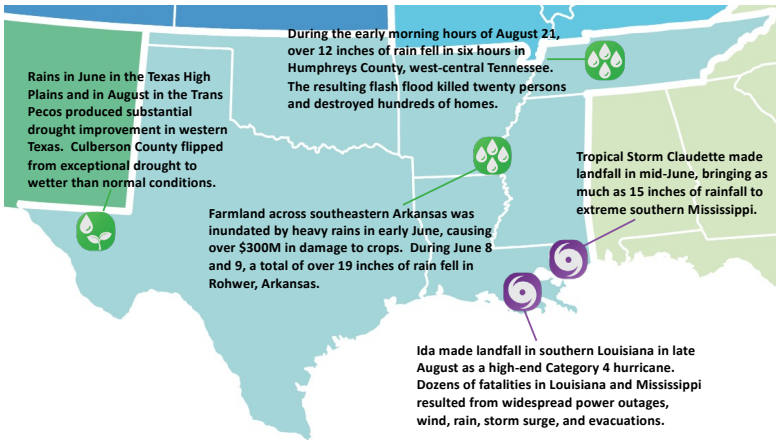


Southern Region Significant Events — Summer 2021



Even before the Atlantic hurricane season had reached its climatological peak, two named storms made landfall in Louisiana. The first, Tropical Storm Claudette, had its greatest impact farther east, in Alabama. The second, Hurricane Ida, caused devastating damage across southeastern Louisiana, and its remnants would later affect the Northeast.

Overview

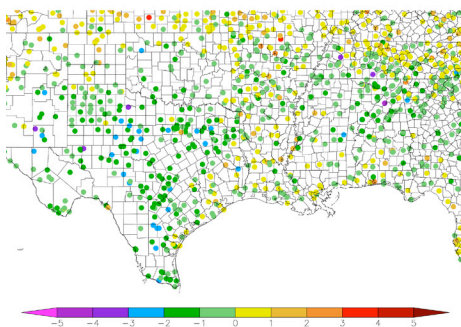
June was mild, near the median of historical temperatures across the region. Thanks in part to Claudette, Mississippi had its third wettest June on record, with an average of 9.96 inches. The wet conditions persisted in July, with Mississippi 10th wettest on record and Texas 12th wettest. The widespread precipitation contributed to continued mild temperatures. July temperature anomalies generally ranged -3 °F to +1 °F compared to the long-term mean. August temperatures recovered somewhat, generally being slightly above the long-term average. Rainfall was generally near to above normal, with Mississippi again leading the way with its fourth-wettest August on record. Tennessee was not far behind, at fifth-wettest on record.

The summertime rainfall for Mississippi was by far the largest on record. The 24.78 inch total easily eclipsed the previous record of 21.14 inches set in 2017.

Regional Climate Overview — Summer 2021

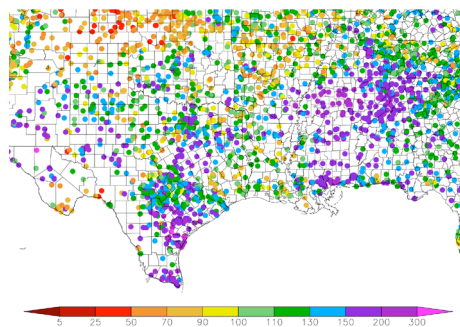
Temperature and Precipitation

Departure from Normal Temperature °F 6/1/2021 – 8/31/2021



At most stations outside of Texas, summertime average temperatures were within 1 °F of normal. Generally speaking, daytime maximum temperatures were slightly cooler than normal, while daytime minimum temperatures were slightly warmer than normal. Most of Texas was 0-2 °F cooler than normal. Year to date, temperatures across the region have generally averaged below normal, unlike most of the rest of the United States.

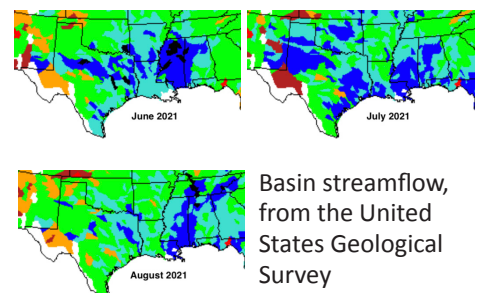
Percent of Normal Precipitation (%) 6/1/2021 – 8/31/2021



Summer 2021 was exceptionally wet across most of South Texas, parts of West Texas, and almost all of Mississippi, with many stations reporting more than double the normal monthly precipitation amounts. Many precipitation reports were missing from southeastern Louisiana in the aftermath of Hurricane Ida. Despite this, summer 2021 was fourth-wettest historically across the region, behind 2017, 2004, and 1989.

Surface Water

Monthly Average Streamflow



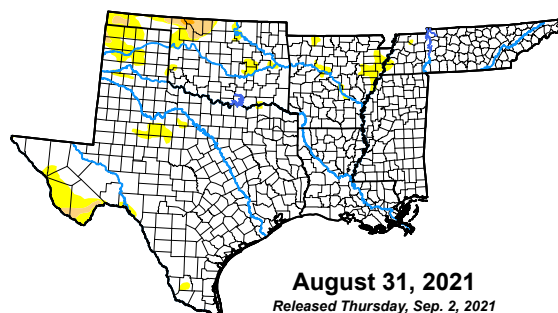
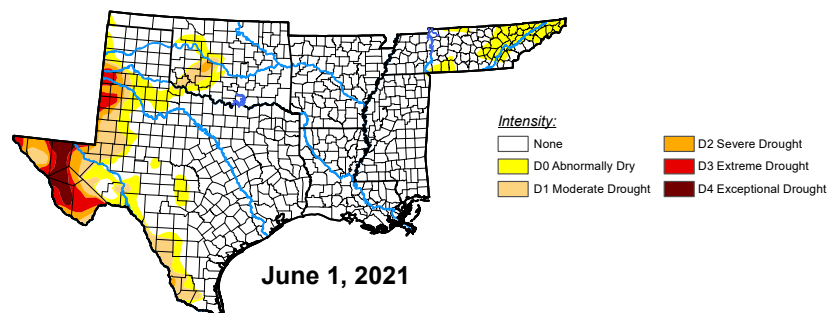
Stream flow was normal to above normal across most of the Southern Region, except for below-normal stream flow in the Pecos River basin of Texas below Red Bluff Dam and isolated basins elsewhere. Many drainage basins in southern Mississippi were consistently above the 90th percentile, and runoff from Hurricane Ida is likely to lead to high stream flow persisting into September.

Southern Regional Impacts

Tropical Weather, Drought, and Agriculture

Two tropical cyclones made landfall in the Southern Region during June-August 2021. The first, Tropical Storm Claudette, was primarily a rain producer, bringing up to fifteen inches of rainfall to southern Mississippi. Hurricane Ida made landfall in southern Louisiana as well, but its impacts were quite different. The storm was a strong Category 4 hurricane, and the widespread hurricane-force winds downed numerous power lines in southeastern Louisiana and created a storm surge that, in combination with heavy rain, produced localized flooding and damaged or destroyed many homes and businesses in low-lying areas. In the aftermath, the lack of electricity combined with high temperatures and humidity to produce a persistent health threat, particularly to vulnerable elderly persons.

Far from the tropical cyclones, drought conditions improved across the Southern Region. The extreme to exceptional drought that was present on June 1 was almost entirely eradicated by the end of August. Developing drought conditions were found in northwestern Oklahoma and adjacent parts of Texas, as July and August were relatively dry there. Overall, drought was affecting less than 3% of the Southern Region on August 31.



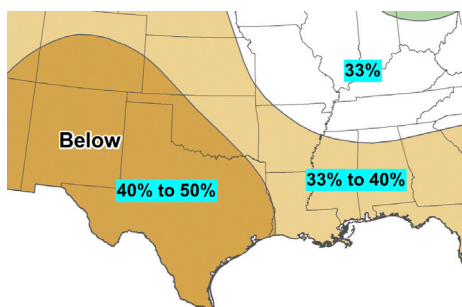
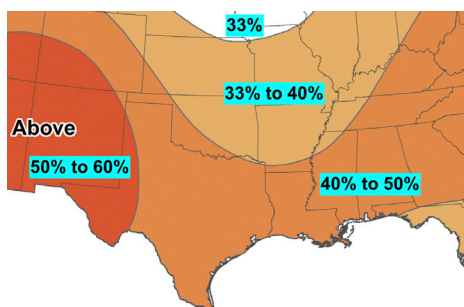
US Drought Monitor depiction of the Southern Region. The US Drought Monitor is produced by the National Drought Mitigation Center, the USDA, and NOAA.

Seasonal Outlook

Temperature

Precipitation

Outlook for October-December 2021



The seasonal temperature outlook from NOAA's Climate Prediction Center calls for enhanced chances of above normal temperatures. Above-normal temperatures are most likely in West Texas, where the outlook calls for a 50%-60% chance that temperatures will rank among the warmest third of recent historical temperatures.

The seasonal precipitation outlook features enhanced chances of drier than normal conditions. In most of Texas and half of Oklahoma, there is a 40%-50% chance that precipitation will rank among the lowest third of recent historical precipitation totals. In Tennessee and parts of adjoining states, there are equal chances of precipitation being substantially greater or substantially less than normal.

ENSO Outlook

According to the Climate Prediction Center, there is at least a 70% chance of the presently neutral conditions in the tropical Pacific evolving into a La Niña by wintertime. In the South, La Niña winters tend to be warm and dry.

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)