## Quarterly Climate Impacts and Outlook

# **Gulf Coast Region**

December 2023

## Gulf Coast Region Significant Events — Fall 2023



This Gulf Coast Quarterly Impact and Outlook is the first in a series of climate summaries for the Gulf Coast States (Florida, Alabama, Mississippi, Louisiana, and Texas). Future summaries will be issued in the fourth week of March, June, September, and December. They are produced by the Southern Regional Climate Center.

#### **Overview**

Fall began in September with above normal temperatures for much of the Gulf Coast, particularly in the west. Precipitation ranged from 25 to 75 percent of normal for most of the Gulf Coast.

October saw much-needed rain along the central Texas coast and in parts of the Florida Panhandle, which led to improvements in drought conditions in these areas. October saw near-normal temperatures for the Gulf Coast.

Temperatures were below normal along the western Gulf coast in November, while the eastern Gulf Coast was near-normal. Precipitation was generally below normal in November, except for deep south Texas and portions of the Florida Panhandle which received 200 to 400 percent of normal precipitation.

Of the 20 named storms, three affected the Gulf Coast States in 2023:

Tropical Storm Arlene (June, South FL), Tropical Storm Harold (August, South Texas), and Hurricane Idalia (August, FL).

### **Regional Climate Overview** — Fall 2023

#### **Temperature and Precipitation**





Fall 2023 temperatures were above average in the west of the Gulf Coast region, with temperatures averaging 2F to 4F above normal , for much of west and central Texas transitioning to near normal to 2 F above normal across much of Louisiana and Mississippi. The eastern Gulf Coast Region by contrast was typically near normal to 1F below normal, with the coolest temperatures observed along the Alabama and Florida Panhandle coasts. Percent of Normal Precipitation (%)



Drought Overall Change

9/5/2023 - 11/28/2023



Above normal precipitation was observed in much of Texas and the eastern two thirds of the Florida Panhandle. The remainder of the Gulf Coast Region was below average with totals ranging from 75 percent below normal in northern Louisiana, Mississippi, and Alabama to 25 percent below normal along the central Texas coast and central Louisiana coast.

The eastern Gulf Coast region generally saw degradation of drought conditions typically ranging from one to two classes of degradation from September 5th to November 28th. Areas in northern Mississippi saw up to five classes of degradation. Across Louisiana and southeast Texas Exceptional Drought persisted throughout the Fall. Substantial improvement in drought conditions was observed throughout much of Texas, outside of the southeast.



## **Gulf Coast Regional Impacts**

#### Drought, Agriculture, and Water Supply

Fall 2023 saw the percentage of area experiencing some level of drought in the Gulf Coast states hold relatively steady, down 2 percent from 57 percent on September 5th to 55 percent on November 28th according to the US Drought Monitor. The total area experiencing Abnormal Dryness or Moderate Drought increased by about 5 percent each to about 12 percent of the Gulf Coast states in each class. The total area of the Gulf Coast region experiencing Extreme or Exceptional Drought decreased from 28 percent on September 5th to 24 percent on November 28th. Improvements were noted in particular along the Texas Gulf coast southwest of Trinity Bay and west through central Texas, while exceptional drought conditions expanded eastward into Mississippi.

Crops in the western portions of the Gulf Coast region continued to be hampered by ongoing hot and dry conditions during the first half of the Fall. Only 10 percent of the cotton crop was rated as Good to Excellent in Texas. Poor grazing conditions forced producers to supplemental feed or sell livestock. Forecasts for the ongoing citrus harvest in Florida are for improvements over the previous season.



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



The seasonal temperature outlook from NOAA's Climate Prediction Center calls for equal chances of above average or below average temperature across much of the Gulf Coast Region. The only exception is much of Florida where the outlook calls for elevated probabilities of near-normal temperatures. This is primarily supported by dynamical model forecasts and the ongoing El Niño event.

The precipitation outlook for January through March reflects the ongoing El Niño conditions and calls for higher probabilities for above normal precipitation across the Gulf Coast. The highest probabilities for above normal precipitation are along the eastern Gulf Coast where there is a 60 to 70 percent probability of above average precipitation. Only deep south Texas shows equal chances of above or below normal precipitation.

## **ENSO Outlook**

El Niño conditions persisted through the fall and are expected to persist into the spring months of 2024. Longrange forecasts suggest a weakening of the El Niño event later in the spring. Across the Gulf Coast during El Niño winters, above normal precipitation is common.

#### **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)

Southeast Regional Climate Center (sercc.com)

Southern Climate Impacts Planning Program (southernclimate.org)

Southern Regional Climate Center (srcc.tamu.edu)

