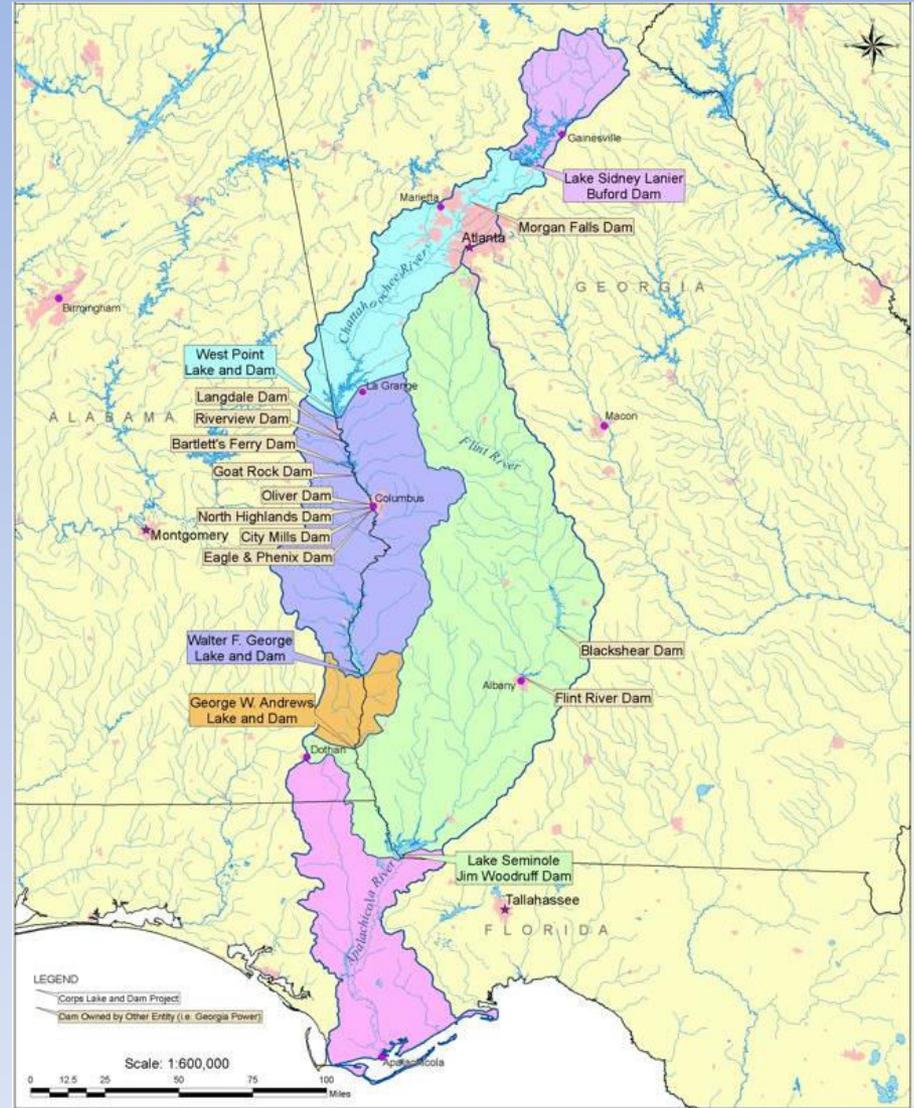
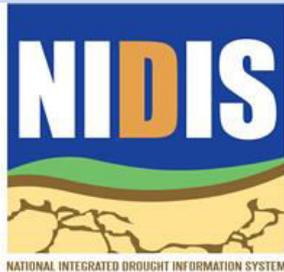


National Integrated Drought Information System

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

14 June 2016

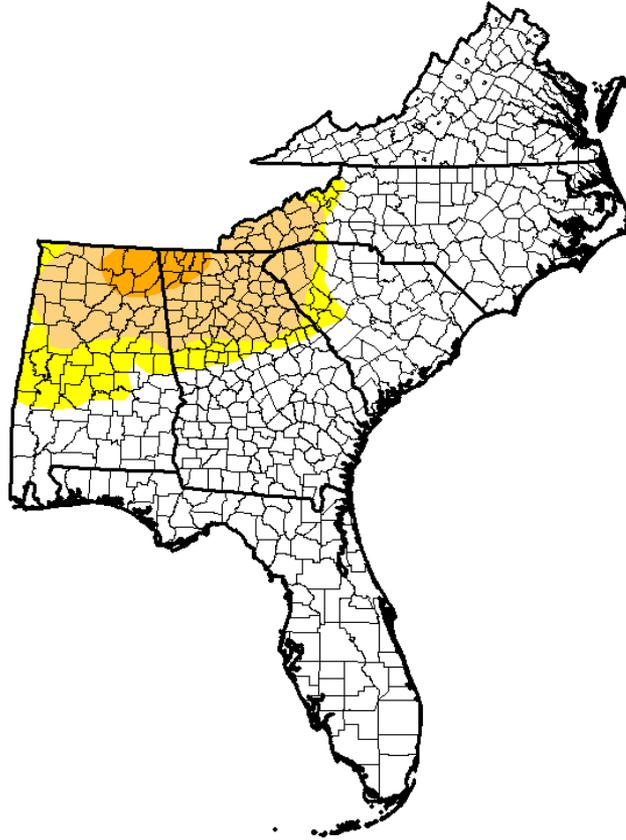


Outline

Welcome – Eric Reutebuch, AU Water Resources Center

- Current drought status, seasonal forecasts and outlooks – David Zierden, Florida Climate Center, FSU
- Streamflows and groundwater – Paul Ankorn, USGS
- Streamflow forecasts – Todd Hamill, SERFC
- ACF reservoir conditions – Cynthia Donald, Water Management Section, United States Army Corps of Engineers
- Summary and Discussion

Current drought status



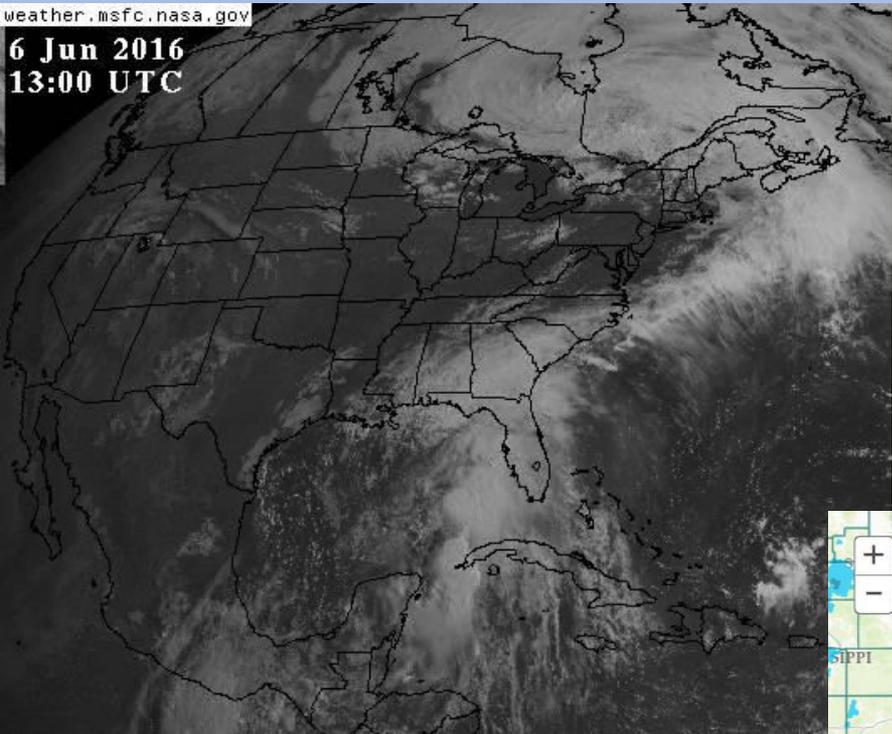
Intensity:

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

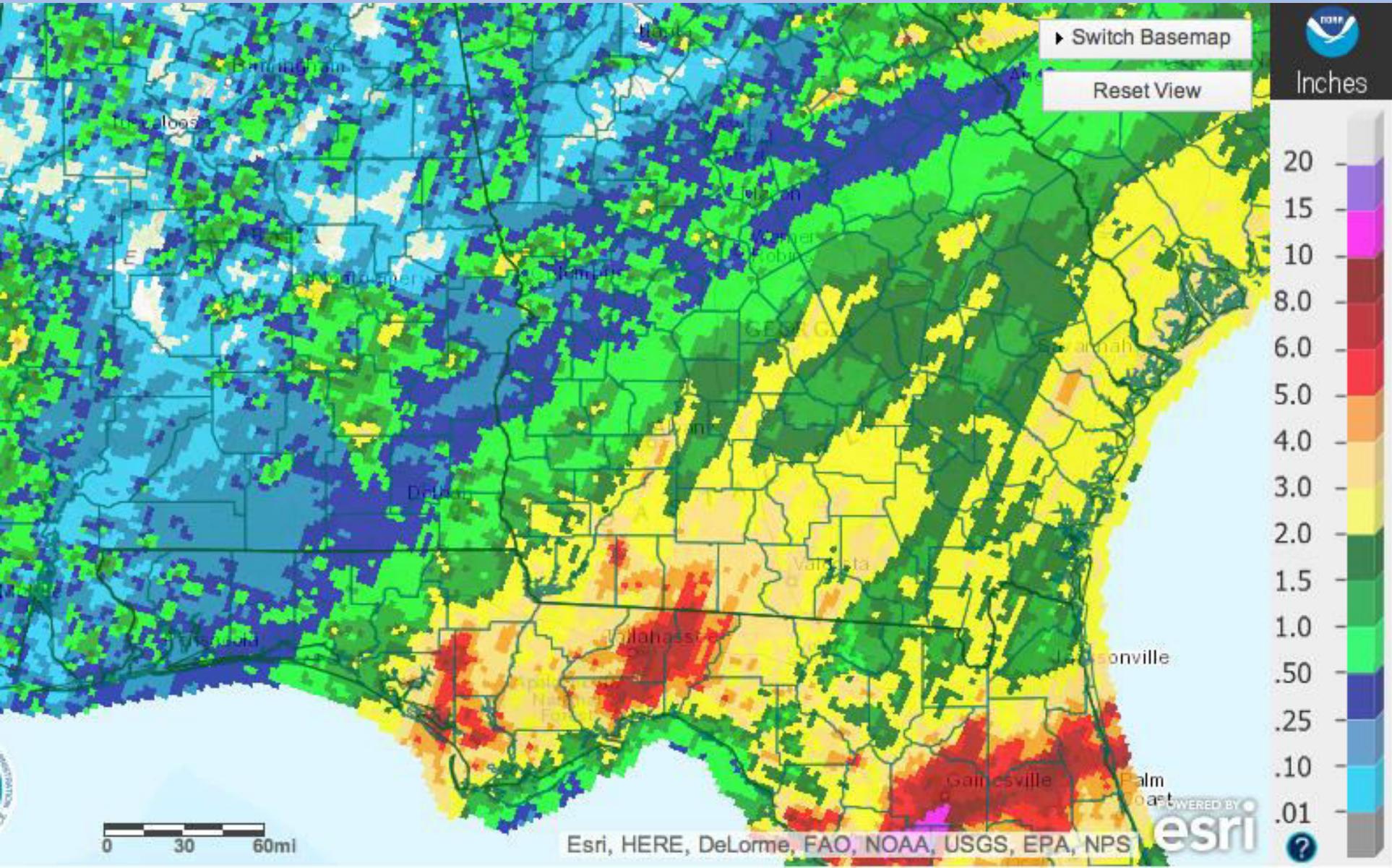
-  D3 - Extreme Drought
-  D4 - Exceptional Drought

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

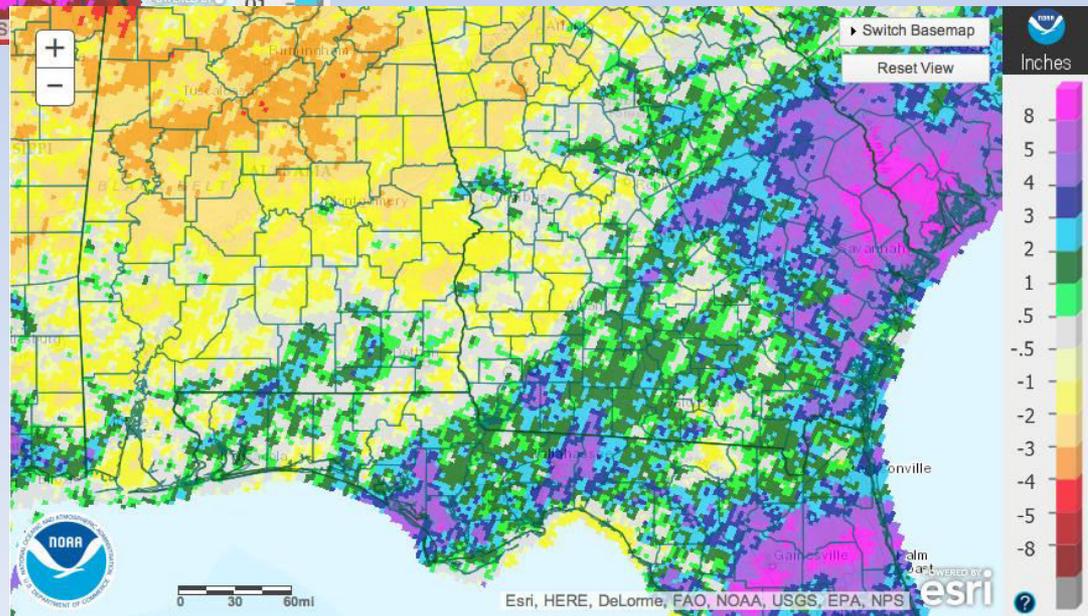
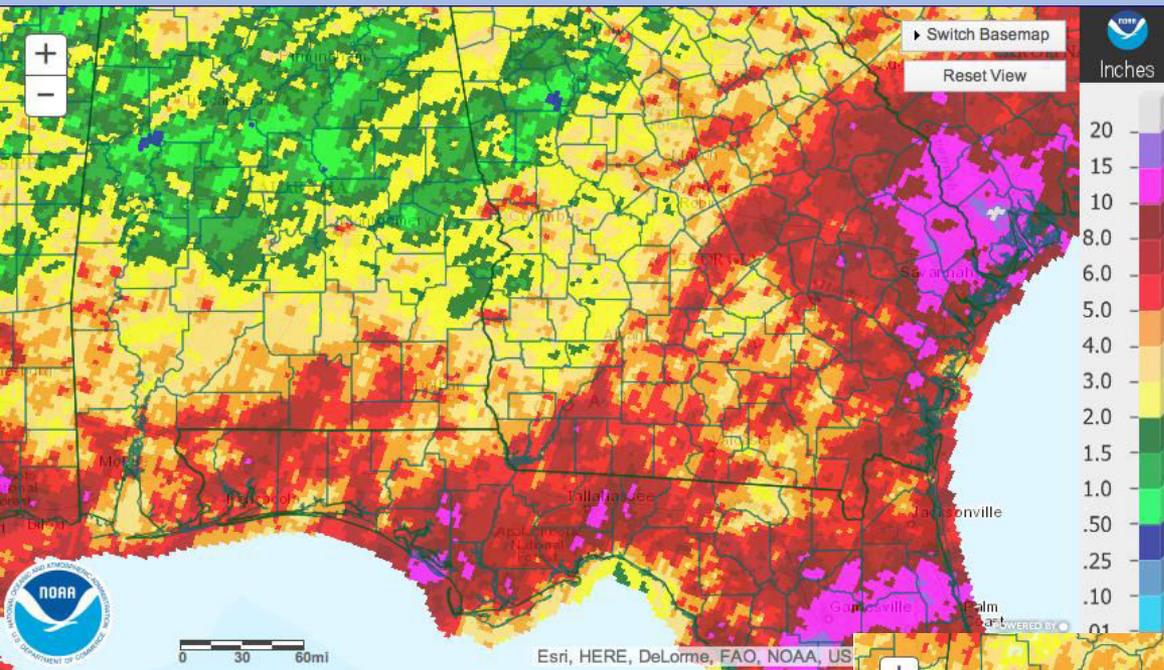
Tropical Storm Colin (June 7th)



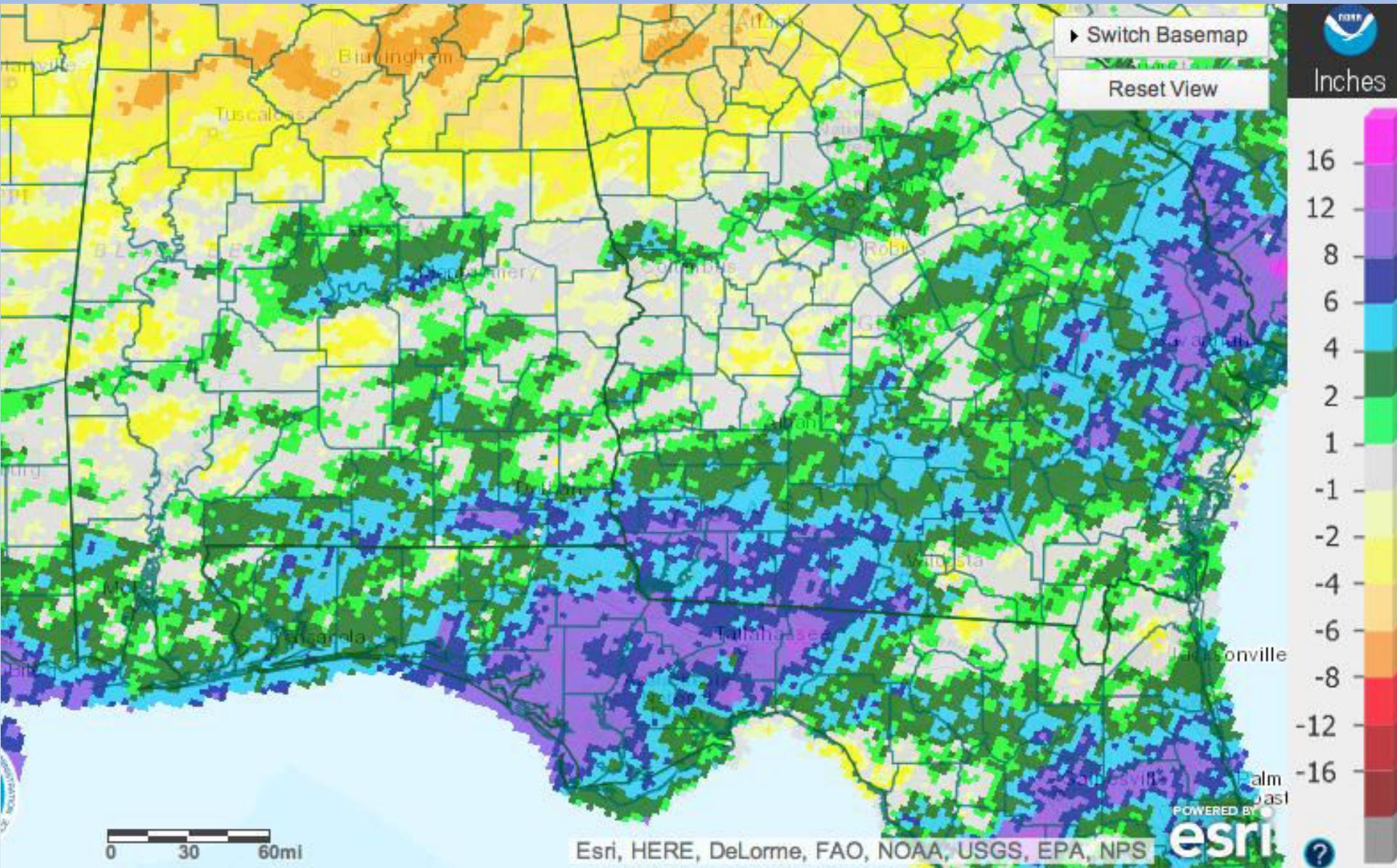
Rainfall – Last 7 Days



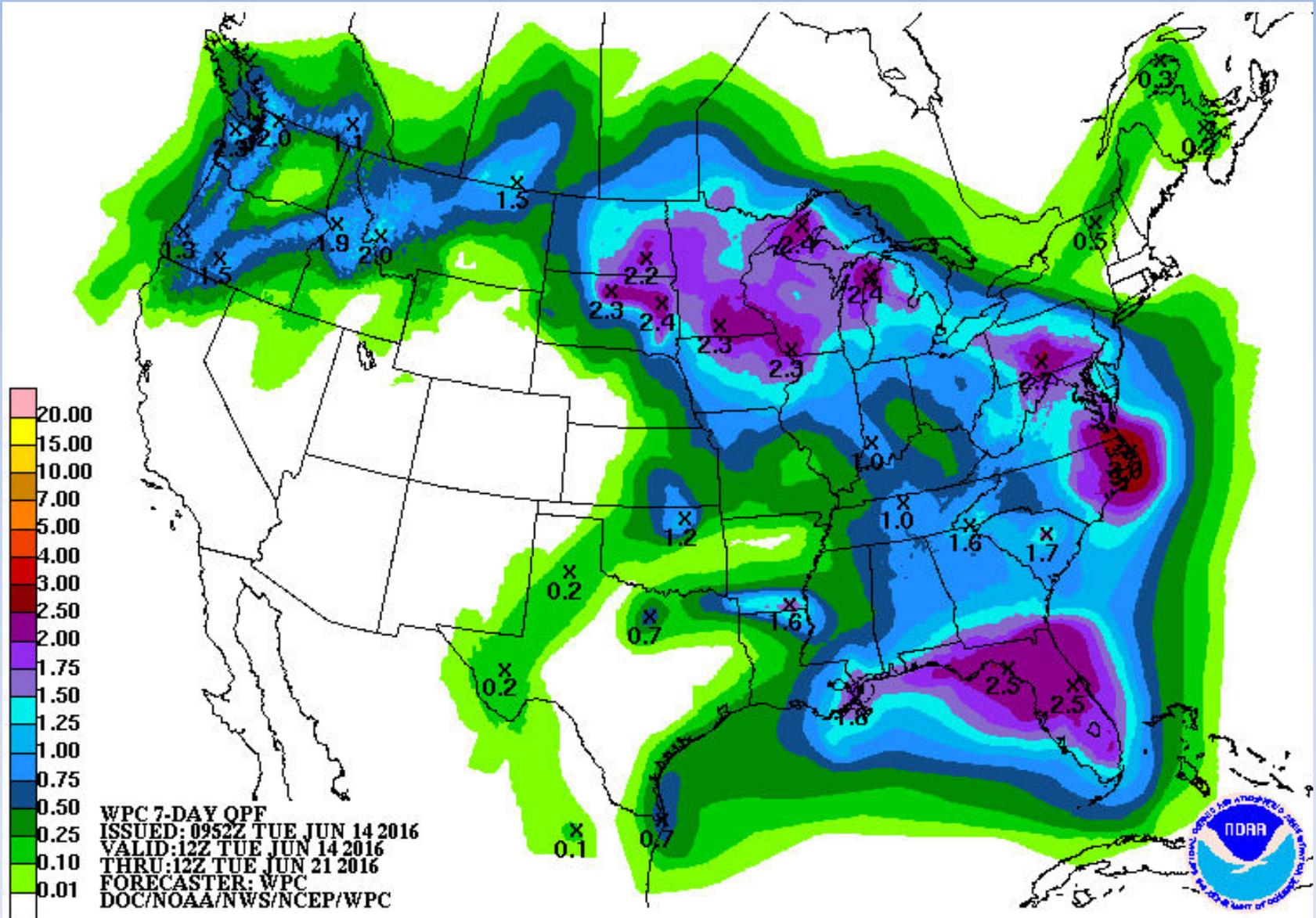
Rainfall – Last 30 Days



90-day Rainfall Departures

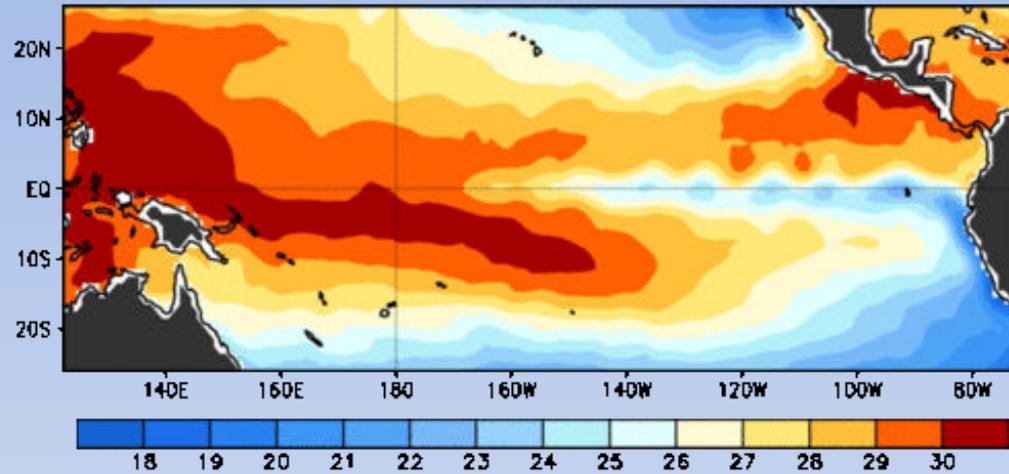


7-Day Precipitation Forecast

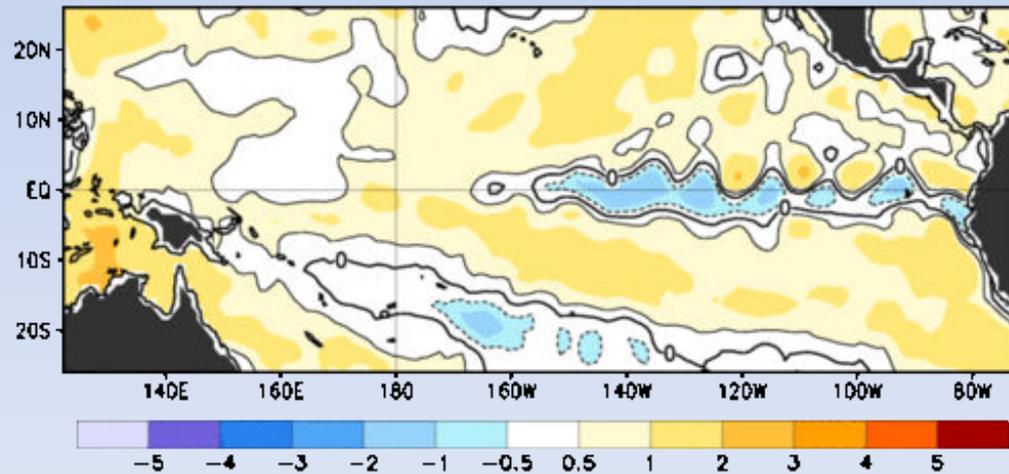


Current SST Anomalies

Observed Sea Surface Temperature (°C)

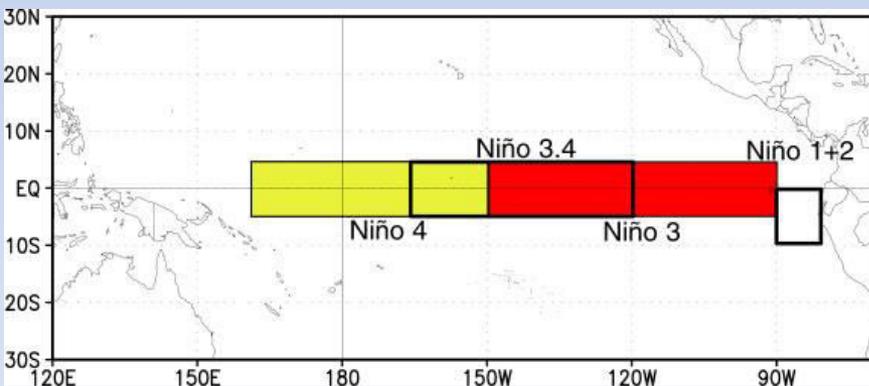
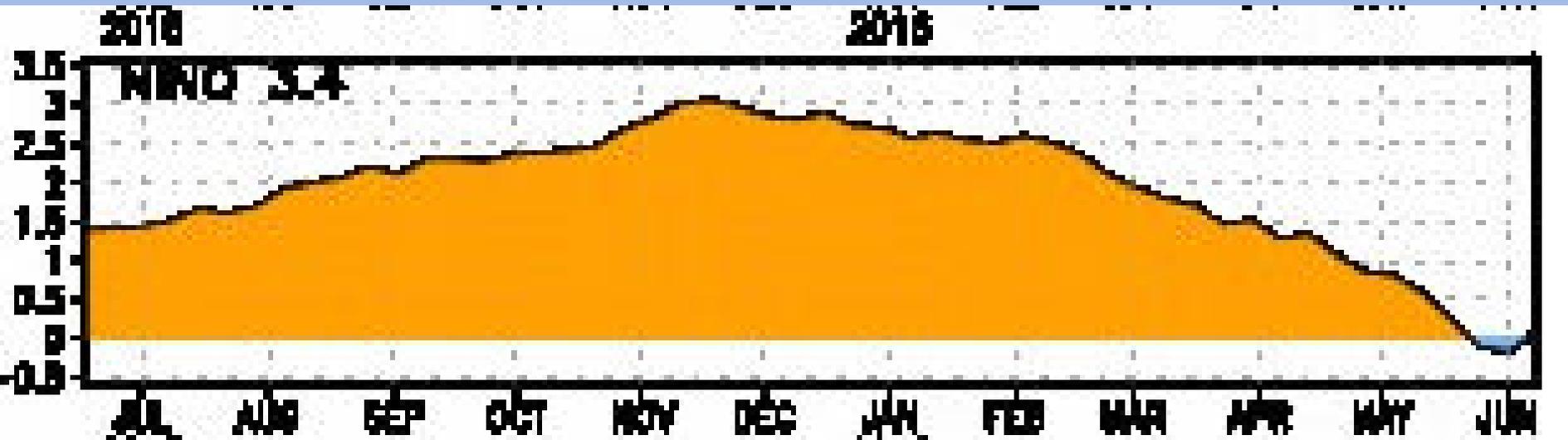


Observed Sea Surface Temperature Anomalies (°C)



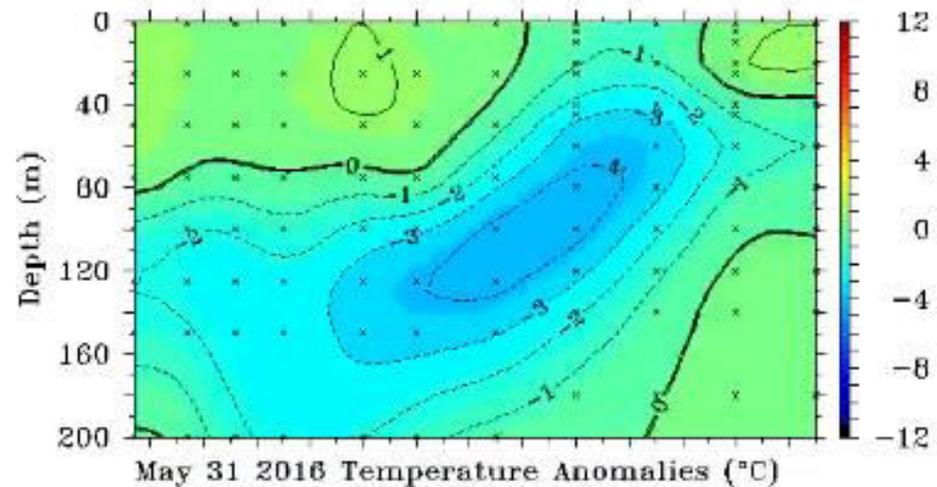
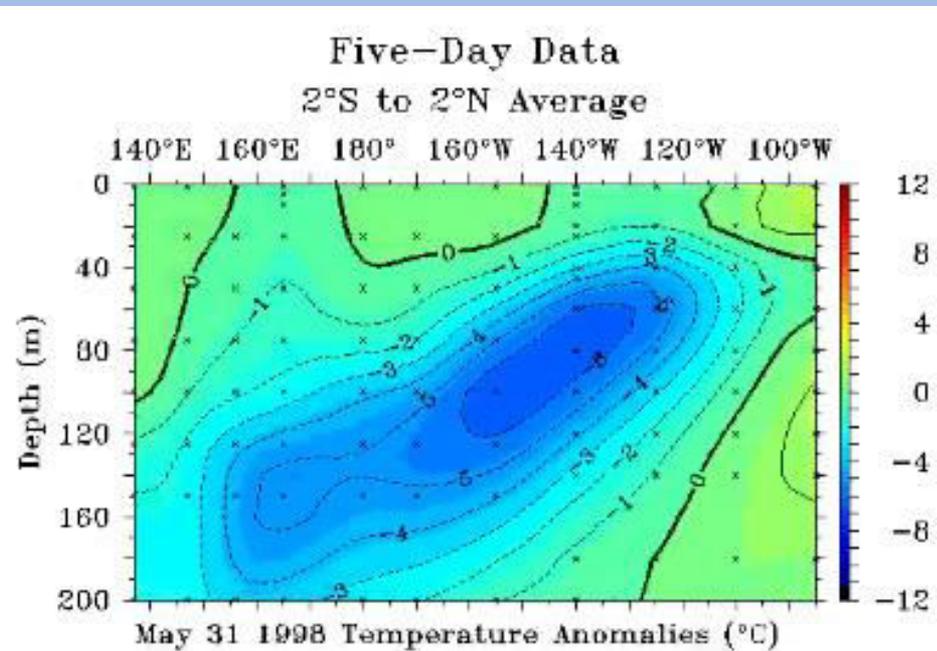
7-day Average Centered on 08 June 2016

El Nino on the decline



- Weekly Nino 3.4 index currently at +0.1
- Similar decline as 1998
- Cold water confined to thin strip along the equator

Subsurface Temperatures

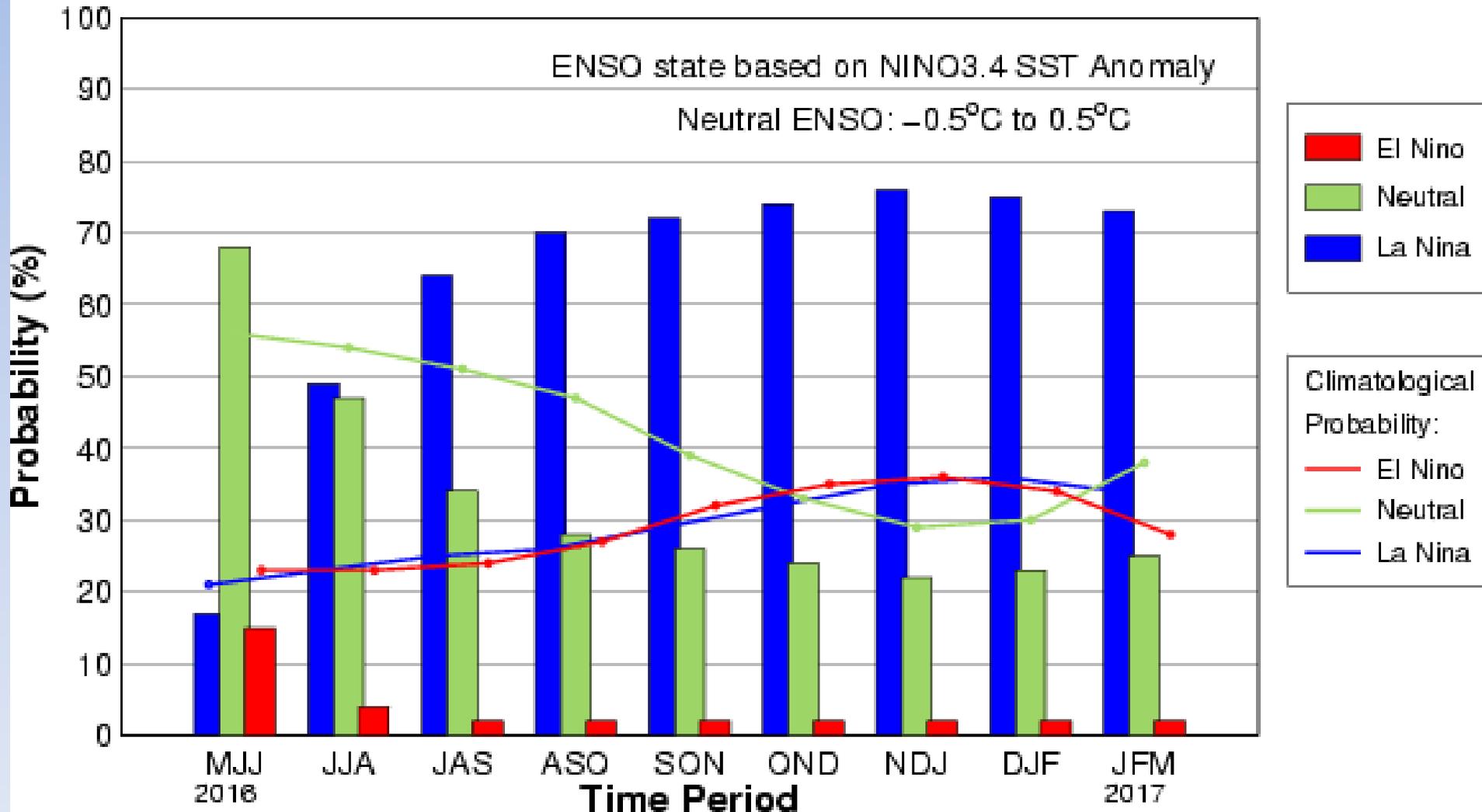


La Nina on the Way?

Early-Jun CPC/IRI Official Probabilistic ENSO Forecast

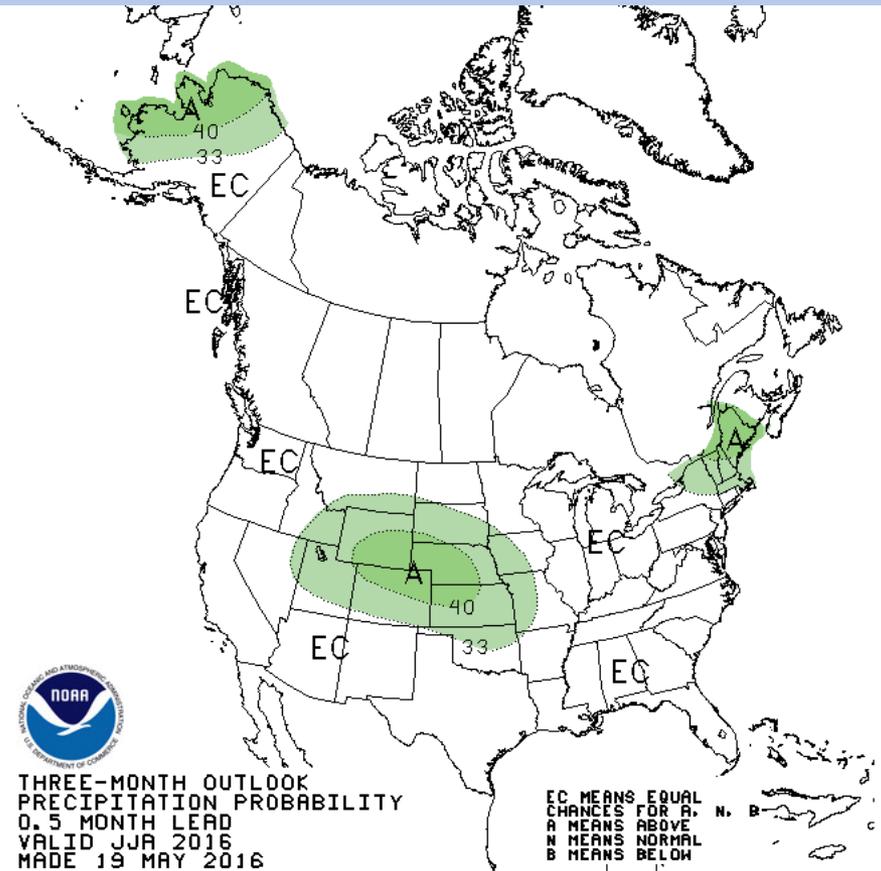
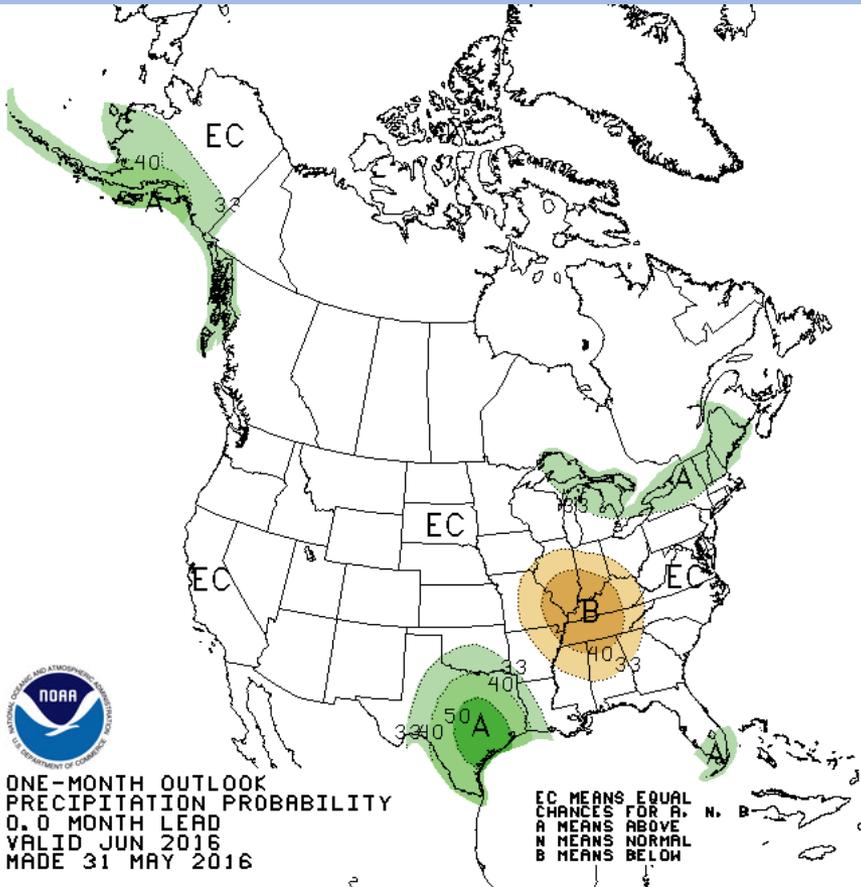
ENSO state based on NINO3.4 SST Anomaly

Neutral ENSO: -0.5°C to 0.5°C



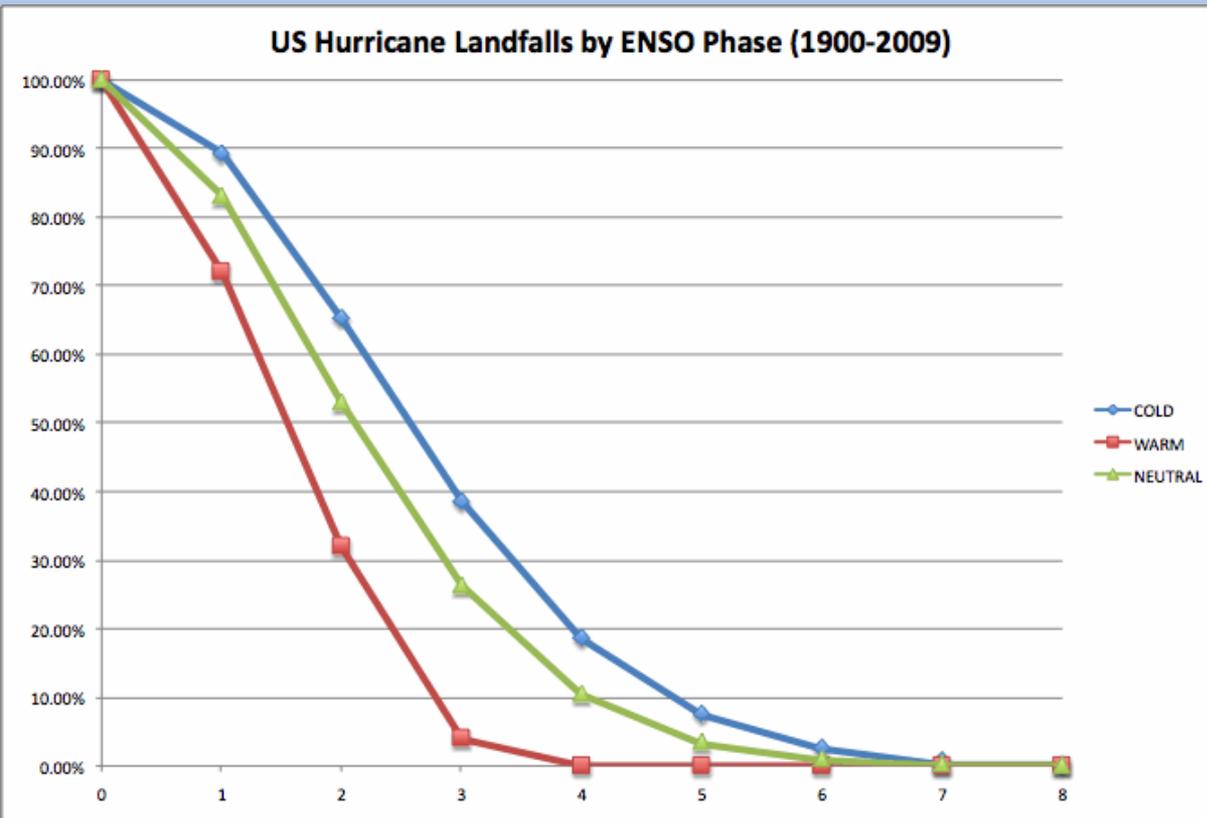
Official NOAA Outlook

One Month



Three-month

Hurricane Season Forecast

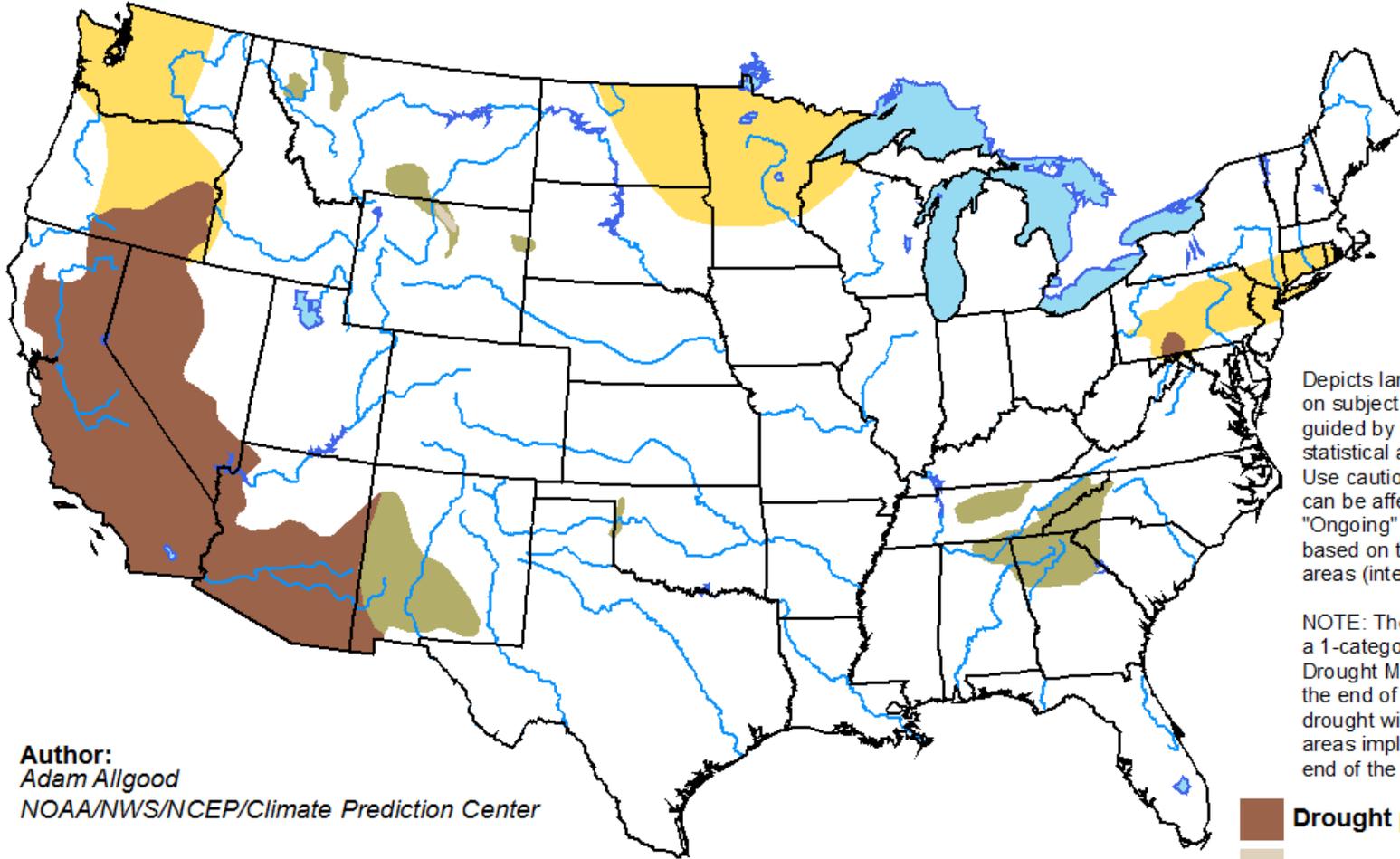


- CSU predicts 12 named storms, 5 hurricanes, and 2 major hurricanes
- NOAA forecasts 70% chance of 10-16 storms, 4-8 hurricanes, 1-4 major hurricanes.
- 2 or more U.S. hurricane landfalls twice as likely during La Nina

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for May 19 - August 31, 2016
Released May 19, 2016

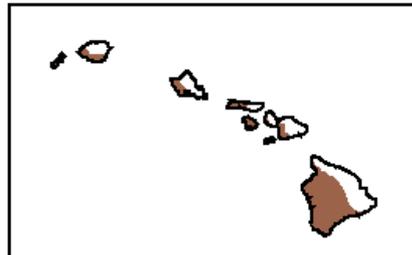
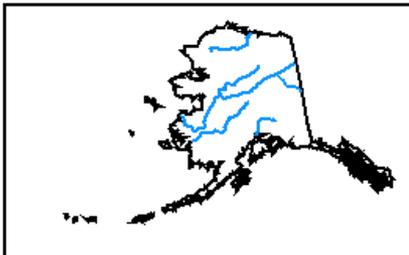


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to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

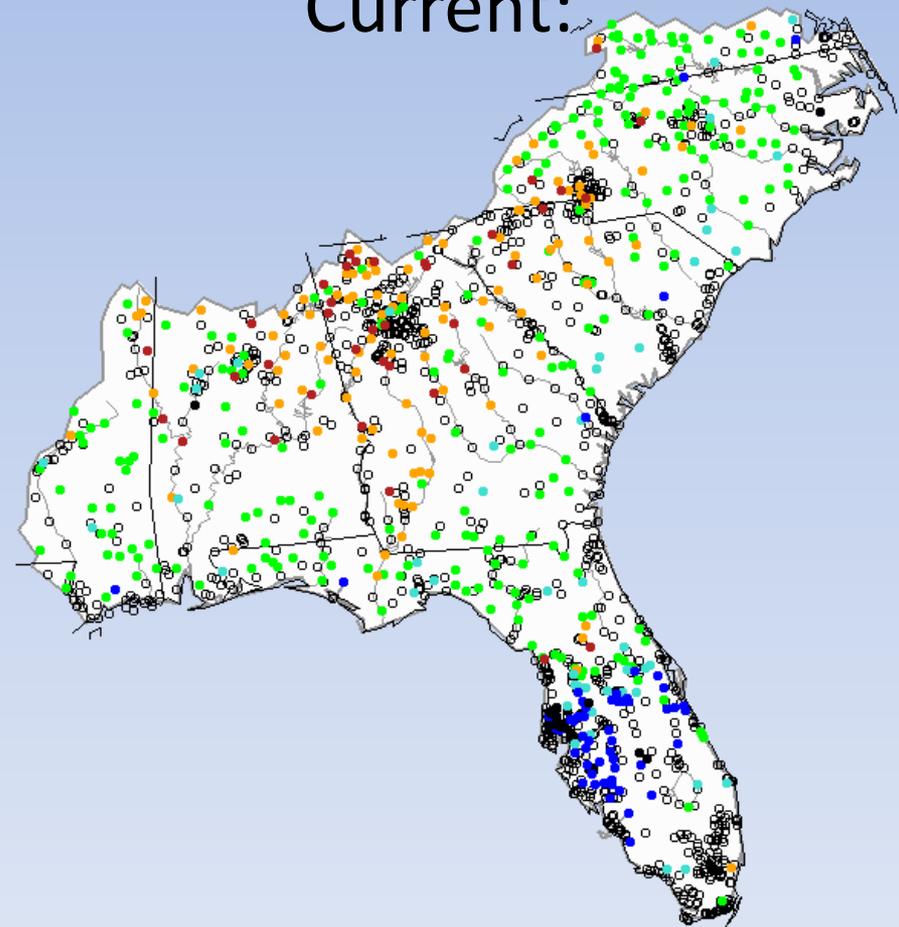
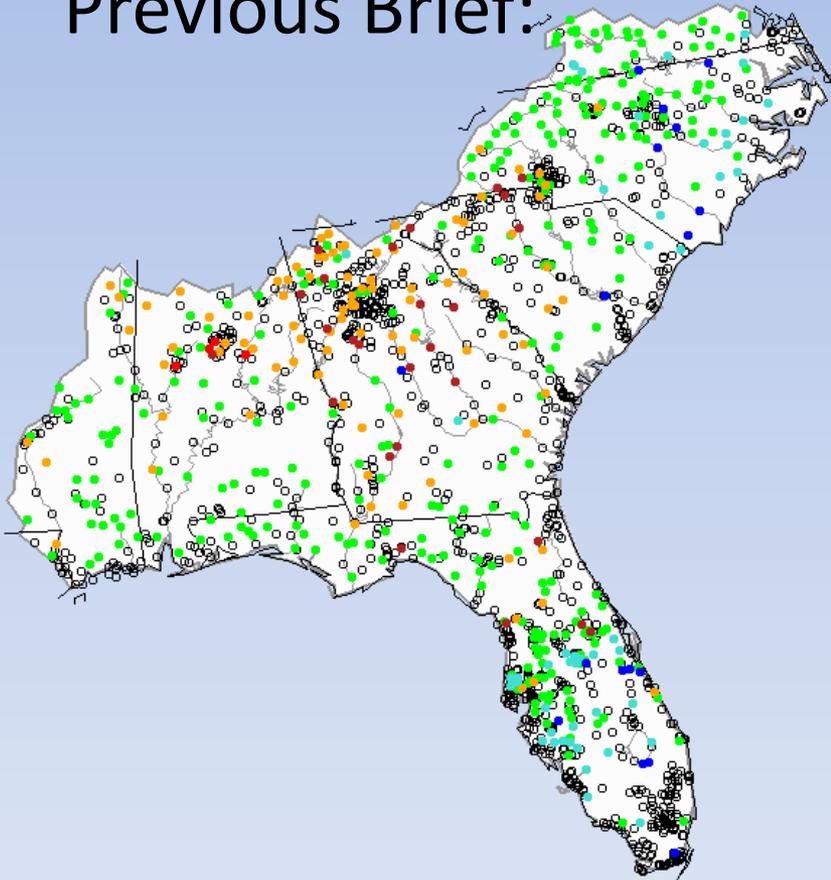
Realtime stream flow compared with historical monthly averages

Monday, May 16, 2016 14:30ET

Tuesday, June 14, 2016 07:30ET

Previous Brief:

Current:



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>

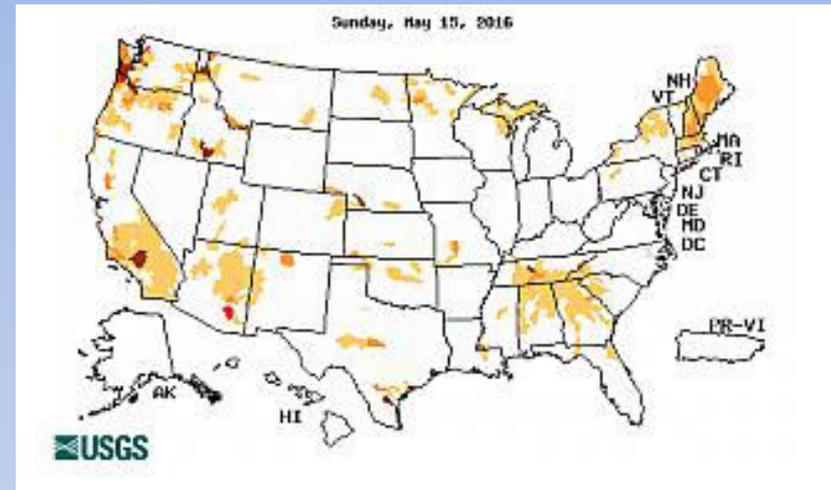
Below Normal 7-day Average Streamflows

Previous brief:

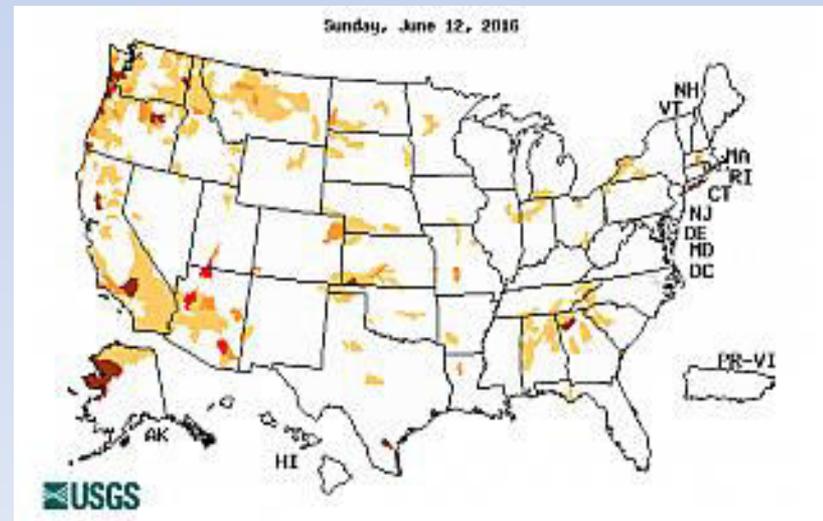
Below normal 7-day average streamflow as compared with historical streamflow for day shown

Current:

<http://waterwatch.usgs.gov>



Explanation - Percentile classes				
Low	<=5	6-9	10-24	Discontinued from hydrologic map
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

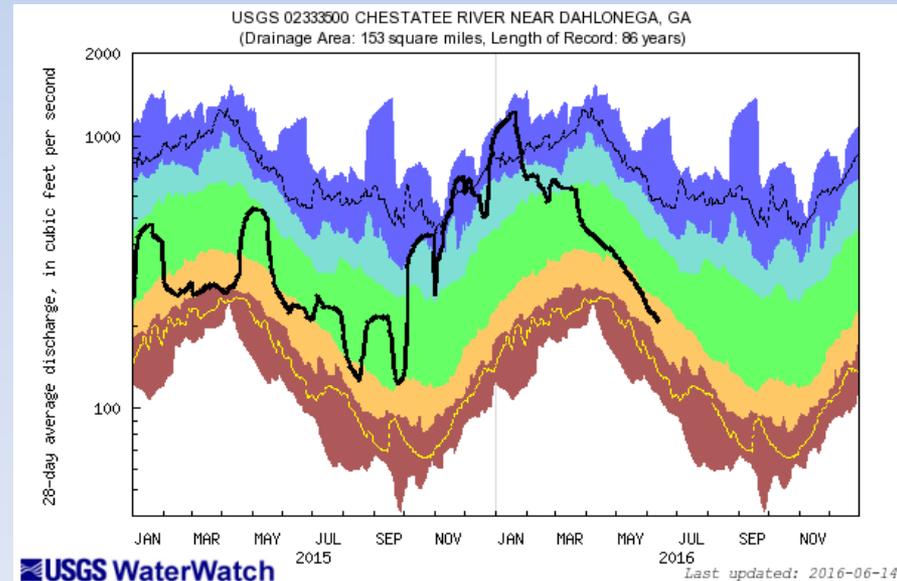
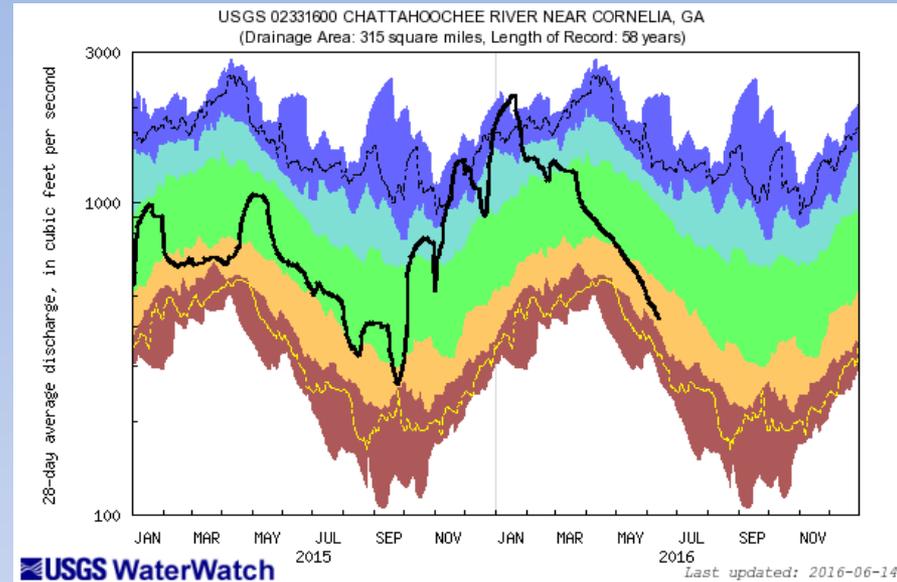


Lake Lanier Inflows

Chattahoochee near
Cornelia (02331600)

<http://waterwatch.usgs.gov>

Chestatee near
Dahlonega (02333500)



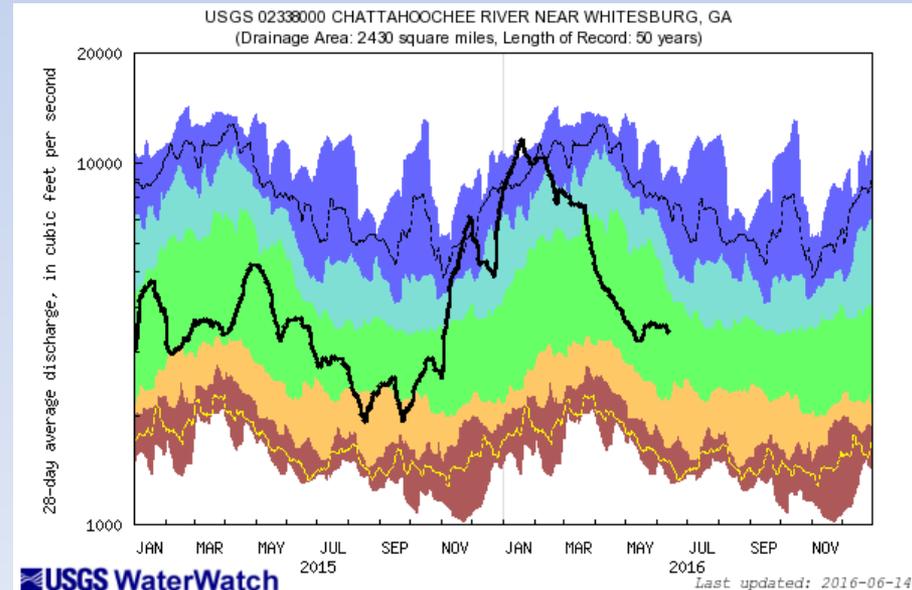
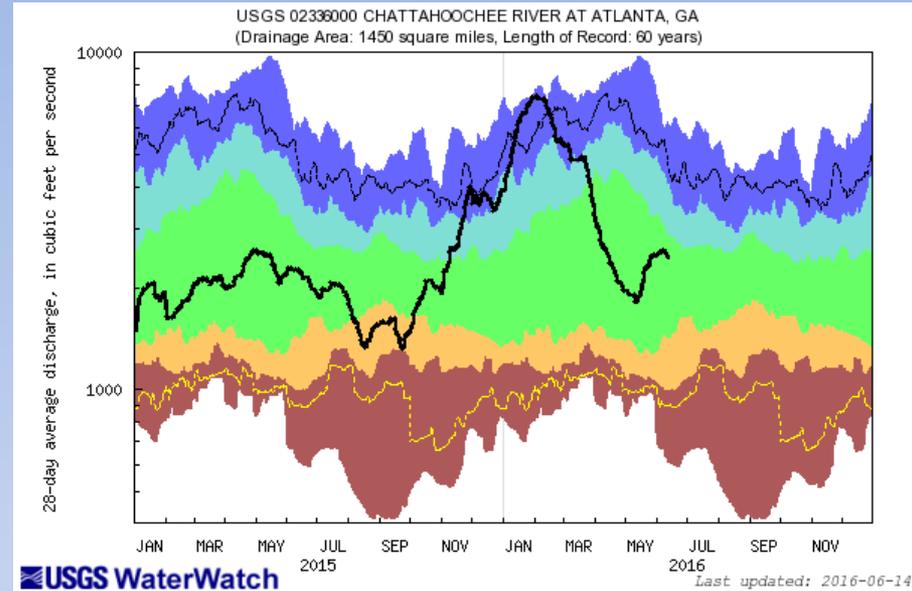
Explanation - Percentile classes							Flow
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest	
Much below Normal	Below normal	Normal	Above normal	Much above normal			

Current Streamflows

Chattahoochee at Atlanta (02336000)

<http://waterwatch.usgs.gov>

Chattahoochee near Whitesburg (02338000)



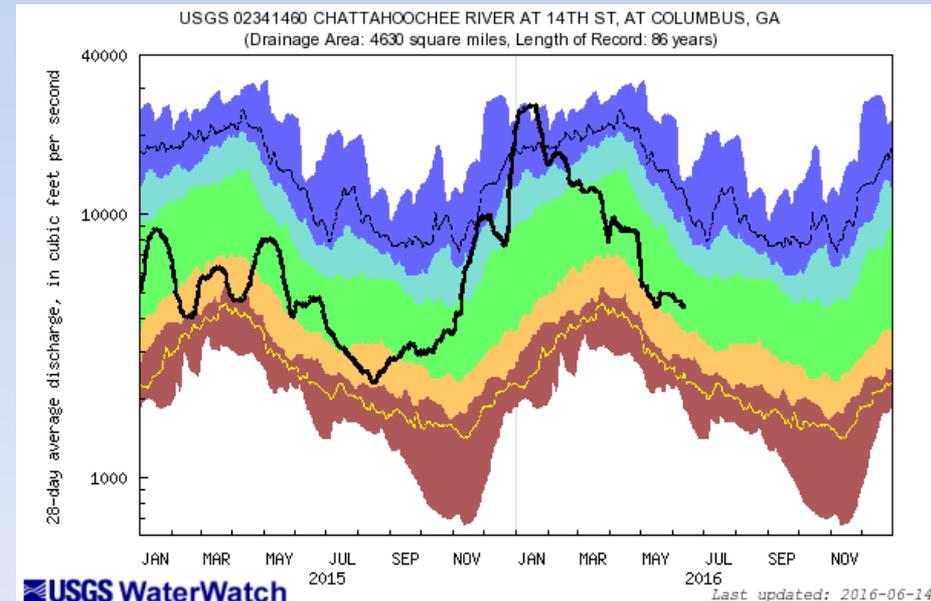
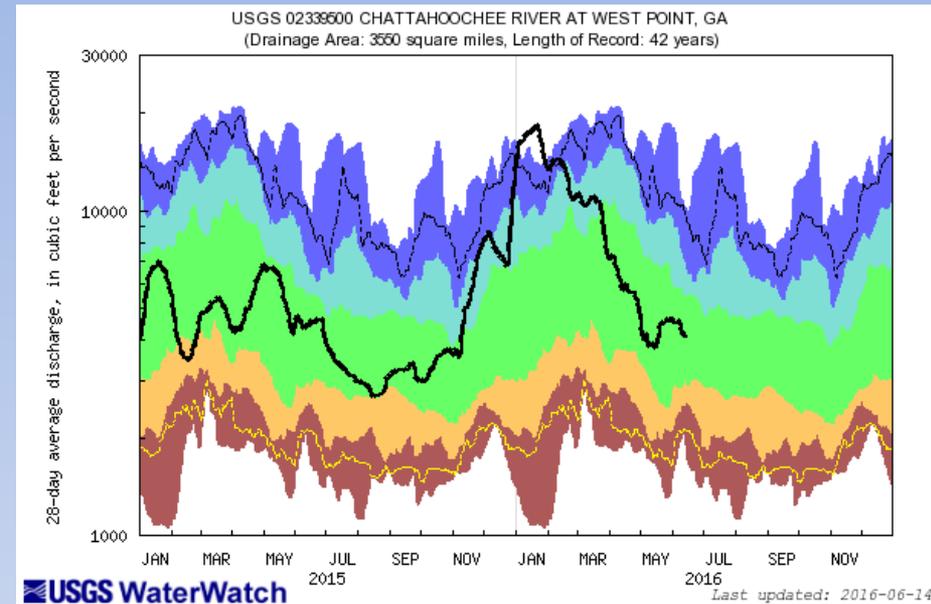
Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow

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	90th percentile - highest	
Much below Normal	Below normal	Normal	Above normal	Much above normal			

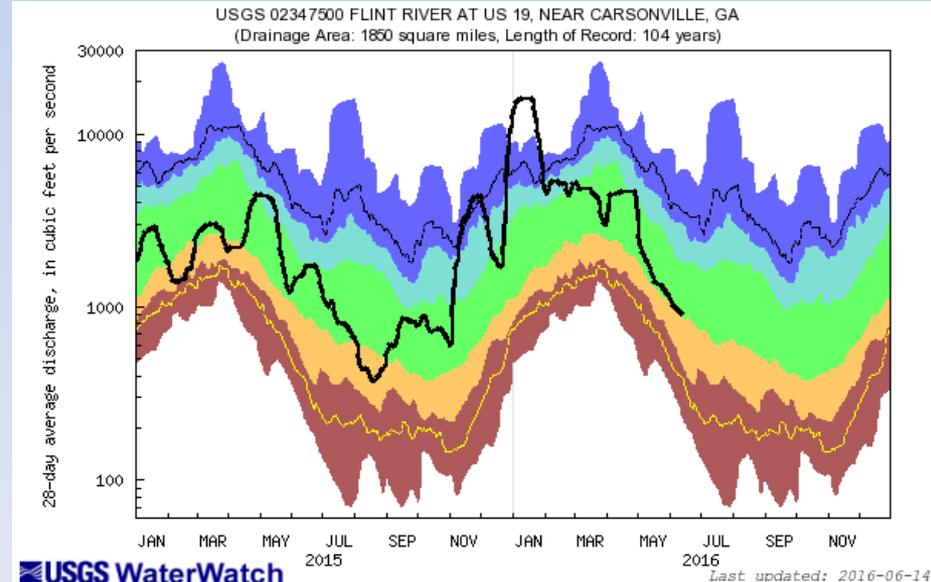
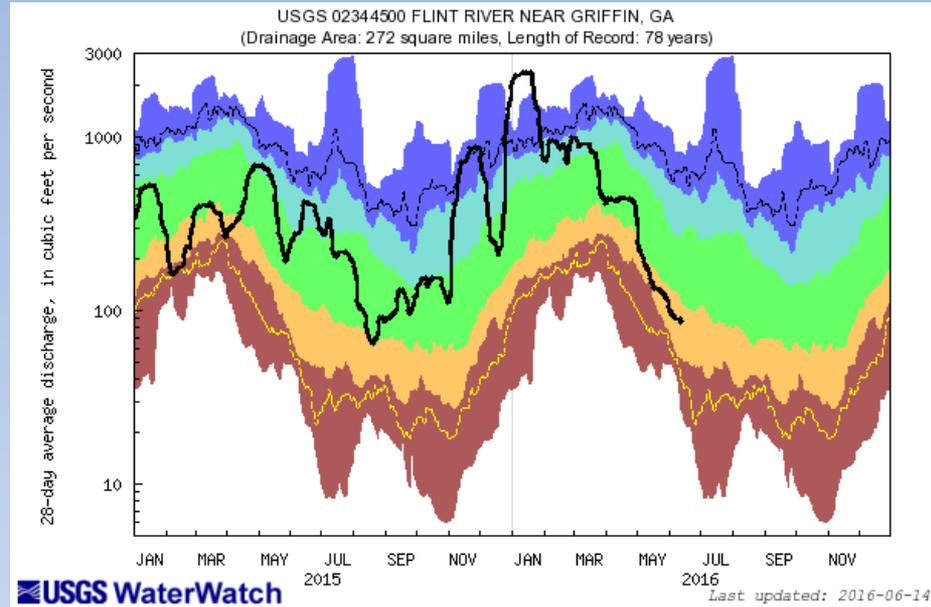
Current Streamflows

Flint River near Griffin (02344500)

<http://waterwatch.usgs.gov>

Flint River near Carsonville (02347500)

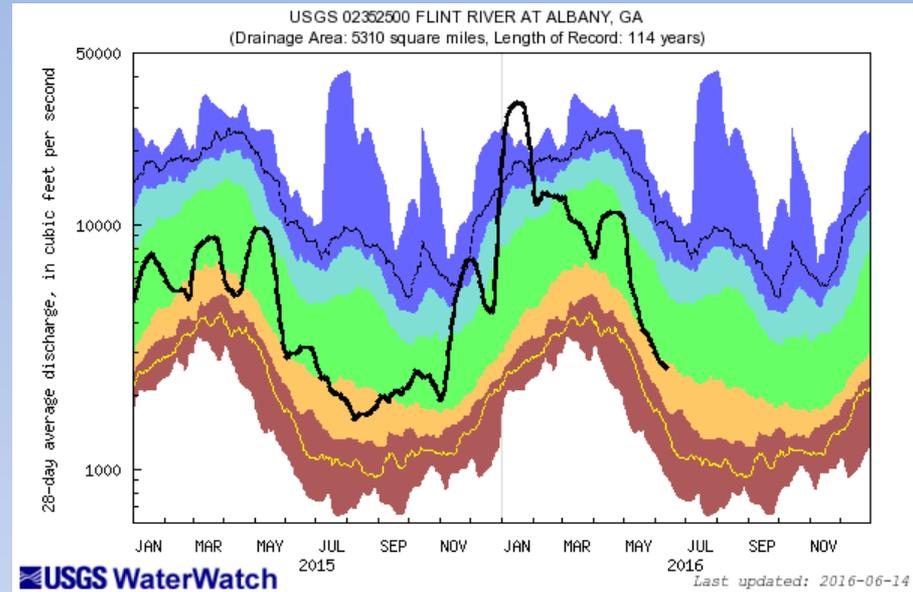
Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile - highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow



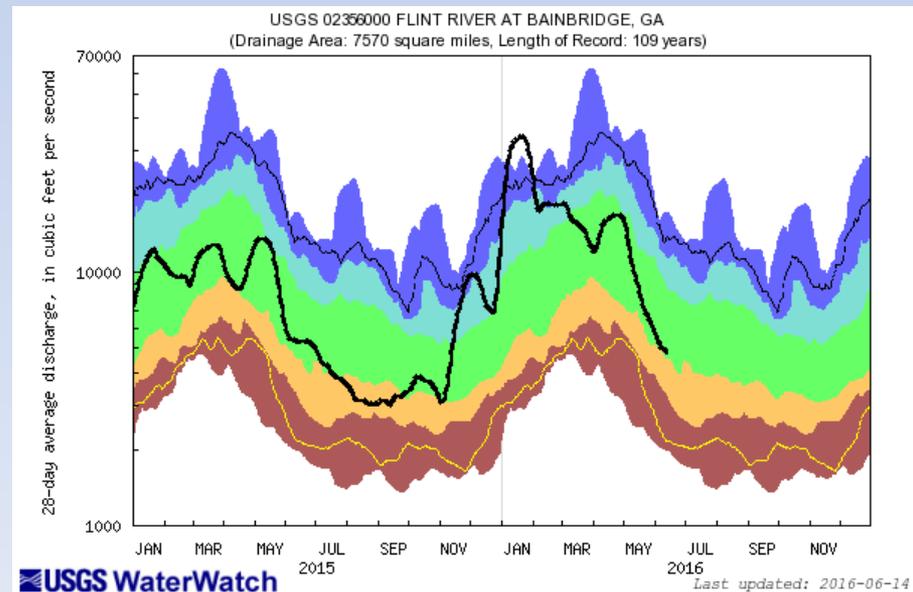
Current Streamflows

Flint River at Albany (02352500)

<http://waterwatch.usgs.gov>



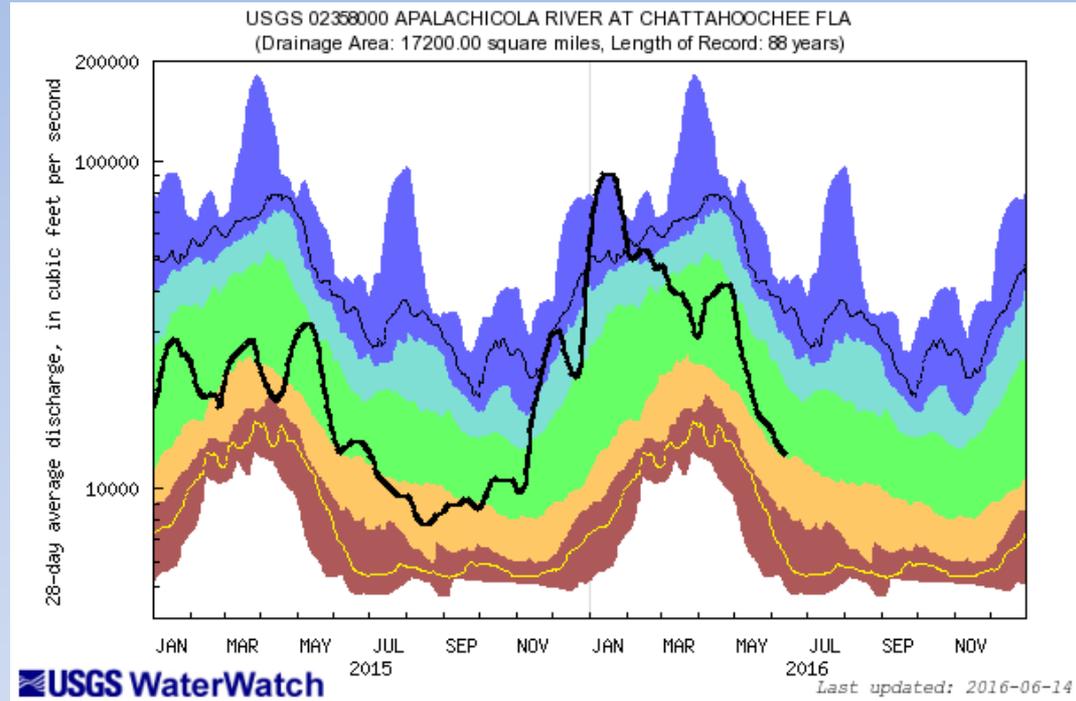
Flint at Bainbridge (02356000)



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

Streamflows

Apalachicola at Chattahoochee (02358000)

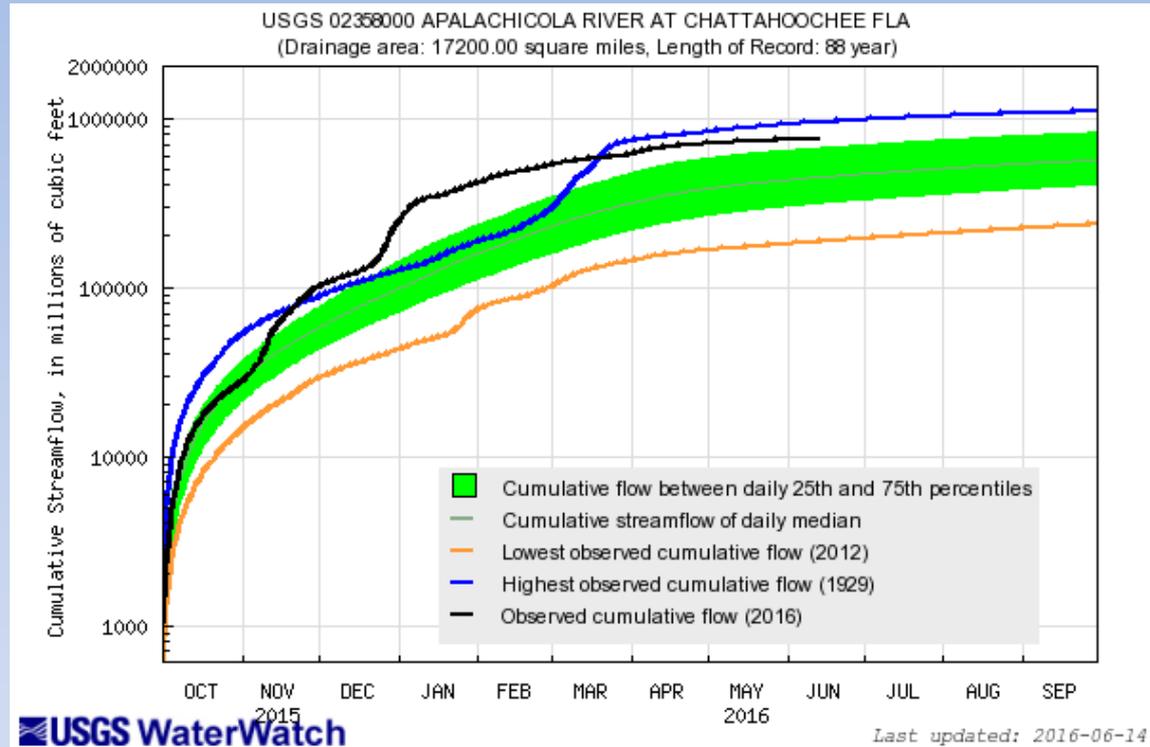


<http://waterwatch.usgs.gov>

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

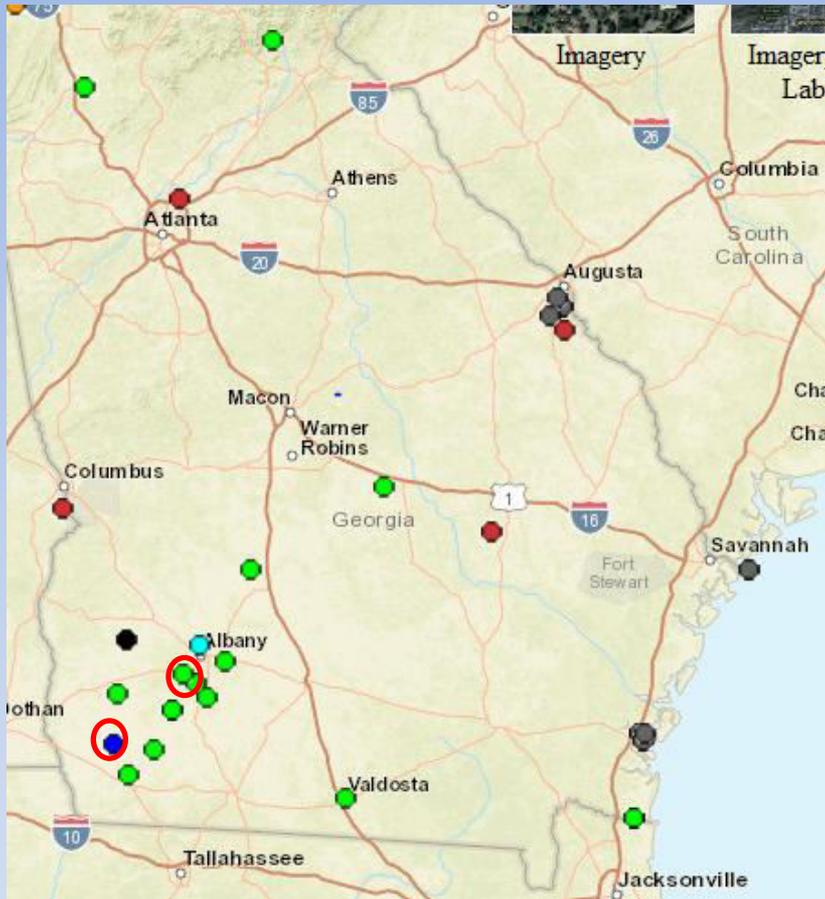
Streamflows

Apalachicola at Chattahoochee (02358000)

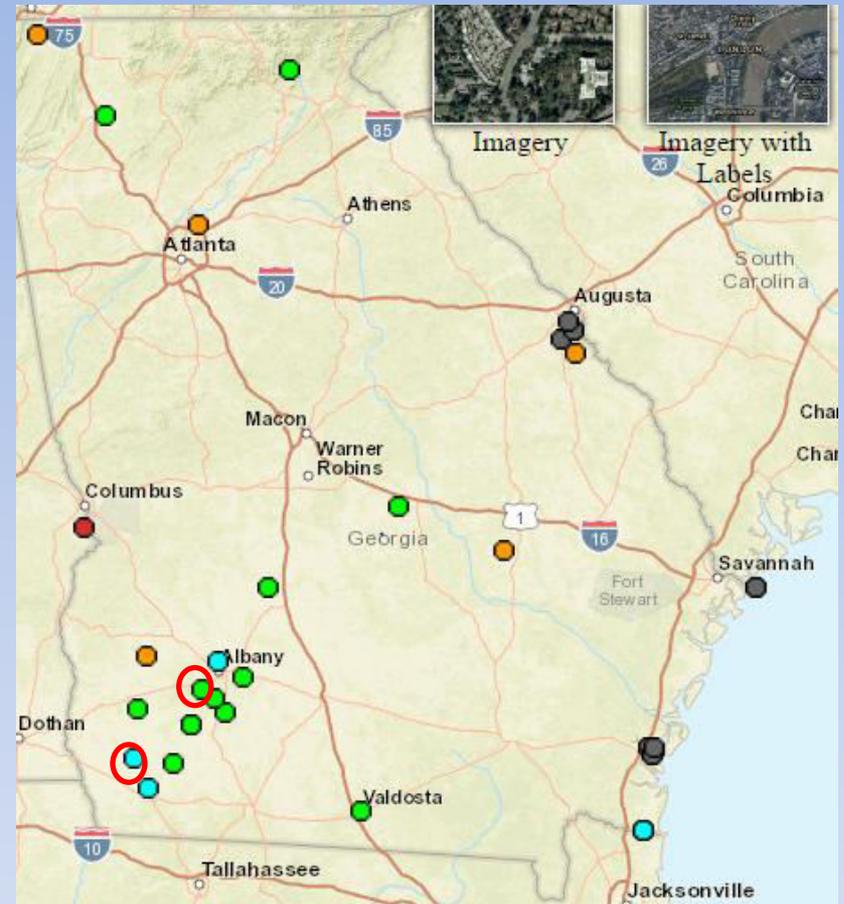


<http://waterwatch.usgs.gov>

Groundwater Conditions



Previous brief

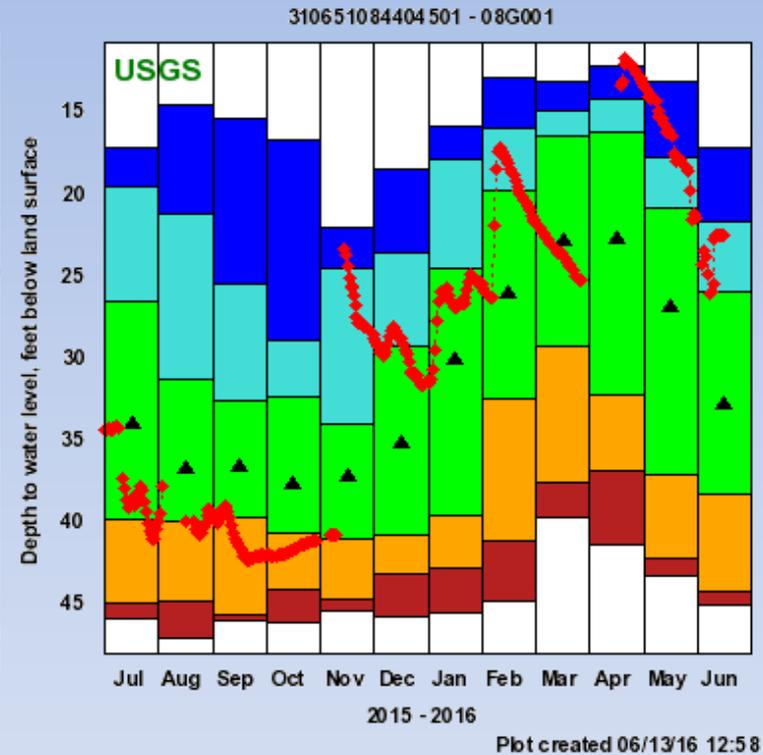
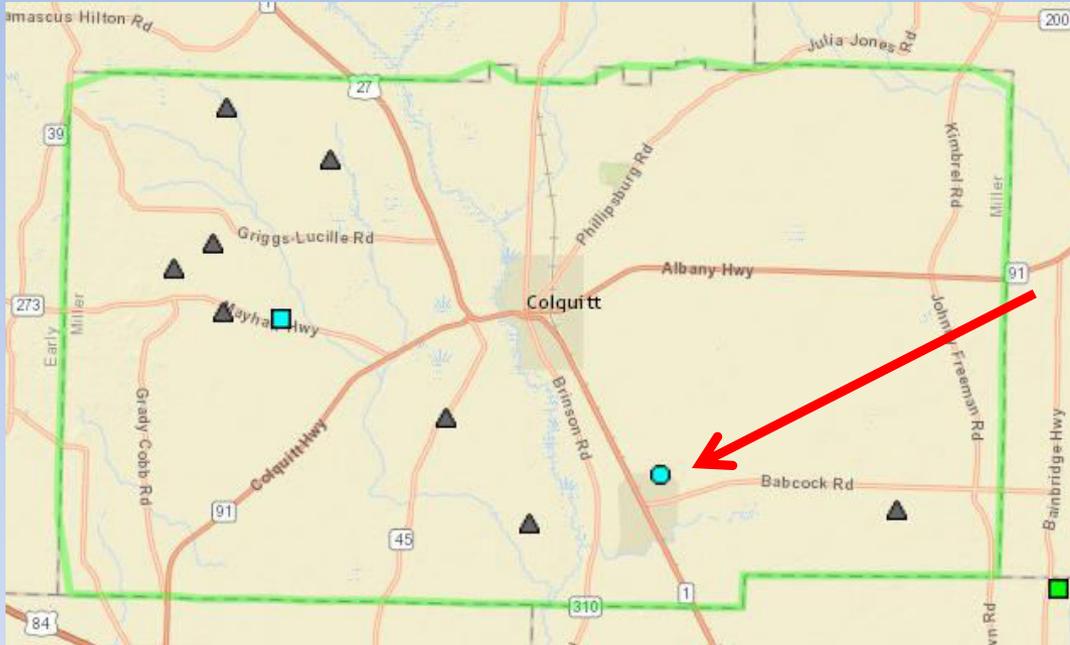


Current brief

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

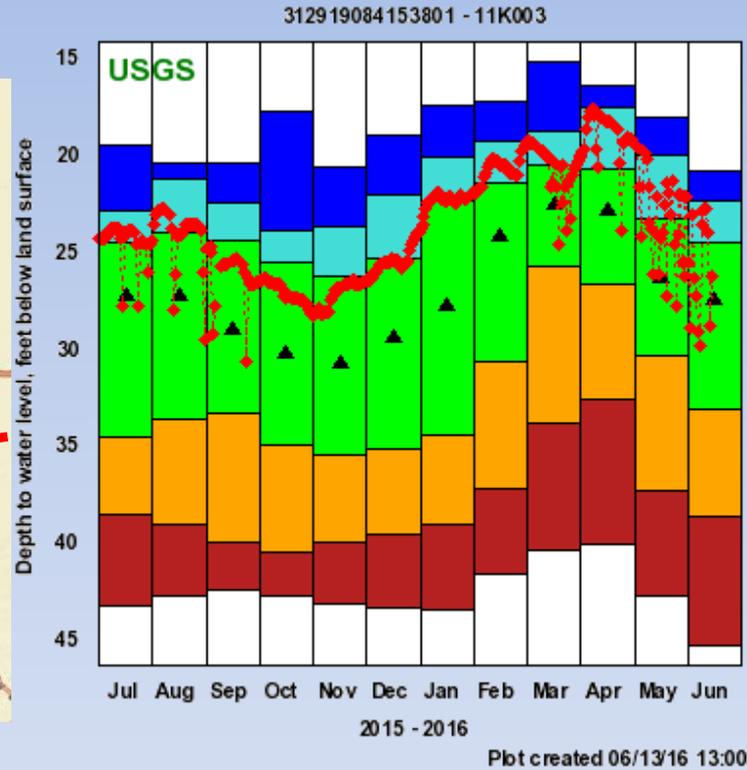
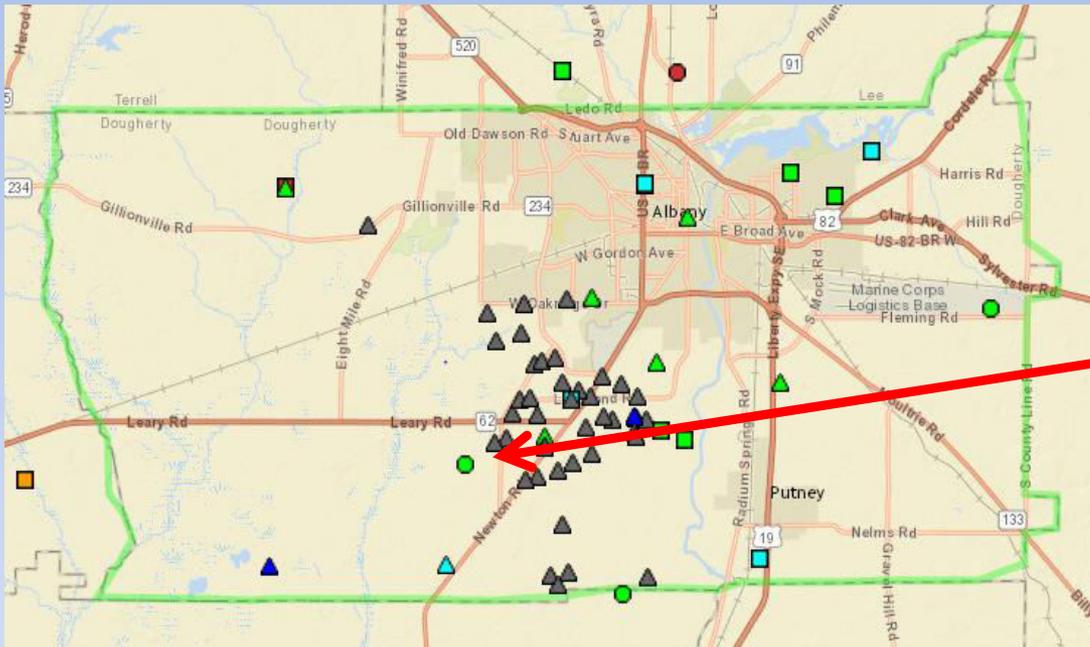


Explanation - Percentile classes (symbol color based on most recent measurement)							Wells		Springs	
● Low	● <10	● 10-24	● 25-75	● 76-90	● >90	● High	○ Real-Time	■	■	
	● Much Below Normal	● Below Normal	● Normal	● Above Normal	● Much Above Normal		□ Continuous	■	■	
							△ Periodic Measurements	■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

(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	□	■	△	■
	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal			△	■	△	■
								Periodic Measurements			

(Upper Floridan Aquifer)

Streamflow Forecasts

Apalachicola Watershed

Southeast River Forecast Center



Todd Hamill



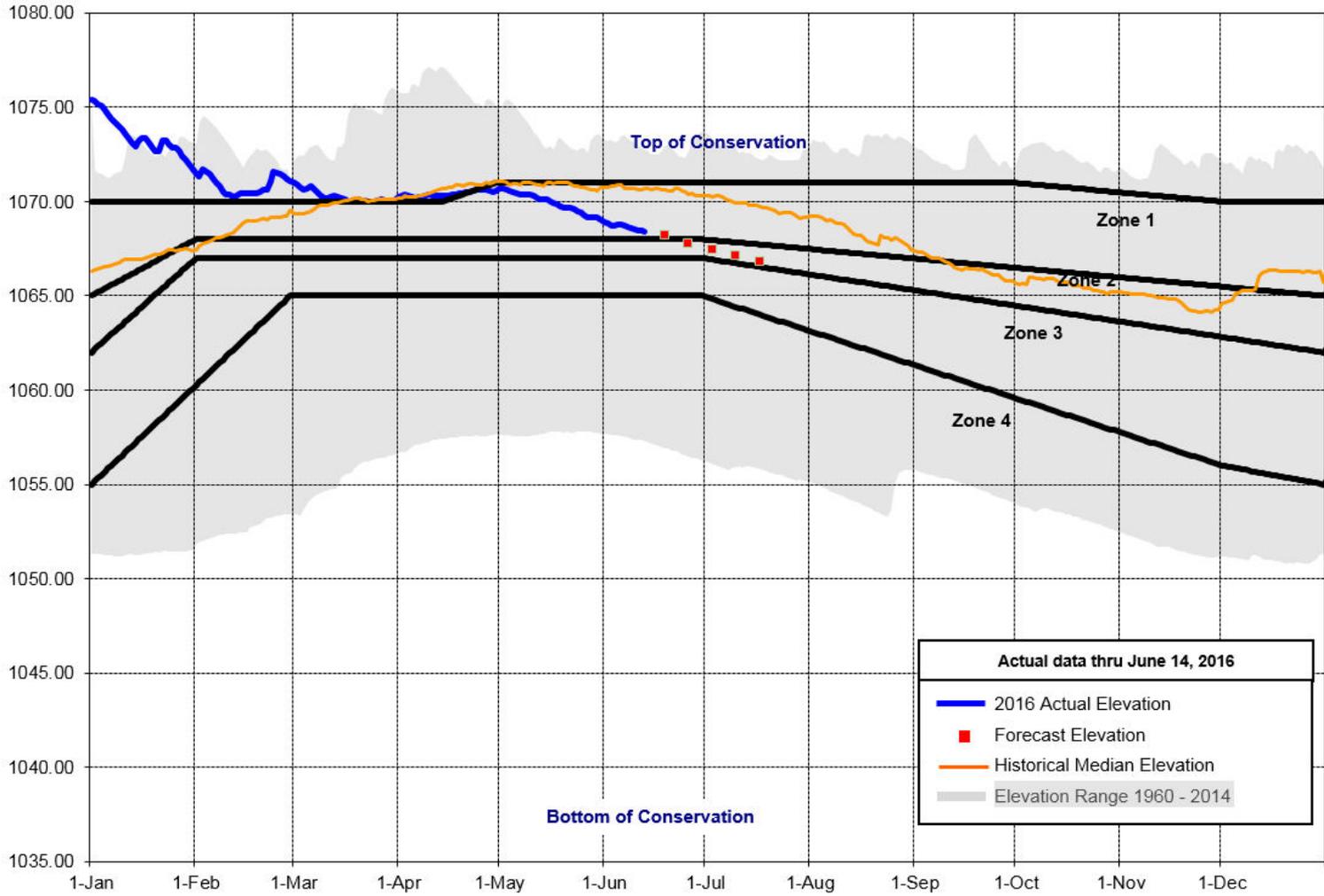
USACE – ACF Reservoir Conditions June 2016



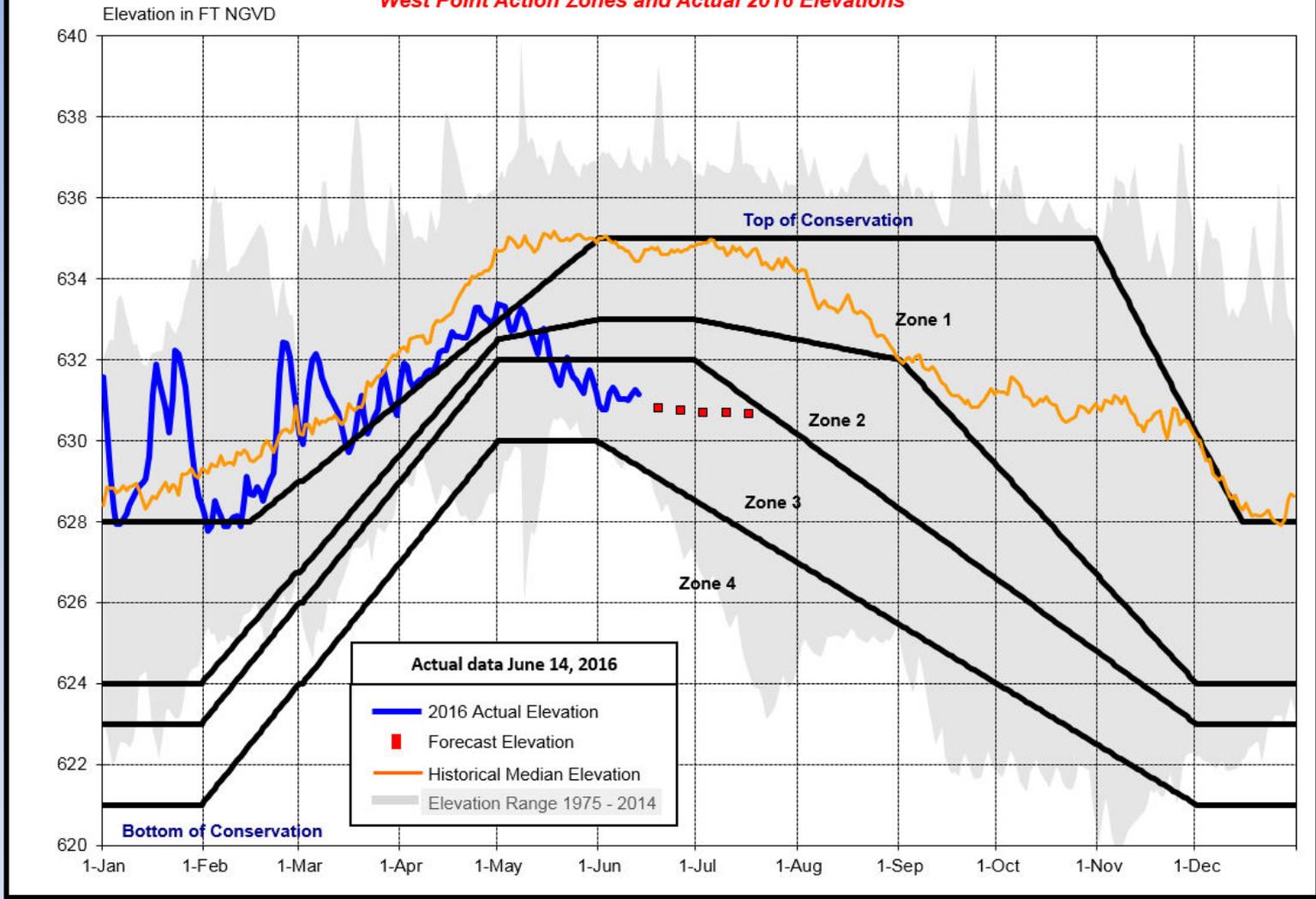
Cynthia Donald

Elevation in FT NGVD

Lanier Action Zones and Actual 2016 Elevations

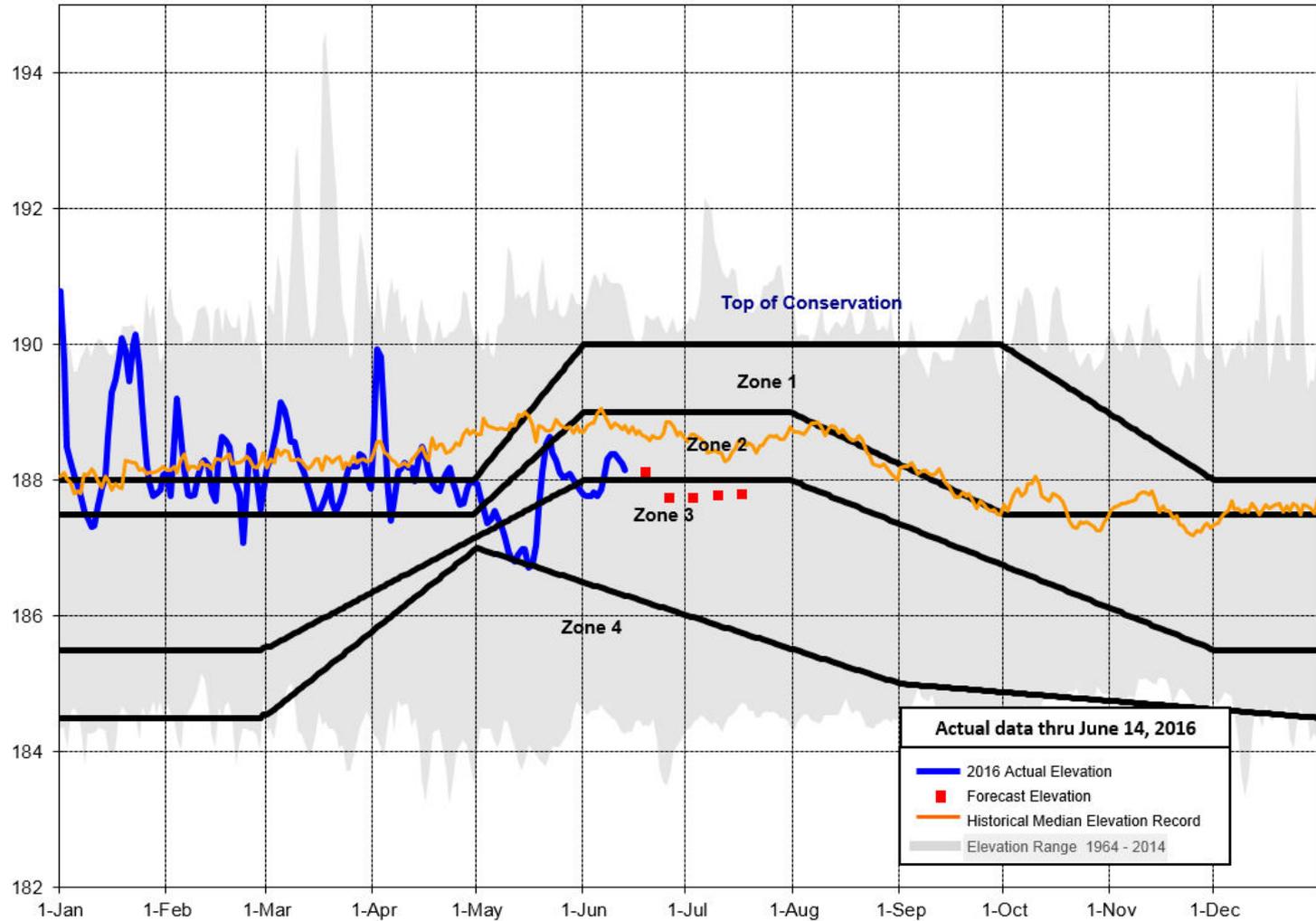


West Point Action Zones and Actual 2016 Elevations



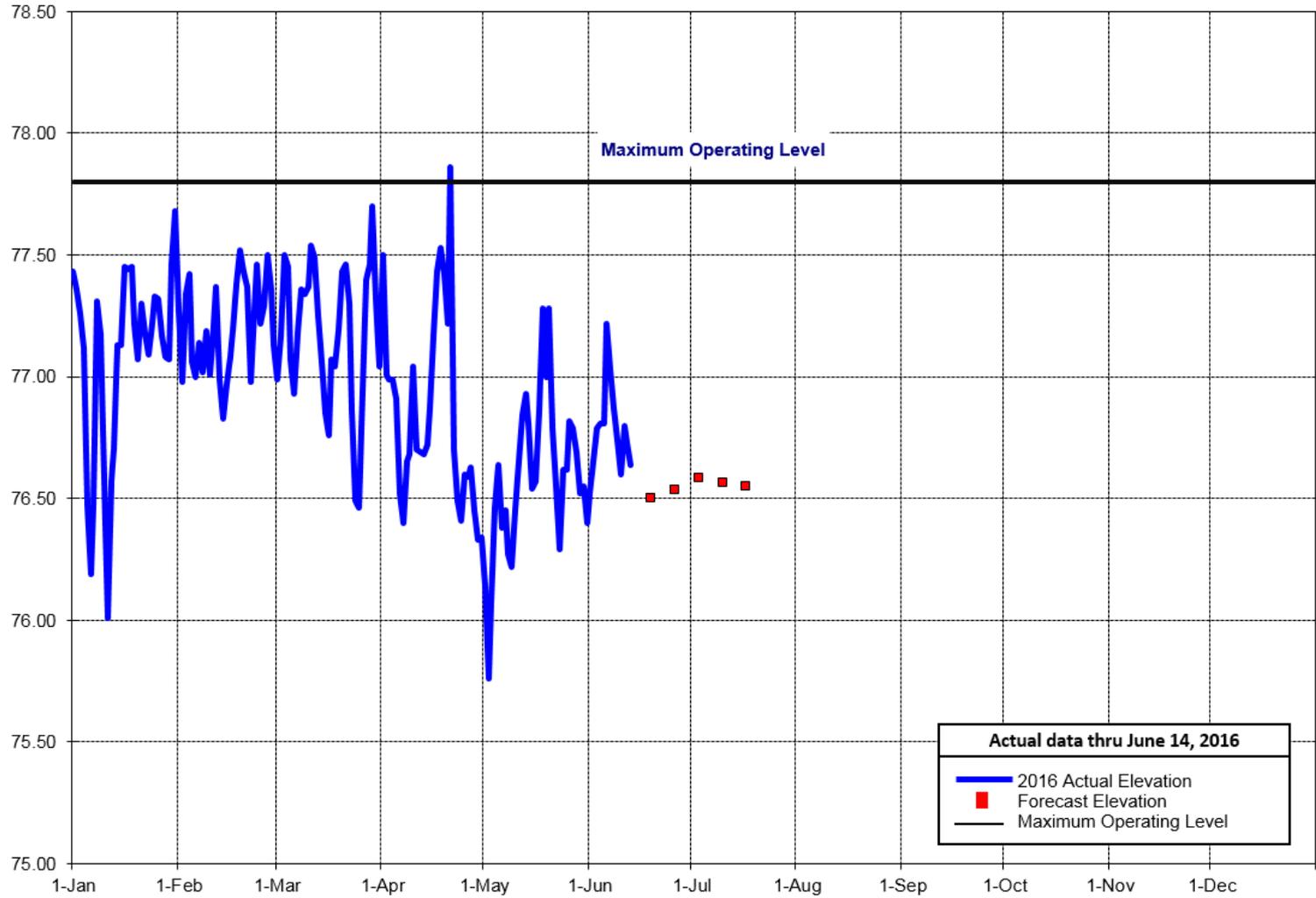
Elevation in FT NGVD

W.F. George Action Zones and Actual 2016 Elevations

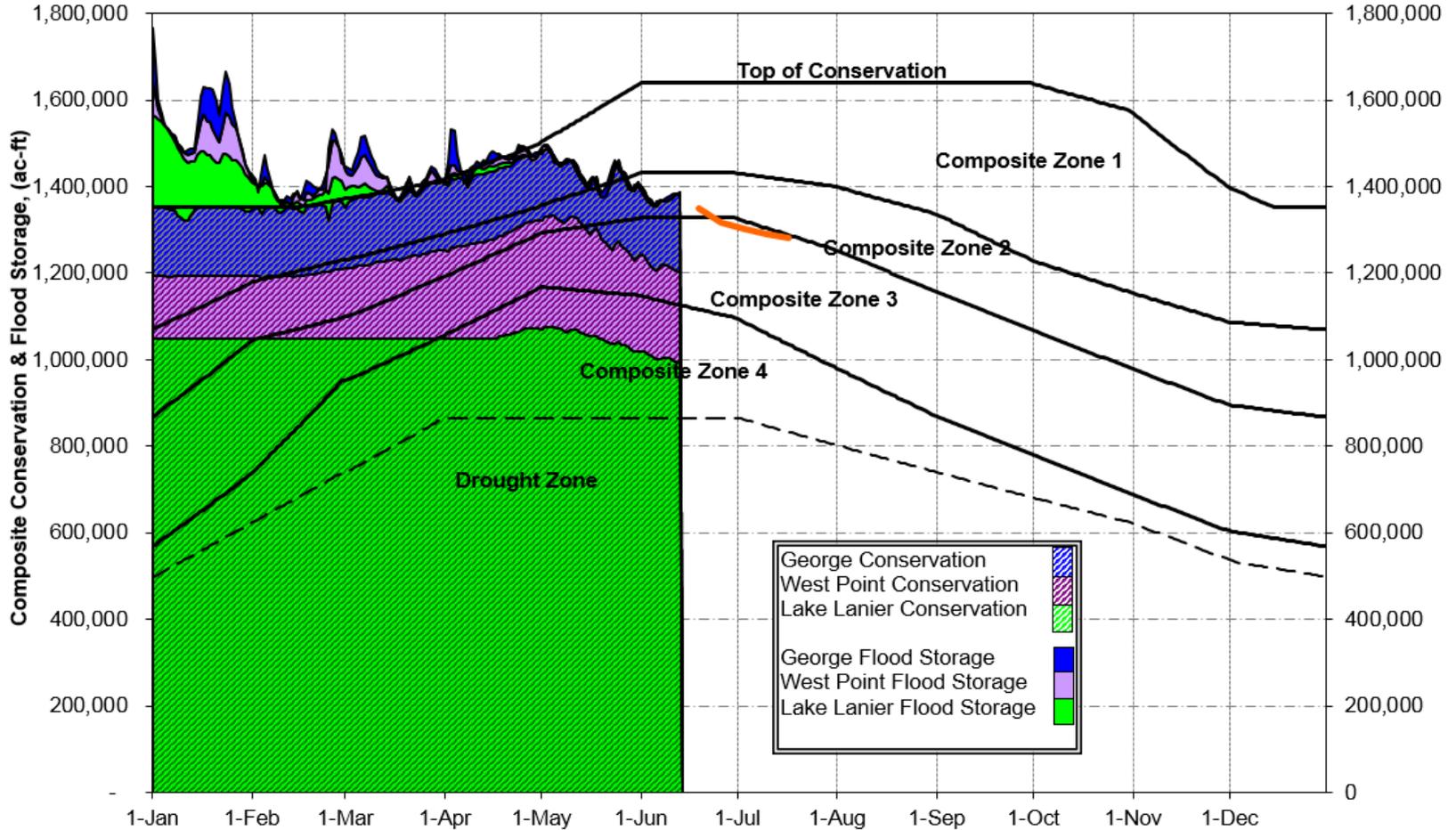


Elevation in FT NGVD

Jim Woodruff Actual & Projected 2016 Elevations



2016 ACF Basin Composite Conservation and Flood Storage



Actual data thru 06-10-2016

Add value of 1,856,000 acre-ft to include inactive storage.

Summary – Cynthia Donald

- The lake levels are below normal and forecasted to remain below normal as the basin is very dry.
- The ACF system is conservation storage has crossed into Zone 2 and is forecasted to dip into Zone 3.
- Continuing to meet minimum downstream flow requirements.

Summary – David Zierden

- Tropical Storm Colin brought needed rainfall to the lower ACF Basin, heavy amounts to the Panhandle and North Florida
- Moderate drought has developed over N. Georgia and the upper ACF, severe drought over North Alabama
- Upper ACF basin showing substantial rainfall deficits at 30-90 days, middle basin near normal, lower basin well above normal
- More unsettled weather forecast for the lower ACF this week
- El Nino declared over, shift to La Nina likely (75%)
- NOAA forecasting increased chances of dryness in the upper ACF at 1-month, equal chances the next 1-3 months
- La Nina likely to enhance tropical activity this upcoming season

Summary-Paul Ankcorn

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

Announcement

Now that drought regulations have been formally promulgated and with the continuing deterioration of conditions in Alabama, OWR, in coordination with Charles Stover (MIG Chair), has scheduled a meeting of the Drought Monitoring & Impact Group (MIG) subcommittee of the Alabama Drought Assessment and Planning Team (ADAPT).

The meeting has been scheduled for **Wednesday, July 6, 2016** at 1 pm in Room 360 in the Alabama Center of Commerce at 401 Adams Avenue, Montgomery, AL 36104.

Tom Littlepage

Chief, Water Management Unit
Alabama Office of Water Resources Division
Alabama Department of Economic and Community
Affairs

401 Adams Avenue | Montgomery, Alabama 36104

334.242.5697 (Office)

334.242.0776 (Fax)

www.adeca.alabama.gov\owr

Questions, Comments, Discussion

References

Speakers

David Zierden, FSU

Paul Ankorn, USGS

Todd Hamill, SERFC

Cynthia Donald, USACE

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

July 12, 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