Quarterly Climate Impacts and Outlook

Southern Region

March 2025

Southern Region Significant Events — Winter 2024-2025



Swings in temperature throughout the winter season resulted in near-average temperatures for much of the Region during winter 2024-2025. Dry conditions intensified in the western portions of the Region leading to the reemergence of Exceptional Drought in Central Texas, while the East was relatively wet this winter.

Overview

Winter began with above normal temperatures across the Region, with Texas and Oklahoma experiencing top ten Decembers in terms of temperature. Dry conditions dominated in the western portions of the Region, while the East saw above normal precipitation.

A snowstorm hit coastal regions of southeast Texas, Louisiana, and Mississippi on January 21-22 before moving eastward, setting all-time records for storm total snow and extreme cold. Below normal temperatures and above normal precipitation in the East.

A fatal severe weather outbreak in Tennessee in early February brought tornadoes, hail, flash flooding, and severe wind to the eastern portions of the Region. Stations in these areas received more than 150 percent of normal precipitation for the month.

Regional Climate Overview — Winter 2024-2025

Temperature and Precipitation



Departure from Normal

Temperature °F

Winter 2024-2025 temperatures were near normal for much of the Southern Region, with most stations running -2F to +2F of normal. Most of the stations running below normal were in the northern portions of the Region from western Oklahoma east through Tennessee. Stations in southern twothirds of Texas and Louisiana were generally +1-2F above normal.

Percent of Normal **Precipitation (%)** 12/1/2024 - 2/28/2025



Precipitation was well below normal in the western portions of the Region during winter 2024-2025, with 41 counties in Texas and 8 in Oklahoma observing one of their five driest winters on record. Eastern Tennessee also saw below normal precipitation. A band of well above normal precipitation, 150-200 percent of normal, extends from Dallas northeast through western Tennessee.

Drought **Overall Change** 12/3/2024 - 3/4/2025

The Region saw degradations in drought conditions across Central and Western Oklahoma, the Texas Panhandle, Central, Deep South, and Far West Texas. The most severe degradations were two classes across a wide swath of Texas Panhandle and Central Texas. The eastern portions of the Region largely saw improvement or remained drought free as of March 4. The largest improvements were 3-4 classes in southcentral Arkansas and isolated areas of the other five states.

Southern Regional Impacts

Drought, Agriculture, and Water Supply

Winter 2024-2025 saw the total amount of area experiencing drought in the Southern Plains decrease from 38 percent on December 3 to 32 percent on March 4. Much of this improvement came in the eastern portions of the Region, including the disappearance of Extreme Drought (D3) from Southern Tennessee. By contrast western portions of the Region saw large expansion of areas of abnormal dryness, drought status, and the severity of existing drought conditions. This includes the reemergence of Exceptional Drought (D4) in Central Texas and the expansions of D4 in Far West Texas to cover almost all of that area of the State. Large areas of the Texas and Oklahoma Panhandles that were previously drought free, as of March 4 are classified as Abnormally Dry (D0) or Moderate Drought (D1). As of March 4, much of southeastern Oklahoma, East Texas, Arkansas, Louisiana, Mississippi, and Western Tennessee remain free of drought going into the spring.

In contrast to the dryness in the west, during February a wide swath of above normal precipitation extending from the ArkLaTex area northeastward through western Tennessee. Station in these areas received 150 to 200 percent of normal. A state of emergency was declared for parts of Obion County in Tennessee on February 15th, after a levee failed and flooded the community of Rives, home to about 300 people.



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



The seasonal temperature outlook from NOAA's Climate Prediction Center calls for enhanced probabilities of above average temperatures for the entire Southern Region. The highest probabilities, 60-70 percent chance of well above normal temperatures, are in Far West Texas. The probabilities decrease as one looks eastward across the Region, decreasing to 33-40 percent.

The precipitation outlook for April through June calls for enhanced probabilities of below normal precipitation. A 40-50 percent chance of well below normal precipitation in West Texas, the Texas Panhandle, and Western Oklahoma tapers to a 33-40 percent chance of well below normal precipitation across Central Texas, and Eastern Oklahoma. The remainder of the Southern Region shows equal chances for above or below normal precipitation.

ENSO Outlook

Conditions in the Tropical Pacific suggest a transition from weak La Niña to neutral conditions as of March 2025. Neutral conditions are forecast to dominate during the next three months and persist through 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)

