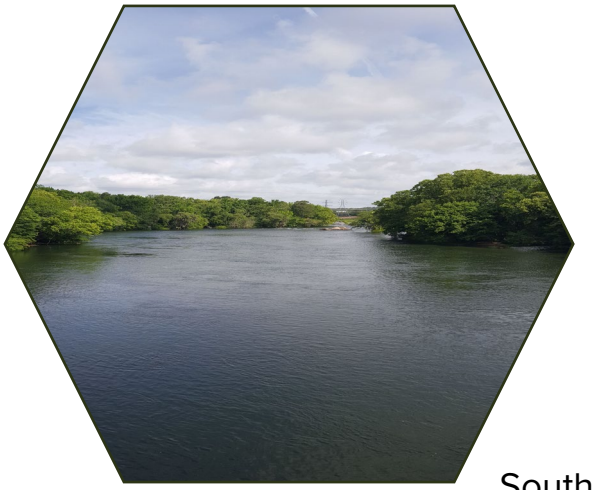


Overview of South Carolina's Climate and Hazards

Prepared by
South Carolina State Climatology Office
Land, Water, and Conservation Division
South Carolina Department of Natural Resources

CLIMATE CONTROLS

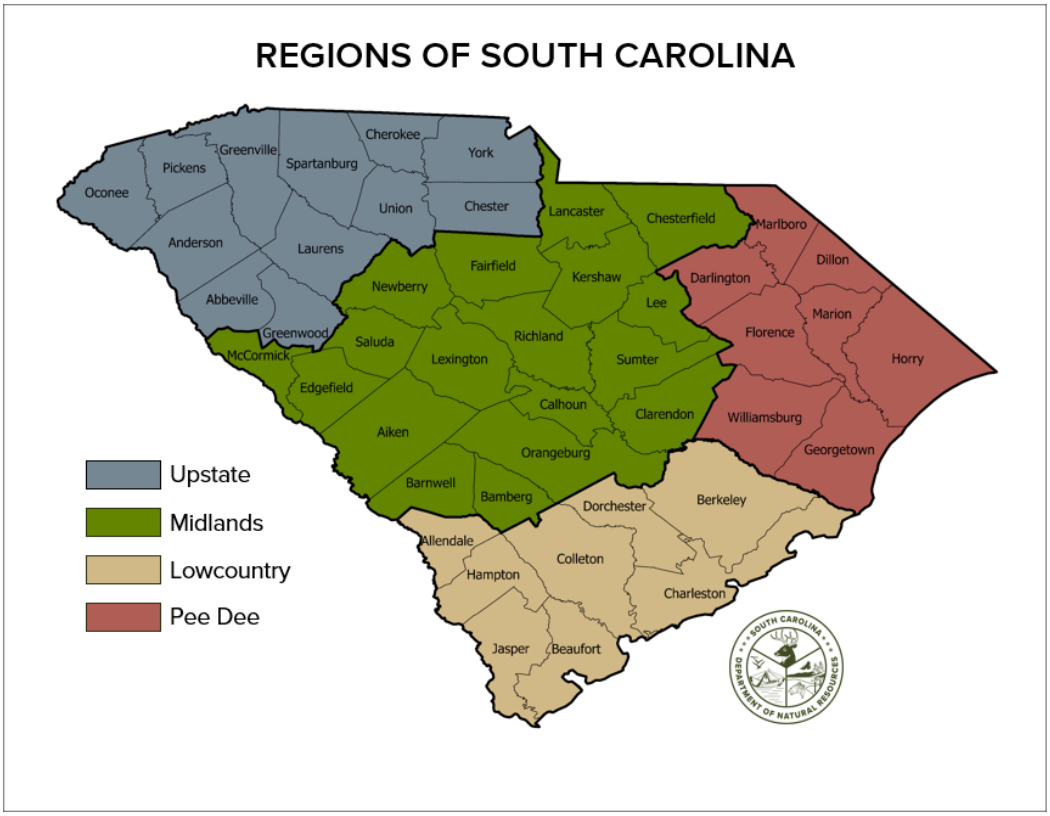
Despite the state's relatively small size, South Carolina boasts a rather diverse climate. Most of the state falls within the humid subtropical (Cfa) Köppen Climate Classification, resulting in hot, humid summers with mild winters. However, portions of the mountains in the South Carolina Upstate have fewer tropical characteristics. Several unique factors contribute to the temperature and precipitation patterns observed within its borders, including continental position and elevation.

Due to South Carolina's position within the mid-latitudes, the prevailing westerly winds help steer weather systems across the region, affecting the climate and weather of the state. Seasonally, the winds are primarily out of the southwest during the summer and the northwest during the winter.

Its position on the continent's eastern coast makes the state susceptible to cold air masses moving in from the northwest. The Appalachian Mountains tend to block most cold air outbreaks, contributing to the state's mild winters. However, cold air damming events occur mainly from October to May when cool air masses flow from the northeast and are funneled along the Appalachians' windward side. The downsloping winds, which warm the air by compression, can contribute to the warmer temperatures and rain shadow observed in the Midlands.

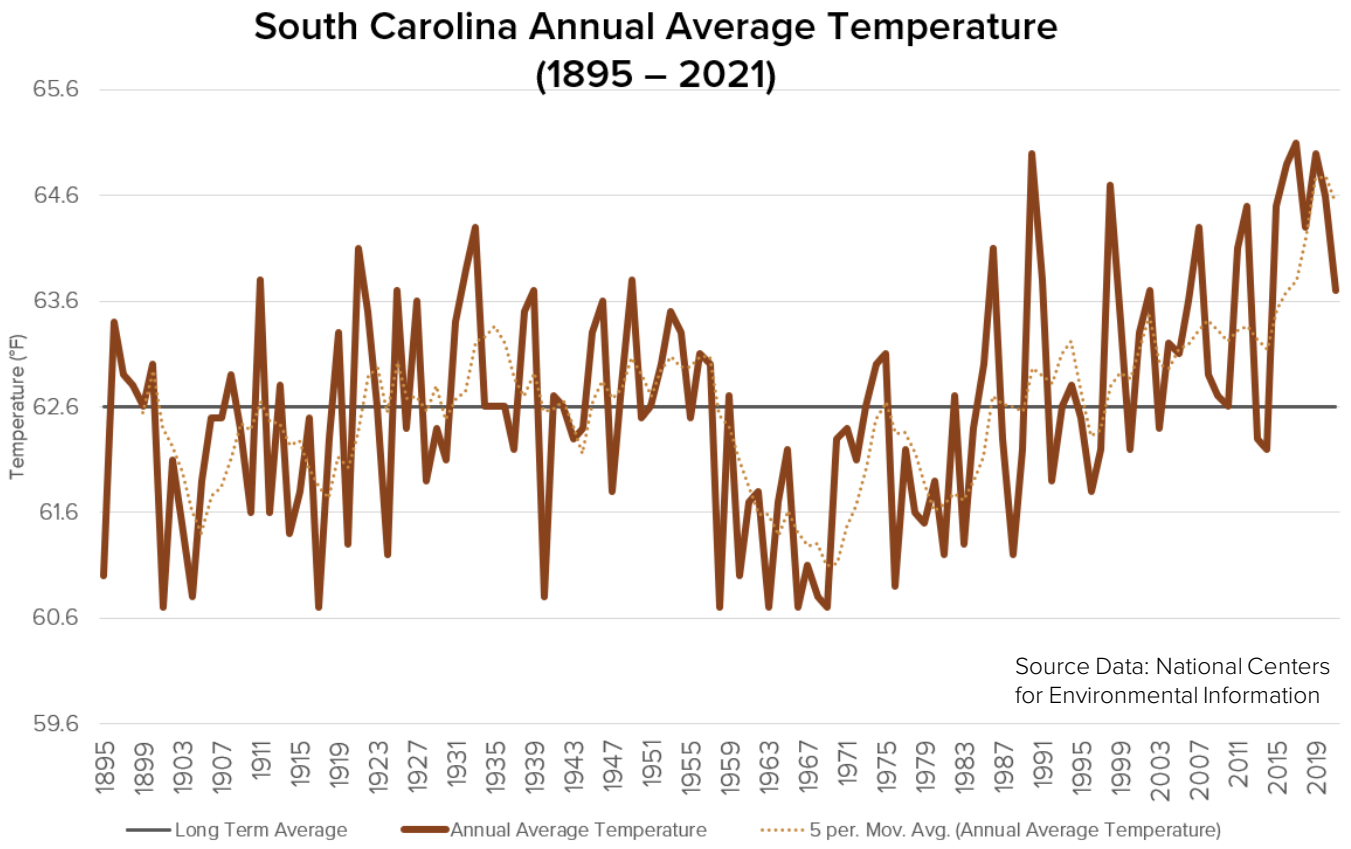
The presence of the Atlantic Ocean, with the Gulf Stream flowing northward off the coast, is important since land and water heat and cool at different rates. South Carolina's weather is dominated by the position of the Bermuda High during the warm season, which provides a persistent flow of warm, moist air into the region.

While the elevation changes from sea level along the 187-mile South Carolina coast to 3560 feet at the state's highest point, Sassafras Mountain in Pickens County, more than 90% of the state is at an elevation of less than 1,000 feet. These changes in elevation impact the temperature and precipitation trends observed across the Lowcountry, Midlands, Pee Dee, and Upstate regions (map below).



TEMPERATURE

The state's annual average temperature varies from the mid-50s in the Upstate to the low-60s along the coast. Since the late-1800s, the statewide annual average temperatures have gone through multiple periods of above and below normal temperatures (below). Despite the year-to-year variability, the overall pattern of average temperatures across South Carolina has increased since the mid-1970s. A substantial rise in minimum temperatures has driven this increase. The warmest year on record for the state is 2017, with an average temperature of 65.1 degrees, and seven of the top ten warmest years have occurred since 2010 (table below).



Tables of the top five statewide warmest and coldest years on record based on average annual temperature.

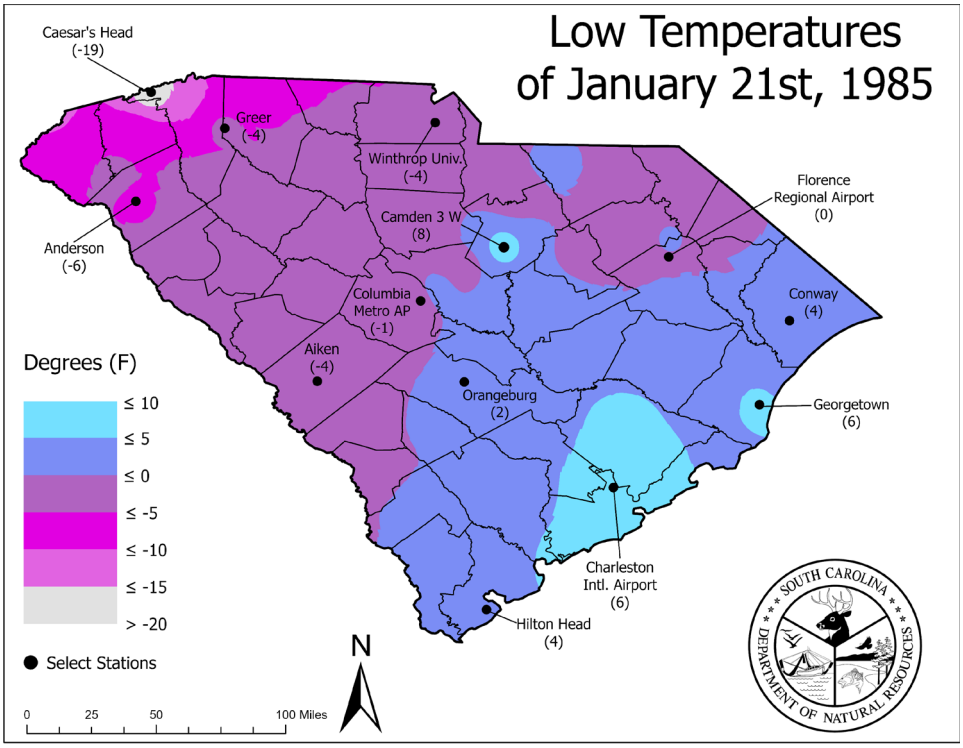
Year	Statewide Average Temperature	Departure from Long Term Average
2017	65.1˚F	2.5˚F
1990	65.0˚F	2.4˚F
2019	65.0˚F	2.4˚F
2016	64.9˚F	2.3˚F
1998	64.7˚F	2.1˚F

Year	Statewide Average Temperatures	Departure from Long Term Average
1901	60.7˚F	-1.9˚F
1917	60.7˚F	-1.9˚F
1958	60.7˚F	-1.9˚F
1963	60.7˚F	-1.9˚F
1966	60.7˚F	-1.9˚F

During winter, the average temperatures range from the mid-30s in the mountains to the lower 50s near the coast. However, there have been many instances of subzero temperatures in the climate record across the state. In January 1985, arctic air surged into the Southeast, dropping overnight temperatures below zero across the Midlands, Pee Dee, and Upstate. The National Weather Service station located at Caesars Head established a new statewide record low temperature of -19 degrees on the morning of January 21 (see map on the next page).

TEMPERATURE

The same morning, the NWS station at the Columbia Metropolitan Airport observed a low of -2 degrees, and the station at the Charleston International Airport reported a value of 6 degrees. Before this event, the Great Arctic Outbreak of 1899 held the record low temperatures at many locations across the state. In February 1899, low temperatures dropped below zero across much of the Palmetto State and drew comparisons to the Arctic Outbreak that froze a portion of Charleston Harbor in February 1835.



During summer, average temperatures range from the upper 60s in the Upstate to the mid-70s in the Lowcountry, though maximum temperatures can reach more than 100 degrees. Heatwaves are extended periods of scorching weather relative to the normal temperatures of an area, which are a common occurrence in the Southeast. Heatwaves can worsen drought conditions, stress agriculture and water resources, and impact human health. South Carolina has experienced multiple heatwaves since 1895, including significant events in July 1952, the Summer of 1954, July 1977, August 1983, July 1986, August 2007, and June – July 2012. In June 2012, the hottest temperature on record for the state was recorded on the University of South Carolina campus in Richland County. The station on campus measured a high of 113 degrees on June 29, which broke the previous record of 111 degrees set in September 1925 and 1954.

In addition to heatwaves, the hot and humid climate of the state can produce oppressive heat indices values. The heat index (HI), also known as apparent temperature, measures how hot it feels when the relative humidity is factored in with the air temperature. Prolonged exposure or strenuous activity when HI values exceed 105 degrees can cause heat-related illnesses (table below). In July 2011, maximum HI values in the Lowcountry reached more than 110 degrees, including an unofficial state record HI of 124 degrees recorded at the Mount Pleasant Airport.

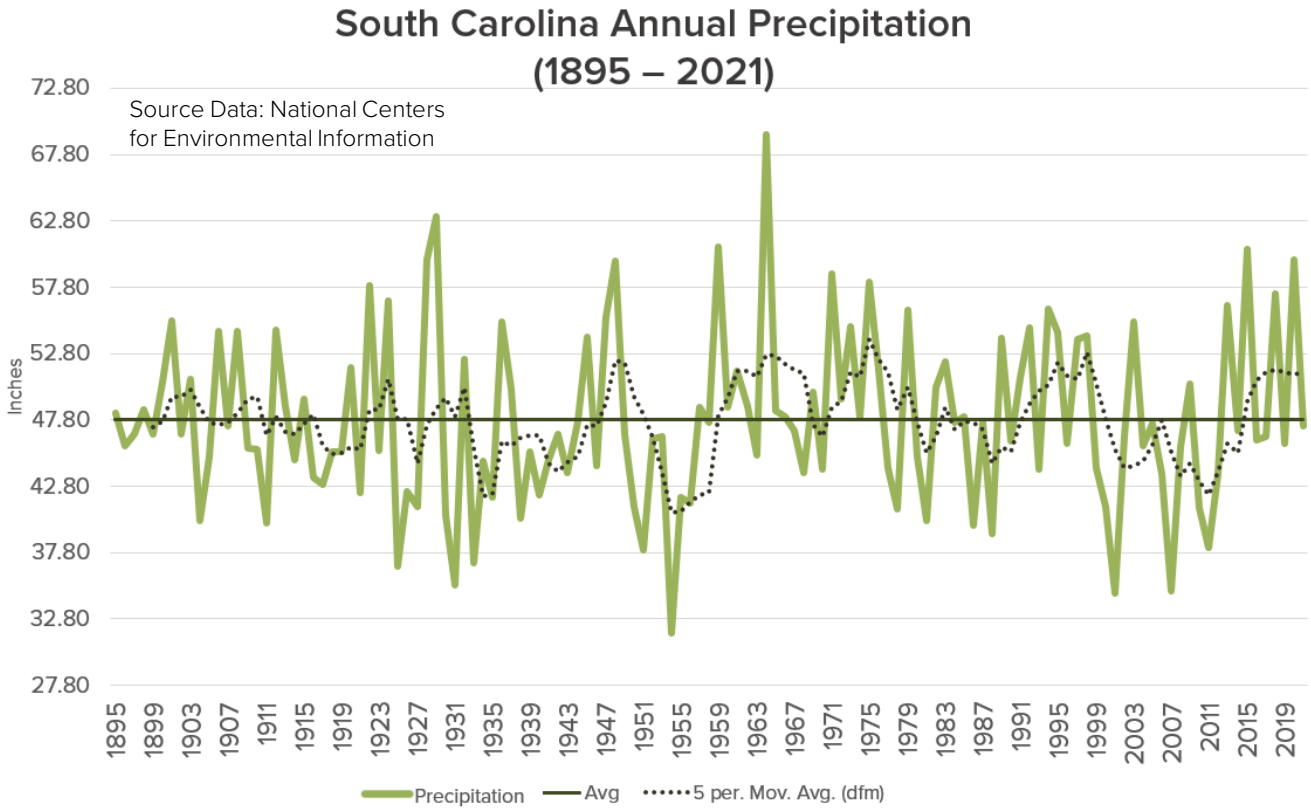
Average Number of Hours with Heat Index (HI) Values at or above threshold values (1973 – 2018)

Location	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F
Greenville-Spartanburg	1038.4	655.7	310.8	105.5	20.3	2.5	0.2	0
Columbia	1525.2	1082.2	635.5	300.7	96.5	15.6	1.6	0.1
Charleston	1559.7	1182.5	705.7	357.9	141.6	34.8	7.8	0.8

Source: Midwest Regional Climate Center

PRECIPITATION

The geography of the state has an impact on the observed precipitation. The statewide annual rainfall average from 1895 – 2021 is 47.80 inches (graph), though the rainfall is varied across South Carolina. Annual rainfall ranges from less than 40 inches in the Sandhills to over 80 inches in the higher elevations of the Appalachian Mountains in the western portion of the state. There is no distinct dry season, and the rainfall is highly variable throughout the year. Outside of the summer, precipitation falls due to the passage of cold fronts and low-pressure systems. Summer precipitation is driven by convective shower activity during the warm season and some locations of the Coastal Plain experience higher rainfall totals due to sea-breeze thunderstorms. Tropical cyclones usually contribute to precipitation during the hurricane season, especially from August through October. The driest year was 1954, with a statewide average rainfall of 31.72 inches, and many locations in the Midlands and Pee Dee regions recorded less than 30 inches. Ten years later (1964), the state reported the wettest year on record, with an annual average of 69.32 inches (table below).



Tables of the top five statewide wettest and driest years on record based on average annual precipitation

Year	Statewide Average Precipitation Total	Departure from Long Term Average	Year	Statewide Average Precipitation Total	Departure from Long Term Average
1964	69.32”	21.52”	1954	31.72”	-16.08”
1929	63.14”	15.34”	2001	34.72”	-13.08”
1959	60.86”	13.06”	2007	34.90”	-12.90”
2015	60.66”	12.86”	1931	35.37”	-12.43”
1928	59.89”	12.09”	1925	36.37”	-11.07”

There is a great deal of variation in the annual precipitation totals; however, there are distinct periods of drier and wetter than normal conditions that can be seen in the overall pattern. From about the mid-1960s until the late 1990s, statewide precipitation totals were above-normal, though a few dry years were noted during the period. There was a shift in precipitation during the first part of the 21st century, and most of the 2000s and 2010s reported a decrease in the annual rainfall, leading to long-term drought conditions.

FLOODING

The highest 24-hour rainfall total for the state is 14.80 inches measured in Myrtle Beach due to the passage of Hurricane Floyd in September 1999. The amount of precipitation that tropical cyclones contribute is often lost when analyzing trends across the entire state. Since 1956, numerous storms have dropped more than a foot of rain over multiple days within the Palmetto State (right table).

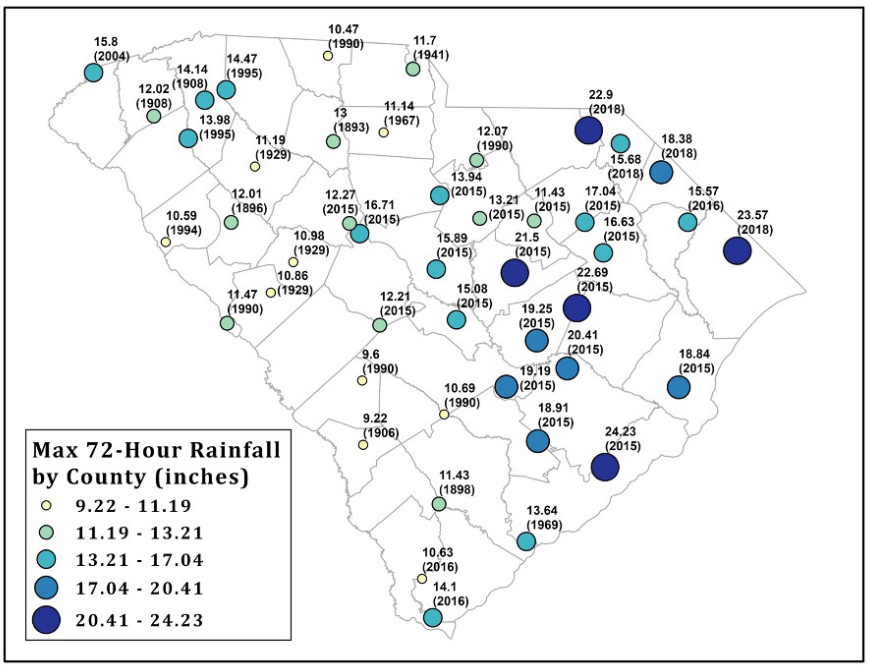
Highest Rainfall Totals in South Carolina
From Tropical Cyclones and their Remnants (1956 – 2021)

Rainfall Total	Tropical Cyclone	Dates	Location
23.68”	Florence	Sep 15-18, 2018	**Loris 2.9 WSW**
17.45”	Beryl	Aug 13-18, 1994	Jocassee 8 NW
16.92”	Matthew	Oct 7-8, 2016	Edisto Island Middleton
16.80”	Floyd	Sep 15-16, 1999	Myrtle Beach
15.21”	Dorian	Sep 5-6, 2019	**Pawleys Island 5.6 NNE**
15.13”	Jerry	Aug 23-28, 1995	Hilton Head
14.17”	Hermine	Sep 1-3, 2016	**Georgetown 6.0 S**
14.11”	TD #8	Aug 15-18, 1971	Sullivans Island
13.96”	Marco/Klaus	Oct 10-13, 1990	Pageland
13.80”	Gladys	Oct 17-20, 1968	Marion

National Weather Service or **CoCoRaHS**

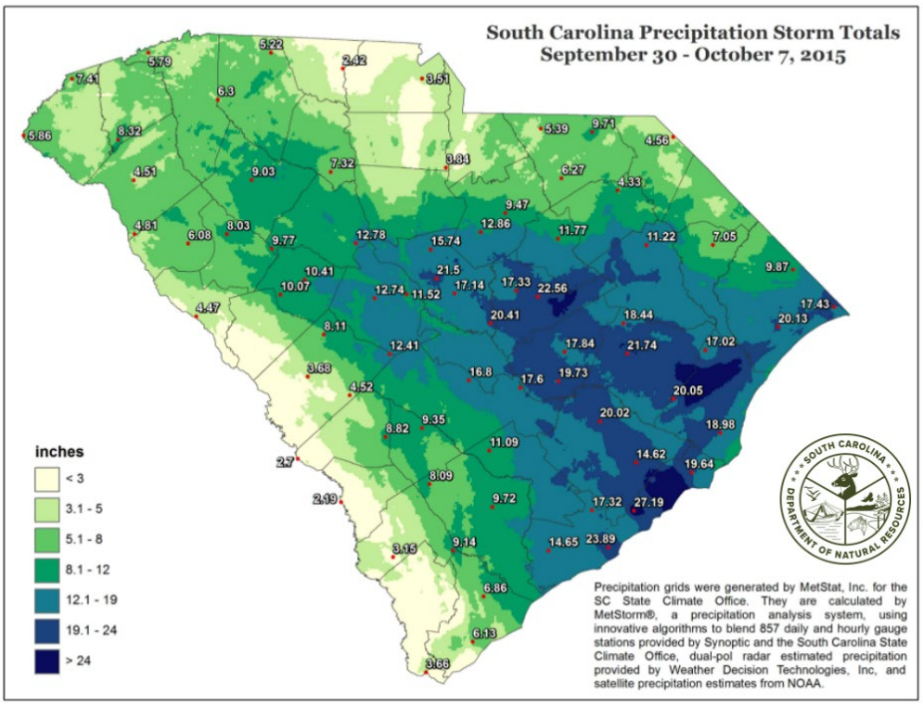
The general definition of a flood is the temporary condition of a partial or complete inundation of typically dry land. There are three common types of flooding; fluvial, pluvial, and coastal. Fluvial flooding, also known as riverine flooding, is the flooding of typically dry areas caused by an increase in the water level of an established lake, river, or stream when the water overflows its banks. The damage from fluvial flooding can be widespread, extending miles away from the original body of water. This type of flooding is caused by excessive freshwater from a severe or prolonged rain event.

Before the historic fluvial flooding in the Pee Dee region caused by Hurricane Matthew (2016) and Tropical Storm Florence (2018), the remnants of the Lake Okeechobee Hurricane (1928) and the Homestead Hurricane (1945) produced the highest crests on record at many river gauges across the watershed.



During Matthew and again with Florence, many stations across the South Carolina Midlands and Pee Dee set new multi-day precipitation records (map left). Heavy rain in these areas caused many river gauges to reach crest values that fell within the top five highest measured crests at their locations, while several rivers set new record crest values. During Florence, some gauges along Waccamaw exceeded previous record crests, some set by Hurricane Matthew, by three or more feet. However, other portions of the state have not broken their maximum rainfall values since the late 1990s.

FLOODING



Widespread, heavy rainfall (between 10 and 27 inches) occurred during the first week of October 2015, producing significant flooding across much of the state. Nearly 17% of the state received rainfall totals that exceed the 4-day 100-year (1%) event. Before 2015, one of the most extensive floods on record took place in August 1908, when extreme rainfall fell over four days. Some locations recorded two to four times the average monthly rainfall, causing some river heights to rise from 9 to 22 feet above the flood stage. Flooding in July 1916 broke several of the 1908 records in the eastern two-thirds of the state.

The table (right) lists some of the memorable floods in the state, prior to 2010, derived from U.S. Geological Survey data, along with local and state reports and newspapers.

Month/Year	Areas Affected
August 1928	Statewide
September 1928	Lower Pee Dee Basin and southern South Carolina
October 1929	Santee and Savannah basins
August 1940	Statewide
September 1945	Statewide
September 1973	Santee and Savannah basins and northwestern South Carolina
August 1981	Lower Pee Dee Basin
October 1990	Central South Carolina
October 1992	Southern South Carolina

Pluvial flooding occurs when an extreme rainfall event causes an independent flood of an overflowing water body and is often described as flash flooding or surface water flooding. Pluvial flooding can happen in urban or rural locations when drainage systems are overwhelmed and water flows into nearby roadways and structures. Coastal flooding is the inundation of land by ocean/saltwater and is commonly caused by high tides, storm surges, and tsunamis.

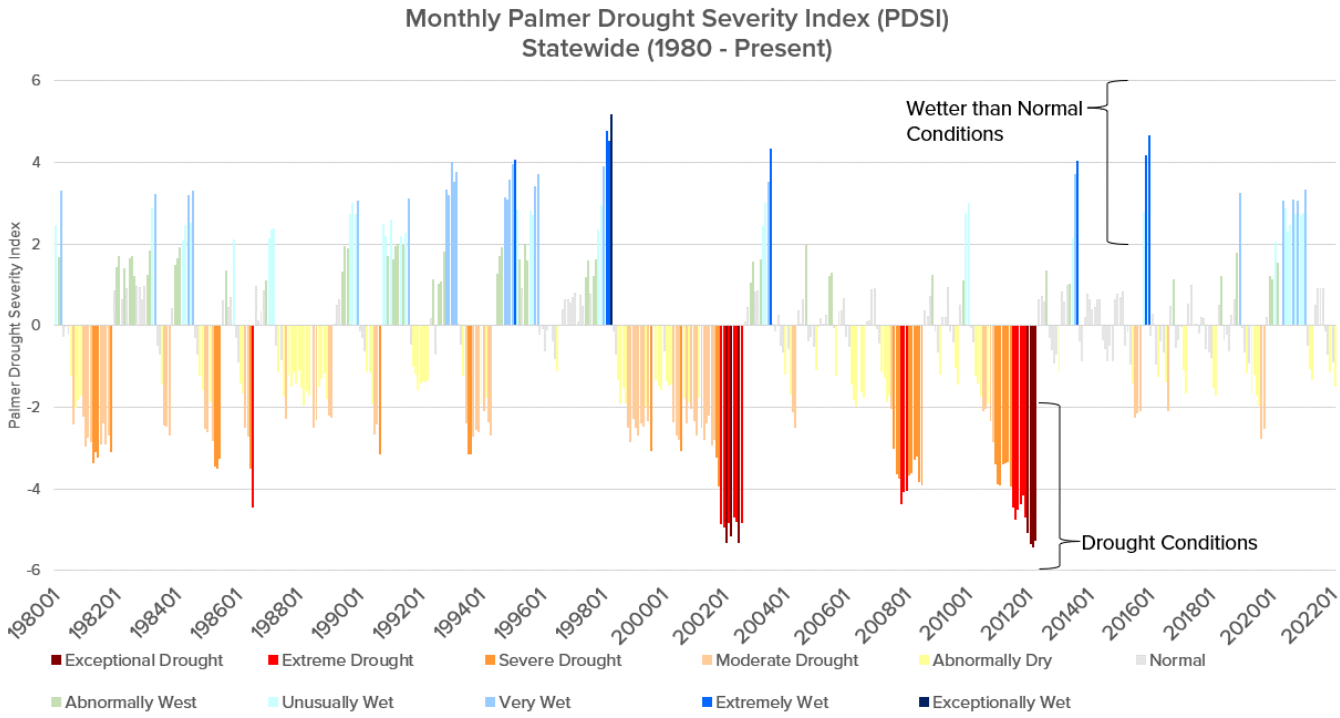
Flooding is very complex, and multiple types of flooding can occur within one single flood event, sometimes referred to as compound flooding. Numerous factors other than rain determine the occurrence of flooding, including the location of the rainfall within the river basin, the areal extent of rain, duration and rate of rainfall, and land use.

HUMIDITY

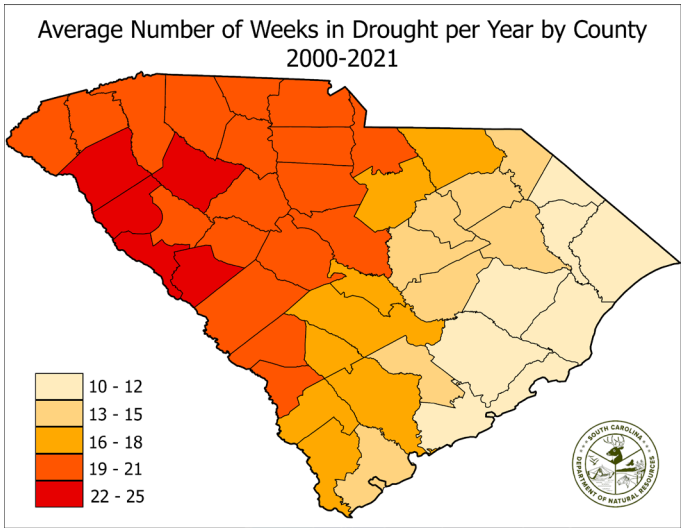
The variation in relative humidity with the time of day is considerably greater than the day to day or month to month variations. The highest values are usually measured around sunrise, and the lowest values occur within an hour or two of local noon. Humidity values during the summer tend to be slightly higher than in the other four seasons due to the prevailing southerly winds.

DROUGHT

Drought is a normal part of climate variability that occurs in every climate. Drought results from a lack of precipitation over an extended period, often resulting in a water shortage for some activity, sector, or the environment. In contrast to other environmental hazards, droughts develop slowly over weeks, months, or years. Three main categories physically define drought, meteorological, agricultural, and hydrological. These categories help determine the economic, ecological, and societal impacts of droughts in communities. Although South Carolina typically receives adequate precipitation, droughts can occur at any time of the year and last for several months to several years. Drought conditions can also contribute to diminished water and air quality, increased public health and safety risks, and reduced quality of life and social well-being.



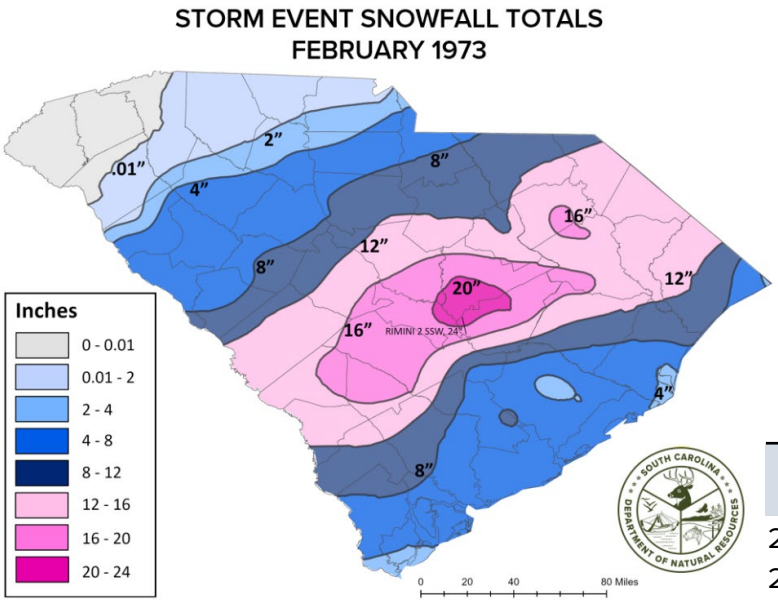
Historical records of droughts across the state indicate periods of dry weather have occurred every decade since the late 19th century. Some of the most severe droughts occurred in 1925, 1933, 1954, 1986, 1998 – 2002, 2007 – 2009, and 2010 – 2013. The 1986 drought accompanied weeks of record high temperatures and record-high water demands. Disaster areas were declared in 45 counties due to drought losses-- $219.9 million in agricultural losses and $8.1 million in forestry losses. During the drought of 2007 – 2009, lakes experienced record low levels, which impacted water supplies, irrigation capacity, and many water-related industries. To address water supply shortages, water systems issued conservation recommendations with some mandatory restrictions. These droughts, along with others on record, have impacted agriculture, forestry, tourism, power generation, public water supply, fisheries, recreation, and ecosystems.



Based on the United States Drought Monitor drought designations (D1 – D4)

WINTER WEATHER

Winter weather events in South Carolina are usually high-impact situations because of their rarity. In the Upstate, two or three winter storms with snow or ice accumulation or freezing rain accretion typically occur per winter season. The Midlands and Pee Dee average about one winter precipitation event per season, whereas it may be a couple of years between winter events in the Lowcountry. Most of the state averages two inches or less of snowfall each year. The annual snowfall average increases in the mountains, with a mean yearly snowfall of five to seven inches at the state's highest elevations. Many of the winter weather events that impact South Carolina include a combination of snow, sleet, and freezing rain.



The snowstorm of February 1973 produced the state's largest 24-hour snowfall total of 24 inches at Rimini (map left). The 28.9 inches observed at Caesar's Head in 1969 was higher but occurred over three days. Several other snowstorms, such as February 12-13, 2010, caused accumulations over most of the state. The winter storms of February 26-27, 2004, and January 7-8, 1988, also caused widespread heavy snowfall.

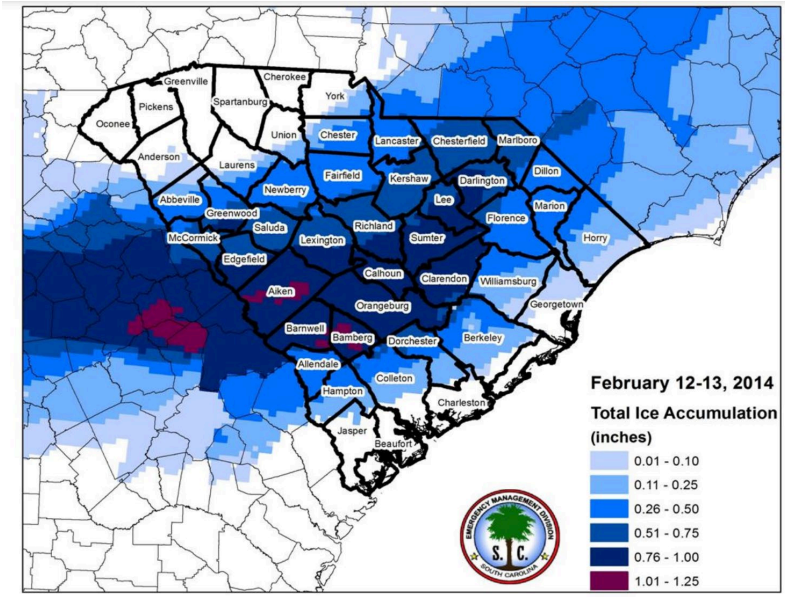
List of select two-day snowfall totals since 1970

Dates	Location	Snowfall (2-Day Total)
2/10/1973	Bamberg	22.0”
2/10/1973	Manning	21.0”
2/27/2004	Winthrop Univ.	17.3”
1/25/2000	Pageland	16.5”
1/8/1988	Caesars Head	16.5”

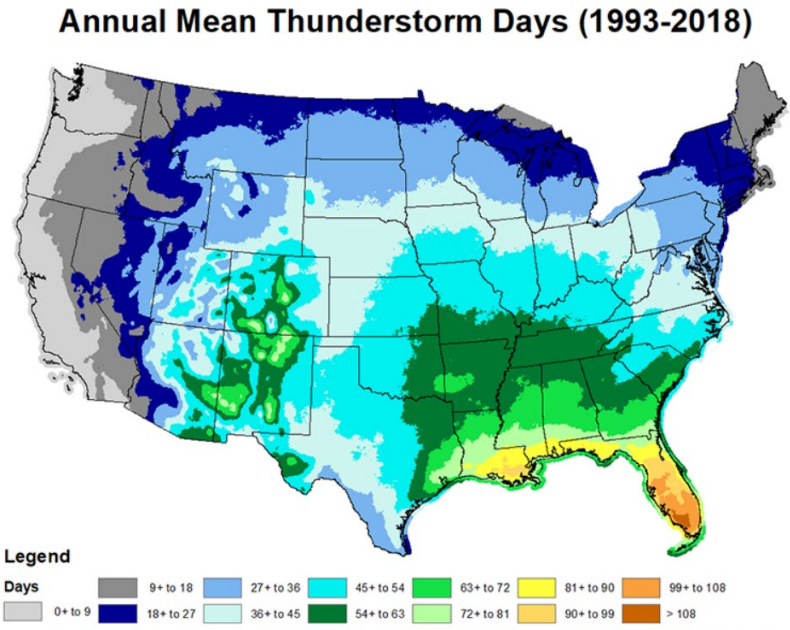
One of South Carolina's worst ice storms occurred in February 2014 (map right), with ice accretion totals of over an inch reported in Aiken, Barnwell, and Bamberg Counties. The storm also produced heavy snowfall in the Midlands and Upstate, and over a foot was reported in York County. The ice caused an estimated total of $430 million in losses, including $360 million in timber losses in the state, and 346,000 power outages.

List of recent impactful Winter Storms (snow freezing rain/ice, and cold temperatures)

Month/Year	Areas Affected
Jan 2011	Statewide
Jan 2005	Midlands and Upstate
Dec 2004	Midlands
Jan 2002	Statewide
Jan 2000	Statewide



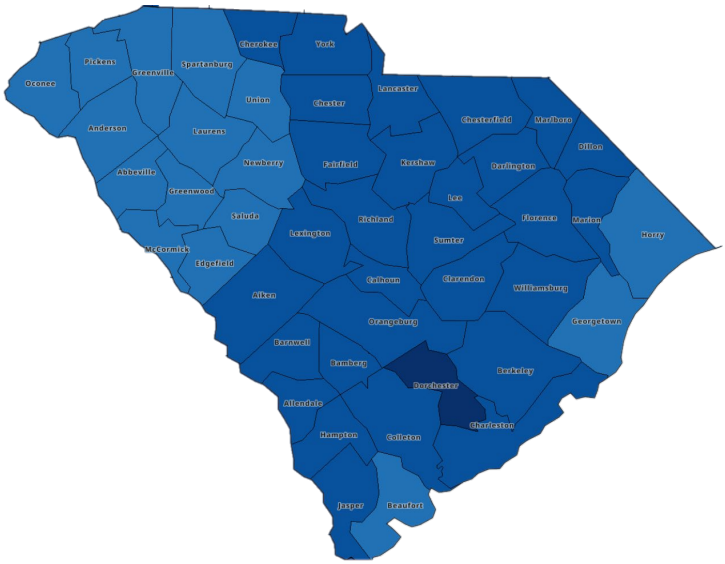
GENERAL SEVERE WEATHER



Annual number of thunderstorms the U.S. From: Koehler, Thomas L., 2019: Cloud-to-Ground Lightning Flash Density and Thunderstorm Day Distributions over the Contiguous United States Derived from NLDN Measurements: 1993-2018. Under review at ***Monthly Weather Review****. Used by permission.*

Severe weather comes to South Carolina in the form of thunderstorms, tornadoes, and tropical cyclones. Although thunderstorms are more common in the summer months, the more violent storms generally occur in the spring, with the passage of cold fronts into the warming Southeast. On average, there are between 45 and 70 thunderstorm days each year across the Palmetto State. Thunderstorms can cause hail, high winds, and lightning.

The map (right) represents the average lightning density (in-cloud pulses and cloud-to-ground strikes) observed for every county in South Carolina. Data from the National Lightning Detection Network was used to compute the map and the table (below) of the top five highest lightning density counties in the state. Statewide, the average lightning density is 36.4 events/km^2/year.



County	Lightning Density (events/km^2/year)
Dorchester	65.8
Jasper	53.2
Colleton	52.8
Hampton	49.7
Berkeley	47.7

There were dozens of reports of damaging hail during the late afternoon and evening of 5/10/11. Hail as large as softballs was reported. Pictured here is hail to the size of baseballs in Conway, SC. Photo courtesy Jamie Arnold, Meteorologist, WMBF NEWS.

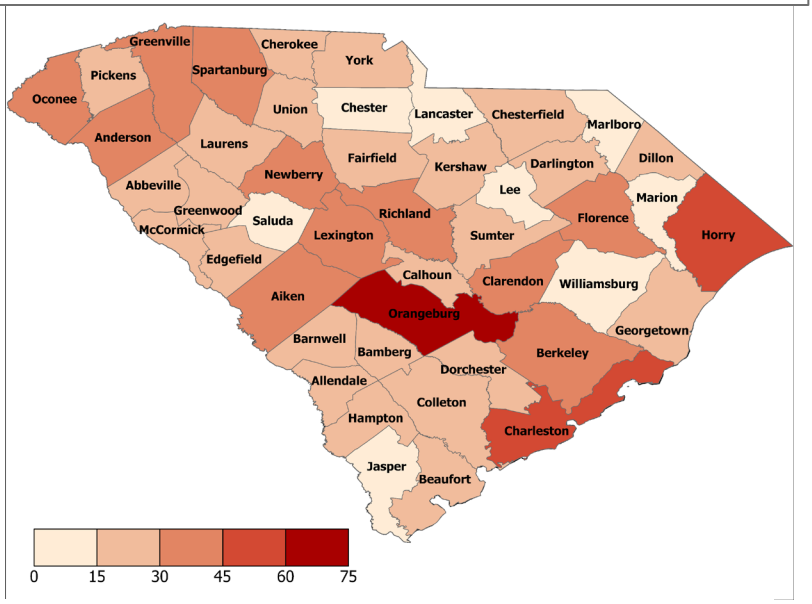
While the size of typical hailstones ranges in size from a pea (0.25 inches) to the size of golf balls (1.75 inches), the largest hailstones on record for the state are 4.5 inches in diameter (the size of softballs) and were produced by severe thunderstorms in May 2000 and May 2011.

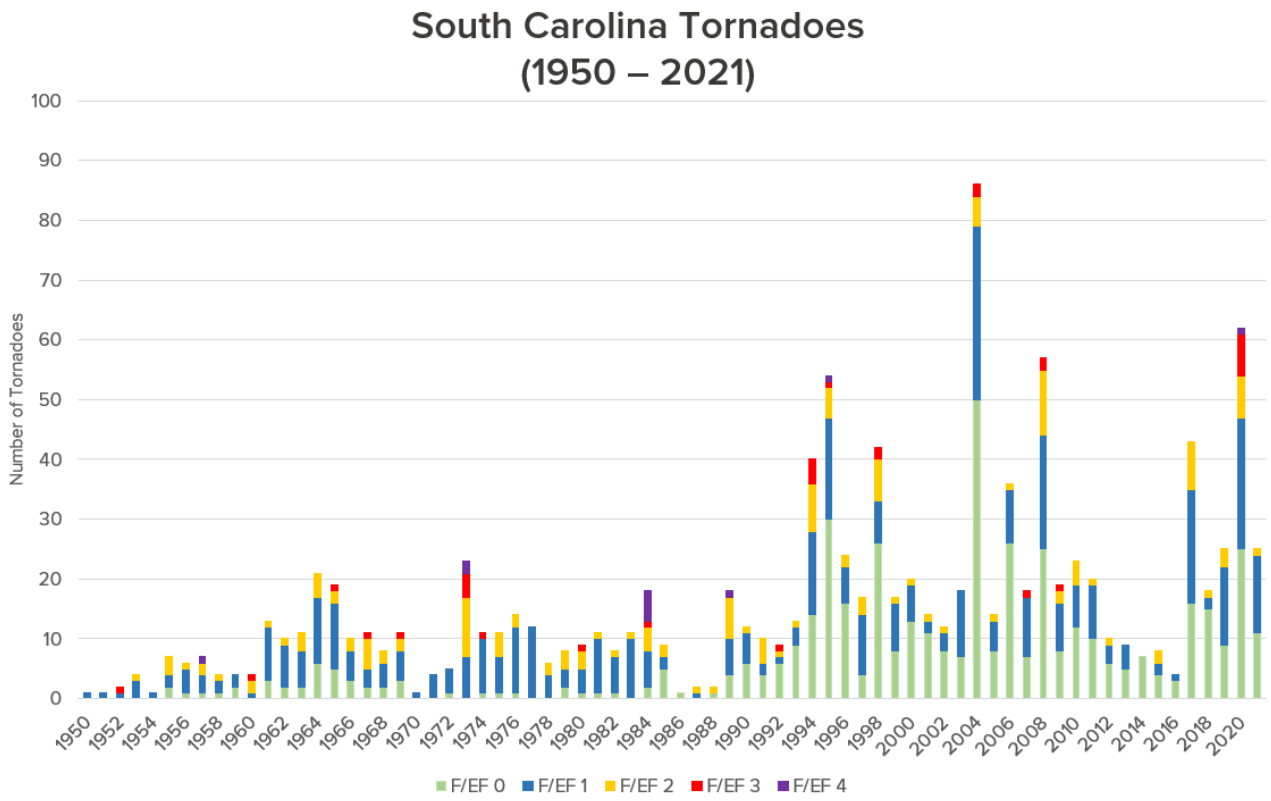
Since 1950, multiple accounts of straight-line winds of more than 80 mph have been recorded, caused by squall lines that pushed through the state.

TORNADOES

Since 1950, more than a thousand tornadoes have been reported in the state, with a primary peak in activity during the spring from supercell thunderstorms and squall lines and a secondary peak in August and September due to increased tropical cyclone activity. Every South Carolina county has reported at least one tornado, with the most frequent touchdowns and track paths found in the Midlands and Pee Dee. Tornadoes have been recorded at all hours during the day, including the particular dangerous hours of the late evening and early morning when citizens are asleep and unable to hear warnings or are unaware of the threat.

Preliminary counts of tornadoes impacting (touchdown or track passing through the county) for each South Carolina county from 1950 to 2021. Data on this map is subject to change.





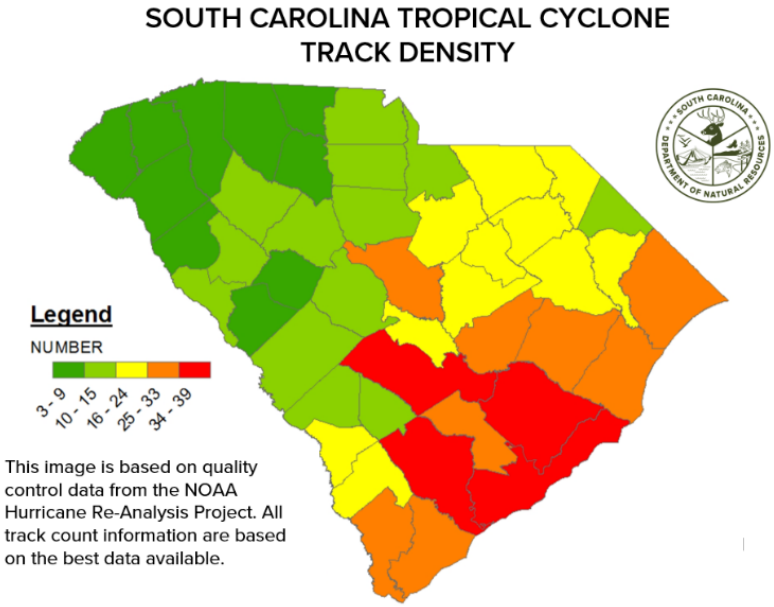
Most of South Carolina's tornadoes are short-lived EF-0 and EF-1 tornadoes, the lowest strengths on the Enhanced Fujita Scale, with winds between 65 and 110 miles per hour (graph above). Stronger, more destructive tornadoes (EF-2 or greater) occur in the state, and there are eleven EF-4 tornadoes on record; the most recent touchdown occurred in Hampton County in April 2020. Tornado outbreaks have happened during severe weather outbreaks, with some of the more impactful outbreaks occurring in November 1995, March 2008, and April 2020. The dramatic increase in the number of reported tornadoes after 1994 is primarily attributed to the NEXRAD Doppler Radar and the invention of social media and additional reporting practices.

TROPICAL CYCLONES

Understanding hurricanes and tropical storms are an essential piece of South Carolina's climatology, especially when considering the growth of coastal communities. However, impacts from these systems are not limited to those living along the coast. Inland portions of the state have also been affected by heavy rain, flooding, high winds, and tornadoes. From 1851 to 2021, 44 tropical cyclones have made direct landfall along the South Carolina coastline. Of these, only four made landfall as major (Category 3 or higher) hurricanes; the October 1893 Hurricane, Hurricane Hazel (1954), Hurricane Gracie (1959), and Hurricane Hugo (1989). There is no record of a Category 5 hurricane making landfall in South Carolina.

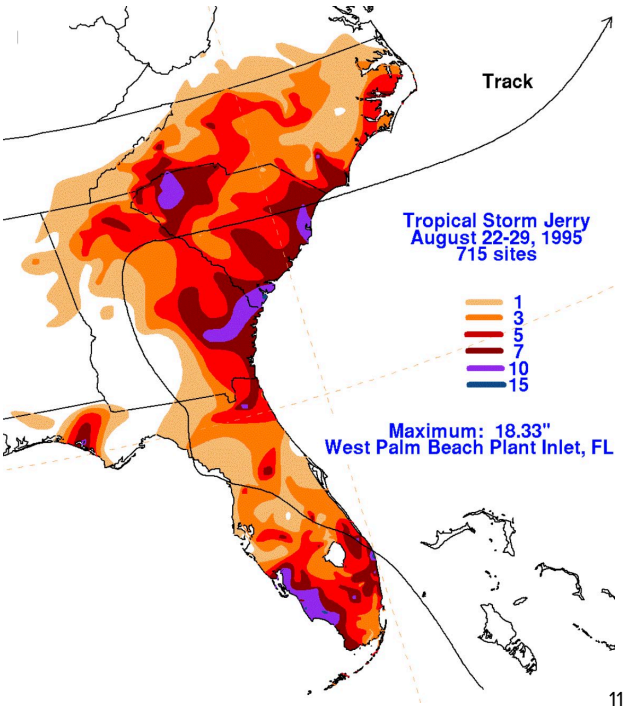
Major Hurricane (Cat 3+) South Carolina Landfalls since 1950

Hurricane	Month/Year	Max Wind Speed	Max Storm Surge	Lowest Pressure
Hugo	September 1989	138 mph	20.2 ft.	934 mb
Gracie	September 1959	132 mph	10 ft.	951 mb
Hazel	October 1954	132 mph	16.9 ft.	938 mb



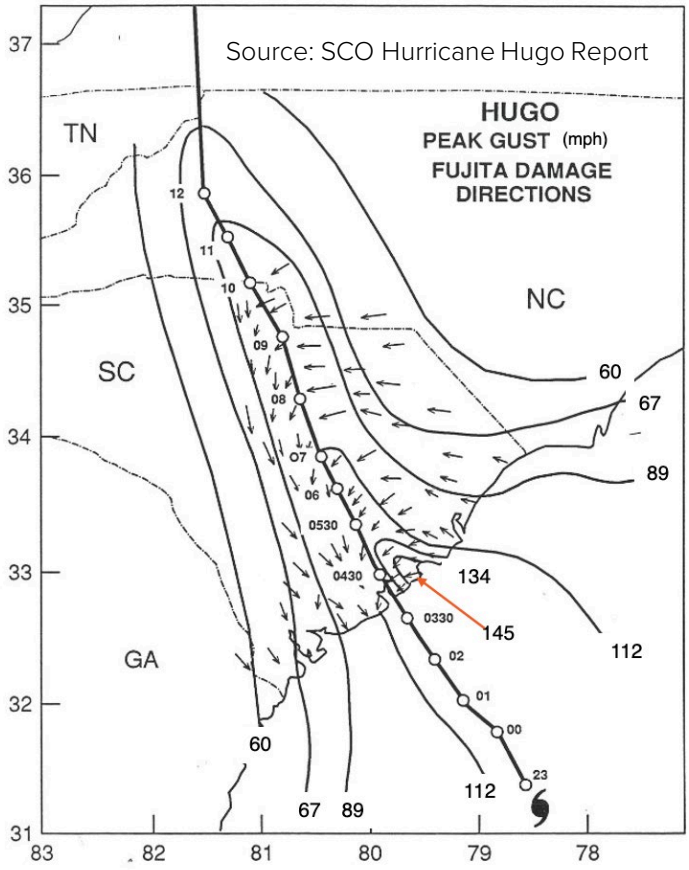
It does not take a direct landfall along the South Carolina coast for a tropical cyclone to impact the state. Tropical cyclones making landfall along the Florida Panhandle and eastern Gulf Coast often track through the South Carolina Midlands and Upstate (map left). With an average size of approximately 300 miles in diameter, tropical cyclones can have far-reaching impacts in the form of high winds, heavy rains, tornadoes, and coastal surges.

A slow-moving Tropical Storm Florence (2018) dropped more than 30 inches of rain across portions of eastern North Carolina and over 20 inches of rain in Chesterfield and Horry counties, causing extensive flooding within the Pee Dee watershed that lasted for weeks. In 1995, Tropical Storm Jerry made landfall along the Florida coast before slowly moving into the Upstate (map right). Torrential rains dumped up to 15 inches, leading to multiple dam breaks and extensive flooding along the Saluda, Board, Congaree, and Edisto rivers.



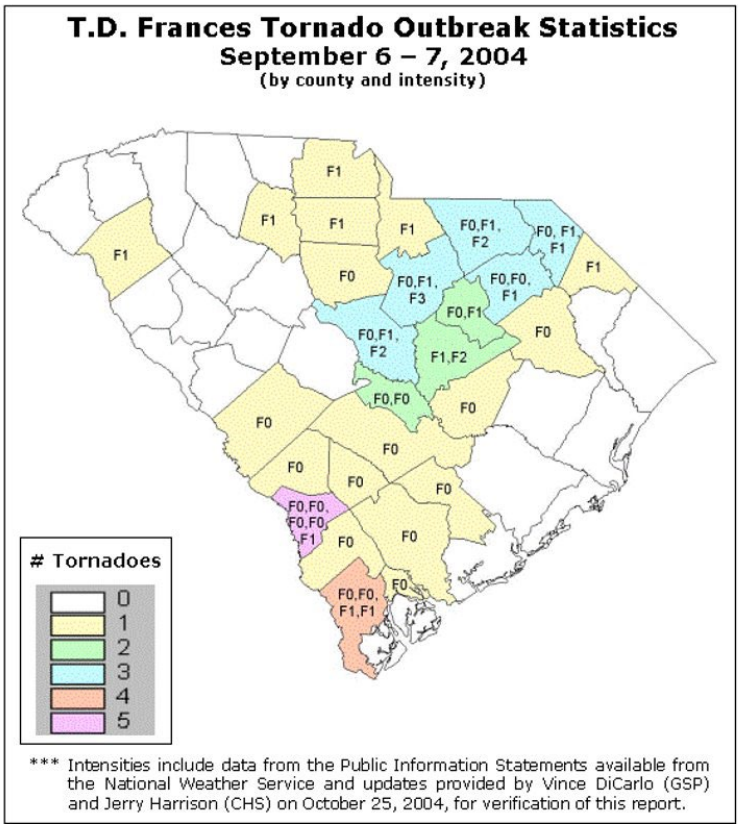
TROPICAL CYCLONES

Tropical cyclones are known for damaging wind and are categorized on the Saffir-Simpson scale based on the maximum sustained winds, not the maximum wind gusts. The size of a tropical cyclone wind field can expand out hundreds of miles from the storm's center, with the concentration of strongest winds generally located in the eyewall. Winds can stay at hurricane strength well inland of the coast. Hurricane Hugo (1989) moved through the state with hurricane-force winds (74 mph or higher), and Shaw Air Force Base, located 80 miles from the coast, recorded a wind gust of 109 mph (table below).



List of select Hurricane Hugo Maximum Wind Gusts

Location	Hurricane Hugo Max Wind Speeds
Sumter AFB	109 mph
Downtown Charleston	108 mph
Charleston	98 mph
Charlotte, NC	87 mph
Hickory, NC	81 mph
Myrtle Beach	76 mph
Columbia, SC	70 mph



Tornadoes produced by tropical cyclones form in the outer rainbands, which can be hundreds of miles away from the storm's center. One of the largest tornado outbreaks recorded in South Carolina was caused by Hurricane Frances (2004), which made landfall along the east coast of Florida. Forty-seven tornadoes were reported in South Carolina, and while most of the tornadoes are on the lower end of the Enhanced Fujita Scale, one was an F3 (winds between 158 – 206 mph) in Kershaw County that destroyed buildings and mobile homes near the city of Camden.

List of Tropical Cyclones Producing Tornadoes

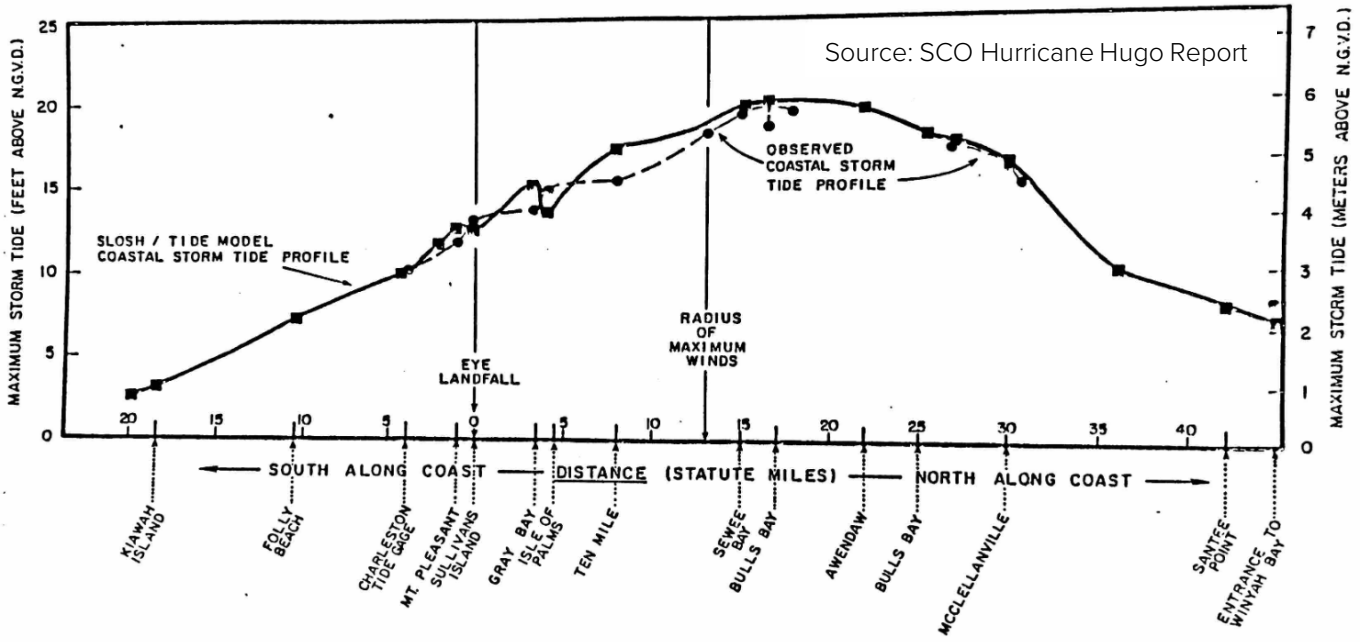
Month/Year	Tropical Cyclone Storm Name	Number of Tornadoes
Sep 2004	Frances	47
Aug 1994	Beryl	23
Sep 2004	Jeanne	17
Jun 2001	Allison	10
Aug 2021	Fred	10
Aug 2008	Fay	8

TROPICAL CYCLONES

Storm surge is the rise of water generated by a storm over and above predicted astronomical tides. In contrast, storm tide is a water level rise due to the combination of storm surge and the astronomical tide. This rise in water level can cause extreme flooding in coastal areas, particularly when storm surge coincides with normal high tide. Inundation is the extent of the water above the ground. Multiple factors contribute to the maximum potential storm surge, including storm intensity, forward speed, wind field size, angle of approach, and shape and characteristics of the coastline.

One of the highest storm tides on record along the South Carolina Coast occurred during Hurricane Hugo (1989). From Sewee Bay to McClellanville (below), the storm tide exceeded 20 feet, sweeping away anything in its push inland. The storm surge went 10 miles inland up the Cooper, Ashley, and Santee Rivers, destroyed piers and oceanfront property, and caused significant beach erosion in Georgetown and Horry counties.

Cross-section of the South Carolina Coast
Hurricane Hugo Maximum Storm Tide Values from Kiawah Island (left) to Winyah Bay (right)



Even storms that do not make direct landfall along the South Carolina coast can produce storm surges, rip currents, and beach erosion. Although Hurricane Irma (2017) made landfall in southwest Florida, it had maximum inundation levels of 3 to 5 feet above ground level along the Georgia and South Carolina coast, which ranked third in the all-time historic crest record at Charleston Harbor (table right). Five of the top highest crests at the gauge have occurred since 2015.

Top Ten Historic Crests at Charleston Harbor

Date	Crest (feet)	Cause
Sep 22, 1989	12.52	Hurricane Hugo
Aug 11, 1940	10.23	Unnamed Hurricane
Sep 11, 2017	9.92	Hurricane Irma
Oct 8, 2016	9.29	Hurricane Matthew
Jan 1, 1987	8.81	Coastal Storm/High Tides
Nov 24, 2018	8.76	King Tides
Oct 27, 2015	8.69	King Tides
Sep 4, 1979	8.64	Hurricane David
May 28, 1934	8.64	Unknown
Nov 7, 2021	8.51	King Tides

The South Carolina State Climatology Office (SCO) has compiled various databases and statistics on the climate and weather of South Carolina at the state, regional and local level.

Please visit the following SCO's resources:

South Carolina County Atlas of Climate and Extremes:
https://www.dnr.sc.gov/climate/sco/ClimateData/cli_county_statistics.php

Extreme Events Timeline: http://www.dnr.sc.gov/climate/sco/wxtimeline

South Carolina Hurricane and Tropical Storm Database:
https://www.dnr.sc.gov/climate/sco/hurricanes/

South Carolina Winter Weather Database: https://www.dnr.sc.gov/scwinterweather

South Carolina Drought: http://www.scdrought.com/

List of resources used in the creation of this document:

- https://www.ncdc.noaa.gov/cag/statewide/time-series
- https://mrcc.purdue.edu/gismaps/heatindex.htm
- https://www.weather.gov/jetstream/tstorms_intro
- https://interactive-lightning-map.vaisala.com
- https://www.ncdc.noaa.gov/cag/county/time-series
- https://www.ncdc.noaa.gov/IPS/sd/sd.html
- https://www.drought.gov/states/south-carolina

If you have any additional questions regarding the information provided above, please contact Dr. Hope Mizzell or Ms. Melissa Griffin at the SCO.

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