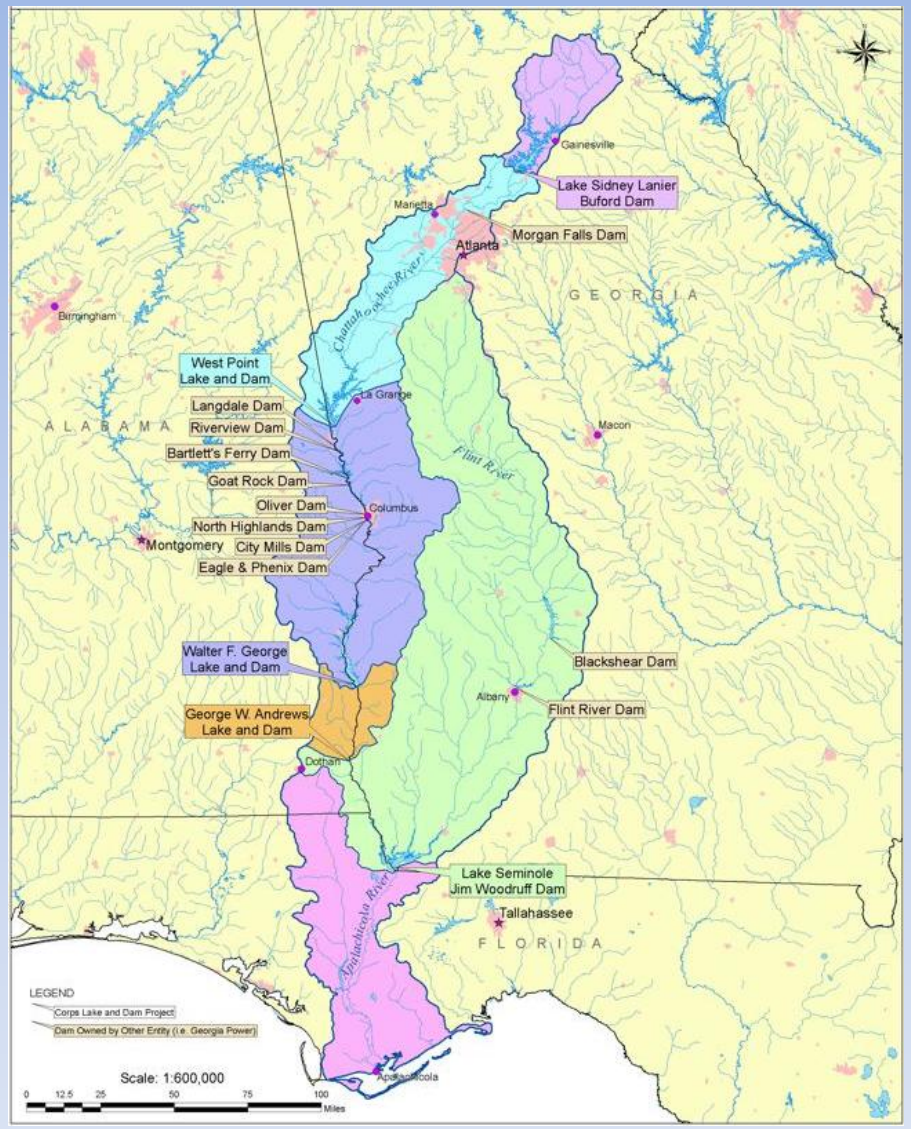
National Integrated Drought Information System

# Southeast US Pilot for Apalachicola-Flint-Chattahoochee River Basin

25 October 2011



# Current drought status from Drought Monitor

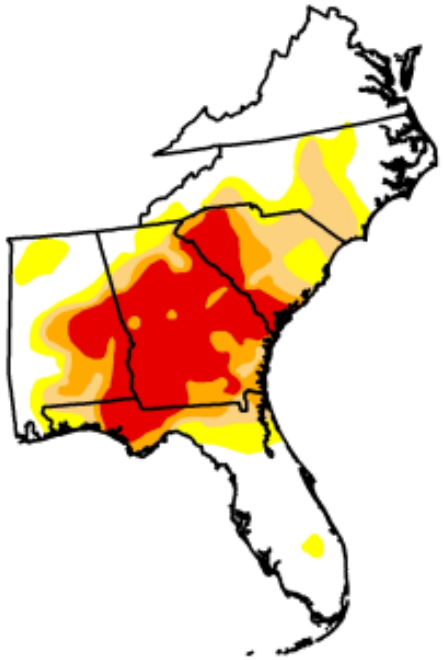
## U.S. Drought Monitor

**October 18, 2011**
Valid 7 a.m. EST

### Southeast

*Drought Conditions (Percent Area)*

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|---|---|---|---|---|---|---|
| Current | 43.01 | 56.99 | 43.60 | 31.91 | 21.79 | 0.00 |
| Last Week (10/11/2011 map) | 41.95 | 58.05 | 43.40 | 32.59 | 23.08 | 0.00 |
| 3 Months Ago (07/19/2011 map) | 26.23 | 73.77 | 57.01 | 38.84 | 24.00 | 1.82 |
| Start of Calendar Year (12/28/2010 map) | 23.01 | 76.99 | 51.84 | 23.55 | 5.63 | 0.00 |
| Start of Water Year (09/27/2011 map) | 42.24 | 57.76 | 41.82 | 31.77 | 23.48 | 0.00 |
| One Year Ago (10/12/2010 map) | 33.93 | 66.07 | 35.16 | 9.69 | 1.62 | 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**

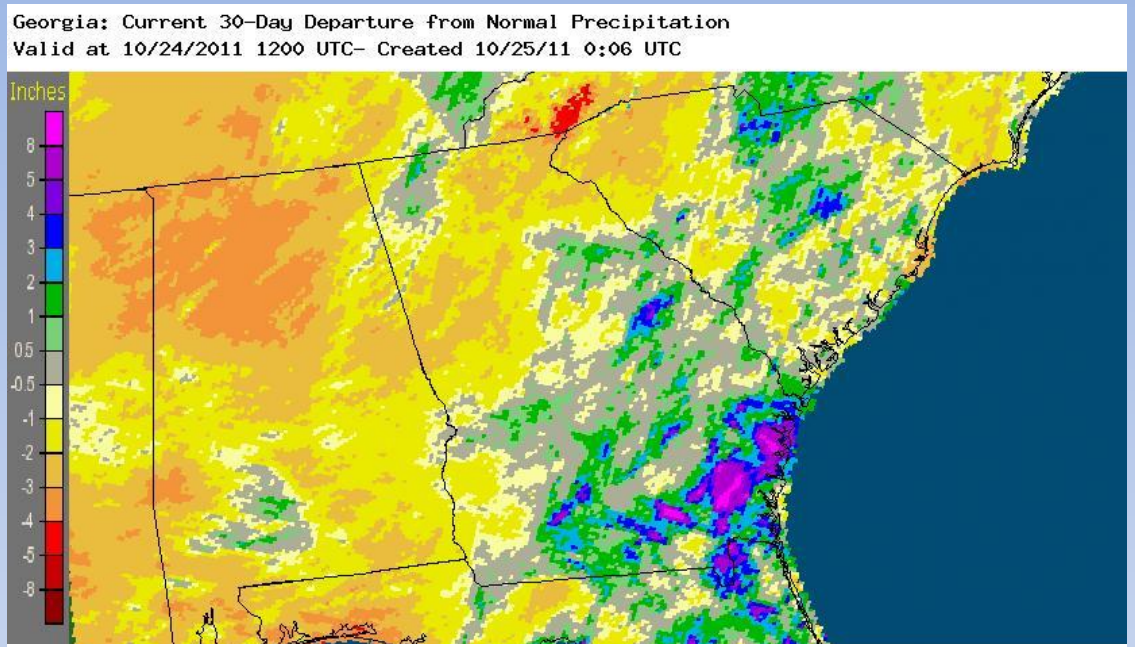
USDA National Drought Mitigation Center

***Released Thursday, October 20, 2011***
***David Miskus, NOAA/NWS/NCEP/CPC***

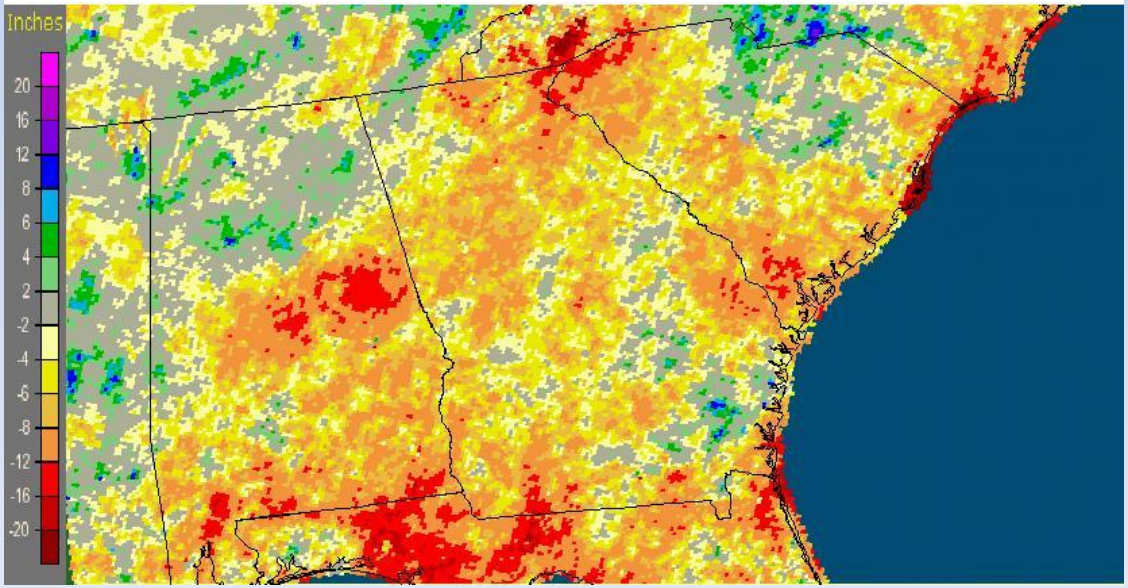
http://www.drought.unl.edu/dm/monitor.html

# Cumulative Rainfall Deficits

Past 30 days

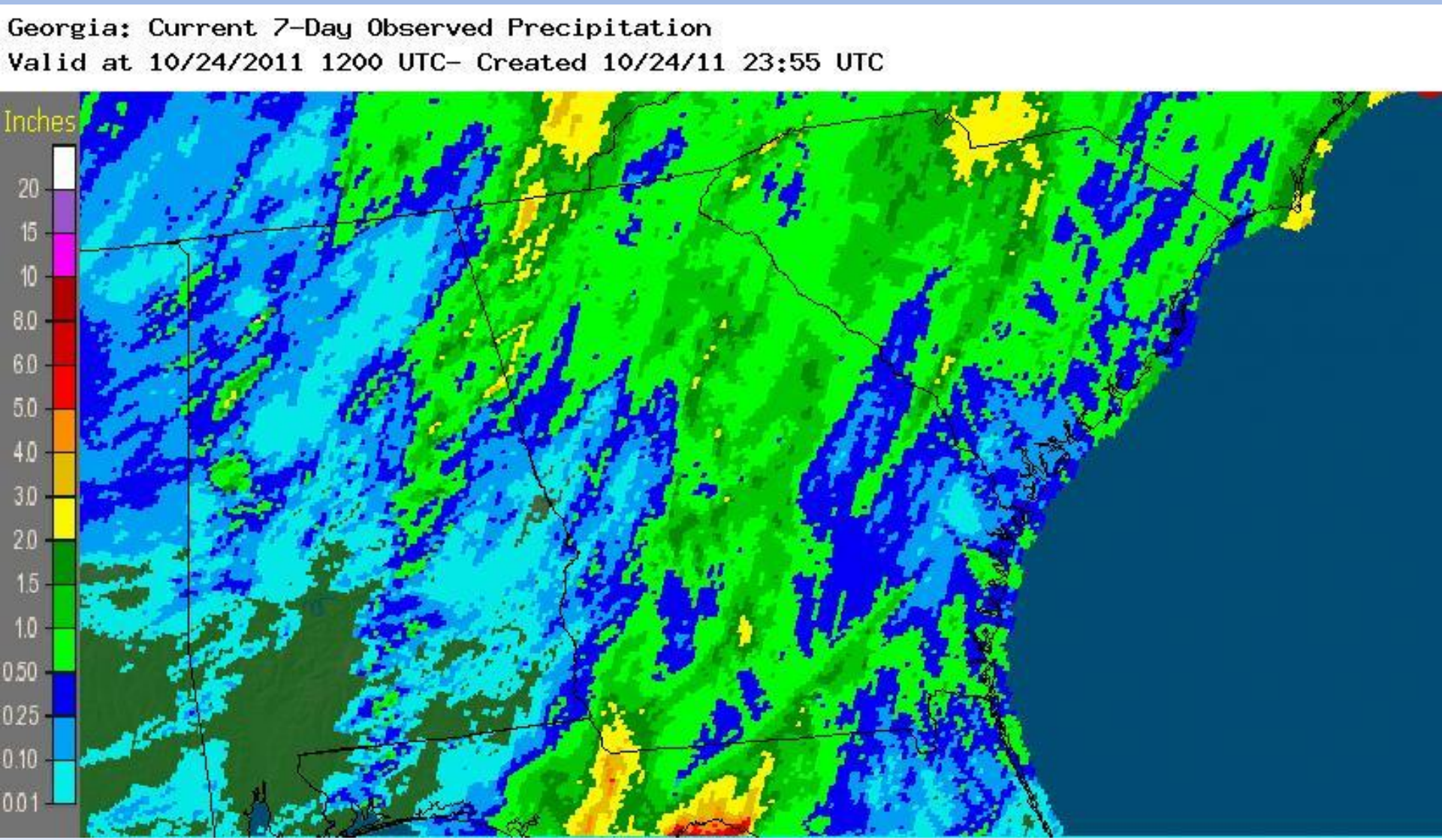



Past 180 days



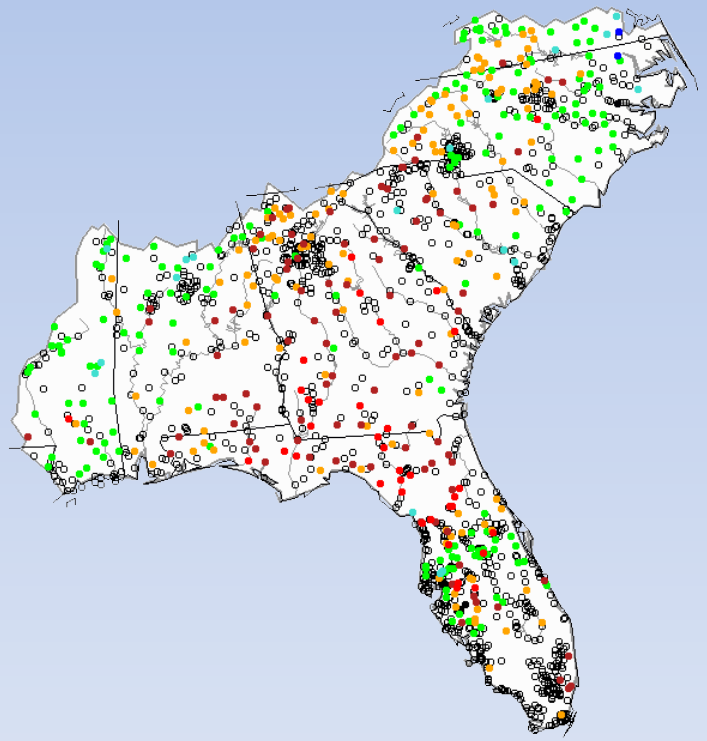

http://water.weather.gov/precip/

# 7-day Rainfall Totals

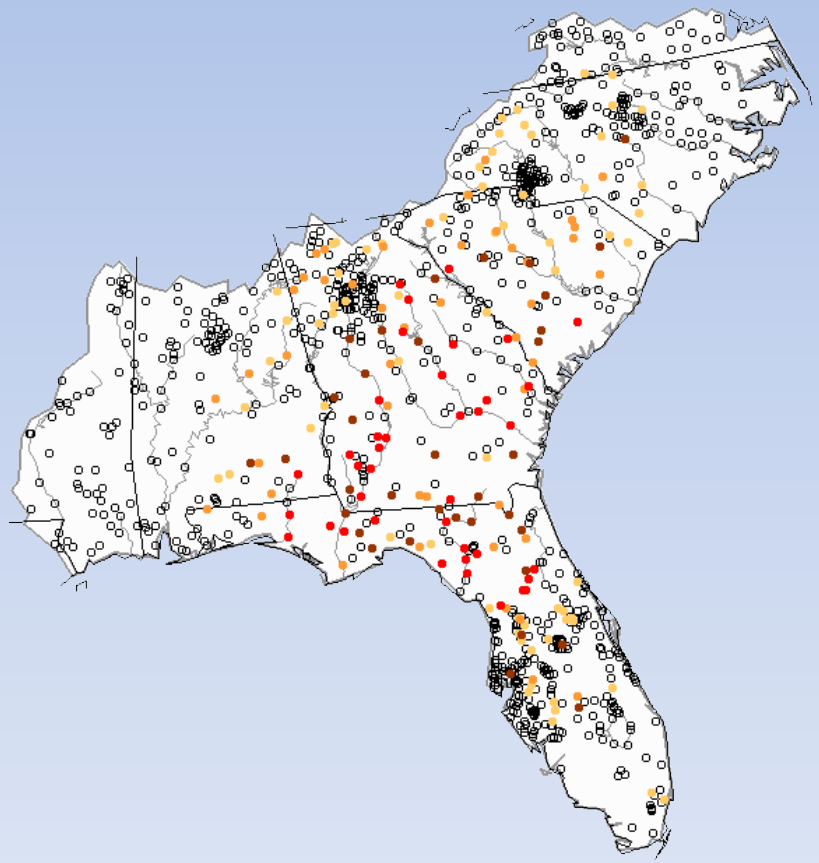


# Realtime stream flow compared with historical monthly averages

Previous Month:



Current:



http://waterwatch.usgs.gov

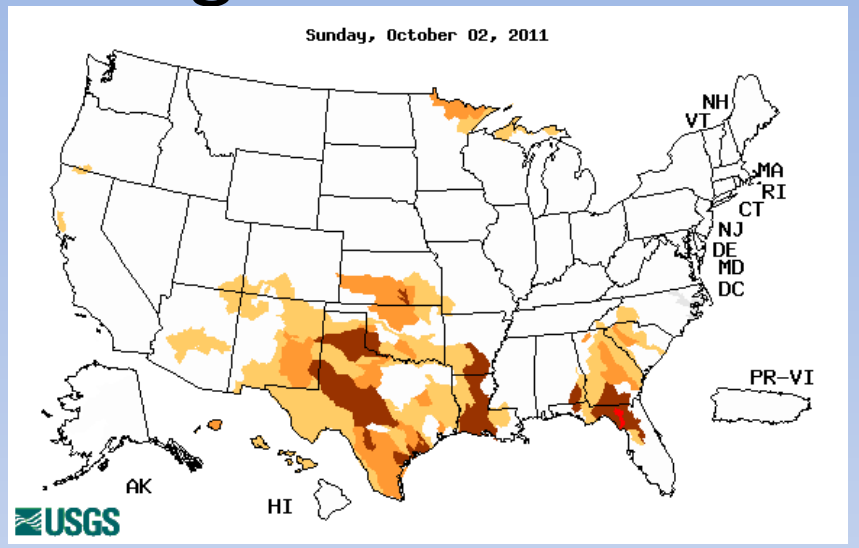
# Below Normal 7-day Average Streamflows

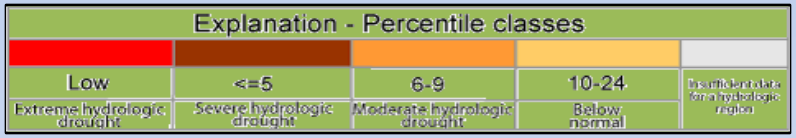
## Previous month:

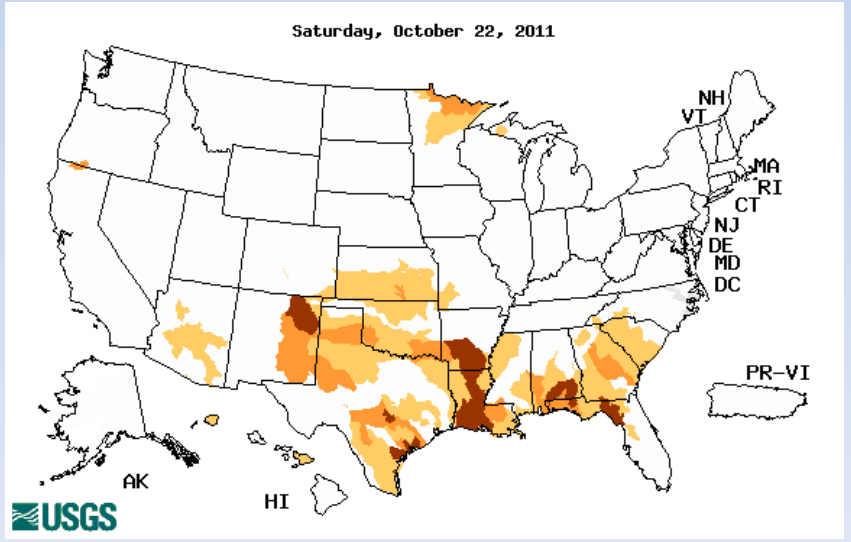
Below normal 7-day average streamflow as compared with historical streamflow for day shown

## Current:

[http://waterwatch.usgs.gov](http://waterwatch.usgs.gov)



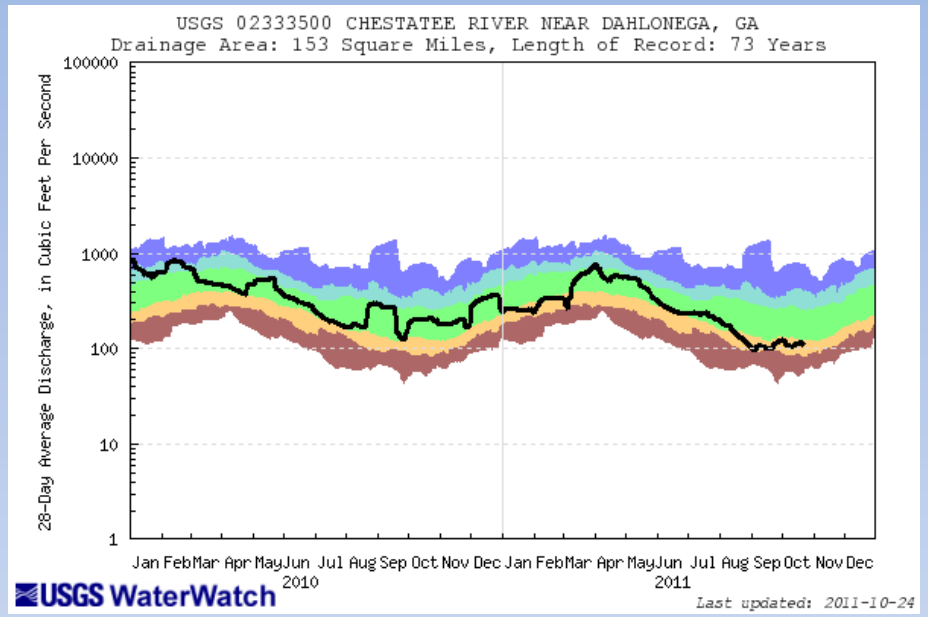



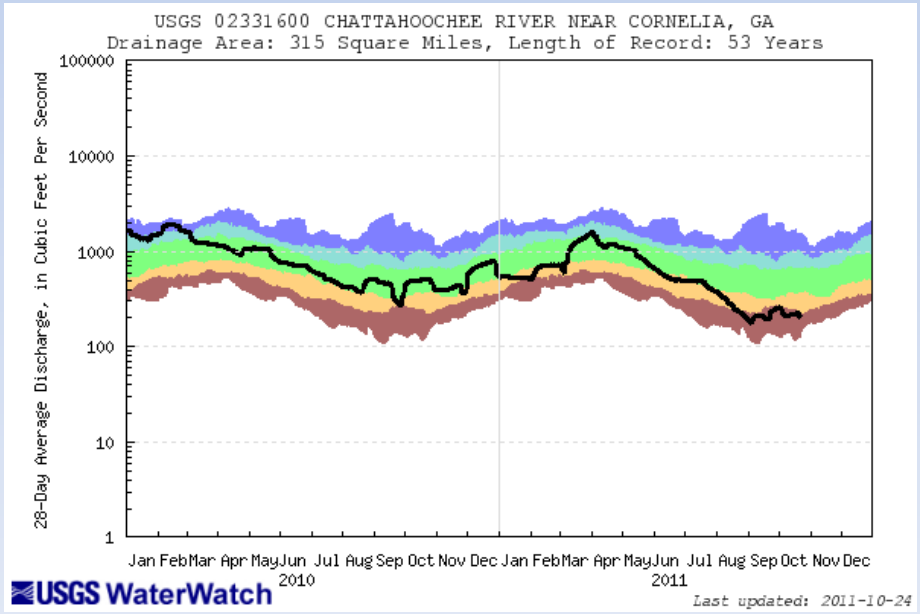
# Lake Lanier Inflows

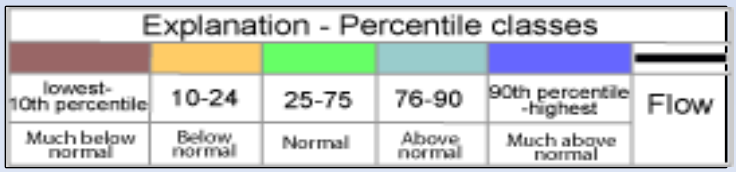
Chestatee near Dahlonega (02333500)

http://waterwatch.usgs.gov

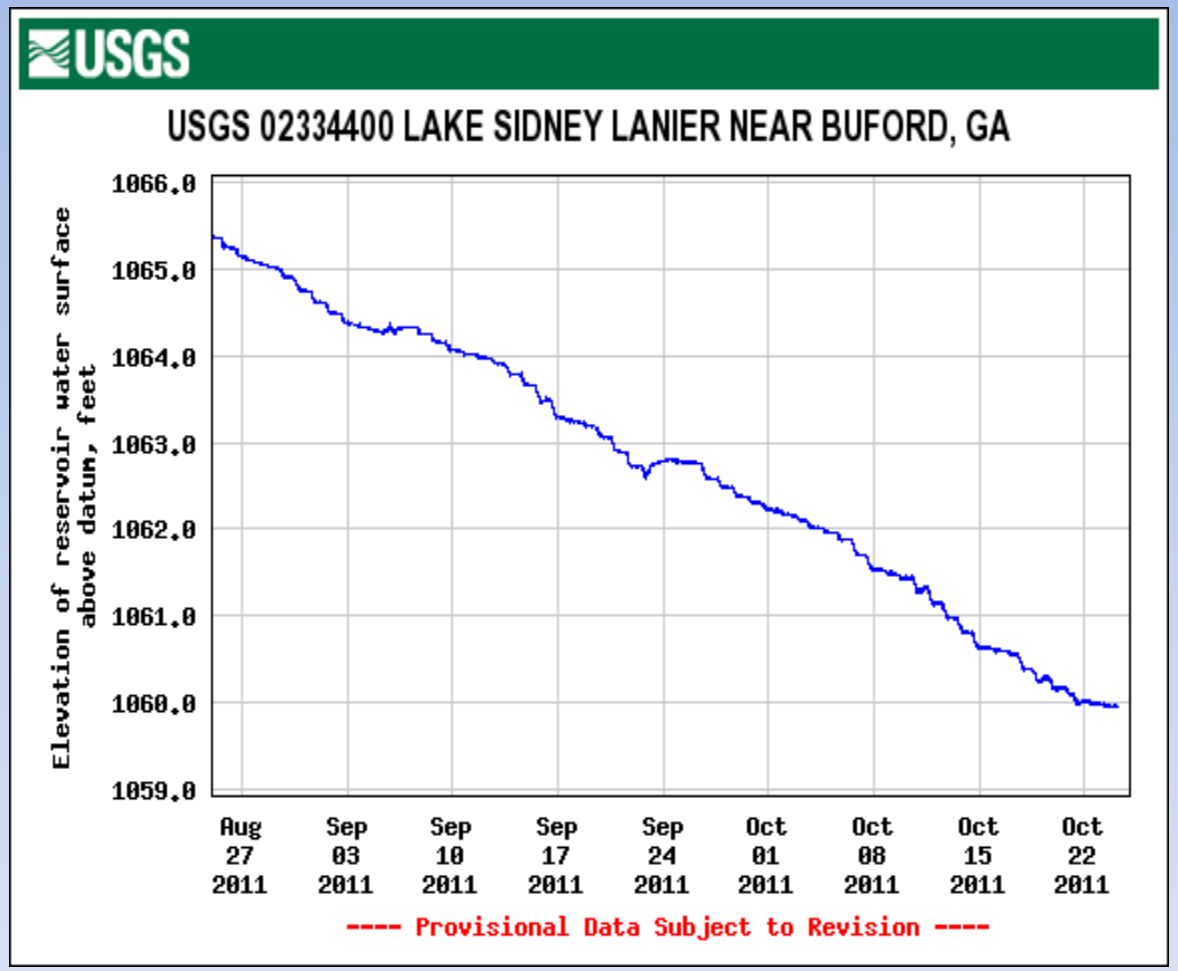
Chattahoochee near Cornelia (02331600)



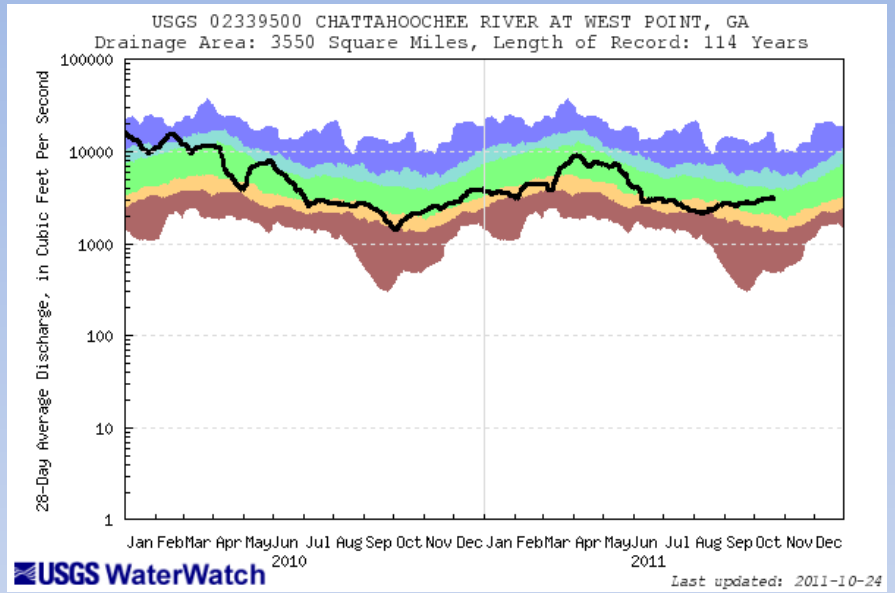



# Lake Lanier Levels (02334400) for Previous 60 Days



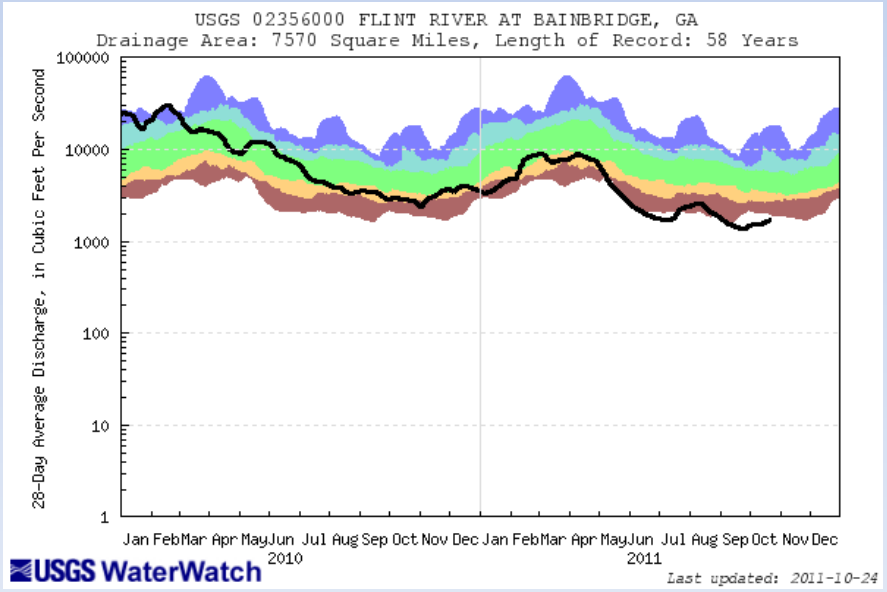
# Current Streamflows

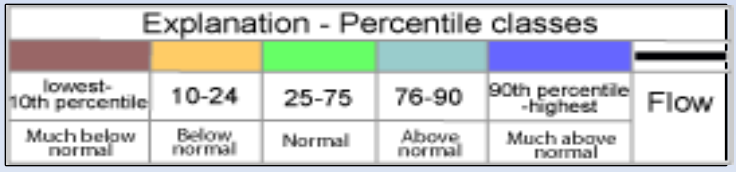
Chattahoochee at West Point (02339500)




http://waterwatch.usgs.gov

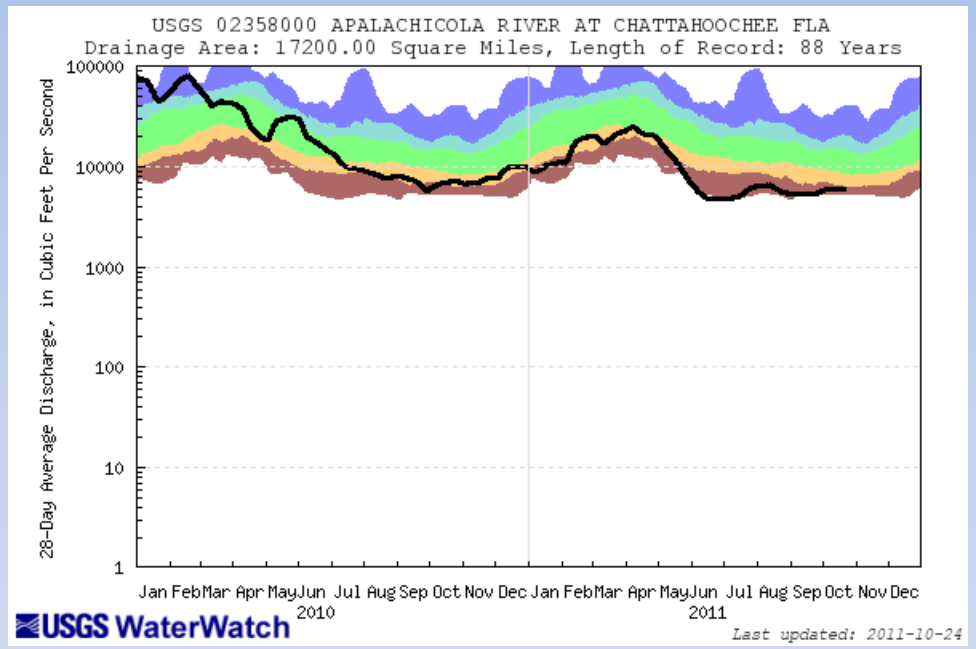
Flint at Bainbridge (02356000)

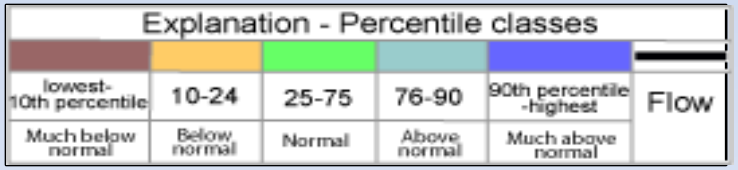


# Streamflows

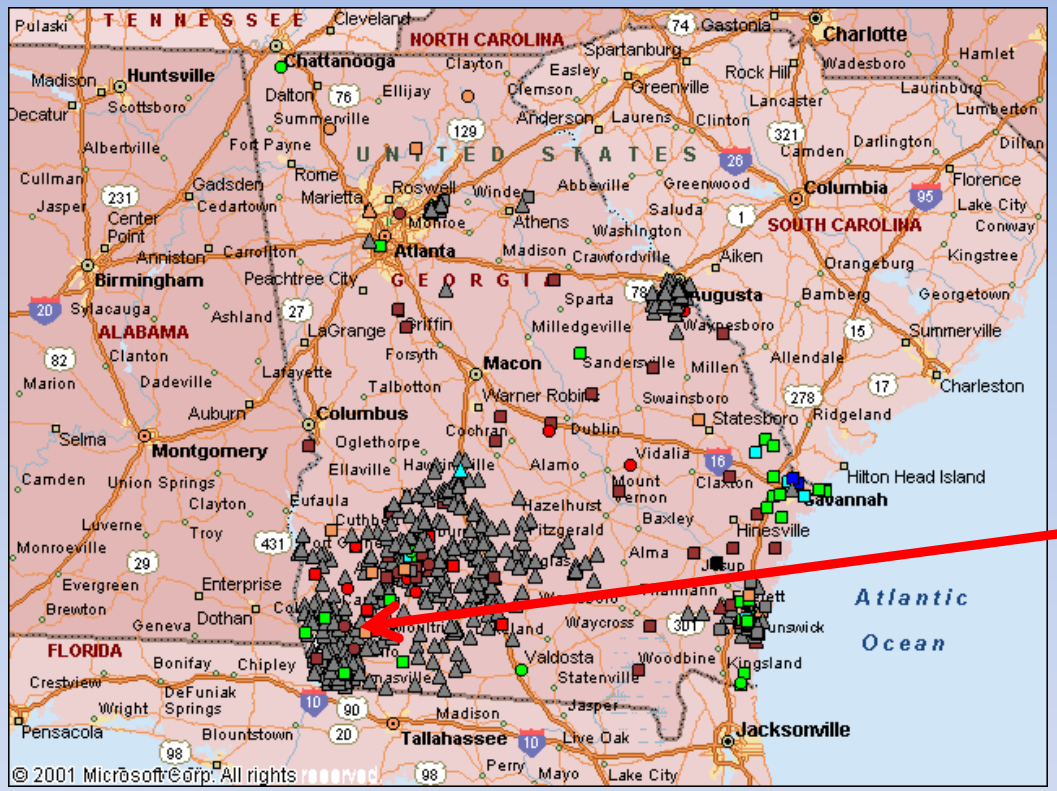
Apalachicola at Chattahoochee (02358000)

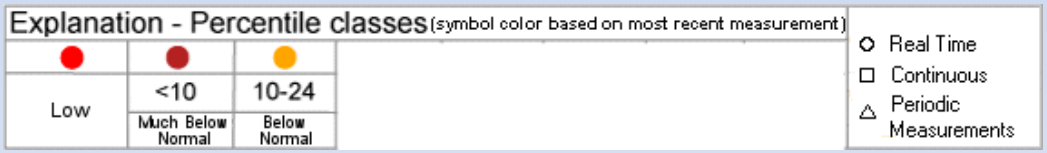


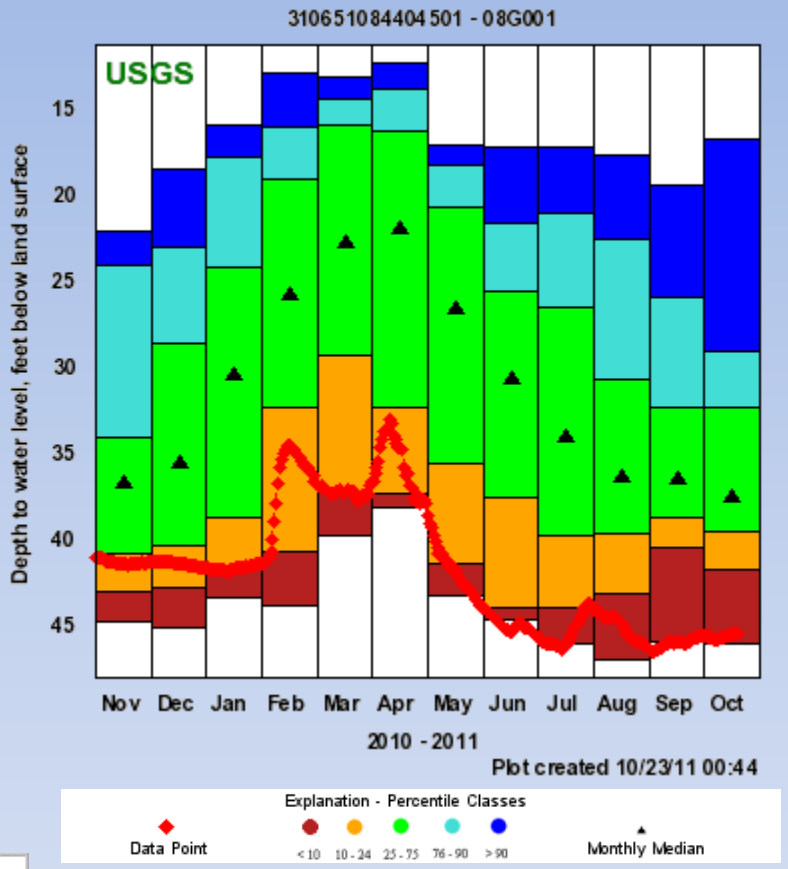




http://waterwatch.usgs.gov

# Groundwater Status



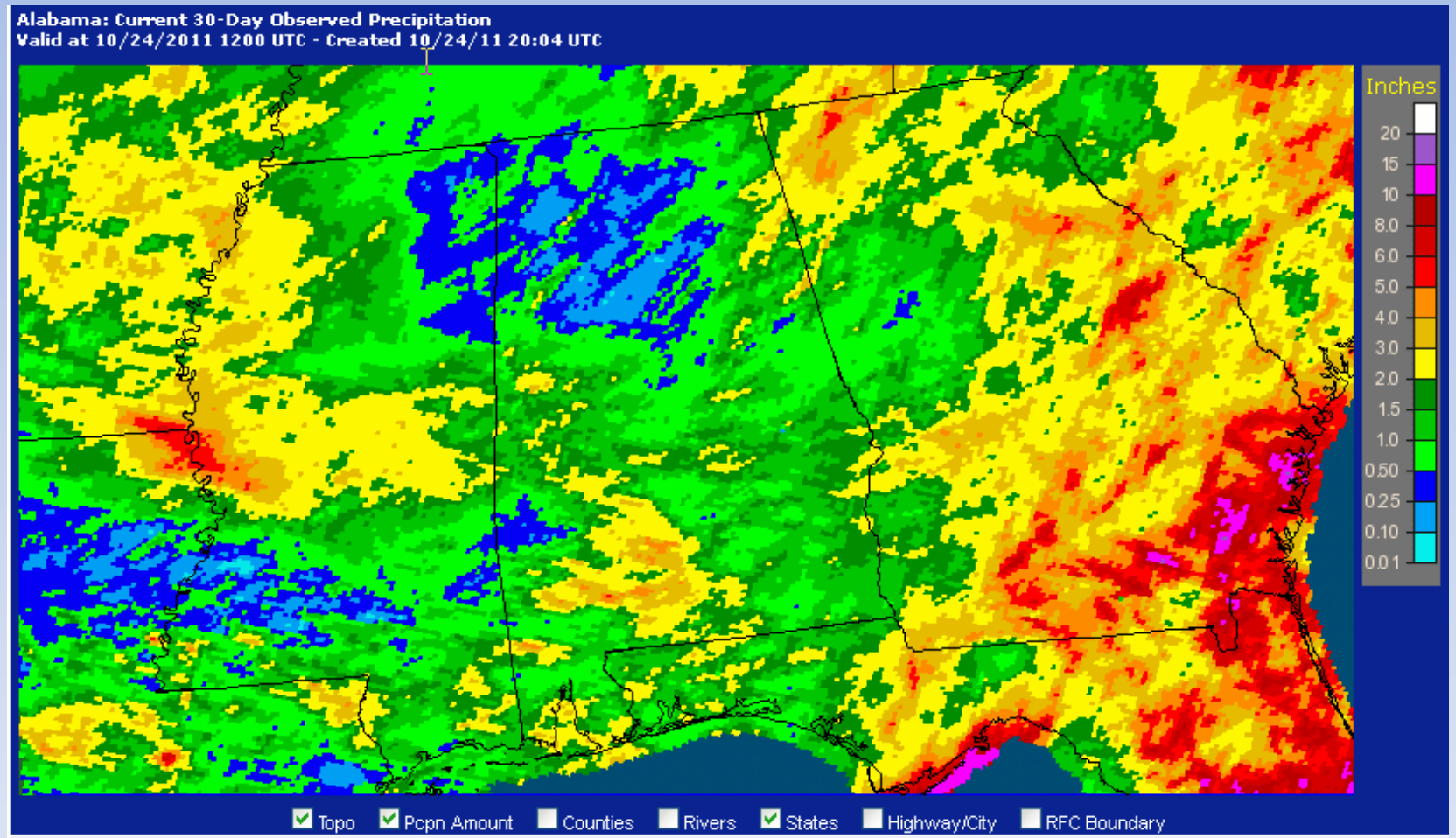



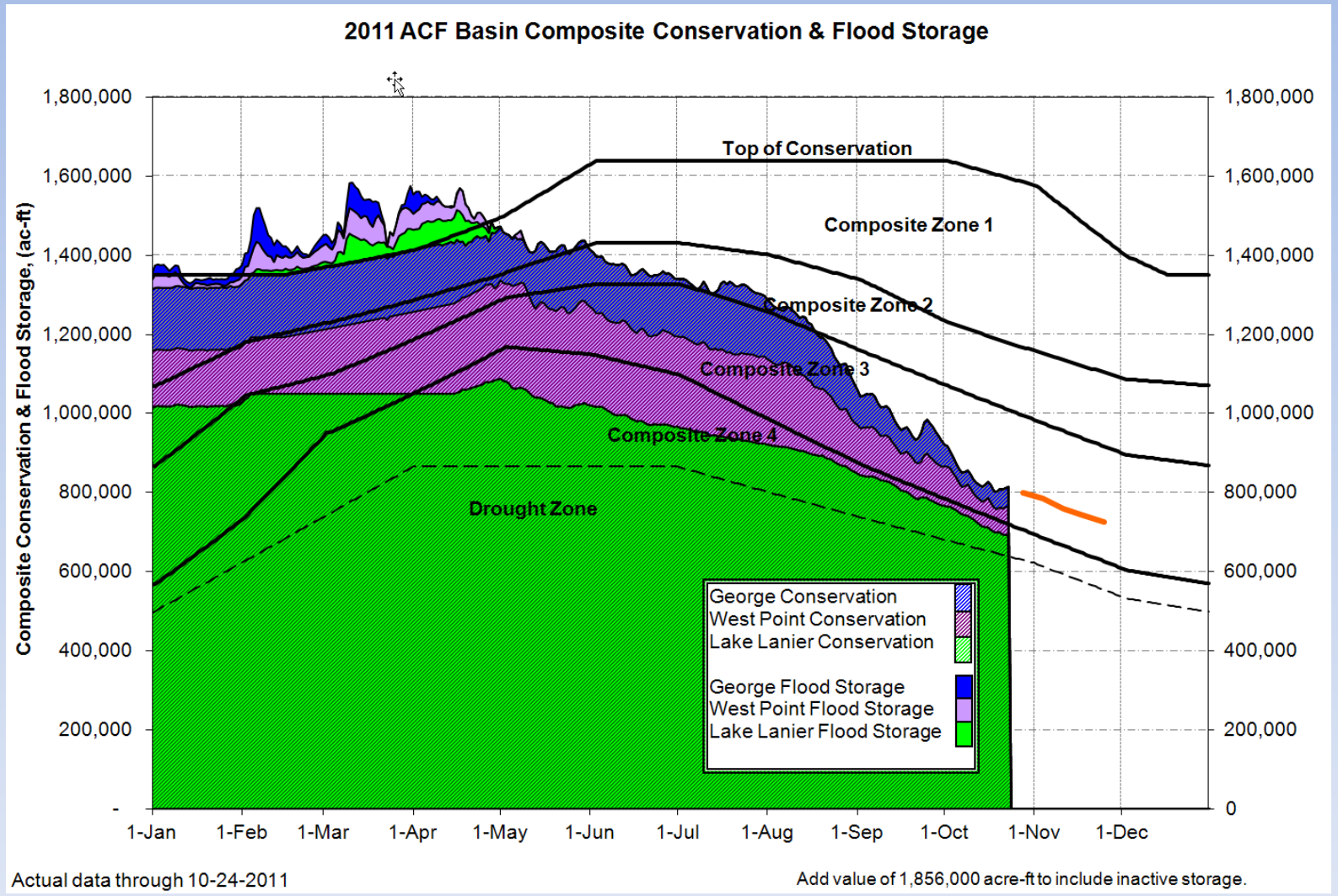

Miller County, GA
(Upper Floridan Aquifer)

http://groundwaterwatch.usgs.gov

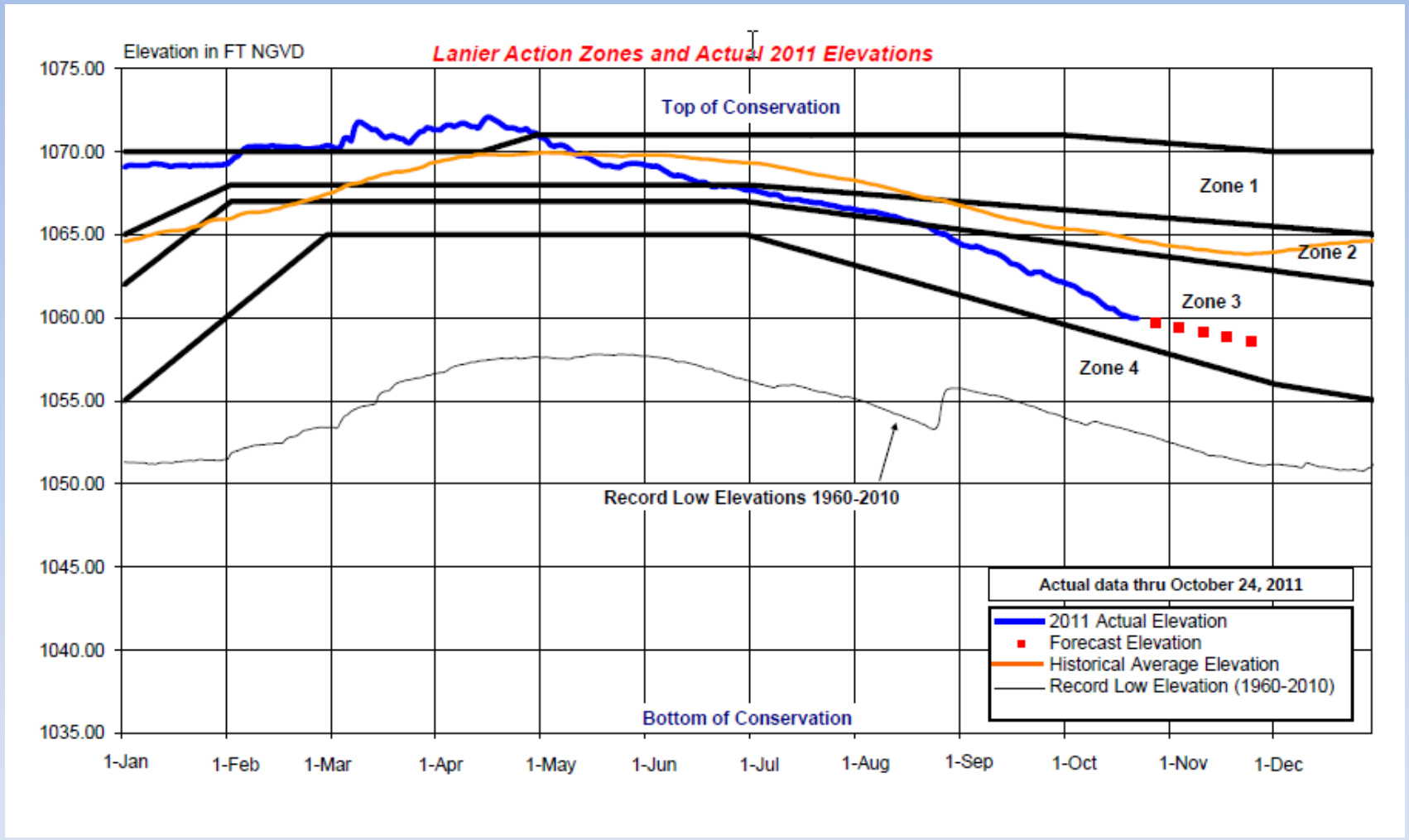
# Last 30-Days Percent of Normal



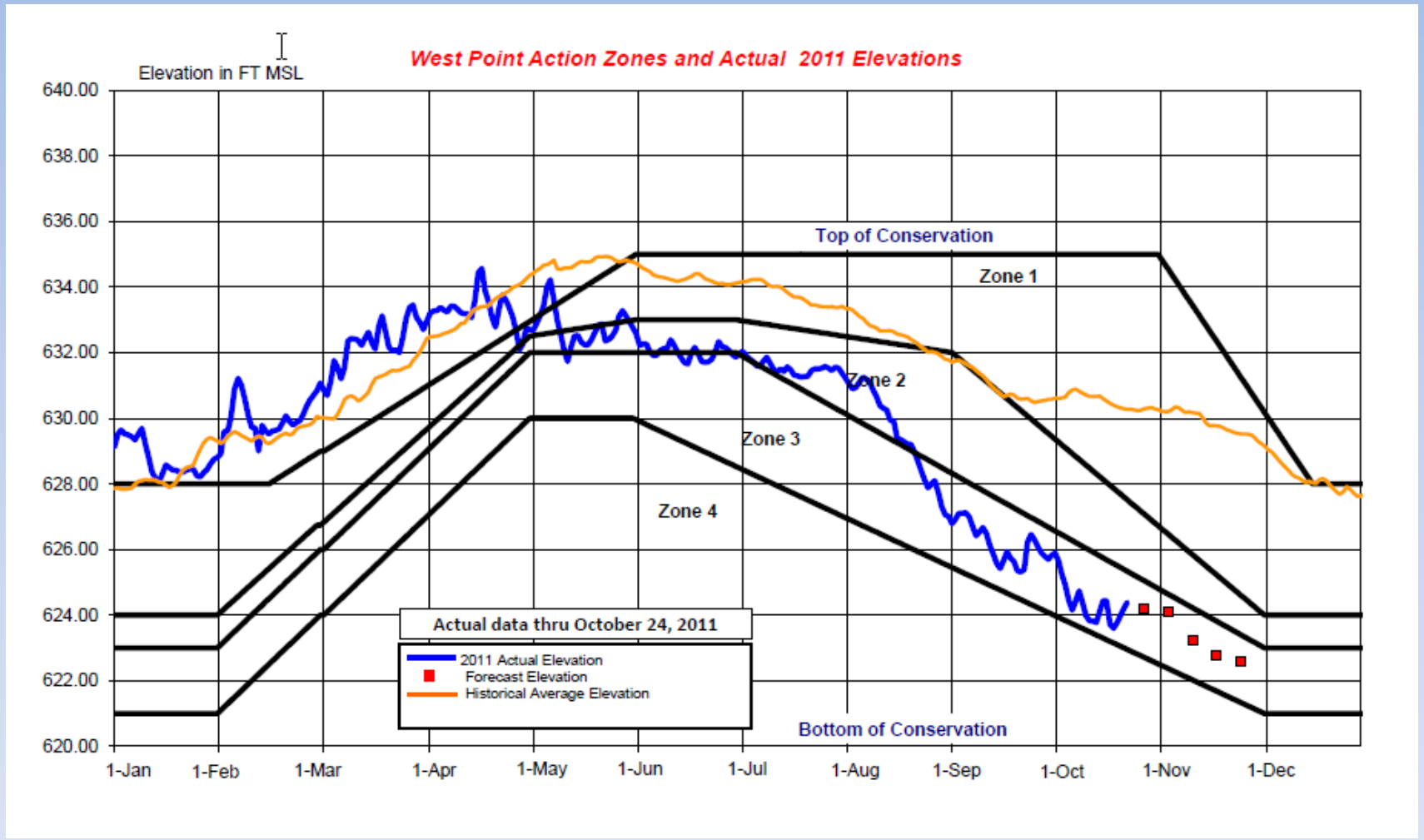
# 2011 ACF Basin Composite



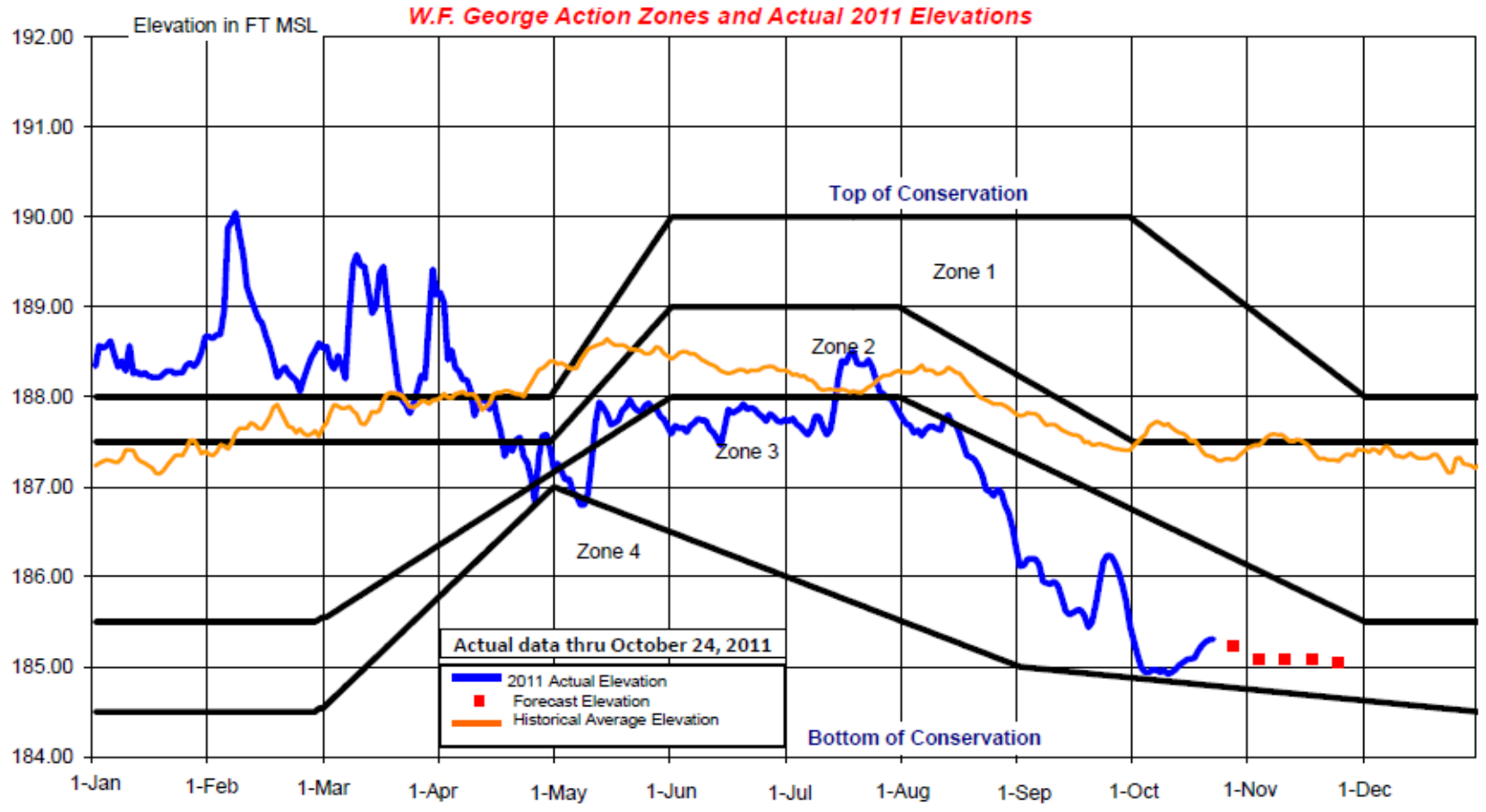
# Lake Lanier


Elevation in FT NGVD
Lanier Action Zones and Actual 2011 Elevations
1075.00
1070.00
1065.00
1060.00
1055.00
1050.00
1045.00
1040.00
1035.00
Top of Conservation
Zone 1
Zone 2
Zone 3
Zone 4
Record Low Elevations 1960-2010
Bottom of Conservation
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
1-Oct
1-Nov
1-Dec
Actual data thru October 24, 2011
2011 Actual Elevation
Forecast Elevation
Historical Average Elevation
Record Low Elevation (1960-2010)

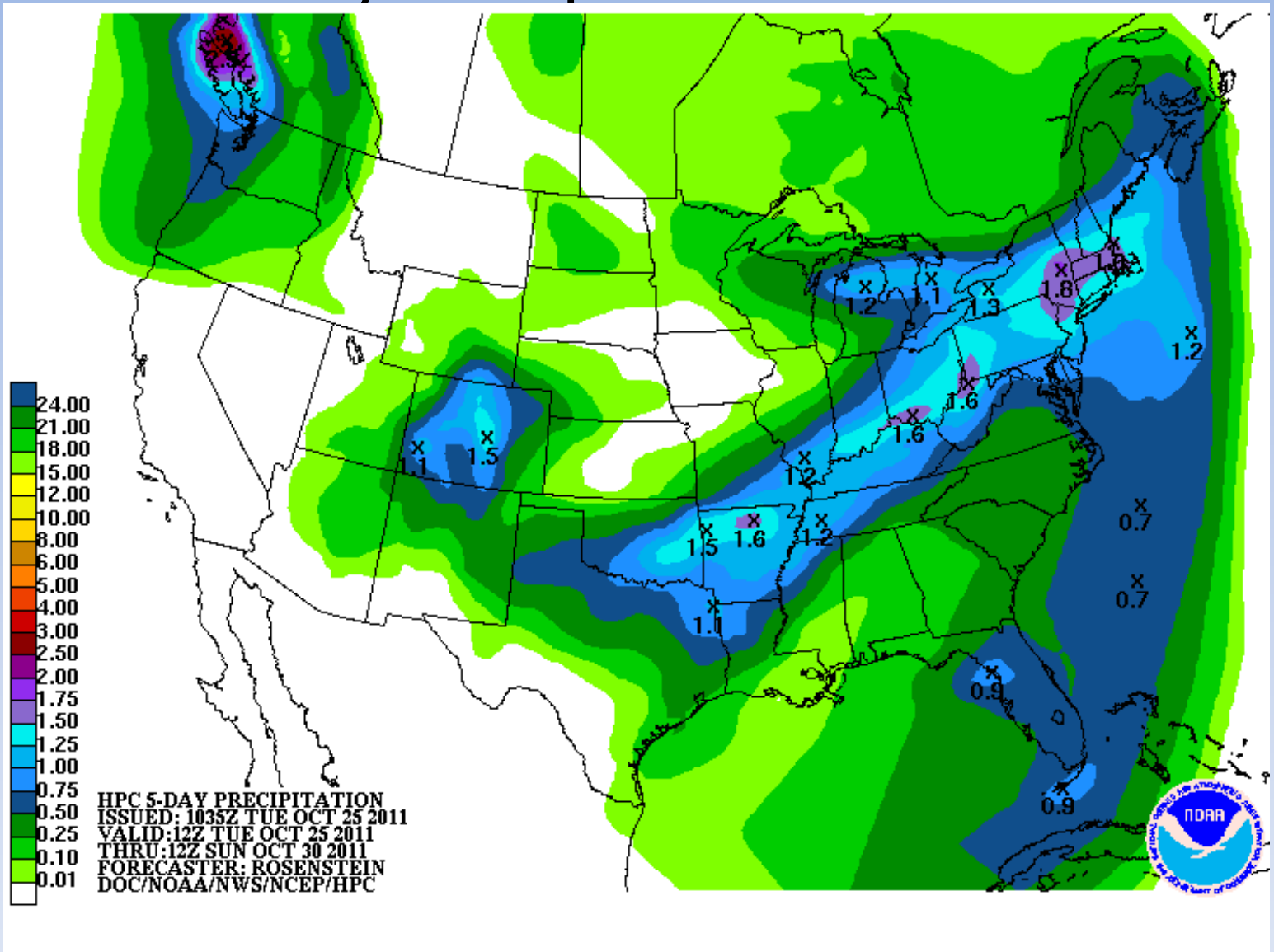
# West Point


West Point Action Zones and Actual 2011 Elevations
Elevation in FT MSL
640.00
638.00
636.00
634.00
632.00
630.00
628.00
626.00
624.00
622.00
620.00
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
1-Oct
1-Nov
1-Dec
Top of Conservation
Zone 1
Zone 2
Zone 3
Zone 4
Bottom of Conservation
Actual data thru October 24, 2011
2011 Actual Elevation
Forecast Elevation
Historical Average Elevation

# W.F. George

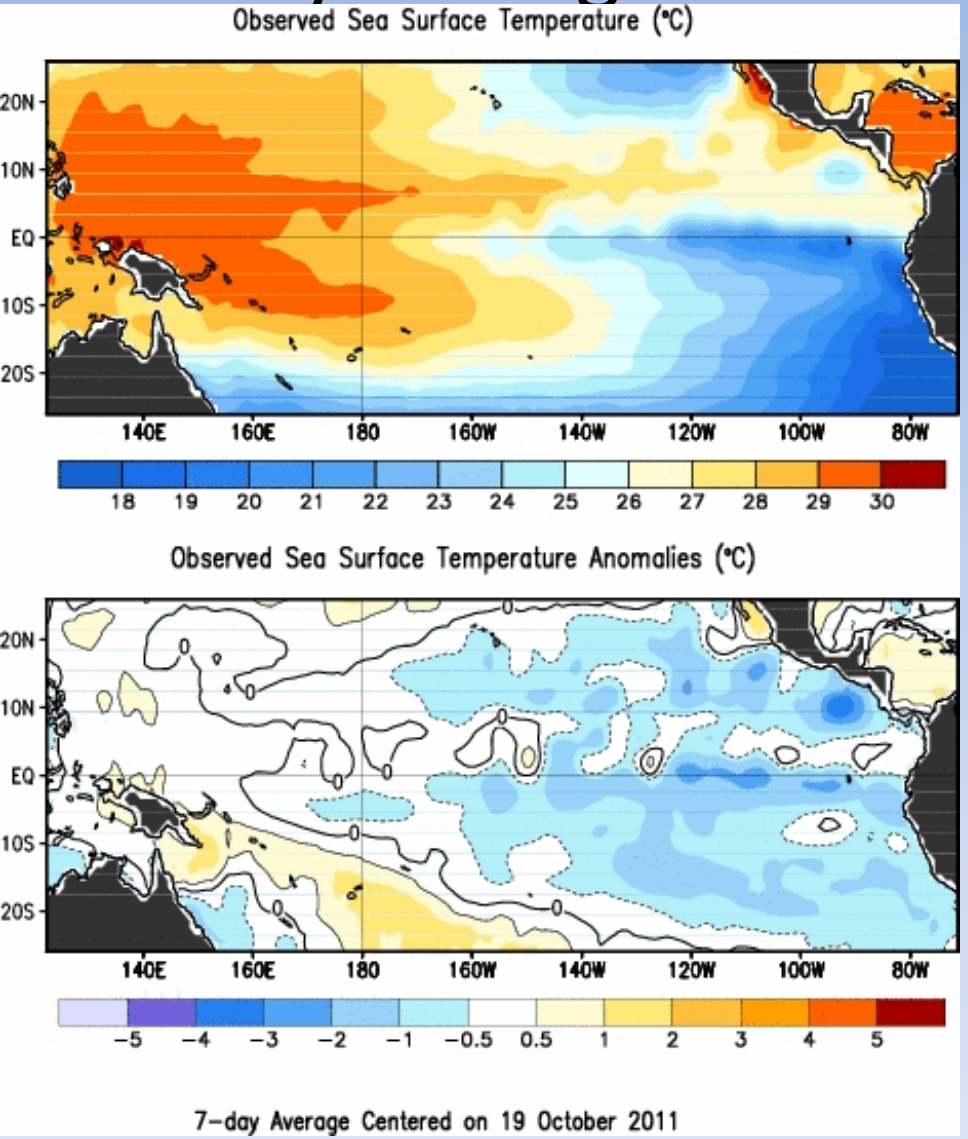

W.F. George Action Zones and Actual 2011 Elevations
Elevation in FT MSL
192.00
191.00
190.00
189.00
188.00
187.00
186.00
185.00
184.00
Top of Conservation
Zone 1
Zone 2
Zone 3
Zone 4
Bottom of Conservation
Actual data thru October 24, 2011
2011 Actual Elevation
Forecast Elevation
Historical Average Elevation
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
1-Oct
1-Nov
1-Dec

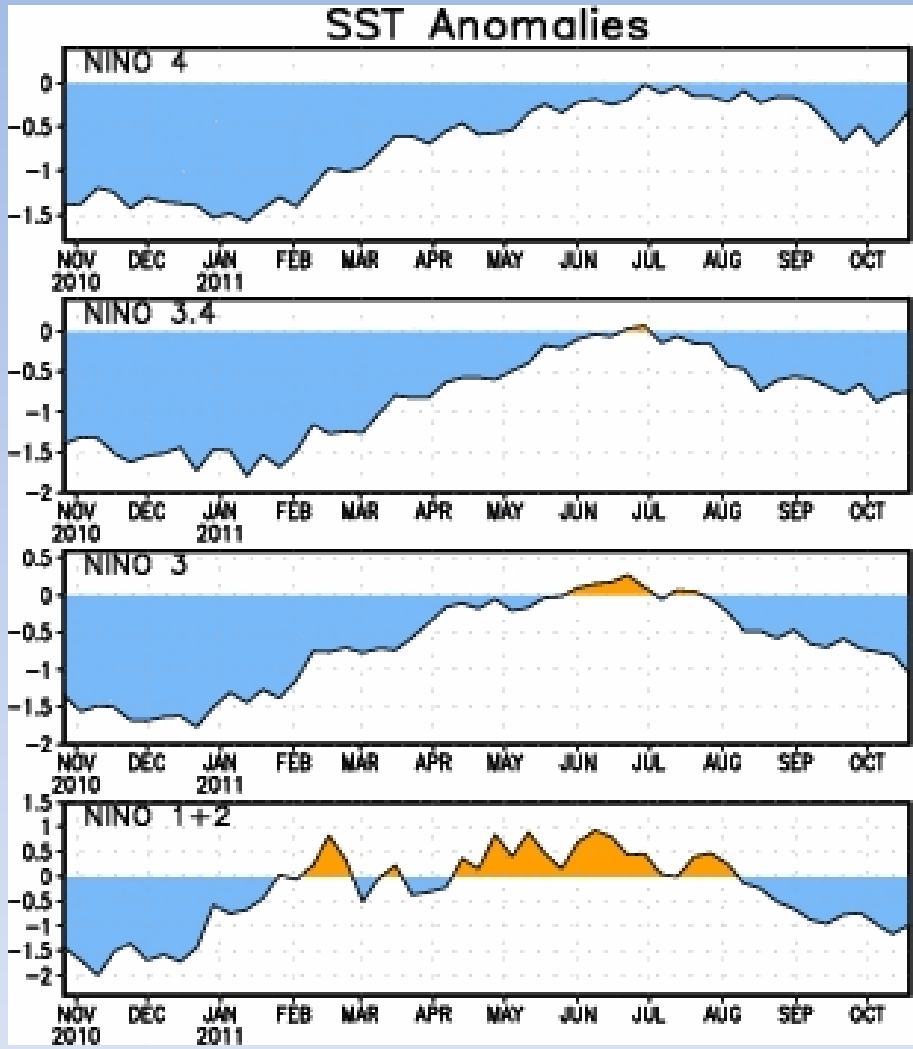
# 5-Day Precipitation Forecast




http://www.hpc.ncep.noaa.gov/qpf/day1-5.shtml

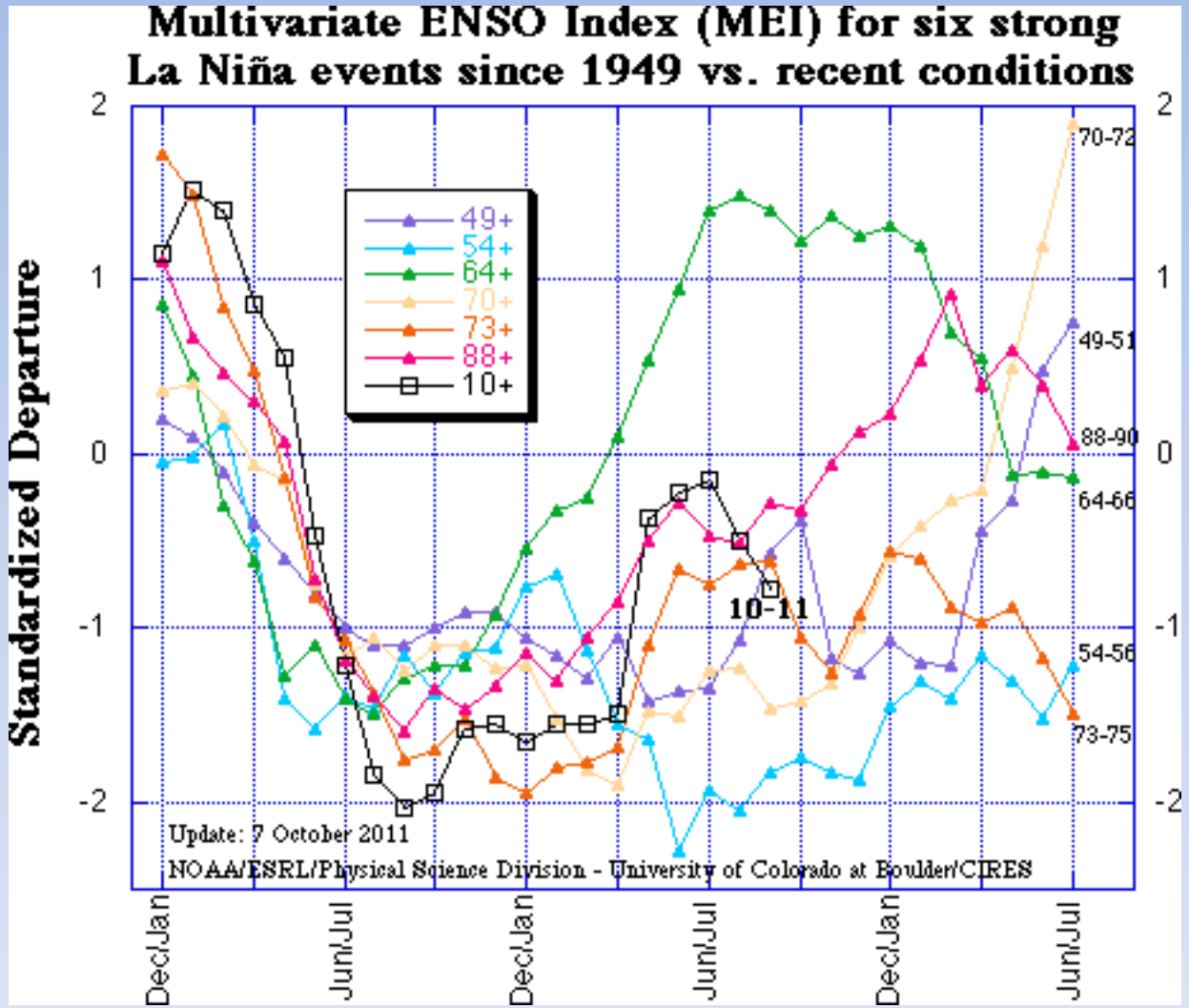
# 7-day average Pacific Ocean SST Anomalies




http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/enso.shtml

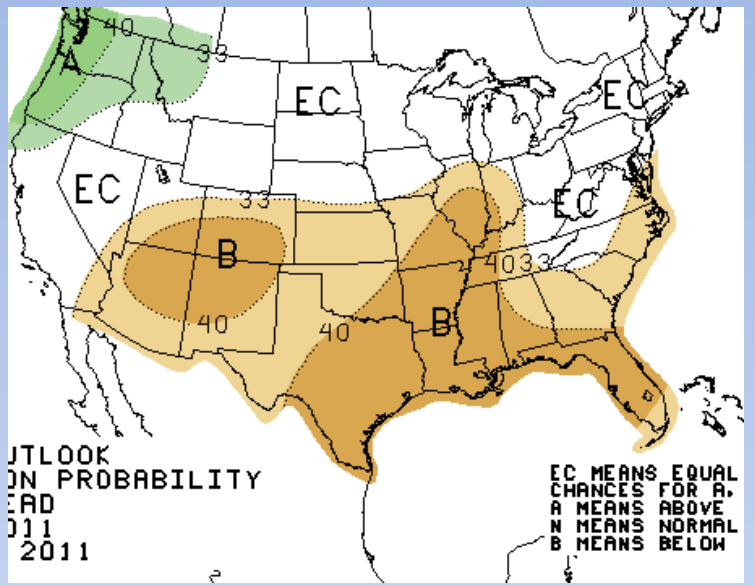
# Multivariate ENSO Index: recent and six strong La Niña events



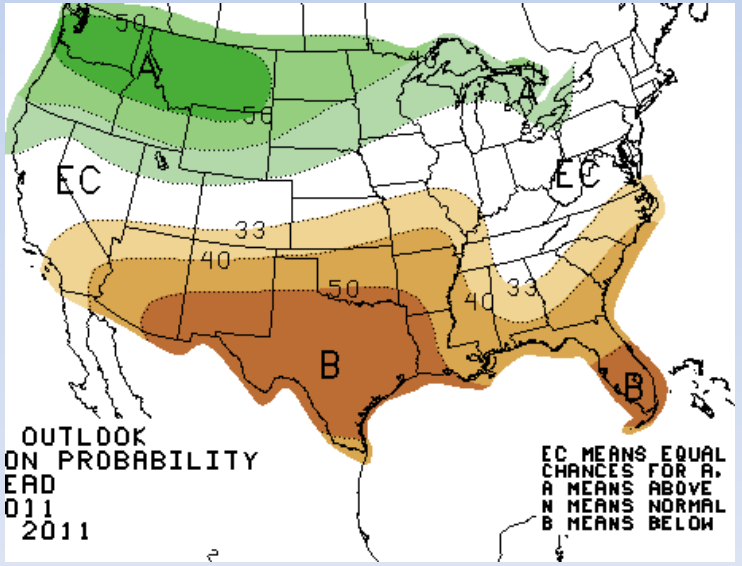

http://www.esrl.noaa.gov/psd/people/klaus.wolter/MEI/

# Precipitation Outlook

1-month




Winter (DJF)

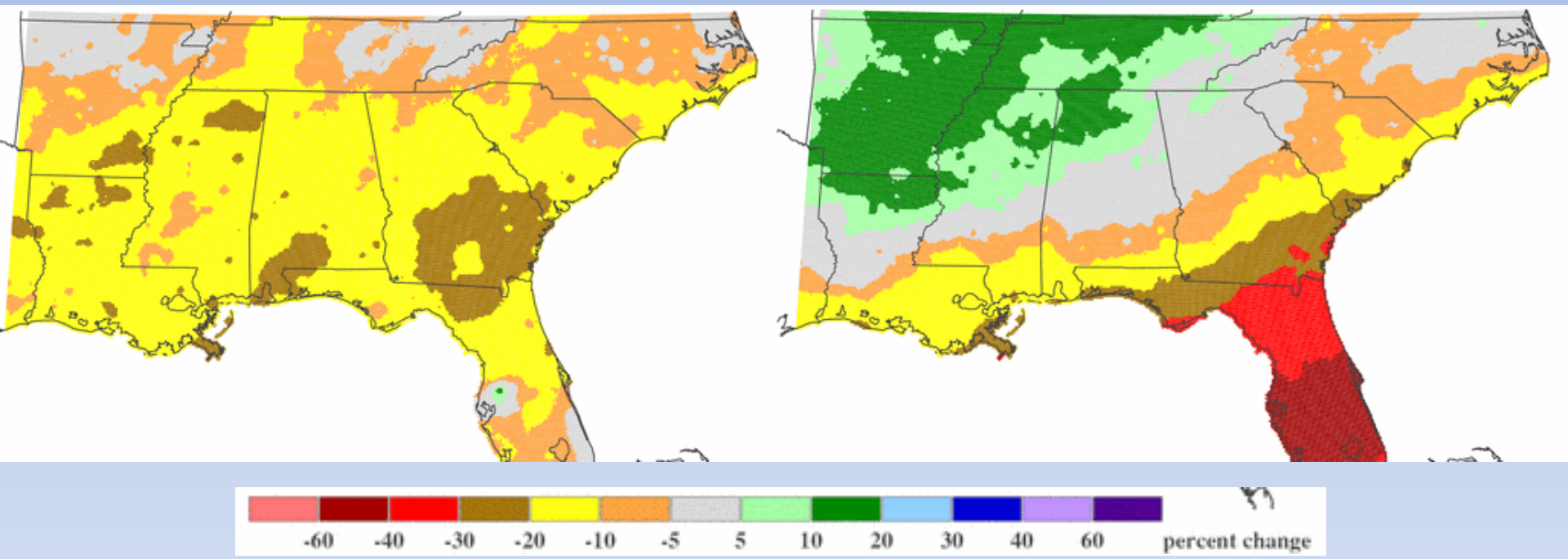



http://www.cpc.ncep.noaa.gov/products/predictions/30day/

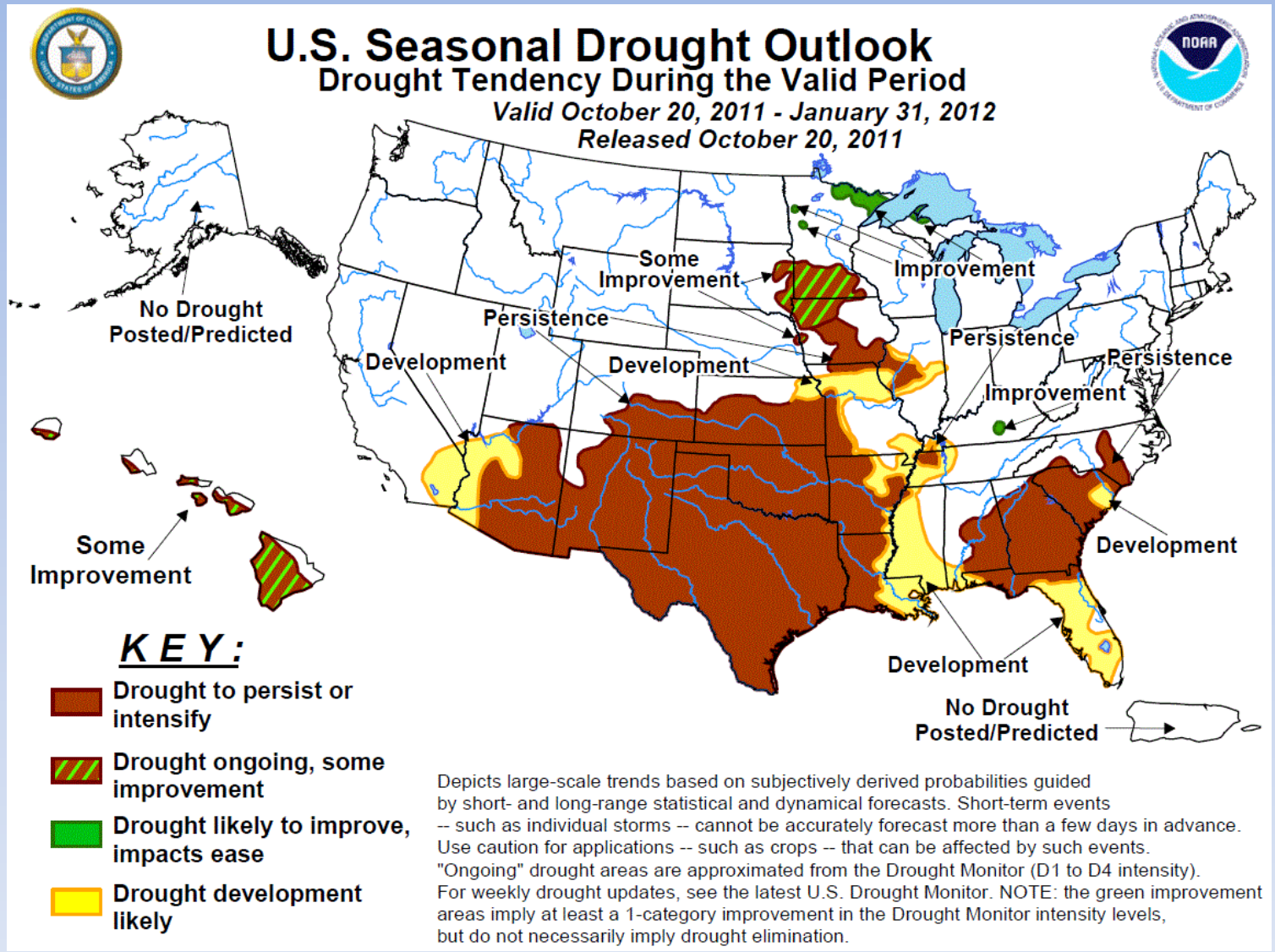
# La Nina Composites

October

January

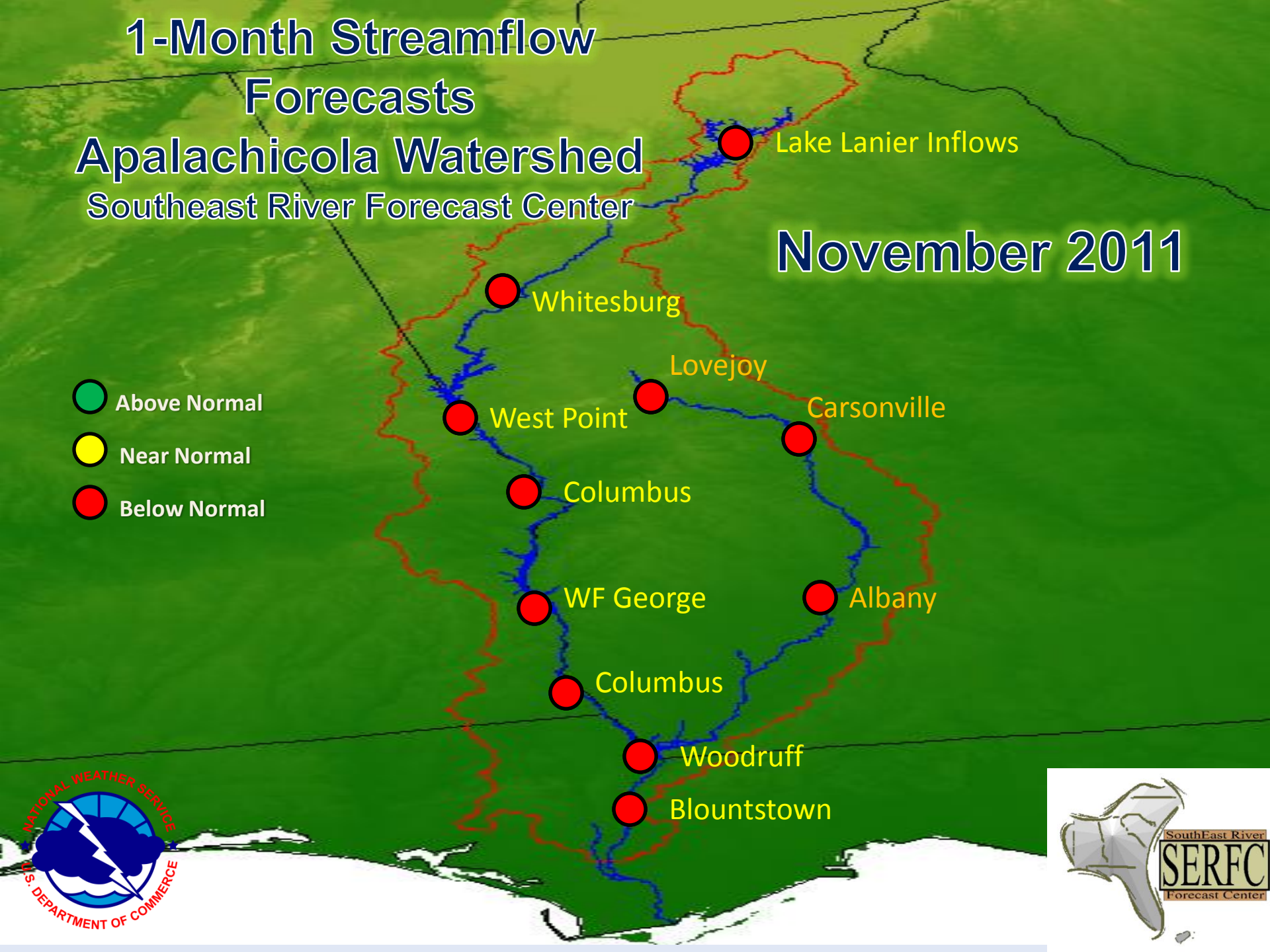


# U.S. Drought Outlook



# 1-Month Streamflow Forecasts
# Apalachicola Watershed
## Southeast River Forecast Center

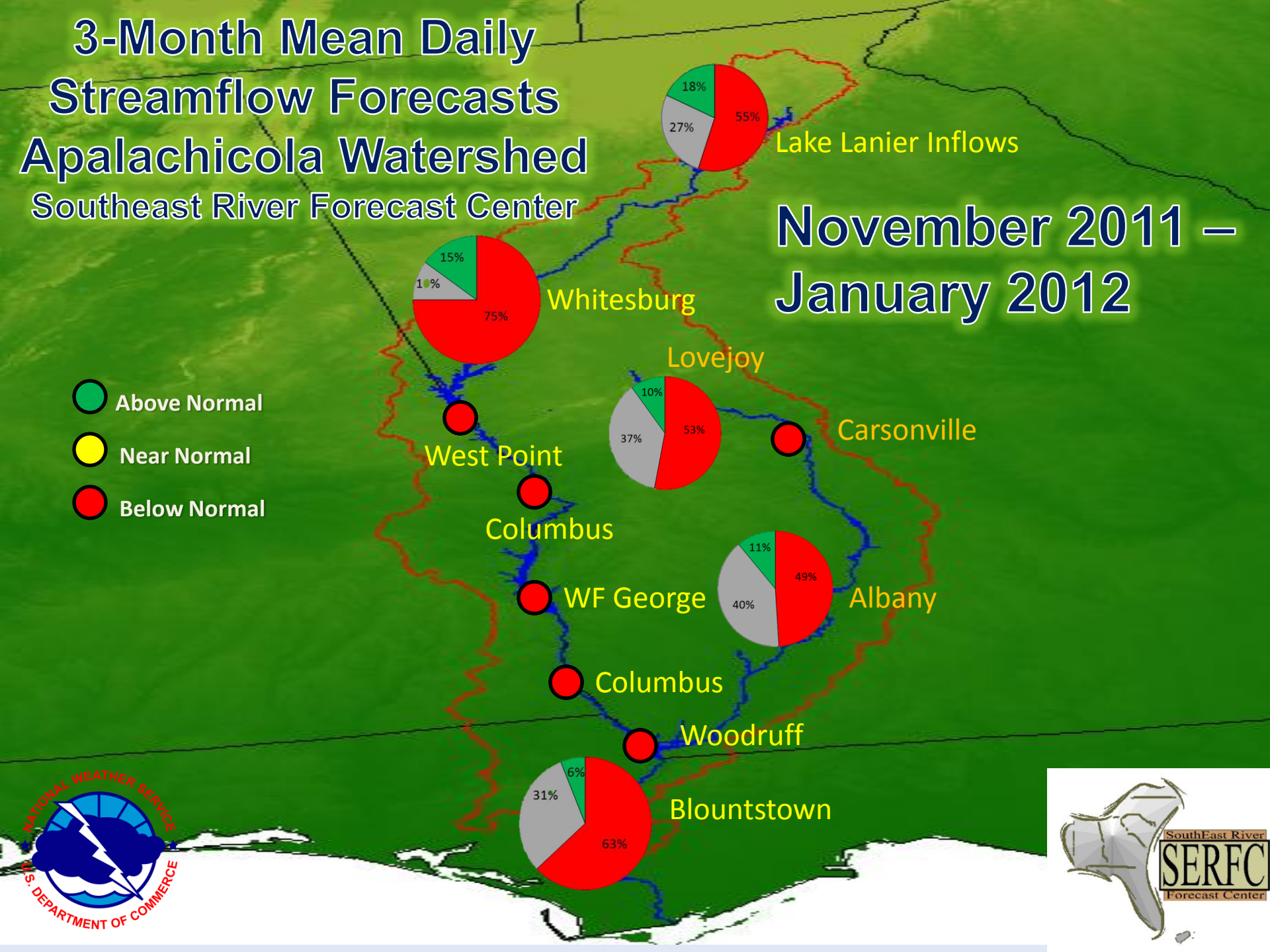
## November 2011



# 3-Month Mean Daily Streamflow Forecasts Apalachicola Watershed

## Southeast River Forecast Center

## November 2011 – January 2012



# Summary

- Drought continues to be severe to extreme through most of the basin
- Rainfall during the previous week was irregularly distributed, with 0.1 to 1.5 inches falling in different parts of the basin
- Current streamflows are in the 10 to 50 percentile range for the middle and upper basin but are still at or below historic lows in the lower basin
- Groundwater levels remain near historic lows in the lower basin
- Lake levels continue to decline and are below historic average elevations; Lake Lanier, West Point, and W.F. George levels are all in action zone 3
- La Niña conditions have strengthened, suggesting an increased probability of drought over the fall and winter
- 1- and 3-month precipitation outlooks show that drought is likely to persist and strengthen.
- 1- and 3-month streamflow forecasts show a high probability of below normal streamflows throughout the basin

# References

## Speakers

David Zierden, FSU

Brian McCallum, USGS

Robert Allen, USACE

Jeffrey Dobur, SERFC

## Moderator

Keith Ingram, SECC/UF

## Additional information

General drought information

http://drought.gov
http://www.drought.unl.edu

General climate and El Niño information

http://agroclimate.org/climate/

Streamflow monitoring

http://waterwatch.usgs.gov

Groundwater monitoring

http://groundwaterwatch.usgs.gov