SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Ecological Update
Governing Board Workshop
April 8, 2009

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sfwmd.gov

Snail Kites Nesting In Upper Kissimmee Basin

Snail Kites are nesting in the Upper Chain of Lakes

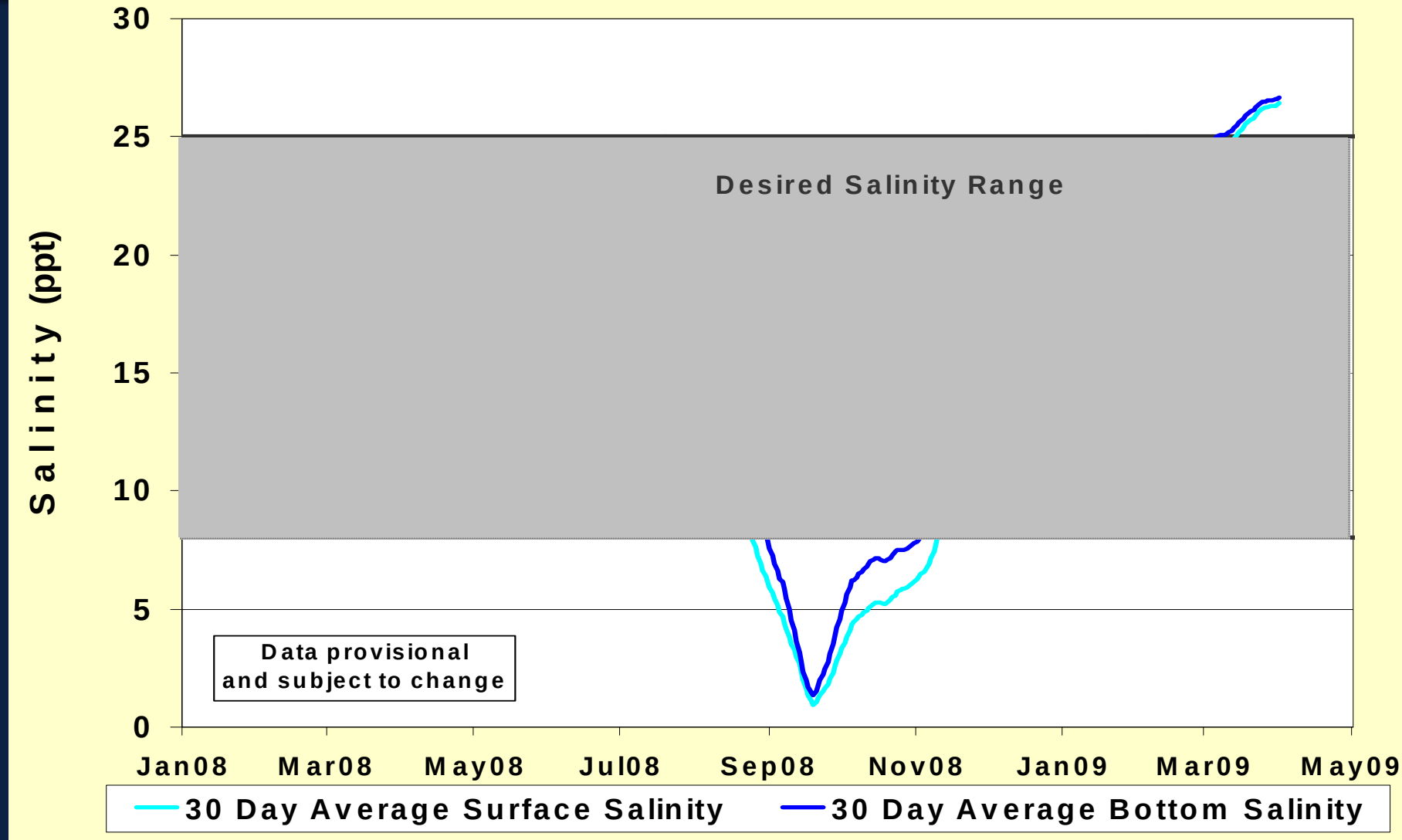
- 23 - Lake Toho
- 2 - East Lake Toho
- 12 - Lake Kissimmee
- 6 - Lake Istokpoga

Kissimmee River Recession

- Constant flow maintained
- Dissolved oxygen levels remain above levels of concern
- Dry season drawdown on track to reach low stage by May 15
- Wading Bird nesting nearby

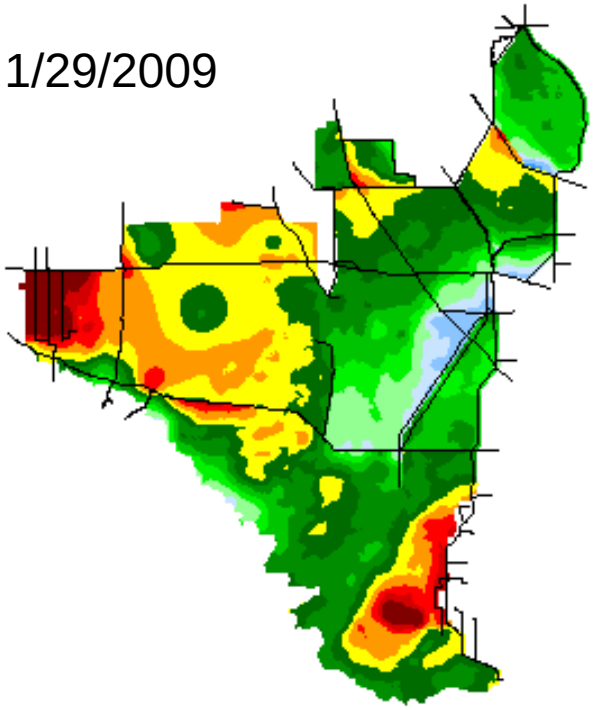
February 11, 2009

St. Lucie Estuary Salinity Envelope
US 1 Bridge

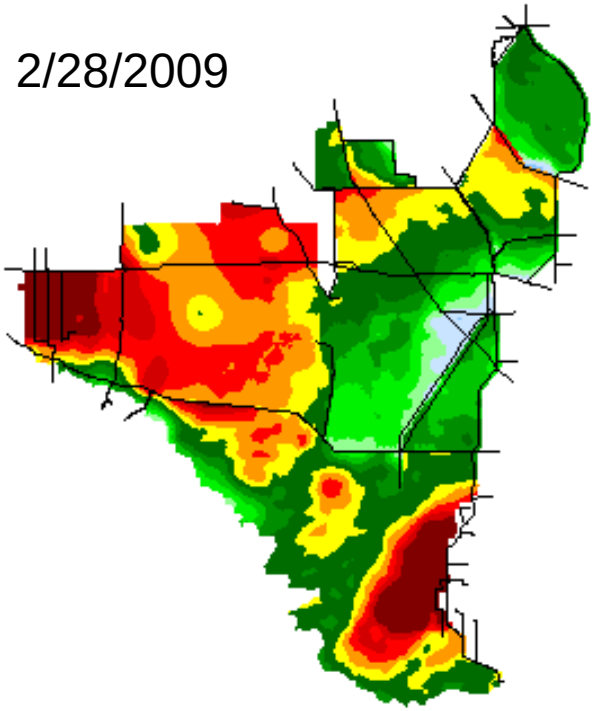


Water Depths

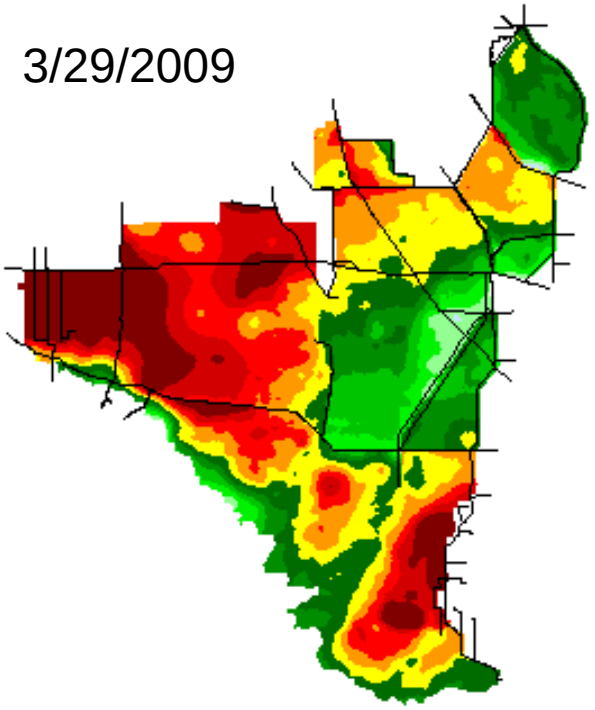
1/29/2009



2/28/2009



3/29/2009

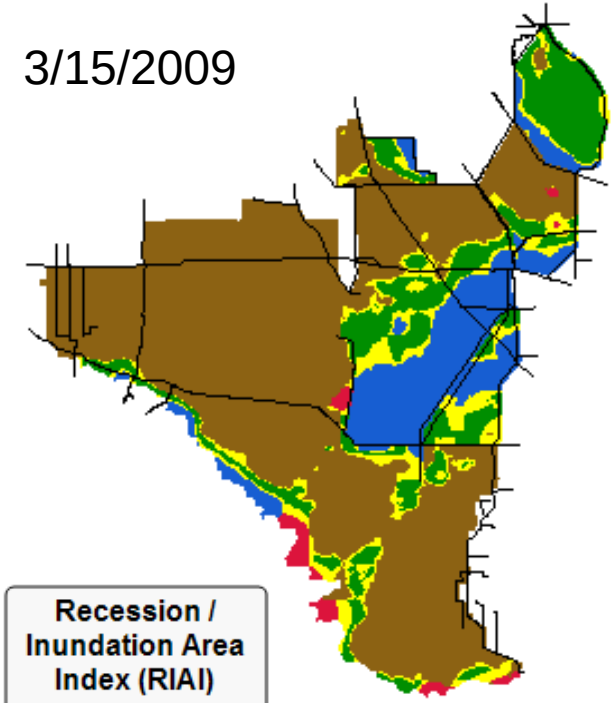


Water Depth (feet)

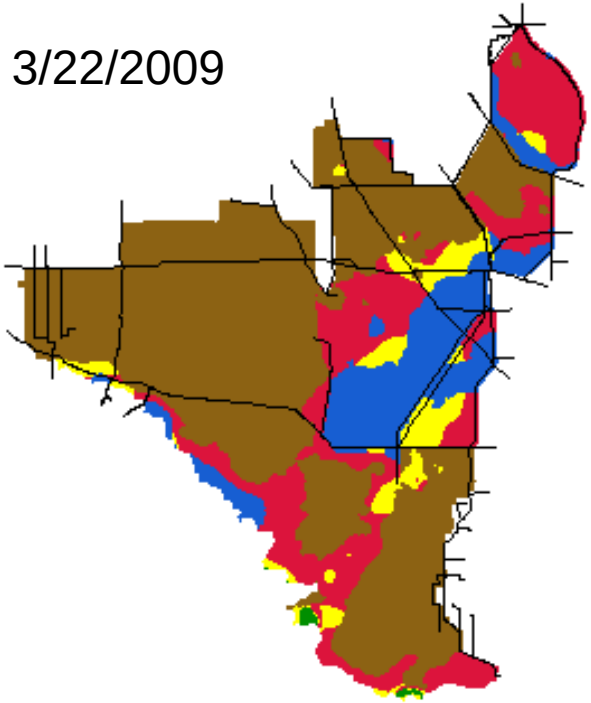
-2.50 0.00 2.50 5.00

Wading Bird Recession Index

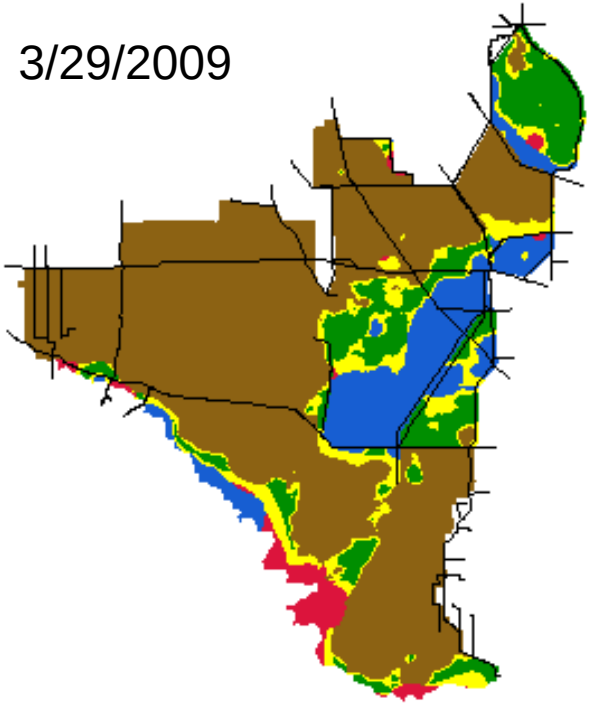
3/15/2009



3/22/2009



3/29/2009



Recession / Inundation Area Index (RIAI)

- Good
- Fair
- Poor
- Too Deep
- Too Dry

1st Check Daily Water Depth Criteria

- Too Dry: < 0.1'
- Good: 0.1' to 0.79' →
- Too Deep: >0.79"

Then Check Weekly Recession Rate Criteria

- Bad: = -0.60
- Fair: -0.17' to -0.59'
- Good: - 0.05' to - 0.16'
- Fair: -0.04 to +0.04' for one week
- Bad: -0.04 to +0.04' for 2 weeks or ≥ +0.041' for one week

Encouraging Start for Wood Storks in the Everglades

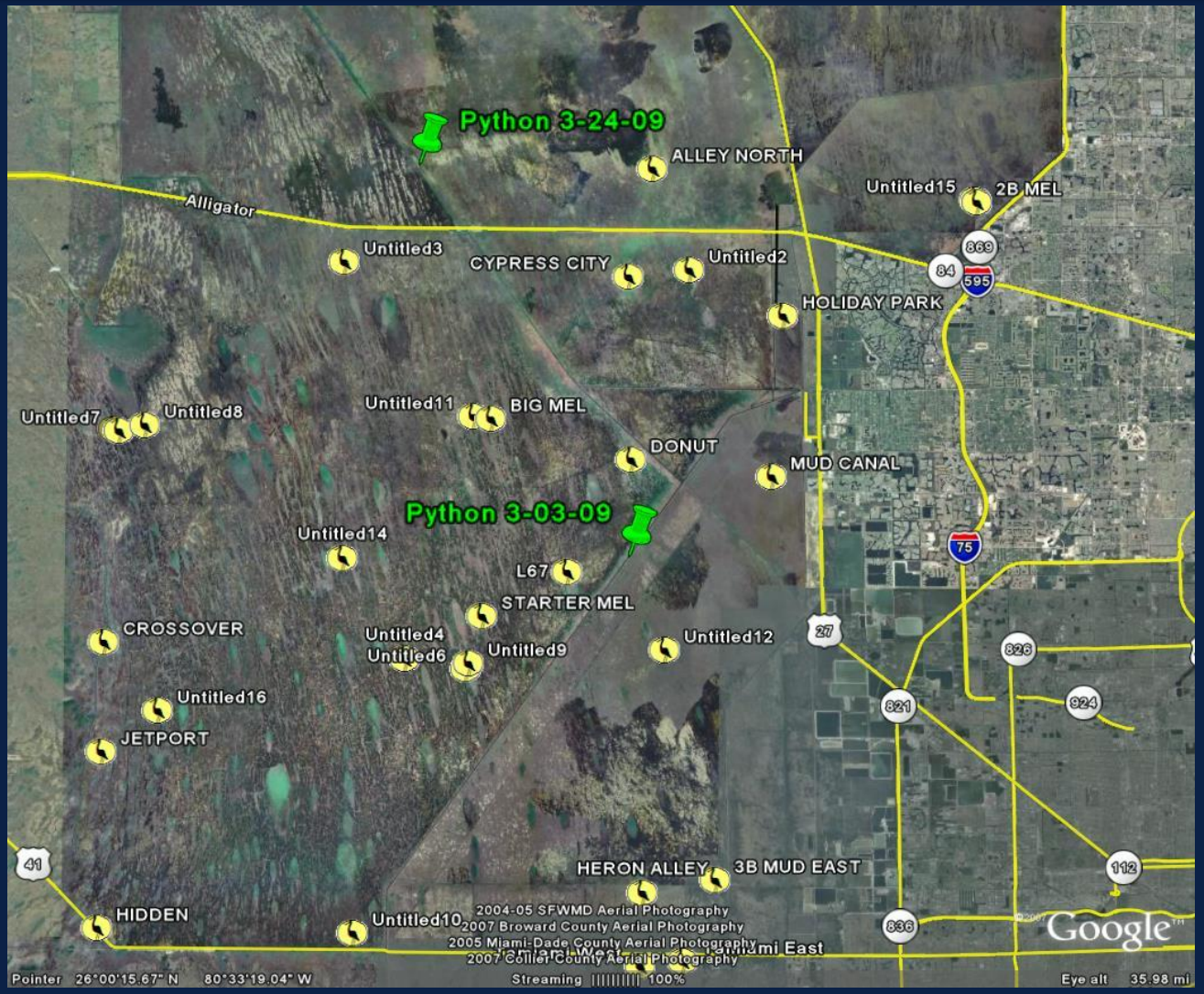
CERP Targets (Wood Stork)

1. Total nests: 1500 – 3000
2009: 3000 nests in ENP and WCAs
2008: 0 nests
2007: 40 nests

2. Location of colonies: Return to northern fringe of Fl. Bay
2009: A small but significant increase in nesting effort in this area relative to recent years (all wading bird species)

3. Timing of nesting: No later than January
2009: February/March

Pythons Near Wading Bird Nesting Colonies



Adaptive Protocols

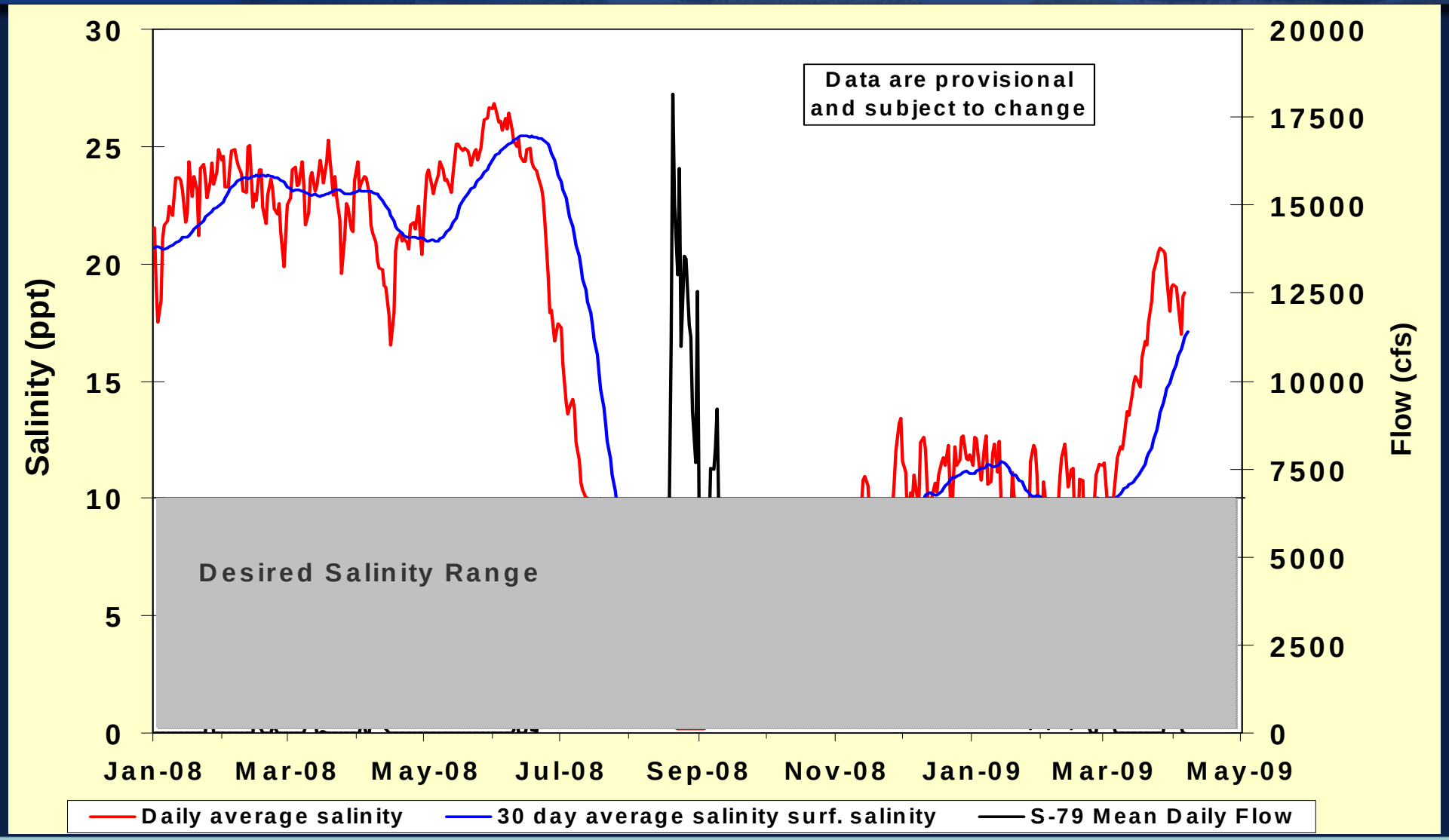
Designed for "win-win situations"

- **When Lake schedule (WSE) does not call for flood control releases**
- **Downstream environmental resources can benefit from Lake releases**
- **Minimal or no adverse effects on meeting water supply demands**

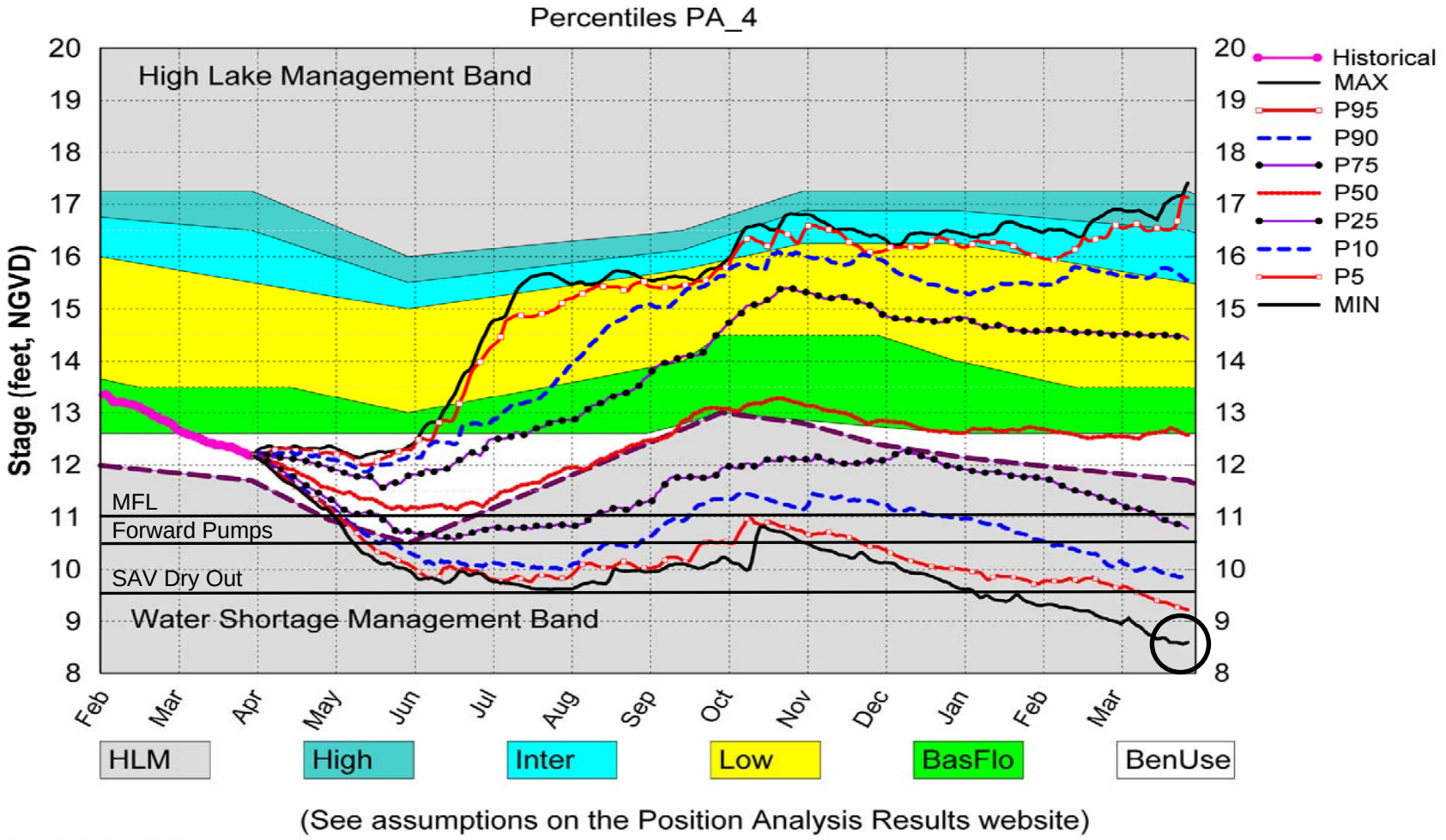
Adaptive Protocols Process

- **Brief Board at regularly scheduled meeting**
  - **Expected benefits**
  - **Potential risks**
  - **Duration and magnitude of anticipated flow**
- **Board may request Corps implement operation**
- **Report results to Board at next meeting**
  - **Appraise Board of facts related to potential additional releases**

Caloosahatchee Salinity: Ft. Myers



Lake Okeechobee Stage Projection

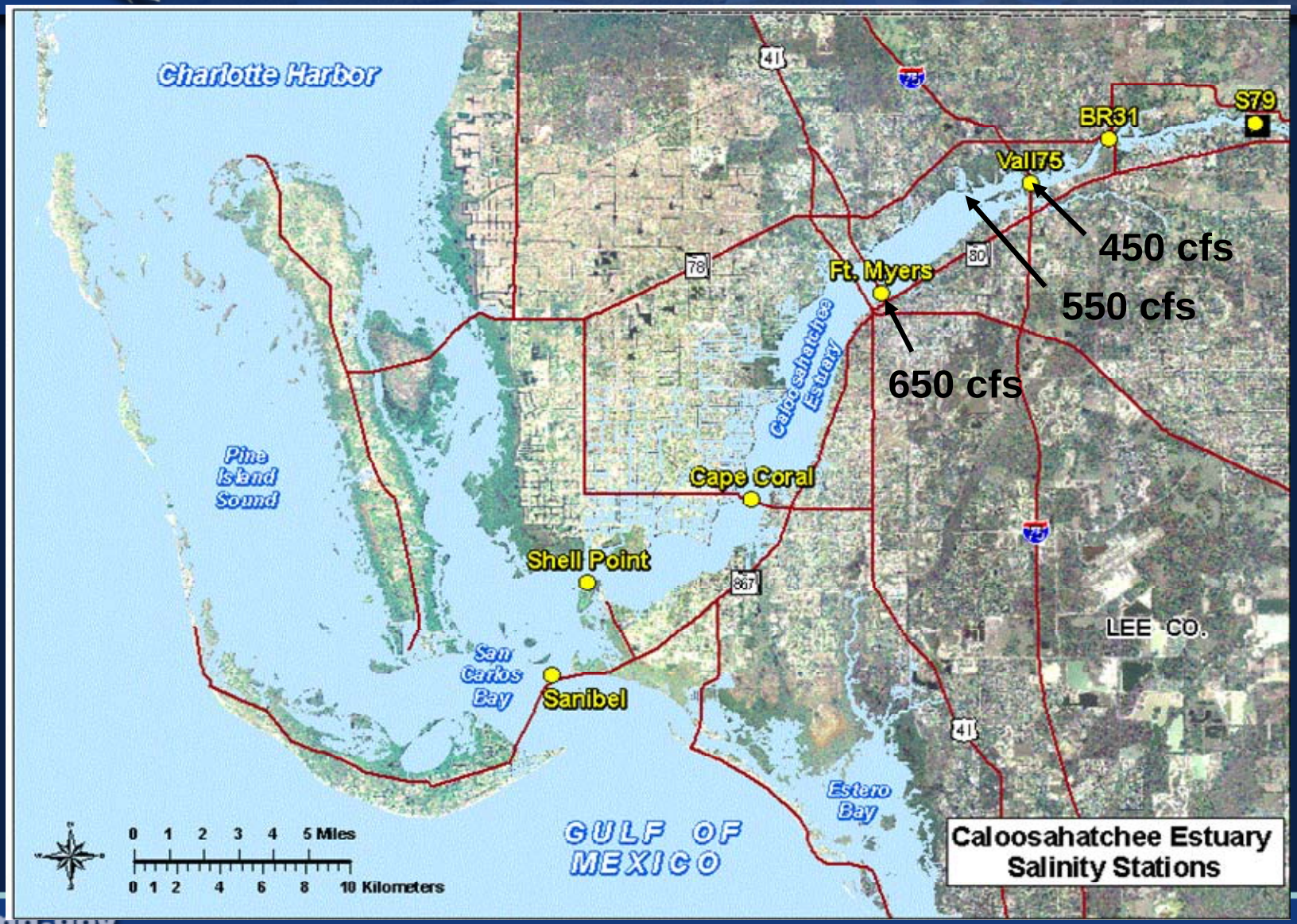


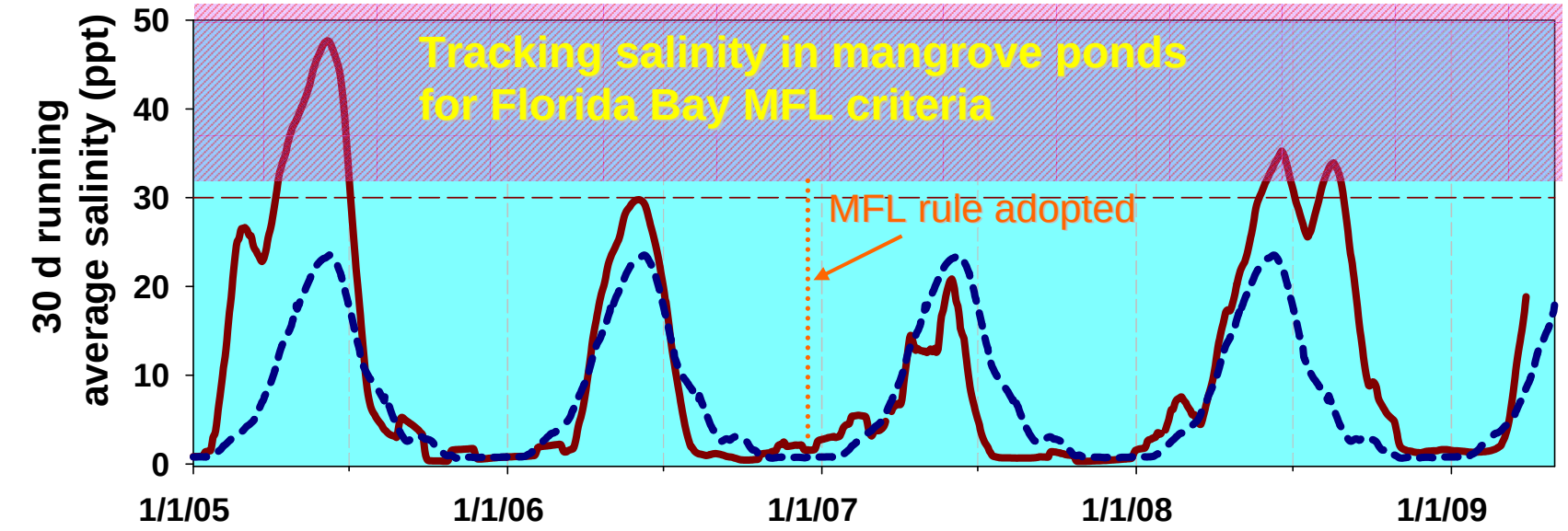
Expected Benefits/Potential Risks

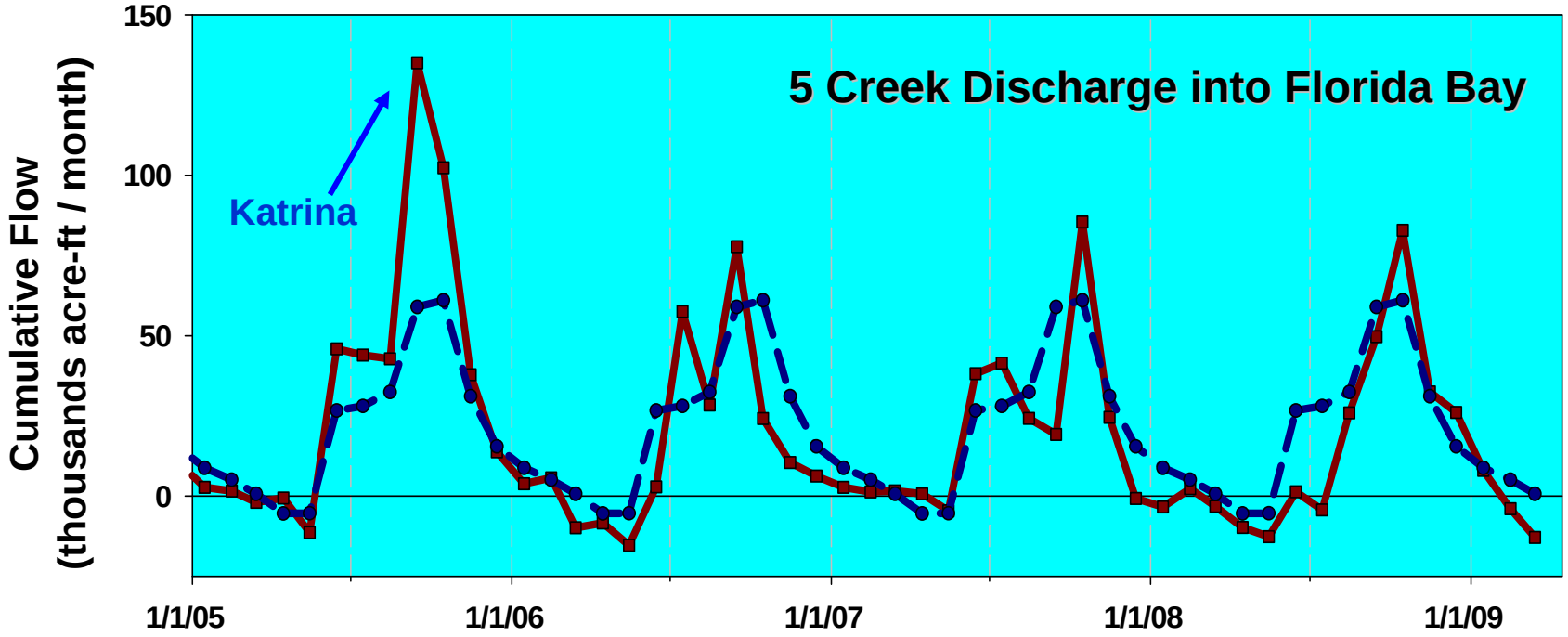
- **Expected benefits**
  - **Produce more desirable salinity regime within Caloosahatchee Estuary**
  - **Decreased chlorides at Olga Water Treatment Plant**

- **Potential risks**
  - **Lake Okeechobee MFL exceedence**
  - **Less water available for LOSA, LEC urban demands, muck fire prevention, STA supplemental water**
  - **If unsustained – benefits lost**
  - **Multi-year drought – less water available next dry season**

Caloosahatchee Options




Tracking salinity in mangrove ponds
for Florida Bay MFL criteria
MFL rule adopted
30 d running
average salinity (ppt)
50
40
30
20
10
0
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09


5 Creek Discharge into Florida Bay
Katrina
Cumulative Flow
(thousands acre-ft / month)
150
100
50
0
1/1/05
1/1/06
1/1/07
1/1/08
1/1/09