

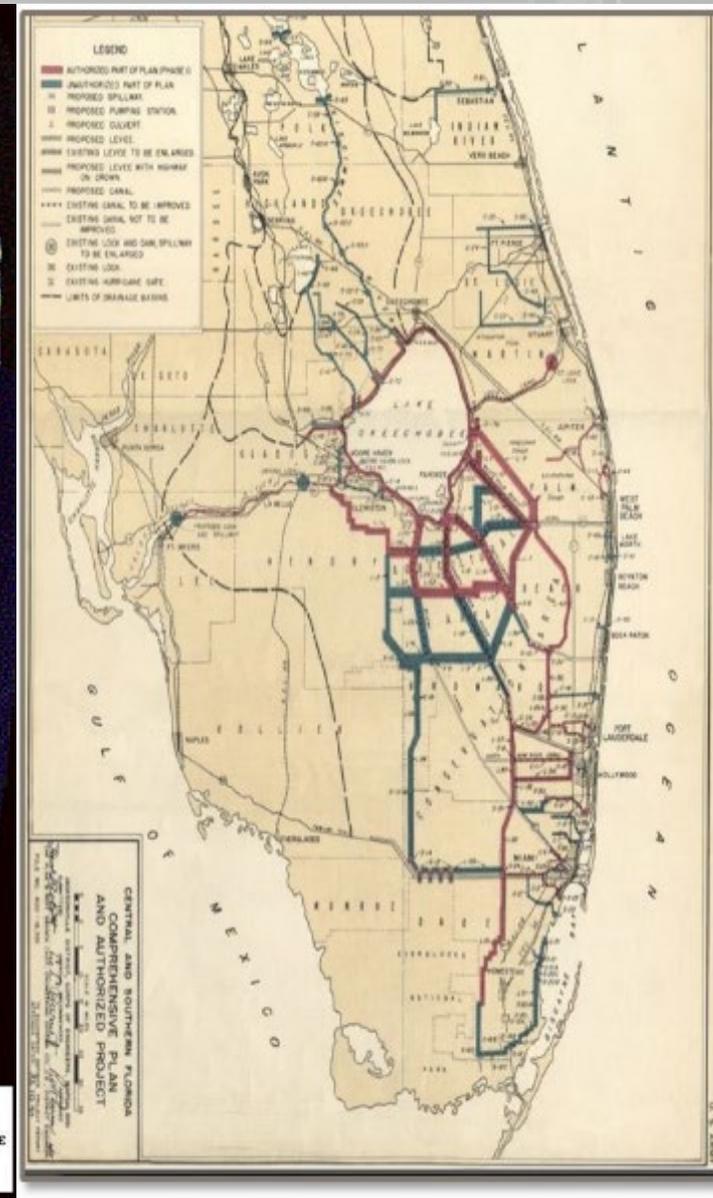
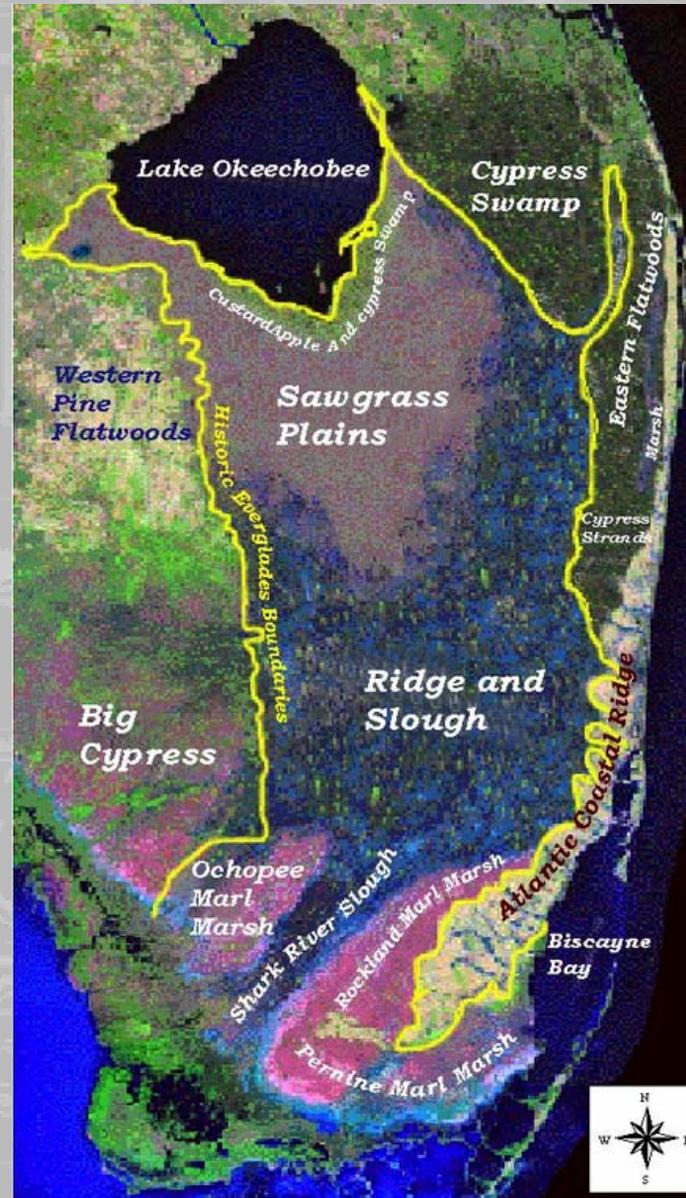
OVERVIEW OF THE CENTRAL & SOUTHERN FLORIDA (C&SF) PROJECT

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U.S. Army Corps of Engineers
Jacksonville District
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US Army Corps
of Engineers®





LAKE OKEECHOBEE SYSTEM OPERATING MANUAL

WEBINARS



- **Webinar 1 – Overview of the Central & Southern Florida Project – 20 May**
- Webinar 2 – Lake Okeechobee Ecology – 22 May
- Webinar 3 – Dam Safety and Herbert Hoover Dike – 24 May
- Webinar 4 – Estuary Ecology – 28 May
- Webinar 5 – Water Management and the 2008 LORS – 30 May
- Webinar 6 – Kissimmee River Restoration – 4 June



WHAT WE WILL COVER

- Overview of Central & Southern Florida Project
- Regulation Schedules and authorities
- Geography of the system
- Kissimmee Chain of Lakes
- Lake Okeechobee
- Everglades Agricultural Area and Stormwater Treatment Areas (STAs)
- Water Conservation Areas (WCAAs)
- South Dade
- Key Takeaways





WHAT YOU WILL LEARN



- Basic history of the Central & Southern Florida Project (C&SF)
- How water moves through the Central & Southern Florida Project
- Basic geography of the system and the purposes of different features
- Authorities of responsible parties within the project
- What a regulation schedule is and how to change it
- Benefits and overview of Comprehensive Everglades Restoration Plan (CERP)



C&SF - HOW AND WHY



"River of Grass"



mid 1800s

Extensive Agricultural Development



early 1900s

EAA Development Continues



1926 & 1928

Catastrophic Hurricanes

WRDA 2000

Comprehensive Everglades Restoration Plan (CERP) Authorized



HHD Rehabilitation
CERP Construction
Restoration Strategies



1948

C&SF Authorized



1947

Extensive Floods

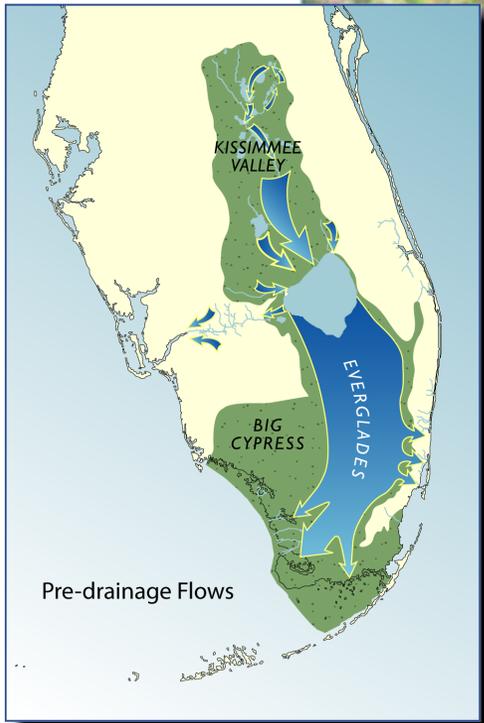


1930s

Muck Fires
Herbert Hoover Dike (HHD) Construction



HISTORY OF DRAINAGE AND FLOOD CONTROL PROJECTS IN SOUTH FLORIDA



Pre-Central & Southern Florida Project (state and local)

- Caloosahatchee/Kissimmee Rivers 1881-93
- East Coast Canals/St. Lucie Canal 1905/24
- Tamiami Trail 1915-28
- Muck dikes south of the lake replaced by Herbert Hoover Dike 1930-37

Central & Southern Florida Project (federal/state sponsor)

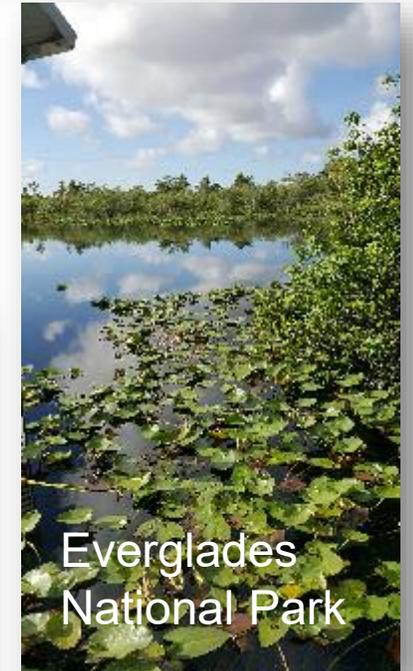
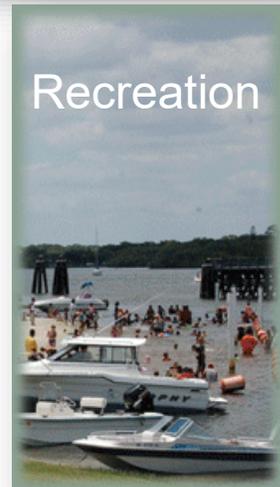
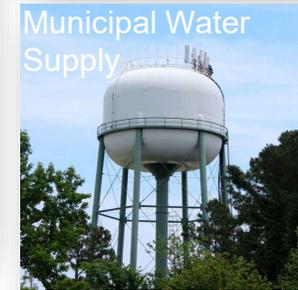
- Eastern Protective Levee System 1952-54
- Everglades Agricultural Area 1954-59
- Water Conservation Area Levees 1960-63
- Herbert Hoover Dike expansion 1960-64
- South Dade Conveyance System 1965-83
- Comprehensive Everglades Restoration Plan 2000 - present



C&SF 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





REGULATION SCHEDULES



What is a regulation schedule?

The regulation schedule is a **tool** used by water managers to meet Congressionally-authorized project purposes. A regulation schedule **attempts to meet all functional objectives** of the particular project, acting separately or in combination with other projects in a system. The regulation schedule has been, and will continue to be, **designed to balance** multiple, and often competing, project purposes and objectives.

Who is responsible for developing and maintaining them?

The **U.S. Army Corps of Engineers (Corps)** is responsible for developing and maintaining regulation schedules for the Central and Southern Florida Project. The commanding general for the South Atlantic Division of the Corps signs them into effect.

How are they developed?

The **Corps** works with **local sponsors** (water management districts) as well as **federal, state, and local governments** as well as the **public** through the National Environmental Policy Act (NEPA) process to develop or modify regulation schedules



CENTRAL & SOUTHERN FLORIDA PROJECT

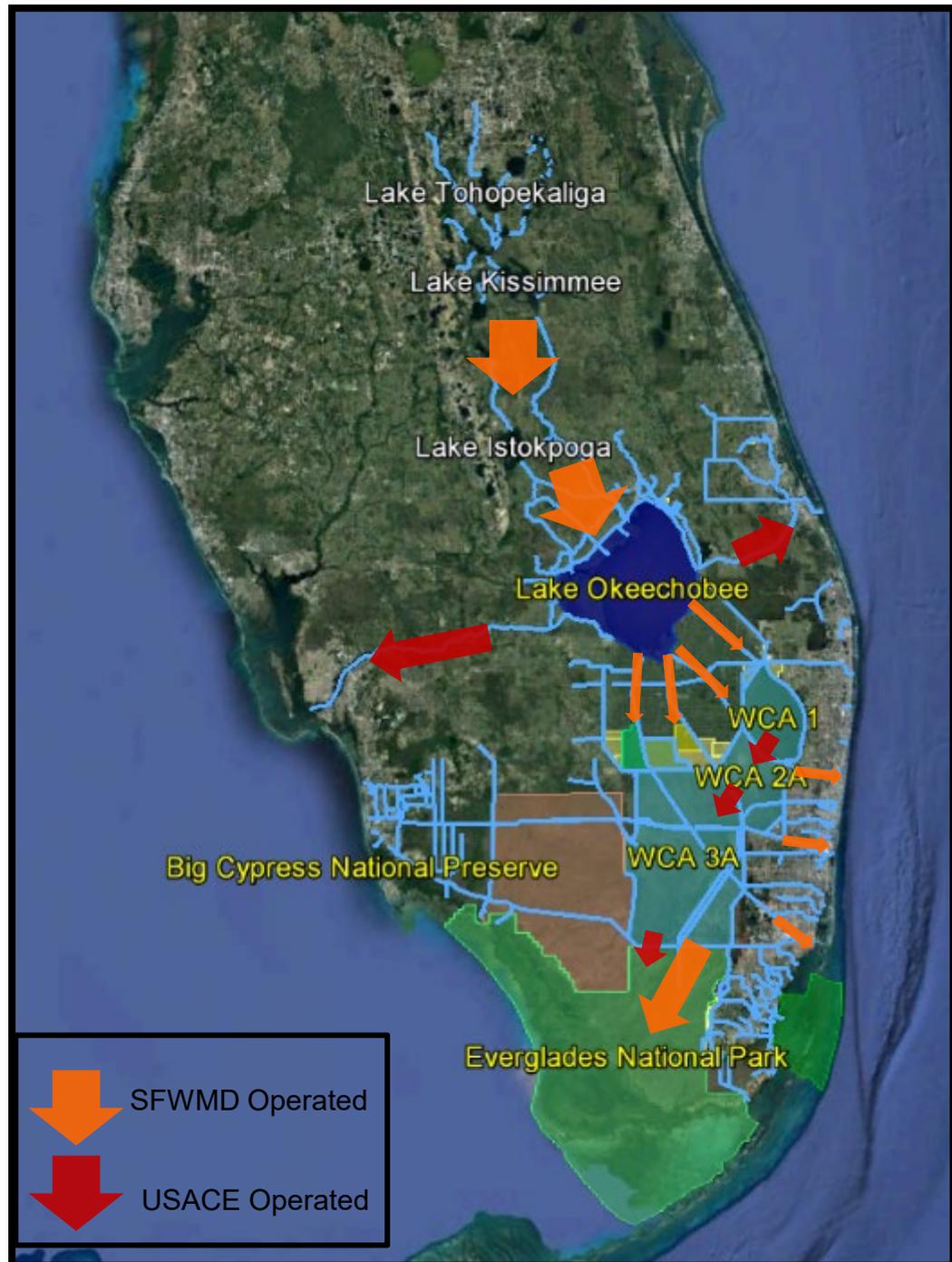


IV - RESPONSIBILITIES

4-01. General. All of the project works constructed as a result of the Rivers and Harbors Act of 1930 were operated and maintained by the Corps of Engineers. Some channels, such as the St. Lucie Canal, were constructed by the State of Florida, and operation and maintenance was taken over by the Corps of Engineers as a result of the 1930 Act. When the Flood Control Act of 1948 approved the creation of the Central and Southern Florida Project for Flood Control and Other Purposes, those features of the old Caloosahatchee River and Lake Okeechobee Drainage Areas (CR&LODA) Project were retained by the Federal Government for operation and maintenance. The flood control features of the CR&LODA project were improved in some cases and incorporated into the C&SF Project. The existing channels and locks were included in the Okeechobee Waterway Project. Locks and channel improvements done as a result of the new project were included in the C&SF Project.

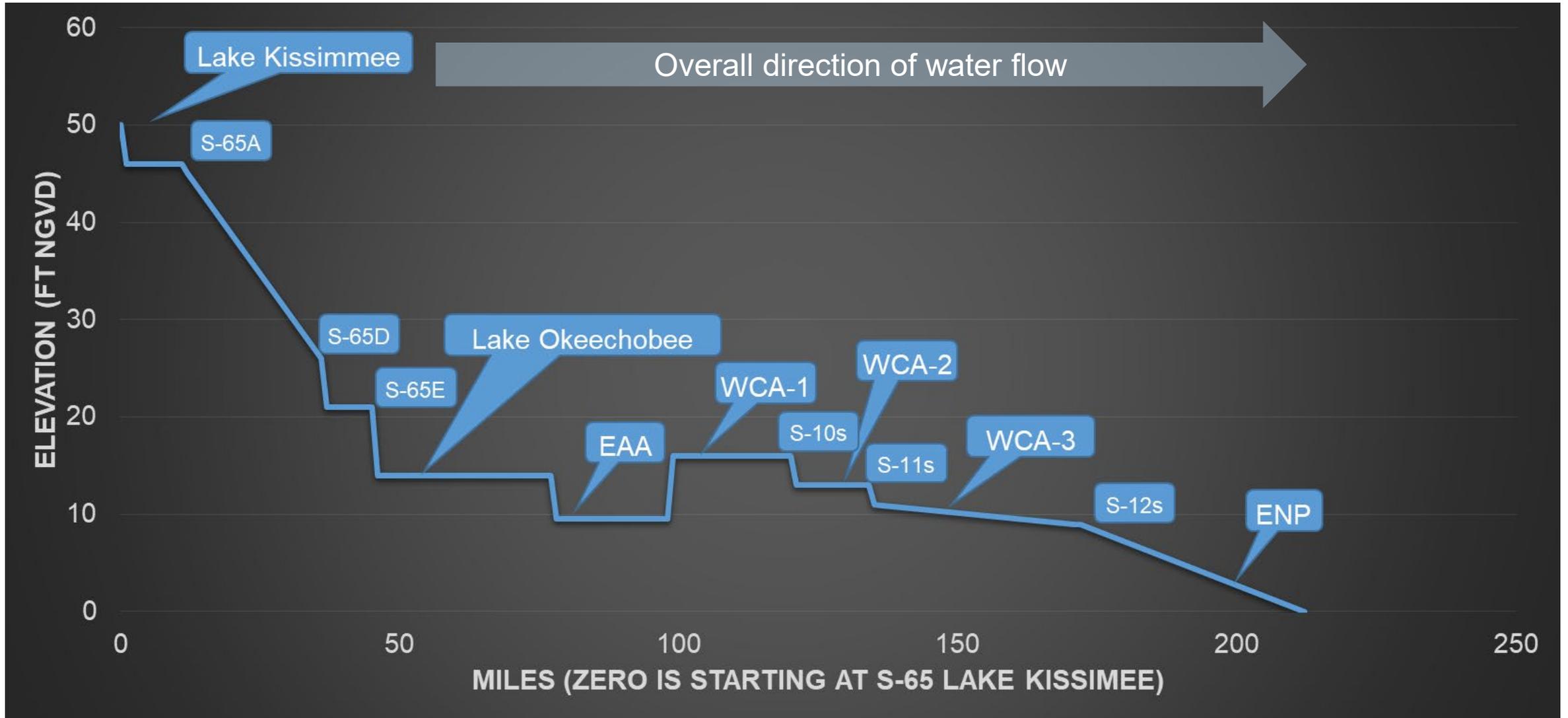
4-02. Corps of Engineers. Both the 1948 Act and the 1968 Act included language which spelled out those features of the project which would be operated and maintained by the Corps of Engineers for the Federal Government. The project features to be operated and maintained by the Corps of Engineers are "the levees, channels, locks, and control works of the St. Lucie Canal, Lake Okeechobee, Caloosahatchee River, and the main spillways of the water conservation areas . . ." In addition, ". . . 60 percent of the additional pumping costs due to the proposed modification [1968 Authorization], . . . [is] to be reimbursed by the Federal Government except for the additional pumping costs at Pumping Station 9 and for the pumping stations along the northeast and northwest shores of Lake Okeechobee which will be all local . . ." The project features operated and maintained by the Corps of Engineers are shown in Table 4-1.

4-03. Local Sponsor. The C&SF Project has two sponsors. The St. Johns River Water Management District (SJRWMD) is responsible for local cooperation requirements for the Upper St. Johns River Basin. All other project features are the responsibility of the South Florida Water Management District (SFWMD). The local sponsor is responsible for operation and maintenance of all project facilities not operated and maintained by the Corps of Engineers in accordance with regulations approved by the Secretary of the Army.



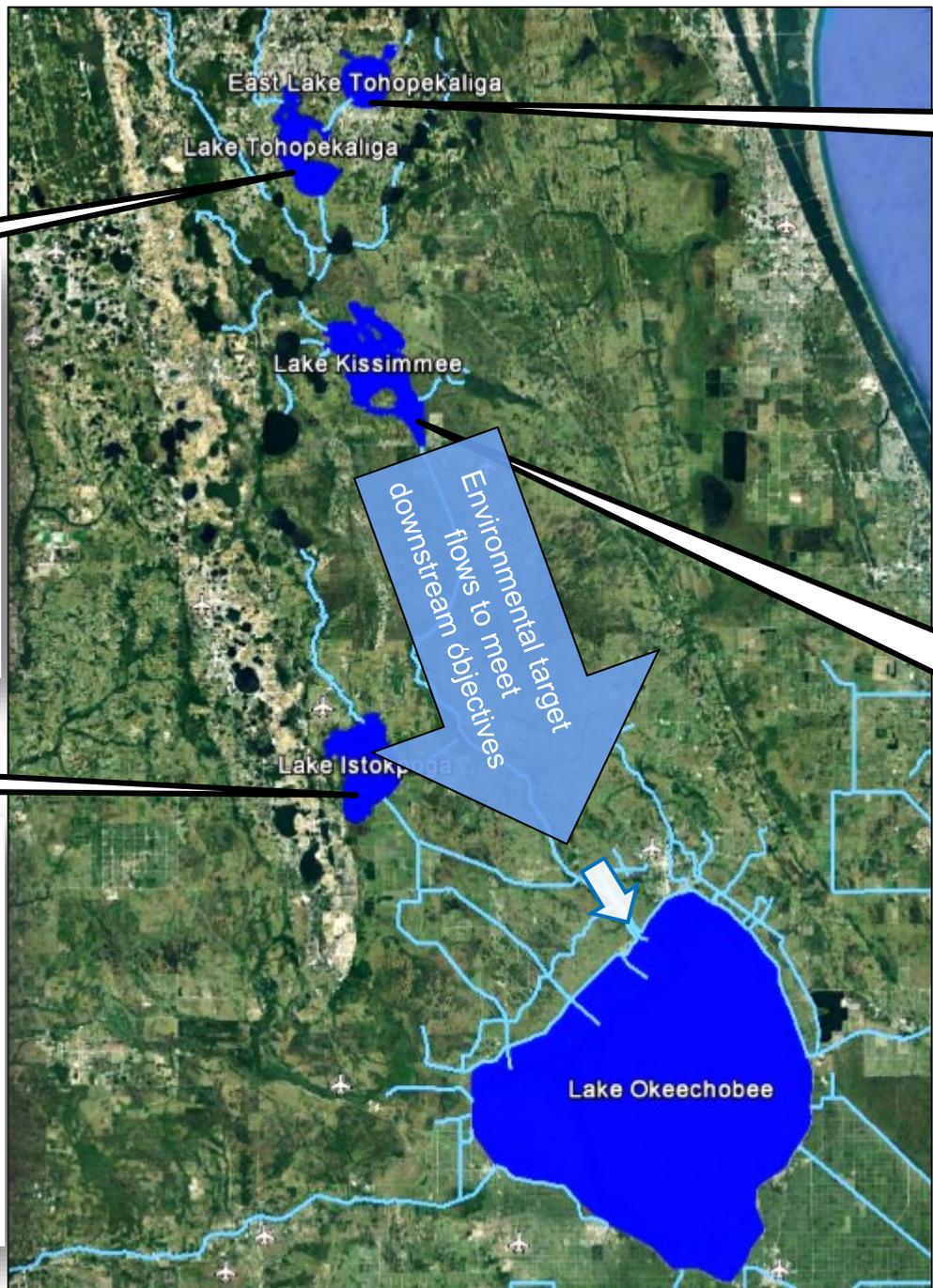


C&SF CROSS SECTION AND GENERAL WATER SURFACE ELEVATIONS

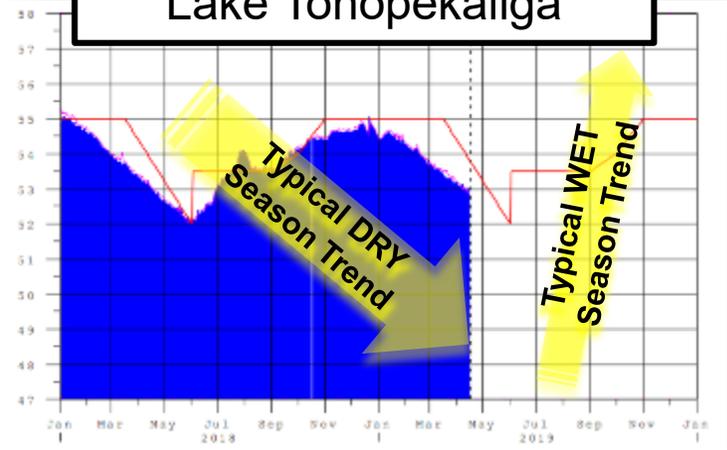




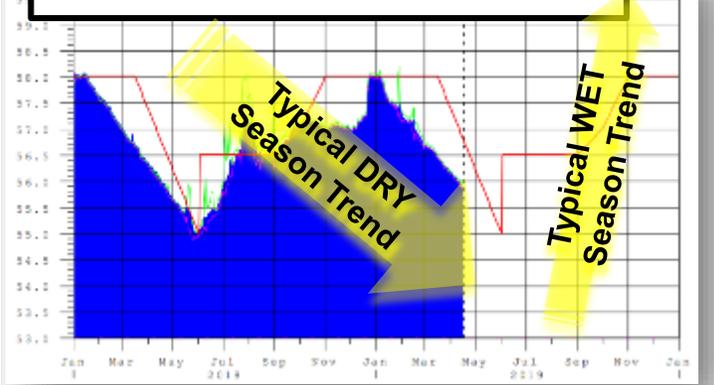
KISSIMMEE CHAIN OF LAKES



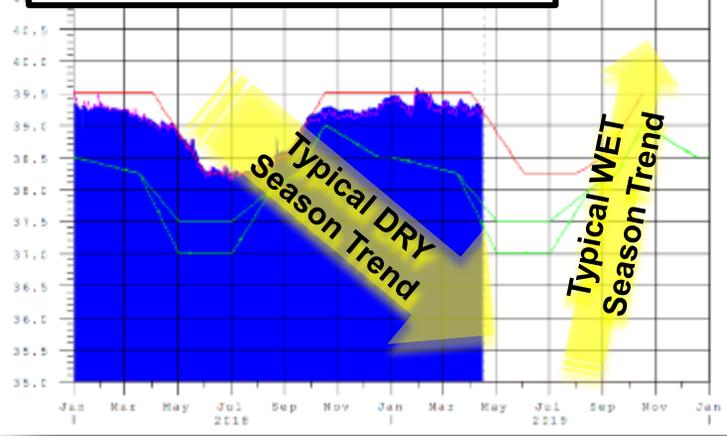
Lake Tohopekaliga



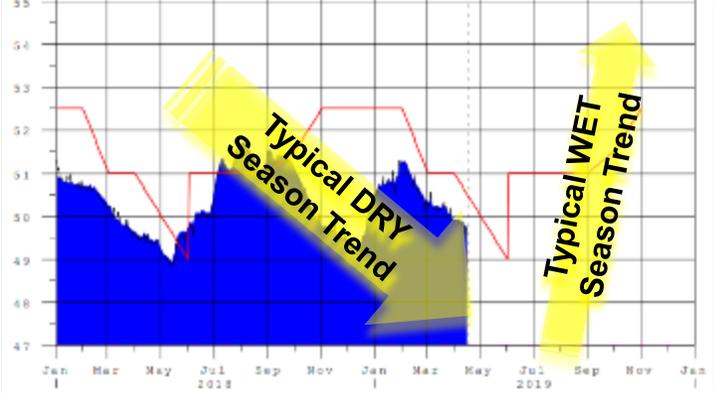
East Lake Tohopekaliga



Lake Istokpoga:



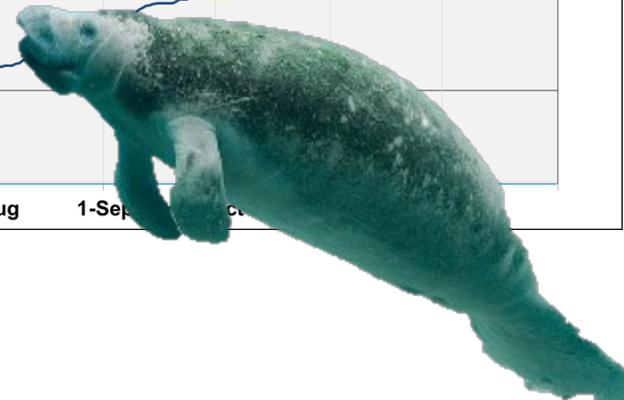
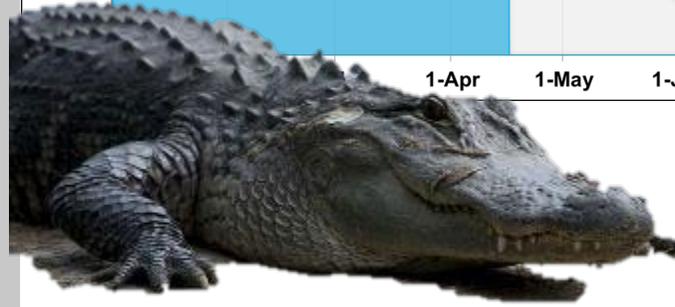
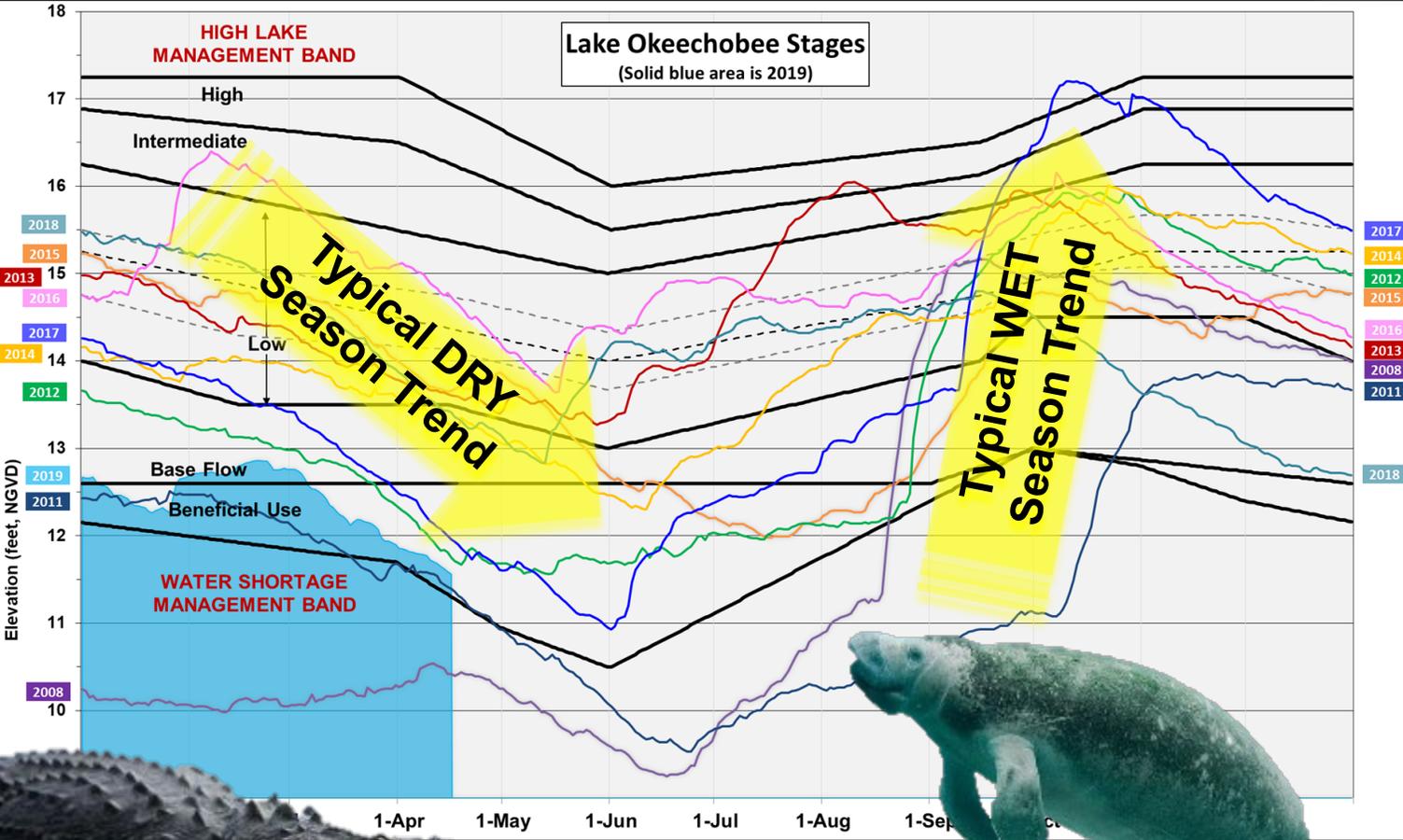
Lake Kissimmee



Environmental target
downstream flows to meet
Objectives

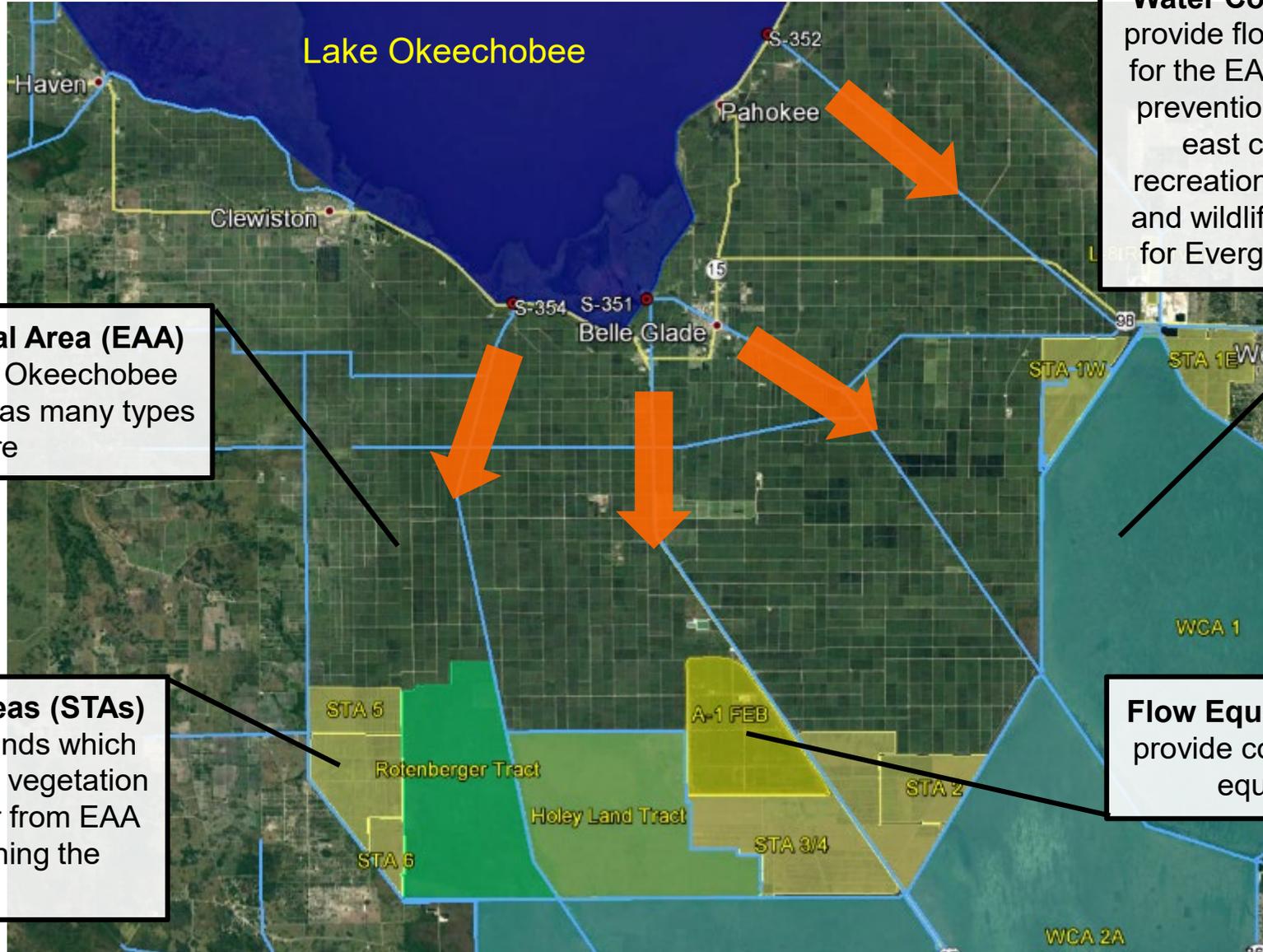


LAKE OKEECHOBEE





EVERGLADES AGRICULTURAL AREA & STORMWATER TREATMENT AREAS



Water Conservation Areas (WCAs) provide flood control and water supply for the EAA and the lower east coast, prevention of saltwater intrusion into east coast well fields, provide recreation areas, preservation of fish and wildlife and provide water supply for Everglades National Park (ENP)

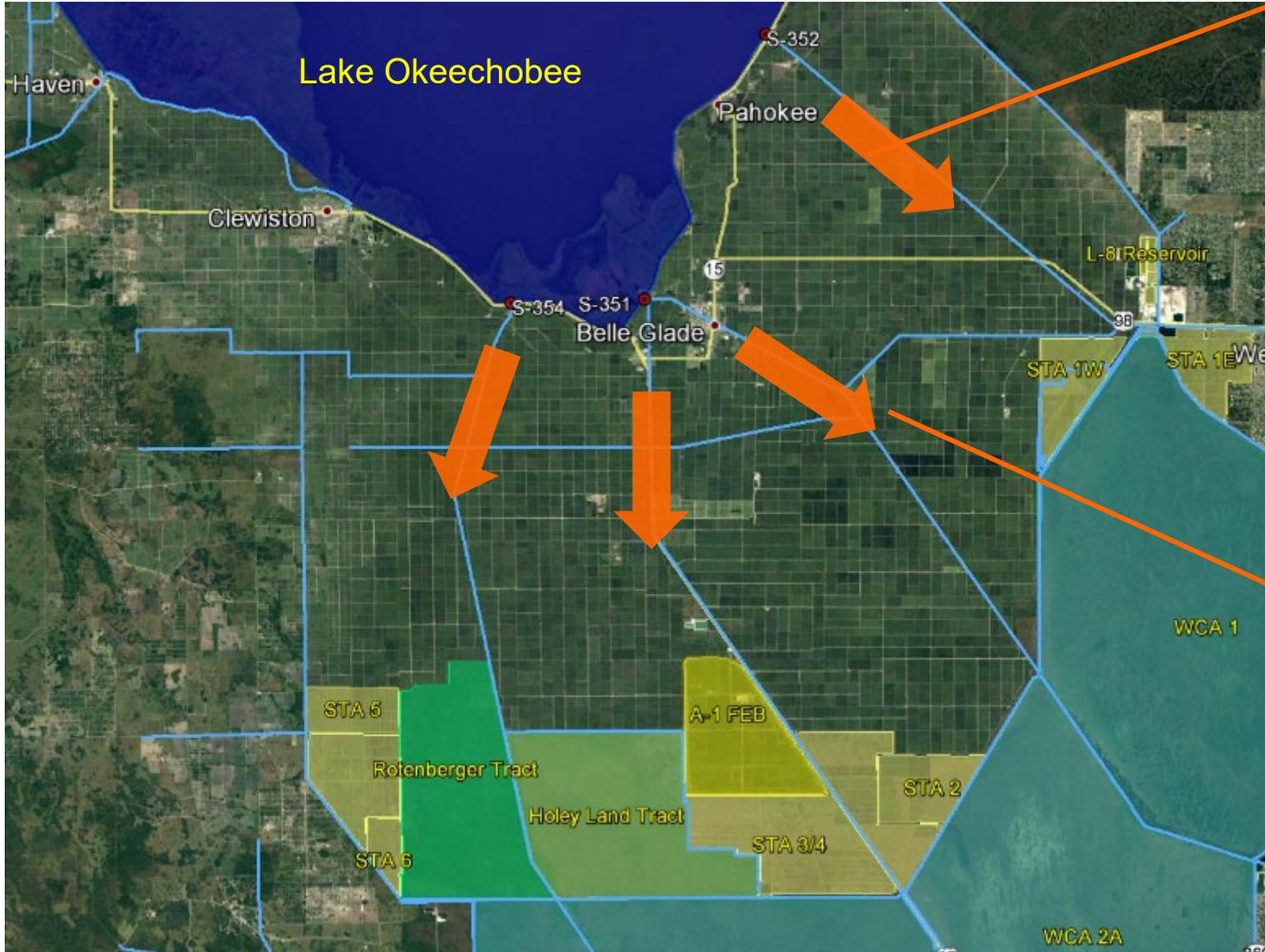
Everglades Agricultural Area (EAA)
The area south of Lake Okeechobee and north of the WCAs has many types of agriculture

Stormwater Treatment Areas (STAs) are large constructed wetlands which use submerged and floating vegetation to reduce nutrients in water from EAA and Lake O before reaching the Everglades

Flow Equalization Basins (FEBs) provide constant flow to STAs and equalize large inflows



EVERGLADES AGRICULTURAL AREA & STORMWATER TREATMENT AREAS



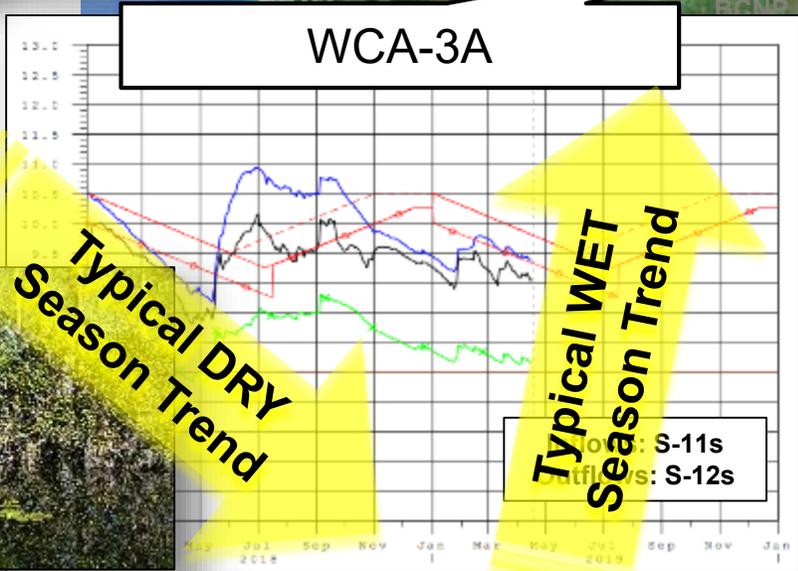
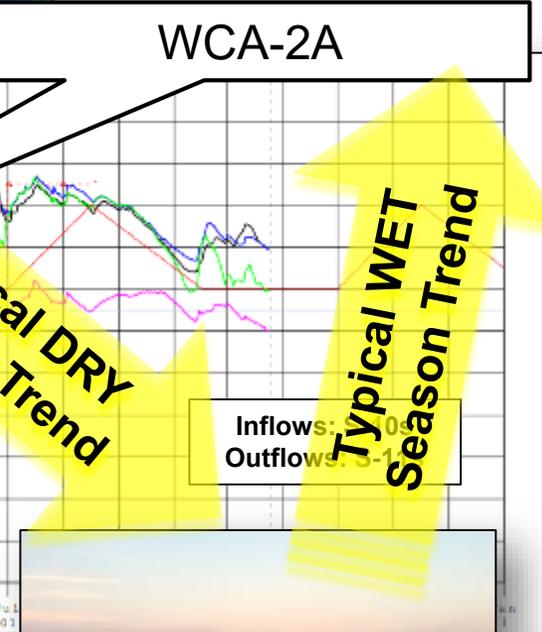
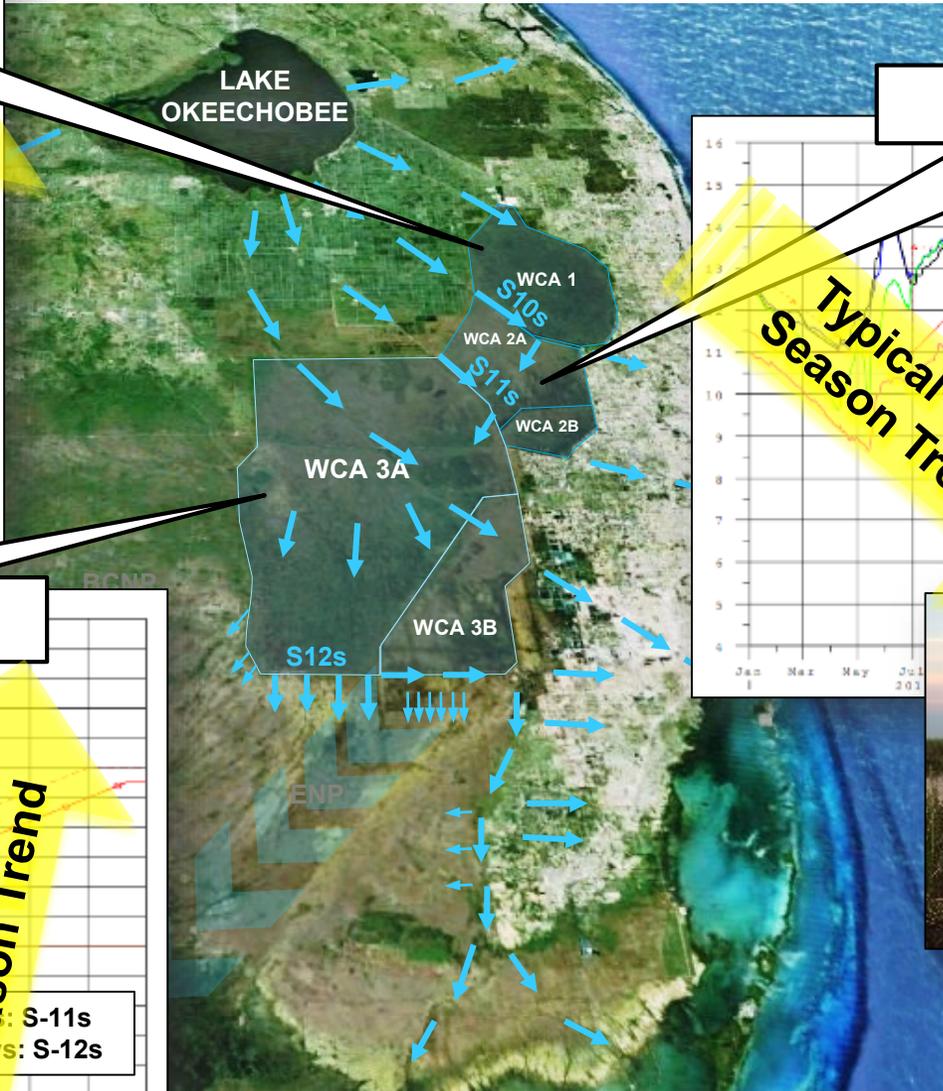
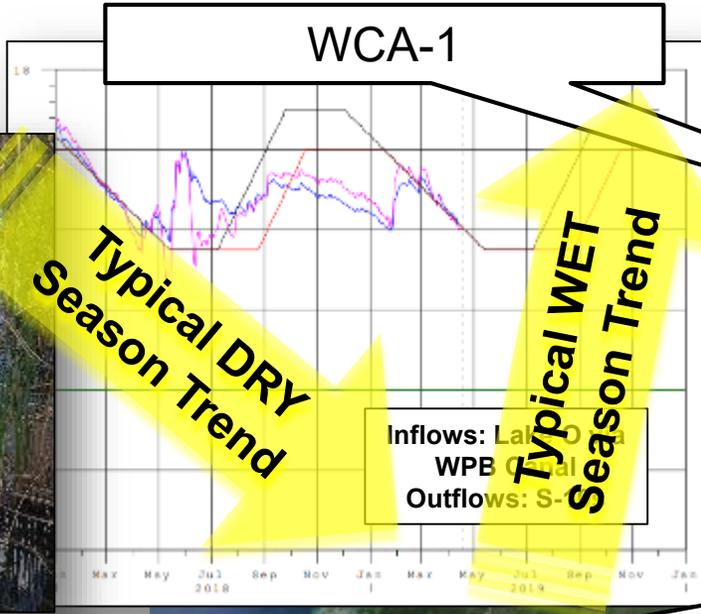
Water flowing south out of Lake Okeechobee goes to:

- EAA agricultural and municipal water supply
- East Coast water supply and to prevent saltwater intrusion into wells
- Everglades environmental water supply via STAs and WCAs and eventually ENP and Big Cypress

Constraints

- Canal conveyance
- FEB/STA capacity to store and treat water
- WCA capacity
- Ecological conditions
- Levee Safety

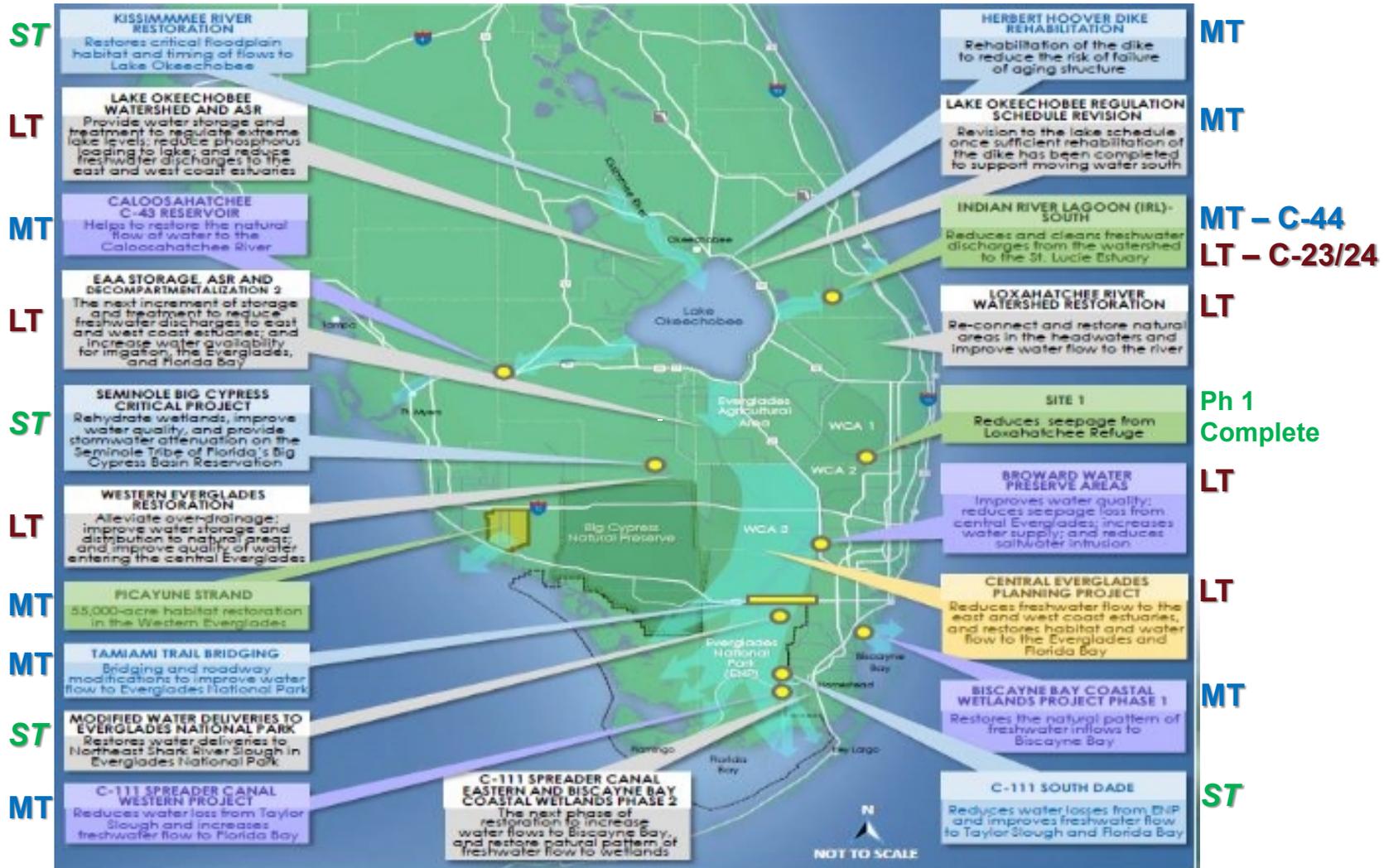
WATER CONSERVATION AREAS





SOUTH FLORIDA ECOSYSTEM RESTORATION PROGRAM OVERVIEW

Federal-State effort to improve the Quantity, Quality, Timing and Distribution of Water throughout Central & Southern Florida



ST – Short Term – Completion in next 0-2 years

MT – Mid Term – Completion in 3-5 years

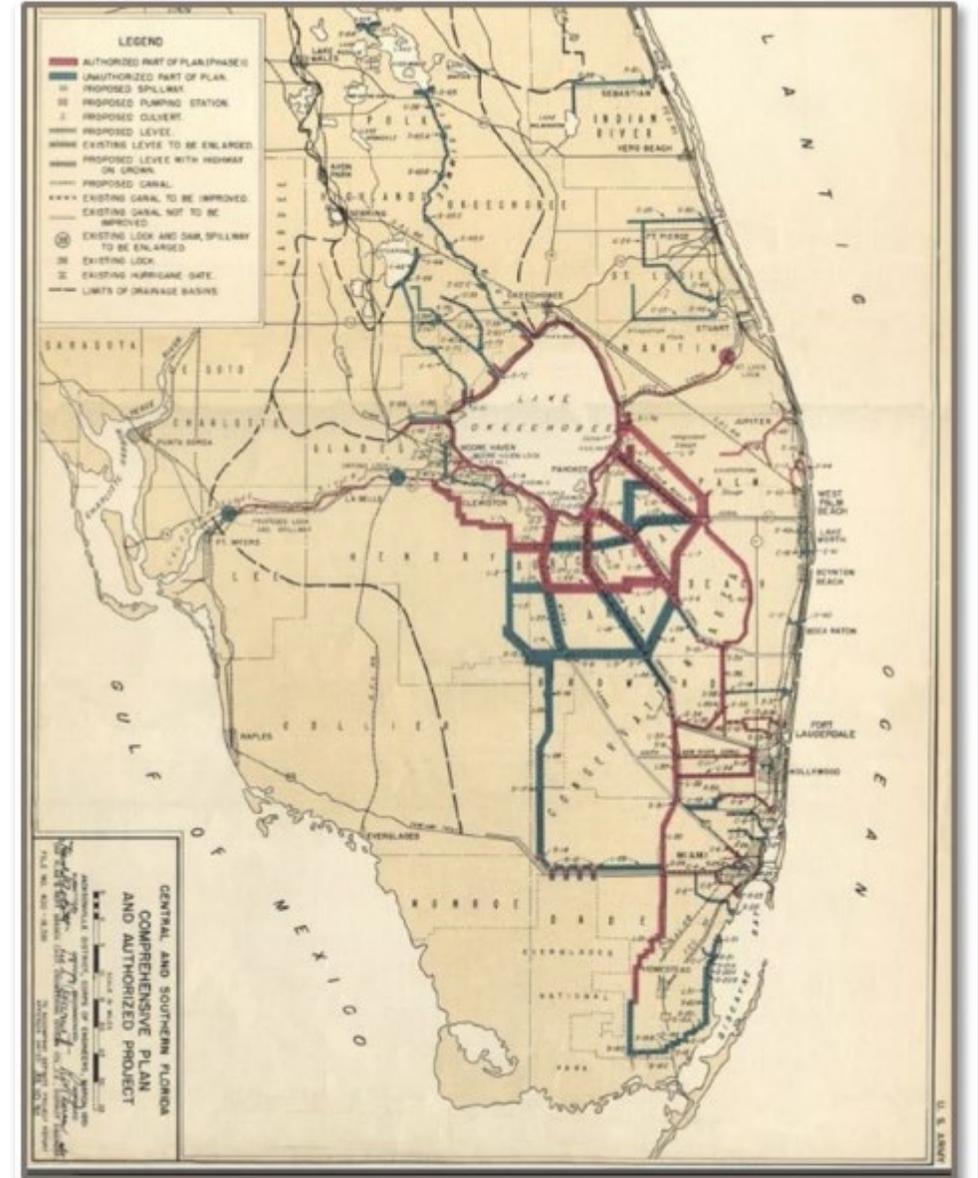
LT – Long Term – Completion in 5+ years





KEY TAKEAWAYS

- The C&SF system provides flood protection for the 8 million people in south Florida.
- The C&SF system works and makes it possible for many of us to live in south Florida.
- The C&SF system is highly connected; changes to one part of the system affects areas downstream.
- Development of the LOSOM includes a process for public input and engagement.
- CERP will provide additional storage and flexibility as projects come online.



QUESTIONS

30 MINUTES

TYPE A QUESTION INTO THE WEBINAR CHAT
OR EMAIL LAKEOCOMMENTS@USACE.ARMY.MIL

LOSOM Website: www.saj.usace.army.mil/LOSOM

LOSOM Email for comments: LakeOComments@usace.army.mil

USACE Water Management Page: www.saj.usace.army.mil//WaterManagement/