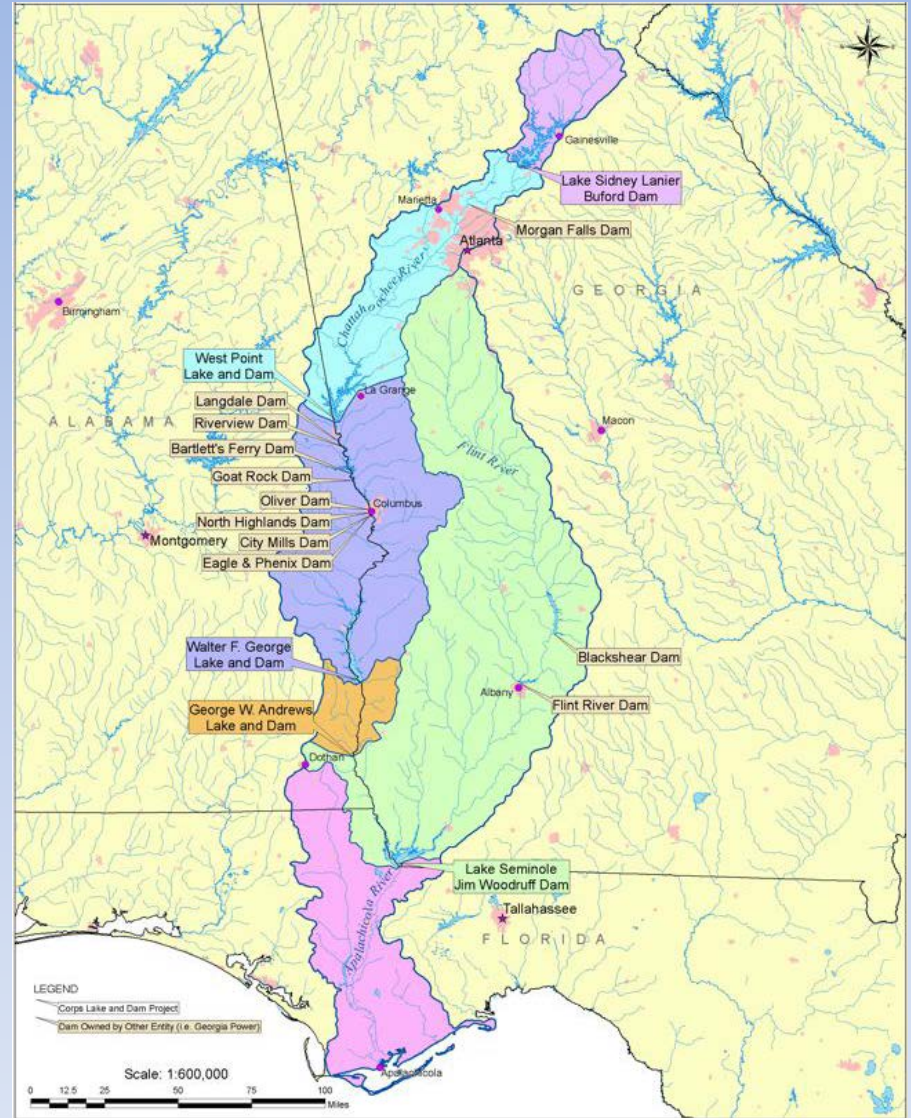
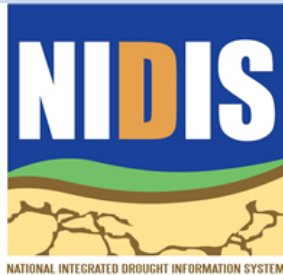


National Integrated Drought Information System

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

22 September 2015

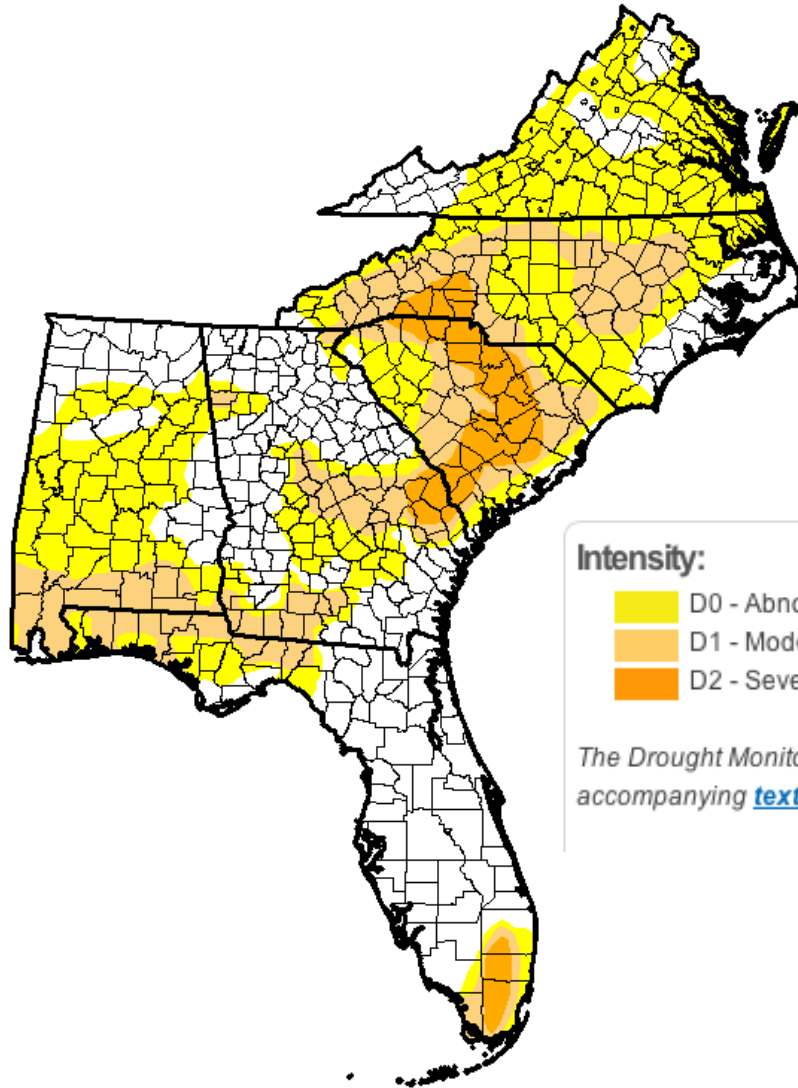


Outline

Welcome – Eric Reutebuch, AU Water Resources Center

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

Current drought status



Intensity:

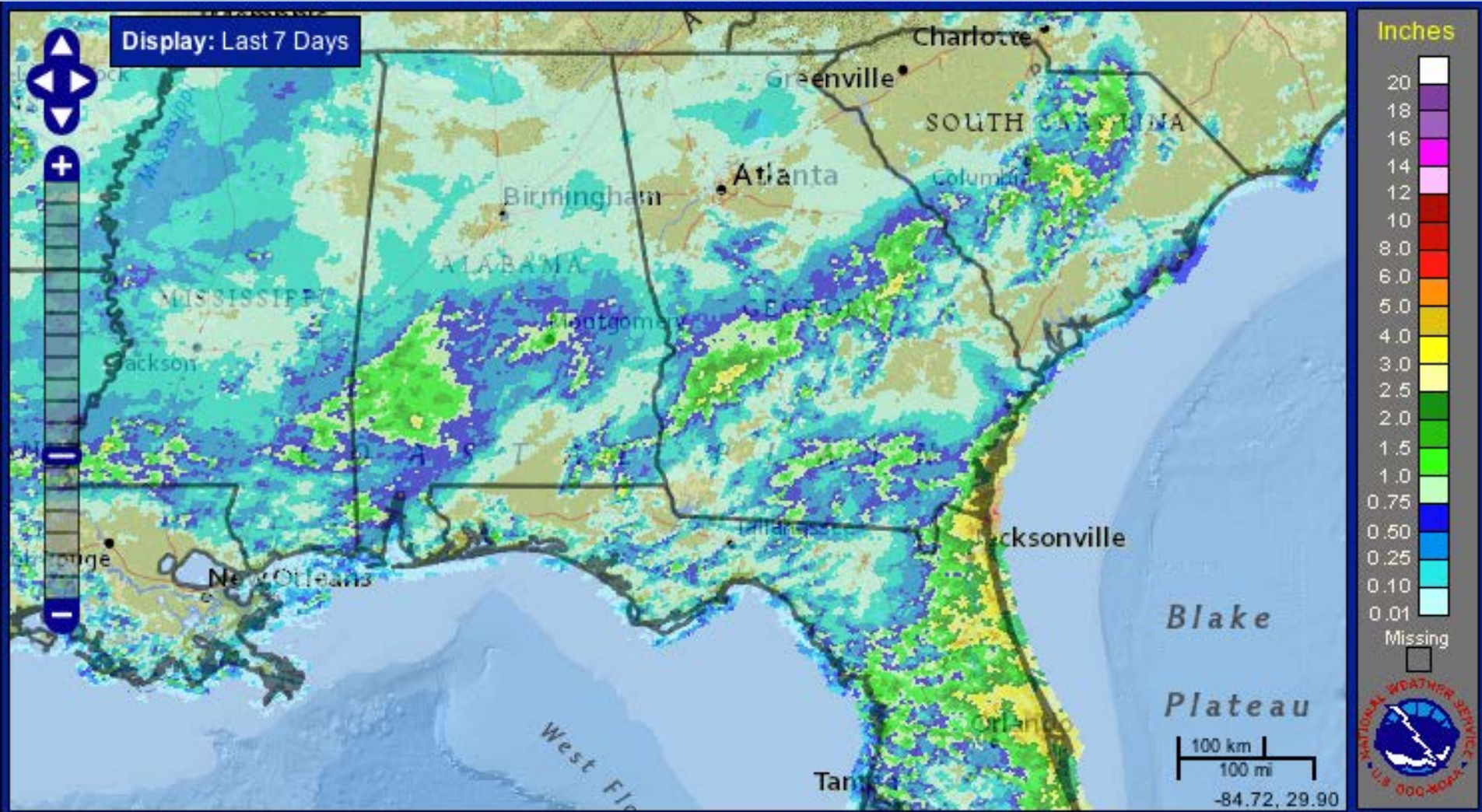


The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying [text summary](#) for forecast statements.

Harvest Season

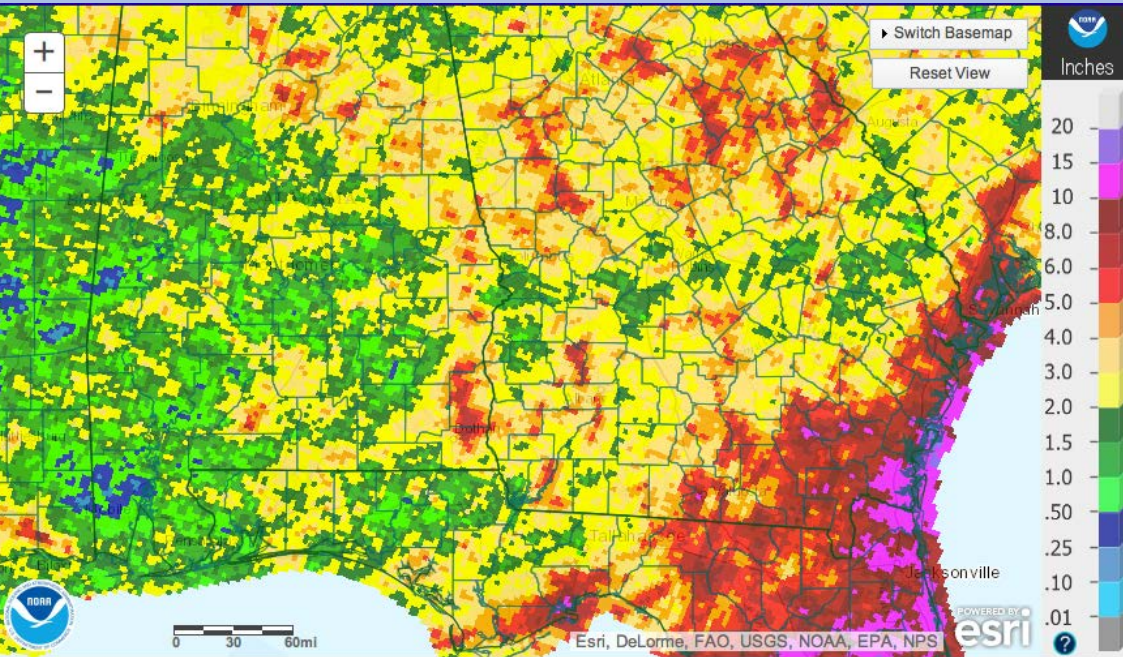


Rainfall – Last 7 Days

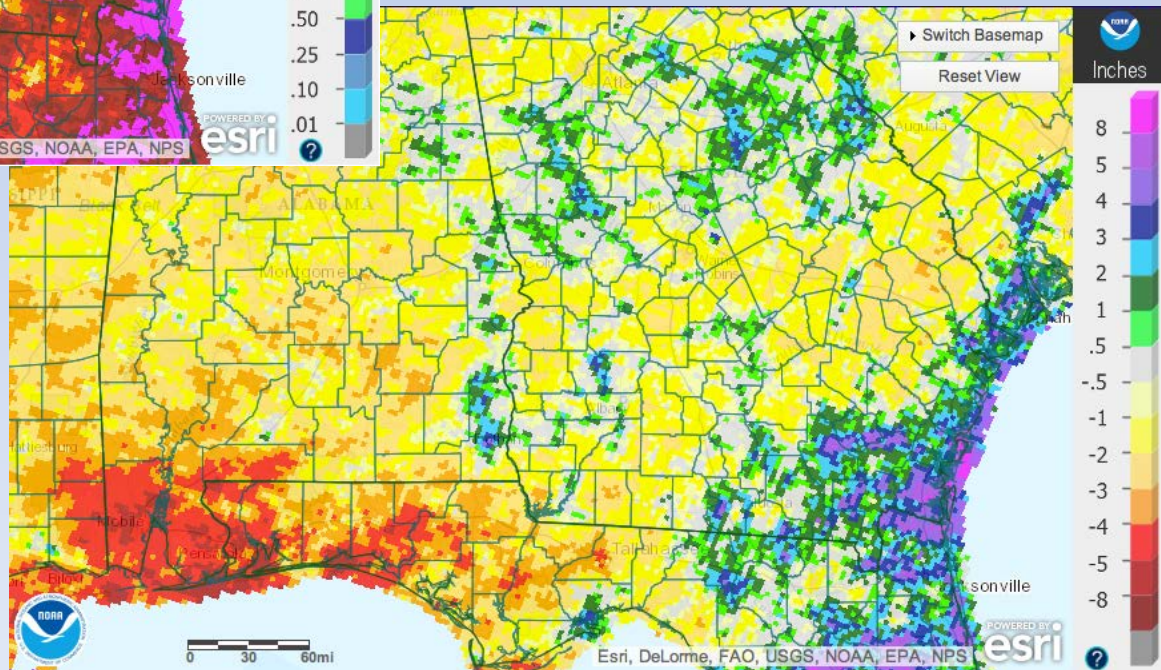


30-Day Rainfall

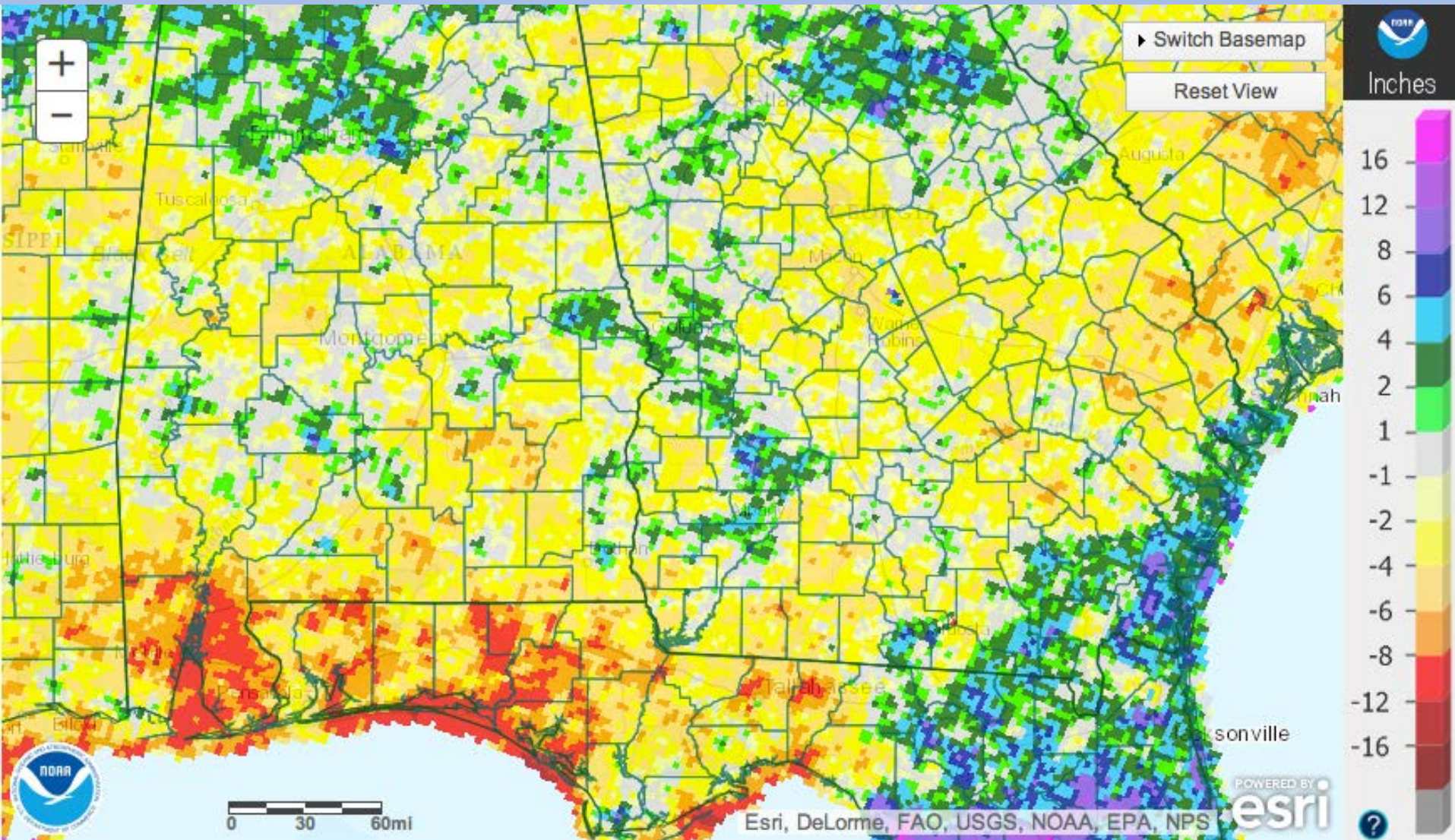
Totals



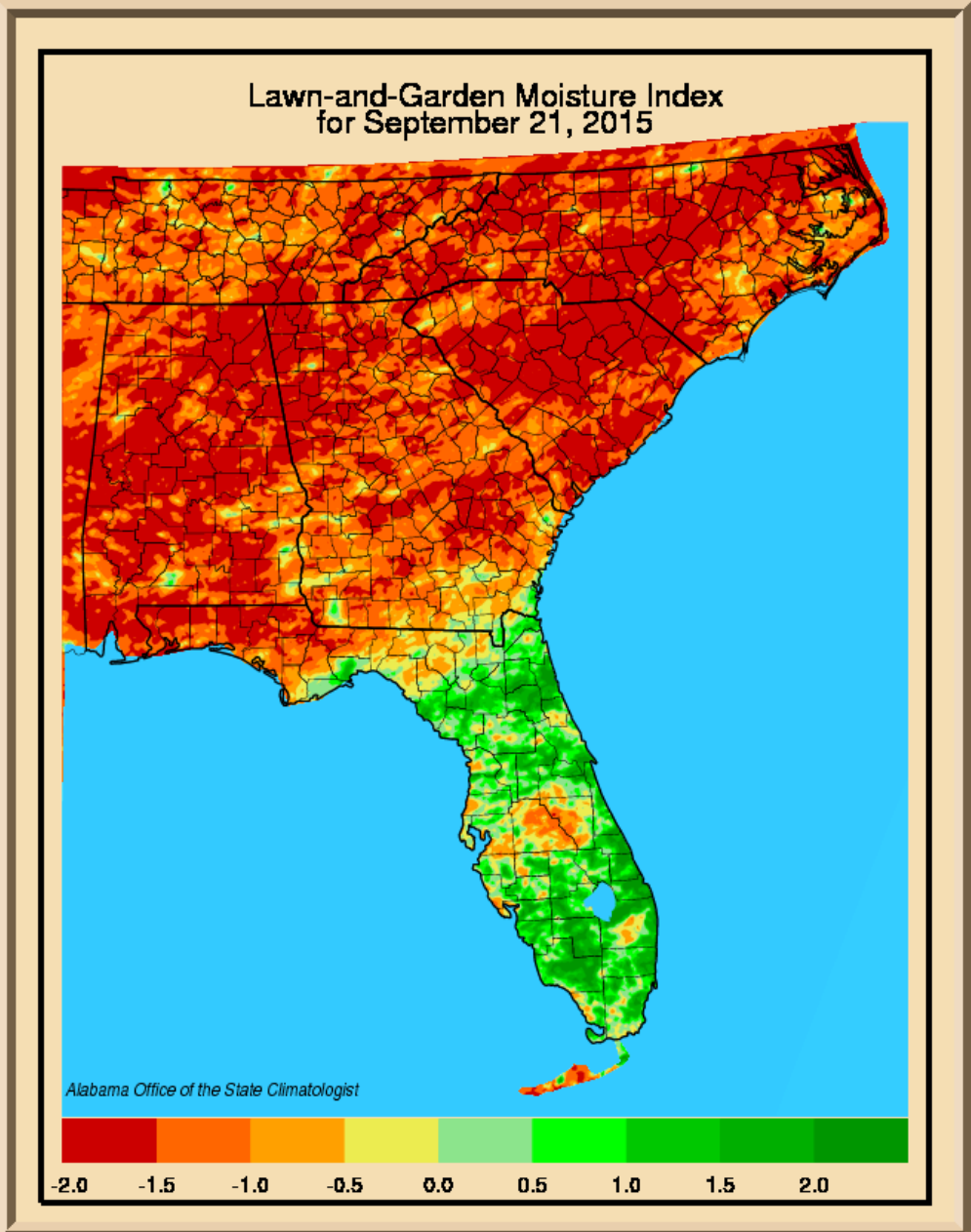
Departure from Normal



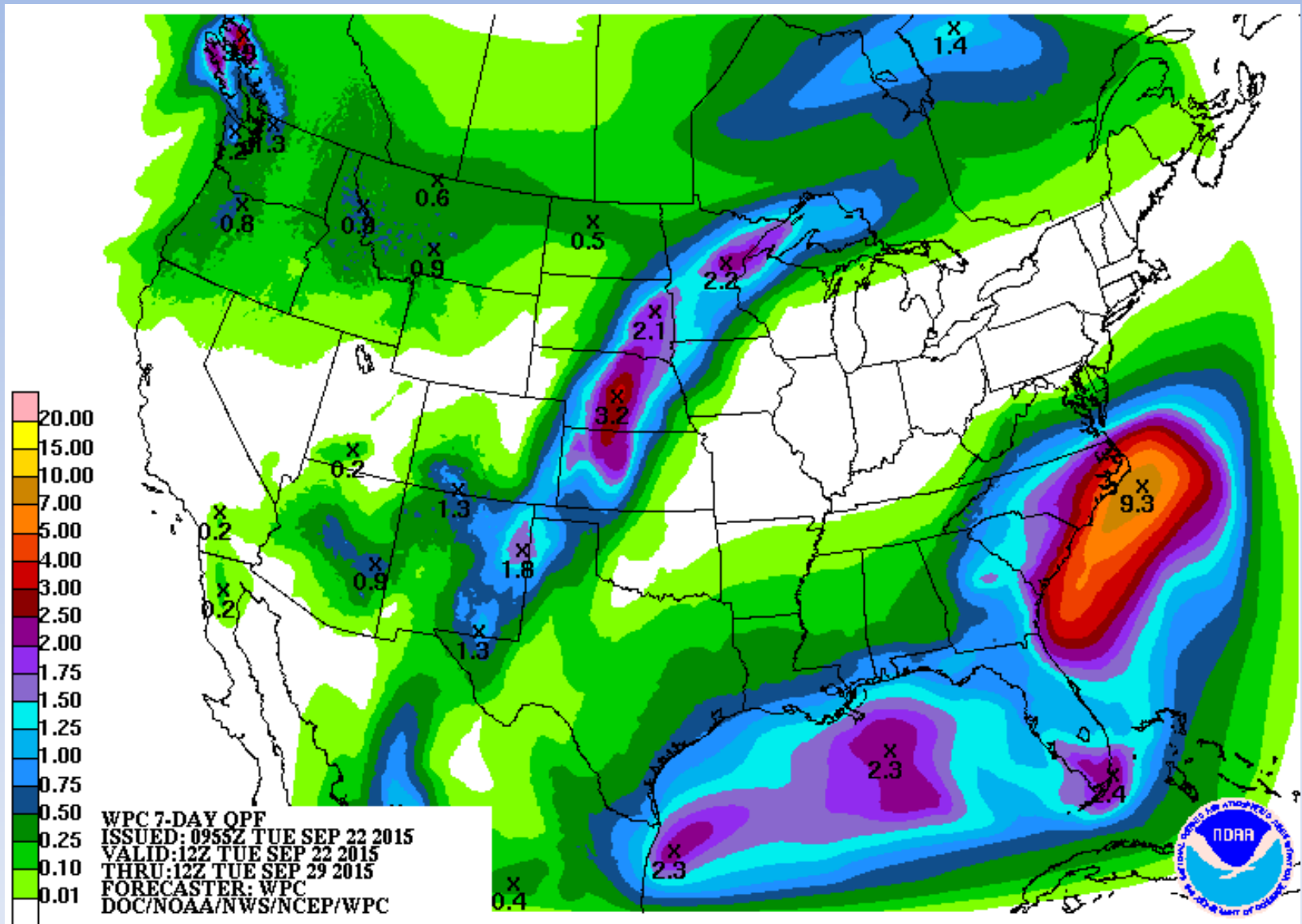
90-day Rainfall Departures



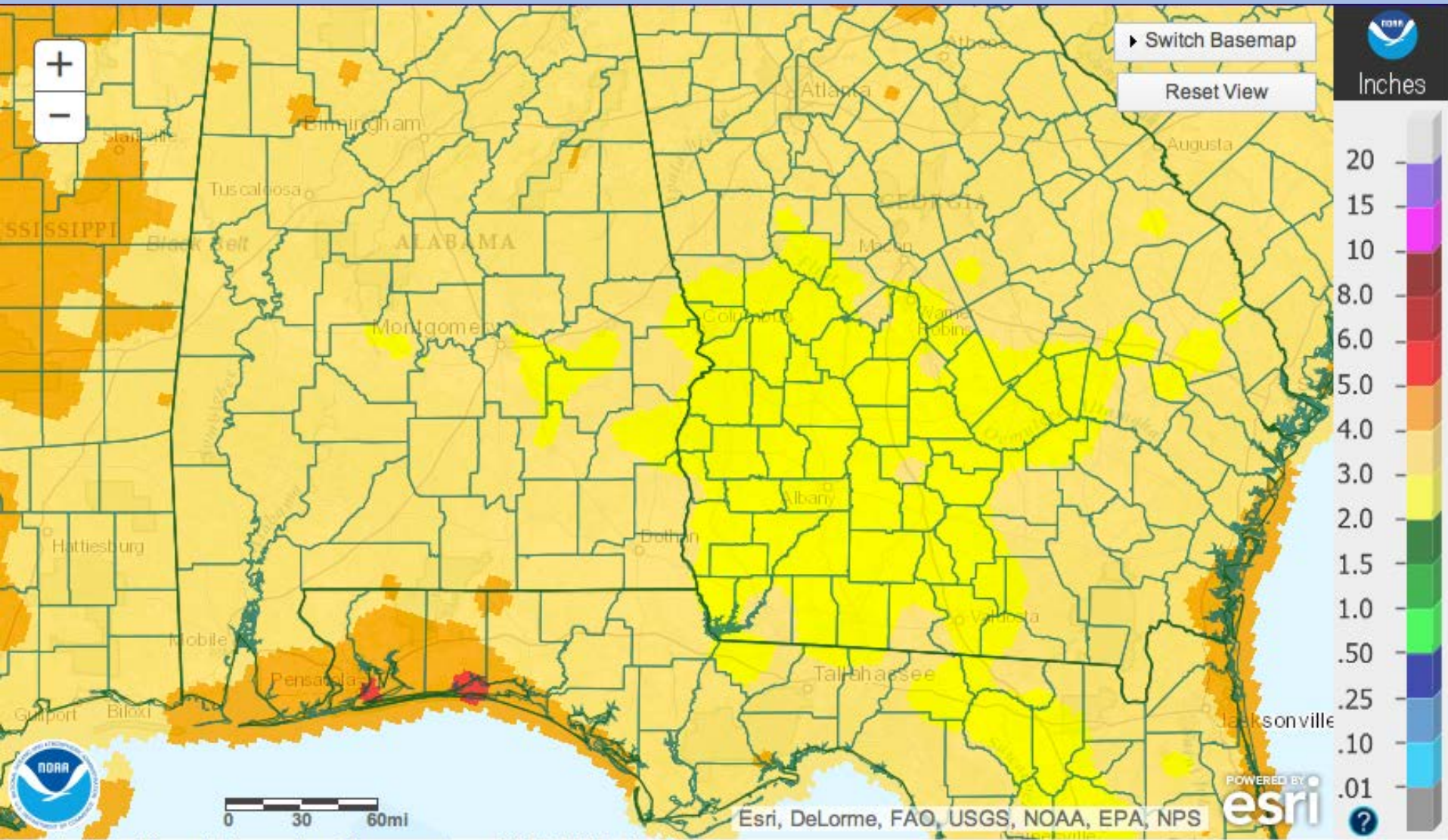
Lawn and Garden Moisture Index



7-Day Precipitation Forecast

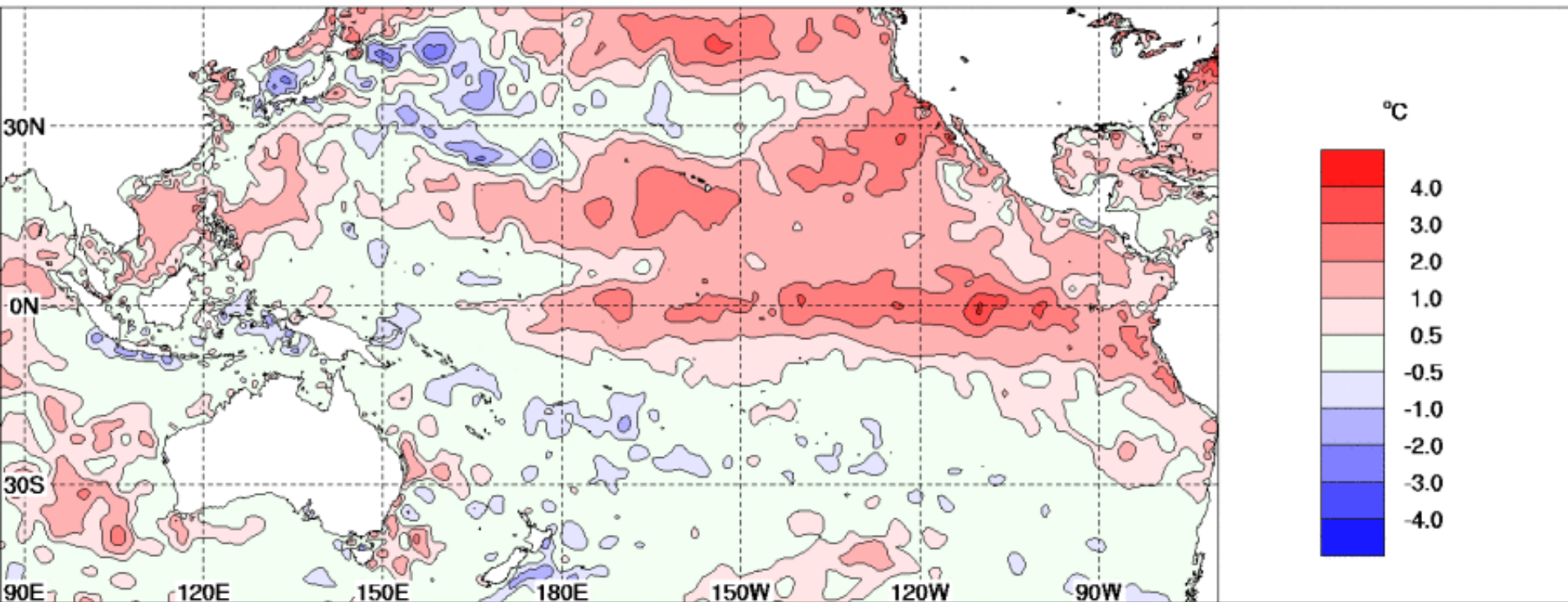


October is Driest Month of the Year

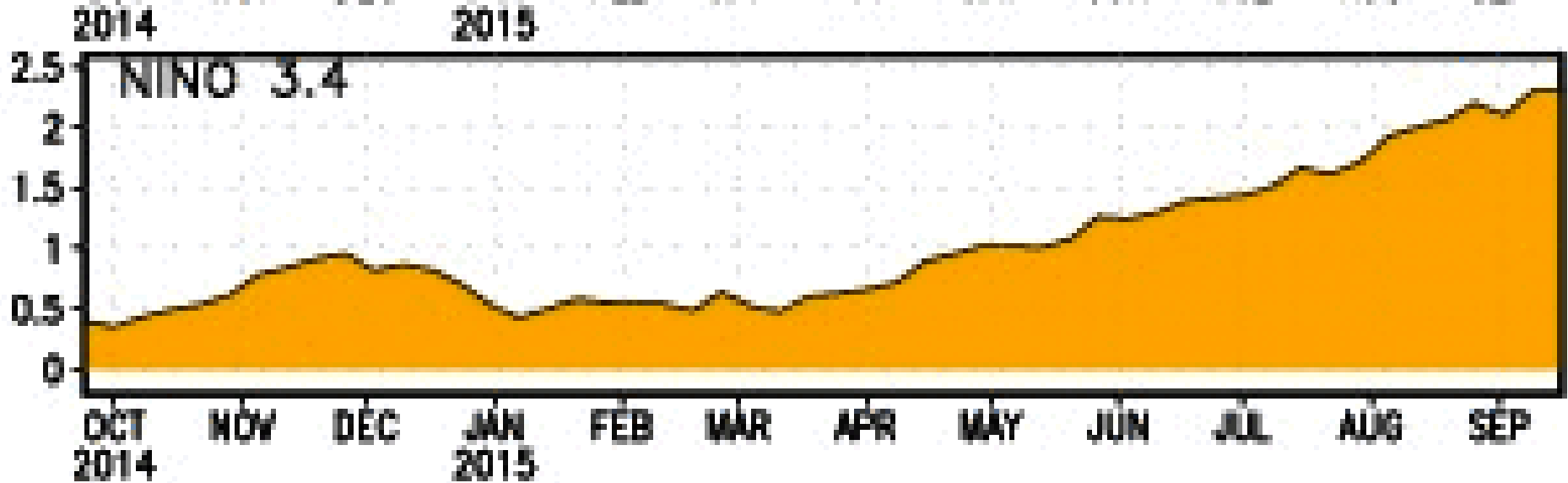


Current SST Anomalies

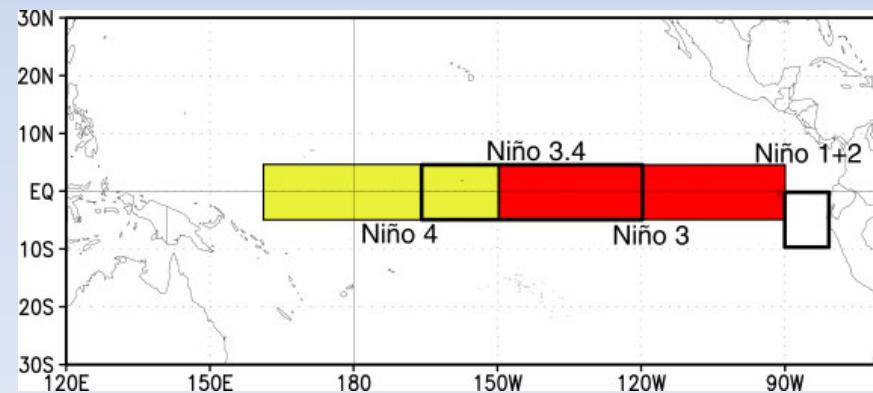
SSTA 1.0X1.0 NMOC OCEAN ANOMALIES (C) 20150907 20150913



Nino 3.4 Index

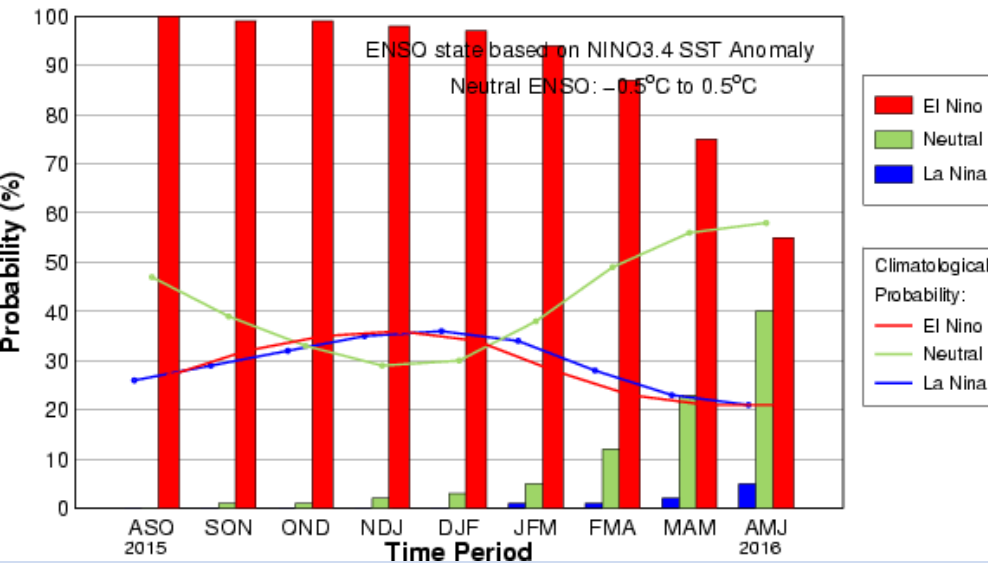


- Current weekly value at +2.3, into the “very strong” range
- Reached weekly peak value of 2.8 in Nov. 1997

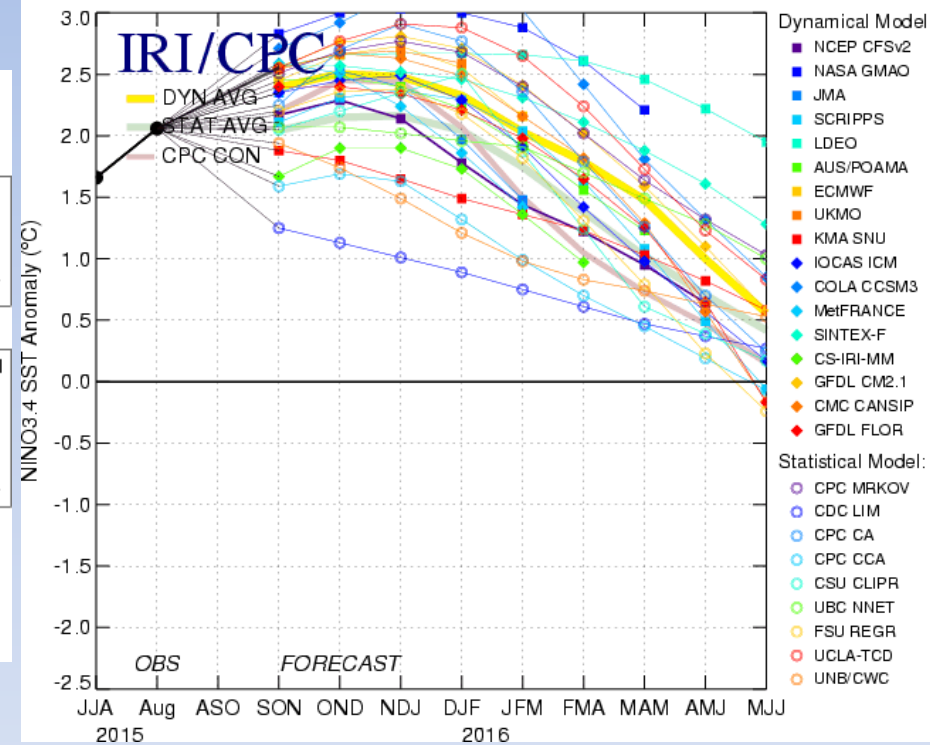


Nino 3.4 Forecasts

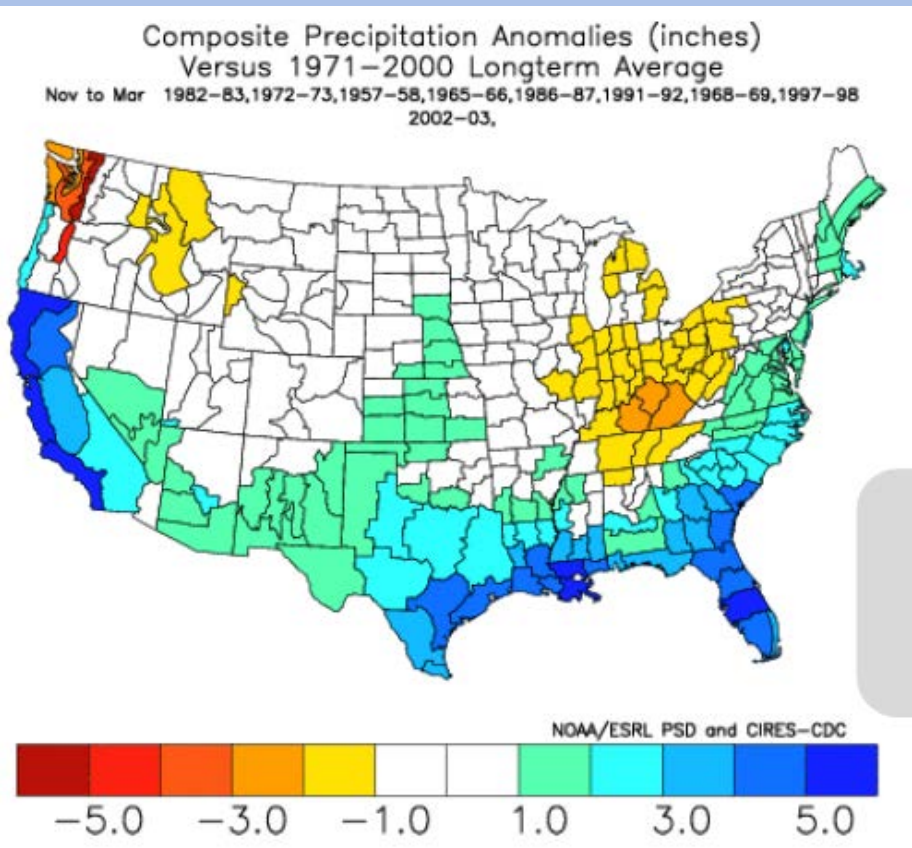
Early-Sep CPC/IRI Consensus Probabilistic ENSO Forecast



Mid-Sep 2015 Plume of Model ENSO Predictions

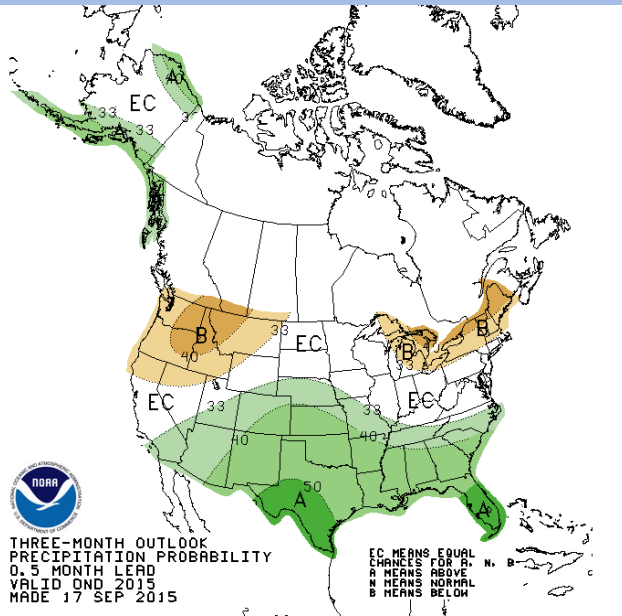


El Nino and Winter Rainfall

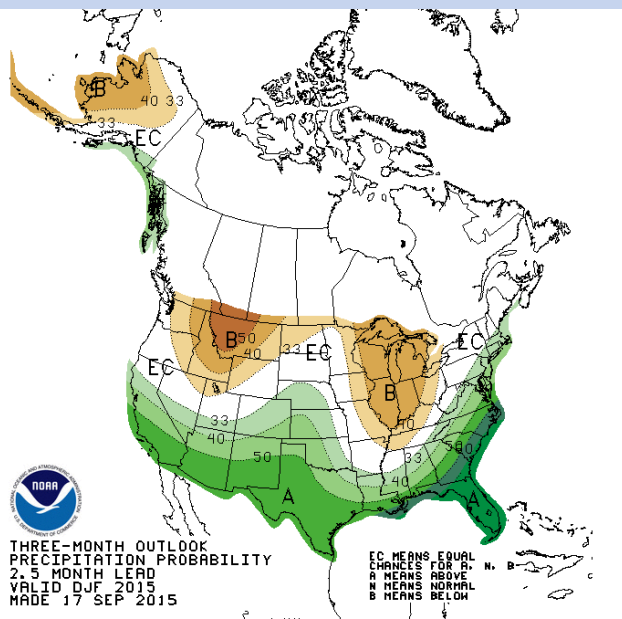


- El Nino typically brings enhanced winter rainfall to California and the southern U.S., including Texas and Florida.
- California Rainfall more hit or miss than other Southern States
- Strong El Nino does not necessarily mean even more rainfall, just more confidence in following the pattern.

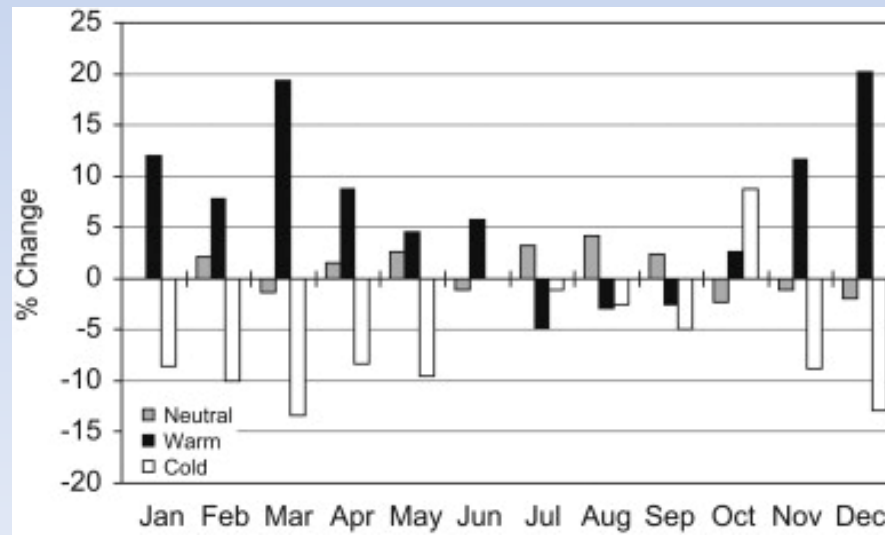
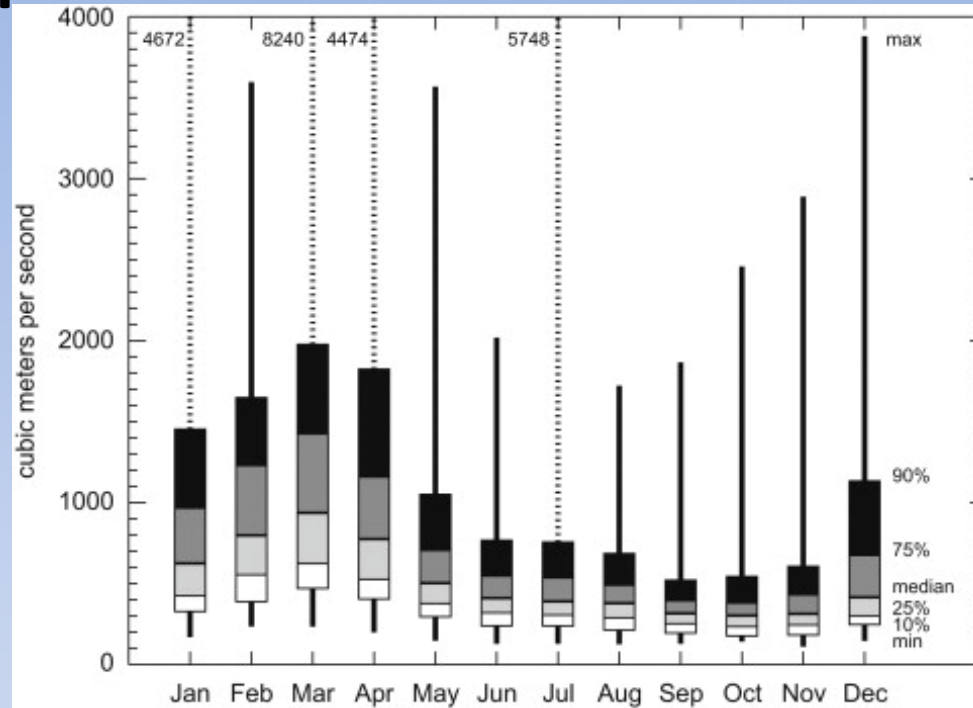
Official NOAA Outlook



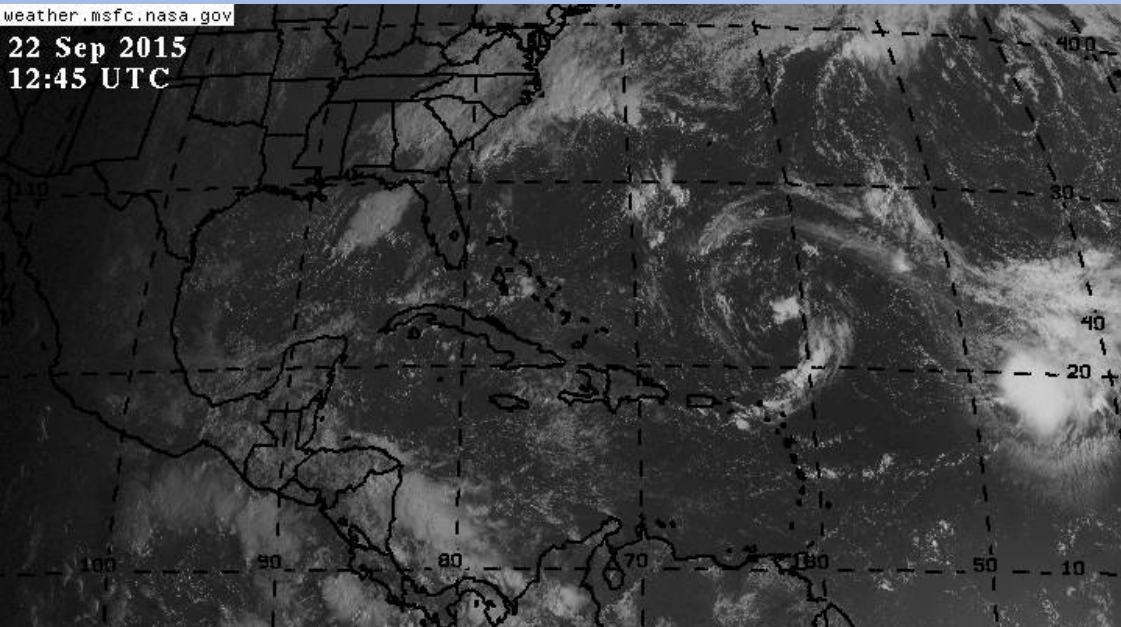
- NOAA's fall (Oct.-Dec.) and winter (Dec. – Feb.) outlooks
- Enhanced fall rainfall favored over entire southern U.S. consistent with El Nino
- 70% chance of above normal rainfall in Florida is the one of the strongest seasonal forecasts ever made.



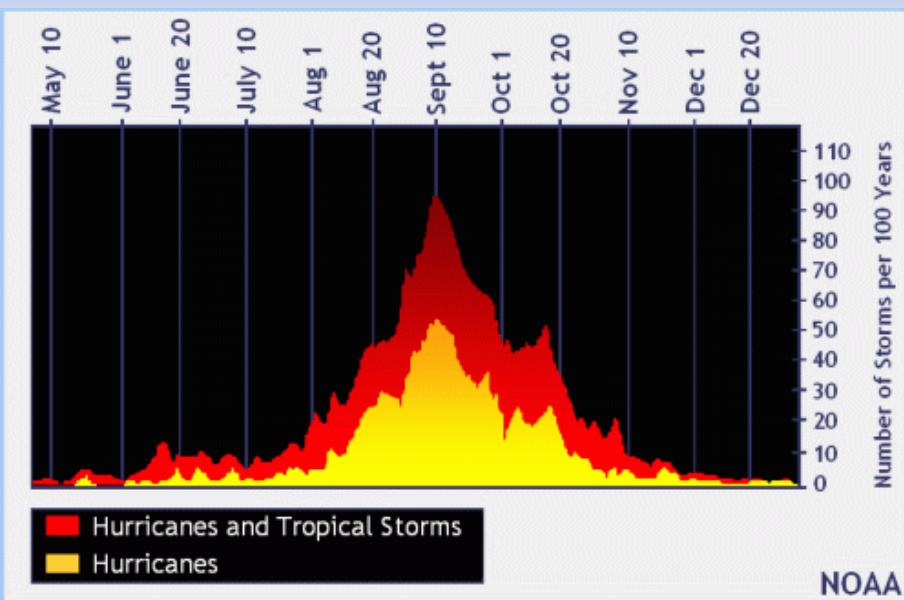
Apalachicola River Flows



Atlantic Hurricane Summary

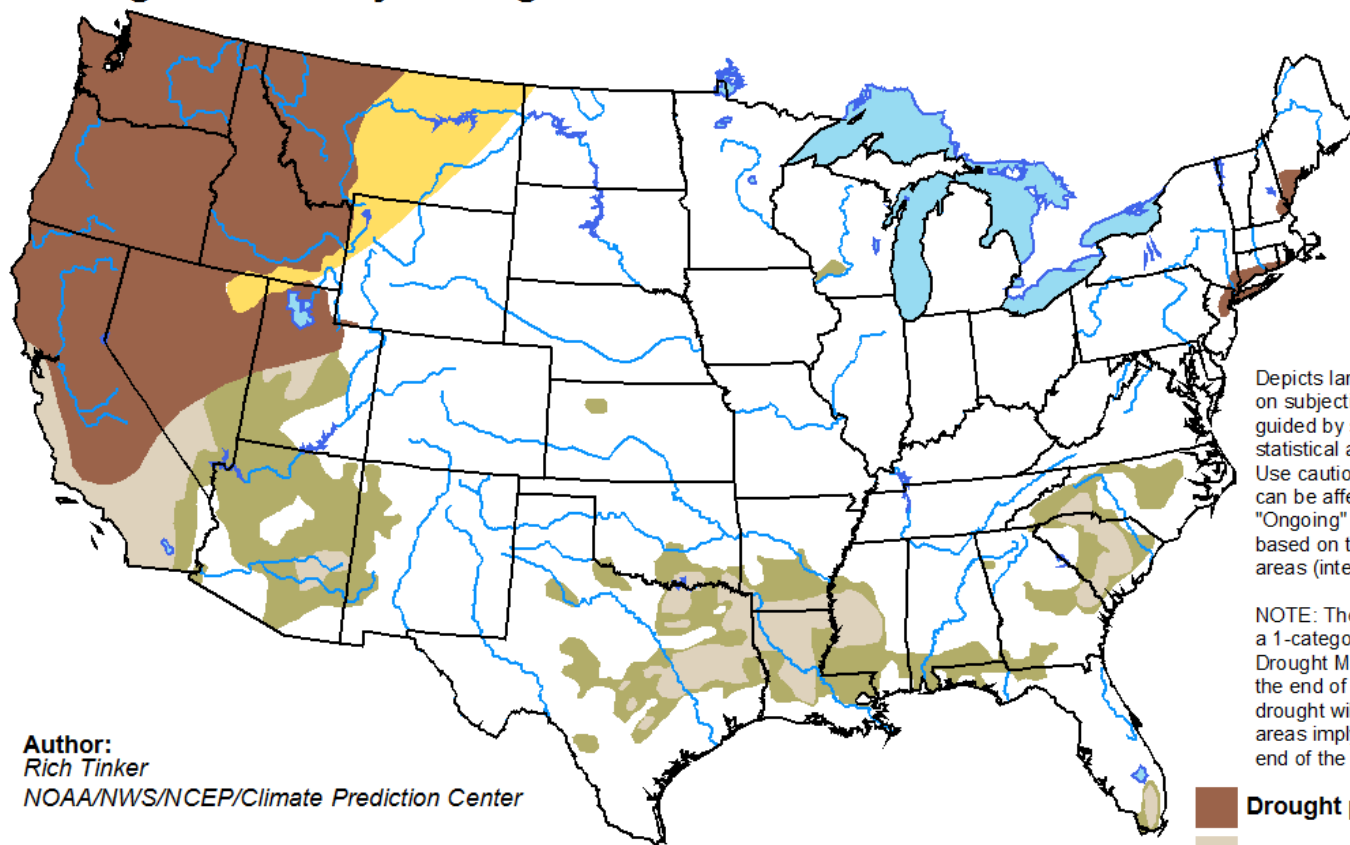


- 9 named storms so far this year (6-11 predicted)
- Only 2 have reached hurricane strength (Danny and Fred)
- None have made it past the central Caribbean



U.S. Drought Outlook





U.S. Seasonal Drought Outlook Valid for September 17 - December 31, 2015
Drought Tendency During the Valid Period Released September 17, 2015

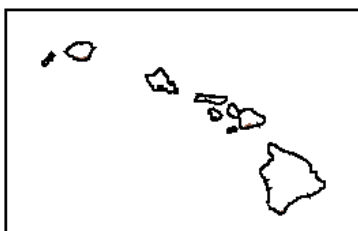
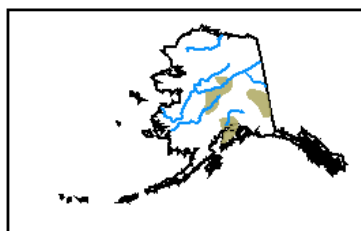


Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

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).

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



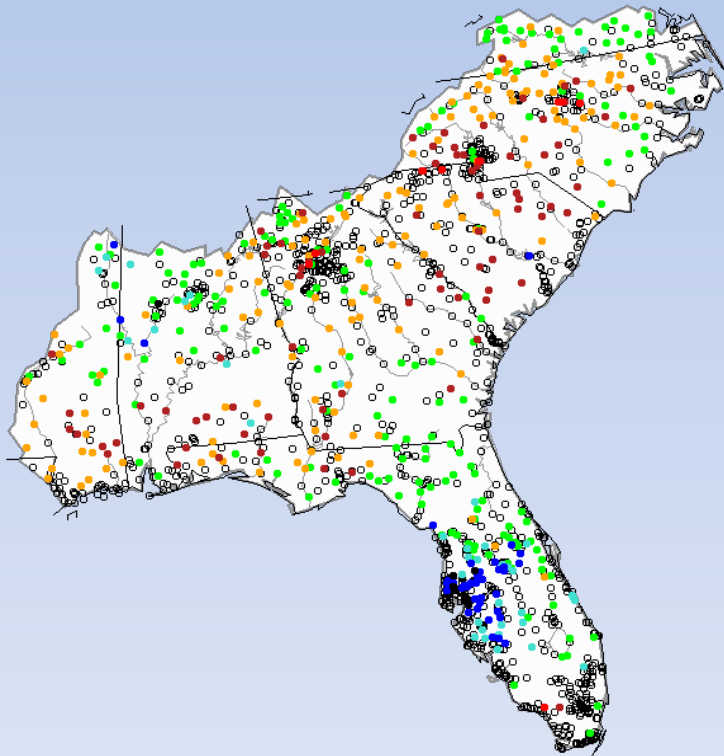
<http://go.usa.gov/3eZ73>

Streamflows and Groundwater

Realtime stream flow compared with historical monthly averages

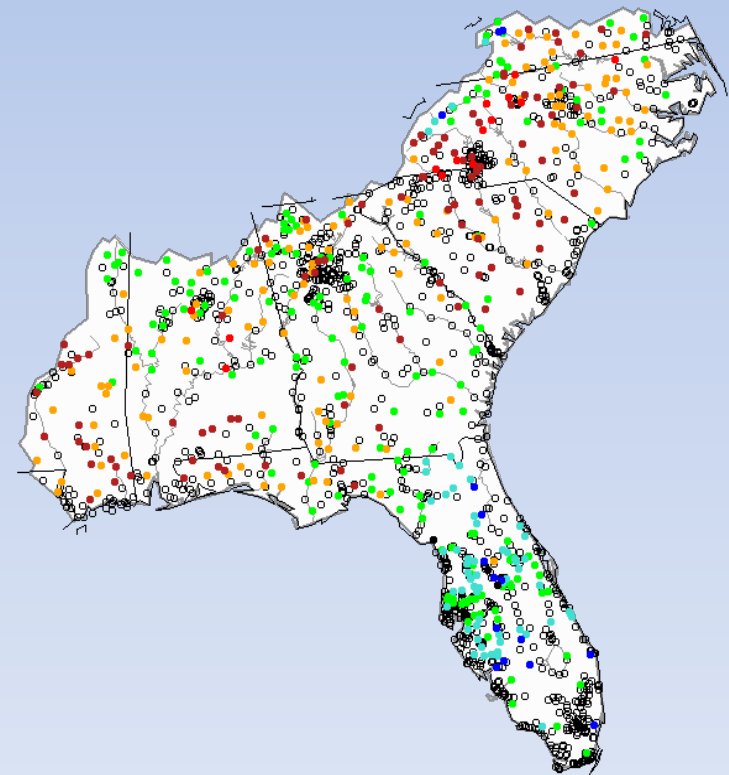
Previous Brief:

Monday, August 17, 2015 12:30ET



Current:

Monday, September 21, 2015 12:00ET



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

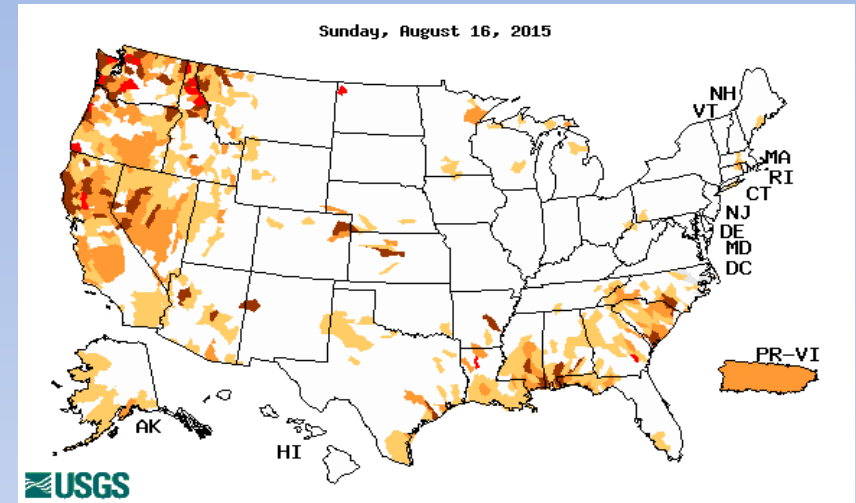
Below Normal 7-day Average Streamflows

Previous brief:

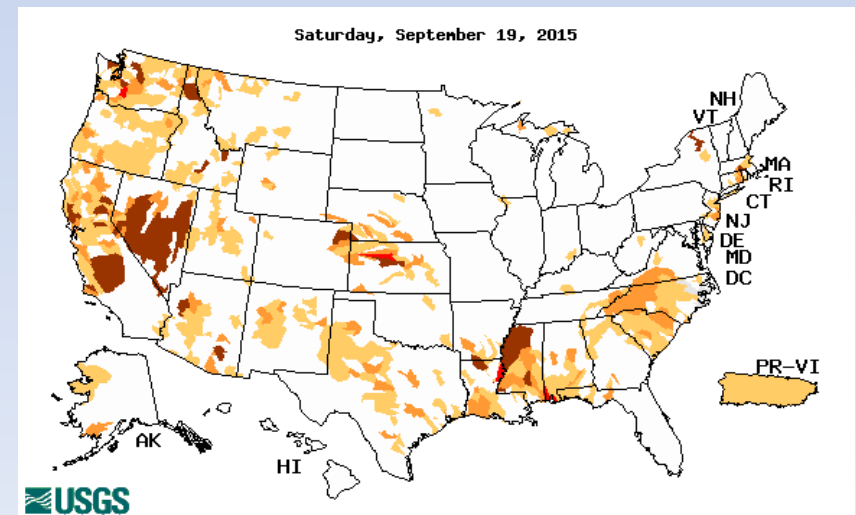
Below normal 7-day average streamflow as compared with historical streamflow for day shown

Current:

<http://waterwatch.usgs.gov>



Explanation - Percentile classes				
Low	≤ 5	6-9	10-24	Near or above normal
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

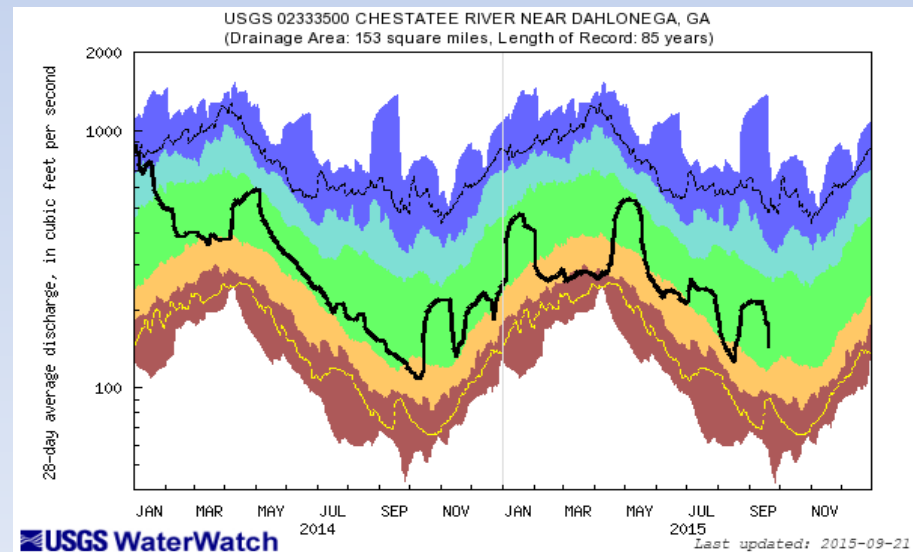
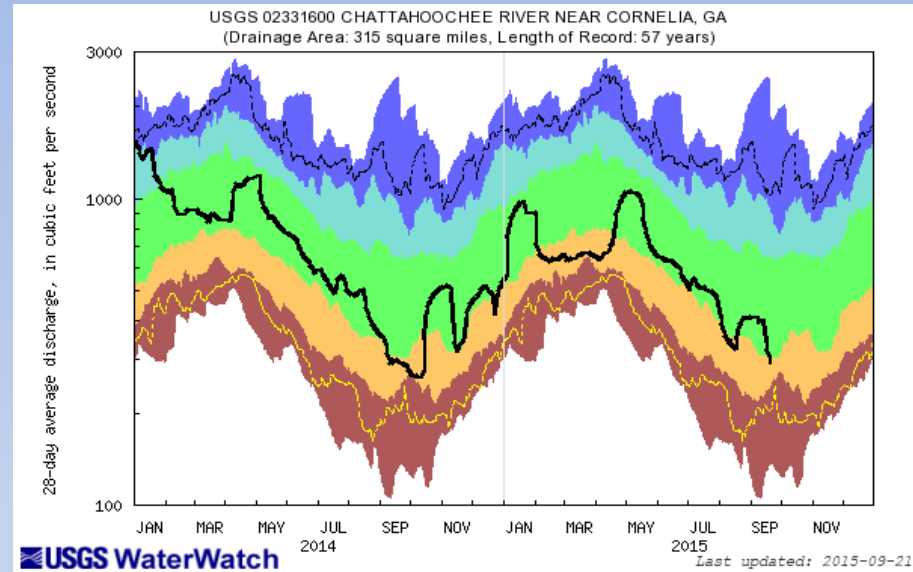


Lake Lanier Inflows

Chattahoochee near
Cornelia (02331600)

<http://waterwatch.usgs.gov>

Chestatee near
Dahlonega (02333500)



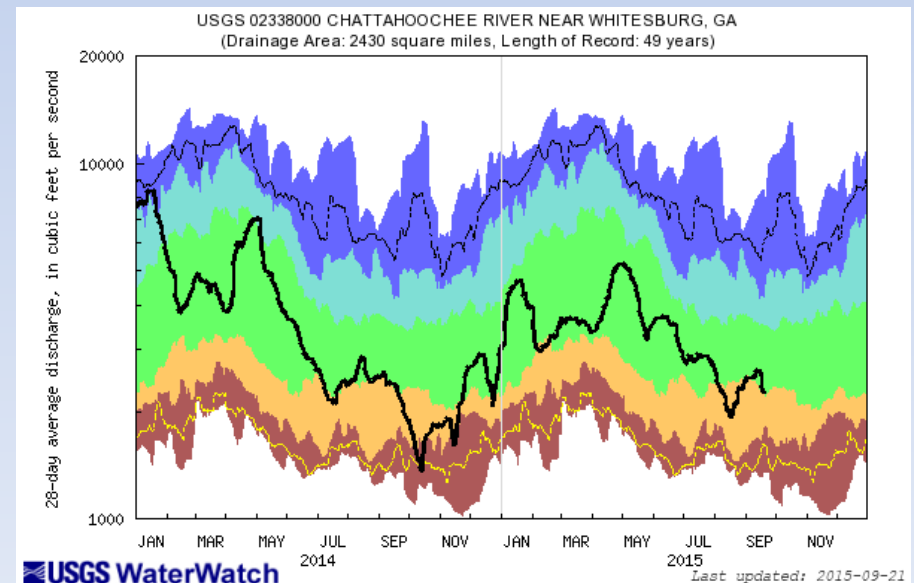
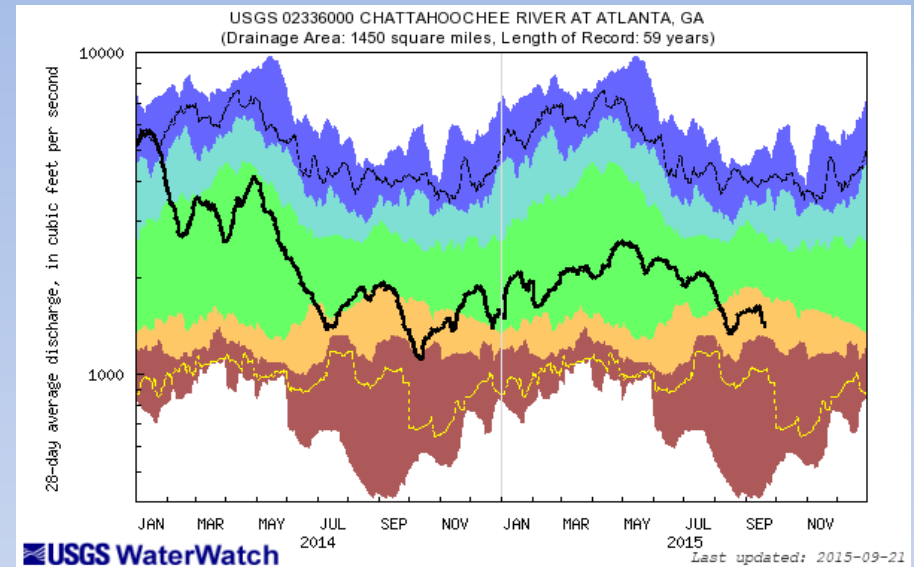
Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal		Below normal	Normal	Above normal	Much above-normal	

Current Streamflows

Chattahoochee at Atlanta (02336000)

<http://waterwatch.usgs.gov>

Chattahoochee near Whitesburg (02338000)



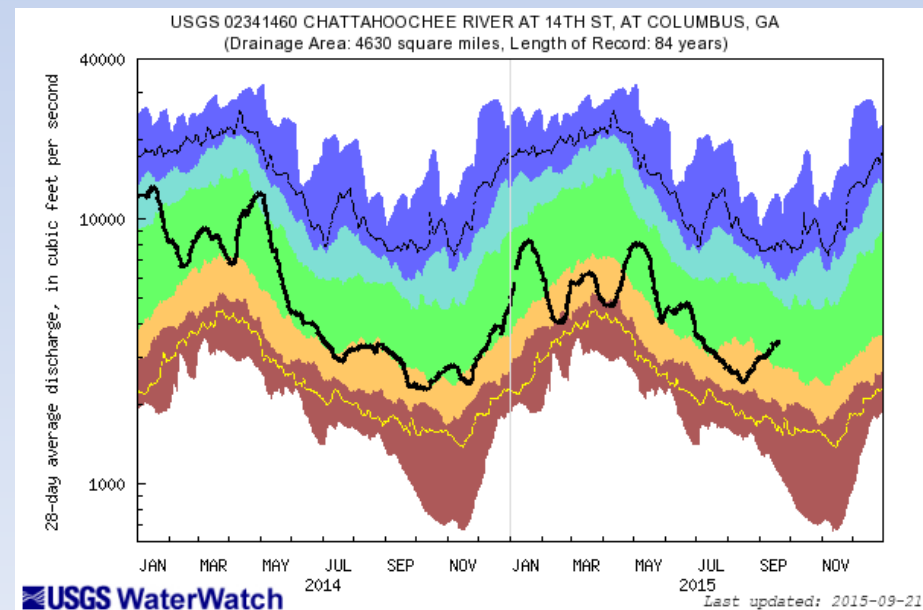
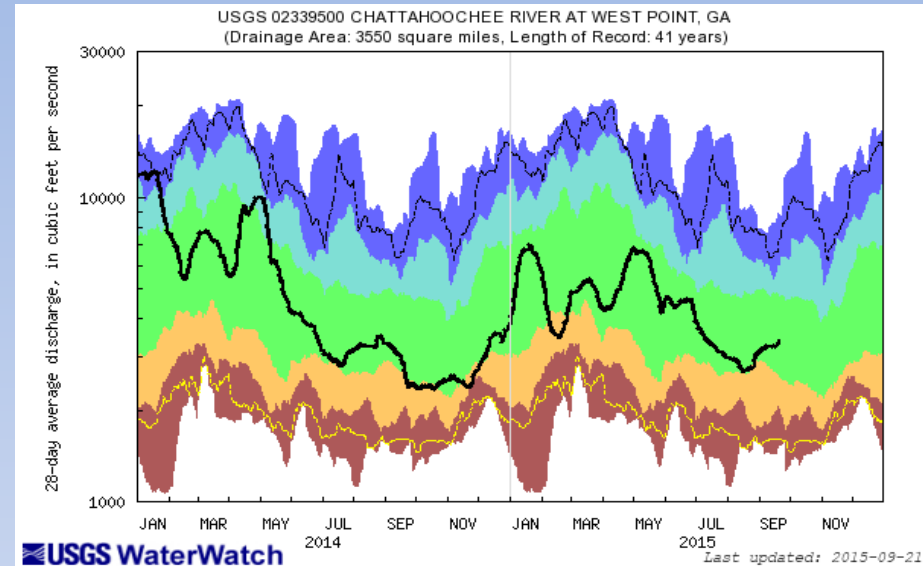
Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above-normal		

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

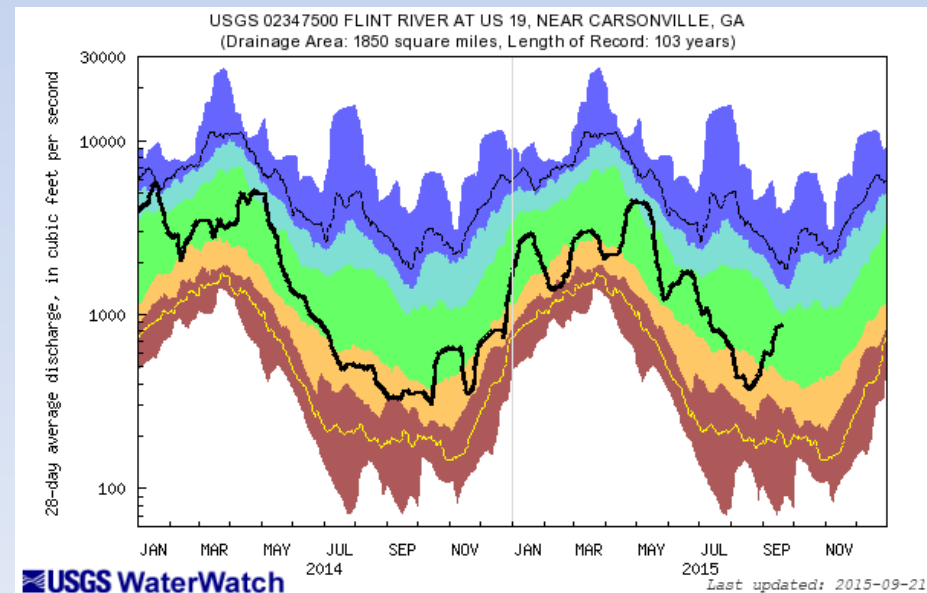
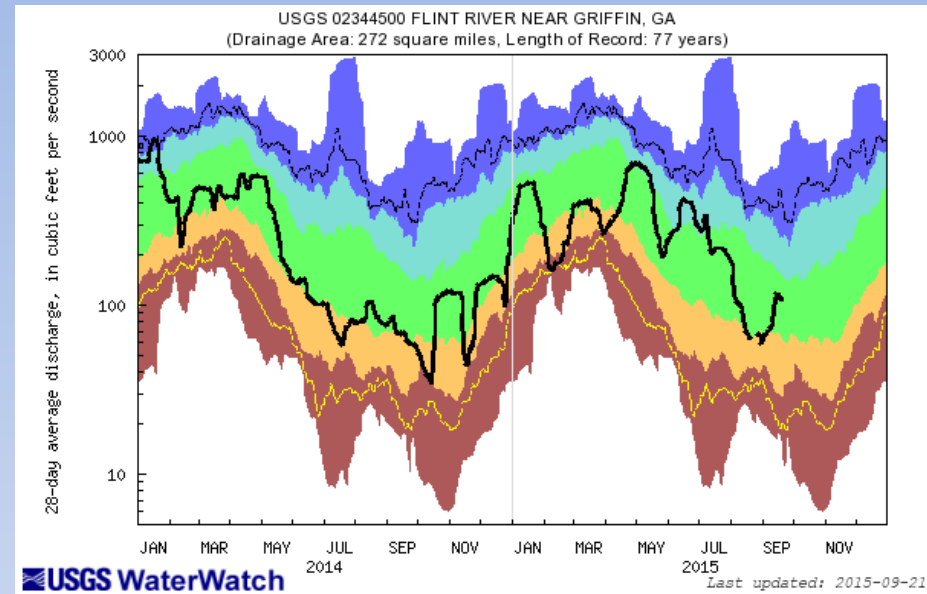
Current Streamflows

Flint River near Griffin (02344500)

<http://waterwatch.usgs.gov>

Flint River near Carsonville (02347500)

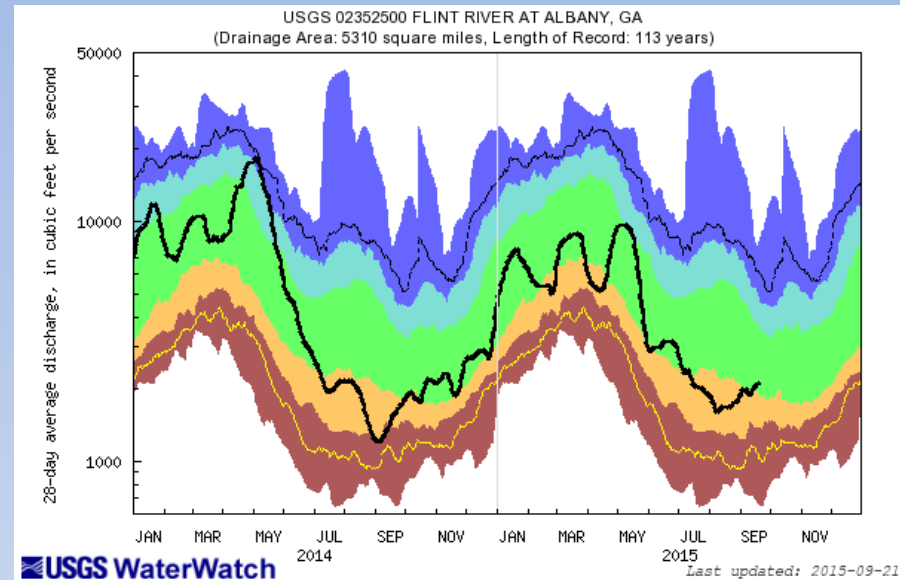
Explanation - Percentile classes						Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	
Much below Normal	Below normal	Normal	Above normal	Much above-normal		



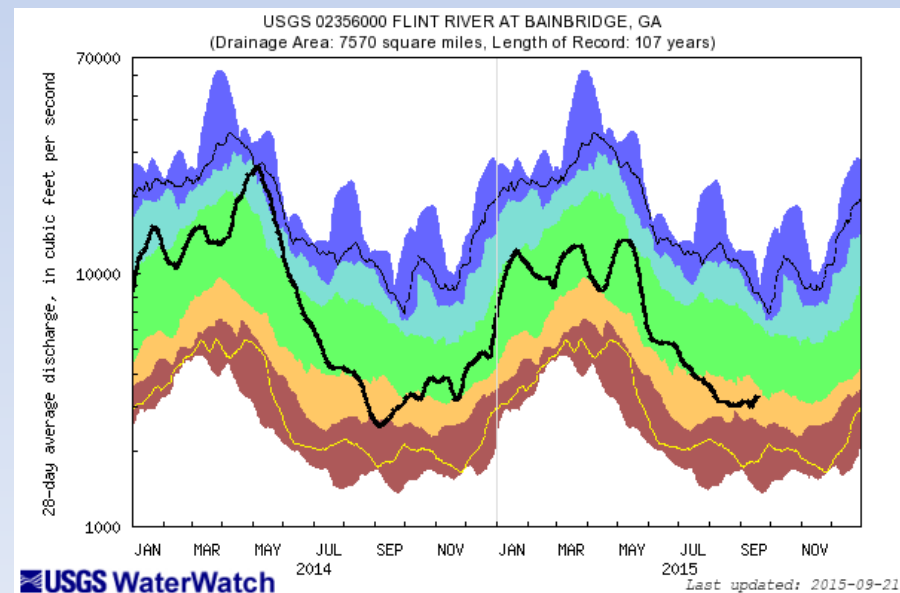
Current Streamflows

Flint River at Albany (02352500)

<http://waterwatch.usgs.gov>



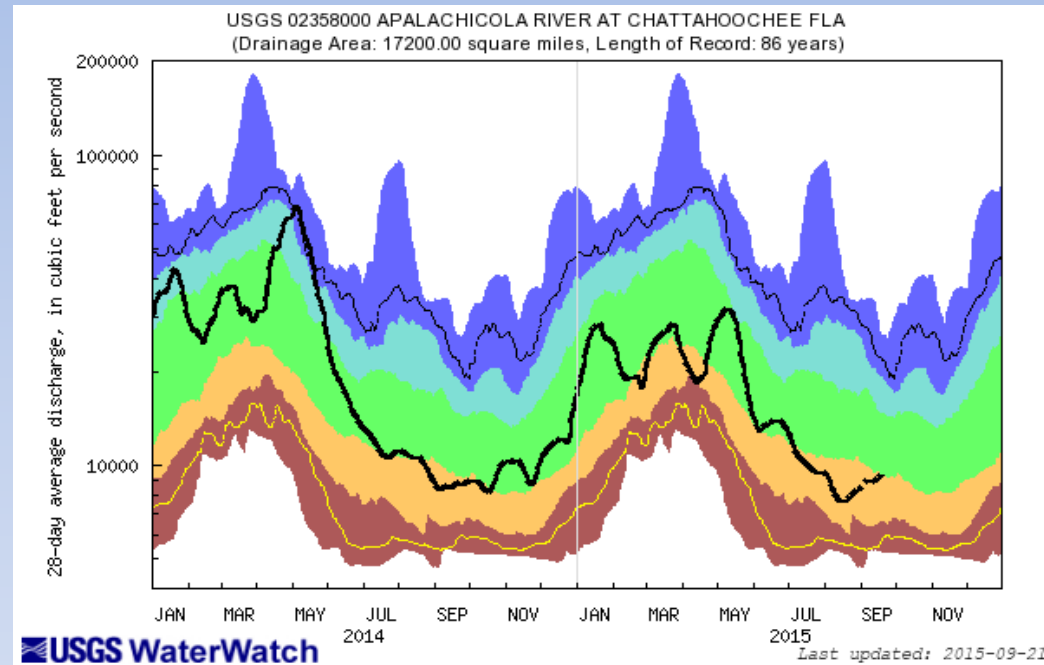
Flint at Bainbridge (02356000)



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)

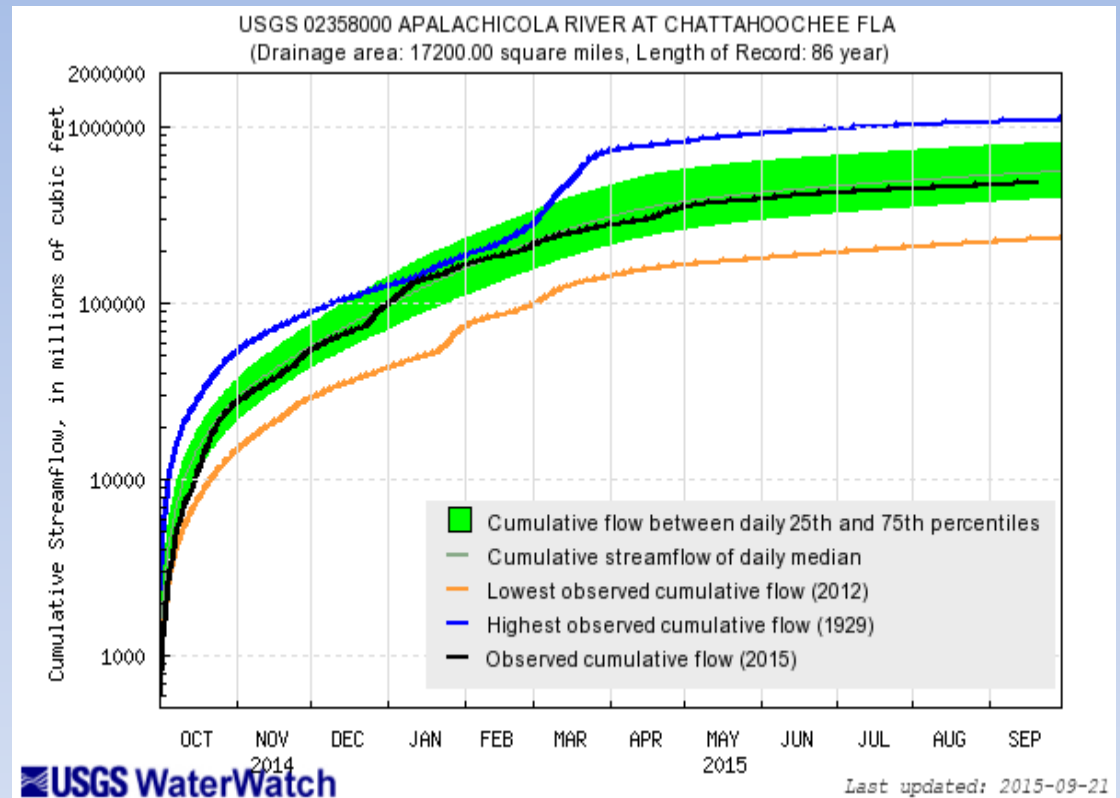


<http://waterwatch.usgs.gov>

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

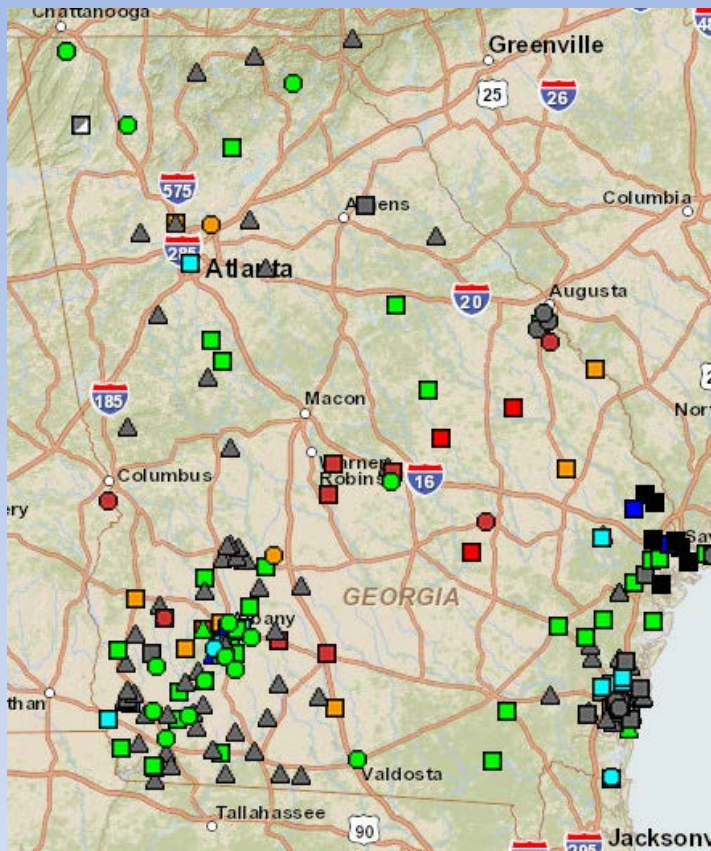
Streamflows

Apalachicola at Chattahoochee (02358000)

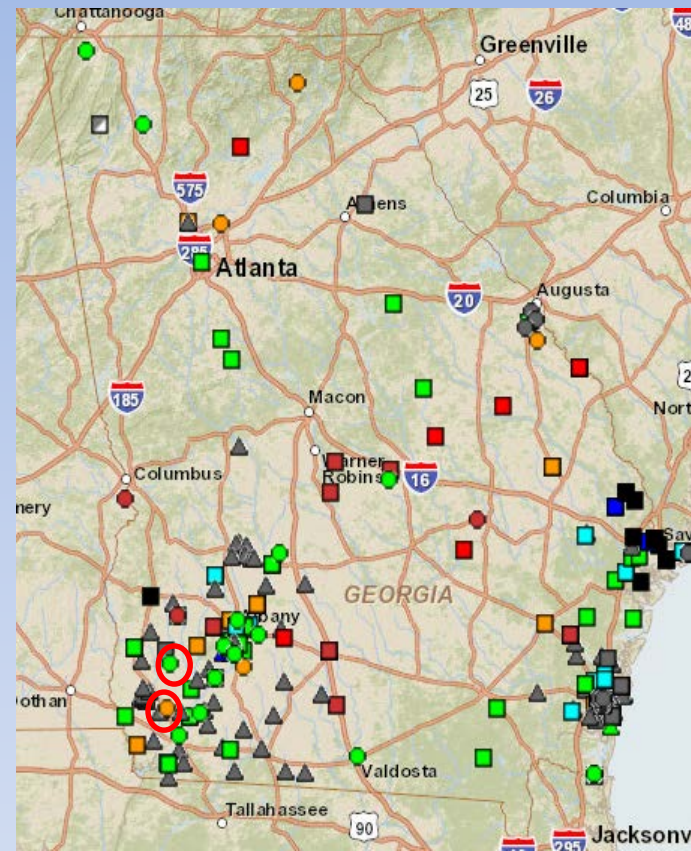


<http://waterwatch.usgs.gov>

Groundwater Conditions



Previous brief

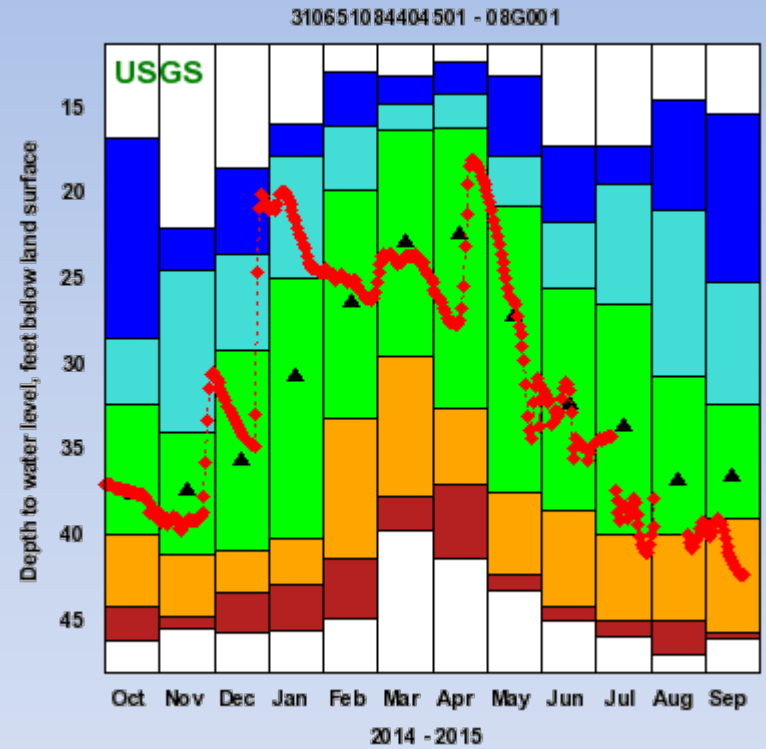
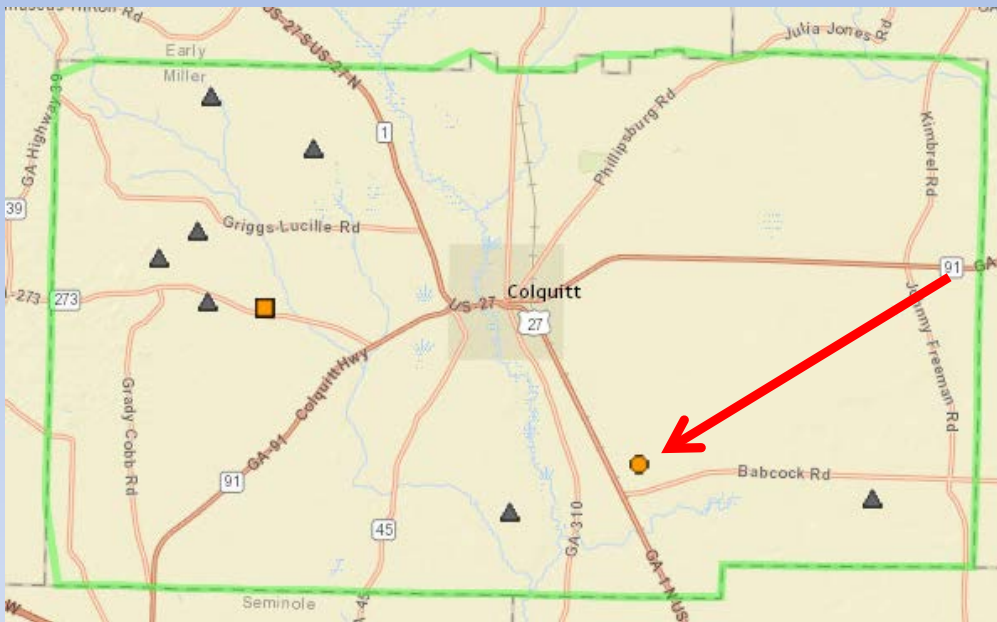


Current brief

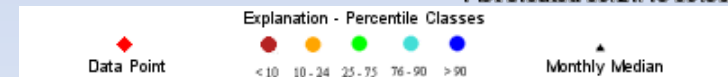
Explanation - Percentile classes (symbol color based on most recent measurement)								Wells		Springs	
●	●	●	●	●	●	●	●	○	○	■	■
Low	<10	10-24	25-75	76-90	>90	High	Not Ranked	□	□	△	△
	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal					Periodic Measurements	

<http://groundwaterwatch.usgs.gov>

Groundwater Status – Miller County 08G001



Plot created 09/21/15 09:56



Explanation - Percentile classes (symbol color based on most recent measurement)								Wells		Springs	
●	●	●	●	●	●	●	●	<input type="checkbox"/>	Real-Time	<input type="checkbox"/>	Continuous
Low	<10	10-24	25-75	76-90	>90	High	Not Ranked	<input type="checkbox"/>	Periodic Measurements	<input type="checkbox"/>	Measurements
	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal						

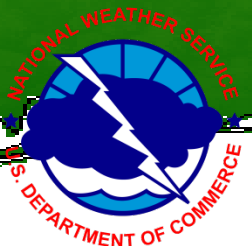
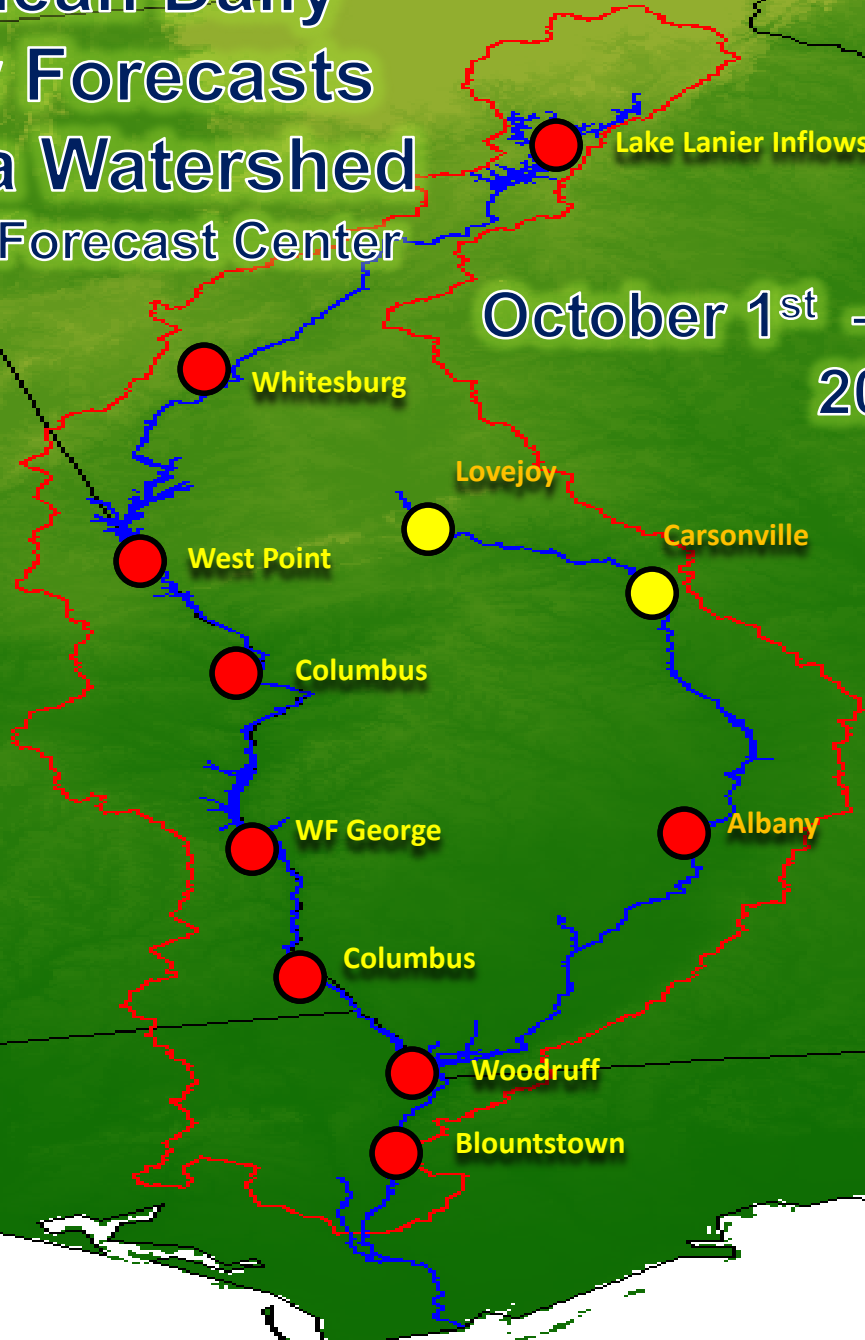
(Upper Floridan Aquifer)

Streamflow Forecasts

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

October 1st – October 31st
2015

-  Above Normal
-  Near Normal
-  Below Normal



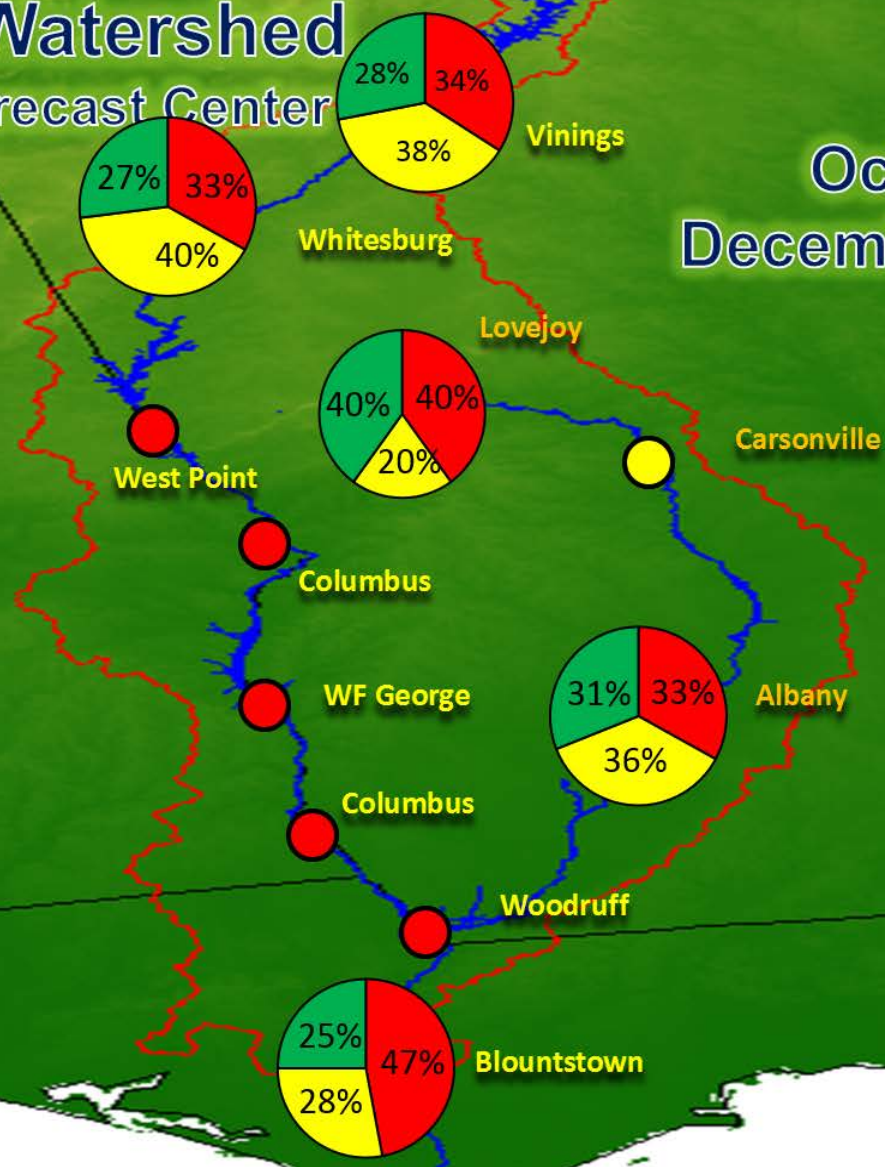
3-Month Mean Daily Streamflow Forecasts

Apalachicola Watershed

Southeast River Forecast Center

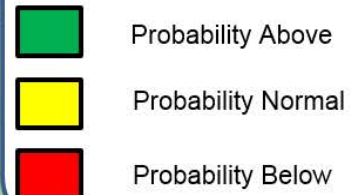
October 1st –
December 31st 2015

-  Above Normal
-  Near Normal
-  Below Normal

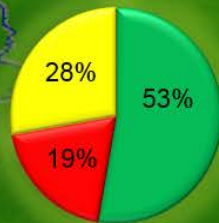


What to expect this Winter and Spring? El Niño and Southeast Streamflow

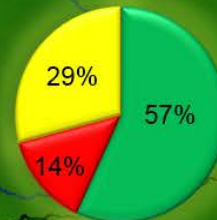
Streamflow November - April



Apalachicola



Altamaha



Satilla

Summary - David Zierden

- Harvest season for row crops in the Southeast, drier weather desirable.
- Mostly normal rainfall the past 30-90 days for upper and middle ACF, below normal in the lower basin.
- Parts of the lower ACF designated as moderate drought by the *US Drought Monitor*.
- El Nino continues to strengthen, reaching “very strong” level (similar to 1982 and 1998).
- El Nino composites show much above normal winter rainfall across most of the ACF
- Streamflow analysis shows increased winter flows on the Apalachicola River during El Nino.
- CPC fall and winter outlooks favor pattern of above normal rainfall for all the Southern U.S., strongest forecast possible for Florida.
- High vertical shear inhibiting hurricanes from impacting the U.S.
- Drought very likely to improve over the next few months.

Summary - Paul Ankcorn

- Realtime streamflows range from normal to much below normal for most of the ACF basin.
- 28-day average streamflows into Lake Lanier are in the normal to below normal range.
- 28-day average streamflows are in the normal to below normal range for most of the Flint River basin.
- Groundwater levels are in the normal to below normal range in Southwest Georgia.

Summary - Jeff Dobur

- 1 Month Streamflow forecast - Near to Below Normal
- 3 Month Streamflow forecast – Equal chances using ESP method. Hedge ENSO = higher flows.
- Pie Charts do not consider any future forecast such as ENSO, CPC or other. Based on soil conditions relative to normal in concert with historical precipitation.

Questions, Comments, Discussion

References

Speakers

David Zierden, FSU

Paul Ankorn, 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

October 27, 2015, 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