Temperature:

Temperatures were well above average across much of the Southeast region during May, but near average to slightly below average across the Florida Peninsula, Puerto Rico, and the U.S. Virgin Islands. Monthly mean temperatures ranged from 3 to as much as 8 degrees F (1.7 to as much as 4.4 degrees C) above average for nearly 65 percent of the 209 long-term (i.e., period of record equaling or exceeding 50 years) stations across the region. Half (104 of 209) of the long-term stations observed monthly mean temperatures that were ranked within their five warmest values on record, and over 60 percent of these stations were located in North Carolina and Virginia. Virginia observed its warmest May since records began in 1895. Twenty-six stations across the region observed or tied their highest May mean temperature on record, including Muscle Shoals, AL (1893–2018; 76.0 degrees F, 24.4 degrees C), Atlanta, GA (1879–2018; 74.8 degrees F, 23.8 degrees C), Raleigh, NC (1887–2018; 74.2 degrees F, 23.4 degrees C), Richmond, VA (1897–2018; 73.4 degrees F, 23.0 degrees C), Greensboro, NC (1903–2018; 73.2 degrees F, 22.9 degrees C), and Roanoke, VA (1913–2018; 72.5 degrees F, 22.5 degrees C). Average daily minimum temperatures were exceptionally warm across the northern half of the region, as the persistent influx of tropical moisture suppressed nighttime cooling during the month. Numerous long-term stations observed or tied their highest count of days during May with a minimum temperature at or above 70 degrees F (21.1 degrees C), including Gainesville, FL (1891–2018; 15 days), Columbia, SC (1888–2018; 15 days), Columbus, GA (1902–2018; 12 days), Fayetteville, NC (1910–2018; 11 days), and Norfolk, VA (1874–2018; 11 days). The warmest weather of the month across the Southeast occurred from the 11th through the 13th, as a westward expansion of the Bermuda High over the region produced unseasonably warm temperatures. Daily maximum temperatures reached at least 90 degrees F (32.2 degrees C) across much of the region, with portions of nearly every state exceeding 95 degrees F (35 degrees C). On the 13th, Pensacola, FL (1880–2018) tied its second highest daily maximum temperature on record for May, reaching 98 degrees F (36.7 degrees C). In contrast, the coolest weather of the month occurred on the 1st, as a continental high pressure system ushered in cool, dry air from Canada. Daily minimum temperatures fell below 55 degrees F (12.8 degrees C) as far south as northern Florida, while numerous stations in North Carolina and Virginia recorded minimum temperatures ranging from 25 to 35 degrees F (-3.9 to 1.7 degrees C).
Mean temperature departures from average (°F) during May 2018.
(image source: SERCC Climate Perspectives)
Precipitation: Precipitation was well above normal across much of the Southeast region during May. Monthly precipitation totals ranged from 200 to more than 500 percent of normal in broad portions of every state. Eighty-eight of the 209 long-term stations across the region observed May precipitation totals that were ranked within their five highest values on record, and nearly 60 percent of these stations were located in Florida and North Carolina. Florida observed its wettest May since records began in 1895. Twenty-three stations across the region observed their wettest May on record, including Stuart, FL (1936–2018; 24.20 inches, 615 mm), Lakeland, FL (1949–2018; 19.19 inches, 487 mm), Asheville, NC (1869–2018; 14.68 inches, 373 mm), Wilmington, NC (1871–2018; 14.36 inches, 365 mm), Charleston, SC (1938–2018; 10.62 inches, 270 mm), and Richmond, VA (1887–2018; 10.35 inches, 263 mm). This was also the wettest month all time for Stuart, FL and Asheville, NC,
which surpassed their previous records in June 1999 (19.98 inches, 507 mm) and August 1940 (13.75 inches, 349 mm), respectively. Jocassee 8 WNW (1950–2018) observed the highest May precipitation total on record for the state of South Carolina, with 17.96 inches (456 mm). Port Salerno 5 W (2003–2018; 24.47 inches, 622 mm), Lake Toxaway 2 SW (1952–2018; 23.50 inches, 597 mm), and Helen (1956–2018; 19.14 inches, 486 mm) observed the second highest May precipitation total on record for the states of Florida, North Carolina, and Georgia, respectively. Several long-term stations in Florida and Georgia observed their highest count of days during May with measurable precipitation, including Key West, FL (1871–2018; 21 days), Sanford, FL (1949–2018; 18 days), Athens, GA (1857–2018; 17 days), and Sarasota-Bradenton, FL (1911–2018; 16 days). From the 13th through the 19th, Washington, D.C. (1871–2018) and Washington Dulles International Airport, VA (1962–2018) observed their longest streak of 7 consecutive days with at least 0.25 inches (6.4 mm) of precipitation. From the 15th through the 18th, Roanoke, VA (1912–2018) and Asheville, NC (1869–2018) observed and tied their longest streak of 4 consecutive days with at least 1 inch (25.4 mm) of precipitation, respectively. Seventeen long-term stations across the region observed their highest 1-day precipitation total on record for May, including Grandfather Mountain, NC (1956–2018; 7.74 inches, 197 mm), Clayton 1 SSW, GA (1894–2018; 6.10 inches, 155 mm), Wilmington, NC (1871–2018; 5.52 inches, 140 mm), Lake City 2 E, FL (1893–2018; 5.12 inches, 130 mm), and Richmond, VA (1887–2018; 3.86 inches, 98.0 mm). During the week of the 13th through the 19th, a slow-moving low pressure system produced 5 to more than 10 inches (127 to more than 254 mm) of rainfall across broad portions of central and southern Florida, western North Carolina, and south-central and eastern Virginia. On the 18th, several rock slides and mudslides were reported in the mountains of western North Carolina, with one woman killed after her home was crushed by a debris flow in Polk County. Numerous roads in portions of North Carolina and Virginia were washed out by floodwater, while two families in Caldwell County, NC had to be rescued by helicopter from the roofs of their flooded homes. From the 22nd through the 24th, several rounds of slow-moving thunderstorms generated 5 to 10 inches of rainfall across portions of west-central Georgia (including the Columbus metropolitan area) and east-central Alabama. Talbotton, GA (1893–2018) and Thomaston 4 SE, GA (1956–2018) observed their second and fifth highest 1-day precipitation total for any month on record, with 8.57 and 5.42 inches (218 and 138 mm), respectively. Numerous flooded roads and overtopped bridges were reported in these areas, with several bridges collapsing in Smiths Station, AL. Around 4:00 PM CDT on the 28th, Subtropical Storm Alberto made landfall near Laguna Beach, FL with maximum sustained winds of 45 mph. From the 26th through the 30th, Alberto produced 3 to more than 10 inches (76.2 to more than 254 mm) of rainfall in portions of Alabama, the Florida Panhandle, south-central and northeastern Georgia, Upstate South Carolina, and western and southeastern North Carolina. Significant flash flooding occurred across western North Carolina and northeastern Georgia, resulting in numerous mudslides, road closures (including Interstate 40), evacuations, and swift water rescues. On the 28th, two journalists, who were preparing to cover the impacts of Alberto in an area damaged by flooding and mudslides earlier in May, were killed when a tree fell onto their vehicle in Polk County, NC. On the 30th, a landslide destroyed a home in Watauga County, NC, killing two people who were inside.
Precipitation totals (inches) during May 2018.
(image source: SERCC)
Percent of normal precipitation during May 2018.
(image source: SERCC)
Severe Weather:

There were 328 severe weather reports across the Southeast during May, which is less than 75 percent of the median monthly frequency of 452 reports during 2000–2017. About 80 percent (267 of 328) of the severe weather reports during the month were for strong thunderstorm winds, and nearly half (122 of 267) of these reports occurred in Virginia. At least one severe weather report was recorded on 23 days during the month, but about half (161 of 328) of the reports occurred on just two days (10th and 14th). On the 14th, a vigorous squall line (nearly meeting the criteria for a derecho) produced significant wind damage and caused tens of thousands of power outages across portions of northern and eastern Virginia, as well as Washington, D.C. Numerous homes and vehicles were damaged by fallen trees, but there were no reports of injuries or fatalities. Some of the highest recorded wind gusts included 64 mph at a mesonet station near Richmond, 63 mph at
Severe weather reports from the Storm Prediction Center (SPC) during May 2018. Only confirmed tornado touchdowns are plotted. (image source: SERCC)

Drought and Agricultural Impacts:

During the first half of May, moderate-to-severe (D1–D2) drought covered approximately 15 percent of the Southeast, as above-average temperatures and below-normal precipitation were observed across much of the region. On May 8th, over 25 percent of Florida, Georgia, and South Carolina were classified in moderate-to-severe drought, with localized portions of Alabama, North Carolina, and Virginia in moderate drought. However, well-above-
normal precipitation during the second half of the month rapidly eliminated drought conditions from the region. A prevalence of warm, dry weather during the first half of May allowed farmers to resume crop planting and other field activities, which were significantly delayed by unusually cool temperatures in March and April. However, a prolonged lack of rainfall and insufficient soil moisture in some portions of the region prevented crop planting and slowed the growth of livestock pastures and hayfields. The persistence of low humidity from March through mid-May reduced disease pressure on fruit and vegetable crops across North Carolina, with a good yield of blueberries expected for the sixth largest producer in the nation. While below-average temperatures in March and April reduced the quantity of the largest Vidalia onion sizes, favorable weather conditions during late April and May resulted in a near-perfect harvest of the onion crop in southeastern Georgia. During the second half of the month, persistent rainfall replenished soil moisture levels in crop fields and livestock pastures across much of the region, but heavy precipitation and flooding in some areas prevented fieldwork, increased disease pressure on crops, and required fields to be replanted. The quality of small grains (e.g., wheat, rye, and oats) and hay deteriorated due to lodging (i.e., when high winds or heavy rain cause crops to fall over) and excessive dampness, with many farmers unable to harvest these crops from wet or flooded fields.