

Southeast Region: (Information provided by the Southeast Regional Climate Center)

- Temperatures were near average to below average across the Southeast region during December, but were near average to above average in Puerto Rico and the U.S. Virgin Islands. Monthly mean temperatures were within 2 degrees F (1.1 degrees C) above and below average for nearly 80 percent of the 178 long-term (i.e., period of record equaling or exceeding 50 years) stations across the region. Relatedly, very few extremes in monthly mean temperature were observed, as only 3 long-term stations were ranked within their ten warmest or coldest values on record. However, Florida observed a below-average monthly mean temperature for the first time since March 2018. The warmest weather of the month occurred on the 13th, as unseasonably warm, moist air surged northward ahead of an approaching cold front. Daily maximum temperatures exceeded 70 degrees F (21.1 degrees C) across portions of every state in the region, with numerous locations across the Florida Peninsula reaching 80 degrees F (26.7 degrees C) or higher. In contrast, the coldest weather of the month occurred on the 25th and 26th, as a departing extratropical cyclone ushered in unusually cold, dry air from Canada. Daily minimum temperatures fell below 30 degrees F (-1.1 degrees C) as far south as northern Florida, with numerous locations across interior portions of the region reaching the teens F (-10.6 to -7.2 degrees C). Dropping to 16 degrees F (-8.9 degrees C) on the 26th, Greensboro, NC (1903–2020) ended its longest streak of 694 consecutive days with a daily minimum temperature at or above 20 degrees F (-6.7 degrees C), surpassing the previous record by 277 days. In addition, many locations across the region observed their coldest Christmas Day in at least two decades. With a daily maximum temperature of 24 degrees F (-4.4 degrees C), Asheville, NC (1876–2020) recorded its coldest Christmas Day since 1983, while Huntsville, AL (1907–2020) observed its coldest Christmas Day since 1985, with a daily maximum temperature of 32 degrees F (0 degrees C). With a daily maximum temperature of 35 degrees F (1.7 degrees C), Atlanta, GA (1878–2020) recorded its coldest Christmas Day since 1989, while Orlando, FL (1892–2020) observed its coldest Christmas Day since 1995, with a daily maximum temperature of 53 degrees F (11.7 degrees C).
- Precipitation was variable across the Southeast region during December, with a few wet extremes recorded. The driest locations were found across portions of coastal South Carolina, west-central and coastal Georgia, central and southern Alabama, the western half of the Florida Panhandle, east-central Florida, the northern half of Puerto Rico, and the U.S. Virgin Islands. Monthly precipitation totals ranged from 50 to less than 25 percent of normal in these areas. In contrast, the wettest locations were found across much of Virginia, as well as portions of North Carolina, southern Florida, and Puerto Rico. Monthly precipitation totals ranged from 150 to more than 200 percent of normal in these areas. Several long-term stations observed December precipitation totals that were ranked within their five highest values on record, including Richmond, VA (1887–2020; 6.62 inches, 168 mm), Williamsburg 2 N, VA (1948–2020; 6.37 inches, 162 mm), Washington Dulles International Airport, VA (1960–2020; 5.81 inches, 148 mm), and Winchester 7 SE, VA (1912–2020; 5.34 inches, 136 mm). Measurable snowfall was generally confined to the higher elevations across the Southern Appalachian Mountains.

Beech Mountain, NC (1991–2020), Mt. Mitchell, NC (1925–2020), and Burkes Garden, VA (1896–2020) recorded 16.7, 16.3, and 14.1 inches (424, 414, and 358 mm) of snowfall during the month, which is 4.0, 3.2, and 6.5 inches (102, 81, and 165 mm) above their long-term averages, respectively. However, Washington, D.C. (1884–2020) only recorded a trace of snowfall during the month, which is 2.9 inches (74 mm) below its long-term average. On the 16th, a winter storm produced freezing rain, sleet, and snow across portions of North Carolina, Virginia, and Washington, D.C. Freezing rain accumulations of 0.05 to as much as half of an inch (1 to as much as 13 mm) occurred in central and western portions of North Carolina, as well as southwestern, central, and northern parts of Virginia. Snowfall totals of 2 to more than 8 inches (51 to more than 203 mm) were found across portions of northern Virginia, with the greatest accumulation of 11.5 inches (292 mm) measured in Bayse, VA. About 200 vehicle crashes and 125 disabled vehicles were reported by the Virginia State Police along I-81 and across northern Virginia. In addition, about 36,000 homes and businesses in Virginia were without power following the height of the storm. On the 24th and 25th, a winter storm produced 3 to more than 6 inches (76 to more than 152 mm) of snowfall across the higher elevations of western North Carolina and southwestern Virginia, with the greatest storm total accumulation of 13.6 inches (345 mm) recorded near Hot Springs, NC. Early on the 25th, snow flurries were reported as far south as Charleston International Airport, SC, which is only its second trace of snowfall on Christmas Day since 1938. In addition, Augusta, GA (1871–2020) observed only its second trace of snowfall on Christmas Day since records began 149 years ago. With 1.1 inches (28 mm) of snow on the 25th, Asheville, NC (1869–2020) observed its fifth highest snowfall on Christmas Day since records began 151 years ago.

- There were 85 severe weather reports across the Southeast during December, which is nearly double the median monthly frequency of 43 reports during 2000–2019. Nearly 90 percent (75 of 85) of the severe weather reports during the month were for strong thunderstorm winds. On the 24th and 25th, an extensive squall line associated with a vigorous cold frontal passage produced convective wind gusts exceeding 45 mph (20 m/s) along coastal portions of the region, including 49 mph (22 m/s) at Charleston International Airport, SC, 59 mph (26 m/s) at Brunswick Golden Isles Airport, GA and Tampa International Airport, FL, 61 mph (27 m/s) at Newport News/Williamsburg International Airport, VA, and 64 mph (29 m/s) at Billy Mitchell Airport on Cape Hatteras, NC. In addition, a 55-mph (25-m/s) wind gust reported at Gainesville Regional Airport, FL was the highest gust observed during the month of December since records began in 1973, breaking the old record of 46 mph (21 m/s) set on December 24, 2014. Ten tornadoes (2 EF-0s, 7 EF-1s, 1 EF-2) were confirmed across the region during the month, which is near the median frequency of 9 tornadoes observed during December from 2000–2019. On the 16th, an EF-2 tornado with estimated peak winds of 125 mph (56 m/s) tracked over thirteen miles across Pinellas and Hillsborough Counties in the Tampa Bay area of Florida. The greatest damage occurred at an industrial park, where two buildings were destroyed, and five buildings sustained major damage. In addition, major damage was reported for several buildings at a boat storage facility, with large 2-ton boats tossed around. This was the strongest tornado to hit Pinellas County since October 1992 and the strongest December tornado in Florida since 2006.

- Drought conditions (D1 and greater) were not observed across the Southeast region during December. However, abnormally dry (D0) conditions persisted across portions of Alabama, Georgia, South Carolina, and northern Florida during the month. By the end of the month, over one-third of Georgia was covered with abnormally dry conditions. In addition, a few small pockets of moderate (D1) drought developed in north-central Puerto Rico during late December. Heavy rainfall during early December saturated vegetable fields in southern Florida, resulting in crop losses, increased disease pressure on lettuce and beans, and bloom dropping in pepper and tomato plants. Vegetable and citrus growers in southern Florida had to pump excess water out of their fields due to the persistent rainfall. While cotton producers in the Florida Panhandle continued their harvest, some noted that cotton yields were particularly poor this year from excessively wet weather. In Georgia, winter grazing and small grains benefitted from timely rainfall during the month, but their growth was slowed by cold weather. In central and eastern portions of South Carolina, heavy rainfall delayed the harvesting of row crops and the planting of small grains and cover crops. Prolonged saturated soil caused some farmers to abandon portions of their soybean and cotton fields. Wet weather continued to delay field work across North Carolina, with reports of negative impacts on the wheat crop due to waterlogged soils. Several nights of frost and freezing temperatures during the month caused some grass damage in pastures across northern and central Florida, while low-lying areas of pastures in southern Florida sustained flooding. Pasture conditions in Georgia suffered from freezing temperatures and heavy rainfall during the month. Persistent rainfall in the Pee Dee region of South Carolina caused some health issues in livestock, including coccidia, pneumonia, and salmonella.