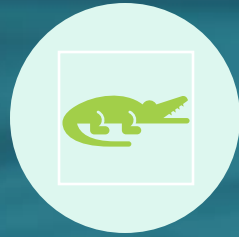


Collaborative Planning and Management across South Florida Ecosystems



THE EVERGLADES



COMPREHENSIVE
EVERGLADES
RESTORATION
PLAN



CERP PROJECTS,
EVALUATION AND
ASSESSMENT



MODELING AND
PREDICTIVE TOOLS



CONNECTING
SCIENCE, POLICY
AND STAKEHOLDER
ENGAGEMENT

January 2025

Amanda Kahn, CERP Ecological Assessment Section Lead

Walter Wilcox, Water Resources & Systems Modeling Bureau Chief

South Florida Water Management District <https://www.sfwmd.gov/>

The Everglades System

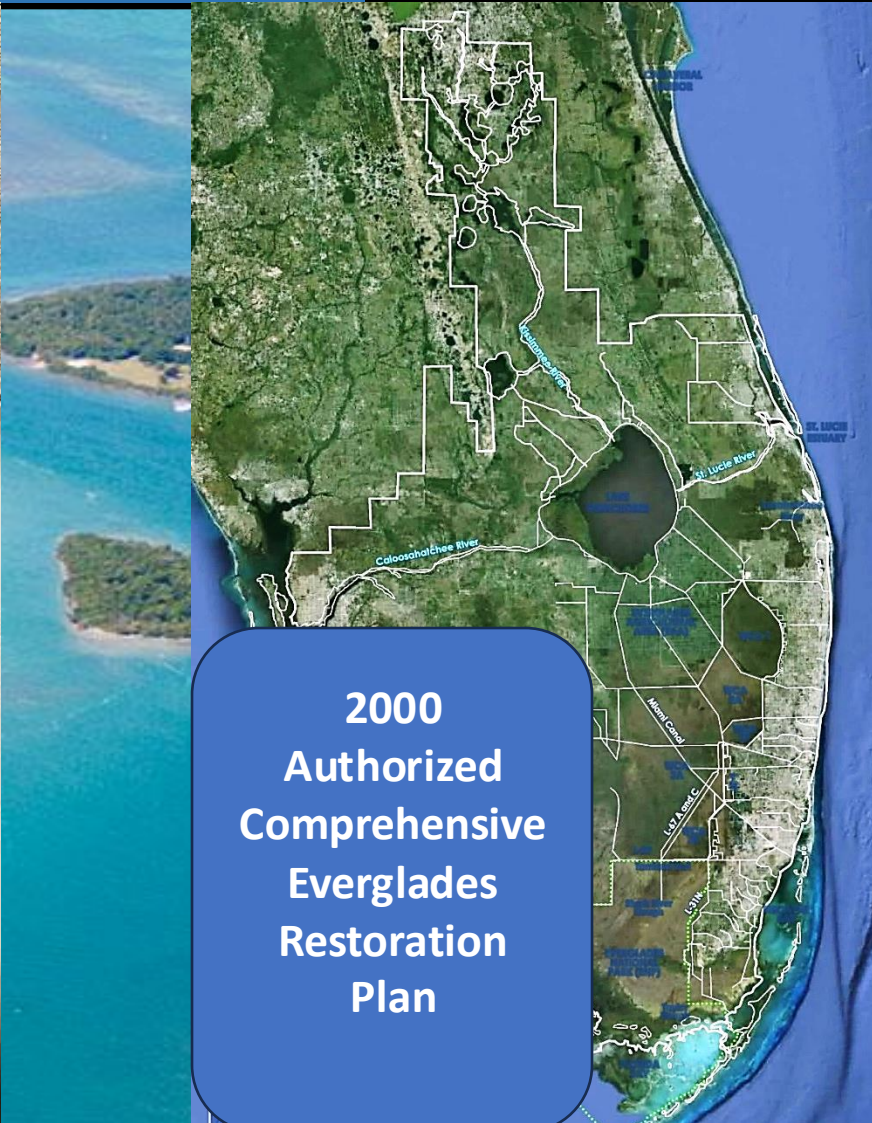


Historic:
Kissimmee
to the Keys

River of
Grass



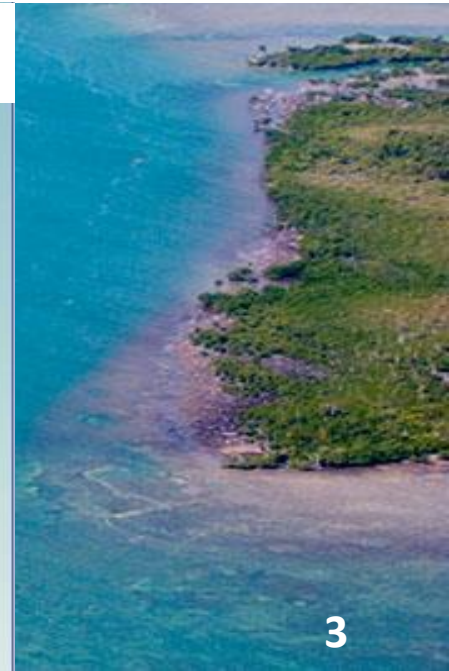
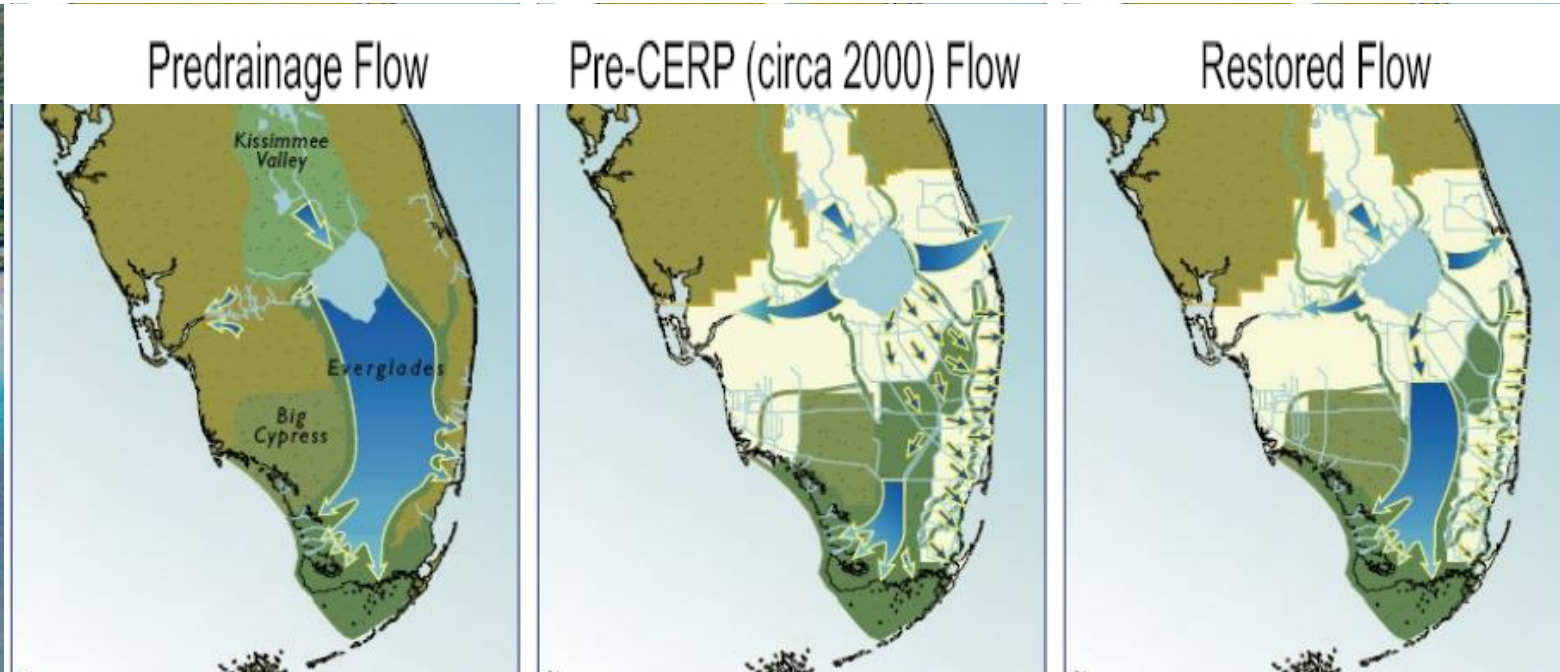
**Mid 20th
Century
Central &
Southern
Flood
Control
Project**



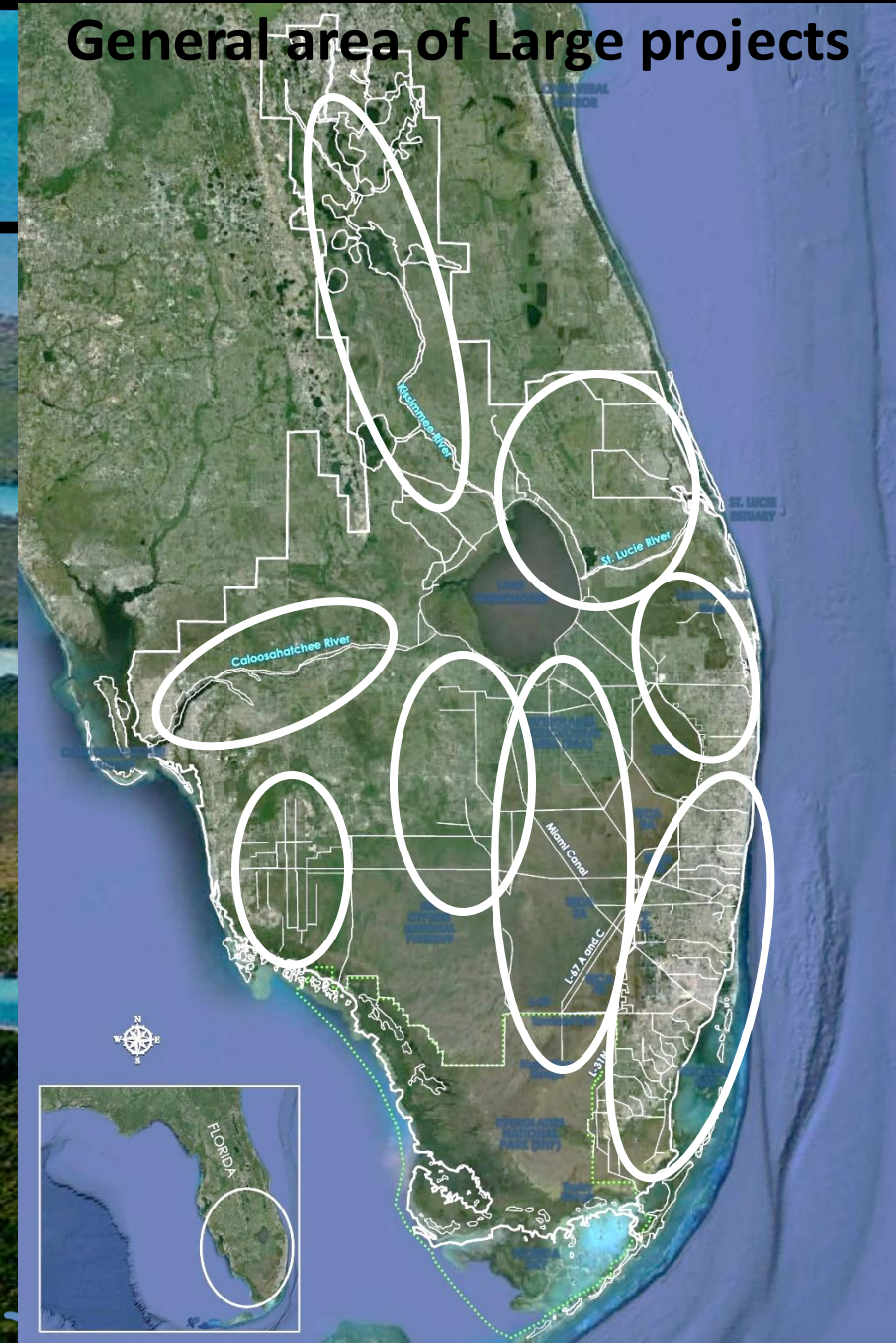
**2000
Authorized
Comprehensive
Everglades
Restoration
Plan**

Comprehensive Everglades Restoration Plan- CERP (WRDA 2000)

- Restore, preserve, protect south FL ecosystem while providing for other water-related needs, including water supply & flood protection
- 2,4 M acres across So FL ecosystems
- Includes structures (pumps, culverts, spreaders, storage, seepage barriers, etc.) storm water treatment areas wetlands, habitat augmentation, veg management
- 50/50 cost share: non-federal sponsor SFMWD (State)& Federal (USACE)



General area of Large projects



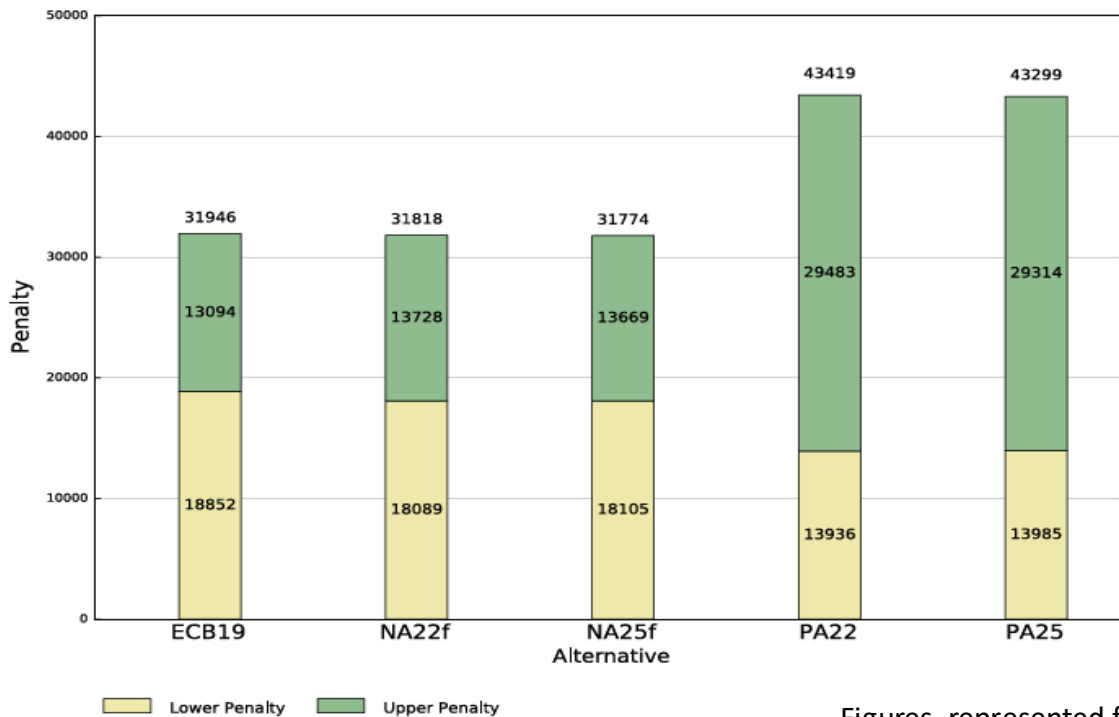
CERP: Large projects across large landscape

- Mosaic of ecosystems and land use
- Ecologic and hydrologic Performance Indicators
 - Direct: salinity gradients, acres, and species composition (e.g., vegetation, invertebrates)
 - Indirect: soil oxidation, fire risk, wading bird habitat suitability
- Water supply and flood protection performance measures
 - Drought severity, % cutback, demands not met
- Evaluate alternative project plans → project implementation → assess ecosystem responses → inform operations & adaptive management

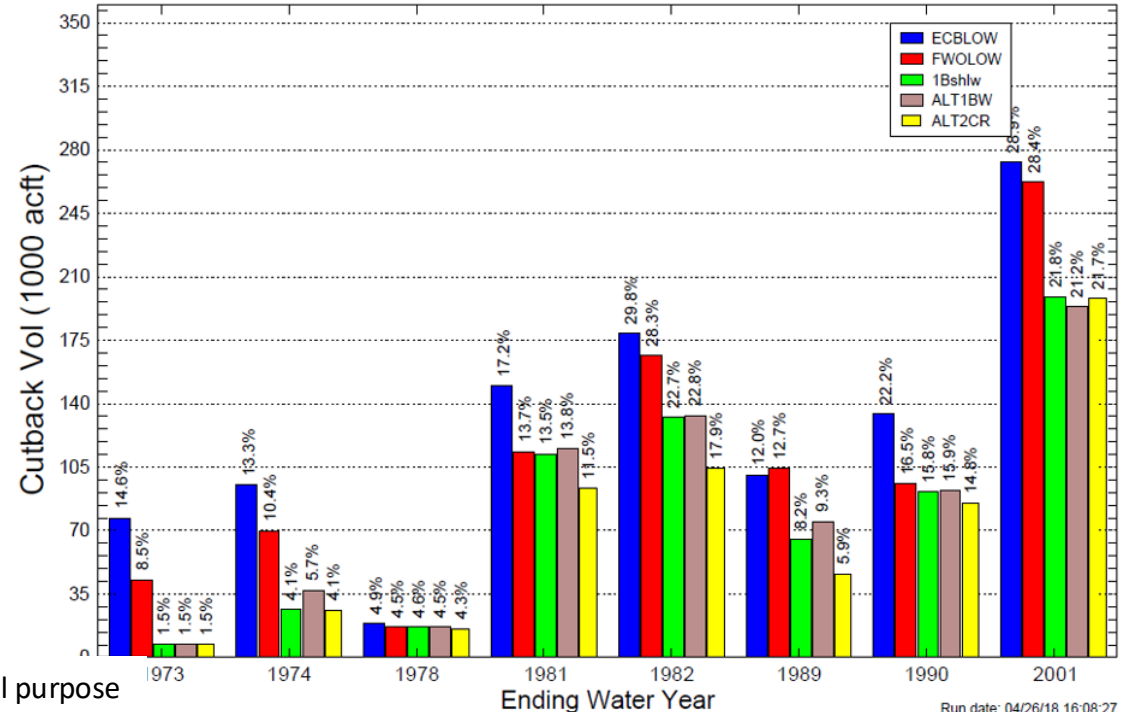
Modeling across scenarios for project planning

- Regional Simulation Model, 1965-2016 POR, Captures 'normal', & extremes
- Performance indicators: Ecological (e.g., Lake stage above and below ecological envelope, left) and water supply (e.g., cutback volume, right)

Lake Okeechobee Envelope Penalty Scores - All Years



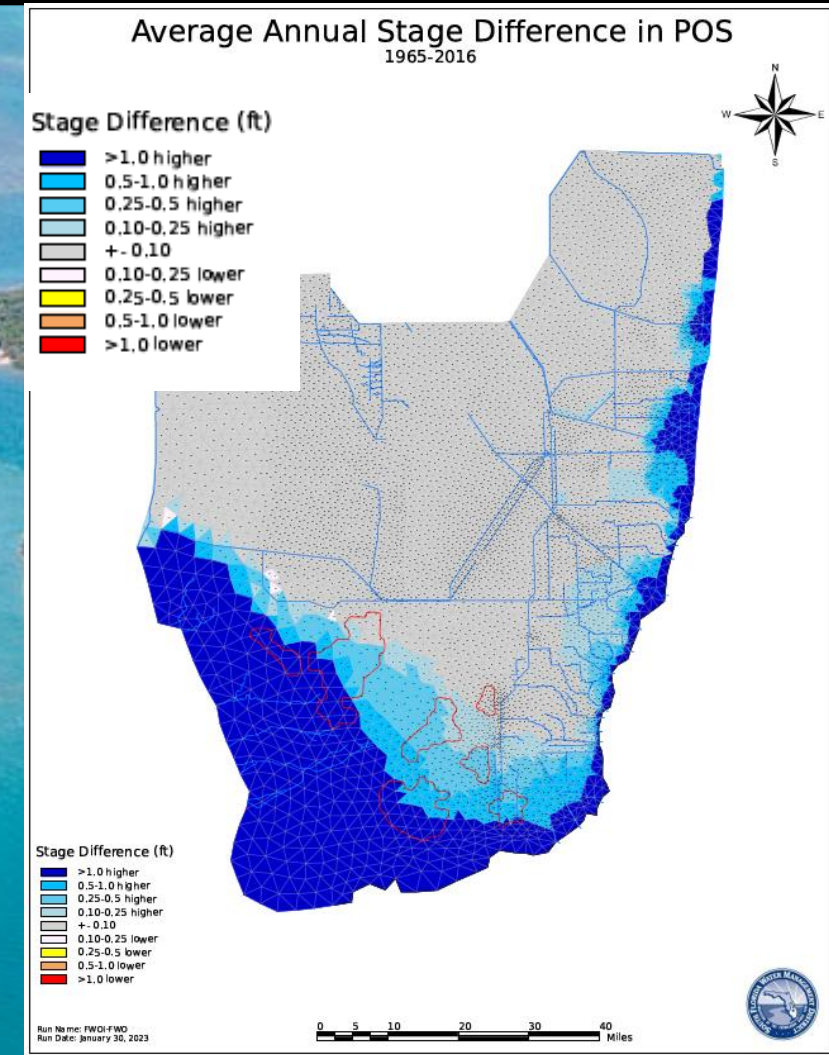
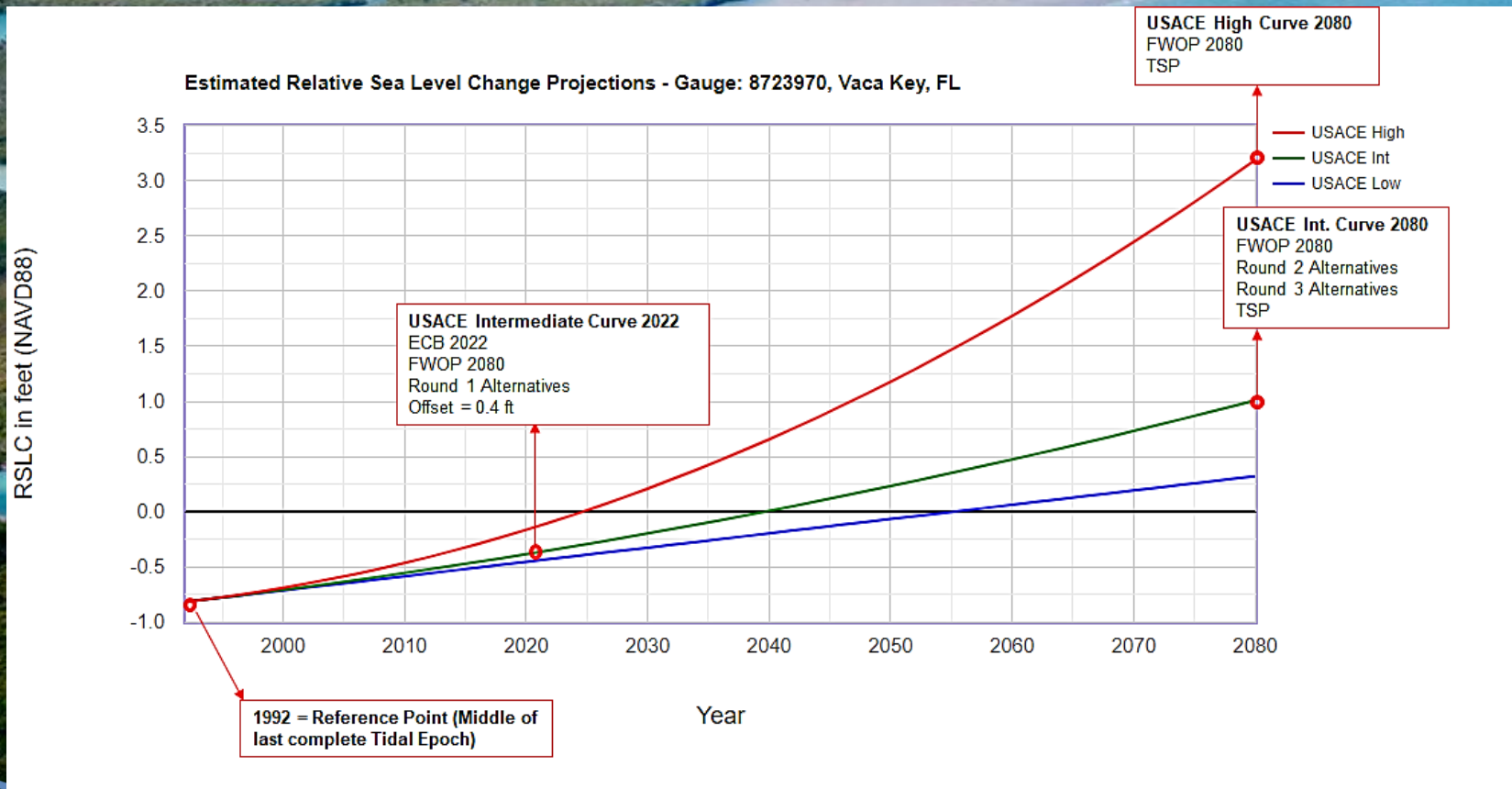
Water Year (Oct-Sep) LOSA Demand Cutback Volumes for the 8 Years in Simulation Period with Largest Cutbacks



Figures represented for conceptual purpose

Challenges of Planning with Sea Level Change (SLC), Example Future Scenario with +1.6 ft SLC

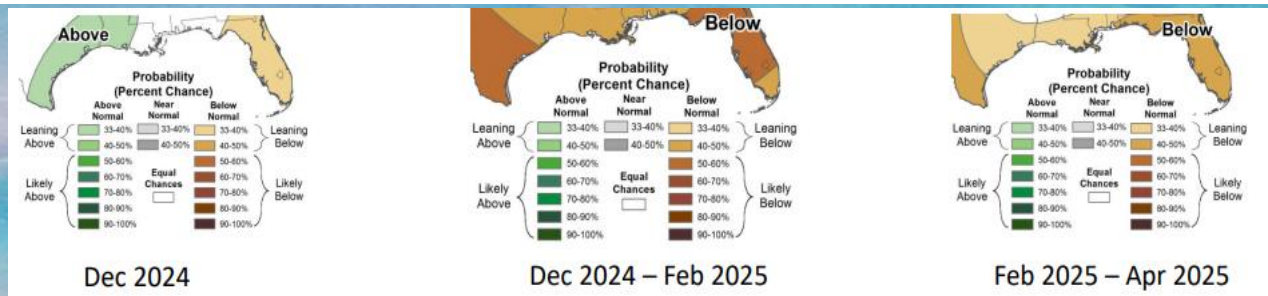
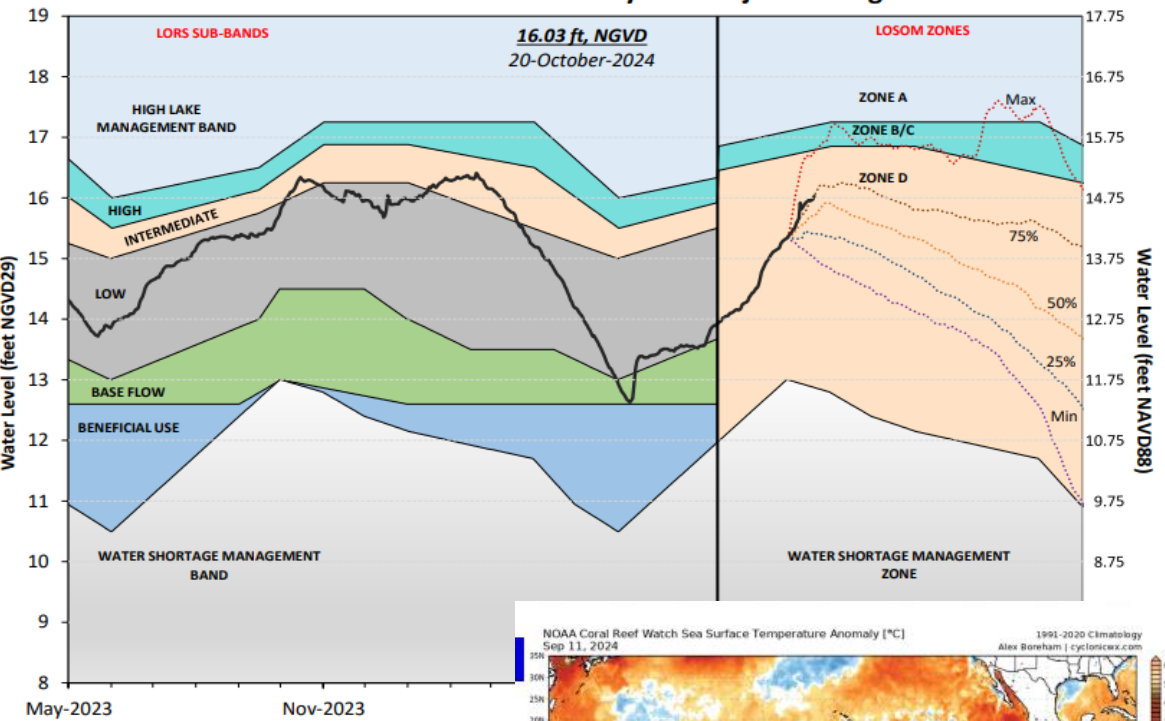
➤ SLC presents resource risks, e.g., aquifer saltwater intrusion, Everglades peat collapse, etc., that are exacerbated in drought conditions.



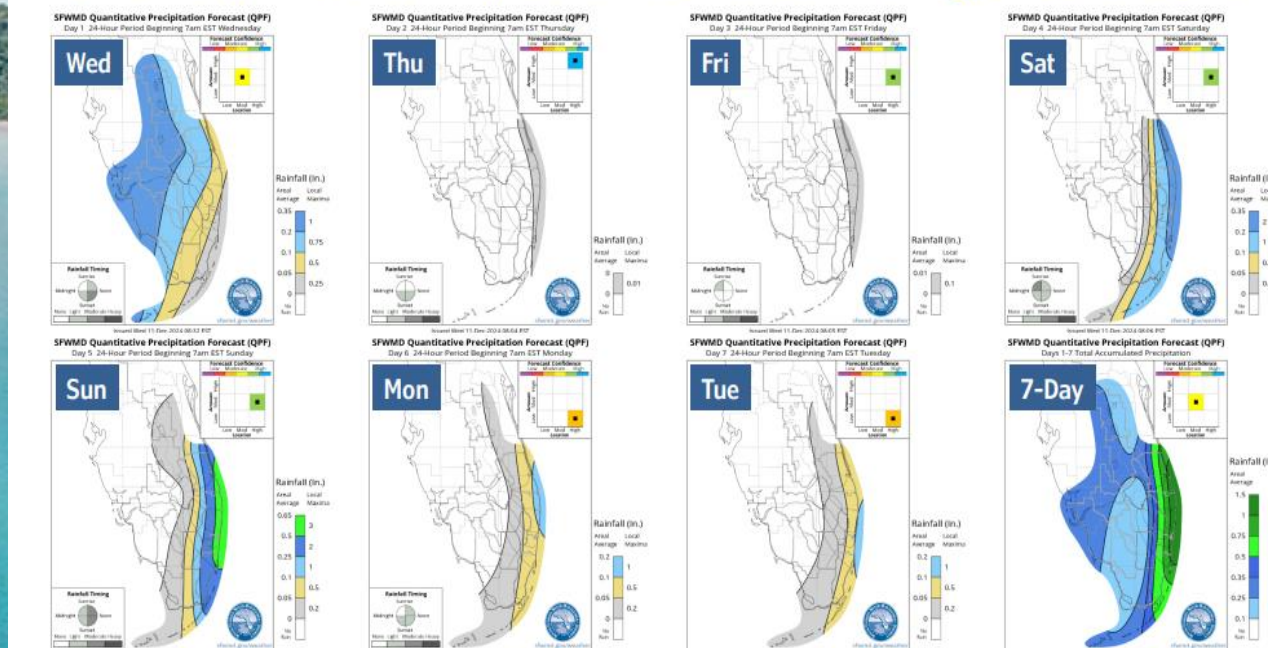
Predictive outlooks: Informing water management

Dynamic position analysis, Regional rain forecast, Climate Prediction Center Outlook, ENSO

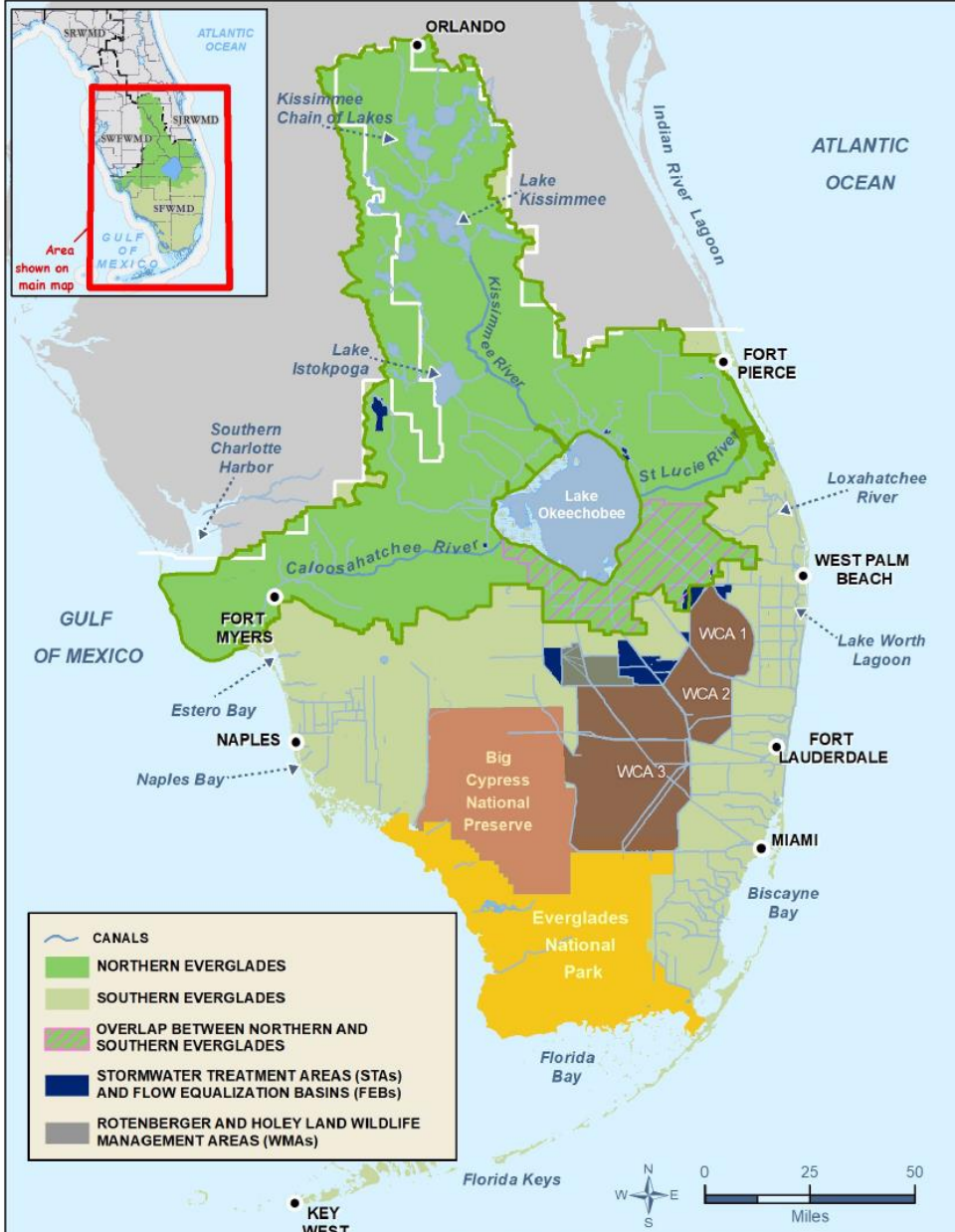
Lake Okeechobee Water Level History and Projected Stages



Short-, Medium-, & Extended-Range Outlooks



Connecting Science, Policy and Stakeholder Engagement



➤ Engagement across regions

- Tribal nations
- Federal and State agencies:
 - Parks, Wildlife, Environmental Protection, Forestry, Agriculture, Transportation
- Municipalities
- Producers
- NGOs
- Residents

➤ Project Delivery Teams for CERP projects

➤ Periodic and seasonal informational calls/forums for ongoing water management in the greater Everglades system

Communication & Translation

