

# February 2021 Central NC Climate Summary

*By Phillip Badgett and James Danco*

February continued the wet and colder-than-normal pattern, with some ice but very little snow.

February 2021 continued the recent monthly weather trends of wet and chilly. However, the record-setting bitter cold that affected much of the country during the month generally remained to the west of the Appalachian Mountains. Still, some of the cold did ooze down from the north in modified fashion just in time to meet with a couple of wet storm systems to produce bouts of cold rain, freezing rain, and a bit of light snow. Overall, the final monthly precipitation totals for central NC ranged between 4 and 9 inches. These amounts were double to even triple the normal values at many locations. Greensboro had its 5<sup>th</sup>-wettest February on record and Raleigh tied for its 9<sup>th</sup>-wettest February. The air was still not quite cold enough for much snow, however, with only 0.5 inches measured at Greensboro (1.9 inches below normal) and just a trace at Raleigh (also 1.9 inches below normal).

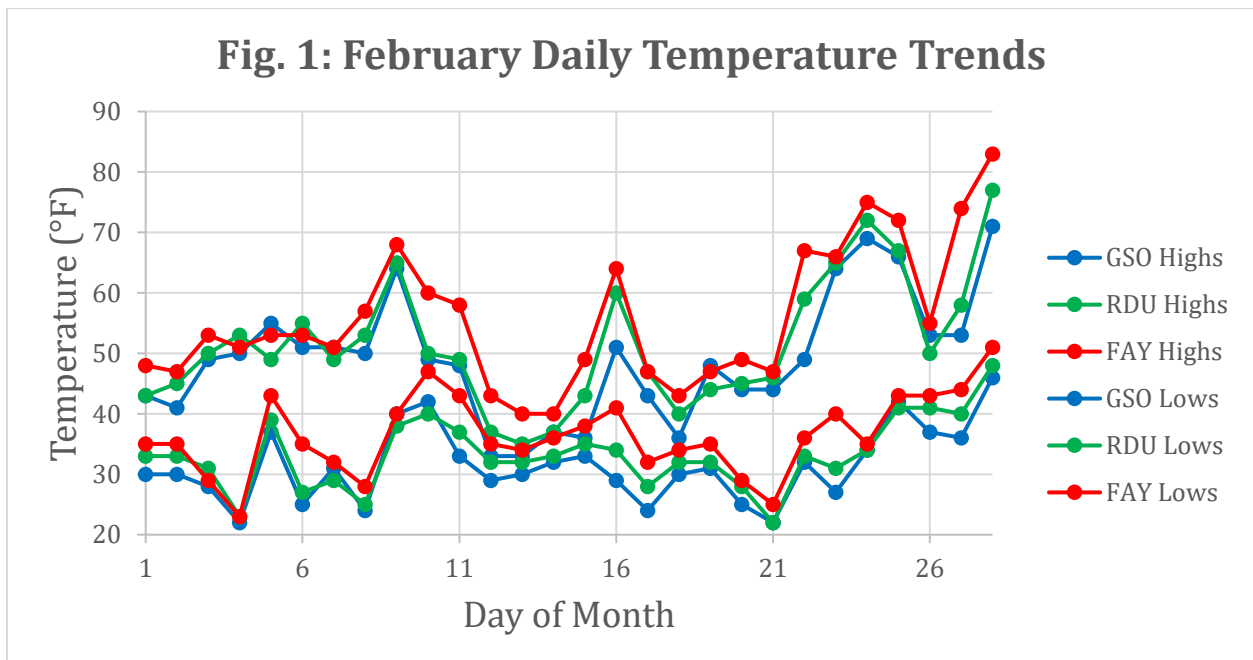
In addition to all the rain and ice in February, the monthly temperatures were below normal, despite a lack of any extreme Arctic cold. Colder-than-average conditions dominated the first three weeks of the month when only a handful of mild days occurred. Of the first 21 days of the month, just three had above-average temperatures at Greensboro and four at Raleigh (most only barely). Not only did the chill dominate, but either cloudy skies, rain, ice, or a combination of all the above enhanced the chill during the daytime. Highs remained in the 30s for many areas between February 12 and February 15, followed by a brief warmup on the 16th, only to return to the 30s and 40s from the 17<sup>th</sup> through the 21<sup>st</sup>. Finally, some warmer air and even some sunshine sent temperatures into the 70s and lower-80s on the last day of the month. The final February 2021 average temperatures were generally around 1-2°F below normal. The minimum temperatures were close to normal, but the daytime temperature were well below normal with all the clouds and frequent precipitation. For example, at Raleigh, the average high was 51.5°F which was 3.7°F below normal, while the nighttime lows averaged 33.3°F, or only 0.5°F below normal.

The monthly average temperatures and their departures from normal at the three climate sites are depicted in Table 1. The monthly record information can be found in the records section at the end of the February 2021 Climate Report.

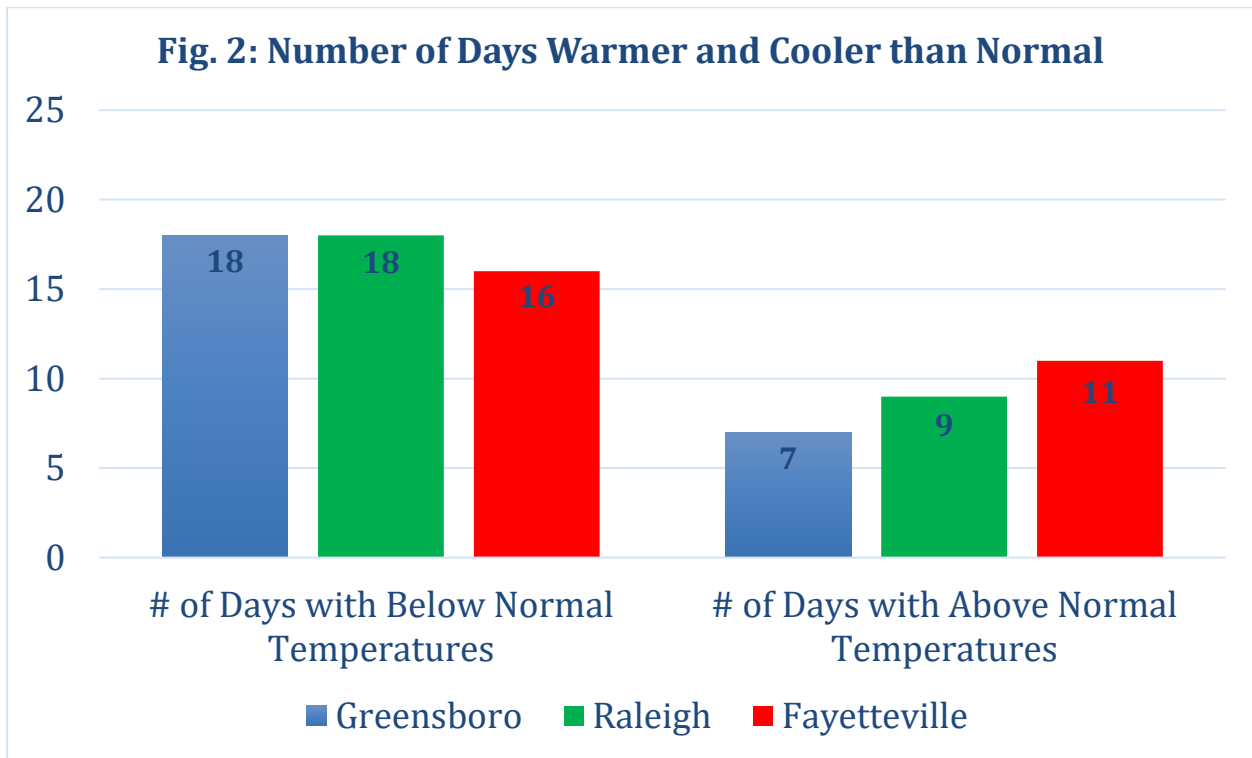
**Table 1: Monthly Temperature Statistics**

Site	Avg High Temp (°F)	Avg Low Temp (°F)	Avg Temp (°F)	Departure From Normal (°F)	Maximum Temperature (°F)	Minimum temperature (°F)
Greensboro (GSO)	49.3	31.5	40.4	-2.0	71 on 2/28	22 on 2/4 and 2/21
Raleigh-Durham (RDU)	51.5	33.3	42.4	-2.1	77 on 2/28	22 on 2/21
Fayetteville (FAY)	55.7	36.5	46.1	-1.2	83 on 2/28	23 on 2/4

The time series of daily temperature for the month at Greensboro, Raleigh, and Fayetteville can be found in Figure 1. Note the chilly temperatures for the first 3 weeks of the month, followed by some notable warming in the last week of the month. The coldest temperatures in February were in the lower-20s. Temperatures reached 60°F only twice in the first three weeks at most locations including Raleigh (February 9 and 16). Greensboro hit 60°F only one time during this three-week period (64°F on February 9). The month closed out with some warmth, including the highest monthly temperatures recorded at each station on February 28. These included 71°F at Greensboro, 77°F at Raleigh, and a record-tying 83°F at Fayetteville!



Not surprisingly, as shown in Figure 2, a majority of days in the month (16-18 out of the 28) had below-normal temperatures. Only a quarter of them were warmer than normal at Greensboro.



As shown in Table 2, February 2021 continued to be wet, about 2.5 to 3.5 inches wetter than normal at the three climate sites. Greensboro had 6.24 inches of precipitation, which was the 5<sup>th</sup>-wettest February on record. This was only an inch shy of the wettest February on record when 7.23 inches of precipitation was recorded just last year. Raleigh totaled 6.17 inches of precipitation, which tied for the 9<sup>th</sup>-wettest February on record. Fayetteville tallied 5.31 inches of precipitation, which did not make the top 10 wettest Februarys on record but was still 2.55 inches above normal.

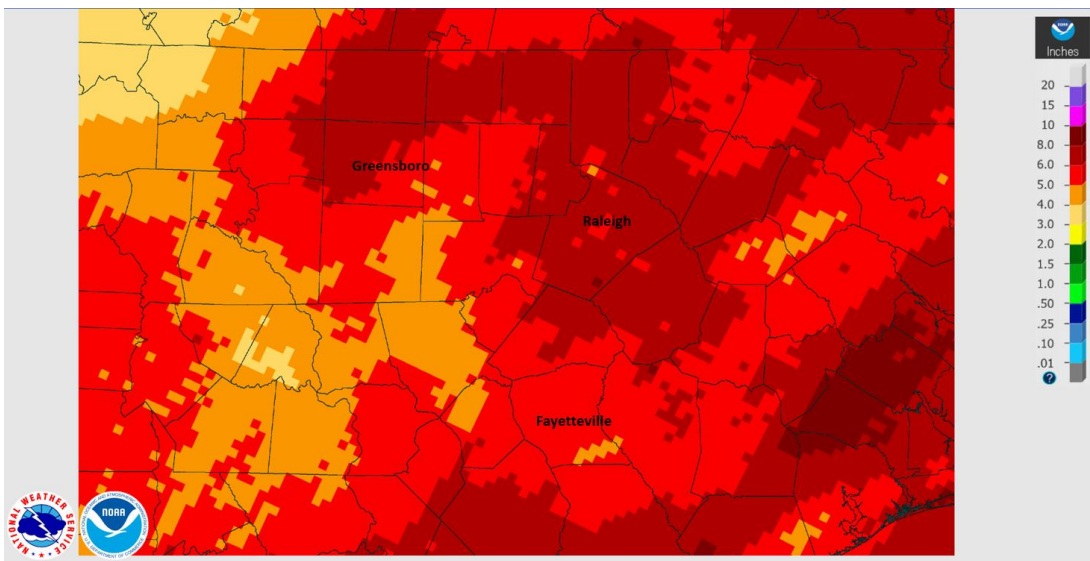
**Table 2: Monthly Precipitation Statistics**

Site	Total precipitation (in.)	Departure from Normal (in.)	Max Daily Precipitation (in.)
Greensboro (GSO)	6.24	+3.28	0.97 on 2/15
Raleigh-Durham (RDU)	6.17	+2.94	0.83 on 2/11
Fayetteville (FAY)	5.31	+2.55	0.97 on 2/18

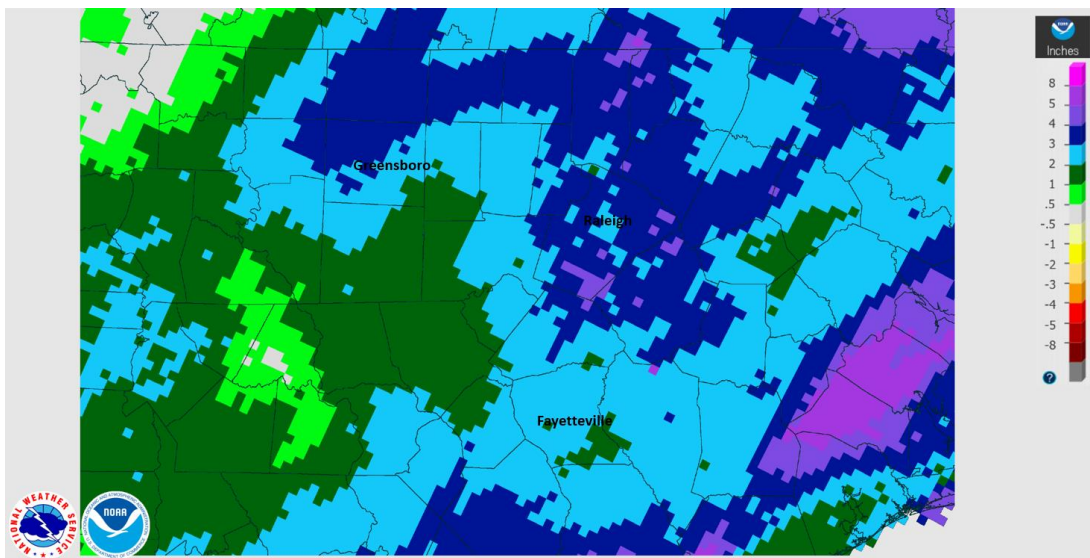
Additional selected cooperative observations for February 2021: Winston-Salem (Forsyth County) 4.79 inches (1.60 inches above normal), Lexington (Davidson County) 9.61 inches (5.90 above normal), North Wilkesboro (Wilkes County) 6.00 inches (2.51 above normal), Louisburg (Franklin County) 5.30 inches (2.05 above normal), Rocky Mount (Nash County) 6.27 inches (3.37 above normal), Clinton (Sampson County) 6.66 inches (3.45 above normal), and Carthage (Moore County) 8.48 inches (5.05 above normal).

As displayed by the radar-estimated precipitation and departure from normal in Figures 3 and 4, the monthly totals were the wettest (6-8 inches, or 3-5 inches above normal) in the northern Piedmont and Coastal Plain and driest (4-5 inches, or 0.5-2 inches above normal) in the southwest.

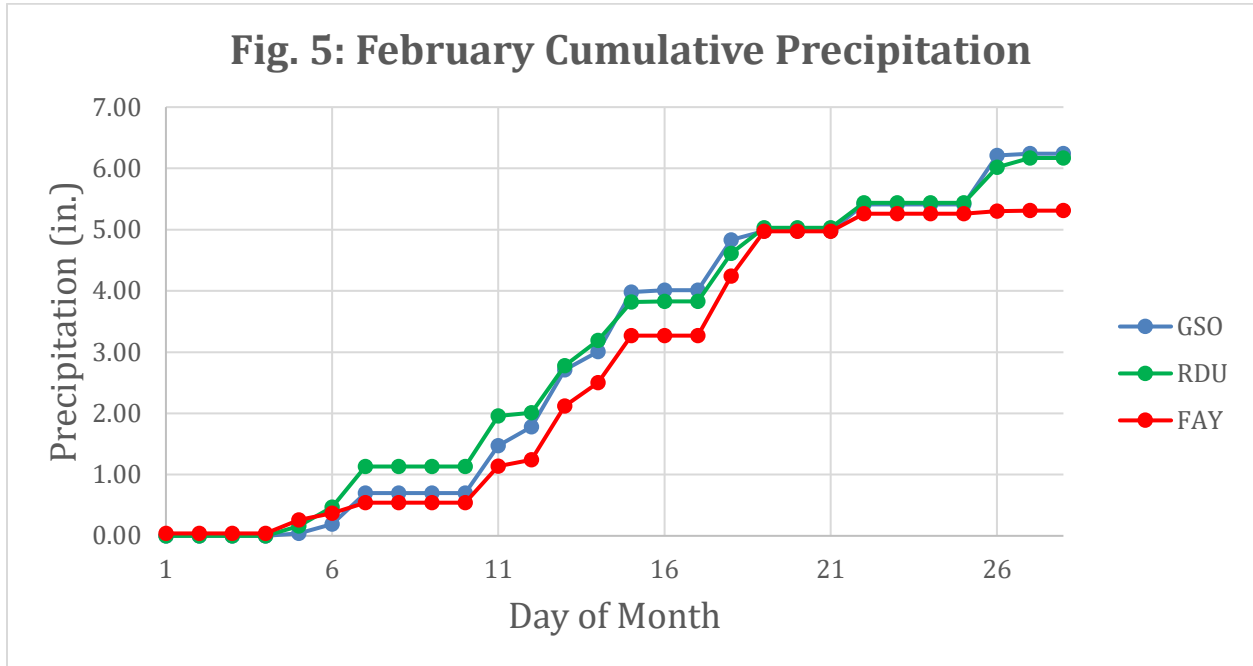
**Fig. 3: Radar-Estimated Monthly Precipitation**



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



The cumulative precipitation at the three climate sites for the month of February is shown in Figure 5. While the month was plenty wet, the cumulative precipitation totals were a gradual increase, and no one event stands out as particularly heavy. The maximum daily precipitation totals were less than an inch at all three climate sites (Table 2).



In addition to some minor freezing rain events, there was one significant ice event that affected our region during the middle of the month. Much of the ice was found over the north-central Piedmont, mainly north of the Interstate 40/85 corridor from the Triad Region to Roxboro and Henderson. The temperatures were marginally cold enough to support the icing, with readings in the upper-20s to lower-30s in these areas. The worst icing occurred during the period between February 12 and 13 when ice accruals reached a quarter to locally a third of an inch in portions of Person, Granville, Vance, and Warren Counties. This icing extended into the northern parts of the Triad region where northeastern Forsyth and northern Guilford Counties reported up to a quarter inch of ice. Trees, tree limbs, and power lines were brought down throughout these areas.

### Other notes:

#### Strongest wind gusts and direction:

Greensboro: NW at 41 mph on February 2

Raleigh: SW at 33 mph on February 16

Fayetteville: W at 39 mph on February 16

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

Greensboro: 18  
Raleigh: 13  
Fayetteville: 7

**Monthly records of note for February 2021:**

**Greensboro:**

February 2021 was the 5<sup>th</sup>-wettest February on record at Greensboro with 6.24 inches of precipitation. The wettest February on record was in 2020 with 7.23 inches recorded.

**Raleigh:**

None.

**Fayetteville:**

None.

**Daily records:**

**Greensboro:**

None.

**Raleigh:**

None.

**Fayetteville:**

A record high temperature of 83°F was tied at Fayetteville on February 28. This tied the record of 83°F set in 2011 and 1997.