



# 2020 South Carolina Year in Review

South Carolina State Climatology Office



Detailed information from the [Weekly Weather and Climate Reports](#) from the South Carolina State Climatology Office was used to compile this comprehensive report.



# Impactful Weather Events in 2020

## Confirmed Tornadoes

2020 was the second most active year for tornadoes across the Palmetto State, sixty-two in total, including two tornadoes that occurred in September\* rated as 'Unknown' due to their locations. The most active year for tornadoes was 2004 (86), and 2020 proceeds 2008 (57), and 1995 (54).

Enhanced Fujita (EF) Rating	EF0 (65 – 85 mph)	EF1 (86 – 110 mph)	EF2 (111 – 135 mph)	EF3 (136 – 165 mph)	EF4 (166 – 200 mph)	Total
January	5	1	2			8
February		2				2
March						
April	5	12	5	7	1	30
May		3	1			4
June	1					1
July						
August	1					1
September*	10	1				13*
October	1	2				3
November						
December		1				1
Total	23	22	7	7	1	62

## Mild Maximum Temperatures

Overall, it was the fifth warmest year on record for the state, mainly due to the extremely warm minimum temperatures observed in 2020. The temperatures at many locations across the state during the warmest part of the calendar year seemed much milder compared to 2019. The statewide average maximum temperature from May to October was 84.3°F, and unlike 2019, many stations reported between 30 and 40 fewer days with high temperatures at or above 90°F.

Number of Days TMAX >= 90°F

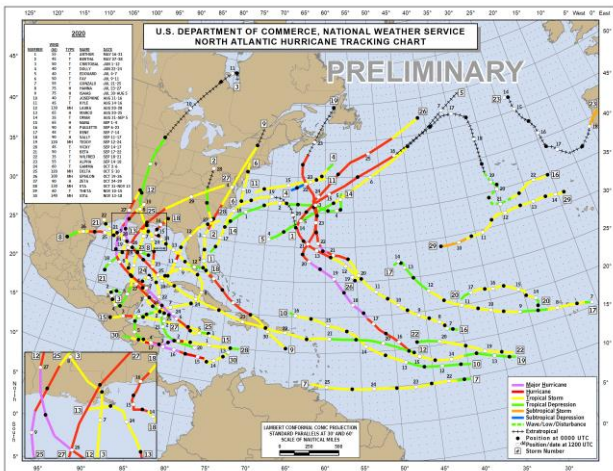
	Charleston		Columbia		Florence		Greenville	
	2019	2020	2019	2020	2019	2020	2019	2020
May	12	15	16	3	14	3	8	0
June	13	11	17	15	18	16	8	9
July	21	27	26	26	28	26	20	25
August	18	21	22	16	23	13	18	16
September	15	8	23	6	21	6	23	5
October	3	0	4	0	3	0	4	0
	82	72	108	66	107	64	81	55
Avg. Max (°F)	88.1	86.0	89.8	85.7	89.1	85.3	86.2	82.5
Avg. Temp (°F)	78.9	77.3	78.6	76.0	78.3	76.0	75.7	72.3
Avg. Min (°F)	69.6	68.7	67.5	66.3	67.4	66.7	65.2	62.0

## 2020 Hurricane Season

The 2020 Hurricane Season broke multiple records and battered locations across the Gulf of Mexico and Southeast. Throughout the season, eight tropical cyclones impacted the Palmetto State. These storms caused minor beach erosion, coastal flooding, heavy rain, and tornadoes.

### 2020 Hurricane Season Quick Facts

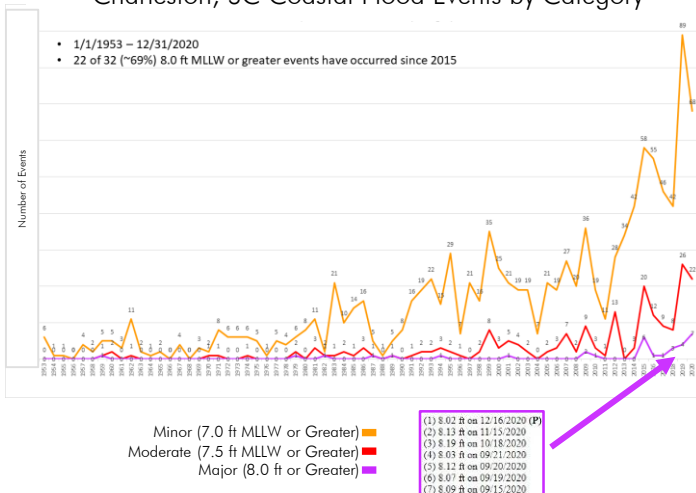
- Thirty named storms (most on record since 1851) broke the previous record of 28 named storms in 2005.
- Thirty-one tropical systems; TD 10 was the only unnamed system.
- Twelve storms made landfall in the U.S.; the previous record was nine in 1916.



## Coastal Flooding

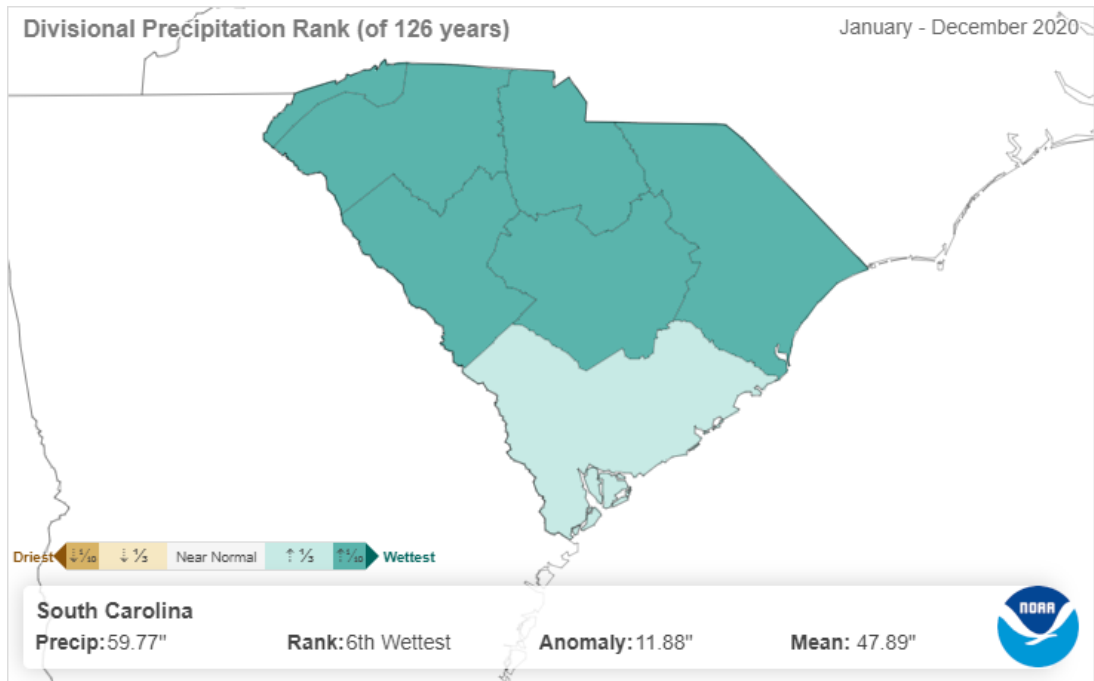
During 2020, the Charleston Harbor tidal gauge reported 68 coastal flooding events (tides reported more than 7.0 ft). This number surpassed the 58 events in 2015, making 2020 the second-highest number of coastal flooding events, behind 2019 (89). More than half of these events occurred in September and October, with four major flood events (tides more than 8.0ft.) in September alone.

### Charleston, SC Coastal Flood Events by Category





# Statewide Precipitation Data 2020



## 2020 Statewide Precipitation Totals, Departures and Rankings

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	4.12"	7.18"	4.26"	5.14"	6.64"	4.27"	4.69"	6.95"	6.63"	2.71"	4.41"	2.77"
Depart	0.29"	3.28"	-0.02"	1.80"	3.06"	-0.43"	-0.85"	1.67"	2.39"	-0.28"	1.80"	-0.84"
Rank	--	5 <sup>th</sup>	--	18 <sup>th</sup>	4 <sup>th</sup>	--	--	27 <sup>th</sup>	13 <sup>th</sup>	--	17 <sup>th</sup>	--
				Record Driest	Top 10 Driest	Top 40 Driest	Normal	Top 40 Wettest	Top 10 Wettest	Record Wettest		
				Drier than Normal				Wetter than Normal				

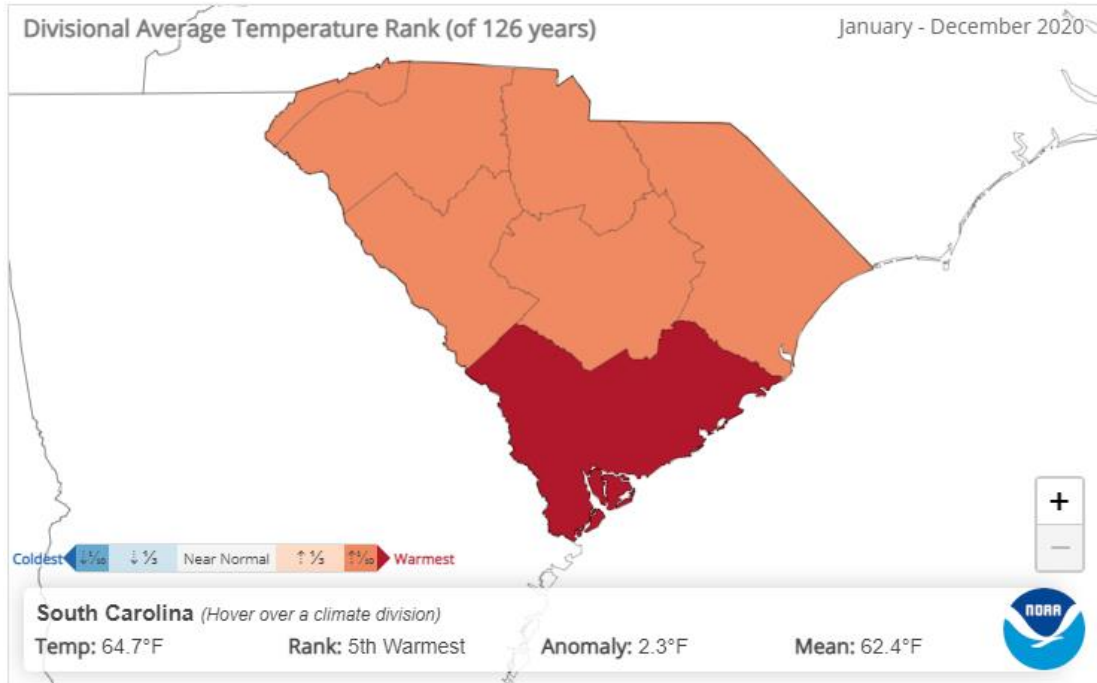
The statewide precipitation total for 2020 was 59.77", which was 11.88" above normal, making it the sixth wettest year on record (since 1895) for South Carolina. The year was the wettest on record at Greenville-Spartanburg Airport (73.70"), and for many other locations, their annual totals ranked in the top five wettest years.

The stations at Caesars Head and Jocassee recorded over 100" of rain. Jocassee, which set a new annual statewide precipitation record in 2018 (123.45 inches), was only three inches shy of breaking that record in 2020.

The above-normal precipitation across the Carolinas in February and May caused flooding along portions of the Santee and Pee Dee river basins.



# Statewide Temperature Data 2020



2020 Statewide Average Temperatures, Departures and Rankings

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	50.3°F	50.9°F	60.5°F	62.3°F	68.2°F	76.3°F	82.0°F	80.1°F	73.3°F	67.4°F	59.3°F	45.9°F
Depart	5.7°F	4.1°F	6.6°F	0.4°F	-2.1°F	-0.7°F	2.1°F	1.4°F	-0.4°F	4.2°F	6.2°F	0.3°F
Rank	14 <sup>th</sup>	18 <sup>th</sup>	7 <sup>th</sup>	--	22 <sup>nd</sup>	36 <sup>th</sup>	13 <sup>th</sup>	24 <sup>th</sup>	--	7 <sup>th</sup>	2 <sup>nd</sup>	--
			Record Coldest	Top 10 Coldest	Top 40 Coldest	Normal	Top 40 Warmest	Top 10 Warmest	Record Warmest			
			Cooler than Normal				Warmer than Normal					

The statewide average temperature for 2020 was 64.7°F, which was 2.3°F above average, making it the fifth warmest year on record (since 1895) for South Carolina. 2020 was the third-warmest year on record for Charleston, tying 2016, with an annual average temperature of 68.1°F, 2.4°F above the long-term average.

While increased precipitation and cloud cover contributed to the cooler than normal May, the driving force behind the warmer than average year was due to the record-breaking high minimum temperatures. From May to October, the statewide minimum temperature average was 64.7°F, 2.2°F above normal. Overall, the annual minimum temperature average of 54.3°F for 2020 is the warmest on record, 3.5°F above the long-term mean.

# January 2020

Credit NWS



Credit NWS

High temperatures at the beginning of the month were well above normal, with some stations recording maximum temperatures in the mid- to upper-70s, contributing to the fourteenth warmest January on record for the state. On January 11, a strong squall-line produced severe weather across the state, including an EF2 tornado, with maximum wind speeds of 130 mph, which caused considerable damage to North-Central High School in Kershaw County and an EF1 damaged cars at Loris High School in Horry County on January 13. At the end of the month, wintry precipitation fell across portions of the Piedmont and Upstate. Up to 1.50 inches of snow were observed in the northern parts of Oconee, Greenville, and Spartanburg counties.

## February 2020

February 2020 was the fifth wettest February on record, with a statewide precipitation total of 7.17 inches. Some locations across the state recorded one of their wettest winters on record, including Columbia, Florence, and Greenville. Due to the above-normal precipitation across the Pee Dee and Santee river basins, low-lying areas reported flooding. Lake Wateree rose to 105 feet, five feet above the lake's full pool level of 100 ft. and stayed high for nearly two weeks in the middle of the month. The water rose high enough to enter into multiple houses on the lakeshore, but the flooding was not widespread across the region.

Top Five Wettest Winters (DJF)  
(Total Precipitation)

Charleston (1937-2020)	Columbia (1887-2020)	Florence (1948-2020)	Greenville (1884-2020)	
22.94" (1997-1998)	20.63" (2019-2020)	21.95" (1994-1995)	23.71" (2018-2019)	
19.13" (2009-2010)	17.54" (1997-1998)	16.30" (2019-2020)	23.63" (2019-2020)	
17.32" (1941-1942)	17.48" (1924-1925)	16.20" (1997-1998)	23.12" (1931-1932)	
16.96" (1986-1987)	17.31" (1973-1974)	15.81" (1974-1975)	22.31"* (1902-1903)	
16.03" (1963-1964)	17.02" (1994-1995)	15.67" (1973-1974)	21.89" (1901-1902)	
2019 – 2020 Season Total:	13.06" (13 <sup>th</sup> wettest)	20.63"	16.30"	23.63"

\*- missing more than 5 days



# March 2020

March 2020 was the seventh warmest March on record, with a statewide average temperature of 60.5°F, nearly seven degrees above the long-term average. There were 43 maximum temperature records tied or broken during the month. The station at Caesars Head recorded a high of 80°F on the 28th, the fourth earliest occurrence on record. The Florence Regional Airport recorded a high of 90°F on the 28th, the third earliest date of record at the location. On the 29th, the morning low in Spartanburg was 68°F, which was 29°F above the average minimum temperature of 41°F, and the same low temperature was observed in downtown Charleston.

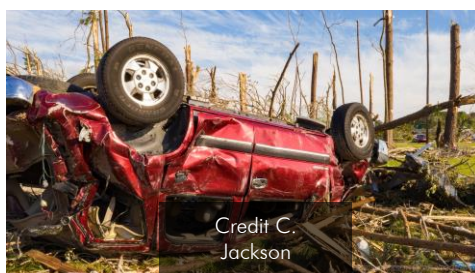
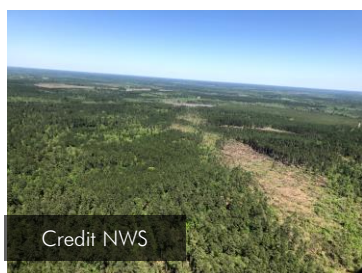
CLIMATE DIVISION	VALUE	RANK 126 YEARS	ANOMALY	1901-2000 MEAN
South Carolina, Climate Division 1	55.6°F	119	6.1°F	49.5°F
South Carolina, Climate Division 2	57.6°F	121	6.4°F	51.2°F
South Carolina, Climate Division 3	58.4°F	121	6.5°F	51.9°F
South Carolina, Climate Division 4	60.2°F	118	6.0°F	54.2°F
South Carolina, Climate Division 5	60.6°F	120	7.1°F	53.5°F
South Carolina, Climate Division 6	61.4°F	121	6.7°F	54.7°F
South Carolina, Climate Division 7	63.5°F	122	7.2°F	56.3°F

## April 2020

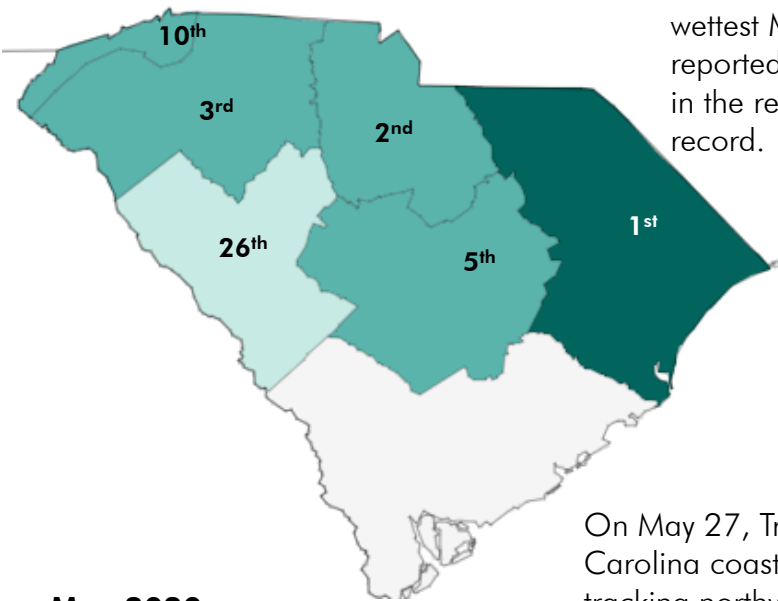
The clash of cold, dry air over the Central U.S. with warm, moist air over the Southeast U.S. provided the set-up for a significant tornado outbreak from April 12-13, 2020. The system developed early Saturday (4/11), and on Easter Sunday (4/12), the storm system spawned tornadoes across six states, including two powerful EF4s in Mississippi. The severe weather continued overnight and into early Monday (4/13) morning, where it impacted the entire state of South Carolina. There were twenty-eight (28) confirmed tornadoes from the outbreak, including the first EF4 in the state since November 1995. This total accounted for more than half of the total number of tornadoes in 2020. More details are available via our [Event Report](#).

### Overview of April 13<sup>th</sup> Outbreak

- Most significant (EF2+) tornadoes reported in a single day: 12
- Most EF3 tornadoes reported in a single day: 7
- All the EF3 tornadoes occurred between 3 – 7 AM EDT.
- Second Deadliest (9 fatalities) Outbreak on record since 1950
- First EF4 in the state since November 1995
- First EF4 on record (since 1950) in the Lowcountry
- First EF3 recorded since April 2009
- First EF3 in the Upstate since March 1994



Precipitation during May was above average across much of the state, making it statewide the fourth wettest May on record. Locations in the Pee Dee reported totals over ten inches, and for some stations in the region, May 2020 became the wettest May on record.



Station (County)	May 2020 Rainfall Total
Cades (Williamsburg)	14.00"
Manning (Clarendon)	12.53"
Sumter (Sumter)	10.04"
Marion (Marion)	12.07"
Mullins (Marion)	10.35"
Florence AP (Florence)	11.07"
Hartsville (Darlington)	10.92"
Catawba (York)	10.52"
Cheraw (Chesterfield)	11.08"

**May 2020 –  
Statewide Precipitation: 6.70"  
4<sup>th</sup> Wettest on Record**

On May 27, Tropical Storm Bertha formed off the South Carolina coast and made landfall near Bulls Bay before tracking northwest across the Pee Dee region. Bertha produced heavy rain on top of already saturated soils in the area, which contributed to additional flooding issues across portions of the Catawba and Pee Dee river basins.

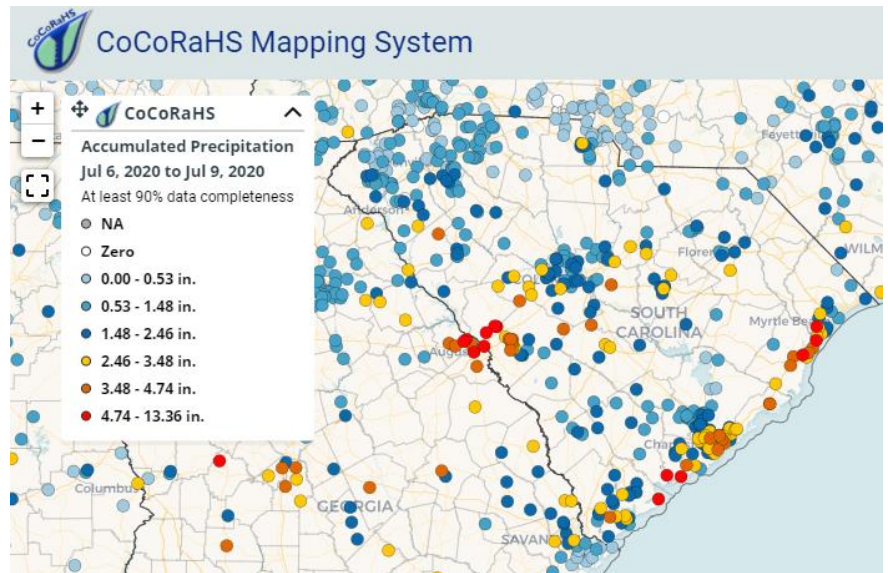
## June 2020

The weather pattern during June 2020 was relatively calm, punctuated by a few severe weather events as cold fronts moved across the region. Most storm reports for the month noted heavy rain, strong winds, up to 50 mph, and dime- to quarter-sized hail.

Station	Date	New Record Low Maximum Temp.	Previous Record
Greer	June 16	61	65 (1979)
Charleston Int. AP	June 16	72	73 (1961)
Newberry	June 17	62	69 (1927)
Saluda	June 17	64	65 (1965)
Chester 1 SE	June 17	62	71 (1999)
Batesburg	June 17	62	75 (1917)
Little Mountain	June 17	62	72 (1918)

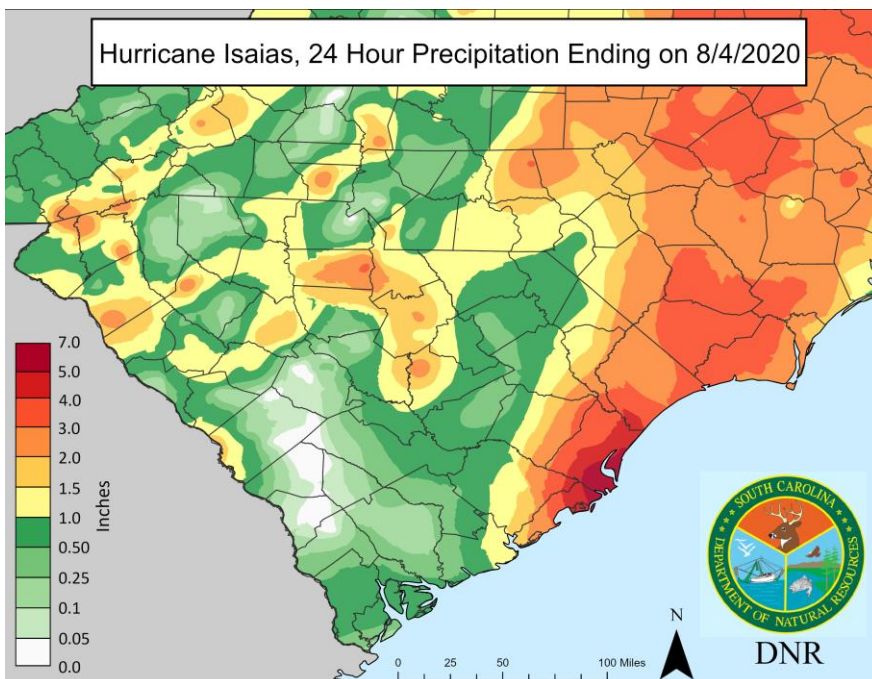
The main weather story for June was below average high temperatures around the middle of the month. Forty-three (43) record low maximum temperatures were either broken or tied on June 14 - 19. Over those six days, high temperatures only reached the low 60s at some locations, nearly fifteen degrees lower than normal for June.

A surface boundary stalled over the state at the beginning of the month, causing heavy rainfall along portions of the coast and the Central Savannah River Area. There were multiple reports from Georgetown and Horry counties of 48-hour rainfall totals ending on July 8 of over five inches from the event. A CoCoRaHS observer near Hunting Island State Park in Beaufort County recorded a 24-hour total of 9.95 inches and a two-day total of over twelve inches. A low-pressure that formed along the stalled front strengthened into Tropical Storm Fay off the North Carolina coast on July 10, causing minimal impacts to South Carolina.



The end of July and the beginning of August were the warmest parts of the year. During the two weeks, maximum temperatures climbed into the upper-90s, with a few locations reporting 100°F. Heat advisories were issued for heat index values between 105-110°F.

## August 2020



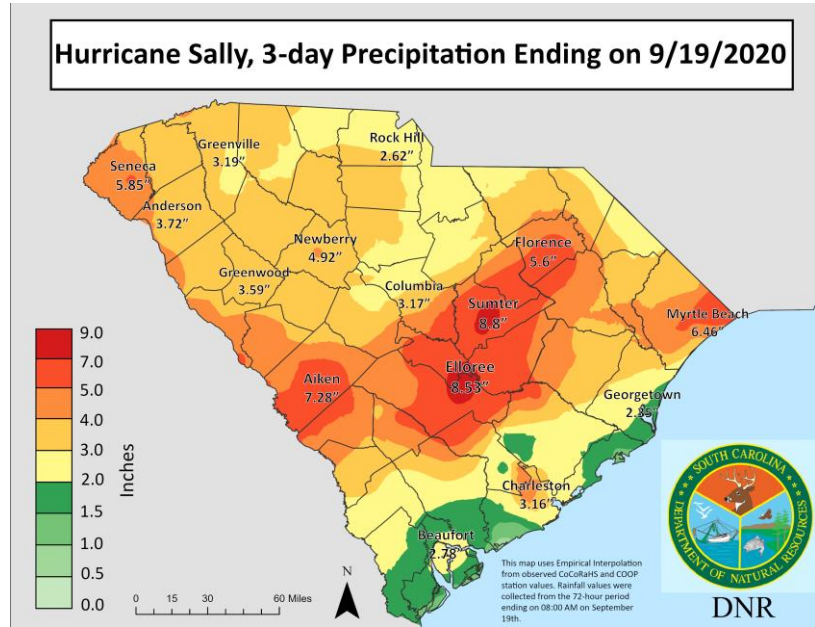
Hurricane Isaias made landfall near Ocean Isle Beach, North Carolina, on August 4. As the storm moved across eastern North Carolina, it produced widespread rain totals between three and six inches in South Carolina, which resulted in some local rivers rising to minor flood stage and coastal flooding in Horry County. The core of Hurricane Isaias' strongest winds remained offshore of the South Carolina coast. Hurricane Isaias spawned one weak tornado in Georgetown County.

More details are available via our [Event Report](#).



# September 2020

After Hurricane made along the Alabama coast on September 15, it moved across the Southeast. There were no significant gusts overland. However, Sally's remnants produced twelve tornadoes across the state, one in Dorchester County, two in Florence County, and nine in and around Lake Marion's northern extent. The strongest tornado spawned by the storm was an EF1, with estimated maximum winds of 105 mph, which snapped and uprooted trees and caused minimal structural damage to a few homes near Reevesville. Most of the heaviest rain from Tropical Storm Sally was located on the eastern side of the center of circulation. Portions of Orangeburg and Sumter counties recorded up to nine inches of rain, while the rest of the state reported at least two inches.



More details are available via our [Event Report](#).

## October 2020

Hurricane Delta made landfall near Creole, Louisiana, on October 9 and as the storm crossed the Southeast, intense storms moved into the area (October 10 – 11). Many communities in the Midlands reported downed trees and snapped limbs. An EF1 tornado, with maximum winds of 105 mph, crossed Interstate 95 in Dillon County, snapped trees, damaged a billboard and the roof of a nearby shed. Another EF1 touched down in Horry County, near Conway, damaging multiple structures.

### Tornado Damage from Hurricane Delta



At the end of the month, Hurricane Zeta made landfall near Cocodrie, Louisiana (October 28), and raced off to the northeast, producing severe weather and localized flash flooding in the Upstate and Midlands (October 29). Wind gusts of over 50 mph were observed in parts of the Upstate, including a gust of 59 mph recorded at the Anderson Airport and a gust of 54 mph observed at the Greenville-Spartanburg International Airport.

# November 2020

The state felt the impacts of another tropical cyclone as up to ten inches of rain fell in portions of the Pee Dee (November 11 – 14), resulting from Hurricane Eta, which made landfall in Florida on November 8 and moved north along the Southeast coast.

November 2020 was the second warmest November since 1895 statewide. There were close to 30 maximum temperature records tied or broken, and nearly 100 high minimum temperature records broken during the month. The extremely warm minimum temperatures caused the higher-than-normal average temperature.

Because of the warm overnight temperatures, there were 21 days of fog in the Midlands, with less than a quarter-mile of visibility on nine of those days.



# December 2020

December was the only month of the entire year that recorded normal temperatures and rainfall.

The first reports of wintry precipitation of the season were made on the 16th as freezing rain accumulated on tree limbs in the Upstate. Cold air funneled into the region, and widespread lows in the teens and 20s led to a hard freeze across the state.

A strong cold front moved through the state on Christmas Eve, causing damage from strong gusts and straight-line winds and producing an EF1 tornado in Clarendon County. Another blast of cold Arctic air, behind the front, made it one of the coldest Christmases in the state within the last ten years. There were reports of snow flurries near Seneca and even reports of flurries in Islandton and at the Charleston International Airport.

	December 24		December 25	
	High Temp(°F)	Low Temp (°F)	High Temp(°F)	Low Temp (°F)
Charleston	72	45	45	29
Columbia	65	40	39	26
Florence	68	46	46	29
Greer	56	34	34	21

