Quarterly Climate Impacts and Outlook

Southern Region

December 2024

Southern Region Significant Events — December 2024



Above normal temperatures were common across the Southern Region, while precipitation was widely variable. This led to a whiplash of drought and precipitation related impacts this fall. Agricultural harvests were generally below expectations but improved over recent years.

Overview

Fall began with above normal temperatures across the northern and far western portions of the Region and below normal temperatures in the southern portions of the Region. Aside from Northeast Tennessee, the Southern Region was spared direct impacts from Hurricane Helene.

October saw well above normal temperatures for the entirety of the Southern Region, with Texas seeing its warmest October on record. Precipitation was well below normal across the majority of the Southern Region, with most stations recording zero to 25 percent of normal.

November temperatures were above normal in the entirety of the Southern Region. The greatest departures from normal were seen along the Gulf Coast of Mississippi and Louisiana where stations averaged nine to twelve degrees F above normal.

Regional Climate Overview — Fall 2024

Temperature and Precipitation

Departure from Normal Departure °C Departure

Fall 2024 temperatures were above normal for the entirety of the Southern Region, with most stations in the Region running 2F to 6F above normal. The relative cool spots in the Region were in Deep South Texas and northwestern Mississippi where temperatures were near normal to 2F above normal. No large area of the Southern Region experienced below normal temperatures during fall 2024. Percent of Normal Precipitation (%) 9/1/2024 - 11/30/2024



Precipitation was mixed across the Southern Region in during fall 2024. The high area for the Region was the Texas and Oklahoma Panhandles where precipitation was 150 to 300 percent of normal. The dry spots for the Region were East, Central. South, and Far West Texas where precipitation was 5 to 25 percent of normal. Drought Overall Change

9/10/2024 - 12/3/2024



There was a mix of degradations and improvements in drought conditions across the Southern Region in fall 2024. Degradations were common across the southern half of Texas, where degradations of three and four classes were observed. Degradations were also observed in central Arkansas, western Louisiana, southeastern Mississippi and eastern Tennessee. Improvements were observed in the western Tennessee, much of Mississippi, eastern Arkansas, the Texas Panhandle, and western Oklahoma.

Southern Regional Impacts

Drought, Agriculture, and Water Supply

Fall 2024 saw the total amount of area experiencing drought in the Southern Region decrease from 41.86 percent on September 10th to 38.21 percent on December 3rd, according to the US Drought Monitor. September saw improvements in drought conditions in the eastern portions of the Region and degradations in the West. While an improvement over 2023, the cotton harvest in Texas and Oklahoma suffered from hot and dry conditions. There was widespread degradation of drought conditions across the Southern Region during October, with some areas of Texas, Oklahoma, and Arkansas saw as many as three classes of degradation in drought status. November saw ample rainfall across the northern portions of the Region and resulted in widespread improvements in drought status. Degradations were common in South, Central, and Far West Texas, portions of Louisiana and eastern Tennessee. Eastern and southern portions of the Region continued to see ongoing drought impacts, including low stream flows, low reservoir storage, low soil moisture, and stressed range and pasture conditions.



US Drought Monitor depiction of the Southern Region. The US Drought Monitor is produced by the National Drought Mitigation Center, the USDA, and NOAA.

Precipitation

Seasonal Outlook

Temperature



The seasonal temperature outlook from NOAA's Climate Prediction Center calls for enhanced probabilities of above average temperatures for much of the Southern Region. The highest probabilities, 50-60 percent chance of above normal temperatures, are along the southern tier of the Region. Probabilities decrease as one looks northward to equal chances in much of Oklahoma, the northern Texas Panhandle, northern Arkansas, and far western Tennessee.

The precipitation outlook for January through March calls for enhanced probabilities of below normal precipitation in the southwest of the Region at 50-60 percent. This tapers as one looks northeast across the Region to enhanced probabilities of above normal precipitation across much of Arkansas, northern Mississippi, and the western two-thirds of Tennessee.

ENSO Outlook

Currently, conditions in the Tropical Pacific suggest neutral ENSO conditions. Weak La Niña conditions are forecast to emerge within the next three months and persist through the coming spring season, with a likely transition back to neutral conditions by summer.

Southern Partners

NOAA/NWS Climate Prediction Center (cpc.ncep.noaa.gov)

NOAA National Centers for Coastal Ocean Science (coastalscience.noaa.gov)

NOAA Gulf of Mexico Collaboration Team (regions.noaa.gov/gulf-mexico)

NOAA/NESDIS National Centers for Environmental Information (ncei.noaa.gov)

NOAA/NWS Southern Region (weather.gov/srh)

Southern Climate Impacts Planning Program (southernclimate.org)

Southern Regional Climate Center (srcc.tamu.edu)

