

NC Climate Overview

NC DMAC Annual Meeting
Sept. 8, 2020

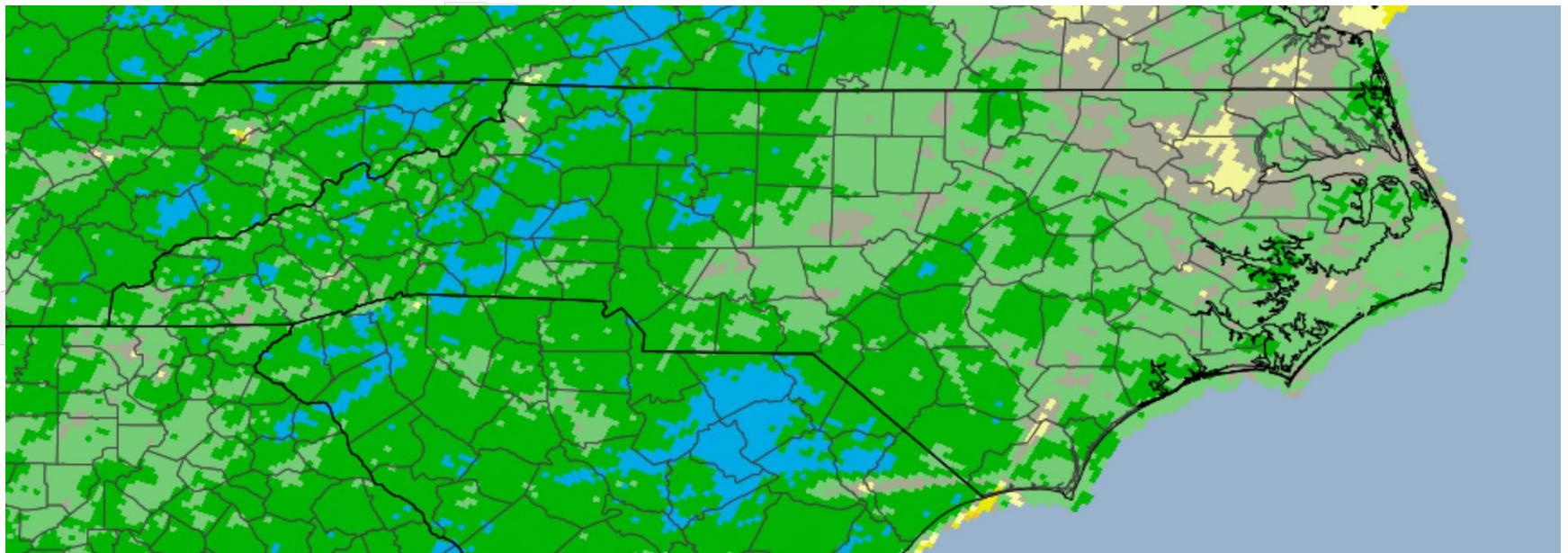


Darrian Bertrand

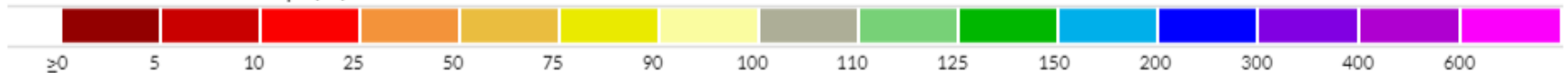
State Climate Office of NC

Past 12 Months

Percent of normal precipitation for September 2019 – August 2020

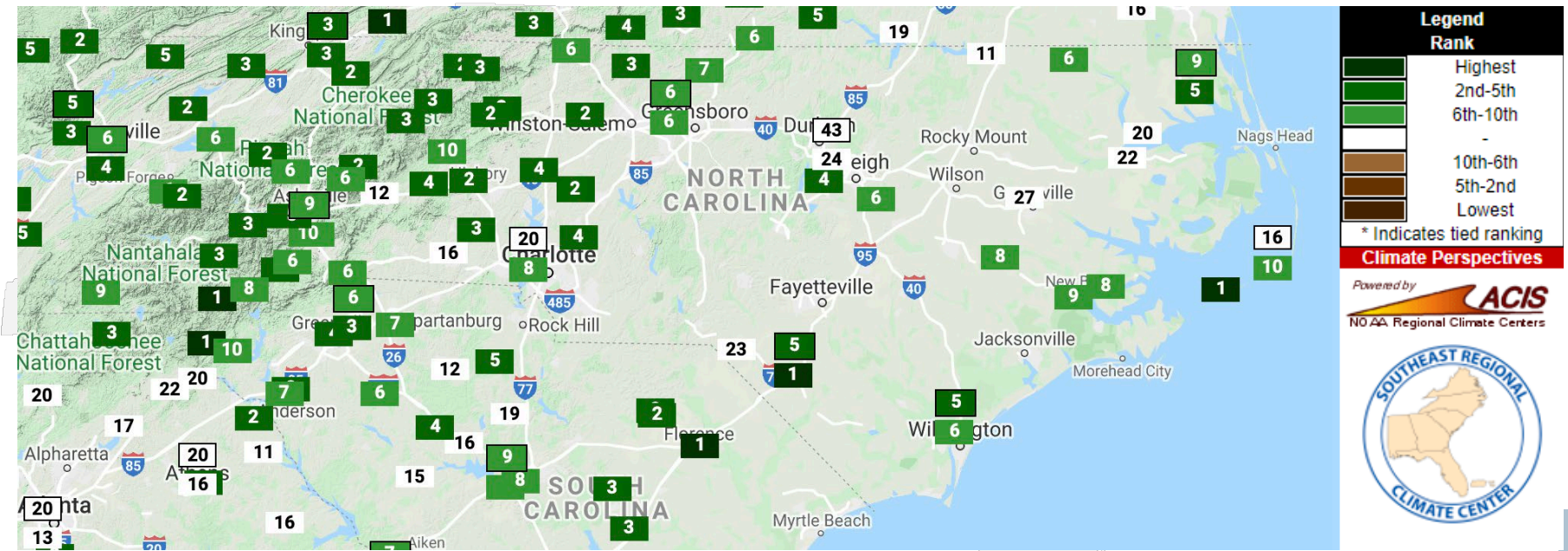


Percent of Normal Precip. (%)



Past 12 Months - Wet

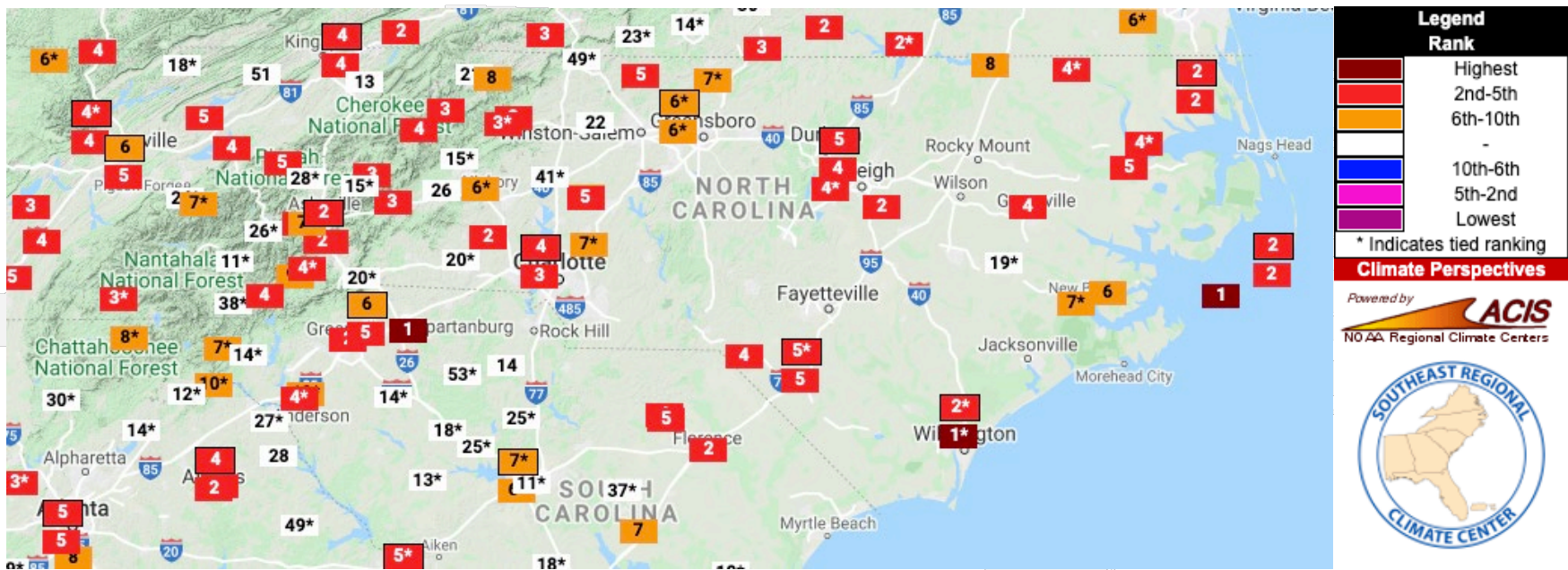
Precipitation rankings for September 2019 – August 2020



Statewide Average Precipitation: **60.92"** → **5th wettest**
 Long-term Average Precipitation: **49.35"**

Past 12 Months - Warm

Mean temperature rankings for September 2019 – August 2020



Statewide Average Temperature: **61.2 °F** → **4 warmest**
 Long-term Average Temperature: **58.5 °F**

The Past Year By the Numbers

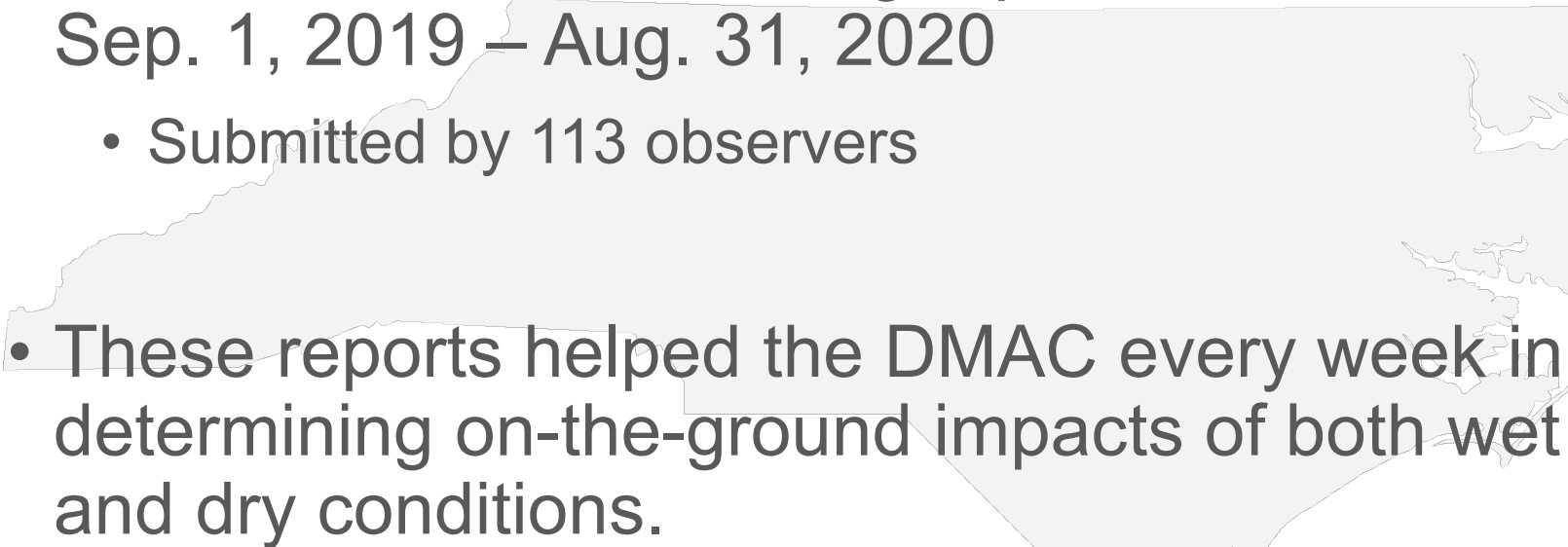
Statewide Temperature Rankings (Based on data since 1895)

Sep 2019	Oct	Nov	Dec	Jan 2020	Feb	Mar	Apr	May	Jun	Jul	Aug
5 th WARMEST	5 th WARMEST	36 th COOLEST	17 th WARMEST	11 th WARMEST	11 th WARMEST	5 th WARMEST	53 rd COOLEST	13 th COOLEST	49 th COOLEST	6 th WARMEST	16 th WARMEST

Statewide Precipitation Rankings (Based on data since 1895)

Sep 2019	Oct	Nov	Dec	Jan 2020	Feb	Mar	Apr	May	Jun	Jul	Aug
43 rd DRIEST	19 th WETTEST	51 st WETTEST	30 th WETTEST	38 th WETTEST	3 rd WETTEST	39 th DRIEST	17 th WETTEST	2 nd WETTEST	44 th WETTEST	32 nd DRIEST	11 th WETTEST

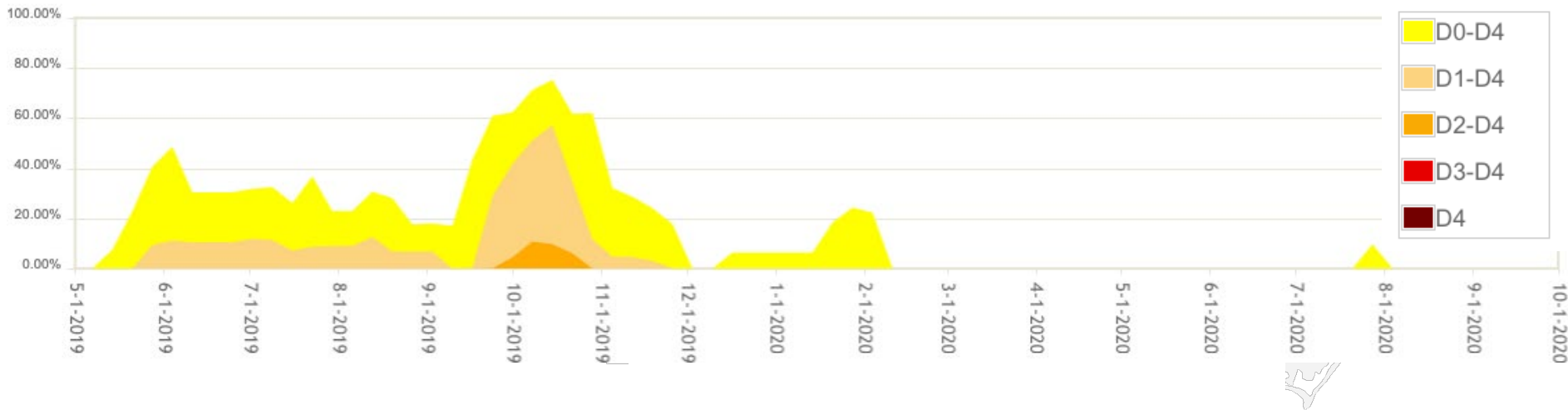
CoCoRaHS Condition Monitoring

- 1,368 condition monitoring reports from Sep. 1, 2019 – Aug. 31, 2020
 - Submitted by 113 observers
 - These reports helped the DMAC every week in determining on-the-ground impacts of both wet and dry conditions.
- 

U.S. Drought Monitor

Statewide Percent by Category

North Carolina Percent Area



Drought conditions:

- Began in May 2019
- Peaked in October 2019
- Ended in November 2019

Fall 2019

Temperature Rankings

Precipitation Rankings

Sep	Oct	Nov
5 th WARMEST	5 th WARMEST	36 th COOLEST
43 rd DRIEST	19 th WETTEST	51 st WETTEST

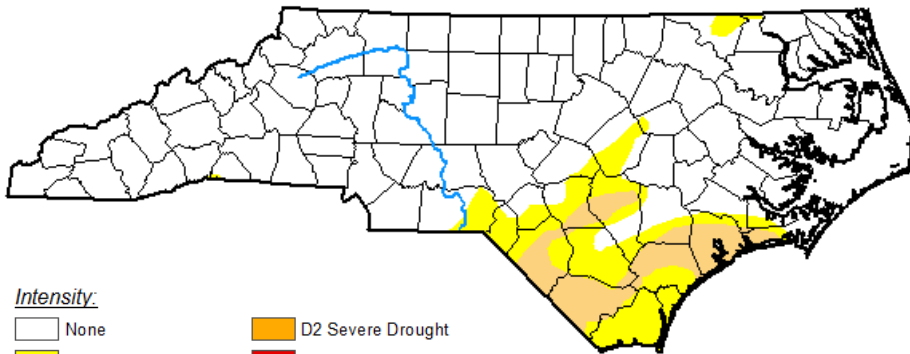


11th warmest & 51st wettest
fall on record

Fall 2019

Sep	Oct	Nov
5 th WARMEST	5 th WARMEST	36 th COOLEST
43 rd DRIEST	19 th WETTEST	51 st WETTEST

*U.S. Drought Monitor
September 3, 2019*



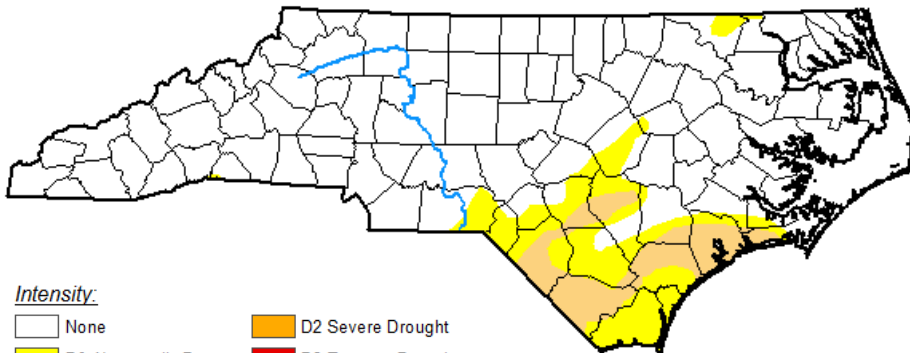
Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Fall 2019

Sep	Oct	Nov
5th WARMEST	5th WARMEST	36th COOLEST
43rd DRIEST	19th WETTEST	51st WETTEST

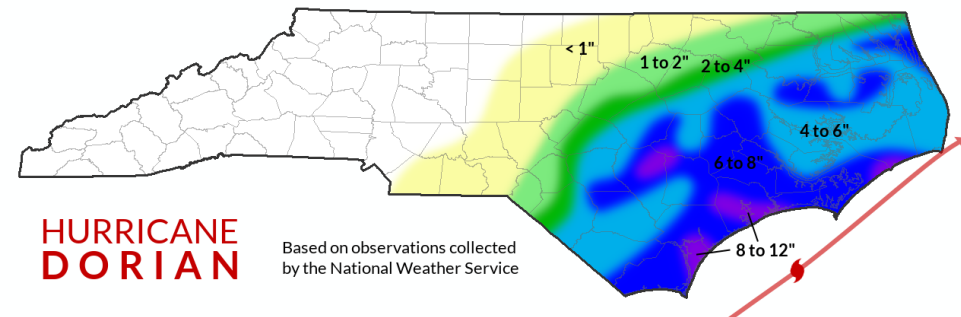
U.S. Drought Monitor September 3, 2019



Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Total Precipitation (in.) Sep. 4-6, 2019



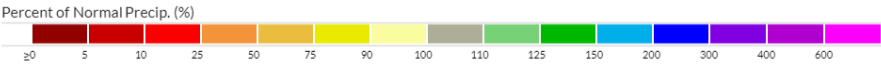
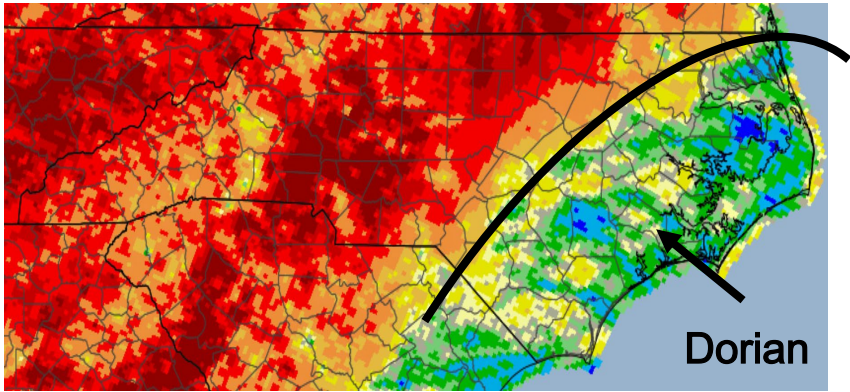
HURRICANE DORIAN

Based on observations collected by the National Weather Service

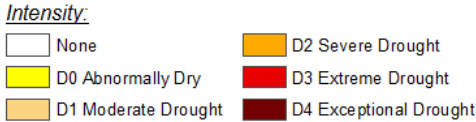
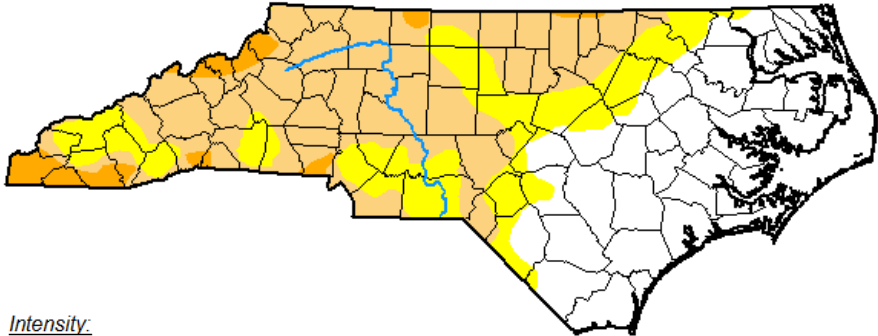
Fall 2019

Sep	Oct	Nov
5th WARMEST	5th WARMEST	36th COOLEST
43rd DRIEST	19th WETTEST	51st WETTEST

30-day Percent of Normal Precipitation



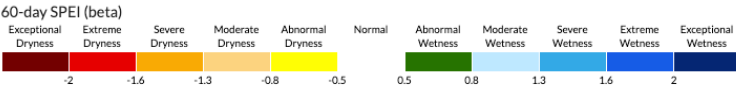
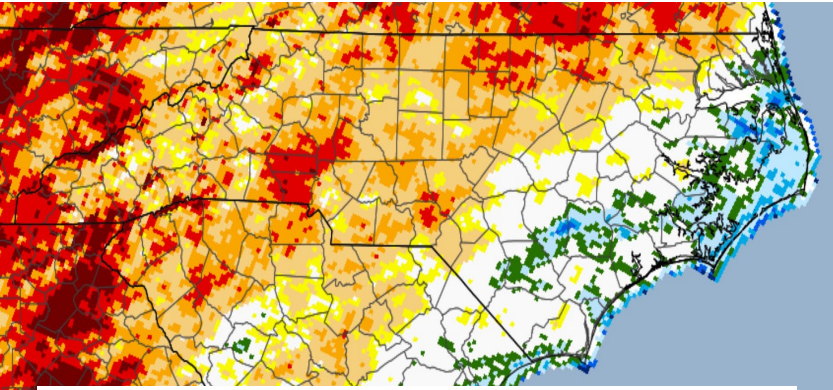
U.S. Drought Monitor October 1, 2019



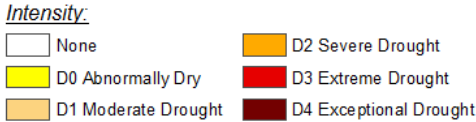
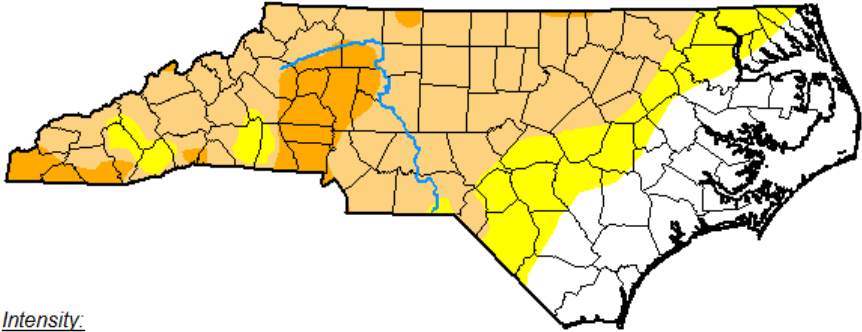
Fall 2019

Sep	Oct	Nov
5 th WARMEST	5 th WARMEST	36 th COOLEST
43 rd DRIEST	19 th WETTEST	51 st WETTEST

60-day Standardized Precipitation Evapotranspiration Index (SPEI)



U.S. Drought Monitor October 15, 2019



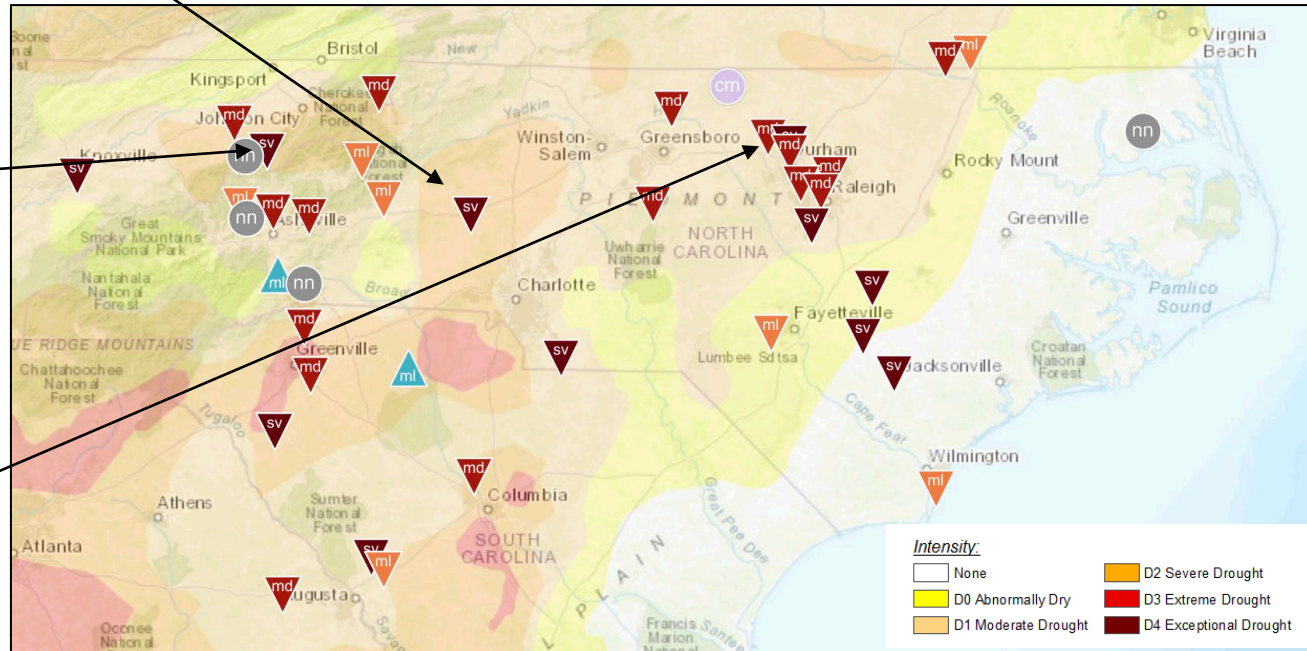
Fall 2019

NC-CT-39:
 “Large cracks in the ground...Grass is dead...Fire danger is high.”

CoCoRaHS Condition Monitoring Reports Oct. 8 – Oct. 14, 2019

NC-MS-19:
 “Water levels in our creeks and springs remains lower than normal and pastures are very dry.”

NC-DH-48:
 “We are bone dry...leaves have all turned brown.”

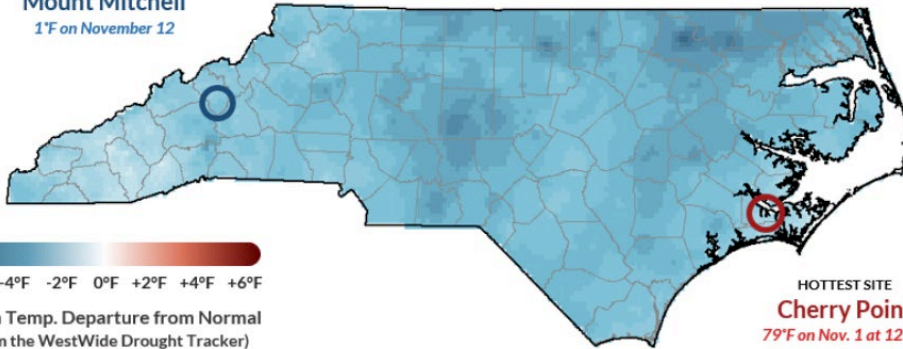


Fall 2019

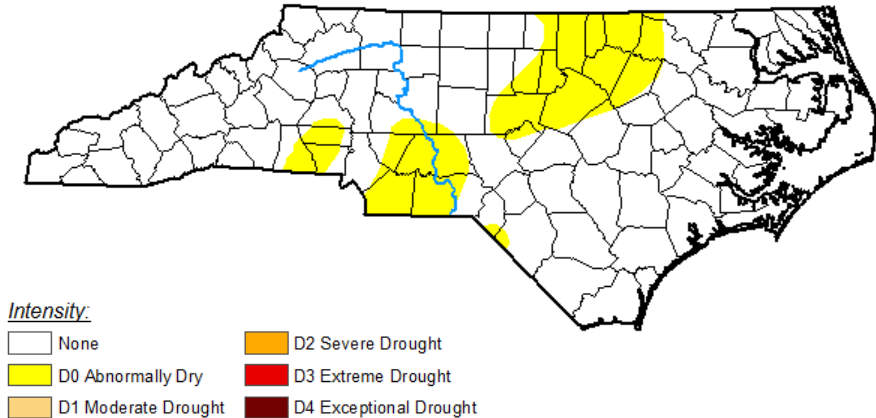
Sep	Oct	Nov
5 th WARMEST	5 th WARMEST	36 th COOLEST
43 rd DRIEST	19 th WETTEST	51 st WETTEST

November 2019 Mean Temperature Departure from Normal

COLDEST SITE
Mount Mitchell
1°F on November 12



U.S. Drought Monitor November 26, 2019



Winter 2019-2020

	Dec	Jan	Feb
<i>Temperature Rankings</i>	17 th WARMEST	11 th WARMEST	11 th WARMEST
<i>Precipitation Rankings</i>	30 th WETTEST	38 th WETTEST	3 rd WETTEST

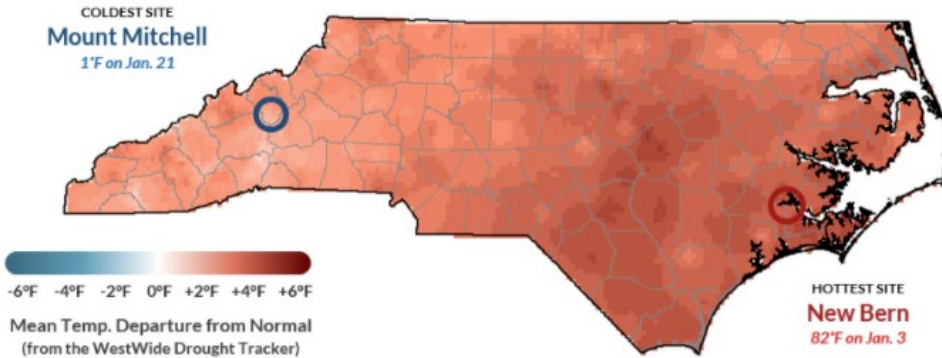


**5th warmest & 11th wettest
winter on record**

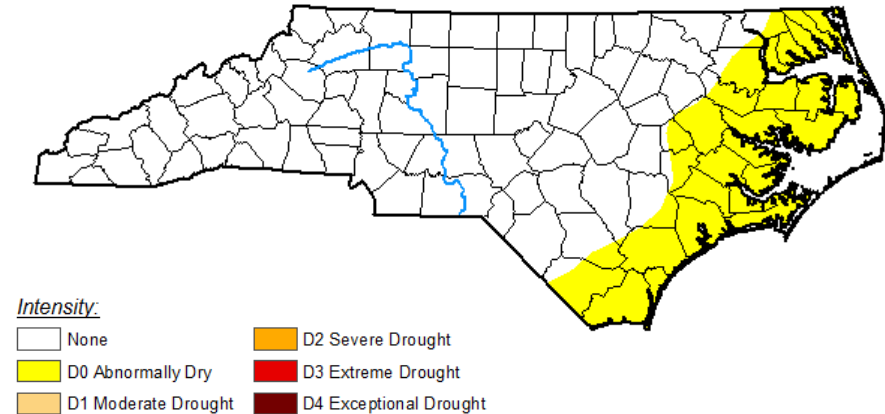
Winter 2019-2020

Dec	Jan	Feb
17 th WARMEST	11 th WARMEST	11 th WARMEST
30 th WETTEST	38 th WETTEST	3 rd WETTEST

January 2020 Mean Temperature Departure from Normal



U.S. Drought Monitor January 28, 2020



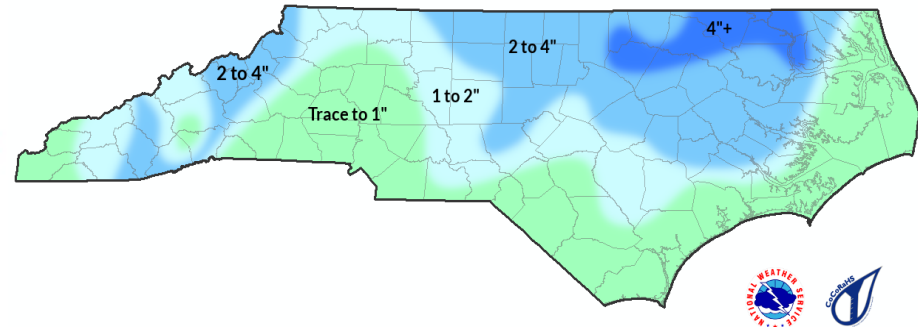
Winter 2019-2020

Dec	Jan	Feb
17 th WARMEST	11 th WARMEST	11 th WARMEST
30 th WETTEST	38 th WETTEST	3 rd WETTEST

February Percent of Normal Precipitation

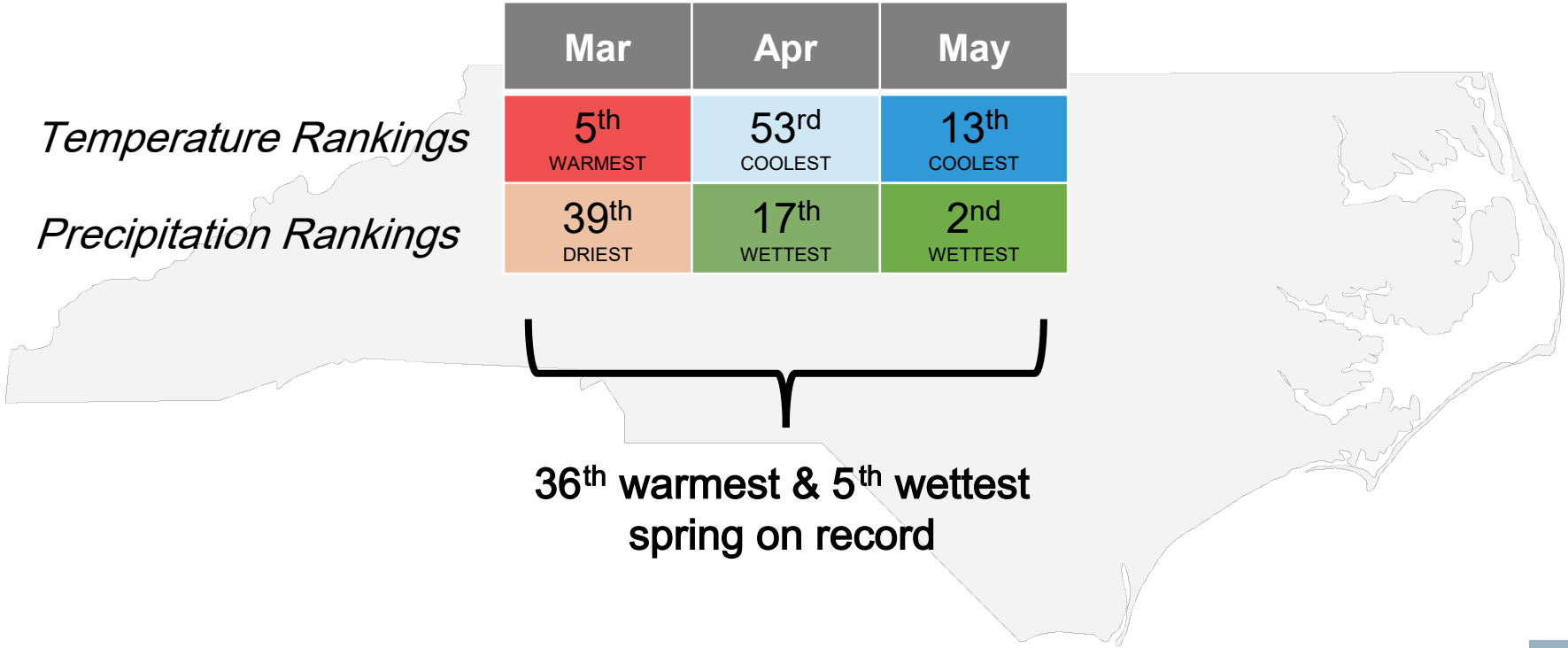


Snow Accumulations February 20-21, 2020



Snow reports collected from the National Weather Service and CoCoRaHS observers

Spring 2020



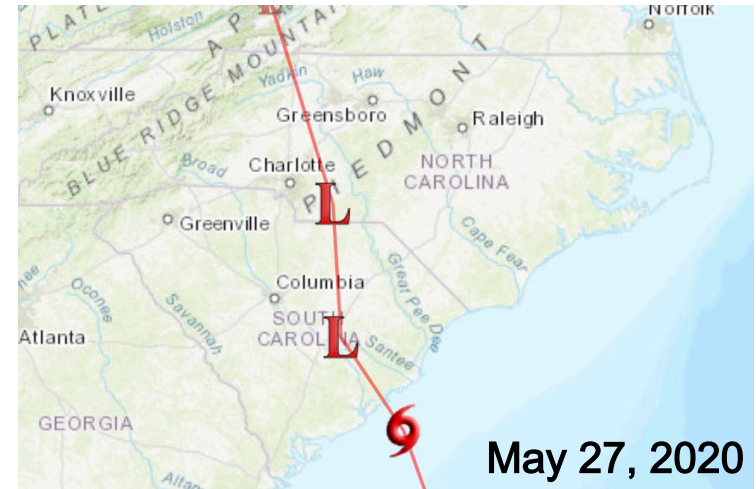
Spring 2020

Mar	Apr	May
5 th WARMEST	53 rd COOLEST	13 th COOLEST
39 th DRIEST	17 th WETTEST	2 nd WETTEST

Tropical Storm Arthur



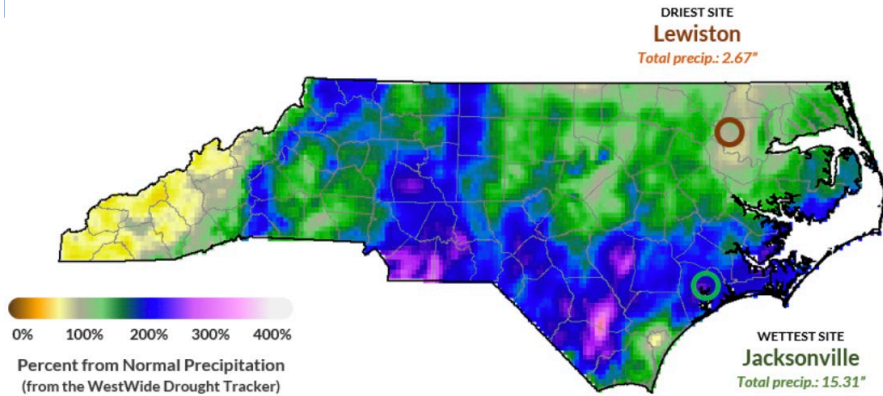
Tropical Storm Bertha



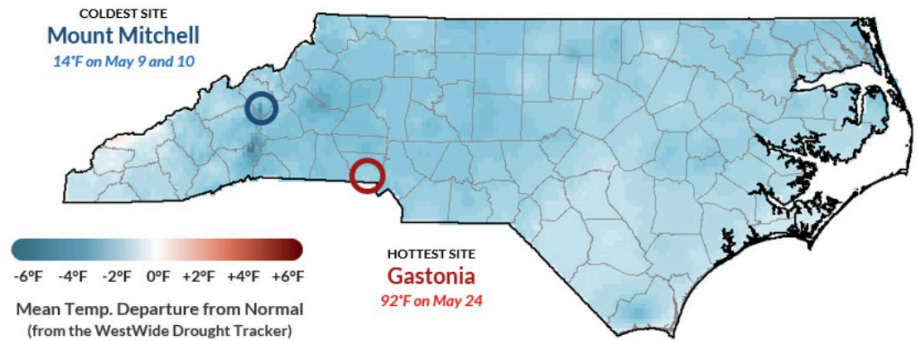
Spring 2020

Mar	Apr	May
5 th WARMEST	53 rd COOLEST	13 th COOLEST
39 th DRIEST	17 th WETTEST	2 nd WETTEST

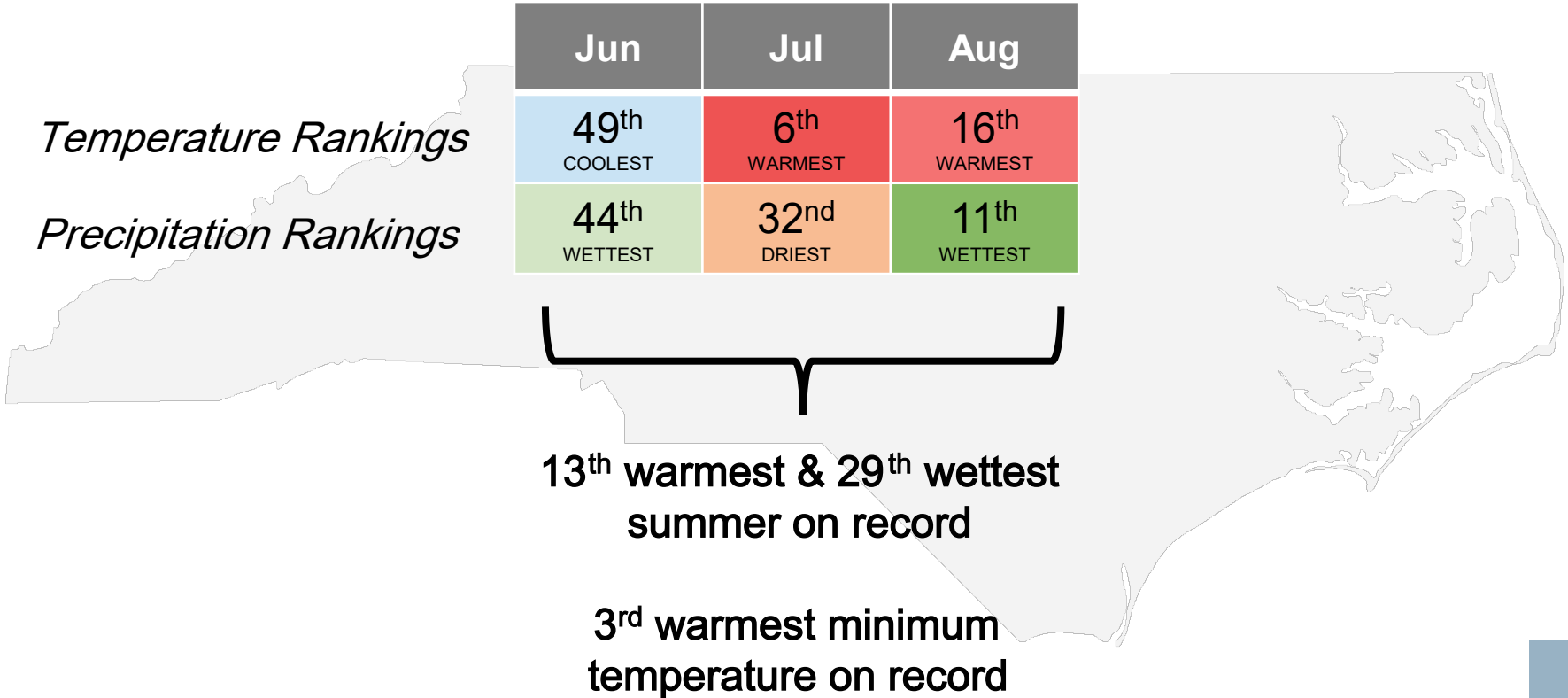
May Percent of Normal Precipitation



May Mean Temperature Departure from Normal



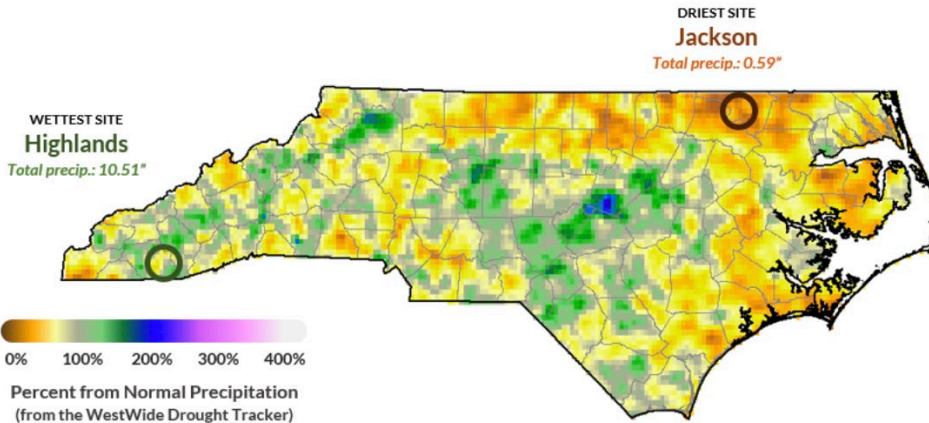
Summer 2020



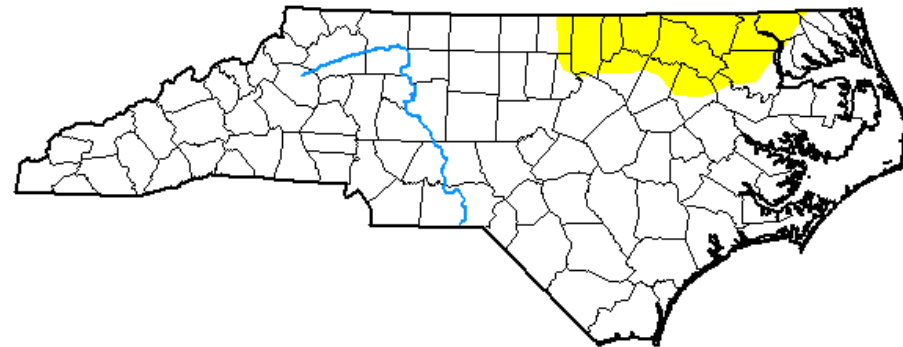
Summer 2020

Jun	Jul	Aug
49 th COOLEST	6 th WARMEST	16 th WARMEST
44 th WETTEST	32 nd DRIEST	11 th WETTEST

July 2020 Percent of Normal Precipitation



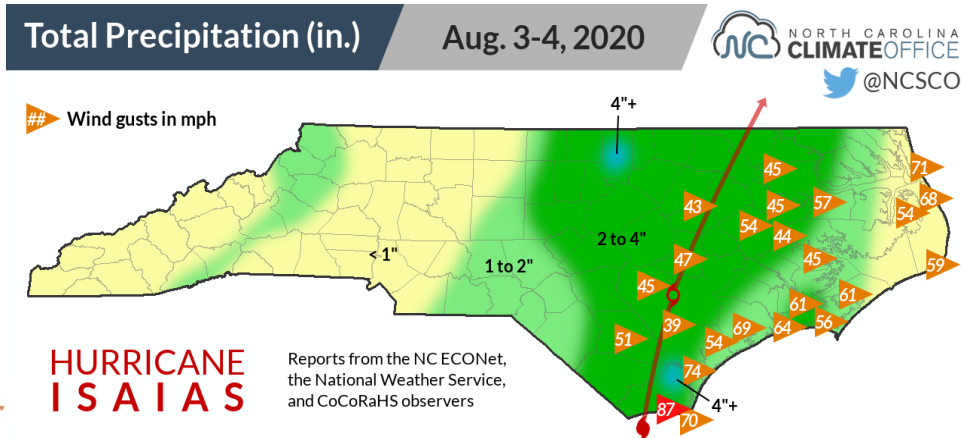
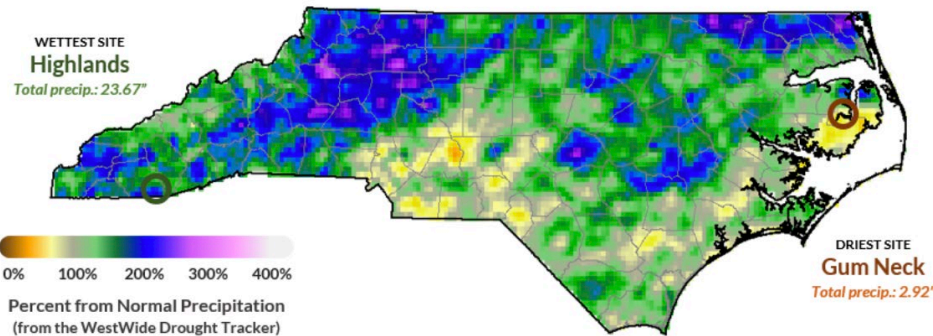
U.S. Drought Monitor July 28, 2020



Summer 2020

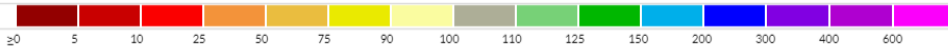
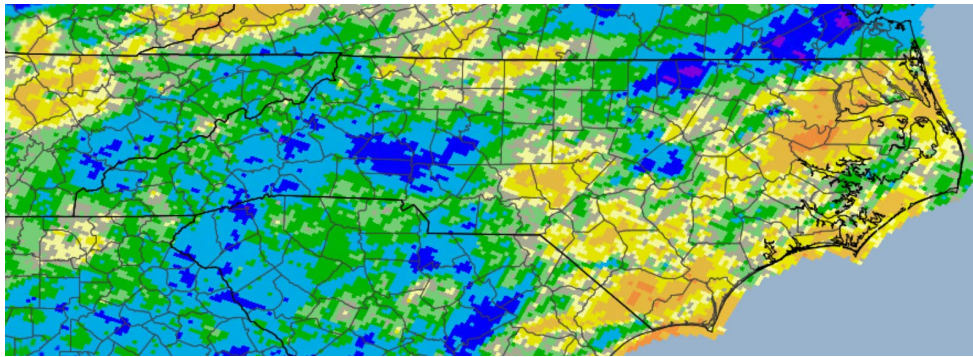
Jun	Jul	Aug
49 th COOLEST	6 th WARMEST	16 th WARMEST
44 th WETTEST	32 nd DRIEST	11 th WETTEST

August 2020 Percent of Normal Precipitation

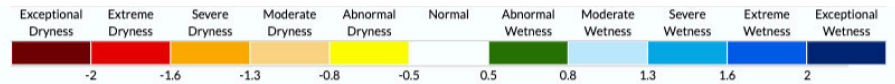
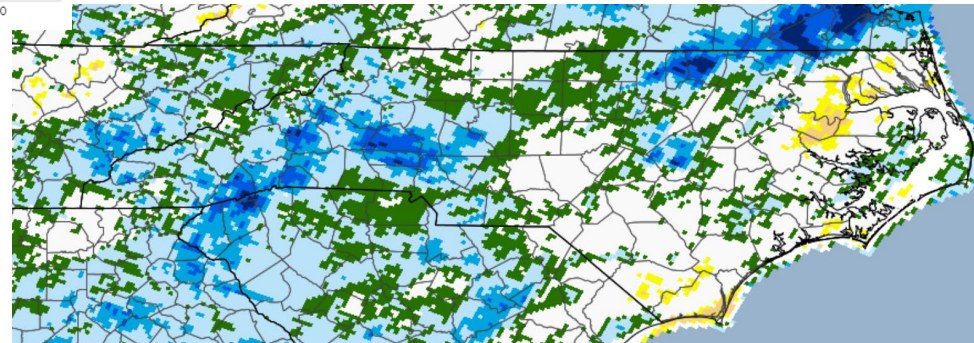


Current Conditions

*30-day Percent of Normal Precipitation
9/25/2020*



*30-day SPEI
9/25/2020*



Climate Overview

- The only drought conditions in the last 12 months occurred in Fall 2019.
- Most months were wetter and warmer than normal.
- The CPC 3-month outlook is warmer than normal and shows equal chances of above/below/normal precipitation, although we're in a cooler pattern for the short term.

Thanks!

Darrian Bertrand

Applied Climatologist

CoCoRaHS State Co-coordinator

State Climate Office of NC

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