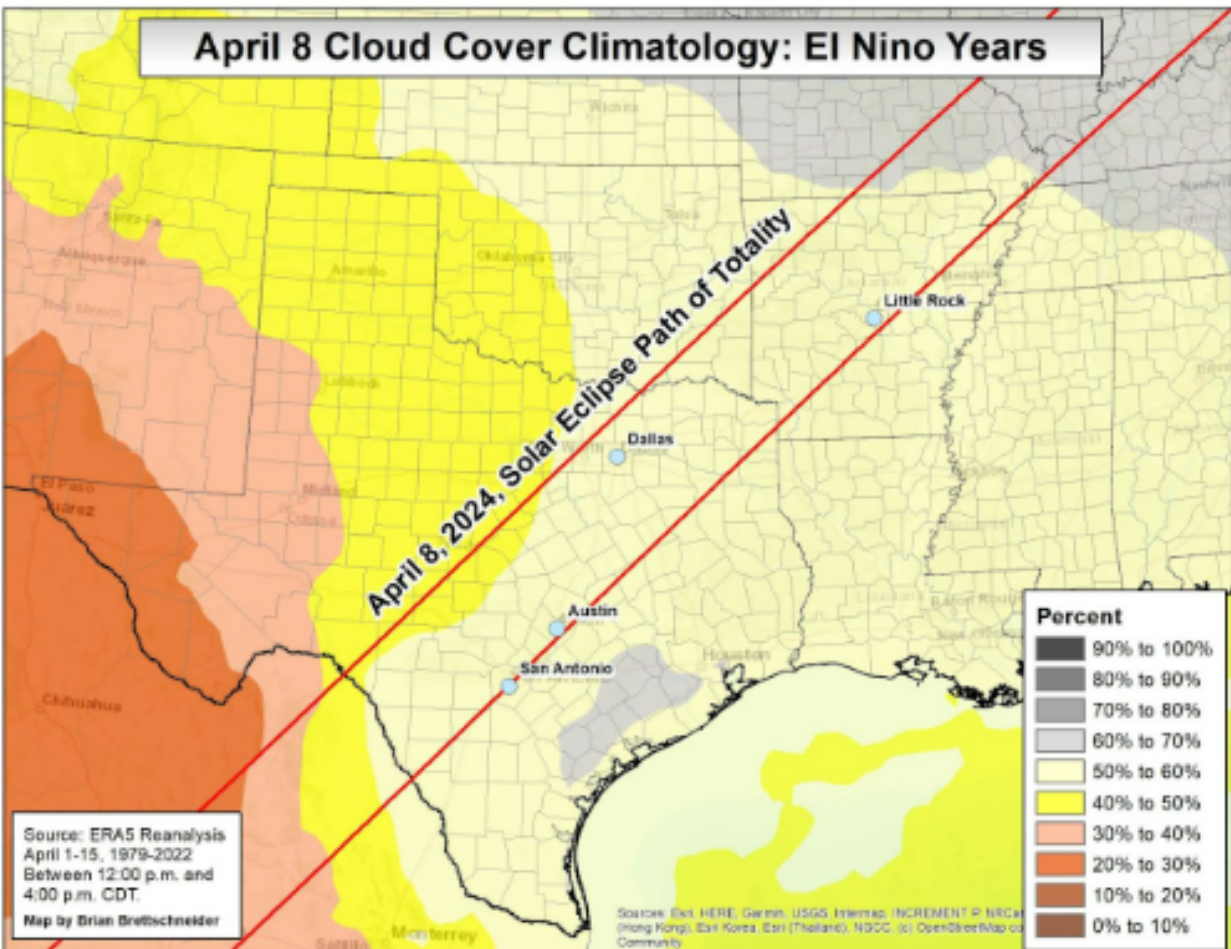


Weekly Climate Summary: 3/17/2024-3/23/2024

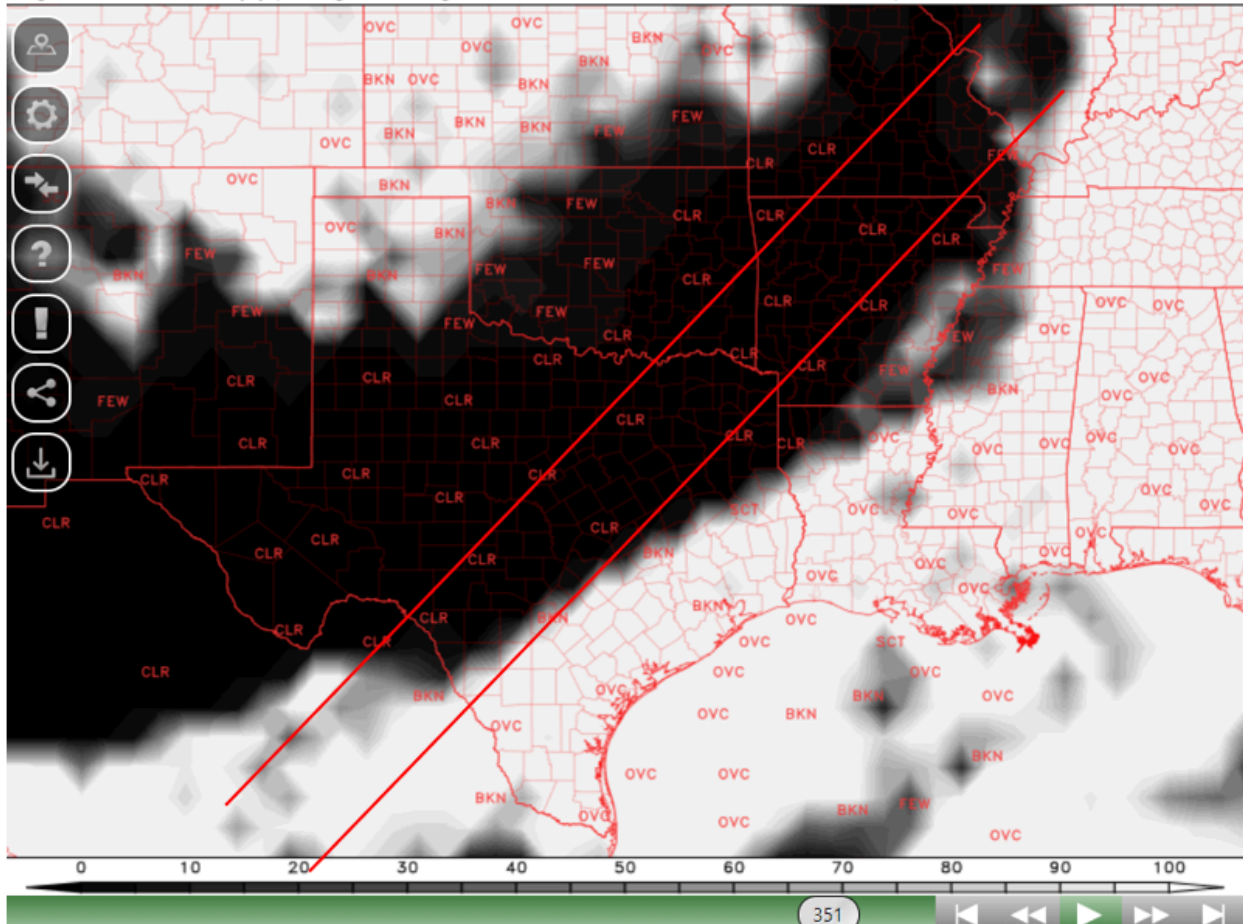
Climate in the News:

The long awaited total solar eclipse of 2024 is now 2 weeks away! The most pressing questions are about viewing conditions along the path of totality. Being this far out, cloud cover climatology gives us a best guess as to what to expect, however, April 8, 2024 is now within range of the Global Forecast System (GFS) forecast. This being said, there is a HUGE disclaimer that must be made here. Any predictions made by this model are hardly better than an educated guess this far out. Meteorologists compile a forecast by looking at *consensus* between lots of different models, not one single model, as well as using their background meteorological knowledge to fine tune model outputs to match likely scenarios. Official forecasts by the National Weather Service are not within range of the total solar eclipse, so any online posts claiming to have *official* viewing forecasts for areas in the path of totality are essentially bogus. Below are several graphics attempting to guess the potential viewing conditions for the day in question, but keep in mind that, specifically for the GFS model output, it is essentially comparable to, if not even less trustworthy than climatology this far out



Given that the 2023-2024 cold season fell on an El Niño year, this map may be more relevant to assessing probabilities of seeing clouds on the actual day of the event. This map shows the average cloud cover for the same time and date for years where El Niño conditions were present.

Courtesy: Brian Brettschneider and NOAA



A map showing the potential sky cover at 1 pm on April 8, 2024 as forecast by the GFS model. Forecasts this far out are essentially a guess, as they can and will vary tremendously as the event nears. Other than climatology, this is the only other way we can estimate what may occur on April 8 in terms of sky cover. The area in between the parallel red lines is the path of totality. The model depicts the sky cover by several categories: clear (clr, 0-10% sky cover), few (few, 11-25% sky cover), scattered (sct, 25-50% sky cover), broken (bkn, 51-90% sky cover), and overcast (ovc, 91-100% sky cover).

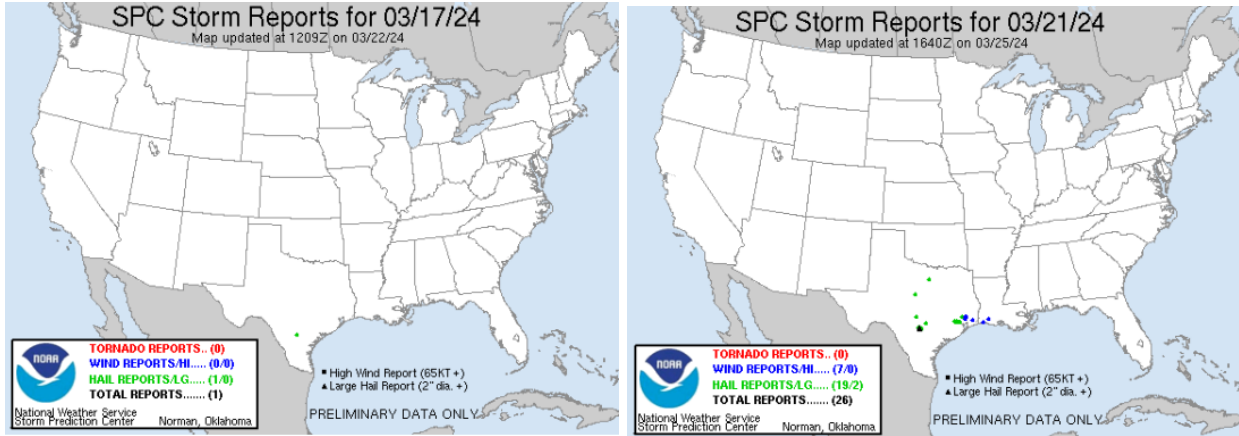
Courtesy: College of DuPage, GFS model

Weather Synopsis:

After the week of March 10-16, the week of March 17-23 was relatively quiet in terms of severe weather. This being said, there were still some reports across the State, yet they were lower in number than the week previous. A sequence of cold fronts kept the week much cooler than the weeks prior (relative to normal), with appreciable rainfall across the State. Notable days in the past week are:

- ❖ March 17 saw 1 severe weather report across Texas, this being a Hail report in Cross, TX with a maximum hail diameter of 1.75"
- ❖ March 21 saw 24 severe weather reports across Texas, with an emphasis on South Central and Southeast Texas. The day saw:
 - 5 wind reports, all with unknown wind speeds but where damage was reported

- 19 hail reports with the maximum reported diameter being 2.00” in Bexar County
- 0 tornado reports
- ❖ March 22 Saw a well defined line of thunderstorms move eastward through central and east Texas producing many sub-severe wind gusts.



Maps of storm reports from the Storm Prediction Center showing the days where severe weather was observed across Texas. 25 total reports were received between the two days where severe weather was observed for the State of Texas. Reports consisted of mainly hail reports, with 20 total reports, followed by wind with 5 reports. No tornadoes were reported.

Courtesy: Storm Prediction Center.

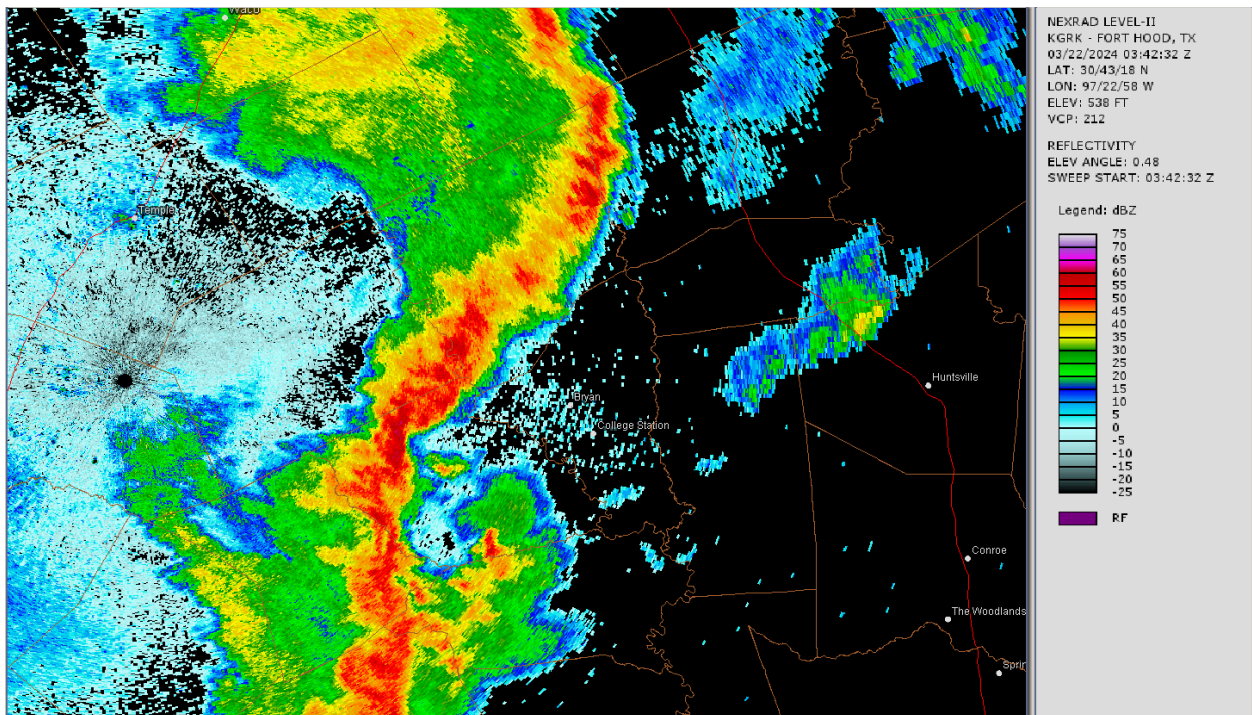
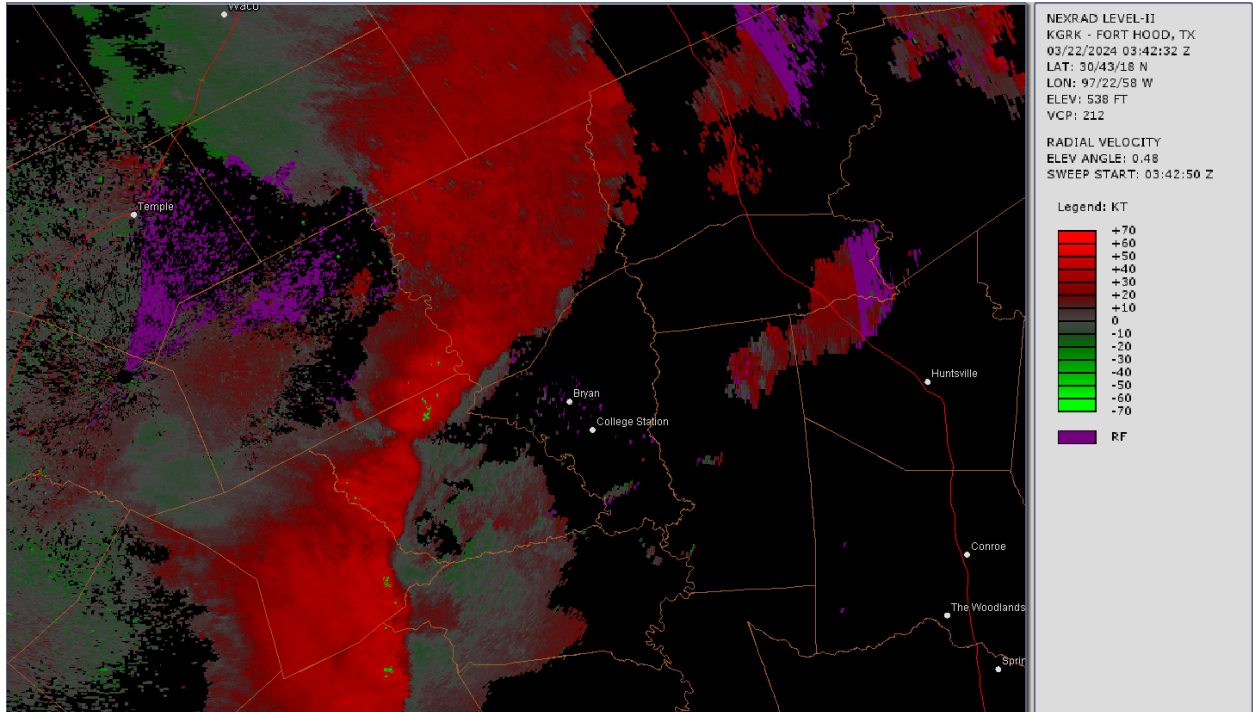


Image of the Fort Cavazos (KGRK) Doppler radar at 10:42 pm CST on March 22, 2024. An impressive line of thunderstorms is evident in the reflectivity image approaching the Bryan-College Station area. Small hail and sub-severe wind gusts were produced by the line as it swept through. College Station Easterwood field reported a maximum wind gust of 36 mph



KGRK radar radial velocity image at the same time as the reflectivity image. The line of storms can be clearly seen as a wall of red approaching the BCS area. Red represents wind moving away from the radar, indicating that strong westerly winds are imminent across the BCS area. Doppler radar can estimate the winds in a storm, and velocity values of over 50 mph were noted on radar velocity displays, however these winds are sampled above the ground and may not be reaching the surface.

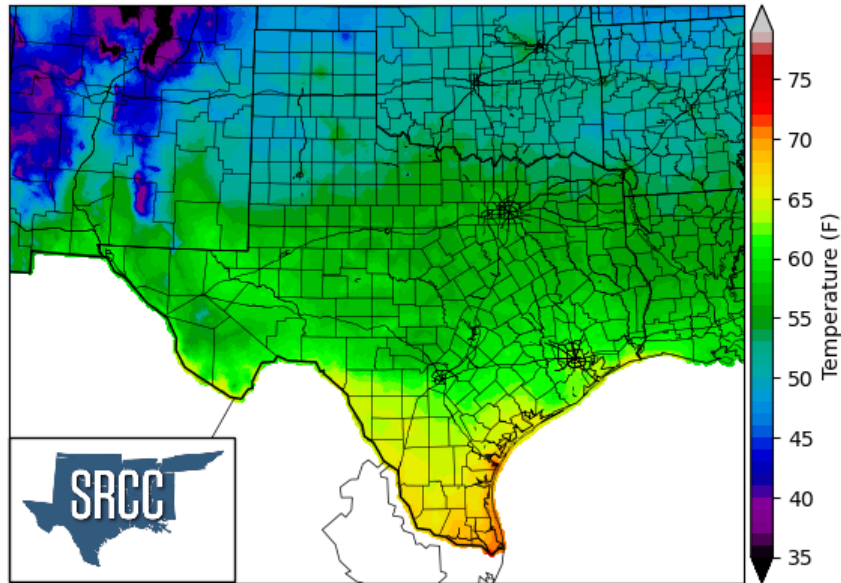
Both images courtesy of NOAA's weather and climate toolkit.

Temperature:

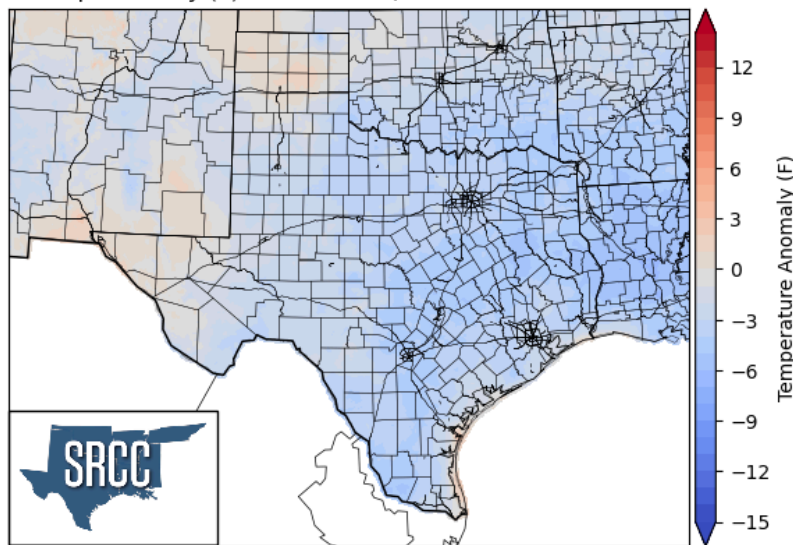
A sequence of cold fronts on the week of March 17-23 brought the recent consecutive streak of weeks with above average temperatures to an end for most of the State. Average weekly temperatures across the state generally ranged from 50°F to 70°F, with the extremes straying outside of this range. The statewide extremes in average weekly temperature are as follows:

- The Hart Co-op station in Castro County saw the lowest weekly average at 47.9°F
- Harlingen Co-op station in Cameron County saw the highest weekly average at 72.4°F

Average Temperature (F) March 17-23, 2024



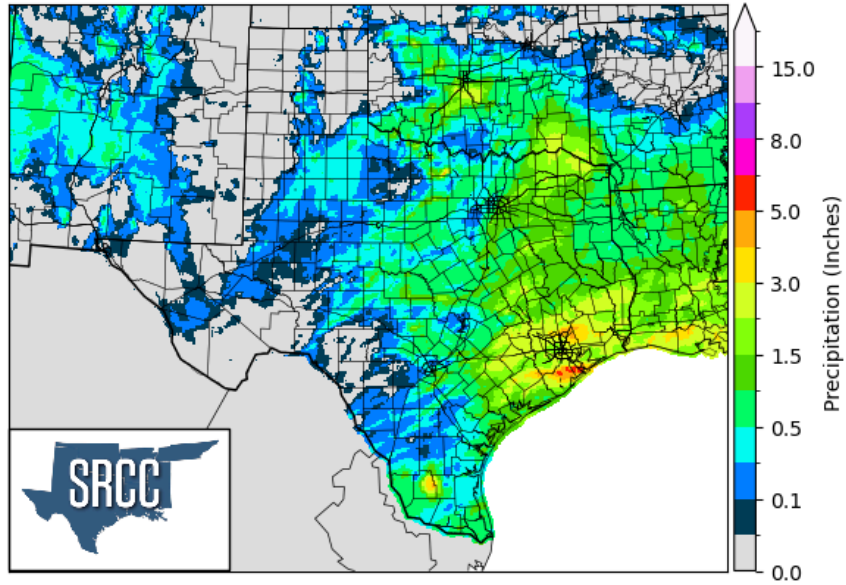
Mean Temp Anomaly (F) March 17-23, 2024 vs 1991-2020 Normals



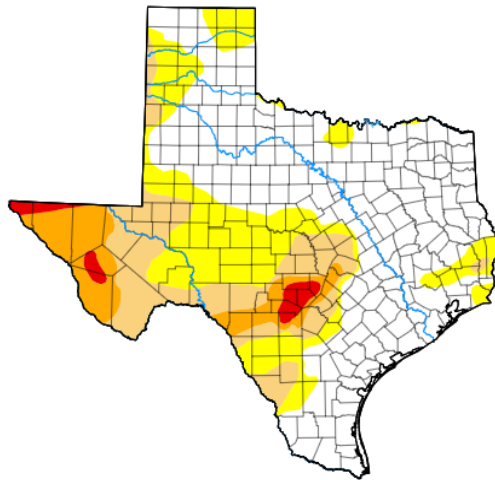
Precipitation:

Precipitation on the week of March 17-23 had a similar pattern to the week of March 10-16, without as much severe weather. Appreciable rainfall totals fell across the State with much of the higher totals falling across the eastern portions of the State. Looking at the precipitation totals along with the U.S drought monitor map for Texas, we find that areas in South-Central Texas received beneficial rain to aid in the drought present, however, the Trans-Pecos Region missed out on any beneficial rain to help alleviate the drought.

Accumulated Precipitation (Inches) March 17-23, 2024



Texas



Map released: Thurs. March 21, 2024

Data valid: March 19, 2024 at 8 a.m. EDT

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

Authors

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Pacific Islands and Virgin Islands Author(s):
[Richard Heim](#), NOAA/NCEI

Statewide extremes:

- The hottest recorded temperature of the week was 96°F at the Spofford Auxiliary Airfield Laughlin Air Force Base in Kinney County on March 22, 2024.
- The coldest recorded temperature of the week was 26°F seen at the Follet Co-op site in Lipscomb County on March 20, 2024 .
- The most precipitation recorded in the week of March 17-23, 2024 was 9.12” at the La Marque 3.9SE CoCoRahs site in Galveston County.
- 5 stations broke or tied record highs in the week of March 17-23, 2024.
- 2 stations broke or tied record lows for the same week.