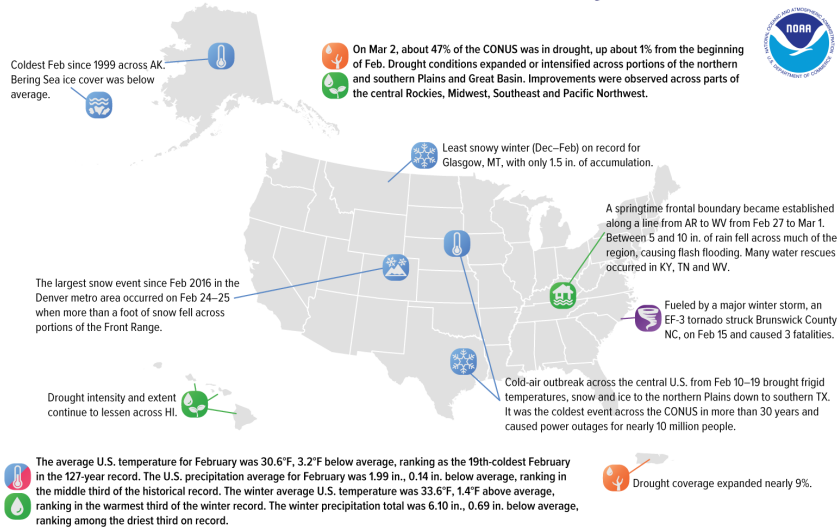


National — Significant Events for February and Winter, 2021

U.S. Selected Significant Climate Anomalies and Events for February and Winter 2021



The average U.S. temperature for February was 30.6°F, 3.2°F below average, ranking nineteenth coldest in the 127-year record. The U.S. precipitation average for February was 1.99 in., 0.14 in. below average, ranking in the middle third of the historical record. The winter average U.S. temperature was 33.6°F, 1.4°F above average, ranking in the warmest third of the winter record. The winter precipitation total was 6.10 in., 0.69 in. below average, ranking among the driest third on record.

Highlights for the Region

Temperatures were above normal across much of the region in December and January, but February consisted of much below-normal temperatures.

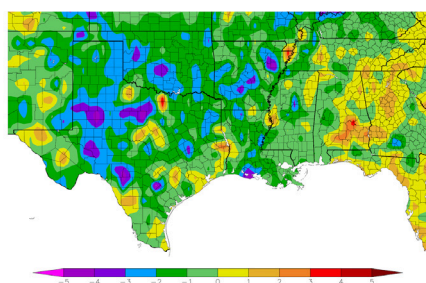
Precipitation varied spatially during winter, as areas receiving above-normal and below-normal precipitation shifted each month.

The main impact this winter was an intense cold air outbreak during the month of February, bringing sub-zero temperatures and setting minimum temperature records across the region.

Regional — Climate Overview for December 2020 to February 2021

Temperature and Precipitation Anomalies

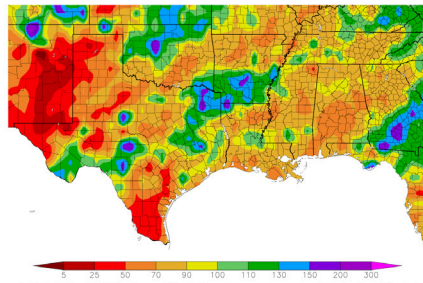
Departure from Normal (°F) 12/01/2020–2/28/2021



Generated 3/2/2021 at HPRCC using provisional data. NOAA Regional Climate Centers

Winter temperatures primarily ranged between 4°F below normal to 1°F above normal across the region. The majority of the region experienced temperatures 0°–2°F below normal. However, parts of Arkansas, Oklahoma, Louisiana, and Texas experienced temperatures 2°–3°F below normal, while eastern Tennessee experienced temperatures 0°–1°F above normal.

Percent of Normal (%) 12/01/2020–2/28/2021

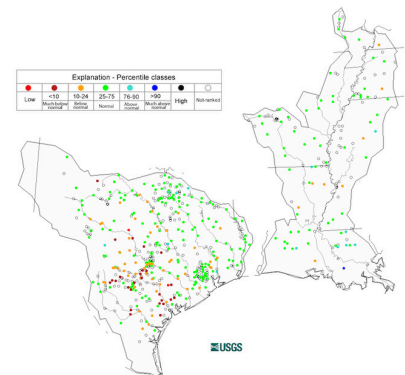


Generated 3/2/2021 at HPRCC using provisional data. NOAA Regional Climate Centers

Winter precipitation varied spatially across the Southern Region, but was primarily below normal. Parts of northern, western, and southern Texas received precipitation 50 percent or less of normal while parts of eastern Texas, southern Arkansas, and northern Oklahoma received precipitation 130 percent or more of normal.

Streamflows

February Average Streamflow vs. Historical Streamflow

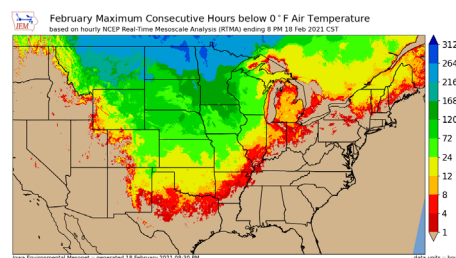
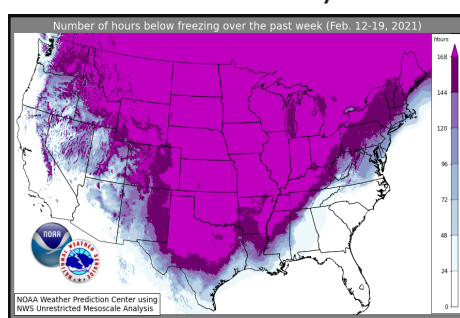
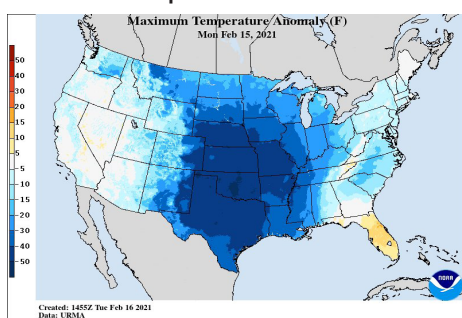


The above figure illustrates February average streamflows in the Texas Gulf and Lower Mississippi Basins as compared to historical streamflows. Streamflows in the Lower Mississippi Basin were normal to below normal. Streamflows in the Texas Gulf basin were normal to below normal across much of the basin, but much below normal inland.

Regional Impacts — for December 2020 to February 2021

Extreme Cold Temperatures

The Southern Region experienced a wave of extremely cold temperatures during the month of February. A combination of a strongly negative Arctic Oscillation and a disrupted jet stream track due to a blocking pattern resulted in a prolonged outbreak of Arctic air that extended as far south as the international border with Mexico. Conditions across parts of the region further deteriorated due to winter precipitation, with freezing rain and sleet contributing to power outages, with nearly 10 million people without power at the peak of the outage. Parts of every state in the region experienced at least 168 consecutive hours of temperatures below freezing (32°F), while parts of far western Oklahoma and northern Texas experienced at least 24 consecutive hours of temperatures below 0°F. At one point during the outbreak, most of Louisiana, Mississippi, and Tennessee as well as all of Arkansas, Oklahoma, and Texas were under a Winter Storm Warning. Oklahoma in particular experienced some noteworthy events, including a wind chill of -36°F in the Panhandle, a statewide average temperature 40 degrees below normal on February 15, and on February 16, every station in the Oklahoma Mesonet concurrently reported temperatures below 0°F, the first time in network history. Due to this outbreak, every state in the region reported a top-20 coldest February on record, while Oklahoma and Arkansas experienced their sixth and seventh coldest February on record, respectively.



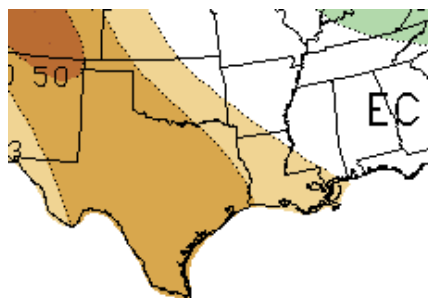
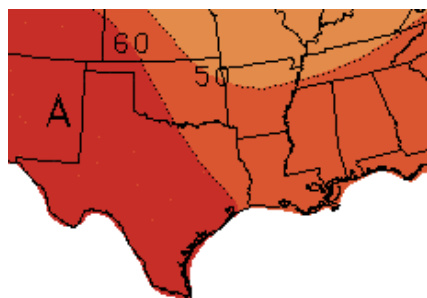
Above: Maximum Temperature Anomaly, Feb. 15 (left), Hours Below Freezing, Feb. 12-19 (middle), and Hours Below Zero, Feb. 1-18 (right). (Credit: NOAA, IEM)

CPC — Three-Month Outlook

Temperature

Precipitation

Outlook for April to June



A = Above-normal temperatures EC = Equal chances
B = Below-normal rainfall N = Normal

According to the Climate Prediction Center, April through June temperatures have chances to be above normal across the entire region, with the highest chance across most of Texas and western Oklahoma.

Precipitation has chances to be above normal across parts of Tennessee and chances to be below normal across parts of southwestern Arkansas, southwestern Mississippi, and most of Louisiana, Oklahoma, and Texas.

2021 ENSO Outlook

As of March 11, 2021, atmospheric and oceanic conditions are indicative of an ongoing La Niña. The IRI/CPC forecast predicts a transition to ENSO-neutral conditions by the end of spring, although there is a chance that conditions may revert to La Niña later in the year.

Gulf Regional Partners

Earth Scan Laboratory at Louisiana State University (esl.lsu.edu)

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.lsu.edu)