

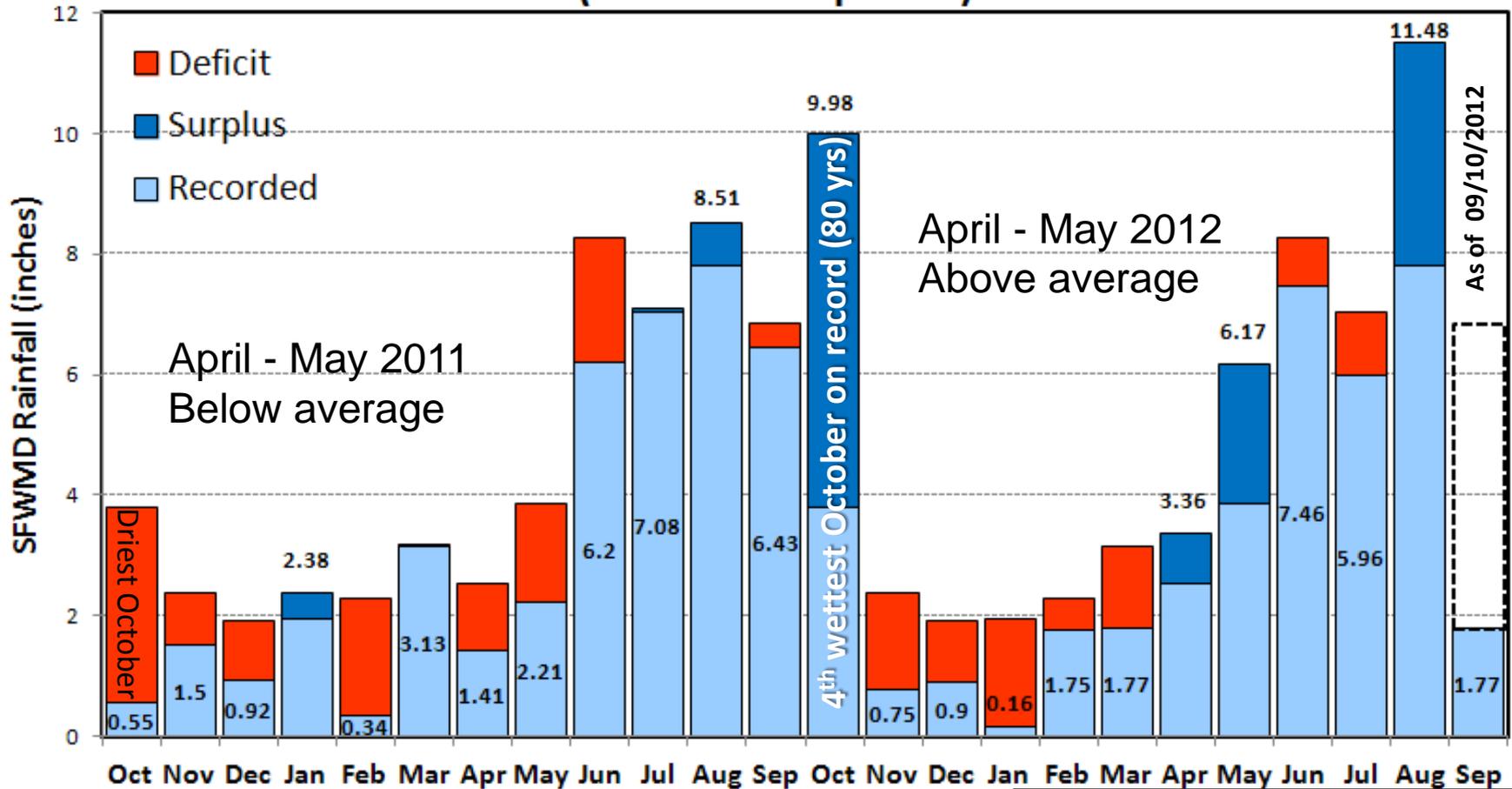
Water Conditions Summary

South Florida Water Management District
Governing Board Meeting

September 13, 2012

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

SFWMD Rainfall Distribution Comparison (Oct 2010 - Sep 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:

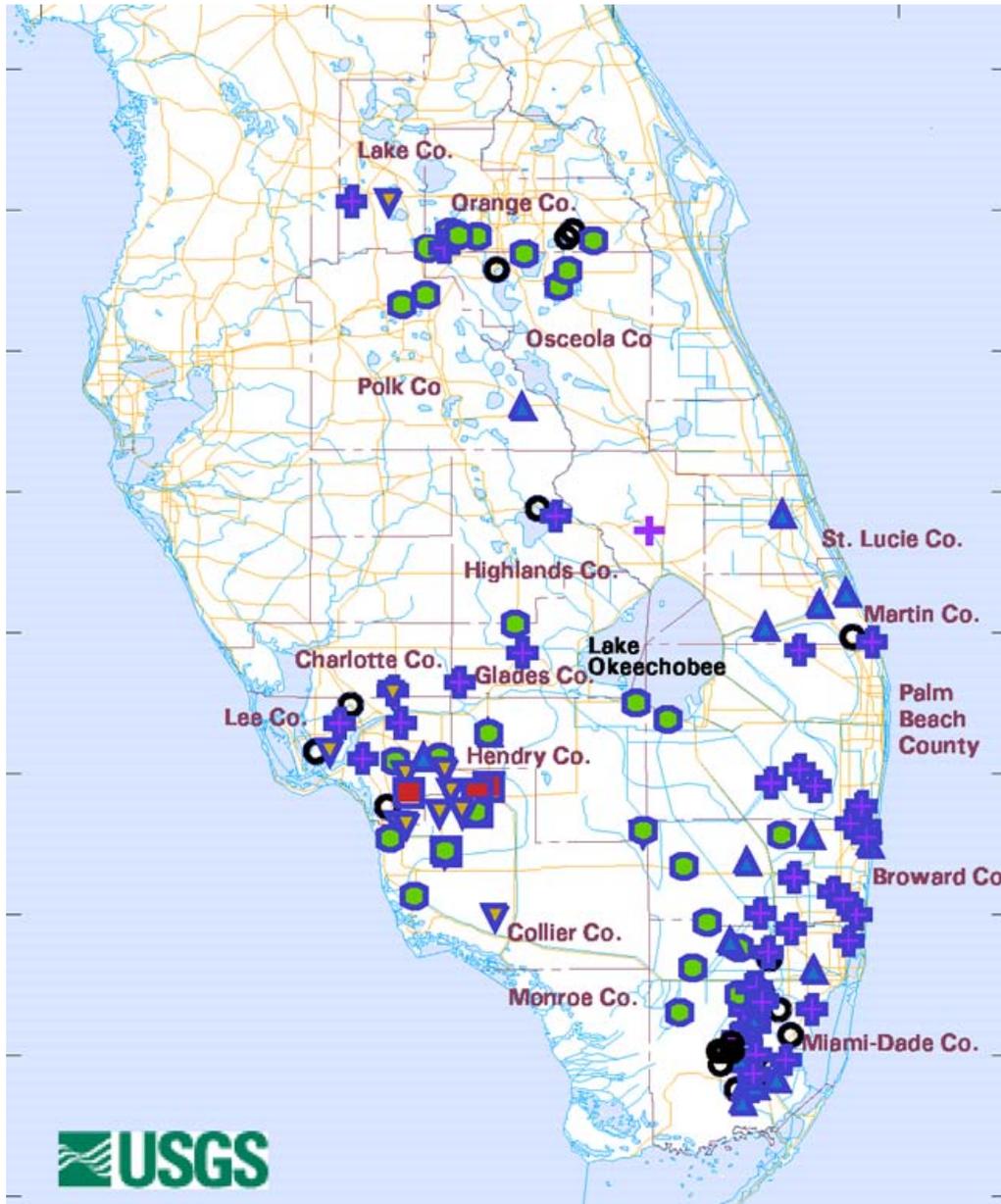
- Record dry in Upper Kissimmee (98 yrs)
- Ended up close to average

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

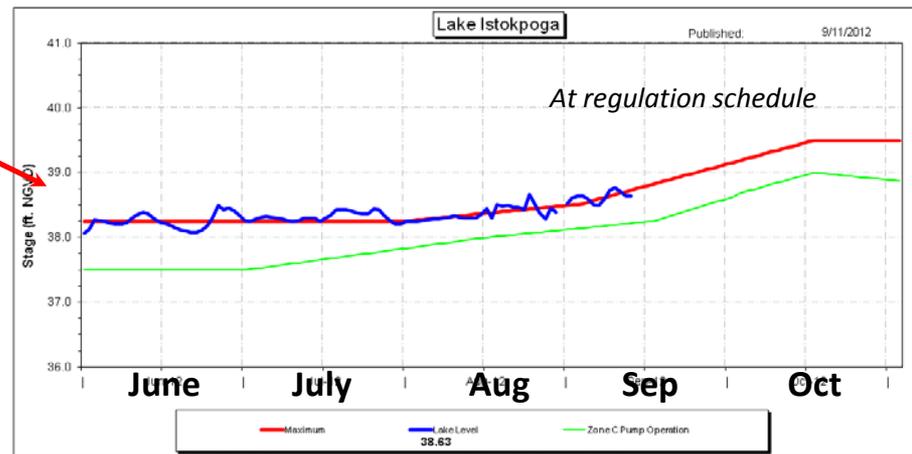
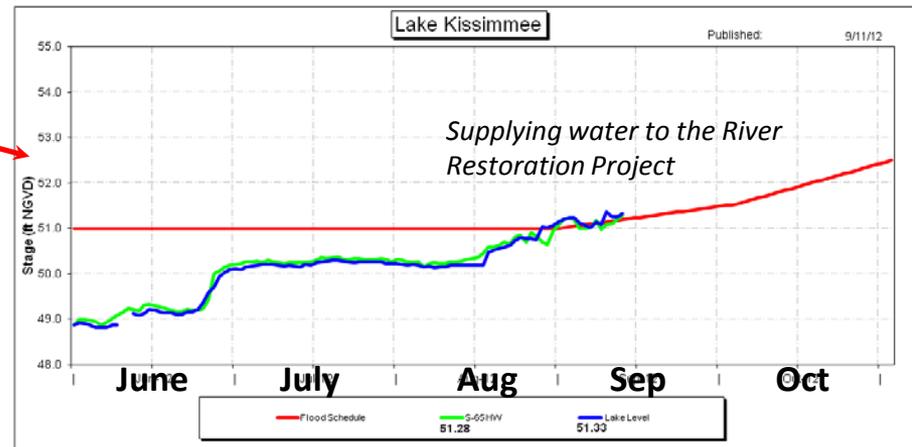
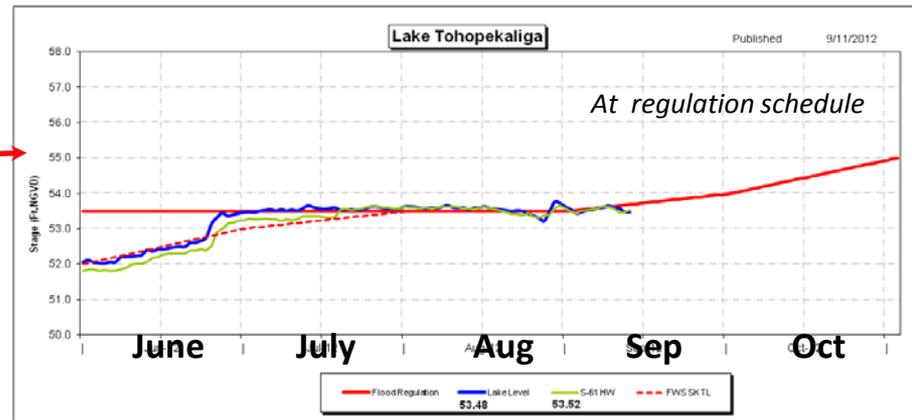
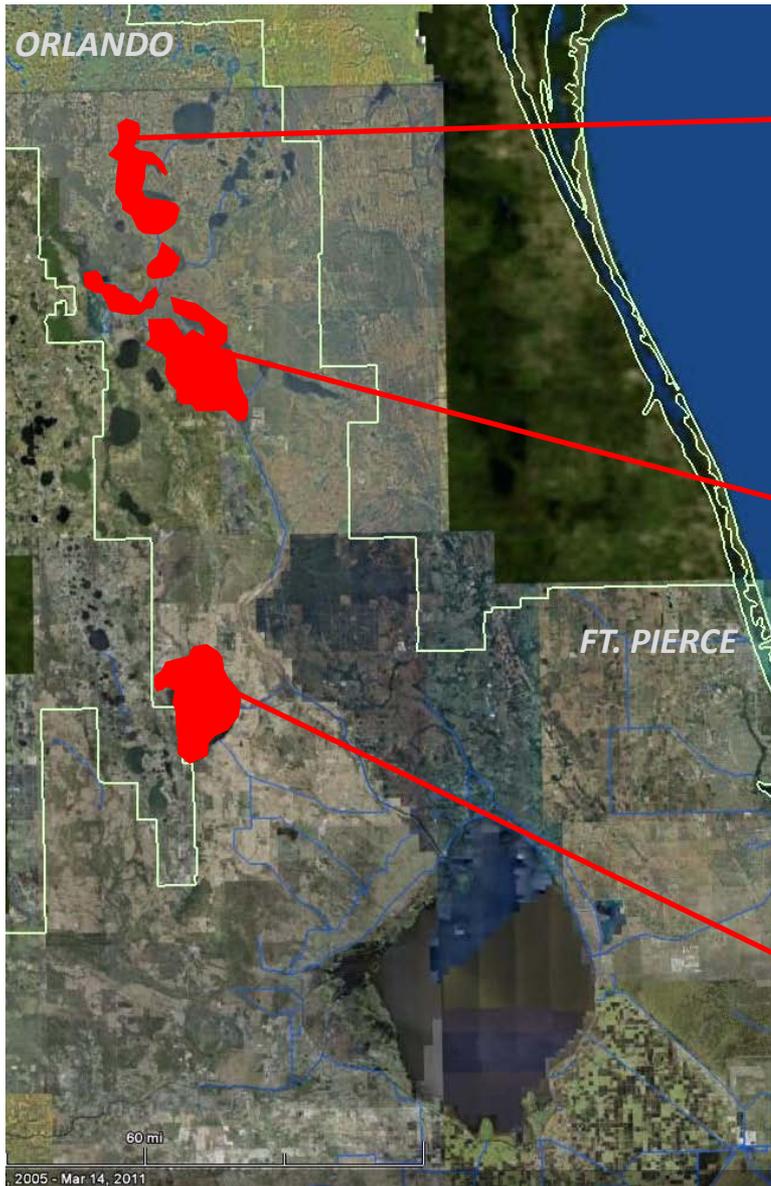
Groundwater Levels

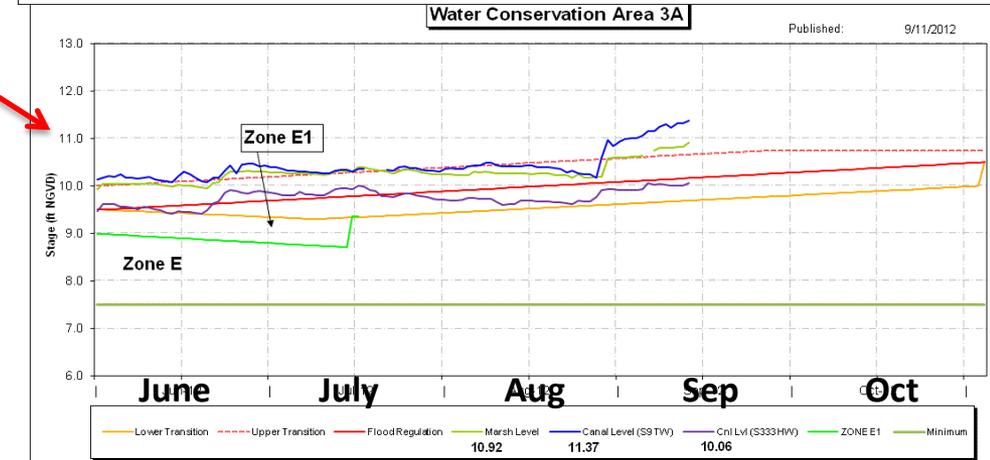
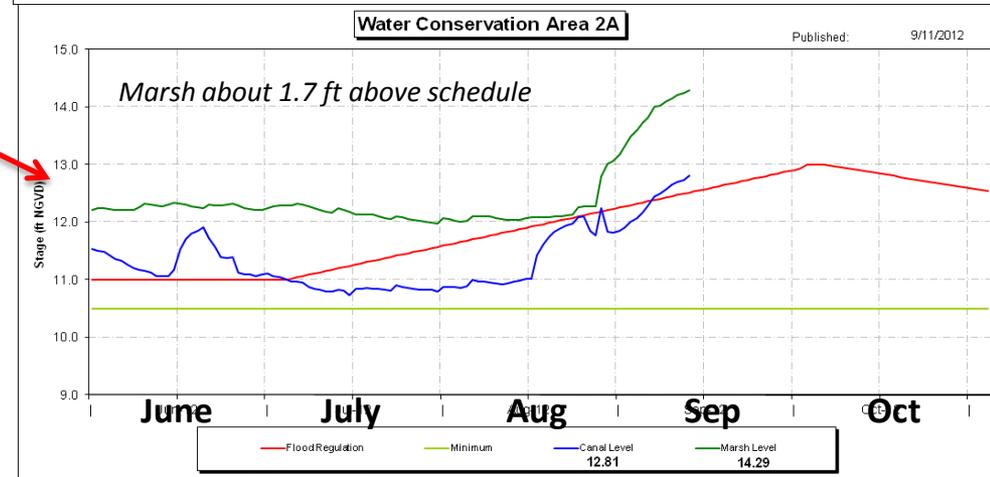
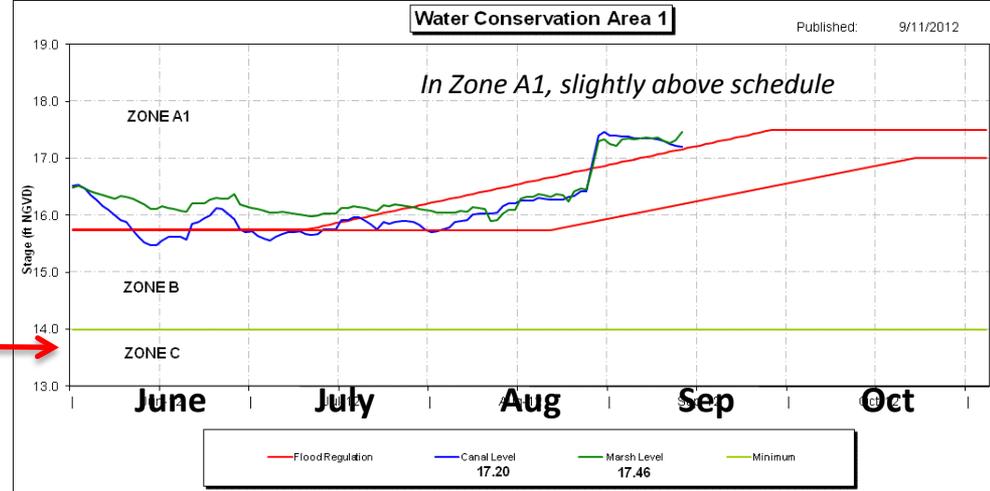
Water levels at selected sites in South Florida
Based on PROVISIONAL DATA, as of September 3, 2012



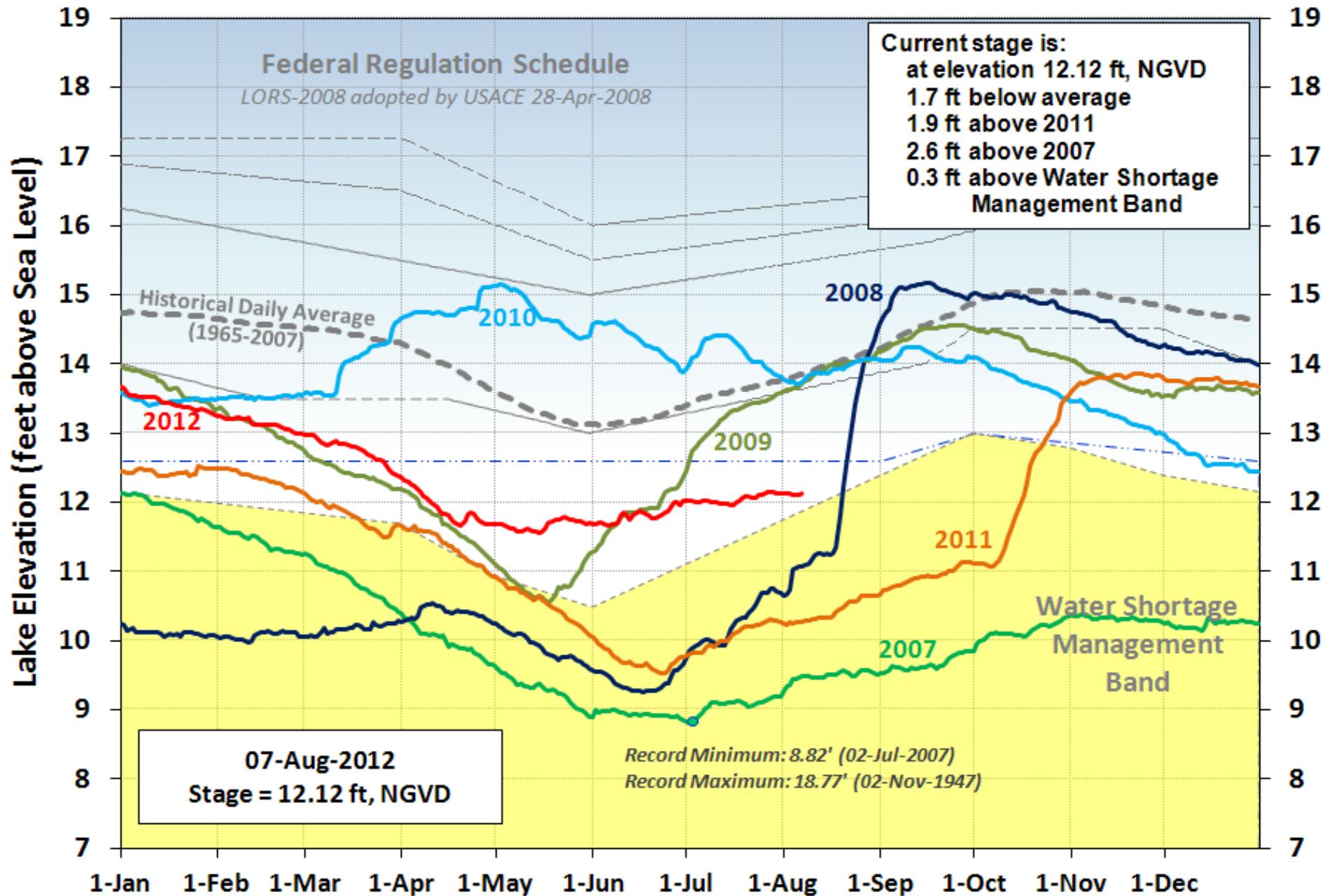
Water level compared to historical data, without trend analysis:

-  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

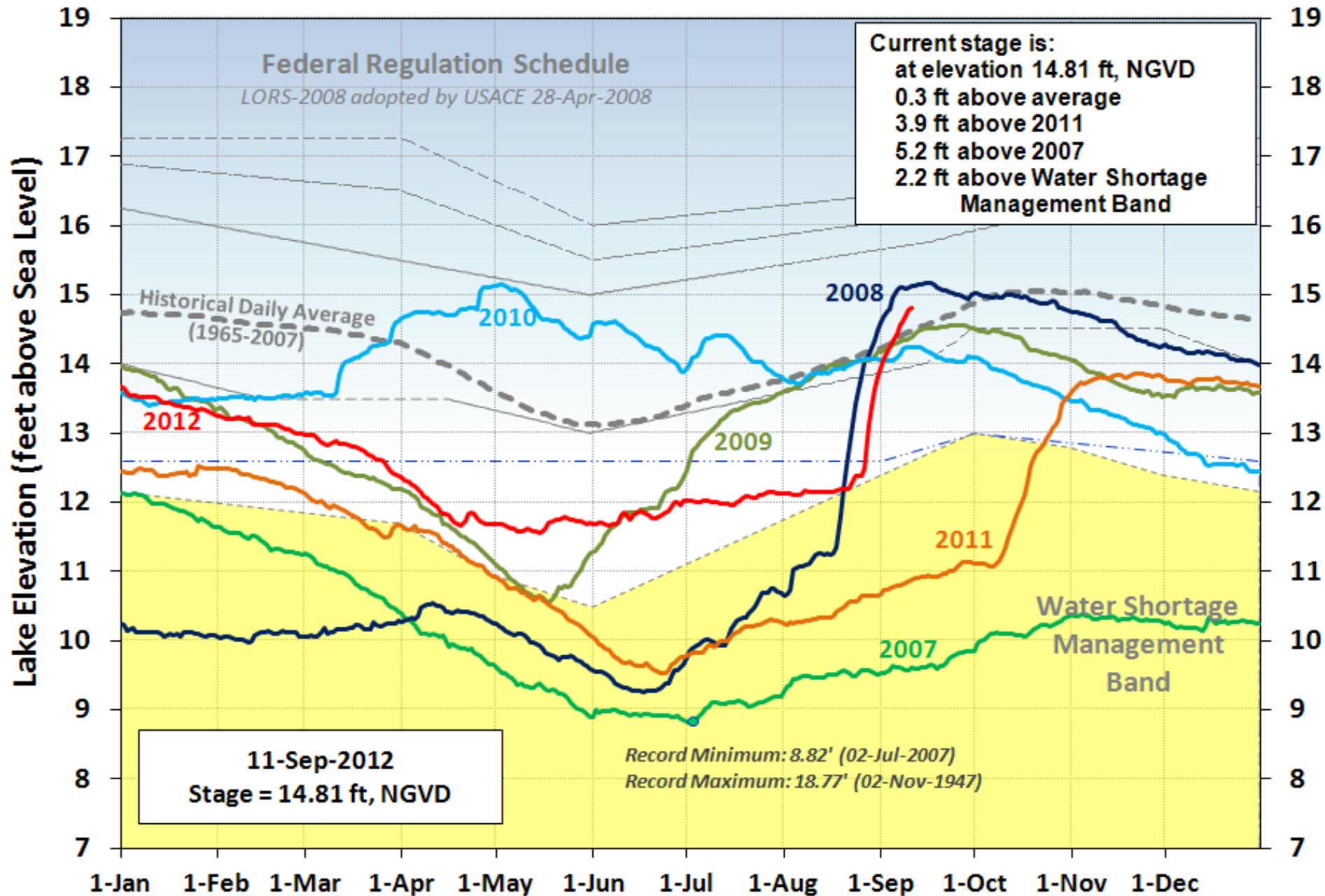




Lake Okeechobee Water Level Comparison



Lake Okeechobee Water Level Comparison



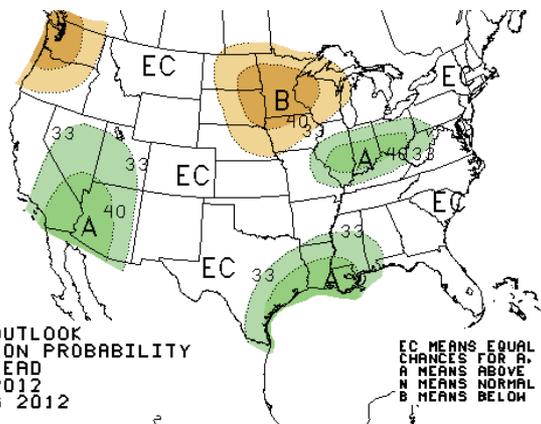
Lake Okeechobee: Current Operations

- **USACE's Lake O Regulation Schedule (2008 LORS)**
 - Stage is within one foot of the Intermediate Subband
 - Tributary Hydrologic Conditions are very wet
 - Seasonal & Multi-Seasonal Lake inflow outlooks are very wet
 - Caloosahatchee Basin runoff currently about 2000-3000 cfs
 - St. Lucie Basin runoff currently about 500-700 cfs
 - Release guidance suggests up to 4000 cfs at S-77, and up to 1800 cfs at S-80
- **SFWMD's Lake O Adaptive Protocol (2010)**
 - Does not apply since 2008 LORS release guidance suggests larger than baseflow releases & the wet season continues

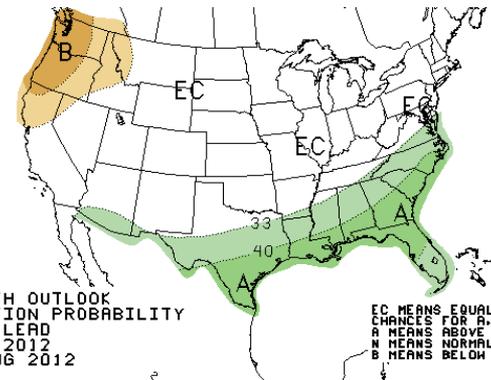
U. S. Seasonal Precipitation Outlook

National Climate Prediction Center (CPC)

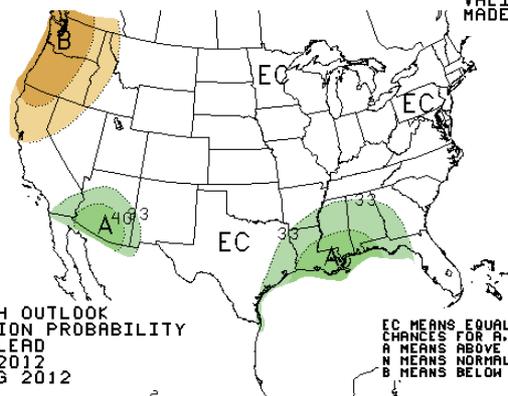
Sep 2012



Oct-Dec 2012

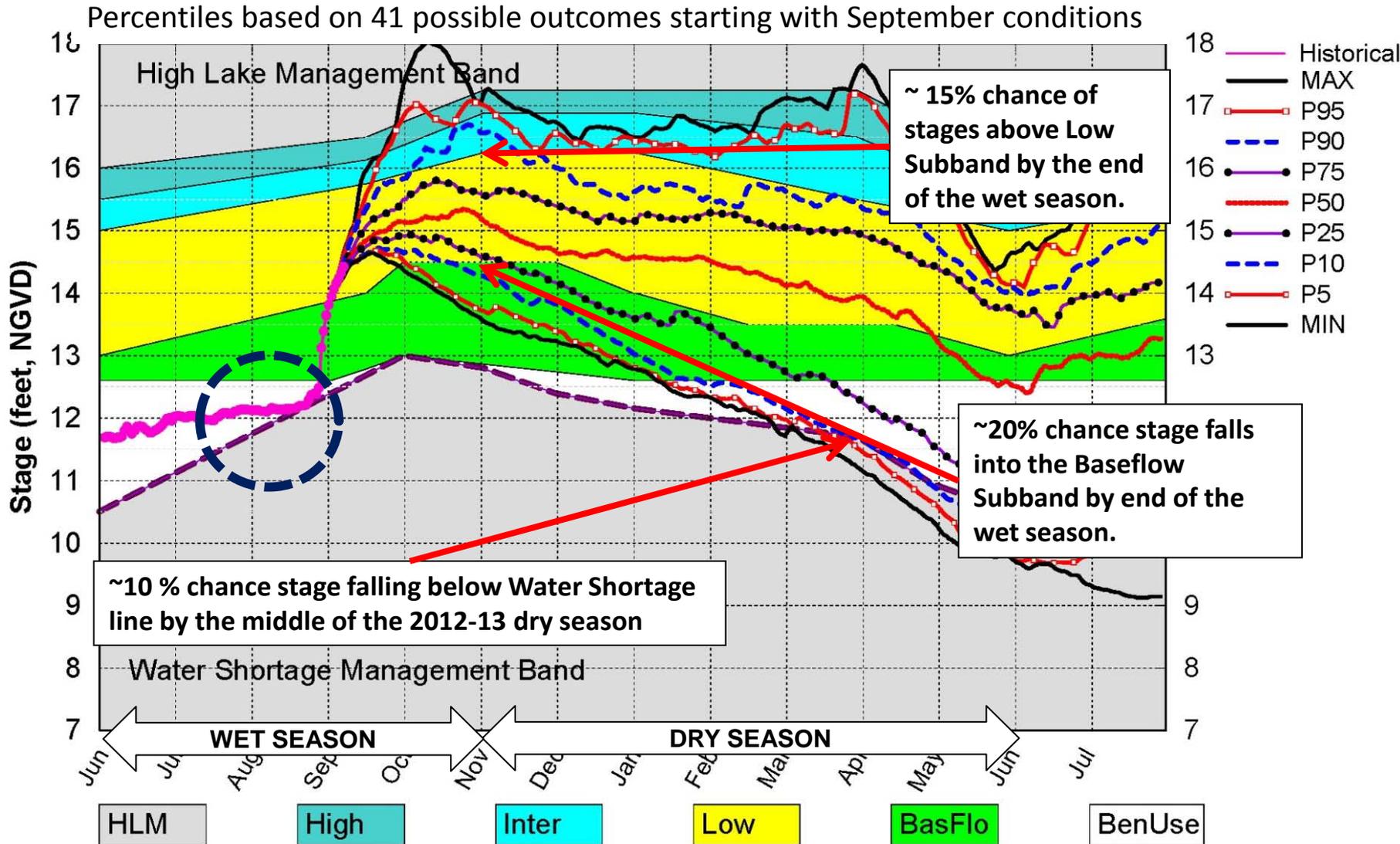


Sep-Nov 2012



- The current CPC precipitation outlook for central and southern Florida is for equal chance (EC) for Sep. and Sep.-Nov.
- Three month windows Oct.-Dec. to Mar.-May show above normal rainfall, based on El Nino forecast for the 2012-2013 dry season

Lake Okeechobee SFWMM Position Analysis for September 2012

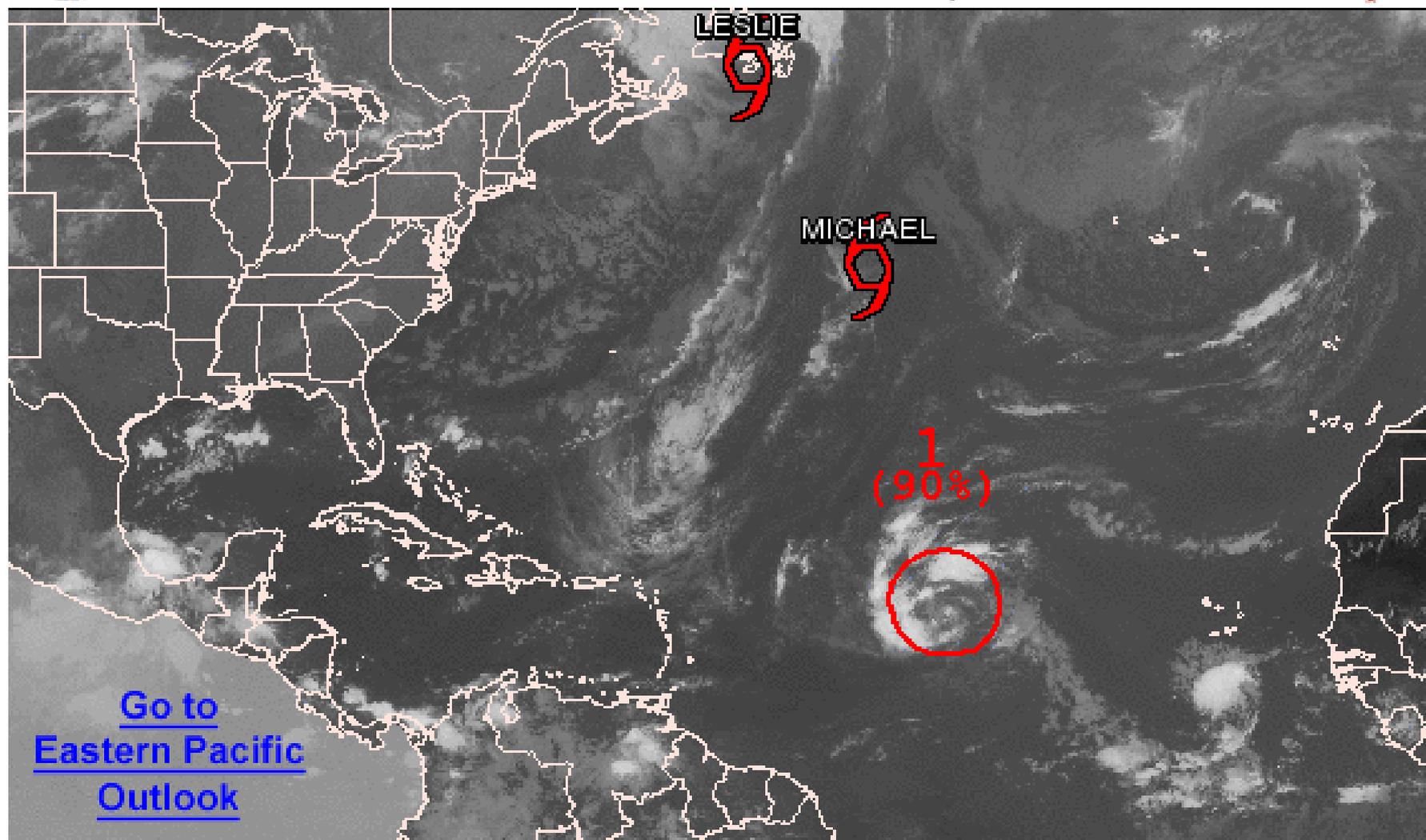


(See assumptions on the Position Analysis Results website)



Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



[Go to Eastern Pacific Outlook](#)

800 AM EDT TUE SEP 11 2012

Satellite Image: 0722 AM EDT

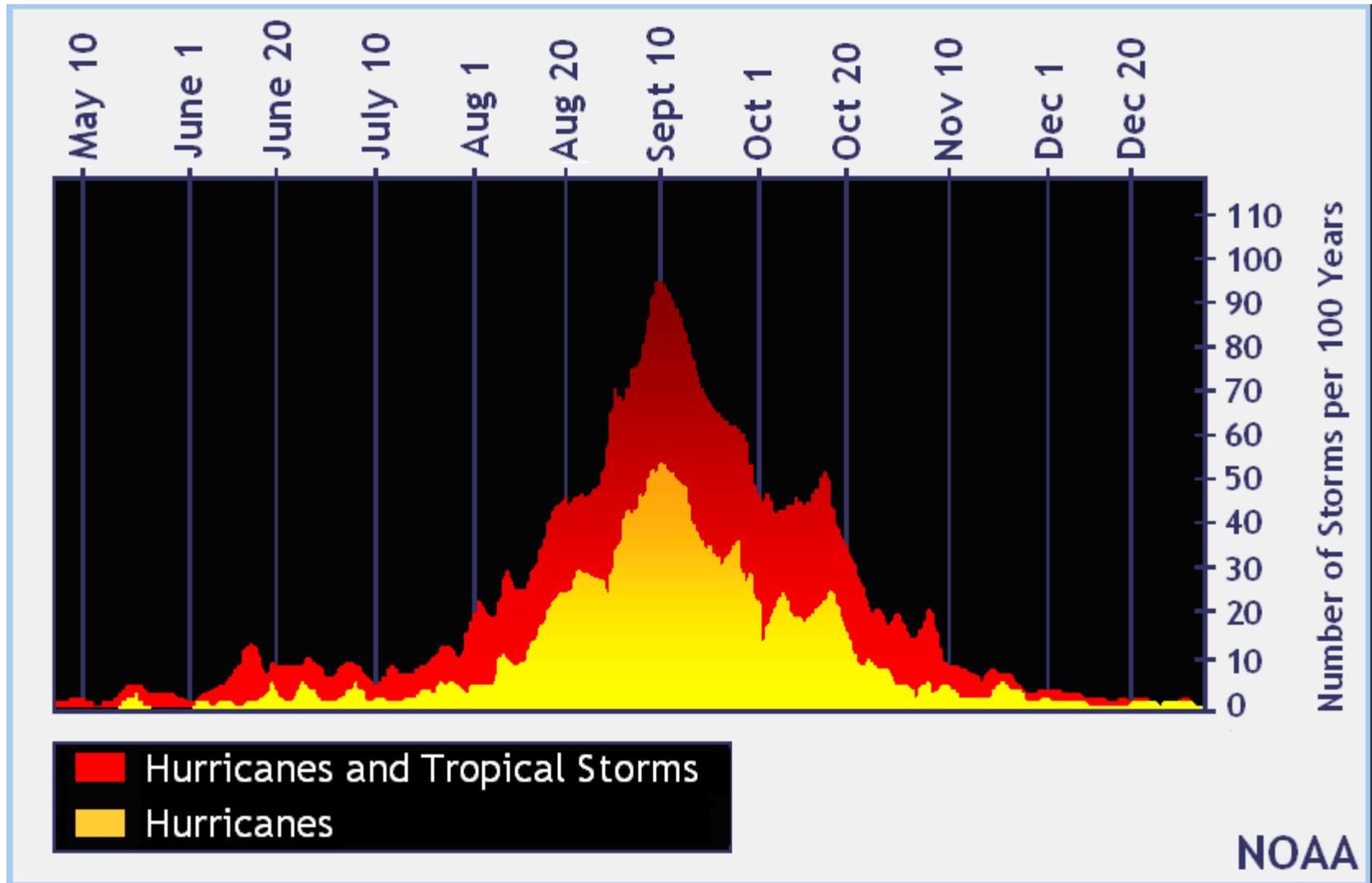
Outlined areas denote current position of systems discussed in the Tropical Weather Outlook. Color indicates probability of tropical cyclone formation within 48 hours.

 Low <30%

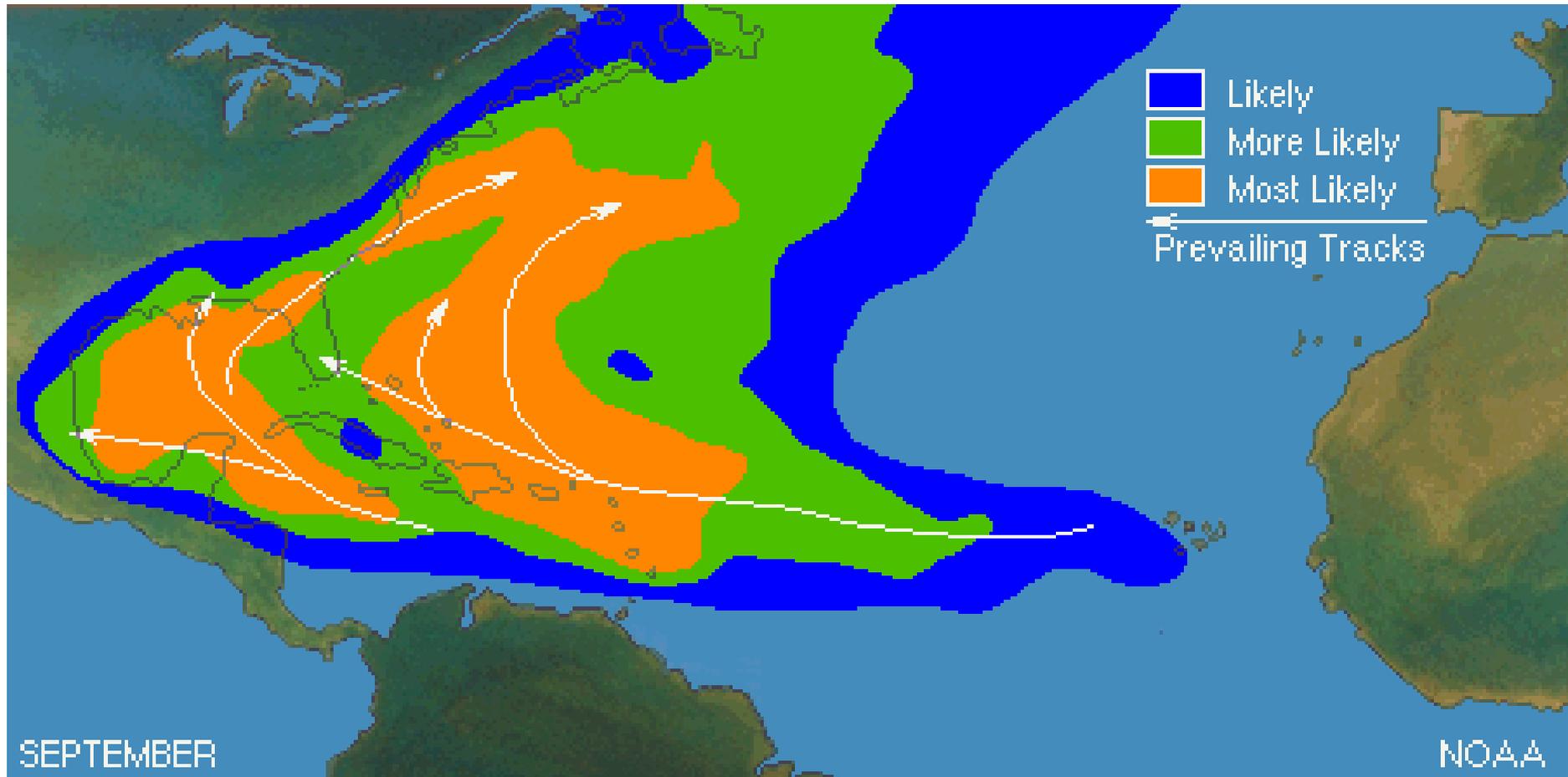
 Medium 30-50%

 High >50%

Peak of the Hurricane Season



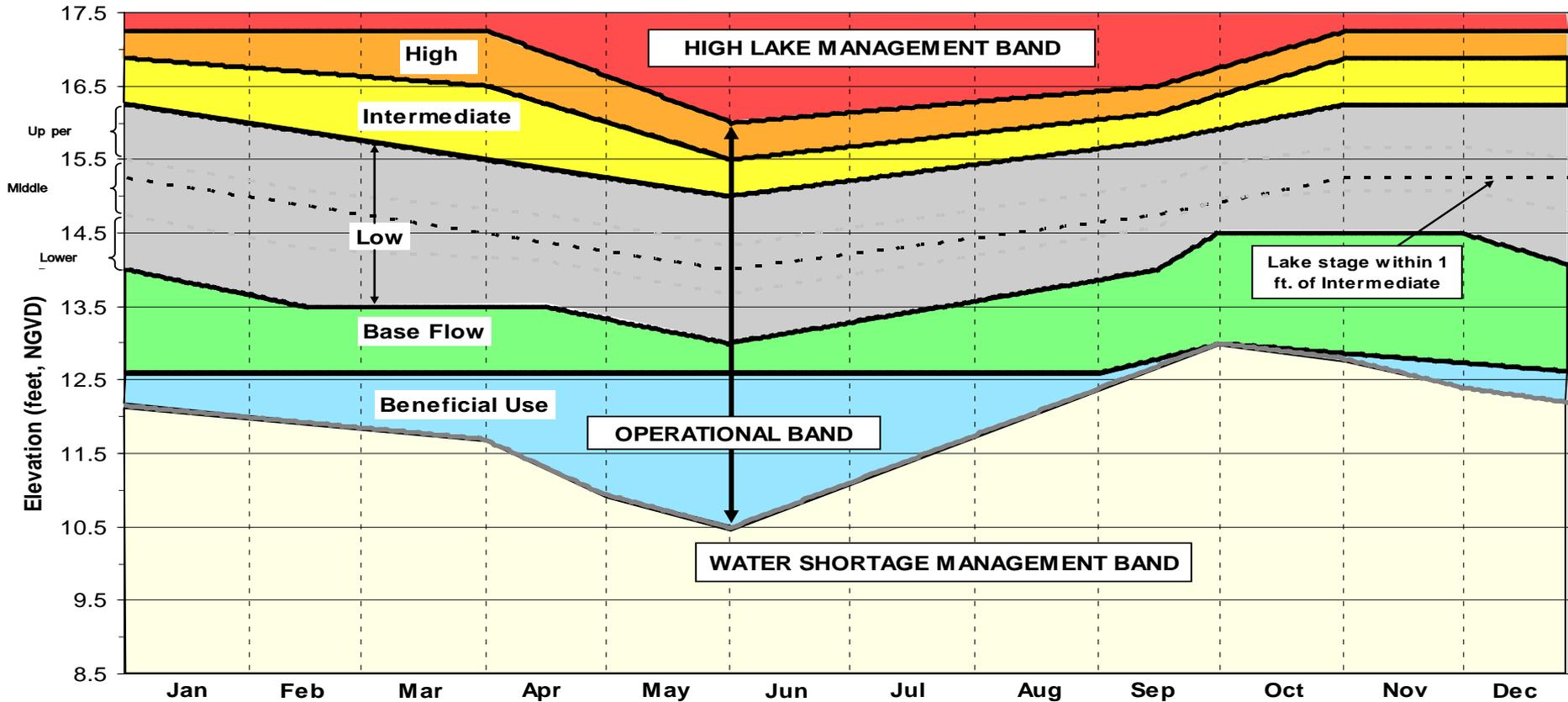
Typical Areas of Hurricane Origin September



Lake Okeechobee Operations

- The USACE uses a regulation schedule to manage Lake Okeechobee stages (2008 LORS)
- Water supply releases are not prescribed by the 2008 LORS. Environmental water supply releases to the Caloosahatchee are made via the SFWMD's Adaptive Protocol (AP) Release Guidance.
- As Lake stages rise, the LORS Release guidance generally calls for increasing releases to manage Lake stages.
 - As stages rise, so does the priority for making releases to reduce the risk to the HH Dike.
- The SFWMD provides weekly input to the USACE regarding environmental and water supply conditions.
- When Lake stages are within the Low Subband and above, the AP release guidance is not applicable. The SFWMD generally does not make specific recommendations to the USACE during these times.

Features of the 2008 Lake Okeechobee Interim Regulation Schedule (LORS-2008)



NOTES:

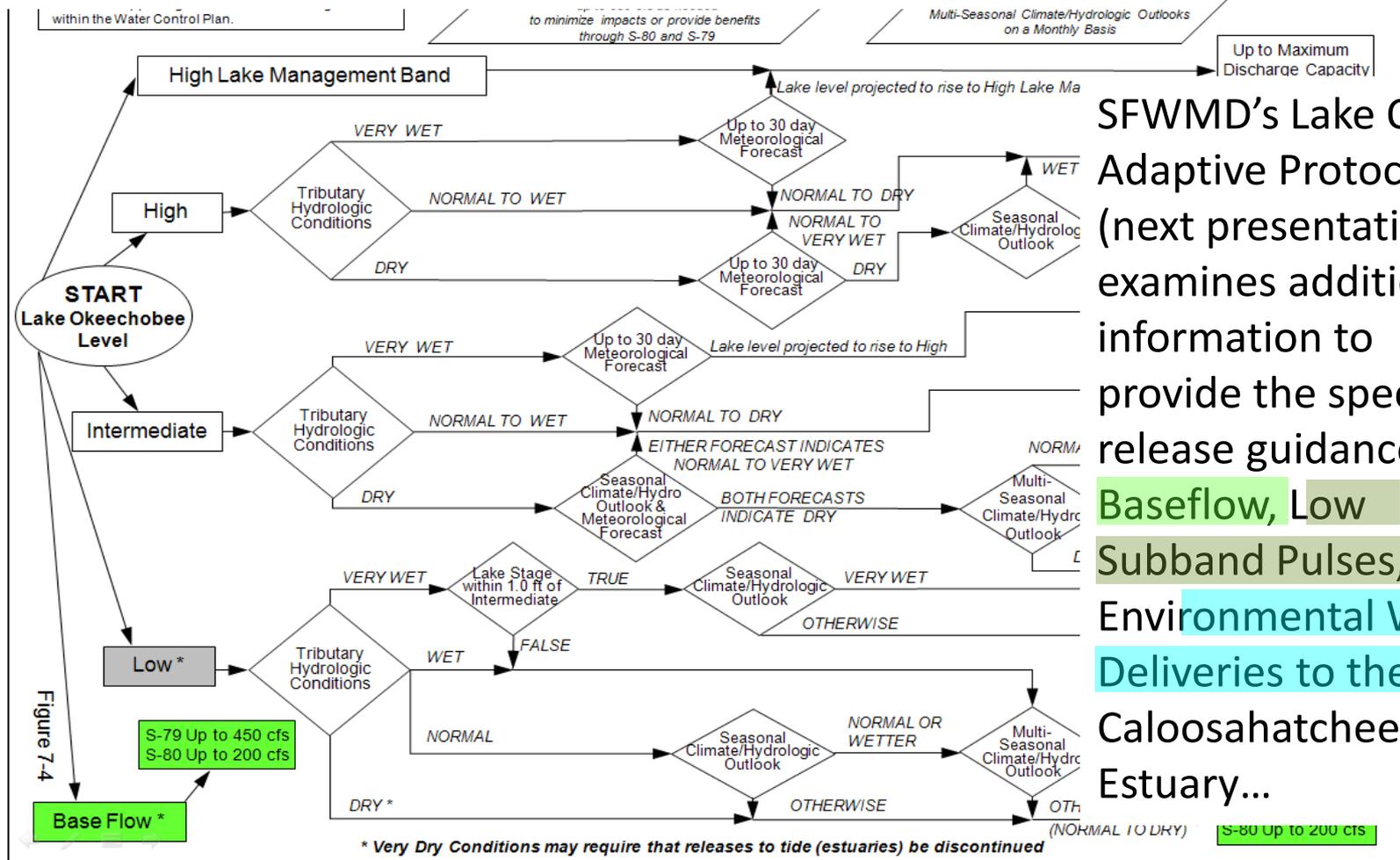
- High Lake Management Band:** Outlet canals may be maintained above their optimum water management elevations.
- Operational Band:** Outlet canals should be maintained within their optimum water management elevations.
- Water Shortage Management Band:** Outlet canals may be maintained below optimum water management elevations.

CENTRAL AND SOUTHERN FLORIDA PROJECT
 2008 LAKE OKEECHOBEE
 INTERIM REGULATION SCHEDULE
 PART B
 DATED: March 2008
 DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT
 CORPS OF ENGINEERS, JACKSONVILLE, FLORIDA

Figure 7-2

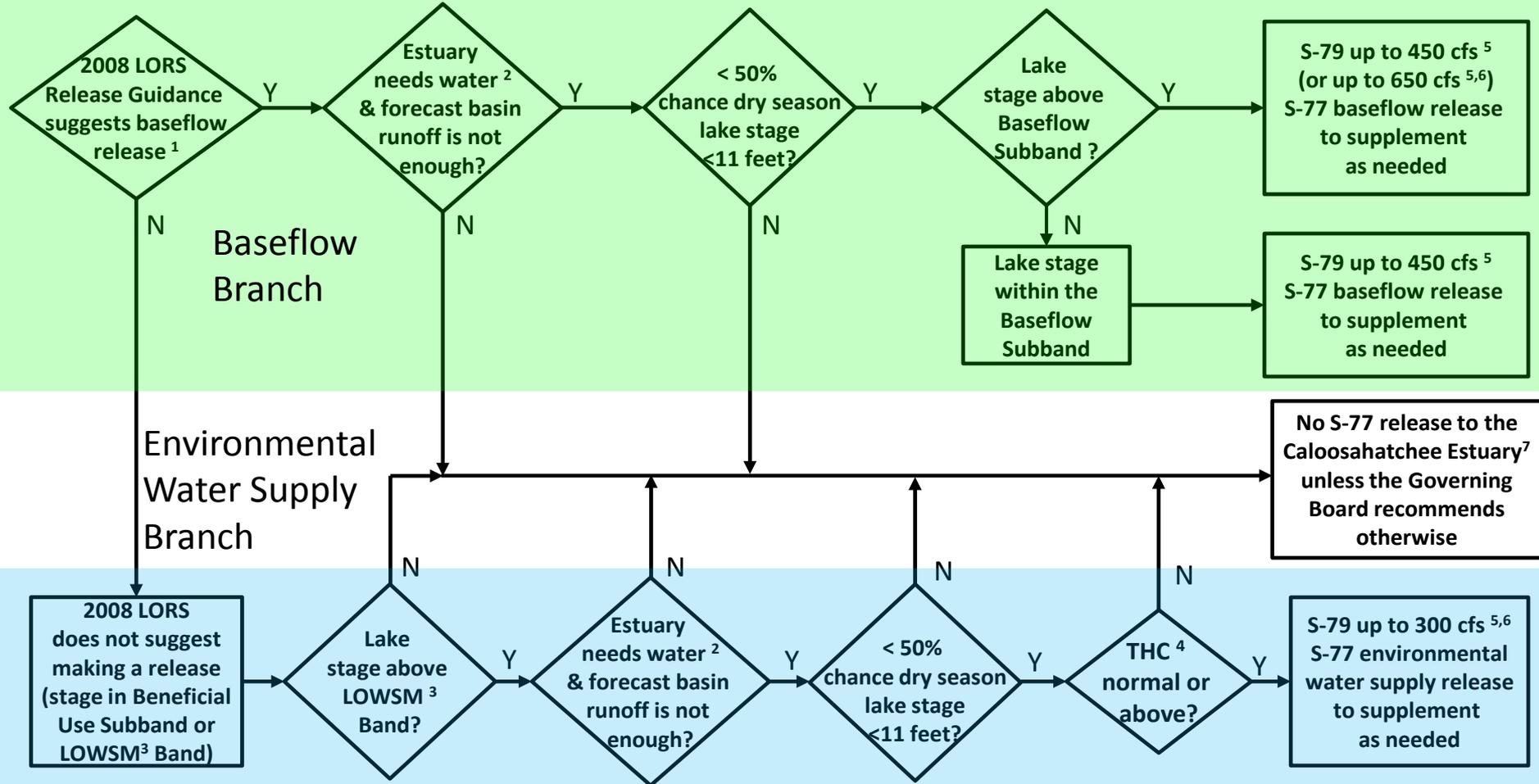
LORS 2008 Release Guidance Flowchart (Part C)

LORS 2008 provides “up to” discharge limits, but does not provide guidance regarding specific release amounts.



SFWMD's Lake O Adaptive Protocol (next presentation) examines additional information to provide the specific release guidance for **Baseflow, Low Subband Pulses, and Environmental Water Deliveries to the Caloosahatchee Estuary...**

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



¹The 2008 LORS Release Guidance (Part D) can suggest baseflow releases in the Intermediate, Low, or Baseflow Subbands.

²Estuary “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.

³LOWSM = Lake Okeechobee Water Shortage Management.

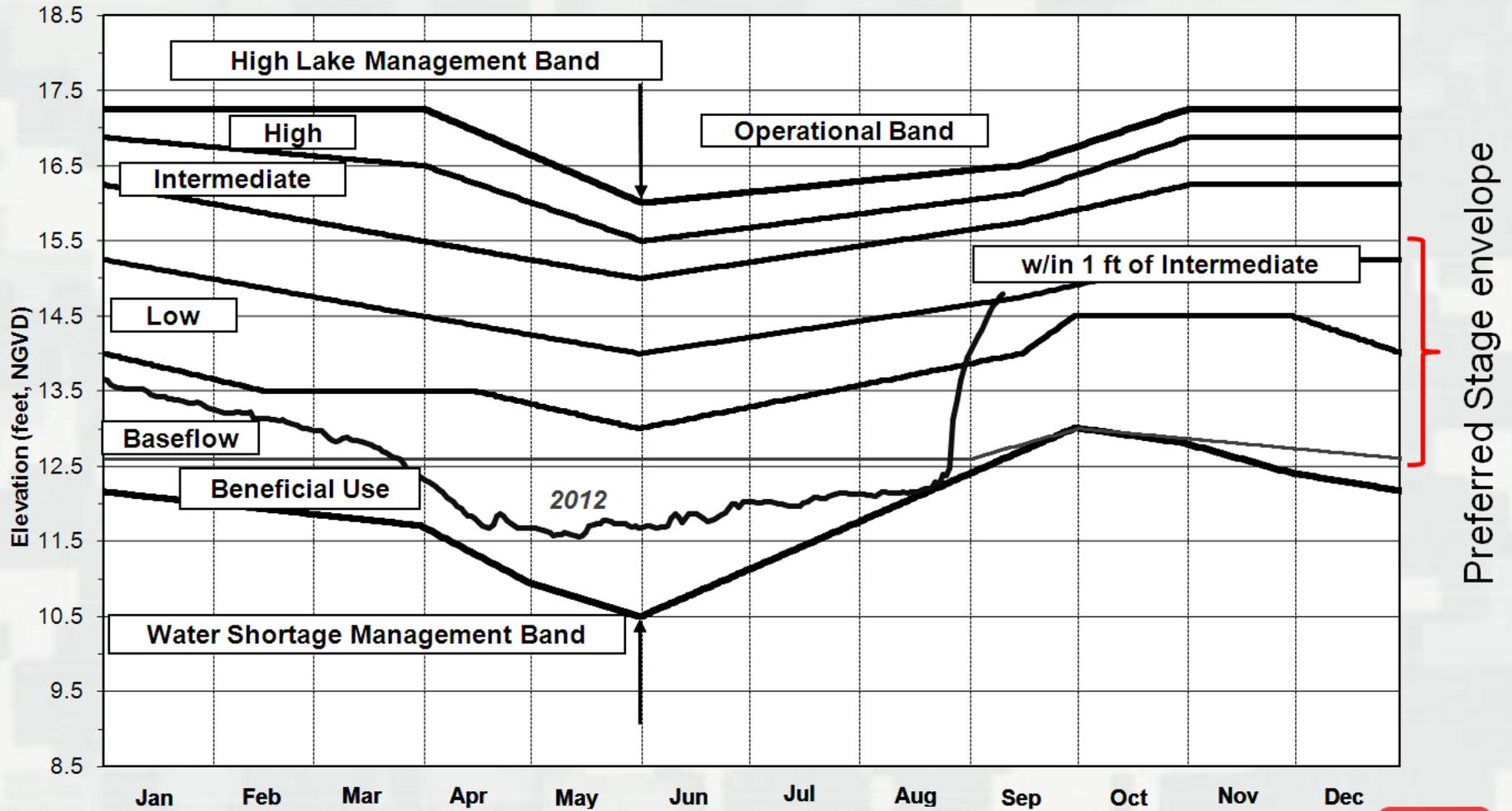
⁴Tributary Hydrologic Condition (THC) is based on classification of Lake Okeechobee Net Inflow and Palmer Index.

⁵Can release less than the “up to” limit if lower release is sufficient to reach or sustain desired estuary salinity; cfs = cubic feet per second.

⁶After reviewing conditions in Water Conservation Areas (WCAs), Stormwater Treatment Areas (STAs), ENP, St. Lucie Estuary and Lake Okeechobee.

⁷Should 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.

2012 LAKE OKEECHOBEE WATER LEVELS





QUESTIONS?