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

- Temperatures during July were near average (i.e. within 2 degree F (1.1 degrees C)) across most of the Southeast region, including Puerto Rico and the U.S. Virgin Islands. Temperatures, were extraordinarily warm in South Florida as several long-term stations observed monthly mean temperatures that were ranked within their five warmest values on record, including Key West, FL (1871–2018; first warmest) and Melbourne, FL (1937-2018; third warmest). Daily minimum temperatures were above average across much of the region. Eight long-term stations in Florida and Georgia observed average daily minimum temperatures that were ranked within their five warmest values on record, including Gainesville, FL (1890-2018; first warmest). On the 11th, sinking air motions between Hurricane Chris, situated off of the East Coast, and an upper-level ridge across the interior U.S produced the warmest weather of the month. The maximum temperature in Columbia, SC soared to 103 degrees F (39.3 C), which was the warmest temperature observed across the region during the month. In contrast, the coolest weather of the month occurred on the 8th and 9th, as an unseasonably strong, continental high pressure system ushered in cooler and drier air from Canada. Daily minimum temperatures ranged from 46 to 59 degrees F (7.8 to 15.0 degrees C) across most of Virginia and the western two-thirds of North Carolina. Mustoe 1 SW, VA (1994-2018) which lies in an elevated (2367 feet) valley, recorded a daily record minimum temperature of 43 degrees F (6.1 degrees C).
- Precipitation was highly variable across the Southeast region during the month, which is common during the summer. Monthly precipitation totals were 50 to 25 percent of normal across local areas of Alabama, portions of Georgia, and the central and western portions of Virginia and the Carolinas. Waynesville 1 E, NC (1894–2018) observed its fifth driest July on record, with only 1.72 inches (43.7 mm) of precipitation. In contrast, the wettest locations were found across portions of eastern Virginia, coastal areas of the Carolinas, northcentral Florida and local areas across the reminder of the region. Monthly precipitation totals were 150 to more than 300 percent of normal in these areas. Eleven long-term stations observed precipitation totals that were ranked within their five highest values on record. Most outstanding was Cape Hatteras, NC (18.74–2018), which observed it wettest July and second wettest all-time month with 20.31 inches (515.9 mm). Wilmington, NC (1871–2018) observed its fourth wettest July and its ninth wettest month on record, with 17.10 inches (434.3 mm) of precipitation. Washington Dulles Airport, VA (1962-2018) recorded its wettest July and 4th wettest month with 11.21 inches (284.7). As is typical of July, localized heavy rainfall produced flash flooding across small portions of the region. On the 6th, Tuscaloosa, AL (1948–2018) observed its wettest July day, with 4.39 inches (111.5 mm) of precipitation. Most of the precipitation fell in a single hour, overwhelming the city's drainage system and producing street flooding. On the 20th and 21st, heavy rainfall was observed across portions of the coastal Carolinas and eastern Virginia, as an unseasonably strong upper level low, diving into the Southeast, generated a surface low pressure that advanced northward across the region. Washington Dulles Airport observed its fifth

wettest day for any month on record, with 5.02 inches (127.5 mm) of precipitation. Over the next three days (23nd to 25th) the upper level low slowly weakened and drifted westward, forcing a plume of extraordinarily moist tropical moisture northward across eastern portions of the Southeast. Nearly 9 inches of rain fell at Cape Hatteras over this three-day period. This amount contributed nearly half of the extraordinary July total precipitation and resulted in much street flooding.

- There were 537 severe weather reports across the Southeast during July, which is nearly 91 percent of the median monthly frequency of 591 reports during 2000–2017. At least one severe weather report was recorded on 29 days during the month, and there were two days (21st and 22nd) with over 200 reports. About 85 percent (459 of 537) of the severe weather reports during the month were for strong thunderstorm winds, and nearly half (242 of 459) of these reports occurred in Georgia and North Carolina. Some of the highest thunderstorm wind gusts that were recorded included 65 mph at Charlotte Douglas Airport in Charlotte, NC, 57 mph & 51 mph at Wilmington International Airport in Wilmington, NC, 52 mph at Charlottesville Albemarle Airport in Charlottesville, VA. Thunderstorm winds were responsible for 2 fatalities and 3 injuries in Florida and North Carolina, with most of these casualties caused by falling trees. On the 5th, straight line thunderstorm winds knocked over trees onto a car, killing 1 and injuring 2, near the Green Mountain Recreational Park in Lenoir, NC. On the 22nd, strong thunderstorm winds caused a tree to fall onto two men unloading furniture just north of Daytona Beach, Fl, killing a 56-year-man. Though there were 68 hail reports across the region in July, only a few reports stood out based on the size of the hail stone reported. On the 22nd, tennis ball-sized hail (4.00-inch diameter) was reported in Covington County, Alabama. On the 21st 3.00-inch diameter hail was reported in Cleburne County, Alabama, and 2.50-inch diameter hail was reported in Gwinnett County, Georgia. Only 7 tornadoes (6 EF-0, 1 EF-1) were confirmed across the region during the month, which is shy of the median frequency of 10 tornadoes observed during July. On the 27th, an EF-1 tornado tracked 2.35 miles across Chatham County near Savannah, GA. Powerlines were downed and over 100 large trees were snapped and uprooted along the path. The roof of a log cabin blew off and partially damaged another structure on Oatland Island, while an elementary school sustained severe roof damage. Lightning resulted in two fatalities during the month. On July 4th a Dalton, GA man was fishing with his kids when he was struck and killed. On July 10th, a 39 year old West Palm Beach, FL man was killed when three bolts hit near where he was cutting branches.
- Drought conditions (D1 and greater) were not observed across the Southeast region for the second consecutive month, though small pockets of abnormal dryness (D0) persisted across the interior Carolinas. In addition, a swath of abnormally dry conditions remained across southern Puerto Rico during the month. Farmers in the some of the wetter areas of the region experienced a variety of problems, especially where wet conditions were also observed in June. In portions of southern Georgia, the unrelenting wetness continued to encourage a host of crop diseases. Gummy

Stem Blight, for example, impacted watermelons, forcing growers to carry out aggressive fungicide treatments. Blueberry farmers in Georgia lost about 60 percent of their crops this year due to the combined effects of very wet conditions in June and July and an early spring freeze. The heavy rainfall across portions of coastal North Carolina and Virginia flooded agricultural fields, which submerged and drowned various crops.