

Water Conditions Summary

South Florida Water Management District
Governing Board Meeting

October 11, 2012

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

SFWMD

Wet Season Rainfall

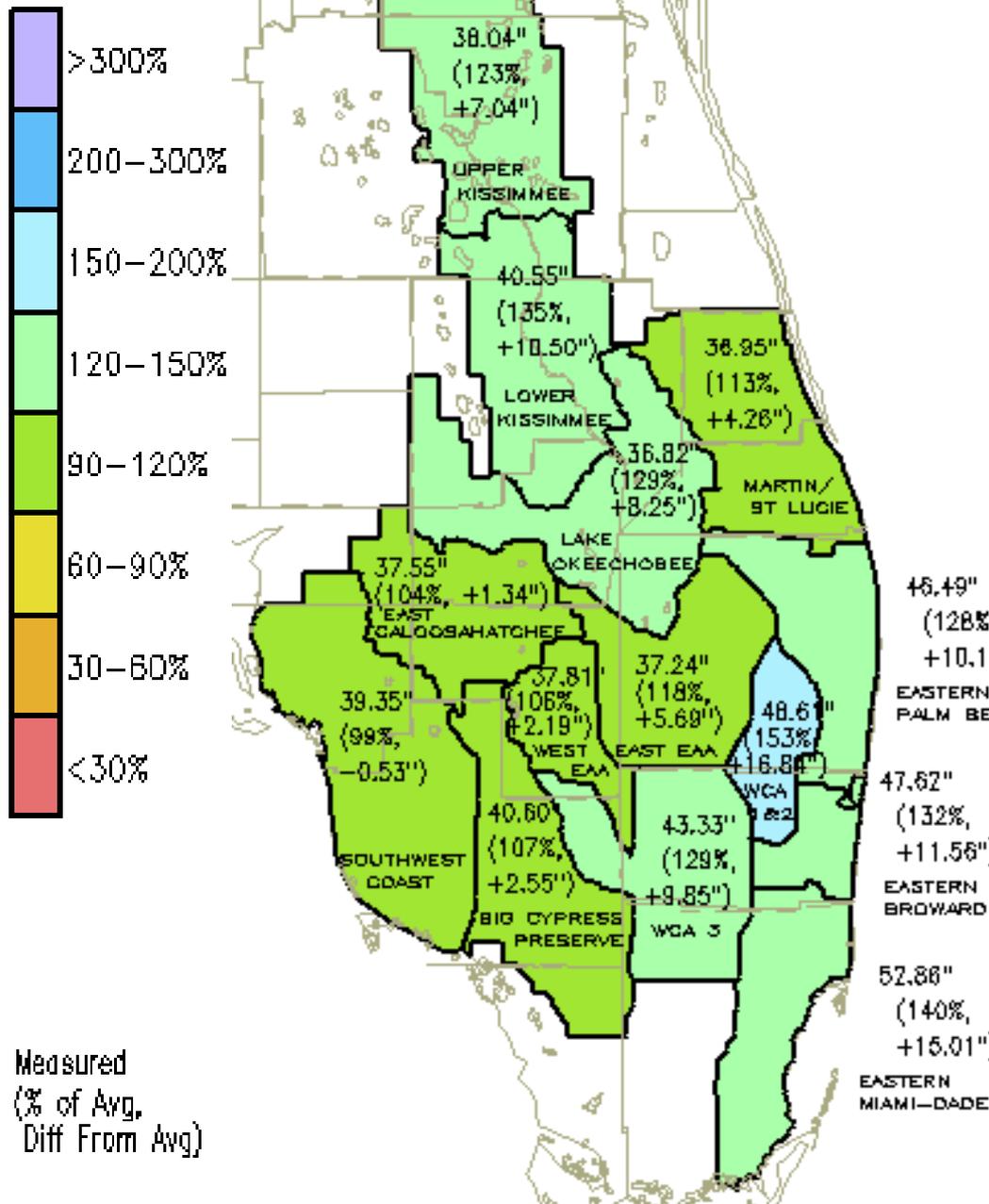
8 May – 8 October 2012

**DISTRICT-WIDE: 40.61"
(120% of Avg, or +6.75")**

Most basins above average:

- Upper Kissimmee + 7.0"
- Lower Kissimmee + 10.5"
- Lake Okeechobee + 8.3"
- WCA 1 & 2 + 17.0"
- Eastern PB Co + 11.6"
- Miami-Dade + 15.0"

Only Southwest Coast is below average



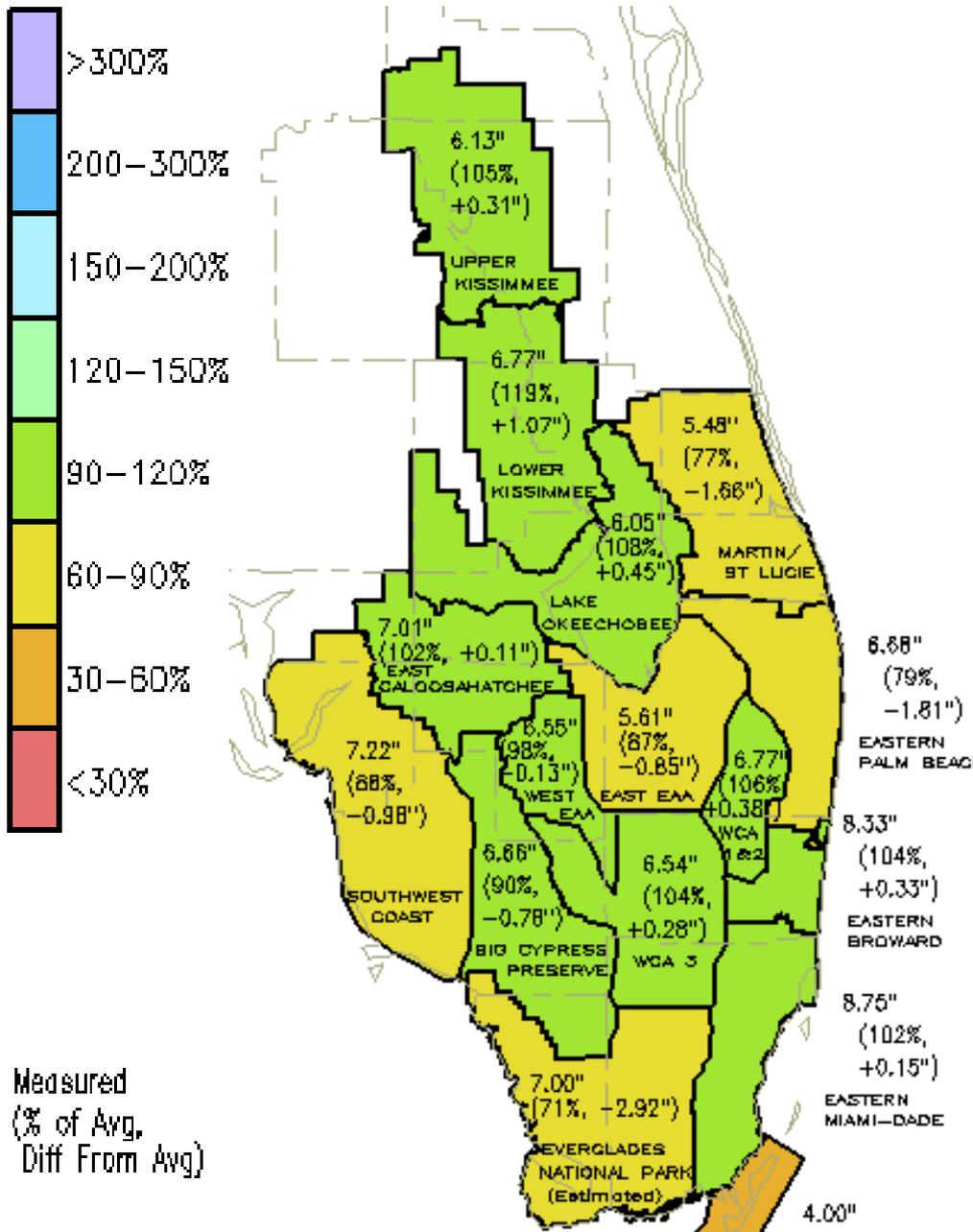
2012 Wet Season Started 05/08/2012

SFWMD 2012

September Rainfall (2-September to 1-October 2012)

**DISTRICT-WIDE: 6.61"
(97% of Avg, or -0.22")**

- Most areas are near or above average, within -13% to + 19%
- Martin/St. Lucie is 13% below average
- Lower Kissimmee basin is 19% above average
- Runoff continues to flow into Lake Okeechobee



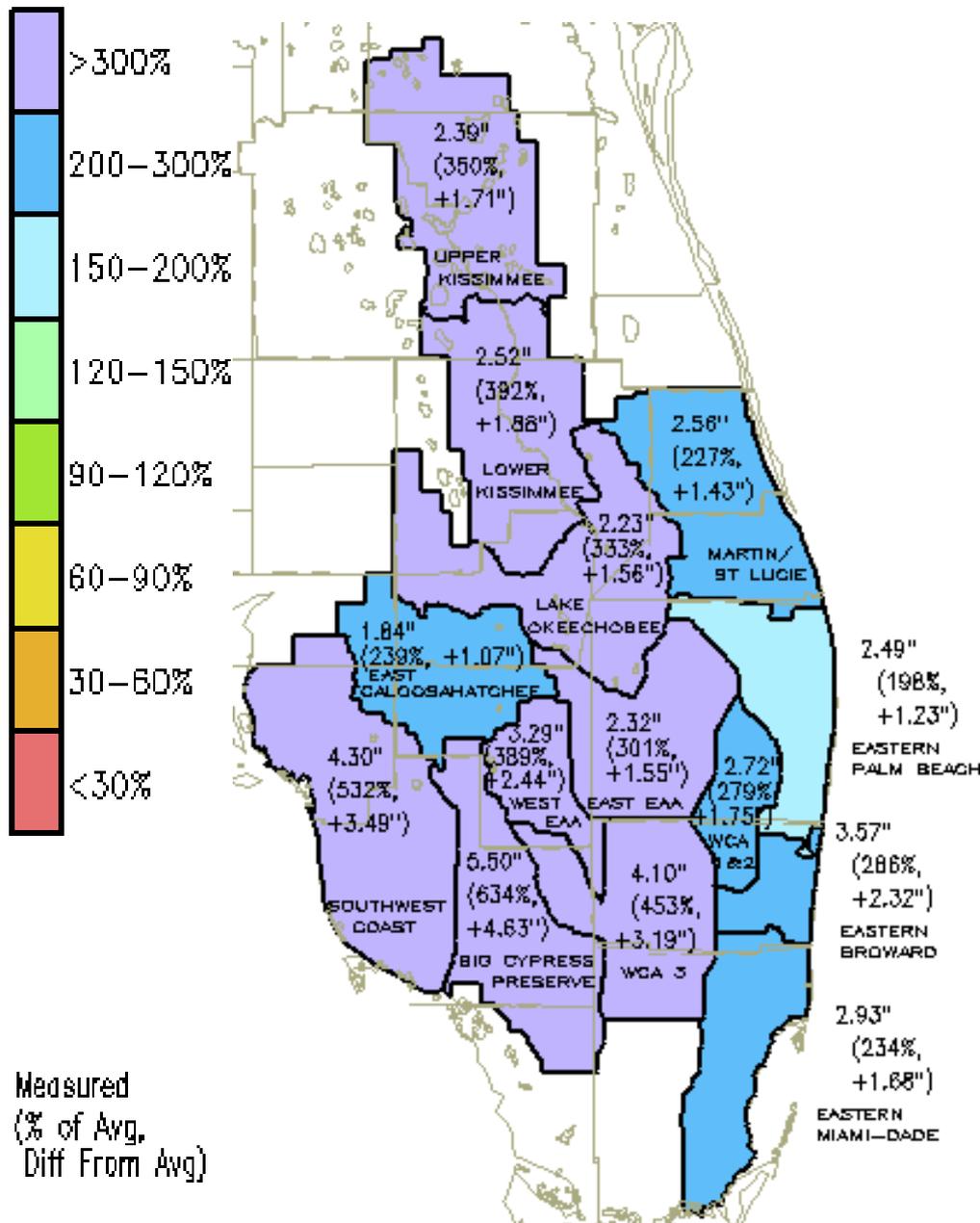
SFWMD 2012

October Rainfall

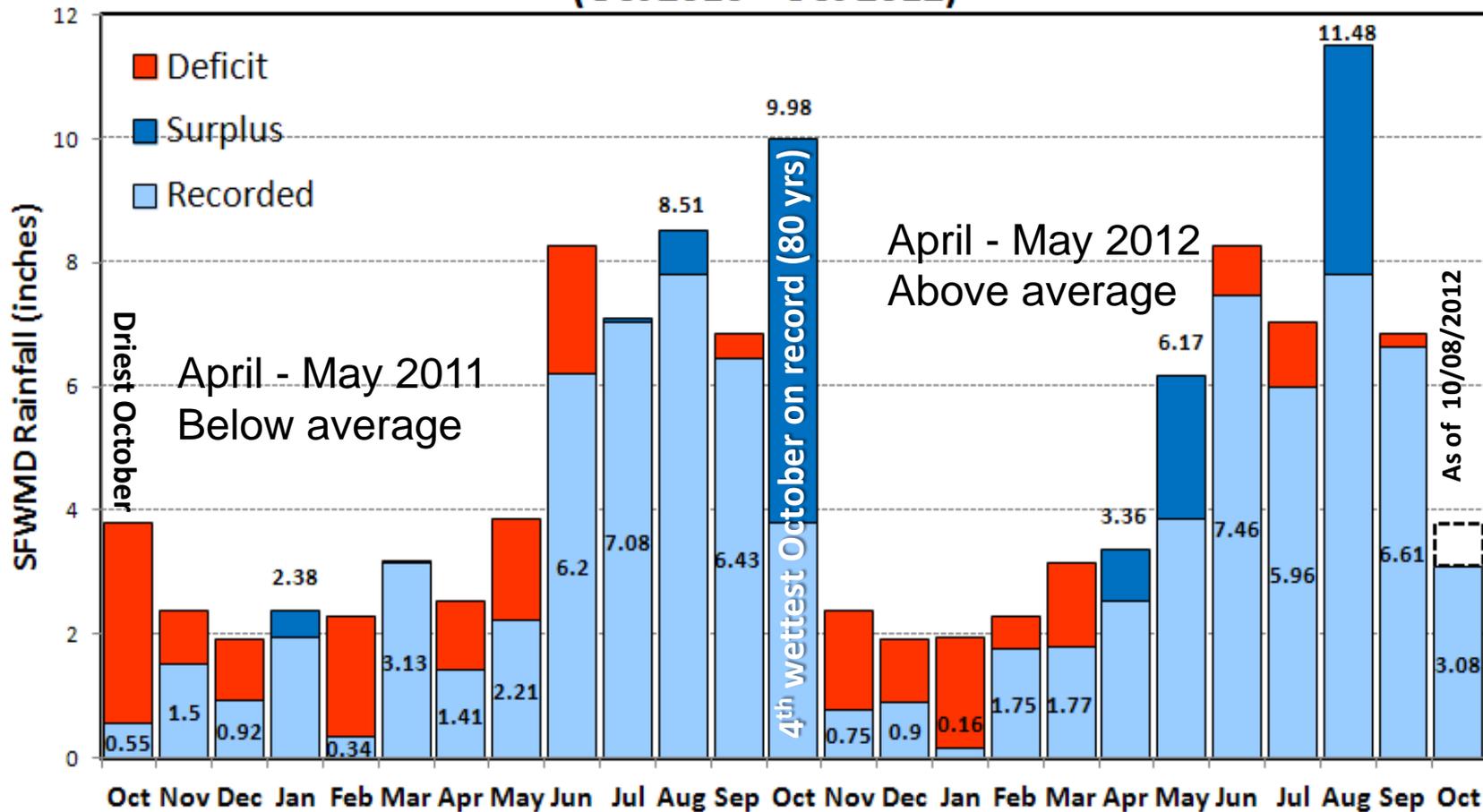
(2 October to 8 October 2012)

DISTRICT-WIDE: 3.08"
(361% of Avg, or +2.23")

- Entire District area has received above average rainfall for the first days of October



SFWMD Rainfall Distribution Comparison (Oct 2010 - Oct 2012)



2010-11 DRY SEASON:

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

2011 WET SEASON:

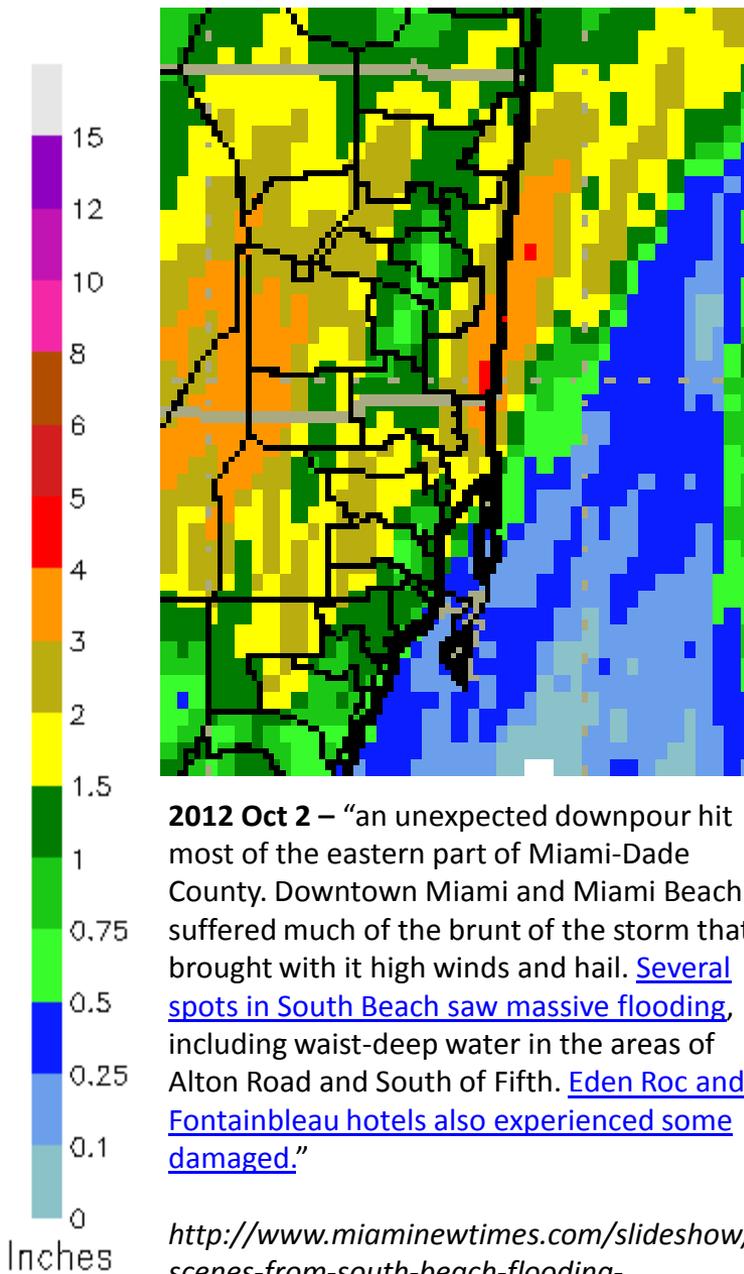
- latest start (June 12) in at least 20 years
- 3 Big Rain Days in October (2.3", 2.3" & 1.7")

2011-12 DRY SEASON:

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

2012 WET SEASON:

- Early wet season start with above normal rainfall in May and below normal in June and July . TS Isaac brought August rainfall high above average



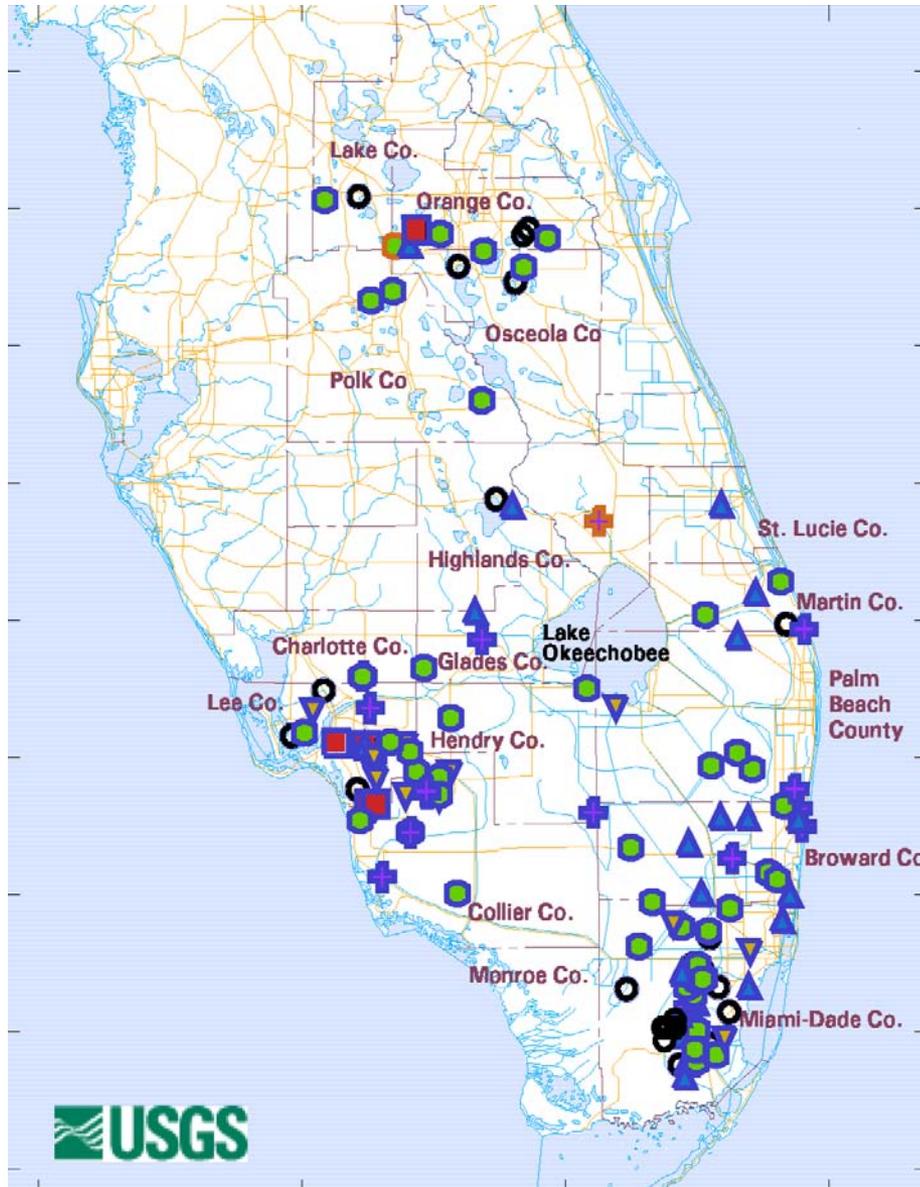
2012 Oct 2 – “an unexpected downpour hit most of the eastern part of Miami-Dade County. Downtown Miami and Miami Beach suffered much of the brunt of the storm that brought with it high winds and hail. [Several spots in South Beach saw massive flooding](#), including waist-deep water in the areas of Alton Road and South of Fifth. [Eden Roc and Fontainebleau hotels also experienced some damaged.](#)”

<http://www.miaminewtimes.com/slideshow/scenes-from-south-beach-flooding-15502851/#17>



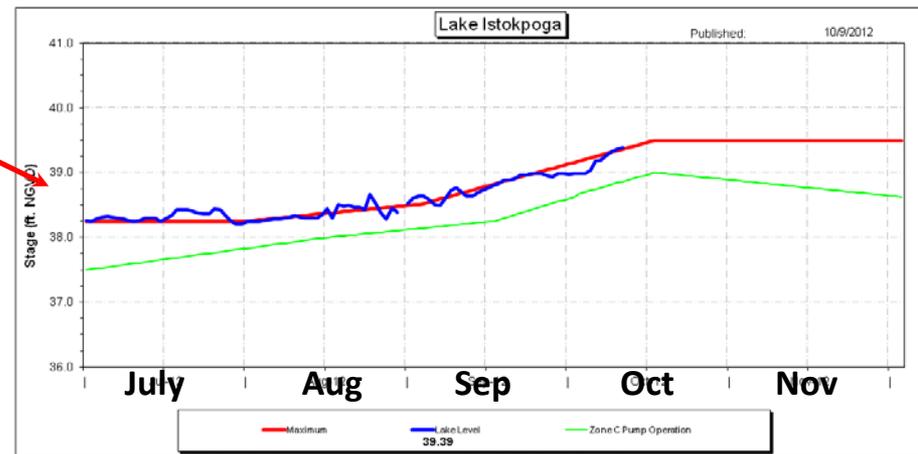
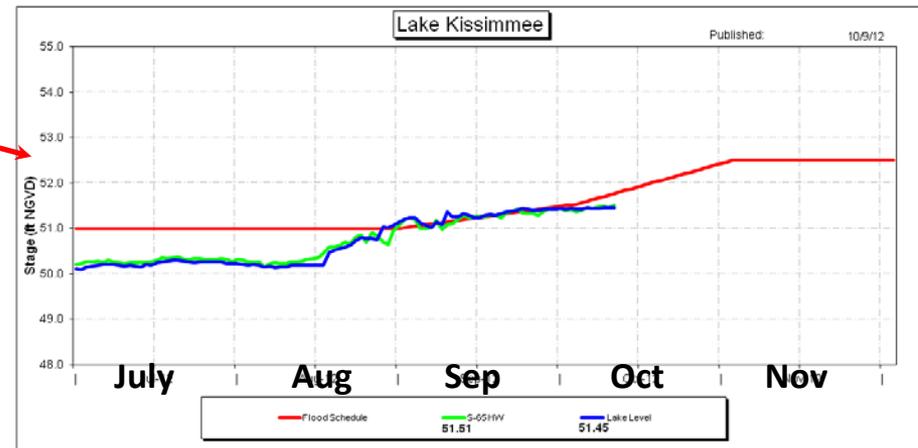
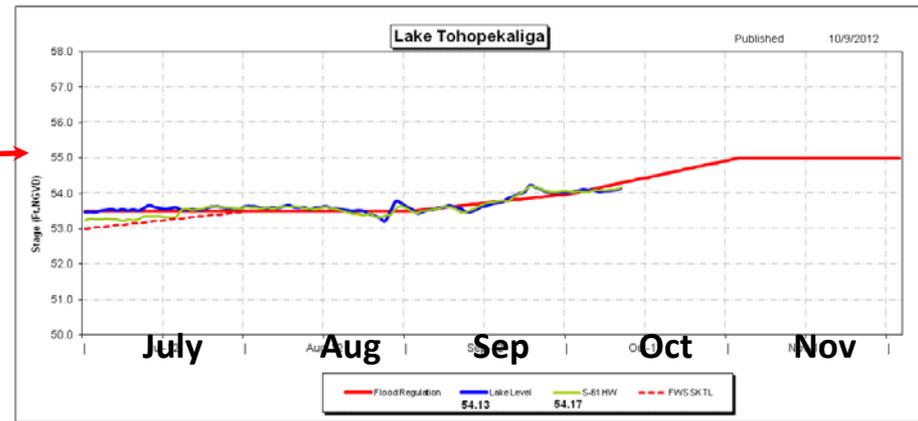
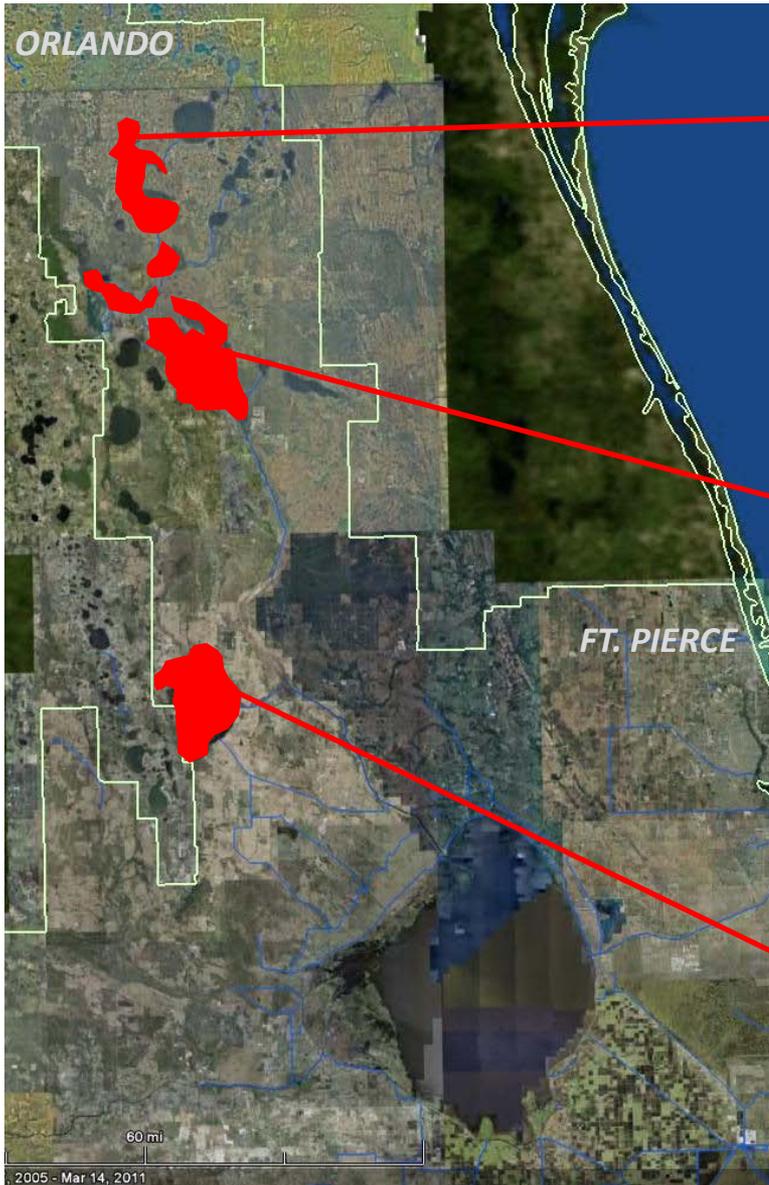
Groundwater Levels

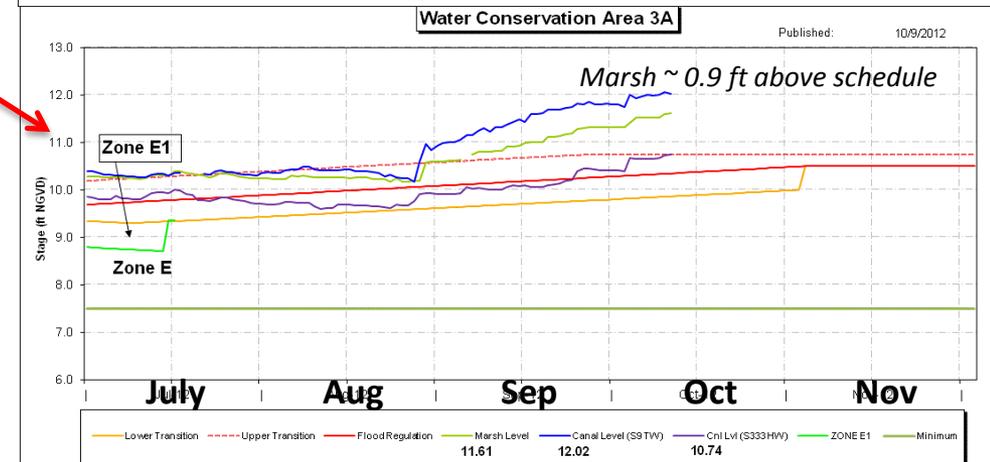
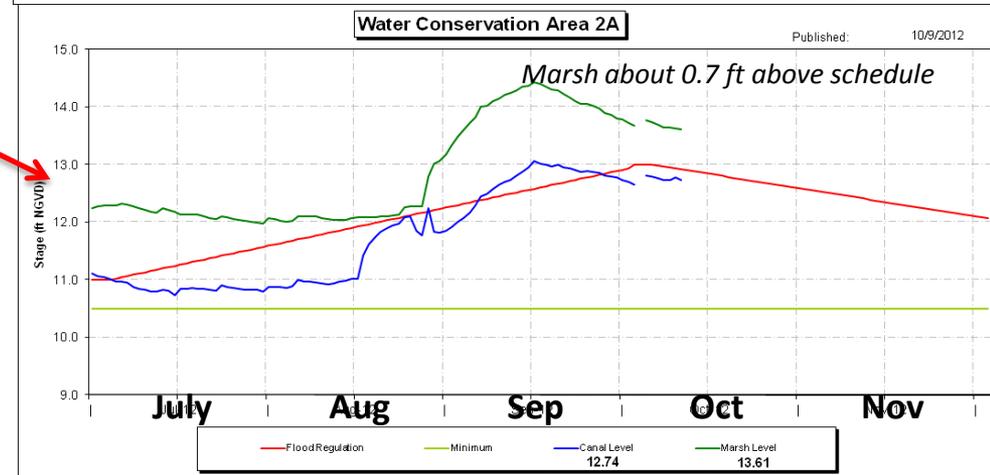
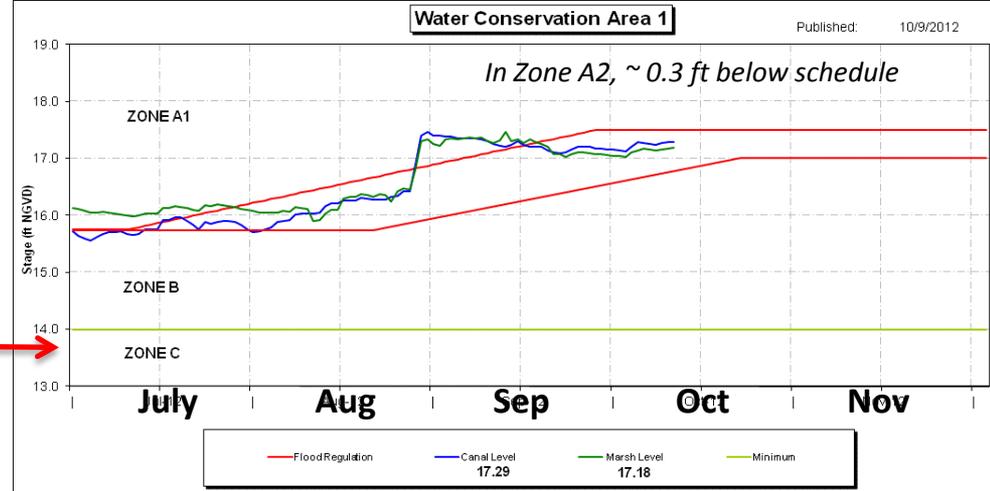
Water levels at selected sites in South Florida
Based on PROVISIONAL DATA, as of October 9, 2012



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





2012 Seasonal Agricultural Drawdown

Based on the October 1st field inspection, The District will proceed with the canal drawdown in South Dade County on October 15th

C-102 Basin:

October 15th - change structure S-21A to Low range;
- *open at 1.4 ft., close at 1.0 ft.*

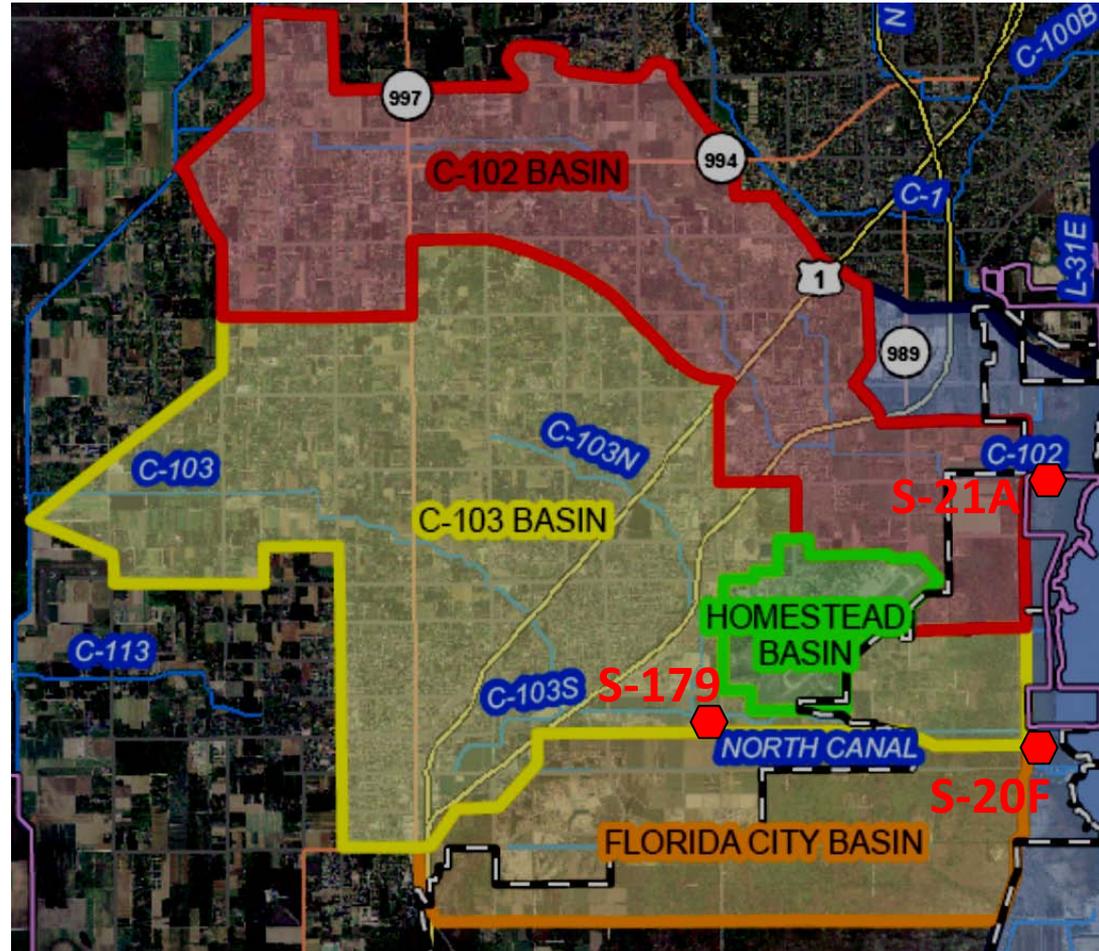
C-103 Basin:

October 15th - change structure S-20F to Low Range;
- *open at 1.4 ft., close at 1.0 ft.*

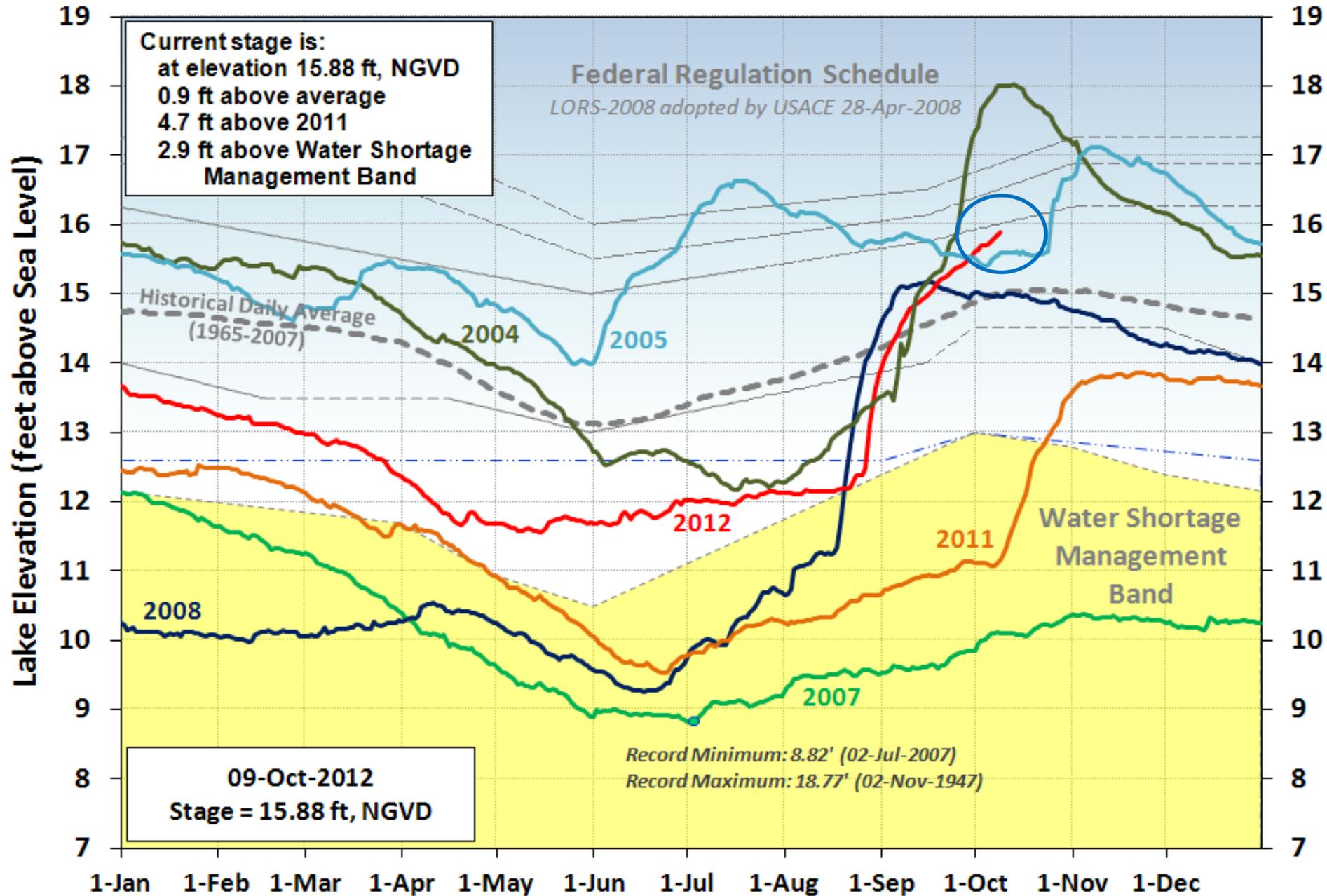
Change S-179 to Low range;

- *open at 3.1 and close at 2.7*

Lowers canals approx. 0.8 ft.



Lake Okeechobee Water Level Comparison



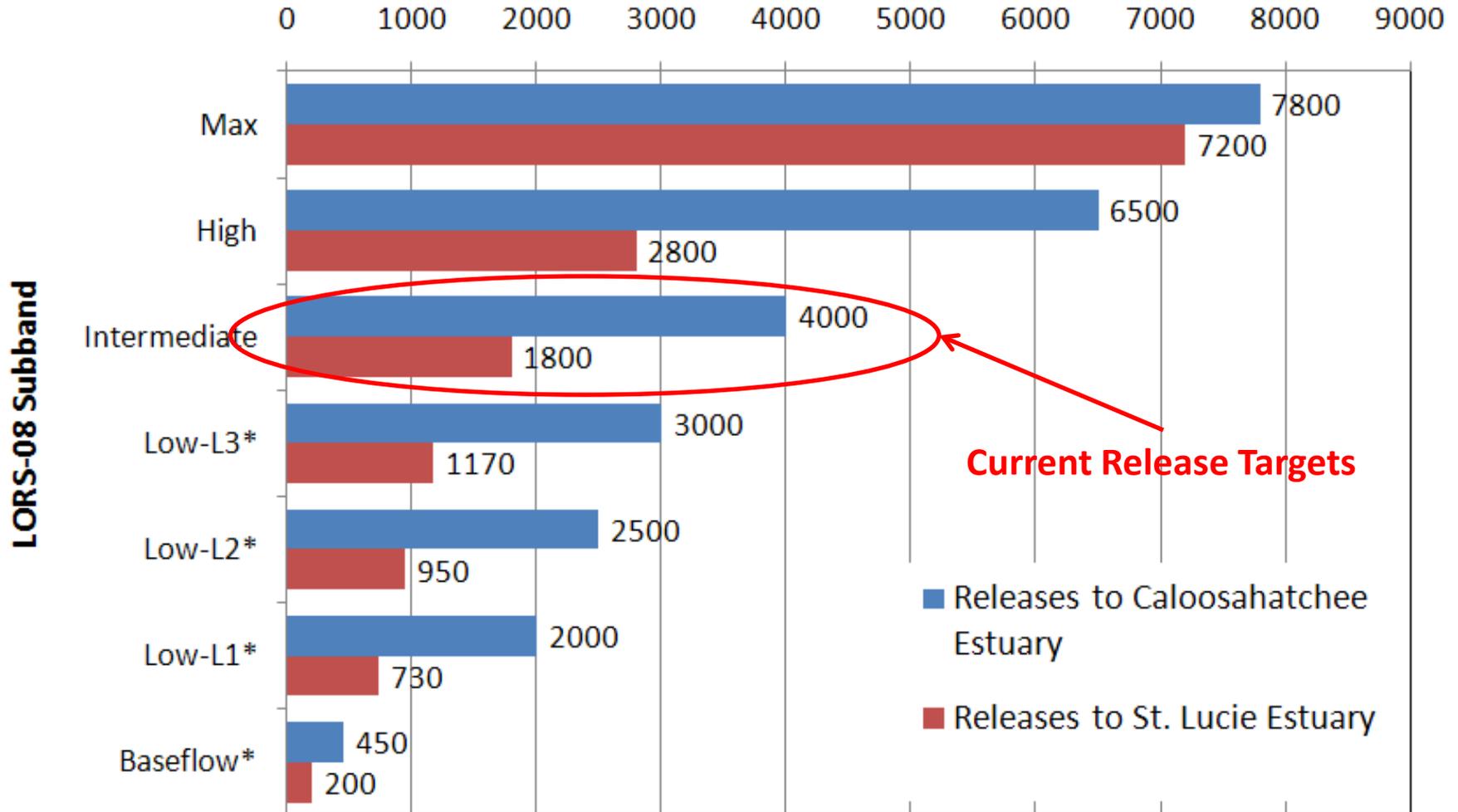
Lake Okeechobee: Current Operations

- **USACE's Lake O Regulation Schedule (2008 LORS)**
 - Stage is near the top of the Intermediate Subband (16.0 ft, NGVD)
 - Tributary Hydrologic Conditions are very wet
 - Seasonal & Multi-Seasonal Lake inflow outlooks are very wet
 - Release guidance suggests up to 4000 cfs at S-77, and up to 1800 cfs at S-80
 - USACE began releases 19-Sep at reduced rates
 - Releases were increased to the release guidance limits on 4-Oct
- **SFWMD's Lake O Adaptive Protocol (2010)**
 - Does not apply since 2008 LORS release guidance suggests larger than baseflow releases & the wet season continues

Lake Okeechobee Release Levels

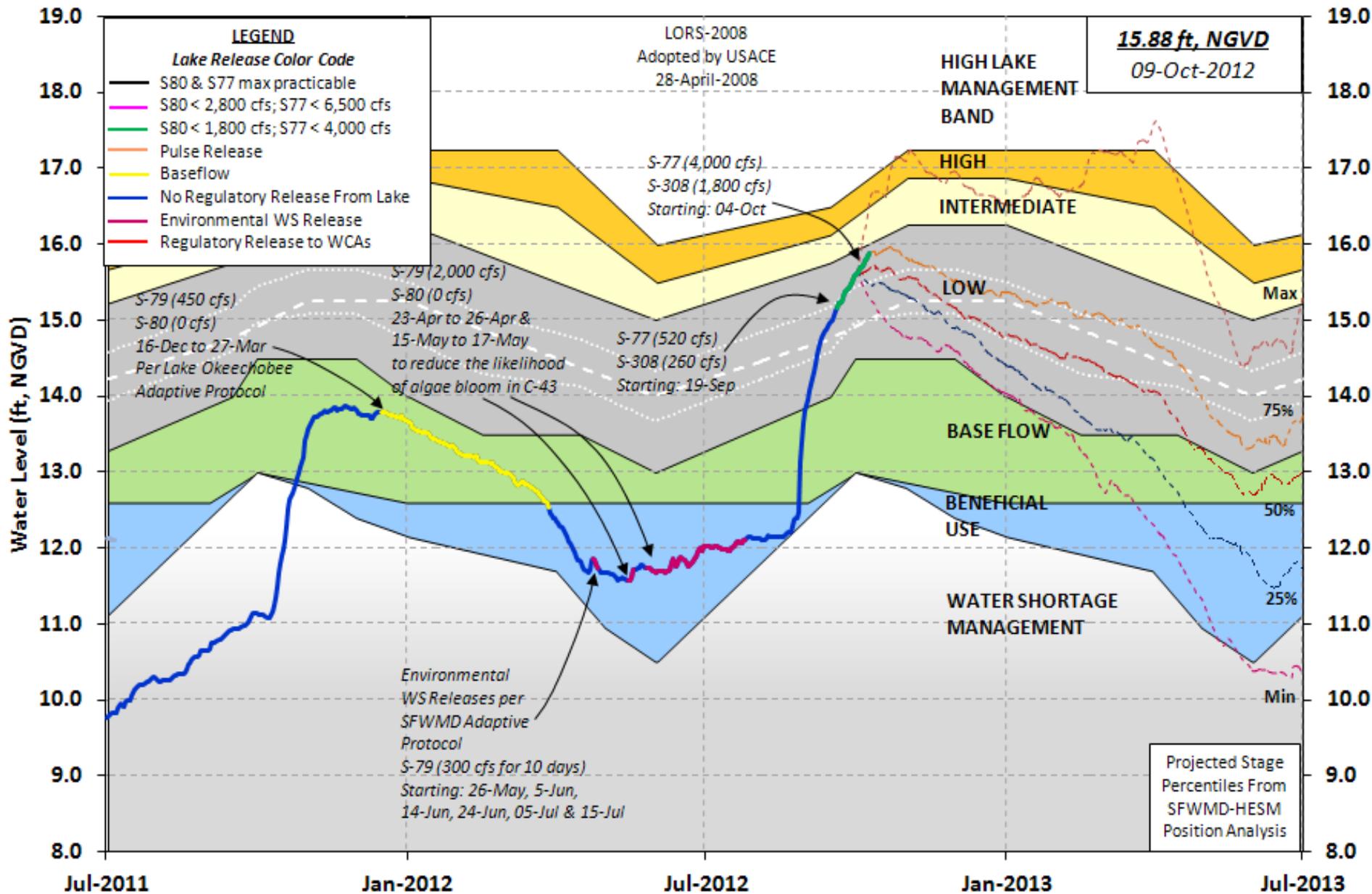
Lake Okeechobee Regulation Schedule 2008

Release Rates (cfs)



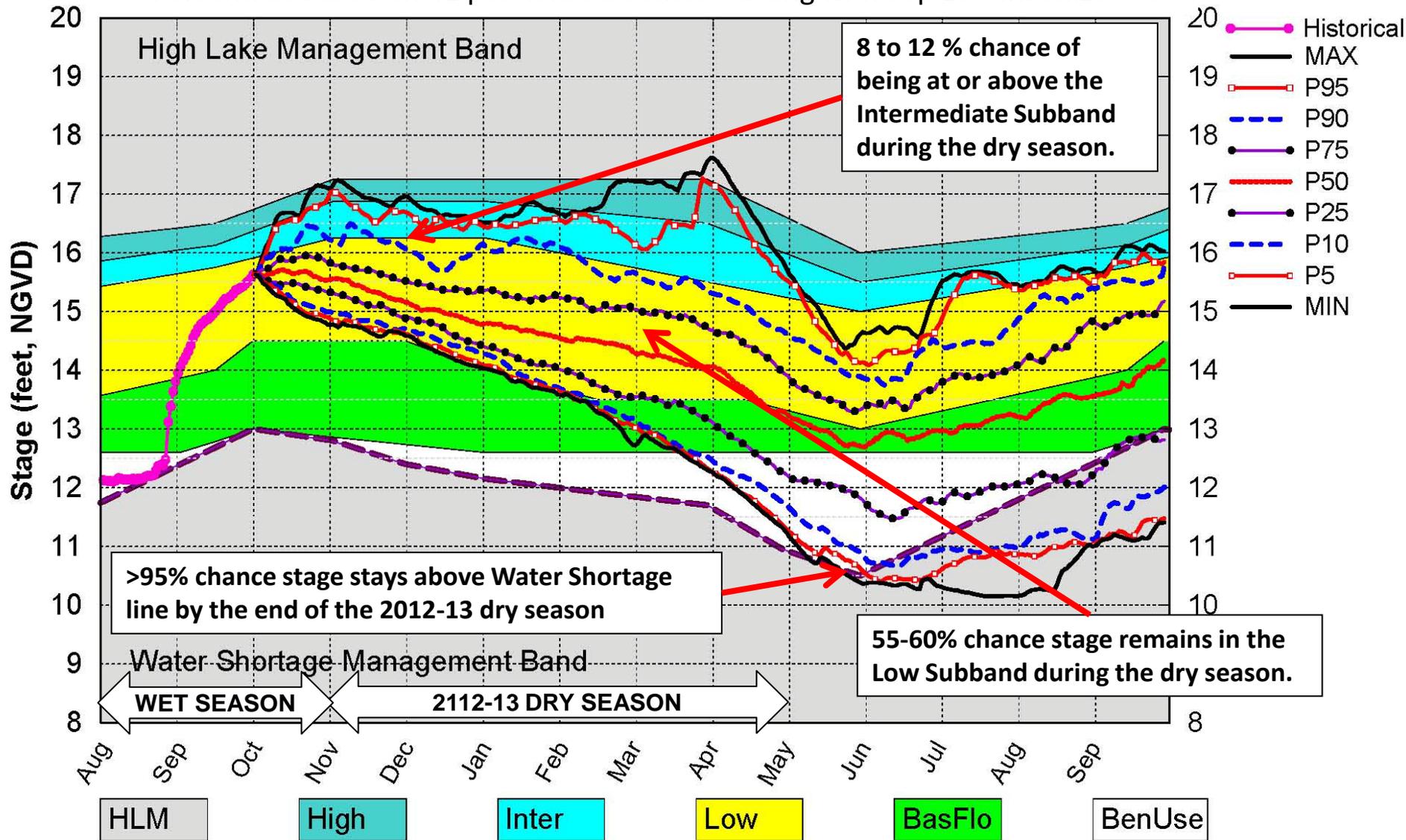
* Lake O Releases for the Baseflow & Low Subbands are limited by C-43 & C-44 basin runoff

Lake Okeechobee Water Level History and Projected Stages



Lake Okeechobee SFWMM October 2012 Position Analysis

Percentiles based on 41 possible outcomes starting with Sep 10th initialization



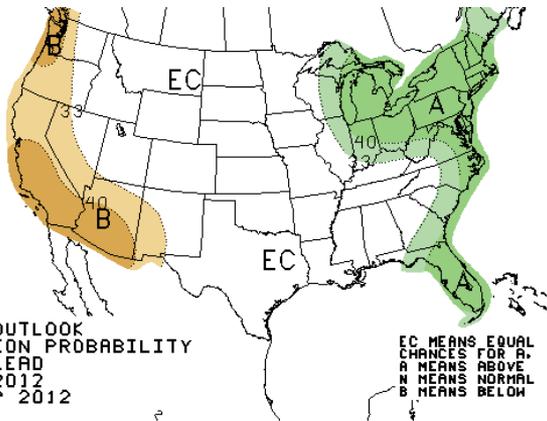
10/12/2012

(See assumptions on the Position Analysis Results website)

U. S. Seasonal Precipitation Outlook

National Climate Prediction Center (CPC)

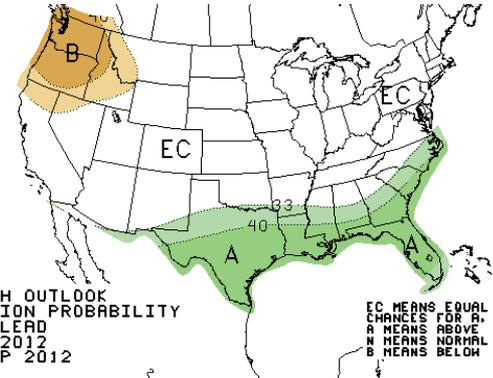
Oct 2012



ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.0 MONTH LEAD
VALID OCT 2012
MADE 30 SEP 2012

EC MEANS EQUAL
CHANCES FOR A,
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

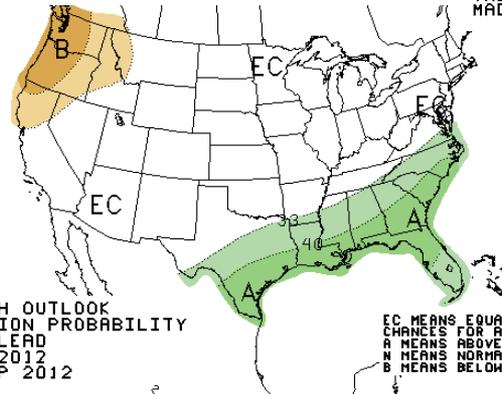
Nov-Jan 2012



THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
1.5 MONTH LEAD
VALID NDJ 2012
MADE 20 SEP 2012

EC MEANS EQUAL
CHANCES FOR A,
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

Oct-Nov 2012



THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID OND 2012
MADE 20 SEP 2012

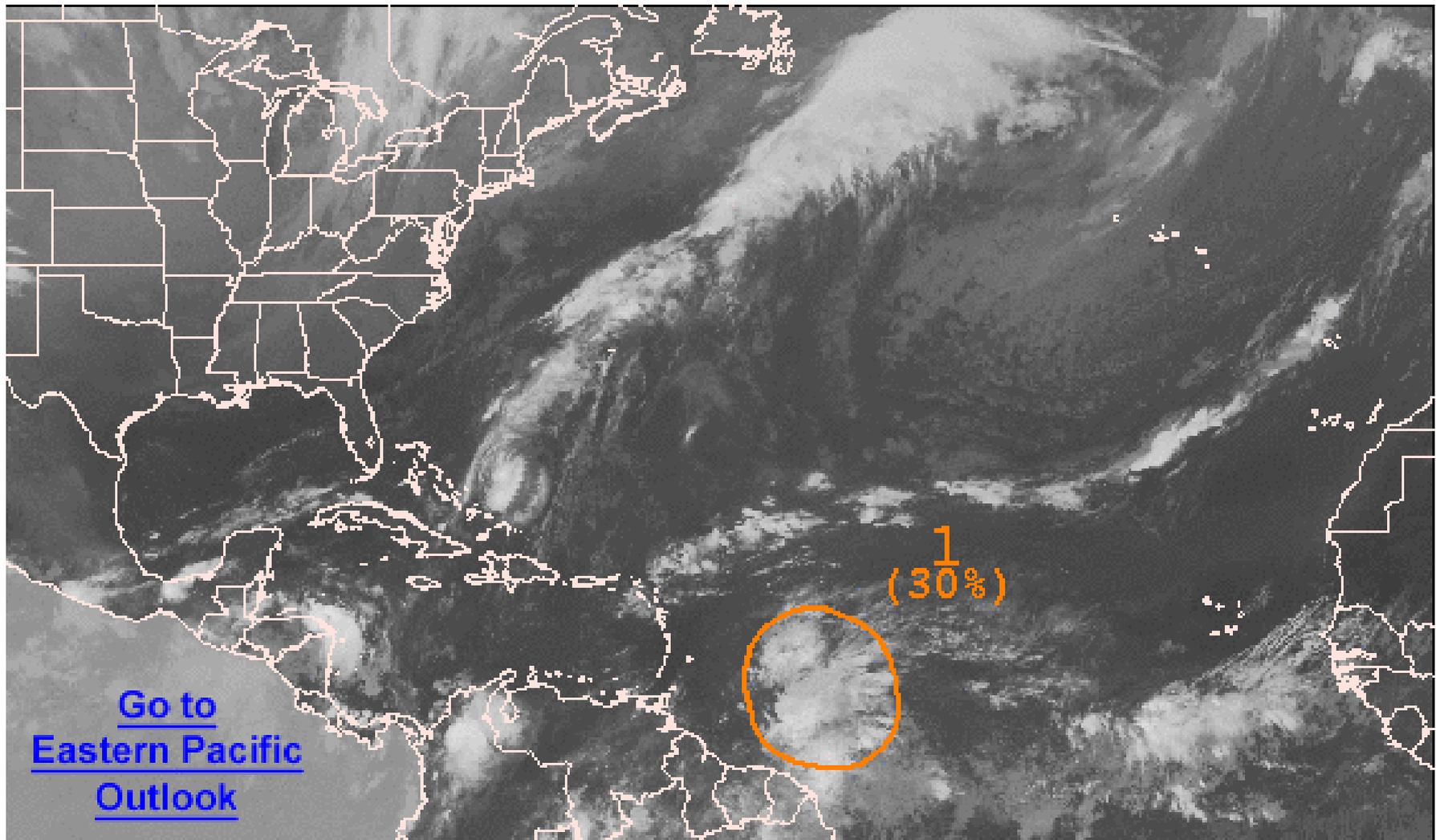
EC MEANS EQUAL
CHANCES FOR A,
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

- The current CPC precipitation outlook for central and southern Florida is for above normal rainfall for October, and for the three month windows Oct-Nov through Feb-Mar, based on a weak El Nino forecast for the 2012-2013 dry season



Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



800 AM EDT WED OCT 10 2012

Satellite Image: 0652 AM EDT

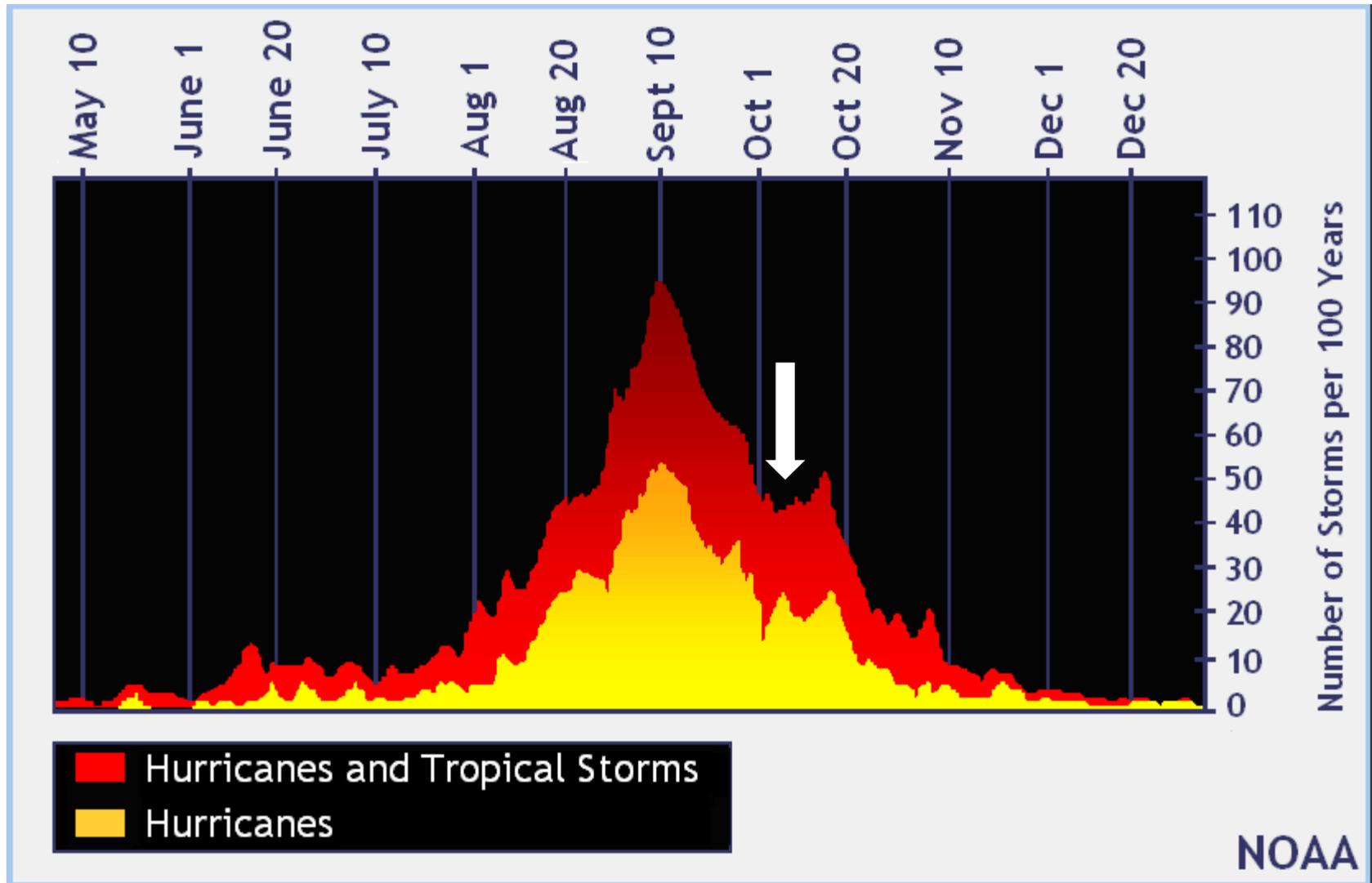
Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

 Low <30%

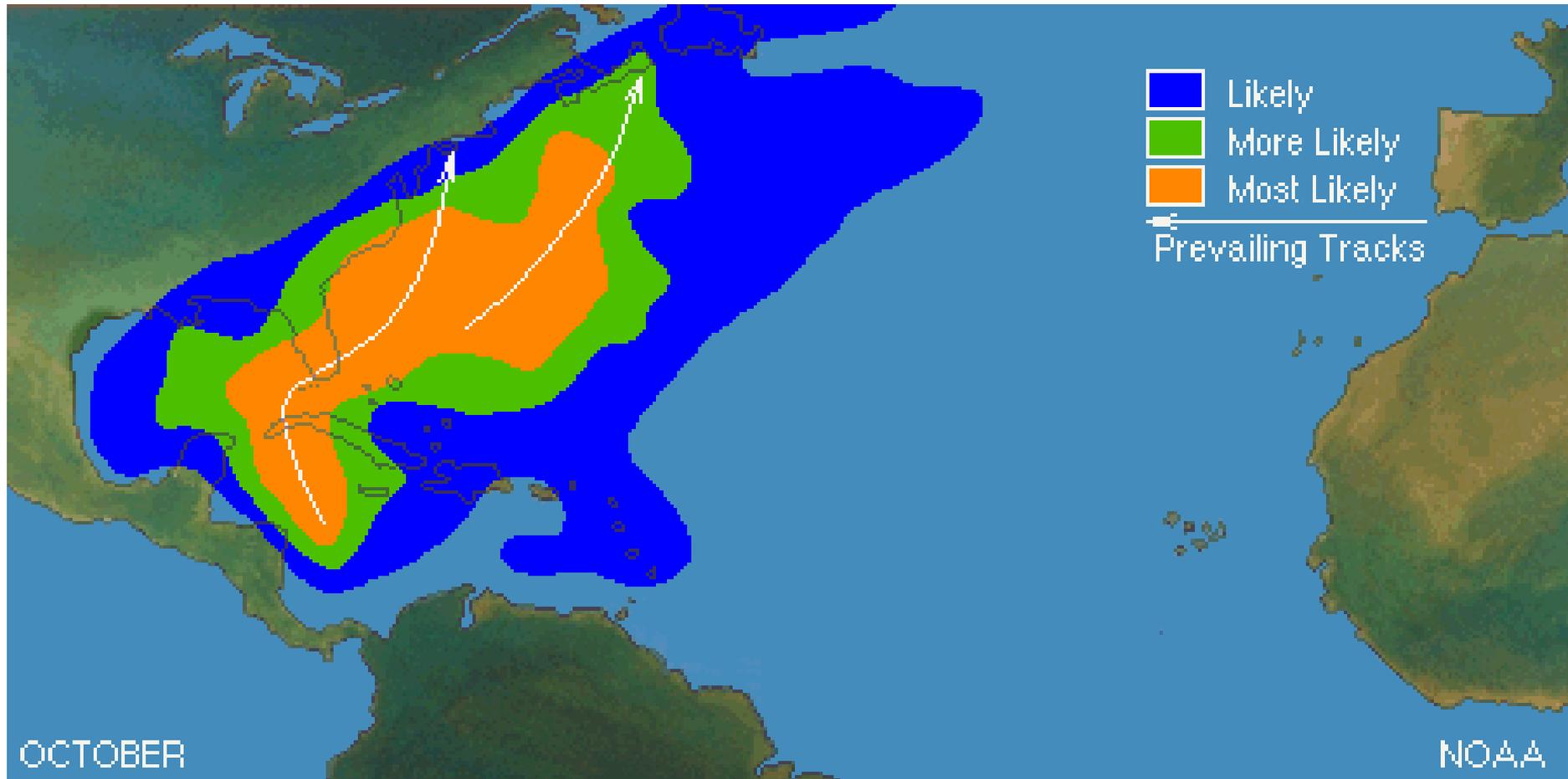
 Medium 30-50%

 High >50%

Peak of the Hurricane Season



Typical Areas of Hurricane Origin October



T.S. Isaac After-Action

- ***September 12th*** - Palm Beach County After-Action Roundtable
 - *Improve Web-based Real Time Structure information*
 - *Corbett / ITID Berm Improvement*
- ***September 12th*** - ITID Board Meeting – Isaac Presentation / Q&A
- ***September 18th*** - ITID Public Information Workshop
- ***October 4th*** - Broward League of Cities – Isaac Presentation / Q&A
- ***October 5th*** - Everglades Agricultural Area After-Action Roundtable
 - *Water Control Operations*
 - *Bolles & Cross Canal Improvements*
 - *Levee Refurbishments / Improvements*
- ***October 30th*** - Upcoming PBCBCC Meeting - Isaac After-Action Assessment

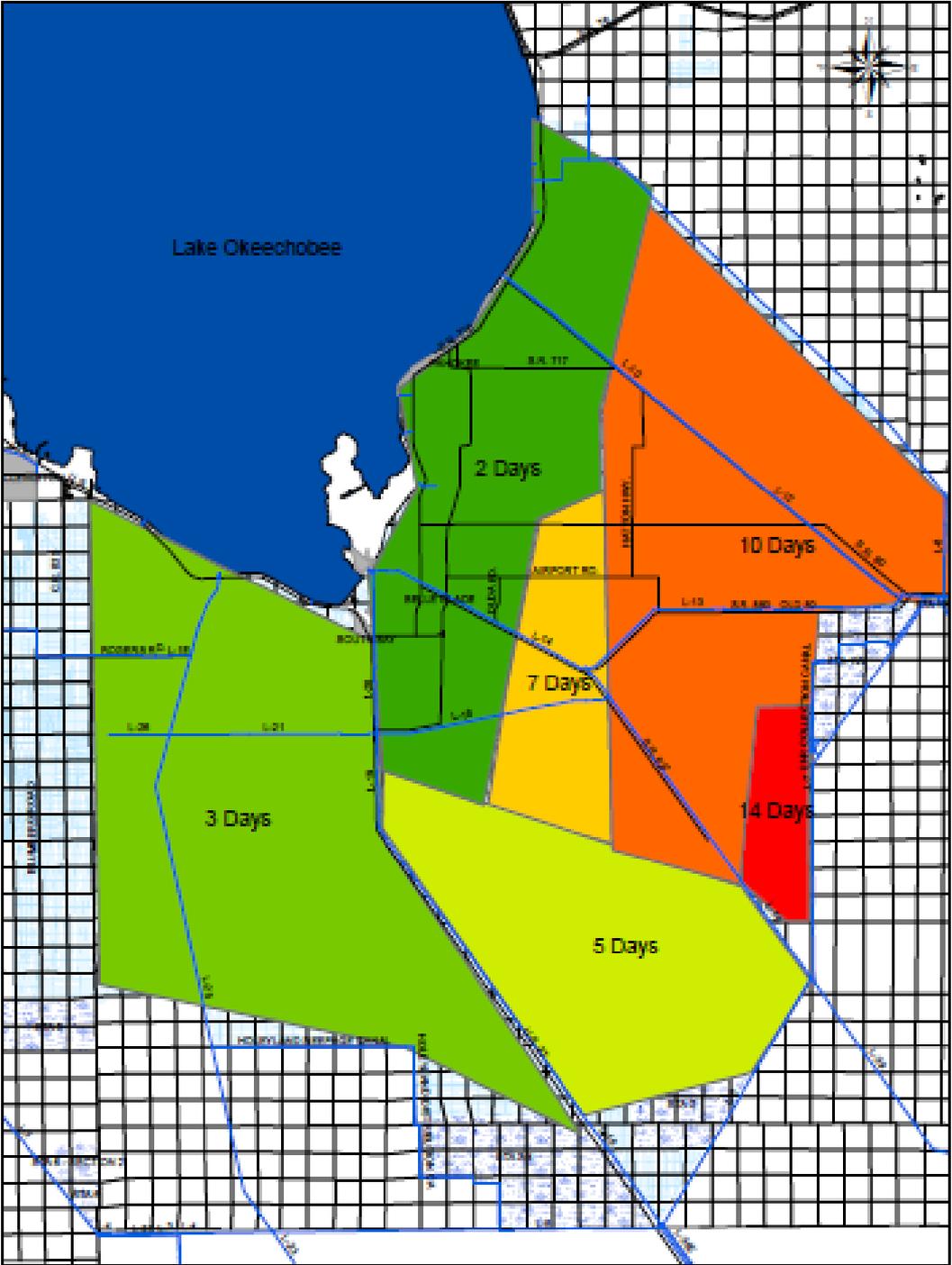
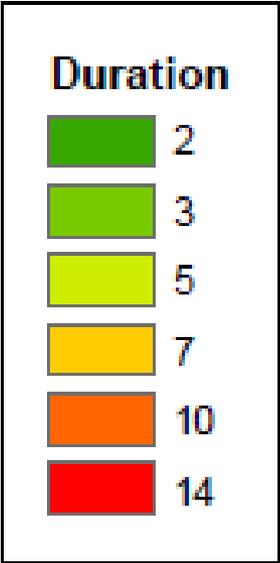


Knights farm on east side of Sam Senter Rd.



Newly planted parsley field that had just come out of the ground before Isaac hit. The total crop was lost.

T.S. Isaac EAA Approximate Flooding Duration



QUESTIONS

