



Ecological Conditions Report

March 12, 2009



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Snail Kites Nesting In Upper Kissimmee Basin



Lake Toho and Lake Jackson

- Snail Kite courtship and nesting activity in January
- As of early February, four snail kite nests have been observed (three on Lake Toho, one on Lake Jackson)



Kissimmee River Recession

Lower Kissimmee Basin

- Constant flow maintained in the Kissimmee River
- Dissolved oxygen levels remain above levels of concern
- Dry season drawdown on track to reach low stage by May 15

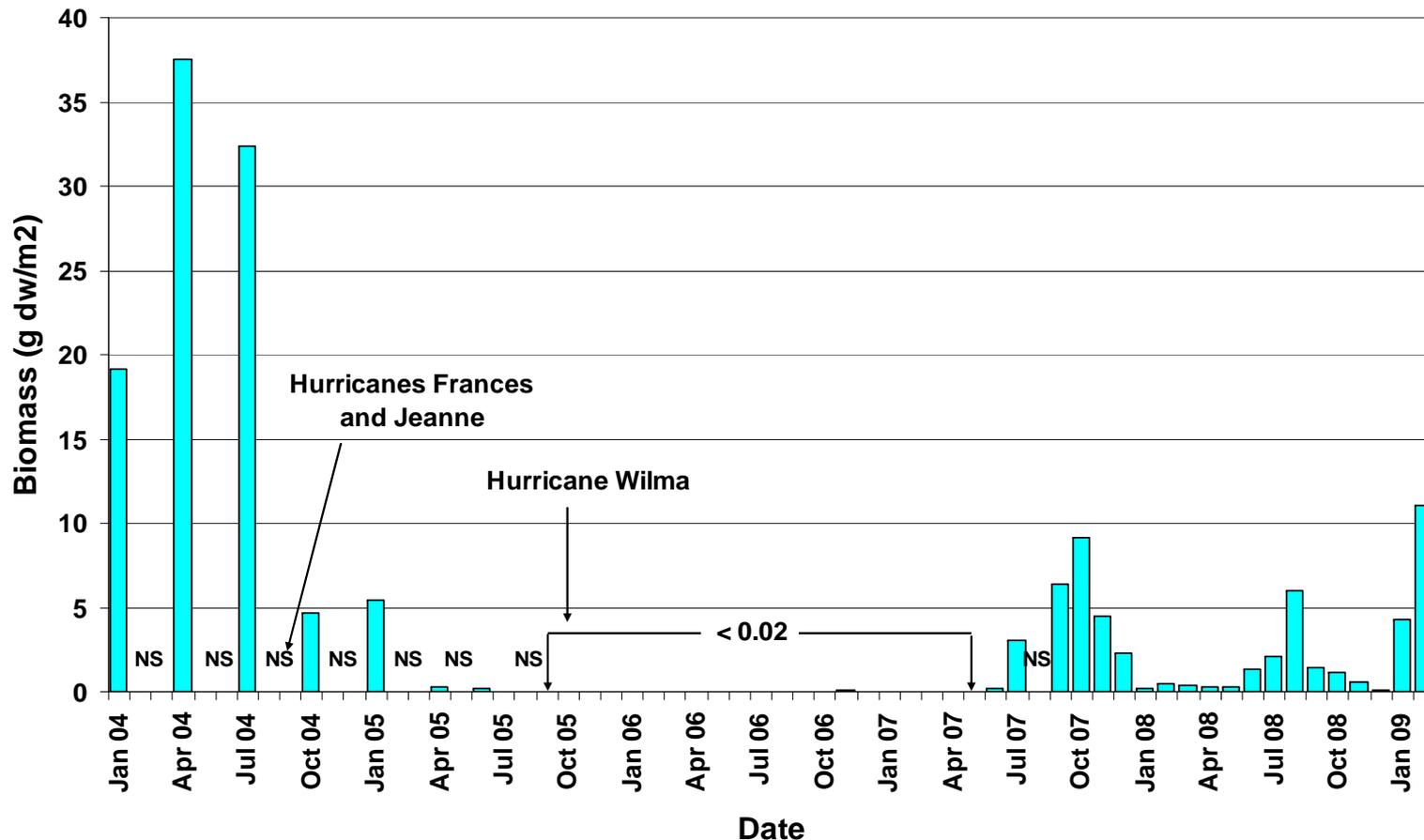


February 11, 2009



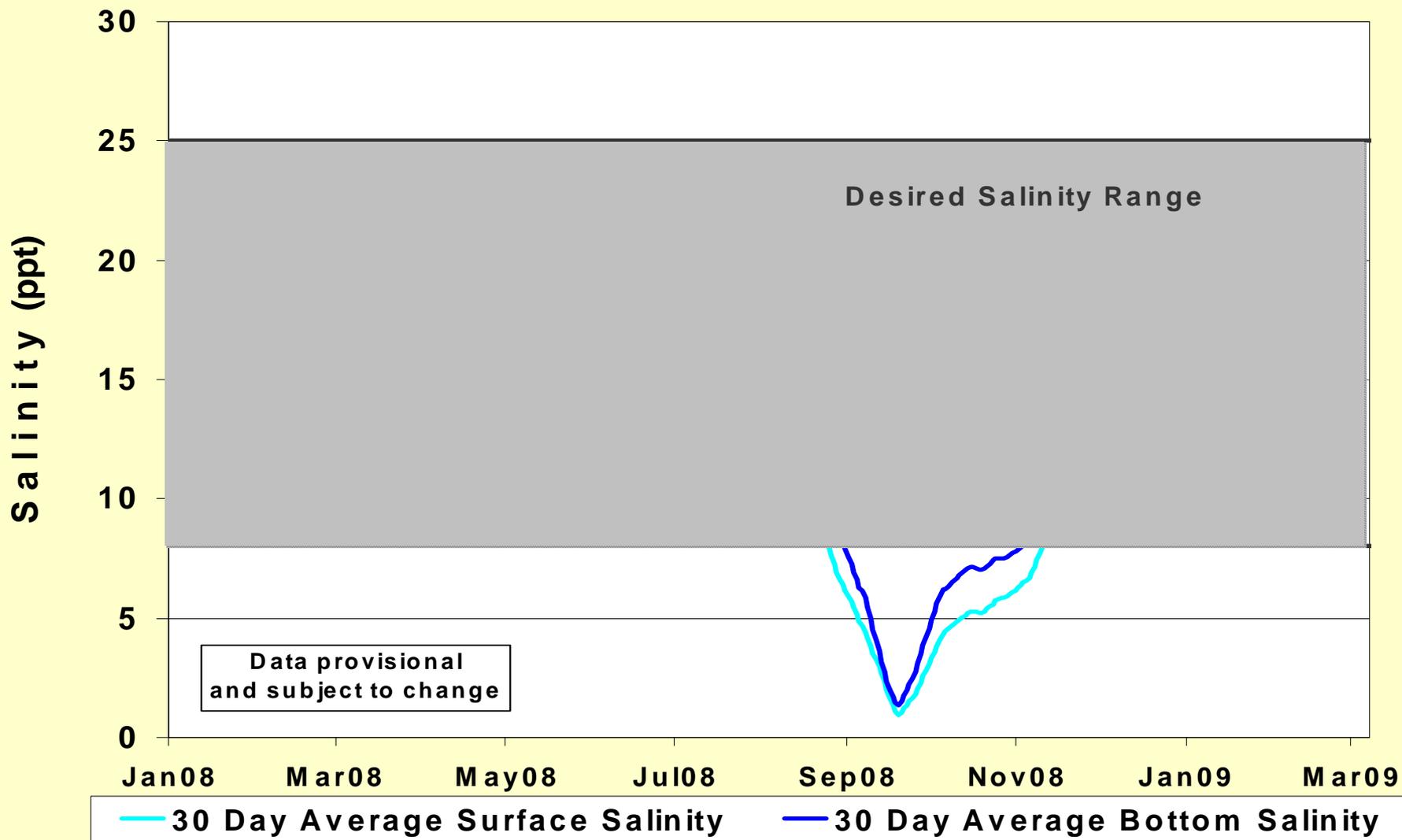
Lake Okeechobee Submerged Aquatic Vegetation

Average SAV Biomass



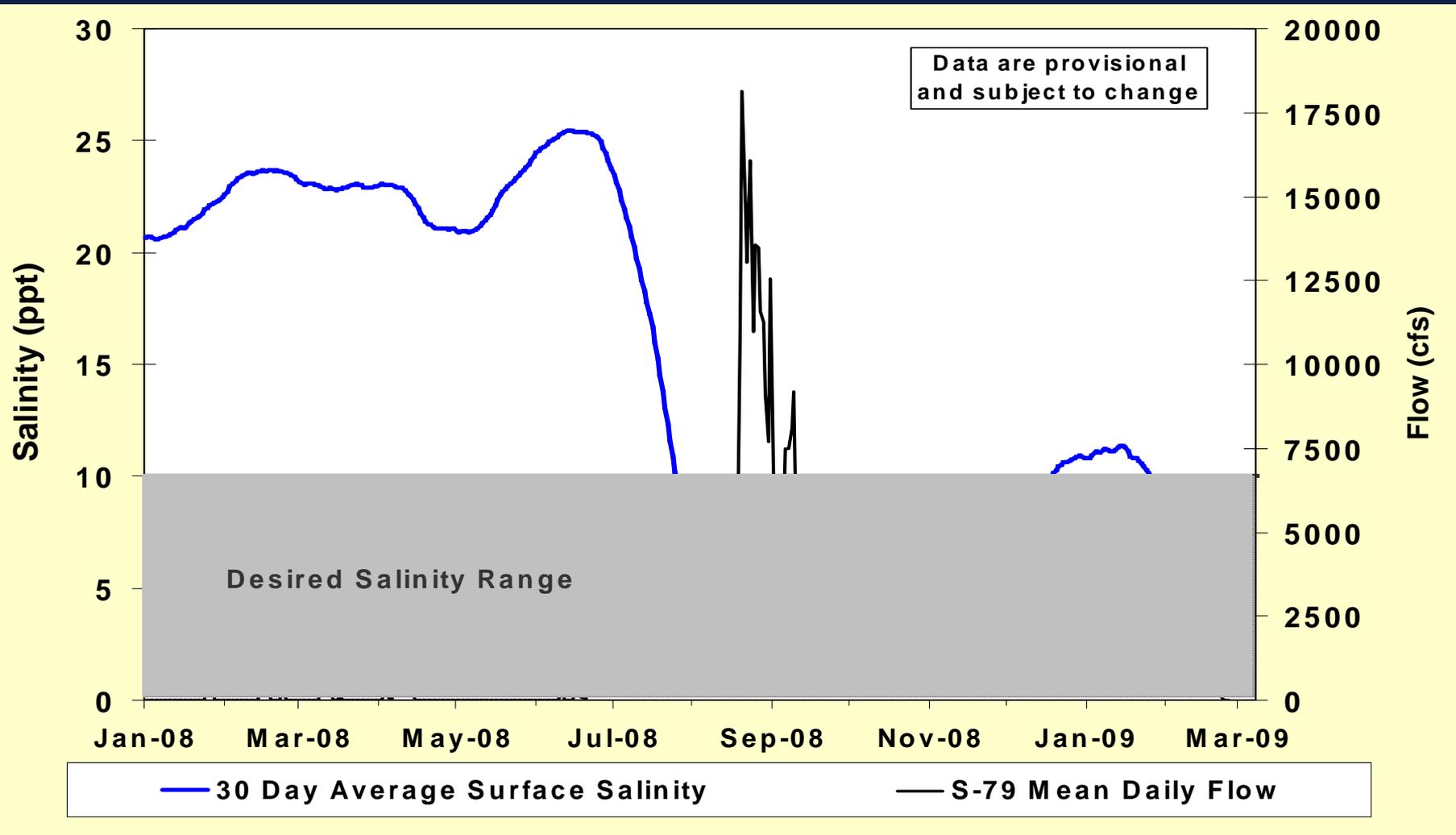


St. Lucie Estuary Salinity Envelope US 1 Bridge





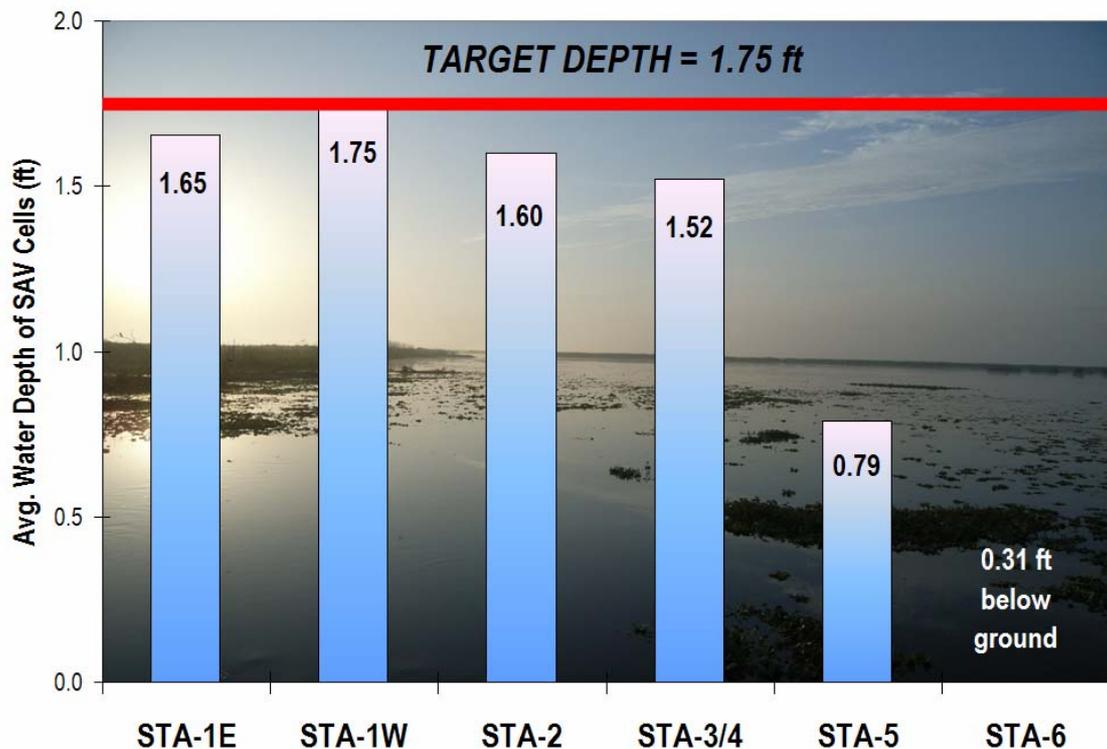
Caloosahatchee Salinity Ft. Myers





STA Supplemental Water

Water Depth Conditions as of March 4, 2009



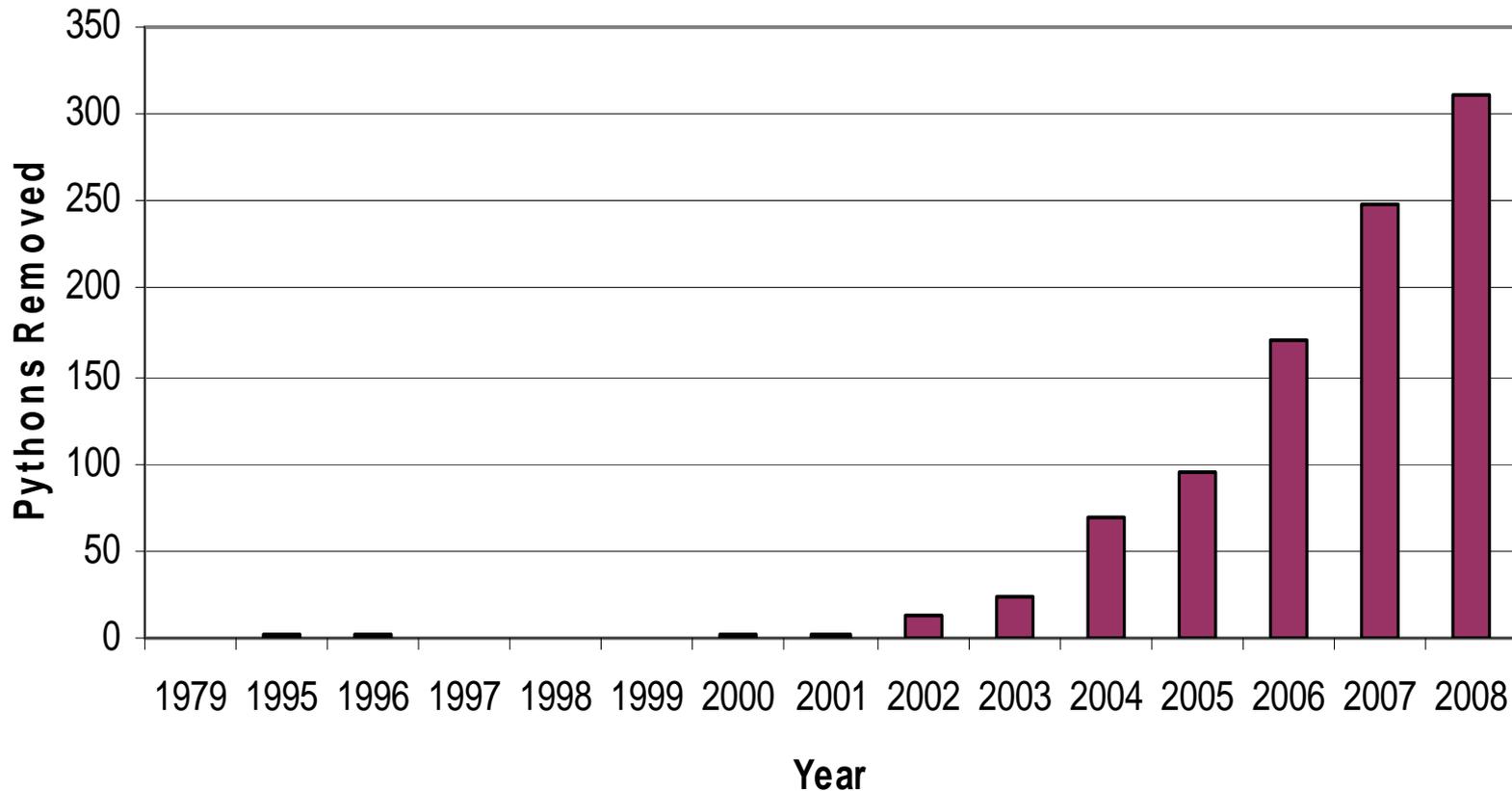
Benefits

- Sustains vegetation
- Minimizes post-drydown phosphorus spikes
- Discourages migratory bird nesting
- Minimizes establishment of undesirable upland vegetation

Supplemental deliveries started January 14, 2009
 Approx. 16,000 ac-ft delivered through February 2009



Pythons Removed



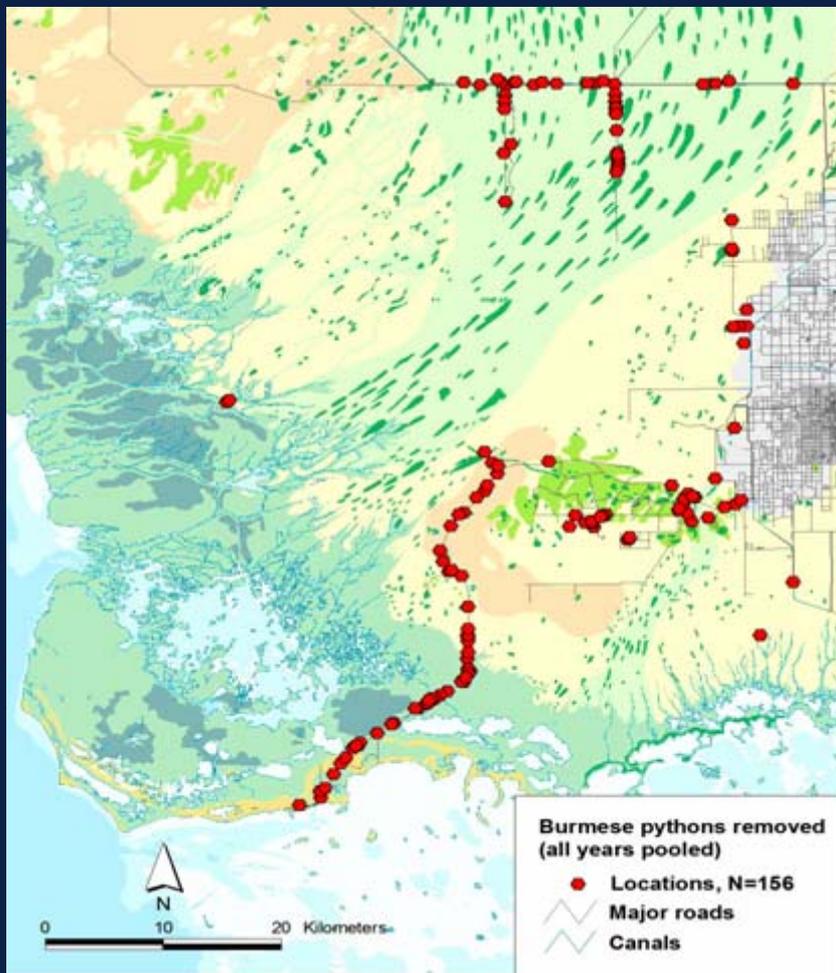


Pythons Recently Collected





Pythons Expanding Their Range



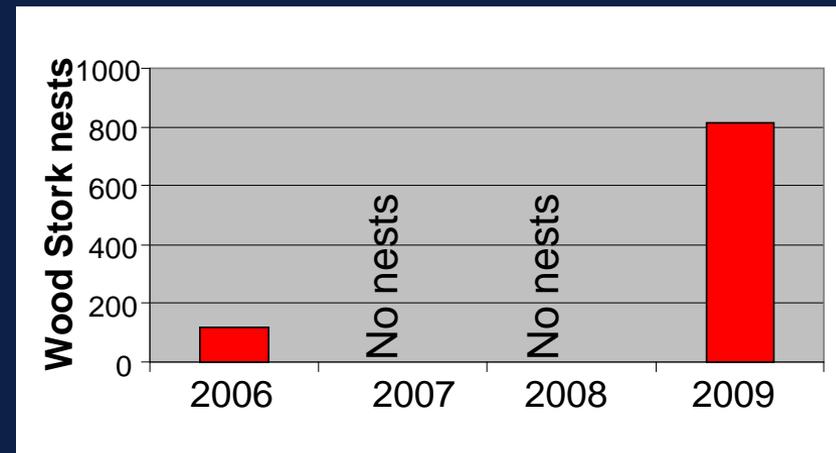
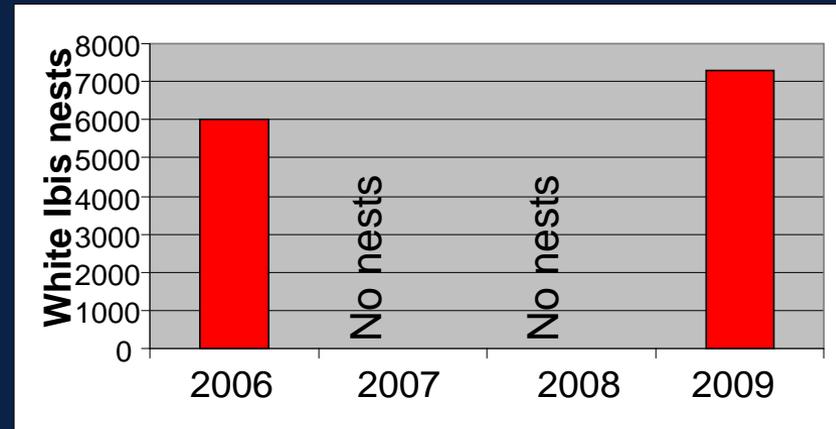


Everglades Wading Bird Nesting

- Nesting early & in large numbers.
- Numbers are higher than during the very successful year of 2006.
- **CAUTION:** The good start may be offset by the increasingly dry conditions.



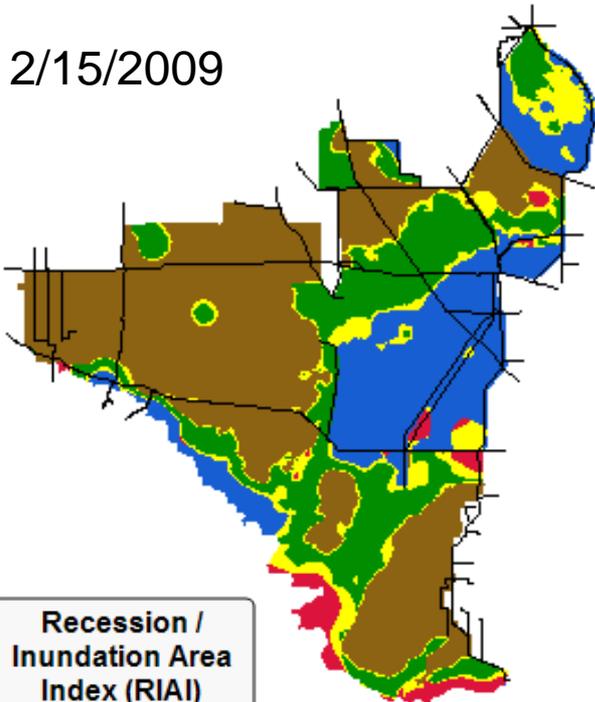
March nest numbers 2006-2009



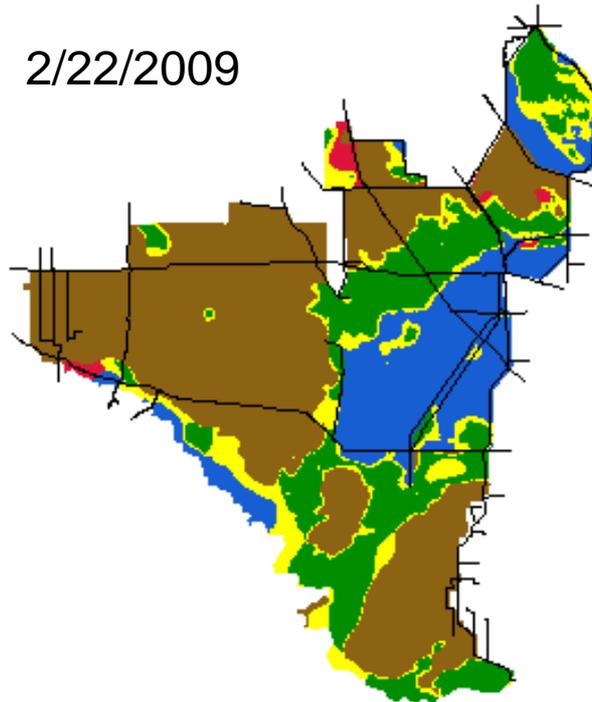


Wading Bird Recession Index

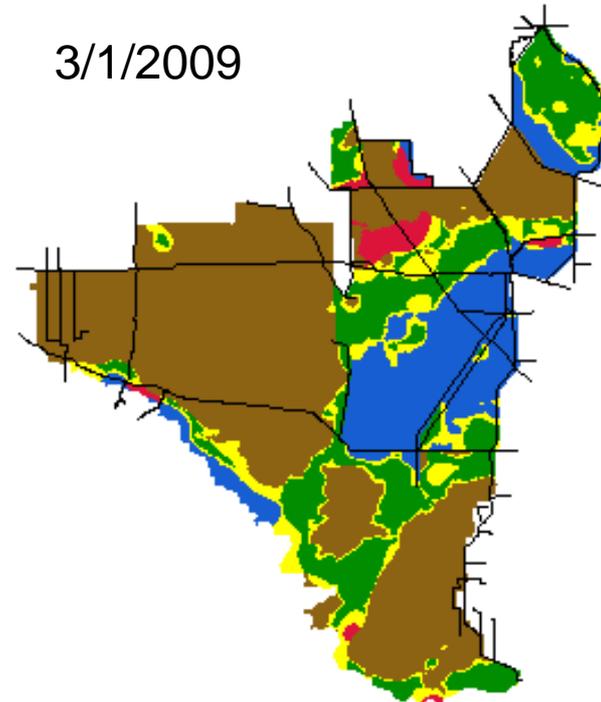
2/15/2009



2/22/2009



3/1/2009



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'

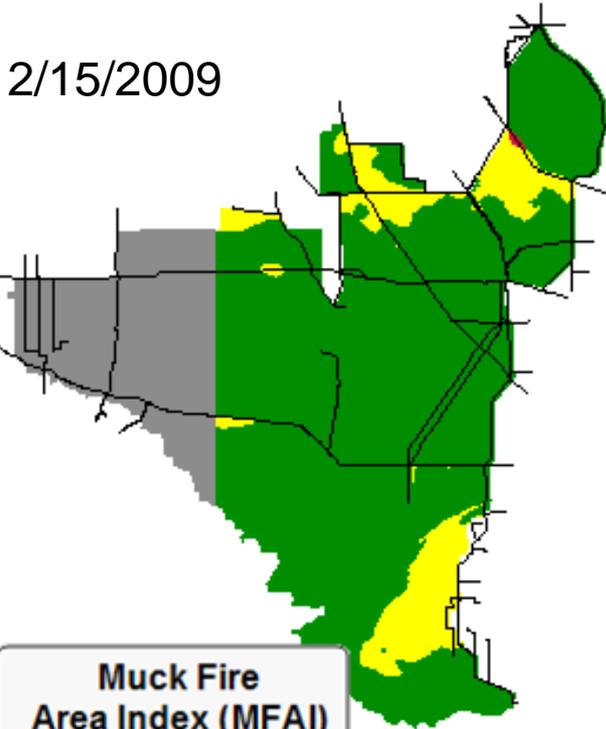
Fair: -0.04 to +0.04' for one week

Bad: -0.04 to +0.04' for 2 weeks or \geq +0.041' for one week

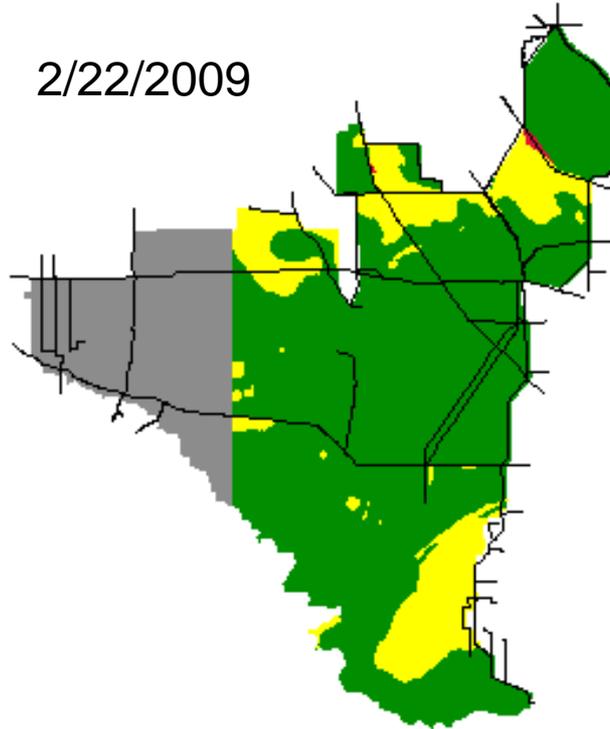


Muck Fire Index

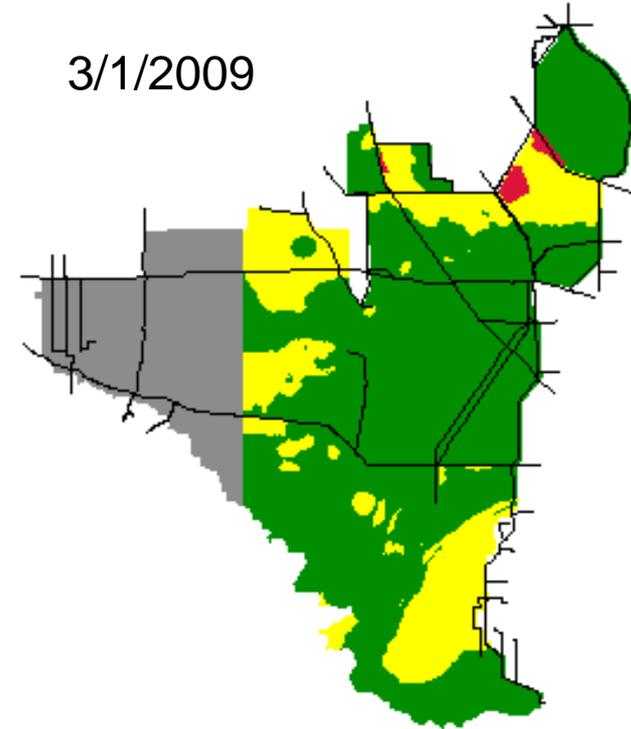
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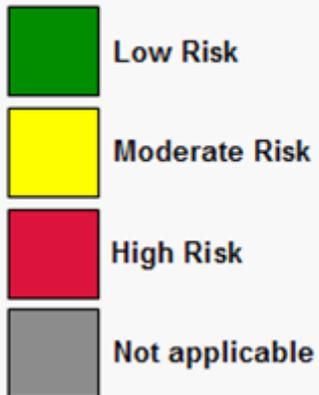
2/22/2009



3/1/2009



Muck Fire Area Index (MFAI)



$$\text{Muck Fire Index} = (\text{WDI} \times 20) + (\text{AFDI} \times 20)$$

- Water Depth Index (WDI): Water Depth Based Classes that range from 1-5.
- Ash Free Dry Weight Index (AFDI): Proportion of ash free dry weight classes that range from 1-5.



Water Supply Concerns Increasing



- **Lake Okeechobee low and dropping fast**
- **Groundwater levels dropping everywhere**
- **LEC groundwater levels of most concern**
- **Chlorides increasing near Utilities at Risk**
- **Water Shortage Team activities increasing**



Water Shortage Activities



- **Contracting for installment of Lake temporary forward pumps**
- **Identify low lake level projects**
- **E-letter to utilities urging conservation**
- **Increased outreach – press conference**
- **Focus on compliance with current 2 days/week watering**
 - **prior to any increase in restrictions**

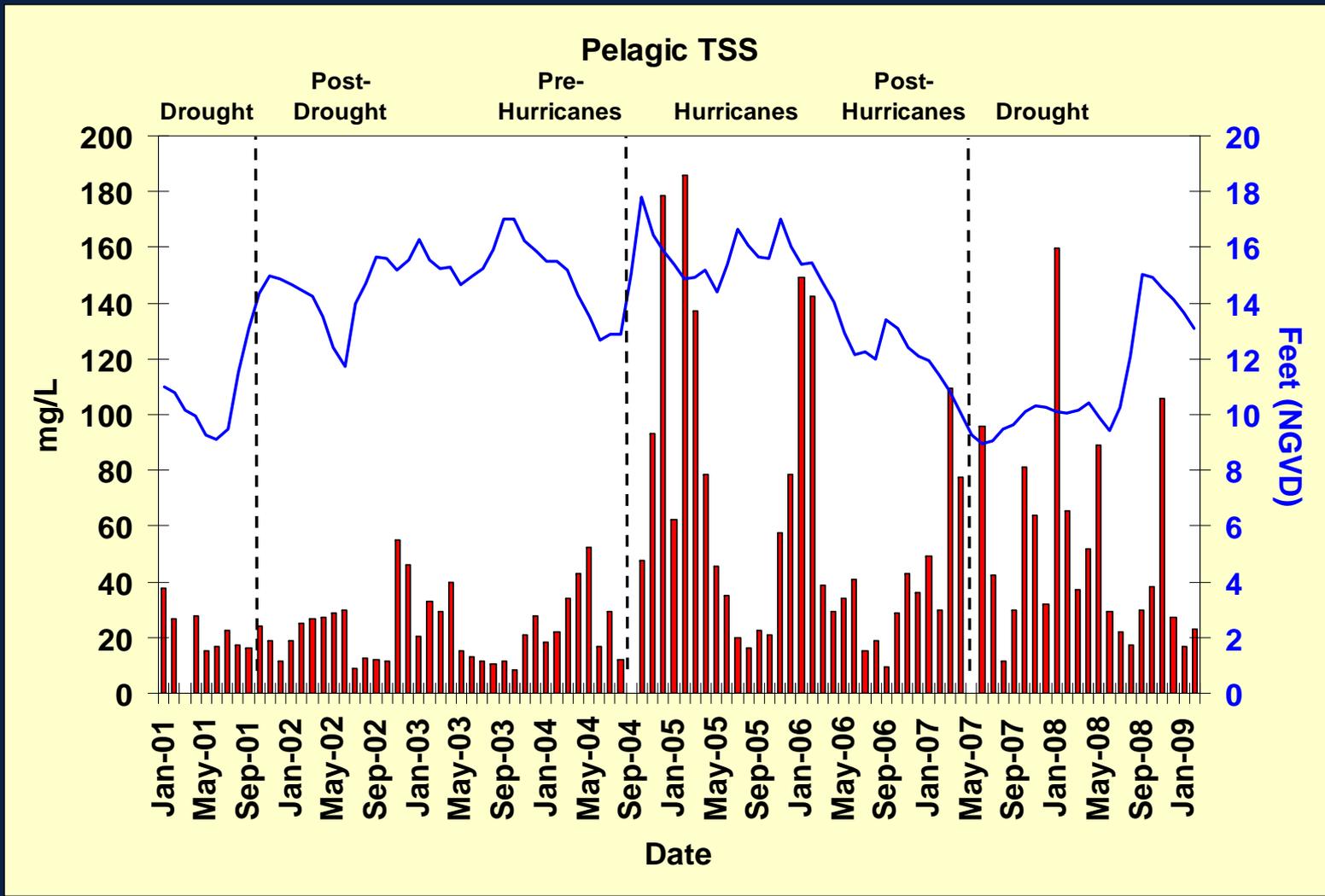


Continue Supplemental Deliveries to the Caloosahatchee?

- **Corps has been pulse-releasing 650 cfs**
 - **Maintaining MFL**
 - **Last pulse ended Saturday**
- **Equals 39,000 ac-ft/month**
 - **0.10 feet from Lake Okeechobee**
 - **0.30 feet to maintain for rest of dry season**
- **Stop – MFL exceedance**
- **Continue – May be difficult to maintain for 4 months**

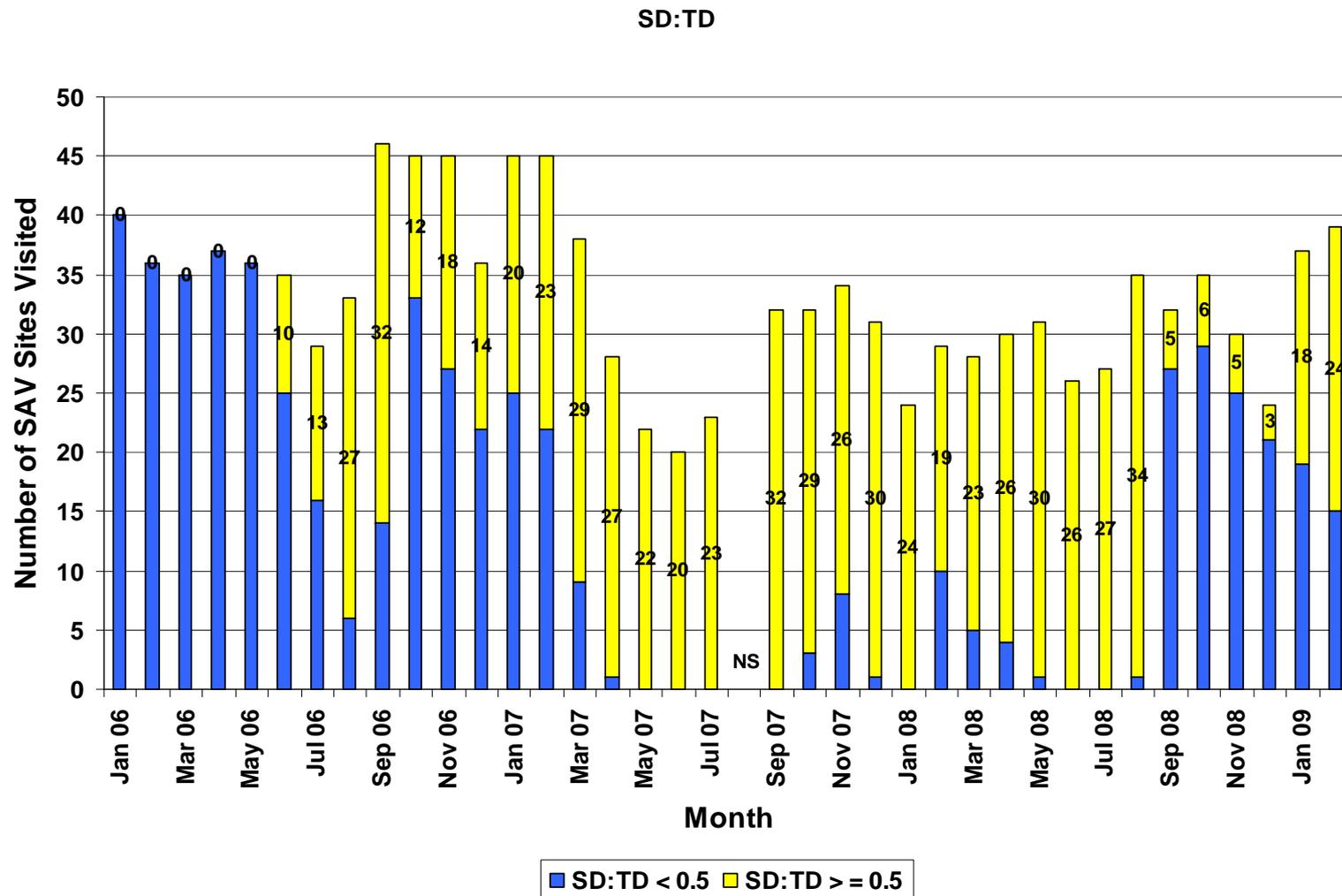


Lake Okeechobee Water Quality



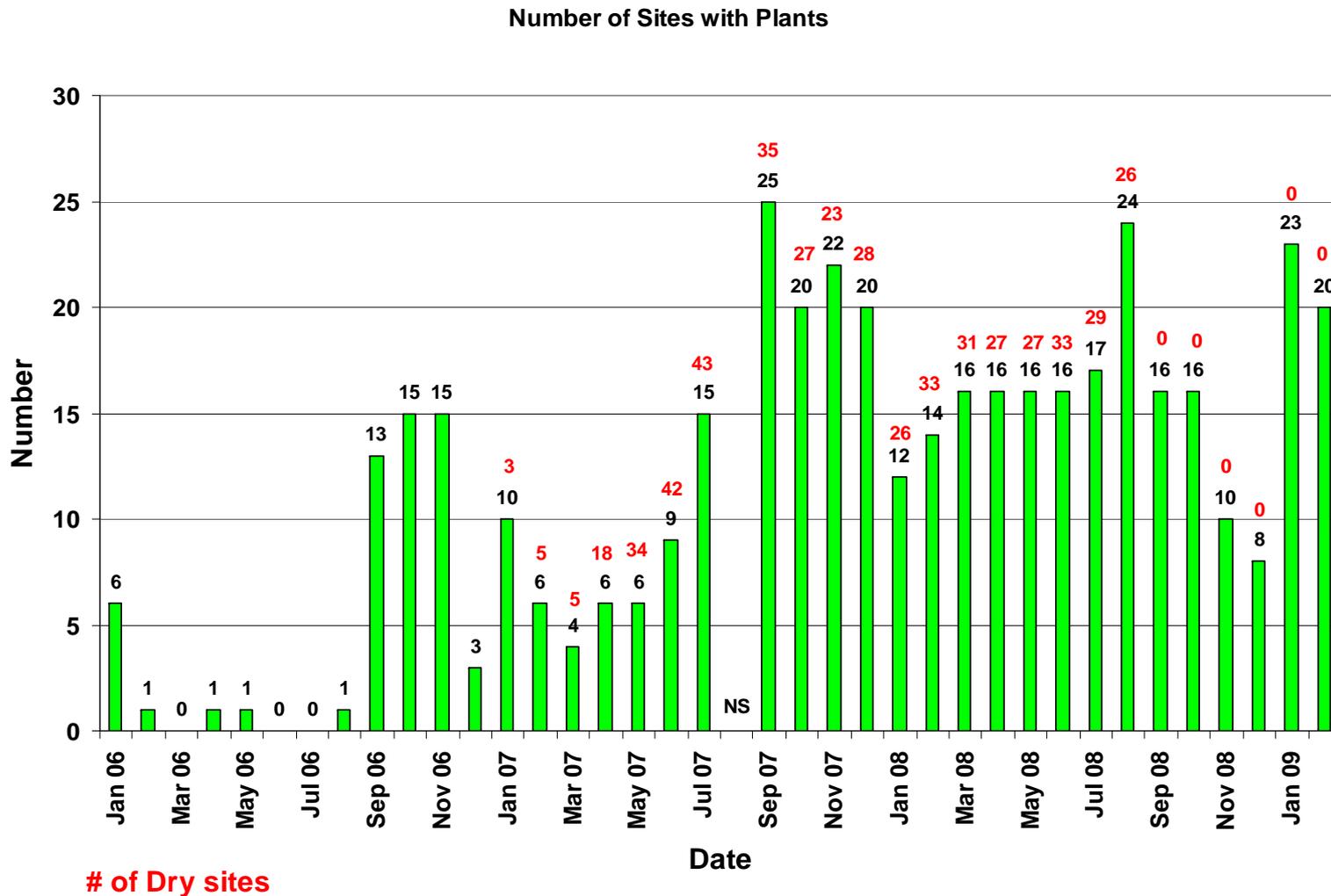


Lake Okeechobee Water Quality





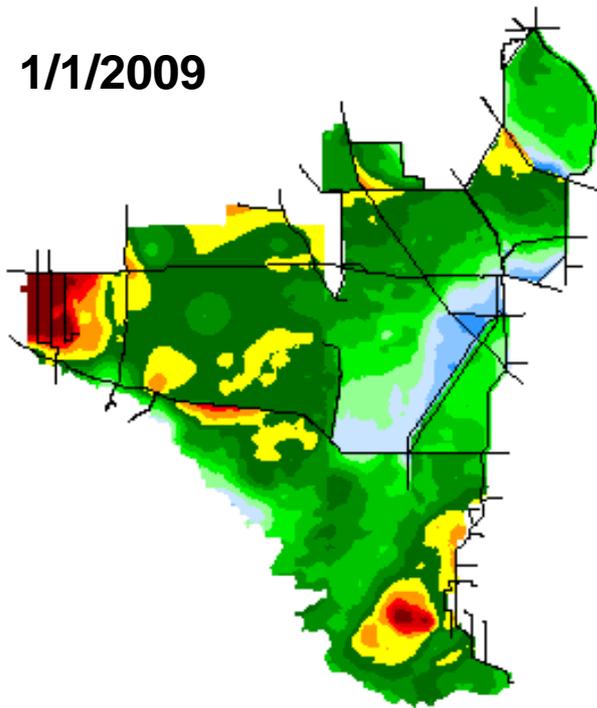
Lake Okeechobee Submerged Aquatic Vegetation



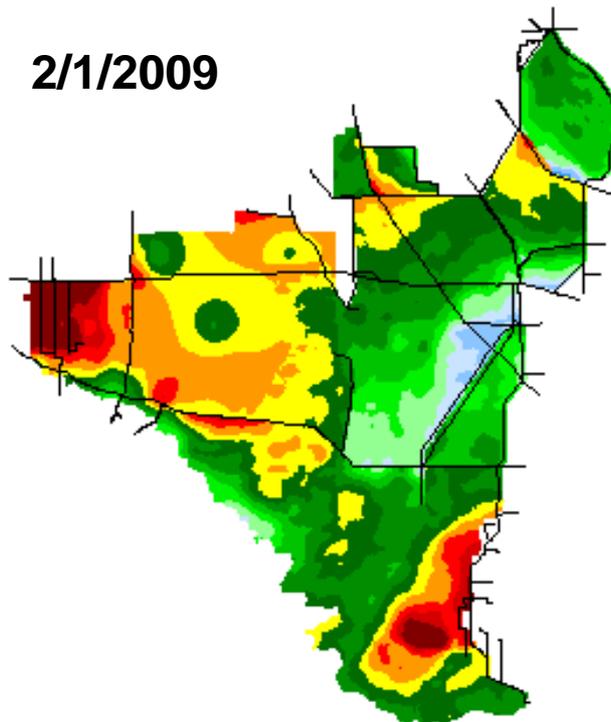


Water Depths

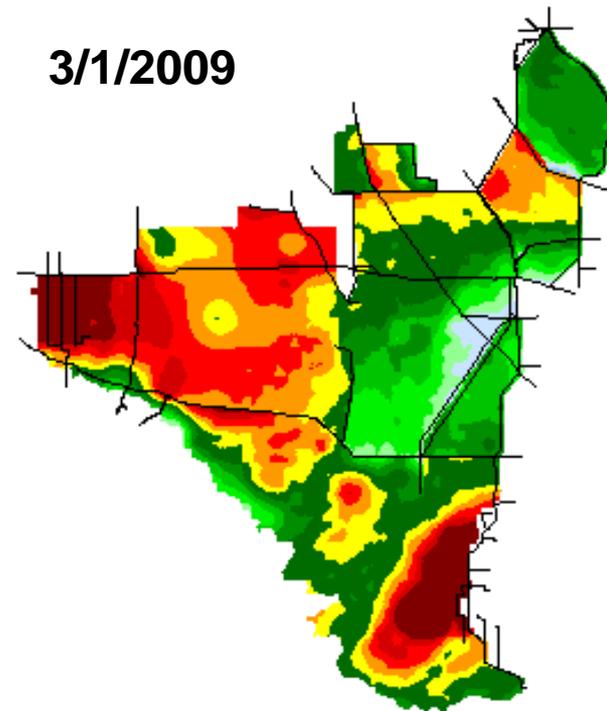
1/1/2009



2/1/2009



3/1/2009



Water Depth (Feet)

-2.50

0.00

2.50

5.00





Loxahatchee Impoundment Landscape Assessment Outreach Update

- Hosted the SFWMD Watershed Management meeting and provided a tour for attendees
- Conducted public tours of LILA for ~160 people on Everglades Day



- Hosted a tour for the South Florida Ecosystem Restoration Task Force
- Instituted an Outreach Program with the FAU Center for Environmental Studies
- Developed an Outreach Work Plan for 2009