

South Carolina Water Resources Monthly Summary

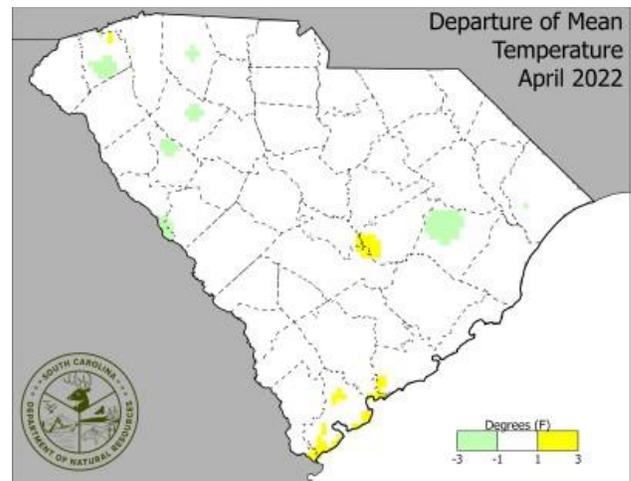
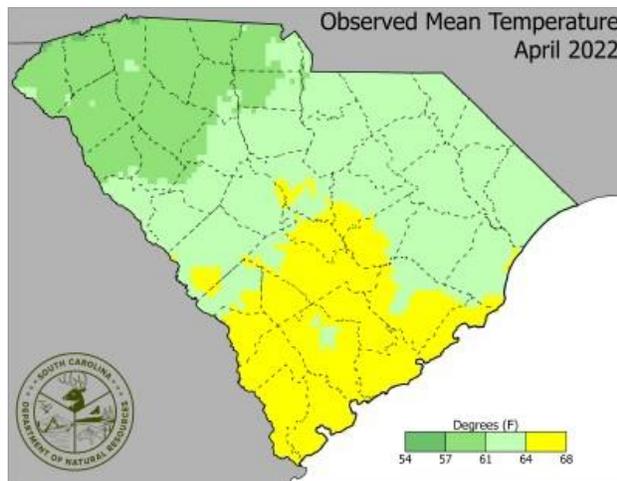
For April 2022

Provided by

The South Carolina Department of Natural Resources

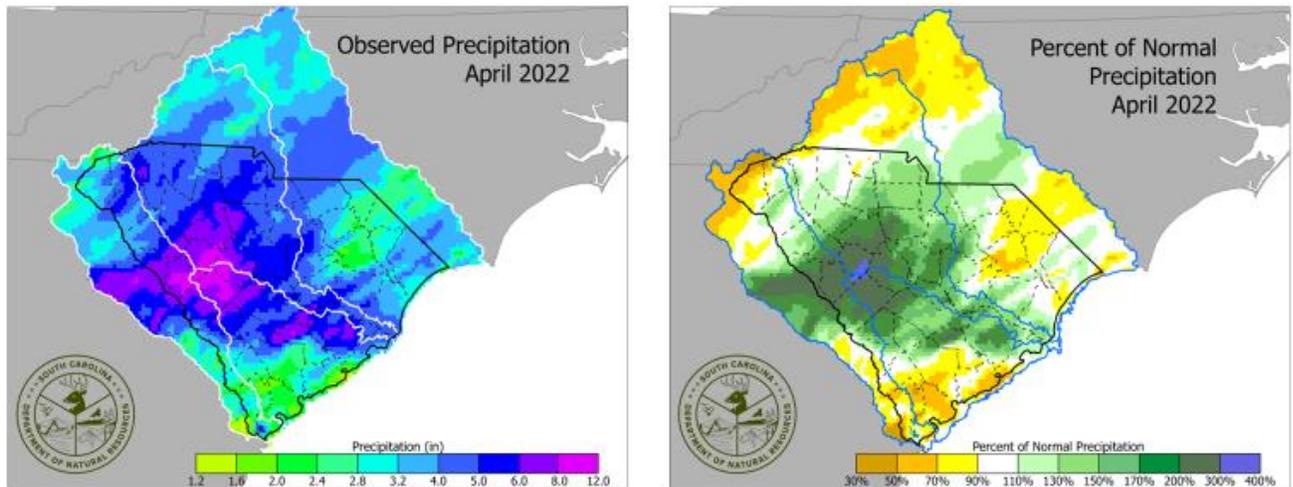
Temperature

Statewide, South Carolina had an average temperature of 62.5 degrees, 0.4 degrees above the long-term average (1895-2021) of 62.1 degrees for April. The National Weather Service (NWS) stations near the Beaufort Marine Corps Air Station and Yemassee recorded the maximum temperature for the month, 90 degrees on April 26 and April 27, respectively. At the end of the month, Temperatures reached the mid to upper 80s across the state, signally the beginning of the warm season in the region. A significant cold front moved through two weeks into April, dropping overnight low temperatures across the state into the mid-20s and low 30s. The lowest temperature observed during the month was 26 degrees at the NWS stations near Jocassee and Union on April 10.



Precipitation

The statewide average precipitation for April 2022 was 4.22 inches, which is 0.87 inches above the long-term average for the month (1895-2021) of 3.35 inches, as most of the state recorded between 75 and 100% of their monthly average rainfall. Locations in the Central Savannah River Area (CSRA) and Midlands reported above-average monthly rainfall totals, with widespread totals around five inches. Some CoCoRaHS observers in portions of Edgefield, Lexington, McCormick, and Saluda counties recorded between seven and nine inches of rain (more than 150% of normal). However, some areas in the coastal Lowcountry measured less than 25% of their average monthly precipitation, including the NWS station on Sullivans Island, which recorded 0.90 inches (2.69 inches below normal).

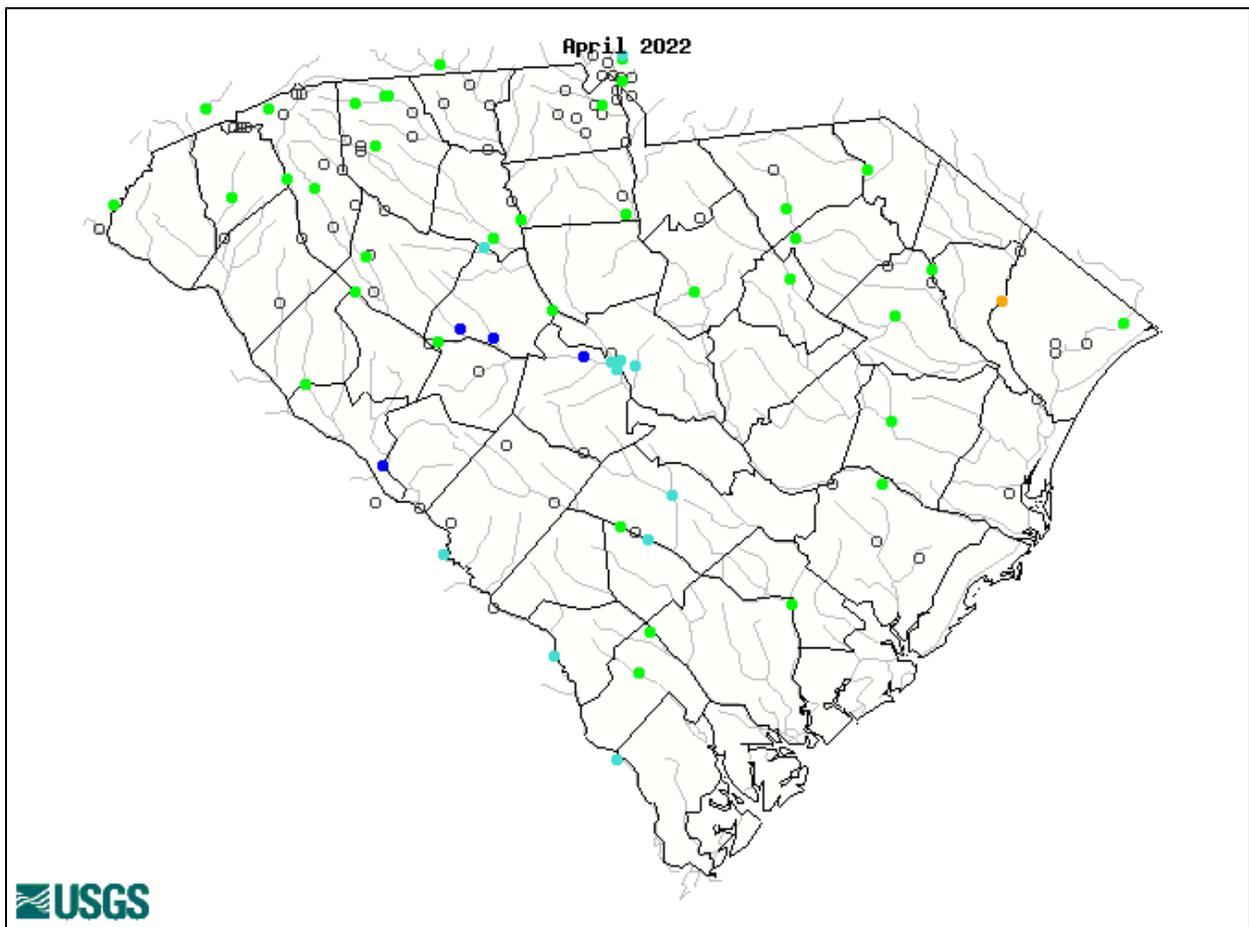


*Precipitation images show observed and percent of normal precipitation for the Water Basins that either flow into or are shared with South Carolina.



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. Rainfall received in April was beneficial for streamflows in the State and relieved below normal conditions observed in March at most of the gages in the Coastal counties. The Little Pee Dee River gage in Horry County, however, is still experiencing below normal conditions. The Little Pee Dee and Waccamaw gages were both at an extreme status in March. Although the overall flows at the Waccamaw gage have improved in April, the Little Pee Dee gage would need more rain to recover from the dryness experienced in the last couple of months. In summary, streamflows across most of the State improved over the past month, but some of the dry areas in the Coastal counties could benefit from future rain events.

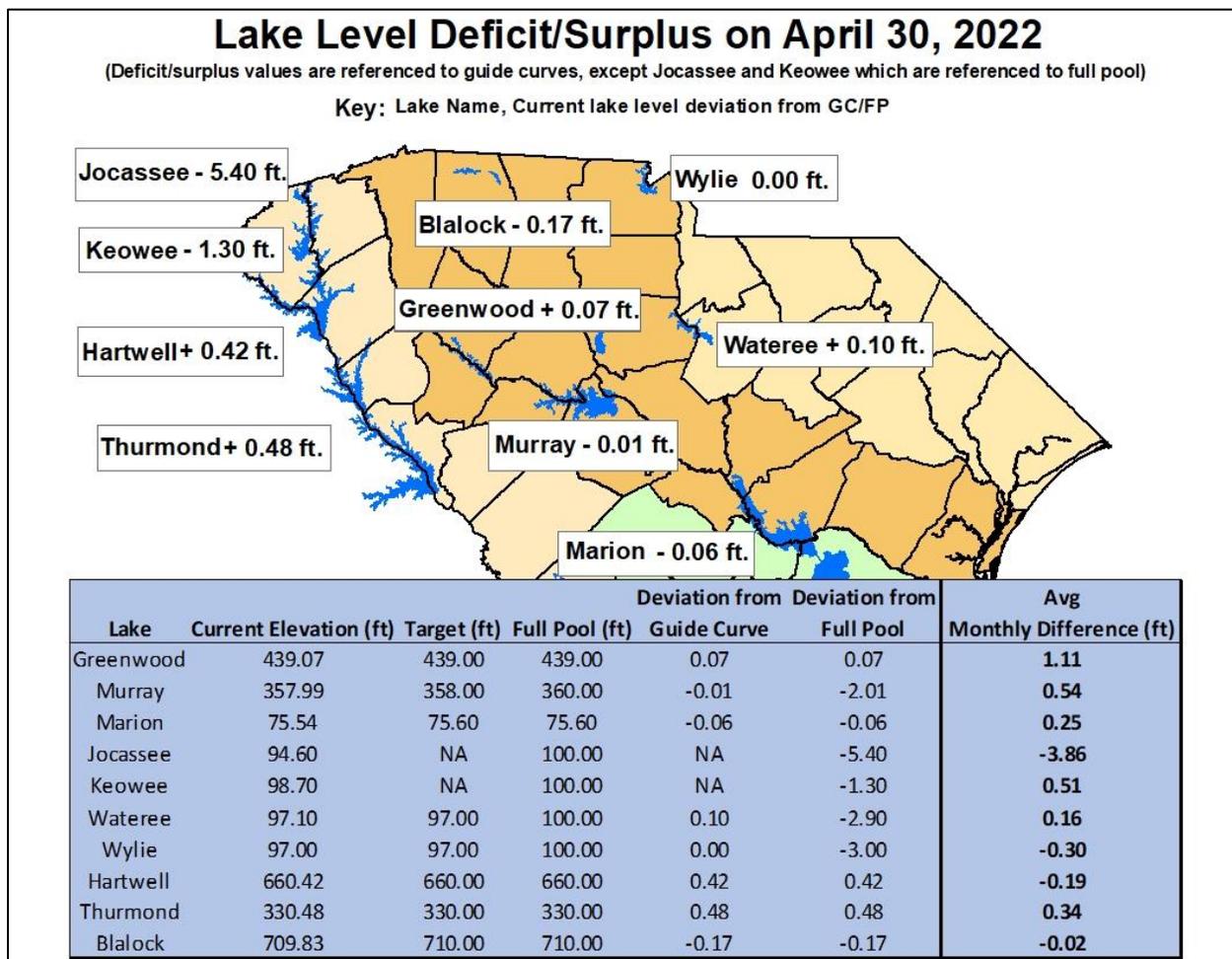


Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		



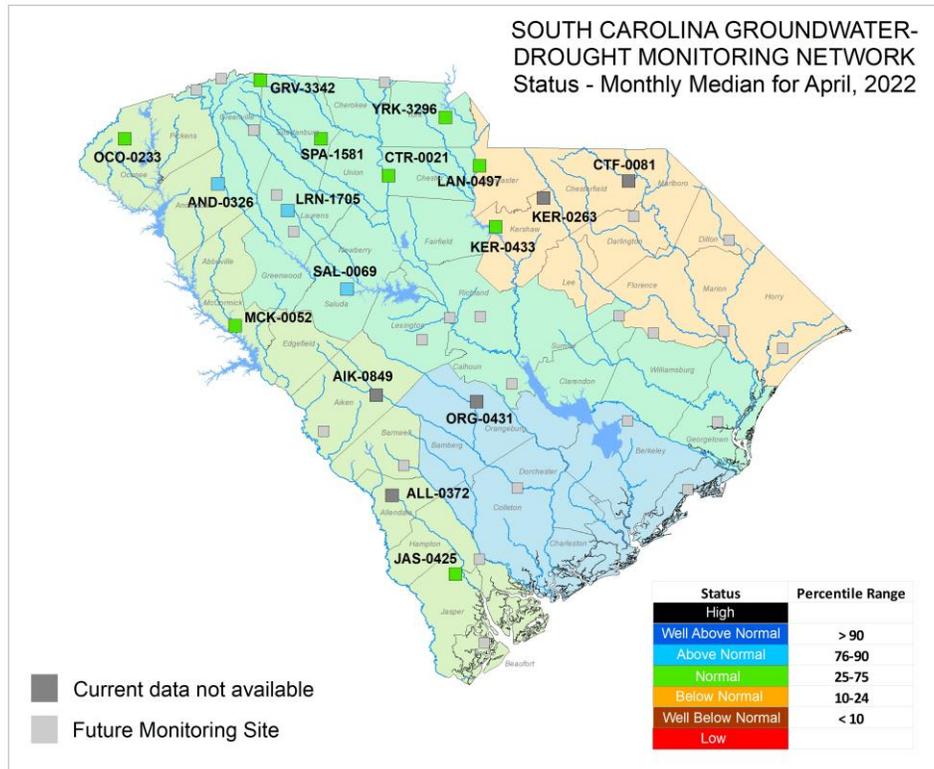
Reservoirs

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 April 30th. Five out of the ten reservoirs are below their target or full-pool elevations in April but are maintained close to their target elevations. The Duke Energy lakes in the Catawba-Wataree 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 the 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 April, the monthly average lake elevations for four of the ten lakes dropped from the last month but are maintained close to their guide curve elevations.



Groundwater

The groundwater condition map for April is based on the monthly medians for the data collected by the USGS and SCDNR. Due to the lack of data, no drought status is assigned to KER-0263 and CTF-0081. As noted in the table below, three out of the twelve wells observed a drop in the monthly median levels from March to April, however, recharge received over the winter and early spring has allowed groundwater levels at the sites noted on the map to remain at normal and above normal levels.



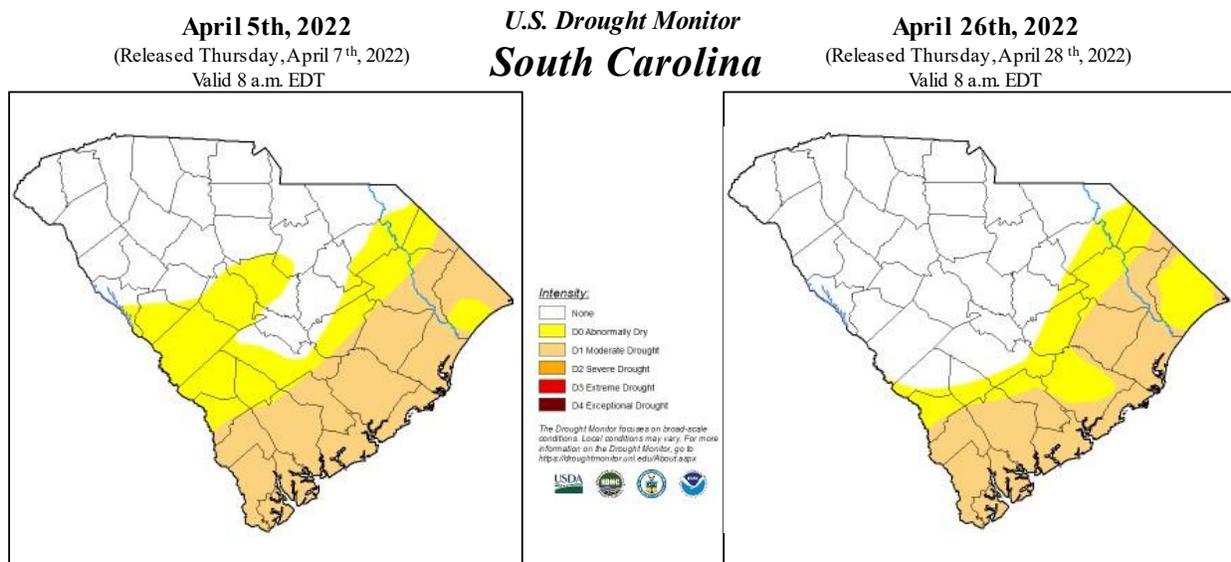
	USGS well sites										DNR Telemetry sites			
	MCK-0052	AND-326	OCO-233	KER-0433	SPA-1581	CTR-0021	YRK-3295	LAN-0497	JAS-0425	CTF-0081	GRV-3342	KER-0263	LRN-1705	SAL-0069
March 2022 Monthly median (ft, below land surface)	38.75	2.71	28.38	46.74	41.38	86.84	23.70	28.03	53.25	NA	43.25	NA	13.19	12.39
April 2022 Monthly median (ft, below land surface)	38.41	2.63	27.19	46.40	41.65	87.16	22.80	27.07	53.08	NA	43.45	NA	13.03	10.65
Difference in monthly median from past month (ft)	0.34	0.08	1.19	0.34	-0.27	-0.31	0.90	0.96	0.17	NA	-0.20	NA	0.16	1.74



Drought

The first U.S. Drought Monitor (USDM) in March (4/5) had 23.91% of the state in abnormally dry (D0) conditions and 30.37% of the state in moderate drought (D1) conditions. Through March, the biggest changes to the map were the reduction of D0 conditions in the Midlands and reduction of D1 conditions portions of the Coastal Plain. These changes took place on the following map (4/12), where 18.59% of the state and 24.33% of the state were in D0 and D1 conditions, respectfully. There were minimal changes to the map through the rest of April. The last map in April (4/26) had 16.47% of the state in D0 conditions and 24.33% of the state in D1 conditions.

The South Carolina Drought Response Committee (DRC) met on April 27th. Prior to this meeting, 11 counties were in incipient drought status, while the other 35 counties were in normal conditions (based on the DRC meeting on March 22nd). In the meeting on 4/27, Berkeley County was taken out of incipient drought status and put in normal conditions due to sufficient rain totals since the last meeting. However, Darlington, Marlboro, and Dillon were downgraded to incipient drought conditions due reported dry conditions (below normal precipitation and soil moisture values). In total 13 counties were categorized as incipient status: Jasper, Beaufort, Colleton, Dorchester, Charleston, Williamsburg, Georgetown, Florence, Darlington, Marlboro, Dillon, Marion, and Horry. The next DRC meeting is not currently scheduled but the DRC is monitoring conditions for future improvement or degradation of county-level drought status.



Summary

While the average temperature for April was normal for the entire state, this was not the case for precipitation. Most portions of the state received above normal rainfall while others received below normal rainfall. Except for the Little Pee Dee River, all streams across the state had normal or above normal flows for April. Reservoir levels and groundwater were all within the normal range for April. The U.S. Drought Monitor in the month of April saw an improvement in abnormally dry (D0) and moderate drought (D1).

Looking Forward

The first half of April has been dry for most of the state, with most of the state receiving less than 75% of normal rainfall. During this period, the driest portions of the state have been the Lowcountry coast and most of the Upstate, receiving less than 25% of normal rainfall. To date, average temperatures across the state have ranged from near normal to 3 degrees above normal, with the Upstate generally receiving above normal temperatures.

For the rest of the month, the current climate outlooks suggest that precipitation will range from near normal to above near normal. Temperature outlooks suggest temperatures will be above normal. If these outlooks hold, it is possible that the U.S. Drought Monitor conditions in South Carolina could improve through May. However, adequate rain will be needed to help remove areas in moderate (D1) and severe (D2) drought conditions with precipitation deficits of 2 to 8 inches since the start of the year.

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