

the journey to restore  
America's  
Everglades



South Florida

# Everglades

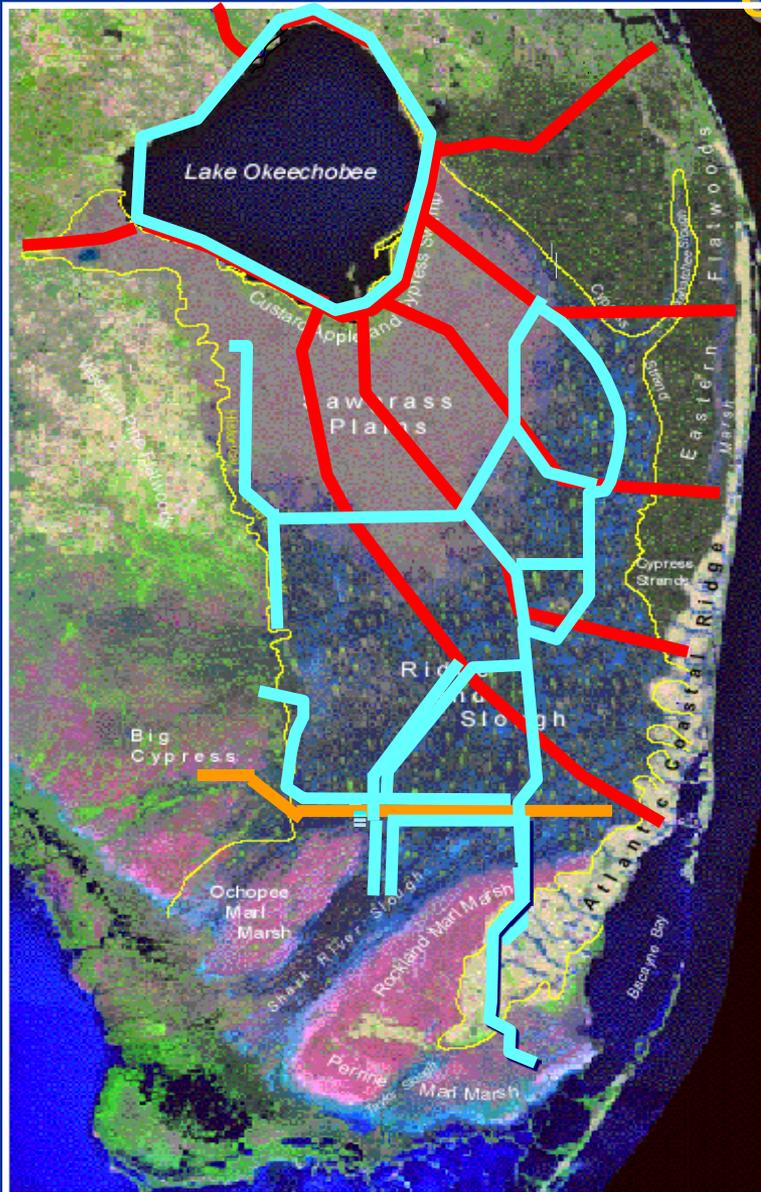
Ecosystem Restoration Program



# The Everglades: "They were changeless. They are changed"

- Marjory Stoneman Douglas

## C&SF Project

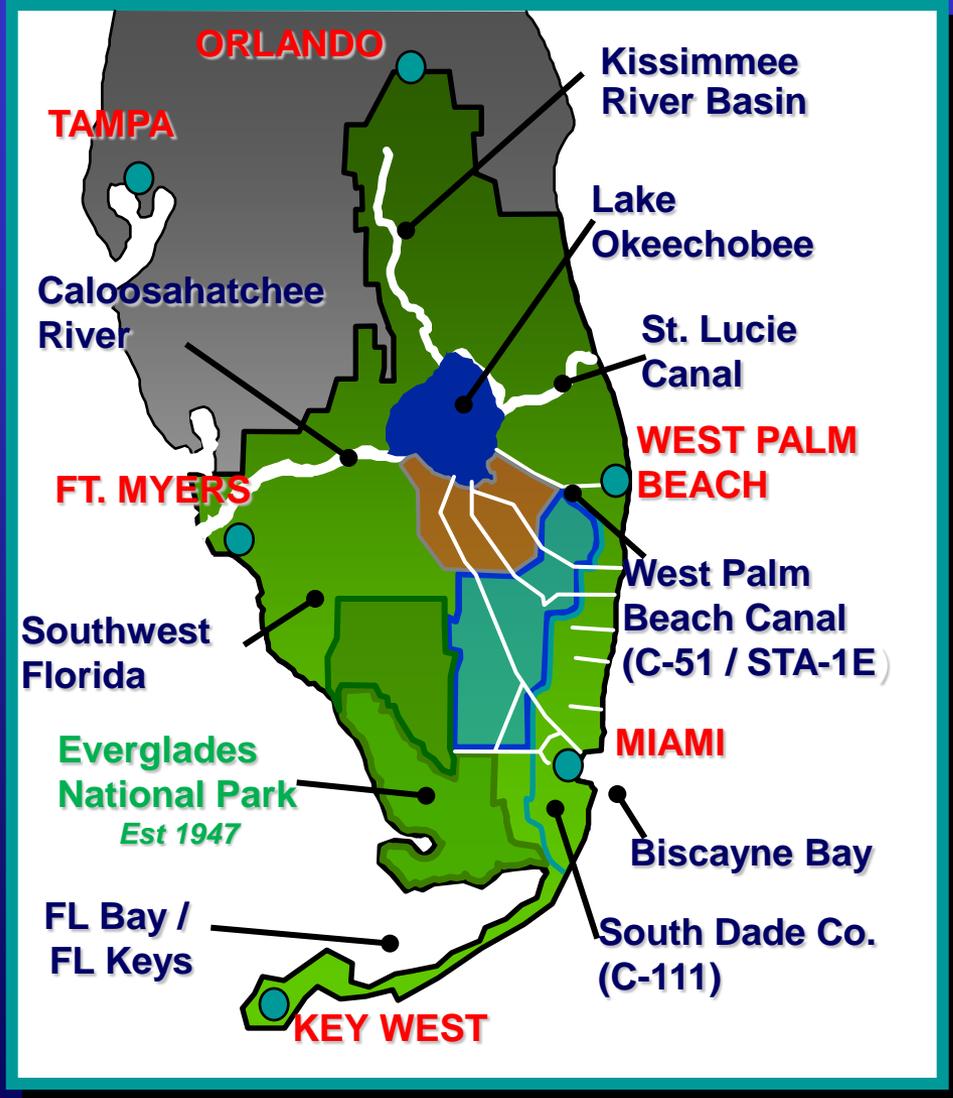


## Construction of the South Dade System

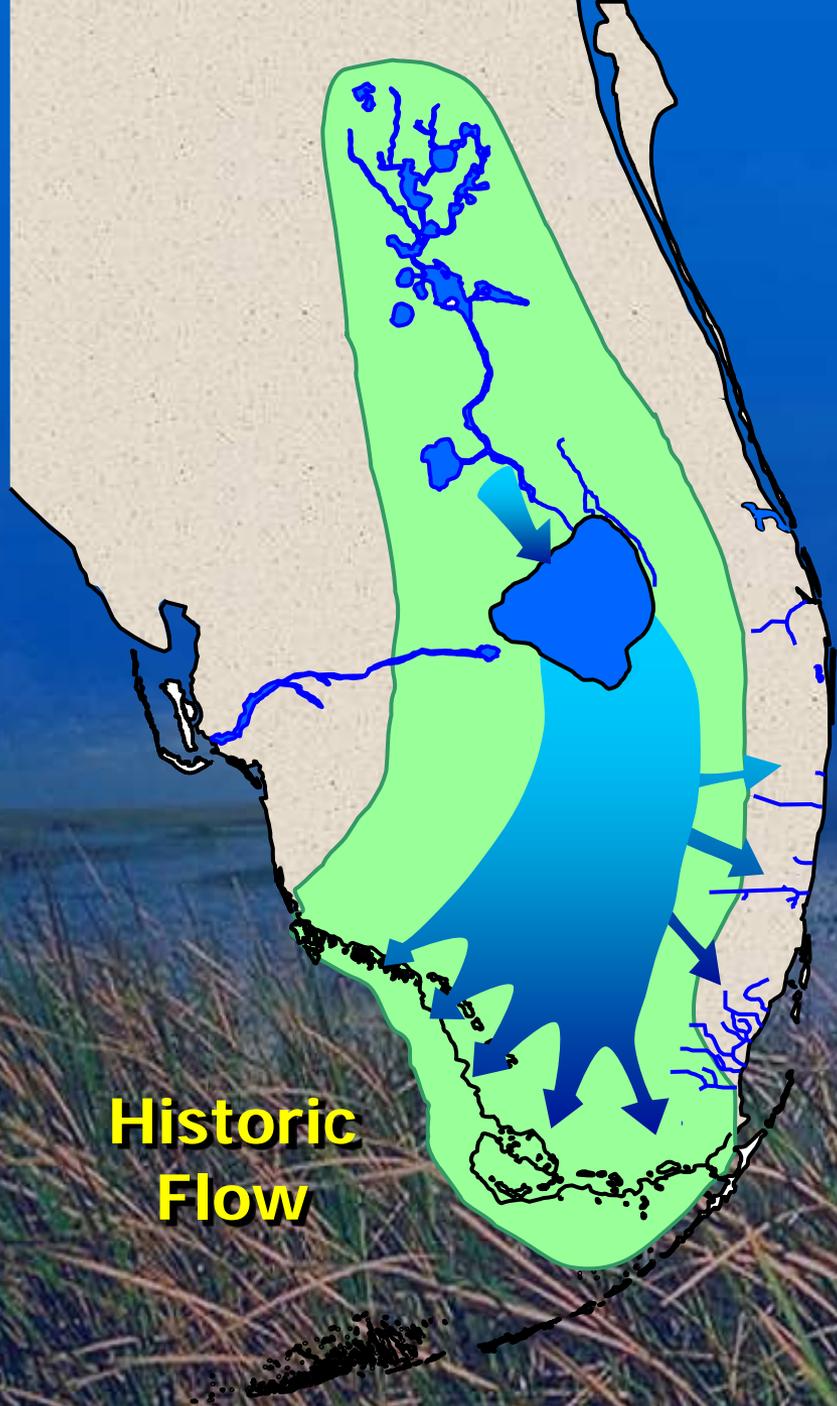


1965-1983

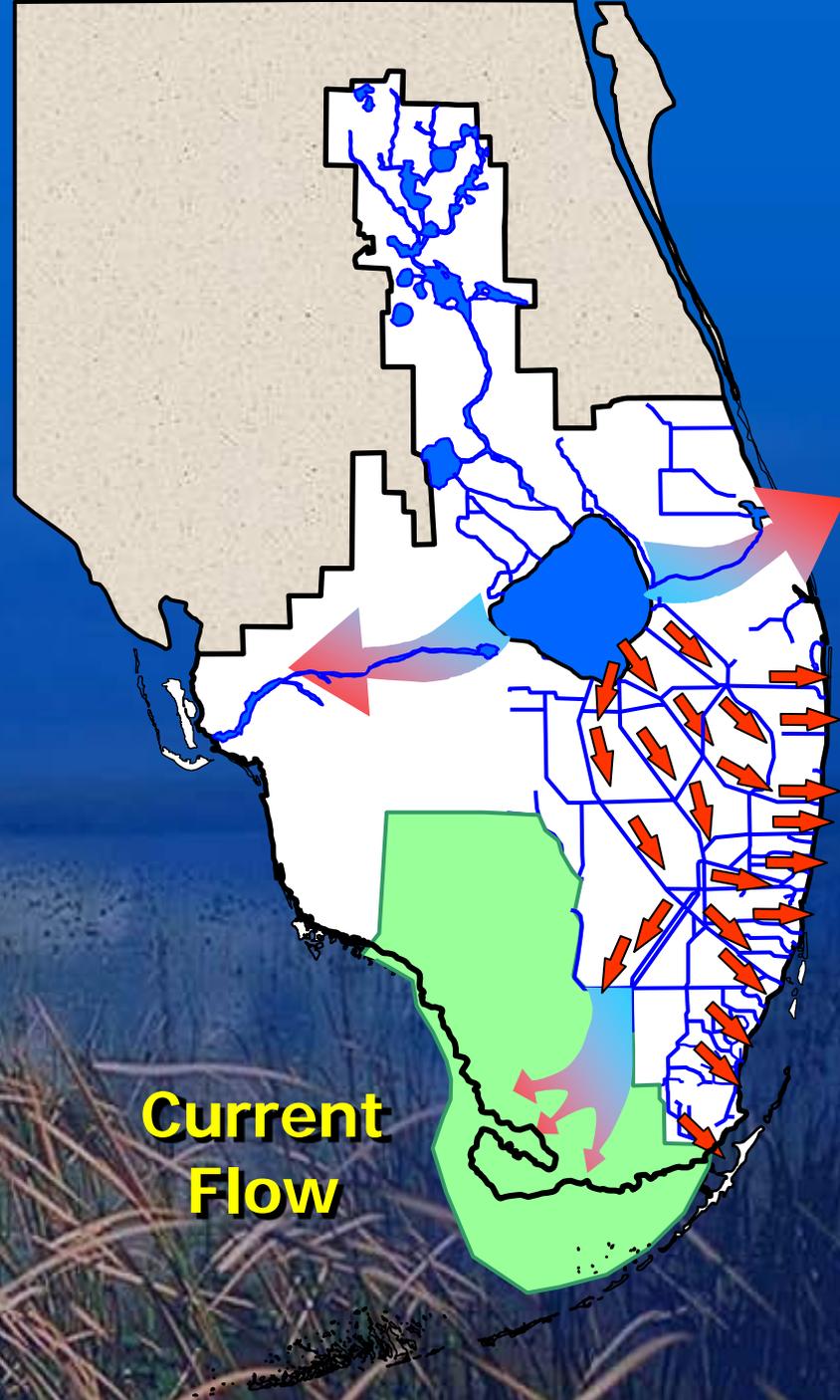
# Central & Southern Florida Project (C&SF)



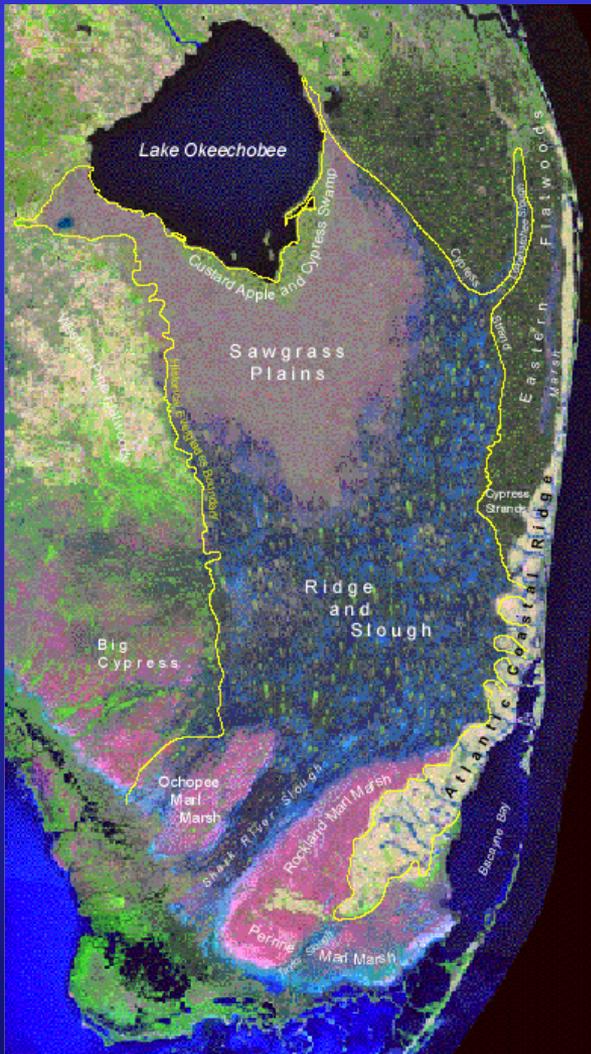
- **Authorization:** Flood Control Act of 1948
- **Purpose:** Flood Control, Water Conservation & Control, Salt Water Intrusion, F&W, Water Supply to ENP, FL Bay/FL Keys, & Environmental Restoration
- **Features:** 46 bridges, 10 locks, 670 miles of canals, 809 miles of levees, 130 control & diversion structures, & 16 pump stations
- **Project Cost:** \$2.9B



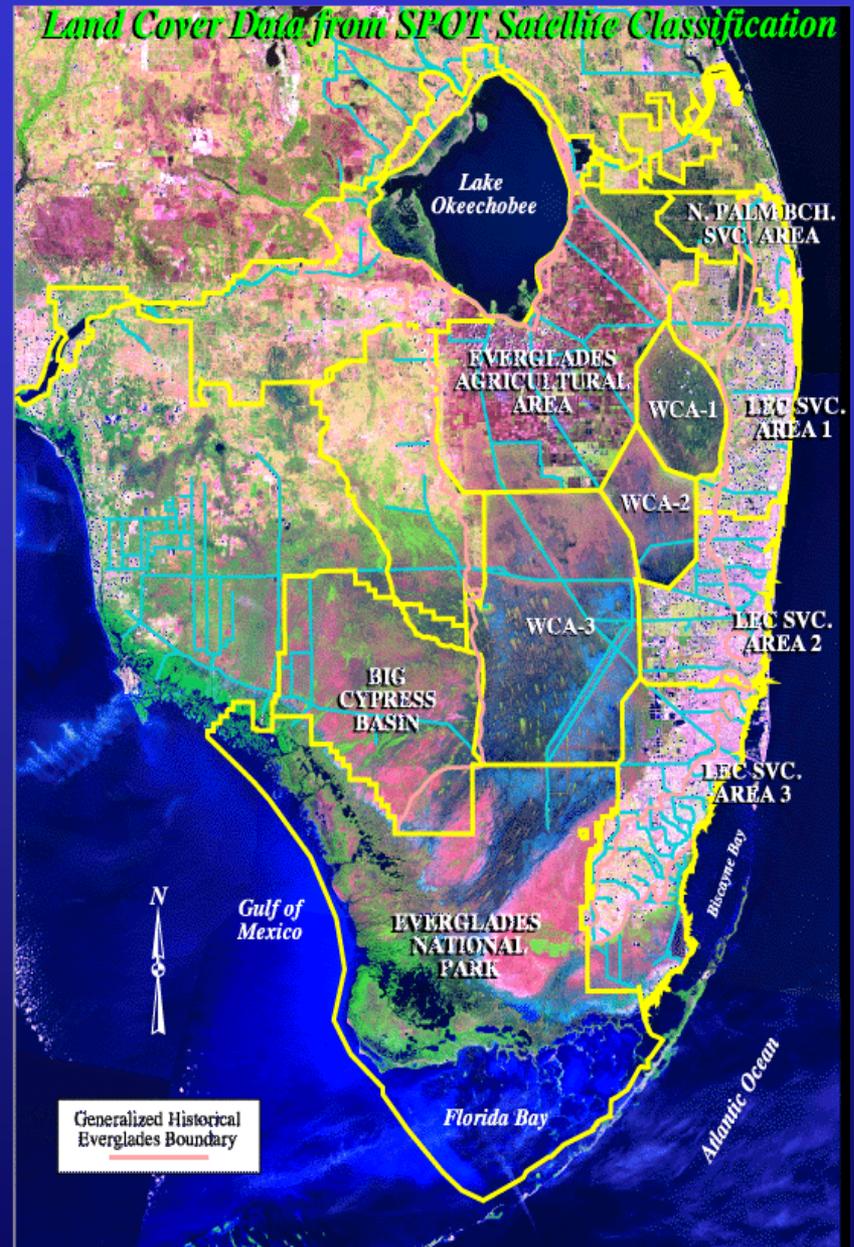
**Historic Flow**



**Current Flow**



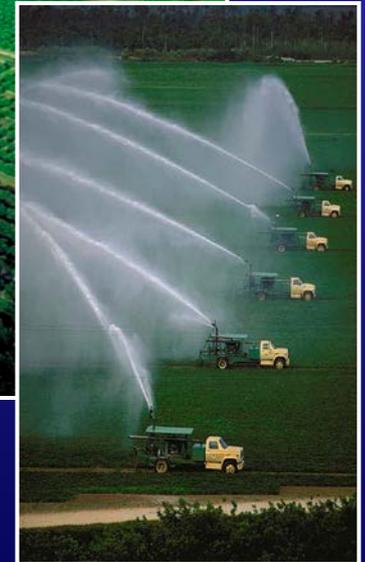
**NATURAL SYSTEM (circa 1850)**



**MANAGED SYSTEM (1995 Landscape)**



# South Florida Flourished





**The expanding population increased demand for land, flood control, and water supply**

# An Ecosystem is in Trouble....

- Too much/too little water for the Everglades/south Florida ecosystem
- Massive reductions in wading bird populations
- 68 Threatened and Endangered species
- Degradation of water quality (**litigation: 1988**)
- Repetitive water shortages and salt water intrusion
- Declining estuary health
- 1.7 billion gallons of water a day wasted to tide



***Rescuing an Endangered Ecosystem:  
The Plan to Restore America's Everglades***



*The Central and Southern Florida Project  
Comprehensive Review Study  
(The Restudy)*

On December 11, 2000, the President signed the Water Resources Development Act of 2000, approving:

# **Comprehensive Everglades Restoration Plan**

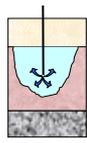
A series of environmental and other improvements over 30+ years with an estimated cost of **\$7.8 billion (1999 Price Levels)**

# CERP is . . .

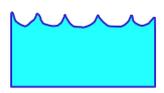
- A 50-50 Partnership between the federal government and the State of Florida
- 68 Components combined into 56 projects
- To be implemented over a 40-year period
- Dependent on foundation projects
- Expensive ( ~ \$ 12.5 B *current price levels*)
- Essential to restoring a functioning ecosystem
- Essential to sustaining the economy of South Florida



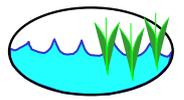
# 68 CERP Components



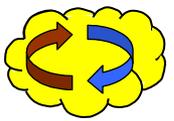
**Aquifer Storage & Recovery – 330 Wells**



**Surface Water Storage Reservoir – 170,000 acres**



**Stormwater Treatment Areas (STAs) – 36,000 acres**



**Reuse Wastewater at 2 Regional Plants**



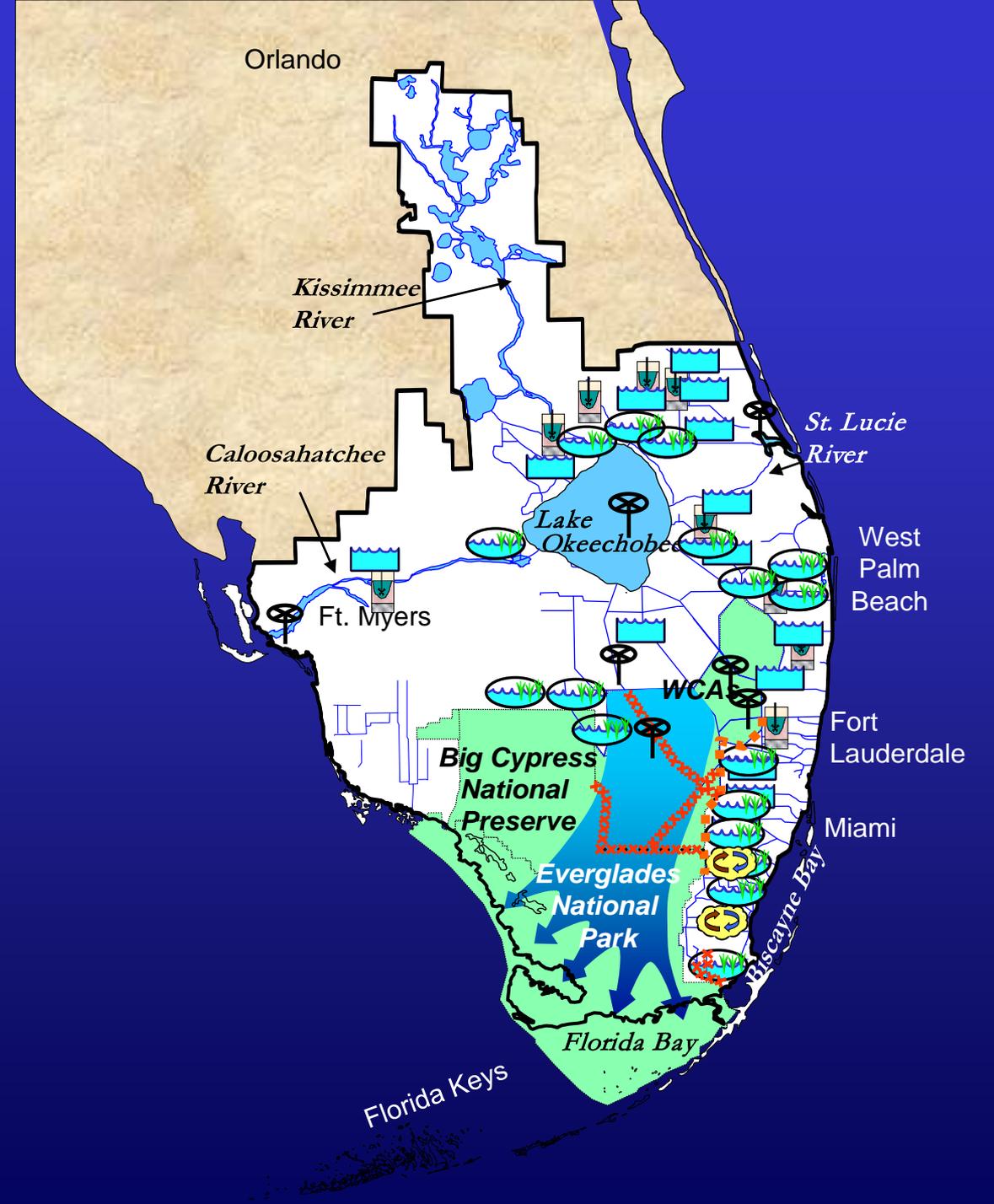
**Seepage Management**

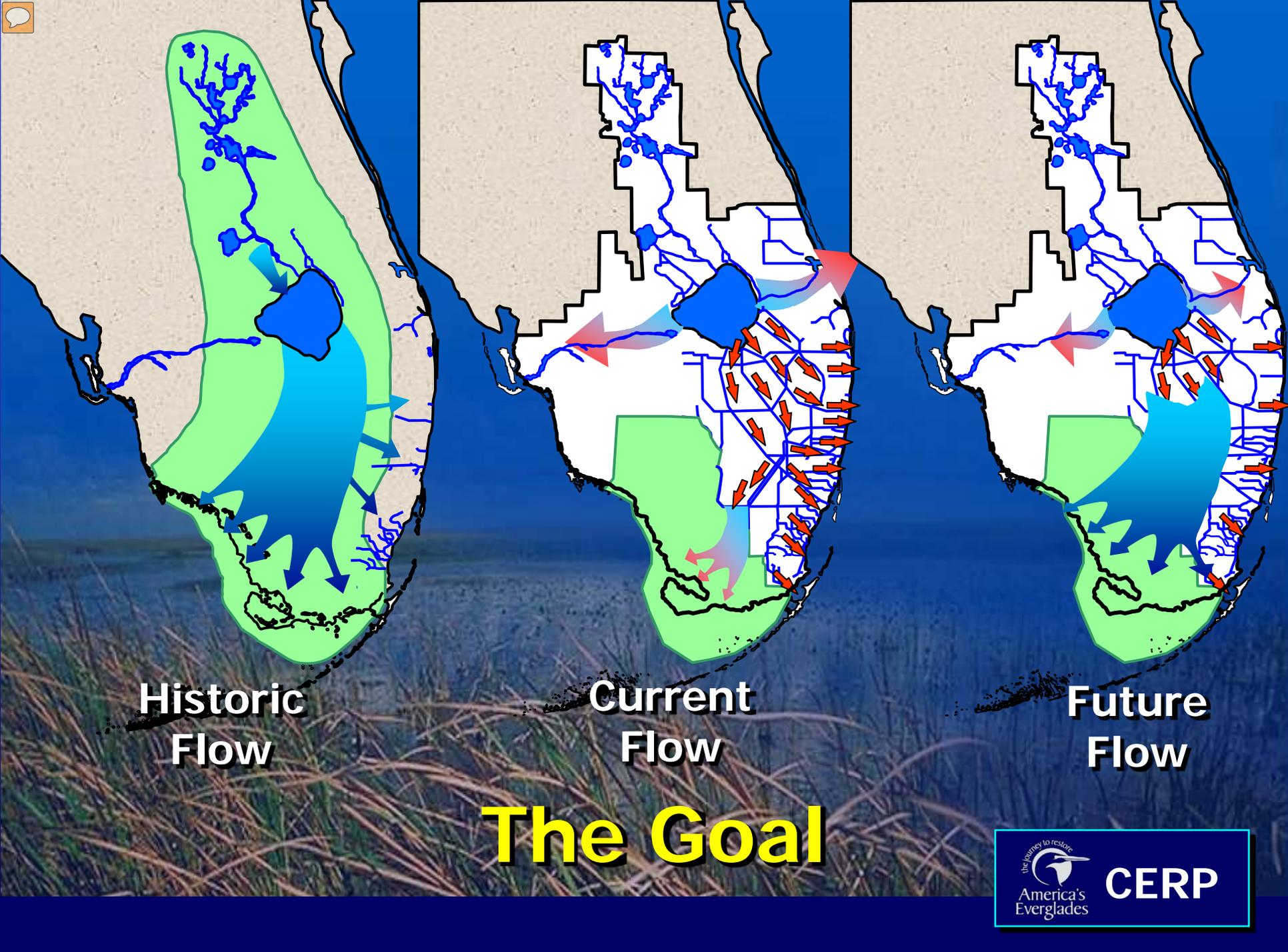


**Removing 240 miles of Barriers to Sheetflow**



**Operational Changes**





**Historic  
Flow**

**Current  
Flow**

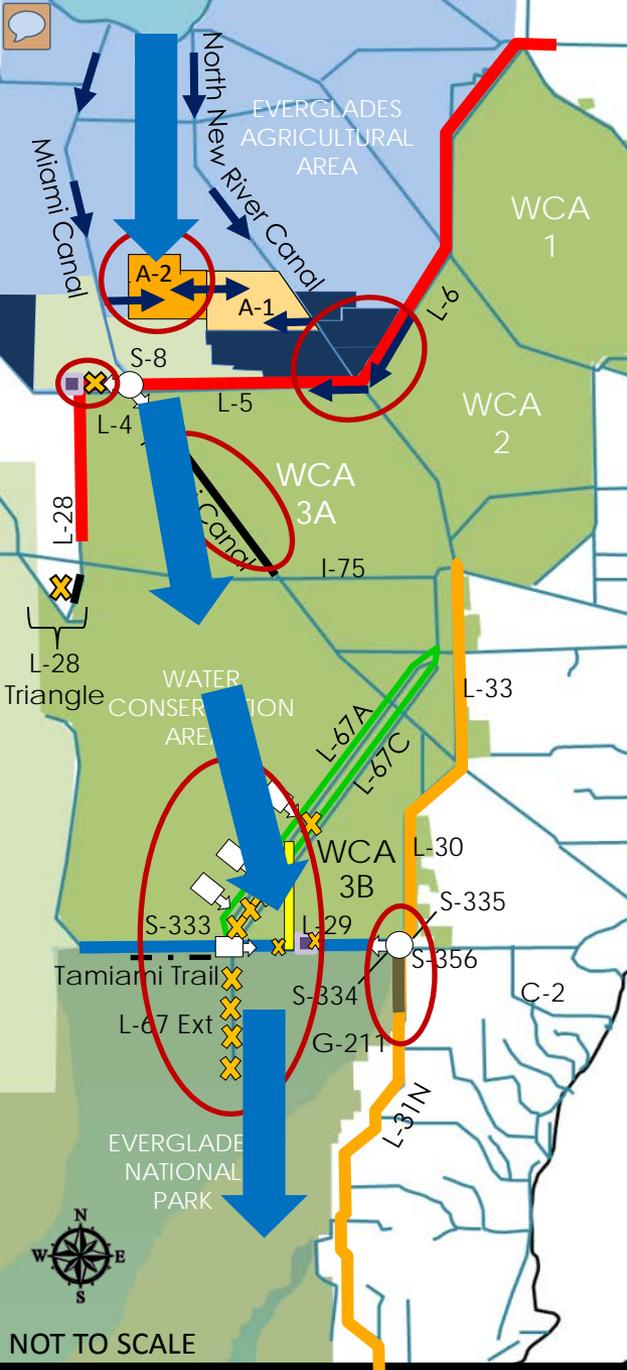
**Future  
Flow**

**The Goal**

# Where We Are Now. . .

- **Three CERP Projects Authorized in 12 years**
  - Indian River Lagoon South (Martin/St Lucie Counties)
  - Picayune Strand (SW Florida – Collier Co.)
  - Site 1 Impoundment (Palm Beach Co.)
- **No progress toward hydrologic restoration of central Everglades**
  - Everglades National Park and Florida Bay
- **Central Everglades Planning Project (CEPP)**
  - Initiated Nov 2011
  - 18-month Pilot Project
  - Tentatively Selected Plan, Jan 2013

# CEPP TENTATIVELY SELECTED PLAN



## STORAGE AND TREATMENT

- Construct A-2 FEB and integrate with A-1 FEB operations
- Lake Okeechobee operation refinements within LORS

## DISTRIBUTION/CONVEYANCE

- Diversion of L-6 flows, Infrastructure and L-5 canal improvements
- Remove western ~2.9 miles of L-4 levee (west of S-8 3,000 cfs capacity)
- Divide structure at western terminus of L-4 levee removal
- Backfill Miami Canal and Spoil Mound Removal ~1.5 miles south of S-8 to I-75
- L-28 Triangle – levee gap and canal backfill (~ 9,000 LF)

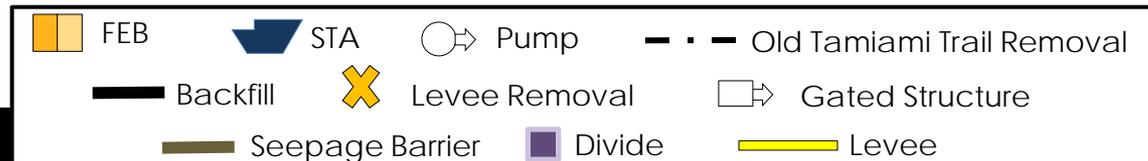
## DISTRIBUTION/CONVEYANCE

- Increase S-333 capacity to 2,500 cfs
- Two 500 cfs gated structures in L-67A, 0.5 mile spoil removal west of L-67A canal north and south of structures
- Construct ~8.5 mile levee in WCA 3B, connecting L-67A to L-29
- Remove ~8 miles of L-67C levee in Blue Shanty flowway (no canal back fill)
- One 500 cfs gated structure north of Blue Shanty levee and 6,000-ft gap in L-67C levee
- Remove ~4.3 miles of L-29 levee in Blue Shanty flowway, divide structure east of Blue Shanty levee at terminus of western bridge
- Tamiami Trail western 2.6 mile bridge and L-29 canal max stage at 9.7 ft (FUTURE WORK BY OTHERS)
- Remove entire 5.5 miles L-67 Extension levee, backfill L-67 Extension canal
- Remove ~6 mile Old Tamiami Trail road (from L-67 Ext to Tram Rd)

## SEEPAGE MANAGEMENT

- Increase S-356 pump station to ~1,000 cfs
- Partial depth seepage barrier south of Tamiami Trail (along L-31N)
- G-211 operational refinements; use coastal canals to convey seepage

Note: System wide operational changes and adaptive management considerations will be include in project



NOT TO SCALE

# CEPP Issues/Next Steps

- Partial Implementation of 5 CERP components
- Depends on other restoration projects
  - State of FL “Restoration Strategies” (Water Quality)
  - Modified Water Deliveries to ENP
  - C-111 South Dade Project
  - CERP Projects not yet authorized
  - More bridging on Tamiami Trail
- \$2 B cost estimate for CEPP
  - Implementation Sequencing Plan in development
- SFWMD concerns about supporting CEPP
  - Legal “Safe Harbor” from WQ litigation
  - Cost/Allocation
- Draft Report/EIS April 2013????