

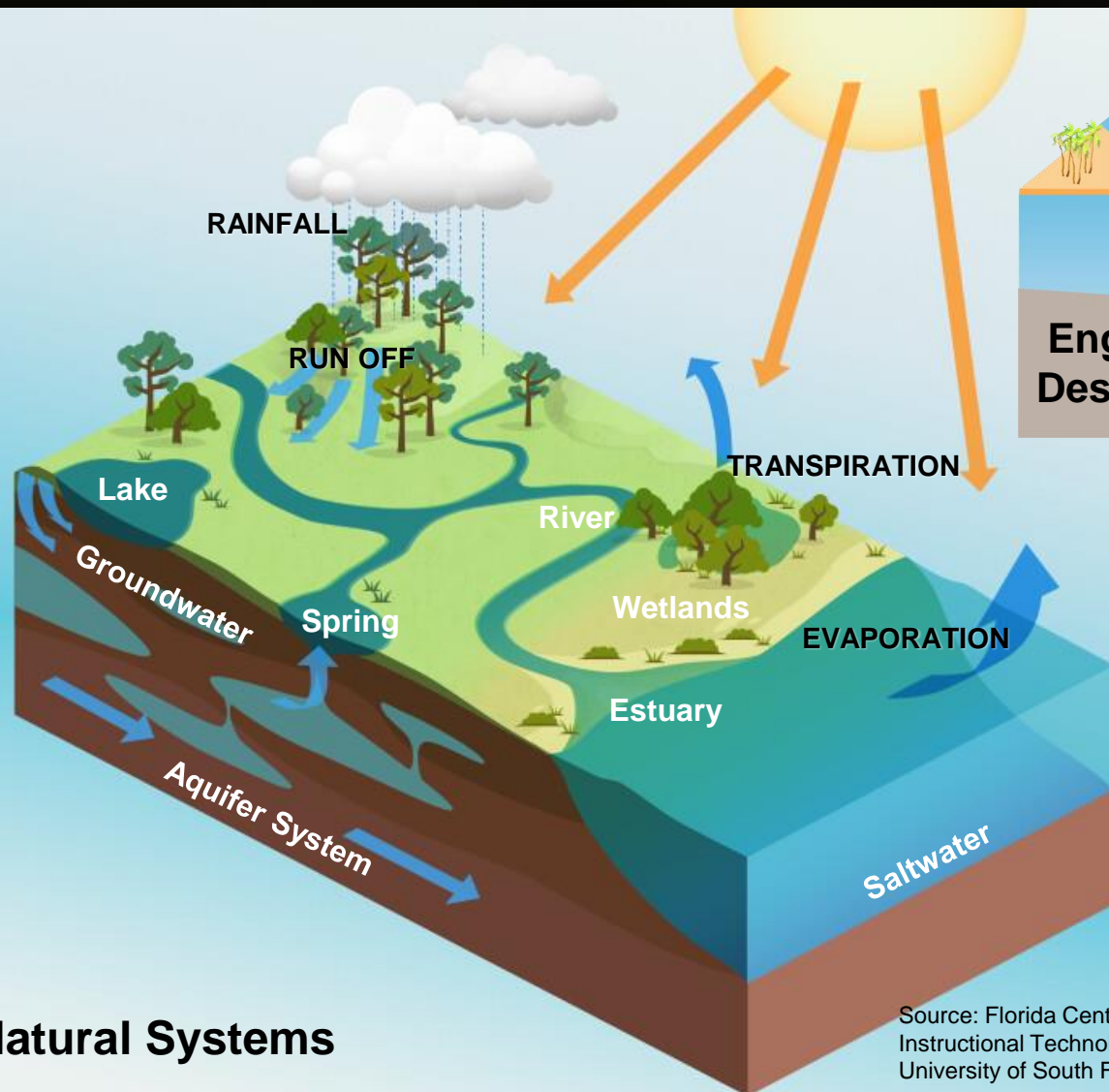


Central and Southern Florida Flood Resiliency Study USACE/SFWMD Feasibility Study Cost Share Agreement

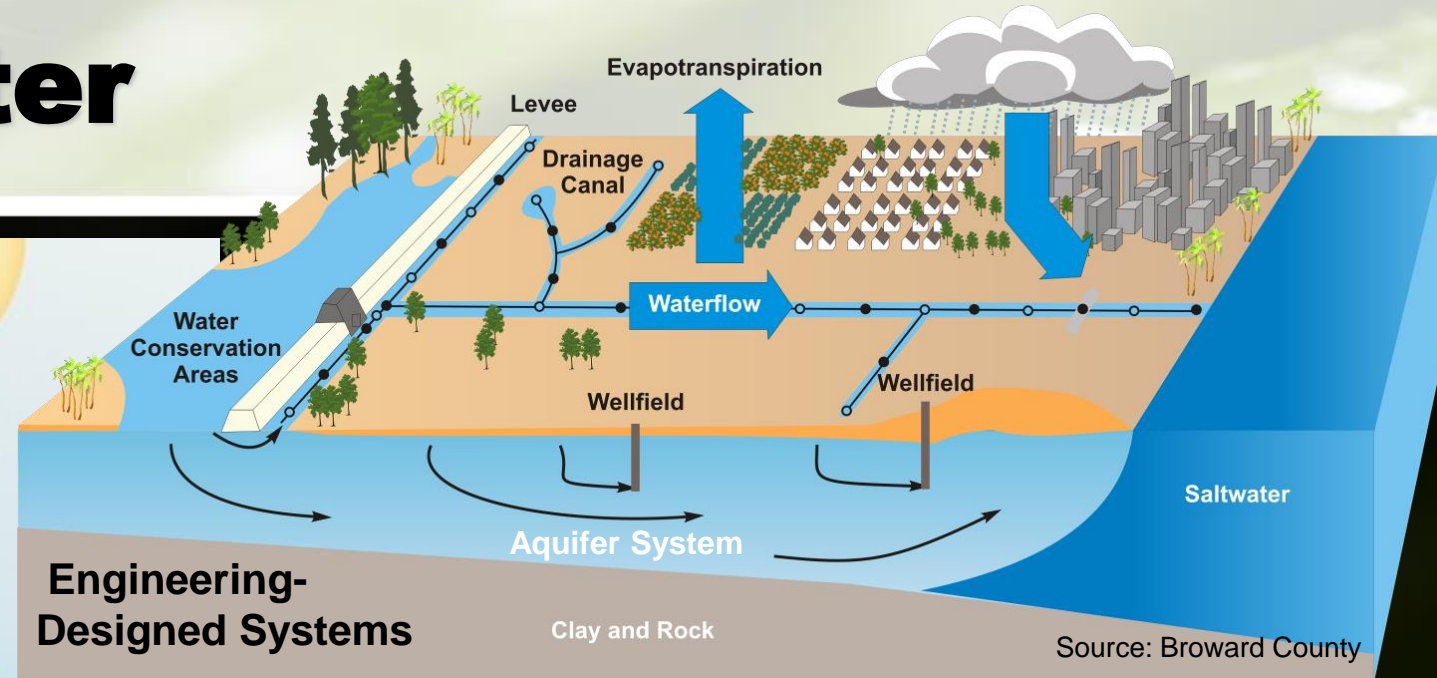


Carolina Maran, P.E., Ph.D., District Resiliency Officer
September 8, 2022

Managing Water



Natural Systems



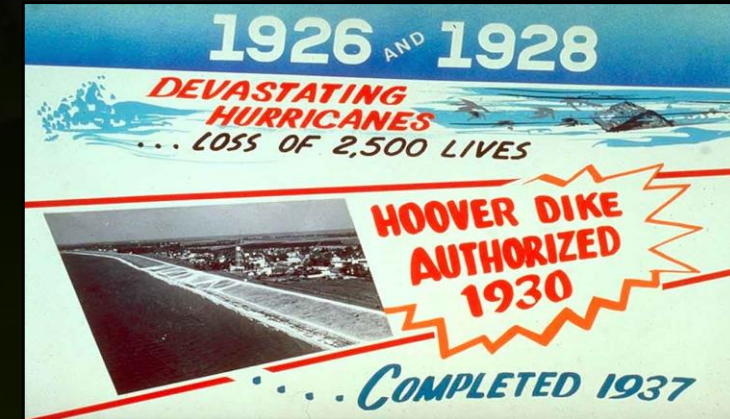
Engineering-Designed Systems

Safeguard and restore water resources & ecosystems

Meet the region's water needs

Protect our communities from flooding

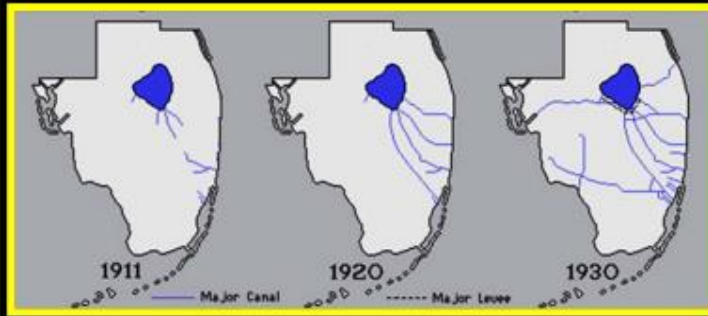
Central & Southern Florida Project



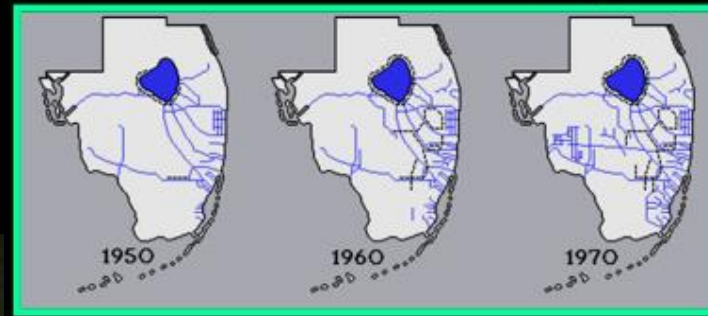
Recognizing Changed Conditions

70+ yrs Water Management System

Pre-1948 Drainage Projects



Post-1948 C & S Florida Project

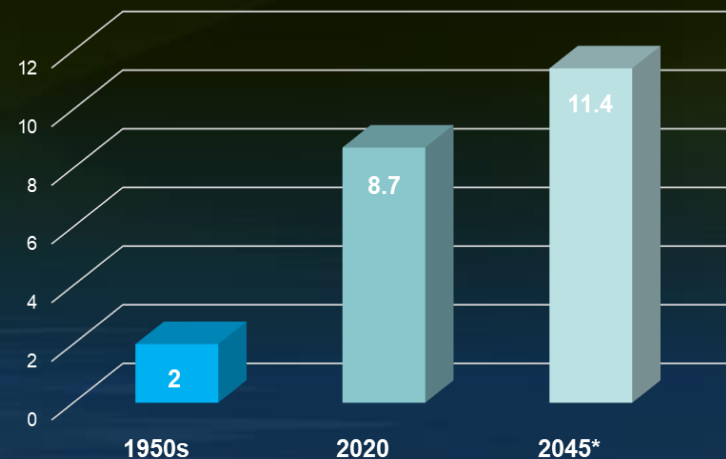


LAND DEVELOPMENT & POPULATION GROWTH

Population (million)



sfwmd.gov



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

Emerging Trends in Regional Resiliency



Regional Rainfall

Changes in rainfall patterns will impact people and ecosystems by altering the amount of water in our region throughout t...



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.



Salinity in the Everglades

The salinization of previously freshwater systems poses threats to several factors.



Estuarine and Mangrove Inland Migration

Trends in Estuarine Inland Migration provide insights to the impacts of sea level rise in coastal areas and the Everglades.



Soil Subsidence in South Florida

Maintaining soil elevations within coastal and intertidal habitats, as sea level changes, is an indicator of long-term stability of coastal.

Future Outlook in Regional Resiliency



WebApp

Future Extreme Rainfall Change Factors for Flood Resiliency Planning in South Florida Web Application
This tool provides access to future extreme rainfall change factors for resiliency planning for the 16 counties and 14 rainfall areas within SFWMD boundaries, as well as the Everglades National Park rainfall area, and an additional combined rainfall area for the Florida Keys and Biscayne Bay.

CLIMATE CHANGE

Current Limitations in C&SF Operation

Reduction in Discharge Capacity as a Result of SLR



C&SF System Resiliency

Current Planning Efforts

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

SEA LEVEL RISE AND FLOOD RESILIENCY PLAN

Building Resilience and Mitigating Risks on South Florida Water Resources

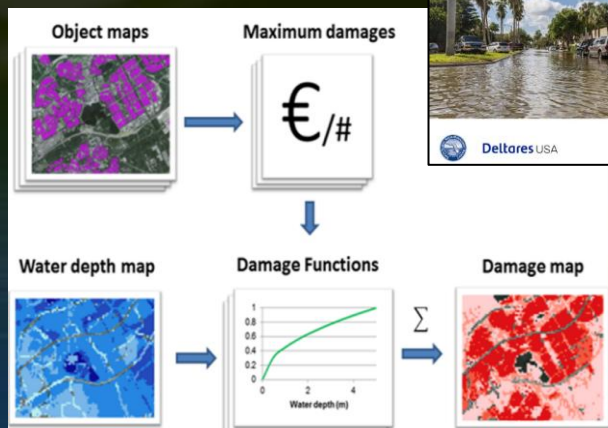
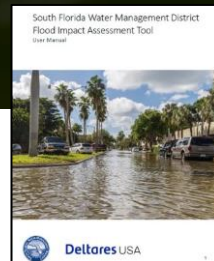
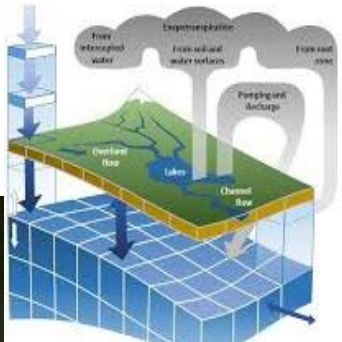
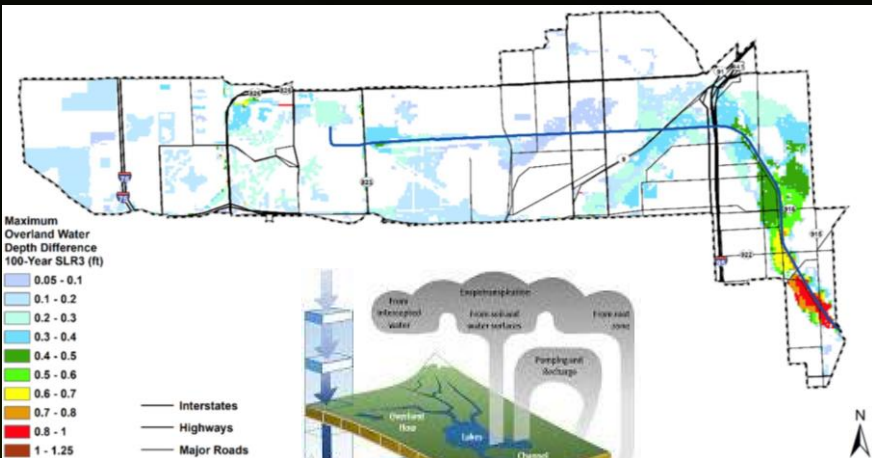


SEPTEMBER 2022



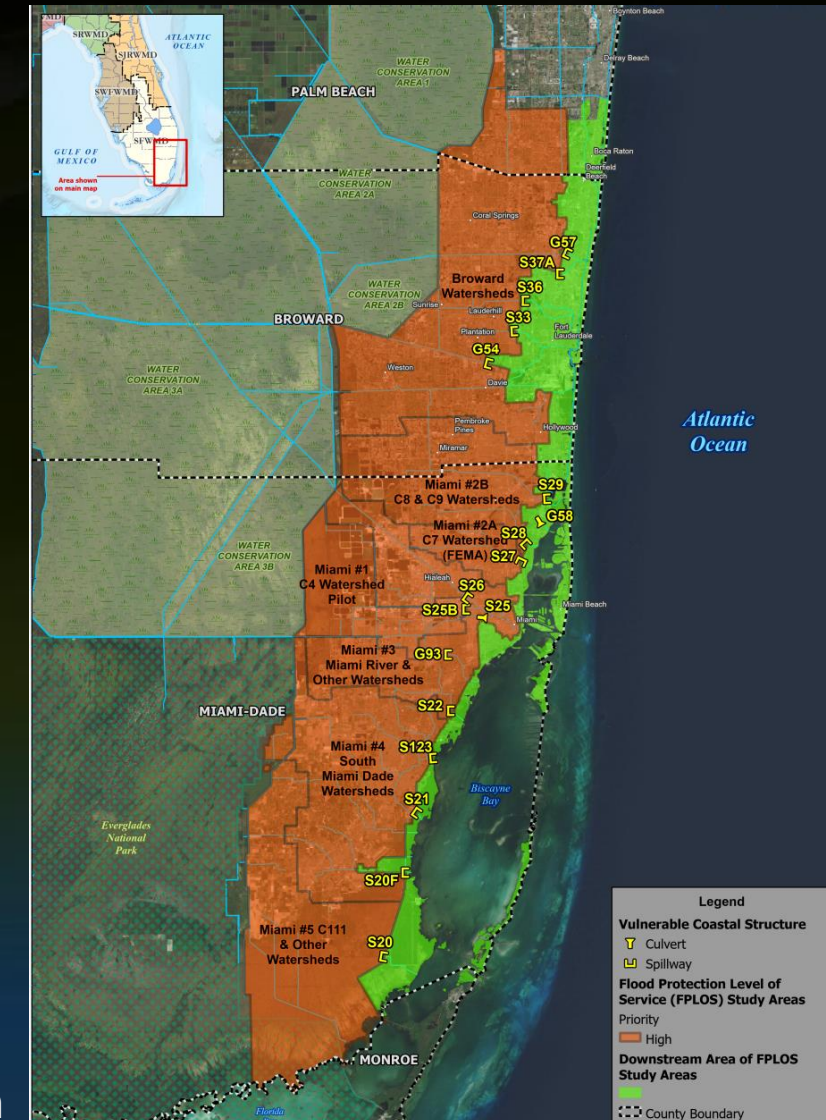
Presenter: Carolina Maran

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USACE/SFWMD C&SF Flood Resiliency Study

- Upcoming study to evaluate existing flood risk management infrastructure and **recommend adaptation strategies to build flood resiliency** now and into the future, in the communities served by the C&SF system
- To be conducted under Section 216 of the Flood Control Act of 1970
- Cost Share Agreement between USACE and SFWMD (local sponsor) for a 3x3x3 Study
- Focus on the **highly vulnerable infrastructure** that can reduce the most immediate flood risks due to to changing conditions, and the resilience aspects of such infrastructure



Feasibility Study Cost Share Agreement

- SFWMD agrees to provide 50% cost share for the Study (\$1.5M, in kind work)
- Estimated time for completion: 2022-2025 (3 years)



- Use of the best available science and data in coordination with stakeholders, Federal agencies, State, Tribal and local officials
- Leverage results from:
 - SFWMD FPLOS Program
 - USACE SACS, Back Bay and Other Studies
- Different instrument than CERP Project Partnership Agreements (PPAs)



Planning Charrette Workshops

Save the Dates

Palm Beach and North Broward Counties Planning Charrette Workshop

Date

Wednesday, September 28, 2022

Time

5:00 p.m. - 7:00 p.m.

Location

DoubleTree by Hilton Hotel
Deerfield Beach / Boca Raton

Hibiscus Room
100 Fairway Drive
Deerfield Beach, FL 33441

South Broward and Miami-Dade Counties Planning Charrette Workshop

Date

Thursday, September 29, 2022

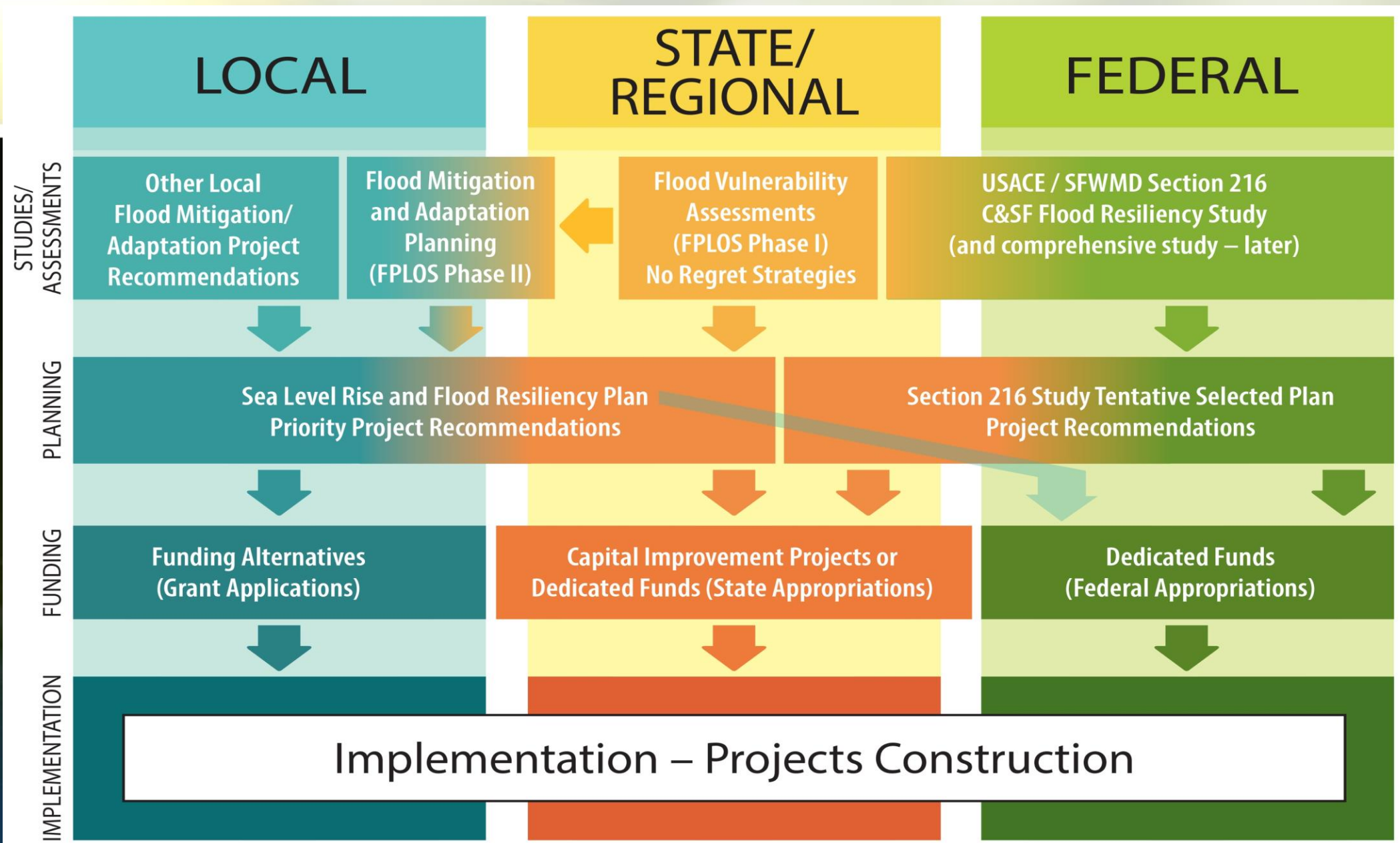
Time

5:00 p.m. - 7:00 p.m.

Location

Florida International University
Biscayne Bay Campus

Wolfe University Center (Room 224A)
3000 NE 151st Street
North Miami, FL 33181



Resolution

A Resolution of the Governing Board of the South Florida Water Management District to support the execution of the Feasibility Study Cost Share Agreement of the Section 216 Central and Southern Florida Flood Risk Management and Resiliency Study, between South Florida Water Management District and the U.S. Department of the Army.

Public Comment on Item #28

If you're participating in person –
please fill out a comment card and
give to a meeting attendant

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

If you're participating via Phone –
*9 Raises Hand
*6 Mutes/Unmutes



3:00

Thanks!

Questions?

Carolina Maran, Ph.D., P.E.,
cmaran@sfwmd.gov
District Resiliency Officer

South Florida Water Management District
www.sfwmd.gov/resiliency