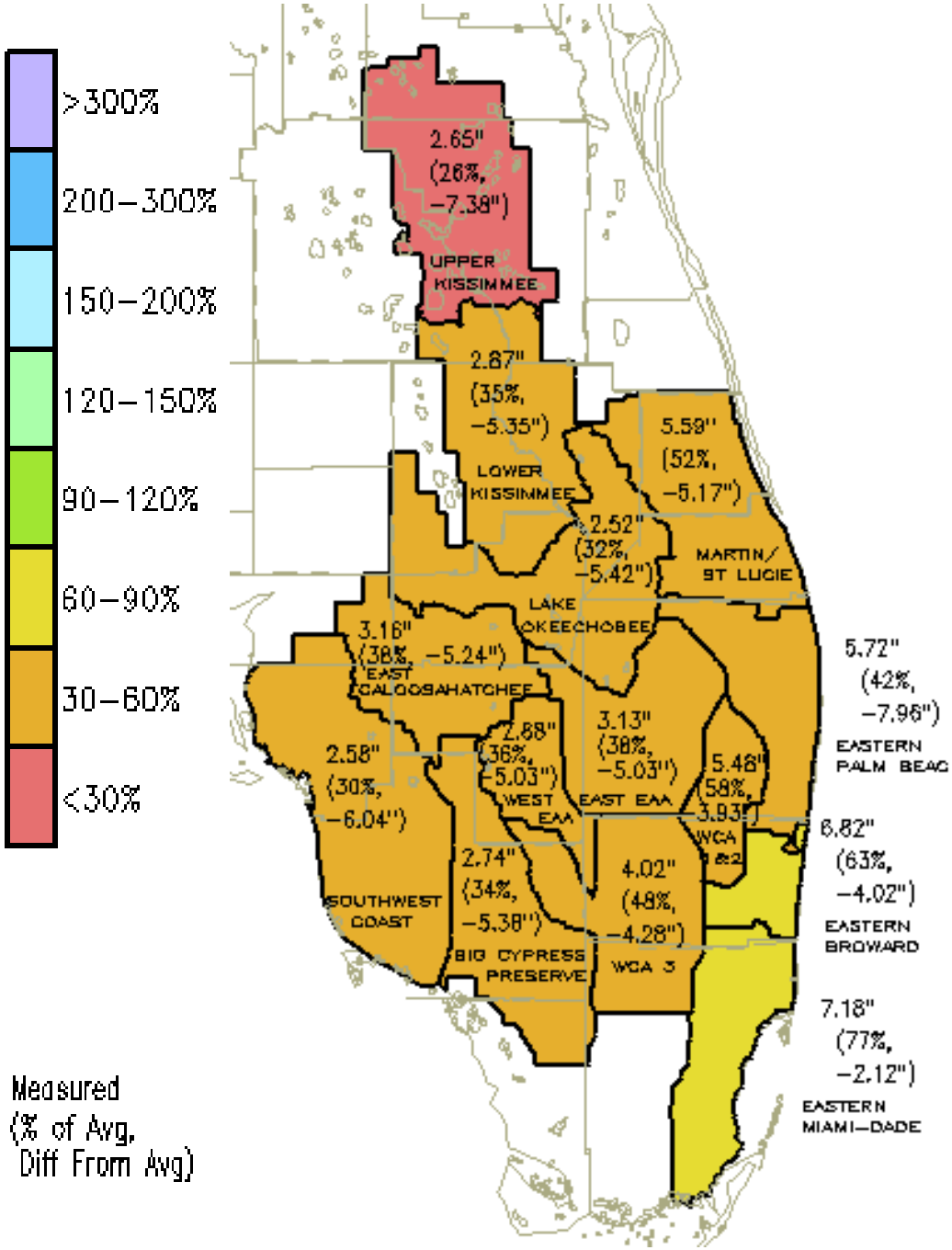
Water Conditions Summary

South Florida Water Management District
Governing Board Meeting

March 15, 2012

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

S-319 Pumping Station: C-51 Canal, Inflow to STA 1E – Palm Beach County



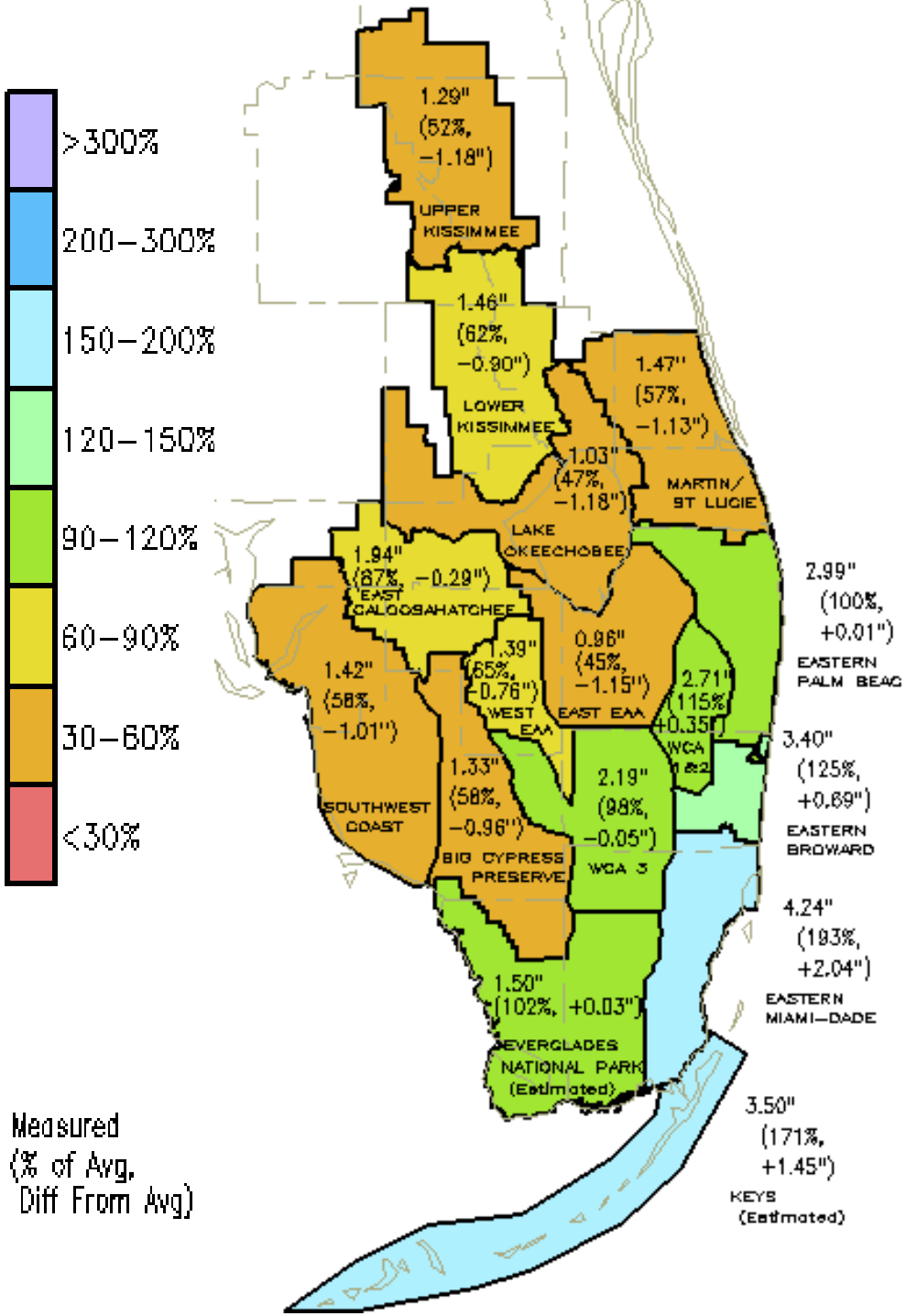
SFWMD 2011-12

Dry Season Rainfall

02Nov2011 – 06 Mar 2012

DISTRICT-WIDE: 3.68” (41% of Avg, or –5.36”)

- All Basins have received less than average rainfall
- Upper Kissimmee has the largest deficiency at -7.38”
- Above average rainfall in most basin in October is still benefiting the regional water resources despite the dryer conditions thus far as compared to last year at this time:
- 2011 Nov – Feb 1.81” (29% of Avg, or –4.45 “)



SFWMD 2012

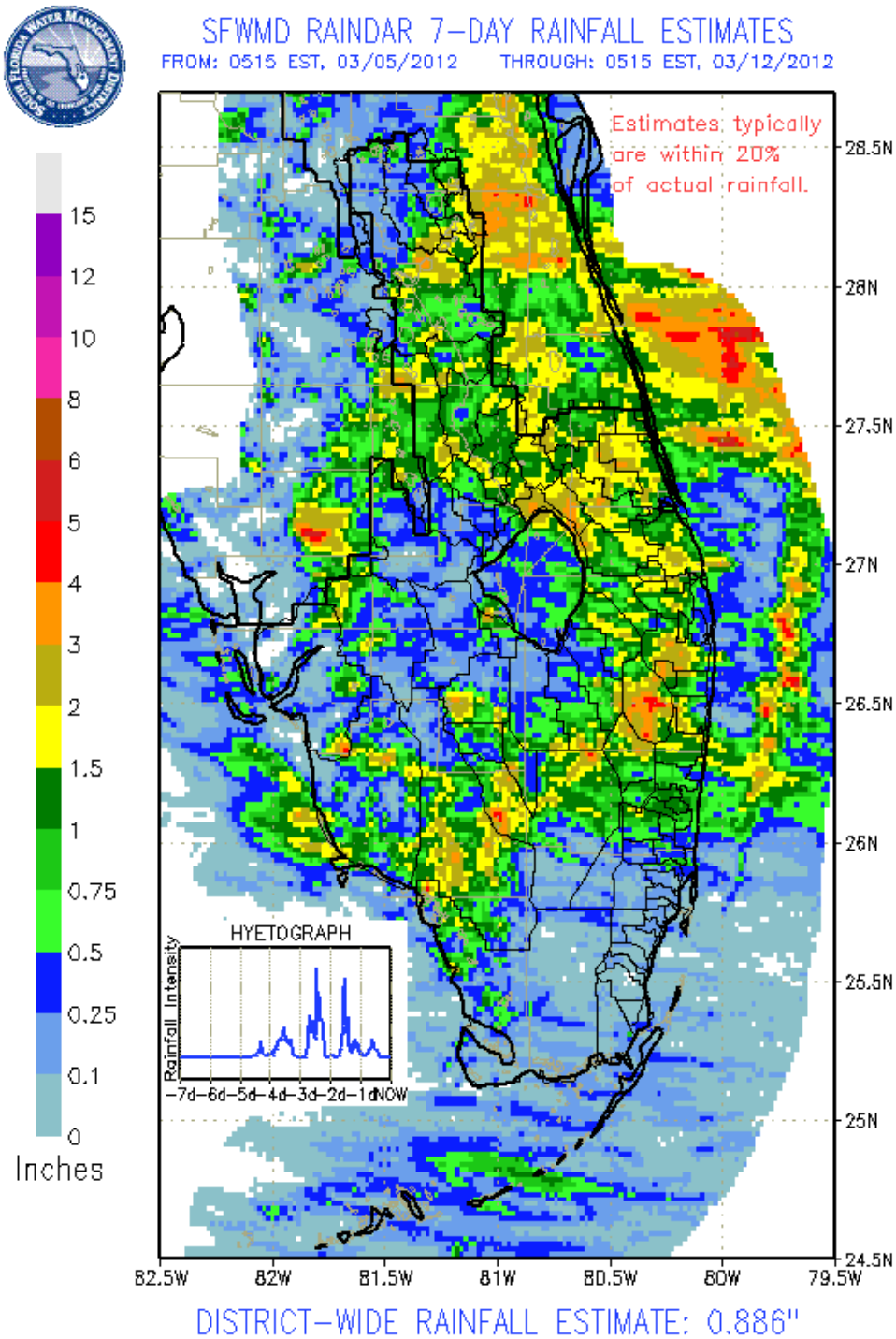
February Rainfall

02Feb2012 – 01Mar2012

DISTRICT-WIDE: 1.75” (74% of Avg, or -0.60”)

- **LEC and Everglades basins close to average.**
- **Other basins below average**

•February contributed ~ 50% of the total rainfall for the current dry season



SFWMD 2012

March Rainfall

03-Mar-2012 – 12–Mar-2012

DISTRICT-WIDE: 1.75” (74% of Avg, or -0.60”)

- **About 0.9 inches during first week of March**
- **Highest rainfall along the east coast**
  - **1.5”-3” in Upper East Coast**
  - **Up to 3” in Palm Beach County**
  - **Up to 1.5” in Broward Count**

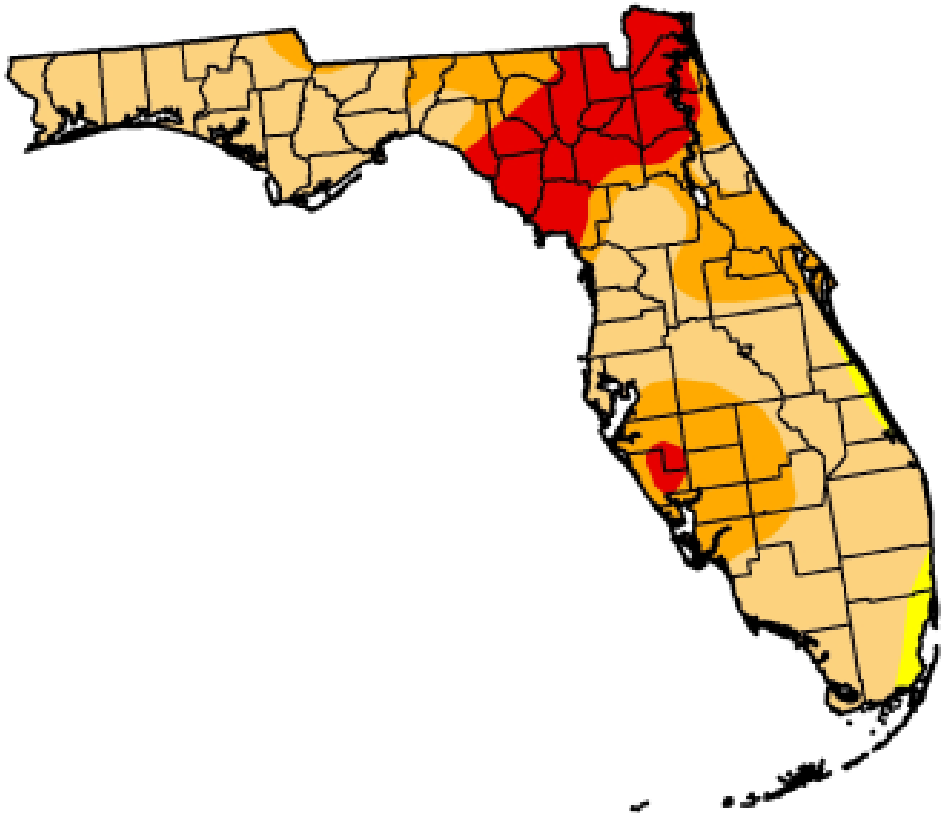
U.S. Drought Monitor

March 6, 2012
Valid 7 a.m. EST

Florida

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	97.68	39.93	15.18	0.00
Last Week (02/28/2012 map)	0.00	100.00	92.18	49.44	23.46	0.00
3 Months Ago (12/06/2011 map)	53.81	46.19	30.25	20.60	9.32	0.00
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 (03/01/2011 map)	0.87	99.13	91.30	53.50	13.06	0.00



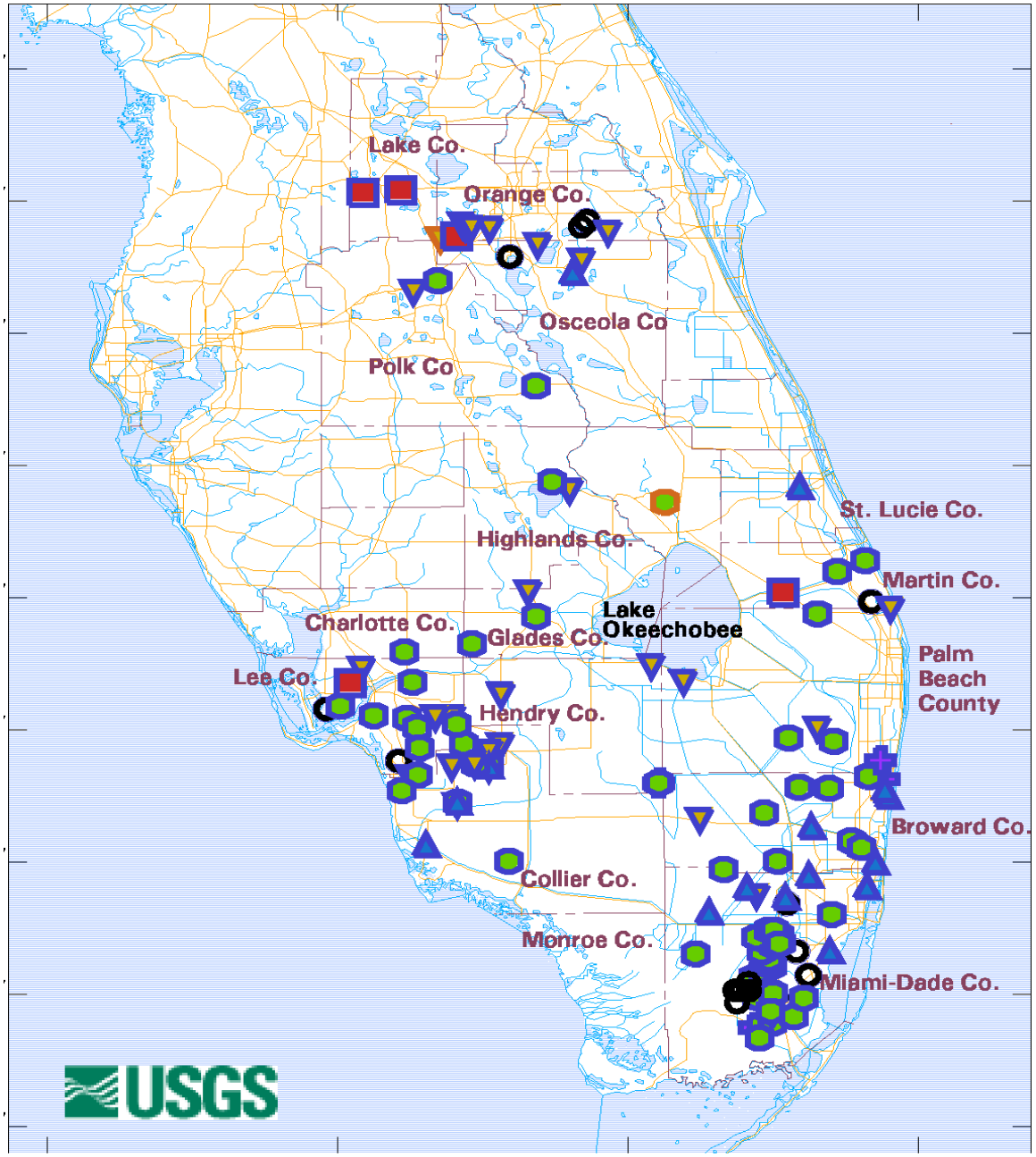
Intensity:

- 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

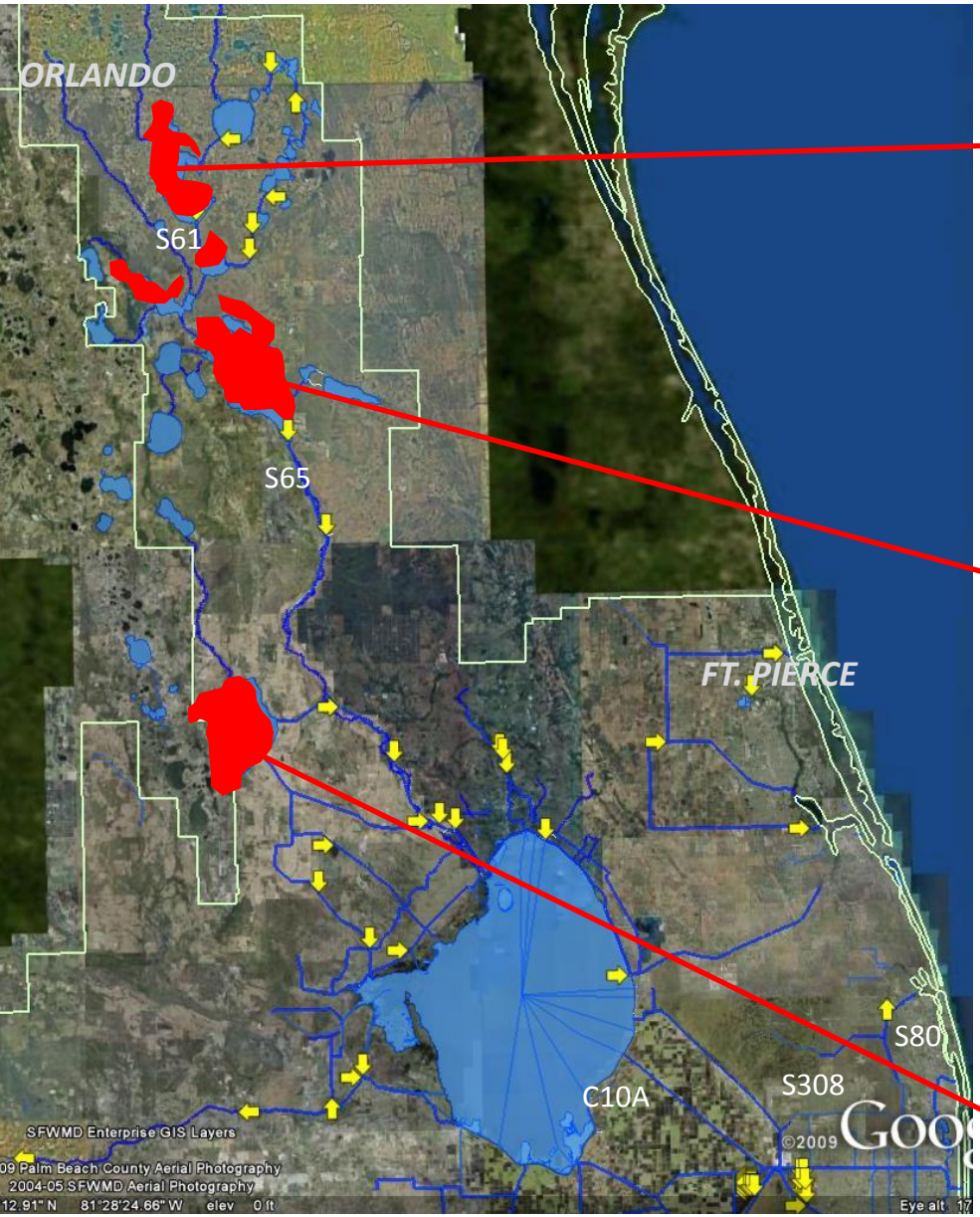
Released Thursday, March 8, 2012
Michael Brewer, National Climatic Data Center, NOAA

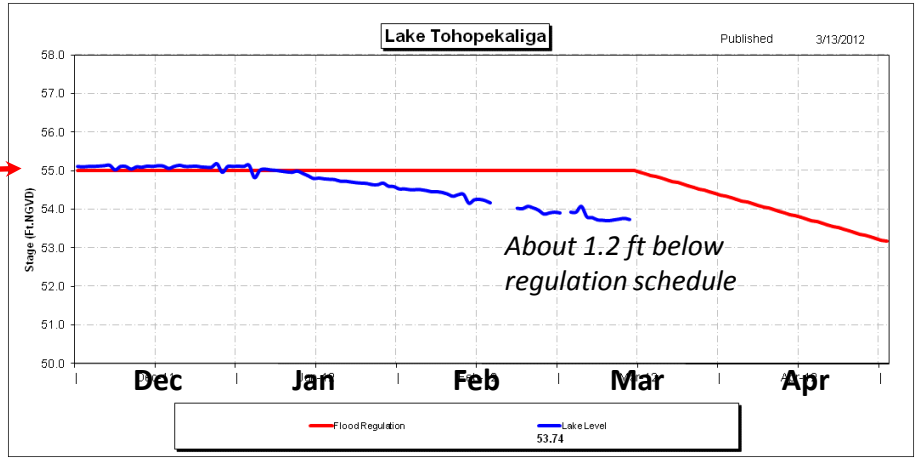


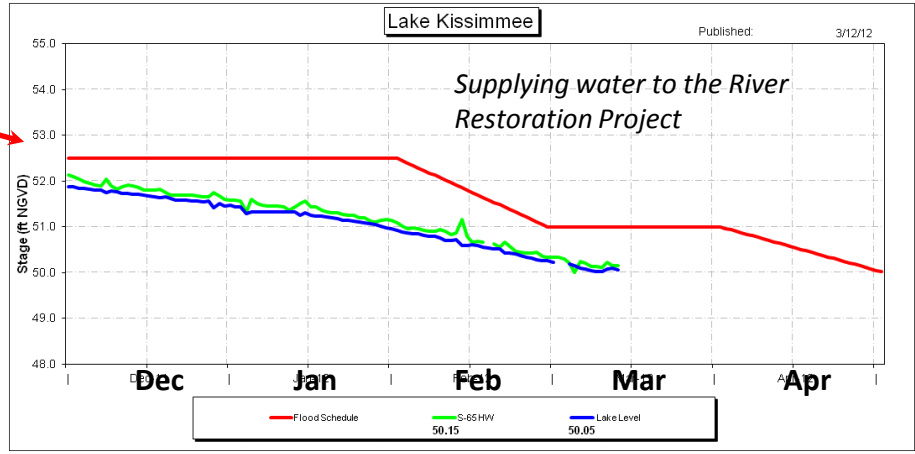
Water level compared to historical data, without trend analysis:

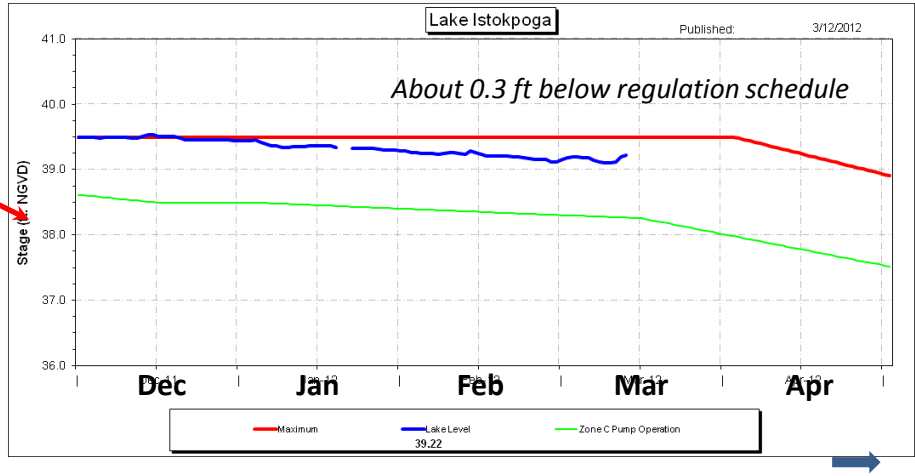
- Insufficient information available to compute water-level statistics
- In lowest 10 percent of past water elevations
- Within lowest 10 to 30 percent of past water elevations
- Within 20 percent of the median of past water elevations
- Within highest 10 to 30 percent of past water elevations
- In highest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

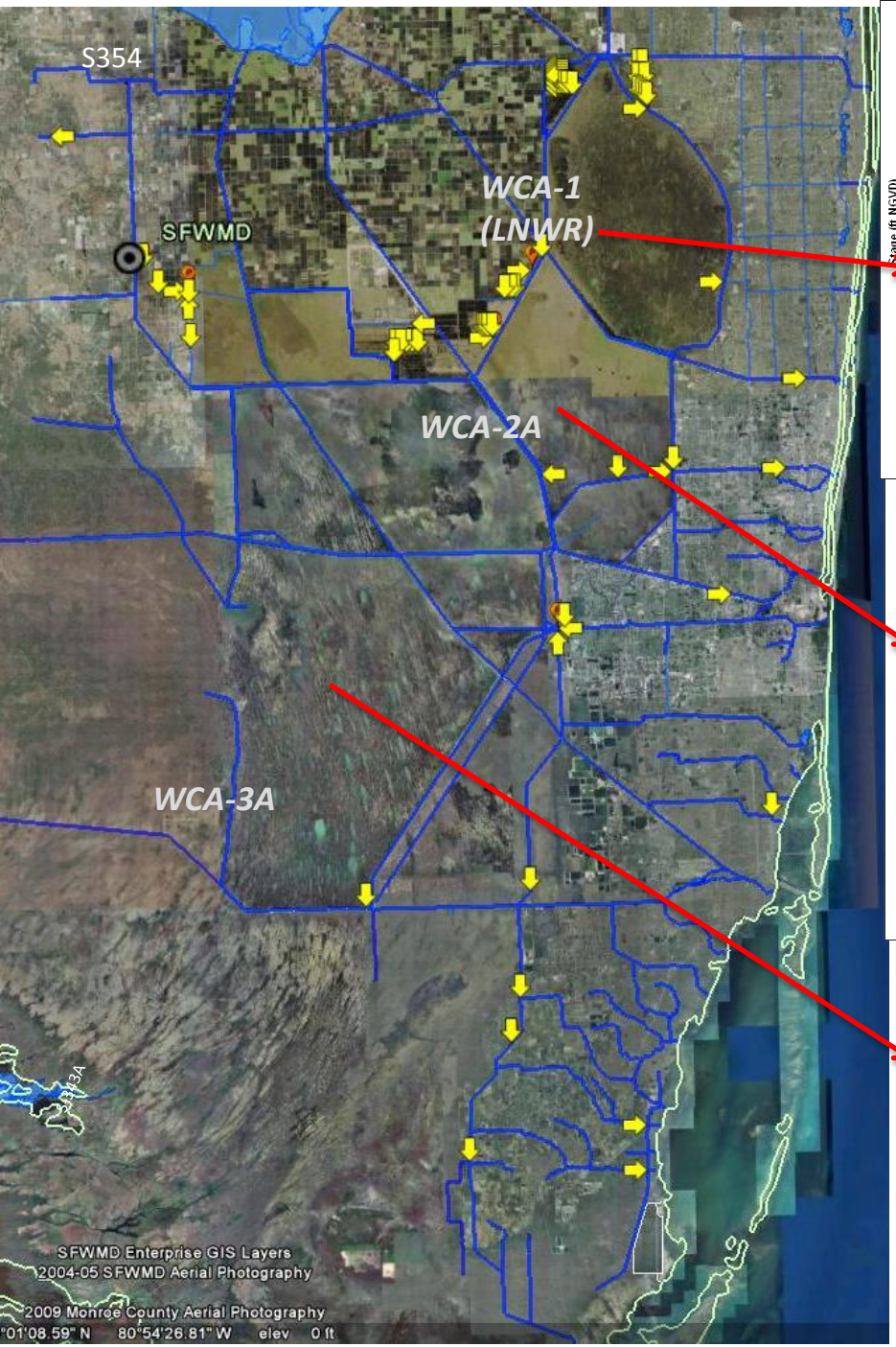
Water levels at selected sites in South Florida,
Based on PROVISIONAL DATA, as of March 13, 2012.

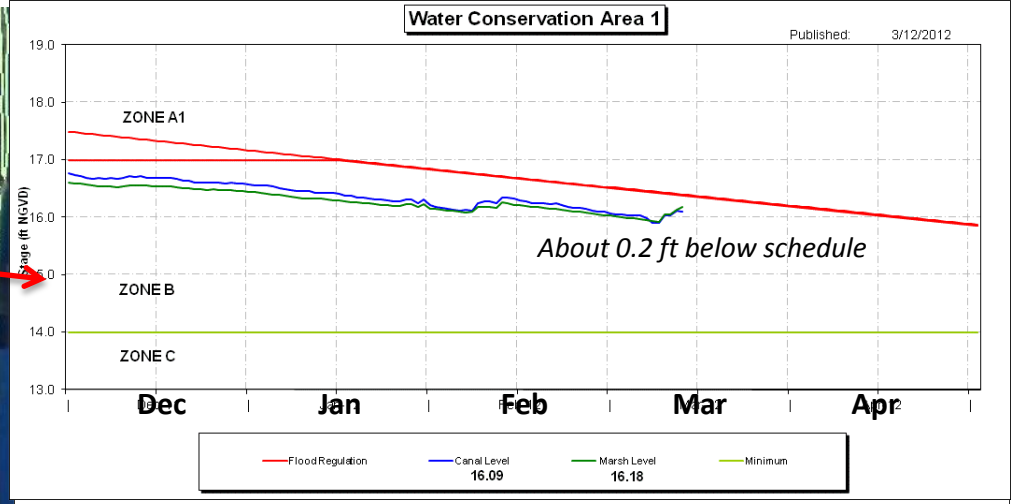

ORLANDO
S61
S65
FT. PIERCE
S80
S308
C10A
SFWMD Enterprise GIS Layers
09 Palm Beach County Aerial Photography
2004-05 SFWMD Aerial Photography
12.91" N 81°28'24.66" W elev 0 ft
©2009
Eye alt 17

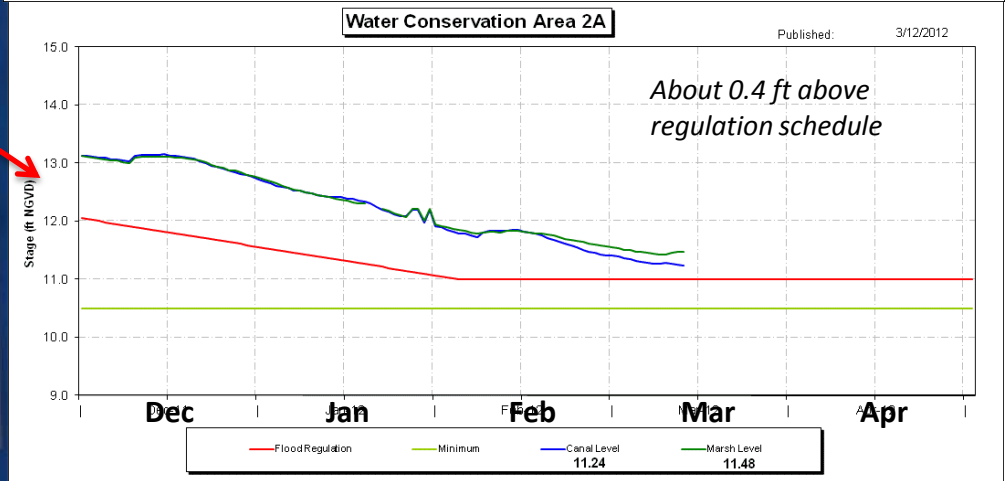

Lake Tohopekaliga
Published 3/13/2012
Stage (Ft.NGVD)
58.0
57.0
56.0
55.0
54.0
53.0
52.0
51.0
50.0
About 1.2 ft below regulation schedule
Dec
Jan
Feb
Mar
Apr
Flood Regulation
Lake Level
53.74

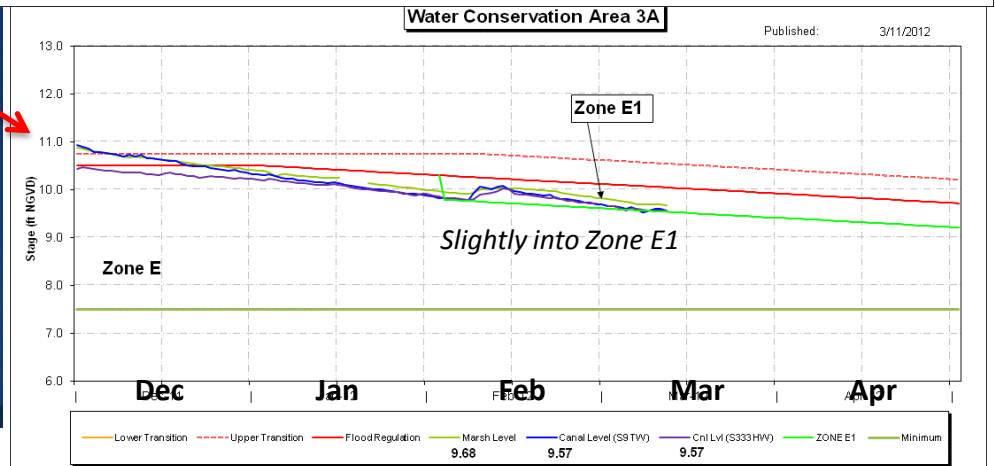

Lake Kissimmee
Published: 3/12/12
Stage (ft NGVD)
55.0
54.0
53.0
52.0
51.0
50.0
49.0
48.0
Supplying water to the River Restoration Project
Dec
Jan
Feb
Mar
Apr
Flood Schedule
S-65 HW
Lake Level
50.15
50.05


Lake Istokpoga
Published: 3/12/2012
41.0
40.0
39.0
38.0
37.0
36.0
About 0.3 ft below regulation schedule
Dec
Jan
Feb
Mar
Apr
Maximum
Lake Level
Zone C Pump Operation
39.22

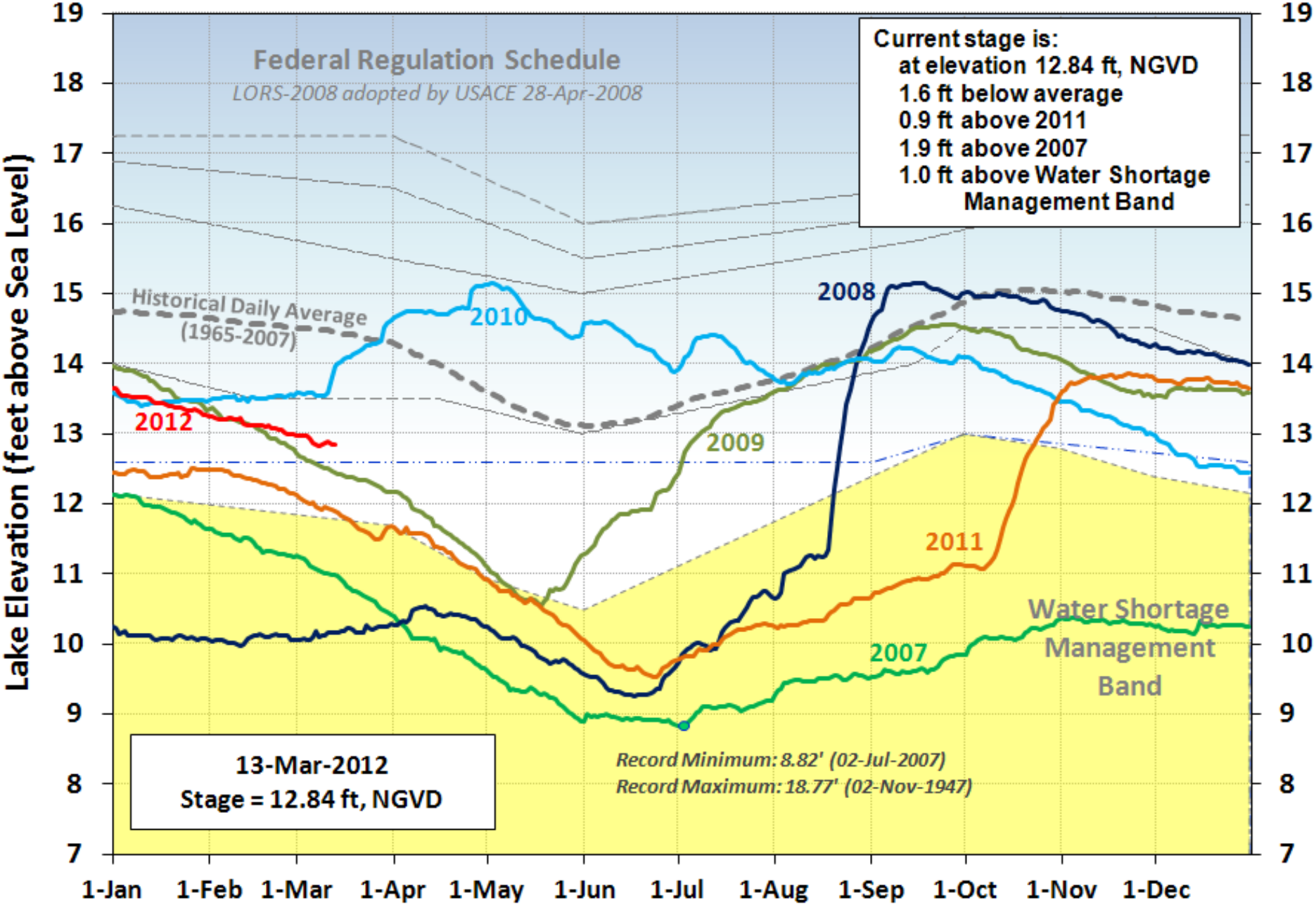

S354
SFWMD
WCA-1
(LNWR)
WCA-2A
WCA-3A
SFWMD Enterprise GIS Layers
2004-05 SFWMD Aerial Photography
2009 Monroe County Aerial Photography
"01'08.59" N 80°54'26.81" W elev 0 ft


Water Conservation Area 1
Published: 3/12/2012
ZONE A1
ZONE B
ZONE C
Stage (ft NGVD)
About 0.2 ft below schedule
Dec
Jan
Feb
Mar
Apr
Flood Regulation
Canal Level
16.09
Marsh Level
16.18
Minimum


Water Conservation Area 2A
Published: 3/12/2012
Stage (ft NGVD)
About 0.4 ft above
regulation schedule
Dec
Jan
Feb
Mar
Apr
Flood Regulation
Minimum
Canal Level
11.24
Marsh Level
11.48


Water Conservation Area 3A
Published: 3/11/2012
Zone E1
Zone E
Stage (ft NGVD)
Slightly into Zone E1
Dec
Jan
Feb
Mar
Apr
Lower Transition
Upper Transition
Flood Regulation
Marsh Level
9.68
Canal Level (S9TW)
9.57
Cnl Lvl (S333HW)
9.57
ZONE E1
Minimum

Lake Okeechobee Water Level Comparison

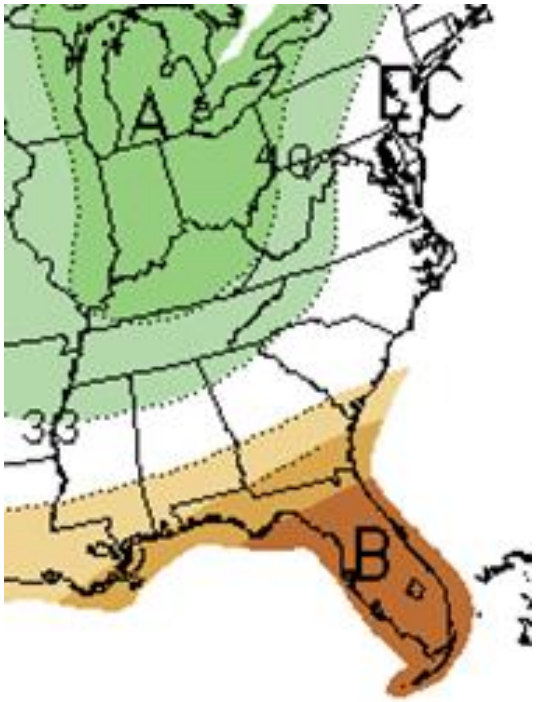


U. S. Seasonal Precipitation Outlook

National Climate Prediction Center (CPC)

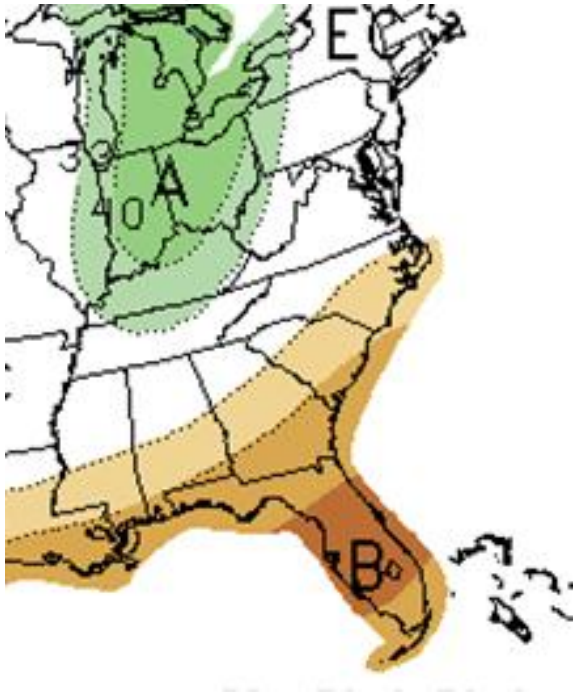
Mar 2012

(issued 29-Feb-2012)



Mar – April – May 2012

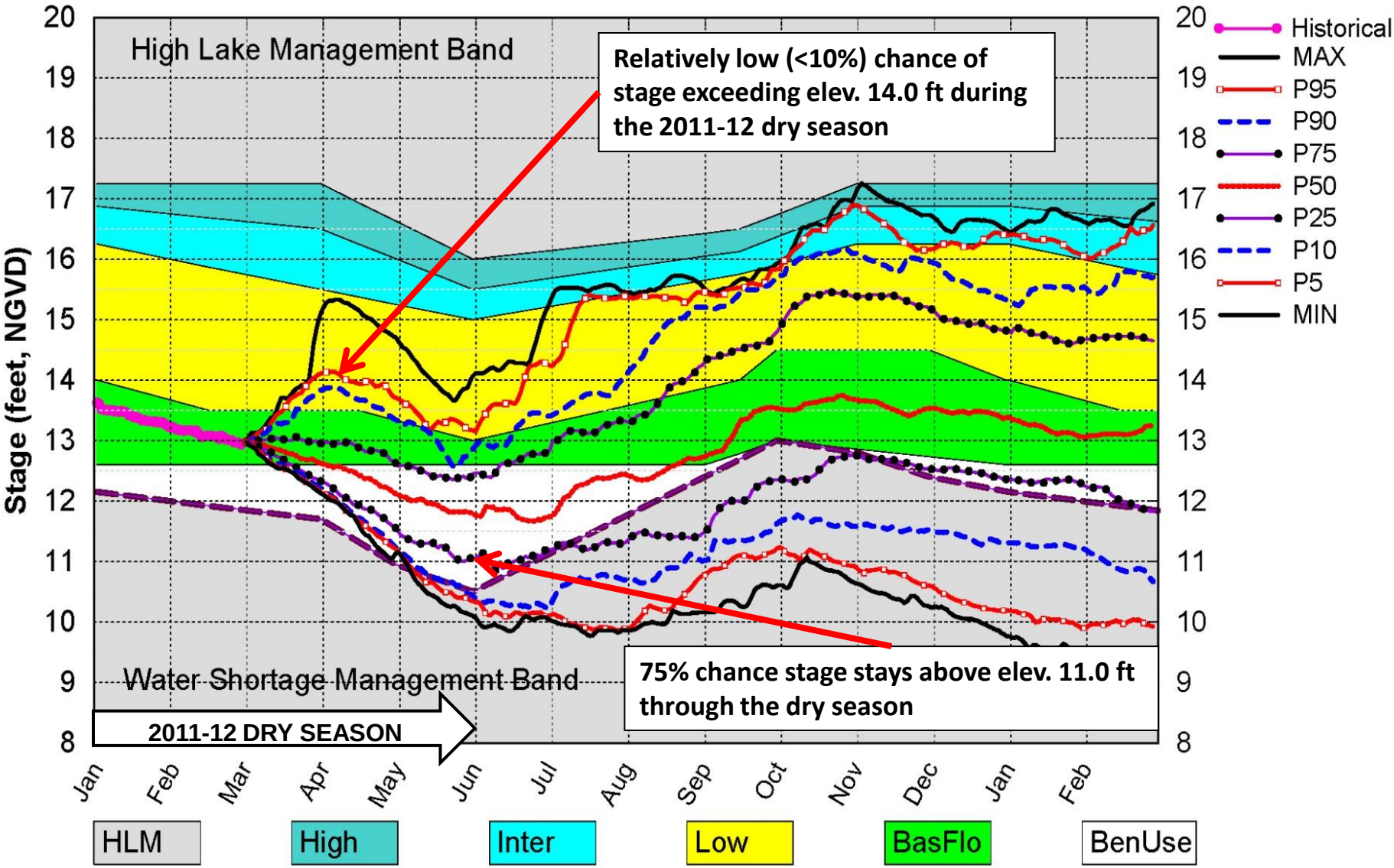
(issued 16-Feb-2012)



The current CPC precipitation outlook for central and southern Florida is for increased chances of below-normal (B) rainfall for the reminder of the 2011-12 dry season.

Lake Okeechobee SFWMM March 2012 Position Analysis

Percentiles based on 41 possible outcomes starting with February 1st initialization

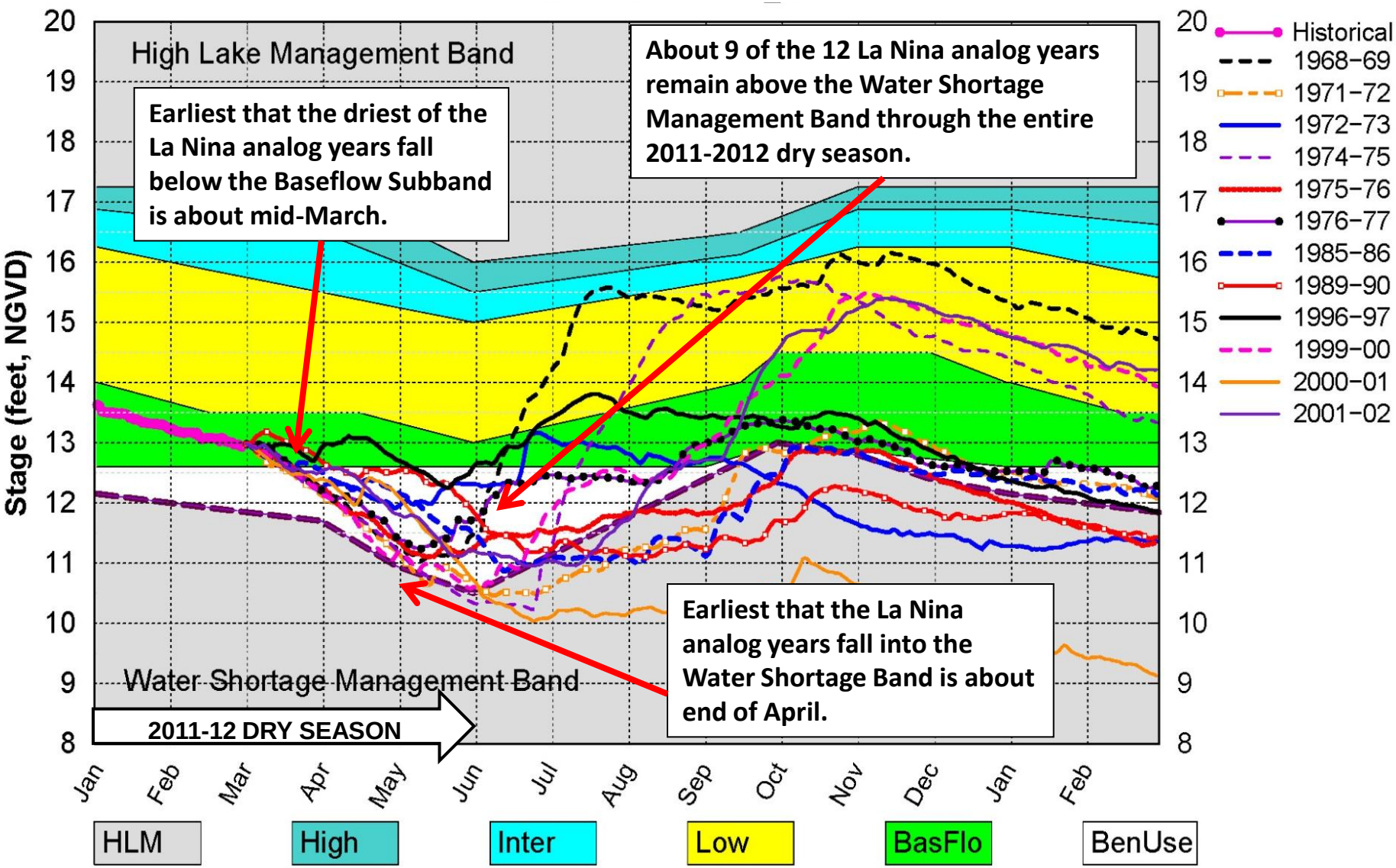


(See assumptions on the Position Analysis Results website)

Mon Mar 5 14:35:08 2012

Lake Okeechobee SFWMM March 2012 Position Analysis

Hydrographs for 12 La Nina Analog Years



(See assumptions on the Position Analysis Results website)

Mon Mar 5 14:35:49 2012

Lake Okeechobee: Current Operations

- **USACE's Lake O Regulation Schedule (2008 LORS)**
  - Stage is within the Baseflow Subband
  - Release guidance suggests:
    - up to baseflow releases at S-79 (450) and S-80 (200)
    - No releases to the WCAs (Dry Tributary Hydrologic Conditions)
- **SFWMD's Lake O Adaptive Protocol (2010)**
  - Release guidance currently suggests up to 450 cfs baseflow releases to the Caloosahatchee Estuary
    - Lake Stage is in the Baseflow Subband
    - Val I75 Salinity forecast (30-day moving avg) > 5 psu within next two weeks
    - Less than 50% chance Lake stage will fall below elevation 11.0 ft during the dry season
  - Mar 15th: SFWMD requested the USACE to initiate 14th consecutive week of 450 cfs baseflow releases

Questions