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

• Nearly all of the Southeast was warmer than normal in January as a whole, with most areas reporting temperatures that were 2-4 degrees F (1.1 to 2.2 degrees C) above the 1981-2010 average. The only region on the mainland that was colder than normal was the west coast of the Florida peninsula, including Fort Myers, FL (1903-2019; 0.7 degrees F or 0.4 degrees C colder than normal). Stations in Puerto Rico were also near to slightly cooler than normal. The first week of the year was exceptionally warm, with much of the region recording mean temperatures more than 10 degrees F (5.5 degrees C) warmer above normal. In the last week of the month, however, a cold spell resulted in temperatures ranging from 4 to 9 degrees F (2.2 to 5.0 degrees C) colder than normal. Because of the canceling effect of the early month warmth and the late month coolness, not a single station in the Southeast reported a temperature that was ranked in the top ten coldest or warmest. Hastings, FL (1978-2019; tied for 11th warmest), Mayport, FL (1976-2019; 12th warmest), Murfreesboro, TN (1975-2019; tied for 12th warmest) and Winchester, VA (1984-2019; tied for 12th warmest) were the highest ranked stations in the region. Stations that were the most above normal include Muscle Shoals, AL (1893-2019; 2.1 degrees F or 1.2 degrees C warmer than normal), Pensacola, FL (1879-2019; 2.0 degrees F or 1.1 degrees C), Key West, FL (1871-2019; 1.9 degrees F or 1.1 degrees C), Augusta, GA (1873-2019; 3.6 degrees F or 2.0 degrees C), San Juan, PR (1898-2019; 2.1 degrees F or 1.2 degrees C above), Lumberton, NC (1903-2019; 3.9 degrees F or 2.2 degrees C), Charleston, SC (1938-2019; 2.6 degrees F or 1.4 degrees C), and Norfolk, VA (1871-2019; 2.1 degrees F or 1.2 degrees C warmer than normal). During the last week of January, very cold temperatures spread through a wide region of the Southeast. The coldest temperatures at most Southeastern stations occurred on the morning of January 21, as a cold dome of Arctic air moved south behind a strong cold front. A second blast of Arctic air flowed into the region on January 30, with temperatures a few degrees warmer than the frigid air of January 20-21. The coldest temperature at any site in January was -7 degrees F (-22 degrees C) at Mount Mitchell, NC on the 21st, followed by -5 degrees F (-21 degrees C) at Copper Hill, VA on the 22nd. Niceville, FL reported 19 degrees F (-7 degrees C) on the 29th in the western Panhandle. The coldest temperature in Puerto Rico was 50 degrees F (10 degrees C) at Adjuntas Substation on the 26th.

• Precipitation varied widely across the Southeast during January. While most areas received rainfall well in excess of normal, a region of relatively dry conditions stretched along the coastal plain from southern Alabama eastward through southern Georgia and northern Florida to the East Coast in South and North Carolina. Precipitation in this region was generally 70 to 90 percent of normal, with isolated pockets receiving less than half their usual amount. Most of Puerto Rico also received less than normal rainfall, with San Juan (1898-2019) receiving 1.66 inches (42 mm) less than normal. However, Roosevelt Roads (1968-2019; 10th wettest) in Ceiba, PR, on the far eastern end of the island, received 4.01 inches (102 mm), 1.37 inches (35 mm) wetter than normal. The wettest part of the Southeast was the southern half of the Florida peninsula, which received rainfall amounts up to 200 percent wetter than normal. Fort Lauderdale Beach (1985-2019; 2nd wettest) observed 4.75 inches (121 mm), 2.11 inches (54 mm) wetter than normal, and Fort Myers (1902-2019; 6th wettest) reported 5.10 inches (130 mm), 3.16 inches (80 mm) wetter than normal. Most of Fort Myers' rain for the month fell on, January 27 (3.67 inches, 93 mm), setting a new record for a January one-day precipitation total. On the same date, West Palm Beach (1888-2018) received 2.78 inches (71 mm), and Daytona Beach (1923-2019) received 1.97 inches (50 mm). Other stations around the Southeast with highly ranked monthly precipitation totals include Madison, AL (1953-2019; 5th wettest; 8.97 inches or 228 mm), Rome, GA (1970-2019; 9th

wettest; 6.82 inches or 173 mm), Marion, NC (1911-2019; 5th wettest; 7.26 inches or 184 mm), and Wallops Island, VA (1966=2019; tied for 8th wettest; 4.20 inches or 107 mm). A snowstorm hit parts of Northern Virginia on January 13, as a strong low pressure system developed along the East Coast. Washington Reagan (1871-2019) received 10.3 inches (262 mm) from the storm and Washington Dulles (1962-2019) received 10.6 inches (269 mm). Most government offices in the vicinity of Washington DC that were not affected by the government shutdown were closed due to the treacherous driving conditions. The DC area received an additional 1.0 inch (25 mm) on January 17-18, and Dulles and outlying areas received 3 inches (76 mm) on the 29th and 30th. For the month, Washington Dulles reported 15.5 inches (394 mm) and Washington Reagan reported 11.5 inches (292 mm). On January 29, snowfall of 0.5 inches or less (13 mm) was reported at several CoCoRaHS stations in Alabama.

• There were 71 severe weather reports for January 2019, compared to the median of 60 reports from 2000-2016. Eight tornadoes were reported during the month. Early in the morning on January 4, an EF-0 tornado with maximum winds of 85 mph (38 m/s) briefly touched down near Abbeville in Henry County, AL. A half-hour later, a EF-1 tornado briefly touched down just east of the Alabama border near Zetto in Clay County, GA and impacted a single family residence. Part of the roof was ripped off from an attached carport as well as a garage. Trees were uprooted and large branches impacted the residence. On January 19, a short-lived EF-1 tornado with winds of 90 mph (40 m/s) touched down on Tyndall Air Force Base in the western Panhandle of Florida. It moved a car, broke car windows, tore a portion of a new roof off some barracks, and flipped dumpsters and garbage cans on their sides. One EF-2 and three EF-1 tornadoes also occurred in Alabama on the 19th ahead of an approaching cold front. The storms caused damage to trees, buildings, and irrigation equipment. The EF-2 tornado in Elmore County, AL destroyed a church in Wetumpka and tossed several vehicles. A weak EF-0 tornado and strong downburst were also observed on January 27 in Hialeah, FL, causing damage to trees and small buildings. In addition to the tornado damage, 45 reports of wind damage were noted. A strong low pressure system on January 23 and 24 brought strong gusty winds to parts of the Southeast, including numerous reports of wind damage to Florida, Alabama, and Georgia and wind gusts of 56 mph (25 m/s) to Charleston, SC and 50 mph (22 m/s) to Washington Dulles. Heavy rain and localized flooding were reported on January 4 in Pike and Upson Counties southwest of Atlanta in Georgia, as a quick-moving low pressure system traveled towards the northeast. Numerous reports of heavy rain and flash flooding were reported in eastern Virginia and North Carolina on January 12 as a strengthening low pressure system moved northeastward off the coast of South Carolina.

• The only areas of the Southeast that experienced dry conditions in January were the southern half of the Florida peninsula and parts of Puerto Rico. At the beginning of the month, moderate (D1) drought covered almost 23 percent of Florida. Over the next two weeks, the drought expanded and worsened, and an area of severe (D2) drought formed along the east coast of the peninsula from Melbourne south to West Palm Beach, FL. At its maximum extent, however, severe drought conditions (D2) only covered slightly more than 3 percent of Florida. In the last week of January, a nearly stationary front brought heavy rain to the dry areas, resulting in the elimination of severe (D2) drought from the Southeast and a reduction in moderate (D1) drought to cover less than 4 percent of Florida. In Puerto Rico, the area of moderate (D1) drought in the center of the island decreased over the month, but a second area of moderate drought developed along the southwest coast near Cabo Rojo during January and dry conditions expanded nearby. By the end of January, three-quarters of the island was categorized as abnormally dry, with nearly 9 percent in moderate drought. Wet soil continued to be a problem for

cotton producers who were still trying to harvest their crops in January. In early January, 10-15 percent of the Georgia crop was still in the field, but by the end of the month that had been reduced to about 5-10 percent of the acreage. Some fields may not be harvested at all due to loss of yield from Hurricane Michael's winds back in October. Forage quality and quantity continued to be a problem for many livestock producers in northern Florida. Supplies were tight due to losses from Hurricane Michael, and the heavy rains since then have made it difficult to get new fields established. Those that were planted and fertilized had a lot of the fertilizer washed away by the rain, resulting in poor stands. Weed-related livestock poisoning was abnormally high because low-quality hay forced hungry cattle to feed on toxic weeds found at the edge of pastures. Warm weather in the first half of January improved strawberry harvests after a slow-down in December due to cooler temperatures and rain.