

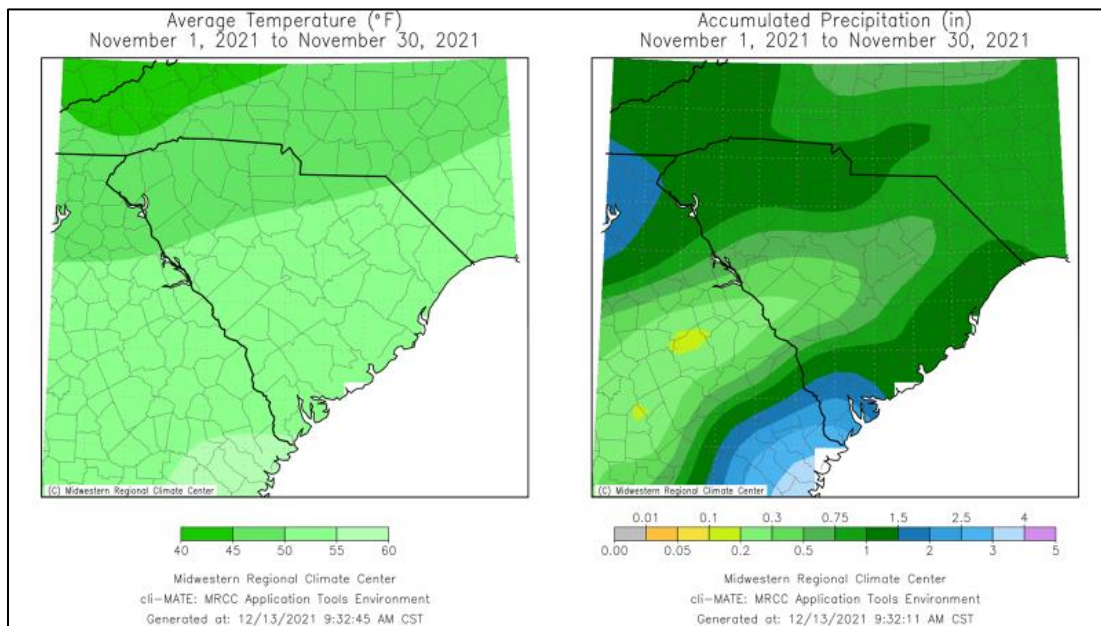
South Carolina Water Resources Monthly Summary For November 2021

Provided by
The South Carolina Department of Natural Resources

Precipitation and Temperature

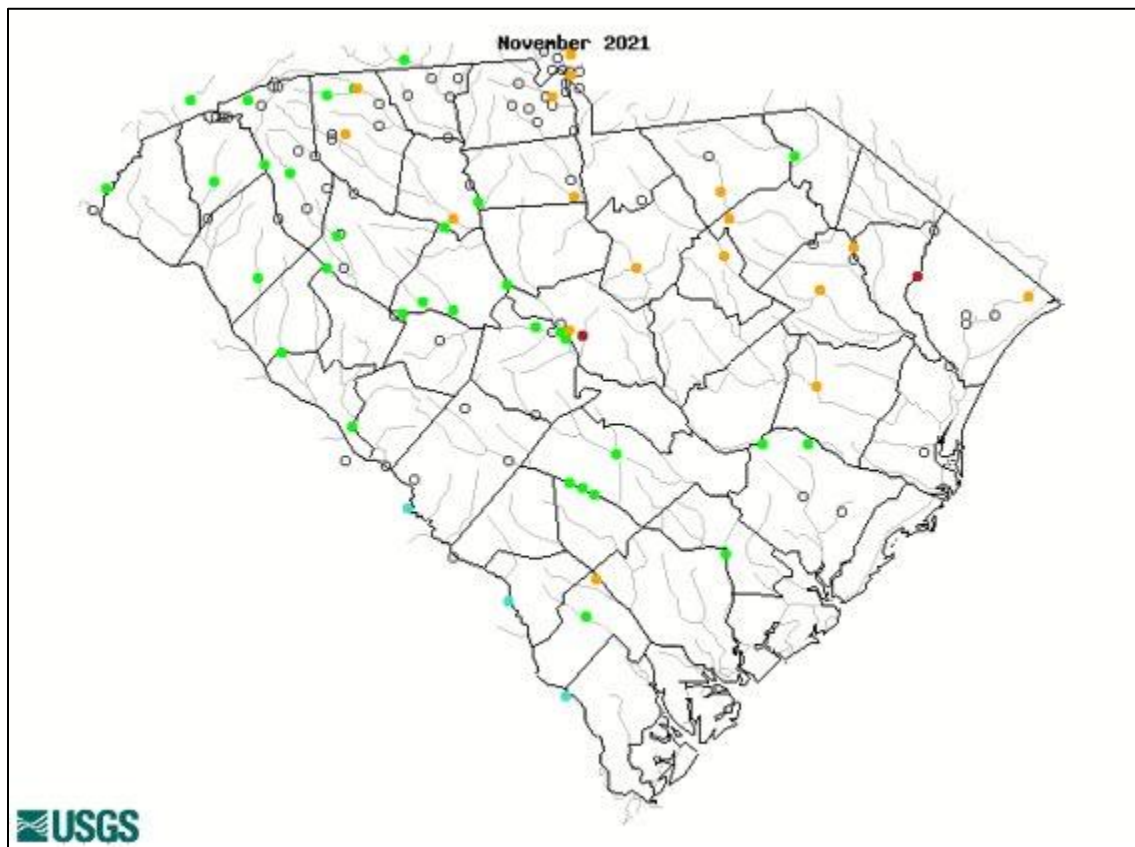
Overall, November's temperatures were below average, and precipitation was well below normal. Statewide, South Carolina had an average temperature of 52.5 degrees, 0.8 degrees below the long-term average (1895-2020) of 53.3 degrees. Hard freezes in the second half of the month brought the growing season to an end. Many locations dropped into the low to mid-20s on November 24 and November 25. The lowest temperature observed during the month was 20 degrees at the NWS station near Union on November 24.

The statewide average precipitation for November 2021 was 0.88 inches, which is 1.85 inches below the long-term average for the month (1895-2020) of 2.73 inches and became the eighth driest November on record. During the month, only the coastal portions of Beaufort and Colleton counties reported slightly above-normal precipitation, with precipitation totals between three and four inches. Elsewhere, it was one of the driest Novembers on record. Parts of the Central Savannah River Area, Midlands, and Pee Dee measured less than 25% of their normal monthly rainfall. The National Weather Service (NWS) station at the Columbia Metropolitan Airport reported its third driest November on record with a total of 0.28 inches. The NWS station at the Florence Regional Airport measured 0.45 inches for the month, making it the fourth driest November since 1948.



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 streamflows for the same month over the gage's period of record. As observed from the map, most of the gages in the northern and northeastern area of the State, which includes the Pee Dee and Catawba basins, as well as parts of the Broad basin, show below normal conditions. Below normal conditions recorded at these gages are consistent with other drought indicators showing dryness in portions of the Catawba and Pee Dee basins. While most of the gages in the Savannah, Saluda, Edisto, and Salkehatchie basins have maintained their normal status, streamflow levels in these basins have gradually declined over the month of November. Overall, streamflow conditions at the vast majority of sites across the State have observed a gradual decline from the past month, reflecting the dryness experienced in the State due to the lack of rain events in November.

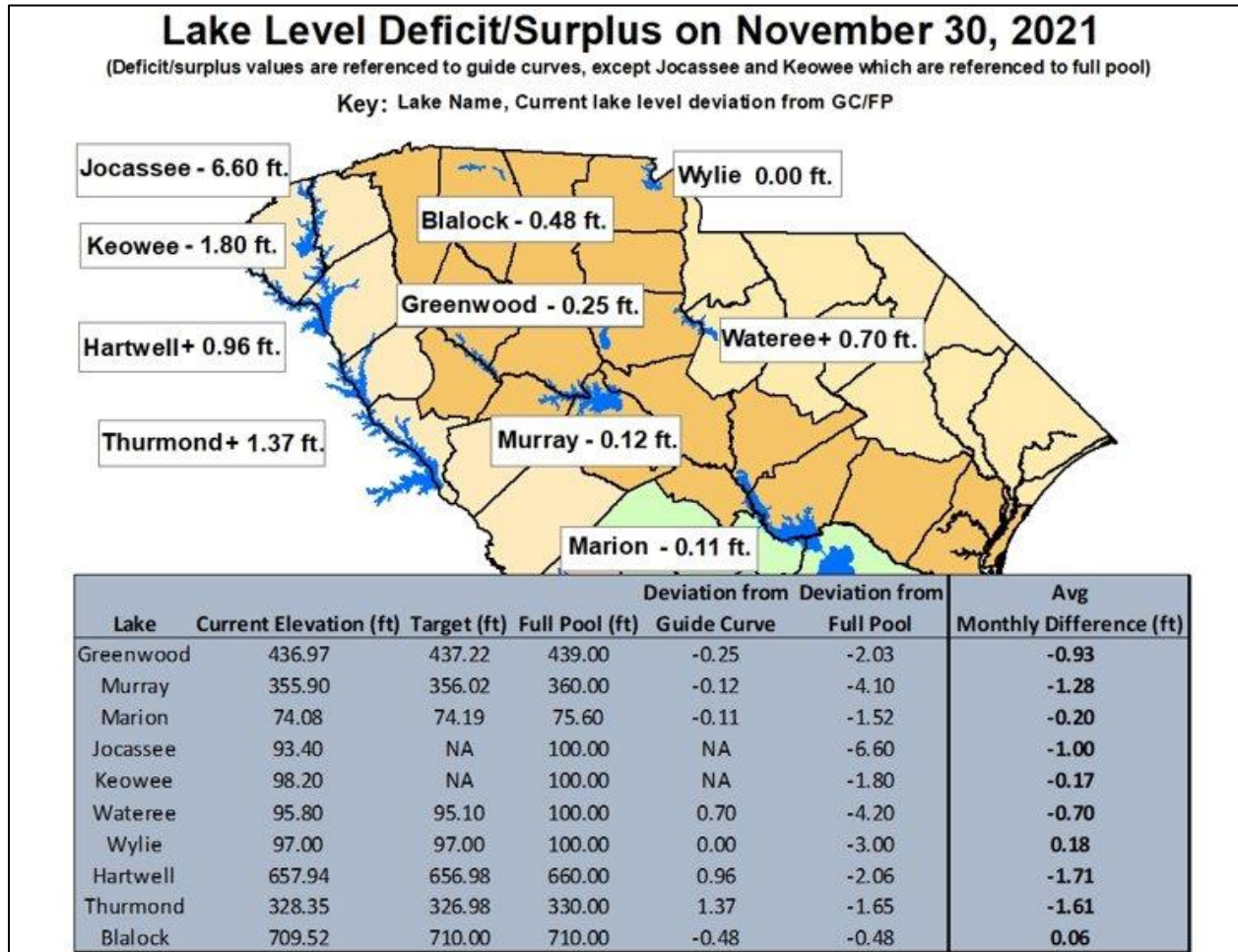


Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		



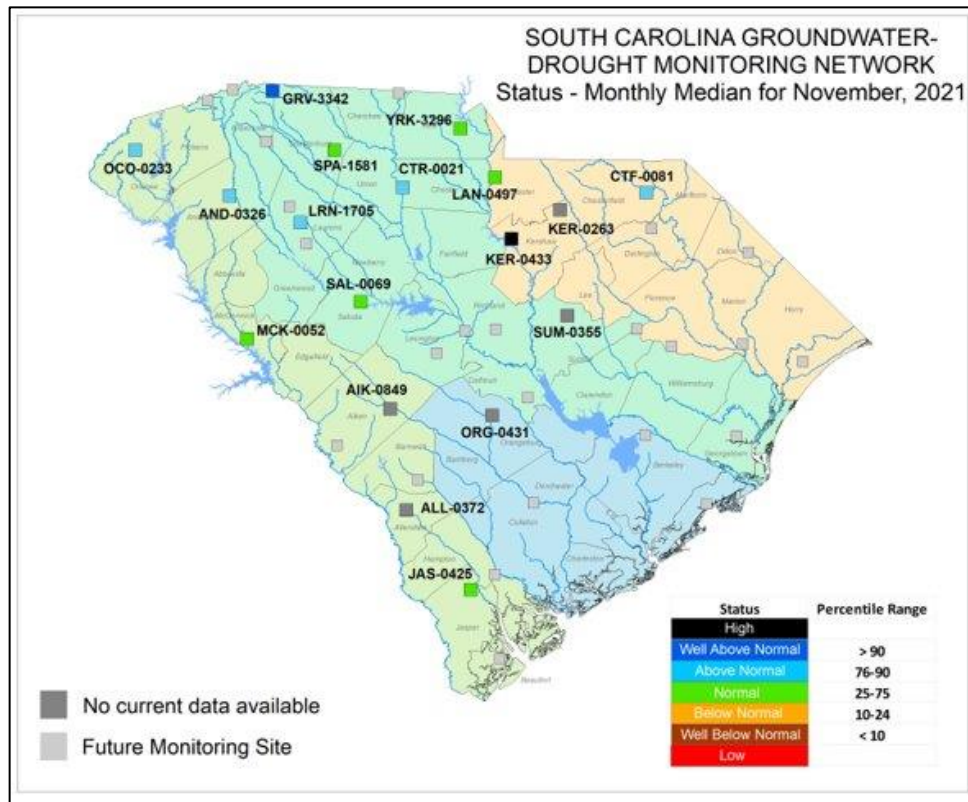
Reservoirs

The map below shows the reservoir level surplus or deficit for each major reservoir and is based on conditions for November 30th. Six of the ten major reservoirs in South Carolina are below their target or full pool elevation. The lake levels for most reservoirs are lowered in the winter months in anticipation of higher inflows that typically occur in late winter and early spring. As of the end of November, the monthly average lake elevations throughout the state have dropped from the last month but are still maintained close to their guide curve elevations.



Groundwater

The groundwater conditions map for November is based on the monthly medians for the data collected by both the USGS and the SCDNR. Though groundwater levels for the wells shown on the map are at normal or above normal conditions, the groundwater levels recorded at most of the well sites are continuing to drop due to the lack of rain. As noted in the table below, eleven out of the fifteen wells show a drop in the monthly median levels from October to November. Unfortunately, due to lack of data for Sumter-355 and Kershaw-0263, a current drought status based on the monthly medians could not be determined for these sites. For rest of the sites, past winter recharge has helped groundwater levels remain at or above normal, but the levels are continuing to drop due to the dryness experienced in the State in the last couple of months.



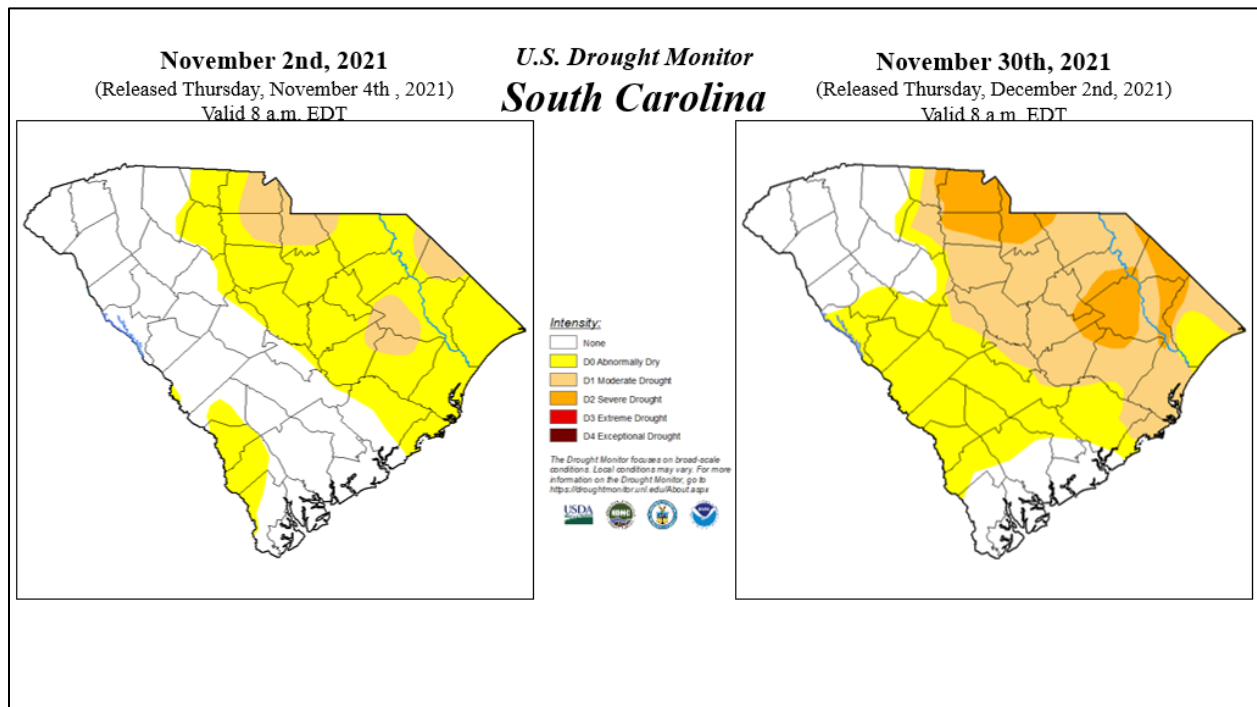
	SUM-0355	MCK-0052	AND-326	OCO-233	KER-0433	SPA-1581	CTR-0021	YRK-3295	LAN-0497	JAS-0425	CTF-0081	GRV-3342	KER-0263	LRN-1705	SAL-0069
October 2021 Monthly median (ft, below land surface)	NA	38.39	3.18	28.11	45.41	40.36	85.57	24.89	32.71	56.51	87.92	40.79	NA	15.52	18.01
November 2021 Monthly median (ft, below land surface)	NA	38.66	3.16	28.70	45.90	40.52	85.77	25.71	33.69	59.42	88.03	41.45	NA	15.53	19.23
Difference in monthly median from past month (ft)	NA	-0.27	0.02	-0.59	-0.49	-0.16	-0.20	-0.81	-0.98	-2.91	-0.11	-0.65	NA	0.00	-1.22



Drought

The first U.S. Drought Monitor (USDM) in November (11/2) had 43.43% of the state in abnormally dry (D0) conditions and 8.15% of the state in moderate drought (D1). D1 conditions were added in portions of the eastern half of the state where precipitation and soil moisture deficits were most intense. The November 23rd USDM map saw an expansion of D0 and D1 conditions. D0 conditions were expanded to areas starting to experience precipitation and soil moisture deficits. D1 conditions were expanded in the Pee Dee region due to below normal streamflows.. The last USDM map of November (30th) saw further expansion of D0 and D1 conditions, while severe drought (D2) conditions were introduced in portions of the eastern half of the state. Expansion of D0 conditions followed building precipitation and soil moisture deficits while D1 conditions were expanded where large precipitation deficits led to soil moisture and streamflow deficits. D2 conditions were introduced in portions of the eastern half of the state where precipitation, soil moisture, and streamflow deficits were most intense. The last USDM map of November had 30.53% of the state in D0 conditions, 31.00% of the state in D1 conditions, and 11.57% of the state in D2 conditions.

The South Carolina Drought Response Committee (DRC) did not meet in November. It was not until the second half of November that the dry conditions started to substantially impact streamflows. The DRC scheduled their next meeting for December 9th, 2021, to discuss the conditions across the state.



Summary

Although November was colder than normal, it was also drier than normal, being the eighth driest November on record for the state. The dry conditions allowed for soil moisture values to decrease across the state. The dry conditions also allowed streams in the eastern half of the state, particularly the Pee Dee region, to fall into below normal conditions. Although the dry conditions allowed for streams to start to fall below normal, the reservoirs and groundwater supplies are still in good standing.

Looking Forward

The first week of December followed the dry pattern of November, allowing for further intensification of precipitation, soil moisture, and streamflow deficits. Luckily, some precipitation finally arrived on the 9th, continuing through the 11th. The state received between 0.25 to 2.00 inches of rain, with localized amounts of over 2.00 inches of rain. Although, this rain did remove all the precipitation, soil moisture, and streamflow deficits, it did help reduce some of the intensifying dryness. Over the next two weeks, the models report some confidence of above normal precipitation for the entire state. More rain would be gladly welcomed as more precipitation is needed to remove the precipitation, soil moisture, and streamflow deficits across the state.

Contact

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