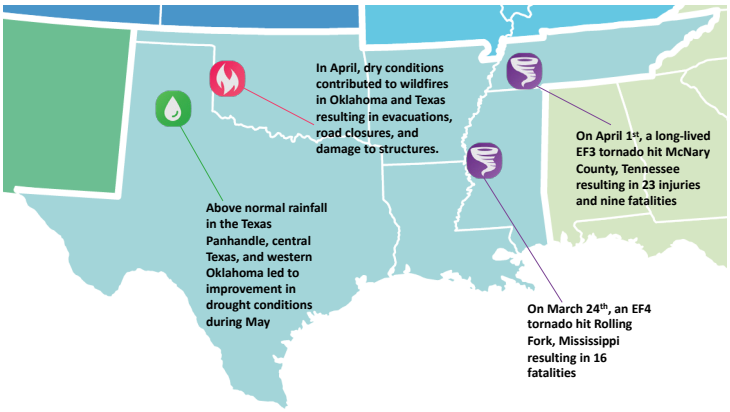
Quarterly Climate Impacts and Outlook

Southern Region

June 2023

Southern Region Significant Events — *Spring 2023*



Severe weather outbreaks in March and April led to seventy tornadoes across the Southern Region resulting in injuries and fatalities in several cases. Above normal rainfall in western Texas and Oklahoma in May led to marked improvement in what had been persistent drought conditions.

Spring started off with above normal temperatures and variable precipitation across the Southern Region in March, with below normal precipitation in the south and above normal precipitation in the north. There were thirty tornadoes across the region in March, leading to 119 injuries and 26 fatalities.

April started off warm before a cool pattern dominated the last half of the month, while precipitation was below normal in the north and west of the region and above normal along the Gulf Coast. Drought conditions across western Texas and Oklahoma persisted and led to negative impacts on winter wheat crops and pasture conditions.

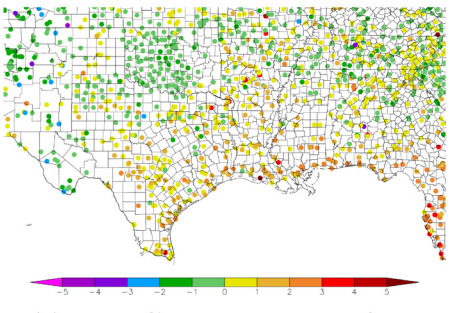
During May, areas of central Texas, the Texas Panhandle, and Oklahoma received much needed rainfall and saw marked improvement in drought conditions. The eastern portions of the region saw below normal precipitation in May, while temperatures were largely near to or above normal.

Regional Climate Overview — *Spring 2023*

Temperature and Precipitation

Departure from Normal Temperature °F

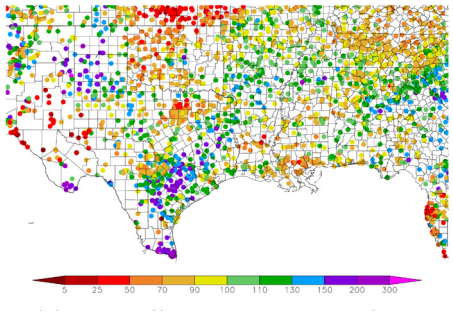
3/1/2023 – 5/31/2023



Spring 2023 temperatures were near normal across much of the Southern Region, with most stations averaging 1F below to 1F above normal. Along the Gulf Coast, temperatures at many stations were 1F to 3F above normal. Below normal temperatures were concentrated in Oklahoma and the Texas Panhandle, with most stations there averaging 1F to 2F below normal.

Percent of Normal Precipitation (%)

3/1/2023 – 5/31/2023

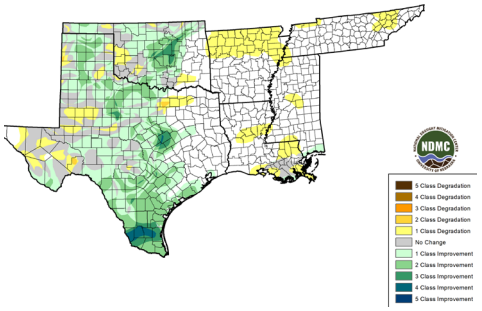


Below normal precipitation was common in central Oklahoma, northeastern Texas, the area north and west of San Antonio, far west Texas, eastern Tennessee, and much of Louisiana, with many stations receiving 25 percent to 70 percent of normal. Above normal precipitation was common in the Texas Panhandle, south Texas, and the Big Bend area of Texas with many stations receiving 150 percent to 300 percent of normal.

Drought

Overall Change

2/28/2023 – 5/30/2023



Areas of the Southern Region experiencing drought largely saw conditions improve over the spring months. Conditions generally improved across Oklahoma, the Texas Panhandle, central Texas, and Deep South Texas. Isolated areas of Deep South Texas, central Texas, and central Oklahoma saw three to four classes of improvement in Drought Monitor status. The eastern portions of the region remained drought free, except for a persistent area of moderate drought in southeastern Louisiana.

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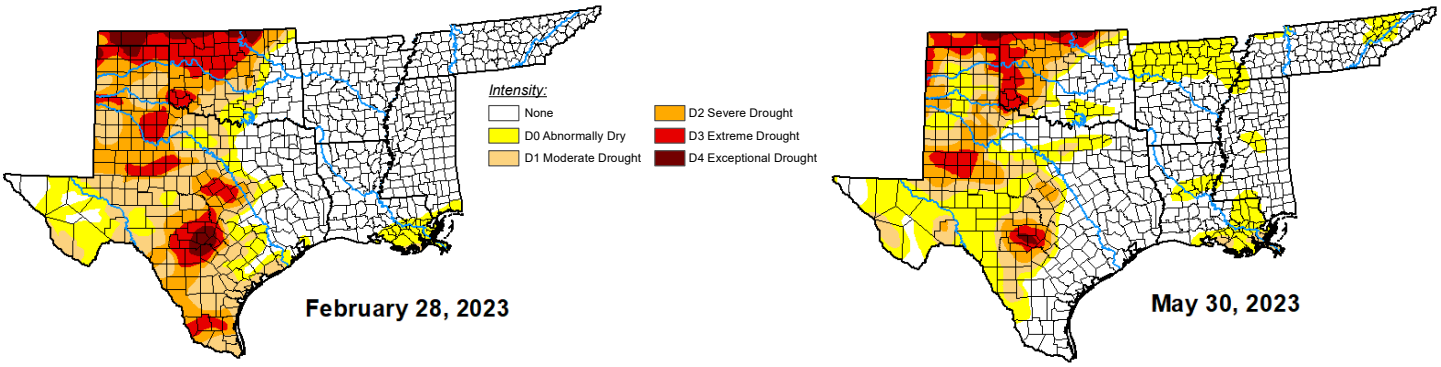
Southern Regional Impacts

Drought, Agriculture, and Water Supply

Spring 2023 saw a decrease in the total area experiencing moderate drought conditions, mostly in the western portions of the region. Areas of extreme and exceptional drought that had persisted across broad stretches of western Texas and Oklahoma saw marked improvement. The percentage of the Southern Region experiencing moderate drought decreased from 16 percent on February 28th, 2023 to 10 percent on May 30th, 2023. Areas experiencing extreme drought decreased from nine percent on February 28th, 2023 to five percent on May 30th, 2023. Improvement in drought conditions across the region led to recovery of Mississippi River water levels and flows, improving the outlook for shipping, though levels and flows on the lower Mississippi remain below their long-term historical averages.

Improving drought conditions is western agricultural areas and drought-free conditions across the eastern portion of the region led to favorable conditions for spring planted crops and pasture conditions. Despite improving conditions, winter wheat crops in Oklahoma and Texas continued to be affected by current and past drought conditions with only 23 percent rating good to excellent in Texas and 30 percent rating as good to excellent in Oklahoma.



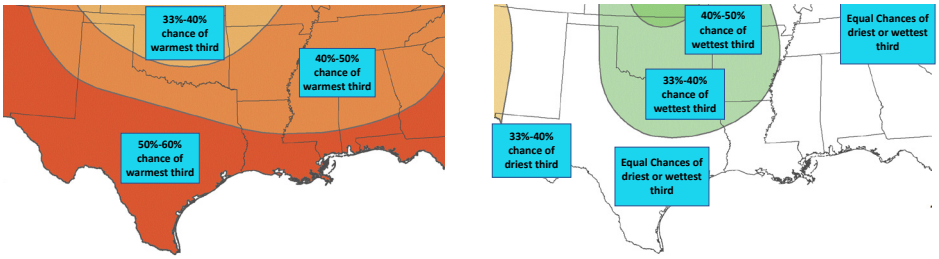
US Drought Monitor depiction of the Southern Region. The US Drought Monitor is produced by the National Drought Mitigation Center, the USDA, and NOAA.

Seasonal Outlook

Temperature

Precipitation

Outlook for July-September 2023



The seasonal temperature outlook from NOAA's Climate Prediction Center calls for higher probabilities for above average temperatures across the southern region. Chances for above normal temperatures are greatest across southern Texas, the Gulf Coasts of Texas and Louisiana, and in Tennessee. This is supported by forecasts of strengthening El Niño conditions in the Tropical Pacific, dynamical model support, and decadal trends in the region.

The precipitation outlook for July through September reflects strengthening El Niño conditions and calls for mixed precipitation signals across the region. Below-normal precipitation is more likely in far west Texas, being attributed to a forecasted sluggish start to the Southwest Monsoon. For the southern and eastern portions of the region and far west Oklahoma there are equal chances for wetter or drier than normal conditions. Northeastern Texas, northwestern Louisiana, and much of Arkansas and Oklahoma have the greatest chances of wetter than normal conditions.

ENSO Outlook

El Niño conditions emerged in May and are expected to persist into the winter months, following the recent three-year La Niña event. El Niño conditions are associated with reduced tropical cyclone activity in the Gulf of Mexico, due to increased vertical wind shear, trade winds, and increased atmospheric stability.

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)