National Integrated Drought Information System

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

17 May 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
Global CO$_2$ Concentration

Latest CO$_2$ reading
May 15, 2016

Carbon dioxide concentration at Mauna Loa Observatory

Latest CO$_2$ reading
May 15, 2016

407.03 ppm

Climbing CO2
A higher peak each year

Source: Scripps CO2 Program

David Zierden
Current drought status

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Rainfall – Last 7 Days
Rainfall – Last 30 Days
90-day Rainfall Departures
Changing May Rainfall Patterns

NOAA/NCDC Climate Division Composite Precipitation Anomalies (in)
May 1981 to 2015
Versus 1950–1995 Longterm Average
7-Day Precipitation Forecast
Current SST Anomalies

7-day Average Centered on 11 May 2016
El Nino on the decline

- Weekly Nino 3.4 index currently at +0.6
- Similar decline as 1998
- 1998 went negative (-0.6) by the first week of June
Subsurface Temperatures
La Nina on the Way?

Early-May CPC/IRI Official Probabilistic ENSO Forecast

ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: −0.5°C to 0.5°C

Climatological Probability:
- Red: El Nino
- Green: Neutral
- Blue: La Nina

Time Period:
- AMJ 2016
- MJJ
- JJA
- JAS
- ASO
- SON
- OND
- NDJ
- DJF 2017

Probability (%): 100, 90, 80, 70, 60, 50, 40, 30, 20, 10, 0
Hurricane Season Forecast

- CSU predicts 12 named storms, 5 hurricanes, and 2 major hurricanes

- NOAA forecast to be released May 27th

- 2 or more U.S. hurricane landfalls twice as likely during La Nina
Streamflows and Groundwater

Tony Gotvald
Realtime stream flow compared with historical monthly averages

Monday, April 18, 2016 08:30ET

Previous Brief:

Monday, May 16, 2016 14:30ET

Current:

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
Lake Lanier Inflows

Chattahoochee near Cornelia (02331600)

http://waterwatch.usgs.gov

Chestatee near Dahlonega (02333500)
Current Streamflows

Chattahoochee at Atlanta (02336000)

http://waterwatch.usgs.gov

Chattahoochee near Whitesburg (02338000)
Current Streamflows

Chattahoochee at West Point (02339500)

http://waterwatch.usgs.gov

Chattahoochee at Columbus (02341460)
Current Streamflows

Flint River near Griffin (02344500)

http://waterwatch.usgs.gov

Flint River near Carsonville (02347500)
Current Streamflows

Flint River at Albany (02352500)

http://waterwatch.usgs.gov

Flint at Bainbridge (02356000)
Streamflows

Apalachicola at Chattahoochee (02358000)

http://waterwatch.usgs.gov
Streamflows

Apalachicola at Chattahoochee (02358000)

http://waterwatch.usgs.gov
Groundwater Status – Miller County 08G001

(Upper Floridan Aquifer)
Groundwater Status – Dougherty County
11K003

(Upper Floridan Aquifer)
Streamflow Forecasts

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

May 16th – June 16th 2016

Lake Lanier Inflows
Whitesburg
West Point
Columbus
WF George
Columbus
Woodruff
Blountstown
Lovejoy
Carsonville
Albany

Above Normal
Near Normal
Below Normal
• CO$_2$ concentrations are likely above 400 ppm for generations or longer
• Moderate drought has developed over N. Georgia and the upper ACF
• Recent pattern brought excess rain to Texas, Louisiana, but left the ACF relatively dry
• Pattern shift bringing unsettled weather to the Southeast this week
• El Nino continues to decline, shift to La Nina likely (75%)
• NOAA forecasting increased chances of above normal rainfall the next 1-3 months
• La Nina likely to enhance tropical activity this upcoming season
Summary-Tony Gotvald

• Realtime streamflows are in the much below normal to 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 Flint River are in the below normal to normal range.
• Groundwater levels are in the much above normal to normal range in Southwest Georgia.
1 Month Streamflow forecast - Near Normal
3 Month Streamflow forecast – ESP indicates equal chances. 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://www.srh.noaa.gov/serfc/

- Groundwater monitoring
Thank you!

Next briefing

**June 14, 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:
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