



Streamflow conditions across North Carolina

*Assessment of hydrologic
conditions observed through
April 2017...*

Presented by:

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<https://www2.usgs.gov/water/southatlantic/>



Presented to:

*North Carolina Drought Management Advisory Council
Gov. James G. Martin Building, NC State Fairgrounds, Raleigh, NC
April 06, 2017*

Access to

Streamflow (26)

<https://water.usgs.gov/nc/>

Groundwater (1)

<http://water.usgs.gov/nc/>

Water quality (1)

<http://water.usgs.gov/nc/>

Precip (140)

<http://water.usgs.gov/nc/>

The screenshot shows the USGS North Carolina website. At the top, the browser address bar displays <https://nc.water.usgs.gov/infodata/>, which is circled in red. The page header includes the USGS logo and the text "South Atlantic Water Science Center - North Carolina Office". A navigation menu lists categories such as "Surface Water", "Groundwater", "Water Quality", "Rainfall", "Water Use", "GIS", and "Site Data".

The main content area is titled "Current Water Data for North Carolina". It features a "Real-time Data Map" and a "Real-time Rainfall Map". A search bar is present with the text "Search North Carolina WSC ...". Below this, a "CURRENT CONDITIONS" section shows a map of North Carolina with a red circle around it, and a link to "View a detailed map.".

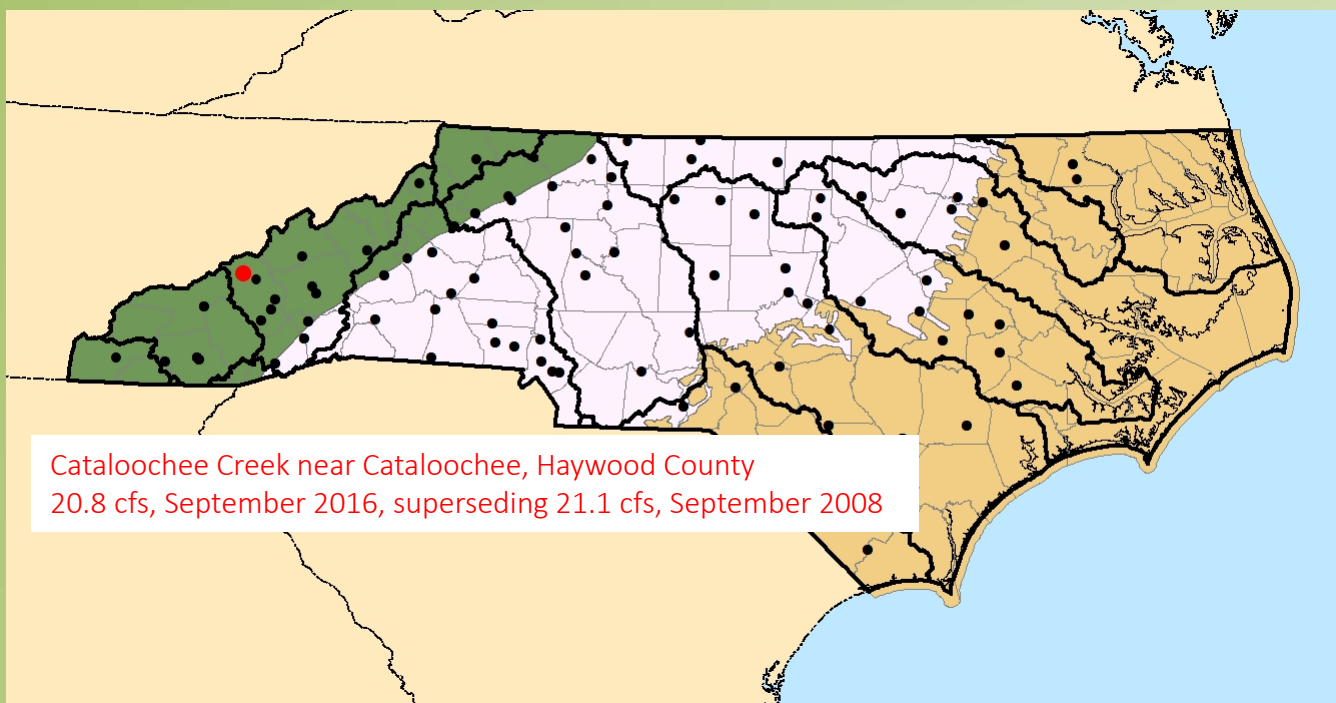
The "DATA CENTER" section is circled in red and contains the following links:

- Real-time data
 - Streamflow
 - Groundwater
 - Water quality
 - Precipitation

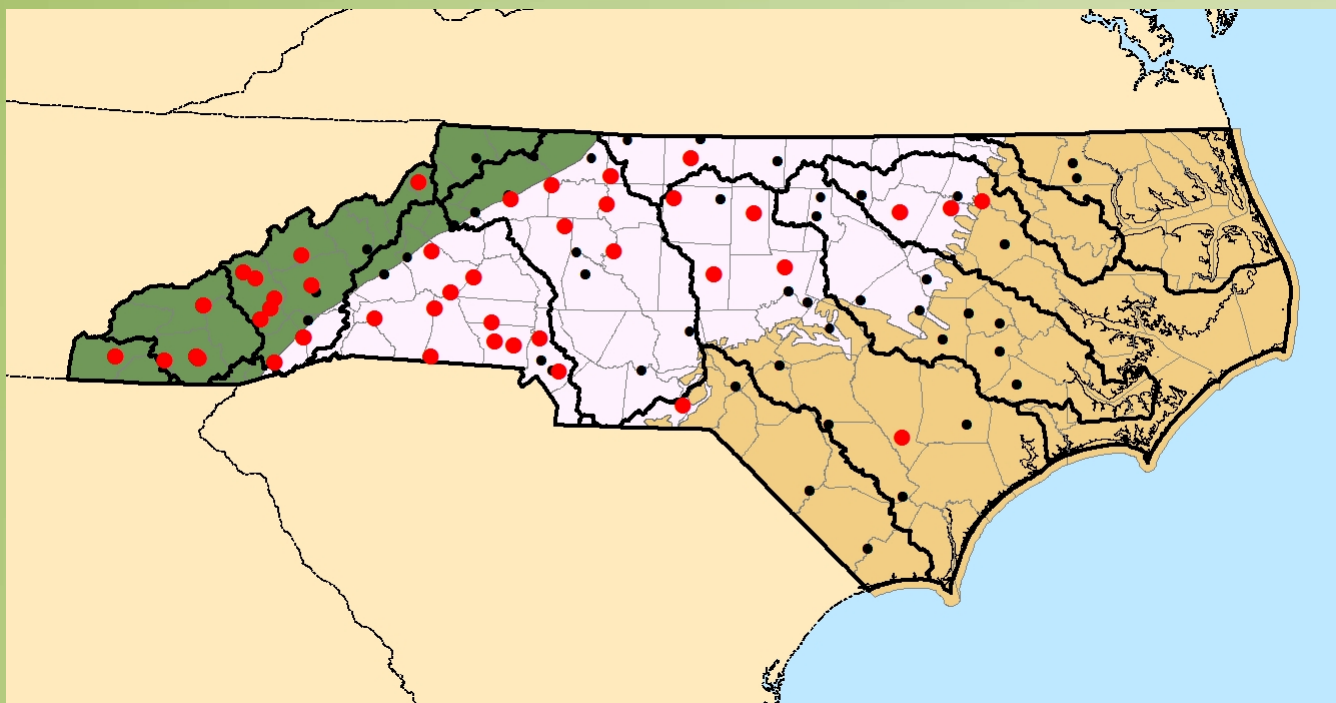
Other sections include "Water Data by Topic - Current Data and Long-term Hydrologic Information" with sub-sections for "Surface Water: Streams and Rivers", "Groundwater: Wells and Aquifers", "Water Quality", and "Rainfall". There are also links for "Water Use", "Natural Hazards", "GIS", and "Site Data".



New record monthly minimum average during 2016 water year

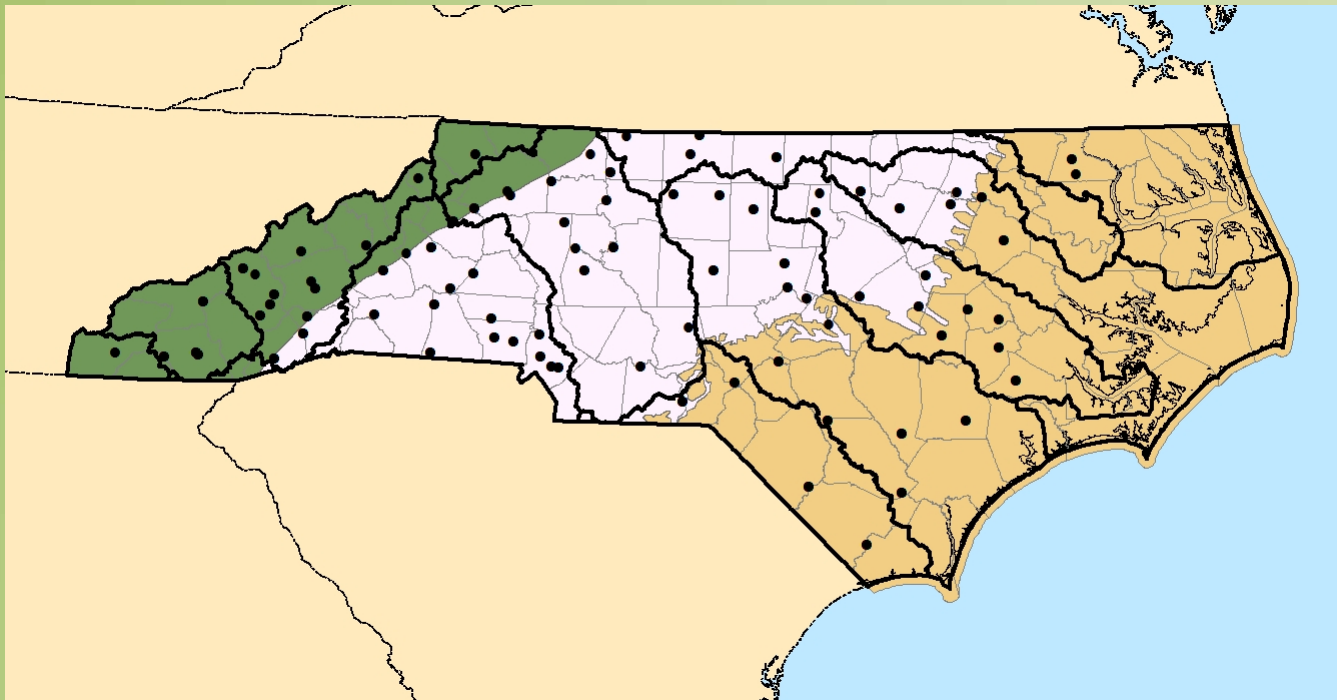


New record monthly minimum average during 2017 water year

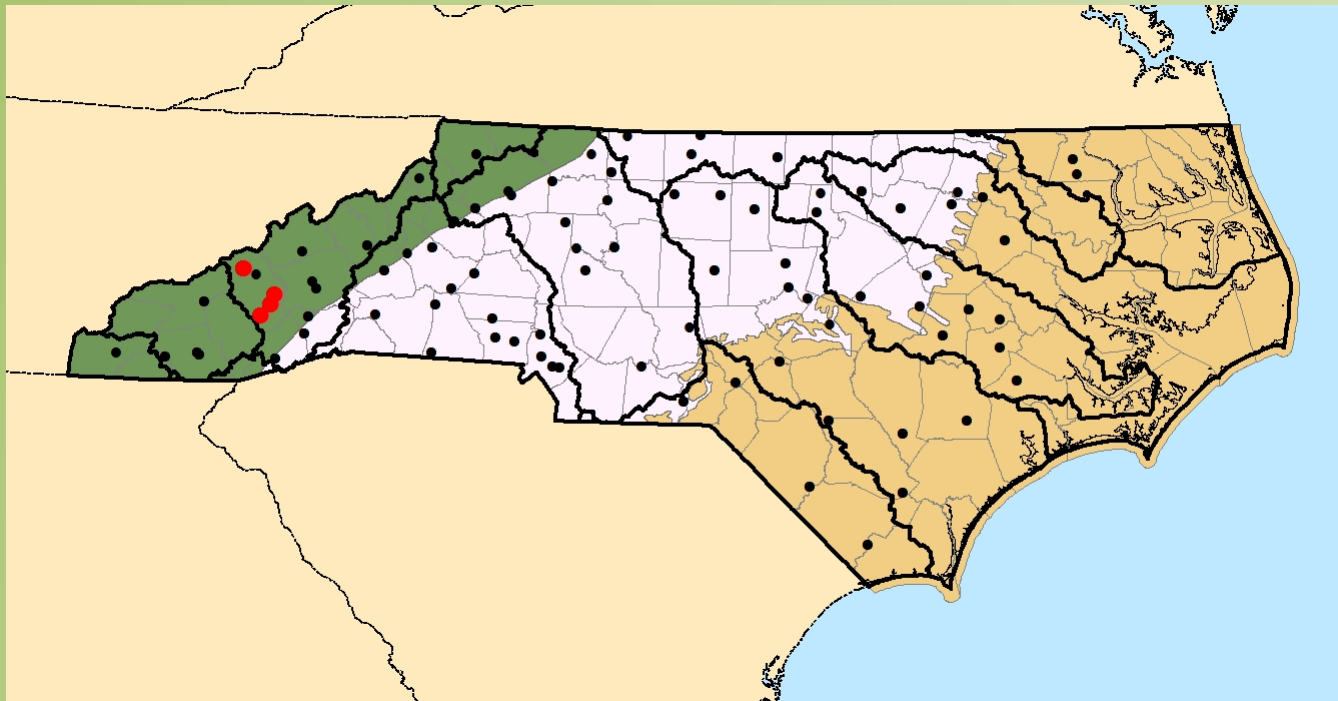


...42 sites during the 2017WY, provisional as of April 06

New period of record daily discharge during 2016 water year



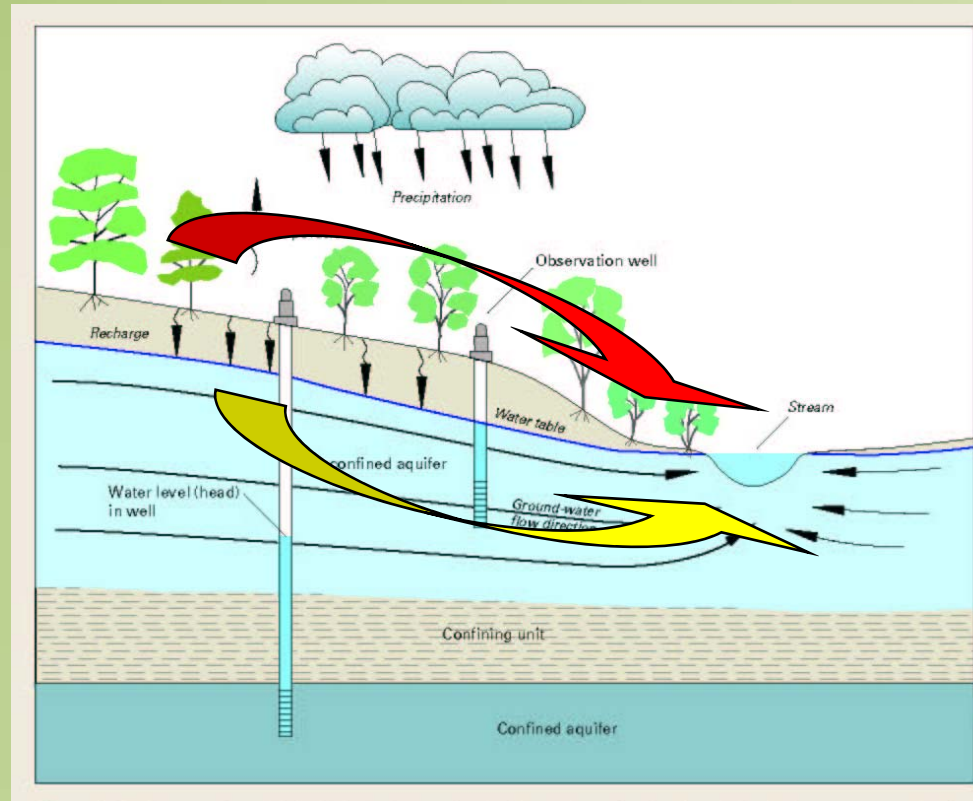
New period of record daily discharge during 2017 water year



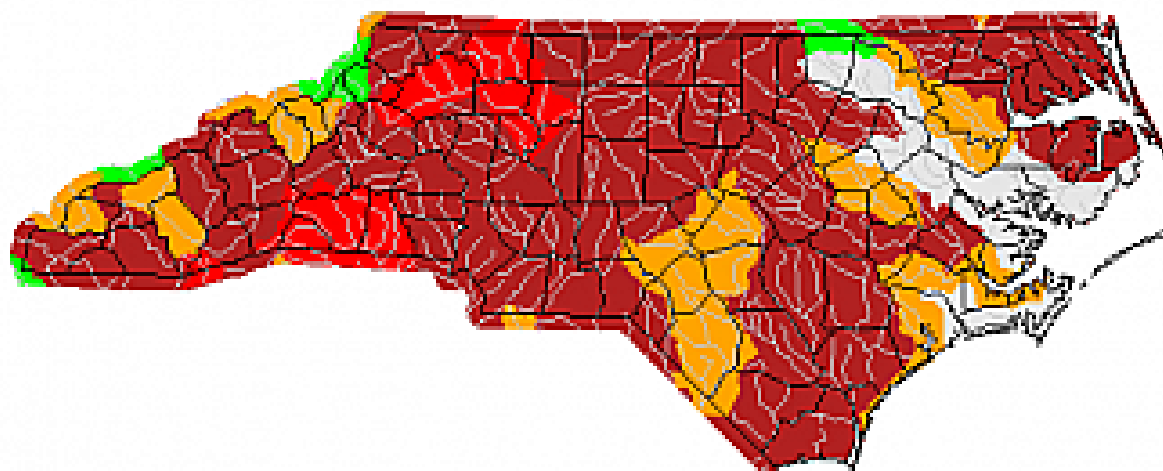
Visualizing the components in streamflow

Overland
runoff

Base flow
(ground-water
discharge to
streams)



Monday, March 27, 2017



Overall
7-day
average
flows

...as of
April 05

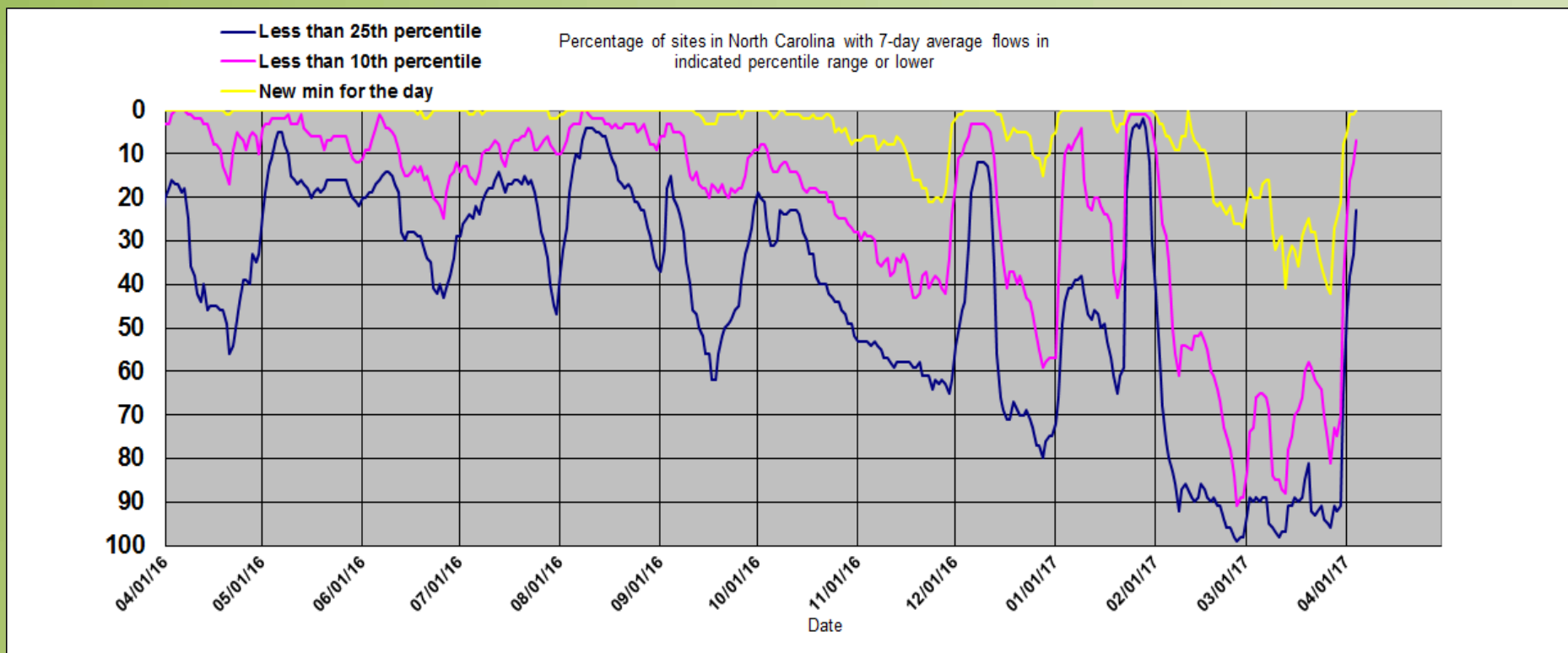


Explanation - Percentile classes						
	Red	Orange	Green	Blue	Black	
Low	≤10	10-24	25-75	76-90	≥90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

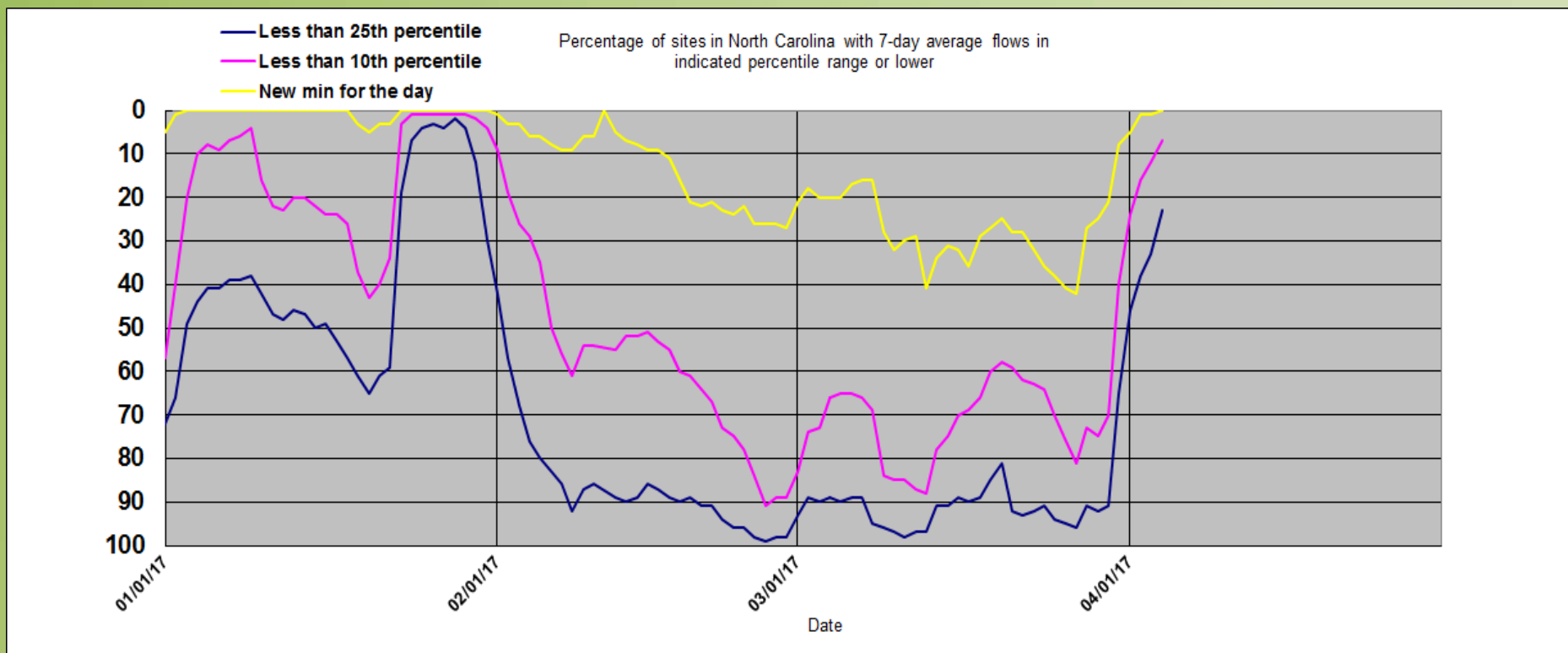


Available at URL <http://waterwatch.usgs.gov/index.php>

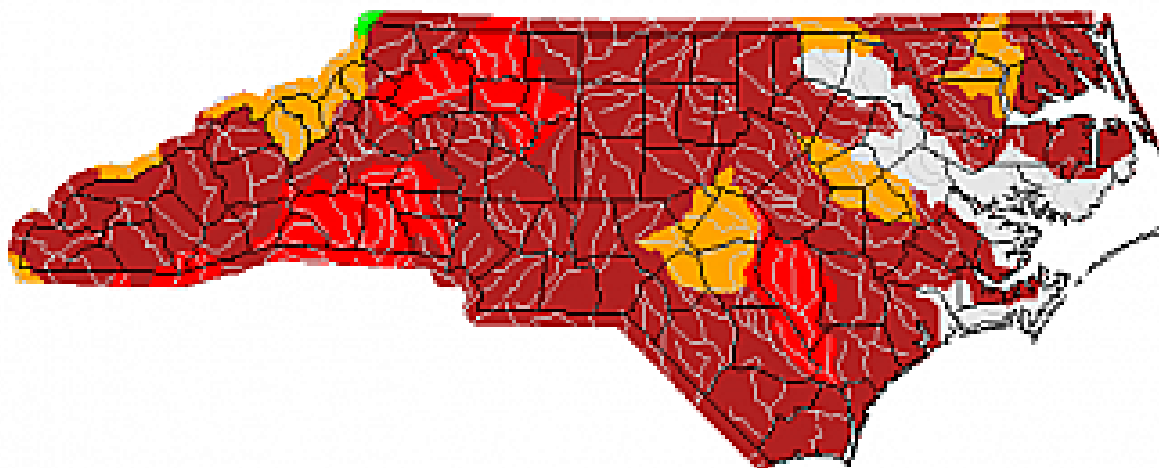
Percentage of sites with 7-day average flows below normal (< 25th percentile)



Percentage of sites with 7-day average flows below normal (< 25th percentile)



Monday, March 27, 2017



Overall
28-day
average
flows

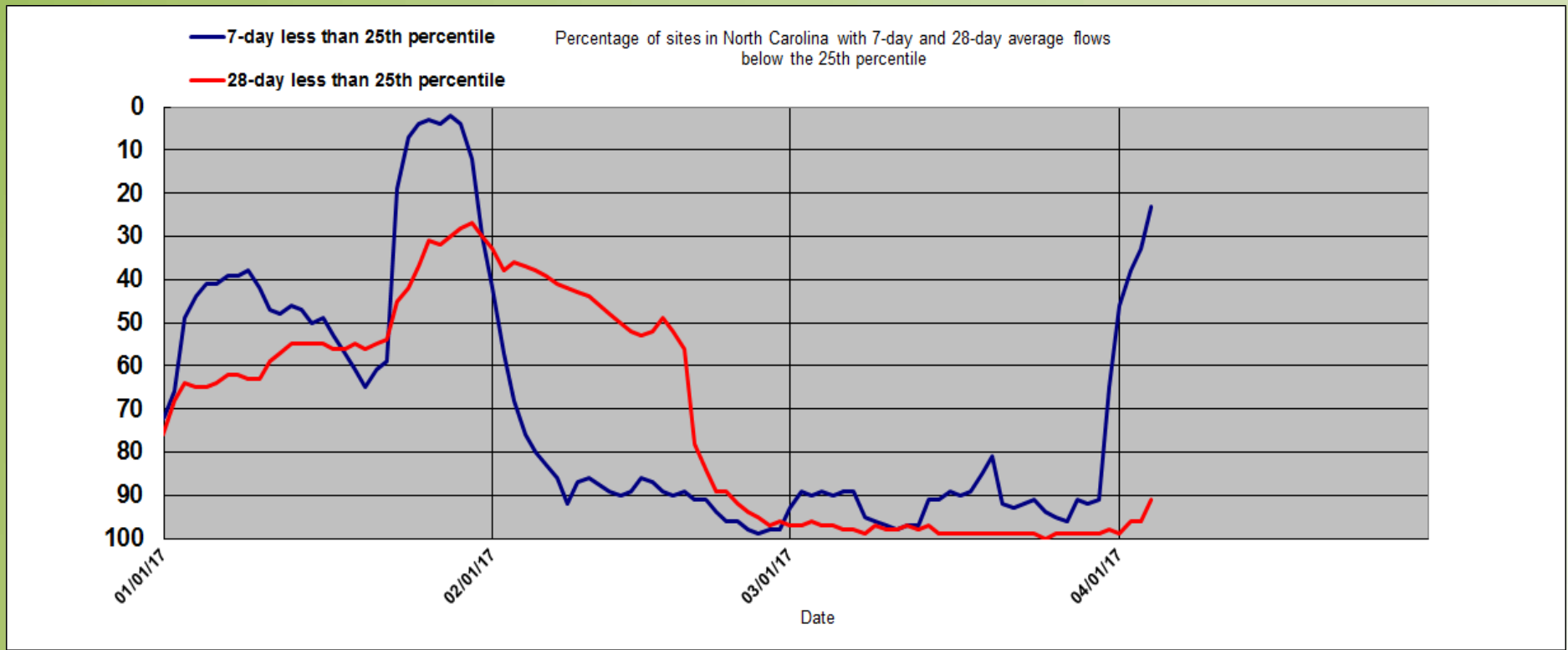
*...as of
April 05*

Explanation - Percentile classes						
	Red	Orange	Yellow	Green	Blue	Black
Low	<=10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	



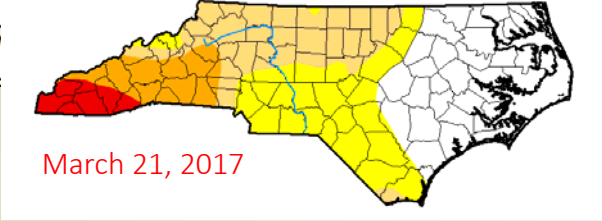
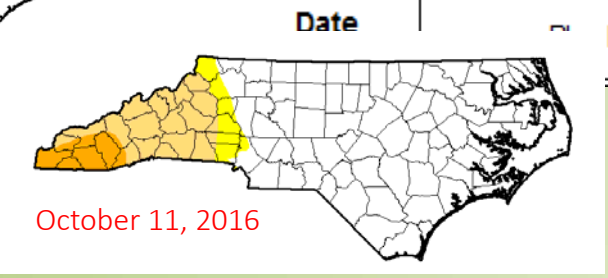
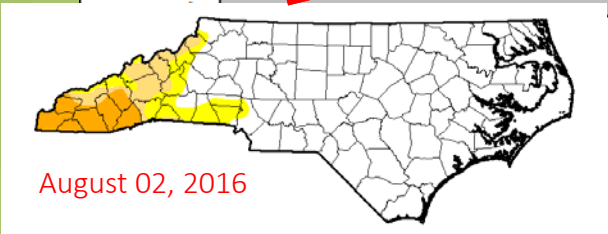
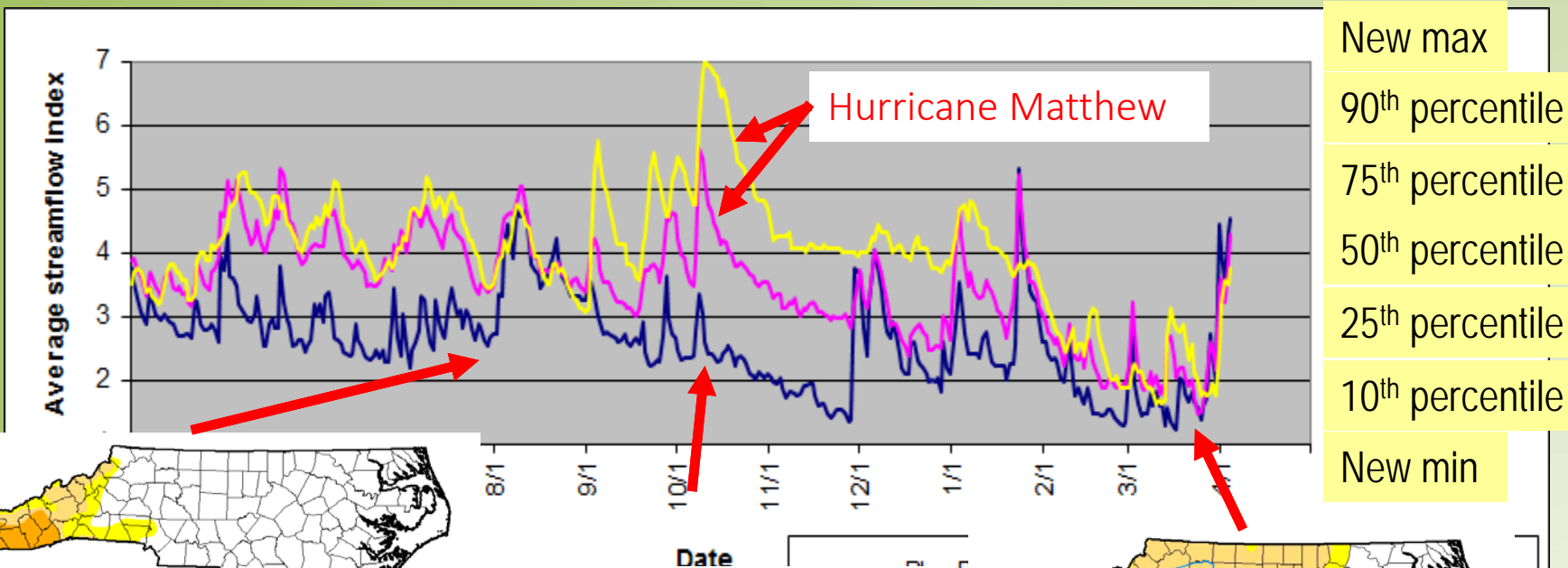
Available at URL <http://waterwatch.usgs.gov/index.php>

Percentage of sites with 7- and 28-day average flows below normal (< 25th percentile)



...since January 1, 2017₁₂

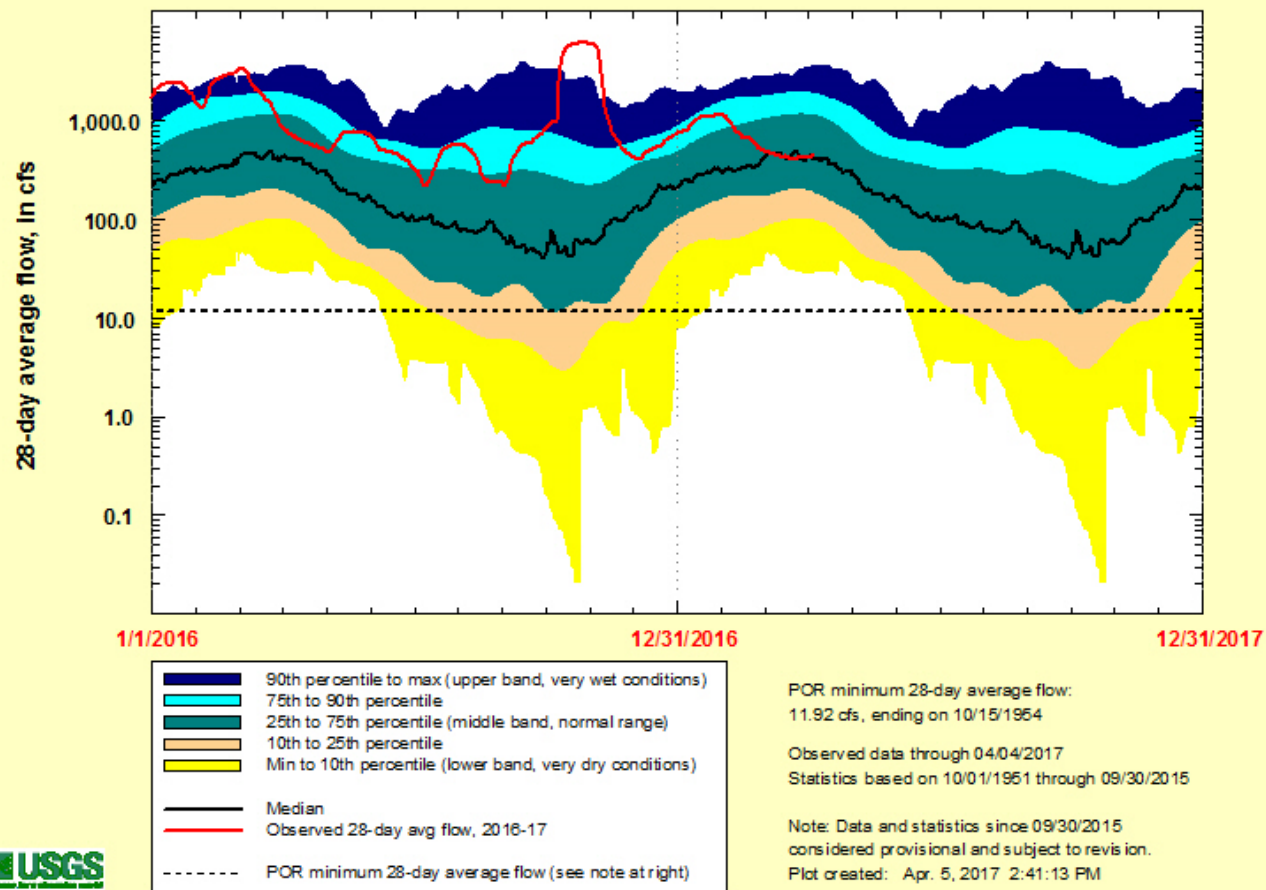
Average streamflow index (by Province)



Sta. 02106500, BLACK RIVER NEAR TOMAHAWK, NC (Sampson County), DA = 676 sqmi

Period of record (POR): 0/0/ through 0/0/

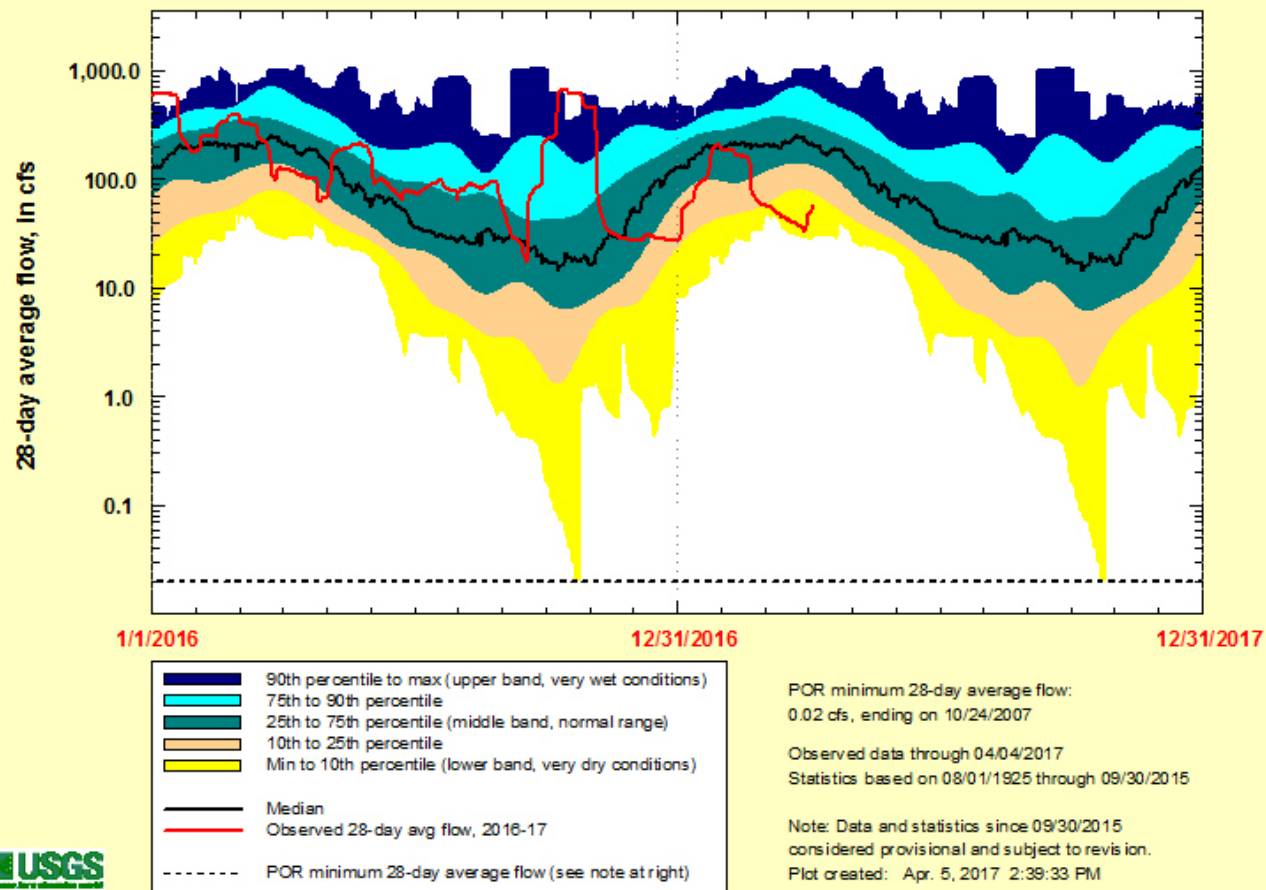
Approx. 66 total years record available to date (Site info from <http://waterdata.usgs.gov/nwis/inventory>)



Sta. 02085500, FLAT RIVER AT BAHAMA, NC (Durham County), DA = 149 sqmi

Period of record (POR): 0/0/ through 0/0/

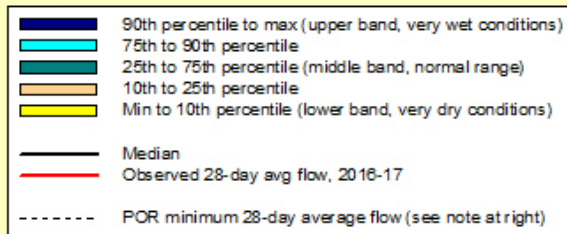
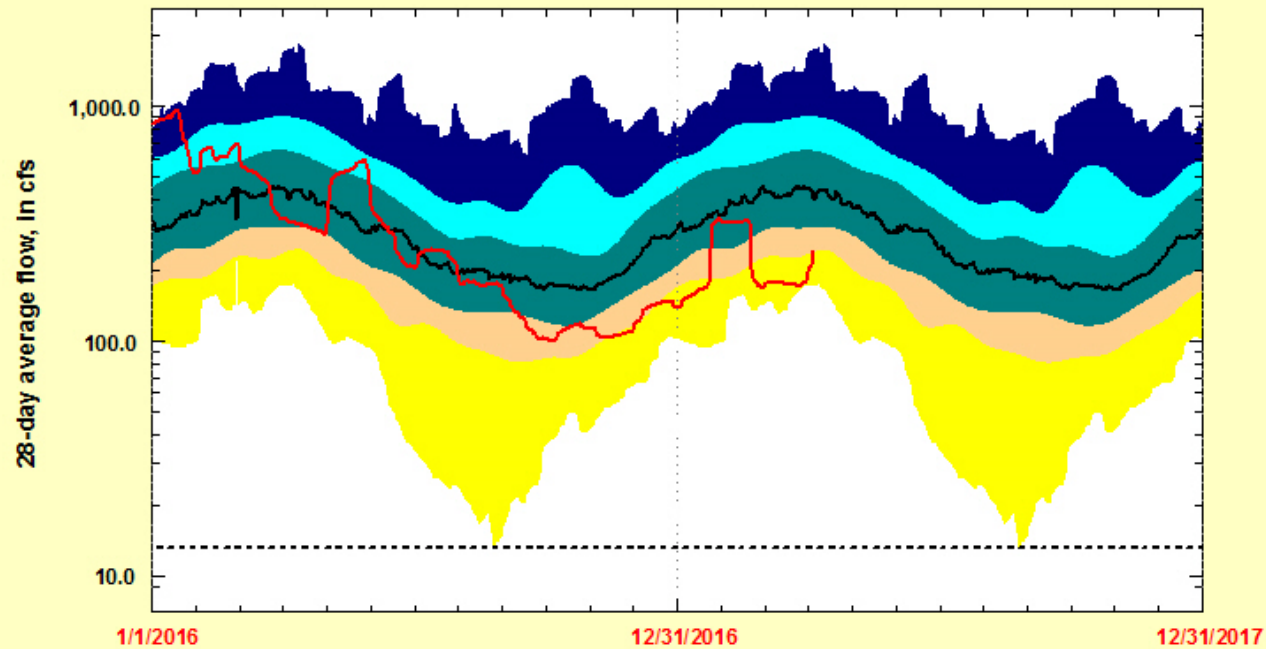
Approx. 92 total years record available to date (Site info from <http://waterdata.usgs.gov/nwis/inventory>)



Sta. 02118000, SOUTH YADKIN RIVER NEAR MOCKSVILLE, NC (Rowan County), DA = 306 sqmi

Period of record (POR): 0/0/ through 0/0/

Approx. 79 total years record available to date (Site info from <http://waterdata.usgs.gov/nwis/inventory>)



POR minimum 28-day average flow:

13.24 cfs, ending on 08/26/2002

Observed data through 04/04/2017

Statistics based on 10/01/1938 through 09/30/2015

Note: Data and statistics since 09/30/2015 considered provisional and subject to revision.

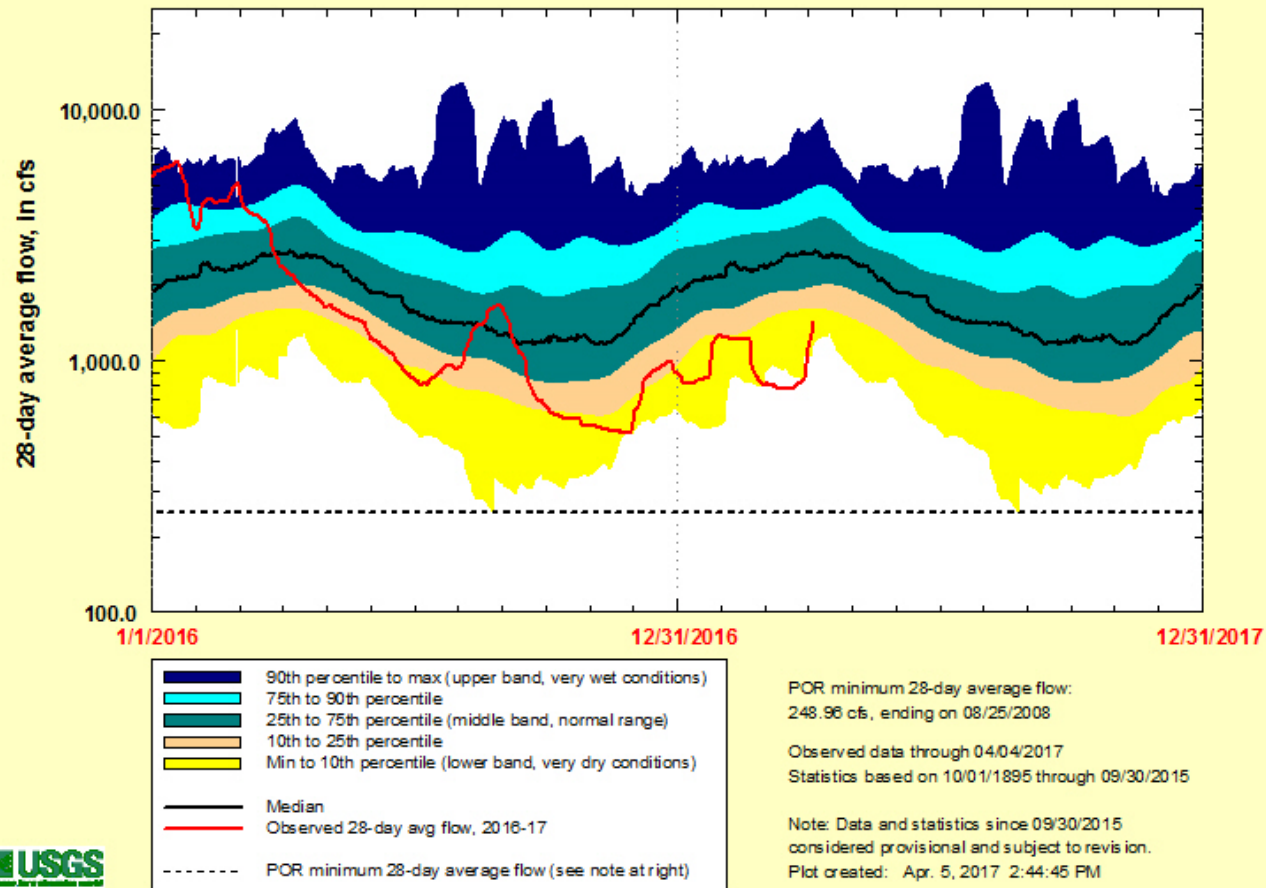
Plot created: Apr. 5, 2017 2:42:54 PM



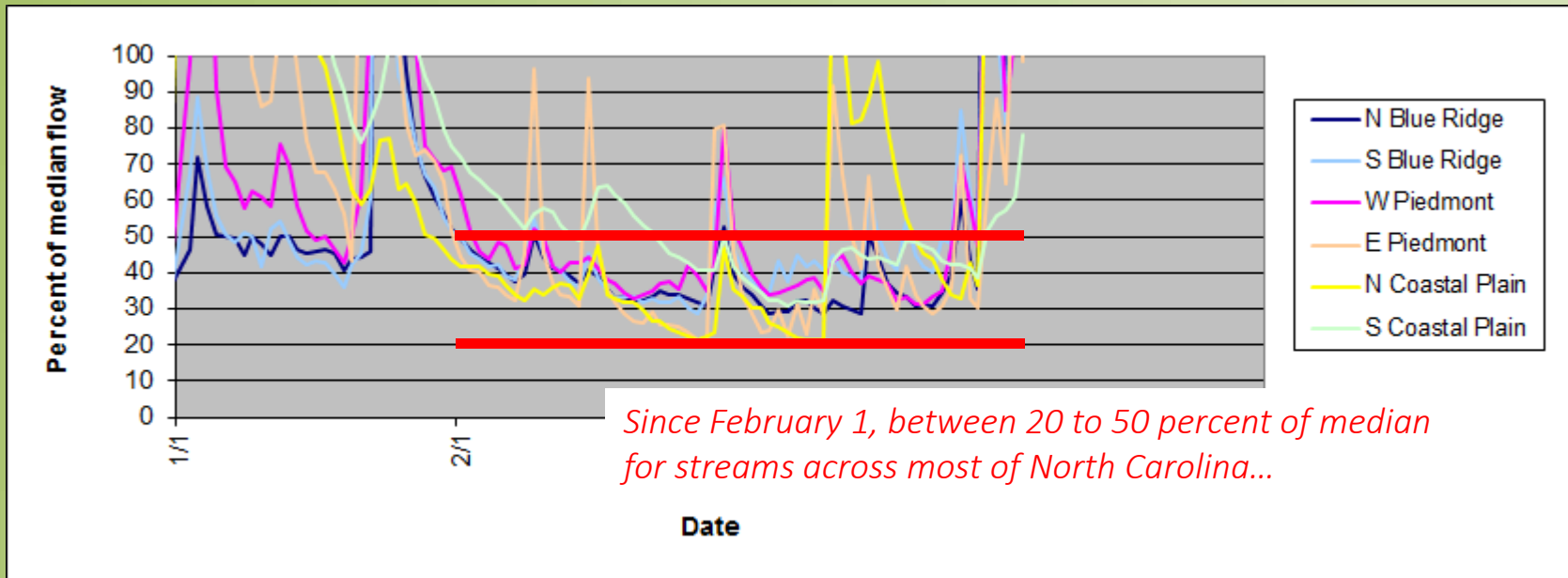
Sta. 03451500, FRENCH BROAD RIVER AT ASHEVILLE, NC (Buncombe County), DA = 945 sqmi

Period of record (POR): 0/0/ through 0/0/

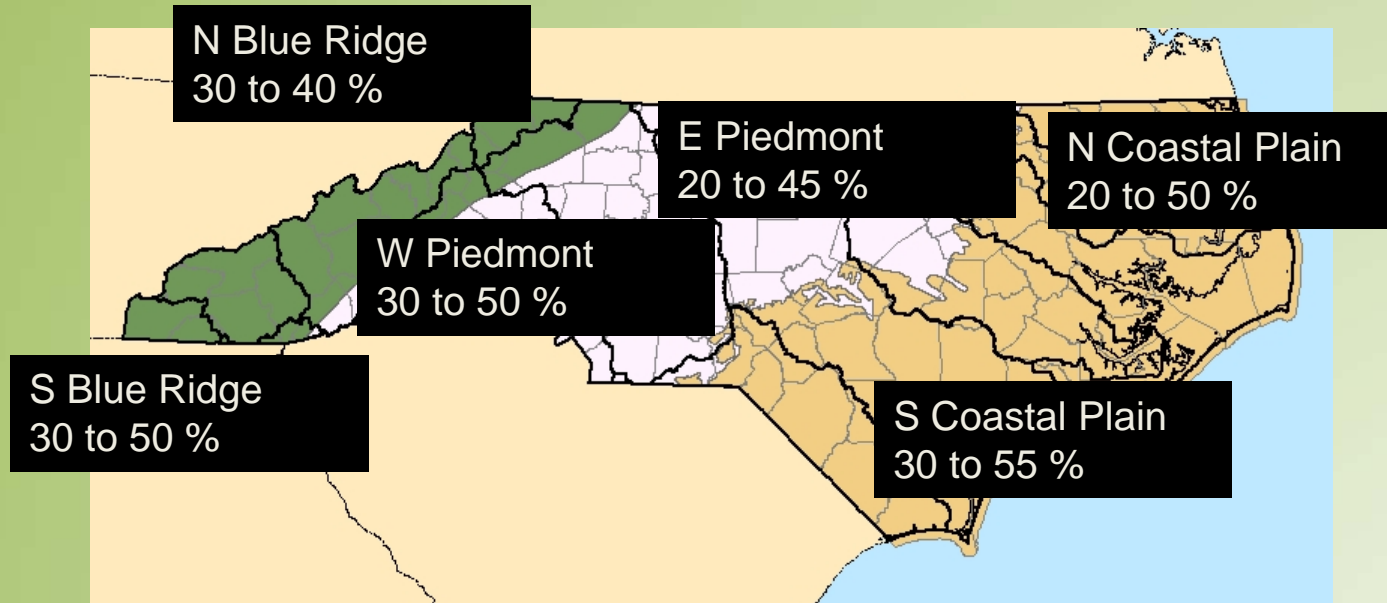
Approx. 122 total years record available to date (Site info from <http://waterdata.usgs.gov/nwis/inventory/>)



“infamous spaghetti plot...”
Percent of median (by region)

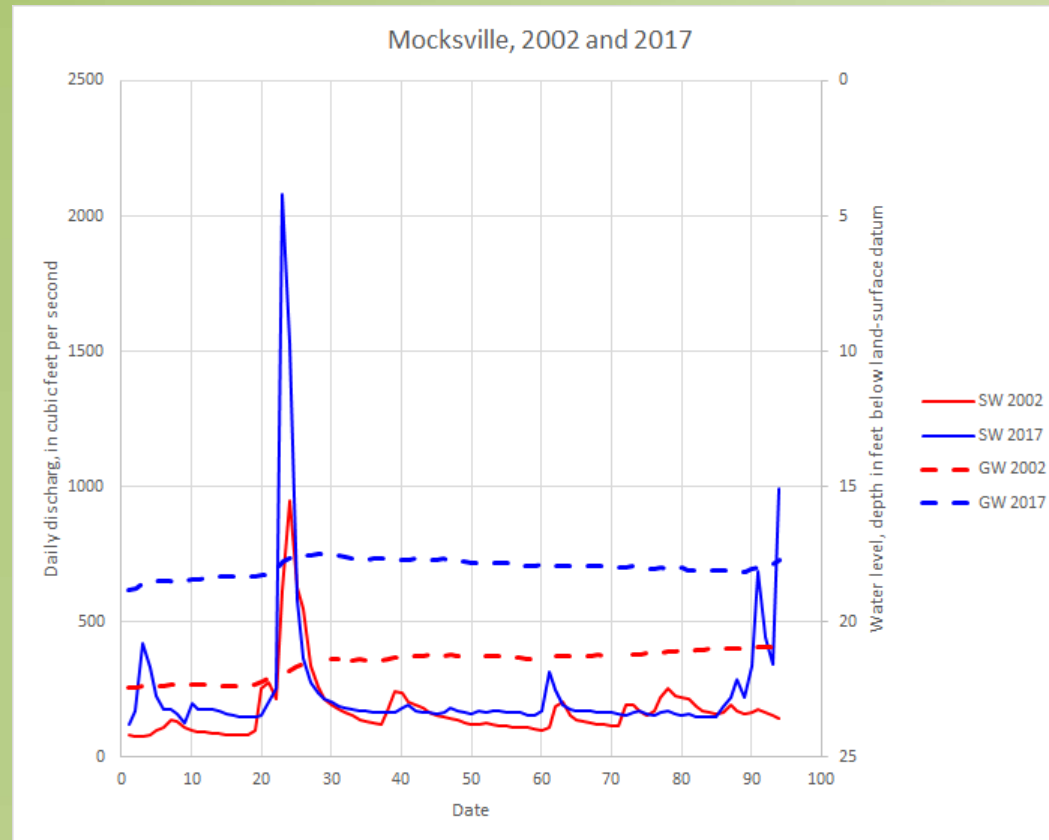


Typical ranges in percentage of median flow since February 1...(by region)



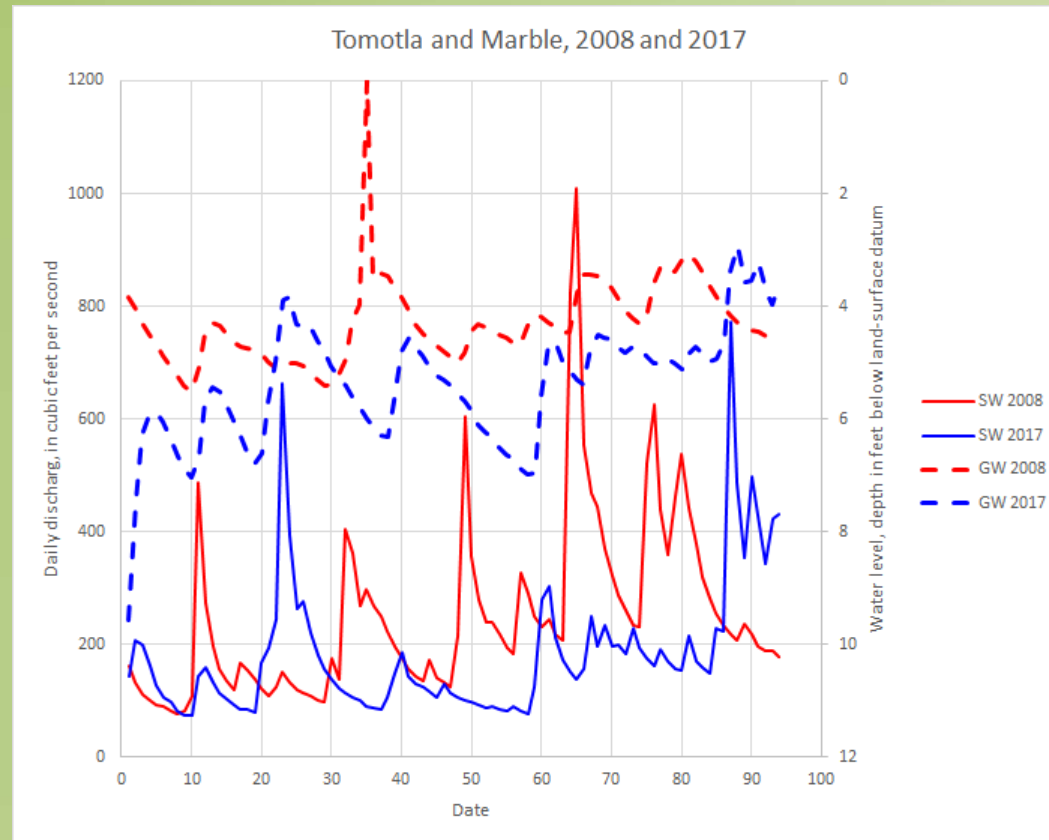
...as of April 04

Comparing Jan–April, 2002 and 2017...



Looking ahead? A Piedmont comparison...

Comparing Jan–April, 2008 and 2017...



Looking ahead? A Blue Ridge comparison...

In closing...

- Questions
- Concerns

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Flat River at Bahama
Durham County