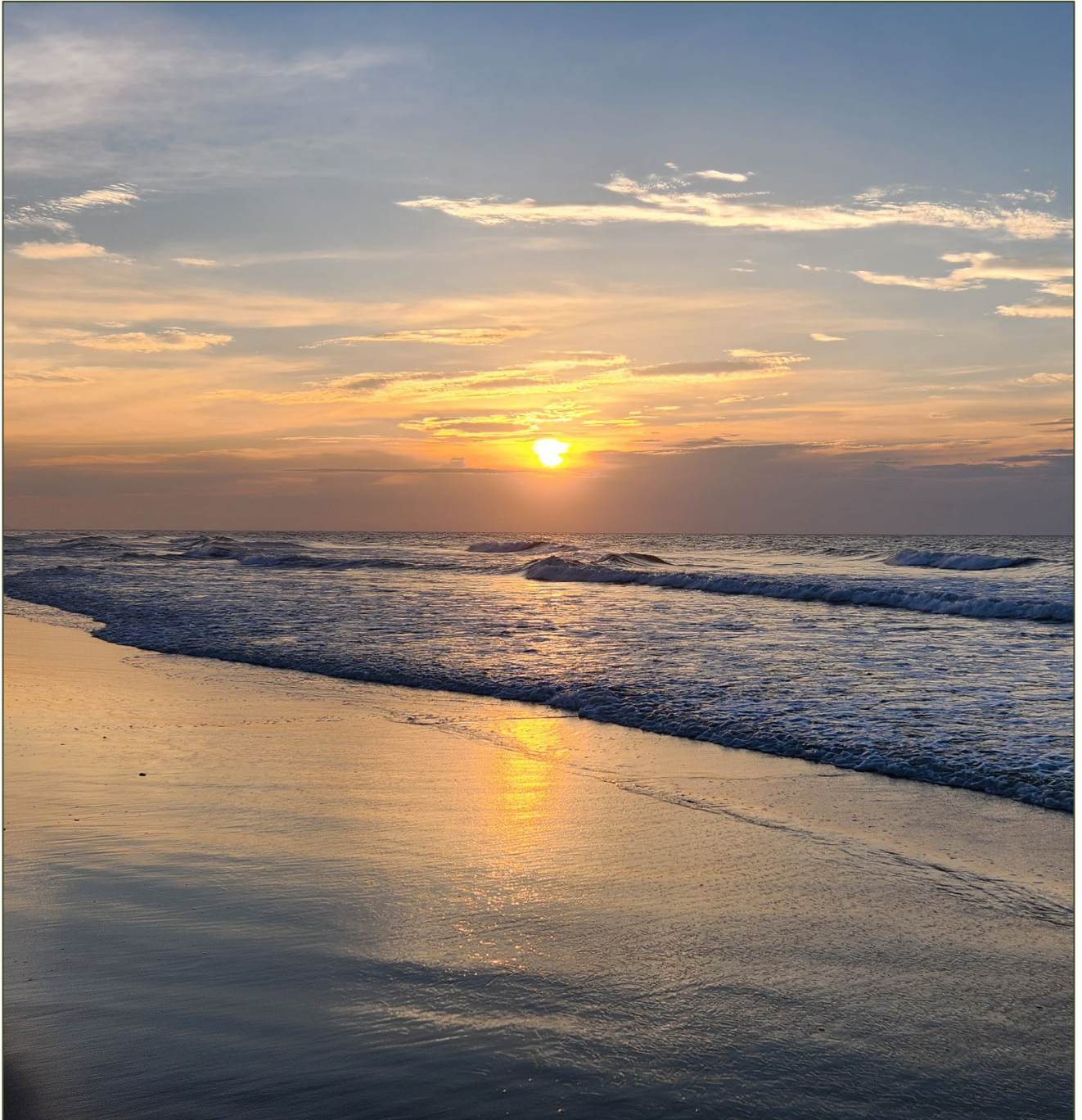




2023 South Carolina Year in Review

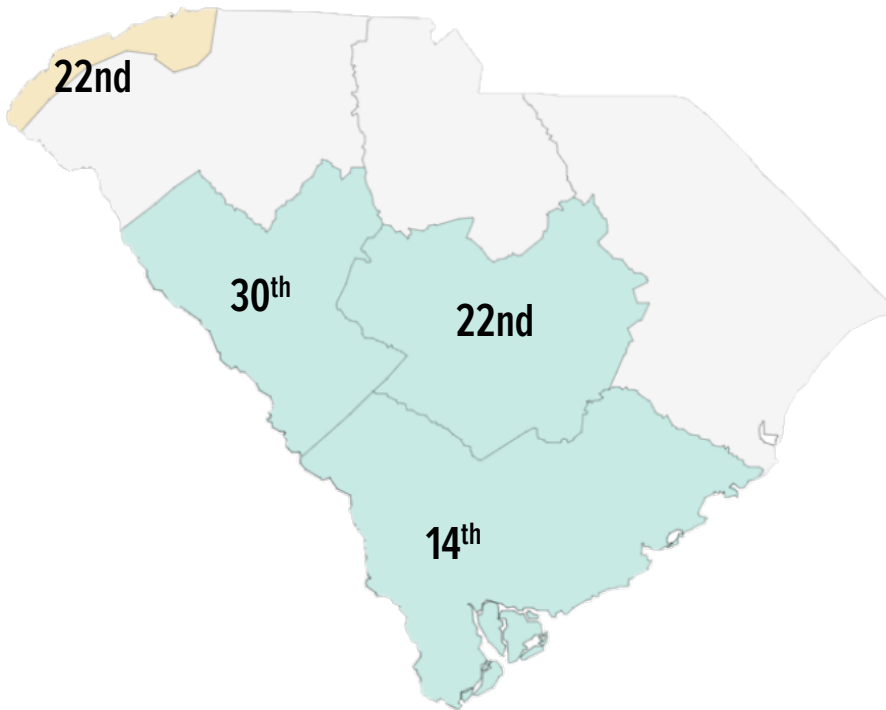
South Carolina State Climatology Office



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

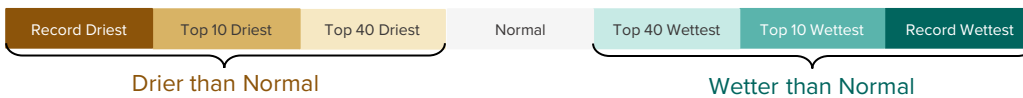


Statewide Precipitation Data 2023



2023 Statewide Precipitation Totals, Departures and Rankings

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	5.77"	3.85"	3.08"	5.11"	3.50"	5.94"	4.92"	6.96"	2.74"	1.90"	2.20"	5.52"
Depart	1.94"	-0.05"	-1.20"	1.77"	-0.08"	1.26"	-0.62"	1.68"	-1.50"	-1.09"	-0.41"	1.91"
Rank	17 th	--	38 th	19 th	--	31 st	--	27 th	34 th	--	--	18 th

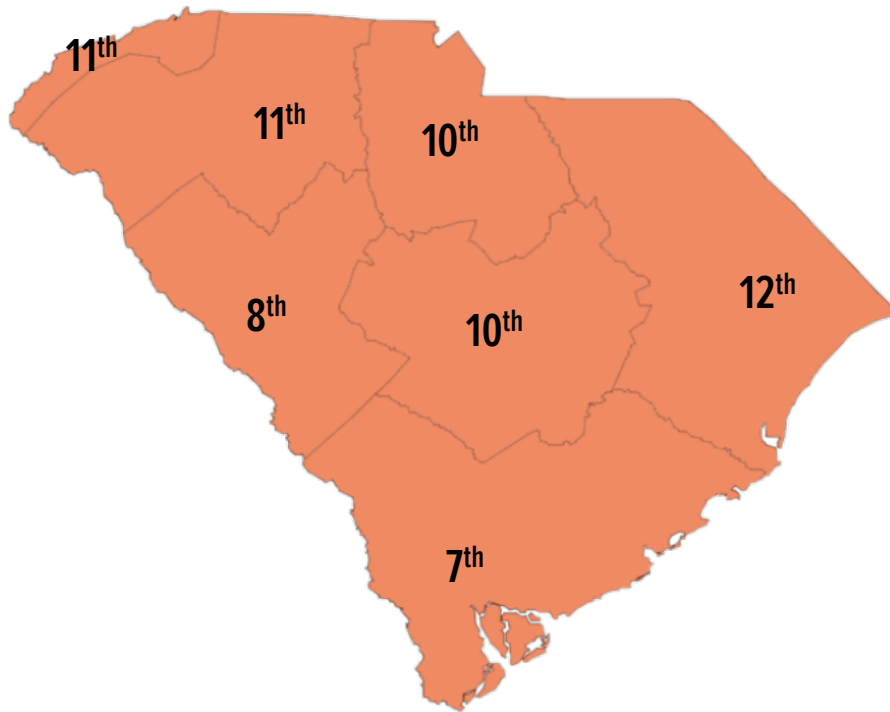


The statewide precipitation total for 2023 was 51.49 inches, 3.60 inches above the long-term average of 47.89 inches (1895 – 2023), and the thirty-fifth wettest year on record; however, precipitation totals varied across the state. The average annual precipitation totals of three of the seven state’s climate divisions ranked in the top thirty wettest years on record, and only one, the South Carolina Mountains, ranked as the 22nd driest year. Five months out of the year reported statewide averages that were wetter than normal, and two months were drier than normal.

Above-normal precipitation was reported mainly in the Lowcountry, Midlands, and Pee Dee, while below-normal rainfall was observed in the Upstate. The National Weather Service (NWS) station near York, SC, recorded 37.74 inches for the year, 6.37 inches below the 1991-2020 normal value, and the NWS station Bamberg reported 83.46 inches, 34.28 inches above normal. Two of the highest 24-hour rainfall totals recorded during the year were 13.55 inches, measured at the NWS station near Holly Hilly in Orangeburg County on August 31 (associated with Tropical Storm Idalia), and 14.72 inches measured by the NOAA Climate Reference Network station in McClellanville, produced by a coastal storm on December 17.



Statewide Temperature Data 2023



2023 Statewide Average Temperatures, Departures and Rankings

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	50.5°F	56.3°F	57.1°F	63.4°F	67.3°F	74.2°F	81.3°F	80.6°F	73.4°F	63.8°F	54.2°F	49.6°F
Depart	5.9°F	9.5°F	3.3°F	1.5°F	-3.0°F	-2.8°F	1.4°F	1.9°F	-0.3°F	0.6°F	1.1°F	4.0°F
Rank	13 th	2 nd	26 th	36 th	7 th	9 th	29 th	15 th	--	--	--	25 th
	Record Coldest		Top 10 Coldest		Top 40 Coldest		Normal	Top 40 Warmest		Top 10 Warmest		Record Warmest
	Colder than Normal						Warmer than Normal					

The statewide average temperature for 2023 was 64.3°F, which was 1.9°F above average, making it the ninth warmest year on record (since 1895) for South Carolina. All seven of the climate divisions reported one of the top ten warmest years on record.

The National Weather Service (NWS) station at the Greenville-Spartanburg Airport (GSP) reported 38 days with low temperatures at or below freezing (32°F) in 2023. Charleston (CHS) recorded 6 days at or below freezing, while Florence (FLO) had 25 days, and there were 29 days at Columbia (CAE). The coldest temperature recorded in 2023 was 17°F on November 29 at the NWS station near Union in Union County, November 30 at the station near Chesnee in Spartanburg County, and December 20 at Caesars Head in Greenville County and near Jocassee in Oconee County.

During the warm season (May to October), CAE, CHS, and FLO CHS recorded over 60 days with high temperatures at or above 90°F. The first 90°F day at CAE, CHS, and FLO was May 9. However, it was July 1 before GSP hit 90°F. The hottest temperature recorded during the year was 102°F on August 27 at the NWS station near Barnwell in Barnwell County and the NWS station in McCormick in Edgefield County.



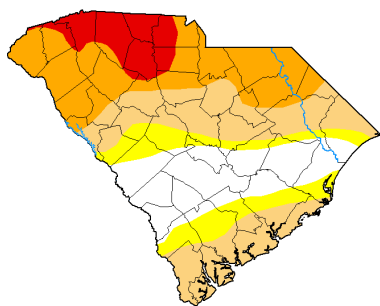
Impactful Weather Events in 2023

Drought Conditions

The statewide average precipitation for Fall was 6.84 inches, 3.01 inches below the long-term average of 9.85 inches, the 30th driest fall on record. The driest areas were in the northern Upstate, where Oconee, Pickens, Anderson, Greenville, Spartanburg, and Cherokee counties had their third or fourth driest fall on record since 1895.

U.S. Drought Monitor South Carolina

November 21, 2023
(Released Wednesday, Nov. 22, 2023)
Valid 7 a.m. EST



Intensity:
 None
 D0 Abnormally Dry
 D1 Moderate Drought
 D2 Severe Drought
 D3 Extreme Drought
 D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <http://droughtmonitor.unl.edu/About.aspx>

Author:
 Brad Rippey
 U.S. Department of Agriculture
 USDA, NRCS, SCDNR, SCS, SCDHEC, SCDOT, SCDHEC, SCDHEC, SCDHEC
droughtmonitor.unl.edu

Lack of Winter Precipitation

Despite a few cold air outbreaks, winter 2022 – 2023 was marked by above-normal average temperatures. Another notable statistic for the season was the lack of snowfall. Multiple stations only recorded a trace of snowfall for the entire season.

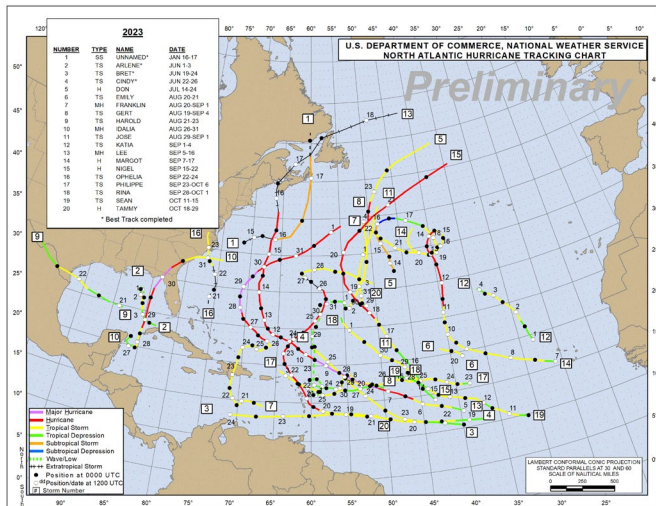
Even if the Lowcountry, Midlands, and Pee Dee miss out on winter weather events, the Upstate, especially the mountain locations, typically has two to three winter storms with measurable snow ($\geq 0.1''$) or ice accumulations.

Least Snow Recorded in South Carolina (1894 – 2023)

Season	Snowfall Totals (Nov 1 – Apr 30)	Location
1908 – 1909	Trace	Multiple Stations
2022 – 2023	Trace	Multiple Stations
1902 – 1903	0.2"	Newberry
1949 – 1950	0.4"	Pelzer
1956 – 1957	0.9"	Caesars Head
2011 – 2012	1.0"	Caesars Head

2023 Hurricane Season

The 2023 Atlantic Hurricane Season had twenty named storms, seven hurricanes, and three major hurricanes, the fourth season with the most named storms since 1950. There was one US hurricane landfall (Idalia in Florida) and two landfalling tropical storms (Harold in Texas and Ophelia in North Carolina). Hurricane Idalia was a Category 3 hurricane when it made landfall in Florida. It produced five tornadoes, strong wind gusts, heavy rain, and coastal flooding in South Carolina.



Coastal Flooding

In 2023, the tidal gauge at the Charleston Harbor reported 75 coastal flooding events (tides reported more than 7.0 ft), the second most events on record (1922-2023). There were eleven events recorded in March 2023, and thirteen in September and October 2023. The Charleston Harbor tidal gauge recorded tides at or above 8 feet mean low lower water (MLLW) six times during 2023, including a crest of 9.86 ft MLLW on December 17, due to the passage of an intense low-pressure system, which is the fourth-highest crest on record at the gauge.

Top 10 Total Event Counts (Years)

- 89 (2019)
- 75 (2023)**
- 70 (2022)
- 68 (2020)
- 58 (2015)
- 55 (2016)
- 46 (2017, 2021)
- 42 (2014, 2018)
- 36 (2009)

Recent Crests

- 9.86 ft on 12/17/2023 (P)**
- 8.06 ft on 09/28/2023
- 9.23 ft on 08/30/2023
- 8.11 ft on 08/02/2023
- 8.37 ft on 06/04/2023
- 8.09 ft on 05/18/2023
- 8.31 ft on 12/22/2022
- 8.35 ft on 11/10/2022
- 8.14 ft on 09/09/2022
- 8.26 ft on 11/08/2021

January 2023

There were record-high temperatures at the beginning of the month, a huge rebound from extreme cold at the end of December 2022. Some locations recorded maximum temperatures in the upper 70s, and the Georgetown County Airport reported a high of 80°F on January 5.

A robust cold front started from the west on the morning of January 4, and ahead of it, additional warm air and moisture streamed into the region, creating severe weather. There were five confirmed tornadoes from the storms on January 4, including one EF1 tornado that touched down near Woodford and four EF0 tornadoes: one in Aiken County, one in Calhoun County, and two in Lexington County.

On Thursday, January 12, ahead of another strong cold front, storms produced EF1 tornadoes in Greenwood and Laurens counties.

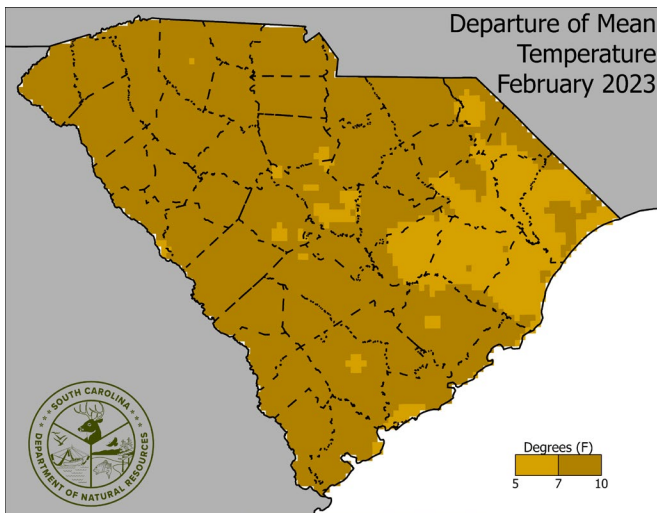


Tornado Damage in Gray Court



Tornado Damage in Joanna

February 2023



The main weather story for February 2023 was the abnormally warm temperatures throughout the month, becoming the second warmest February on record behind 2018. Multiple stations reported highs in the mid- to upper 80s at the end of the month, setting new record high temperatures. Temperatures at Greenville-Spartanburg International Airport reached the upper 70s, nearly twenty-five degrees above normal. The high of 79°F on the 23rd and 28th was just shy of the all-time warmest temperature in February for the station (81°F in 1996, 2017, and 2018).

Station	February 2023 Avg. Temp (°F)	Normal February Avg. Temp (°F)	Departure from Normal	Rank
Charleston Int'l AP	61.5	52.7	8.8	2 nd Warmest
Florence Reg AP	56.0	49.7	6.3	5 th Warmest
Columbia Metro AP	56.7	49.1	7.6	3 rd Warmest
Gr'nvl-Spart. Int'l Ap	53.1	45.9	7.2	3 rd Warmest

March 2023

On the heels of one of the warmest Februarys on record, some locations reported maximum temperatures in the mid-to-upper 80s at the beginning of March.

Freezes around the middle to end of the month, with overnight temperatures below the hard freeze threshold (28°F), damaged some sensitive agriculture in the Upstate.

Johnston 4 SW (Edgefield County)

Date	Min Temp (°F)	Max Temp (°F)
March 14	32	53
March 15	28	60
March 16	32	69
March 17	46	69
March 18	43	58
March 19	37	57
March 20	31	56
March 21	28	64
March 22	34	67



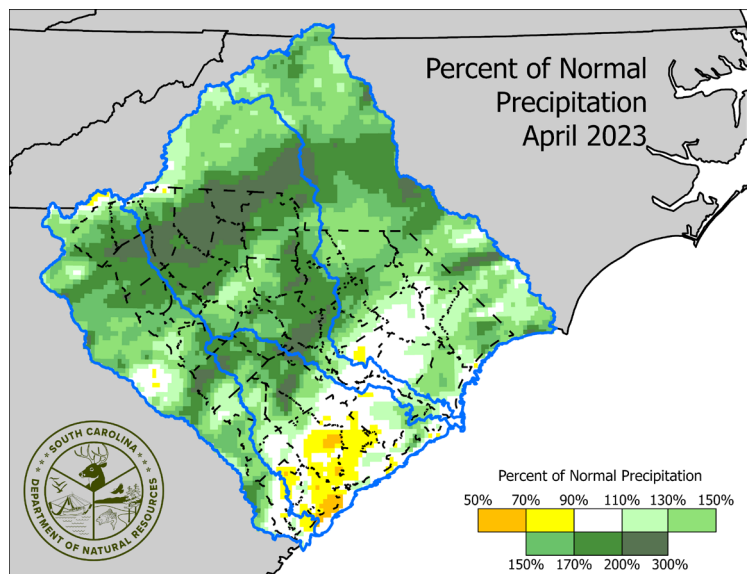
Fruit that was already in shuck off suffered damage. The embryo is damaged and will not make a decent fruit. Sarah Scott, ©2023, Clemson Extension

When peaches started blooming, the blooms were severely damaged due to the freeze, and early-season varieties that were already fruiting were the hardest-hit crops. The Department of Agriculture estimated that the state lost over 70% of its peach crop, the biggest loss of peaches since 2017.

April 2023

Multiple cold fronts and low-pressure systems moved through the region during April. The unsettled weather resulted in increased rainfall for much of the state, with some locations receiving more than double their average monthly rainfall totals. The Greenville-Spartanburg International Airport measured 10.12 inches for the month, the third wettest April for the location.

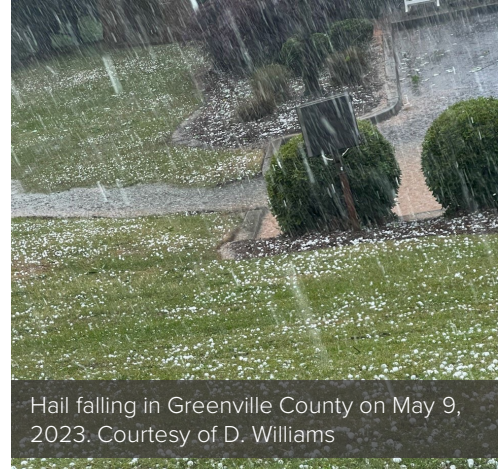
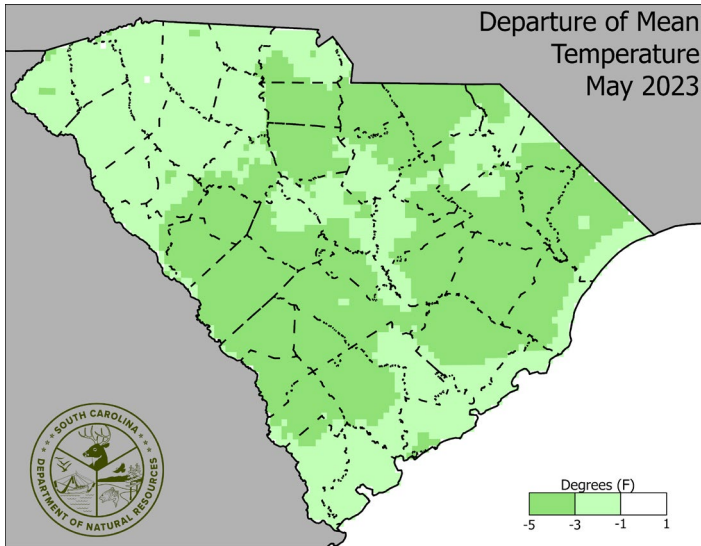
The cold front passages also provided periods of cooler-than-normal temperatures. Around the middle of the month, maximum temperatures struggled to reach the 50s, up to thirty degrees below average, and temperatures felt more like January than April.



Station	County	April 2023 Total Rainfall (")	Network
Spartanburg 0.9 E	Spartanburg	12.15	CoCoRaHS
Gaston Shoals	Cherokee	12.02	COOP
Five Forks 1.0 W	Greenville	11.24	CoCoRaHS
Piedmont 4.7 WSW	Anderson	10.18	CoCoRaHS
Langley 0.2 SSW	Aiken	9.71	COOP

May 2023

Morning lows near freezing temperatures at the beginning of the month were observed. May 2023 is the seventh coldest May on record, coldest since 1997, mainly driven by the cooler-than-normal maximum temperatures. The statewide average maximum temperature for May 2023 was 77.9°F, 4.8°F below average, and the second coldest since 1895.



A storm on the 9th of the month produced baseball-sized hail (2.75”) in Greenville County, and a wind gust of 80 mph was measured in Charleston. A strong low pressure off the Southeast’s coast contributed to high seas, strong winds, and up to three inches of rain in portions of the Lowcountry and Pee Dee over Memorial Day weekend.

June 2023

The statewide average temperature was below normal, making it the ninth coldest June on record. No stations recorded a temperature above 100°F, and there were only a handful of days when the temperature was over 90°F. In mid-month, high pressure provided cool and dry conditions, with some locations reporting low temperatures in the upper 40s to low 50s. The NWS station near Spartanburg recorded a new daily minimum temperature of 43°F on the 10th, beating the previous record of 51°F set in 2002. Multiple record low maximum temperatures were tied or broken toward the end of the month.

Maximum Temperatures – June 2023

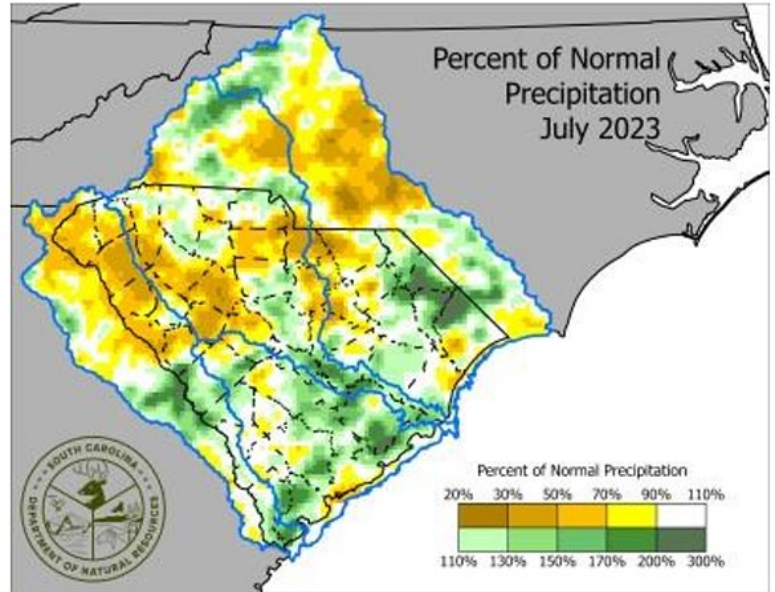
Station	Number of Days $\geq 90^{\circ}\text{F}$	Number of Days $\geq 100^{\circ}\text{F}$
Charleston Int'l AP	8	0
Florence Reg AP	9	0
Columbia Metro AP	11	0
Gr'nvl-Spart. Int'l Ap	0	0

Precipitation was variable across the state during the month. The NWS station in Bamberg recorded a monthly total of 11.54 inches, 6.34 inches above average, while the station in North Myrtle Beach only received 3.06 inches, -1.01 inches below normal.

On Monday, June 26, a cold front approaching from the west triggered severe thunderstorms, causing wind damage in parts of the Midlands.



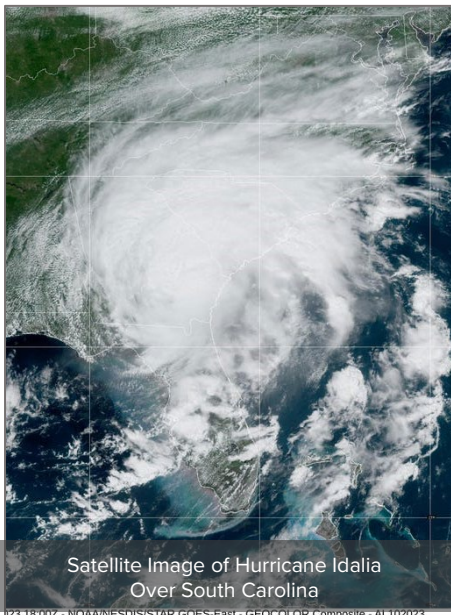
While the statewide average precipitation was near normal, precipitation totals were mixed across the state. Some areas received less than 50% of average rainfall for July, and others reported over 170% of average rainfall. The Huger 7.7S CoCoRaHS reporter in Berkeley County recorded 14.86 inches for July 2023, the highest recorded total for the month. The Due West 0.6SE CoCoRaHS reporter in Abbeville County recorded only 0.52 inches for July, the lowest recorded total for the month.



Excessive heat was observed throughout the month, and humid conditions led to heat indices over 100°F, with heat index values exceeding 110°F in some locations. Due to warm and humid conditions, the NWS station in downtown Charleston tied record high minimum temperatures of 82°F on the 14th, 15th, and 26th. Additionally, smoke from the Canadian wildfires filtered into the region, reducing air quality conditions throughout the month.

August 2023

Hurricane Idalia was the strongest storm of the 2023 Hurricane season to make landfall along the U.S. coast. The Category 3 hurricane made landfall near Keaton Beach, Florida, on August 30. It weakened as it tracked across Florida and southern Georgia and crossed into South Carolina as a tropical storm.



The storm produced five tornadoes and wind gusts between 40 and 60 mph across portions of the state. Already elevated water levels, with the full moon and high tide cycle, caused the Charleston Harbor tidal gauge to crest at 9.23 ft. (fifth highest crest on record), and the gauge at the Springmaid Pier in Horry County crested at 9.13 ft. (sixth highest crest on record). The preliminary estimates indicate a storm surge of 3.47 ft. at the Charleston Harbor and 3.53 ft. at the Springmaid Pier. A NWS station in Holly Hill (Orangeburg County) reported a 24-hour rainfall total of 13.55 inches, while a few stations in the Pee Dee recorded over ten inches of rain.

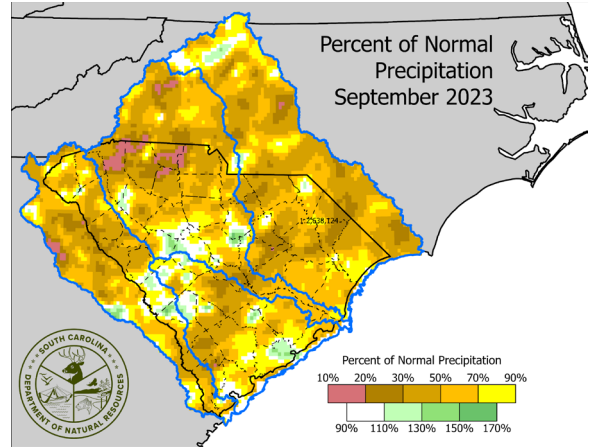
More details about Hurricane Idalia's impacts are available via our [Open-File Report](#).

September 2023

Despite Hurricane Lee passing well offshore of the coast around the middle of the month, high surf conditions and dangerous rip currents were reported along South Carolina beaches. Tropical Storm Ophelia made landfall near Emerald Isle in North Carolina on the 23rd and moved northward through Virginia and across the Delmarva Peninsula by the end of the period. While most of the storm's impacts remained north of the state, portions of Georgetown and Horry counties recorded between two and three inches of rain. High surf and rip current advisories were issued for the coast.



In September, most of the state received less than 70% of average precipitation. The driest portions of the state were in the Upstate, where some areas received less than 20% of average rainfall for September. The NWS station at Ninety Nine Islands in Cherokee County recorded only 0.52 inches of rain in September.



October 2023

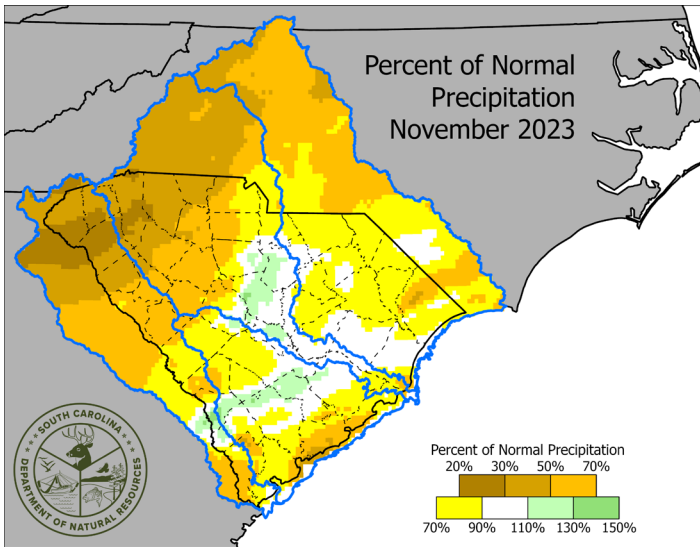
The morning of October 8 was the coldest since the Spring, with minimum temperatures dropping into the low to mid-30s across portions of the Upstate and mid-40s elsewhere, up to fifteen degrees below normal. Another round of cooler-than-normal weather came around mid-October, with maximum temperatures only reaching the low to mid-60s. Strong radiational cooling overnight allowed minimum temperatures to drop into the upper 30s to low 40s across the state on October 17. Some locations in the Piedmont and Upstate reported a light frost, with a few mountainous locations recording temperatures at freezing.

October was another dry month for South Carolina. The driest portions of the state were in the Upstate, where some areas received between 10% and 30% of average precipitation for October.

Station	October 2023 Rainfall (")	Normal October Rainfall (")	Departure from Normal
Charleston Int'l AP	2.45	4.33	-1.88
Florence Reg AP	0.98	3.42	-2.44
Columbia Metro AP	1.62	3.13	-1.51
Gr'nvl-Spart. Int'l Ap	0.80	3.59	-2.79

November 2023

The statewide average precipitation for September, October, and November was 6.84 inches, 3.01 inches below the long-term average of 9.65 inches, making it the thirtieth driest fall on record. The driest areas were in the northern Upstate, where Oconee, Pickens, Anderson, Greenville, Spartanburg, and Cherokee counties had their third or fourth driest fall on record since 1895. Based on the precipitation deficits and other indicators, including soil moisture and streamflow, drought conditions were observed in portions of the Upstate.



The dry conditions severely impacted agriculture. Livestock producers had to feed winter hay well ahead of schedule. Soil moisture in November was so limited that producers could not put winter grains in the ground. The dry conditions also increased the potential for wildfire activity, limiting prescribed burn permits. SCDNR issued a no-fires restriction at Jocassee Gorges Wilderness Area. Water systems also noticed the dry conditions, and a few considered issuing voluntary restrictions.

December 2023

On Sunday, December 17, the state was impacted by [a coastal storm](#) with heavy rain, gusty winds, and moderate to major coastal flooding. The preliminary tide data shows a crest of 9.97 ft MLLW at Springmaid Pier on Sunday afternoon, which would be the fourth-highest tide at the location, and a crest of 9.86 ft MLLW at the Charleston Harbor Tidal Gauge, which would be the fourth-highest crest on record at the location. Wind gusts up to 45 mph were reported across the Coastal Plain, with higher gusts directly along the coast. Rainfall total reports ranged between ten and fifteen inches of rainfall in parts of Charleston and Georgetown counties from the band of heaviest rain, which trained over the area as the storm moved along the coast. There were widespread reports of flooded and washed-out roads in Charleston, Georgetown, and Horry counties.



Tidal area near Botany Bay Heritage Preserve before winter storm on December 16 and during high tide on December 17. Courtesy SCDNR Botany Bay WeatherSTEM