

MIAMI RIVER COMMISSION C&SF Flood Resiliency



PRESENTED BY:

Carolina Maran, Ph.D., Chief Resiliency Officer

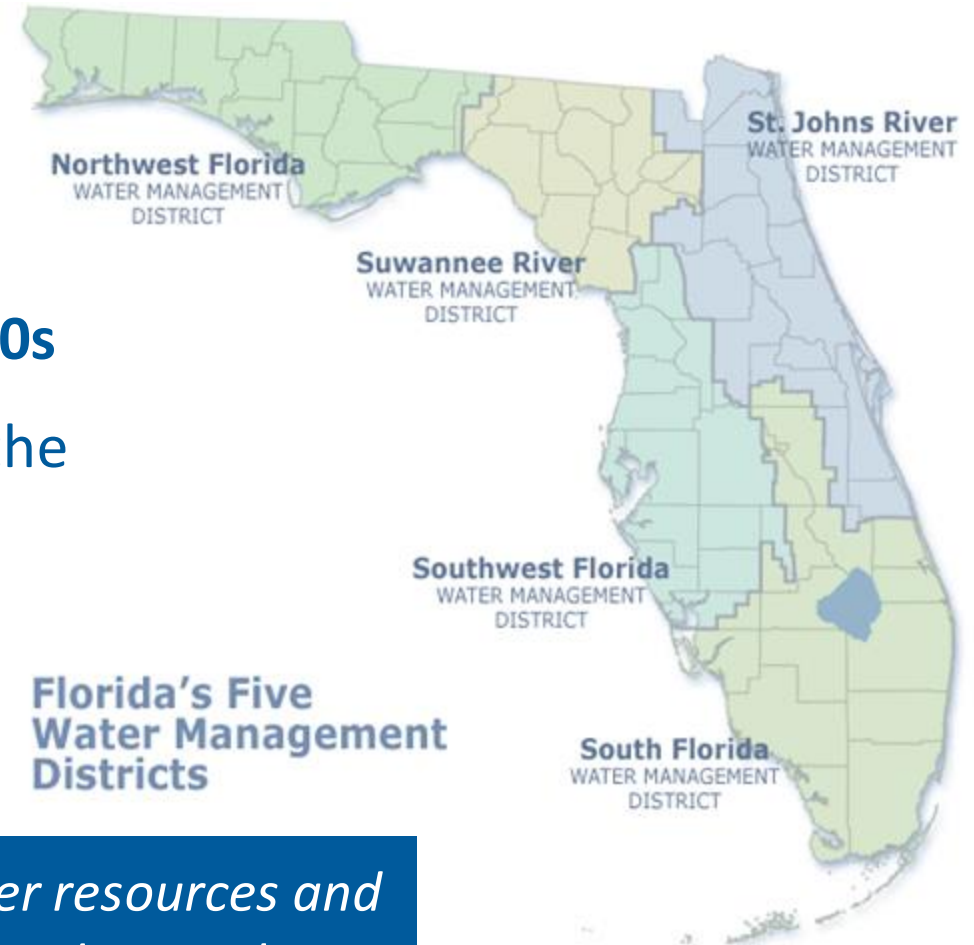
South Florida Water Management District

Monday, September 09, 2024



South Florida Water Management System

- Created in 1949, **oldest** and **largest** of the state's five water management districts
- Majority of structures used for flood control operations today were **built in the 1950s and 1960s**
- **16 counties, 139 municipalities** from Orlando to the Florida Keys
- Serves a population of **9 million+ residents**
- **Approximately 50%** of Florida's Economy



MISSION: To safeguard and restore South Florida's water resources and ecosystems, protect our communities from flooding, and meet the region's water needs while connecting with the public and stakeholders.

District Then: 1949

- From 1913-1927, the Everglades Drainage District constructed:
 - **6 Major drainage canals** & numerous minor canals totaling **440 miles**
 - **47 miles** of levees & **16 locks and dams**
- Herbert Hoover Dike first completed in 1938 (partial), and again in 1960's
- South Florida recovering from devastating 1947 Hurricane where **over 4,000 people died (est.)**
- Florida Total Population ~ 2.6 Million People
 - South Florida Pop. > **1,059,208** (1950 Census)
- In 1948, U.S. Congress created the Central & Southern Florida Flood Control District



Kissimmee River After 1947 Hurricane



**Kissimmee River out of it's banks after 1947 Hurricane
This condition set-up the need for flood control , and in 1950,
The South Central Flood Control District was formed at the
Okeechobee County Courthouse by Govenor Fuller Warren**

Tamiami Trail Then & Now



Old Tamiami Trail Roadbed Removal



STA-1E

Stormwater Treatment Areas (STAs):
Large, constructed wetlands designed to remove nutrient pollution from water using natural aquatic plants.



S-69 Weir

Reservoirs and Impoundments:
Human-made water bodies used for water storage. A Flow Equalization Basin (FEB) is a type of impoundment designed to temporarily capture and hold water.

Weirs: Structures across a canal or stream that block the flow of water until the water flows over the structure.

Pump Stations: Control structures that force the movement of water using pumps.



S-155A Spillway

Spillways: Structures that allow movement of water between water bodies by use of gates.

Dikes & Levees: A barrier that diverts or restrains the flow of water. Large earthworks that surround Lake Okeechobee are generally referred to as dikes. Smaller earthworks surrounding canals and Water Conservation Areas are generally called levees.

Culverts: Structures that allow the flow of water between two areas. They are typically placed under roads or levees.

Canals: A system of human-made trenches used for the movement of water.



C-18 Canal Culvert



C-44 Reservoir



G-251 Pump Station



Herbert Hoover Dike



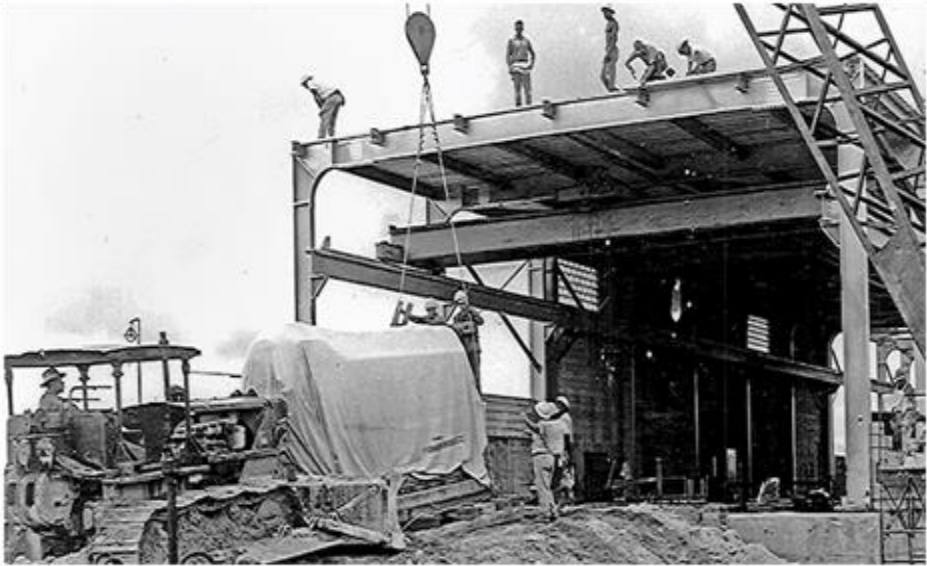
C-59 Canal

District Today

- On average the flood control system moves more than **20-million-acre feet of water each year.**
- More than **2,175 miles** of canals
- More than **2,130 miles** of levees/berms
- More than **915** water control structures
- More than **620** project culverts
- **90** pump stations
- Approx. **3,537** hydrological monitoring stations at more than **687** flow sites, including **201** rain gauges and **22** weather stations.
- Every year new capital projects add more infrastructure:
 - Comprehensive Everglades Restoration Plan
 - Northern Everglades and Estuaries Protection Plan
 - Dispersed Water Storage
 - Restoration Strategies
 - Resiliency



SFWMD Celebrates 75 Years of Service



Moving One of the Engines into the S-5A Pump Station in 1954



Modern Day S-5A Pump Station



First Governing Board Taking the Oath in 1950



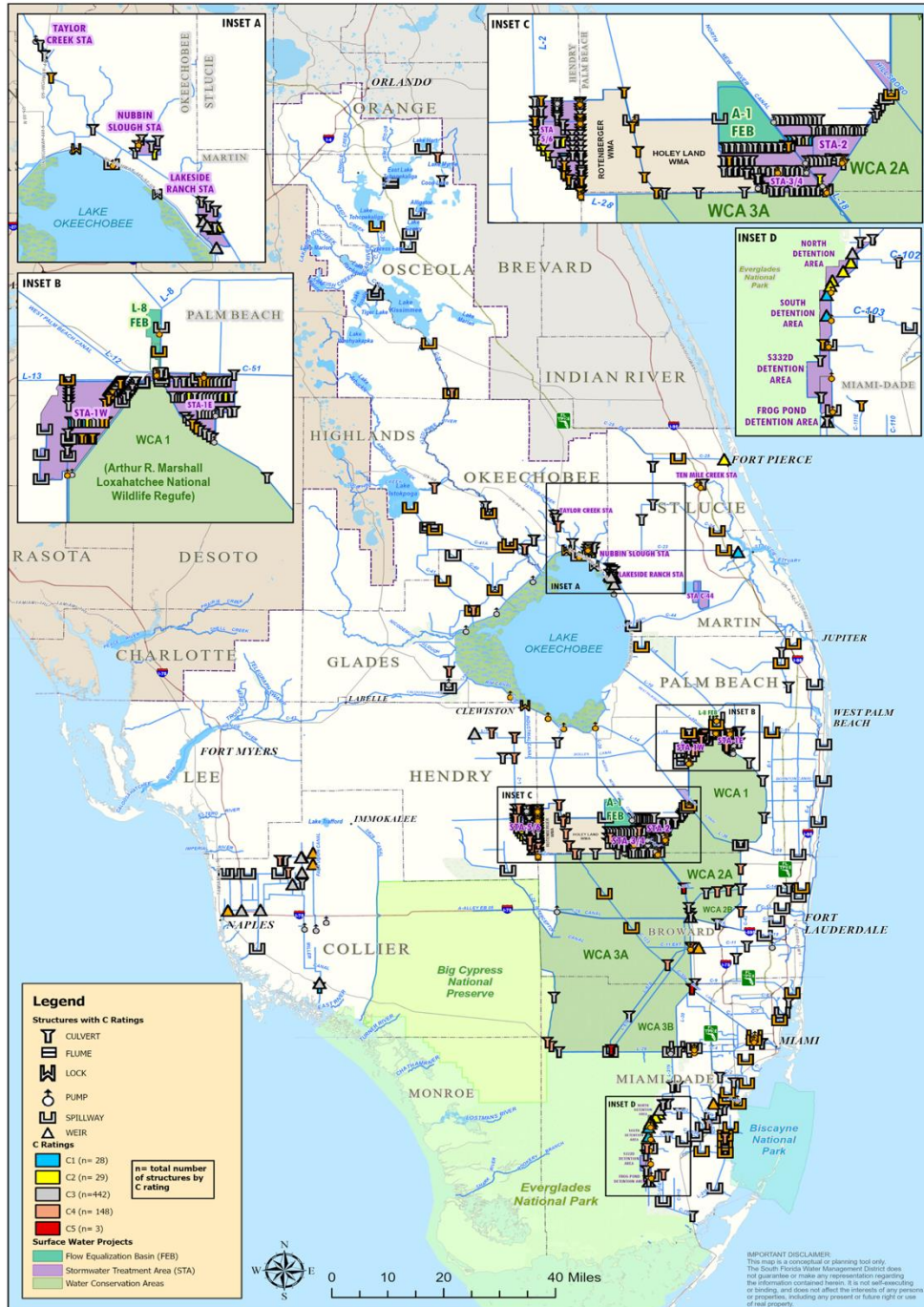
Modern Day Board Meeting in 2024



Infrastructure Overview

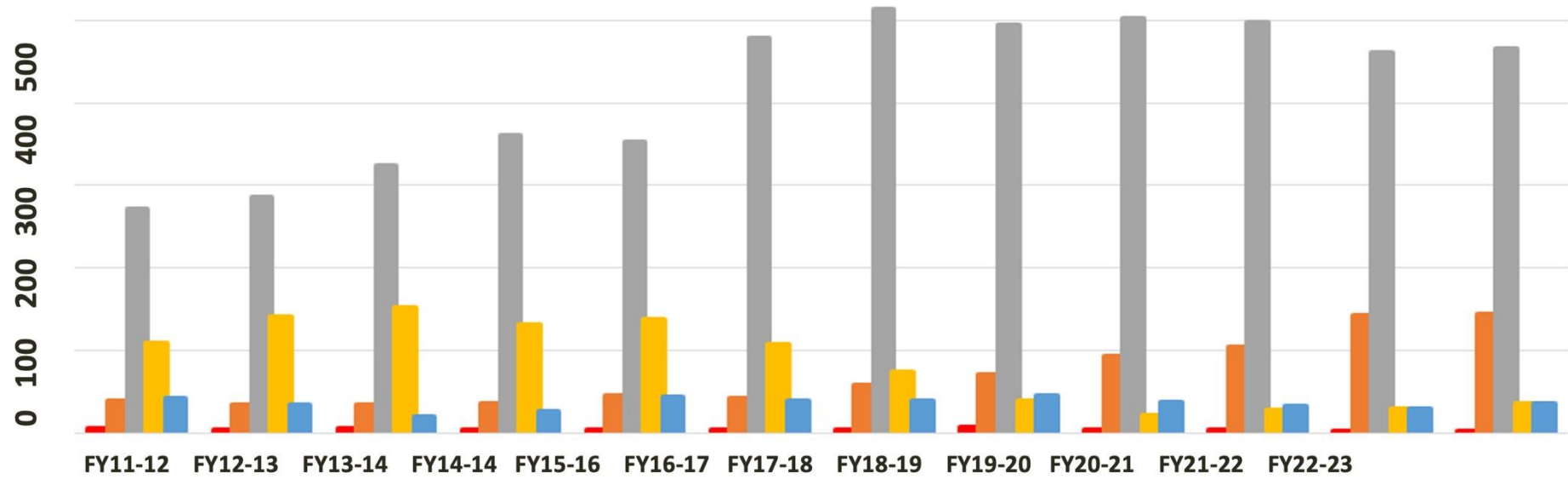
- Infrastructure portfolio has increased since 2006
- 50% of original C&SF infrastructure at end of life
- Some structure designs prevent refurbishments and require full replacements
- Highly urbanized flood zones require adaptation
- Additional high priority infrastructure on the way with Reservoirs, FEBs and STAs

Infrastructure Type	% Change (2006 - 2024)	10-Year (2015-2024)
Project Culverts	0%	0%
Miles of Canals/Levees	119%	5%
Structures	84%	35%
Pump Stations	78%	27%
Total	87%	8%



Structure Inspection Program

- C-5** Repair within one year
- C-4** Repair within 18 months
- C-3** Repair within two years
- C-2** Monitor
- C-1** No Action



Rating	FY2011-12	FY2012-13	FY2013-14	FY2014-15	FY2015-16	FY2016-17	FY2017-18	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23	Quantity Change from FY2011-12 to FY2022-23
C-5	5	4	5	3	3	3	3	6	4	4	2	2	-3
C-4	38	34	33	35	45	41	58	70	93	103	142	143	105
C-3	271	285	324	360	353	478	514	494	503	497	461	466	195
C-2	108	140	152	131	137	107	74	39	21	28	29	36	-72
C-1	42	34	19	26	43	39	39	44	37	32	29	35	-7
Total	464	497	533	555	581	668	688	653	658	664	663	682	218



Infrastructure Common Fail Modes

- Acid attack on structural concrete and rebar failure
- Undermining of wingwalls, foundation slab, and structure apron
- Corrosion, metal loss and pitting of structural steel, pump components and structure gates
- Obsolescence of major machinery: engines, gearboxes, generators, instrumentation and control panels and electrical equipment
- Downstream scour and canal bank erosion impacting structure stability



S-8 Engine Control Panel Upgrades



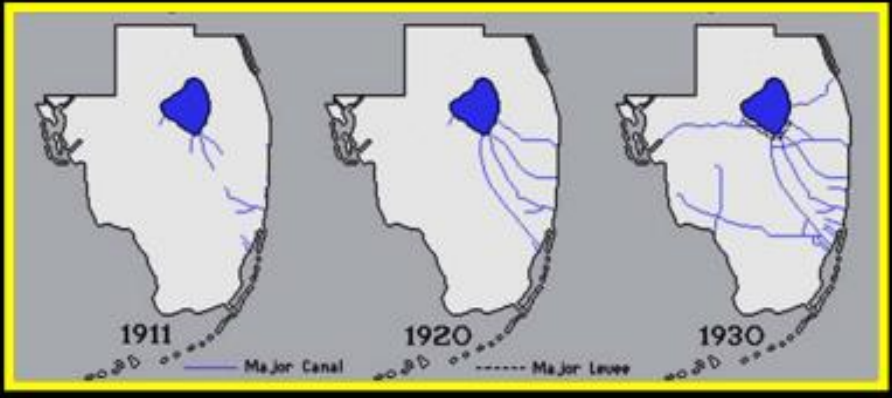
Obsolete Detroit Diesel 2 - Stroke Engines



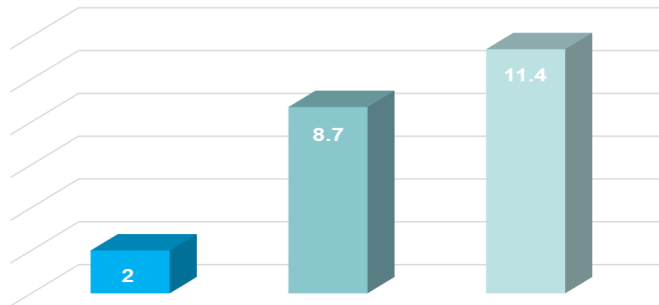
Electric Motor Damaged Stator

Recognizing Changed Conditions

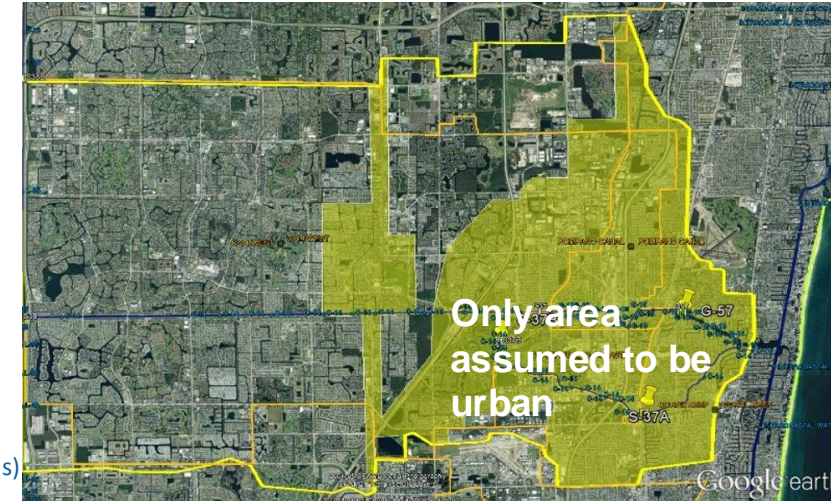
Pre-1948 Drainage Projects



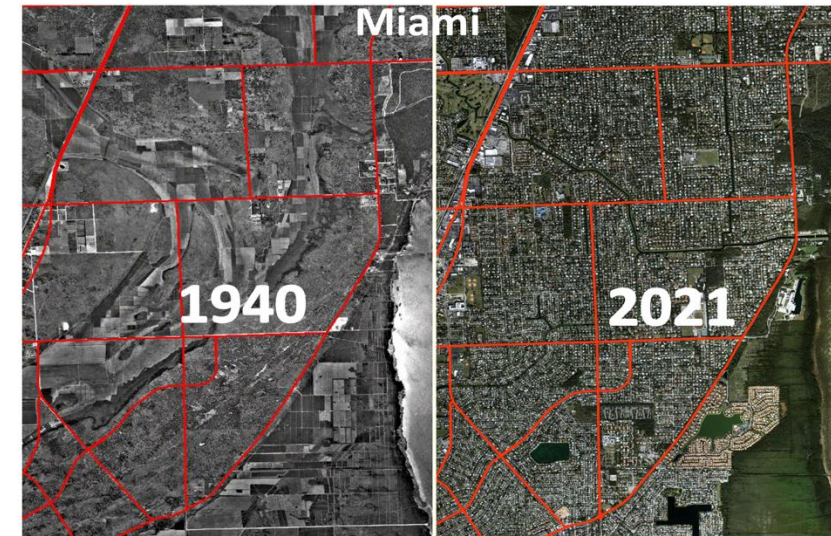
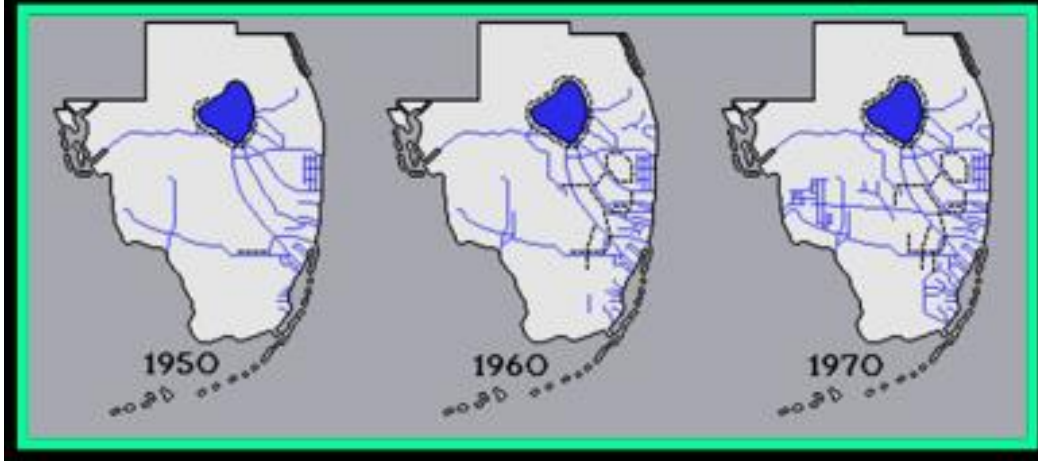
POPULATION GROWTH



* Estimate taken from BEBR 2017 publication (Median, SFWMD boundaries)

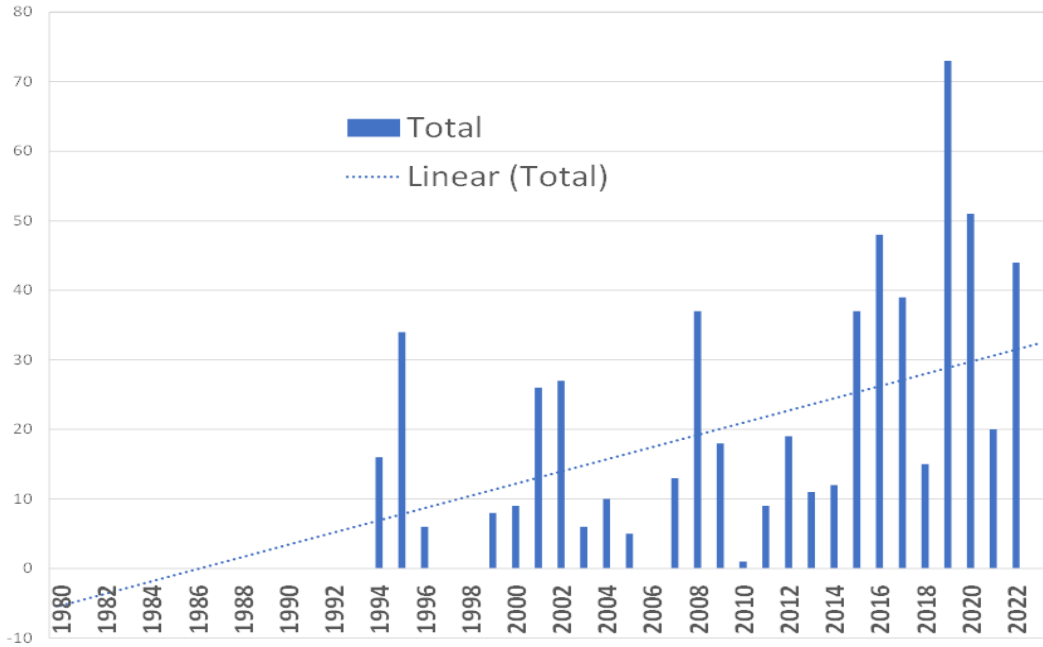


Post-1948 C & S Florida Project

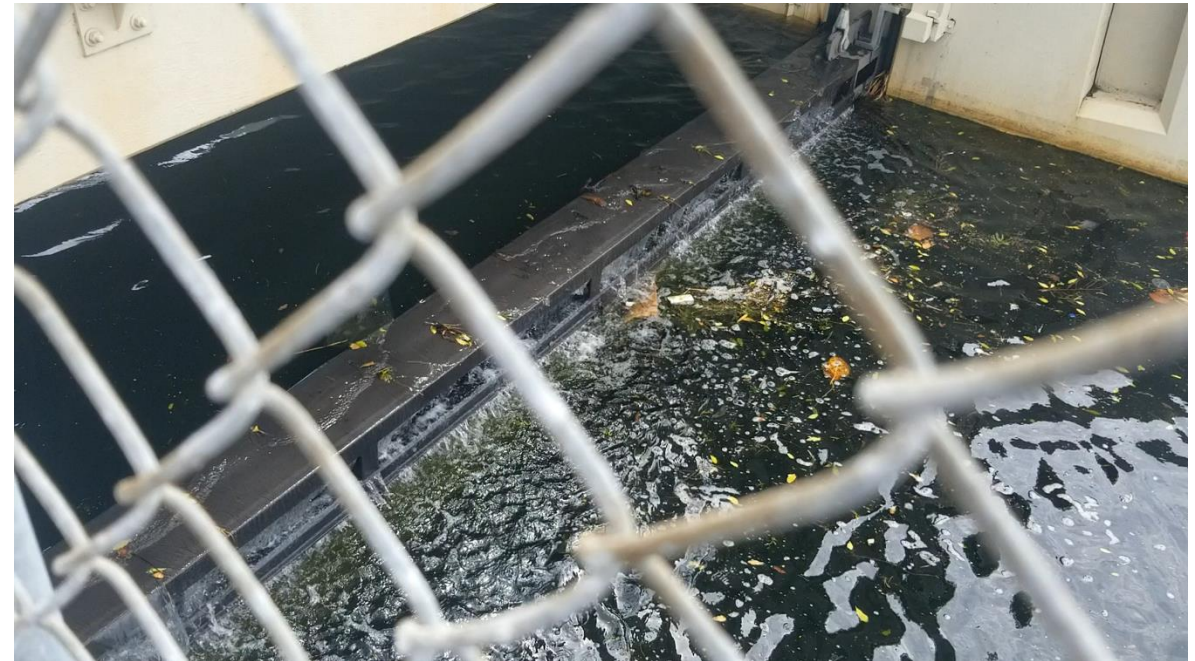


Changed Conditions: Sea Level Rise

S28 - Number of Days in a Year where TW > HW



Coastal Structure Gate Overtop



Saltwater moving inland, bypassing the top of the gate of the salinity coastal structure during a High Tide event in 2019.



Tidal Elevations at Coastal Structures and Sea Level Rise

Flood control and the prevention of saltwater intrusion in South Florida relies heavily on the operation of coastal gravity structures.



Saltwater Intrusion in Coastal Aquifers

The inland migration of saltwater poses a threat to water supply and critical freshwater habitats.

S-27 Structure Deficiencies & Future Resiliency Pump Station

- Notable deficiencies include sheet pile corrosion with section loss, horizontal crack in composite retaining wall, and soil erosion on west downstream bank



Structure became operational in 1961

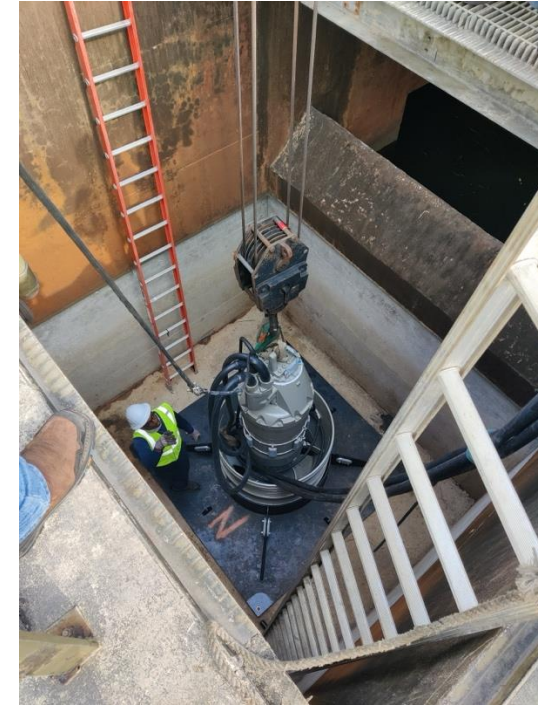
Currently rated C4



Break in retention wall on downstream eastside

S-25B and S-26 Pump Replacement Projects

- Successfully completed the replacement of three pumps (2022, April 2024)
- Replacing the remaining three MWI pumps (+ one spare) in FY26 Dry Season
- Installing new Caterpillar C18 500kW generators by May 2025 (3 in each)



O&M: Debris Accumulation at S-26 on C-6 Canal



Existing trash rake enhances performance and reduces debris removal costs in this Basin

Late 1990s Flooding Events in C4-C6 Basins in MDC

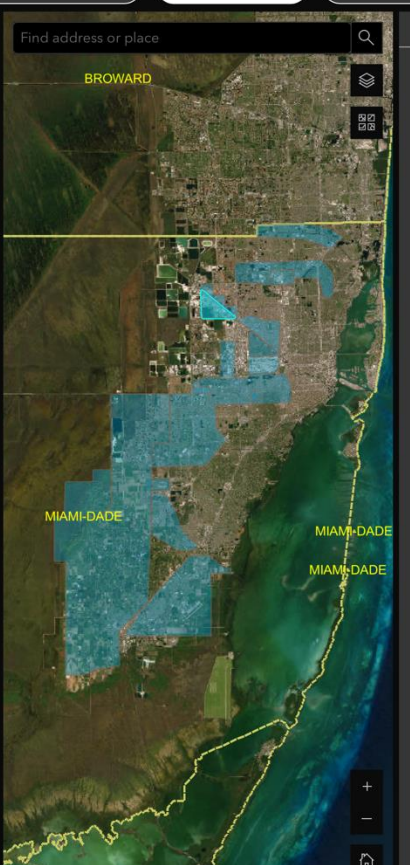
Current Event Viewer | Flood Prone Area Summary | **Event Summary** | Photo Viewer

Event Name: 2000 Oct Extreme Rain Event

Find address or place

Historical Event Impact Areas: 2000 Oct Extreme Rain Event

Collection Date:	10/5/2000, 12:00 AM
Event Name:	2000 Oct Extreme Rain Event
Event Type:	Extreme or Heavy Rainfall
Event Type (Other):	Rain
Event Start Date:	10/3/2000, 12:00 AM
Event End Date:	10/4/2000, 12:00 AM
Description:	
Source:	Web Sources
Web Source Link:	View
NOAA Event URL:	
Photo:	No




Event Name: 1999 Oct Hurricane Irene

Find address or place

Historical Event Impact Areas: 1999 Oct Hurricane Irene

Collection Date:	10/16/1999, 12:00 AM
Event Name:	1999 Oct Hurricane Irene
Event Type:	Extreme or Heavy Rainfall
Event Type (Other):	Category 1 Hurricane
Event Start Date:	10/13/1999, 12:00 AM
Event End Date:	10/19/1999, 12:00 AM
Description:	
Source:	ECT Deployment
Web Source Link:	View
NOAA Event URL:	View
Photo:	No



Push for the construction of new flood protection infrastructure at S-25B and S-26 Coastal Structures (forward pumps) and C4 Basin (Emergency Detention Basin) supported with FEMA Funds.



Flood Protection Level of Service (FPLOS) Study Area

Areas of Interest:

C2:

- Primary Canal: Snapper Creek
- Primary Outfall: S22

C3W:

- Primary Canal: Coral Gables Canal
- Primary Outfall: G93

C4:

- Primary Canal: C4 Canal (Tamiami Canal)
- Primary Outfall: S25B

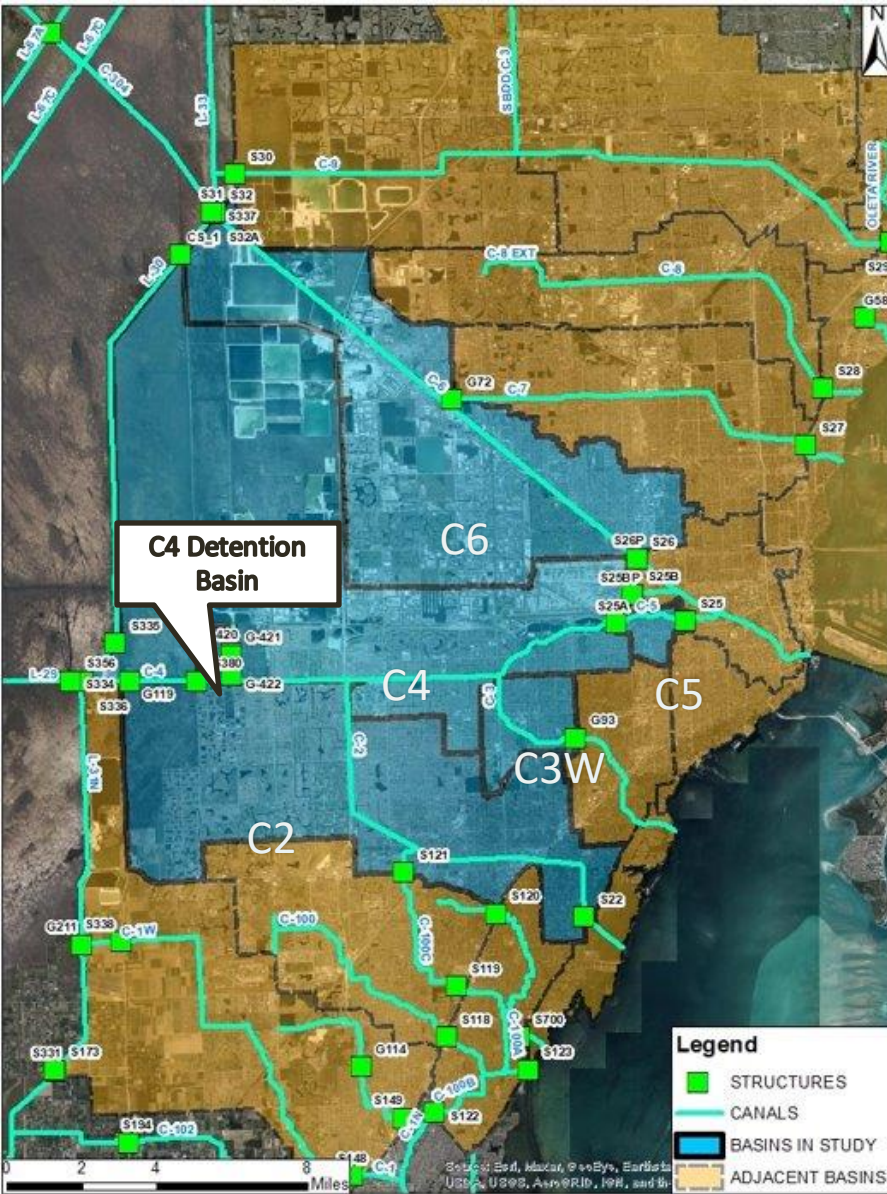
C5:

- Primary Canal: Comfort Canal Southfork
- Primary Outfall: S25

C6:

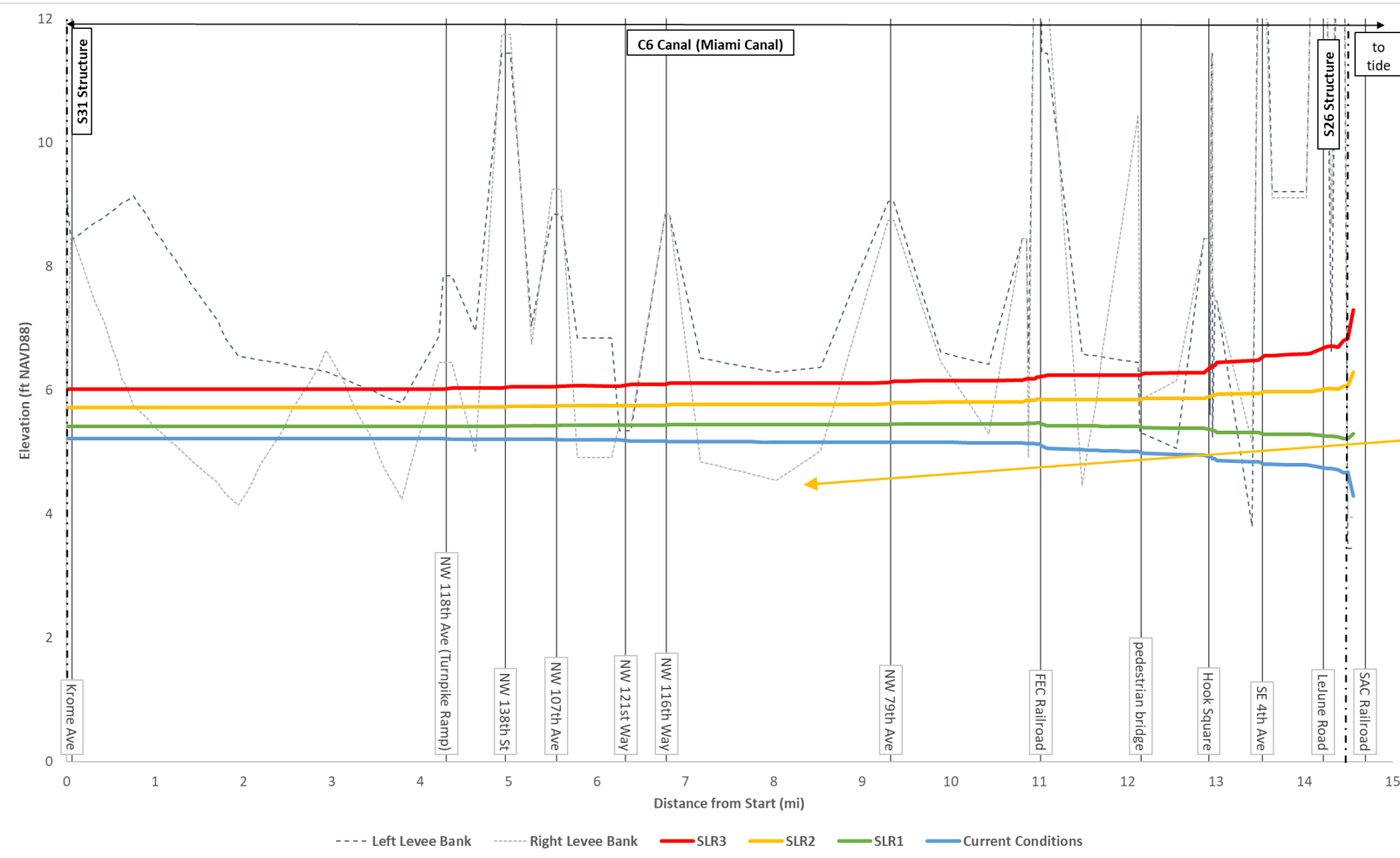
- Primary Canal: C6 Canal (Miami Canal)
- Primary Outfall: S26

Considering significant interconnectivity of these watersheds and capability of MIKE SHE/MIKE 1D as a regional modeling platform, all watersheds were combined in a single model



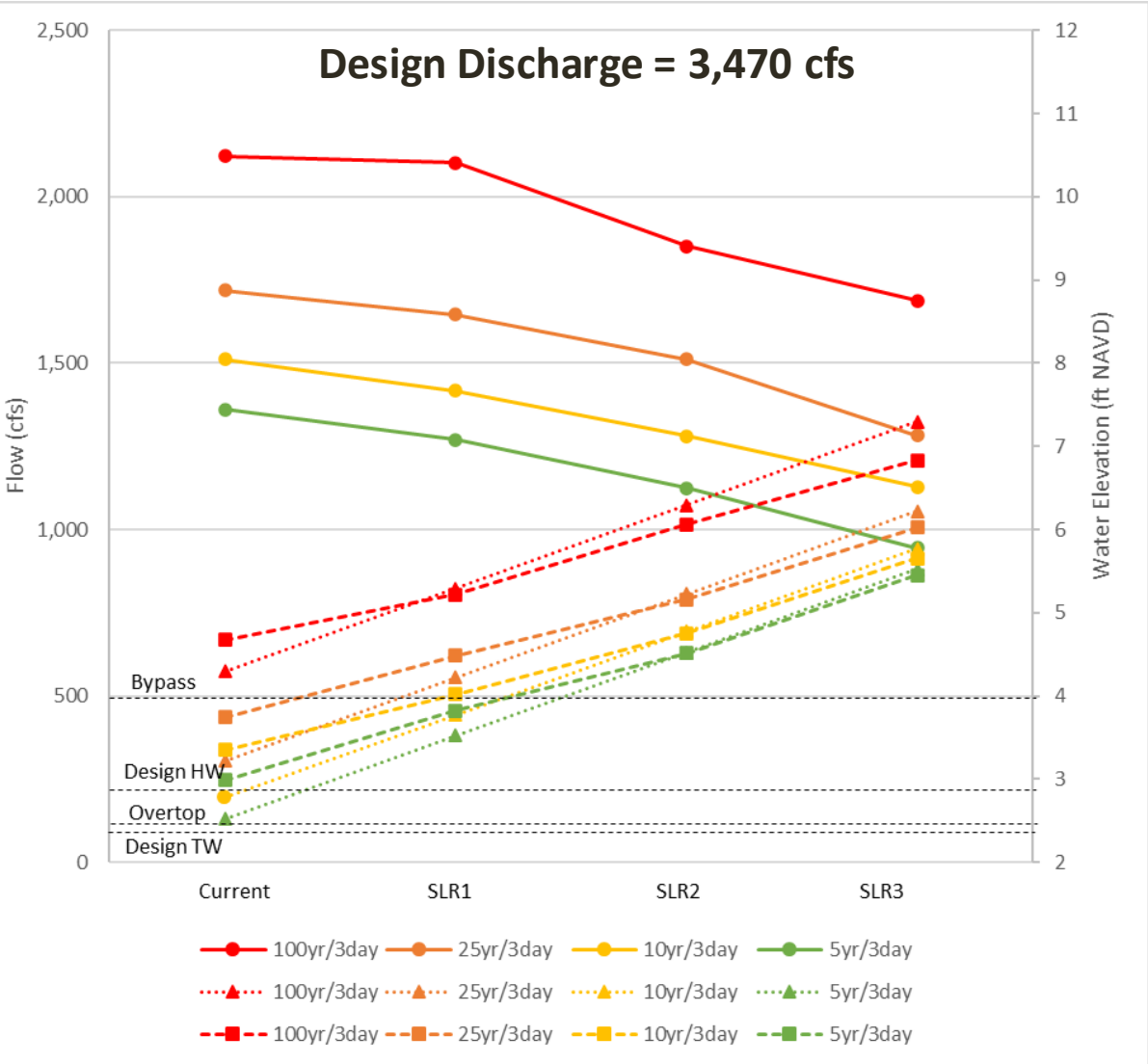
Results – C-6 Basin

- PM1 – Maximum Stage in Miami Canal (100yr/72hr storm)

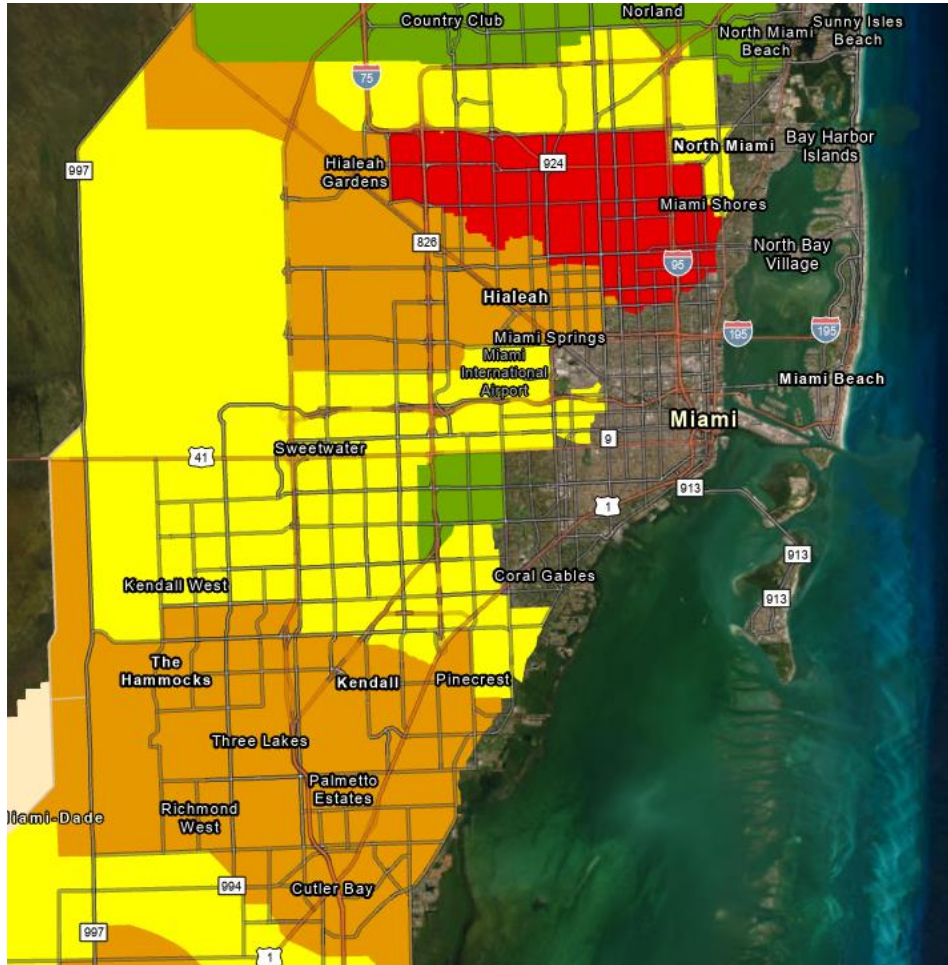


Results – C-6 Basin

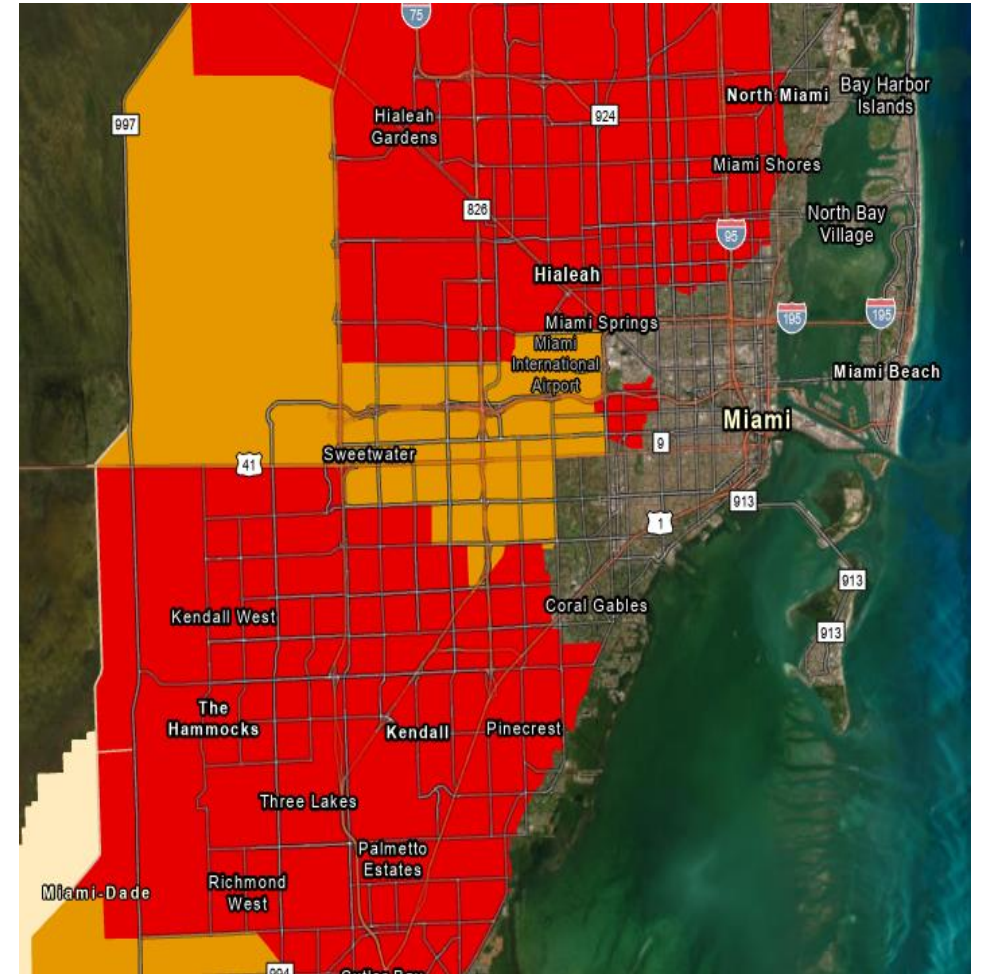
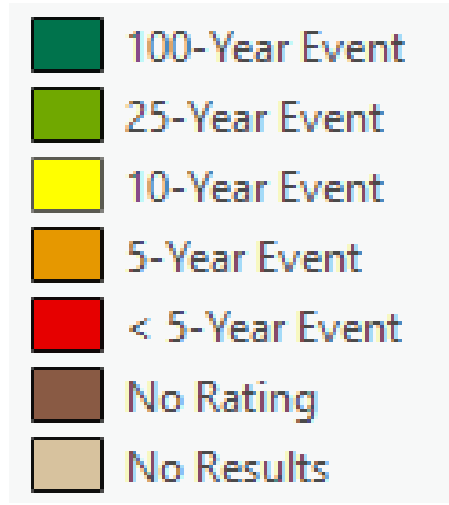
PM3 – Structure Performance (S26)



Results – C-6 Basin



Current Conditions
Level of Service

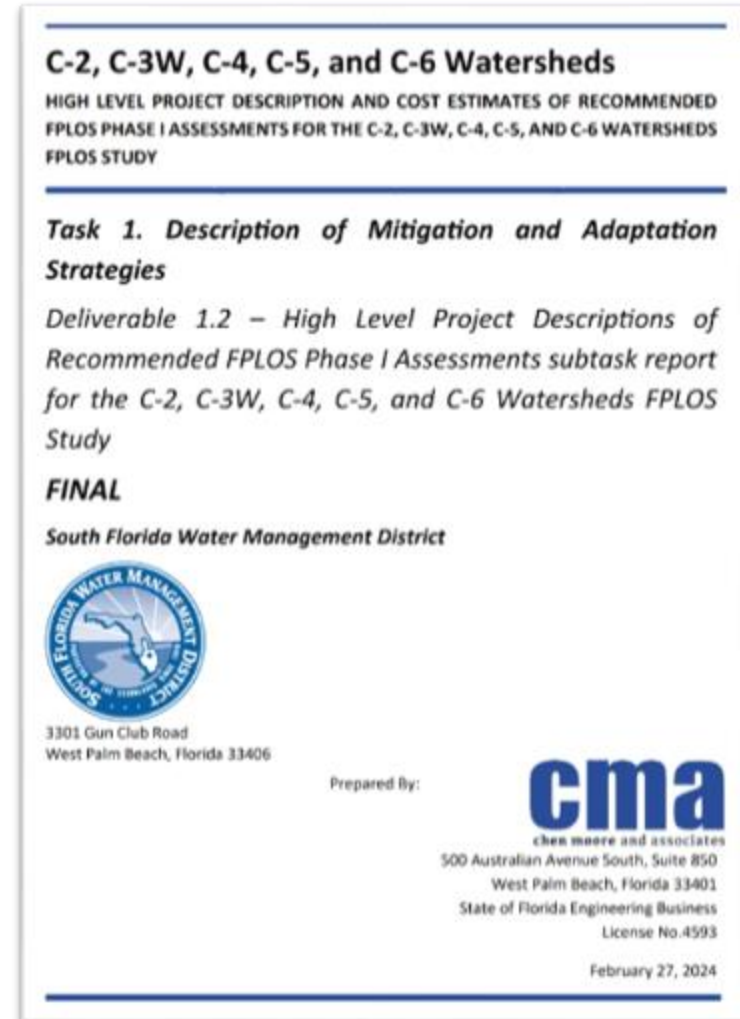


Future Conditions
Level of Service (2ft SLR)



Preliminary Mitigation Strategies in C-6 Basin

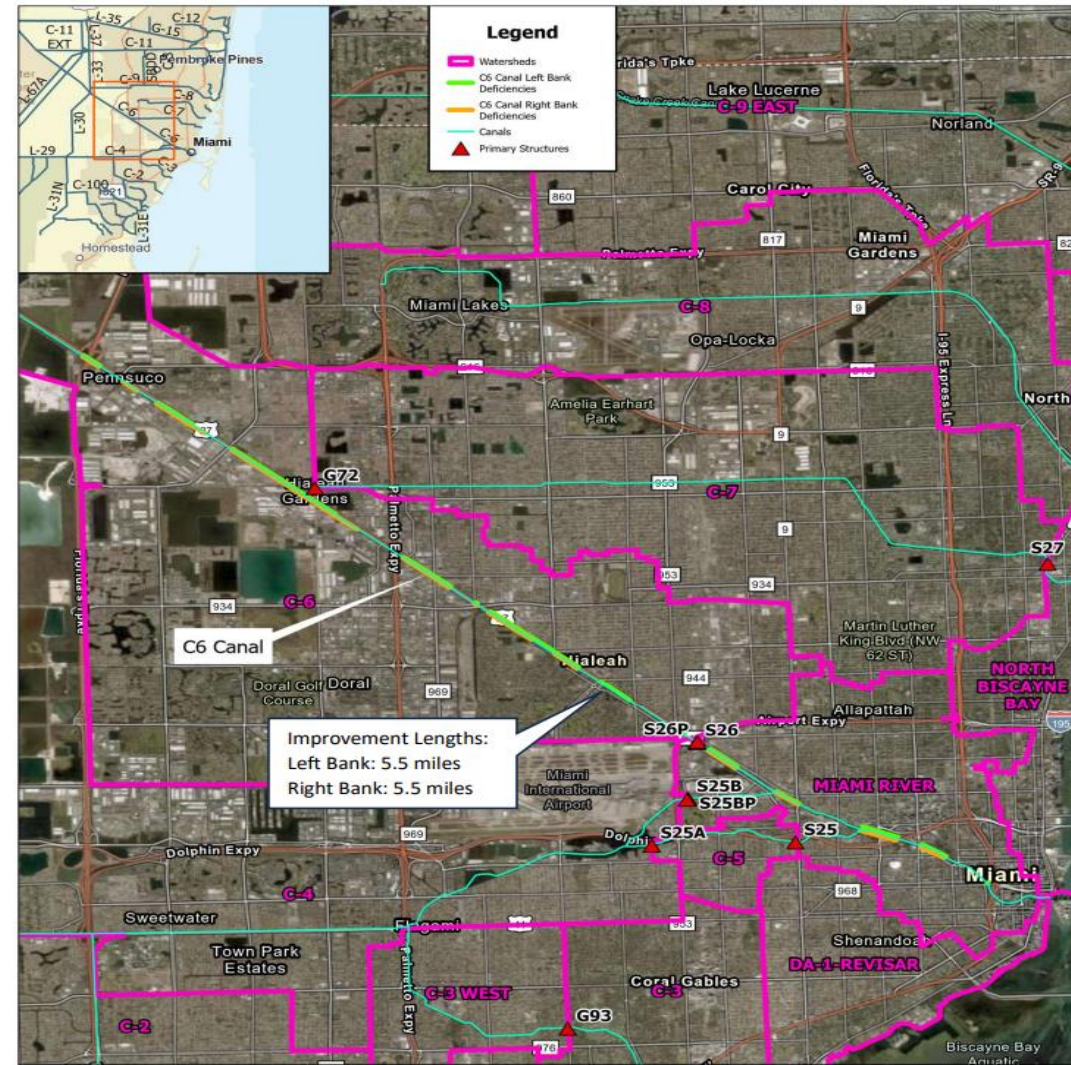
1. Structure Hardening
2. Canal Embankments Resiliency
3. Canal Widening and Dredging Resiliency
4. New Storage Area(s)
5. Additional Potential CERP Storage
6. Inter Basin Transfer
7. Measures at the mouth of the Miami River (Downstream S-26)



C-6 Canal Embankment Resiliency

Raising Canal Improvements

- Locations along the Miami River which experience overbank exceedances
 - Krome Ave to NW 118th Ave (Turnpike Ramp)
 - NW 107th Ave to NW 121st Way
 - NW 116th Way to NW 79th Ave
 - Hook Square to LeJeune Road
- Recommended improvements :
 - Left and Right Embankments (5.5 miles each) = 11 miles
 - Tie-Back Flood Barrier

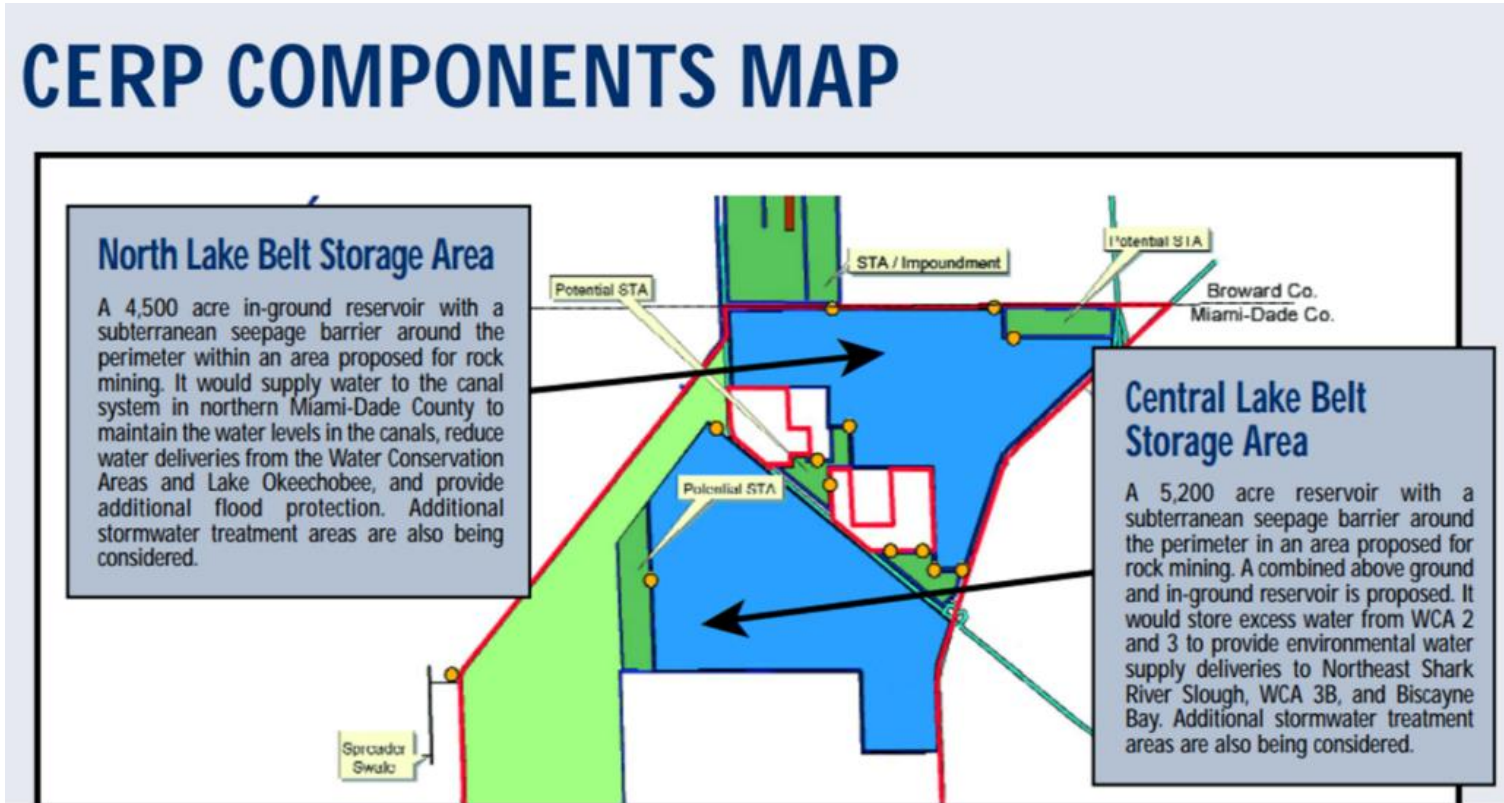


C-6 Canal Embankment

Additional Potential CERP Storage

Storage in Western Mining Lakes with Conveyance Structures Connection to Miami River

- Connect and utilize the mining lakes west of the Turnpike as storage and emergency detention.
- Over 2,500 acres of existing mine lakes within the C-6 that have completed operations and are currently serving no additional purpose



2024 Sea Level Rise and Flood Resiliency Plan

2024 SEA LEVEL RISE AND FLOOD RESILIENCY PLAN



Building Resilience and Mitigating Risks
to South Florida's Water Resources

FINAL SEPTEMBER 1, 2024

2023 Consolidated Annual Report on Flood Resiliency

Central and Southern Florida Flood Resiliency
Study

Sea Level Rise and Flood Resiliency Plan

October 2023



sfwmd.gov

Compiling of Resiliency
Priority Projects

*GOAL: Reducing the risks of
flooding, sea level rise and
other climate impacts on
water resources and
increasing community and
ecosystem resiliency in South
Florida.*

2024 Consolidated Annual
Report on Flood Resiliency
coming October 2024.



Planning Reach A - Broward County Basins

- Section 203 with associated USACE agreements for technical assistance
- Feasibility Study (Initiated Q4 FY24) – Target WRDA 26
- Funding support from FDEP and Broward County
- Letter of intent from SFWMD to ASA(CW) submitted 17 JUL 2024; ASA(CW) acknowledgment letter sent 23 AUG 2024

Planning Reach B - C-7, C-8, C-9 Basins

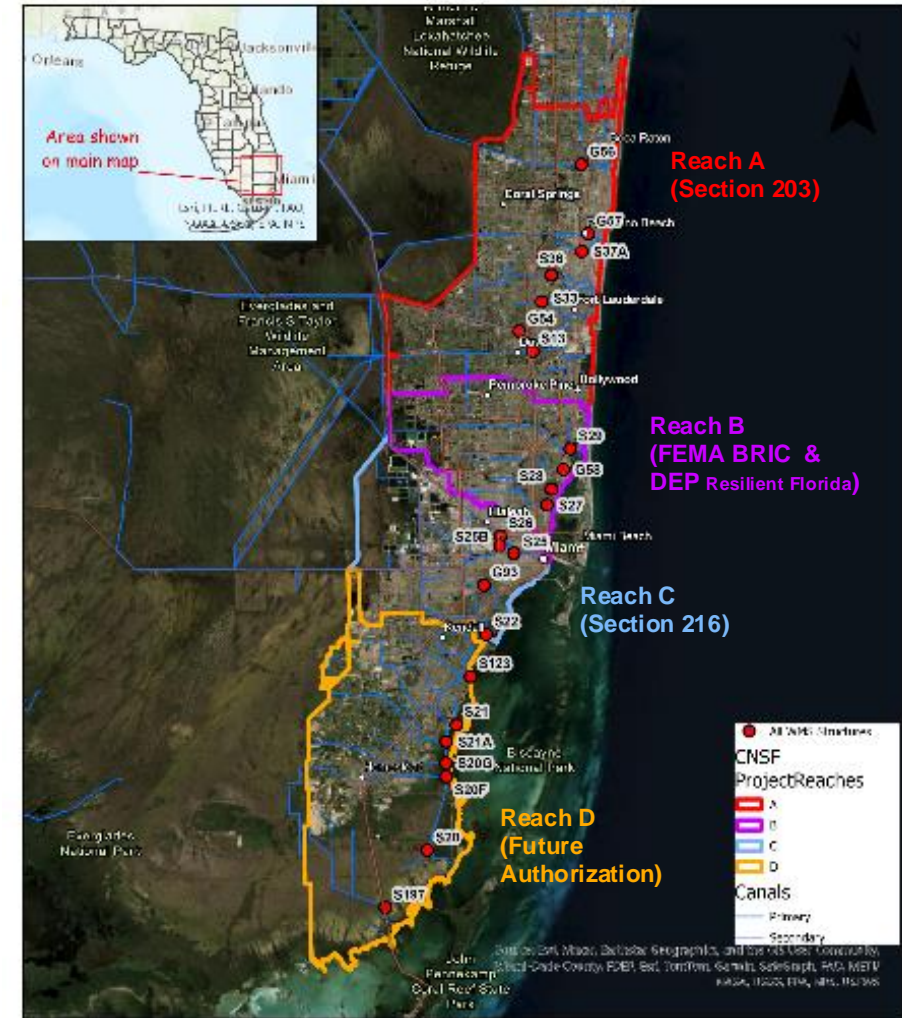
- FEMA Building Resilient Infrastructure and Communities (BRIC) / Resilient Florida Grant Funding Available with associated Section 408 requests
- Funding support from Miami Dade County

Planning Reach C - Miami River Basins

- C&SF Flood Resiliency Study – Section 216 Authorization – Budget to be agreed with VTAM
- Feasibility Study - Target WRDA 28

Planning Reach D – South Dade Basins

- Structures potentially to be integrated into the upcoming CS&F Comprehensive Study or future planning studies



C&SF Project Reaches and Associated Coastal Structures

0 1.25 2.5 5 10 Miles

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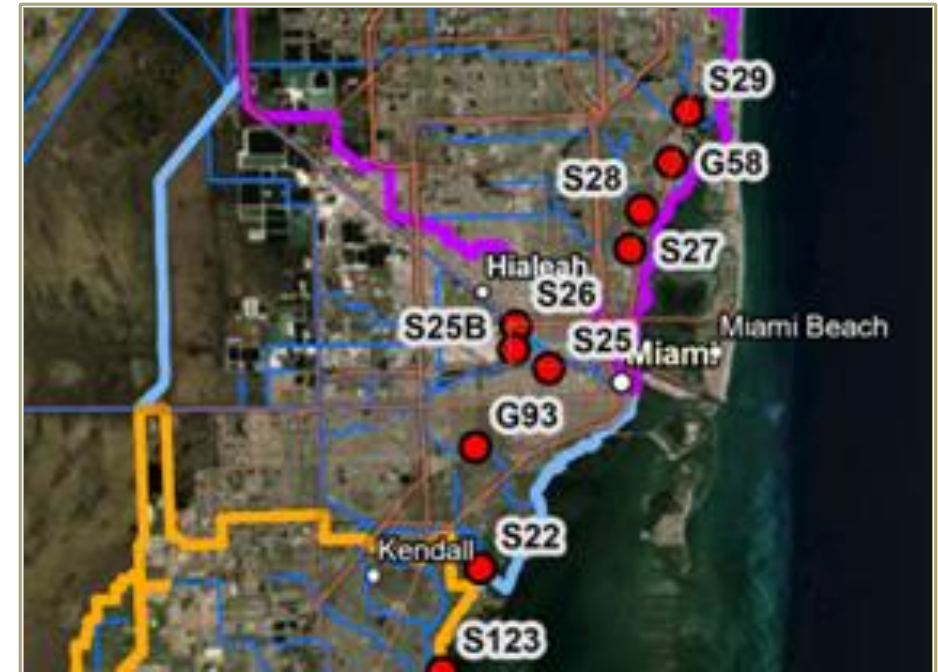
C&SF Flood Resiliency (Section 216) Study

• Study Process

- USACE Jacksonville District and SFWMD finalized an overall integrated strategy; Revised Section 216 will focus on Reach C
- USACE Jacksonville submitted revised Vertical Team Alignment Memorandum (VTAM) to the South Atlantic Division (SAD) on 14 August 2024 for the focused Reach C study; VTAM details the resources required to complete the study
 - Next steps : endorsement by SAD, transmittal to Headquarters USACE, endorsement by HQ USACE, transmittal to the Assistant Secretary of the Army for Civil Works for review and approval

Technical Efforts

- Initial economic modeling (FDA model for NED evaluations) for the existing conditions
 - Review of output and model assumptions; team will be updating model details/assumptions based on the reviews
 - Interim runs for the existing condition and future without project (FWOP)
- SFWMD and HDR have developed initial total benefit evaluations for the regional economic development (RED), environmental quality (EQ), and other social effects (OSE) benefit categories
- Target to share existing conditions and FWOP results with the PDT in Oct 2024



Planning Reach C – Miami River

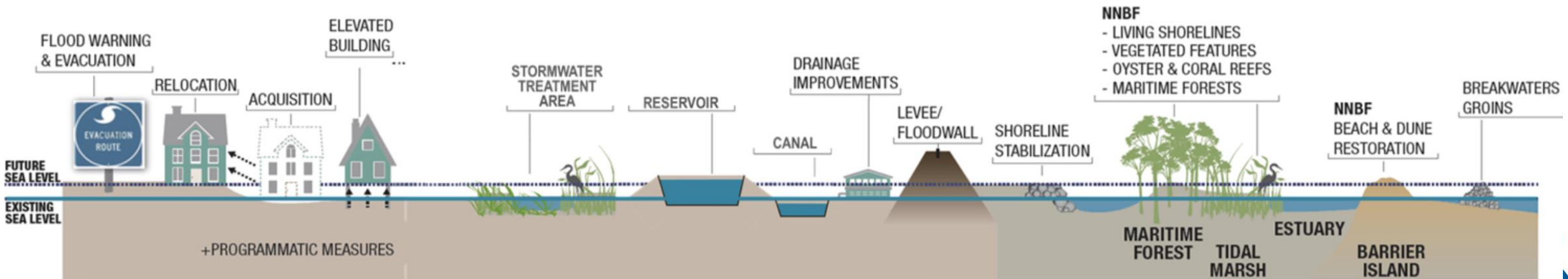
Resiliency Initiatives Coordination

Integrating Inland and Coastal Flood Mitigation Strategies



POTENTIAL MEASURES TO IMPROVE RESILIENCE AND SUSTAINABILITY

Graphic modified from https://ewn.el.erdc.dren.mil/nnbf/other/5_ERDC-NNBF_Brochure.pdf



Biscayne Bay Model Development

Processes included:

- Tides
- Wind
- Precipitation
- Air pressure
- Solar radiation
- Evaporation (calculated internally)
- Inland flow fluxes:
 - Canals
 - Ungauged sheet surface flow
 - Ungauged ground water



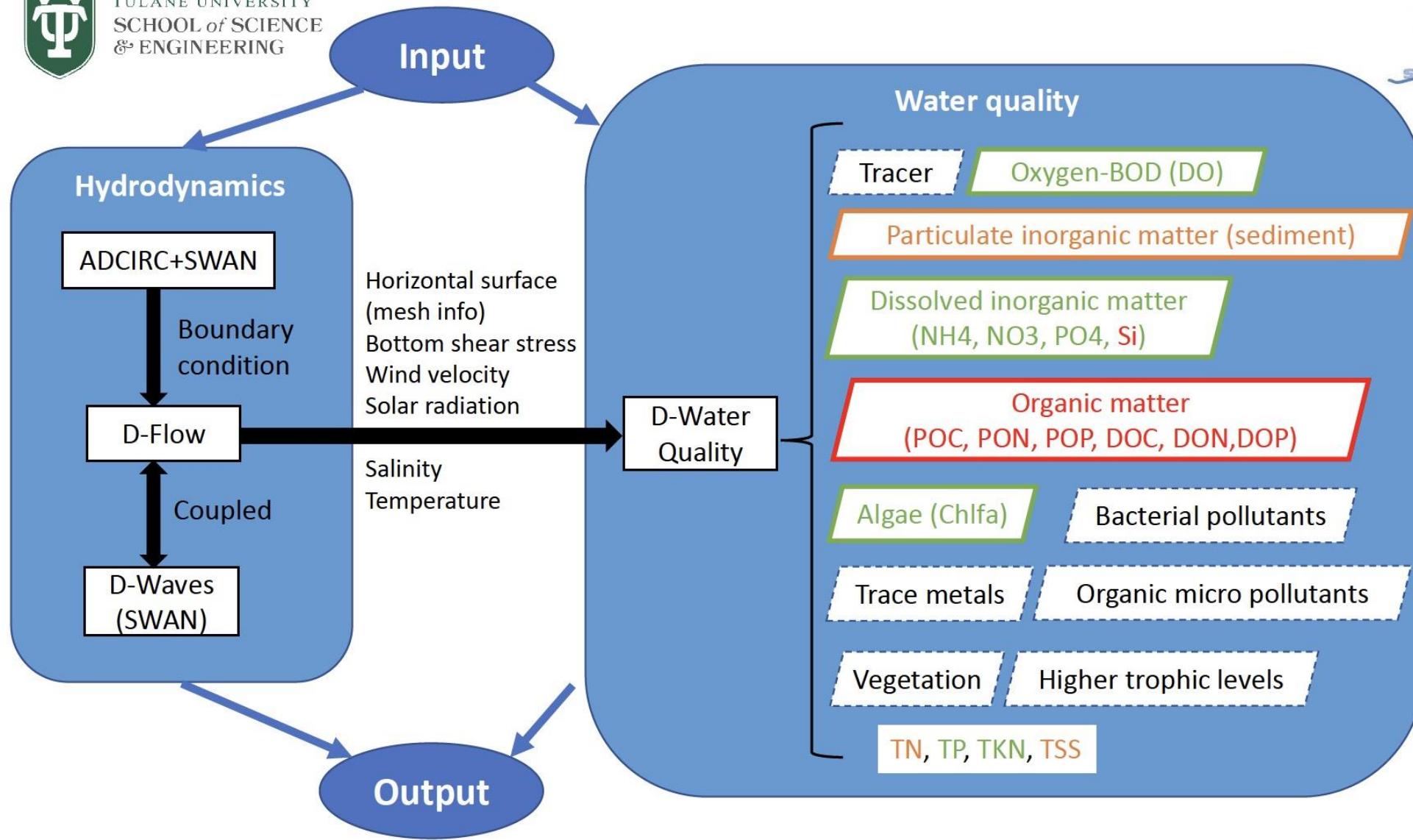
Biscayne Bay Model Development



TULANE UNIVERSITY
SCHOOL of SCIENCE
& ENGINEERING

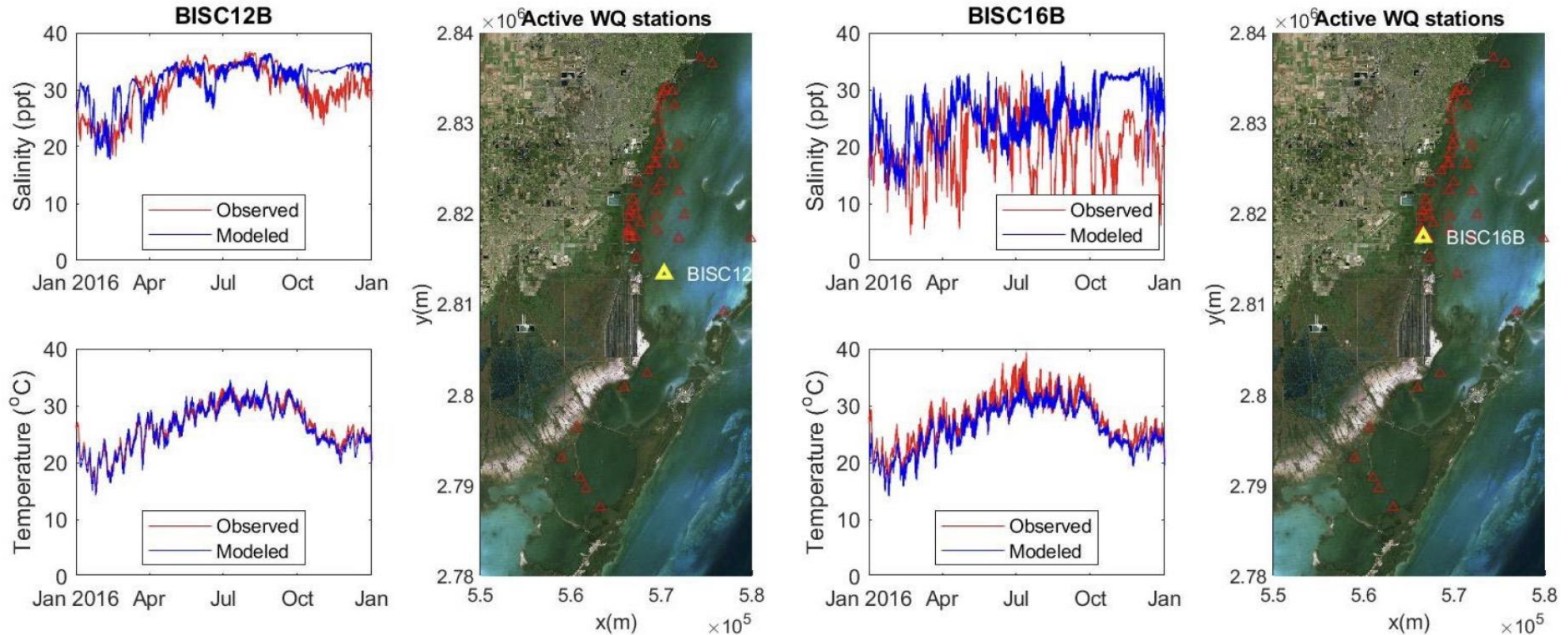


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Biscayne Bay Model Development

Salinity and Temperature (2016 validation)



Biscayne Bay Model Development

Next steps

- Confirm WQ high priority parameters
- Focus the calibration on the WQ high priority parameters
- Focus the 2018 WQ calibration on: Boundary/source WQ concentrations
- Adjust key WQ processes/model parameters
- Inorganic matters (IM)
- WQ validation (2016)
- A 2nd validation period including a hurricane
- Scenario runs (~ 10 scenarios)

Flood Control & Resiliency Funding Sources

- Ad Valorem
- Senate Bill 1638 – General Revenue
- Federal Emergency Management Administration - Building Resilient Infrastructure and Communities and Mitigation Grants
- Florida Department of Environmental Protection - State Resiliency Program
- United States Army Corps of Engineers Planning Studies



Gov. Ron DeSantis signed Senate Bill 1638 at the SFWMD's Ft. Lauderdale Field Station on April 4, 2024

Executive Order 23-06: Achieving *Even More* Now



EXECUTIVE ORDER 23-06

Achieving *Even More* Now for Florida's Environment



WHEREAS, on January 10, 2019, I signed Executive Order 19-12, which laid out a bold plan to achieve more now for Florida's environment, and in the last four years, we have made incredible progress, entering into a golden era for conservation and protection of our treasured natural resources; and

WHEREAS, we secured unprecedented funding for the protection of our natural resources, including over \$3.3 billion in state funding for Everglades restoration and protection of our water resources, far surpassing our goal of \$2.5 billion; and

WHEREAS, we expedited Everglades restoration to reduce harmful discharges and send more water south, with more than 50 Everglades restoration projects being completed, breaking ground, or hitting a major milestone, and helped Florida Bay reach salinity goals for the first time in decades; and

WHEREAS, in 2020, I signed into law Senate Bill 712, which was the most consequential environmental legislation in decades and included a wide range of water quality protections aimed at minimizing the impact of known nutrient pollution sources, rejoining the State's resources to better protect Florida's environment, and strengthening our environmental regulatory requirements; and

WHEREAS, we invested \$1.6 billion in water quality improvements, created the Wastewater Grant Program to construct, upgrade, or expand wastewater facilities, provide advanced wastewater treatment, and convert septic-to-sewer, and dedicated historic funding to increase alternative water supply and restore and protect Florida's springs; and

WHEREAS, we dedicated funding to enhance our state's water quality monitoring and identify new and innovative ways to treat, predict, and respond to blue-green algal blooms, including more than \$45 million to the Innovative Technology Grant Program and funding 20 different innovative technology projects to date; and

WHEREAS, the State, with the coordination of the Chief Science Officer, ensured that science is at the forefront of environmental protection and policy, with enhanced monitoring, innovative research, and modern data analytics to support water quality restoration and ensure that high quality, scientific data are readily available to citizens and state agencies; and

WHEREAS, we provided support to local governments for red tide cleanup efforts and established the Center for Red Tide Research within the Florida Fish and Wildlife Conservation Commission (FWC) Fish and Wildlife Research Institute, which brings together state and local governments, universities, private sector partners, and community scientists to enhance statewide red tide monitoring and conduct applied research associated with tracking, predicting, and mitigating the effects of red tide; and

WHEREAS, the State, with the coordination of the Chief Resilience Officer, invested more than \$1.1 billion in resilience projects to protect our communities from flooding and sea level rise; and

WHEREAS, we established the Florida Wildlife Corridor and committed more than \$600 million to the Florida Forever Program and acquired more than 170,000 acres for conservation, nearly four times that acquired in the previous four years; and

WHEREAS, while the achievements of the first four years are historic, protecting our water resources, investing to make our communities more resilient, and preserving our conservation lands are essential to our economy and way of life, and we must continue the momentum of the last four years to achieve even more now for Florida's environment and ensure that we leave Florida to God better than we found it.

NOW, THEREFORE, I, RON DESANTIS, as Governor of Florida, by virtue of the authority vested in me by article IV, section (a) of the Florida Constitution, and all other applicable laws, do hereby issue the following Executive Order, to take immediate effect:

Section 1: Continuing Historic Investments in Everglades Restoration, Water Quality, and Water Supply
I hereby direct the Department of Environmental Protection (DEP) to take the following actions to build on our momentum and further protect Florida's water resources:

- Secure \$5.5 billion over the next four years for Everglades restoration and protection of our water resources, including water quality and water supply.
- Work with the Legislature to expand the existing Wastewater Grant Program, which is currently limited to funding septic-to-sewer conversions, advanced septic system upgrades, and upgrades to advanced wastewater treatment projects, by broadening project eligibility to also address impacts from nonpoint sources such as stormwater and agricultural runoff and address aging wastewater infrastructure that increases nutrient loading to surface and groundwater.
 - Strategically engage with local governments and stakeholders to identify the most effective and beneficial water quality improvement projects.
 - Inspect all water management districts to annually identify regional projects to improve water quality.
 - Continue to prioritize grants to local governments for septic-to-sewer conversions and identify ways to minimize the installation of new septic systems in areas with impaired watersheds.
 - Ensure that all wastewater facilities discharging to waterbodies within a basin management action plan (BMAP) area or discharging to a waterbody not attaining water quality standards upgrade to advanced wastewater treatment by 2033.
- Partner with the Department of Economic Opportunity and local governments to improve local government long-term comprehensive planning that ensures sustainable growth while protecting our natural resources, including prioritizing sewer connections and advanced wastewater systems that can sustain increased population demands and protecting taxpayer investments in Everglades restoration projects and major land conservation and water quality protection programs.

D. Direct the South Florida Water Management District (SFWMD) to:

- Continue expediting Everglades restoration projects, including Comprehensive Everglades Restoration Program (CERP) projects, and projects that minimize the risk of harmful discharges and send water south.
- Make every effort to advance Everglades restoration projects undertaken by the U.S. Army Corps of Engineers (Corps) to ensure meaningful progress over the next four years, including any component of the Everglades Agricultural Area (EAA) Reservoir Project, all CERP Storage Checkdams within the Lake Okechobee watershed, and any component of the Indian River Lagoon-South project reservoirs.
- Hold the Corps accountable by reporting on the Corps' progress on CERP construction projects and CERP planning efforts for the restoration of the Greater Everglades at every SFWMD Board meeting.
- Work with the Corps to ensure the Lake Okechobee System Operating Manual (LOSOM) is implemented in a manner that reduces harmful discharges into our estuaries by holding water in the lake during the wet season and sending more water south to benefit the environment and meet the needs of our communities.

E. Continue progressing toward reducing the frequency and severity of harmful algal blooms, including blue-green algae and red tide, in our state's inland and coastal waters by:

- Directing the Blue-Green Algae Task Force to continue examining the sources of and solutions for addressing and mitigating blue-green algae and to provide additional recommendations for further state action.
- Coordinating with FWC, the Florida Department of Health, and the Harmful Algal Bloom Task Force to continue providing technical expertise and recommendations for supporting investigations into harmful algal bloom causes, impacts, management responses, and mitigation strategies.
- Continuing the red tide emergency grant program and creating a similar blue-green algal bloom emergency grant program to provide targeted funding supporting state and local government response efforts to minimize the harmful effects of blue-green algal blooms on our citizens and visitors.

F. For reasons impaired waterbodies, strengthen BMAPs, which provide a roadmap to restoring water quality and reducing pollutants, by:

- Updating all BMAPs to include the specific projects necessary to meet the requisite water quality standards to achieve restoration goals. The projects most likely to yield maximum pollutant reductions should be prioritized.
- Requiring local governments to identify and expedite high priority projects to meet the nutrient load allocations required under a BMAP.
- Working with the Florida Department of Agriculture and Consumer Services (DACFS) to identify and seek funding for regional projects that address excess nutrient inputs from agricultural nonpoint sources in BMAP areas where agriculture has been identified as a significant source of nutrient pollution.

G. Work with DACFS to improve Agricultural Best Management Practices (BMP), which are important measures agricultural producers utilize to reduce nutrients from entering our waterways, by:

- Working with DACFS to ensure a comprehensive data-driven review of all agricultural BMP manuals and completion of updates, as needed.
- Obtaining and reviewing site-specific data on BMP implementation, including parcel-level reporting of commodity and fertilizer application.
- Working with DACFS to achieve 100 percent BMP enrollment and implementation in BMAP areas.

Section 2: Protecting and Restoring the Indian River Lagoon
I hereby direct DEP to identify and prioritize strategies and projects to expedite water quality restoration in the Indian River Lagoon (IRL), one of our state's most unique and diverse ecosystems, by:

- Working with the Legislature to establish the Indian River Lagoon Protection Program and secure at least \$100 million annually for priority projects to improve water quality in the IRL.
- Coordinating with stakeholders, including federal agencies, local governments, water management districts, and the Indian River Lagoon National Estuary Program to expand partnerships to identify and prioritize projects for water quality restoration.
- Undertaking enhanced water quality monitoring in the IRL to better identify sources of nutrient loading to inform project prioritization and improve water quality in the IRL.
- Taking actions to reduce nutrient contributions to the IRL from septic tanks and wastewater facilities, stormwater discharges, and agriculture non-point sources, including:
 - Ensuring the utilization of sewer when available to reduce the density of septic systems, and the proper siting of septic tanks to reduce nutrient contributions, as well as the use of advanced nutrient reducing septic systems.
 - Ensuring that all wastewater facilities discharging to the IRL upgrade to advanced wastewater treatment by July 1, 2023.
 - Prioritizing state investments for the conversion of all traditional septic tanks adjacent to the IRL to sewer, while also investing in the expansion of wastewater capacity and advanced treatment.
- Supporting innovative nature-based solutions including living shorelines, freshwater and coastal wetland restoration, and seagrass recovery utilizing strategic propagation and planting efforts.

Section 3: Protecting Our Coasts and Making Florida Communities More Resilient
I hereby direct the Chief Resilience Officer and DEP to build upon our efforts protecting Florida communities from flooding, sea level rise, and future storm events by undertaking the following:

- Continuing to provide expedited hurricane recovery support to the communities across the state that were impacted by Hurricanes Ian and Nicole, including seeking continued funding to rebuild and restore our beaches.
- Ensuring continued funding for statewide resilience projects through the Resilient Florida Program.
- Supporting the completion of comprehensive vulnerability assessments for all of Florida's counties and municipalities by 2026 to better inform flood risk planning and adaptation solutions.
- Establishing a Coral Reef Restoration and Recovery Initiative to increase the State's coral propagation and deployment capacity to restore the natural infrastructure that will enhance coastal flood and storm surge protection.
- Coordinating with the Florida Department of Transportation to ensure it identifies and considers water quality and flood mitigation benefits when developing and implementing its resilience planning.

Section 4: Preserving and Restoring Conservation Lands for Future Generations
I hereby direct DEP to take the following actions to preserve and protect natural lands for generations to come:

- Continue to seek consistent and meaningful annual funding for the Florida Forever Program, the state's premier conservation and recreation land acquisition program.
- Take all necessary steps to expedite the state's land conservation efforts, including a strategic focus on acquisitions within the Wildlife Corridor and acquisitions that benefit vulnerable ecosystems, water quality, and resilience.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Florida to be affixed, at Tallahassee, this 10th day of January, 2023.


 Ron DeSantis
 Governor
 State of Florida

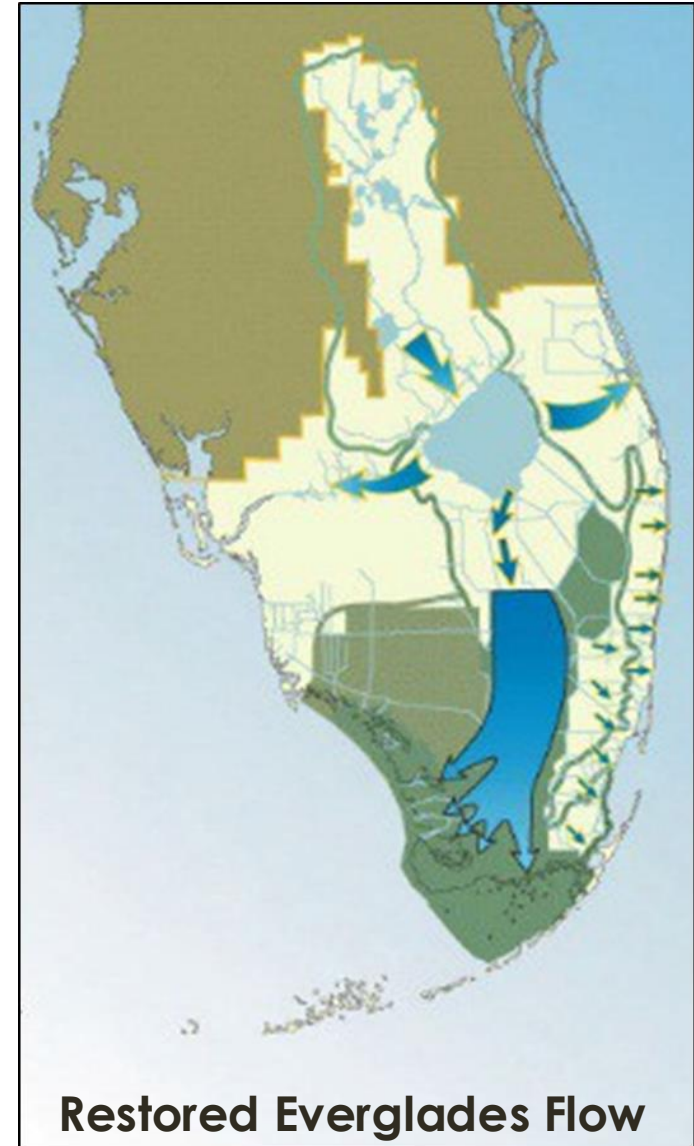
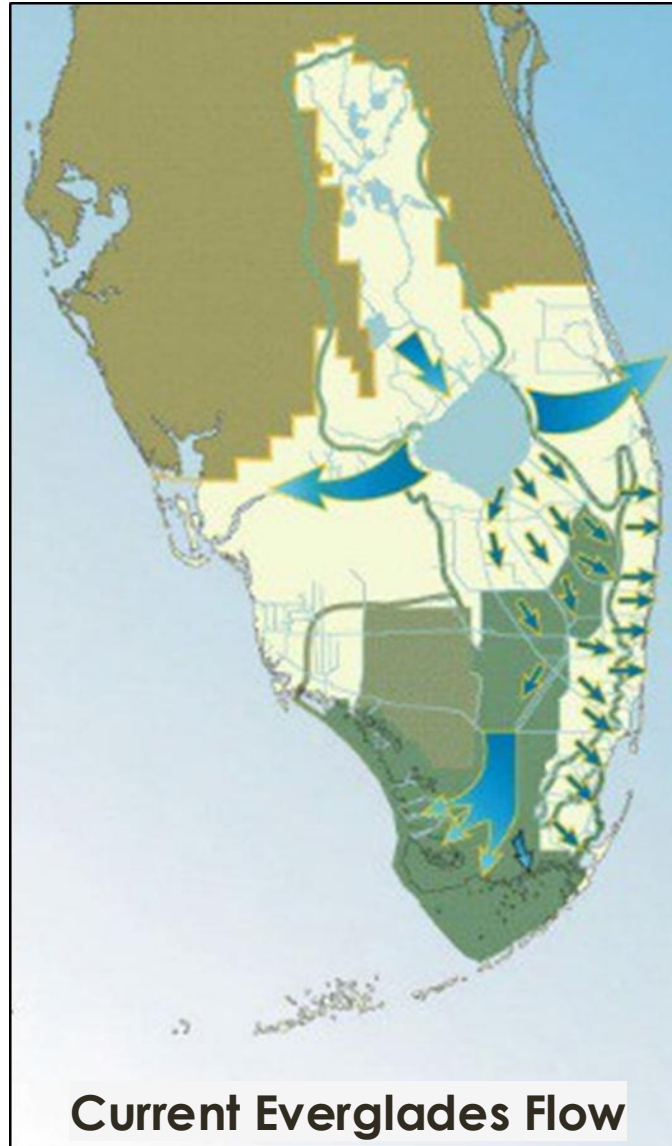


South Florida Ecosystem Restoration

The SFWMD has held over 70 ribbon-cuttings, ground-breakings, and other major milestone achievements since 2019!



Keeping Water and Improving the Flow



Golden Era of Everglades Restoration



Sending Water South Through the Central Everglades



- CEPP North
- CEPP South

- CEPP EAA
- CEPP New Water



Restoring & Reconnecting WCA3A with Big Cypress National Preserve and Lostmans Slough

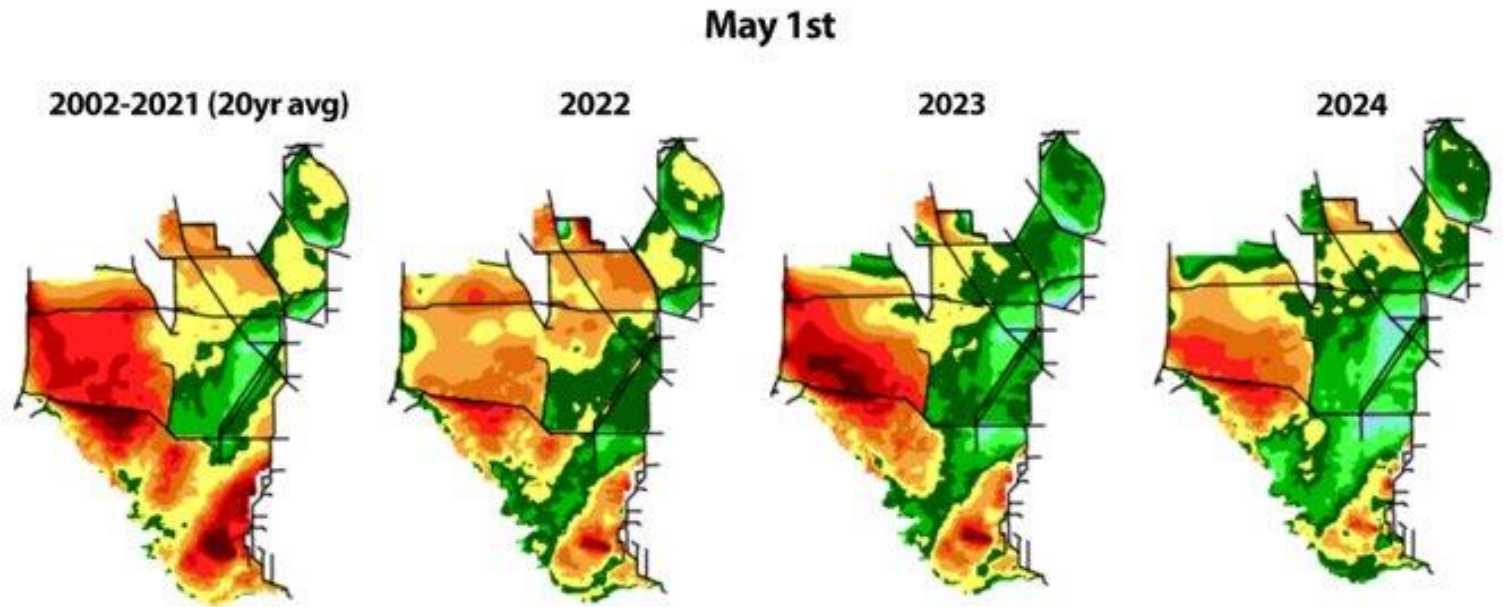


- Celebrated the first major feature of the **Western Everglades Restoration Project**, the L-28 South Culverts.
- Culverts will re-establish **ecological connectivity** and **restore hydrologic conditions** in **Big Cypress National Preserve** and western **Everglades National Park**.

Biscayne Bay Restoration



Restoration is Working – Record Hydration in the Everglades!



Shark River Slough and **Taylor Slough** demonstrate that restoration projects and operations work well together to nourish the **Everglades** and send water south to support the health of **Florida Bay**.

2025 is Going to Be a Big Year



CEPP New Water Seepage Wall
Ribbon Cutting



EAA A2 STA Ribbon Cutting



Caloosahatchee (C-43) Reservoir
Pump Station Ribbon Cutting



C-44 Reservoir and STA Ribbon Cutting

- Fiscal Year 2024-2025 Tentative Budget = \$1.63 Billion
- **East + West Reservoirs Completed**
- **All IRL Reservoirs** under Construction
- **Clean Water** Entering the Everglades + New 6,000-acre STA
- **North + South Lake O Storage** Underway
- **Tamiami Trail** Raised and Ready
- Restored **Picayune Strand**
- Completed **Biscayne Bay Coastal Wetlands**
- Completing **Design and Construction of Critical Flood Control Infrastructure / Resiliency Projects**



Thank You

SFWMD.GOV

Staff at Big Cypress Basin Field Station

