

## **2014 State Climatology and Meteorological Summary**

The climate across North and Central Georgia varies based on a variety of factors, the most prominent of which is terrain. The typical climatology of North Georgia, excluding the Northeast Georgia Mountains, includes warm and humid summer months, and mild winters with interspersed cold spells. Central Georgia has a similar climatology, with summer high temperatures in the lower 90's and winter lows averaging in the middle 30's. Average rainfall ranges from 45-75 inches in the state, with March generally being the wettest month and September and October averaging as the driest months. The average temperature across the entire state for 2014 was 63°F, only -0.4 cooler than average, but the coolest year since 2010. Rainfall amounts were 1.27" (inches) above normal for the state.

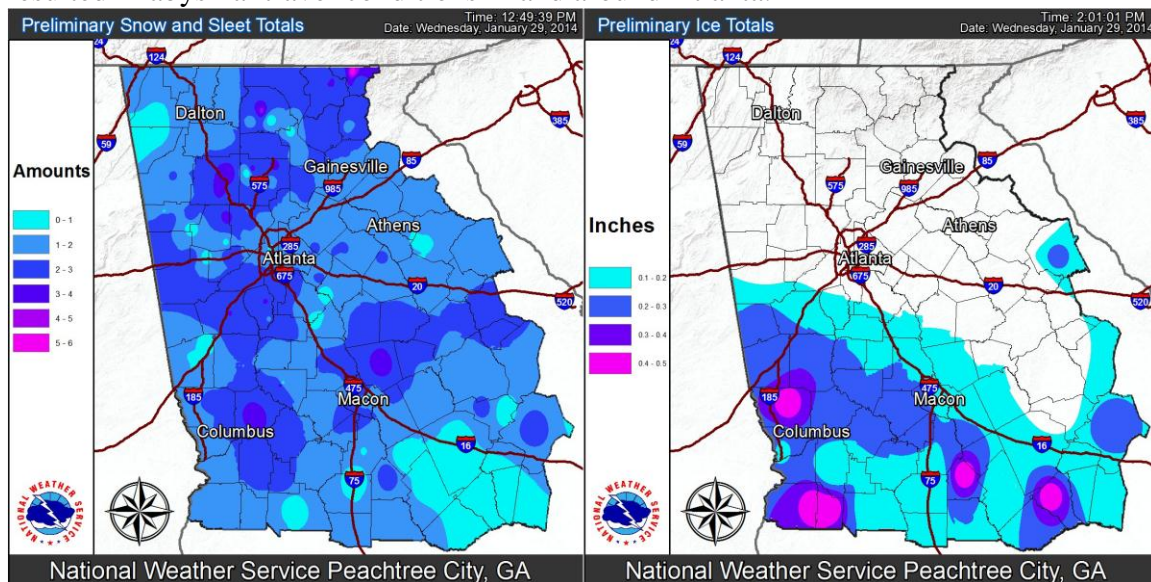
The year began on a cold note when an arctic blast broke decades of previous temperature records. Statewide, the monthly mean temperature was 40.1°F, which was 6.8°F below the average of 46.9°F. It ranked as the 6<sup>th</sup> coldest January for the state since records began in 1895. January was characterized by colder and drier than normal conditions, frequent cold-air outbreaks, and a few wintry precipitation events. Monthly average temperatures were well below normal statewide, with the greatest departures found across the north and west. Temperatures dropped to record lows on the 6<sup>th</sup> and 7<sup>th</sup> of the month, in association with an upper level longwave trough that pushed a strong arctic front into the Southeastern U.S. This front was also accompanied by gusty winds, some up to 30 miles per hour (mph), which caused wind chill indices to reach close to zero over parts of north and central Georgia. Daily minimums on the 7<sup>th</sup> ranged from near -5°F in the northern mountains to near 20°F along the immediate coast. Several daily minimum temperature records were established on the 7<sup>th</sup>. Many climate locations also established new daily low maximum records on the 7<sup>th</sup> as well. After a brief mid-month warm-up, cold temperatures returned on the 21<sup>st</sup> and continued for the remainder of the month. Macon established a new record low of 13°F on the 25<sup>th</sup> (breaking the old record of 16°F set in 1963).

Precipitation was typically below average across the state in January, with the exception of the southeast coast where departures were two to three inches above normal. Accumulating snowfall occurred in the far northern portions of the state on the 5<sup>th</sup> and 6<sup>th</sup> and again on the 21<sup>st</sup> and 22<sup>nd</sup>. Trace amounts were reported as far south as Atlanta in both cases.

<b>Location</b>	<b>January Precipitation (in.)</b>	<b>Departure from Norm</b>
Athens	4.68	+0.63
Atlanta	3.35	-1.01
Augusta	2.48	-1.43
Macon	3.23	-1.01
Savannah	2.41	-1.28

A significant winter storm affected much of the state on the 28<sup>th</sup> and 29<sup>th</sup> with accumulating snow and freezing rain. An advancing arctic front moved into the area on the 27<sup>th</sup>, with freezing temperatures being recorded across much of the state by the evening of the 28<sup>th</sup>. A shortwave then began spreading moisture into the area, resulting in a mixture of snow, freezing rain, and sleet. Snow totals of up to 3-4" throughout the state

and ice accumulations of up to 0.4-0.5" were reported south of Atlanta by the 29<sup>th</sup>. The combination of very cold temperatures, accumulating snowfall, and workday-hours onset resulted in abysmal travel conditions in and around Atlanta.

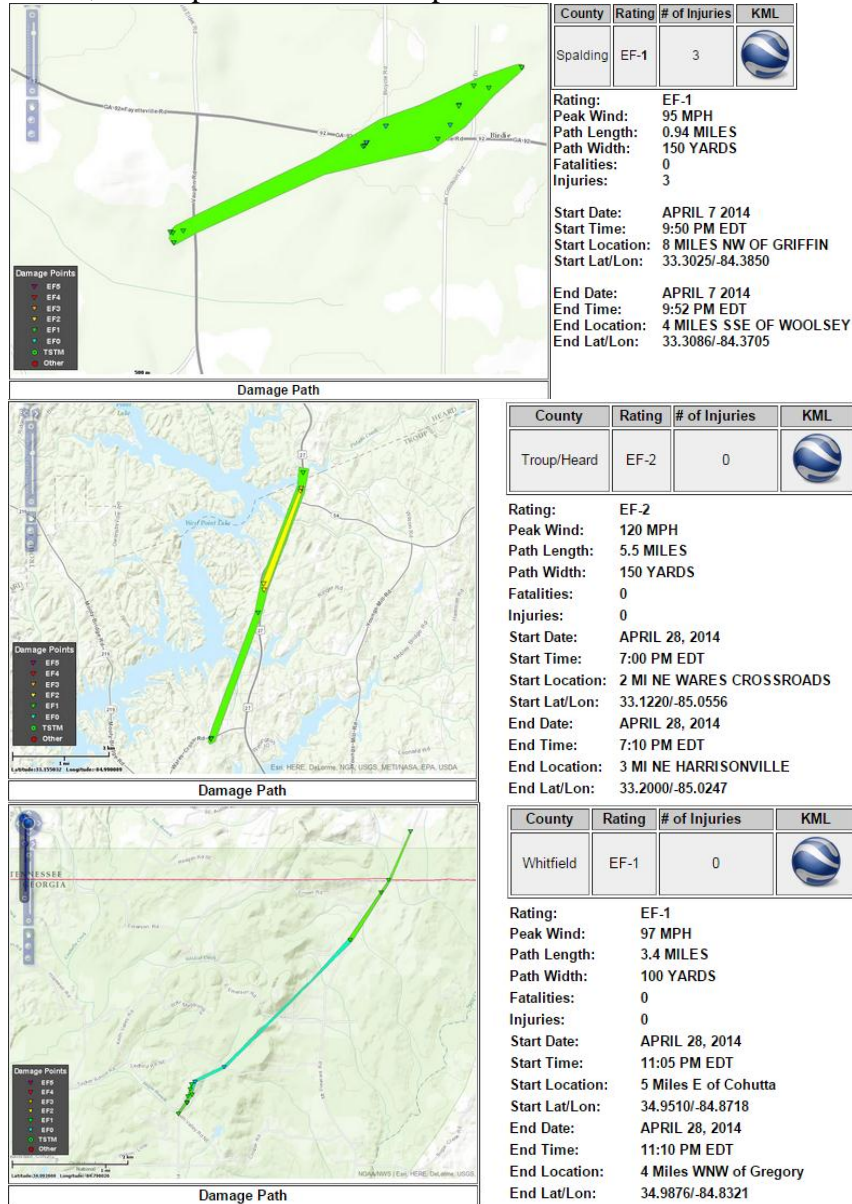


The month of February proved to be relatively mild with regard to precipitation and temperature across the state. The average statewide temperature of 49.8°F was 1.2°F above the 20<sup>th</sup> century average of 48.6°F, making it the warmest February since 2012. Most major climate sites across the state saw near-normal average temperatures. Athens recorded 47°F (-0.2), Macon's average temperature was 49.4°F (-0.6), Columbus recorded 50.8°F (-0.3), and Savannah's average temperature was 55.2°F (+2.2). Several record high temperatures were set throughout the month, including a record high of 74°F in Atlanta on February 2<sup>nd</sup> (breaking the old record of 73 set in 1986). A record high of 82°F was also set on the 2<sup>nd</sup> at Augusta, which tied the old record of 82°F set in 1991. Rainfall amounts were, on average, below normal across much of the state. The statewide average precipitation was 4.04", -0.47 below the 20<sup>th</sup> century average of 4.51". Areas in the Northeast and Southeast experienced the most dryness, with Brunswick and Alma in Southeast Georgia falling almost 2" below normal rainfall.

Two significant weather events occurred at the beginning and end of the month. A powerful storm brought heavy snow and record levels of ice to north and central Georgia on February 11-13<sup>th</sup>. Then, a cold front moved through the state on the 21<sup>st</sup>, spawning severe weather with that system. The National Weather Service (NWS) in Peachtree City (FFC) confirmed an EF-2 tornado with maximum winds of 125 mph struck Laurens and Johnson counties.

March crept in with cooler and drier-than-average conditions. The average statewide temperature for the month was 52.9°F, which was -2.5°F below the average of 55.4°F. Precipitation totals were only -0.64" below the average of 5.06" statewide. April began on a much more active note with a strong storm system moving through north and central Georgia on the 6<sup>th</sup> and 7<sup>th</sup>. Over a 48-hr period, widespread 2-4 inches of rain fell across North Georgia and parts of West Central Georgia. The higher rainfall amounts caused many rivers to reach flood stage, according to the NWS at FFC. In addition to the

flooding, an EF-1 tornado was confirmed in Spalding County on the 7<sup>th</sup>. Another severe weather event later in the month spawned an EF-2 tornado in Troup and Heard counties on the 28<sup>th</sup>. The NWS also confirmed an EF-1 tornado in Whitfield County with that system on the 28<sup>th</sup>, with a peak wind of 97 mph.



The month of May saw near normal, to slightly above normal, precipitation across the majority of the state. Areas of North Georgia and western parts of the state fell slightly below average in rainfall. Temperatures averaged one to three degrees above average in areas of North and Central Georgia, with below average temperatures in the southwest. Another round of severe weather caused an EF0 tornado to touch down in Dodge County on the 14<sup>th</sup> of the month, and an EF-1 in Banks County on the 15<sup>th</sup>. No injuries or deaths occurred as a result of either tornado.

The summer months proved to be slightly cooler than normal and two to four inches drier than normal across the majority of locations, according to the NWS at FFC.

June was warmer than normal, with July and August averaging cooler than normal temperatures. August also averaged drier than normal, with Macon and Columbus experiencing the 2<sup>nd</sup> and 6<sup>th</sup> driest months on record, respectively. Climatologically, the Fall season is one of the driest periods for the region. September experienced mostly above normal temperatures and below normal precipitation across North and Central Georgia. Interestingly, a NWS survey team determined that downburst winds estimated between 70 and 80mph caused damage at Henry County Airport on the 7<sup>th</sup>. Several planes were destroyed and others damaged as a result of those winds.

October was characterized by warmer than normal temperatures and below normal rainfall across eastern parts of the state, with above normal rainfall in the north and west. The month began with severe weather and subsequently cooler temperatures. A strong shortwave and associated cold front moved across the state, causing Atlanta, Athens, and Macon to set record low daily maximum temperature records of 65°, 66° and 69°F on the 4<sup>th</sup>, respectively. Record low temperatures continued as Athens set a record low of 38°F and Macon 37°F on the 5<sup>th</sup>. Alma tied a record low of 45°F on the 6<sup>th</sup>. A persistent longwave trough remained across the eastern U.S. with disturbances in the flow setting off a round of severe weather on the 6<sup>th</sup>. The NWS at FFC recorded an EF-1 tornado just north of Ringgold at approximately 7:40 P.M. EDT on the 6<sup>th</sup>. A warm spell occurred from the 9<sup>th</sup> through the 13<sup>th</sup> with temperatures in central and southern areas reaching into the 80's and lower 90's. Numerous record high temperatures were set across the state. A persistent ridge of high pressure at the end of the month propelled temperatures to record warmth once again.

November proved to be relatively cool on average across the state. The average statewide temperature of 49.8°F was -4.4° below the 20<sup>th</sup> century average of 54.2°F, making it the 4<sup>th</sup> coolest November on record and the coolest November since 1976. Macon experienced its coldest average November minimum temperature on record of 34.5°F, which was -8.5° below the average. Athens and Columbus both experienced their 4<sup>th</sup> coolest November on record. The month began on a cool note as wraparound moisture and freezing temperatures behind a strong upper level low allowed areas of North Georgia to receive their first snow of the season on November 1<sup>st</sup>. Macon and Brunswick then set record low temperatures on the 2<sup>nd</sup> with 29°F and 38°F, respectively. The record low temperatures continued through the month as Athens, Columbus, and Macon were among sites that set record low temperatures on the 19<sup>th</sup> with 20°, 21°, and 17°F, respectively. Augusta also dipped to 15°F on the 19<sup>th</sup>, which broke the existing record of 22°F set in 2008.

**November Avg. Temperature (°F) and Rankings – Courtesy of NWS at FFC**

Site	Avg. Temp. and Current Ranking	Normal	Dep. from Normal	Previous Records
Athens	48.1 (4 <sup>th</sup> Coolest)	53.8	-5.7	46.4 (1951)
Atlanta	49.0 (16 <sup>th</sup> Coolest)	54.0	-5.0	44.2 (1976)
Columbus	50.8 (4 <sup>th</sup> Coolest)	57.3	-6.5	48.7 (1976)
Macon	49.2 (#1 Coolest)	55.9	-6.7	49.3 (1901)
Cartersville	45.6	51.3	-5.7	
DeKalb Peachtree Arpt	46.6	52.7	-6.1	
Fulton Co. Arpt	47.0	53.0	-6.0	
Gainesville	47.3	52.6	-5.3	
Peachtree City	47.2	52.7	-5.5	
Rome	45.7	50.9	-5.2	

Average precipitation statewide was 4.37”, a departure of +1.50 above the average. Periods of severe weather spawned several tornadoes across the state. A NWS survey determined an EF-1 tornado touched down in Twiggs County on November 17<sup>th</sup>. Another round of severe weather associated with a strong storm system on the 23<sup>rd</sup> produced four tornadoes and a straight line wind event over Troup County, according to the NWS in Peachtree City. The year ended with a warmer and wetter than average December across many climate sites.