Quarterly Climate Impacts and Outlook

Gulf Coast Region

March 2024

Gulf Coast Region Significant Events — Winter 2023-2024



Winter 2023-2024 was variable in terms of temperature and precipitation. A cold snap in January brought extremely cold temperatures to much of the region. January also brought much needed rainfall across the region. Forecasts point to a transition to La Niña conditions in the Tropical Pacific by mid-summer.

Overview

Winter began in December with above normal temperatures in the west of the Gulf Coast region and near normal to below normal temperatures in the east. Precipitation was below normal in much of the region, except for coastal Louisiana and northern Florida.

January brought below average temperatures for much of the region; only Florida was above average for the month. Precipitation was well above normal for much of the Gulf Coast except Florida and West Texas. Stations in East Texas saw totals above 300 percent of normal.

February brought with it the return of above normal temperatures to the region, except Florida where most stations averaged 1 to 2 degrees below normal. Precipitation was generally below normal for February, with isolated areas of above normal precipitation in Texas, Louisiana, and Florida.

Regional Climate Overview — Winter 2023-2024

Temperature and Precipitation

12/1/2023 - 2/29/2024 12/1/2

Winter 2023-2024 temperatures were near normal across much of the Gulf Coast region, with temperatures averaging 2F below normal to 2F above normal in most locations. The Gulf Coast of Florida was the cool spot with most stations 2F below normal. A cold air mass in late January affected much of the Gulf Coast, bringing with it extremely cold temperatures for the region.

Departure from Normal

Temperature °F

Percent of Normal Precipitation (%) 12/1/2023 - 2/29/2024



Precipitation during winter 2023-2024 was variable across the Gulf Coast region. The coasts of Texas, Louisiana, Florida and Mississippi, and the Texas Panhandle received anywhere from 130 to 300 percent of normal precipitation. Inland Mississippi, Alabama and Louisiana were near normal. While the Gulf Coast of Alabama was below normal. Drought Overall Change

12/5/2023 - 3/5/2024



Drought conditions saw dramatic improvement in the west portions of the Gulf Coast region with areas of Texas, Louisiana, Mississippi, and northern Alabama seeing as many as four classes of improvement from December 5th, 2023 to March 5th, 2024. Isolated areas of drought persist in Texas, Louisiana, and northwestern Mississippi. Florida and Alabama are largely drought free as of March 5th.

Gulf Coast Regional Impacts

Drought, Agriculture, and Water Supply

Winter 2023-2024 saw the percentage of areas experiencing some level of drought in the Gulf Coast states decrease from 38 percent on December 5th, 2023 to 11 percent on March 5th, 2024 according to the US Drought Monitor. The total amount experiencing Moderate Drought decreased by 7 percent from 14 to 7 percent, the total area of the Gulf Coast region experiencing Severe Drought decreased from 8 to 3 percent, and Extreme Drought decreased from 12 to 1 percent. As of March 5th, there is no Exceptional Drought in the Gulf Coast region, down from 4 percent as of December 5th. The majority of improvements were observed in East Texas, Louisiana, Mississippi, and Northern Alabama.

Recent rainfall across much of the region has improved soil moisture conditions in agricultural areas leading to improvements in pasture, range, and field conditions. Many stations directly adjacent to the Gulf of Mexico from Texas to Florida recorded total winter precipitation accumulations in the top 10 for their period of record.



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 across the entire Gulf Coast Region. The highest probabilities, 40 to 50 percent chance of well above normal temperatures, are called for over West Texas, extreme northern Florida, northern Alabama, and northern Mississippi. Across East Texas, Louisiana, much of Florida, southern Alabama, and southern Mississippi, the outlook shows a 33 to 40 percent chance.

The precipitation outlook for April through June calls for enhanced probabilities of above normal precipitation in the east of the Region and for below normal precipitation in the far west. The highest probabilities of below normal precipitation are in West Texas and the Texas Panhandle, while the greatest probabilities for above normal precipitation are across Louisiana, Mississippi, Arkansas, and Tennessee. Deep South and Central Texas have equal chances of above or below normal precipitation.

ENSO Outlook

El Niño conditions present throughout the winter are rapidly weaking and are expected to continue weakening throughout the spring months. Longrange forecasts suggest emerging La Niña conditions by summer, which can contribute to above normal tropical activity in the Gulf of Mexico.

Gulf Coast 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)

Southeastern Regional Climate Center (sercc.com)

Southern Climate Impacts Planning Program (southernclimate.org)

Southern Regional Climate Center (srcc.tamu.edu)

