

South Carolina CoCoRaHS Rain Gauge Gazette

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Welcome to the second edition of the 'South Carolina CoCoRaHS Rain Gauge Gazette.'

This newsletter will discuss some of the top precipitation-related stories during 2023 and highlight the impact of your observations. Whether you have been with us for ten years or ten days, know that your data has been instrumental in monitoring drought and flooding across the Palmetto State.

South Carolina CoCoRaHS is always looking for new observers to help understand where it did or did not rain. If you know someone that enjoys the weather, encourage them to sign up to participate in this worthwhile citizen science project.

Sincerely,
Melissa Griffin
South Carolina CoCoRaHS State
Coordinator

If you have any questions, please feel free to contact me at GriffinM@dnr.sc.gov.

Observer Corner

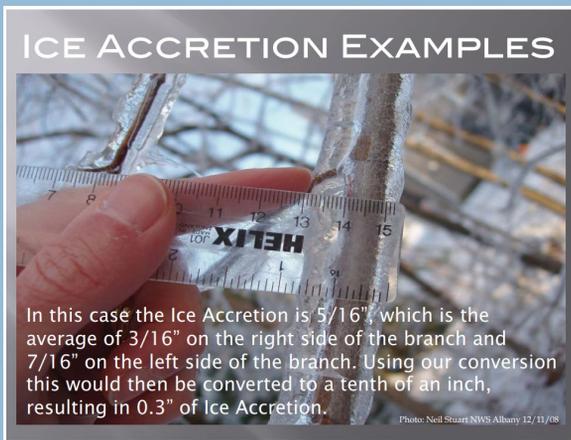
Here's some information on reporting precipitation for all observers, old and new!

Double-check your report before you hit submit. Occasionally, someone at CoCoRaHS HQ may contact you, a regional coordinator, or myself about a flagged rainfall value. Two of the most common mistakes are entering the observation time as the rainfall total and misplacing the decimal.

Report your zeroes. Even when there is nothing in your rain gauge, that 0.00" value is extremely important to many individuals and agencies who are tracking abnormally dry and drought conditions across the state.

Do not report dew or fog. Moisture from dew or frost does not count as precipitation, so if you suspect that amount came from dew, make the total 0.00", and include notes in the comments field of your report.

There are still a potential for winter precipitation, take a few moments to read the [training slideshows](#) or watch the [instructional videos](#) on snow measuring, measuring snow water equivalent (SWE), and ice accretion. While I know winter weather is rare in the state, it does happen – just like last year!



Your South Carolina CoCoRaHS Team

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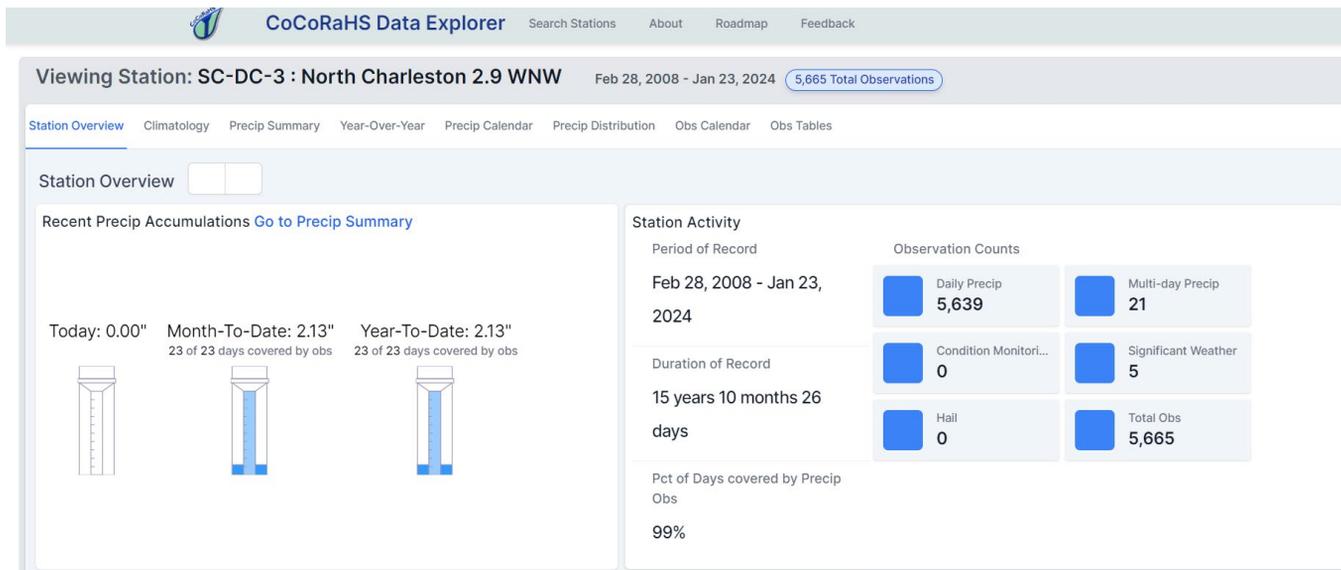
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2023 CoCoRaHS Highlights

The [CoCoRaHS Data Explorer \(DEX Tool\)](#) was released in Fall 2023 and is designed for observers to interrogate the data from their stations. DEX also allows observers to look at data from all stations in the network are included, and there are options to plot graphs, calendars, distributions, comparisons to climatology (from both NOAA and PRISM normals), and more.



If you have not had a chance to look at the DEX Tool or are unsure of all the features and functionality, CoCoRaHS HQ recorded their [training webinar](#) from October. Take a moment to explore the data and information you have collected at your station, and if you have any questions, please feel free to reach out to Melissa or your regional coordinator.

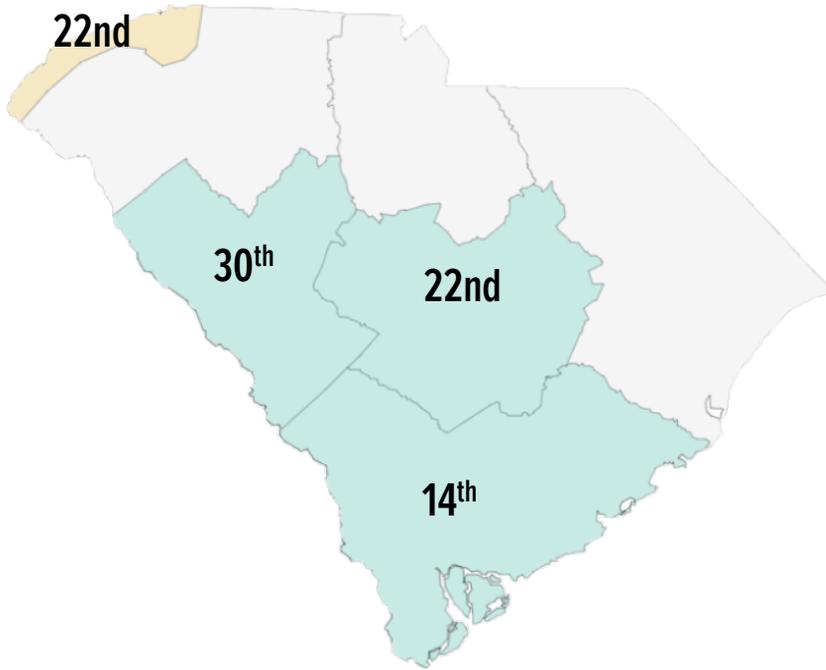
2023 South Carolina Program Highlights

- Citizen Weather Observer Week (March 2023)
- 2nd Place in the March Recruitment Campaign (156 new sign-ups)
- Years of Service Awards
 - 59 Active observers started in 2008 (15 years)
 - 37 Active observers started in 2013 (10 years)
 - 62 Active observers started in 2018 (5 years)



We want to thank the [Harry Hampton Wildlife Fund](#) for its continued support of the South Carolina CoCoRaHS program over the last few years. We have provided rain gauges to schools, educational centers, and other observers across the state through their generous donations.

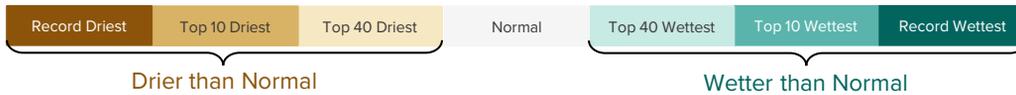
2023 South Carolina Precipitation Summary



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.

2023 Statewide Precipitation Totals, Departures and Rankings

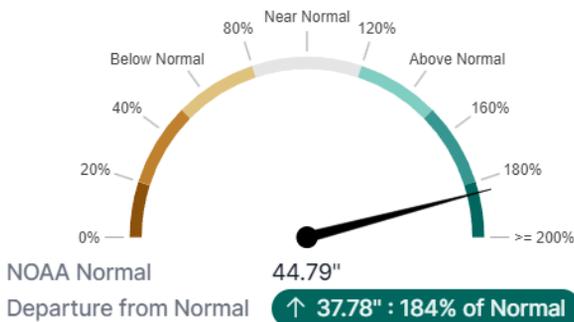
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	5.77"	3.85"	3.08"	5.11"	3.50"	5.94"	4.92"	6.96"	2.74"	1.90"	2.20"	5.52"
Depart	1.94"	-0.05"	-1.20"	1.77"	-0.08"	1.26"	-0.62"	1.68"	-1.50"	-1.09"	-0.41"	1.91"
Rank	17 th	--	38 th	19 th	--	31 st	--	27 th	34 th	--	--	18 th



Here are some examples of the 2023 precipitation totals and a climatological perspective from the new CoCoRaHS DEX Tool for two CoCoRaHS stations in South Carolina.

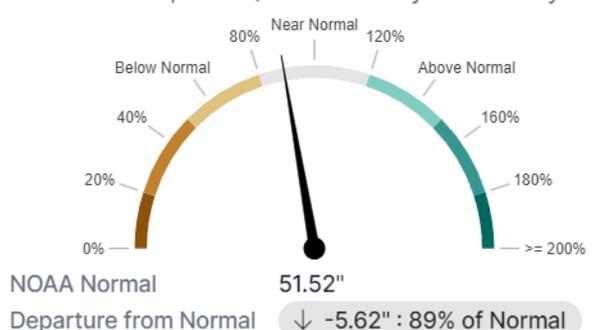
SC-RC-127: Columbia 2.1 NNW

Year: 2023: 82.57"
 Jan 1 to Dec 31, 2023 (364 of 365 days covered by obs)



SC-HR-106: Myrtle Beach 4.8 NNW

Year: 2023: 45.90"
 Jan 1 to Dec 31, 2023 (365 of 365 days covered by obs)



Lack of Winter Events

Least Snow Recorded in South Carolina (1894 – 2023)

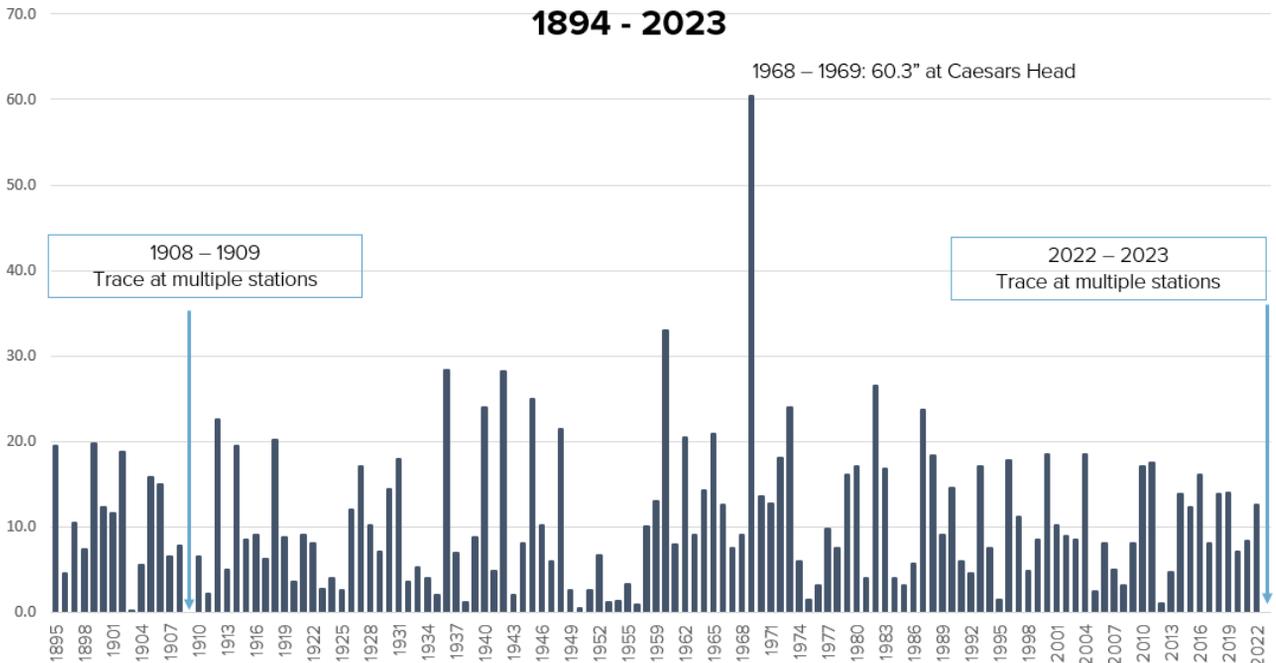
Despite a few cold air outbreaks, winter 2022 – 2023 was marked by above-normal average temperatures. Another notable statistic for the season was the lack of snowfall. Multiple stations only recorded a trace of snowfall for the entire season.

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

Trace amounts of snow were reported at Greenville (Dec 2022, Feb 2023), York (Dec 2022), Caesars Head (Feb 2023), Table Rock (Feb 2023), and Spartanburg (Dec 2022).

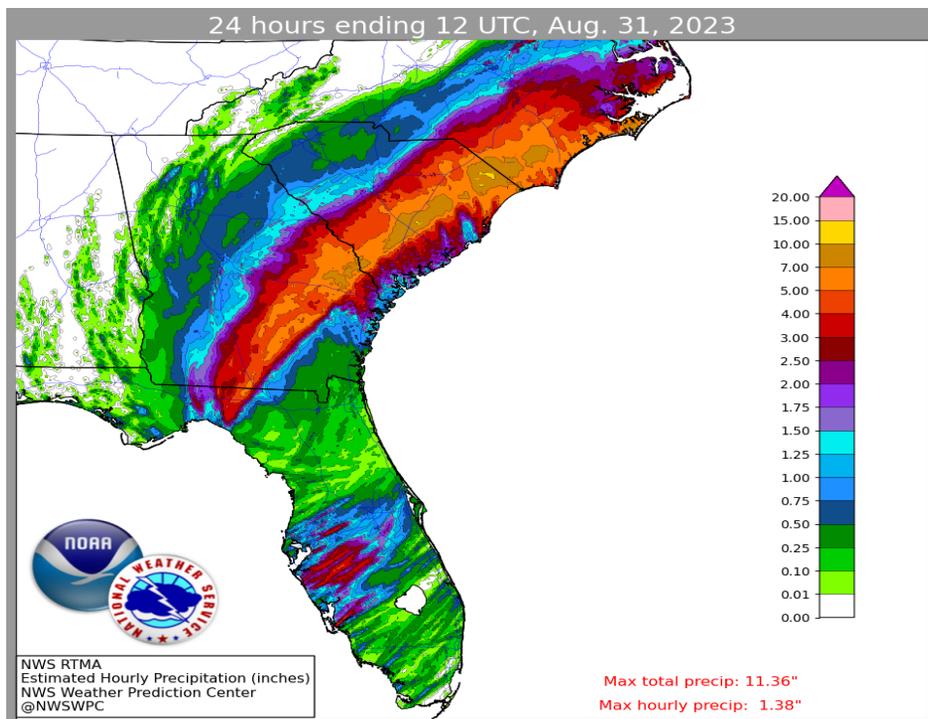
Even if the Lowcountry, Midlands, and Pee Dee miss out on winter weather events, the Upstate, especially the mountain locations, typically has two to three winter storms with measurable snow ($\geq 0.1"$) or ice accumulations.

South Carolina Maximum Winter Snowfall Totals 1894 - 2023



Tropical Storm Idalia

Tropical Storm Idalia produced a wide swath of rainfall three to ten inches south and east of the Interstate 20 corridor. A National Weather Service station in Holly Hill (Orangeburg County) reported a 24-hour rainfall total of 13.55 inches, and a CoCoRaHS observer near Mullins (Marion County) measured a daily total of 10.70 inches. However, the Upstate recorded less than half an inch of rainfall from the storm.



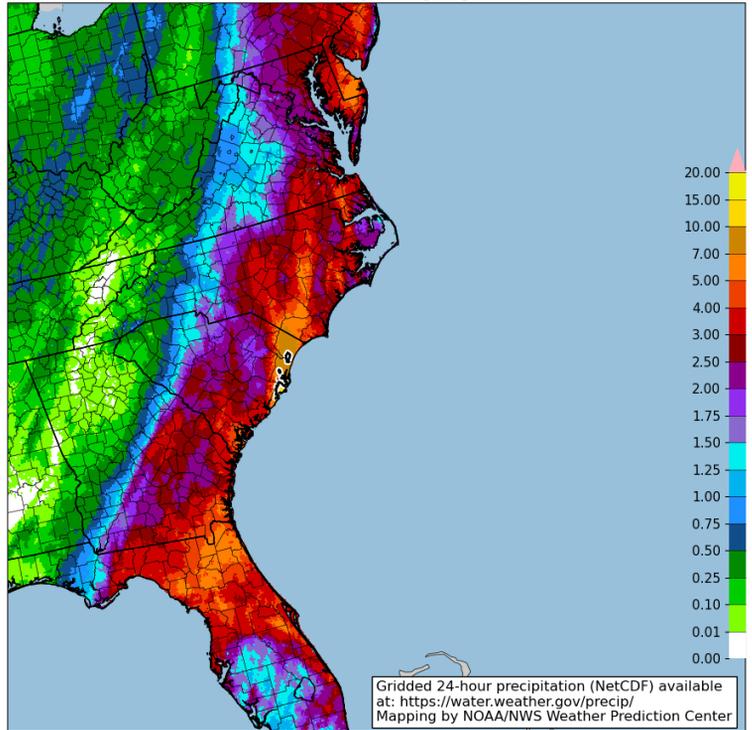
Station Name	County	Provider	Rainfall (Inches)
Holly Hill 1 SW	Orangeburg	NWS COOP	13.55
Mullins	Marion	NWS COOP	11.57
Mullins 4.9 ESE	Marion	CoCoRaHS	10.70
Smoaks 1.0 ESE	Colleton	CoCoRaHS	9.05
Marion	Marion	NWS COOP	8.96
Lodge 3.4 SW	Colleton	CoCoRaHS	8.79
Kingstree 7.9 NW	Williamsburg	CoCoRaHS	8.76
Loris 1.4 ENE	Horry	CoCoRaHS	8.64
Varnville 6.7 SW	Hampton	CoCoRaHS	8.53
Longs 1.3 NW	Horry	CoCoRaHS	8.08
Conway 9.2 NNE	Horry	CoCoRaHS	7.90
Manning 7.1 S	Clarendon	CoCoRaHS	7.85
Santee 2.0 ENE	Orangeburg	CoCoRaHS	7.76
Florence 6.1 W	Florence	CoCoRaHS	7.60

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

December Coastal Storm

On Sunday, December 17, the state was impacted by [a coastal storm](#) with heavy rain, gusty winds, and moderate to major coastal flooding. The highest rainfall totals were reported in Charleston, Georgetown, and Horry counties, which experienced widespread observations of six to twelve inches of rain. One CoCoRaHS observer near McClellanville and one south of Georgetown measured two-day totals of over fourteen inches of rain. Areas of the Midlands and Pee Dee recorded over two inches of rain, and locations in Beaufort and Jasper counties received up to five inches of rain. The Upstate received less than an inch of precipitation from the system.

2-day accumulated precipitation (inches) ending 7 am EST, Dec. 18, 2023
(10-inch isohyet highlighted)



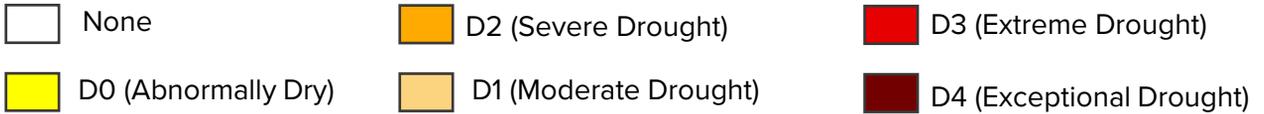
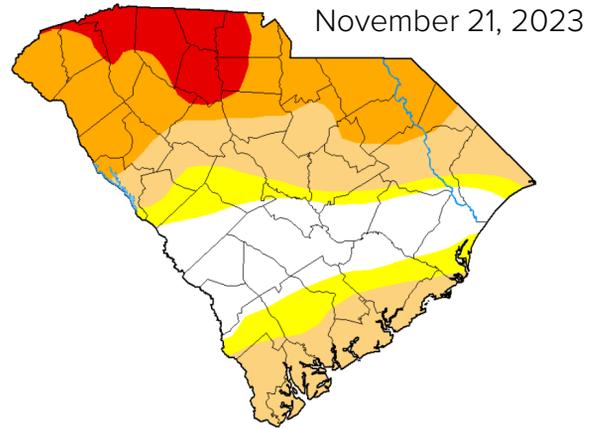
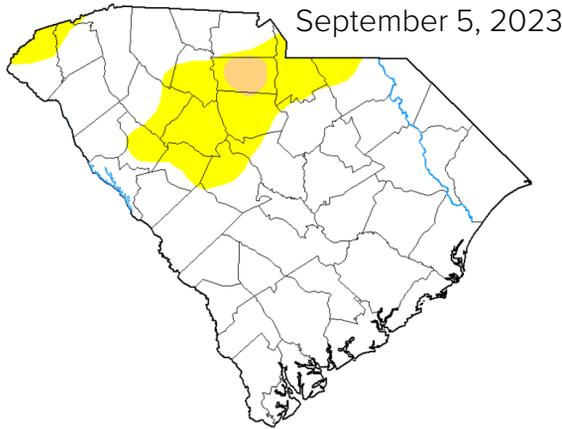
Select Rainfall Reports from Dec 17 – 18, 2023

Station Name	County	Provider	Rainfall (Inches)
Santee Coastal Reserve	Charleston	NWS	14.74
McClellanville 0.2 ESE	Charleston	CoCoRaHS	14.59
Georgetown 11.2 SW	Georgetown	CoCoRaHS	14.42
McClellanville 0.5 ESE	Charleston	CoCoRaHS	12.88
Georgetown Co. Airport	Georgetown	NWS	12.45
Murrells Inlet 2.4 NW	Horry	CoCoRaHS	11.00
Hobcaw Barony	Georgetown	CoCoRaHS	10.77
Andrews	Georgetown	NWS	4.50
Downtown Charleston	Charleston	NWS	3.92
North Myrtle Beach	Horry	NWS	3.77

The 24-hour total of 14.72 inches measured by the NOAA Climate Reference Network station at the Santee Coastal Reserve in McClellanville is now the highest daily rainfall on record in December in the state; 7.60 inches was recorded in 2009 at Moncks Corner.

Statewide Drought Conditions

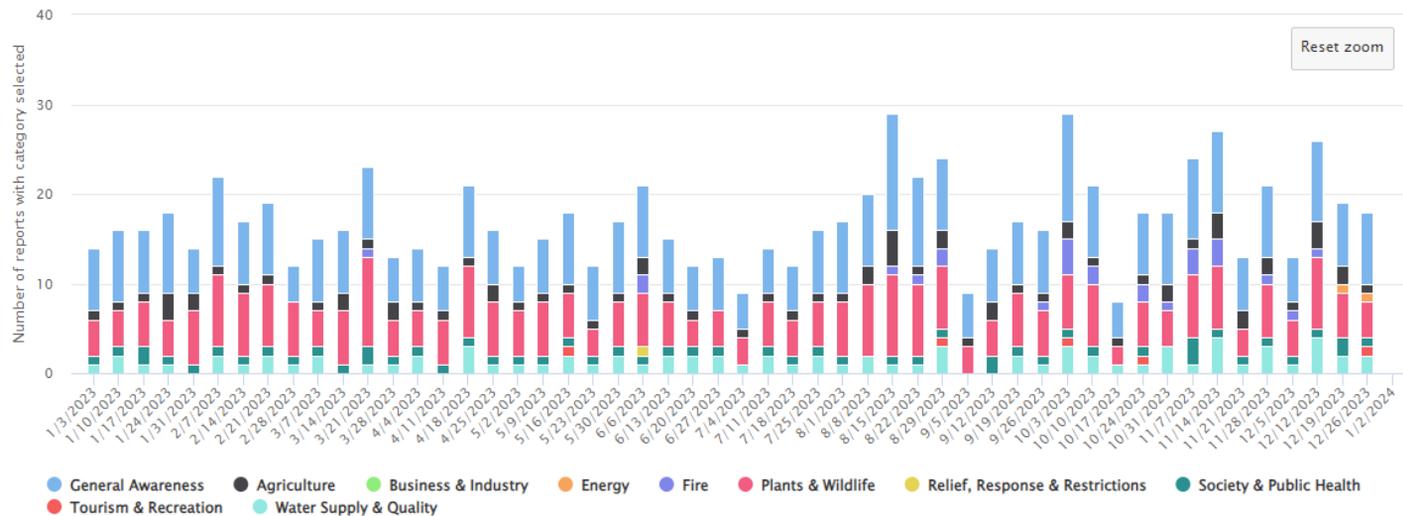
The dry conditions peaked on the United States Drought Monitor (USDM) on November 21st, where 64.89% of the state was in at least moderate drought (D1) conditions. 35.81% of the state had at least severe drought (D2) conditions, and 9.70% of the state had extreme drought (D3) conditions. This was the first time since fall of 2019 that any portion of South Carolina had reached extreme drought conditions on the USDM. The increase to moderate drought conditions for these counties was due to a further decline in agricultural and hydrologic conditions and a further rise in wildfire potential.



Thank you to our observers who sent in Condition Monitoring Reports, which helped local, state, and federal agencies track emerging and improving drought conditions in 2023. If you want to learn how to submit a condition monitoring report, you can look at the training [PDF](#) or watch the training [video](#).

Condition Monitoring Weekly Category Counts

South Carolina, United States From 10/4/2016 to 1/8/2024



Severe Weather Reporting

As you share your pictures of wintry precipitation or severe weather via social media, make sure to include the following information:

- Weather or Precipitation Type (rain, snow, sleet, or ice)
- Location
- Time and Duration
- Amount
- Impacts

Tag your local National Weather Service Office. These reports provide valuable data to meteorologists and emergency managers during these events.

Twitter: [@NWSGSP](#) [@NWSColumbia](#) [@NWSCharlestonSC](#) [@NWSWilmingtonNC](#)

NATIONAL WEATHER SERVICE OFFICES SERVING SOUTH CAROLINA

Greer, SC www.weather.gov/gsp
Phone: 864-848-3859
Email: gsp.webmaster@noaa.gov
Twitter: [@NWSGSP](#)

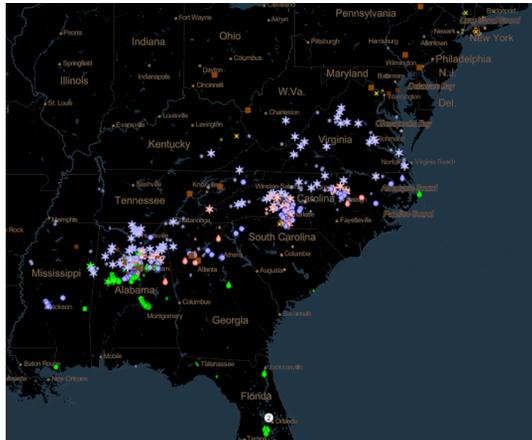
Wilmington, NC www.weather.gov/ilm
Phone: 910-762-4289
Email: ilm.webmaster@noaa.gov
Twitter: [@NWSWilmingtonNC](#)



Columbia, SC www.weather.gov/cae
Phone: 803-822-8135
Email: NWS.Columbia@noaa.gov
Twitter: [@NWSColumbia](#)

Charleston, SC www.weather.gov/chs
Phone: 843-747-5860
Email: nws.charlestonsc@noaa.gov
Twitter: [@NWSCharlestonSC](#)

SCDNR | State Climatology Office



In addition to noting if you see rain, sleet, or snow in the comments box with your observation, I highly recommend downloading the mPING App on your phone. This easy-to-use tool provides vital information on the type of precipitation falling at your location.

For more information:

<https://mping.nssl.noaa.gov/>