

# Water Conditions Summary

**South Florida Water Management District  
Governing Board Meeting**

**February 14, 2013**

Tommy B. Strowd, P.E., Director  
Operations, Maintenance & Construction Division

# SFWMD

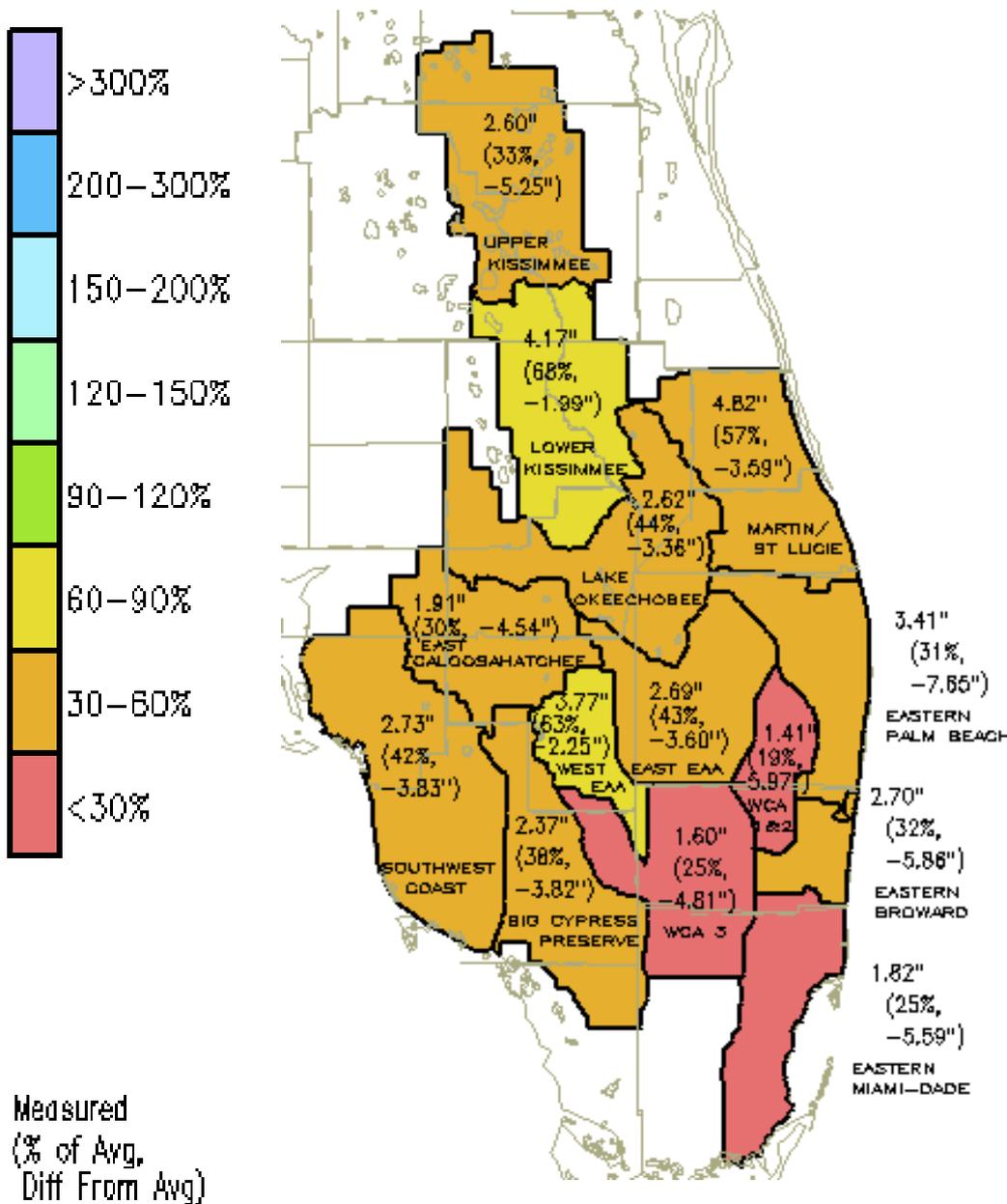
## Dry Season Rainfall

2 Nov 2012 – 7 Feb 2013

**DISTRICT-WIDE: 2.82"  
(40% of Avg, or -4.17")**

**All basins below average:**

- **Lowest**
  - **WCA-1 & 2 19% of average**
  - **Eastern Miami-Dade 25 % of average**
- **Closest to average**
  - **Lower Kissimmee with 68% of average**
  - **West EAA with 63% of average**

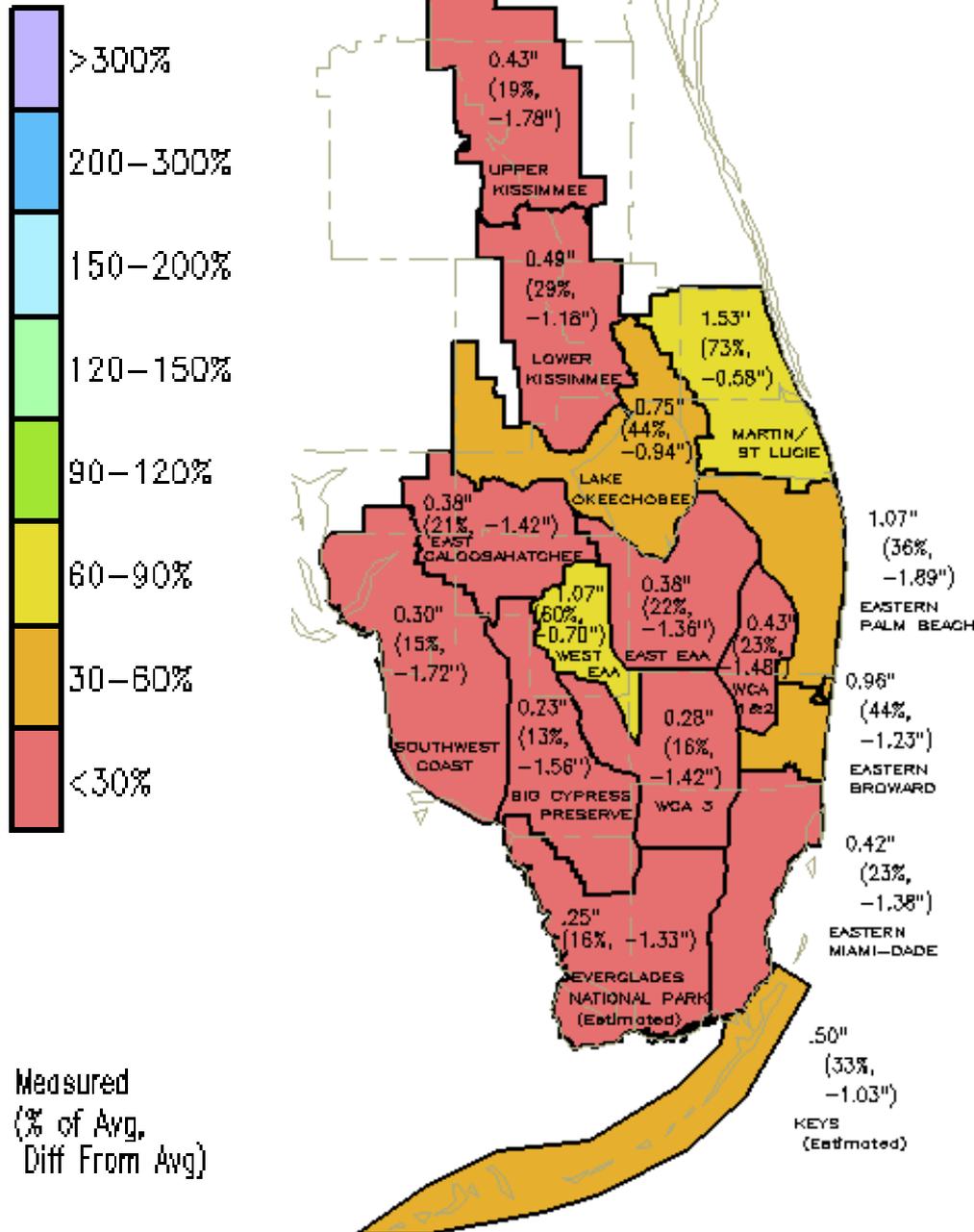


# SFWMD January 2013 Rainfall

(Jan 2 2013 – Feb 1 2013)

**DISTRICT-WIDE: 0.59"  
(31% of Avg or -1.34")**

- 10 basins are reporting below 30% of average
- Best positioned basin is Martin/St. Lucie with 73% of average
- For the twelfth time in the last fourteen years, January produced below average rainfall



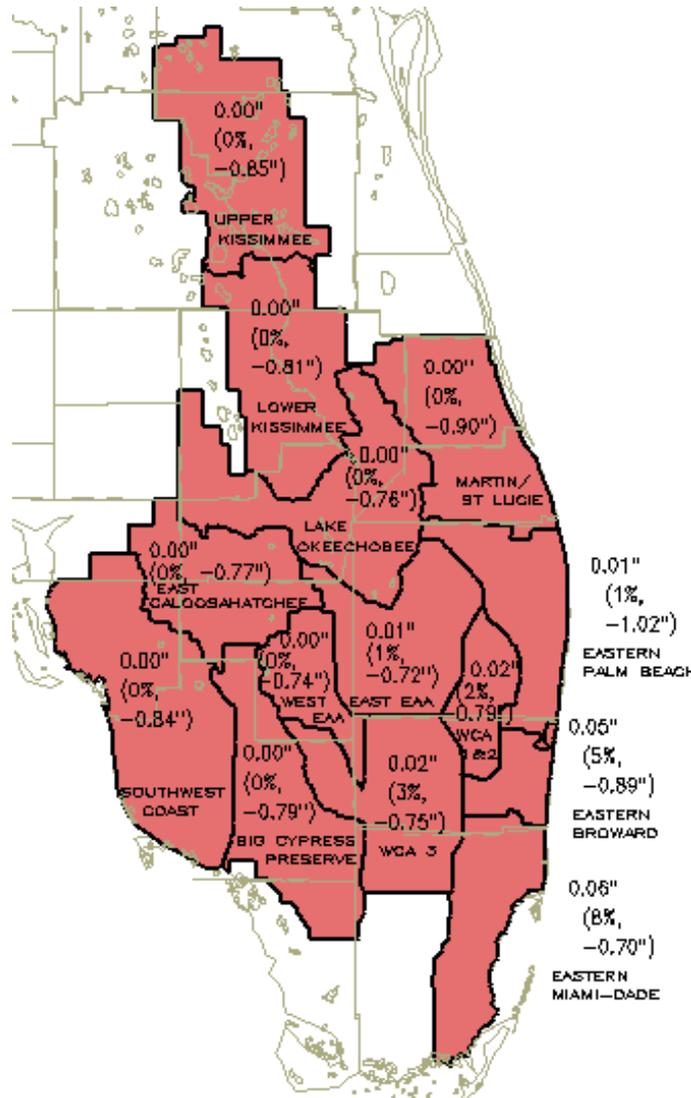
# SFWMD

## February 2013 Rainfall

(Jan 2 - 8, 2013)

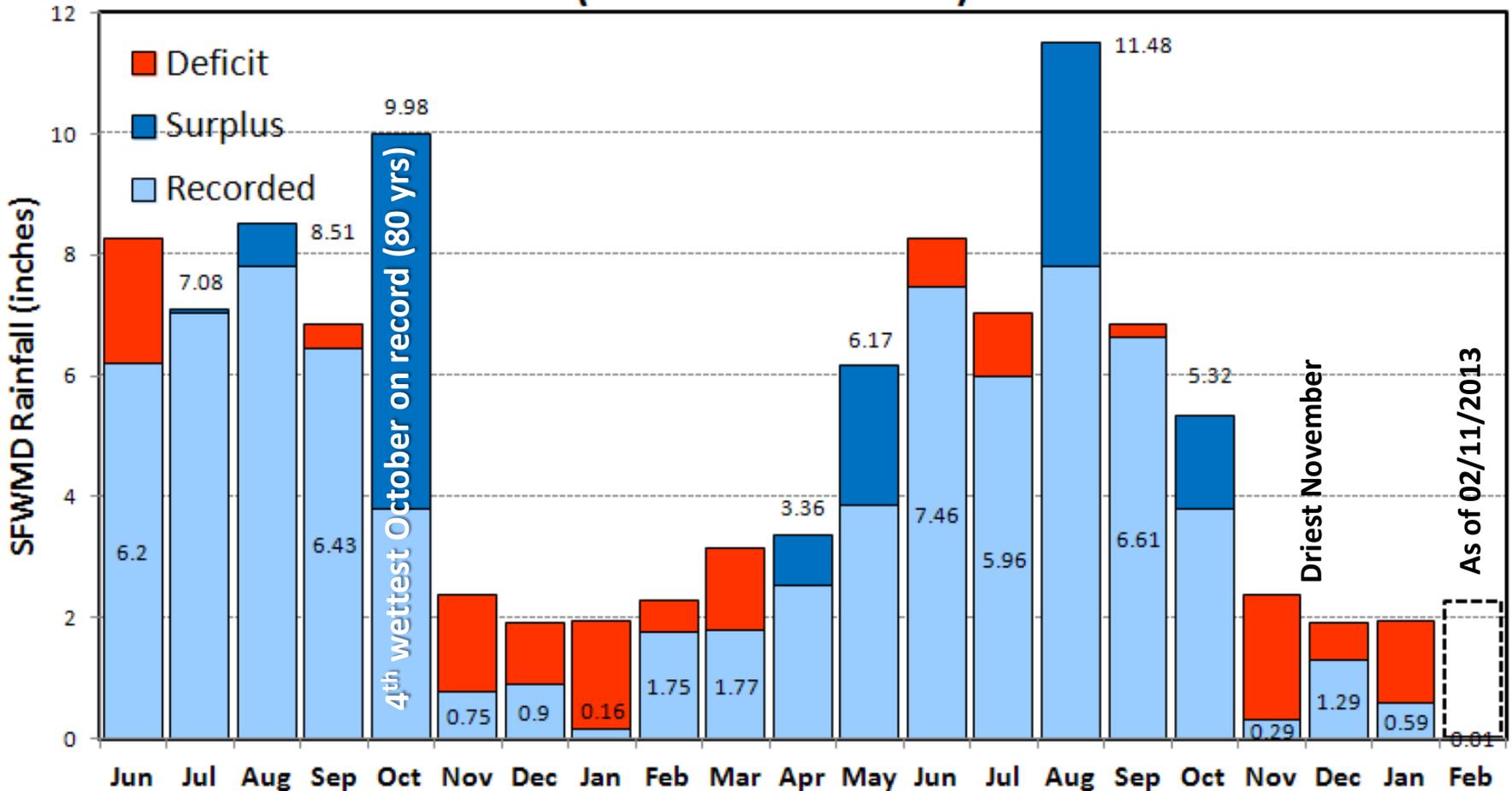
**DISTRICT-WIDE: 0.01"**  
**(1% of Avg, or -0.80")**

- All basins are below 30% of average
- 6 basins show some rainfall



Measured  
(% of Avg,  
Diff From Avg)

# SFWMD Rainfall Distribution Comparison (Jun 2011 - Feb 2013)



### 2011-12 DRY SEASON:

- Record dry in Upper Kissimmee (98 yrs)
- Ended up close to average

### 2012-13 DRY SEASON:

- Driest November since 1932
- Below average so far

### 2011 WET SEASON:

- Latest start (June 12) in at least 20 years
- 3 Big Rain Days in October (2.3", 2.3" & 1.7")

### 2012 WET SEASON:

- Started early with wet May, followed by dry June and July . TS Isaac brought August rainfall high above average.
- Ended up above average.

# U.S. Drought Monitor

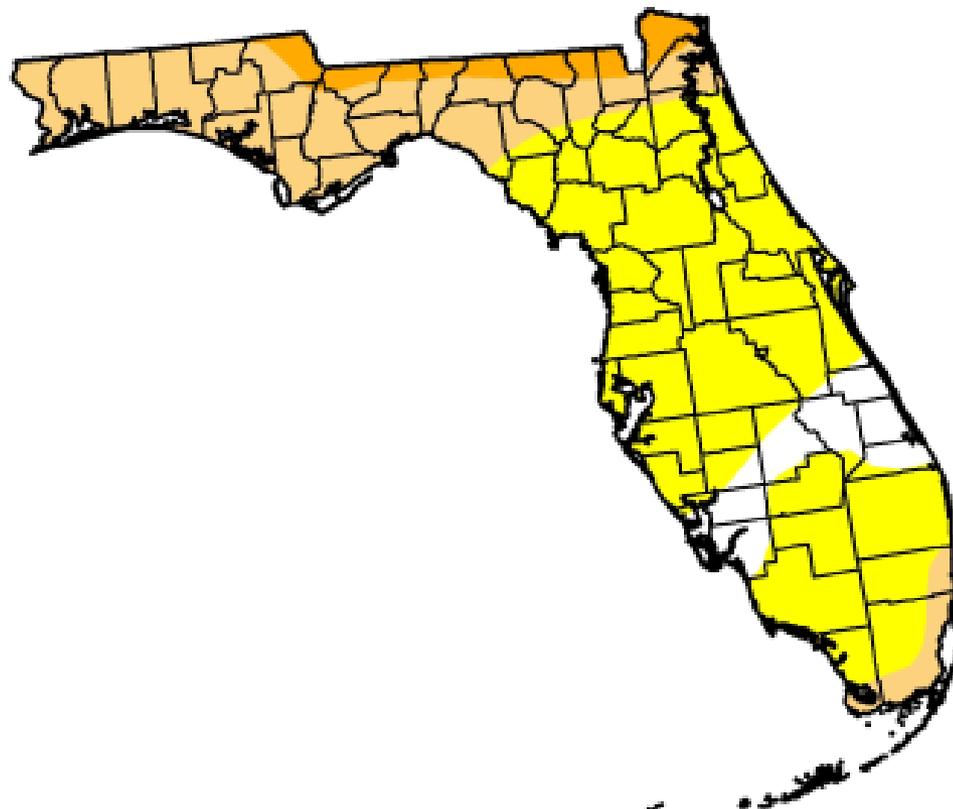
February 5, 2013

Valid 7 a.m. EST

## Florida

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	8.63	91.37	33.67	5.62	0.00	0.00
Last Week (01/29/2013 map)	9.75	90.25	30.98	5.62	0.00	0.00
3 Months Ago (11/06/2012 map)	98.90	1.10	0.00	0.00	0.00	0.00
Start of Calendar Year (01/01/2013 map)	56.86	43.14	3.13	0.00	0.00	0.00
Start of Water Year (09/25/2012 map)	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago (01/31/2012 map)	0.00	100.00	90.50	45.06	9.22	0.00



### Intensity:

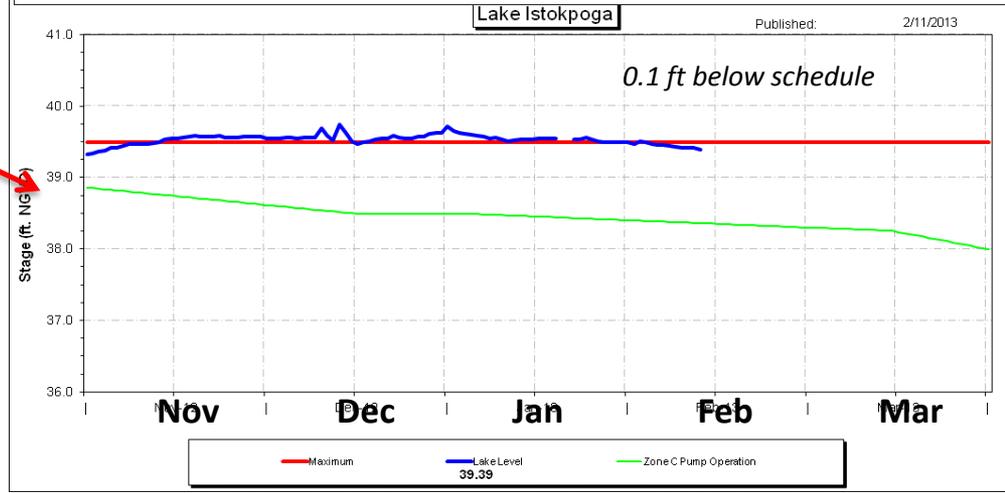
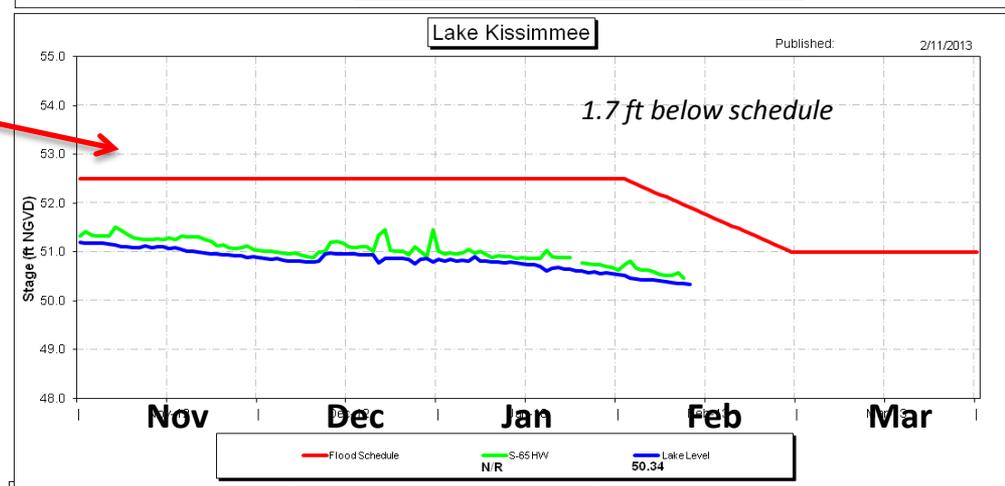
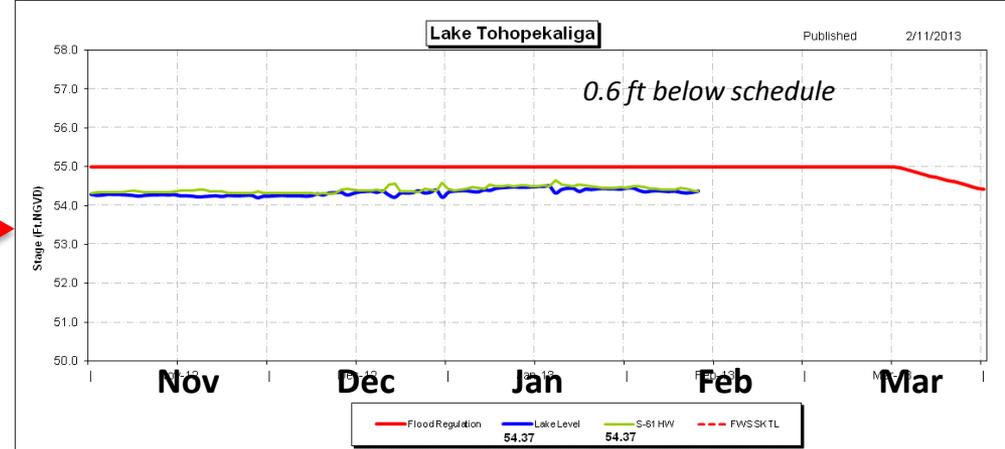
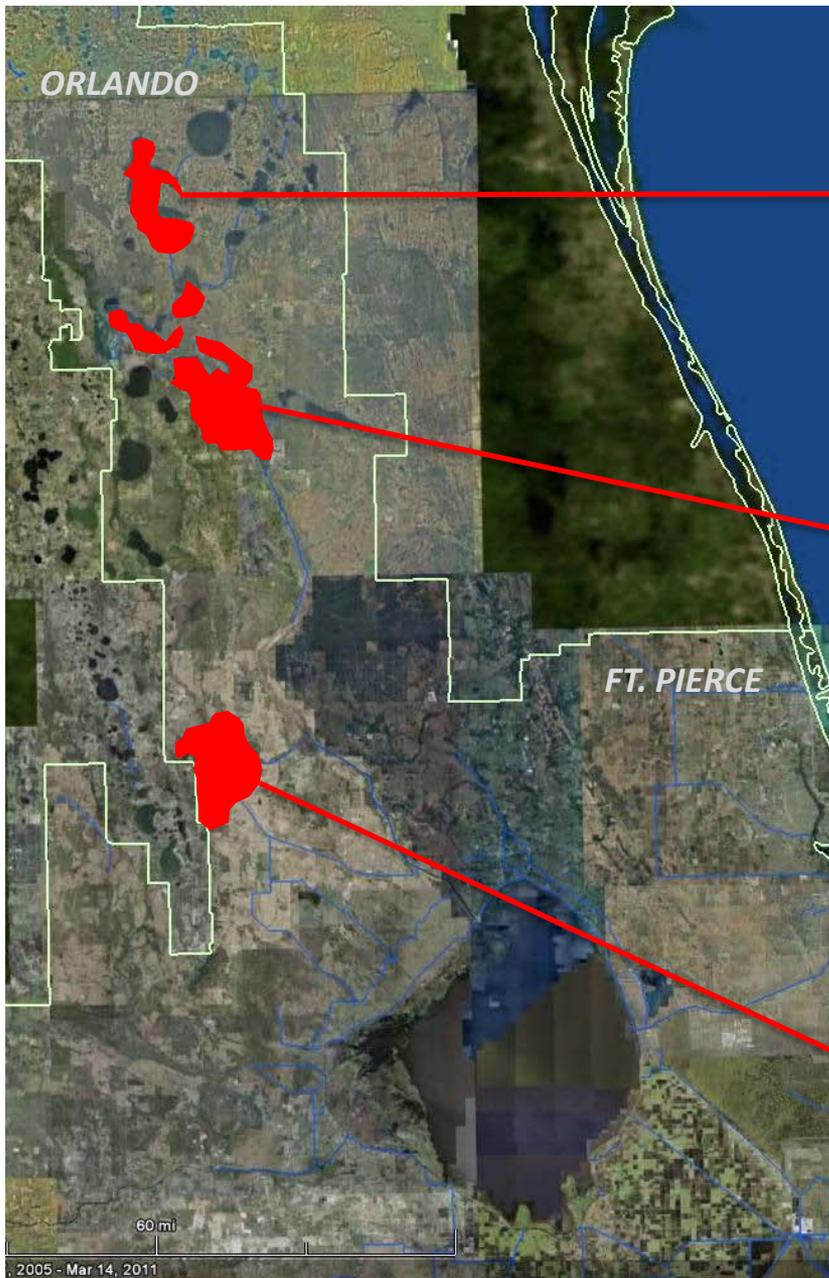
-  D0 Abnormally Dry
-  D1 Drought - Moderate
-  D2 Drought - Severe
-  D3 Drought - Extreme
-  D4 Drought - Exceptional

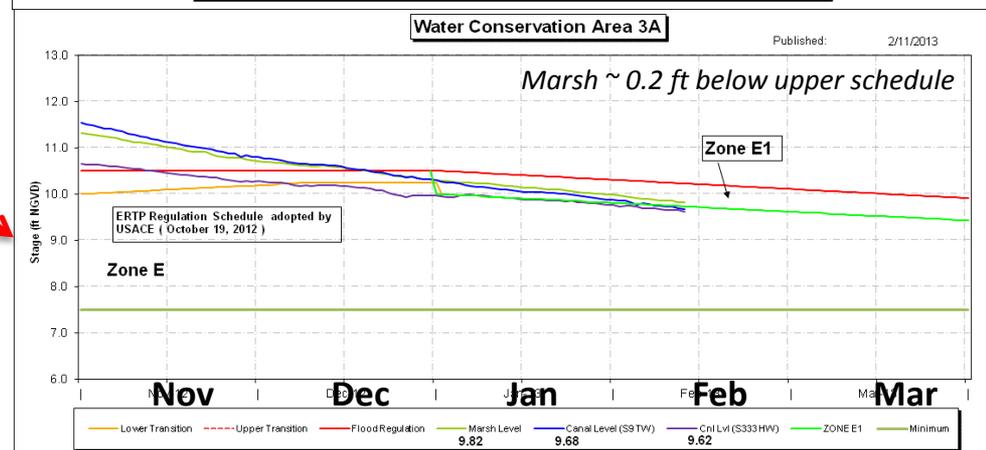
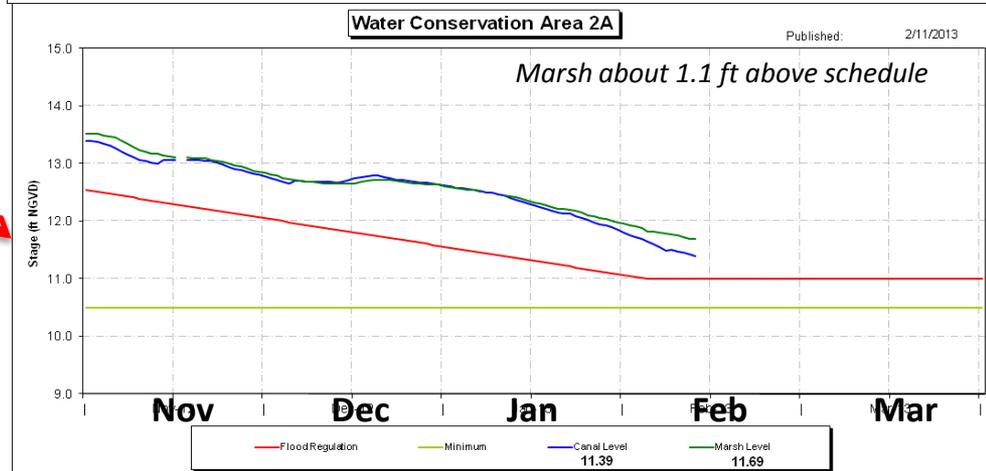
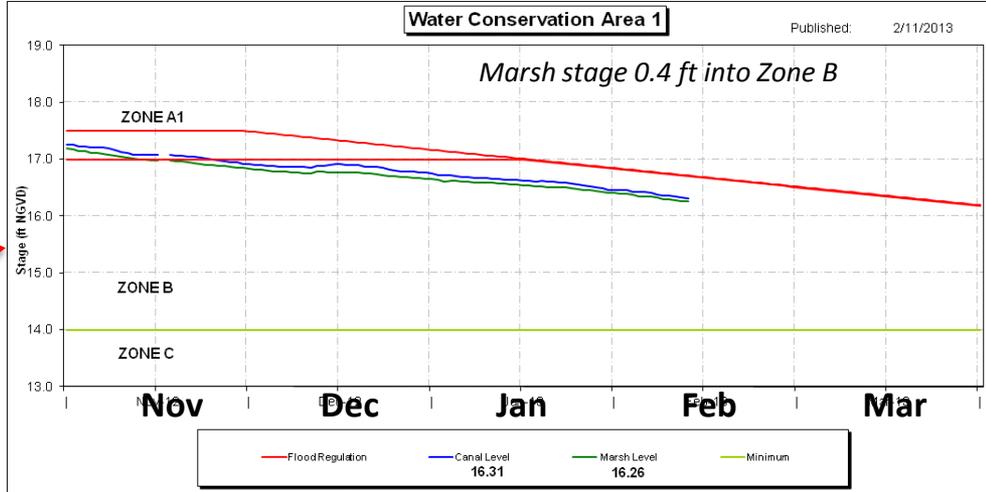
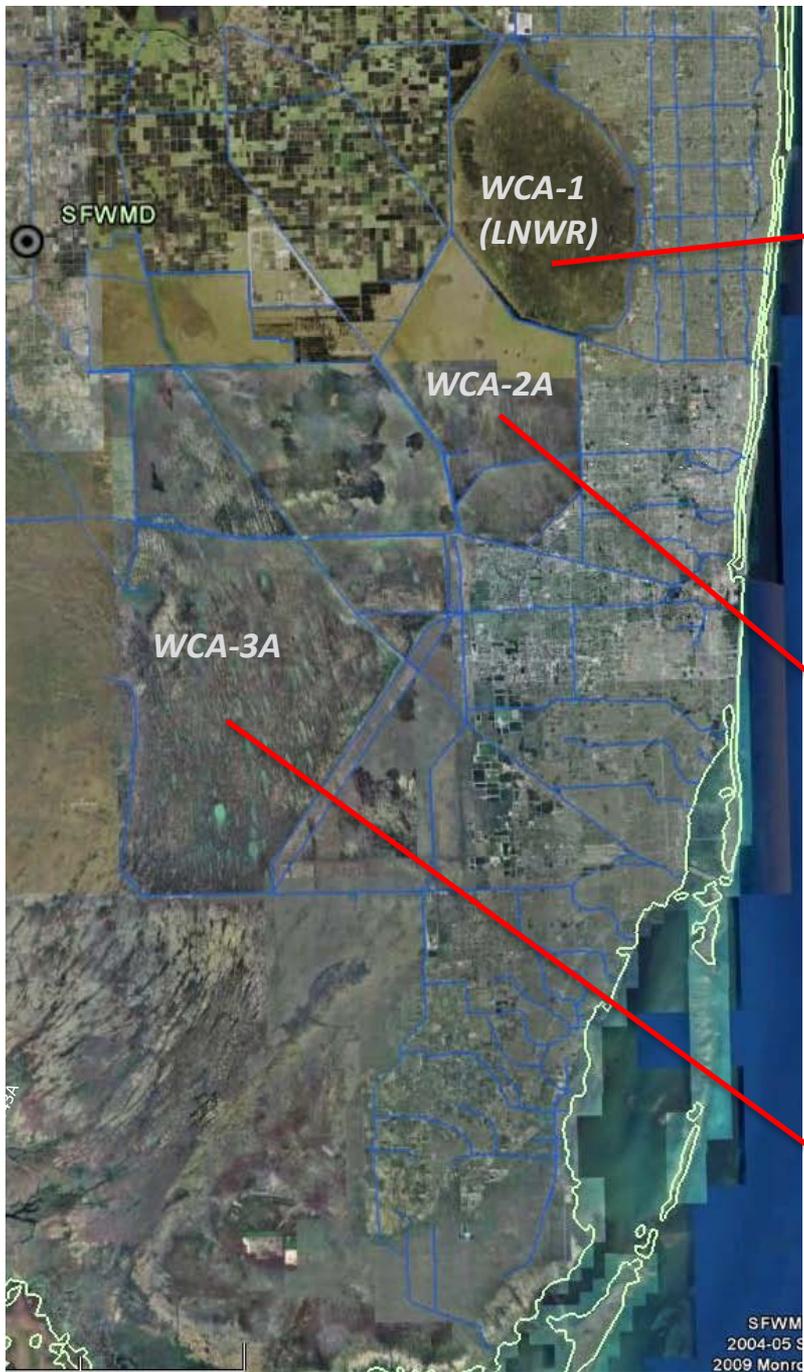
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>



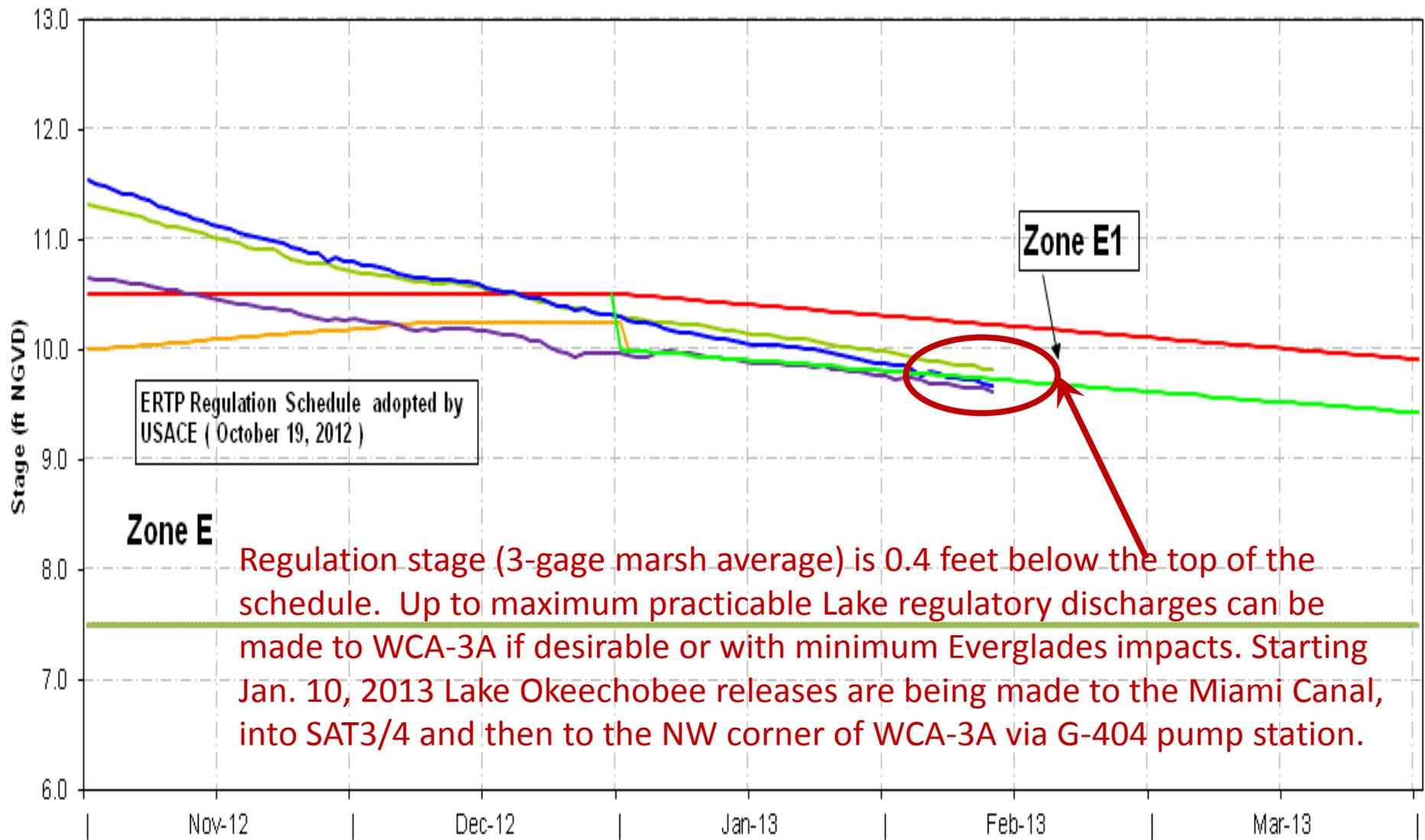
Released Thursday, February 7, 2013  
Michael Brewer, National Climatic Data Center, NOAA





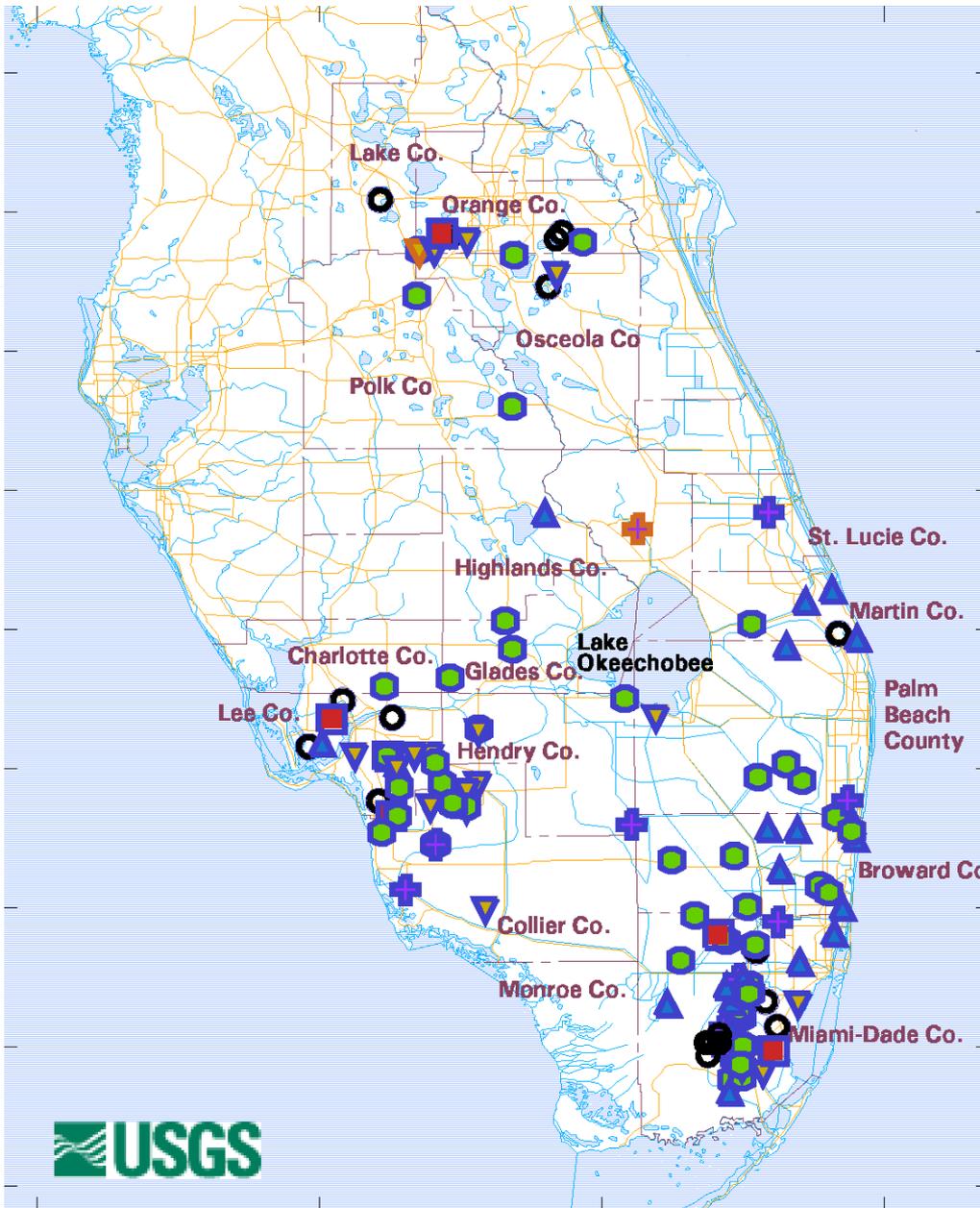
# Water Conservation Area 3A

Published: 2/11/2013



# Groundwater Levels

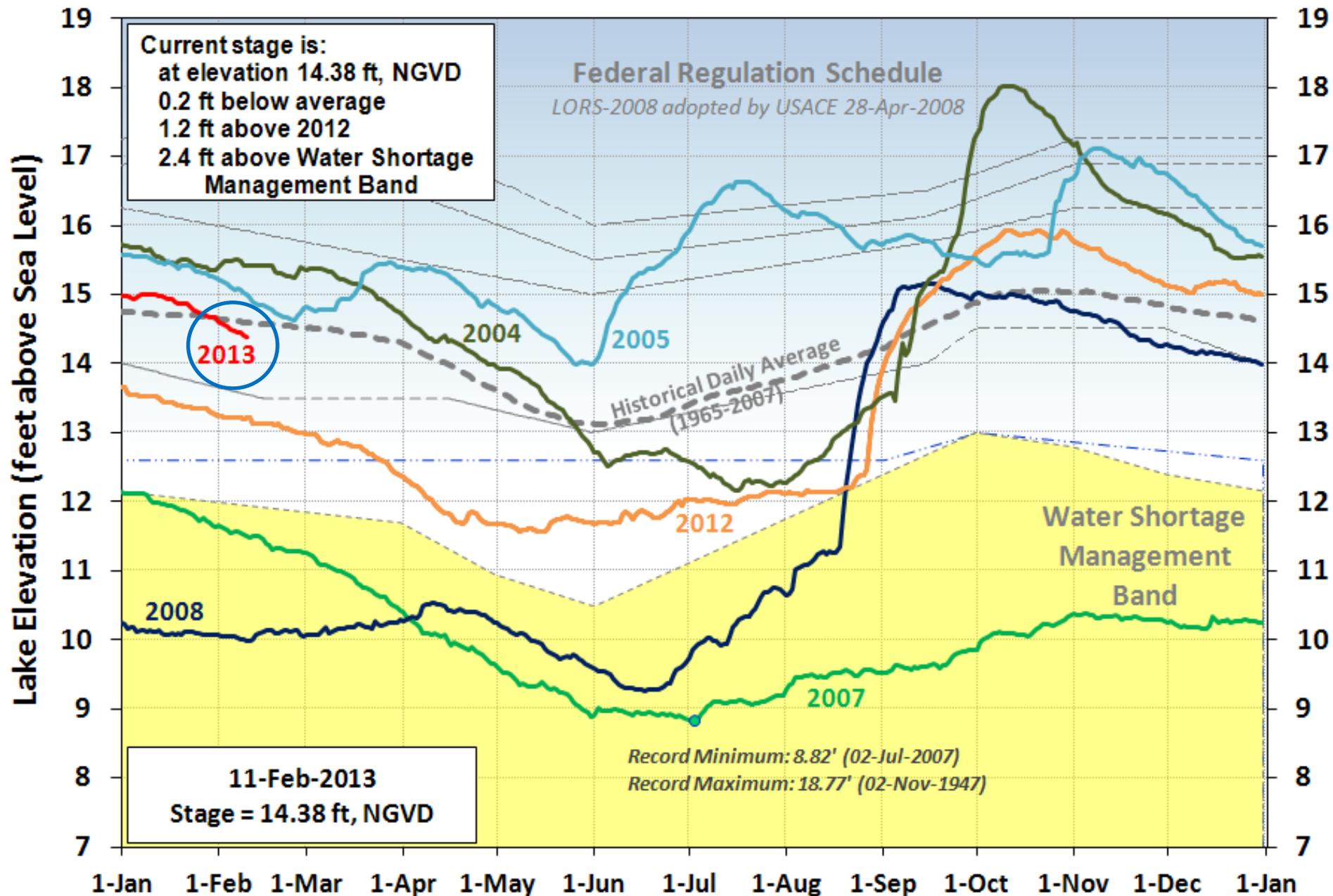
Water levels at selected sites in South Florida  
Based on PROVISIONAL DATA, as of February 11, 2013



Water level compared to historical data, without trend analysis:

-  Insufficient information available to compute water-level statistics
-  In lowest 10 percent of past water elevations
-  Within lowest 10 to 30 percent of past water elevations
-  Within 20 percent of the median of past water elevations
-  Within highest 10 to 30 percent of past water elevations
-  In highest 10 percent of past water elevations

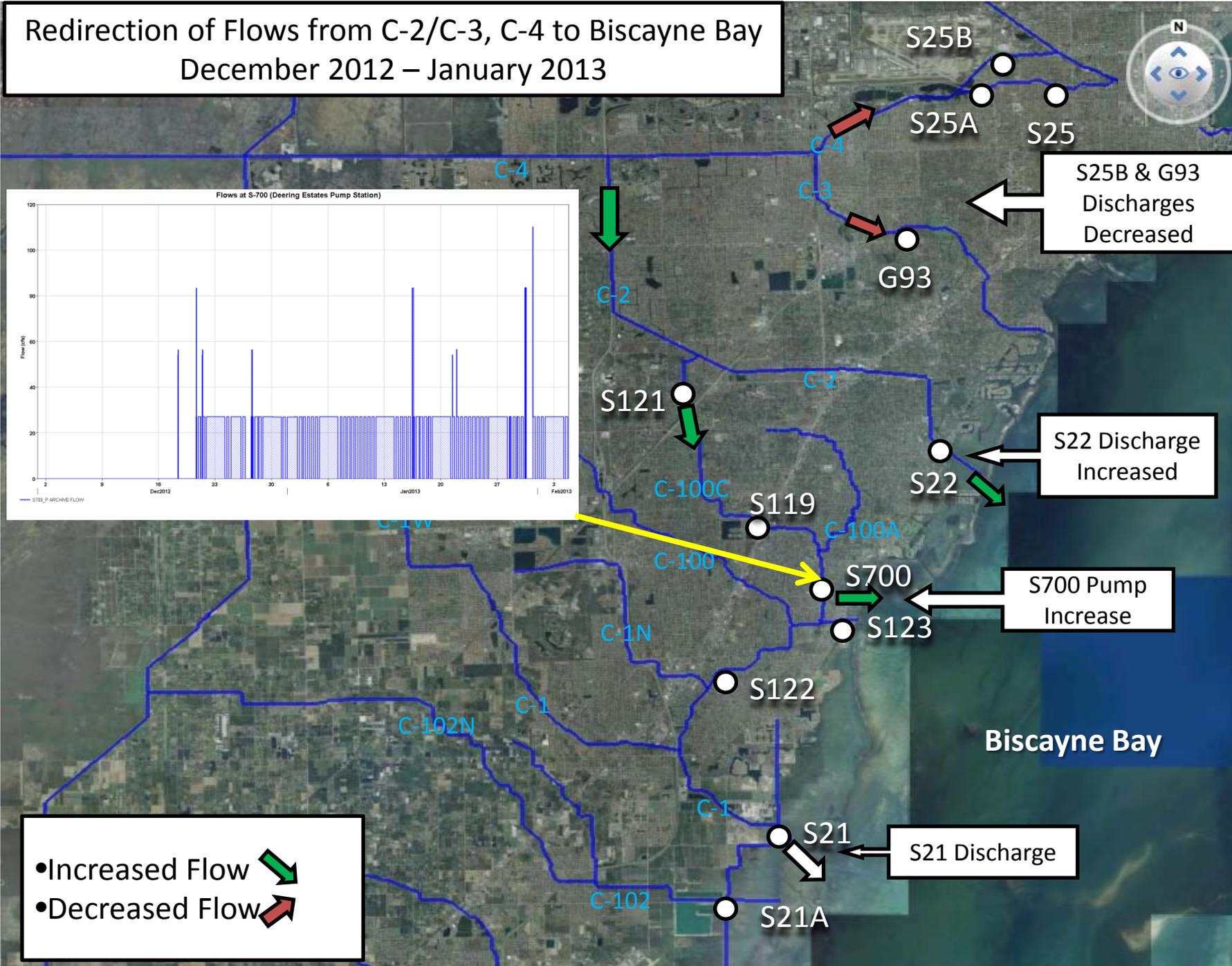
# Lake Okeechobee Water Level Comparison



# ***South Miami-Dade Current Operations***

- Seasonal Agricultural Drawdown is proceeding normally
  - C-102 Canal was switched from low to intermediate operating range
- The District has implemented special operations to divert excess water from the C-2/C-3/C-4 canals to Biscayne Bay'
  - Providing water from C-102 to Military Canal via L31-E canal
- The gap adjacent to L-67 Extension was refilled on the second week of January

# Redirection of Flows from C-2/C-3, C-4 to Biscayne Bay December 2012 – January 2013



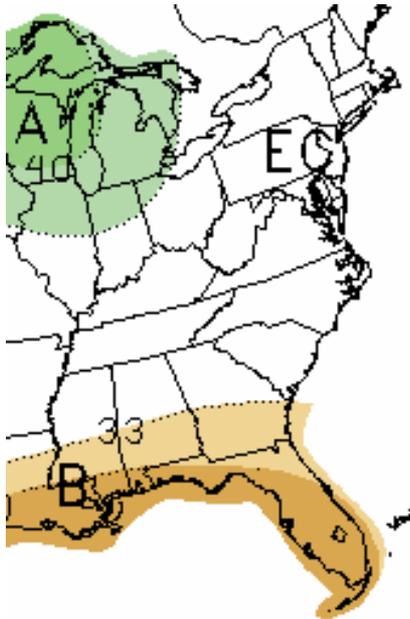
# ***Lake Okeechobee: Current Operations***

- **USACE's Lake O Regulation Schedule (2008 LORS)**
  - Stage (~14.4 ft, NGVD) is within the bottom 1/3 of the Low Subband
  - Water Control Plan Release Guidance currently suggests up to 2500 cfs at S-79, and up to 950 cfs at S-80 to manage the Lake stage
    - Tributary Hydrologic Condition is in the normal classification
    - Seasonal Lake inflow outlook is normal (neutral ENSO conditions)
  - 7-Feb-2013: USACE initiated 1000 cfs average 10-day pulse release through S-79
  - Lake regulatory discharge to northwest WCA-3A via STA-3/4 was initiated last month and continues (approx. 220 cfs mean daily)
- **SFWMD's Lake O Adaptive Protocol (2010)**
  - Will be the basis for SFWMD recommendations as the Lake stage recedes into the Baseflow Subband of the 2008 LORS

# U. S. Seasonal Precipitation Outlook

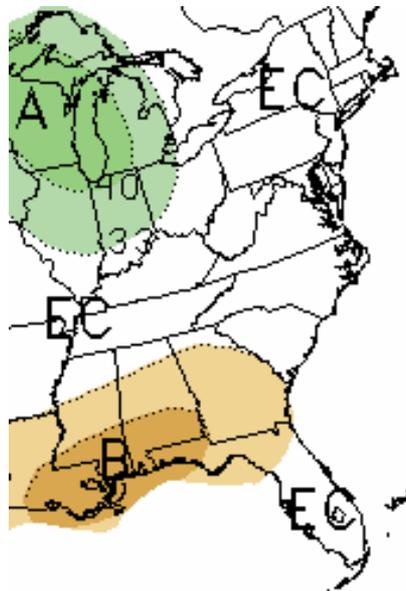
National Climate Prediction Center (CPC)

**Feb 2013**



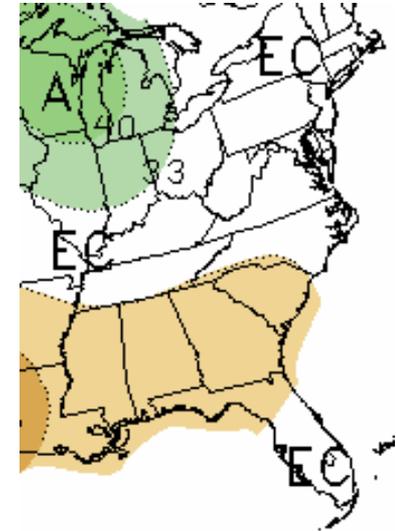
*Made 31-Jan 2013*

**Feb – Apr 2013**



*Made 17-Jan 2013*

**Mar-May 2013**

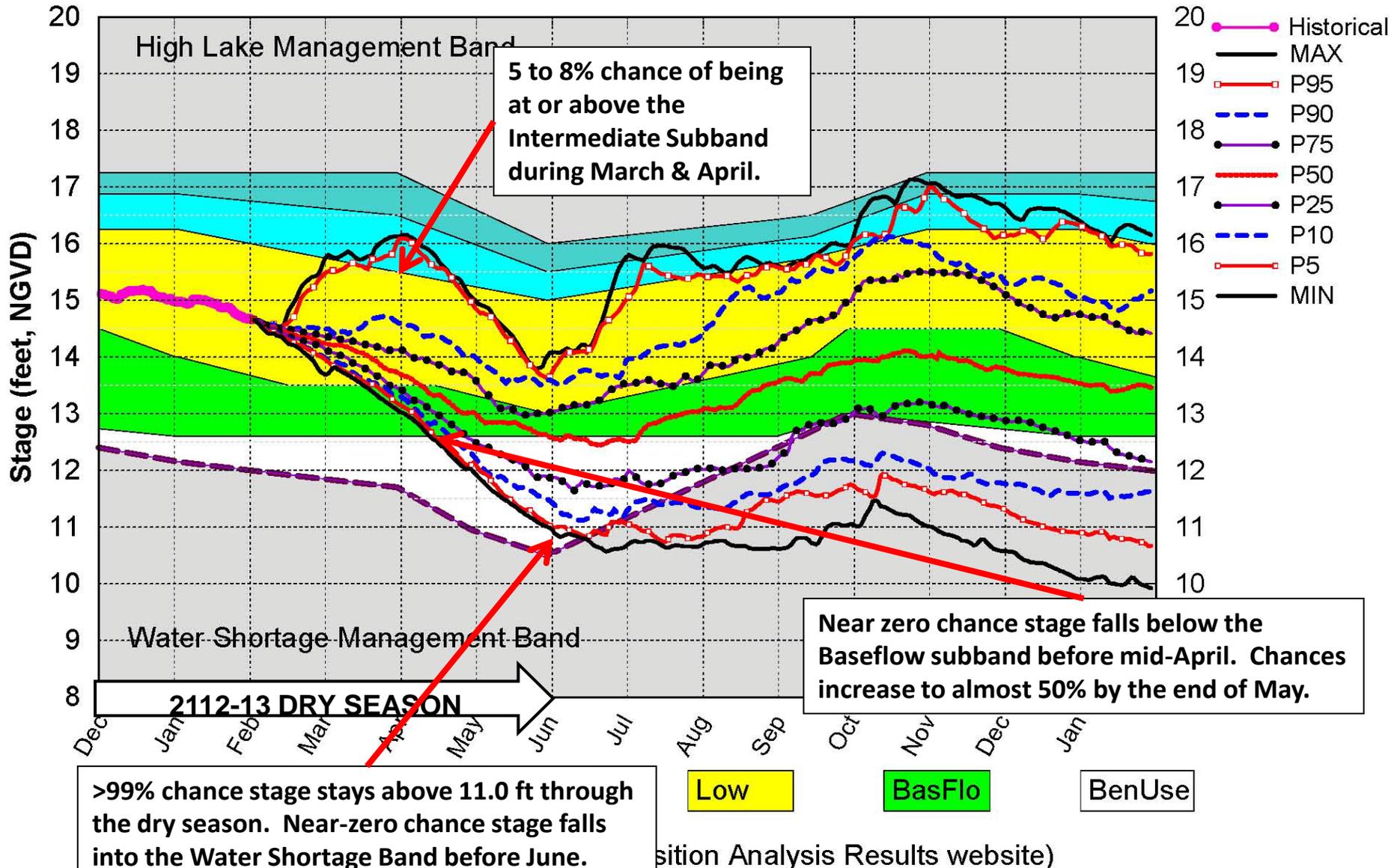


*Made 17-Jan 2013*

The recent CPC precipitation outlooks for the 2013 dry season indicate Below-Normal (B) for February 20013. Equal chances of Above-Normal (A), Below-Normal (B), and Normal rainfall for central and southern Florida are forecast for March and the reminder of the current dry season.

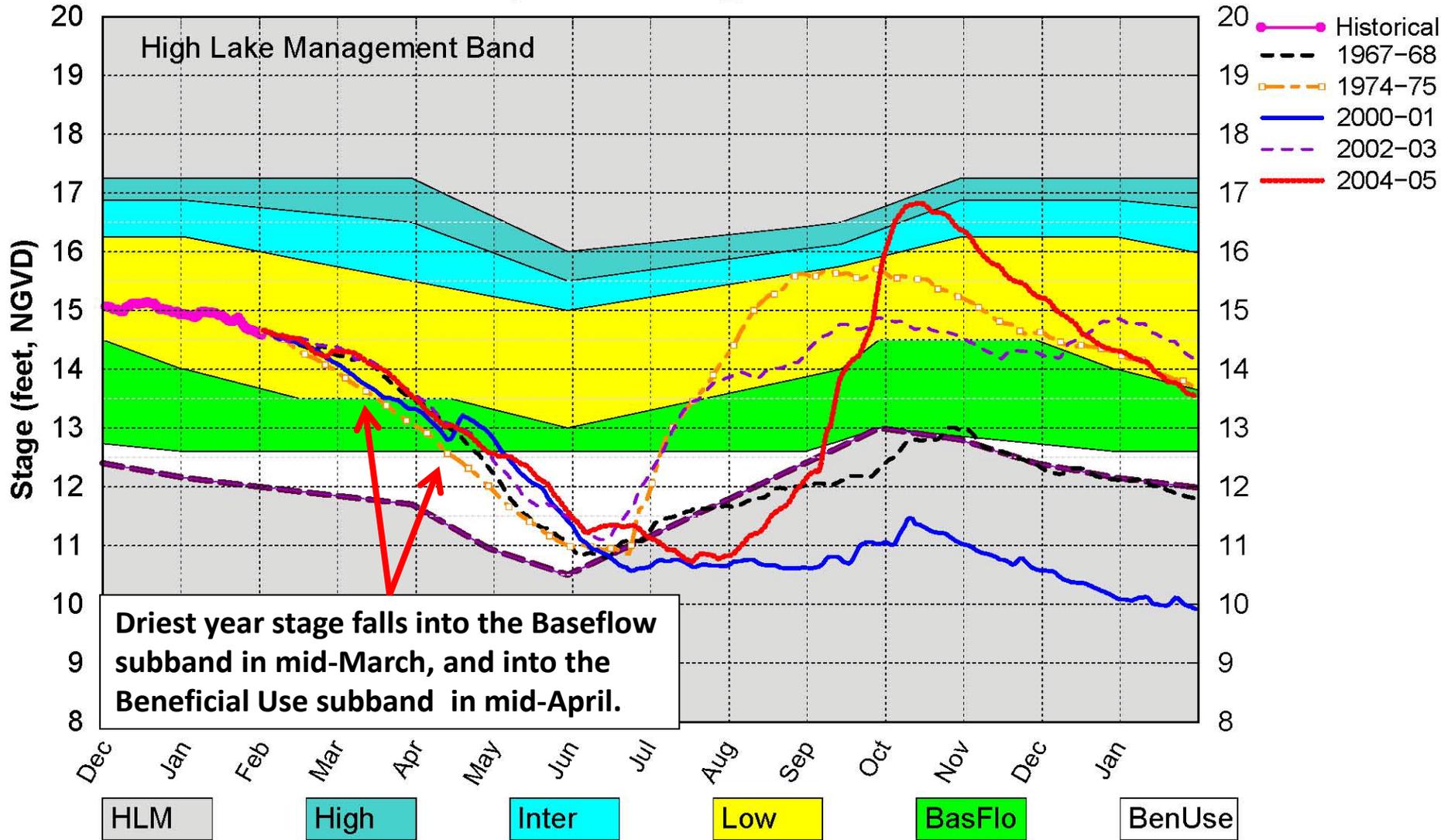
# Lake Okeechobee SFWMM February 2013 Position Analysis

Percentiles based on 41 possible outcomes starting with Feb 1<sup>st</sup> initialization



# Lake Okeechobee SFWMM February 2013 Position Analysis

Dry Years Plot PA\_MDS2



(See assumptions on the Position Analysis Results website)

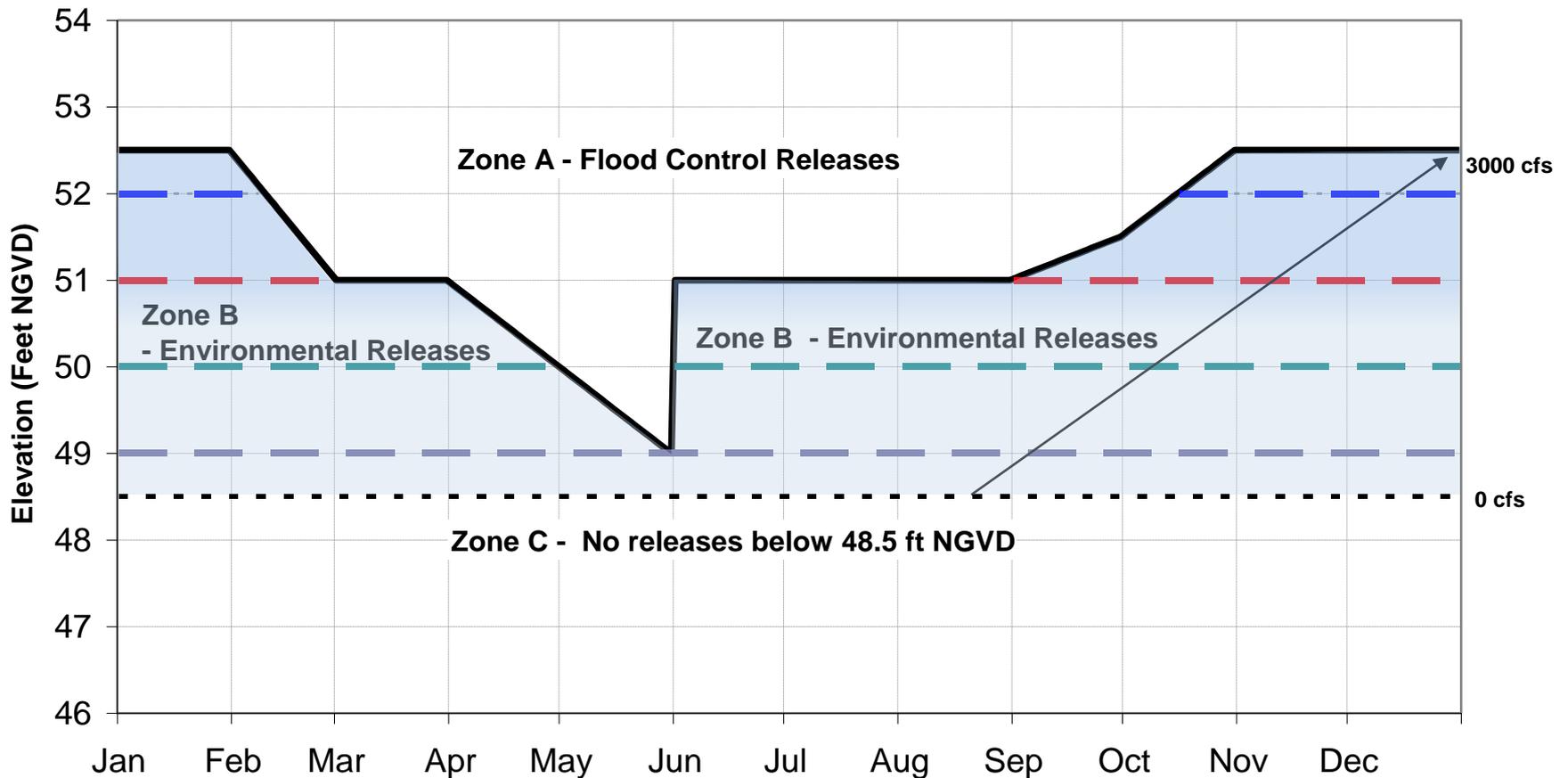
# Questions?



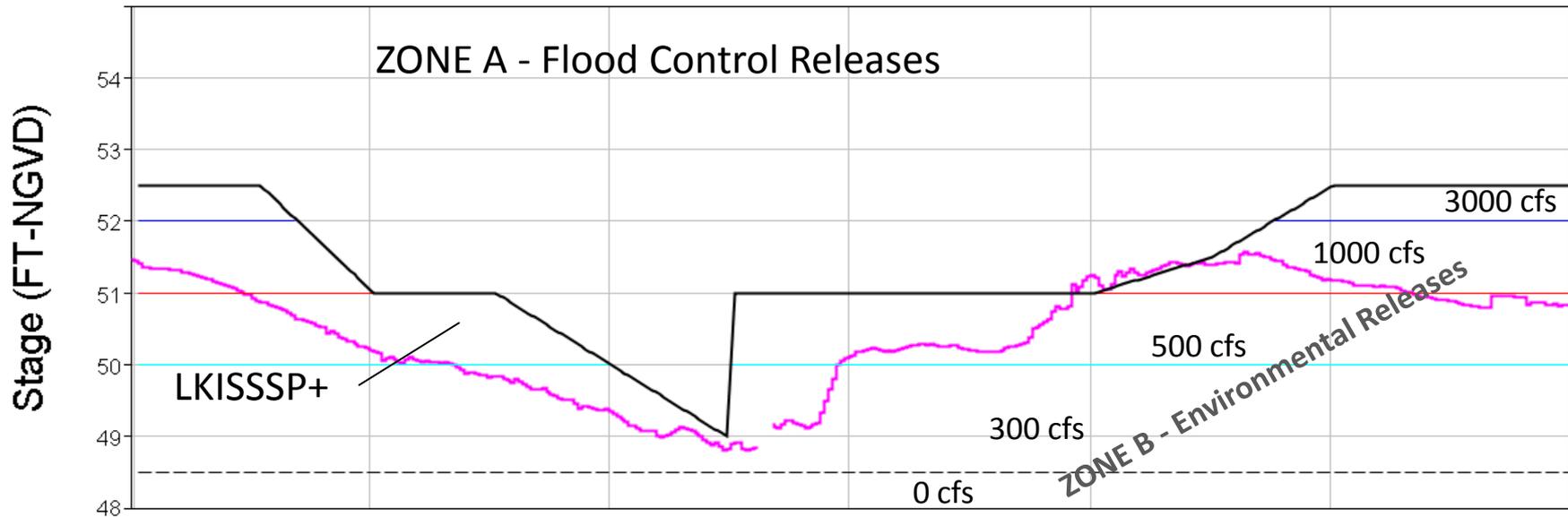
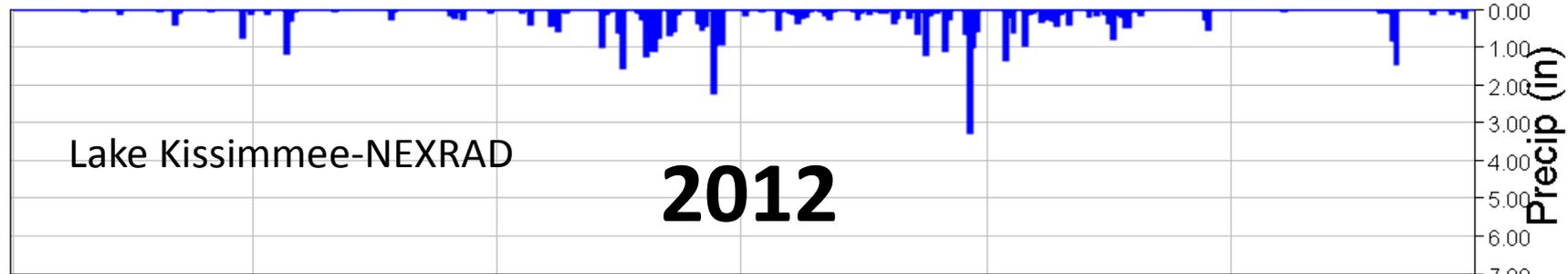
# Lake Operations - Upper Kissimmee Basin

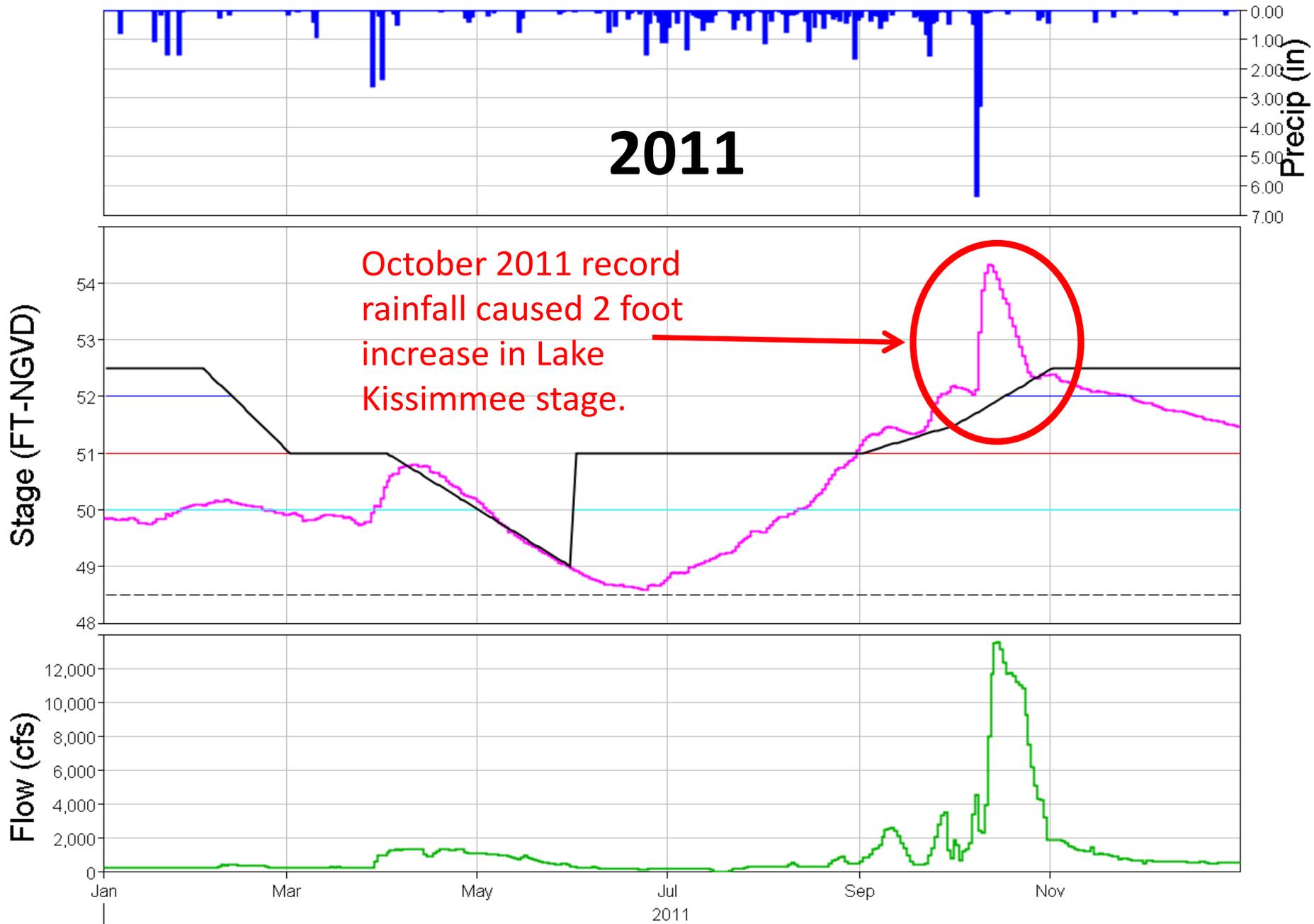
- Post T.S. Isaac Discharges from Lake Kissimmee were questioned by some stakeholders
  - Opinions expressed that not making such releases would reduce impacts to St. Lucie and Caloosahatchee Estuaries from Lake O regulatory discharges
- The facts and a what-if analysis demonstrate that not making the required discharges would:
  - Increase flood risk to private lands
  - Cutoff authorized environmental flows to the Kissimmee R.
  - Produce a small reduction in Lake O inflows & stages
  - Likely not affect the USACE's Lake O discharge decisions, thereby not reducing the Lake O portion of the impacts to the estuaries

# Interim Operational Schedule for Lakes Kissimmee-Hatchineha-Cypress

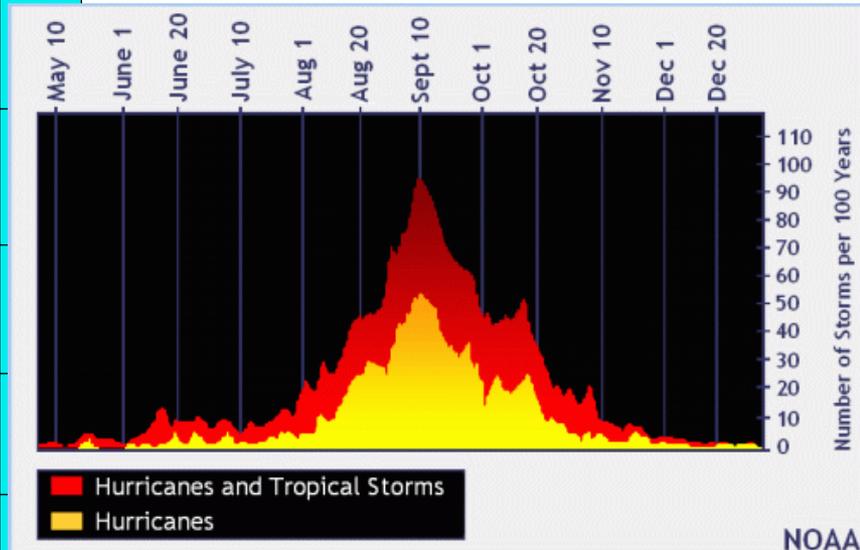
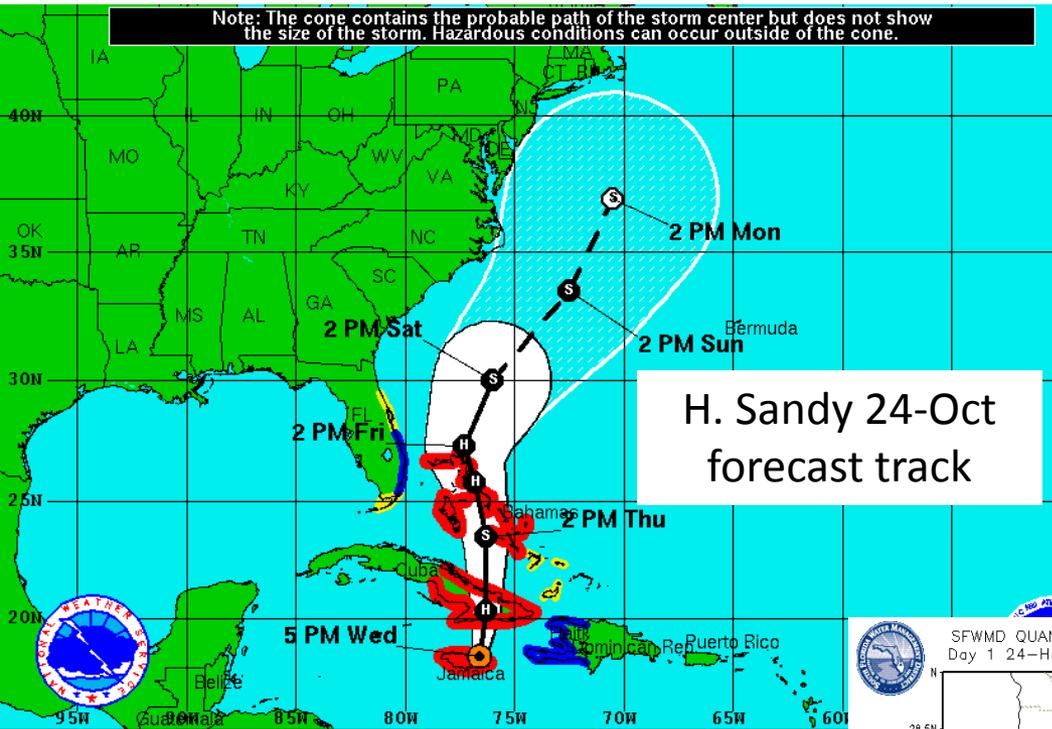


Implementation of the recommended Zone B releases should be flexible and consider prevailing conditions.



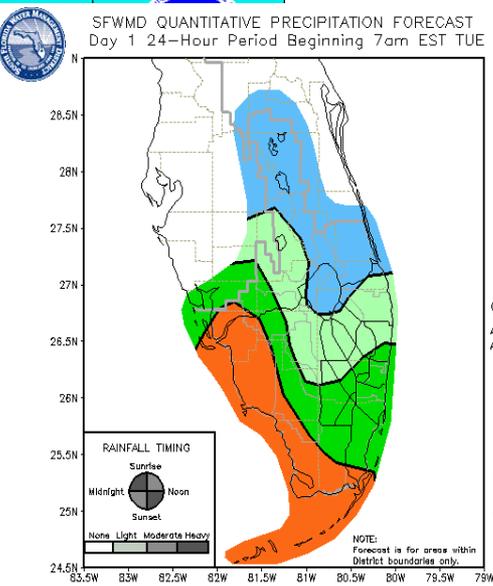


# Wet Season typically ends in late October & Hurricane Season officially ends November 30



H. Sandy 24-Oct forecast track

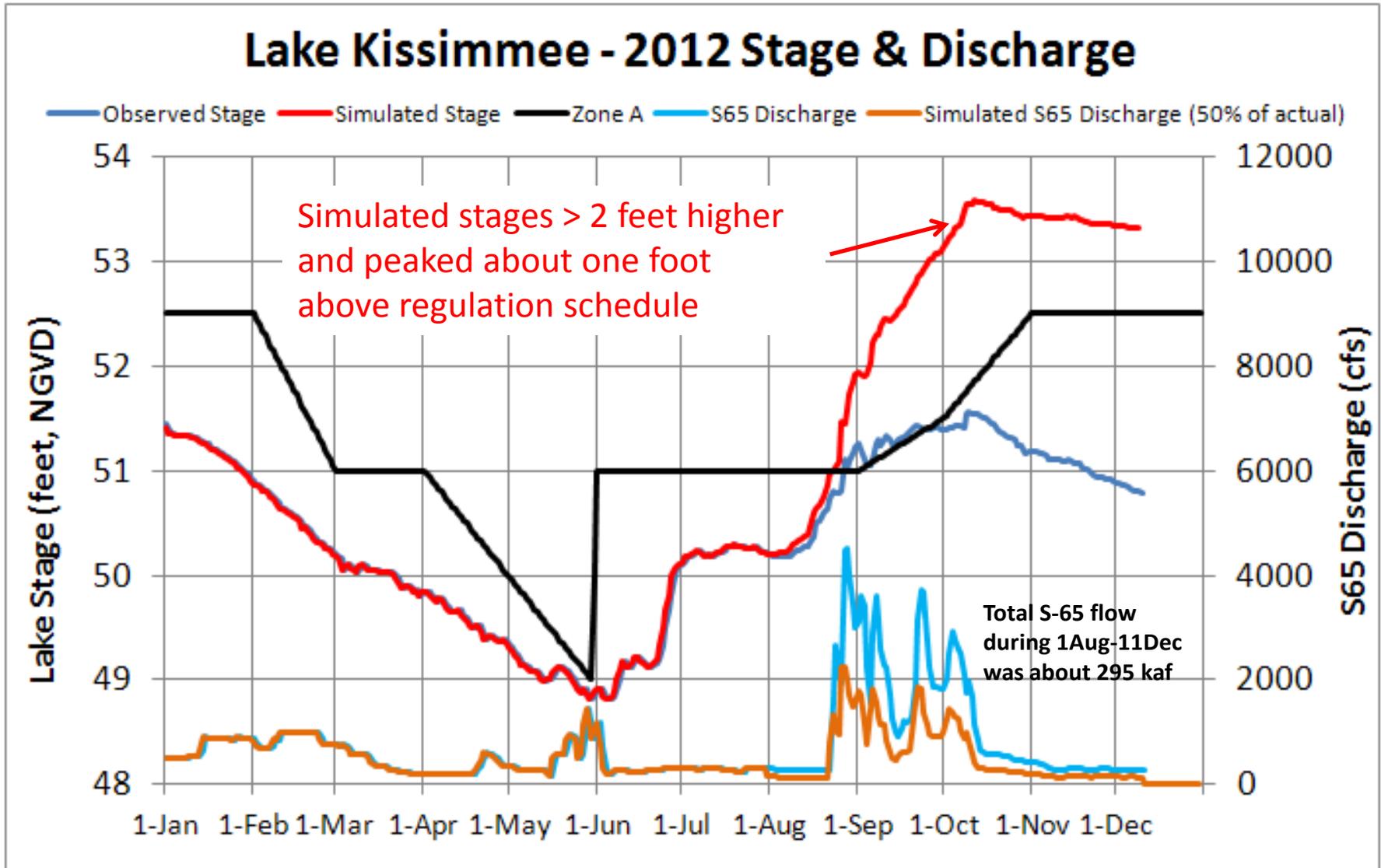
<b>Hurricane Sandy</b> Wednesday October 24, 2012 5 PM EDT Advisory 10 NWS National Hurricane Center	<b>Current Information:</b> Center Location 18.3 N 76.6 W Max Sustained Wind 80 mph Movement N at 14 mph	<b>Forecast</b> ● Tropical ● Sustained ● S 39-73 mph
<b>Potential Track Area:</b> Day 1-3 Day 4-5	<b>Watches:</b> Hurricane Trop.Storm	<b>Warnings:</b> Hurricane



Late October Storms are possible  
 e.g., H. Wilma 2005  
 H. Sandy 2012

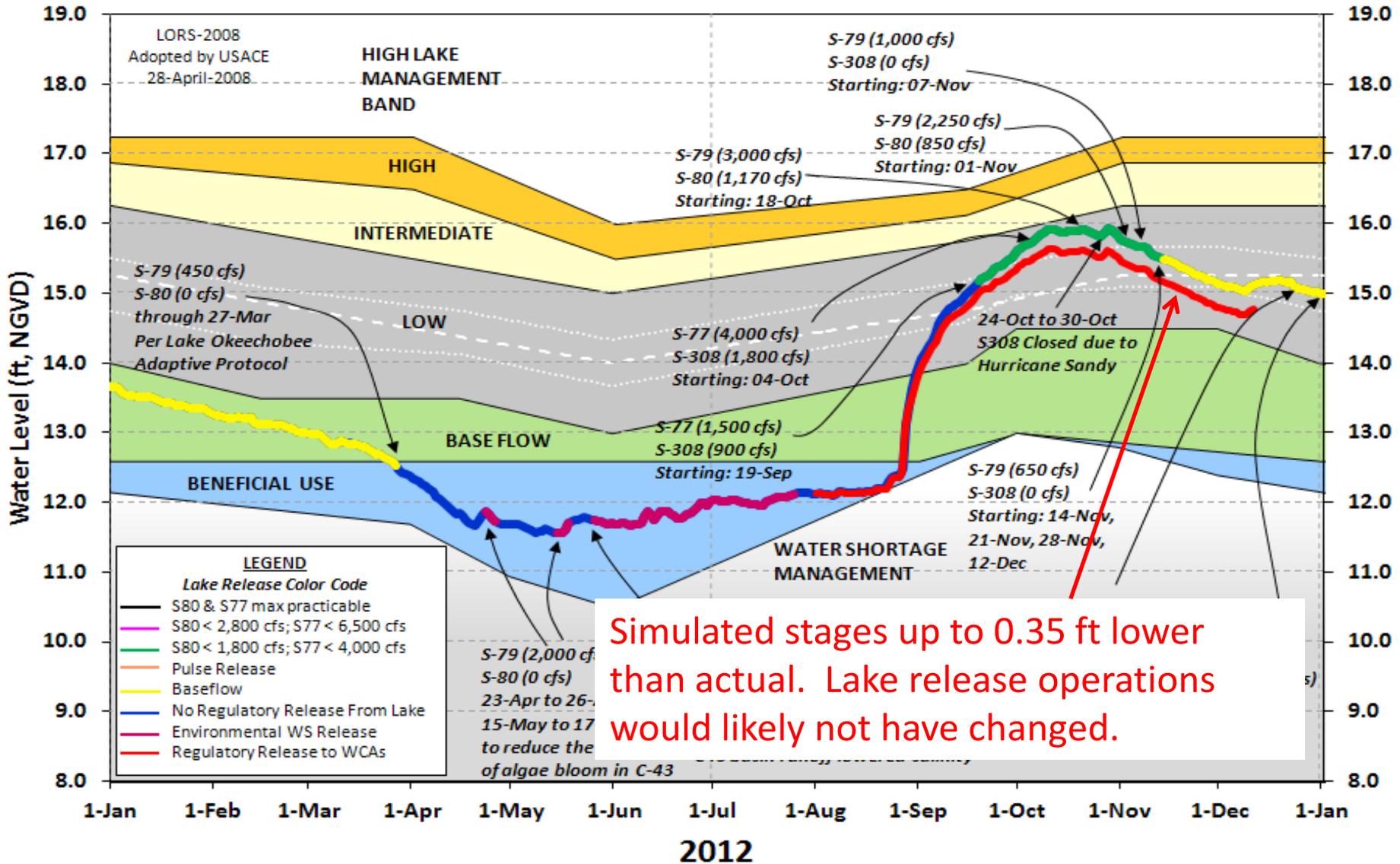
October Rainfall Forecasts indicated wet season rain was expected to continue

# What-if S-65 discharges had been 50% less?



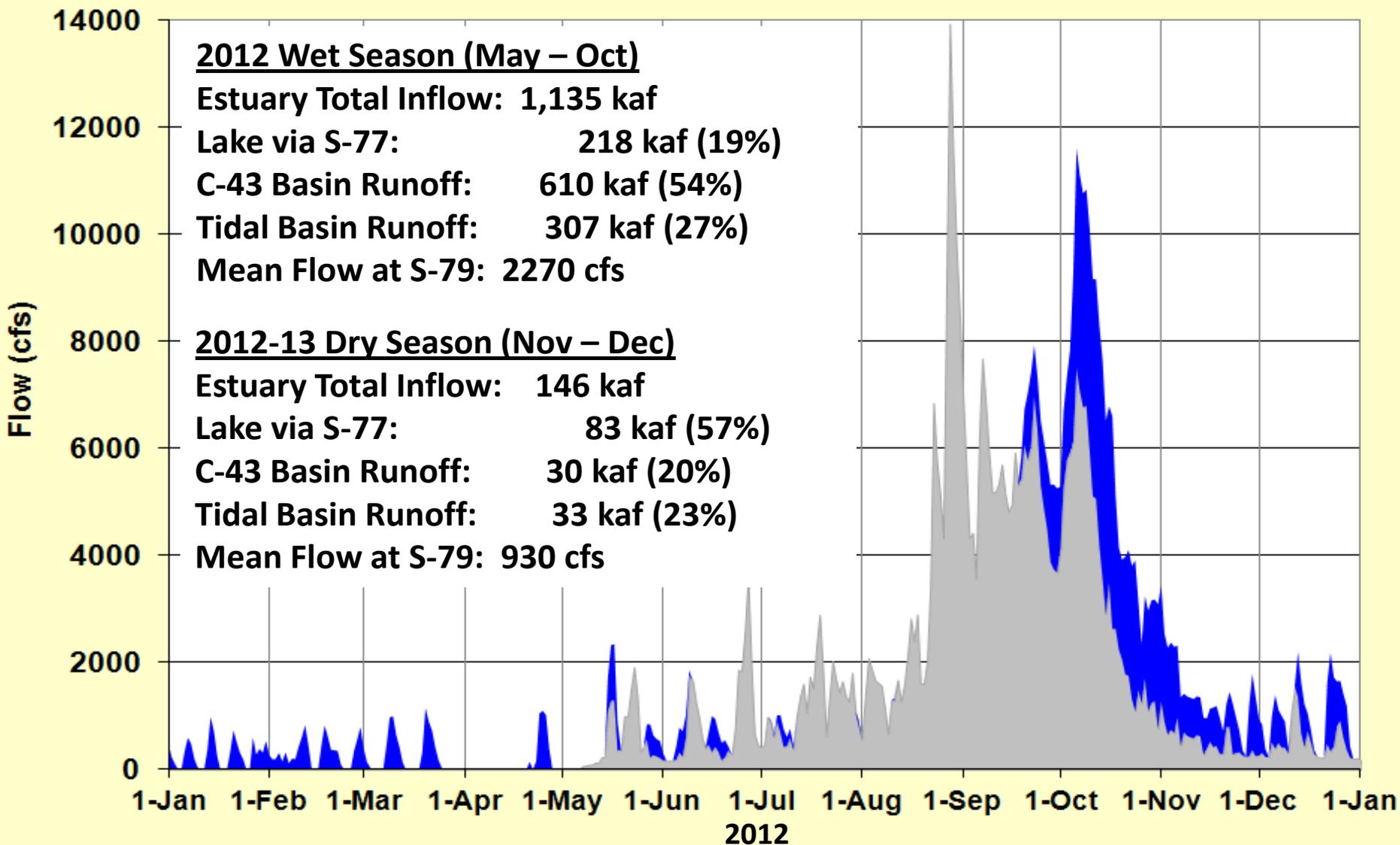
# What-if S-65 discharges had been 50% less?

## How much change in Lake stage and operations?



# Total Flow to Caloosahatchee Estuary

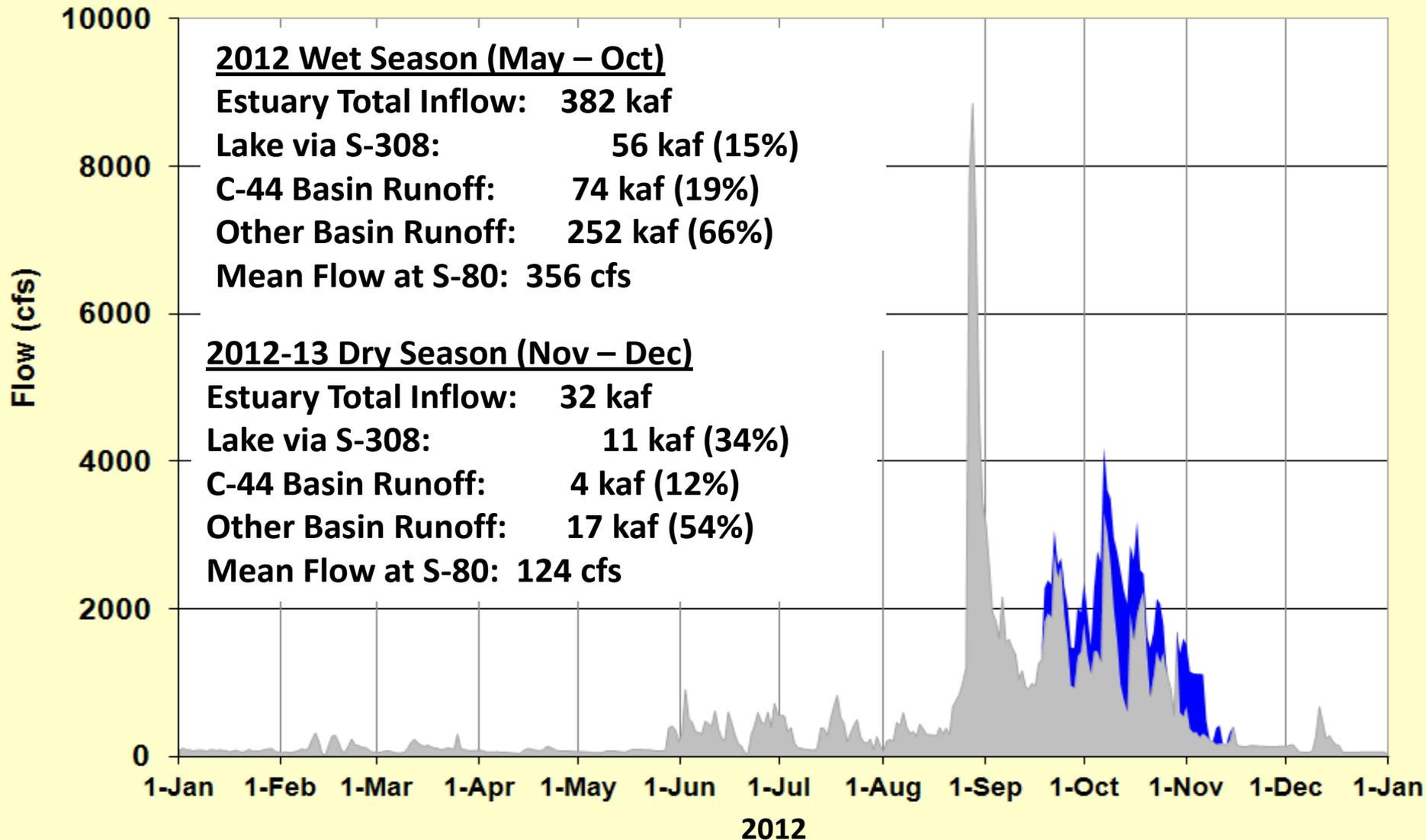
showing contributions from C-43 & Tidal Basins and Lake Okeechobee



USACE provisional data  
and subject to change

# Total Flow to St. Lucie Estuary

showing contributions from C-44, C-24, C-23, 10-mi Creek & Lake O



USACE provisional data  
and subject to change

■ Inflow from Lake   ■ Inflow from C-44, C-24, C-23, and Tenmile Creek Basins\*

# Questions?

