

# **Water Conditions Summary**

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

**July 12, 2012**

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

# SFWMD

## Wet Season Rainfall

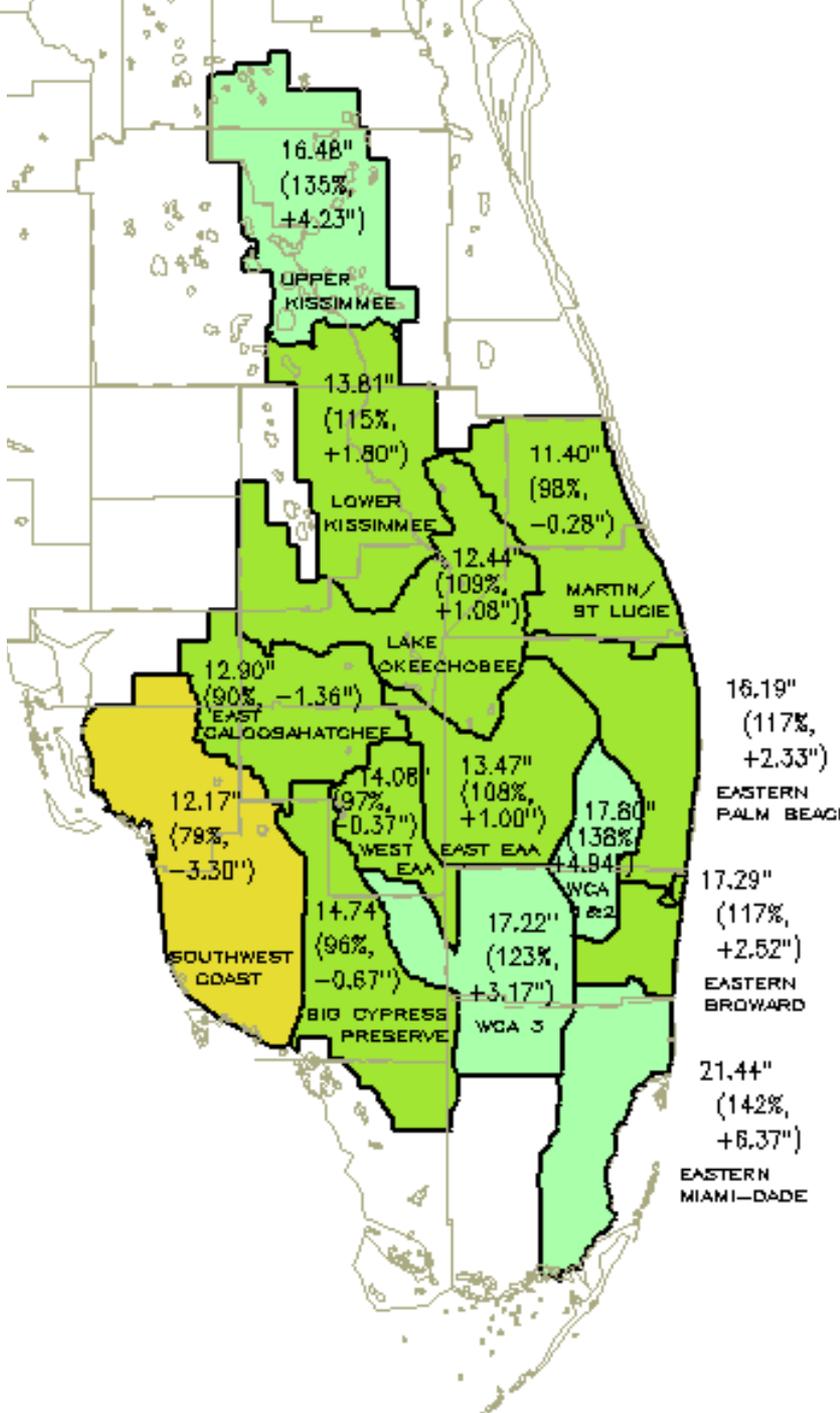
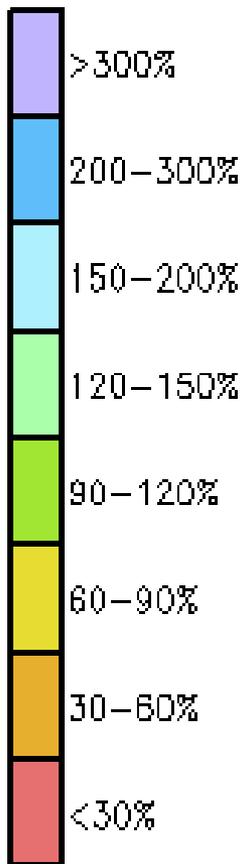
08 May 2012 – 10 July 2012

**DISTRICT-WIDE: 14.59"  
(109% of Avg, or +1.18")**

**Southwest Coast still in a  
well below normal (-3.30")**

**All other basins above  
normal:**

- **Miami-Dade + 6.37"**
- **WCA 1 & 2 + 4.94"**
- **Upper Kissimmee + 4.23"**
- **WCA 3 + 3.17"**

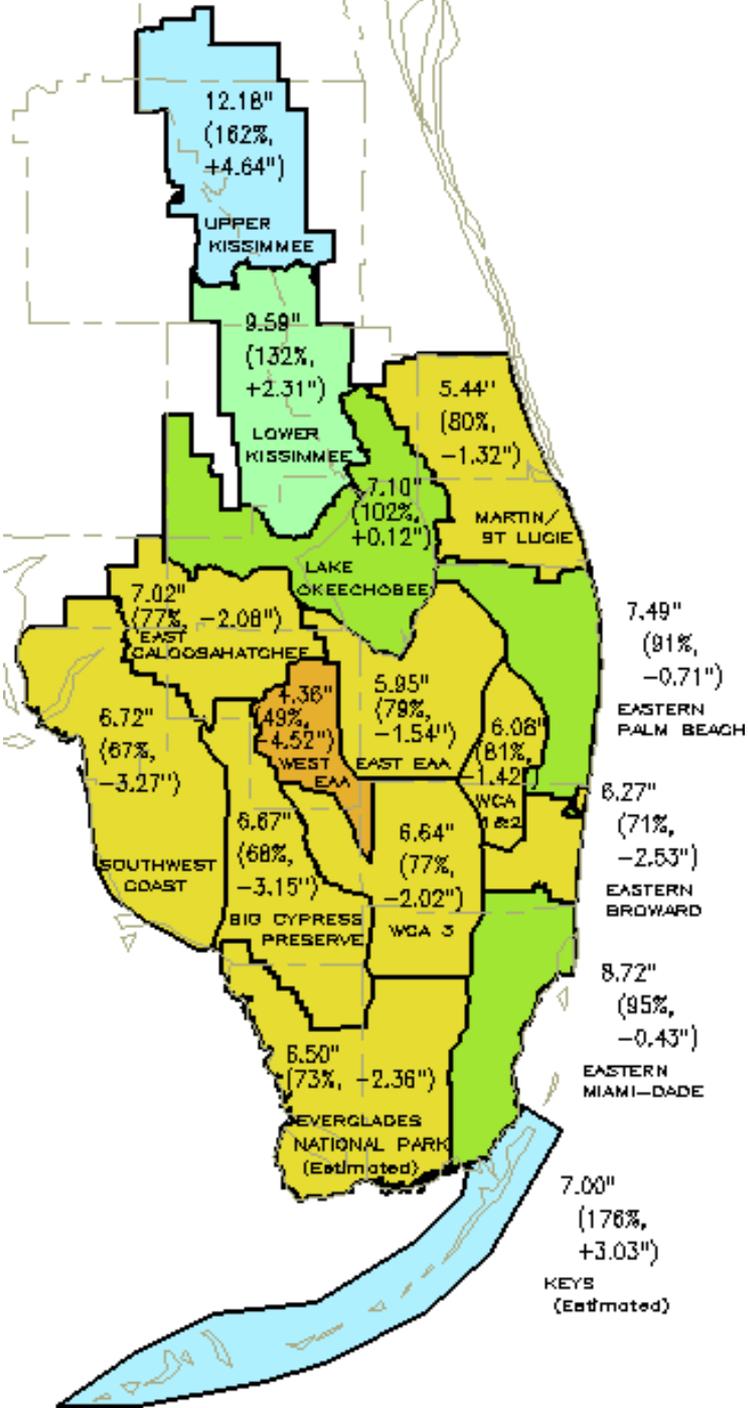
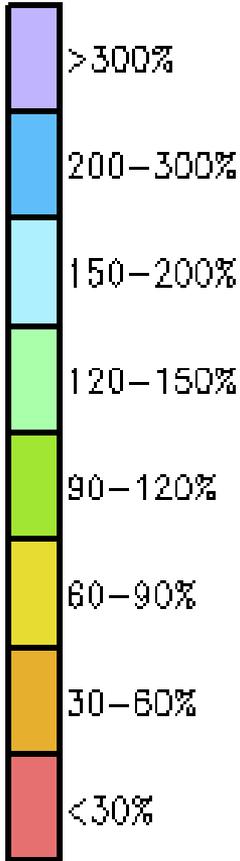


Measured  
(% of Avg,  
Diff From Avg)

# SFWMD 2012 June Rainfall

**DISTRICT-WIDE: 7.46"  
(90% of Avg, or -0.80")**

- Kissimmee, Lake Okeechobee, Palm Beach, Miami-Dade and the Keys were above average
- Upper Kissimmee is 162% of average (+4.64")
- West EAA is 49% of average (-4.52")



Measured  
(% of Avg,  
Diff From Avg)

**Large multi-day rain event  
TS Debby 2.77"**

# SFWMD

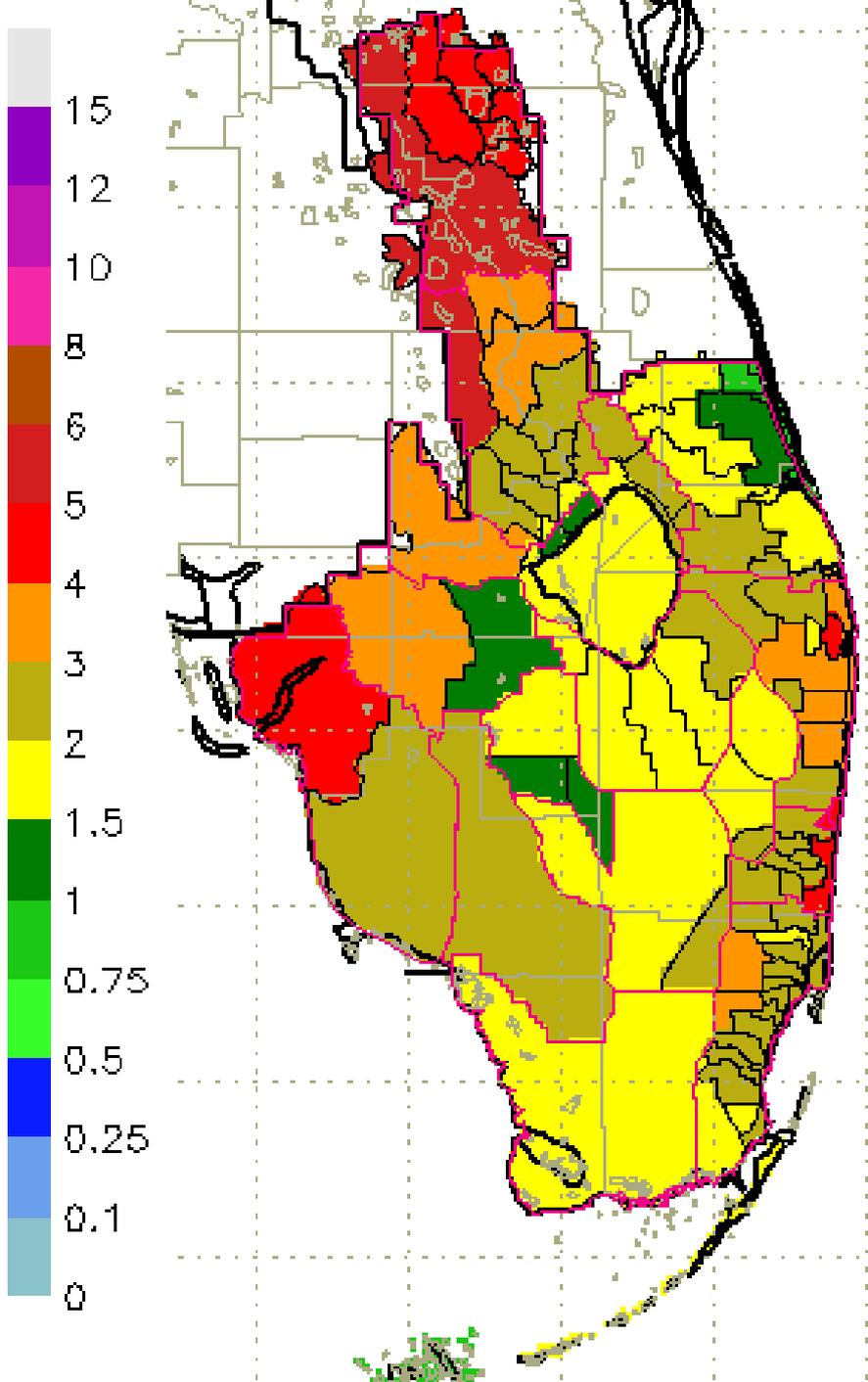
## T.S. Debby Rainfall

22 Jun 2012 – 28 Jun 2012

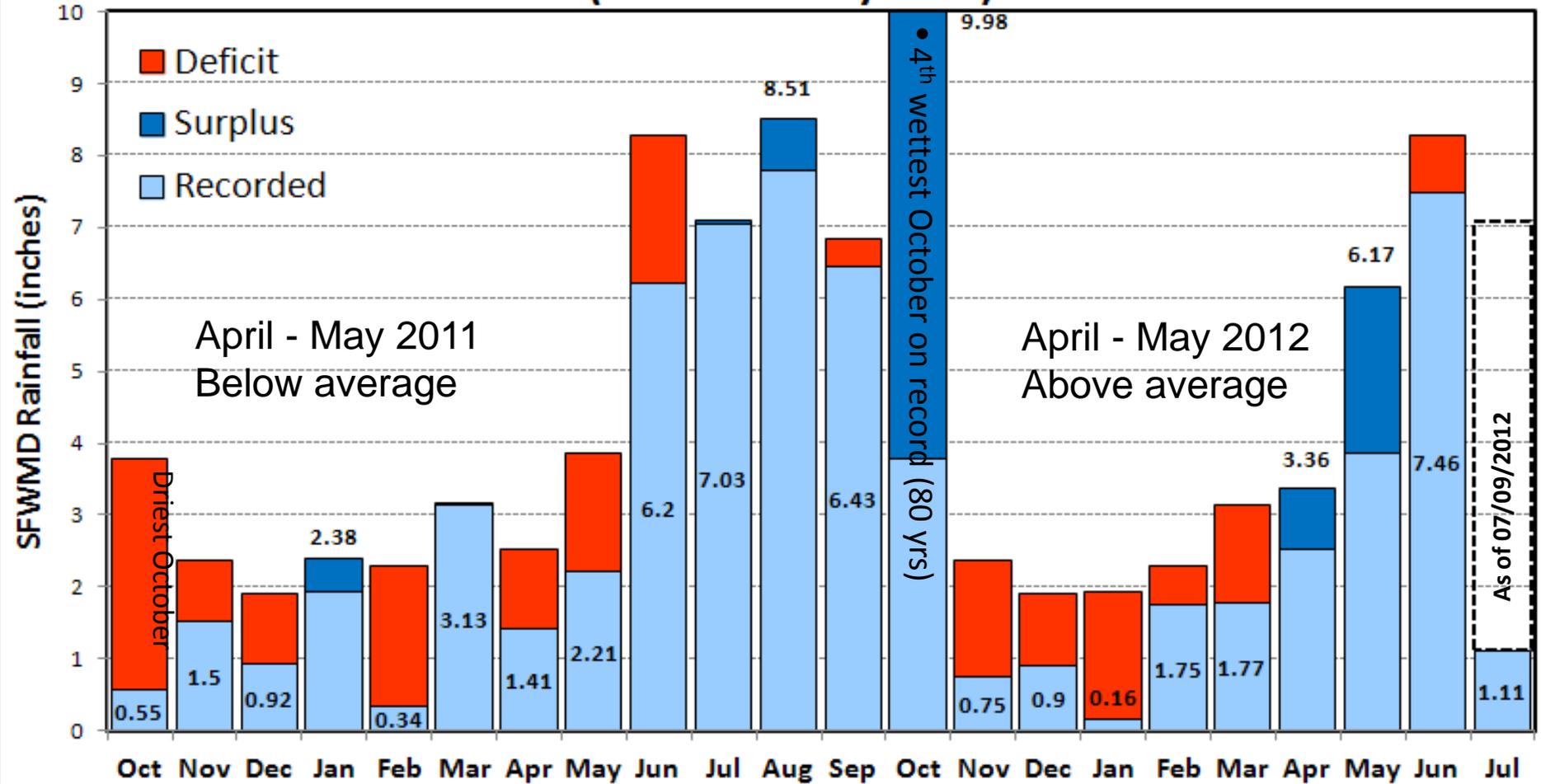
**DISTRICT-WIDE: 2.78"**

**All areas received rainfall  
above average:**

- **Upper Kissimmee + 6"**
- **Lower Kissimmee + 5"**
- **Caloosahatchee + 4"**
- **Eastern Broward + 4"**



# SFWMD Rainfall Distribution Comparison (Oct 2010 - July 2012)



### 2010-11 DRY SEASON:

- started early with driest October on record
- 2<sup>nd</sup> largest deficit on record (80yrs)

### 2011 WET SEASON:

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

### 2011-12 DRY SEASON:

- Most months below average.
- Ended up close to average

### 2012 WET SEASON:

- Early wet season start with above normal rainfall in May and June below normal

# U.S. Drought Monitor

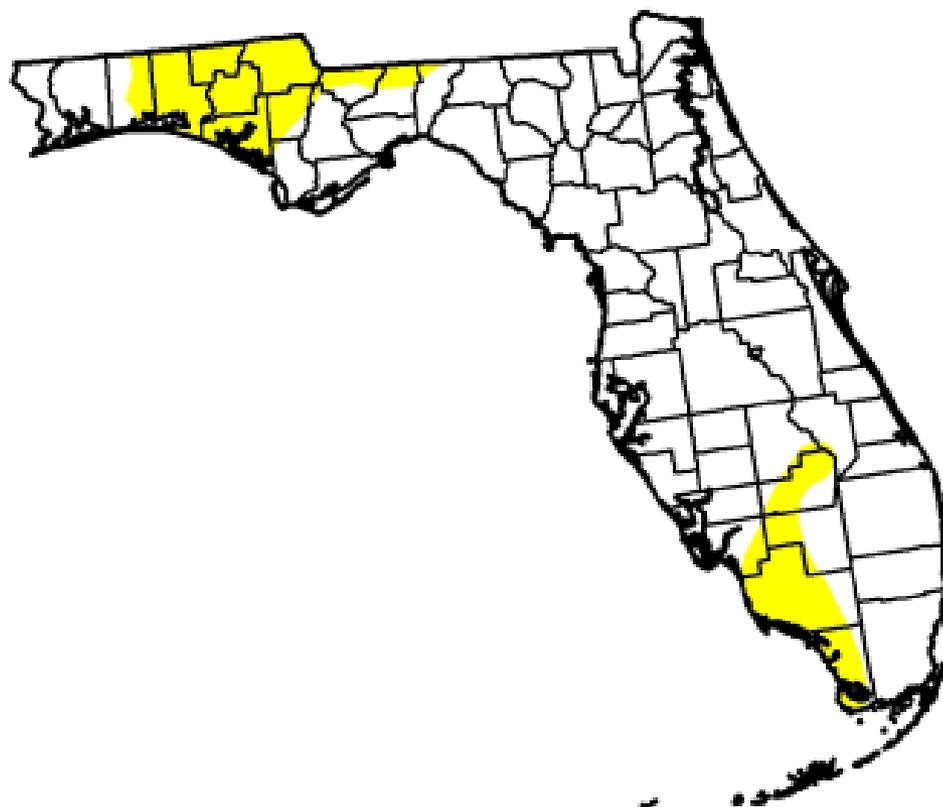
July 3, 2012

Valid 7 a.m. EST

## Florida

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	83.50	16.50	0.03	0.00	0.00	0.00
Last Week (06/26/2012 map)	85.45	14.55	0.04	0.00	0.00	0.00
3 Months Ago (04/03/2012 map)	0.00	100.00	97.81	56.44	20.31	7.42
Start of Calendar Year (12/27/2011 map)	38.81	61.19	27.41	12.84	2.61	0.00
Start of Water Year (09/27/2011 map)	43.12	56.88	28.83	16.85	7.85	0.00
One Year Ago (06/28/2011 map)	6.53	93.47	82.96	66.48	47.59	20.65



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.*

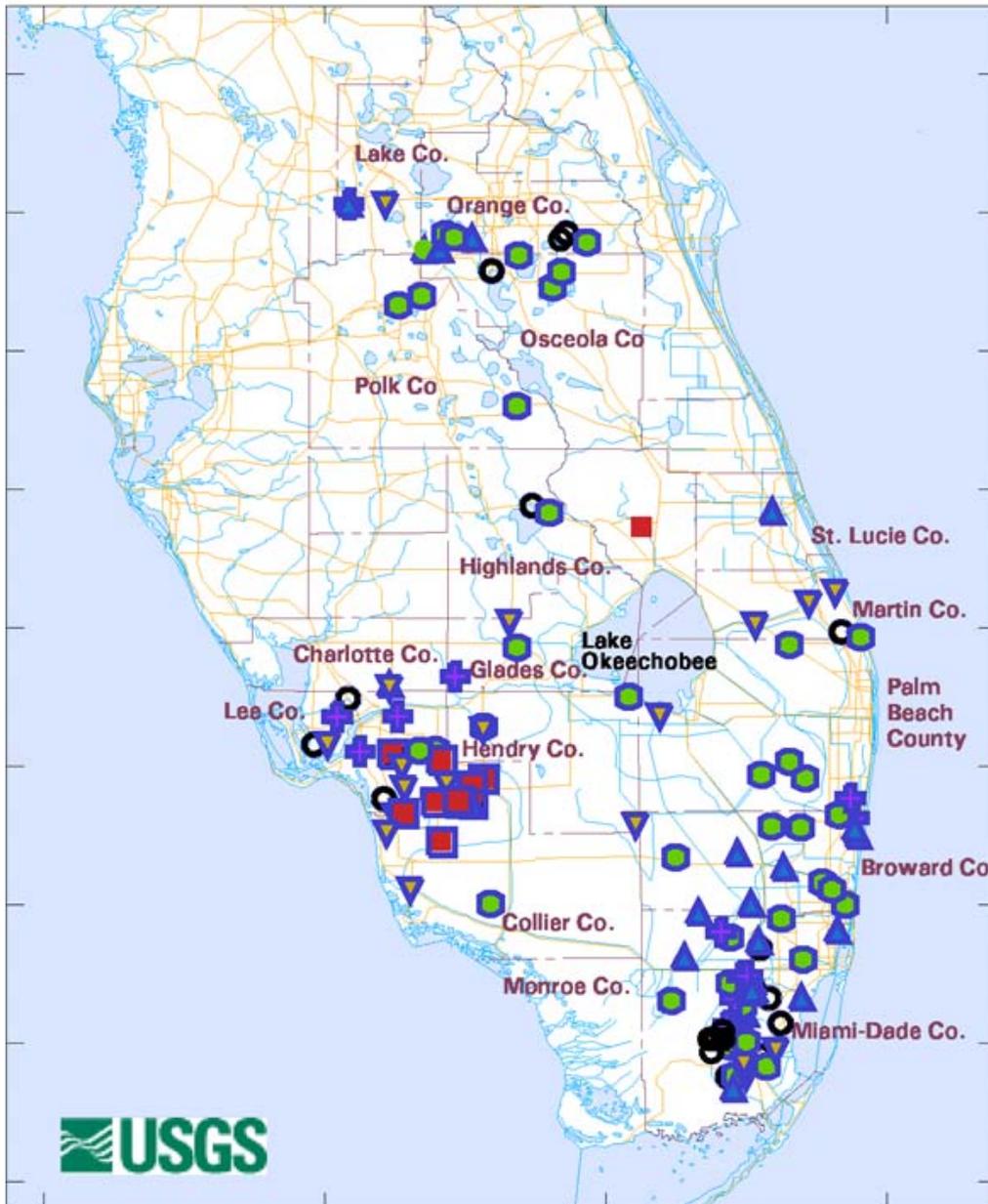
<http://droughtmonitor.unl.edu>



Released Thursday, July 5, 2012  
Rich Tinker, Climate Prediction Center/NOAA

# Groundwater Levels

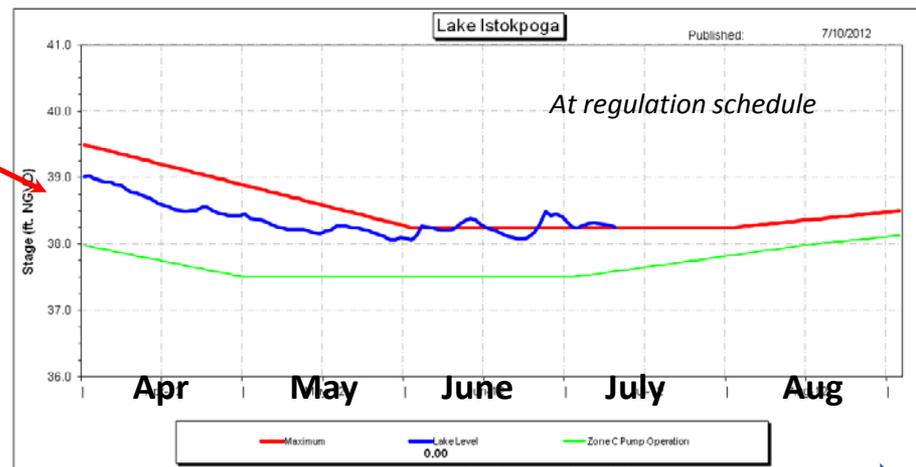
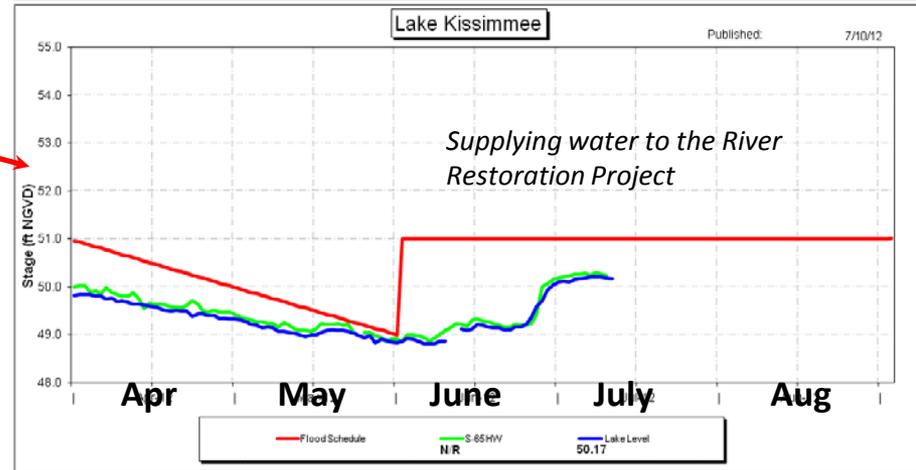
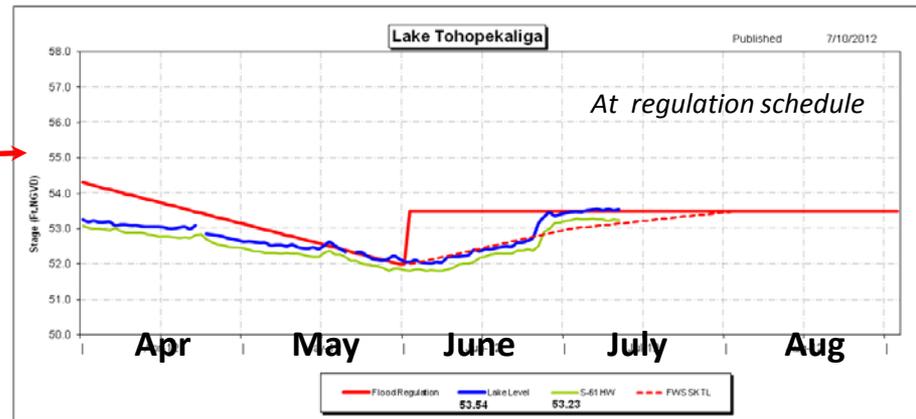
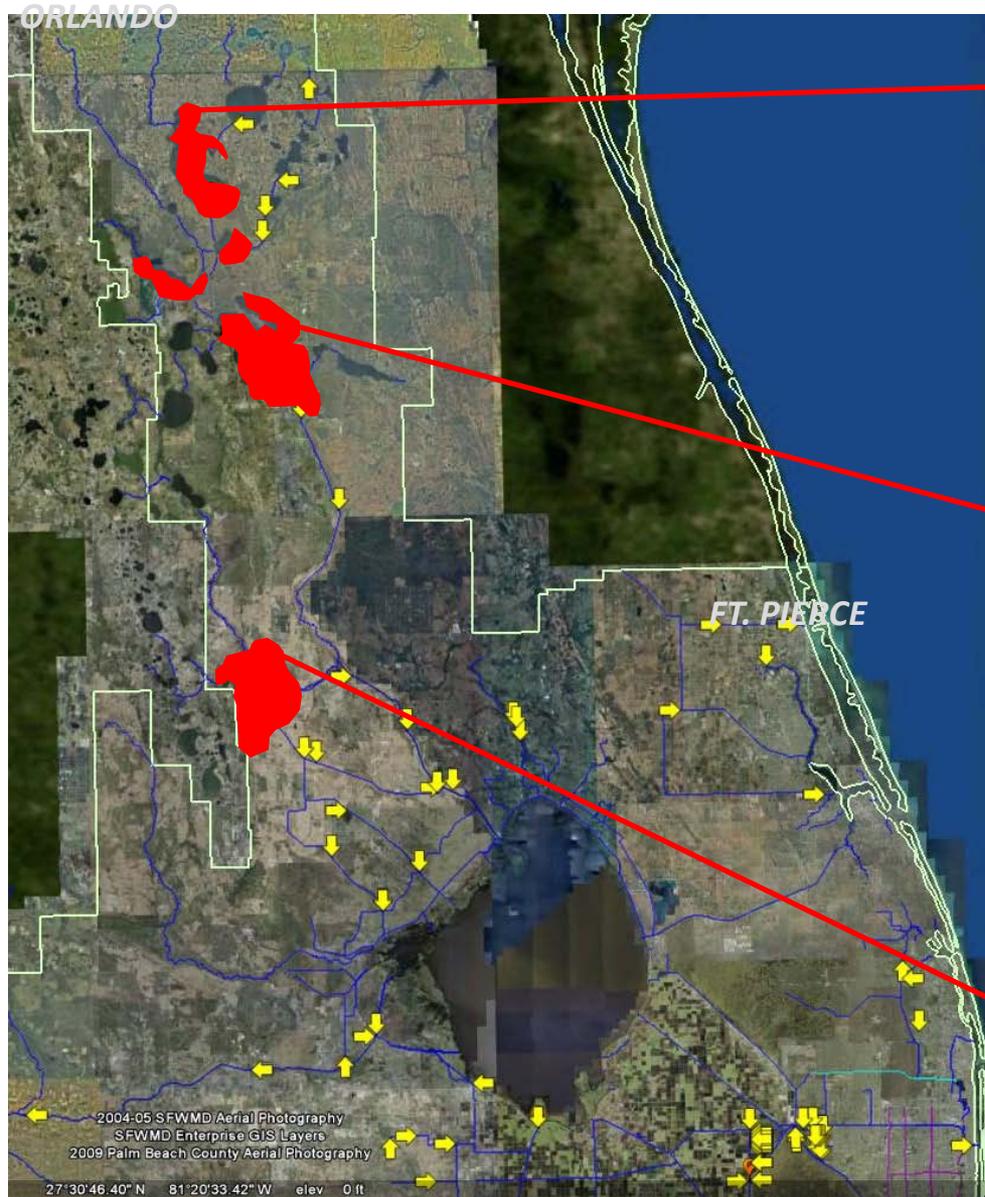
Water levels at selected sites in South Florida  
Based on PROVISIONAL DATA, as of July 9, 2012

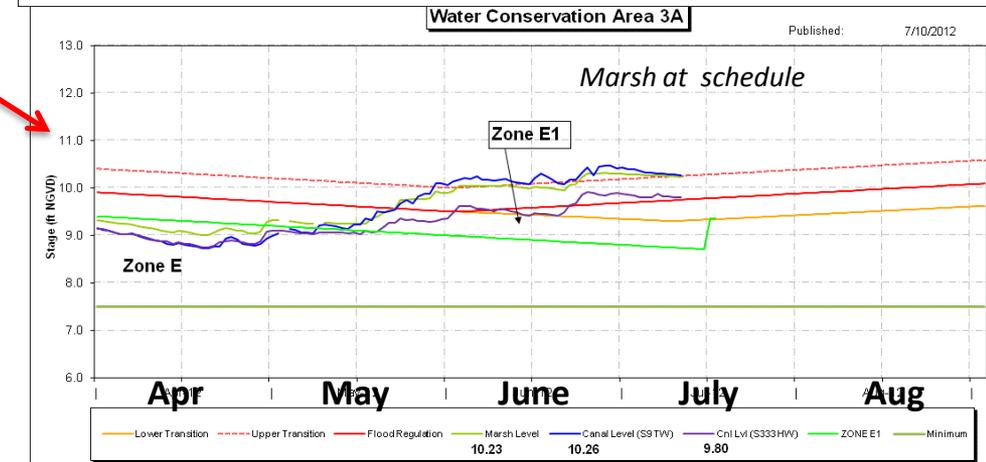
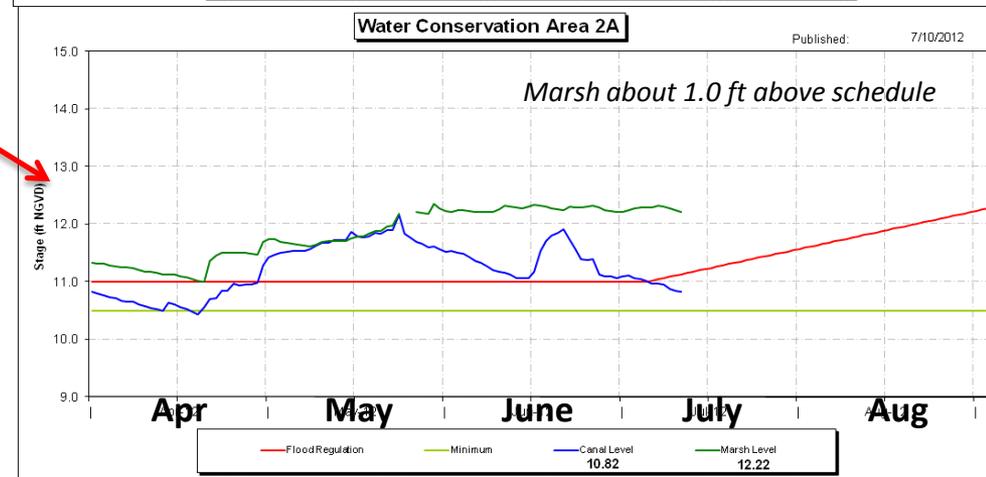
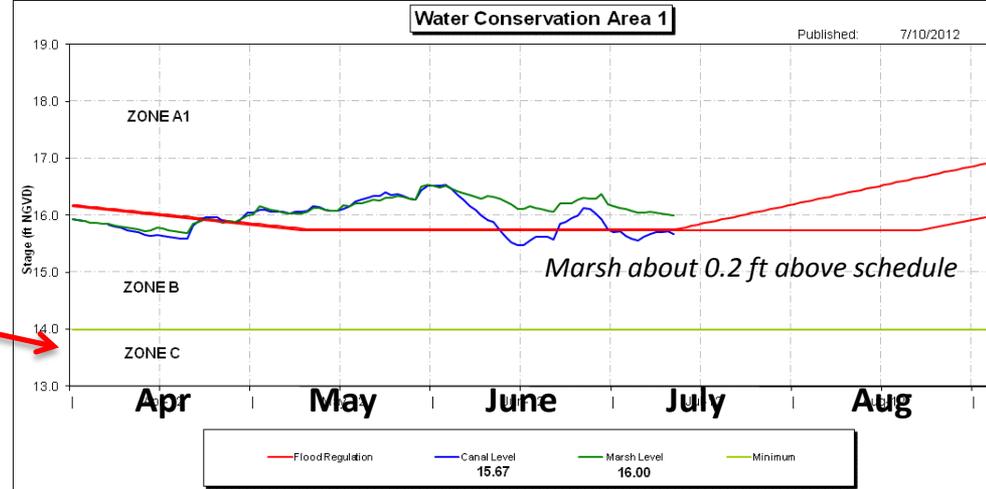
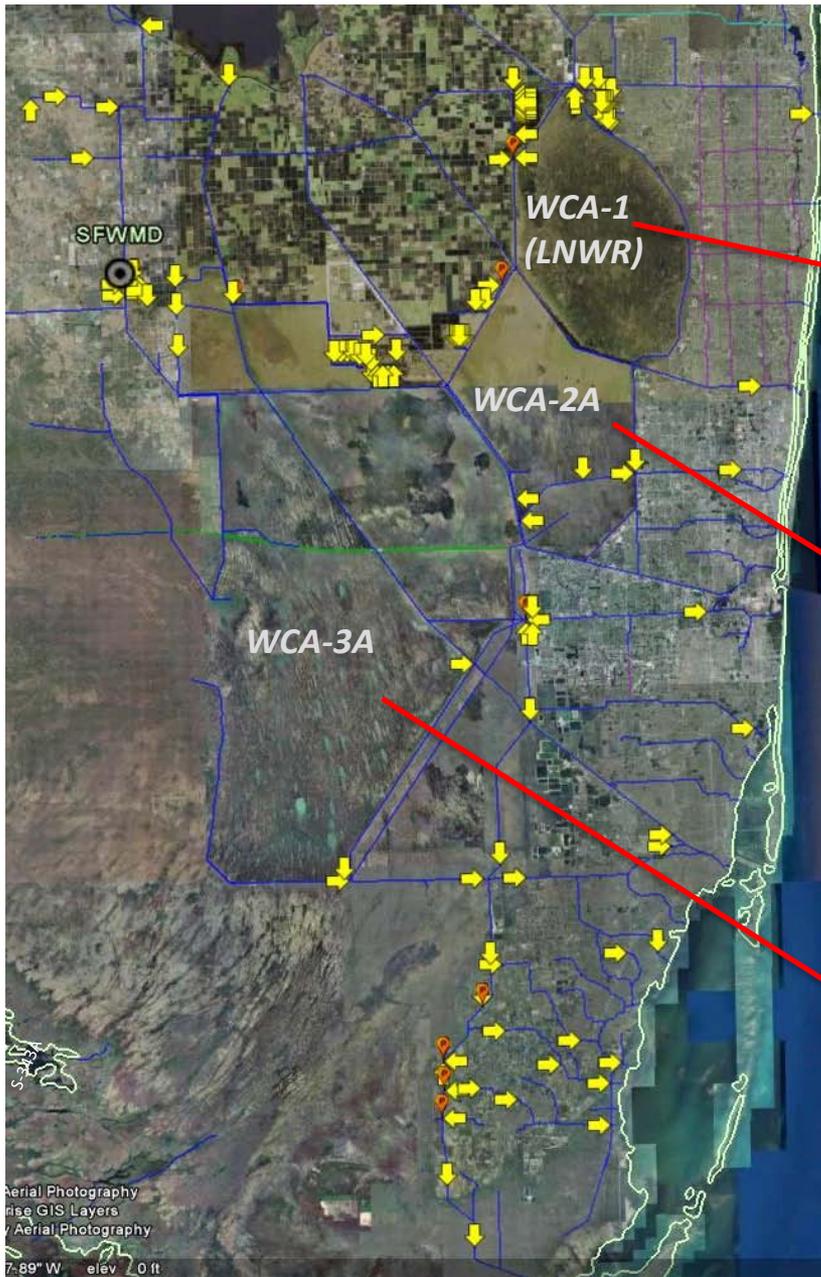


- **Triangles consistent with rainfall in the Eastern Broward and Miami-Dade Counties area over the past 30-days**

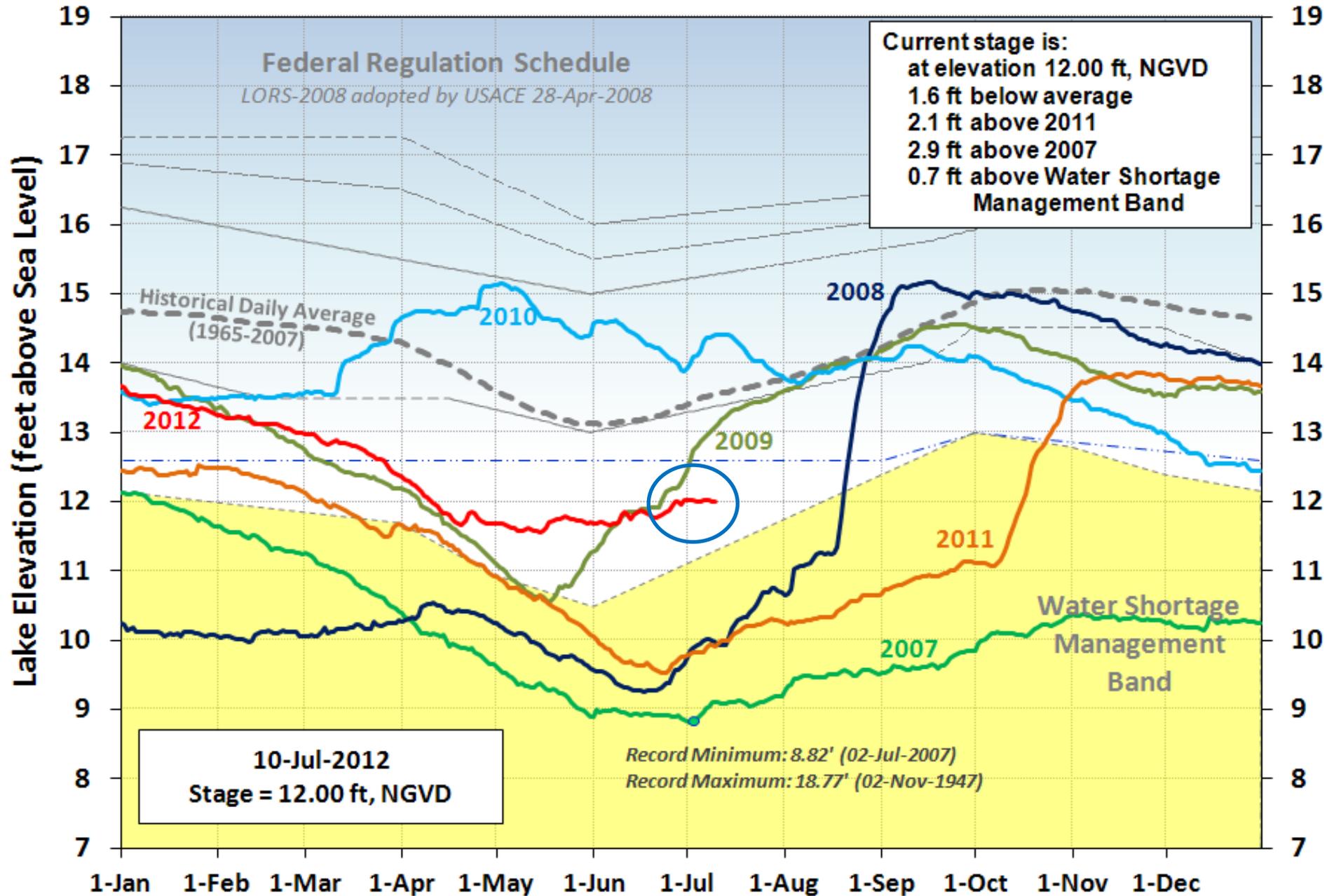
Water level compared to historical data, without trend analysis:

- 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





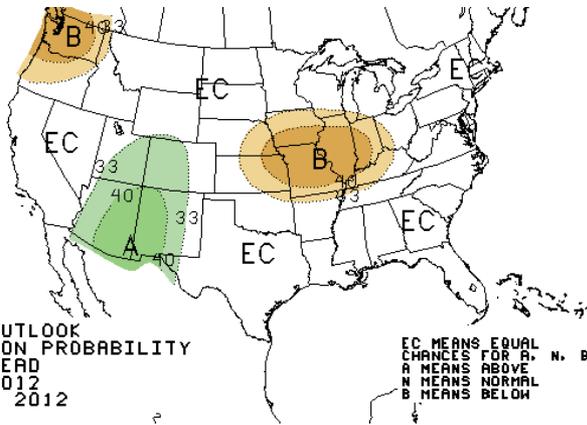
# Lake Okeechobee Water Level Comparison



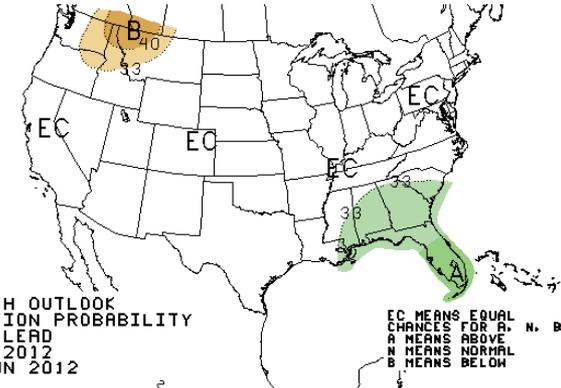
# U. S. Seasonal Precipitation Outlook

National Climate Prediction Center (CPC)

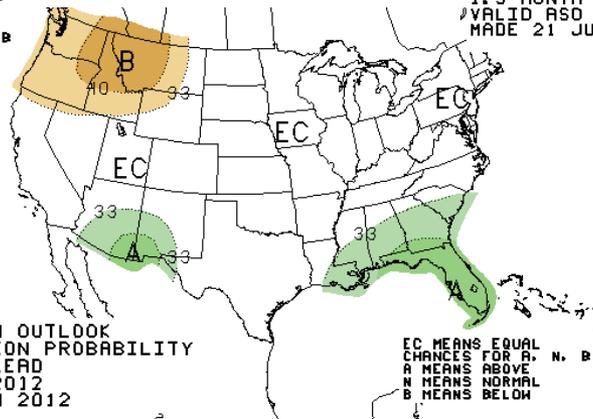
## July 2012



## Aug-Oct 2012



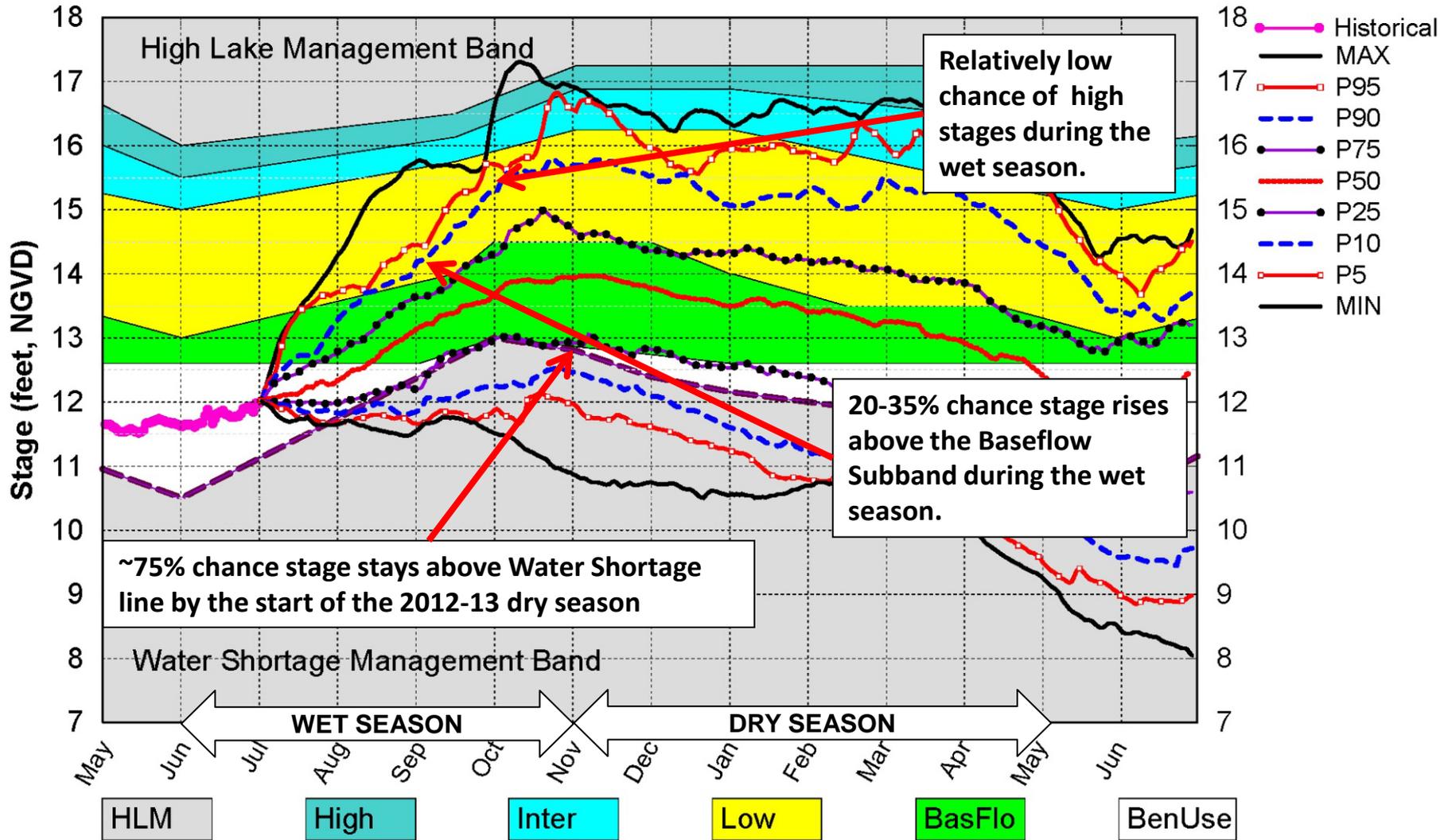
## Jul-Sep 2012



- The current CPC precipitation outlook for central and southern Florida is for equal chance (EC) for July and above normal (A) for Jul-Sep and Aug-Oct
- Forecast El Niño conditions could bring above normal (A) rainfall for the 2012-2013 dry season

# Lake Okeechobee SFWMM July 2012 Position Analysis

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

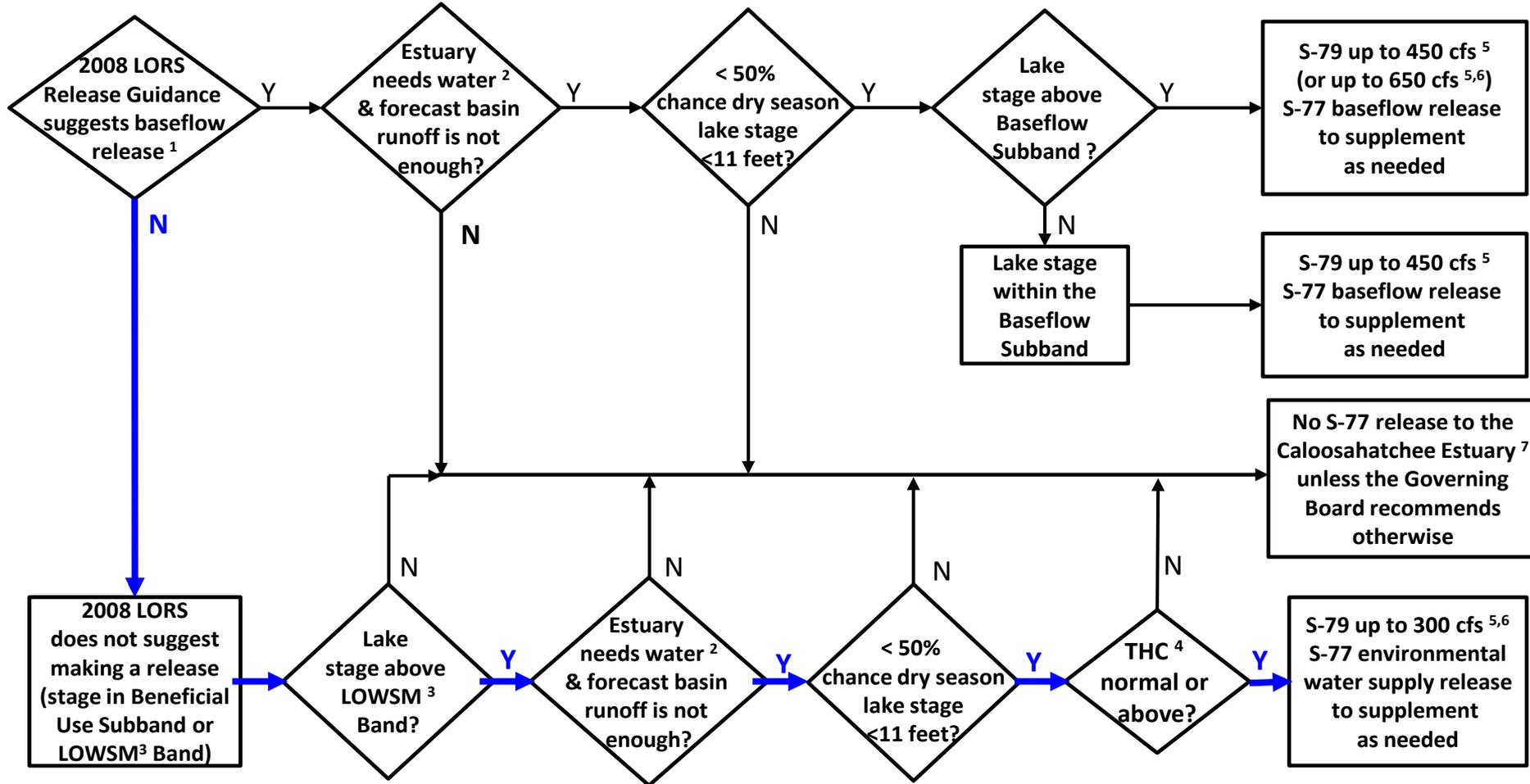


(See assumptions on the Position Analysis Results website)

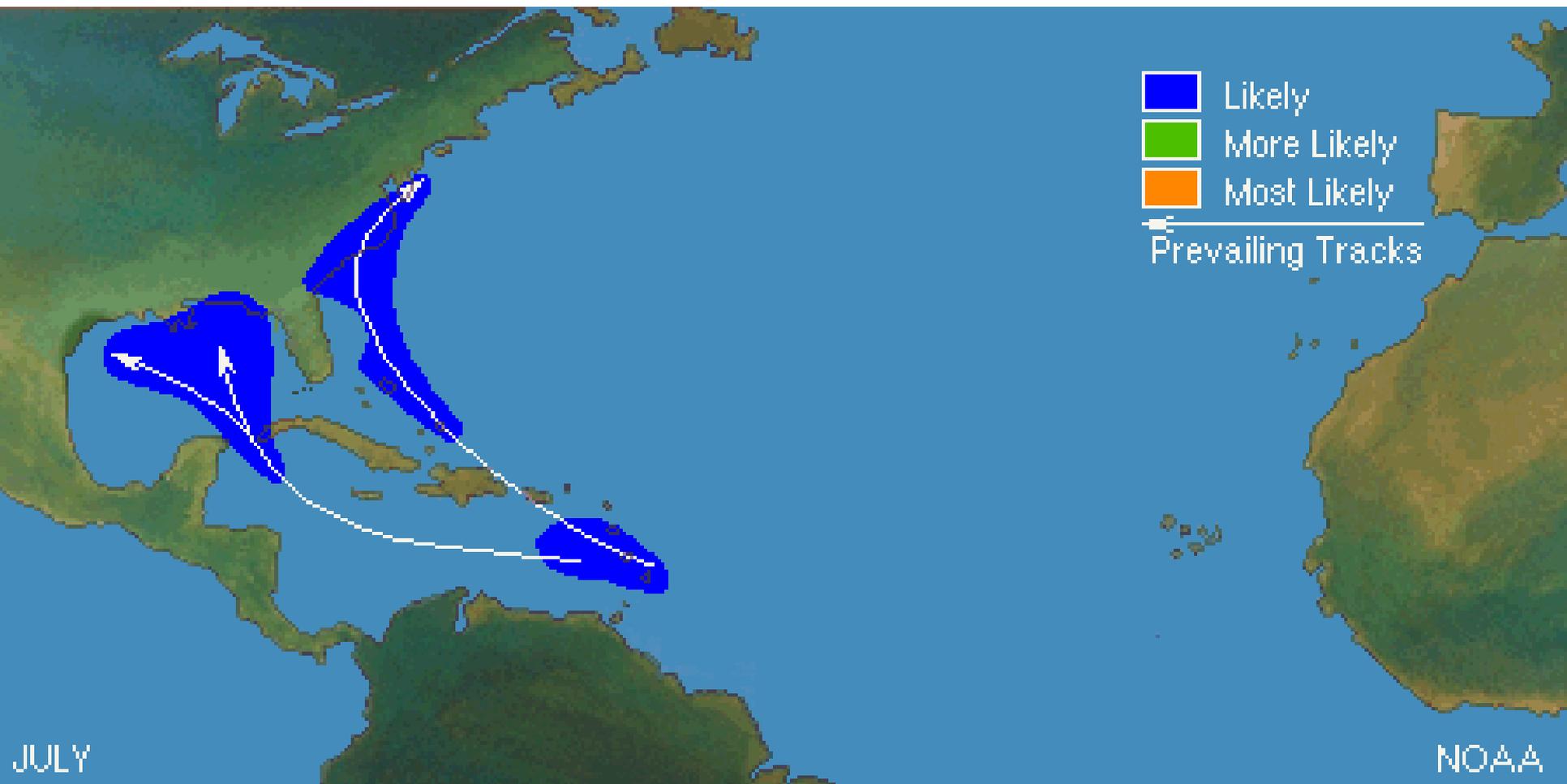
# ***Lake Okeechobee: Current Operations***

- **USACE's Lake O Regulation Schedule (2008 LORS)**
  - Stage is within the Beneficial Use Subband
  - No Lake O releases at this time according to 2008 LORS
- **SFWMD's Lake O Adaptive Protocol (2010)**
  - Release guidance did suggest 300 cfs 10-day pulse releases to the Caloosahatchee Estuary : 26-May, 5-June, 14-June, 24-June, 5-July
    - Lake Stage is in the Beneficial Use Subband
    - Val I75 Salinity forecast > 5 psu for next two weeks
    - Tributary Hydrologic Condition is in the “Normal” class
    - Chance of Lake stage falling below 11.0 ft is < 50%

# Flowchart to Guide Recommendations for Lake Okeechobee Releases to the Caloosahatchee Estuary for 2008 LORS Baseflow & for Environmental Water Supply

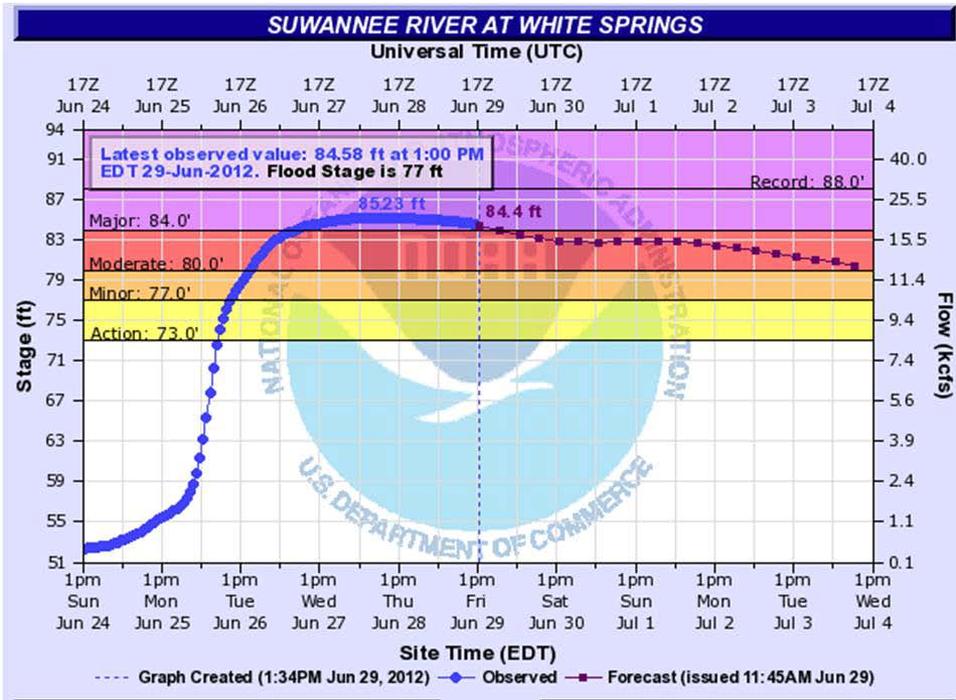
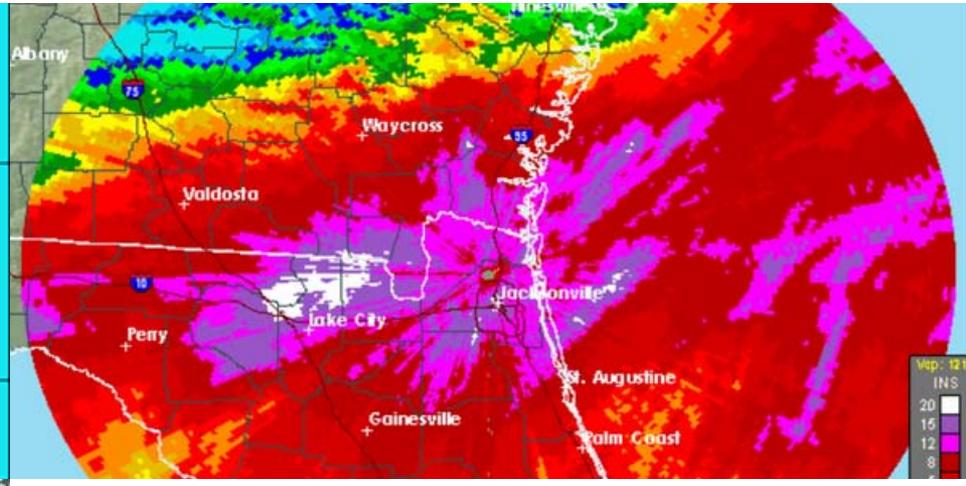


<sup>1</sup>The 2008 LORS Release Guidance (Part D) can suggest baseflow releases in the Intermediate, Low, or Baseflow Subbands.  
<sup>2</sup>Estuary “needs” water when the 30-day moving average salinity at I-75 bridge is projected to exceed 5 practical salinity units (psu) within 2 weeks.  
<sup>3</sup>LOWSM = Lake Okeechobee Water Shortage Management.  
<sup>4</sup>Tributary Hydrologic Condition (THC) is based on classification of Lake Okeechobee Net Inflow and Palmer Index.  
<sup>5</sup>Can release less than the “up to” limit if lower release is sufficient to reach or sustain desired estuary salinity; cfs = cubic feet per second.  
<sup>6</sup>After reviewing conditions in Water Conservation Areas (WCAs), Stormwater Treatment Areas (STAs), ENP, St. Lucie Estuary and Lake Okeechobee.  
<sup>7</sup>Should this condition be reached, the Governing Board will be briefed at their next regularly scheduled meeting as part of the State of the Water Resources agenda item.



# Tropical Storm Debby June 22-28, 2012

## North Florida recorded from 10 to 26 inches





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# TS Debby Deployments 1-2 Statistics

- 3 Crews have rotated response activities
  - Total Hours Worked: 1,217
  - Agencies/Local Governments Supported\*
    - SRWMD
    - City of Live Oak Public Works
    - Columbia County Public Works
  - Number of Pumping Locations 24\*\*
  - Numerous Recon Missions Performed During First Few Days to Locate Flooded/Isolated Homes and Flooded Roads



# TS Debby Deployments 1-2 Support

- Equipment Used
  - 1 Semi Transport
  - 1 Boom Truck
  - 1 Fleet Support Truck
  - 3 Pickup Trucks
  - 3 Hydraulic Pumps/Associated Equipment, Supplies & Hoses



# Crew and Equipment Arrival Live Oak - Suwannee County





# Taking Inventory of Arriving Equipment Suwannee County





# Unloading Pump Columbia County





# Tending Pump Columbia County





# TS Debby Deployments 1-2 Staffing

## Team 1: June 27 – July 3

- Karl Baker – OKE
- Rick Berglund – OKE
- Frank Bradley – OKE
- Larry Jacobs – OKE
- Robert Prescott – OKE
- Larry Russell – STC
- Paul Sham - STC

## Team 2: July 3 – July 10

- David Coulter – STC
- Ernie Feller – STC
- Chris Graham – STC
- Tim Ittenbach – STC
- Mike Mann – STC
- Don Saunders – STC
- Thomas Scott – OKE

## Team 3: July 10 - ?

- Rick Berglund – OKE
- Kent Farmer – OKE
- Scott Henderson - STC
- Jeff Lamb – OKE
- Travis McElroy – OKE
- Paul Sham - STC

# Questions

