

# January 2023 Central NC Climate Summary

*By Phillip Badgett and James Danco*

January was warm with no measurable snowfall.

January 2023 brought plenty of warm days and no measurable snowfall to central NC. The warmth started early and did not end. Temperatures in the 70's were observed in parts of central NC on January 3-5, the 12<sup>th</sup>, and the 19<sup>th</sup>. Nearly half the days in the month, 15, had temperatures reaching into the 60's at Raleigh. This was tied for the 10<sup>th</sup>-most days reaching 60°F or greater there in January.

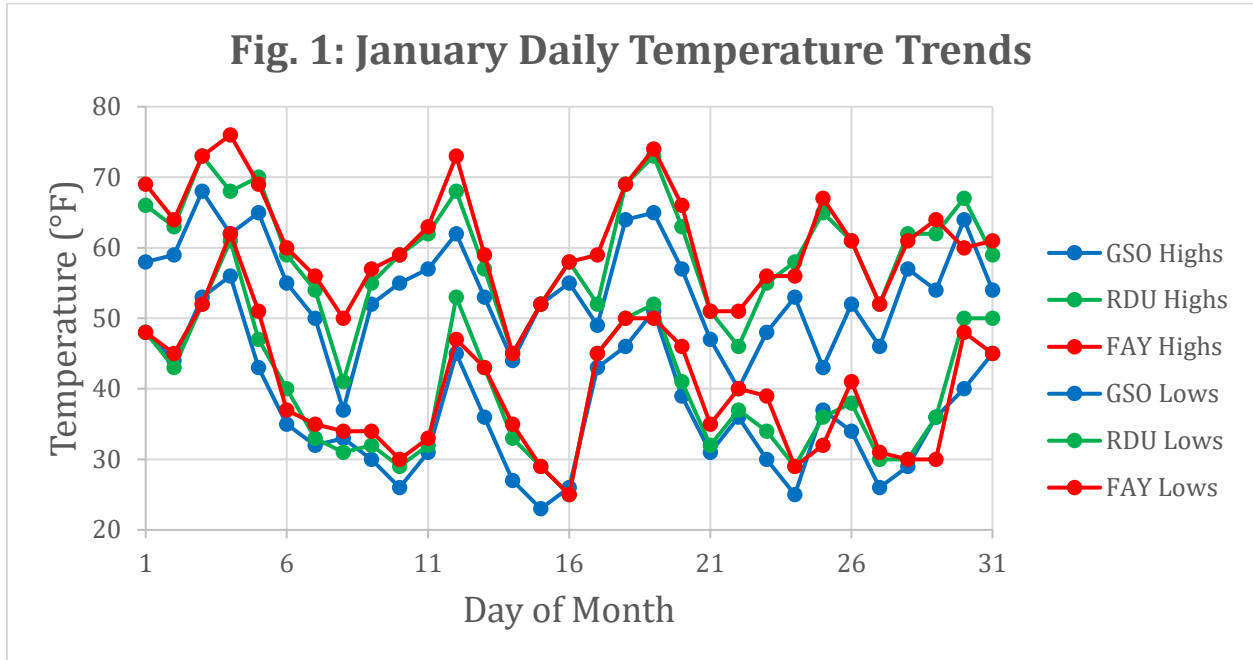
By the time all data was in for the month, the temperatures averaged 5-8°F above normal. It was the 10<sup>th</sup>-warmest January on record at Greensboro since records began in 1903, while it was the 7<sup>th</sup>-warmest January at Raleigh since records began in 1887. At Fayetteville, it was tied for the 9<sup>th</sup>-warmest January at Fayetteville since 1910. The preliminary average monthly temperatures across the state of NC averaged 46.8°F according to NCEI, which ranked January 2023 as the 8<sup>th</sup>-warmest in the past 129 years. The monthly average temperatures and their departures from normal at the three climate sites are depicted in Table 1.

**Table 1: Monthly Temperature Statistics**

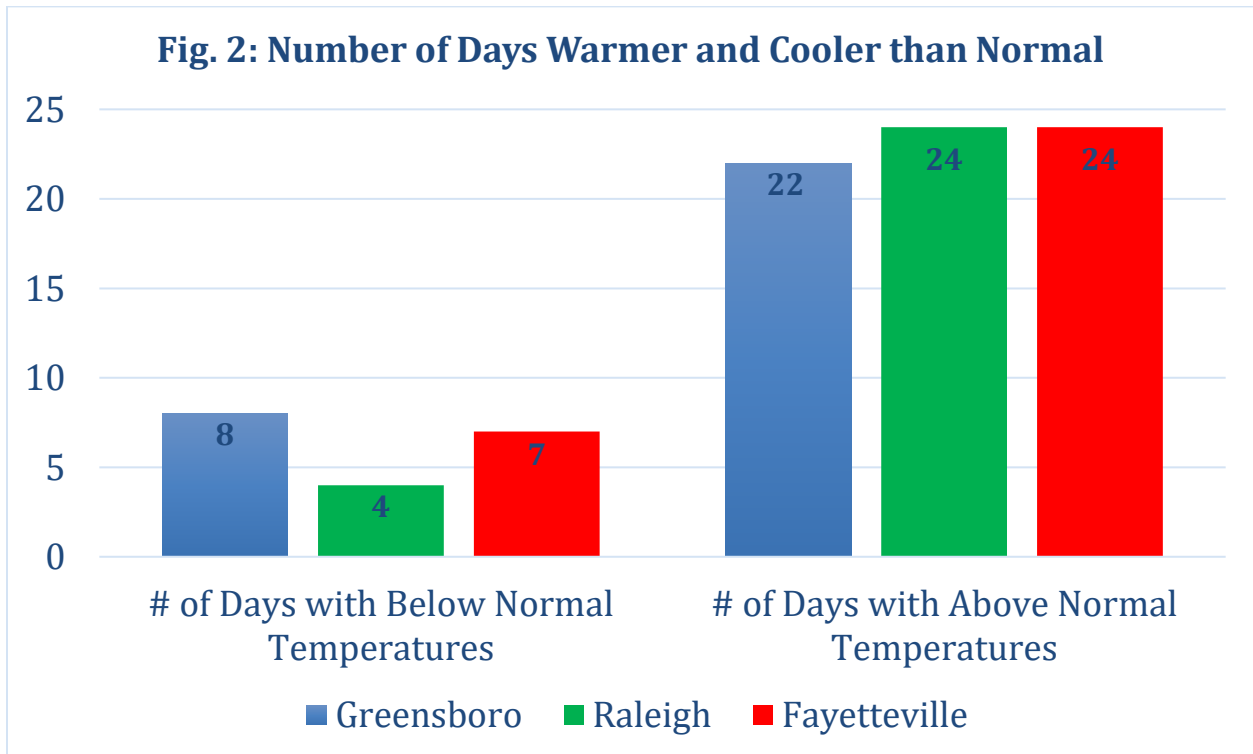
Site	Avg High Temp (°F)	Avg Low Temp (°F)	Avg Temp (°F)	Departure From Normal (°F)	Maximum Temperature (°F)	Minimum temperature (°F)
Greensboro (GSO)	54.1	36.6	45.4	+5.7	68 on 1/3	23 on 1/15
Raleigh-Durham (RDU)	59.5	39.4	49.5	+7.6	73 on 1/3 and 1/19	25 on 1/16
Fayetteville (FAY)	61.0	39.7	50.4	+6.4	76 on 1/4	25 on 1/16

Nighttime lows averaged well above normal as well. It dropped below freezing only 12 times at Greensboro, 10 times at Raleigh, and 8 times at Fayetteville during the month. The average number of subfreezing lows in January (from 1991-2020) include roughly 19.5 at Greensboro, 18 at Raleigh, and 15 at Fayetteville.

The time series of daily temperature for the month at Greensboro, Raleigh, and Fayetteville can be found in Figure 1.



As displayed in Figure 2, about 70-80% of days in the month of January had above-normal temperatures.

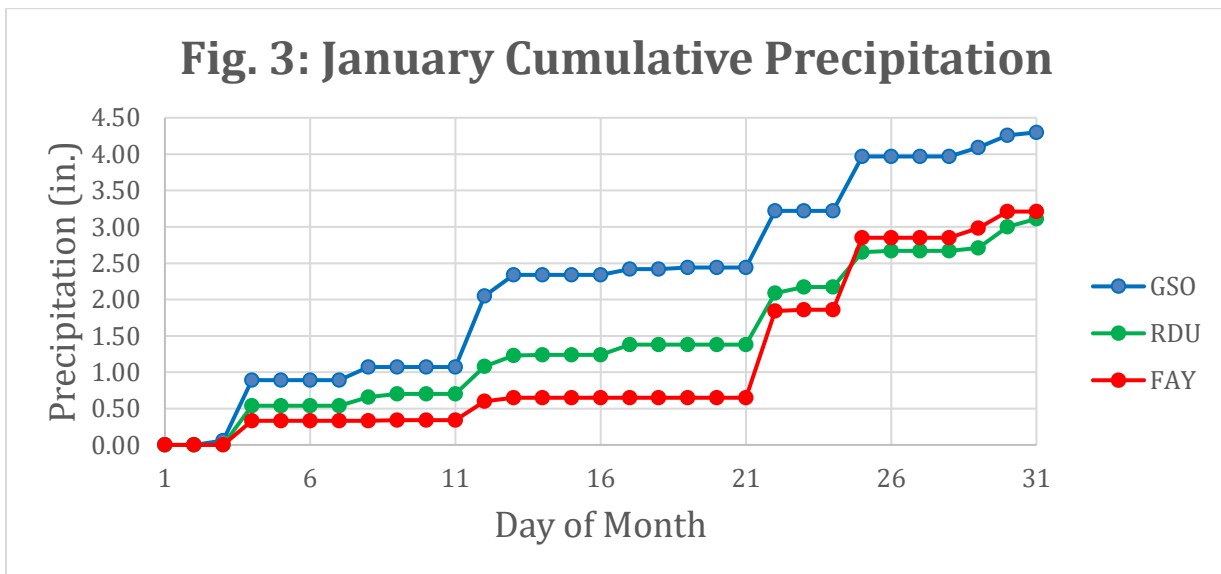


Even with only trace snowfall for the entire month of January across central NC, rainfall continued to be rather plentiful, particularly over the western Piedmont. The southern and eastern areas of central NC returned to average monthly totals, while the northwestern parts of central NC tallied above normal rainfall. Rainfall increased in southeastern parts of the region by late in the month, with a coastal low on January 22 giving the highest daily precipitation for the month at both Raleigh and Fayetteville. As shown in Table 2, Greensboro was nearly an inch wetter than normal, while Raleigh was slightly drier than normal and Fayetteville ended up almost exactly normal. According to NCEI, the state of NC had a preliminary average rainfall of 4.35 inches. This made it the 43<sup>rd</sup>-wettest January since 1895.

**Table 2: Monthly Precipitation Statistics**

Site	Total precipitation (in.)	Departure from Normal (in.)	Max Daily Precipitation (in.)
Greensboro (GSO)	4.30	+0.91	0.98 on 1/12
Raleigh-Durham (RDU)	3.11	-0.32	0.71 on 1/22
Fayetteville (FAY)	3.21	+0.06	1.19 on 1/22

The cumulative precipitation at the three climate sites for the month of January is shown in Figure 3. Rainfall was fairly evenly distributed throughout the month.

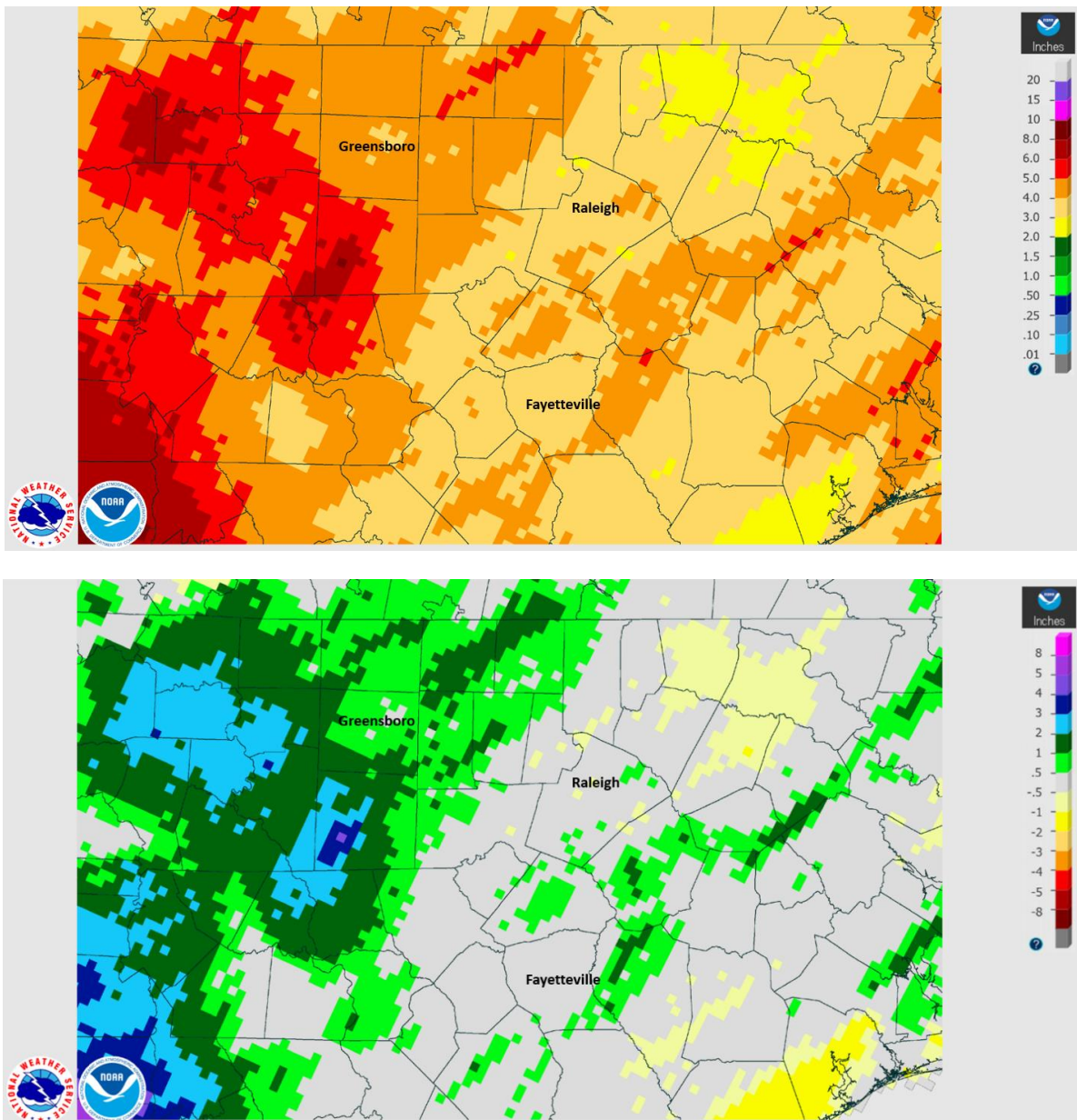


Some of the cooperative station rainfall reports for January included: Sparta 3.34 inches, Lexington 4.58 inches, Winston-Salem 3.53 inches, Burlington 3.89 inches, Mount Airy 4.46 inches, Danbury 4.71 inches, Yanceyville 5.25 inches, Eden 4.43 inches, Henderson 3.15 inches,

Carthage 3.73 inches, Cary 3.83 inches, Raleigh (NCSU) 2.40 inches, Louisburg 2.26 inches, Apex 3.53 inches, Chapel Hill 3.82 inches, Jackson Springs 4.23 inches, Clayton 3.88 inches, Laurinburg 4.06 inches, Rocky Mount 3.25 inches, Tarboro 3.54 inches, and Clinton 3.81 inches.

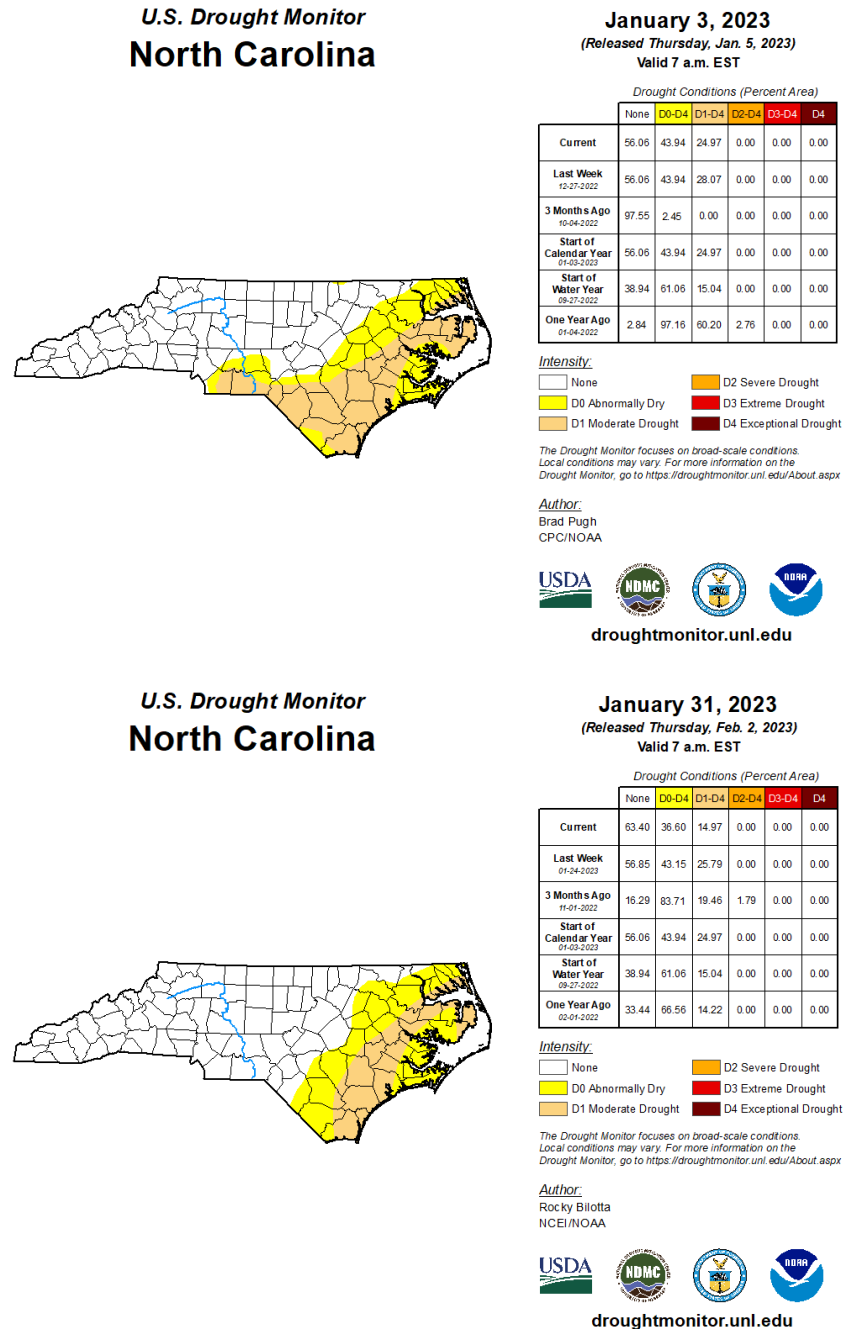
Radar-estimated precipitation and precipitation departure from normal are depicted in Figure 4. Much of the NE Piedmont, Coastal Plain, and Sandhills had about 3-4 inches (near normal), with pockets of slightly higher or lower totals. Places north and west of the Triangle region had 4-6 inches, or as much as 1-3 inches above normal.

**Fig. 4: Radar-Estimated Monthly Precipitation (top) and Monthly Departure from Normal Precipitation (bottom)**



The US Drought Monitor map from early January 2023 and from later in the month indicate much of our southern Coastal Plain and Sandhills areas improved by one or two categories, with D1 (Moderate Drought) becoming more limited to places farther east. D0 (Abnormally Dry) conditions still continued across much of the Coastal Plain. The US Drought Monitor maps from January 3 and January 31 are shown in Figure 5.

**Fig. 5: US Drought Monitor for NC on January 3 (top) and January 31 (bottom)**



## **Other notes:**

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

Greensboro: 2  
Raleigh: 1  
Fayetteville: 1

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

Greensboro: 7  
Raleigh: 3  
Fayetteville: 5

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

Greensboro: W (290 degrees) at 36 mph on January 26  
Raleigh: SW (210 degrees) at 38 mph on January 19  
Fayetteville: SW (230 degrees) at 62 mph on January 4

### **Daily records:**

#### **Greensboro:**

A daily record high minimum temperature of 51°F was tied on January 19. This record was first set in 1907.

#### **Raleigh:**

A daily record high minimum temperature of 61°F was set on January 4. This broke the old record of 58°F set in 1950.

A daily record high temperature of 73°F was tied on January 19. This record was first set in 2001.

#### **Fayetteville:**

A daily record high minimum temperature of 62°F was set on January 4. This broke the old record of 60°F set in 2004.

## **Monthly records:**

### **Greensboro:**

January 2023 was the 10<sup>th</sup>-warmest January on record with a monthly average temperature of 45.4°F.

### **Raleigh:**

January 2023 was the 7<sup>th</sup>-warmest January on record with a monthly average temperature of 49.5°F.

### **Fayetteville:**

January 2023 was tied for the 9<sup>th</sup>-warmest January on record with a monthly average temperature of 50.4°F.