

November 2019 Central NC Climate Summary

By Phillip Badgett and James Danco

The month featured much colder-than-normal temperatures, and much-needed rain to help take away the lingering dryness.

November 2019 was generally 4-5°F colder than the 30-year average across central NC. The monthly average temperatures and their departures from normal at the three climate sites are depicted in Table 1.

Table 1: Monthly Temperature Statistics

Site	Avg High Temp (°F)	Avg Low Temp (°F)	Avg Temp (°F)	Departure From Normal (°F)	Maximum Temperature (°F)	Minimum temperature (°F)
Greensboro (GSO)	56.3	36.2	46.2	-4.0	70 on 11/5	20 on 11/13
Raleigh-Durham (RDU)	58.6	37.6	48.1	-4.1	73 on 11/5	24 on 11/14
Fayetteville (FAY)	60.8	39.2	50.0	-4.7	75 on 11/7	25 on 11/13 and 11/14

Several cold fronts brought modified arctic air into the state during the month with the coldest readings reported on November 13 and 14. Greensboro fell to 20°F on November 13 which was a daily record low. This broke the previous record of 22°F set in 1977. Meanwhile, Raleigh dipped to 24°F and Fayetteville 25°F on November 14. The temperatures during this cold spell fell to as much as 20-22°F below normal. This followed the first major cold spell a week earlier when temperatures were as much as 15°F below normal. The time series of daily temperature at Greensboro, Raleigh, and Fayetteville can be found in Figure 1. The more active storm track over the region allowed frequent cold frontal passages. This led to many more days in which colder-than-normal readings were recorded and fewer warm days. In fact, around two-thirds of days in November were colder than normal. Details can be found in Figure 2.

Fig. 1: November Temperature Trends

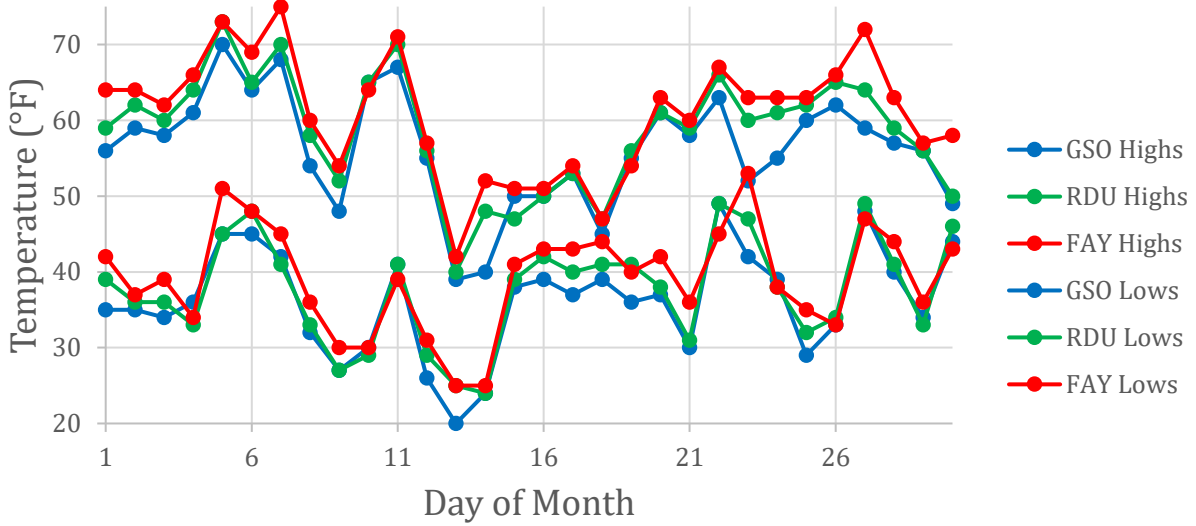
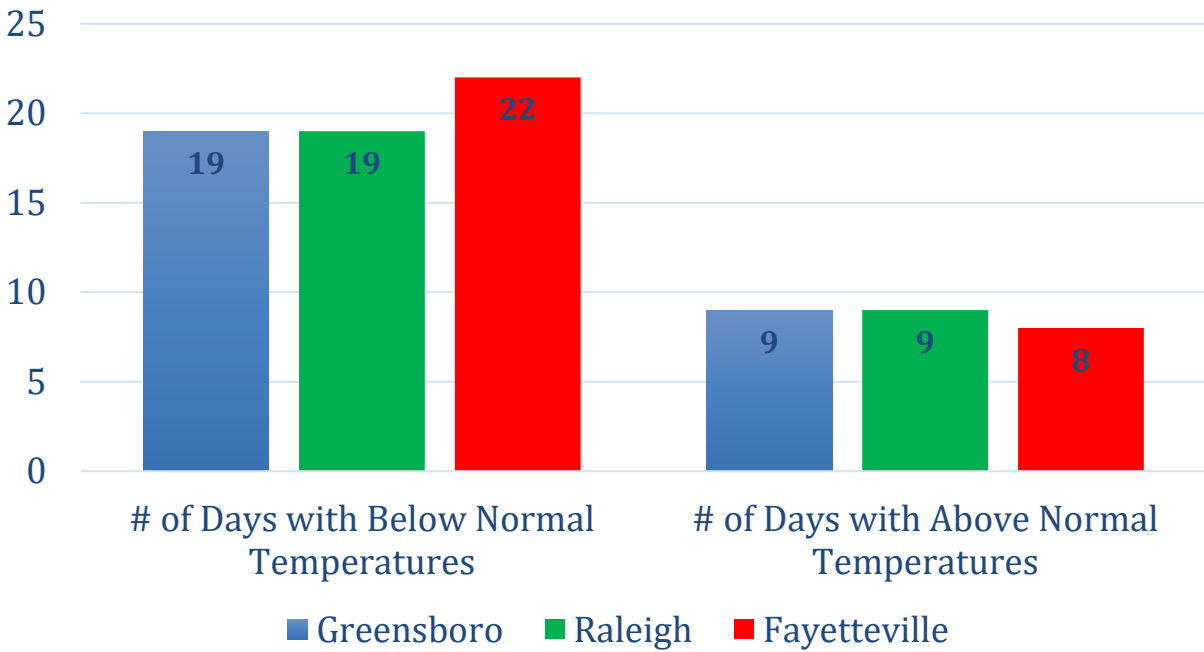


Fig. 2: Number of Days Warmer and Cooler than Normal



Much-needed rainfall associated with a more active storm pattern for our region continued to ease the lingering drought conditions through the month of November. While the U.S. Drought Monitor of North Carolina still placed much of central NC under “D0 - Abnormally Dry Conditions” at the beginning of November, by the start of December no location anywhere in the entire state of NC was under any drought classification. As shown by the radar-estimated precipitation in Figure 3, final monthly totals were generally in the 2 to 4 inch range across central

NC, wettest in the Triad region and driest in the Coastal Plain due to the main storm track being just to our west. These totals were near normal, within half an inch of normal in most places (Figure 4).

Fig. 3: Radar-Estimated Monthly Precipitation

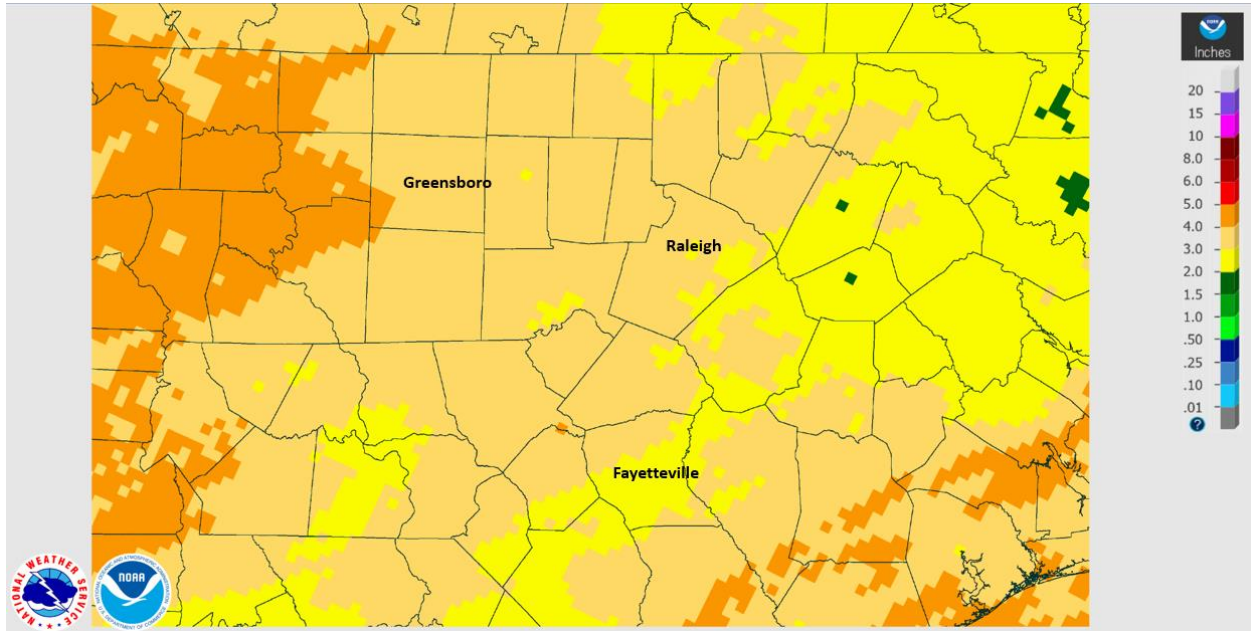
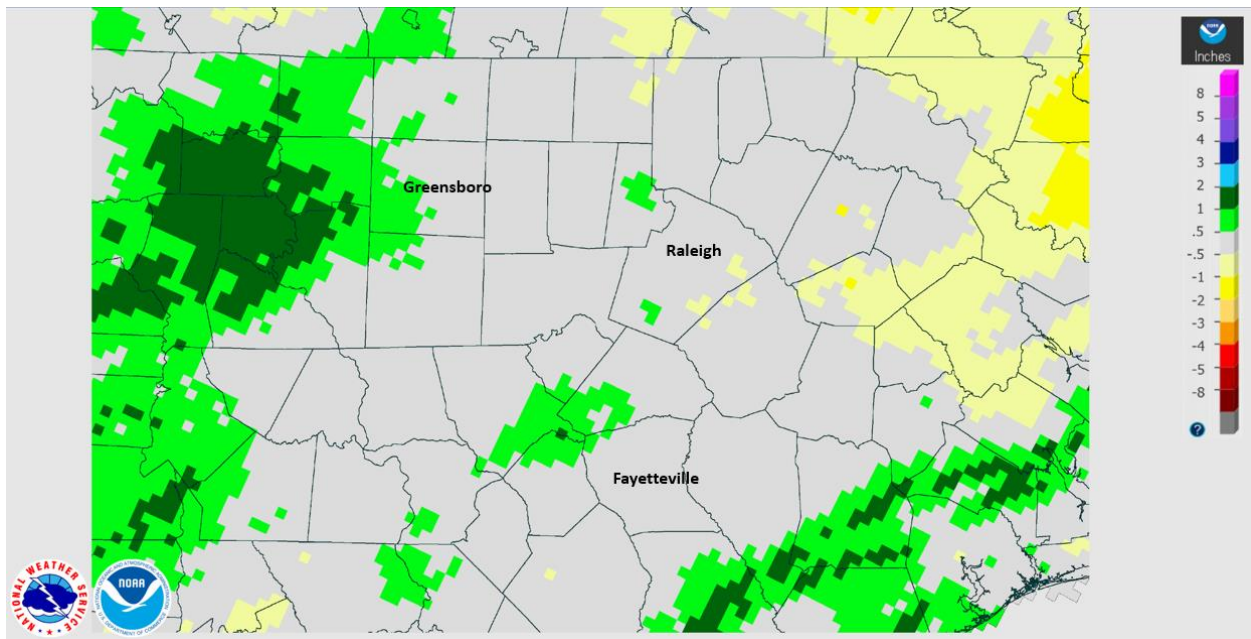


Fig. 4: Radar-Estimated Monthly Departure from Normal Precipitation

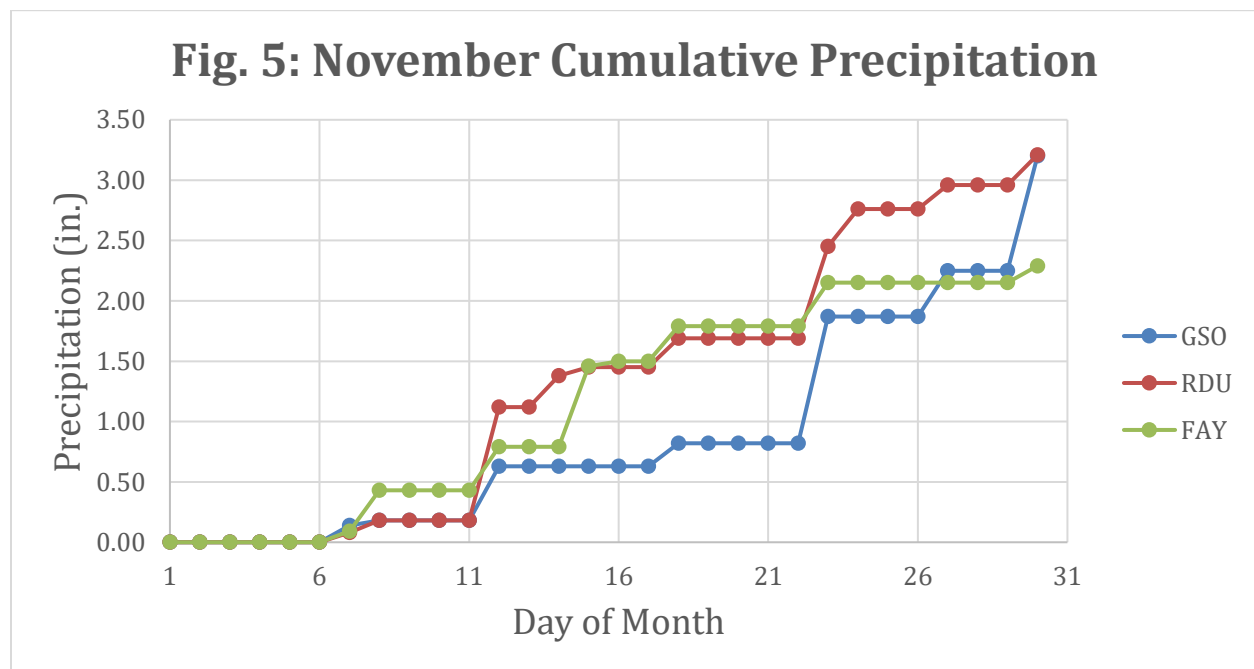


The monthly precipitation statistics at the three climate sites are displayed in Table 2. Additionally, some of the NOAA/NWS Cooperative Observer reports included: 4.64 inches in Henderson (Vance County), 4.39 inches in Jordan Lake (Chatham County), 4.18 inches in Roanoke Rapids (Halifax County), 4.03 inches in Carthage (Moore County), 3.86 inches in Raleigh (on the NC State University campus), and 3.30 inches in Goldsboro (Wayne County).

Table 2: Monthly Precipitation Statistics

Site	Total precipitation (in.)	Departure from Normal (in.)	Max Daily Precipitation (in.)
Greensboro (GSO)	3.20	+0.09	1.05 on 11/23
Raleigh-Durham (RDU)	3.21	+0.09	0.94 on 11/12
Fayetteville (FAY)	2.29	-0.48	0.67 on 11/15

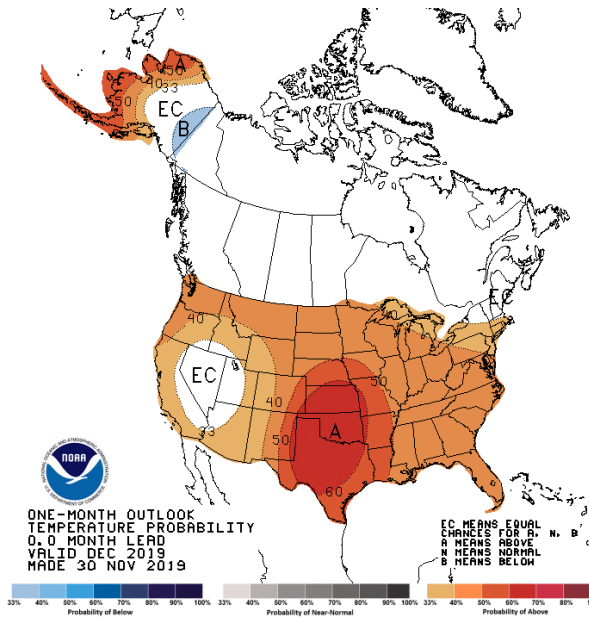
November featured several systems that brought widespread rains of 1 to 2 inches each over the western areas, and nearly an inch with each storm over the Coastal Plain. The heaviest individual event storm totals included: 1.07 inches in Raleigh on November 23-24, 1.05 inches in Greensboro on November 23, and 0.71 inches in Fayetteville on November 15-16. The cumulative precipitation at the three climate sites is shown in Figure 5. Measurable rainfall fell on 7 of the 30 days in Greensboro, 10 of the 30 days in Raleigh, and 8 of the 30 days in Fayetteville.



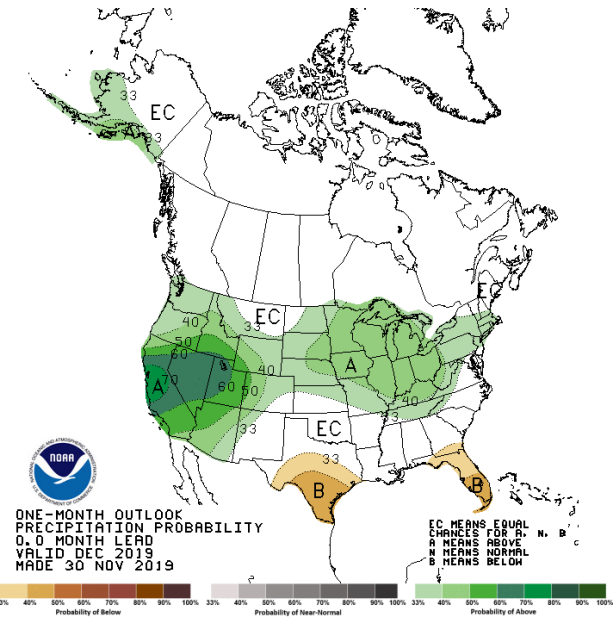
December 2019 Outlook

The latest December outlook from the Climate Prediction Center indicates increased chances of above-normal temperatures and equal chances of above and below normal precipitation across central NC.

Temperature Outlook



Precipitation Outlook



Other notes:

Number of days with low temperatures at or below 32 °F this month:

Greensboro: 8
Raleigh: 7
Fayetteville: 5

Strongest wind gusts and direction:

Greensboro: North at 36 mph on November 16 (Coastal low pressure)
Raleigh: Northeast at 39 mph on November 16 (Coastal low pressure)
Fayetteville: North at 45 mph on November 16 (Coastal low pressure)

Records:

A record low temperature of 20 degrees was set at the Piedmont Triad International Airport on November 13. This breaks the old record of 22 degrees which was set in 1977.

A record rainfall of 1.05 inches was set at the Piedmont Triad International Airport on November 23. This breaks the old record of 0.99 inches which was set in 1957.

A record rainfall of 0.95 inches was set at the Piedmont Triad International Airport on November 30. This breaks the old record of 0.90 inches which was set in 2008.