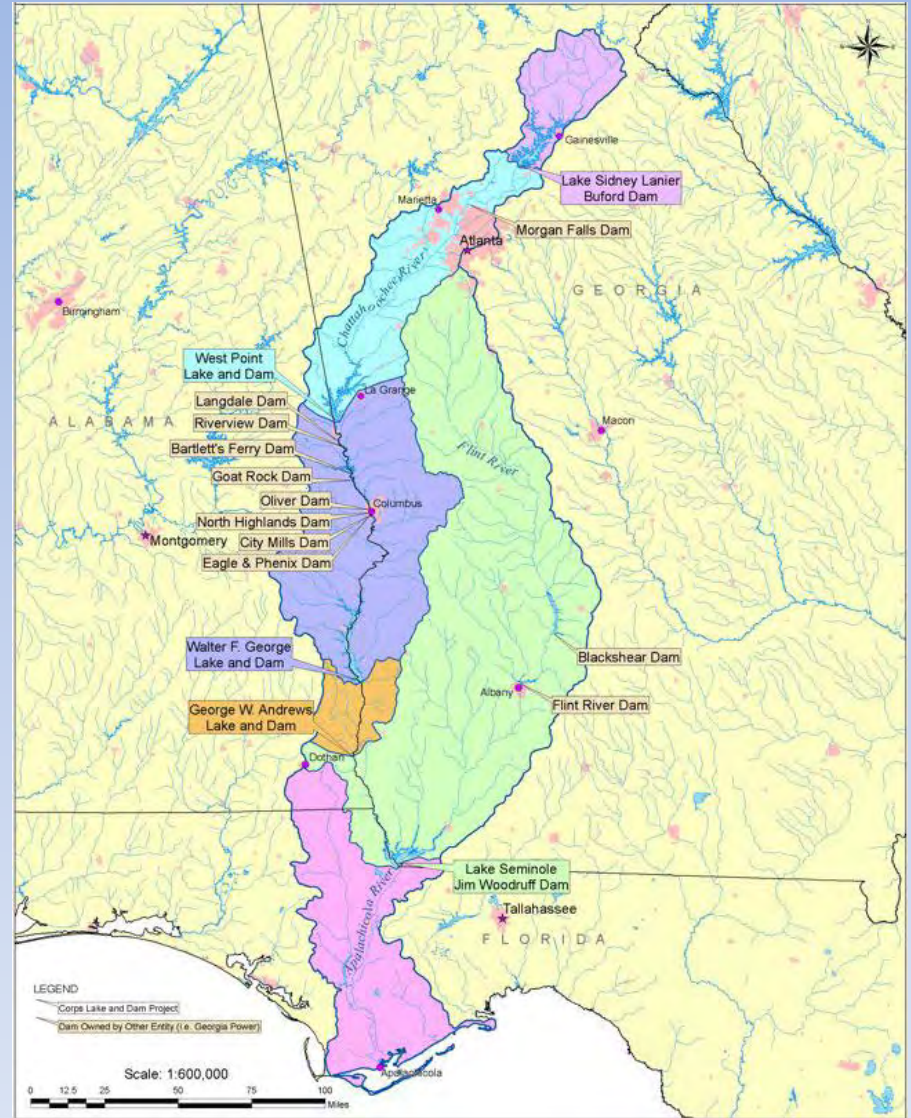
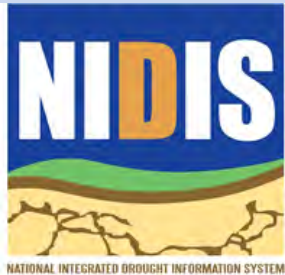


National Integrated Drought Information System

Drought Early Warning for the Apalachicola-Chattahoochee-Flint River Basin

15 March 2016

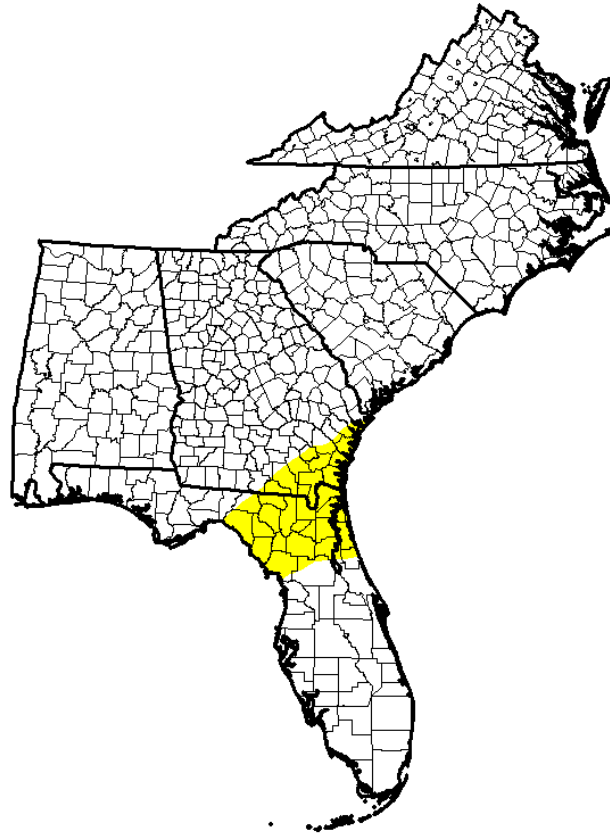


Outline




Welcome – Eric Reutebuch, AU Water Resources Center



- Current drought status, seasonal forecasts and outlooks – David Zierden, Florida Climate Center, FSU
- Streamflows and groundwater – Tony Gotvald, USGS
- Streamflow forecasts – Jeff Dobur, SERFC
- Summary and Discussion

Current drought status



Intensity:

-  D0 - Abnormally Dry
-  D1 - Moderate Drought
-  D2 - Severe Drought

-  D3 - Extreme Drought
-  D4 - Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying [text summary](#) for forecast statements.

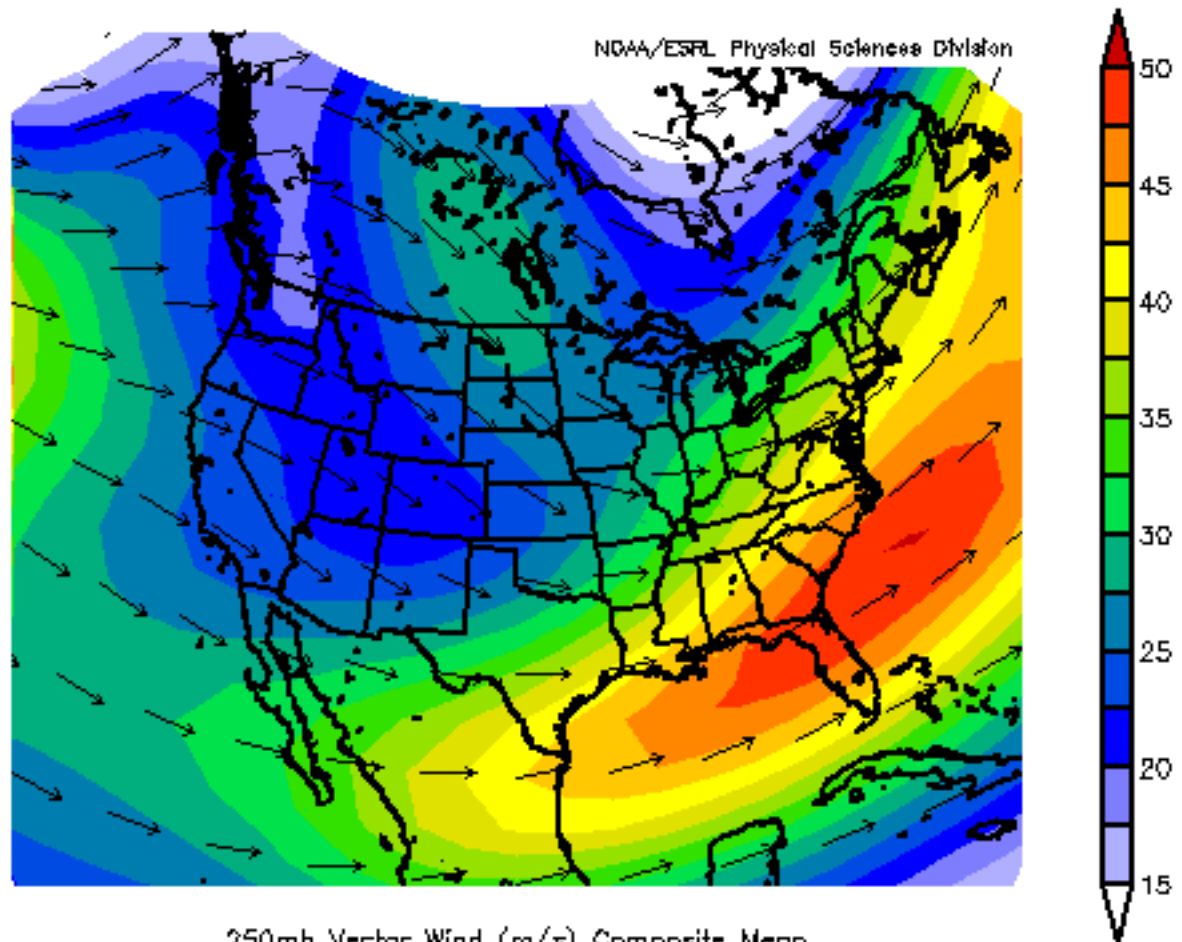
El Nino and Severe Weather



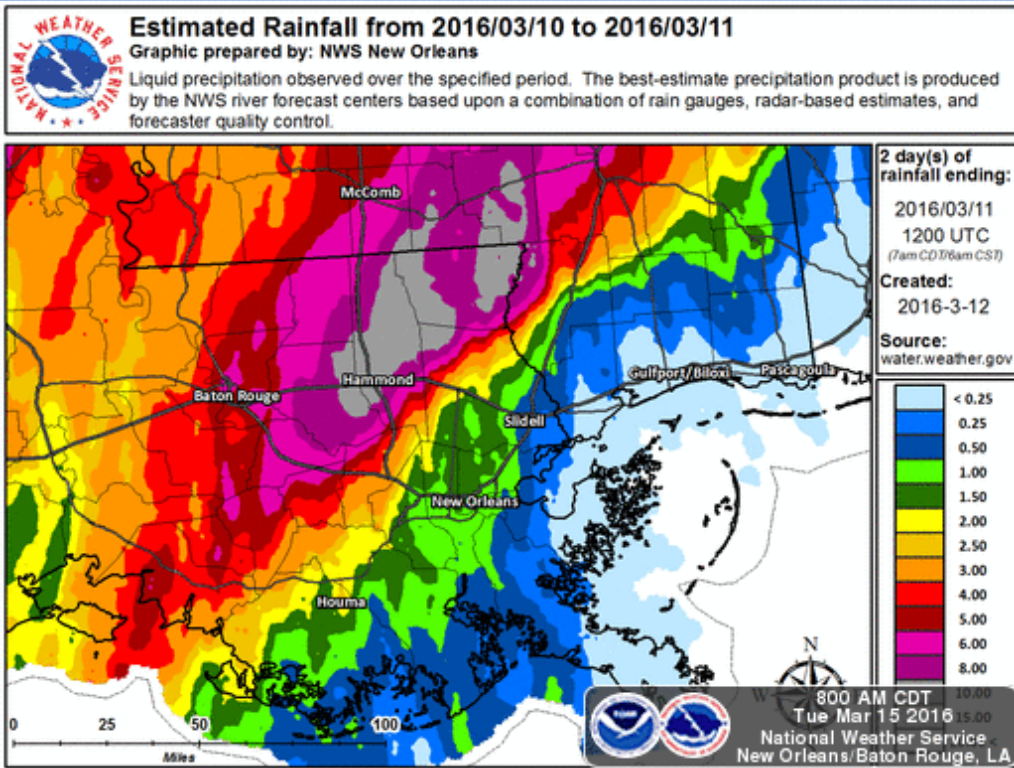
- Series of Gulf low pressure systems tracked across the area in January and February.
- 18 confirmed Tornadoes in 2016 (Including two EF-3 and three EF-2)
- Strong subtropical jet has been a consistent feature



Subtropical Jet

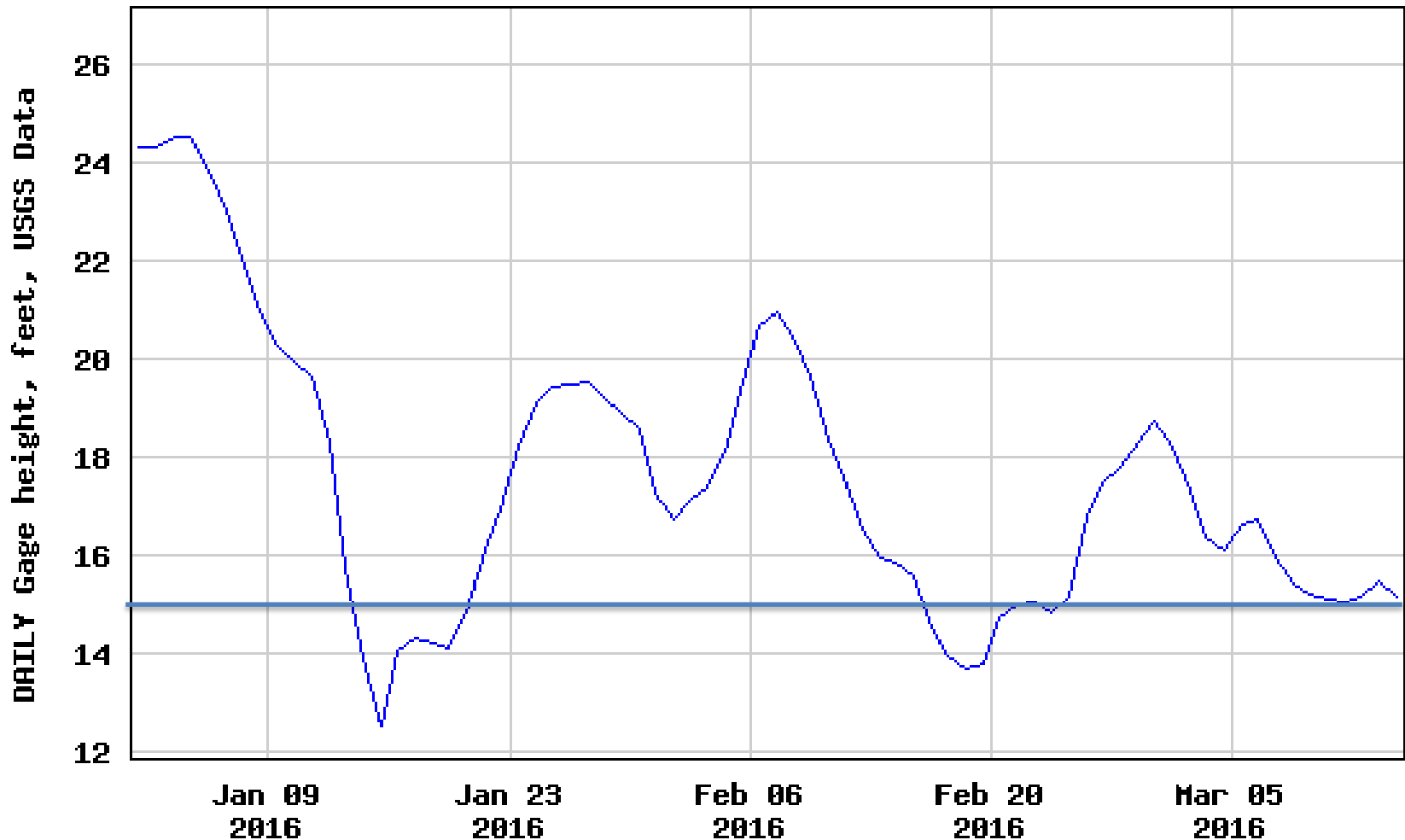


Louisiana Floods



Apalachicola River at Blounstown

USGS 02358700 APALACHICOLA RIVER NR BLOUNTSTOWN, FLORIDA



----- Provisional Data Subject to Revision -----

Inflows to St. Lucie from Lake Okeechobee

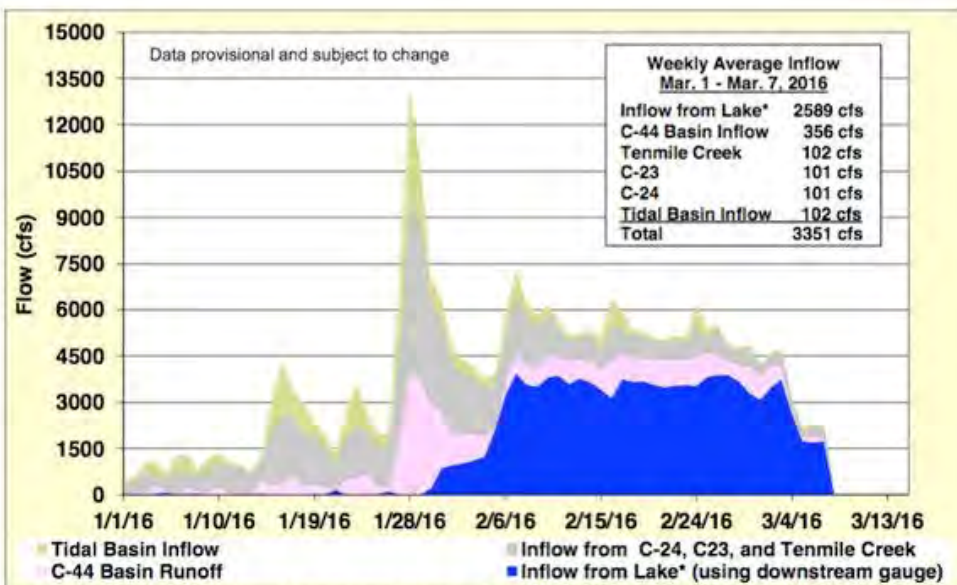
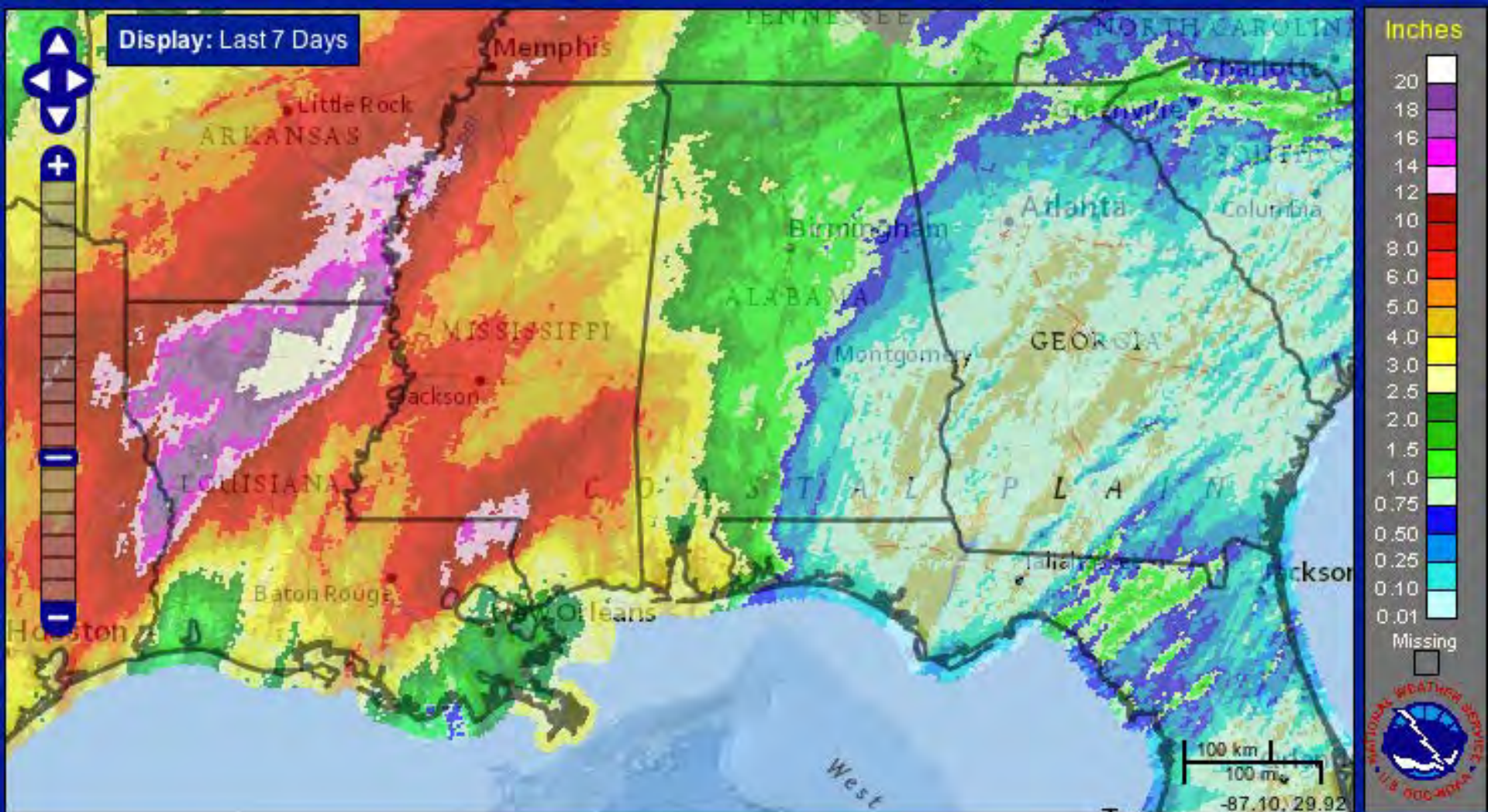


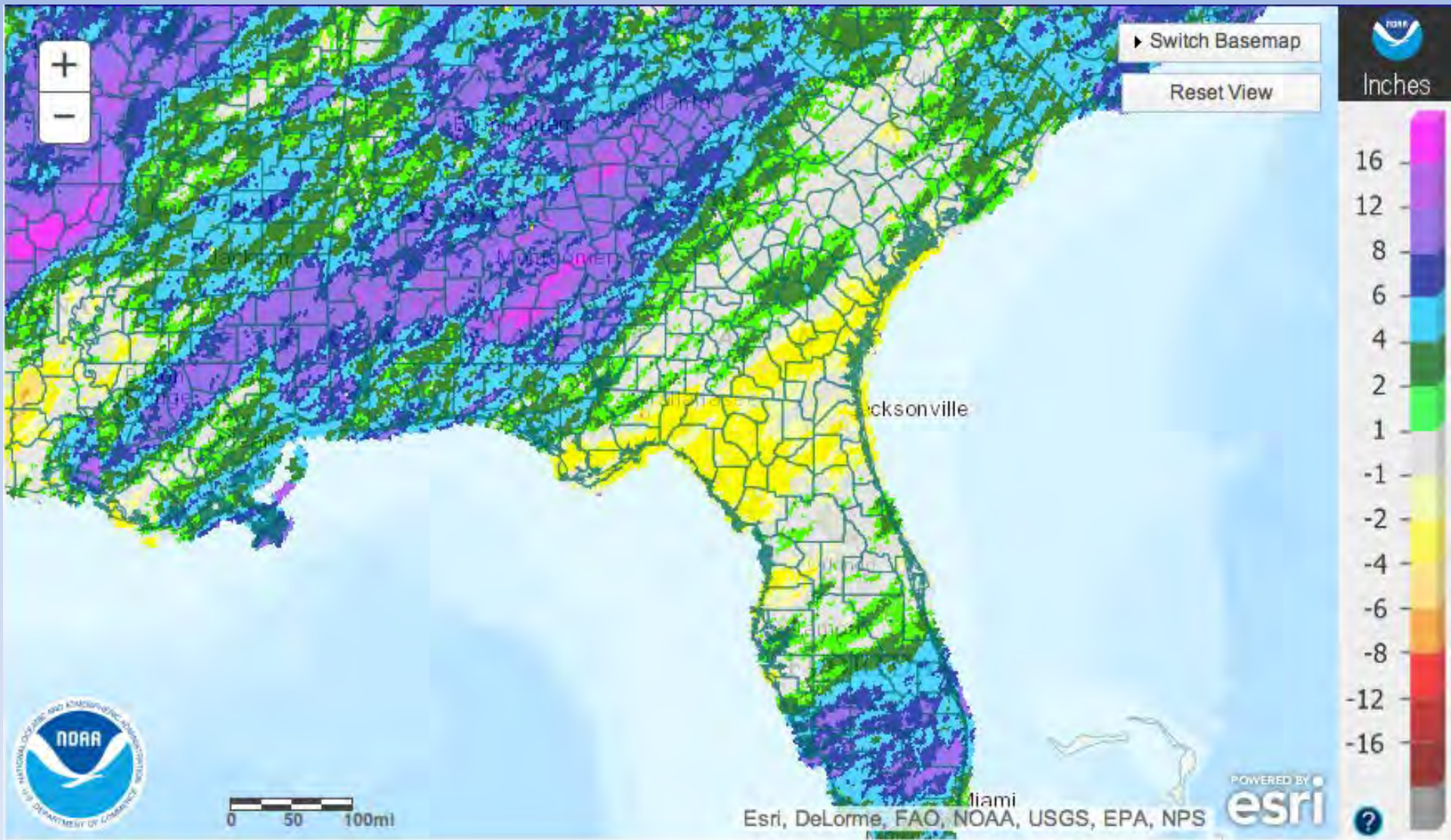
Figure 2. Estimated surface freshwater inflows from Lake Okeechobee and runoff from the C-44, C-23, C-24, Ten Mile Creek, and tidal basins into the St. Lucie Estuary.



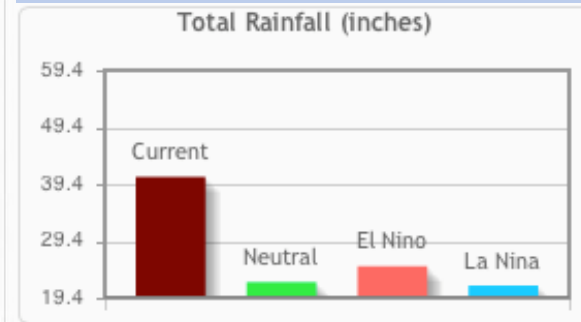
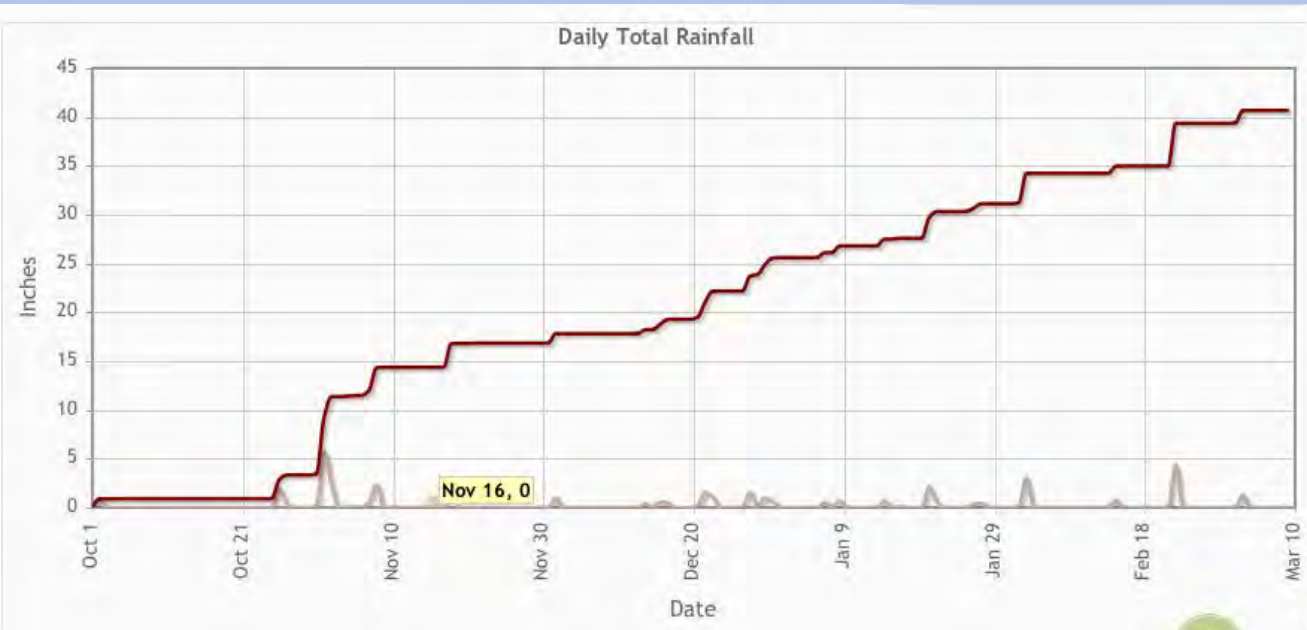
Rainfall – Last 7 Days



90-day Rainfall Departures

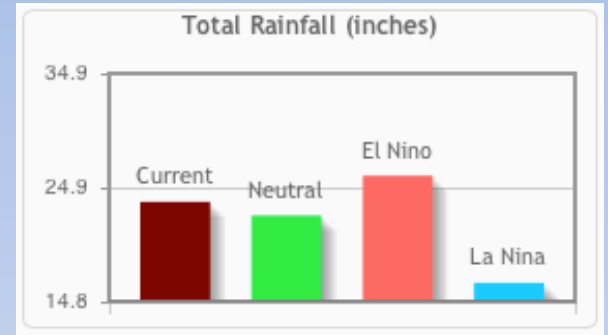
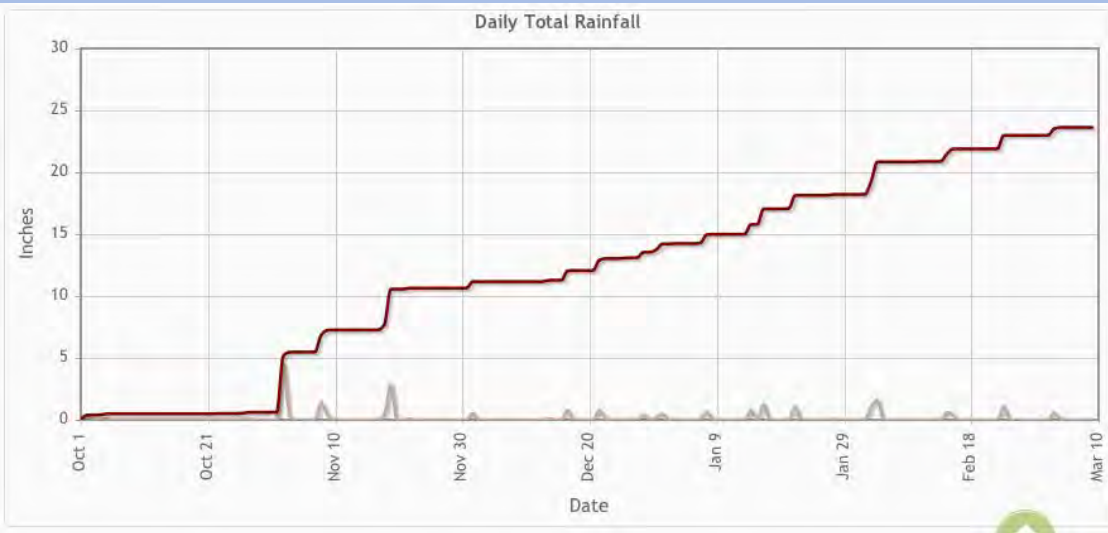


Fall Rainfall Accumulation - Defuniak Springs

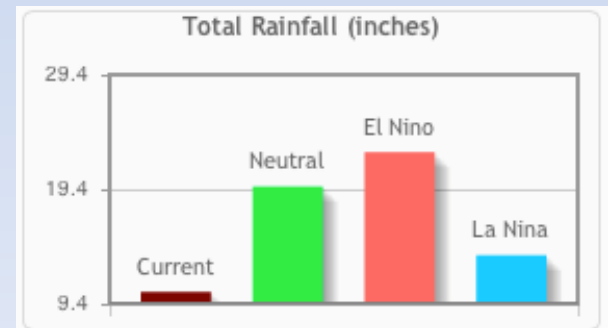
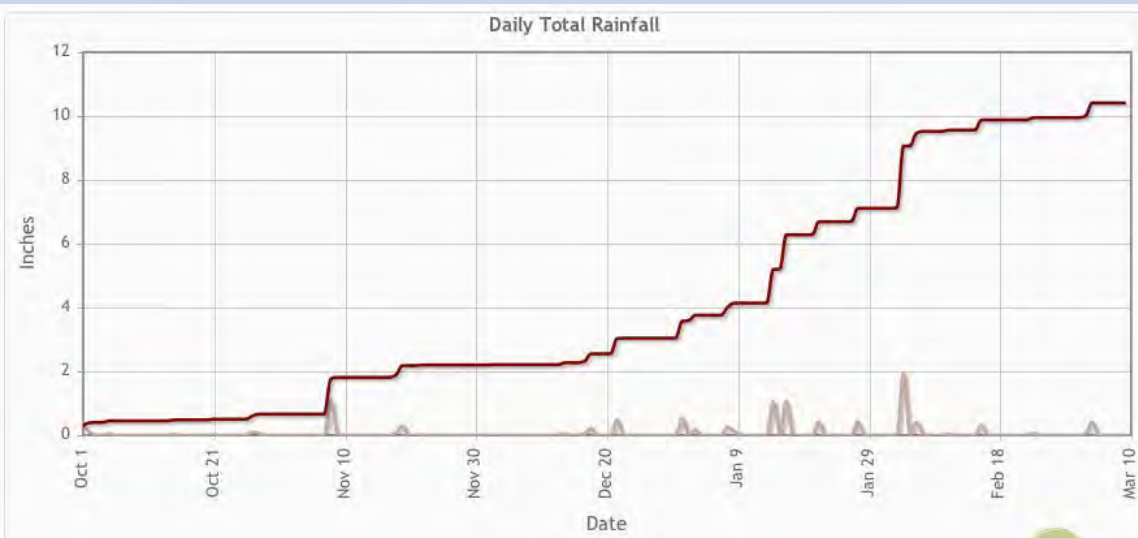


Rainfall Accumulations – Big Bend

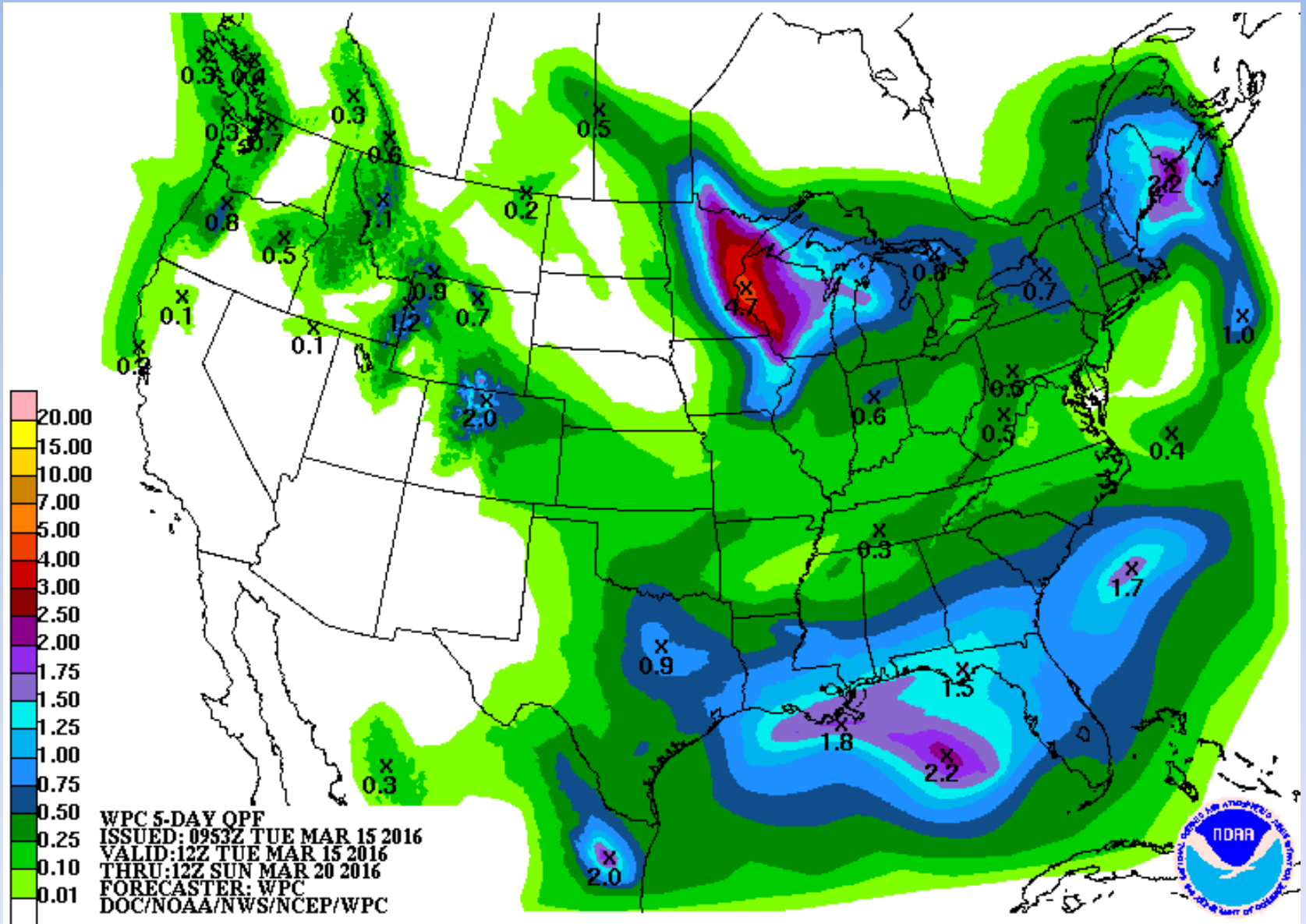
Monticello



Live Oak

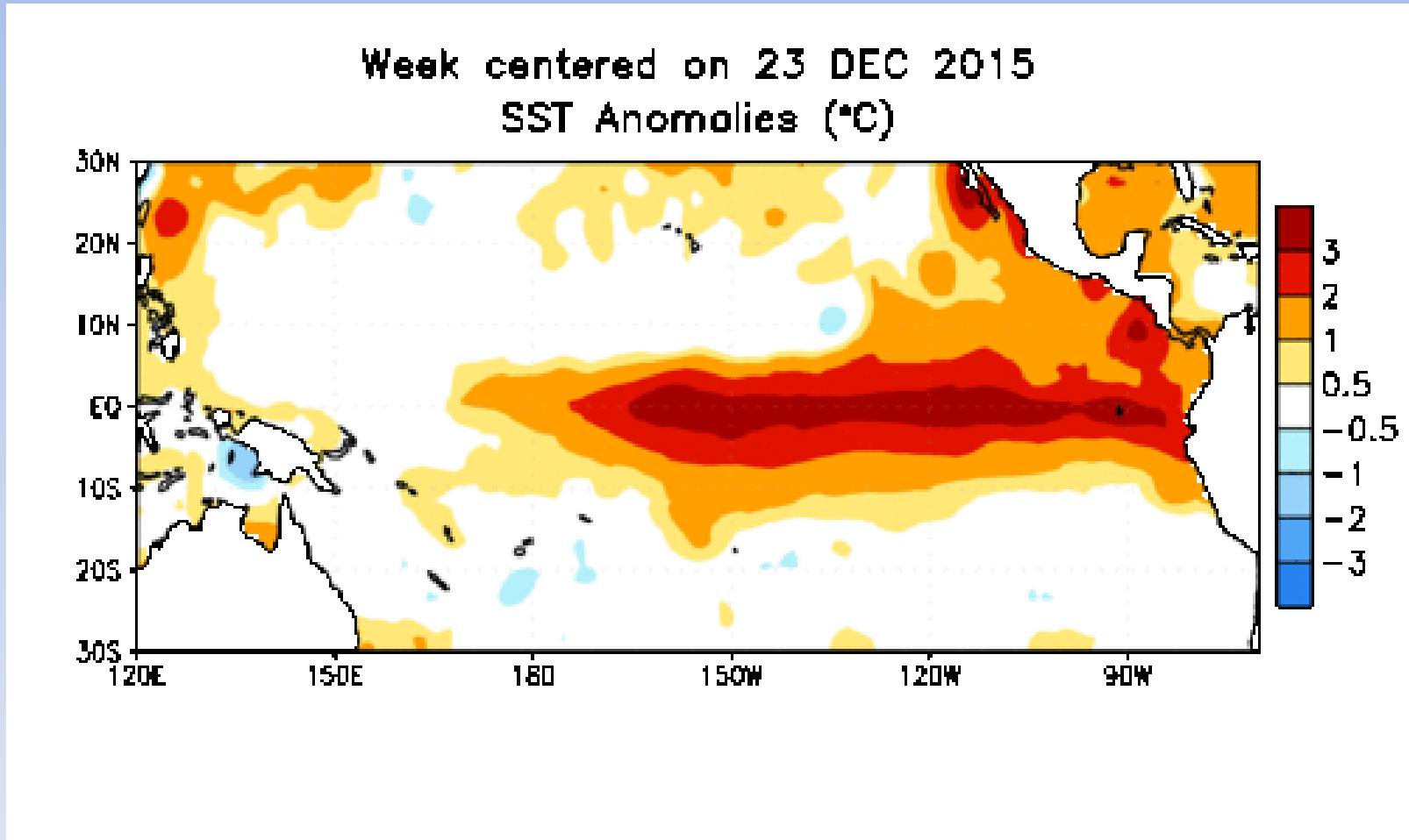


7-Day Precipitation Forecast

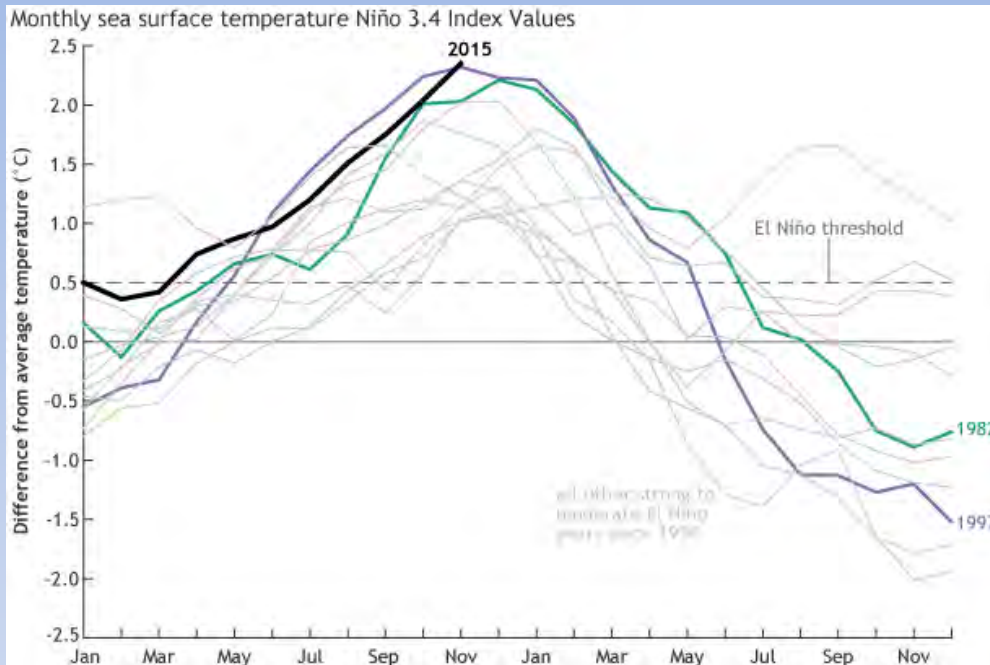


Current SST Anomalies

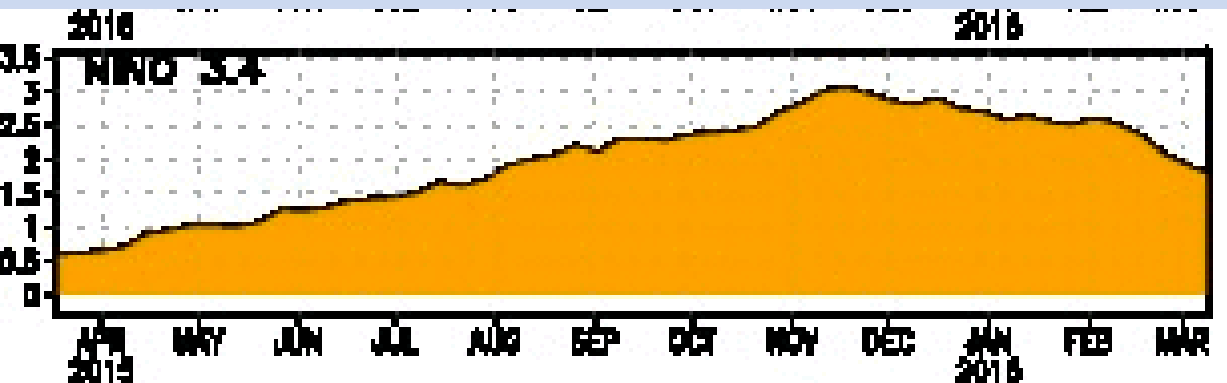
(animation from www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_update/sstanim.shtml)



Strongest El Nino this Century?

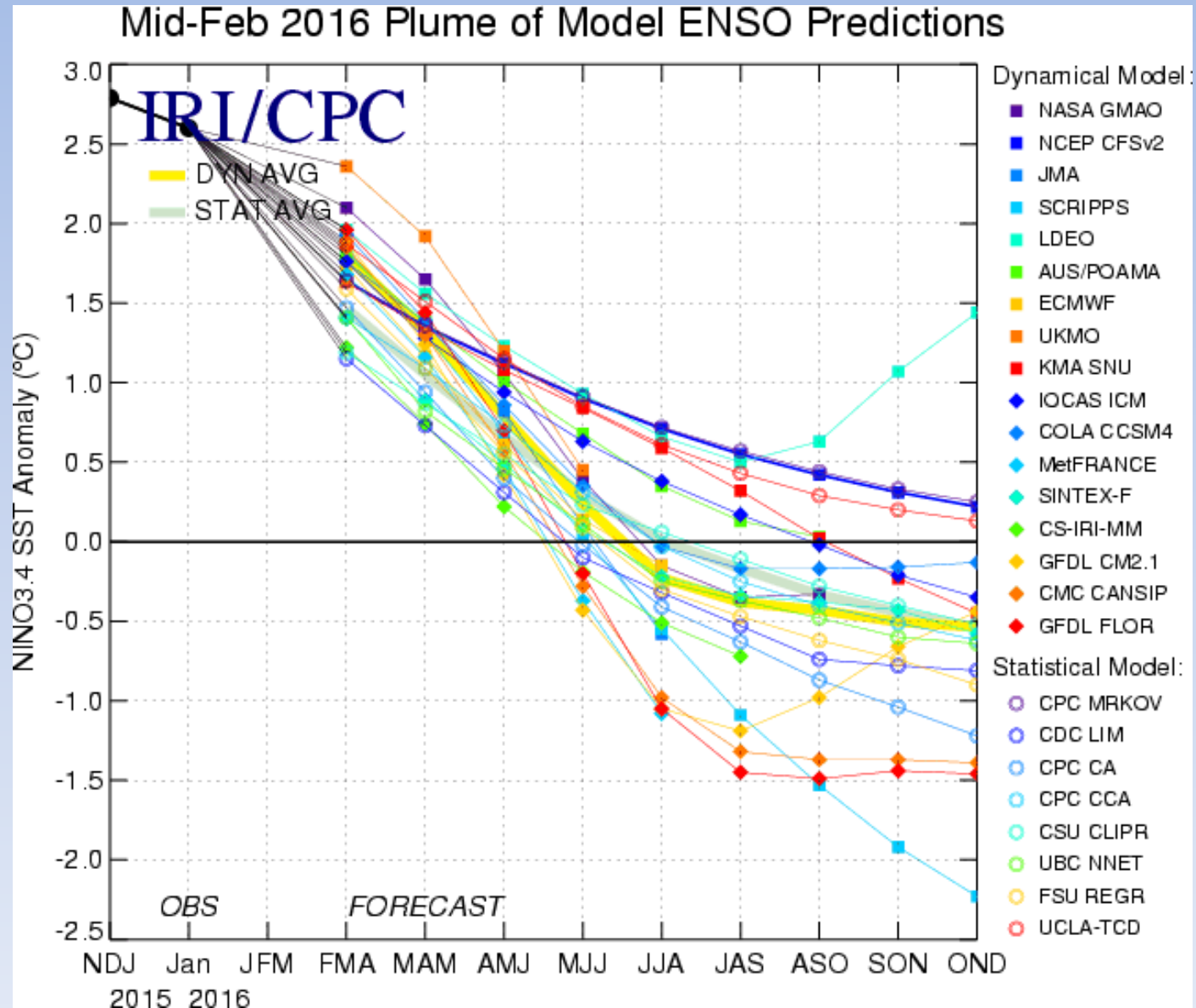


- SST's slightly higher than previous record values from 1997
- Coupled ocean-atmosphere phenomenon, atmosphere and impacts important



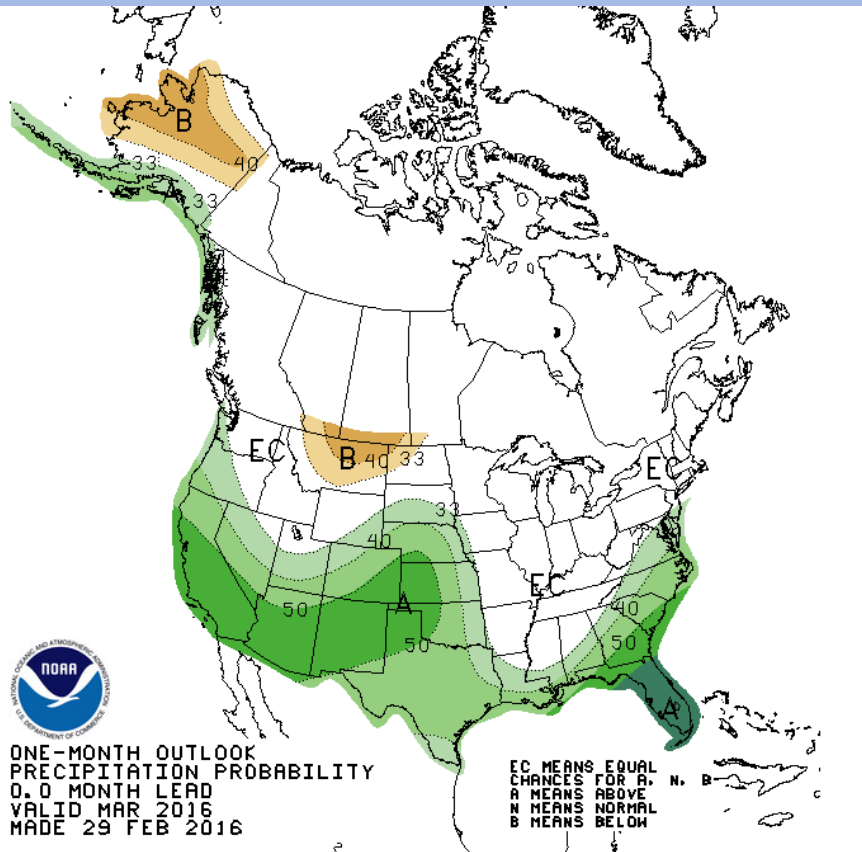
In same category as 1982/83 and 1997/98

El Nino Forecast

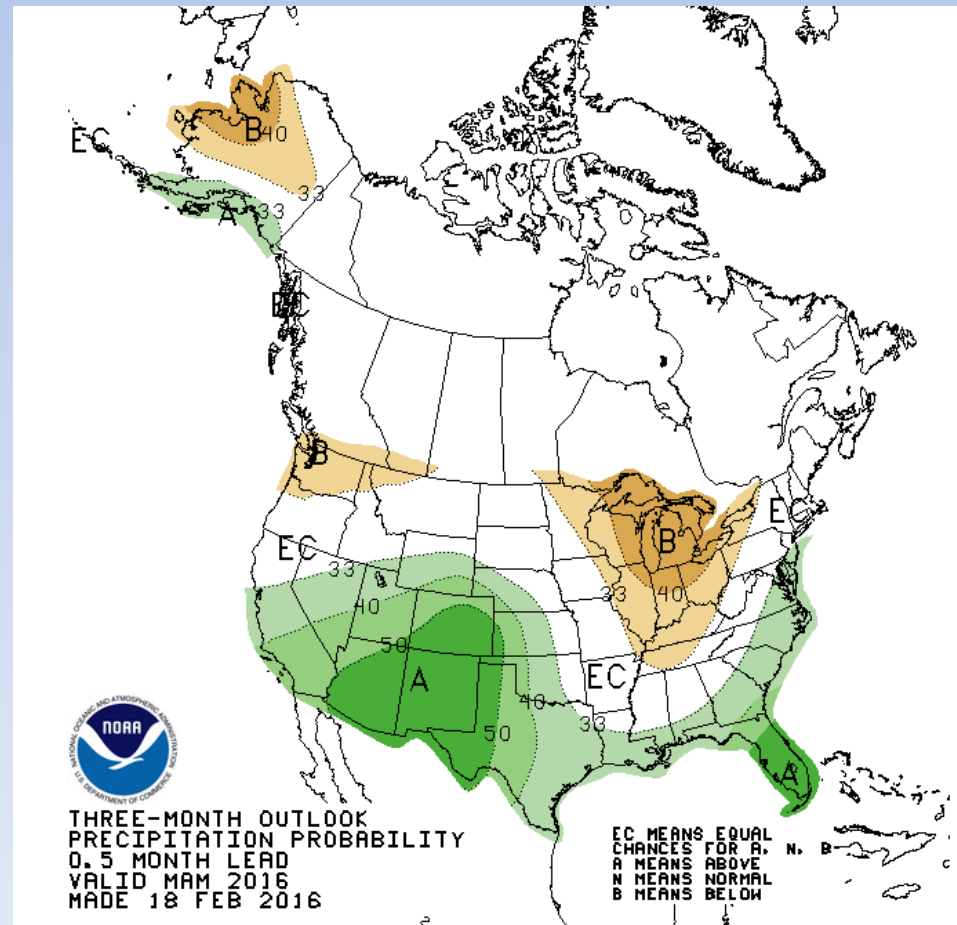


Official NOAA Outlook

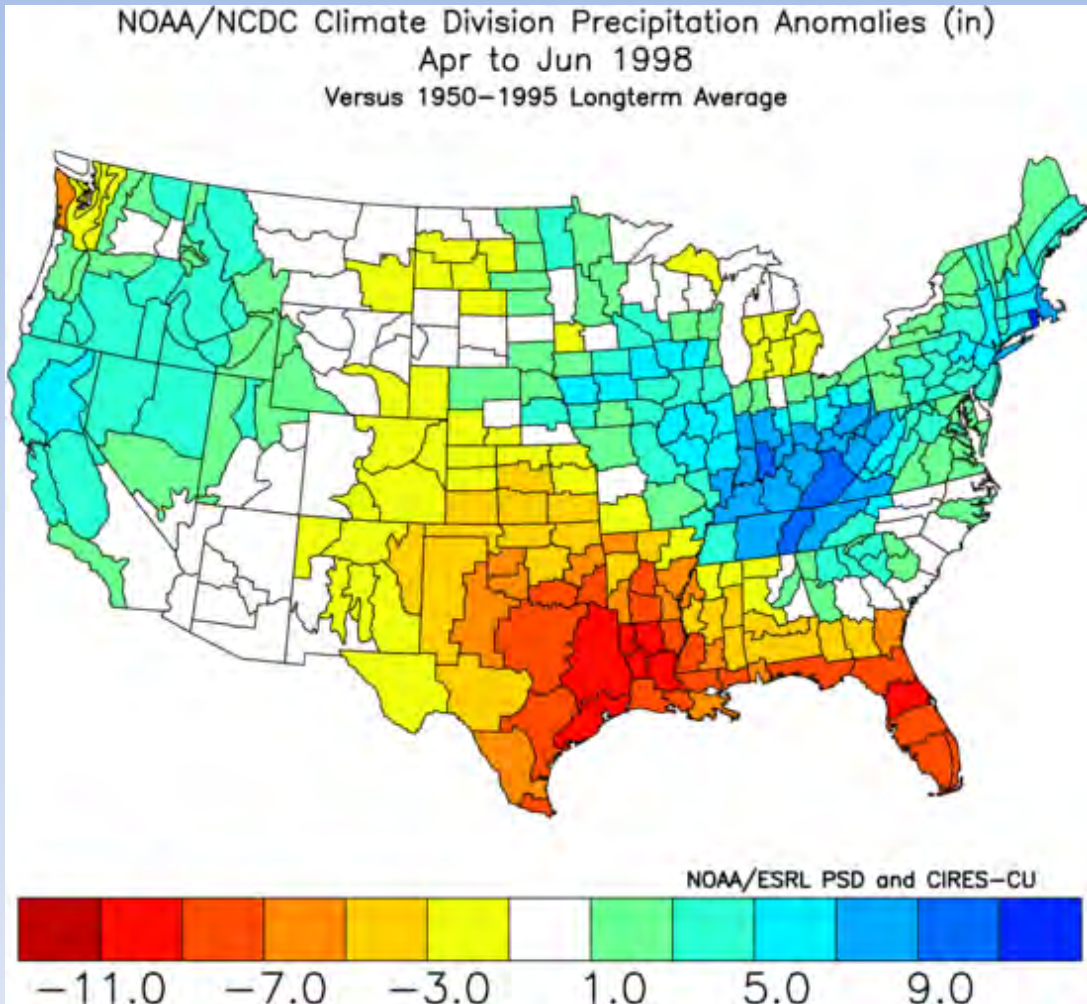
One Month



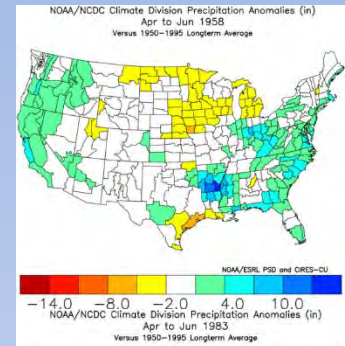
Spring (MAM)



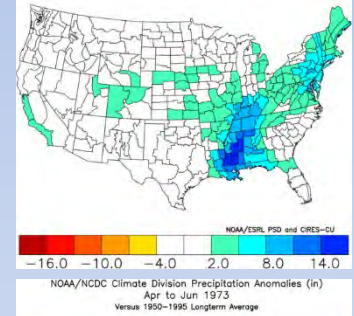
1998 Spring Compared to Other El Nino's



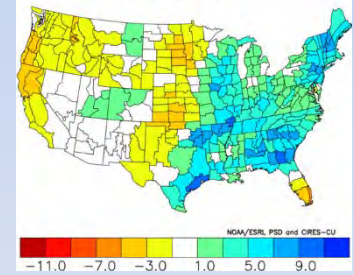
1958



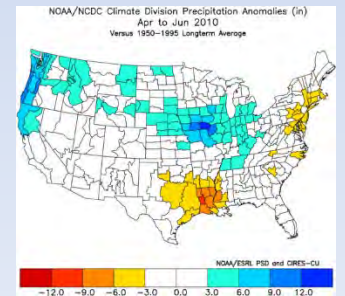
1973



1983



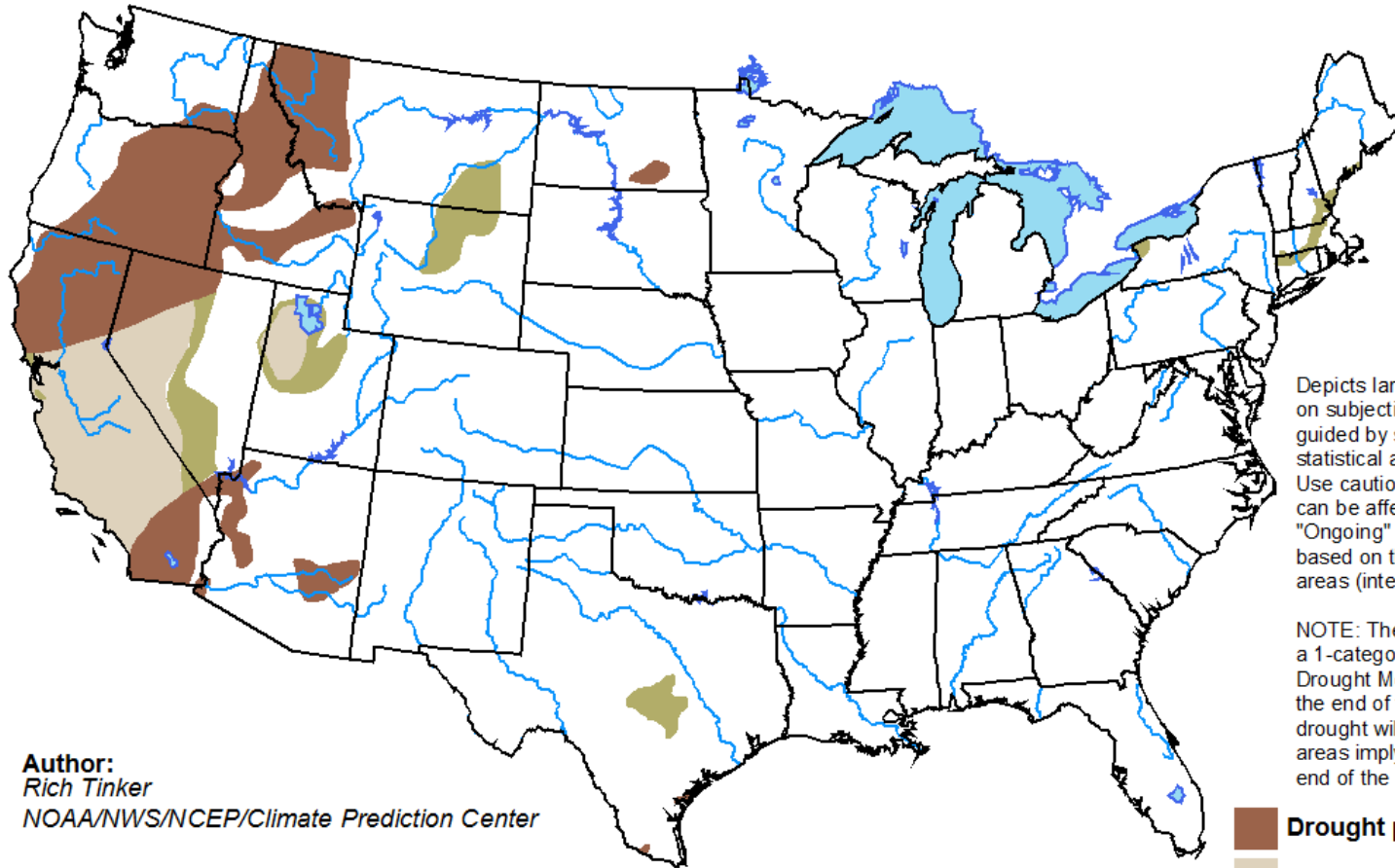
2010



U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period




Valid for February 18 - May 31, 2016
Released February 18, 2016

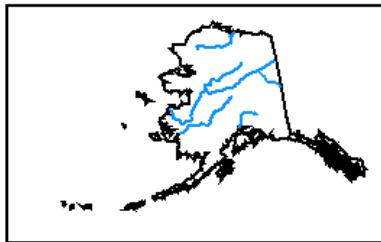


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

-  Drought persists
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely



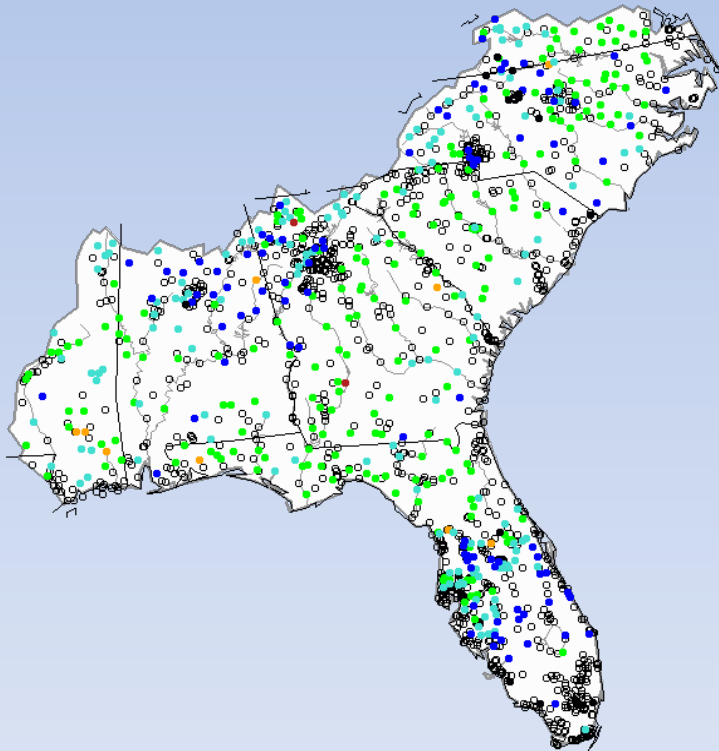
<http://go.usa.gov/3eZ73>

Streamflows and Groundwater

Realtime stream flow compared with historical monthly averages

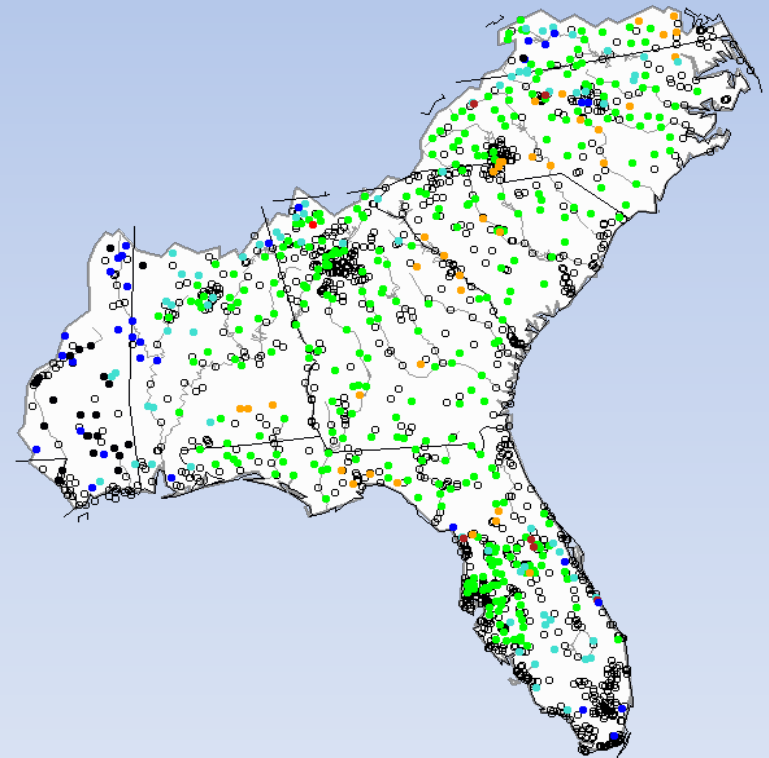
Previous Brief:

Tuesday, February 16, 2016 07:30ET



Current:

Monday, March 14, 2016 12:31ET



Explanation - Percentile classes						
●	●	●	●	●	●	●
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	



<http://waterwatch.usgs.gov>

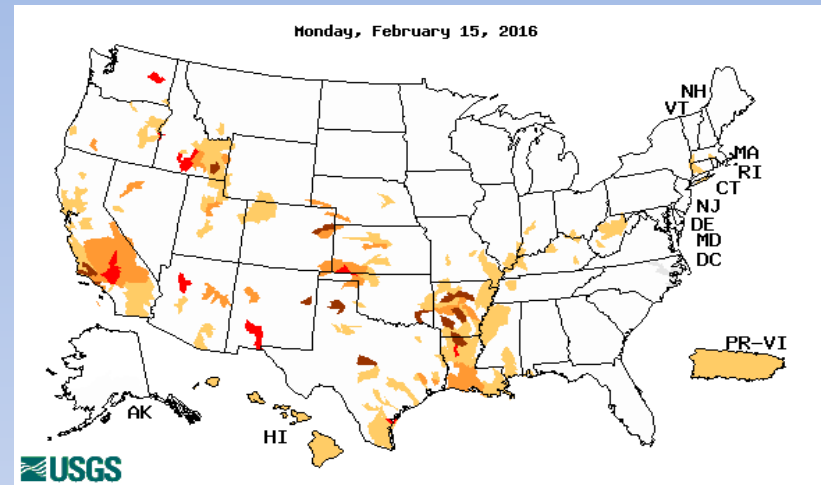
Below Normal 7-day Average Streamflows

Previous brief:

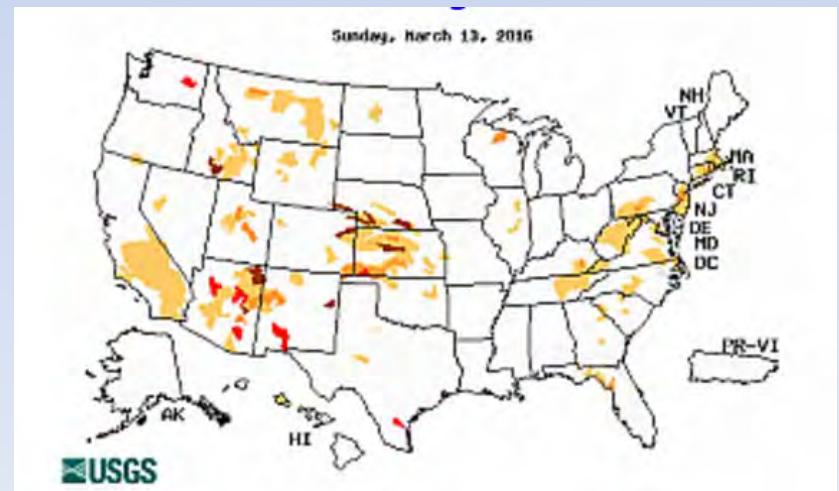
Below normal 7-day average streamflow as compared with historical streamflow for day shown

Current:

<http://waterwatch.usgs.gov>



Explanation - Percentile classes				
Low	≤ 5	6-9	10-24	Inadequate for hydrologic needs
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

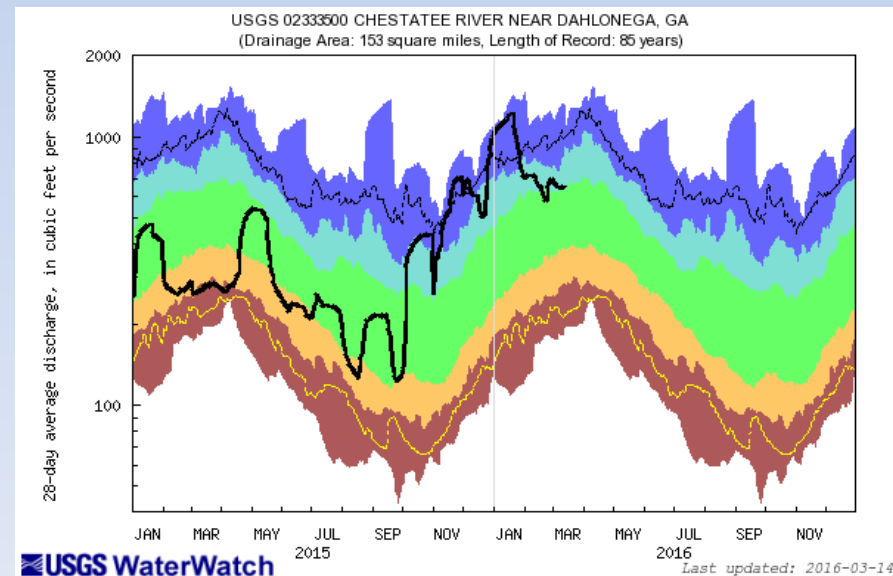
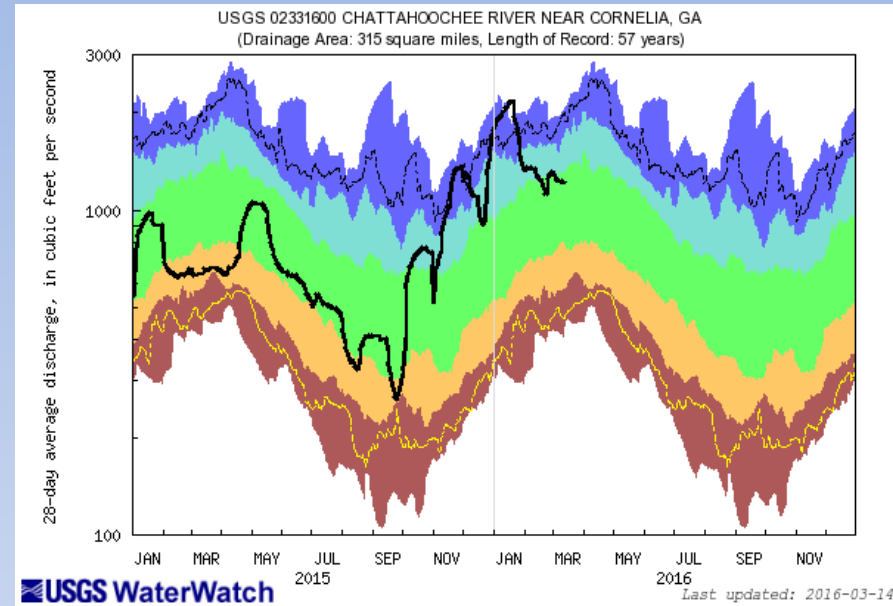


Lake Lanier Inflows

Chattahoochee near
Cornelia (02331600)

<http://waterwatch.usgs.gov>

Chestatee near
Dahlonega (02333500)



Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above-normal		

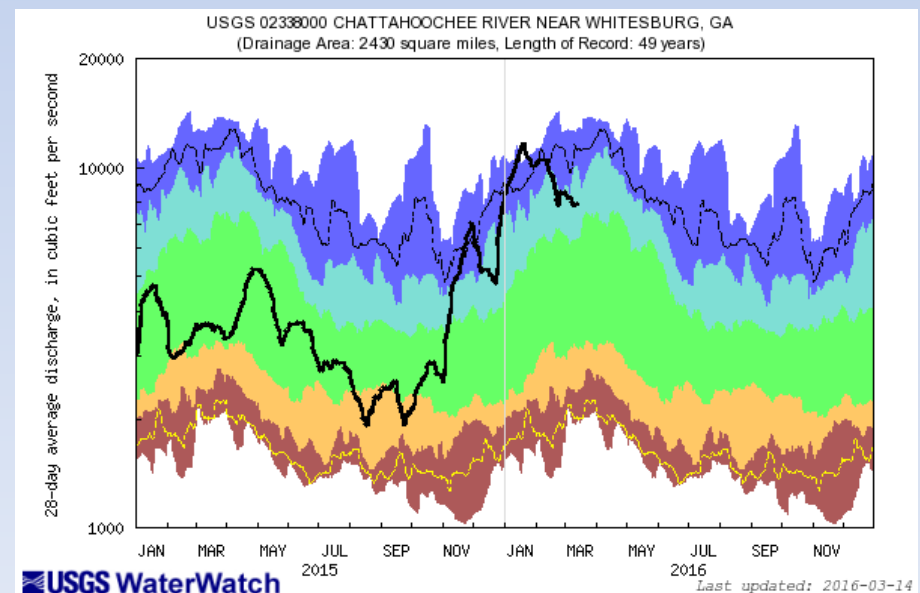
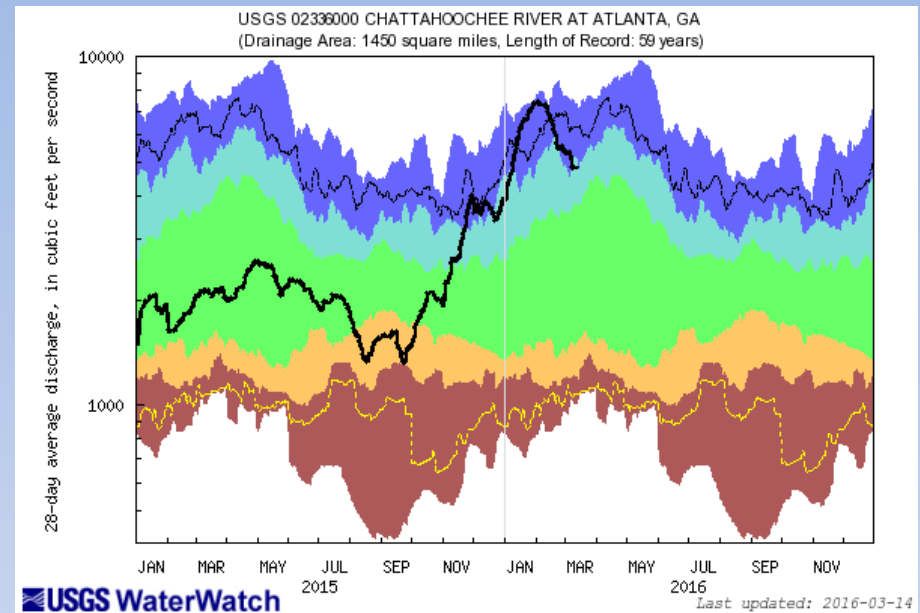
Current Streamflows

Chattahoochee at Atlanta (02336000)

<http://waterwatch.usgs.gov>

Chattahoochee near Whitesburg (02338000)

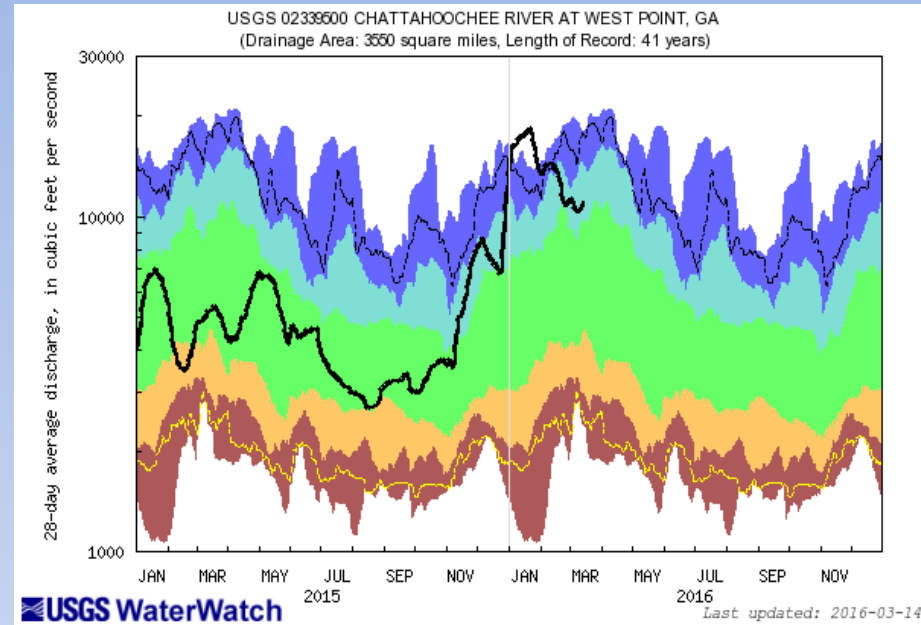
Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above-normal		



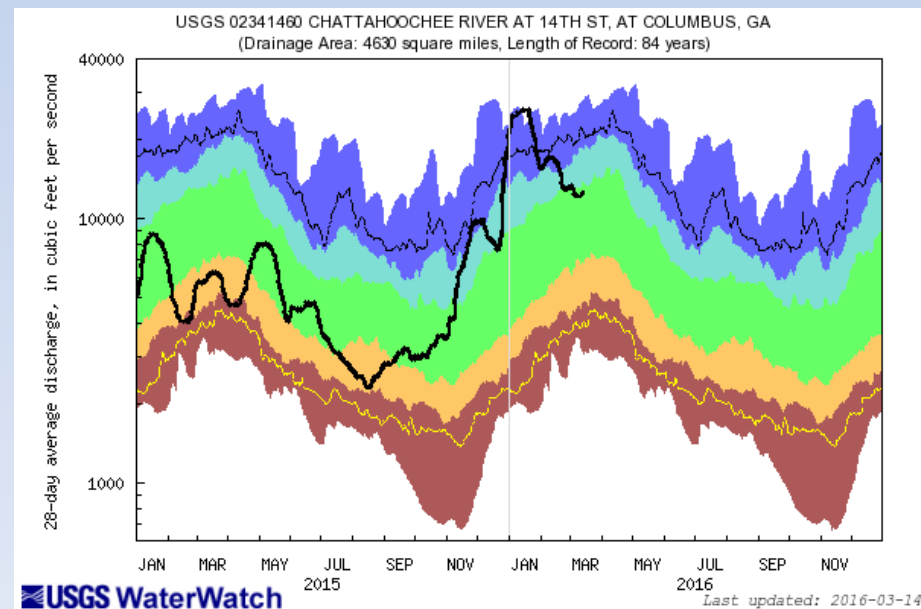
Current Streamflows

Chattahoochee at West Point (02339500)

<http://waterwatch.usgs.gov>



Chattahoochee at Columbus(02341460)



Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above-normal		

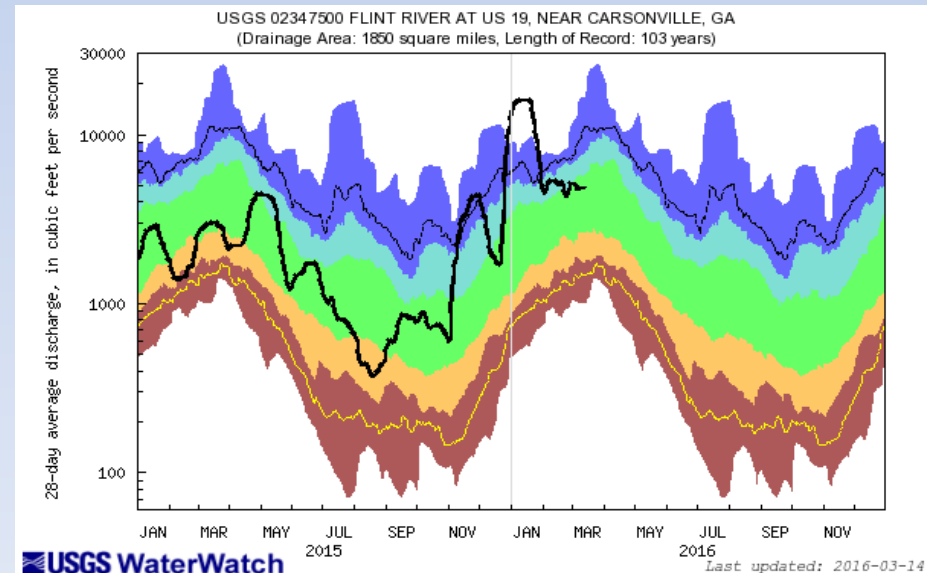
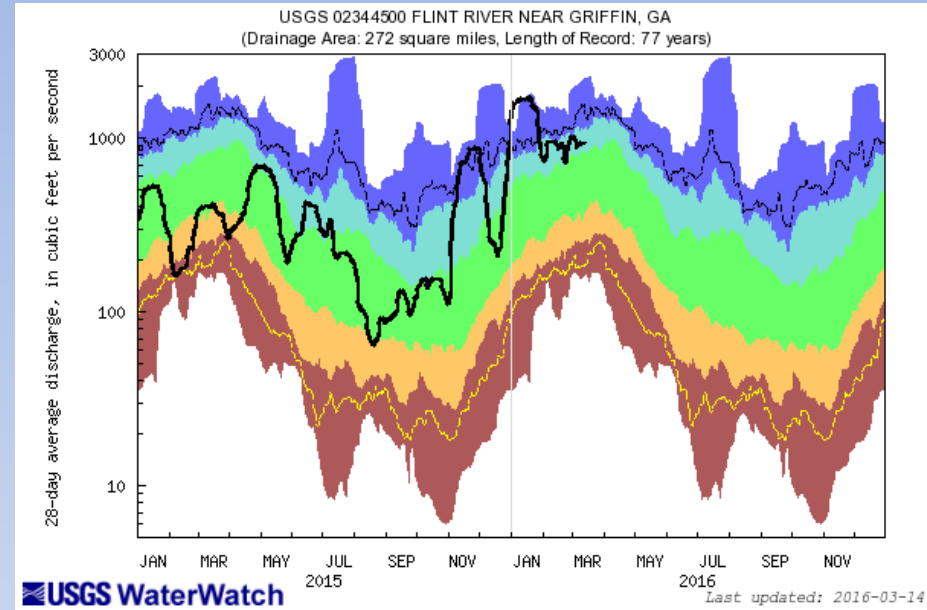
Current Streamflows

Flint River near Griffin (02344500)

<http://waterwatch.usgs.gov>

Flint River near Carsonville (02347500)

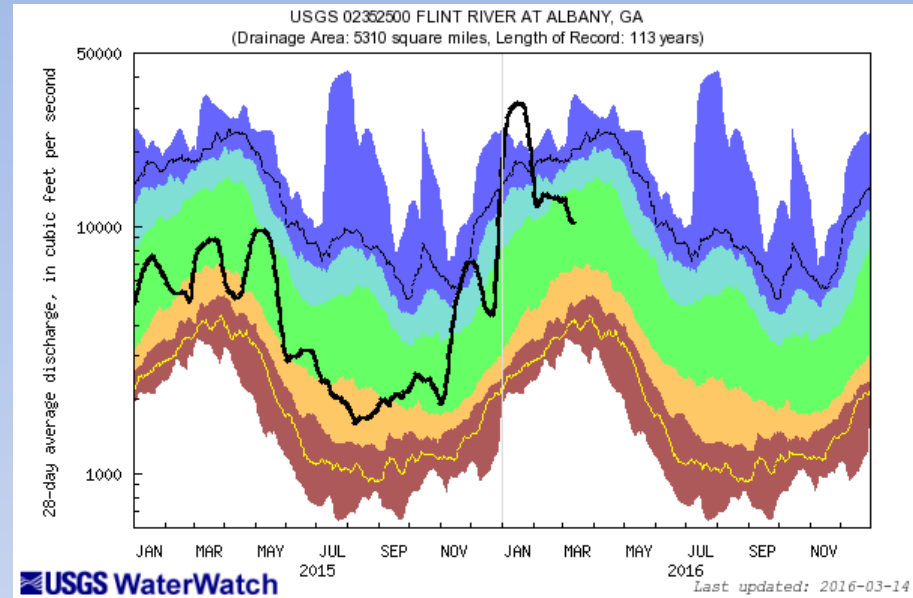
Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above-normal		



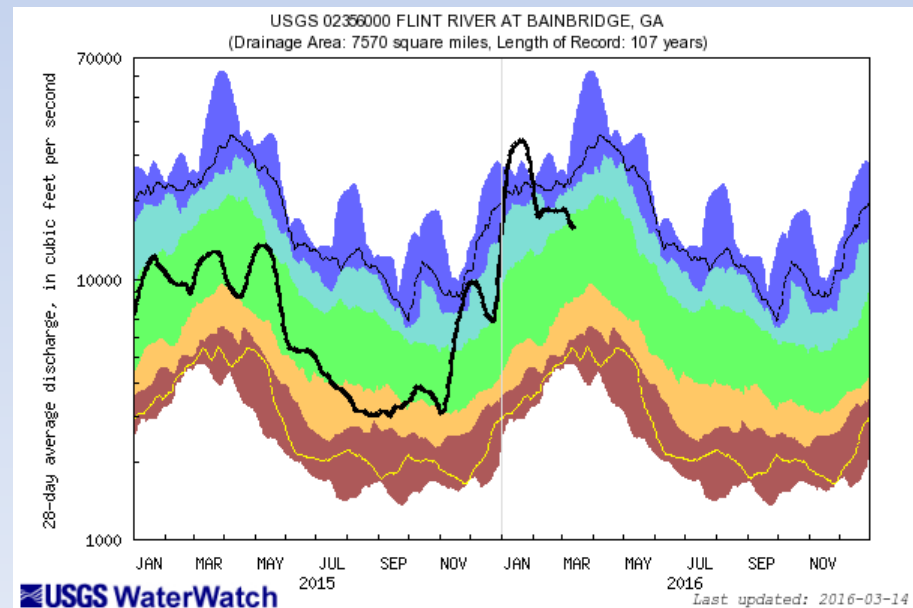
Current Streamflows

Flint River at Albany (02352500)

<http://waterwatch.usgs.gov>



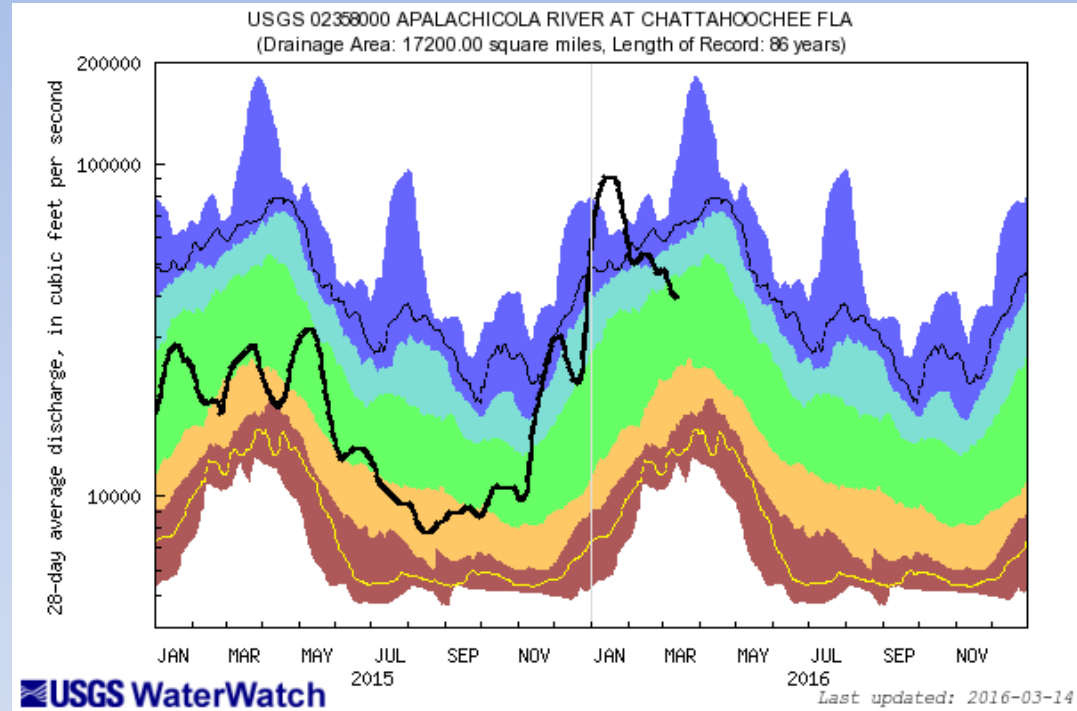
Flint at Bainbridge (02356000)



Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above-normal		

Streamflows

Apalachicola at Chattahoochee (02358000)

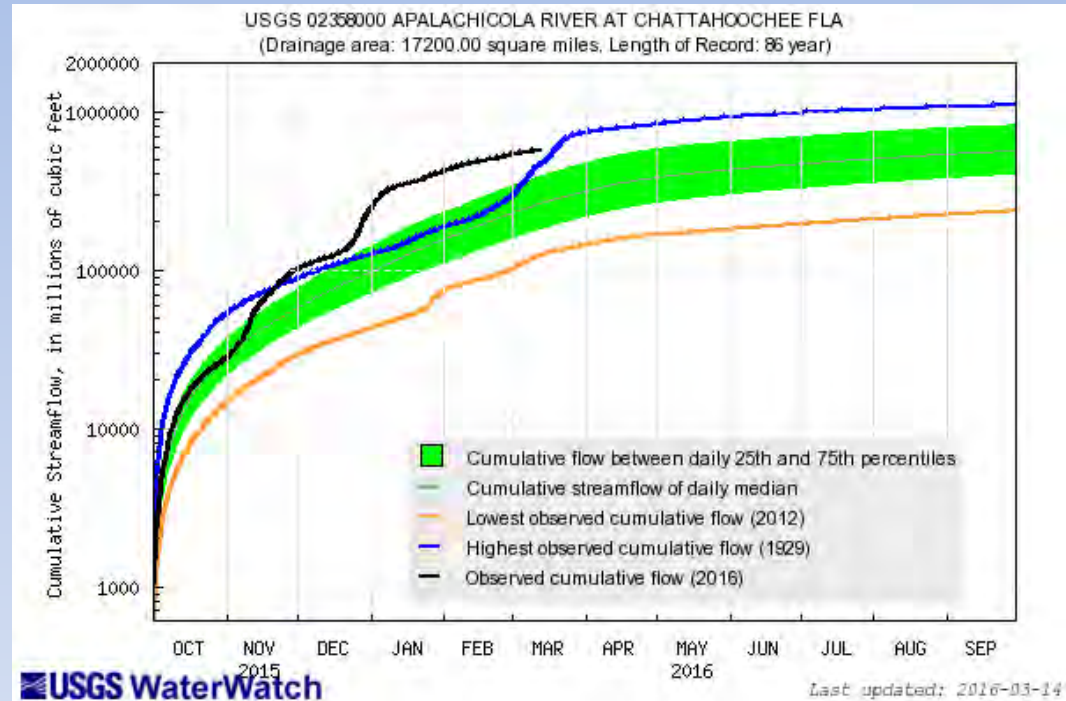


<http://waterwatch.usgs.gov>

Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow

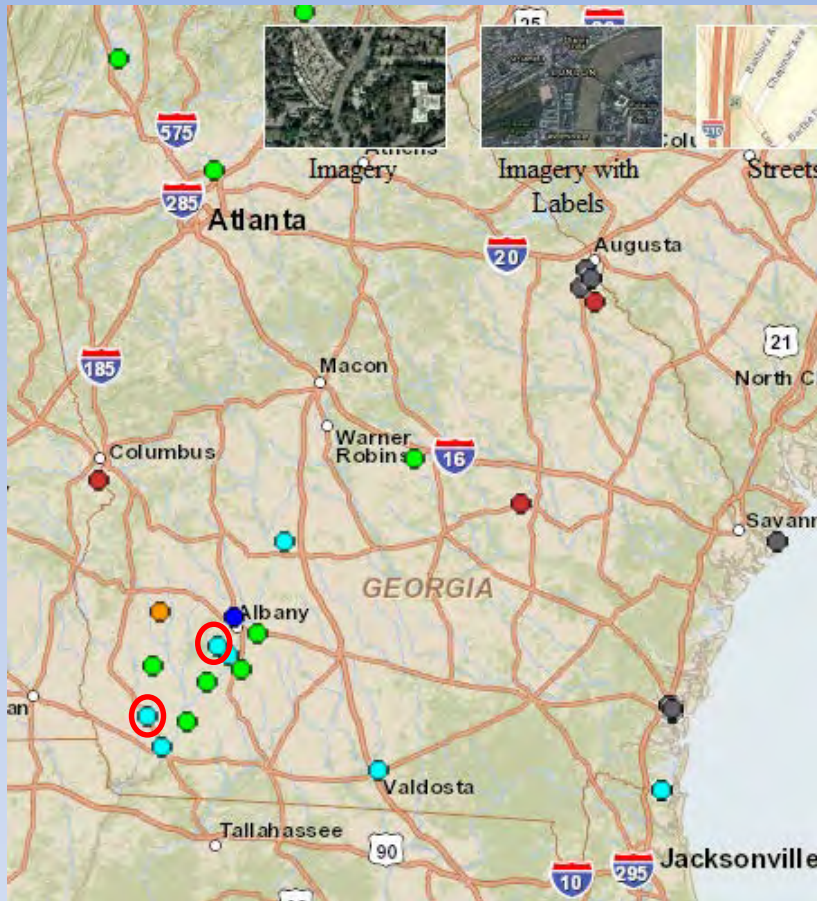
Streamflows

Apalachicola at Chattahoochee (02358000)

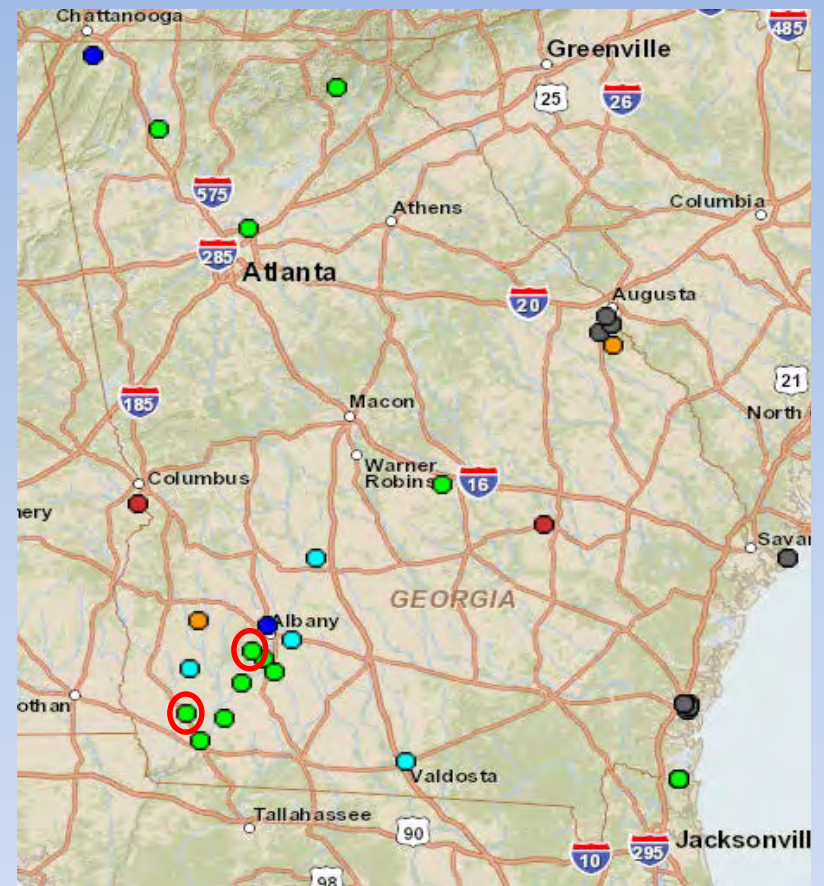


<http://waterwatch.usgs.gov>

Groundwater Conditions



Previous brief

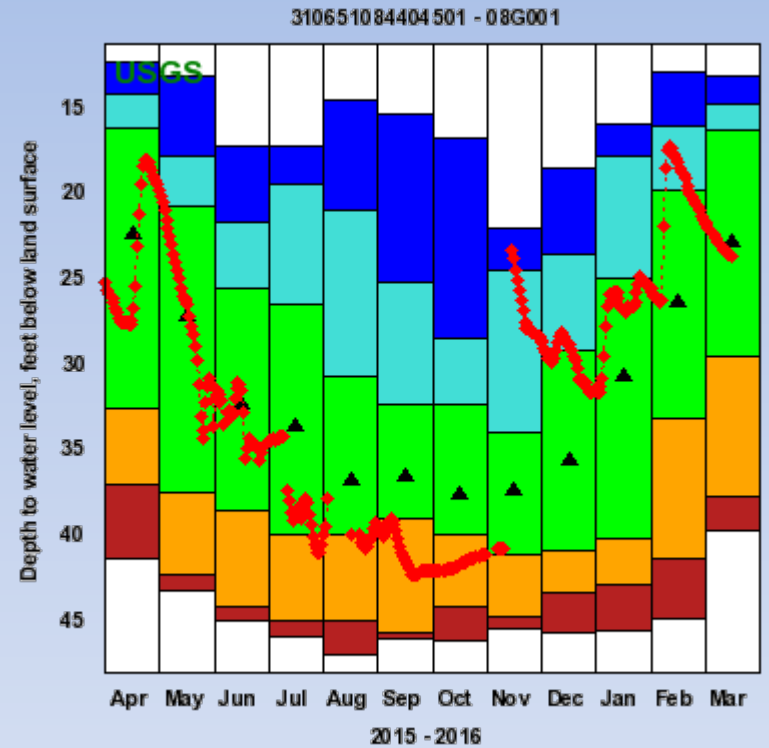
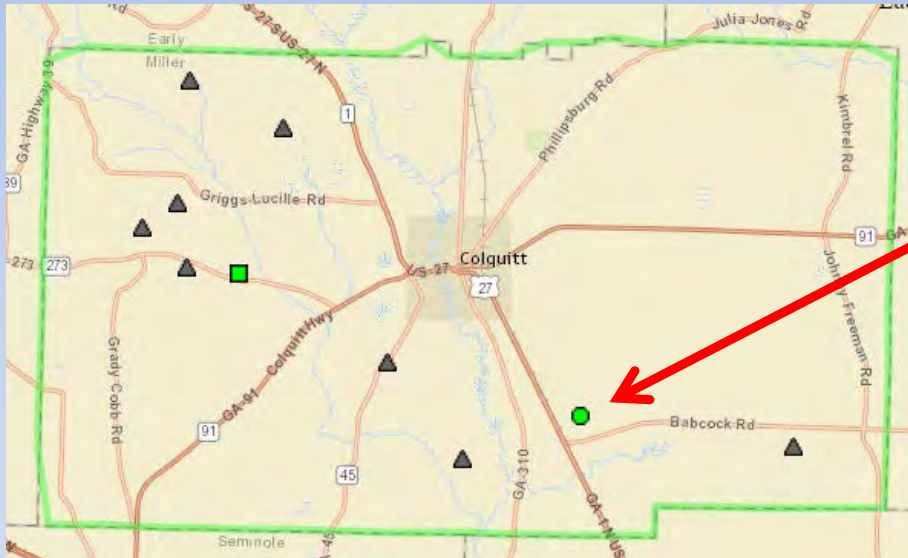


Current brief

Explanation - Percentile classes (symbol color based on most recent measurement)							Wells		Springs	
● (Red)	● (Dark Red)	● (Orange)	● (Green)	● (Cyan)	● (Blue)	● (Black)	○	□	■	■
Low	<10	10-24	25-75	76-90	>90	High	Not Ranked	△	△	△
	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal			Periodic Measurements		

<http://groundwaterwatch.usgs.gov>

Groundwater Status – Miller County 08G001

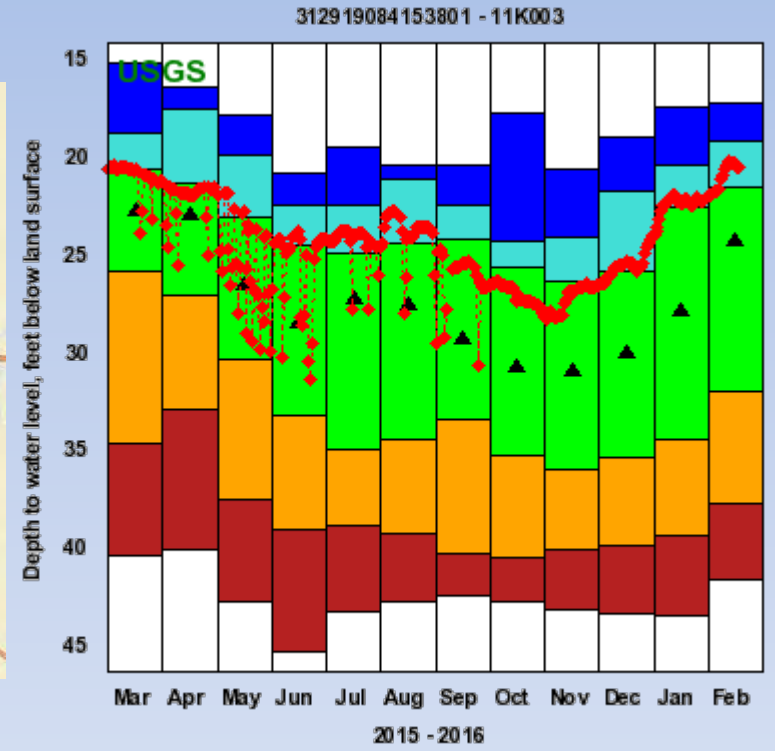
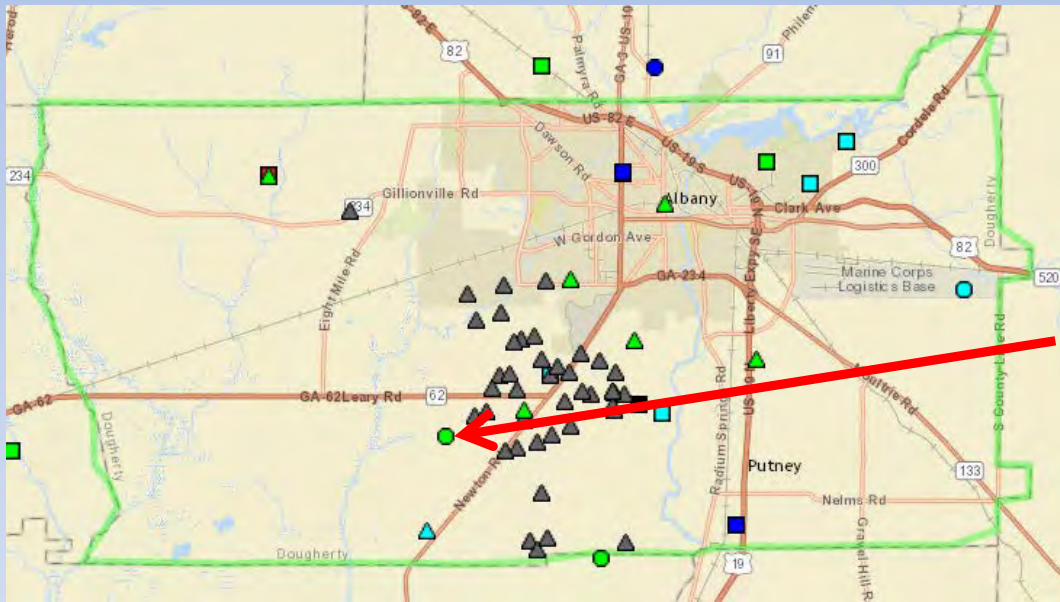


Explanation - Percentile classes (symbol color based on most recent measurement)							Wells		Springs	
Low	●	●	●	●	●	●	○	□	■	■
	<10	10-24	25-75	76-90	>90	High	Not Ranked	△	■	■
	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal			Periodic Measurements		

(Upper Floridan Aquifer)

Groundwater Status – Dougherty County

11K003



Explanation - Percentile classes (symbol color based on most recent measurement)							Wells		Springs	
Low	●	●	●	●	●	●	○	□	■	▲
	<10	10-24	25-75	76-90	>90	High	Not Ranked	Real-Time	Continuous	Periodic Measurements
	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal					

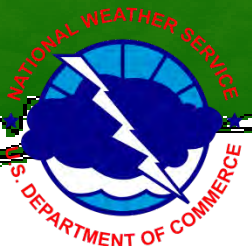
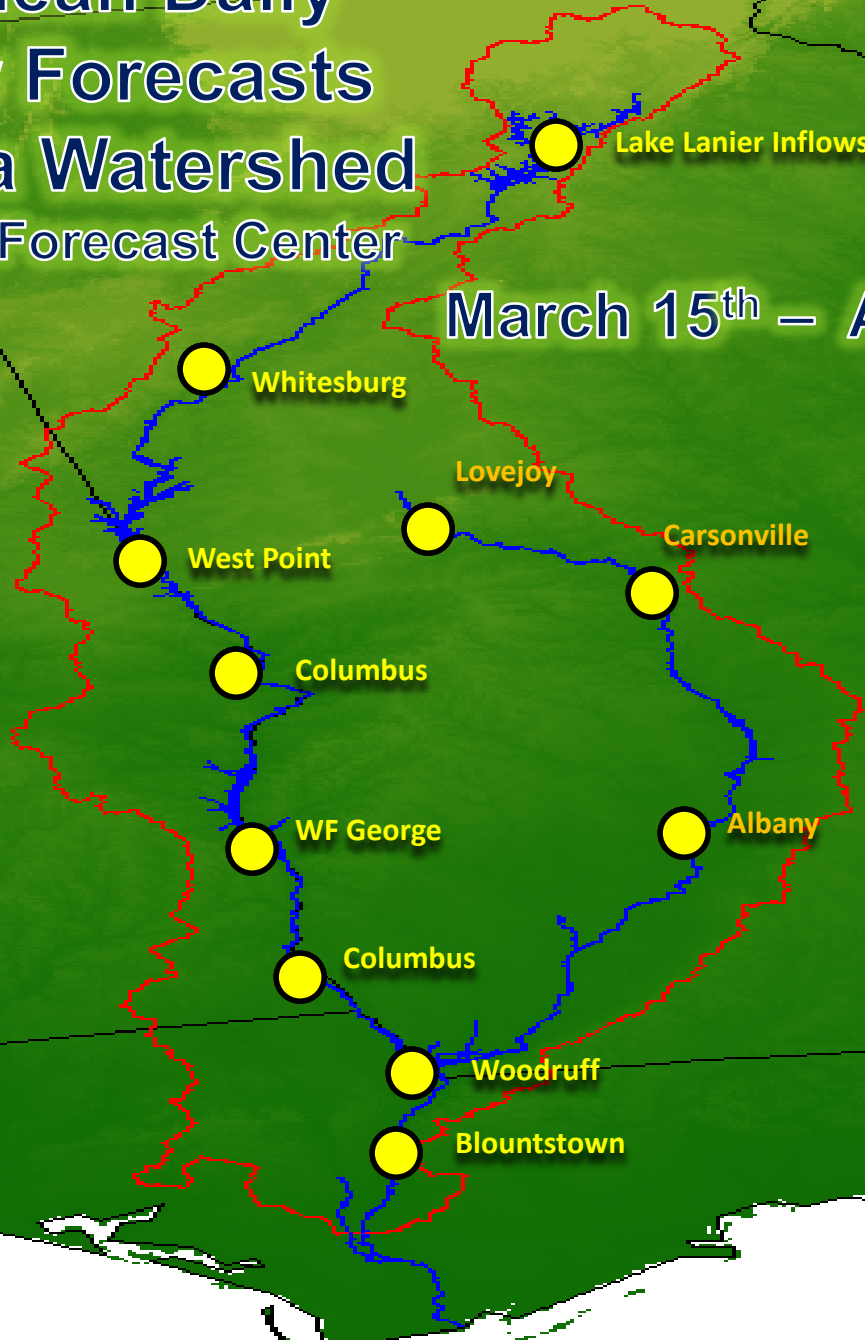
(Upper Floridan Aquifer)

Streamflow Forecasts

1-Month Mean Daily Streamflow Forecasts Apalachicola Watershed Southeast River Forecast Center

March 15th – April 15th 2016

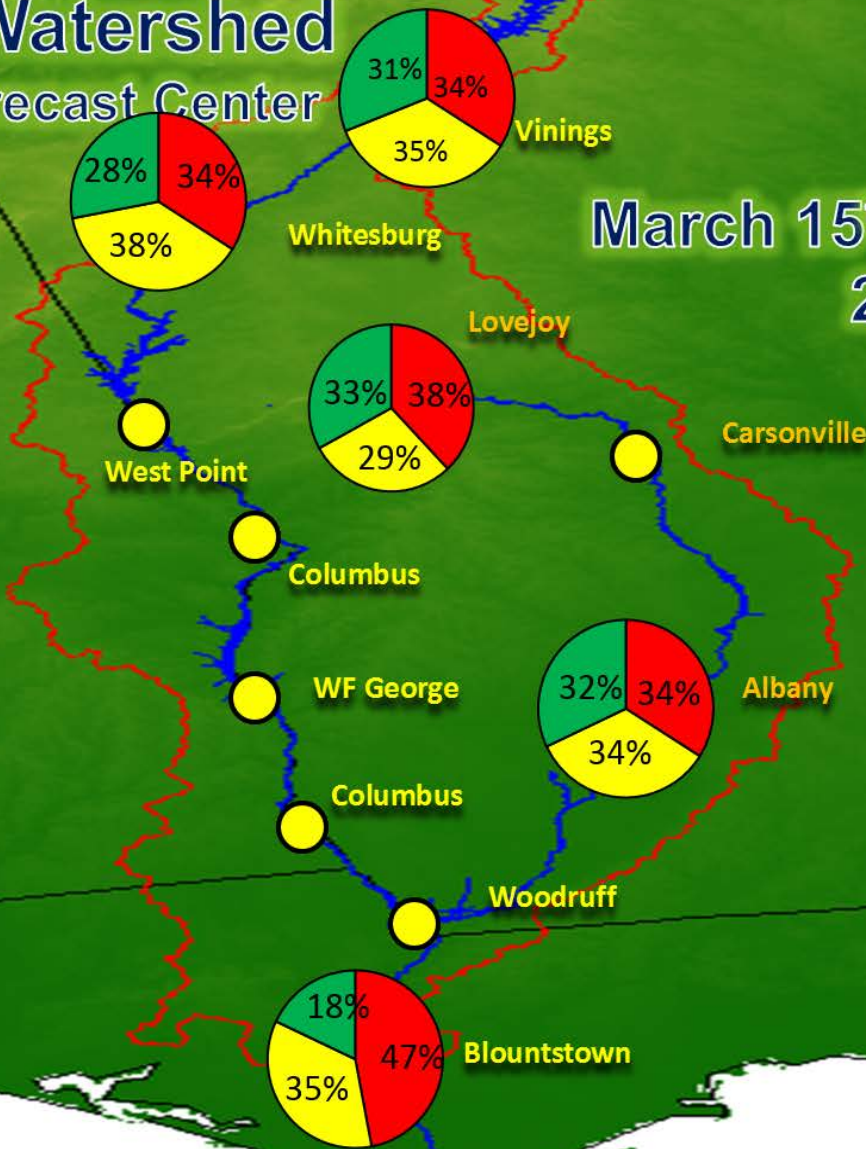
-  Above Normal
-  Near Normal
-  Below Normal



3-Month Mean Daily Streamflow Forecasts Apalachicola Watershed Southeast River Forecast Center

March 15th – June 15th
2016

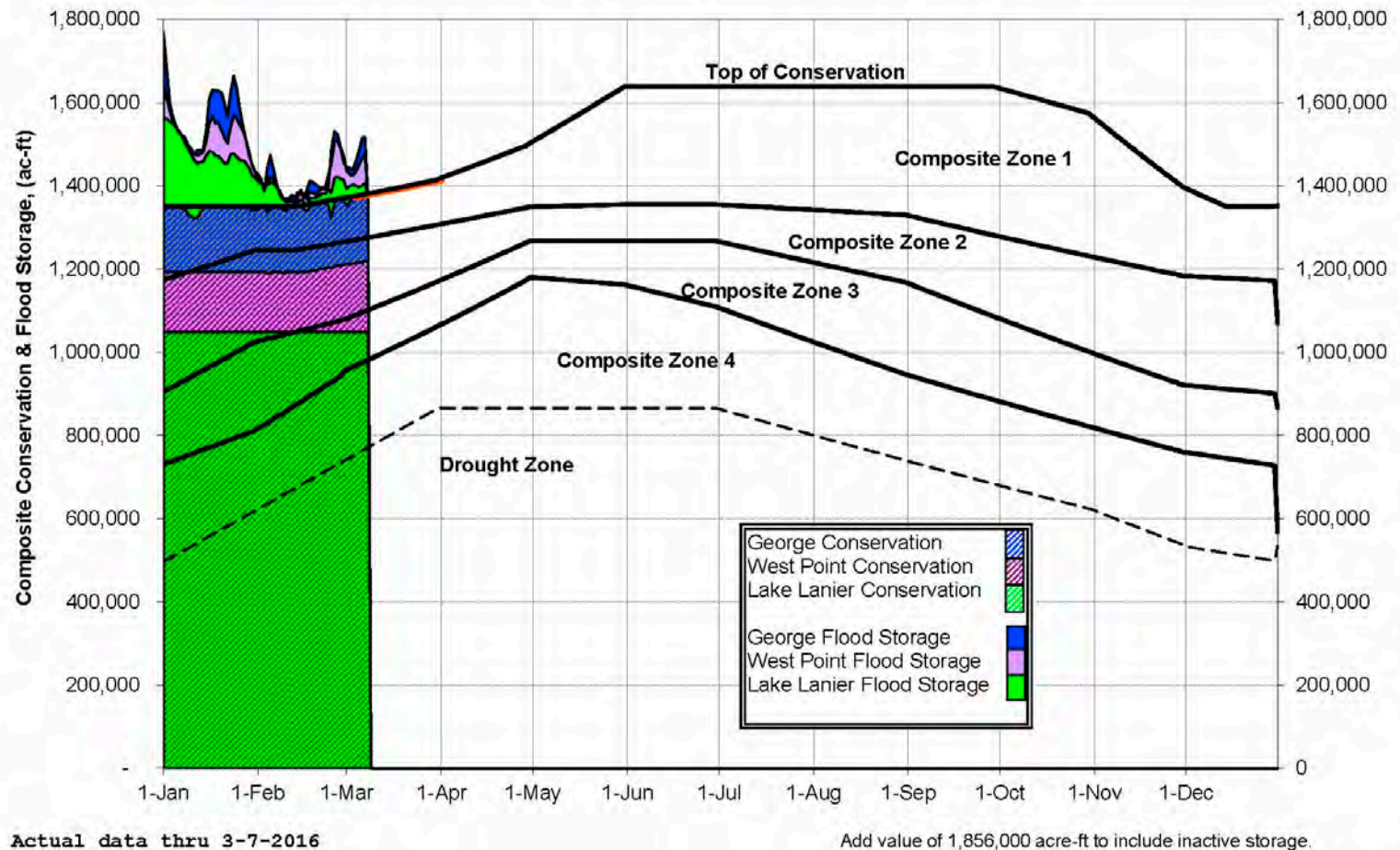
-  Above Normal
-  Near Normal
-  Below Normal



USACE – ACF Reservoir Conditions March 2016



2016 ACF Basin Composite Conservation and Flood Storage



ACF reservoirs have recently risen back above their typical levels of storage in the system for this time of year.

Summary – David Zierden

- El Nino continues to disrupt the Southeast with severe weather and flooding
- Apalachicola River and Lake Okeechobee levels far above their seasonal norm
- Big Bend, Northeast Florida, and Southeast Georgia are the “hole” in El Nino rain
- El Nino impacts expected into mid-April, fading afterwards
- El Nino likely to decay in coming months, rebound to La Nina possible
- Spring drought in 1998, but repeat is unlikely

Summary-Tony Gotvald

- Realtime streamflows are in the normal range for most of the ACF Basin.
- 28-day average streamflows into Lake Lanier are in the normal range.
- 28-day average streamflows for the Flint River are in the normal to above normal range.
- Groundwater levels are mostly in the normal range in Southwest Georgia.

Summary – Jeff Dobur

- 1 Month Streamflow forecast - Near Normal
- 3 Month Streamflow forecast – ESP indicates equal chances of above-normal, normal and below-normal. Favor near normal.
- Pie Charts do not directly include any adjustments to the ESP forecast based on ENSO, CPC or other. Based on soil conditions relative to normal in concert with historical precipitation.

Questions, Comments, Discussion

References

Speakers

David Zierden, FSU

Tony Gotvald, USGS

Jeff Dobur, SERFC

Moderator

Eric Reutebuch, AU WRC

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 & forecasting
<http://waterwatch.usgs.gov>
<http://www.srh.noaa.gov/serfc/>
- Groundwater monitoring
<http://groundwaterwatch.usgs.gov>

Thank you!

Next briefing

April 19, 2016, 1:00 pm EDT

Moderator: Eric Reutebuch

Slides from this briefing will be posted at

<http://drought.gov/drought/content/regional-programs/regional-drought-webinars>

Please send comments and suggestions to:

reuteem@auburn.edu