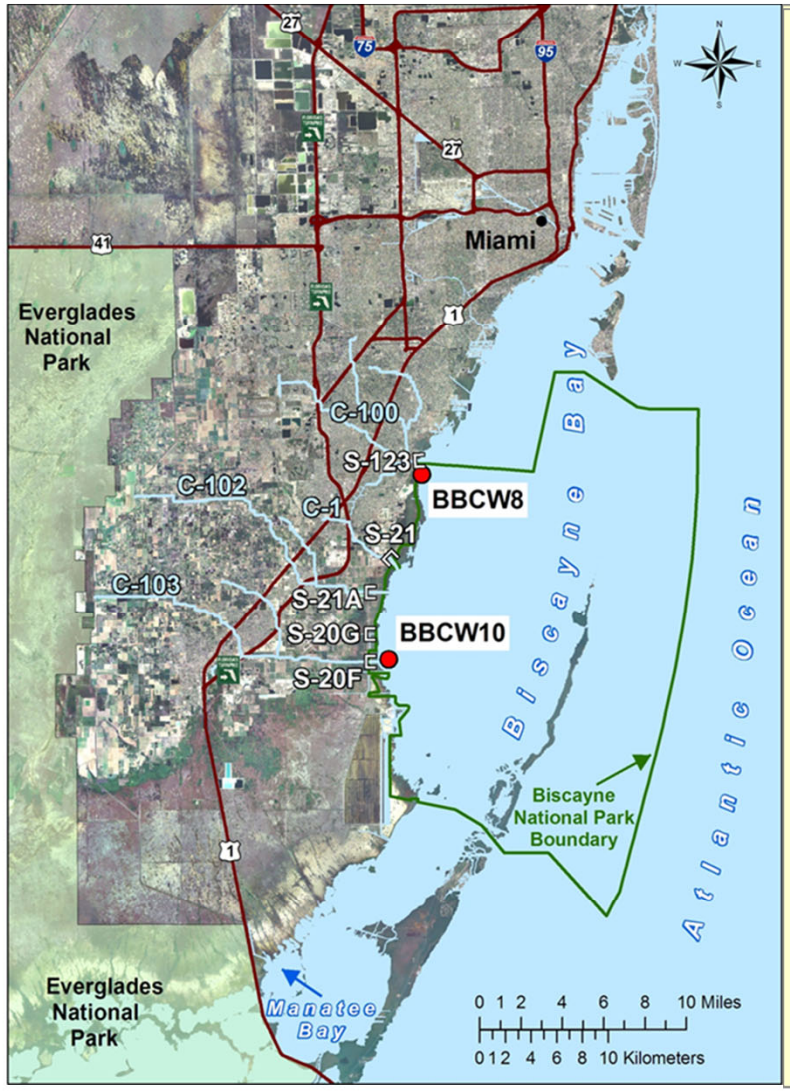


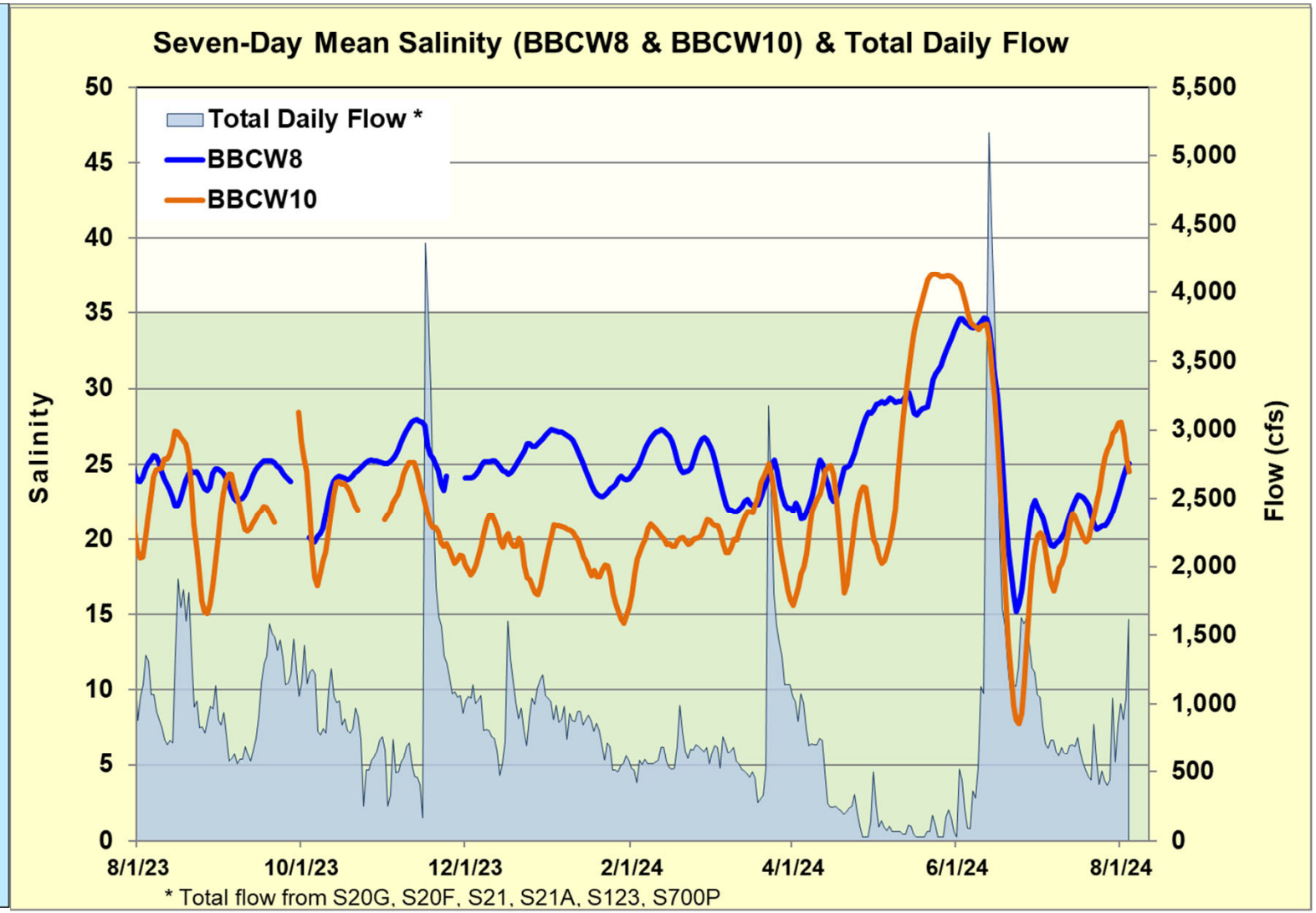


Secondary vertical axis shows stages in NAVD88. These stages are based on Agreed Upon Regulation Schedule Conversion Offsets between NGVD29 and NAVD88 (1.5 ft for WCA2&3).

Presenter: John Mitnik

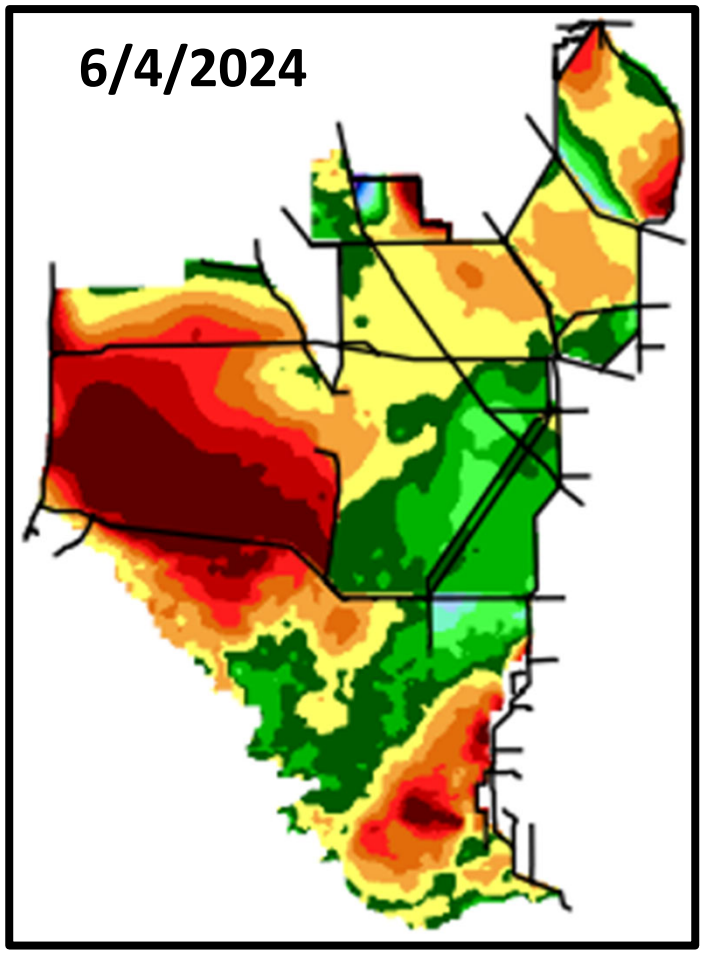
Biscayne Bay Salinity Conditions

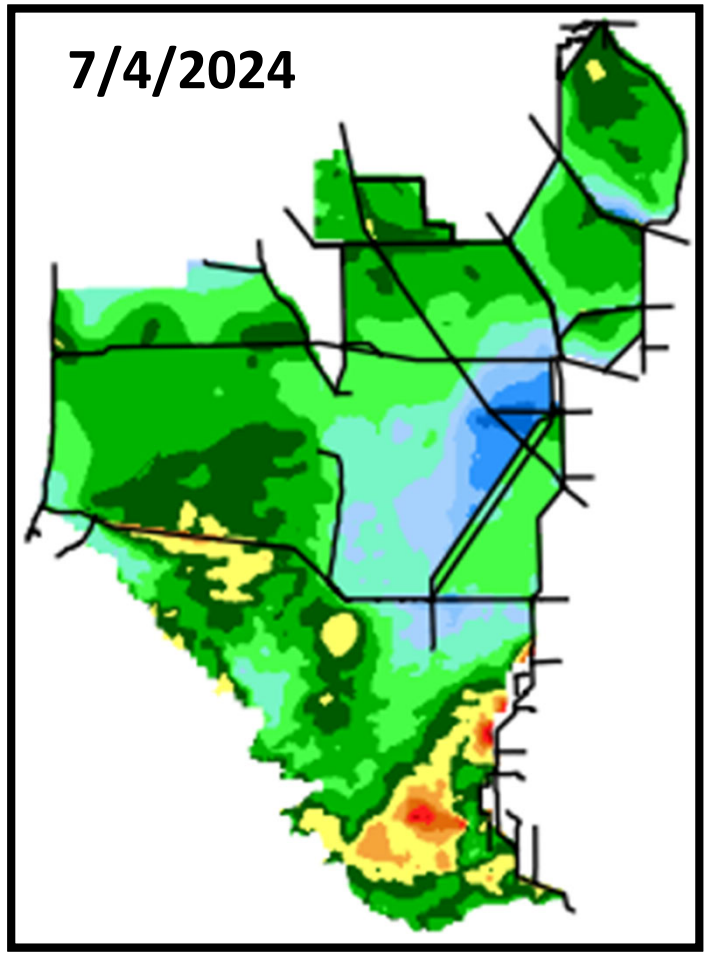


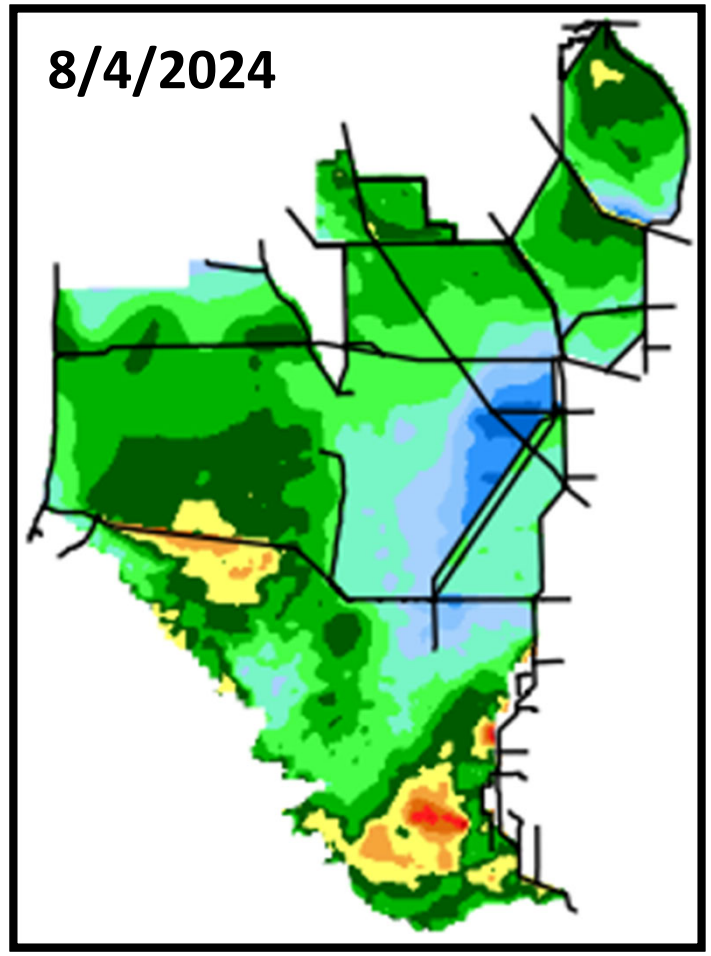


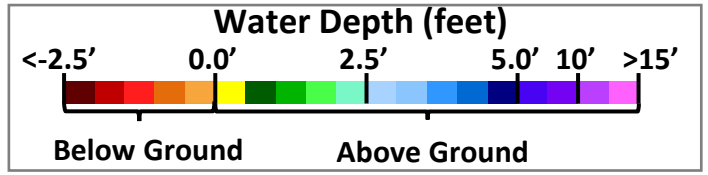
Presenter: Lawrence Glenn

Everglades Water Depths



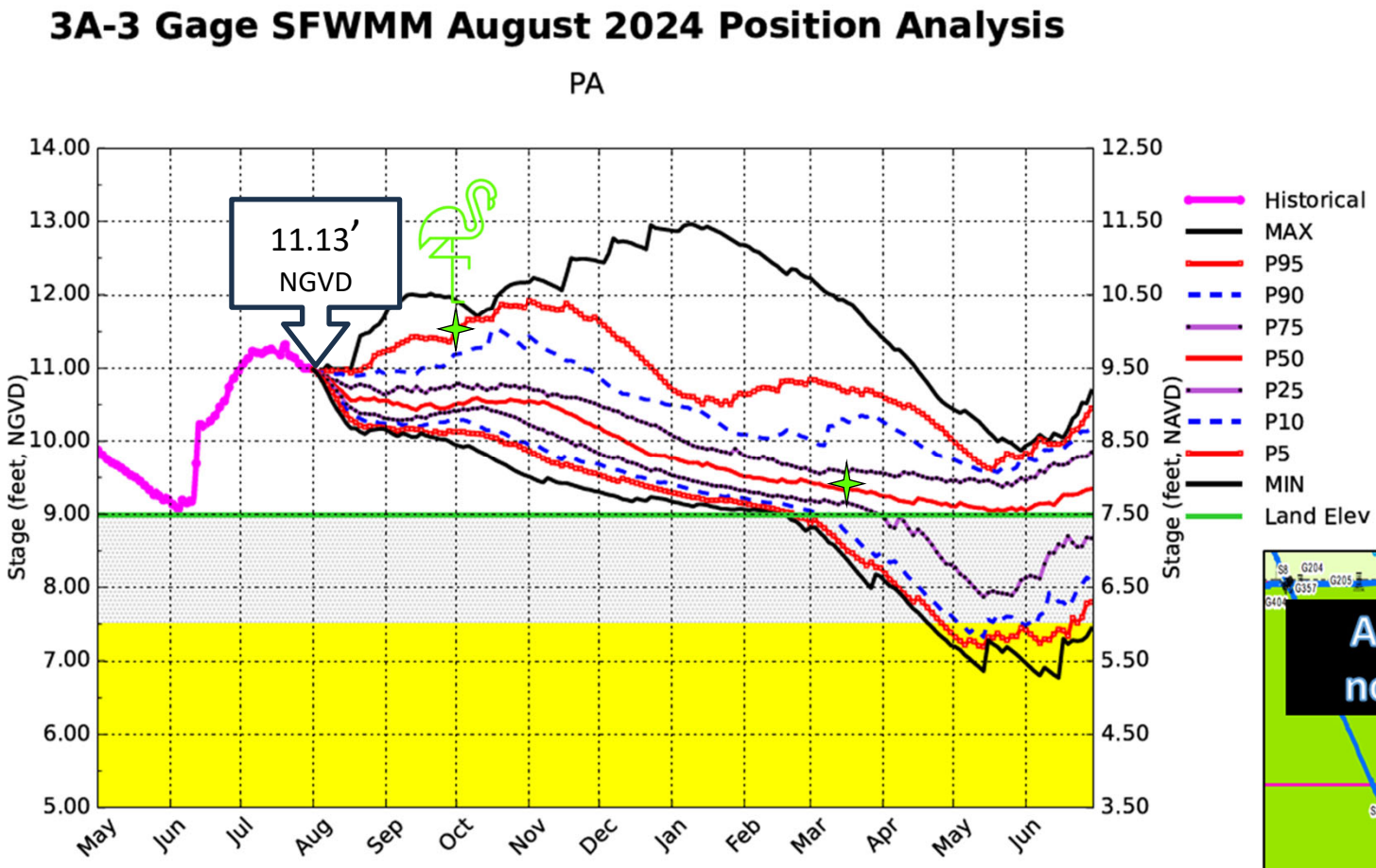


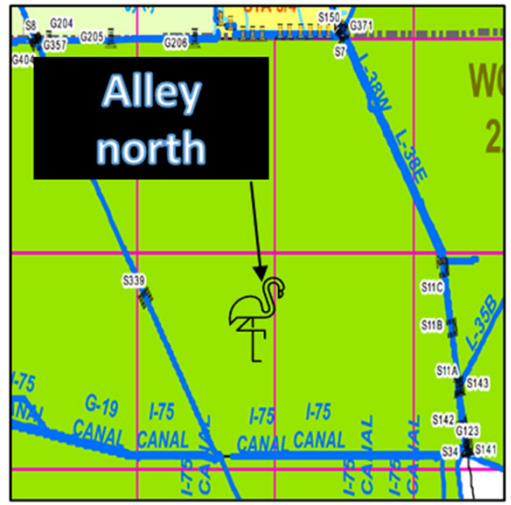




Presenter: Lawrence Glenn

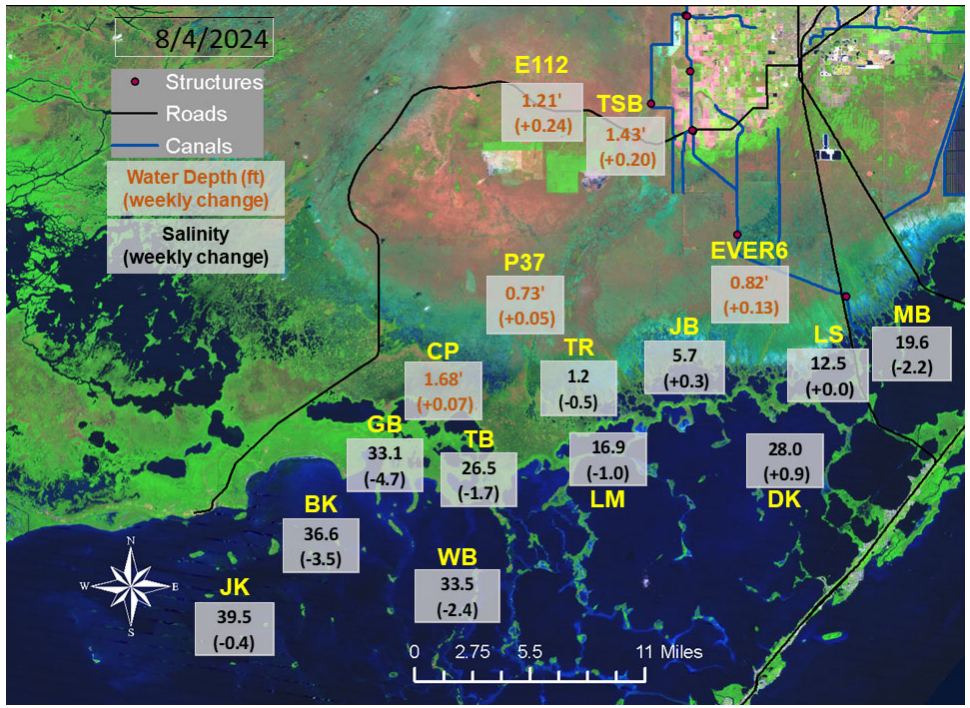
Dynamic Position Analysis Modeling





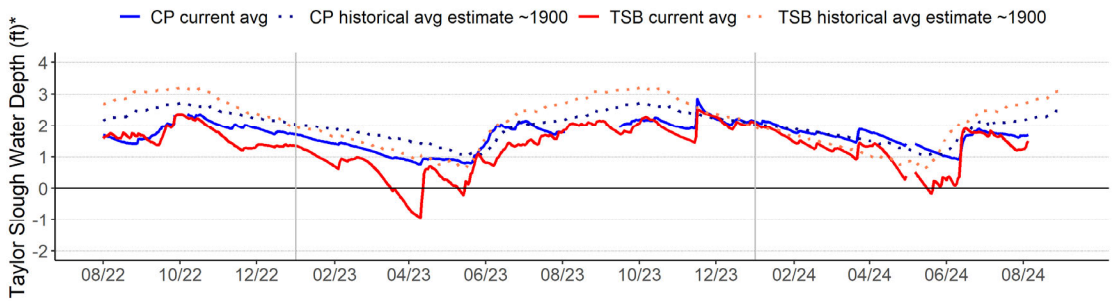
Presenter: Lawrence Glenn

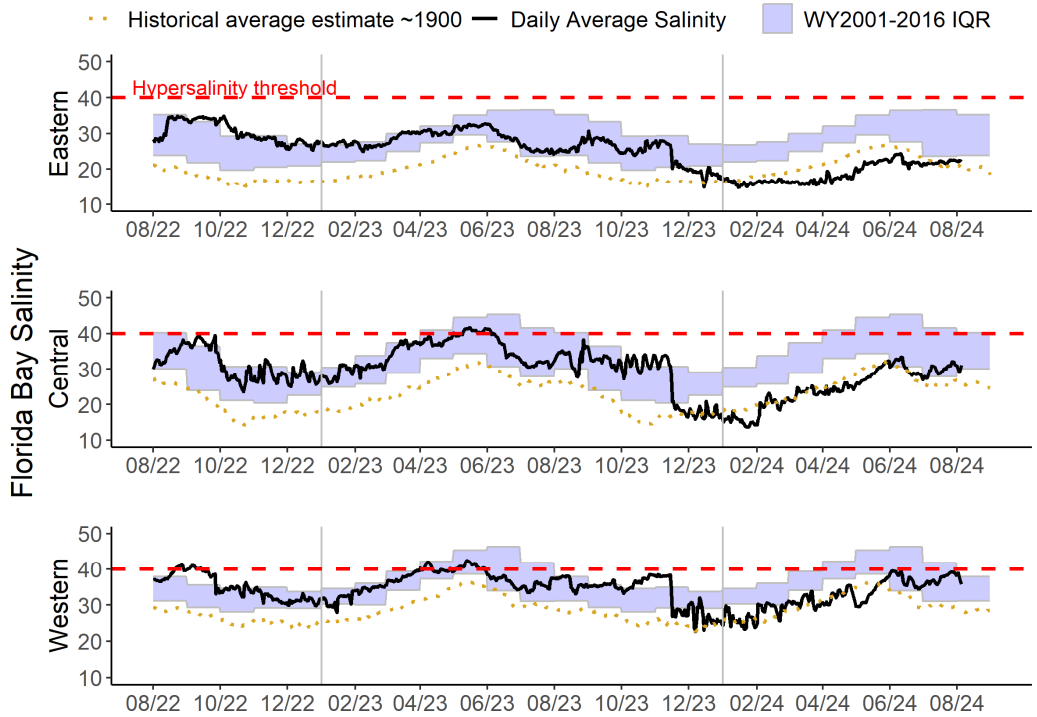
Florida Bay Salinity



Taylor Slough Water Depths

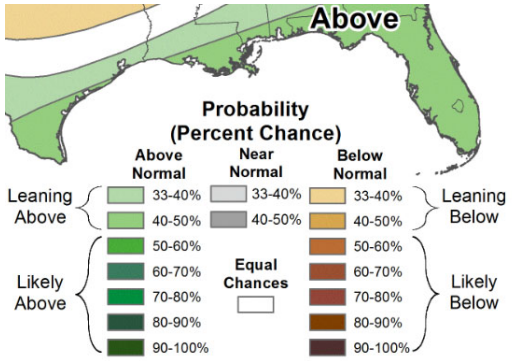
*note: calculated using ground surface elevations values (NAVD88) from EDEN



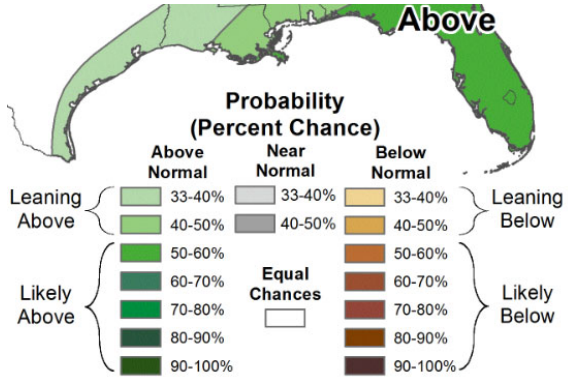


Presenter: Lawrence Glenn

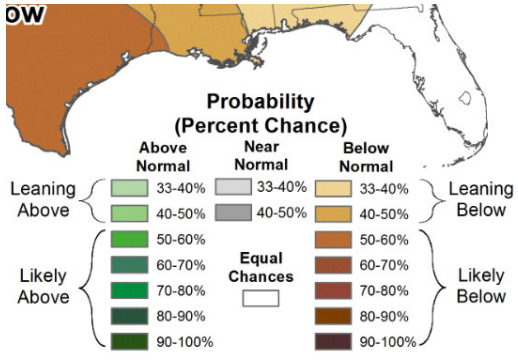
CPC Precipitation Outlook for South Florida



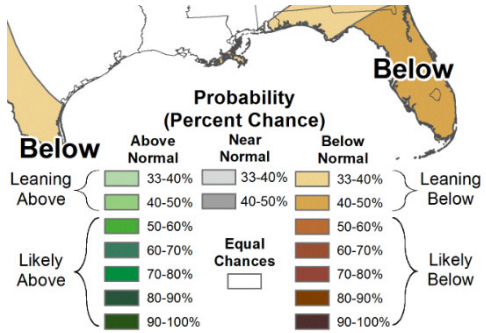
Aug 2024



Aug 2024 – Oct 2024



Oct 2024 – Dec 2024



Feb 2025 – Apr 2025

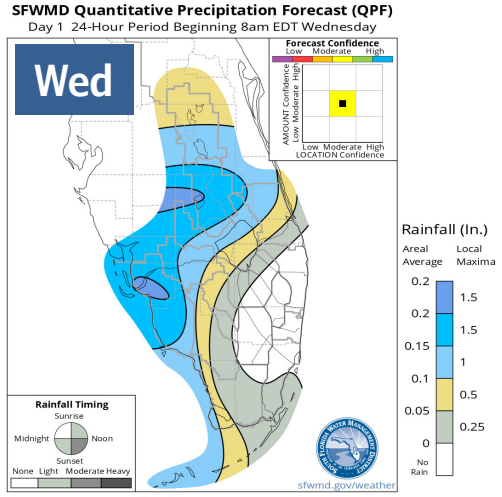
- The most recent CPC precipitation outlook for Aug 2024 is for increased chances (40-50%) of above Normal rainfall for south Florida.
- The 3-month window of Aug 2024 - Oct 2024 shows substantial increased chances (50-60%) of above Normal rainfall for south Florida. The 3-month window of Sep 2024 - Nov 2024 indicates increased chances (40-50%) of above Normal rainfall for the entire District.
- The transition into the 2024 – 2025 Dry Season goes through the 3-month window of Oct 2024 – Dec 2024 with equal chances of below, normal, and above normal (EC) for south Florida.
- The 3-month window of Nov 2024 – Jan 2025 and Feb 2025 – April 2025 shows increased chances (40-50%) of below normal rainfall for the entire District.
- The 3-month windows of Dec 2024 – Feb 2025 and Jan 2025 – Mar 2025 show outlooks for substantial increased chances (50-60%) of below normal rainfall for the entire District.
- The transition into the 2025 wet season shows equal chances (EC) of rainfall for the state of Florida.

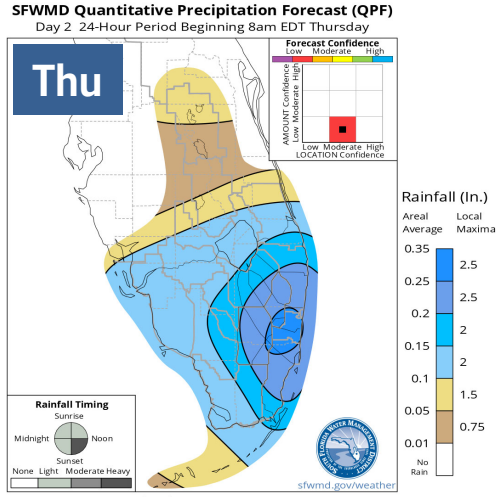
Updated Jul 18, 2024

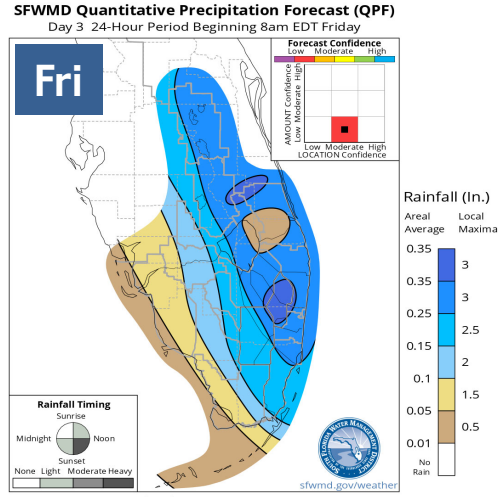
https://www.cpc.ncep.noaa.gov/products/predictions/30day/

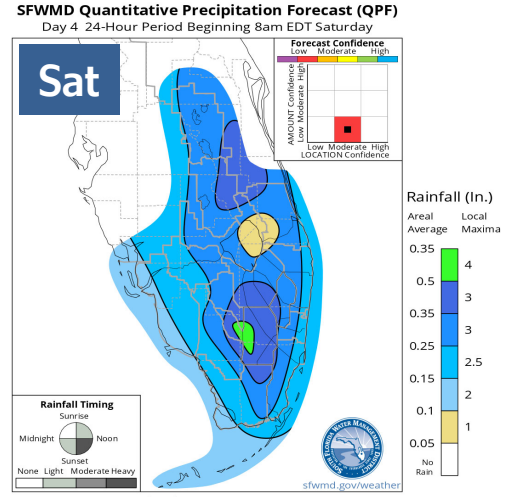
Presenter: John Mitnik

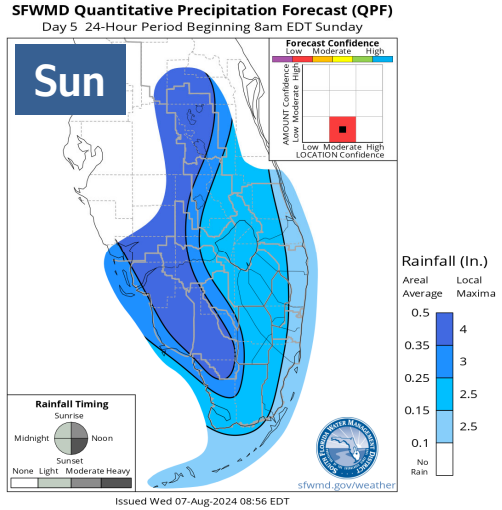
Short-, Medium-, & Extended-Range Outlooks

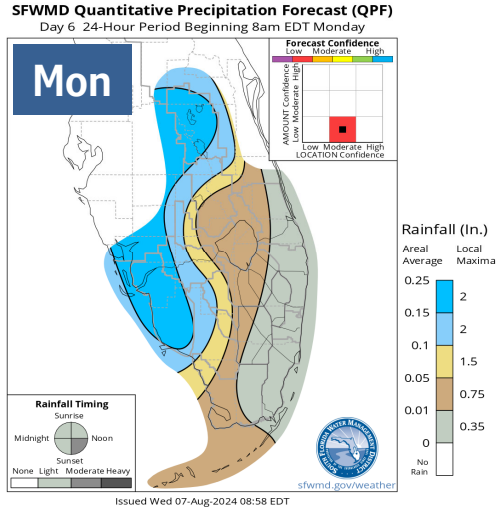


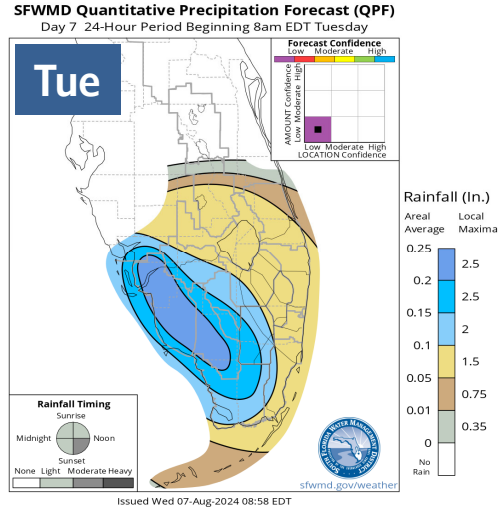


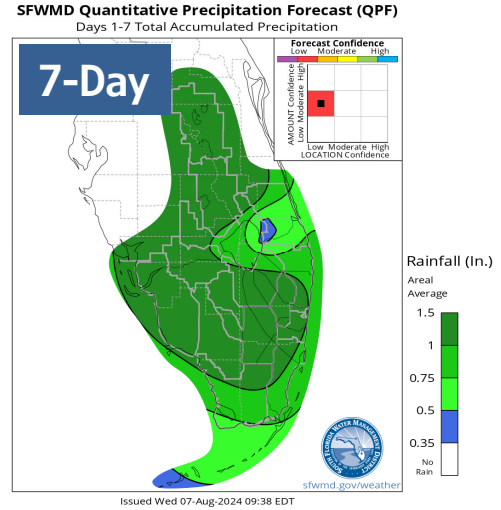












Weekly Summary

Week 1 (Historical Avg: 1.68”): Below normal
Week 2 (Historical Avg: 1.80”): Below normal

THANK YOU!!!

Okeechobee Field Station
Roscoe Prescott
Nathan Conroy
Robert Hall
Steele Holliday
Charles Smith
Homero Torres
Chad Burnsed

Miami Field Station
Ernesto Garcia
Henry Bulman
Leo Coney
Michael Wyant
Paul Wilson
Tyler Sizemore
William Valdes

Homestead Field Station
James Sneckenberg
Michael Motta
Brian Ferland
Jesse Browning
Christopher Galea
Jorge Serrano
Jeremy Padrick
Zack Kilgore
Ozelle Jones

Presenter: John Mitnik

Construction at the L-28 South Culverts site.

CERP Construction and Planning Projects

Progress Report

South Florida Ecosystem Restoration Projects including the Comprehensive Everglades Restoration Plan (CERP) are authorized when a planning study is approved by Congress as part of a Water Resource Development Act (WRDA). Responsibility for design and construction of CERP and other restoration projects is shared between the U.S. Army Corps of Engineers (USACE) and the South Florida Water Management District (SFWMD), based on coordination between the two agencies, the Integrated Delivery Schedule (IDS), and the Project Partnership Agreement for each project. This document reports on the USACE's progress on CERP efforts for the restoration of the Greater Everglades as directed by Governor DeSantis in Executive Order 23-06, as well as the SFWMD's continued efforts to expedite Everglades restoration projects and improve water quality and quantity.

Biscayne Bay Coastal Wetlands – Cutler Wetlands Component

Lead Agency: SFWMD

Anticipated Completion Year: 2025

Project Description: The Biscayne Bay Coastal Wetlands Project – Cutler Wetlands Component will improve the health of Biscayne Bay, aid in wetland rehydration, build coastal resiliency and improve water quality. The Cutler Wetlands Component is the final component of the Biscayne Bay Coastal Wetlands Project.

Status: Construction.

- Contract 6A – Pump Station S-701 under construction.
- Contract 6B – Conveyance channel under construction.

Biscayne Bay Coastal Wetlands – L-31 East Flowway

Lead Agency: USACE

Anticipated Completion Year: 2026

Project Description: The project restores freshwater flows to southern Biscayne Bay and Biscayne National Park while improving salinity distribution near the shore. It also restores historical freshwater wetland habitat adjacent to the Bay, which acts like a sponge, soaking up water in the wet season and slowly releasing it in a more natural pattern.

Status: Construction; Operational Testing and Monitoring Period.

- Contract 4 – Pump Station S-709: Construction is complete. Operation Testing and Monitoring Period is underway.
- Contract 5A – Pump Station S-705: Construction is complete. Permanent power was delivered to pump station on March 5, 2024 and endurance testing was completed. Operation, Testing, and Monitoring Period is underway.
- Contract 5B – Pump Station S-703 and Recreational Sites: Endurance testing began May 13, 2024 and the final punchlist was received. Work is ongoing to bring permanent power to the pump station.
- Contract 5C – Pump Stations S-710 and S-711, Seepage Canal C-711W: Seepage canal berm and spreader canal construction are substantially complete. S-711 Control Building is complete. Permanent power work by FPL is being scheduled for both S-710 and S-711.

Biscayne Bay and Southeastern Everglades Ecosystem Restoration (BBSEER)

Lead Agency: USACE

Anticipated Completion Year: TBD

Project Description: The BBSEER Project aims to restore natural areas in southeastern Miami-Dade County, including the Model Lands, Southern Glades, nearshore estuarine habitats of Biscayne Bay, and the associated coastal and freshwater wetlands.

Status: Planning; A planning study waiver request for scope, schedule and budget is in development to complete the study. The project team is evaluating the third round of alternatives and will identify the final array of alternatives before selecting a plan for TSP assurances modeling.
Next Milestone: The Tentatively Selected Plan milestone is expected to shift to August 2025 due to increased scope and design requirements.

Broward County Water Preserve Areas

Lead Agency: USACE

Anticipated Completion Year: 2034

Project Description: This project will reduce water loss from the Central Everglades. It is designed to perform two primary functions: reduce seepage loss from Water Conservation Area (WCA) 3A/3B to the C-11 and C-9 basins; and capture, store and distribute surface water runoff from the western C-11 basin that has been discharged into WCA 3A/3B.

Status: Design.

- Contract 2 – C-11 Impoundment Embankment: Final design is in progress and the construction award is expected in 2025.
- Contract 3 – C-11 Impoundment Pump Station: Design is in progress, and the construction award is expected in FY26.
- Contract 4 – WCA3A Seepage Management Area: Design to begin in 2025.
- Contract 5 – C-9 Impoundment: Design to begin in 2026.

Caloosahatchee (C-43) Reservoir

Lead Agency: SFWMD

Anticipated Completion Year: 2025

Project Description: The project will capture excess C-43 Basin runoff and regulatory releases from Lake Okeechobee during the wet season and release water from the reservoir during the dry season. It includes development of one aboveground reservoir, with a total storage capacity of approximately 170,000 acre-feet. The project will reduce the extreme salinity changes in the Caloosahatchee River Estuary by providing a more consistent flow of freshwater discharging into the estuary.

Status: Construction.

- Package 1 – Embankment Preloading at 6 critical structures around the dam and demolition of existing infrastructure work is complete.
- Package 2 – S-476 Pump Station replaces the original irrigation pump station located on the header canal that supplied water to existing water users work is complete.
- Package 3 – S-470 Inflow Pump Station which pulls water from the Caloosahatchee River through the Townsend Canal to the Reservoir work is complete. Ribbon cutting event held on December 19, 2023.
- Package 4 – Reservoir: Soil cement (buttress) 21.5 of 22 miles completed, soil cement (slope) 10 of 22 miles completed, Townsend Canal sheet pile installation completed, perimeter canal and intake canal works are 95%, first 400 feet of wave wall installed, production and deliveries continue. Sand column relief manifold (north reach) has commenced work on the cofferdam, NTP issued for south three reaches of the PRS for August 12th, S470 discharge piping installation continues. Piezometer SPT wells are complete. Monitoring platform installation begins this week, all embankment structures are substantially completed and inspected (S-471, 472, 473, 474 and 475).

Central Everglades Planning Project (CEPP) Everglades Agricultural Area (EAA) Reservoir

Lead Agency: USACE

Anticipated Completion Year: 2030

Project Description: CEPP includes four phases of projects that help restore the natural flow of water south from Lake Okeechobee to Central & Southern Everglades. The CEPP EAA Phase will store, treat and send new water to the Everglades. The EAA Reservoir reduces damaging discharges from Lake Okeechobee to the Northern Estuaries. The 10,000-acre reservoir component includes 240,000 acre-feet of storage and delivers water to the 6,500-acre A-2 STA for water quality treatment. The project provides an additional average annual 370,000 acre-feet of clean water sent to the Everglades.

Status: Design; Construction.

- Contract 11B - Embankment, outlet structures and spillway: Final design has been completed, the construction contract was advertised February 23, 2024, proposals were received April 9, 2024, and are being evaluated. Construction award expected end of FY24.
- Contract 11C - S-636 Seepage Pump Station: Design began in March 2023, and the construction award is expected in September 2026.
- Contract 10A - Seepage Inflow/Outflow Canal: Environmental monitoring and pre-construction survey work continues. De-mucking, clearing, and grubbing activities are complete for the base contract. Excavation of the canal footprint continues and is 55% complete. Seepage canal and inflow/outflow canal blasting is ongoing. Embankment construction began and the excavated material is being processed and tested.
- Contract 11A - Foundation Preparation & Cutoff Wall: Contractor is still progressing through submittals. Clearing, grubbing and de-mucking of borrow pit areas 2 and 3 is complete with borrow area 5 being 65% complete. Drilling and blasting of borrow area 3 is ongoing. Construction of the access and haul roads on the eastern perimeter is nearing completion. Construction of the east side batch plant slab (near borrow area #3) is ongoing and 87% complete. Site access improvements are 25% complete.
- Contract 12: S-623 Reservoir Inflow Pump Station: In design and will be awarded for construction by SFWMD in December 2024.

Central Everglades Planning Project (CEPP) Everglades Agricultural Area (EAA) Stormwater Treatment Area (STA)

Lead Agency: SFWMD

Completion Year: 2024

Project Description: The 6,500-acre STA will clean water stored in the 240,000 acre-foot EAA Reservoir and allow it to be moved south to the Everglades. Stormwater Treatment Areas use aquatic vegetation to remove harmful nutrient pollution from the water. Sending more clean water south will support the ecological health of the Everglades and Florida Bay.

Status: Construction.

- Contract 9B - STA Cells: In construction. Initial filling commenced end of January 2024.
- Contract 9B - STA Inflow-Outflow Canal: Construction completed in FY 2023.

Central Everglades Planning Project (CEPP) Everglades Agricultural Area (EAA) Canal Conveyance Improvements

Lead Agency: SFWMD

Anticipated Completion Year: 2027

Project Description: The North New River Canal Conveyance increases canal capacity by 200 cfs. The Miami Canal Conveyance Improvements increase canal capacity by 1,000 cfs.

Status: Design.

- Contract 9A - EAA North New River Canal Improvements: Construction Notice to Proceed issued on June 20, 2024.
- Contract 9A - EAA Miami River Canal Improvements Phase 1: Design is complete and construction award by end of FY 2024.
- Contract 9A - EAA Miami River Canal Improvements Phase 2: Design is ongoing and construction award in FY 2025.

Central Everglades Planning Project (CEPP) New Water Seepage Barrier Wall Project

Lead Agency: SFWMD

Completion Year: 2024

Project Description: The CEPP New Water Seepage Barrier Wall Project extends the successful underground wall that was built as part of the 8.5 Square Mile Area Seepage Wall Project. The project supports ongoing restoration efforts to move water south through the Everglades and into Florida Bay while mitigating potential flooding impacts in communities outside of Everglades National Park.

Status: Complete - Ceremonial Ribbon Cutting was held on April 24, 2024.

Central Everglades Planning Project (CEPP) North Phase

Lead Agency: SFWMD

Anticipated Completion Year: 2030

Project Description: CEPP North will restore water levels in the northern portion of the Central Everglades and improve our water resource resiliency in South Florida. The features within the CEPP plan include a reservoir, a stormwater treatment area and water flow improvements.

Status: Design; Construction.

- Contract 7A - L-6 Diversion: A groundbreaking for S-620 was held in May 2023. S-622 is in design and contract award is in Q3 FY2025.
- Contract 7A - L-4 Canal Improvements & Distribution Features & S-630 Gated Culverts are in design.
- Contract 7B - S-8 Pump Station Modifications is in design and Phase 1 construction contract Notice to Proceed issued on April 8, 2024.
- Contract 8A - L-5 Canal Improvements is in design to be constructed in two packages.
- Contract 8B - Miami Canal Backfill and Vegetated Hammocks survey is complete, and design is underway.

Central Everglades Planning Project (CEPP) South Phase

Lead Agency: USACE

Anticipated Completion Year: 2031

Project Description: CEPP South removes water flow barriers to allow natural flow of water south into Everglades National Park. Components include the construction of a pump station, the installation of culverts and spillways and the removal of a roadway and levees that will all help increase the flow of clean water south from WCA 3A to Everglades National Park.

Status: Design; Construction.

- Contract 1AR - L-67A Culverts: At S-631 the cofferdam construction is complete and surface water removal and guardrail installation continues. Cofferdam construction is ongoing at S-632 and turbidity barriers are being installed. FDEP inspection complete and the batch plant setup continues.
- Contract 2A - Pump Station S-356E and S-334E Gated Spillway: Final design is complete, but construction contract advertisement delayed due to ongoing coordination with respect to the FDOT construction agreement. Contract award forecasted for May 2025 but may shift with this agreement issue.
- Contract 3B - S-355W Gated Spillway in L-29 Canal: Final design is complete. USACE, SFWMD, and FDOT completed negotiation of the FDOT construction agreement. However, after review by the Corps, further coordination between SFWMD and USACE is underway to determine the Corps' real estate needs at this location. The construction contract advertisement Is delayed.
- Contract 5 - Blue Shanty Flowway: Final design is scheduled to be complete in FY 2026, and the contract award is scheduled for FY 2026. USACE and SFWMD are coordinating how best to incorporate design refinements needed for this contract.
- Contract 6 - L-29 Levee Removal: Design is scheduled to begin in FY 2025, and the contract award is scheduled for FY 2028.

Indian River Lagoon South – C-23 Estuary Discharge Diversion Canal

Lead Agency: SFWMD

Anticipated Completion Year: 2025

Project Description: This interconnect canal project will divert harmful discharges from the C-23 Canal and send it south to the C-44 Reservoir. It improves water quality in the St. Lucie Estuary and helps bring flows to the Estuary closer to its natural pattern.

Status: Construction; S-457 Pump Station wall pours have reached elevation 30 ft. NAVD88, canal excavation in Segment 1 is 80% and Segment 3 is 95% complete, Segment 2 canal excavation 50%, and Coca Cola Box Culvert construction is 30% complete.

Indian River Lagoon South – C-23/24 North Reservoir

Lead Agency: USACE

Anticipated Completion Year: 2030

Project Description: The C-23/24 North Reservoir is a component of the IRL South Project, encompassing more than 2,000 acres. Once completed, it will store approximately 32,000 acre-feet of water.

Status: Design.

- Contract 4A – S-426 Pump Station, Afterbay, S-245 Culvert, PC-37 Canal and Structure: Final design has been completed. Construction contract was advertised May 17, 2024, bids were recieved on July 8, 2024 and are being evaluated. Contract award scheduled for September 2024.
- Contract 4B – S-425 Sag Culvert, S-426 Afterbay, and Reservoir Embankment Construction: The final design is scheduled to be complete December 2025.

Indian River Lagoon South – C-23/24 South Reservoir

Lead Agency: SFWMD

Anticipated Completion Year: 2030

Project Description: The C-23/24 South Reservoir is a component of the IRL South Project, encompassing more than 3,500 acres. Once completed it will store approximately 57,000 acre-feet of water.

Status: Design is ongoing by the SFWMD. Package 1 of the canal and structure construction contract was approved by the SFWMD Governing Board in April 2024, and Package 2 - Reservoir construction contract will be awarded in FY 2025.

Indian River Lagoon South – C-23/24 STA

Lead Agency: USACE

Anticipated Completion Year: 2026

Project Description: The 2,700-acre C23/24 STA is designed to treat water from the C-23 and C-24 Basins. Its purpose is to reduce the sediment, phosphorus, and nitrogen going to the St. Lucie River Estuary and the southern portion of the Indian River Lagoon.

Status: Construction; Stormwater treatment areas (STA) Cells 1 and 2 are complete. Cell 3 and Cell 5 embankment construction is underway. Cell 4 clearing and grubbing is complete. All water control structures are 65% complete.

Indian River Lagoon South C-25 Reservoir and STA

Lead Agency: SFWMD

Anticipated Completion Year: 2028

Project Description: The C-25 Reservoir and STA will capture, store and treat local stormwater runoff from the C-25 Canal. The project reduces the rate of harmful flows to downstream estuaries and improves water quality in the estuary and lagoon. Project features include an 803-acre reservoir with 5,176 acre-feet of storage, a 532-acre STA, and a 250 cfs pump station.

Status: Design. Package 1 for Site Preparation contract award in August 2024. Package 2 is in design and estimated contract award is in Q3 of FY 2025.

Indian River Lagoon South – C-44 Reservoir

Lead Agency: USACE

Completion Year: 2021

Project Description: The C-44 Reservoir will store 50,000 acre-feet of water, including local basin runoff and Lake Okeechobee releases. This will reduce harmful releases reaching the St. Lucie Estuary that can fuel harmful algal blooms.

Status: Construction Complete, in Operational Testing and Monitoring Period (OTMP). Repairs to S-402 complete. Design of additional seepage management features is underway and argeting a construction award is expected in 2025 under a separate contract.

Indian River Lagoon South – C-44 STA

Lead Agency: SFWMD

Completion Year: 2019

Project Description: The 6,400-acre C-44 STA will remove harmful nutrients and provide regional water quality benefits. It will treat the water stored in the reservoir before it is released into the estuary. A recreation plan is now being developed.

Status: Construction Complete, in Operational Testing and Monitoring.

Indian River Lagoon South Natural Water Quality Storage Areas and Muck Removal

Lead Agency: SFWMD

Anticipated Completion Year: TBD

Project Description: This project is part of Indian River Lagoon – South Phase II and will work together with other IRL-South components to protect and restore the lagoon and estuary. It will create natural storage by preserving and restoring lands in the contributing basins of the north and south forks of the St. Lucie River and the estuary.

Status: Planning; Acquiring Lands.

Lake Okeechobee System Operating Manual (LOSOM)

Lead Agency: USACE

Anticipated Completion Year: 2024

Project Description: The USACE is updating the Lake Okeechobee operations manual to reevaluate and define operations for the Lake Okeechobee regulation schedule that takes into account additional infrastructure that will soon be operational.

Status: Planning; The Army Corps of Engineers Jacksonville District released the final Environmental Impact Statement (EIS) and Water Control Plan (WCP) on May 24, 2024. The 30-day review period ended June 24, 2024. USACE Jacksonville District submitted the Final EIS and WCP to Army Corp's South Atlantic Division (SAD) for review and signing on July 19, 2024. SAD review is expected to be complete by mid-August 2024. The Final WCP will go into effect once reviewed and signed by USACE South Atlantic Division.

Lake Okeechobee Watershed Restoration Project (LOWRP)

Lead Agency: SFWMD

Anticipated Completion Year: TBD

Project Description: LOWRP is an Everglades restoration planning effort that will improve water levels in Lake Okeechobee; improve the quantity and timing of discharges to the St. Lucie and Caloosahatchee estuaries; restore degraded habitat for fish and wildlife throughout the study area; and increase the spatial extent and functionality of wetlands.

The Florida Legislature appropriated a total of $150 million for the LOWRP during the previous three legislative sessions. During the 2021 legislative session, the Florida Legislature also passed Senate Bill 2516 to further support and expedite the implementation of LOWRP. This funding was provided to the SFWMD for the design, engineering and construction of specific LOWRP components designed to achieve the greatest reduction in harmful discharges to the Caloosahatchee and St. Lucie Estuaries.

Status: Planning; Design, Well Testing and ASR Science Plan. The Jacksonville District has transmitted the final PIR to Corps higher headquarters for policy compliance review. The USACE is targeting a Chief's Report for the wetlands restoration in Summer 2024.

Loxahatchee River Watershed Restoration Project

Lead Agency: SFWMD

Anticipated Completion Year: 2032

Project Description: The Loxahatchee River Watershed Restoration Project will restore and sustain the overall quantity, quality, timing and distribution of fresh water to the federally designated "National Wild and Scenic" Northwest Fork of the Loxahatchee River for current and future generations. This project also seeks to restore, sustain and reconnect the wetlands and watersheds that form the historic headwaters for the river. These areas include Jonathan Dickinson State Park, Pal Mar East/Cypress Creek, DuPuis Wildlife and Environmental Management Areas, J.W. Corbett Wildlife Management Area, Grassy Waters Preserve, Loxahatchee Slough, the Northwest Fork of the Loxahatchee River and the Loxahatchee River Estuary.

Status: Design.

- Flowway 1: Anticipated to execute design contract in FY 2024.
- Flowway 2 and 3: In design, survey and geotechnical work underway.

Groundbreaking ceremony for the first major feature of the Western Everglades Restoration Project, the L-28 South Culverts on July 10, 2024.

Picayune Strand Restoration Project

Lead Agency: USACE

Anticipated Completion Year: 2025

Project Description: This project restores the natural water flow across 85 square miles in western Collier County that were drained in the early 1960s in anticipation of extensive residential development. The restoration involves plugging 48 miles of canals, removing 260 miles of crumbling roads, and constructing three major pump stations, all of which will restore more than 55,000 acres of natural habitat.

Status: Construction. All three Picayune pump stations and Miller Tram and Road Removal are complete.

- Southwest Protection Feature Levee: Five of six lifts for the full seven miles are complete and the sixth lift is 50% complete with expected completion by September 2024.
- Conveyance Features (Design/Build Contract): U.S. 41 culverts construction completed January 2024. CR-92 construction underway and completion is expecte by November 2024.
- Canal Plugging: On May 31, 2024, the SFWMD and the USACE along with state officials and stakeholders celebrated the completion of the plugging of the Faka Union Canal. The Miller Canal plugging is scheduled to begin January 2025 and conclude December 2025.

Southern Everglades

Lead Agency: USACE/SFWMD

Anticipated Completion Year: TBD

Project Description: The Southern Everglades project aims to provide substantial amounts of freshwater to improve the quantity, timing, and distribution of freshwater in the Greater Everglades and Everglades National Park wetlands and Florida Bay.

Status: Planning; The study is targeting a kick-off in 2025.

Western Everglades Restoration Project (WERP)

Lead Agency: USACE/SFWMD

Anticipated Completion Year: TBD

Project Description: The Western Everglades Restoration Project is an Everglades restoration planning effort that aims to improve the quantity, quality, timing, and distribution of water in the western Everglades. The study area covers approximately 1,200 square miles, bounded by the L-1 Canal to the north; the L-2 Canal, Stormwater Treatment Area (STA) 5/6, and the eastern boundary of the Miccosukee Tribe of Indians of Florida Reservation to the east; a natural watershed boundary to the west; and portions of U.S. Highway 41, Loop Road, and the southern Miccosukee Tribe of Indians of Florida Reservation area to the south.

Status: Planning, Design & Construction; The 3x3x3 planning study waiver request, for schedule and budget to complete the study, was approved by the Assistant Secretary of the Army, for Civil Works, January 2024. The draft Project Implementation Report (PIR) and draft Environmental Impact Statement (EIS) were released for public comment 15 Dec 2023. A series of "open house" public meetings were held in December to discuss the project. In-person and virtual National Environmental Policy Act (NEPA) Public Meetings were held January 17 & 18, 2024. USACE District Quality Control (DQC) review was completed April 15, 2024. The final PIR and EIS will undergo Agency Technical Review (ATR) beginning on April 29, 2024. The Jacksonville District transmitted the final PIR/EIS to Corps higher headquarters for policy compliance reviews on June 13, 2024. The USACE is targeting a Chief's Report in September 2024 for inclusion in WRDA 2024.

- Region 4 Design and Construction – L-28 Culverts under construction, Notice to Proceed issued in April 2024. Modeling complete, geotechnical work ongoing and design commenced for 11-Mile Road, US-41 and Loop Road Culverts. A groundbreaking was held on July 10, 2024, for the first major feature of the Western Everglades Restoration Project, the L-28 South Culverts, which will support Everglades restoration.

Northern Everglades and Estuaries Protection Program (NEEPP)

Progress Update – August 2024

INTERAGENCY SPOTLIGHT

The Coordinating Agencies are preparing the NEEPP Annual Progress Report for the *Draft 2025 South Florida Environmental Report (SFER) – Volume I, Chapter 8A*, along with the 2025 Watershed Protection Plan Updates for the Lake Okeechobee, St. Lucie River, and Caloosahatchee River Watersheds (Chapters 8B-8C-8D). This year's report will highlight the many accomplishments and successes of our agencies during the 2024 reporting period. The draft will be published in October for public and peer review at SFWMD.gov/SFER.

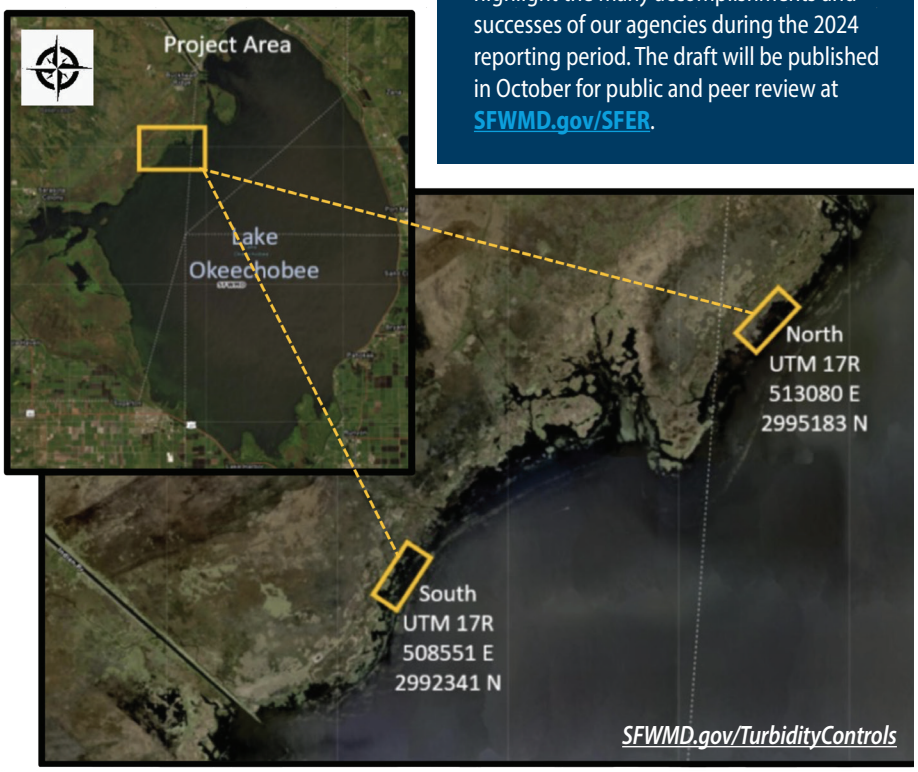
SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD) PROGRESS UPDATE

In the West Caloosahatchee Basin, the ALJO Four Corners Rapid Infiltration project has successfully completed its first year of operations. This Northern Everglades Public-Private Partnership Project increases water storage and nutrient retention by operating a 366-acre above-ground impoundment including a 22-acre rapid infiltration area, 97-acre seepage area, 3 inflow pump stations totaling 200-cfs capacity, and associated water control structures and ditch improvements necessary to facilitate project inflow from Cypress Creek, Babcock Ranch, County Line Ditch, and other County Line Drainage District areas.

This large-scale water storage and treatment project was expected to provide an average water quantity benefit of approximately 20,000 acre-feet per year and an estimated annual average water quality benefit of 1.23 metric tons of total phosphorus (TP) and 39.3 metric tons of total nitrogen (TN).

Since operations began in July 2023, project benefits have exceeded expectations, with total storage of 22,968 acre-feet and nutrient retention of 3.89 metric tons of TP and 40.0 metric tons of TN for the one-year operational period (preliminary results as of June 28, 2024).

Pumps running at ALJO Four Corners Rapid Infiltration project.



New Pilot Study in Lake Okeechobee

Submerged aquatic vegetation (SAV) in Lake Okeechobee provides critical habitat for fish and wildlife, stabilizes shoreline sediments, and supports attached algae that help to remove nutrients from the water. Recently, SAV coverage on the lake has been minimal due to high water and turbidity associated with Hurricanes Ian and Nicole during the 2022 storm season, resulting in a need to recover this critical fish and wildlife habitat.

As a proactive measure, the SFWMD has launched a new pilot study in Lake Okeechobee to test if temporary turbidity controls can improve water clarity in this high energy environment to promote SAV recovery. The two study areas are situated along the Indian Prairie (northwest shorelines) north and south of Tin House Cove, where SAV beds were documented prior to the 2022 hurricanes (see map).

Additionally, pursuant to Section 15, Chapter 2024-58, Laws of Florida, on July 3, 2024, SFWMD executed a new contract with the Water School at Florida Gulf Coast University (FGCU) to study the health and ecosystem of Lake Okeechobee. With input from local stakeholders, subject matter experts, and lake ecologists, a report on the FGCU study findings and recommendations will be submitted to the Governor, the President of the Senate, and the Speaker of the House of Representatives by January 1, 2025, per the legislation. Collectively, these studies are intended to support longer-term efforts to help reestablish desirable SAV in nearshore regions of the marsh and inform future, in-lake restoration efforts.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) PROGRESS UPDATE

On May 1, 2024, DEP launched the Water Quality Protection Grant Portal for Fiscal Year 2024-25. DEP accepted project proposals for water-related grant programs for Fiscal Year 2024-25. Proposals were received through the extended deadline of July 31, 2024, and are now being evaluated for further consideration for state or federal funding. For more information on each of the grants, visit **protectingfloridatogether.gov/state-action/grants-submissions**.

On July 31, 2024, DEP held its first rulemaking workshop on proposed revisions to Chapter 62-306, F.A.C. (Water Quality Credit Trading, WQCT) and Chapter 62-330, F.A.C. (Environmental Resource Permitting, ERP) to establish a WQCT program between water quality enhancement areas (WQEAs, under Section 373.414, F.S.) permitted under the ERP program and governmental entities. The purpose of this joint workshop was to present DEP's proposed rule revisions and receive public input on the development of proposed amendments. Notably, WQEAs provide large-scale, offsite treatment by using natural systems to improve water quality, with the use of WQEA permits as a new statewide tool. The current rulemaking will amend Chapter 62-306, F.A.C., consistent with the statutory changes, as well as update the rules as necessary to effectively address total maximum daily load (TMDL) requirements under Section 403.067, F.S. For more details on this rulemaking, visit **floridadep.gov/dear/water-quality-restoration/content/florida-water-quality-credit-trading-registry**.

As part of the Clean Waterways Act (Chapter 2020-150, Laws of Florida), local governments are required to develop wastewater and onsite sewage and treatment disposal systems (OSTDS) remediation plans to be incorporated into the statewide BMAP updates that must be adopted by July 1, 2025. The deadline for submitting the final remediation plans was August 1, 2024. As the next step in this process, DEP will review the final remediation plan submissions. For further information, visit **floridadep.gov/dear/water-quality-restoration/content/clean-waterways-act-requirements-wastewater-onsite-sewage**.

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES (FDACS) PROGRESS UPDATE

As of June 1, 2024, FDACS has completed 94% of required implementation verifications (IVs) for agricultural operations within the NEEPP boundary. FDACS continues to collect and retain required nutrient application records as IVs are conducted.

FDACS has begun rulemaking to revise the existing Florida agricultural Best Management Practices (BMP) manuals and rules. For a complete list of rule development activity, visit **fdacs.gov/divisions-offices/agricultural-water-policy/rule-development-activities**.

Scenic view of Lake Okeechobee.

A LOOK AHEAD

August 19 and 20, 2024
National Environmental Policy Act (NEPA) Scoping Meetings to discuss the Kissimmee River Restoration Project's Kissimmee River Headwaters Revitalization Schedule

Before each NEPA Scoping Meeting, an Open House session will be held featuring informational posters and staff from the SFWMD and USACE. For more information visit **SFWMD.gov/Meetings**.

August 28, 2024
Lower Kissimmee Basin Stormwater Treatment Area (LKBSTA) Project Open House

This public Open House will be held at Indian River State College in Okeechobee. For more information visit **SFWMD.gov/Meetings**.

September 16-19, 2024
2025 Basin Management Action Plans (BMAPs)

DEP will be holding in-person meetings for all three Northern Everglades BMAPs. The SFWMD will also participate in these meetings to share information on the upcoming 5-Year Watershed Protection Plan Updates.

To stay informed on more details for the upcoming meetings, please subscribe to DEP's announcement distribution list at **floridadep.gov/dear/dear/content/subscribe#BMAP**.

September 20, 2024
NEEPP Annual Public Workshop

Held by the Coordinating Agencies at the District's Headquarters in West Palm Beach to collectively summarize our agencies' NEEPP key accomplishments and progress made over the past year. During this in-person event, there will also be an Open House with posters where Coordinating Agencies staff will be available to share the latest information, engage with the public/stakeholders, and answer questions on NEEPP specific topics of interest. Further details will be web-posted at **SFWMD.gov/WPPs**.