

CENTRAL AND SOUTH FLORIDA SYSTEM, FLOOD RISK MANAGEMENT STUDY, AND RESILIENCY NEEDS

Florida Water and Climate Alliance

**Climate Change Impacts on Wastewater & Stormwater
Management**

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20 September 2021



**US Army Corps
of Engineers®**





BUILDING COMMUNITY RESILIENCE

A COMPREHENSIVE AND COLLABORATIVE APPROACH



SHARED RESPONSIBILITY

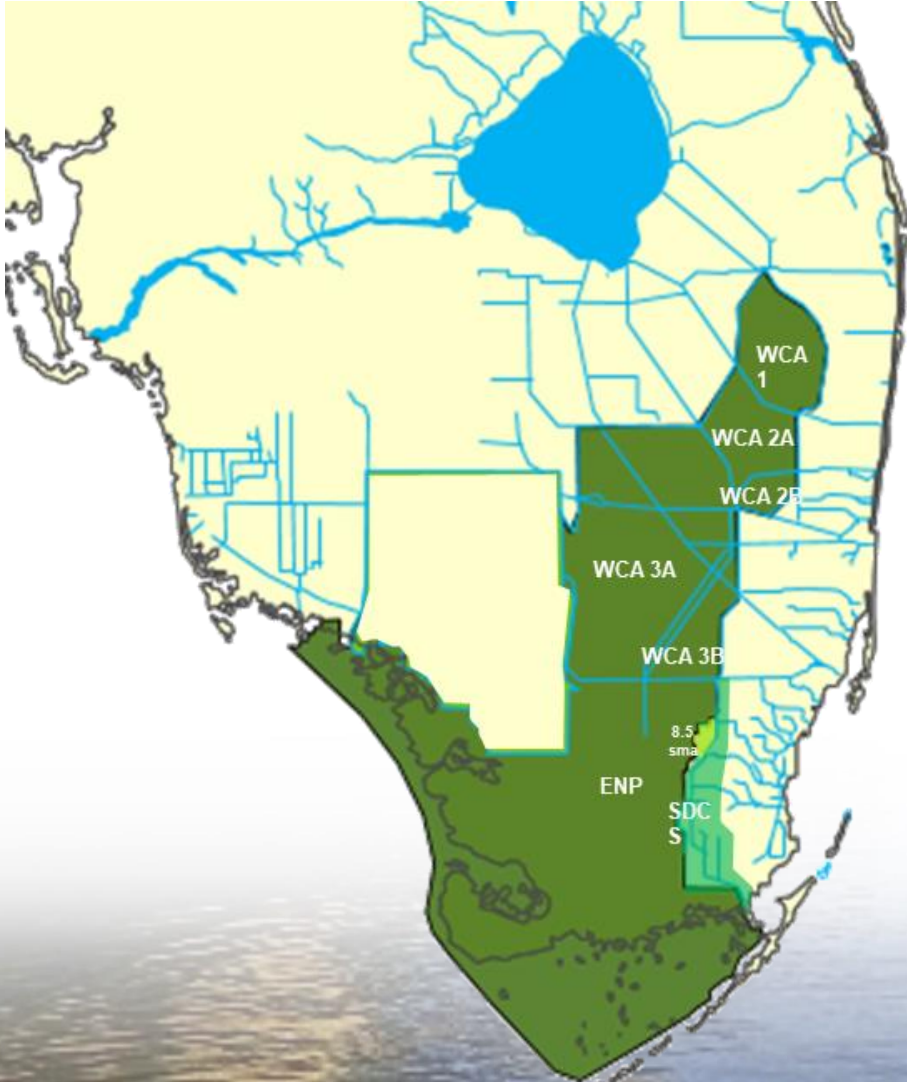
An Effective Resilience-focused Strategy Requires a Coordinated and Integrated Approach Across All Levels of the Public and Private Sectors

- The problems related to climate change are uncertain, broad, and complex
- It is essential to survey and assess relationships among all public and private sector deliverables and capabilities – at local, regional, state and federal levels – to determine the most appropriate and effective packaging of programs, projects, and services to accomplish resilience and sustainability objectives





CENTRAL & SOUTHERN FLORIDA (C&SF) PROJECT



Balance multiple congressionally-authorized project purposes:

- Flood control
- Navigation
- Water supply for :
 - Agriculture
 - Municipalities
 - Industry
 - Everglades National Park
 - Regional groundwater control
 - Salinity control
- Enhancement of fish and wildlife
- Recreation



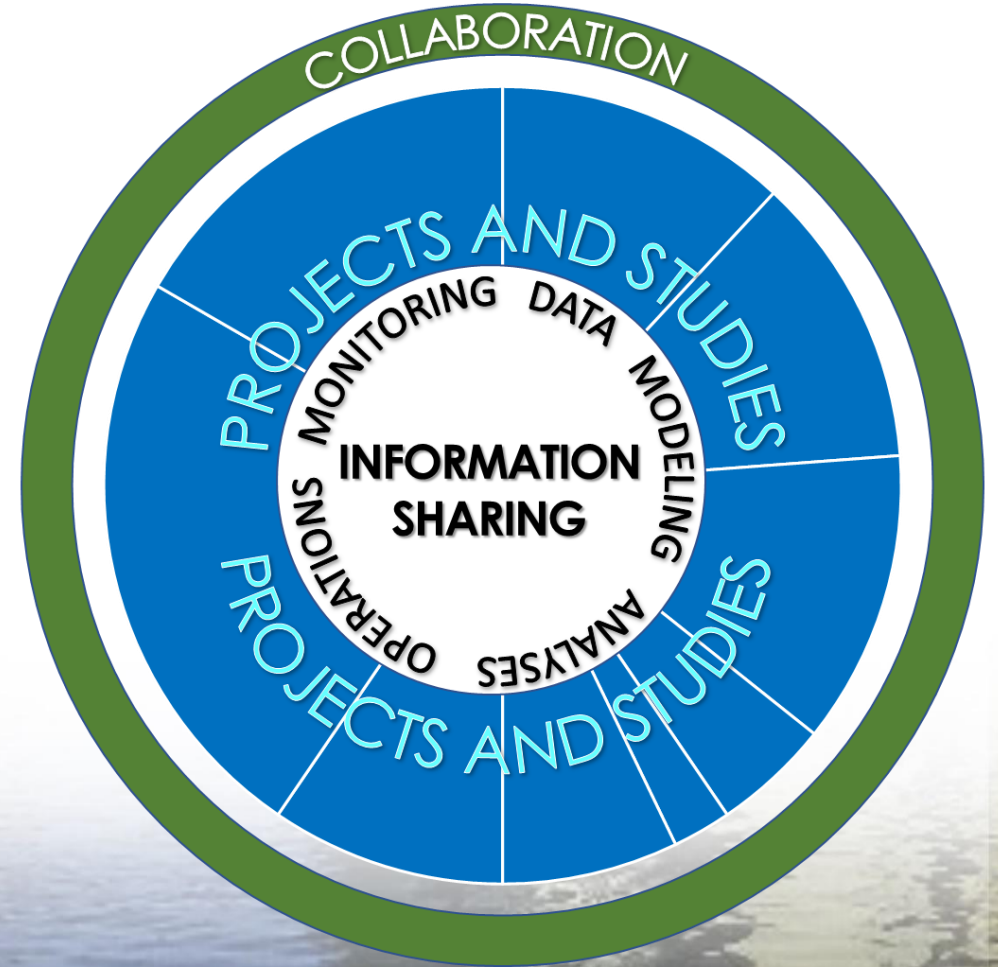
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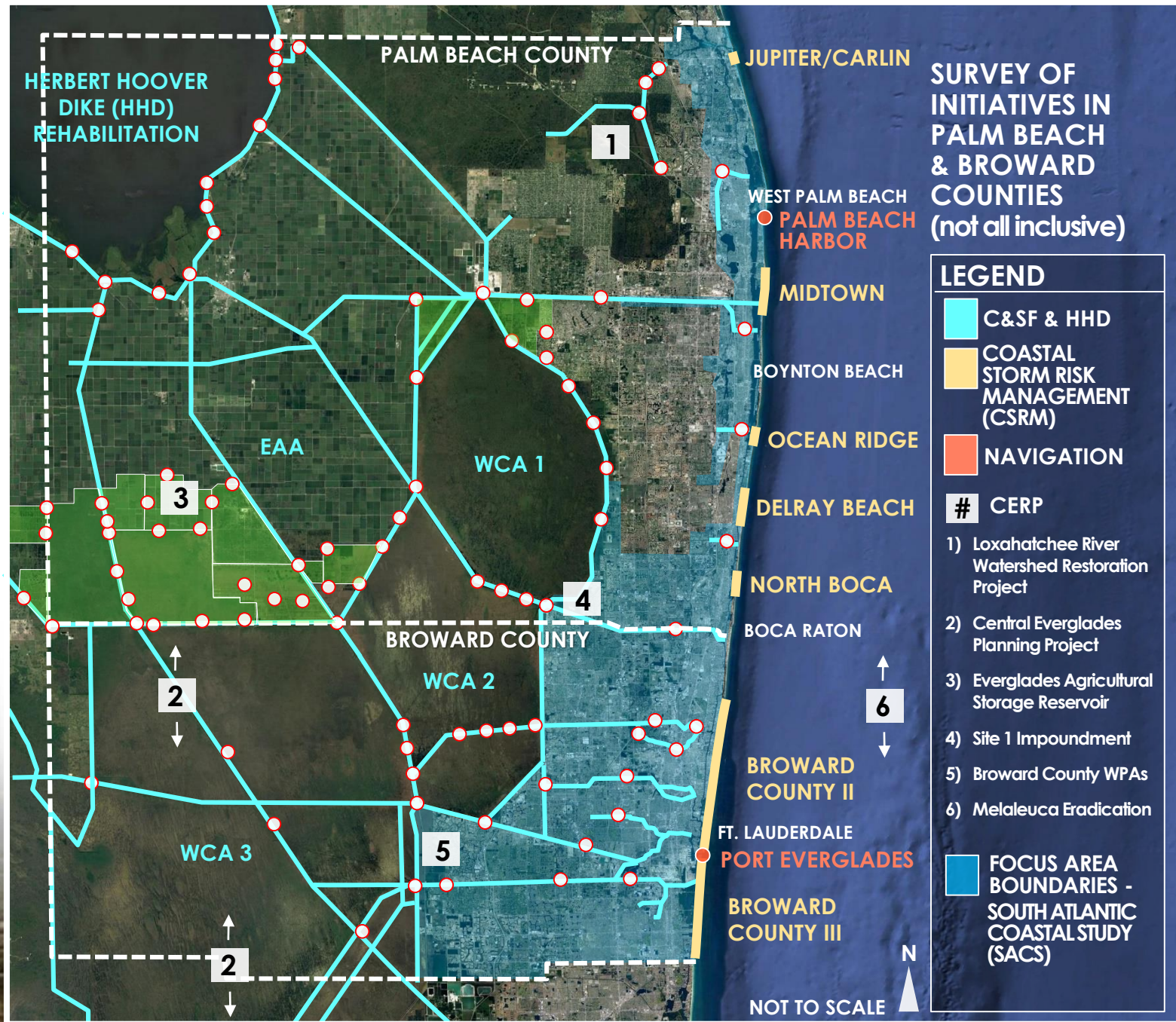


HOW DOES IT ALL FIT TOGETHER?

Collaboration is key to identify and assess impacts, connections, dependencies, relationships, causes, economies of scale, etc. – that are needed to more fully and adaptively plan, implement, integrate, and operate programs and projects for more resilient and sustainable communities in the long term, and in the face of climate change.

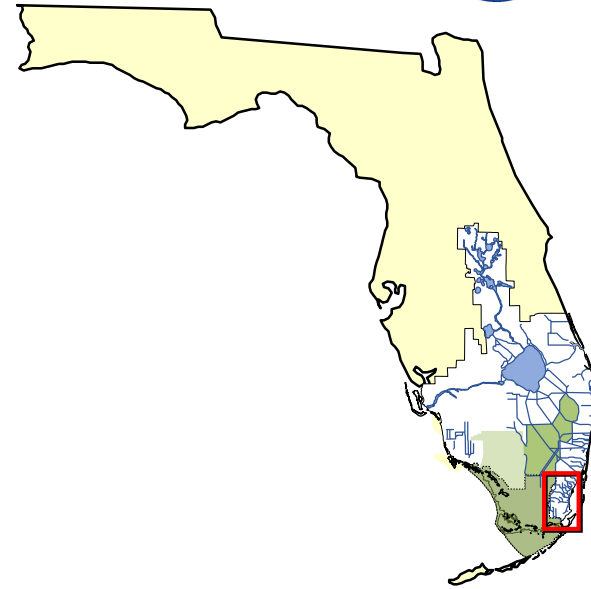


The C&SF System is the connector



UNDERSTANDING THE C&SF SYSTEM IS THE KEY

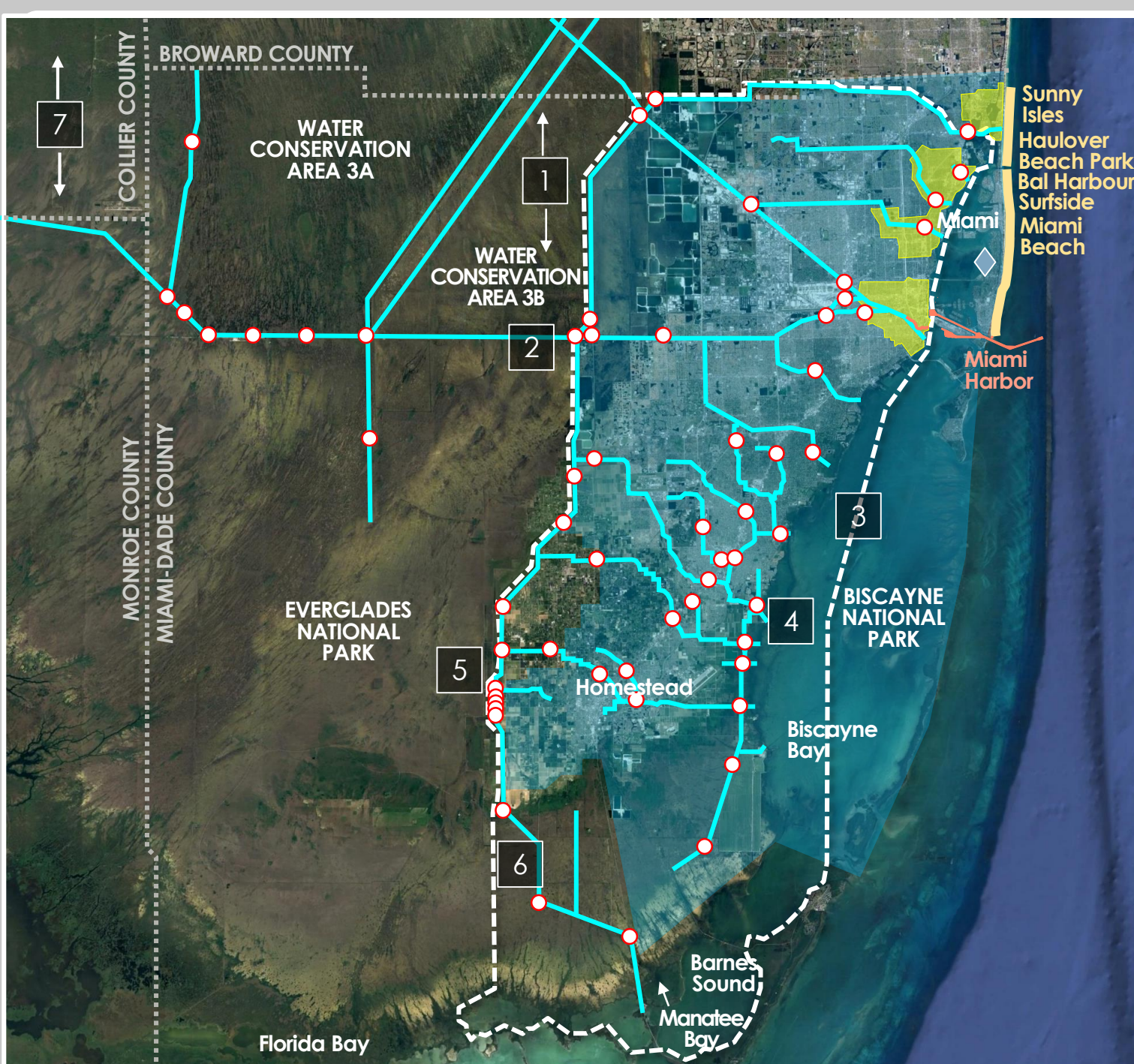
- When you look at this image, what you see depends on your perspective
- Operations of the C&SF are the basis of adaptation – form the context for all other actions



SURVEY OF INITIATIVES IN MIAMI-DADE COUNTY (not all inclusive)

LEGEND

- C&SF
 - COASTAL STORM RISK MANAGEMENT (CSRМ)
 - NAVIGATION
 - FLOOD RISK MANAGEMENT (FRM) (BACK BAY STUDY)
 - CAP | SECTION 14 (Mt. Sinai)
 - SFER
- 1) Central Everglades Planning Project (CEPP)
 - 2) Tamiami Trail Next Steps – Phase 2
 - 3) Biscayne Bay and Southeastern Everglades Ecosystem Restoration (BBSEER)
 - 4) Biscayne Bay Coastal Wetlands (BBCW)
 - 5) S-332 Pump Replacements
 - 6) C-111 Spreader Canal Western Project
 - 7) Melaleuca Eradication
- FOCUS AREA BOUNDARIES - SOUTH ATLANTIC COASTAL STUDY (SACS)



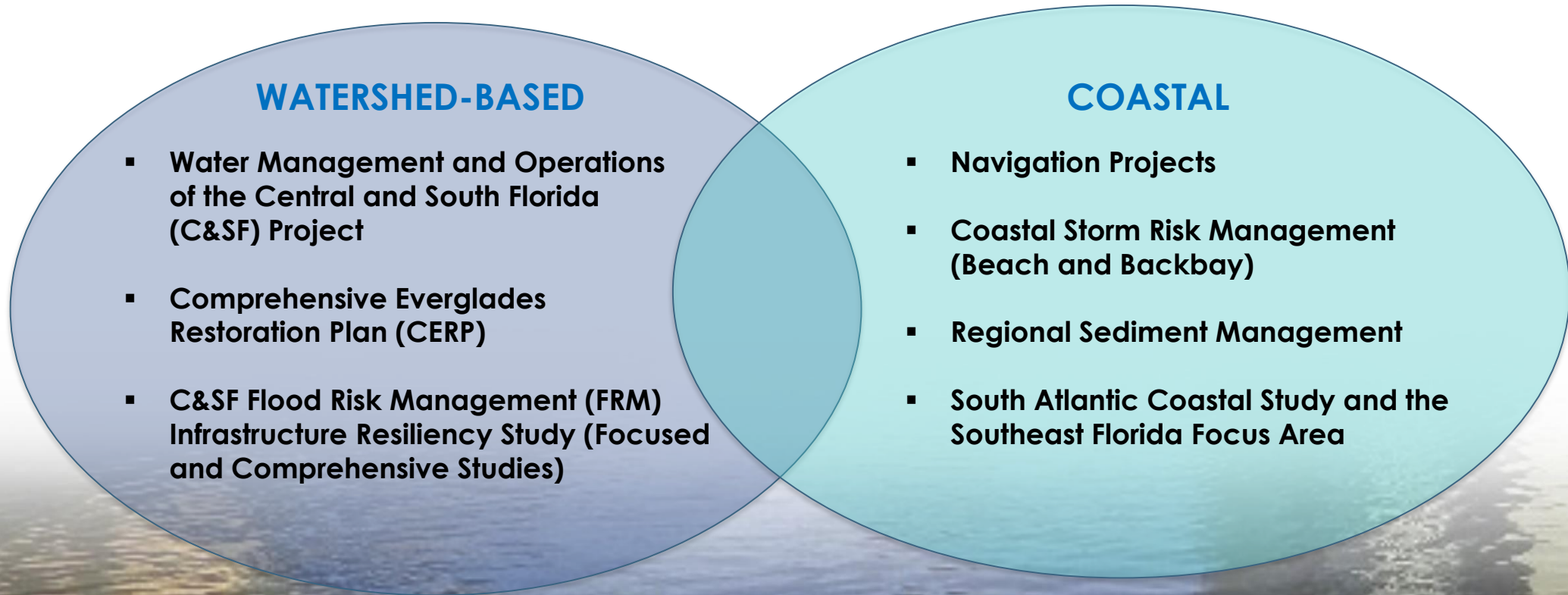


BUILDING COMMUNITY RESILIENCE

HOW DOES IT ALL COME TOGETHER?



The conditions and operations of the C&SF system, the benefits of CERP, and climate change science will form the context of the C&SF Flood Risk Management Infrastructure Resiliency Study





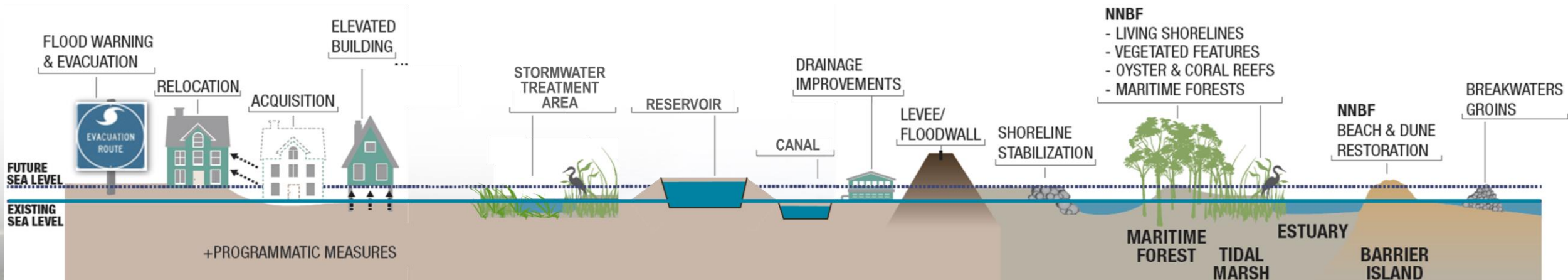
BUILDING COMMUNITY RESILIENCE MEASURES IN ACTION



- ❑ NATURAL
- ❑ STRUCTURAL
- ❑ NATURE-BASED
- ❑ NON-STRUCTURAL

CLIMATE CHANGE ADAPTATION OPPORTUNITIES

Each mission area contributes a collection of measures to combine into projects to help adapt to climate change and render a community more resilient



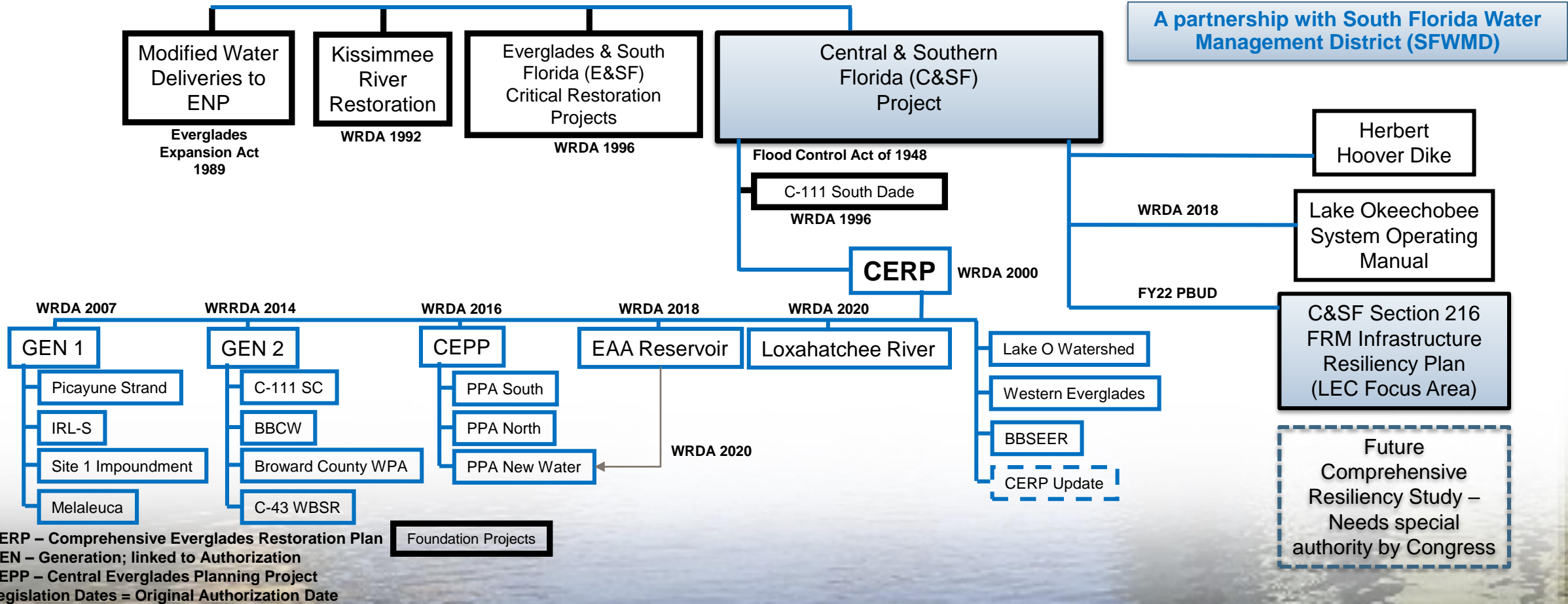
America's Everglades serve as a natural and nature-based feature that protect the C&SF system which in turn provides flood protection and water supply to millions of Floridians



BUILDING COMMUNITY RESILIENCE

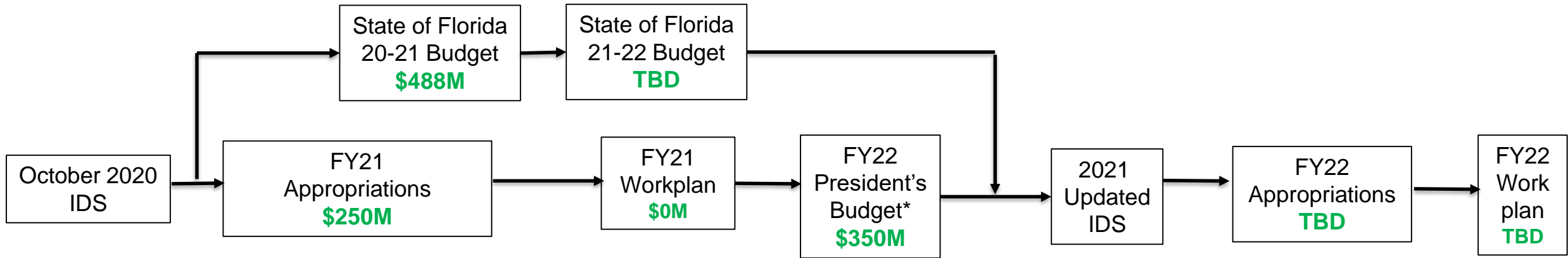


C&SF Program – One part of an integrated approach





SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM



*Does not include C&SF Infrastructure Resiliency Study



SECTION 216 C&SF FLOOD RISK MANAGEMENT (FRM) INFRASTRUCTURE RESILIENCY STUDY



- **Section 216 C&SF FRM Infrastructure Resiliency Study**
 - **South Florida Water Management District will be the Non-Federal Sponsor**
 - **The study will focus on the project features which can reduce the most immediate risk to changing conditions, and the resilience aspects of such infrastructure in terms of flood vulnerabilities resulting from climate change, sea level rise, and population growth**
 - **Status Update**
 - ▶ **New Start in FY22 PBUD (\$500k Fed) – Investigations, Flood Risk Management (FRM) Business Line**
 - ▶ **FY22 Appropriations Bill by U.S. Congress – next step**
 - ▶ **Target Execution of new Feasibility Cost Sharing Agreement in June 2022**

- **Additional Comprehensive Plan is needed**
 - ▶ **Overall C&SF System**
 - ▶ **Development of hydrologic/rainfall climate change scenarios for Florida**
 - ▶ **Separate study authority is needed from Congress**



THANK YOU



C&SF OPERATIONS/CURRENT CONDITIONS



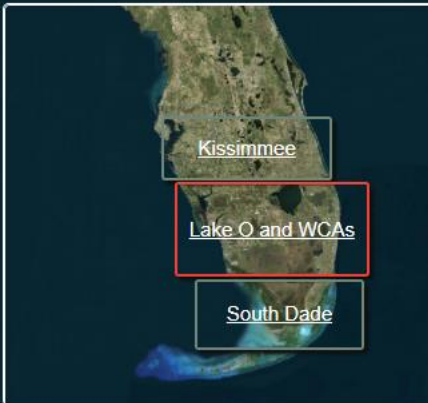
Lake Okeechobee and WCAs

Daily averages for 16 September 2021

Lake Okeechobee stage: 14.92 ft
 Previous day: 14.91 ft
 One week ago: 14.75 ft
 (1965-2007 avg for today): 14.55 ft

Total Structure/Creek Inflows: 3510 cfs
 Total Structure Outflow: 0 cfs
 Quick Reference for Map Flows

Area	Stages (hover for notes)	Schedule
WCA-1	Site 1-8C: 17.19 ft 3-Station: 17.04 ft	17.30 ft
WCA-2A	Site 2-17: 13.25 ft S-11B HW: 13.29 ft	12.67 ft
WCA-3A	3-Station: 9.98 ft	10.20 ft



[Water Management Main Page](#)
[Status Update Archives](#) [WRDA Archives](#)
 Elevations are ft-NGVD.
 Flows are average daily CFS.
 Data is provisional and subject to revision.
 Report generated: 16 SEP 2021 @ 15:20

Current Lake Release Schedule*

West (S-79)	1000 cfs	Pulse
East (S-80)	0 cfs	Constant

*Updates are generally made on Fridays

7 Day Average Outflows and % of total

Total	0 cfs	
West (S-77)	0 cfs	0%
West (S-79)	2660 cfs	
East (S-308)	0 cfs	0%
East (S-80)	306 cfs	
South	0 cfs	0%
Other	0 cfs	0%

