

Streamflow conditions across North Carolina

*Assessment of hydrologic
conditions observed through
April 2018...*

Presented by:

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USGS South Atlantic Water Science Center (Raleigh office)

<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 12, 2018

Access to

Streamflow (2)
https://waterdata.usgs.gov/nc/nwis/rt_d

Groundwater
<https://waterdata.usgs.gov/nc/nwis/gw>

Water quality
<https://waterdata.usgs.gov/nc/nwis/qd>

Precipitation
https://waterdata.usgs.gov/nc/nwis/py_cd

USGS Current Water Data for North Carolina

<https://waterdata.usgs.gov/nc/nwis/rt>

-Or-
Search on “**usgs real time conditions NC**”

USGS Current Water Data for North Carolina

Click to hide state-specific text

*****PLEASE BOOKMARK THIS PAGE FOR EASE OF ACCESS*****

- USGS Water Resources of the South Atlantic Water Science Center: the place to start for all USGS water information in the SAWSC.
- Real-time data [Streamflow](#) || [Water-Quality](#) || [Groundwater Levels](#) || [Precipitation](#)
- [Statewide Rainfall Map](#)
- [Live Streaming RiverCams](#)
- [StreamStats](#) - online tool for basin and flow characteristics
- [USGS Flood Event Viewer](#)
- Sign up for [custom Water Alerts by text or email](#)

Questions about data? [Click here.](#)

Predefined displays
Introduction go

Daily Streamflow Conditions

Select a site to retrieve data and station information.
Wednesday, April 11, 2018 19:30ET

Statewide Streamflow Table

Current data typically are recorded at 15- to 60-minute



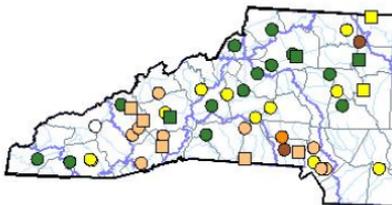
South Atlantic Water Science Center (SAWSC)

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Drought Monitor classification for s

U.S. Drought Monitor classification applied to median of "daily" selected USGS streamflow gaging stations.

[7 days](#) | [14 days](#) | [30 days](#) | [60 days](#) | [90 days](#)



7-day average streamflow
 Median percentile previous 7 days through
 Tuesday, April 10, 2018

Explanation

	Unregulated
No - No Drought (>30 percentile)	
D0 - Abnormally Dry (21 to 30 percentile)	
D1 - Moderate Drought (11 to 20 percentile)	
D2 - Severe Drought (6 to 10 percentile)	
D3 - Extreme Drought (3 to 5 percentile)	
D4 - Exceptional Drought (0 to 2 percentile)	
n/d - Not determined	

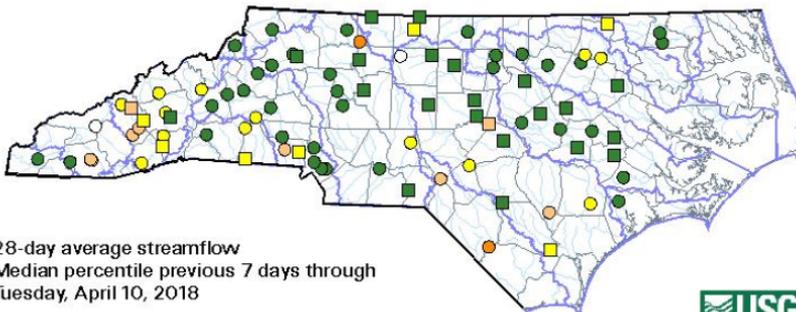
Map is assembled as follows:

1. At each site, compute the "daily running" 7-day average calendar date. See [USGS WaterWatch pages](#) for this pa
2. Then for previous "x" days (where x = 7, 14, 30, 60, or 9

Drought Monitor classification for streamflow gaging stations

U.S. Drought Monitor classification applied to median of "daily" percentiles for **28-day average** flow during the previous 7, 14, 30, 60, and 90 days at selected USGS streamflow gaging stations.

[7 days](#) | [14 days](#) | [30 days](#) | [60 days](#) | [90 days](#)



28-day average streamflow
 Median percentile previous 7 days through
 Tuesday, April 10, 2018



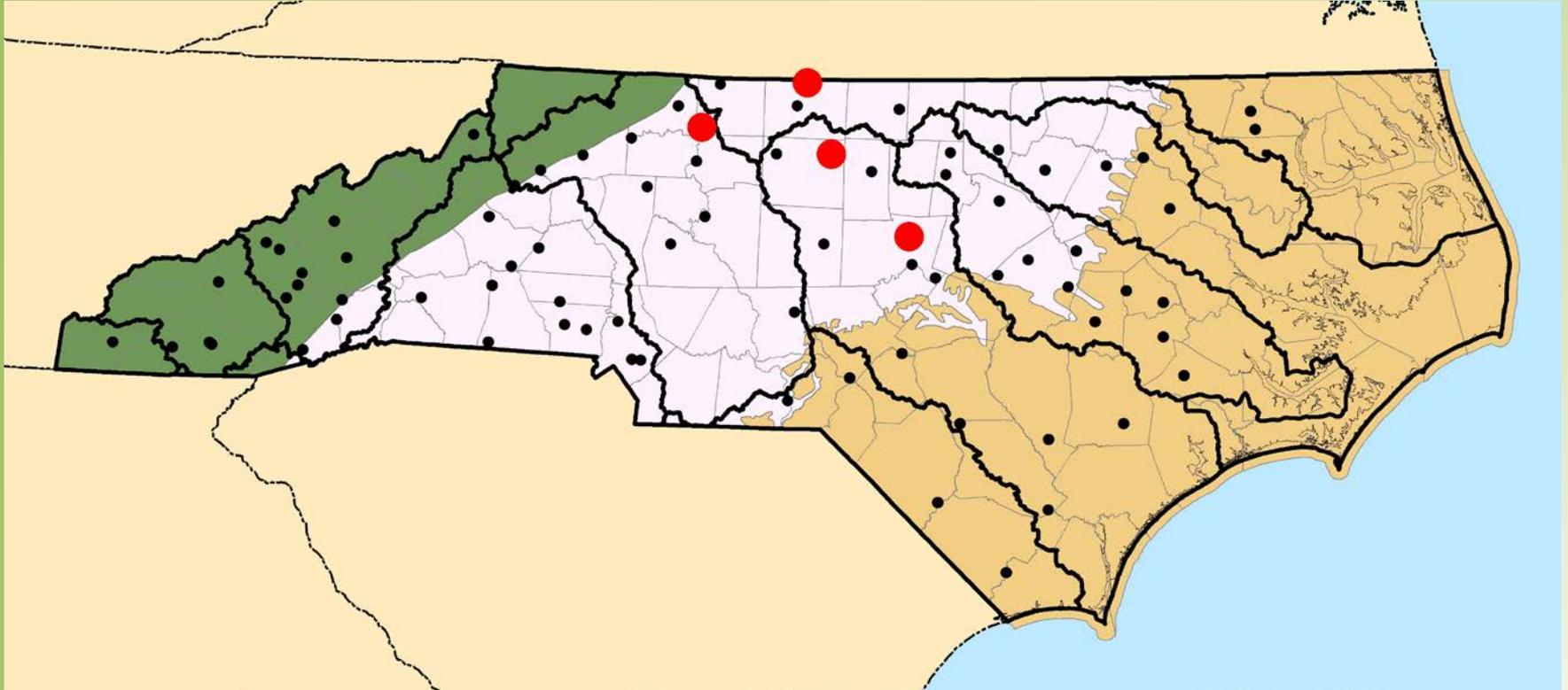
Explanation

	Unregulated	Regulated
No - No Drought (>30 percentile)		
D0 - Abnormally Dry (21 to 30 percentile)		
D1 - Moderate Drought (11 to 20 percentile)		
D2 - Severe Drought (6 to 10 percentile)		
D3 - Extreme Drought (3 to 5 percentile)		
D4 - Exceptional Drought (0 to 2 percentile)		
n/d - Not determined		

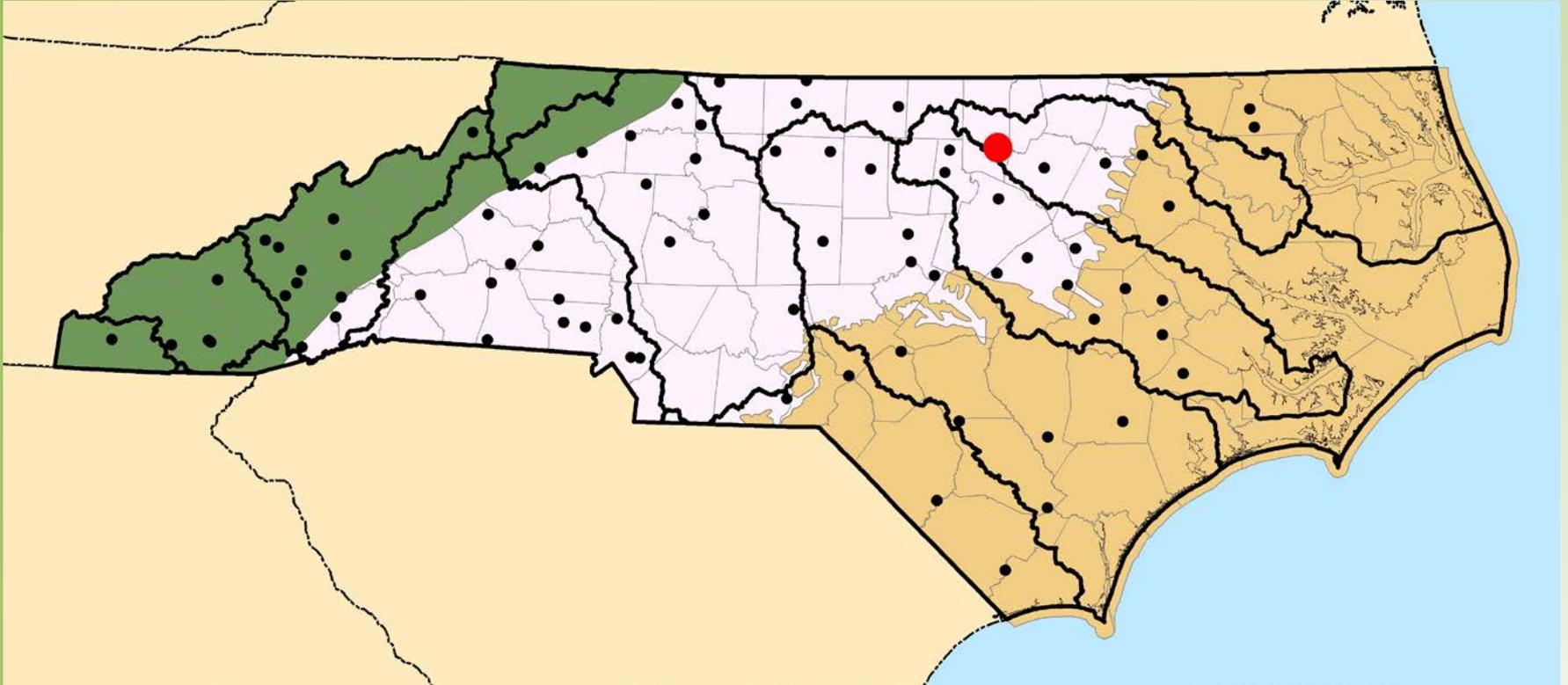
Map is assembled as follows:

1. At each site, compute the "daily running" 28-day average flows and corresponding percentile based on historical 28-day flows for the given calendar date. See [USGS WaterWatch pages](#) for this particular statistic for each calendar day.
2. Then for previous "x" days (where x = 7, 14, 30, 60, or 90), rank the computed daily percentiles and determine the median percentile for the

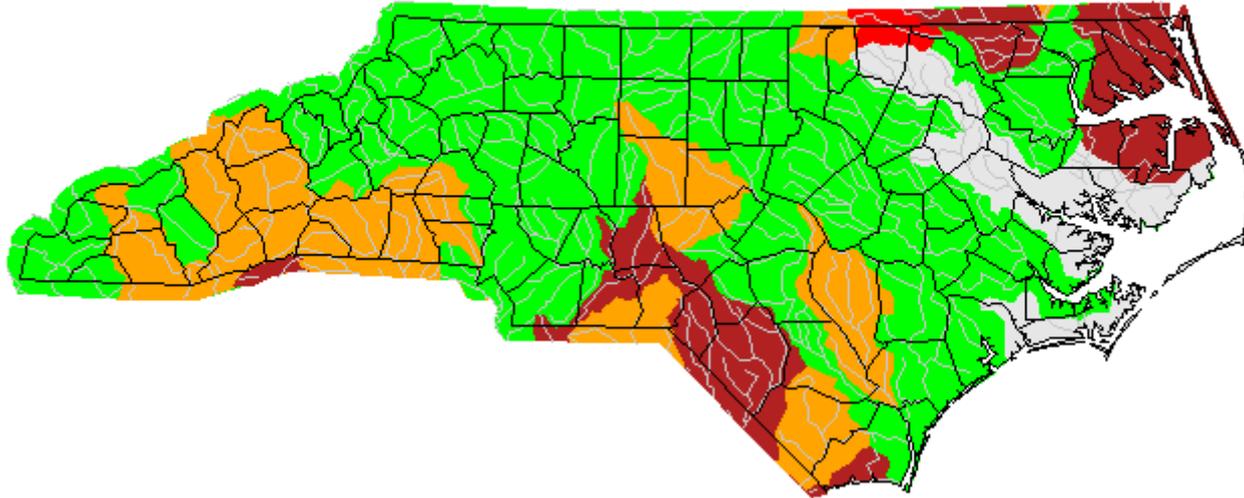
New record monthly minimum average



New record POR minimum daily discharge



Tuesday, April 10, 2018



Overall
7-day
average
flows

*...as of
April 10*



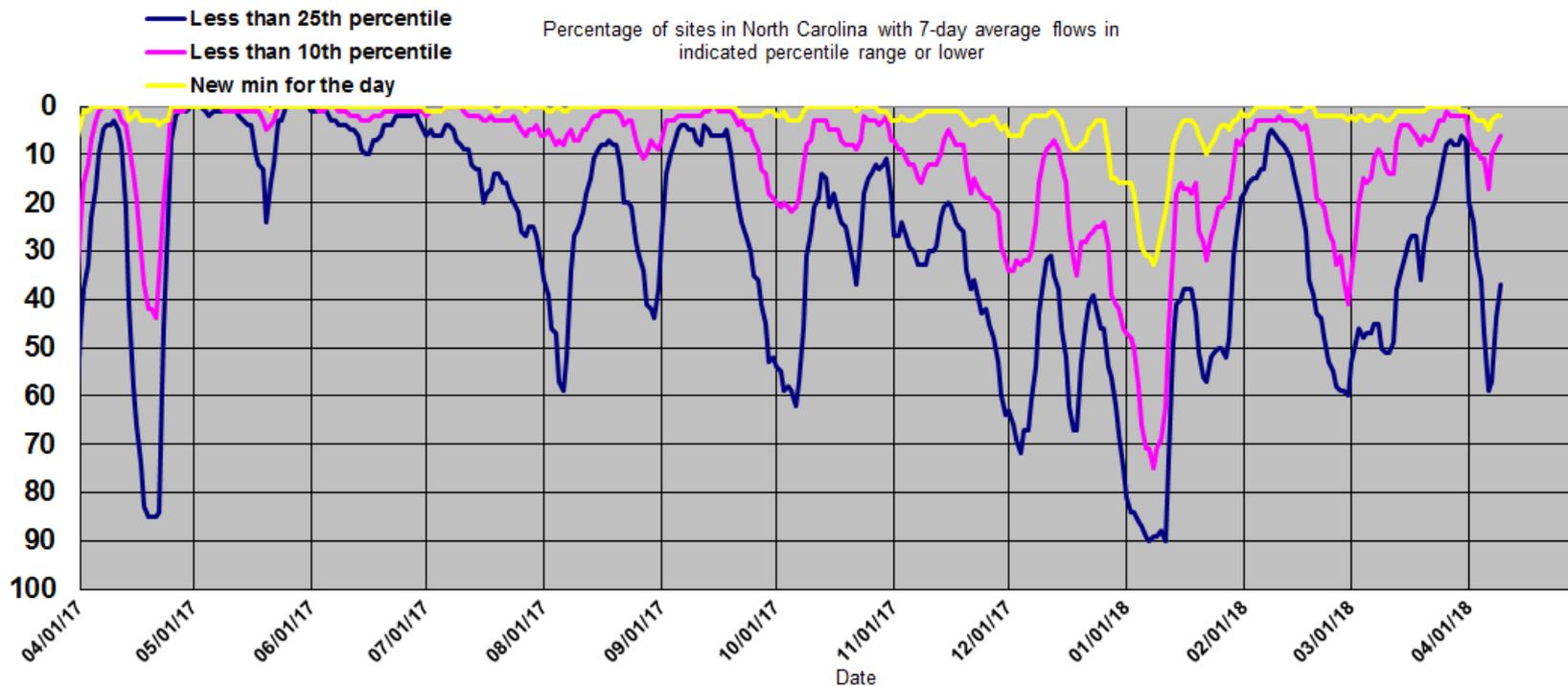
Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	



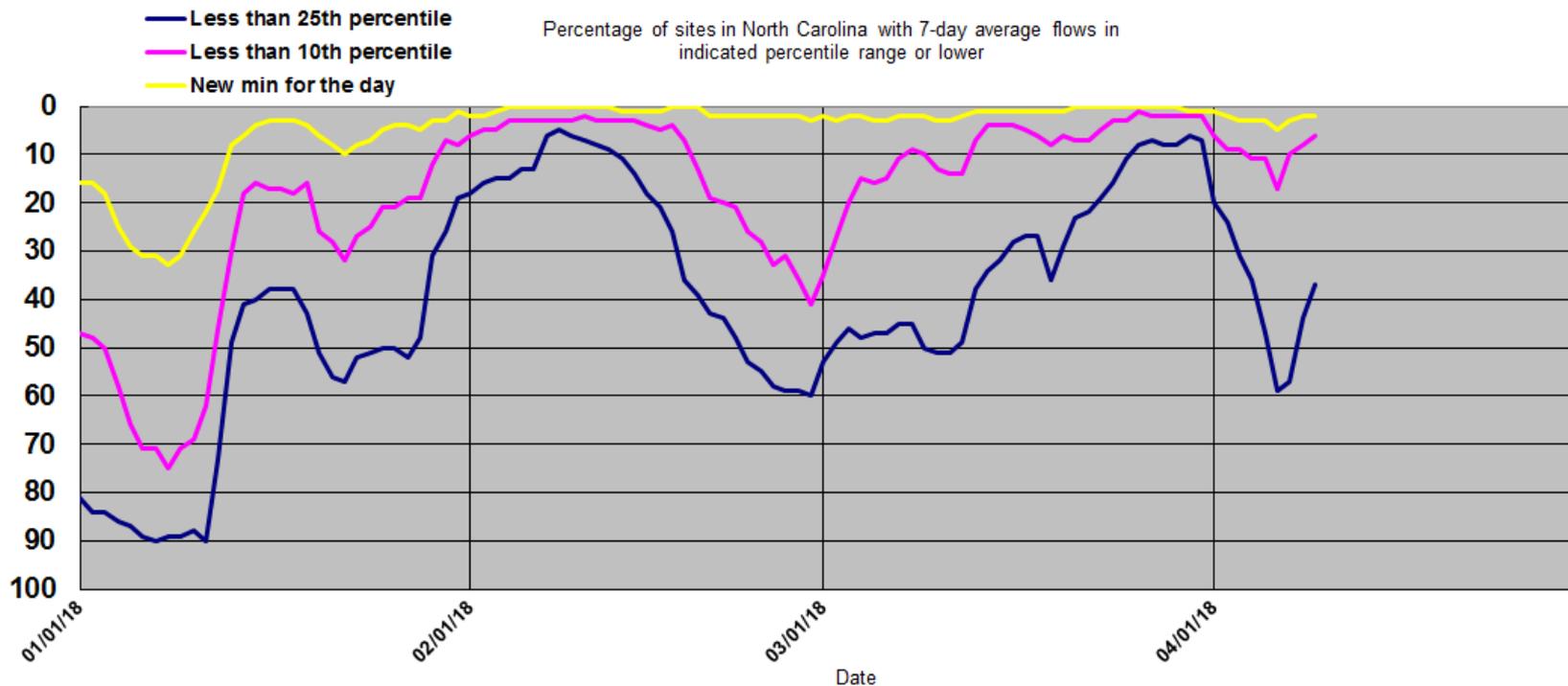
Available at URL

<http://waterwatch.usgs.gov/index.php>

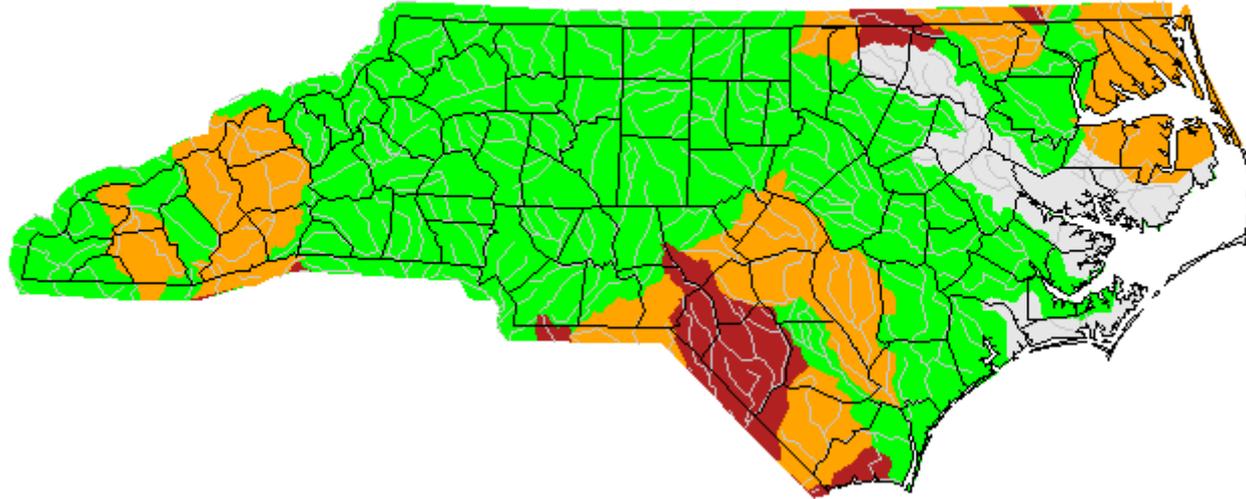
Percentage of sites with 7-day average flows below normal (< 25th percentile)



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



Tuesday, April 10, 2018



Overall
28-day
average
flows

*...as of
April 10*



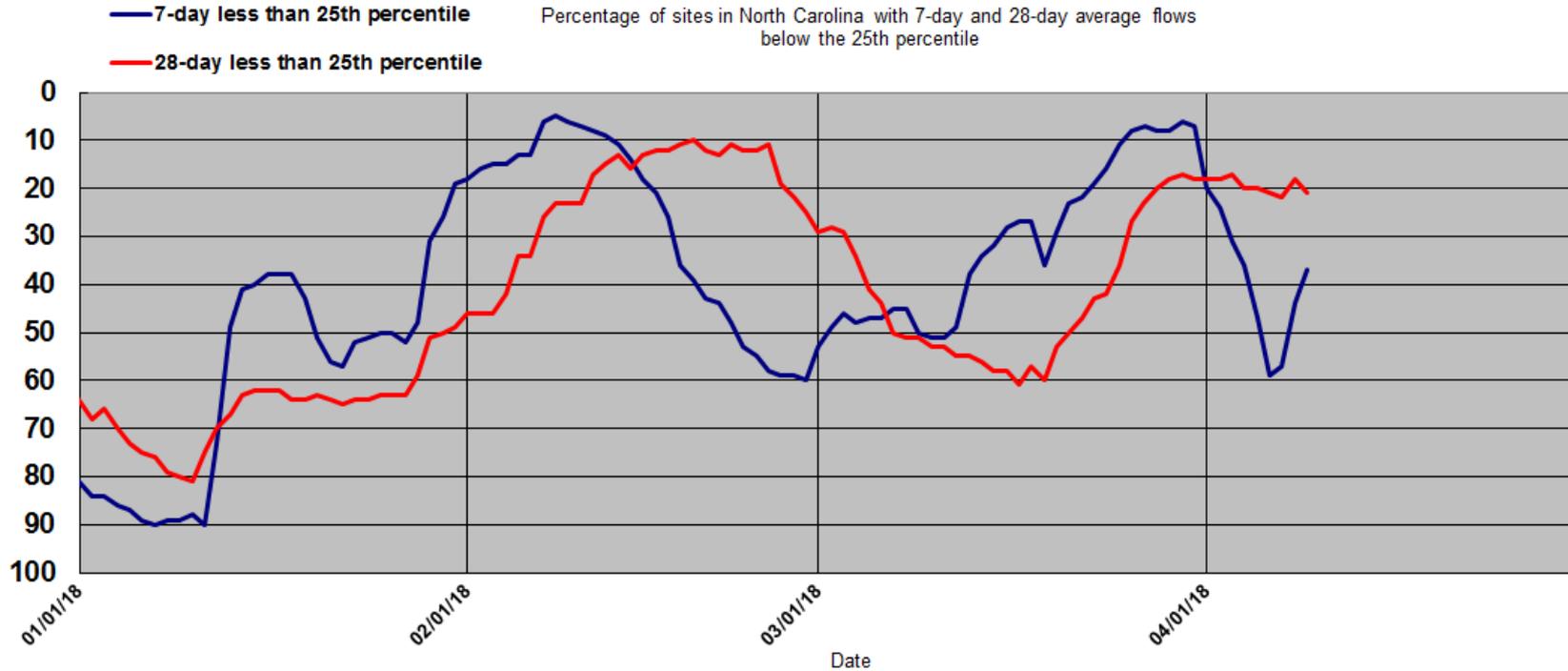
Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	



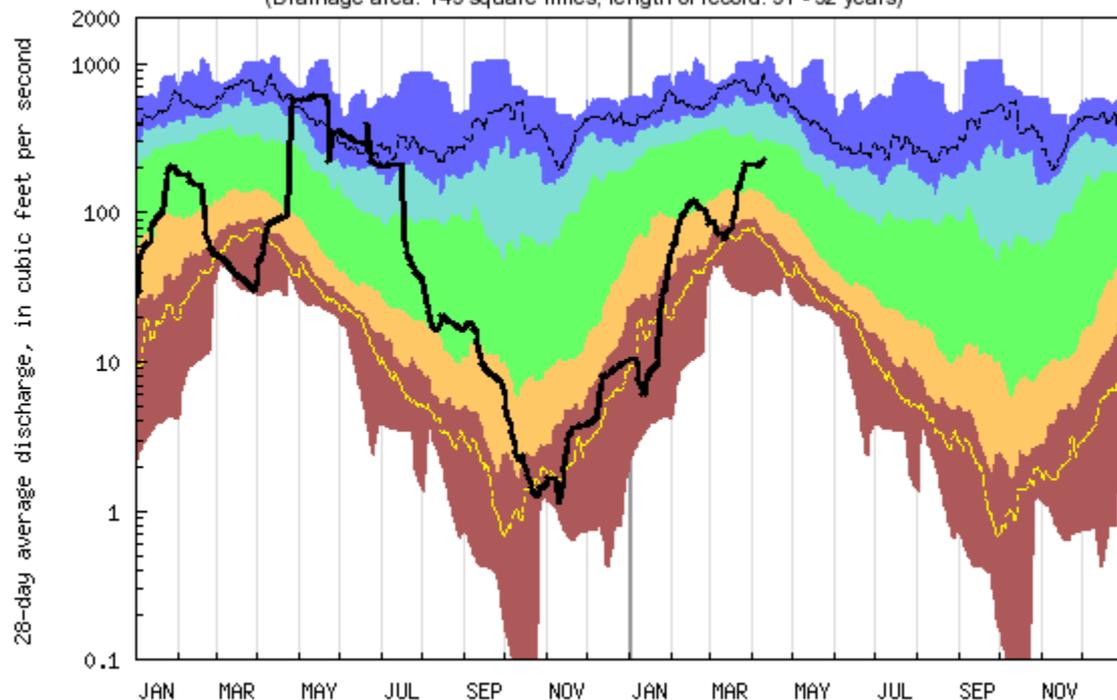
Available at URL

<http://waterwatch.usgs.gov/index.php>

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



USGS 02085500 FLAT RIVER AT BAHAMA, NC
 (Drainage area: 149 square miles, length of record: 91 - 92 years)



USGS WaterWatch

2017

2018

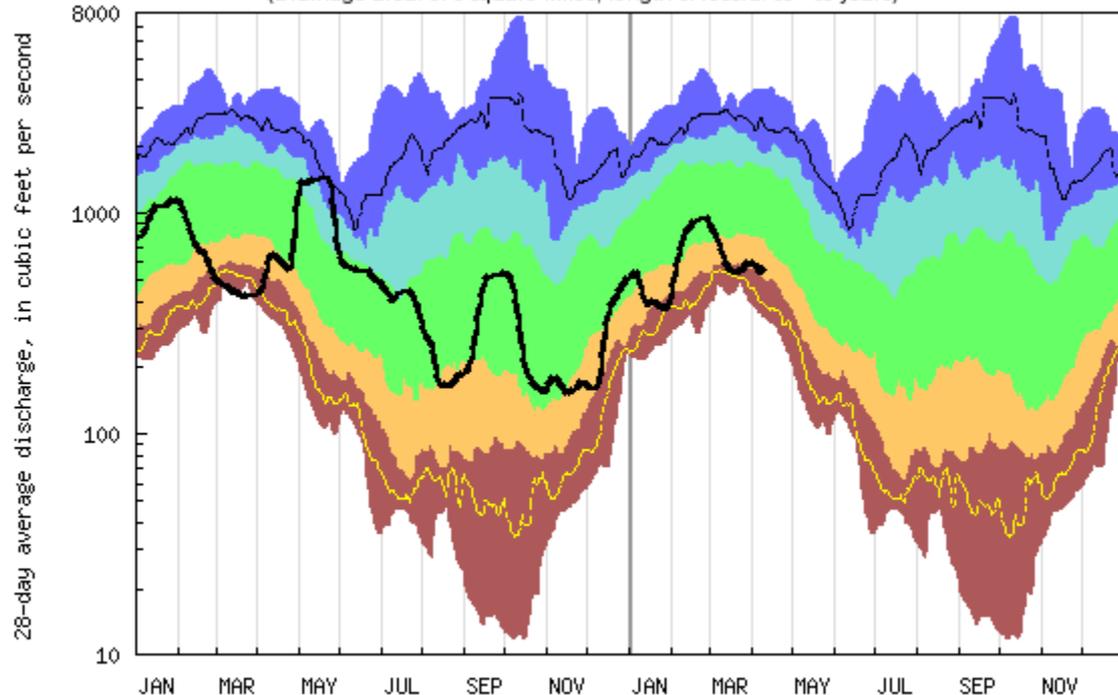
Last updated: 2018-04-11

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	



USGS 02106500 BLACK RIVER NEAR TOMAHAWK, NC
 (Drainage area: 676 square miles, length of record: 65 - 65 years)



USGS WaterWatch

2017

2018

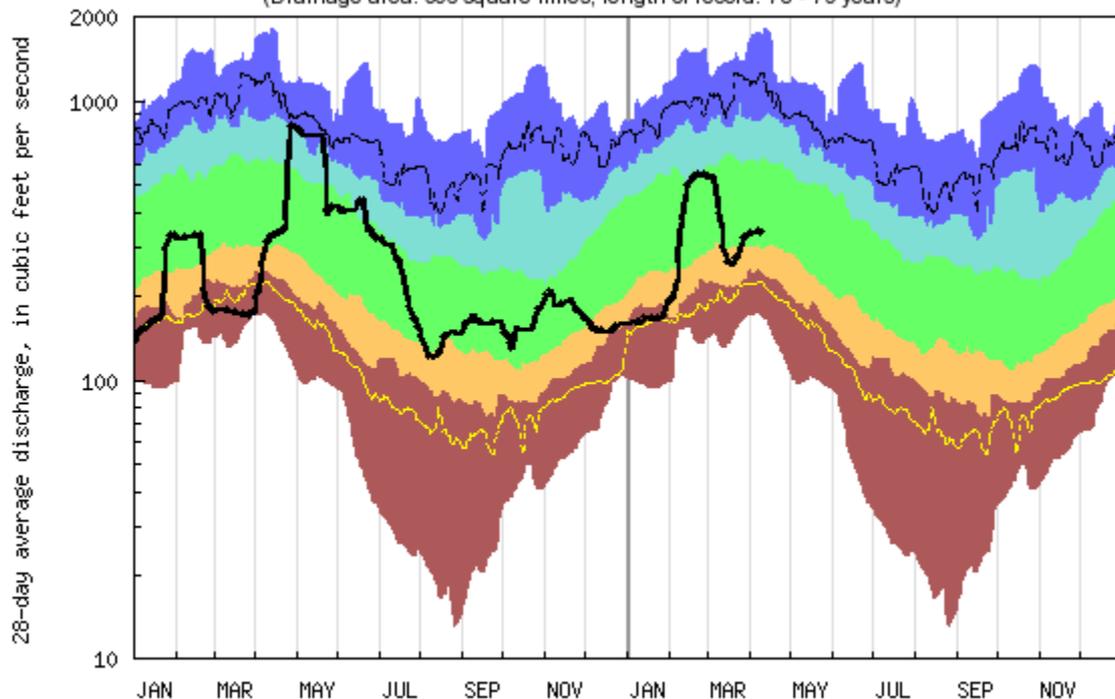
Last updated: 2018-04-11

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



USGS 02118000 SOUTH YADKIN RIVER NEAR MOCKSVILLE, NC
 (Drainage area: 306 square miles, length of record: 78 - 79 years)



USGS WaterWatch

2017

2018

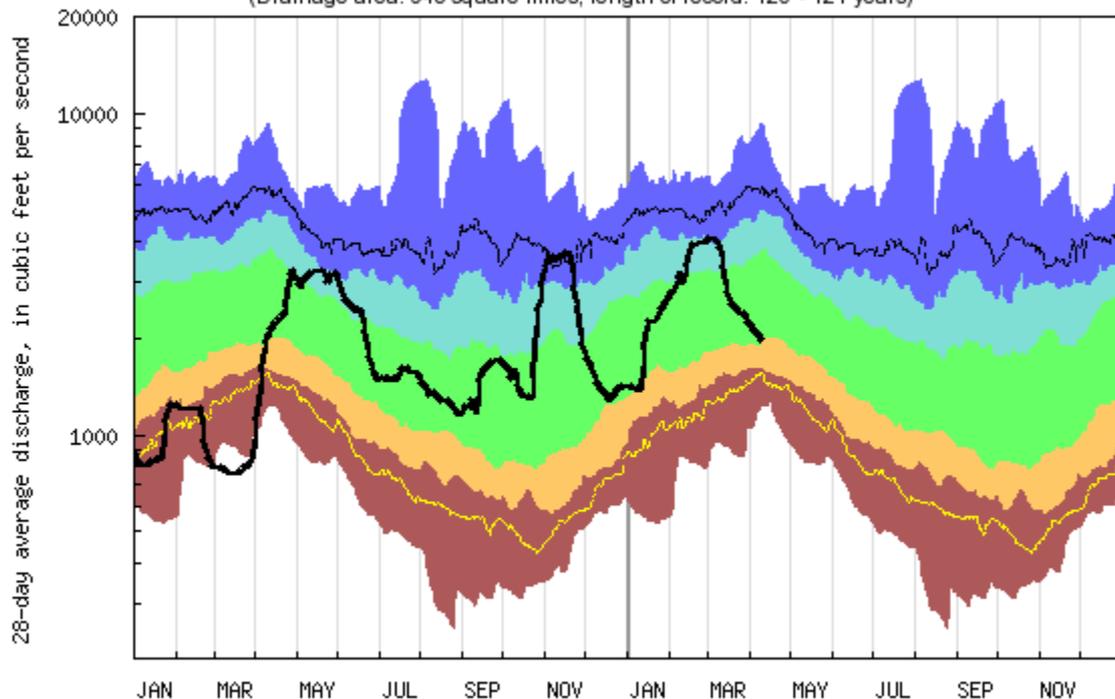
Last updated: 2018-04-11

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



USGS 03451500 FRENCH BROAD RIVER AT ASHEVILLE, NC
 (Drainage area: 945 square miles, length of record: 120 - 121 years)



USGS WaterWatch

2017

2018

Last updated: 2018-04-11

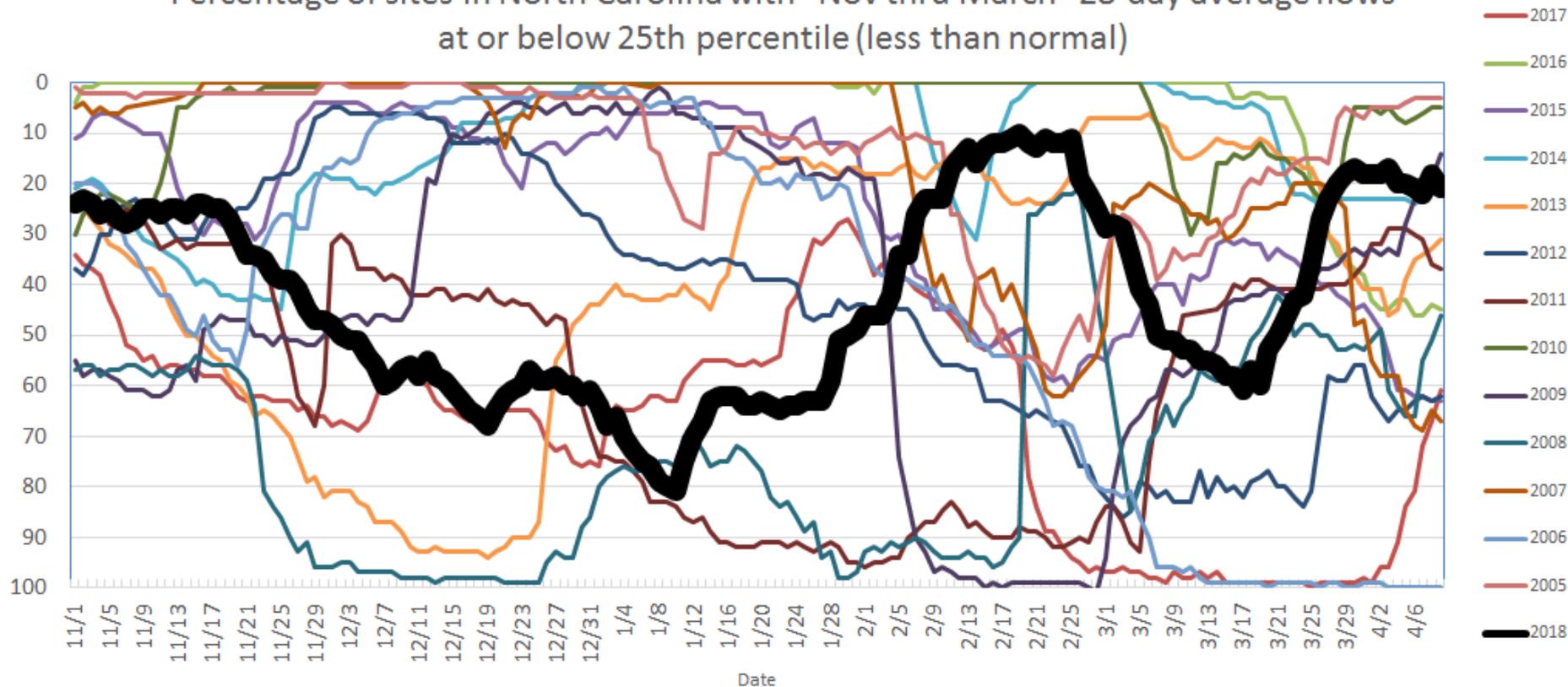
Explanation - Percentile classes

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

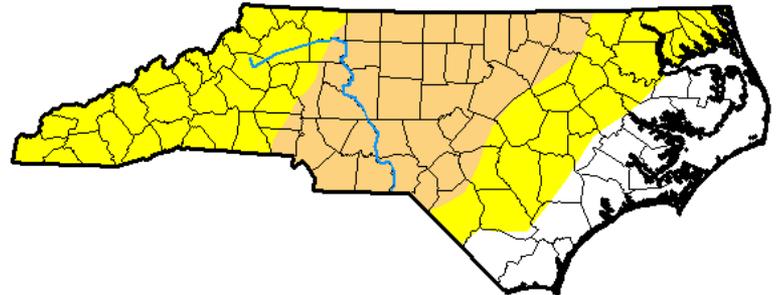
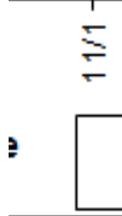
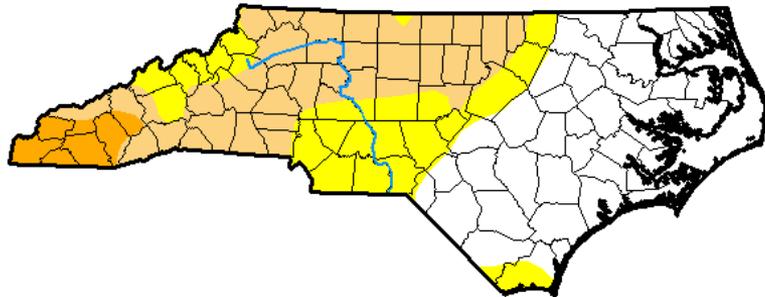
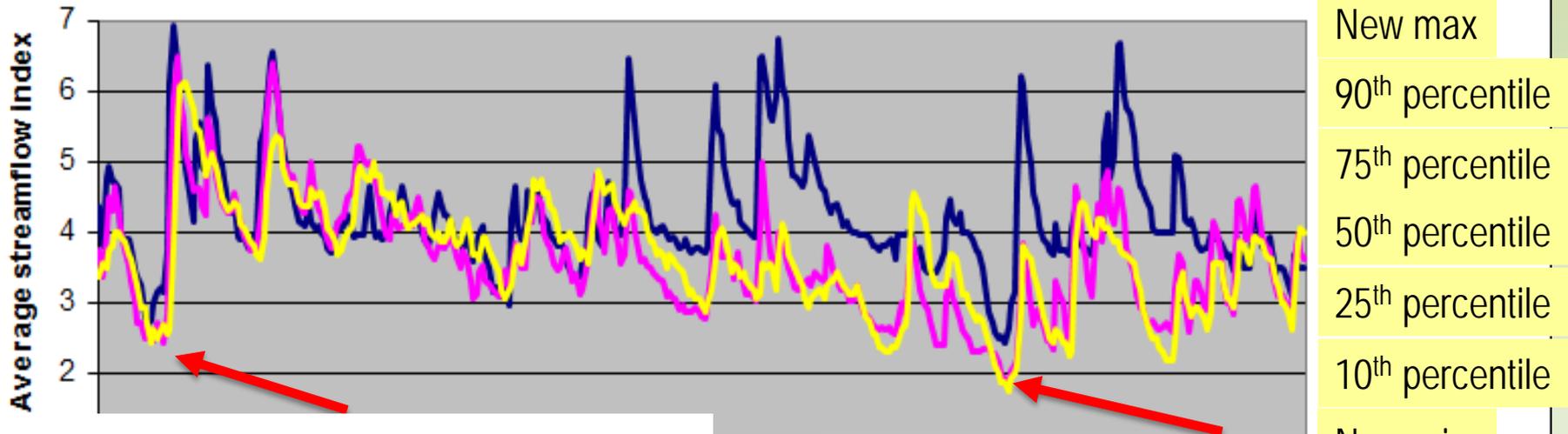


Comparison of 28-day flows for November through March

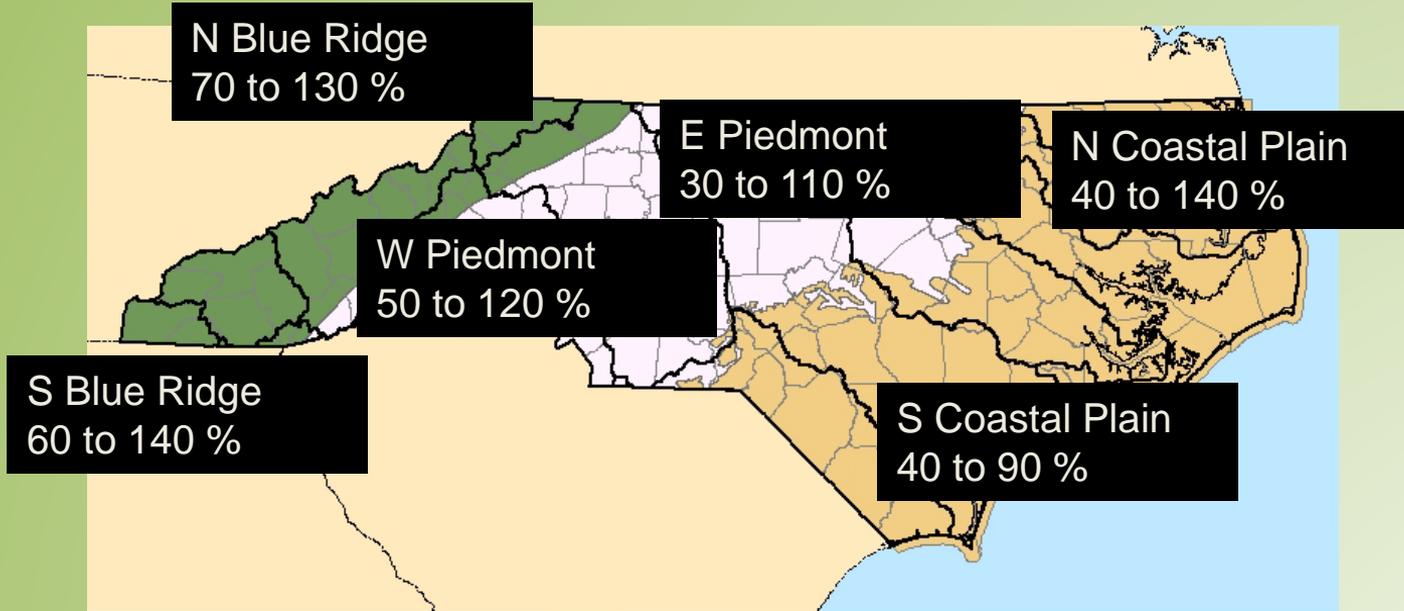
Percentage of sites in North Carolina with "Nov thru March" 28-day average flows at or below 25th percentile (less than normal)



Average streamflow index (by Province)



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



...as of April 10

In closing...

- Questions
- Concerns

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Flat River at Bahama
Durham County