

# May 2024 Central NC Climate Summary

*By Phillip Badgett and James Danco*

Rainfall increases in May while warm temperatures continue.

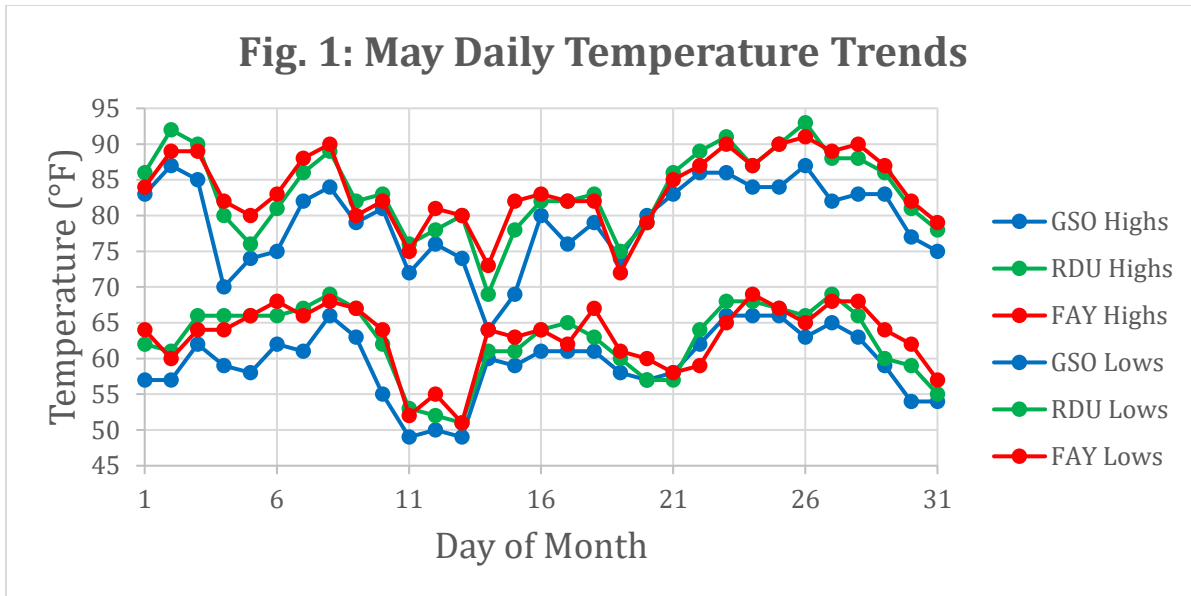
May 2024 continued the warm start to spring over central NC. In fact, it was so warm that some would argue that summer started a month early. Rainfall did bring plenty of water and cooling relief for rapidly growing plants. After a dry April, above normal rainfall returned in May. The wettest areas were much of the western and northern Piedmont region that totaled 6 to 10 inches of rain (3 to 6 inches above average). Greensboro was a big winner as they reported 8.73 inches for the month, which made it the 3<sup>rd</sup>-wettest May on record in Greensboro since records began in 1903. This capped a warm and mostly wet meteorological spring across central NC, despite the dry April. Raleigh had its warmest spring since records began in 1887, Fayetteville tied with 2017 to have its 3<sup>rd</sup>-warmest spring with records going back to 1910, and Greensboro tied with 1991 and 2010 to also have its 3<sup>rd</sup>-warmest spring on record. Greensboro had its 15<sup>th</sup>-wettest spring on record with 14.59 inches of rain. But not everywhere was that wet, as Fayetteville was only 0.95 inches above normal and Raleigh was actually 1.41 inches below normal. Preliminary data from the National Centers for Environmental Information (NCEI) indicate that March through May were the 3<sup>rd</sup>-warmest and 28<sup>th</sup>-wettest spring season for the entire state of NC since 1895.

NCEI reported that May's preliminary average temperature across NC was 69.3°F. This made it the 16<sup>th</sup>-warmest May since 1895. Most of central NC finished the month with an average temperature that ranged between 2 and 4°F above normal. Raleigh had its 8<sup>th</sup>-warmest May on record, and Fayetteville tied for its 13<sup>th</sup>-warmest May. The temperatures hit 90°F a whopping five times at Raleigh and Fayetteville, while Greensboro did not hit 90°F. The monthly average temperatures and their departures from normal at the three climate sites are depicted in Table 1.

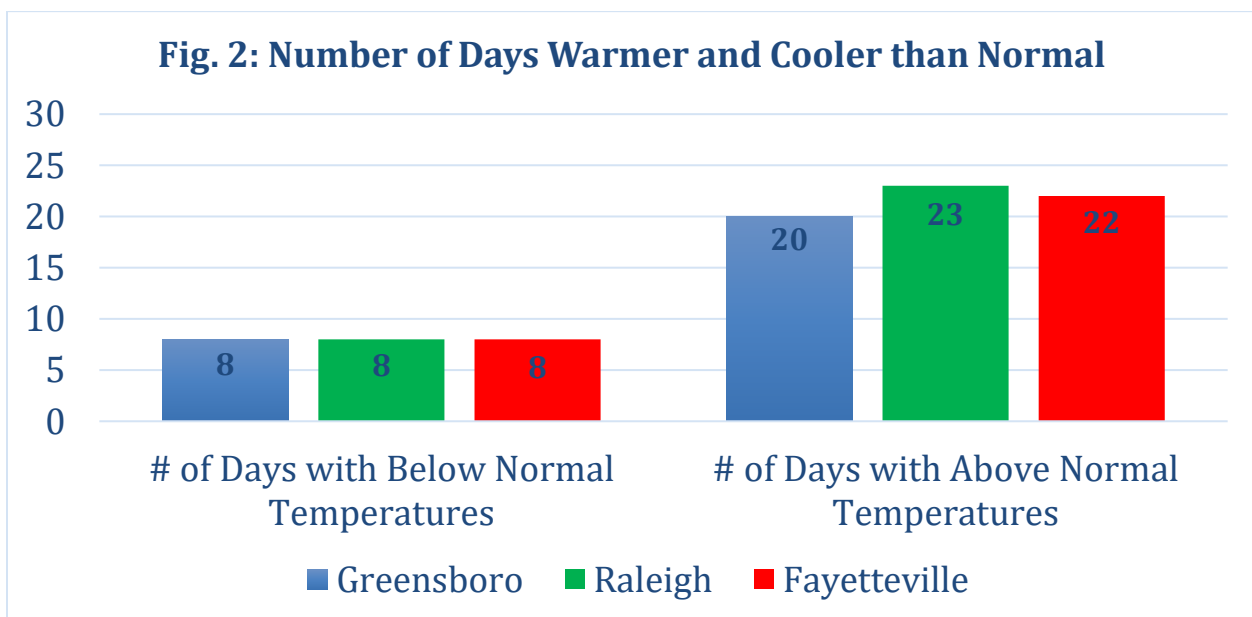
**Table 1: Monthly Temperature Statistics**

Site	Avg High Temp (°F)	Avg Low Temp (°F)	Avg Temp (°F)	Departure From Normal (°F)	Maximum Temperature (°F)	Minimum temperature (°F)
Greensboro (GSO)	79.2	59.4	69.3	+1.8	87 on 5/2 and 5/26	49 on 5/11 and 5/13
Raleigh-Durham (RDU)	83.4	62.5	72.9	+4.1	93 on 5/26	51 on 5/13
Fayetteville (FAY)	83.6	63.0	73.3	+2.4	91 on 5/26	51 on 5/13

The time series of daily temperature for the month at Greensboro, Raleigh, and Fayetteville can be found in Figure 1. The warmth started on May 2 when Raleigh reached 92°F, tying a daily record. According to the NC state climate office, this was Raleigh's earliest 90°F day since 2012. Many other areas topped out in the upper 80s on May 2, including Greensboro at 87°F and Fayetteville at 89°F. There was one notable cool spell in May which occurred in the middle of the month. Many areas fell into the 40s to lower 50s between May 11 and 13. Greensboro reached its monthly low of 49°F on the 11<sup>th</sup> and 13<sup>th</sup>, while Raleigh and Fayetteville both reached their monthly low of 51°F on the 13<sup>th</sup>. Another hot spell arrived Memorial Day weekend when Smithfield hit 94°F, Raleigh 93°F, and Fayetteville 91°F on the 26<sup>th</sup>.



As seen in Figure 2, about 65-75% of days in the month of May were warmer than normal at all three climate sites.



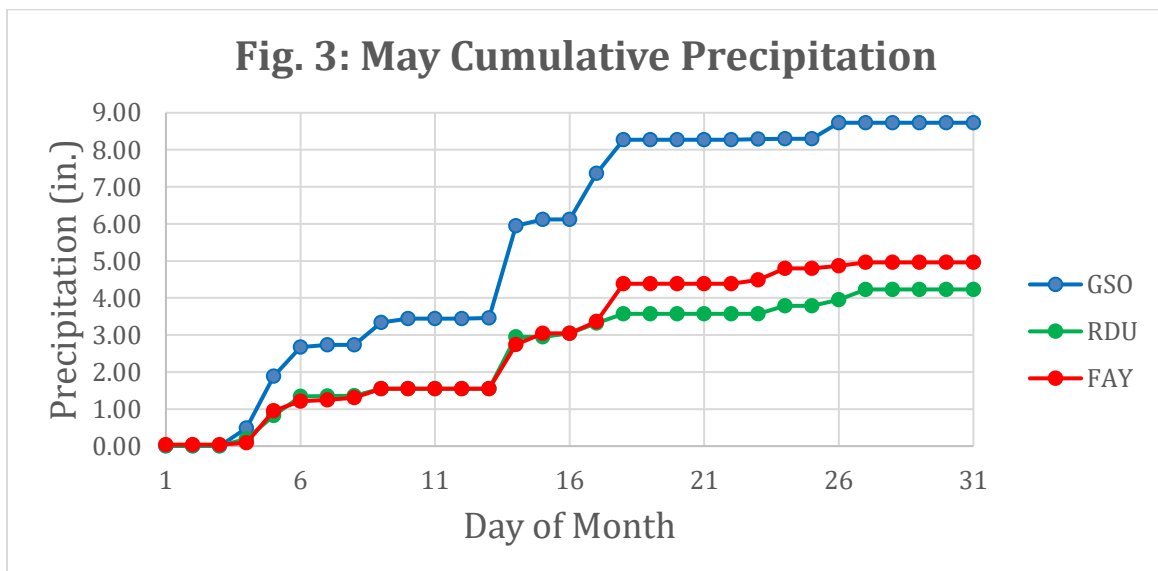
Much wetter conditions returned to our region in May after a very dry April. According to NCEI, May 2024 turned out to be the 12<sup>th</sup>-wettest since 1895 across NC. The statewide average was 6.09 inches. Greensboro had nearly 9 inches while Raleigh and Fayetteville had 4-5 inches. These rainfall amounts essentially wiped out any dry conditions that had developed in April over central NC. The May 2024 monthly precipitation totals are found in Table 2.

**Table 2: Monthly Precipitation Statistics**

Site	Total precipitation (in.)	Departure from Normal (in.)	Max Daily Precipitation (in.)
Greensboro (GSO)	8.73	+5.24	2.49 on 5/14
Raleigh-Durham (RDU)	4.23	+0.85	1.40 on 5/14
Fayetteville (FAY)	4.96	+1.85	1.19 on 5/14

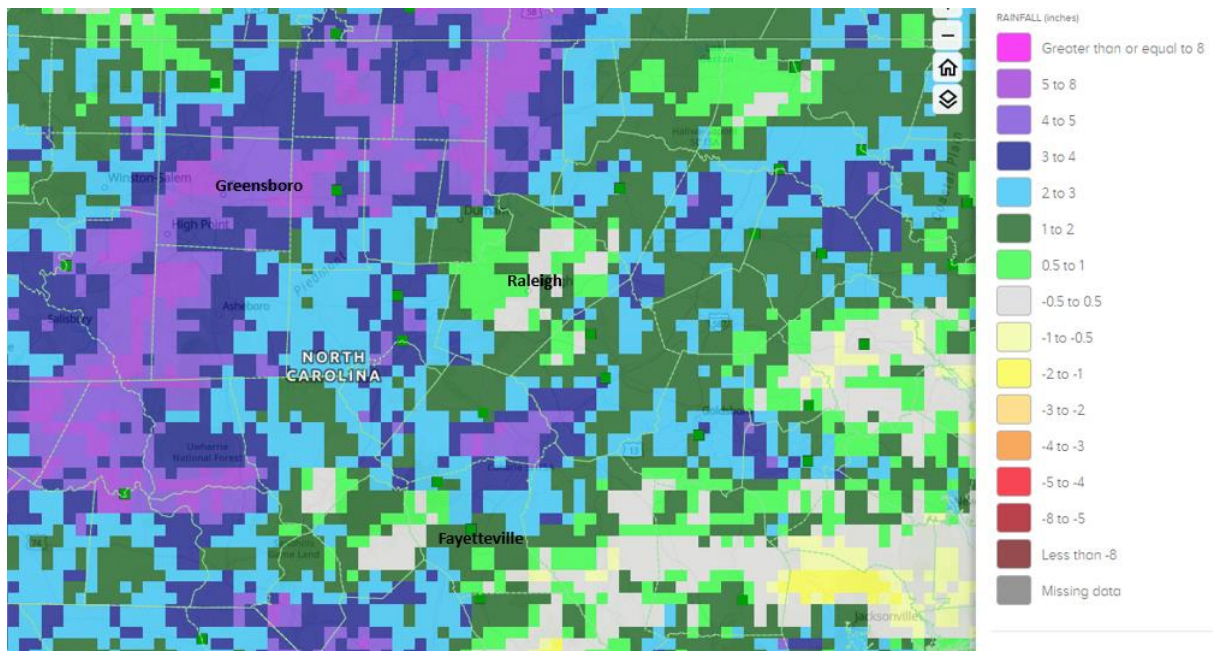
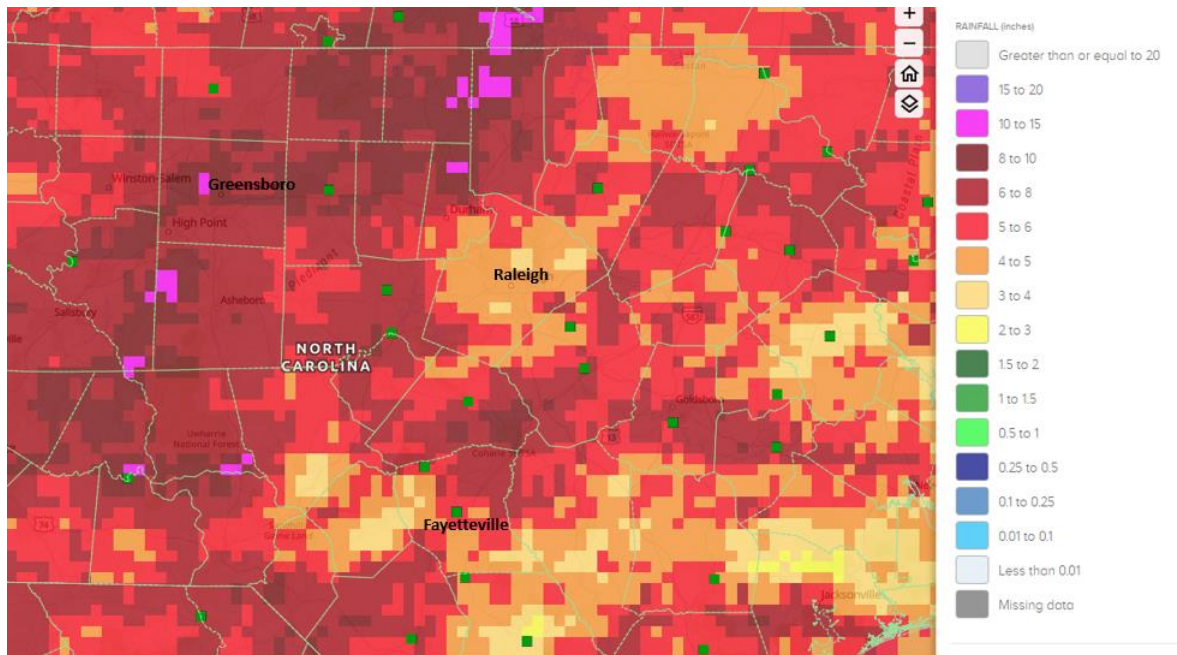
Some of the cooperative station rainfall reports from around central NC from May 2024 included: Sparta 9.14 inches (+3.66), Winston-Salem 5.37 inches (+1.51), Lexington 6.30 inches (+ 2.97), Burlington 9.00 inches (+5.63), Mount Airy 8.00 inches (+3.47), Danbury 6.51 inches (+2.10), Henderson 8.97 inches (+5.03), Cary 4.05 inches (+0.31), Raleigh (NCSU) missing, Louisburg 6.14 inches (+2.43), Apex 4.68 inches (+0.85), Laurinburg 5.12 inches (+1.62), Rocky Mount 5.33 inches (+2.31), and Clinton 4.80 inches (+0.75).

The cumulative precipitation at the three climate sites for May is shown in Figure 3. There were frequent rainfall events, especially in the beginning and middle of the month, topped off by the heaviest one on the 14<sup>th</sup> when Greensboro set a new daily rainfall record of 2.49 inches.



As displayed by the radar-estimated precipitation and the radar-estimated precipitation departure from normal in Figure 4, the final monthly totals across much of the far northern and western Piedmont ranged from 6 to 10 inches, which was about 3 to 6 inches above normal. Amounts decreased farther east from the US-1 corridor into the Sandhills and Coastal Plain, where they were mostly in the 4 to 8 inch range. This was still slightly above normal to as much as 3 to 5 inches above normal. Only small isolated spots had near normal rainfall.

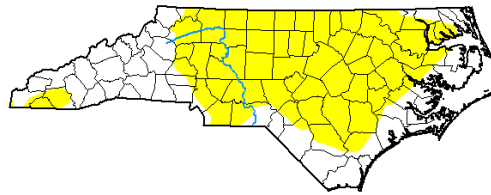
**Fig. 4: Radar-Estimated Monthly Precipitation and Departure from Normal Precipitation**



Heavy rainfall in May wiped out the dry conditions. Note the US Drought Monitor maps for NC from April 30 and May 28 in Figure 5. On April 30, D0 (Abnormally Dry) conditions covered nearly all of central NC and over 60% of the state. By May 28, there were no D0 conditions left in central NC and only a tiny spot of D0 in the far NE corner of the state.

**Fig. 5: US Drought Monitor for NC on April 30 (top) and May 28 (bottom)**

**U.S. Drought Monitor  
North Carolina**



**April 30, 2024**  
(Released Thursday, May. 2, 2024)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	39.10	60.90	0.00	0.00	0.00	0.00
<b>Last Week</b> 04-23-2024	59.89	40.11	0.00	0.00	0.00	0.00
<b>3 Months Ago</b> 01-30-2024	97.14	2.86	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> 01-01-2024	53.95	46.05	13.26	3.54	0.00	0.00
<b>Start of Water Year</b> 09-26-2023	82.24	17.76	0.36	0.00	0.00	0.00
<b>One Year Ago</b> 05-02-2023	100.00	0.00	0.00	0.00	0.00	0.00

**Intensity:**  
 None (white)      D2 Severe Drought (orange)  
 D0 Abnormally Dry (yellow)      D3 Extreme Drought (red)  
 D1 Moderate Drought (light orange)      D4 Exceptional Drought (dark red)

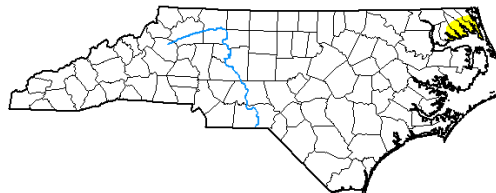
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

**U.S. Drought Monitor  
North Carolina**



**May 28, 2024**  
(Released Thursday, May. 30, 2024)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	98.89	1.11	0.00	0.00	0.00	0.00
<b>Last Week</b> 05-21-2024	96.12	3.88	0.00	0.00	0.00	0.00
<b>3 Months Ago</b> 02-27-2024	65.46	34.54	8.59	0.00	0.00	0.00
<b>Start of Calendar Year</b> 01-01-2024	53.95	46.05	13.26	3.54	0.00	0.00
<b>Start of Water Year</b> 09-26-2023	82.24	17.76	0.36	0.00	0.00	0.00
<b>One Year Ago</b> 05-30-2023	97.53	2.47	0.00	0.00	0.00	0.00

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[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

## **Other notes:**

### **Days with thunderstorms this month:**

Greensboro: 9  
Raleigh: 6  
Fayetteville: 12

### **Days with dense fog (visibility of ¼ mile or less):**

Greensboro: 1  
Raleigh: 2  
Fayetteville: 3

### **Strongest wind gusts and direction:**

Greensboro: NW (310 degrees) at 44 mph on May 9  
Raleigh: E (100 degrees) at 30 mph on May 14 and SW (220 degrees) at 30 mph on May 27  
Fayetteville N (340 degrees) 46 mph on May 26

### **Number of days with high temperatures at 90°F or above:**

Greensboro: 0  
Raleigh: 5  
Fayetteville: 5

### **Monthly records:**

#### **Greensboro:**

The 8.73 inches of rainfall in May was 5.24 inches above normal and the 3<sup>rd</sup>-wettest May since records began in 1903.

#### **Raleigh:**

None.

#### **Fayetteville:**

None.

## **Daily records:**

### **Greensboro:**

A daily record high minimum temperature of 66°F was tied on May 8. This record was last set in 1938.

A daily record rainfall of 2.49 inches was set on May 14. This broke the old record of 2.06 inches set in 1972.

### **Raleigh:**

A daily record high temperature of 92°F was tied on May 2. This record was last set in 2010.

A daily record high minimum temperature of 69°F was set on May 8. This broke the old record of 68°F in 1930.

### **Fayetteville:**

A daily record high minimum temperature of 68°F was set on May 6. This broke the old record of 67°F set in 2018.