South Carolina Water Resources Monthly Summary

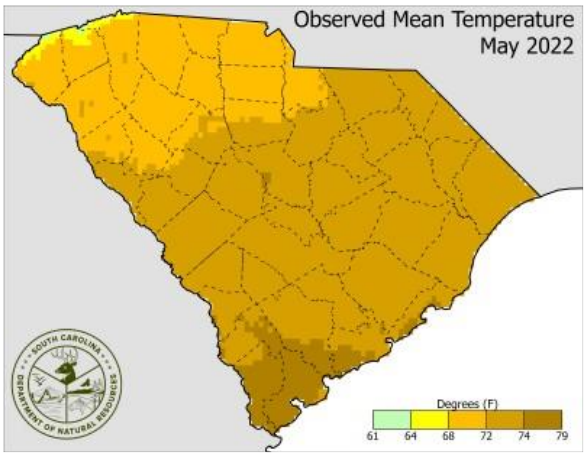
For May 2022

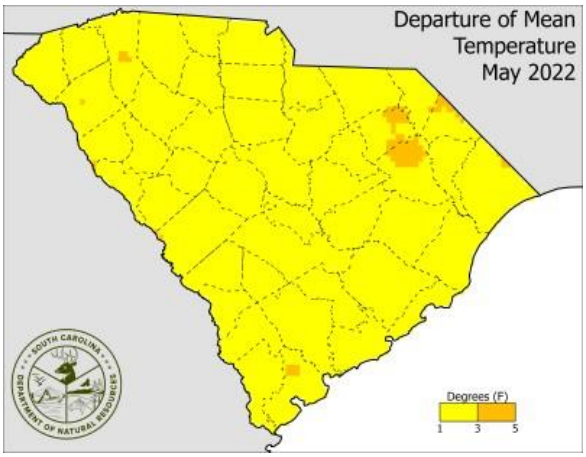
Provided by

The South Carolina Department of Natural Resources

Temperature

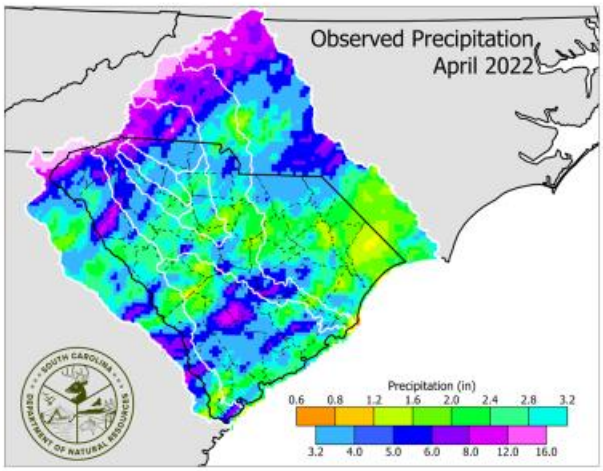
Statewide, South Carolina had an average temperature of 73.0 degrees, 2.6 degrees above the long-term average (1895-2021) of 70.4 degrees for May. The National Weather Service (NWS) stations near the Beaufort Marine Corps Air Station and Florence Regional Airport recorded the maximum temperature for the month, 98 degrees on May 19, and the Barnwell station recorded the same temperature on May 20. The lowest temperature observed during the month was 39 degrees at the NWS stations near Cedar Creek in Richland County and Union on May 10.

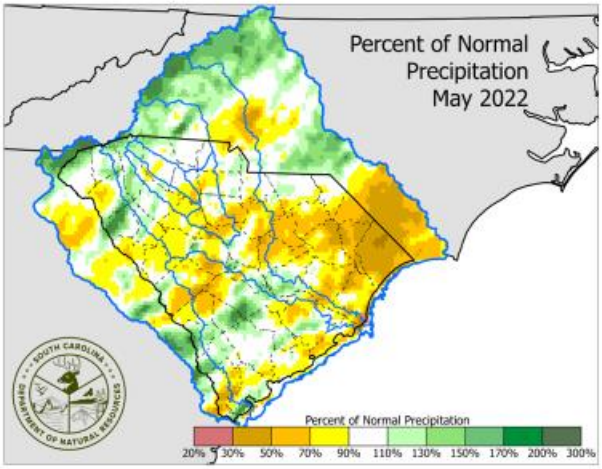




Precipitation

The statewide average precipitation for May 2022 was 3.25 inches, which is 0.33 inches below the long-term average for the month (1895-2021) of 3.58 inches, as most of the state recorded between 75 and 100% of their monthly average rainfall. Locations in the mountains and upper Savannah River Basin reported above-average monthly rainfall totals, with widespread totals above four inches. Some CoCoRaHS observers in northern portions of Greenville, Oconee, Pickens, and Spartanburg counties recorded between five and eight inches of rain (more than 125% of normal). Areas in the coastal and interior Pee Dee measured less than 50% of their average monthly precipitation.

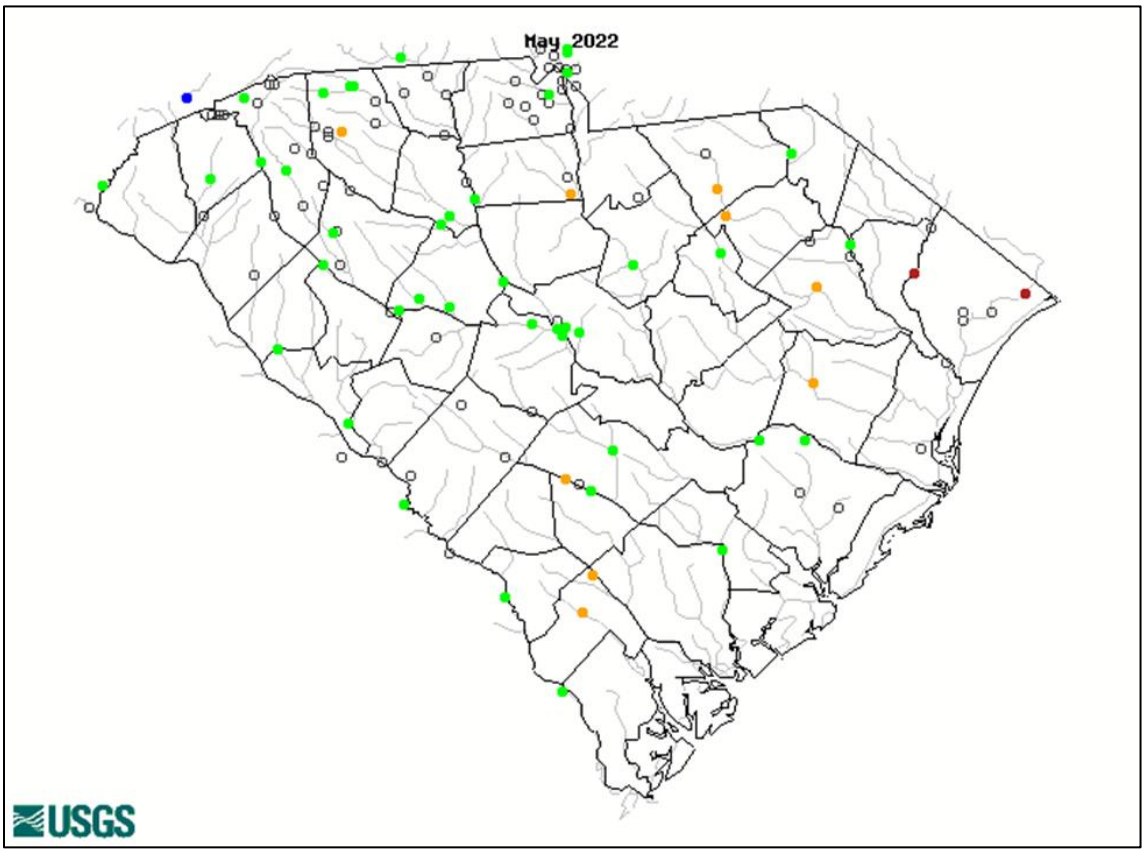




*Precipitation images show observed and percent of normal precipitation for the Water Basins that either flow into or are shared with South Carolina.

Streamflow

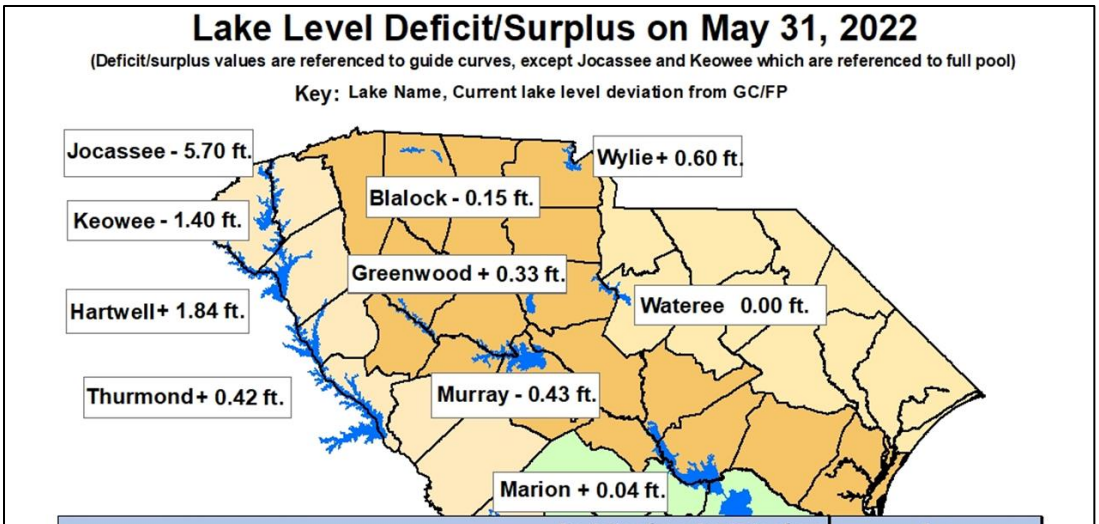
The USGS's monthly streamflow map compares the current monthly average streamflow at each gage for a given month to each gage's historical monthly average streamflow for the same month over the gage's period of record. Although the state received some beneficial rain during the last week of May, the consistently warm temperatures and lack of enough rain have resulted in dry conditions for gages in the Pee Dee, Edisto, Salkehatchie, Broad, and Catawba basins. The Little Pee Dee River gage and the Waccamaw river gage in Horry County, are experiencing much below normal conditions. In April, the Little Pee Dee gage was at below normal condition and did not show much improvement in May. In summary, while streamflows across most of the State are still at normal status, some of the dry areas could benefit from future rain events.



Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

Reservoirs

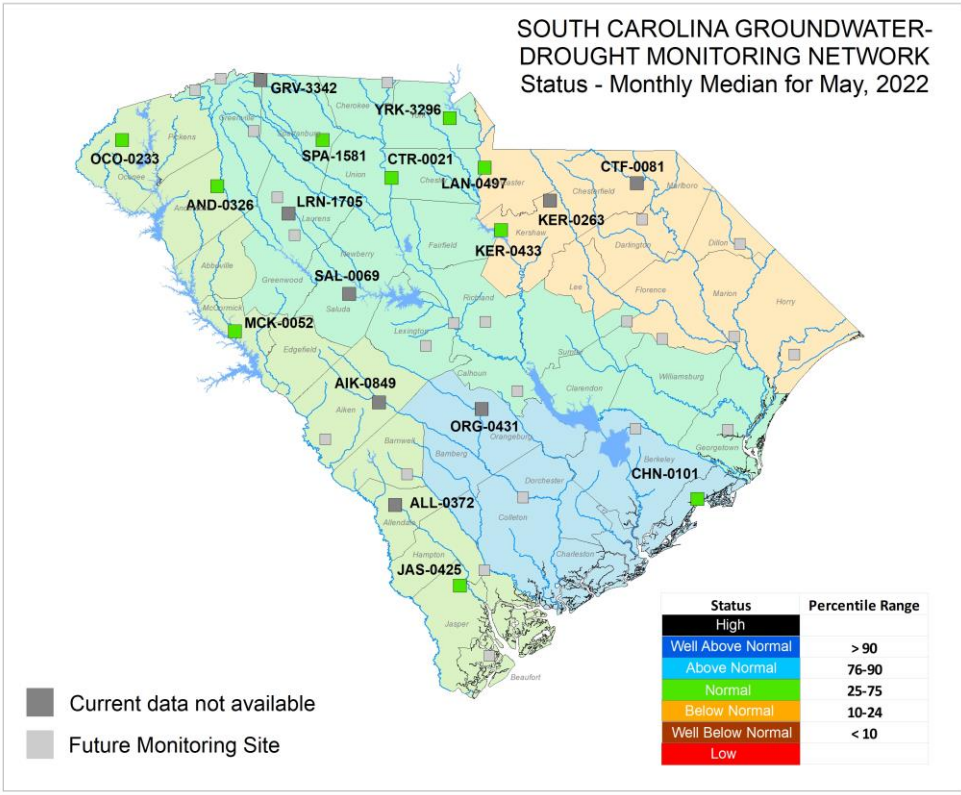
The map below shows a surplus or deficit from the guide curves or full-pool elevations for the major reservoirs in the State, based on conditions for May 31st. Four out of the ten reservoirs are below their target or full-pool elevations in May but are maintained close to their target elevations. The Duke Energy lakes in the Catawba-Wateree River Basin are still in Stage 0 of the Low Inflow Protocol (LIP). Due to the warmer and drier than normal weather conditions in the past months, the LIP status continues to be in Stage 0. The LIP gets initiated when two of the three triggers (Storage Index, U.S. Drought Monitor, and Streamflow) support Stage 0 or higher status. The U.S. Drought monitor and Streamflow triggers are long-term indicators based on more than one month of data. In the upcoming months, as the past drier months get excluded from the averages, the lakes will be able to return to normal status, provided there's enough support from all three triggers. Duke Energy also manages Lake Jocassee and Keowee. These lakes are pump storage systems, and their levels fluctuate based on their power generation and maintenance requirements. As of the end of May, the monthly average lake elevations for seven of the ten lakes had dropped from the last month but remain close to their guide curve elevations.



Lake	Current Elevation (ft)	Target (ft)	Full Pool (ft)	Deviation from Guide Curve	Deviation from Full Pool	Avg Monthly Difference (ft)
Greenwood	439.33	439.00	439.00	0.33	0.33	**0.29**
Murray	357.57	358.00	360.00	-0.43	-2.43	**-0.79**
Marion	75.73	75.69	75.60	0.04	0.13	**-0.14**
Jocassee	94.30	NA	100.00	NA	-5.70	**0.12**
Keowee	98.60	NA	100.00	NA	-1.40	**-0.18**
Wateree	97.00	97.00	100.00	0.00	-3.00	**-0.63**
Wylie	97.60	97.00	100.00	0.60	-2.40	**-0.39**
Hartwell	661.84	660.00	660.00	1.84	1.84	**0.02**
Thurmond	330.42	330.00	330.00	0.42	0.42	**-1.31**
Blalock	709.85	710.00	710.00	-0.15	-0.15	**-0.08**

Groundwater

The groundwater condition map for May is based on the monthly medians for the data collected by the USGS. Due to the lack of data (SCDNR sites are temporarily out of commission), no drought status is assigned for DNR's telemetry well sites. As noted in the table below, seven out of the ten wells observed a drop in the monthly median levels from April to May. Although the wells have recorded a drop in the medians from last month, the water levels at these sites are still within a normal range for May.

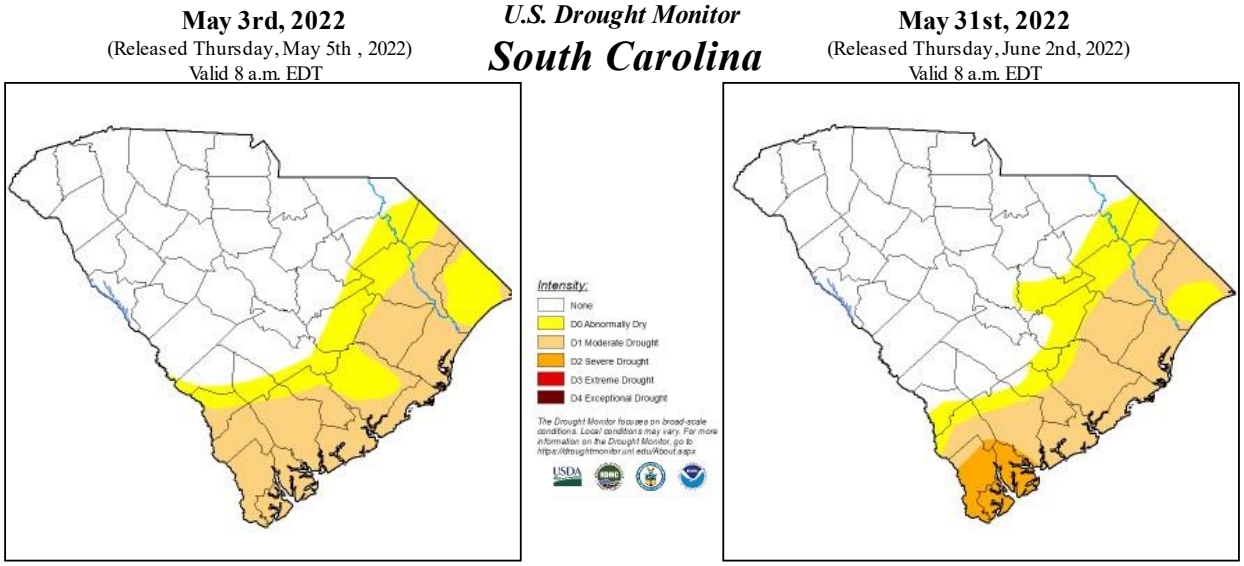


	USGS well sites										DNR Telemetry sites				
	MCK-0052	**AND-326**	**OCO-233**	**KER-0433**	**SPA-1581**	**CTR-0021**	**YRK-3295**	**LAN-0497**	**JAS-0425**	**CHN-0101**	**CTF-0081**	**GRV-3342**	**KER-0263**	**LRN-1705**	**SAL-0069**
April 2022 Monthly median (ft, below land surface)	38.41	2.63	27.21	46.35	41.65	87.16	22.80	27.07	52.76	NA	NA	43.45	NA	13.03	10.65
May 2022 Monthly median (ft, below land surface)	38.18	2.74	27.77	46.33	41.82	87.37	22.85	27.97	56.03	13.67	NA	NA	NA	NA	NA
Difference in monthly median from past month (ft)	0.23	-0.11	-0.57	0.02	-0.17	-0.22	-0.05	-0.90	-3.28	NA	NA	NA	NA	NA	NA

Drought

The first U.S. Drought Monitor (USDM) in March (5/3) had 16.11% of the state in abnormally dry (D0) conditions and 24.69% of the state in moderate drought (D1) conditions. Through May, The Lowcountry, Midlands, and Upstate saw the biggest change in conditions. For the map of 5/10, D0 conditions were expanded in the Midlands, D1 conditions were expanded in Berkeley County, and severe drought (D2) conditions were added in Hampton, Jasper, Beaufort, and Colleton Counties. On the map of 5/17, D0 conditions were added to the Upstate but were removed on the map of 5/31. The last map in April (5/31) had 13.61% of the state in D0 conditions, 21.78% of the state in D1 conditions, and 3.95% of the state in D2 conditions.

The South Carolina Drought Response Committee (DRC) did not meet in the month of May. The next DRC meeting is scheduled for Thursday, June 30th.



Summary

While the average temperature for May was above normal for the entire state, this was not the case for precipitation. Most of the state received below normal rainfall in May, however, there were pockets of the Upstate, Midlands, Lowcountry and Pee Dee regions that had above normal precipitation. Most of the rain fell in the 2nd half the state, which helped to stop the growing dry conditions from the last half of April and first half of May. These rains in the second half of the month helped to reduce some of the abnormally dry (D0) conditions that were starting to build.

Looking Forward

Through the 16th, most of the state has received below normal rain totals for June. Much of the Lowcountry, Midlands, and Upstate regions have received less than 50% of normal rainfall for June, with many of these same areas having received less than 25% of normal rainfall. To date, temperatures have been above 1 to 4 degrees above normal. Between the 12th and 16th of June, the entire state has had maximum temperatures between 90 and 100 degrees, which is between 3 and 7 degrees above normal.

For the rest of the month, the current climate outlooks suggest that precipitation will range from near normal to below normal. Temperatures, however, will continue to stay above normal for most of the month. One-Hundred-degree heat is forecast to return to the state on 6/25. Through the 25th, precipitation will be limited for much of the state, with totals generally less than 0.50 inches.

If these outlooks and forecasts hold, it is likely that the U.S. Drought Monitor conditions in South Carolina will deteriorate through June. This includes the expansion of abnormally dry (D0) and moderate drought (D1) conditions. However, Given the extremely high temperatures for multiple days this month, it's possible that severe drought (D2) conditions could expand too.

Contact

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