

## April 2024 Climate Summary

### **Significant Weather Events:**

Where do we begin? The month of April 2024 was an action-packed adventure. The month hit the ground running with a pronounced severe weather event on the 1st of the month. Amidst this severe weather event, folks had the long awaited April 8 eclipse on their mind, but the threat of cloud cover made many feel like their plans were going to be thwarted. Luckily for many, the thick cloud cover cleared just in time for millions to witness the astronomical spectacle a long time in the making. During the eclipse, a severe weather threat loomed, and in the days following, the State would see what would become a theme for the remainder of the month: axes of thunderstorms wielding a double threat, the threat being flooding rain and severe weather. Transitioning into mid-month, the State saw a brief reprieve from the onslaught of severe weather events, with the count of reported severe weather instances taking a significant downturn. During this timeframe, Southwest Texas was also dealing with a formidable heat spell as temperatures climbed into the upper 90's and even 100's. At the two-thirds mark of the month, a significant rain event affected much of North and Central Texas, breaking several records. The last ten days of the month saw severe weather return with a vengeance, as numerous severe thunderstorms produced a prolific count of reports involving all severe weather threats. These events also involved thunderstorms repeatedly passing over the same regions, causing flooding across the Bryan-College Station area. On April 28, 2024, College Station broke a slew of records, some of which are outlined below. A chaotic being in its own right, April handed off the torch to the month of May in a spectacular way, with an active weather pattern to kick off the month.

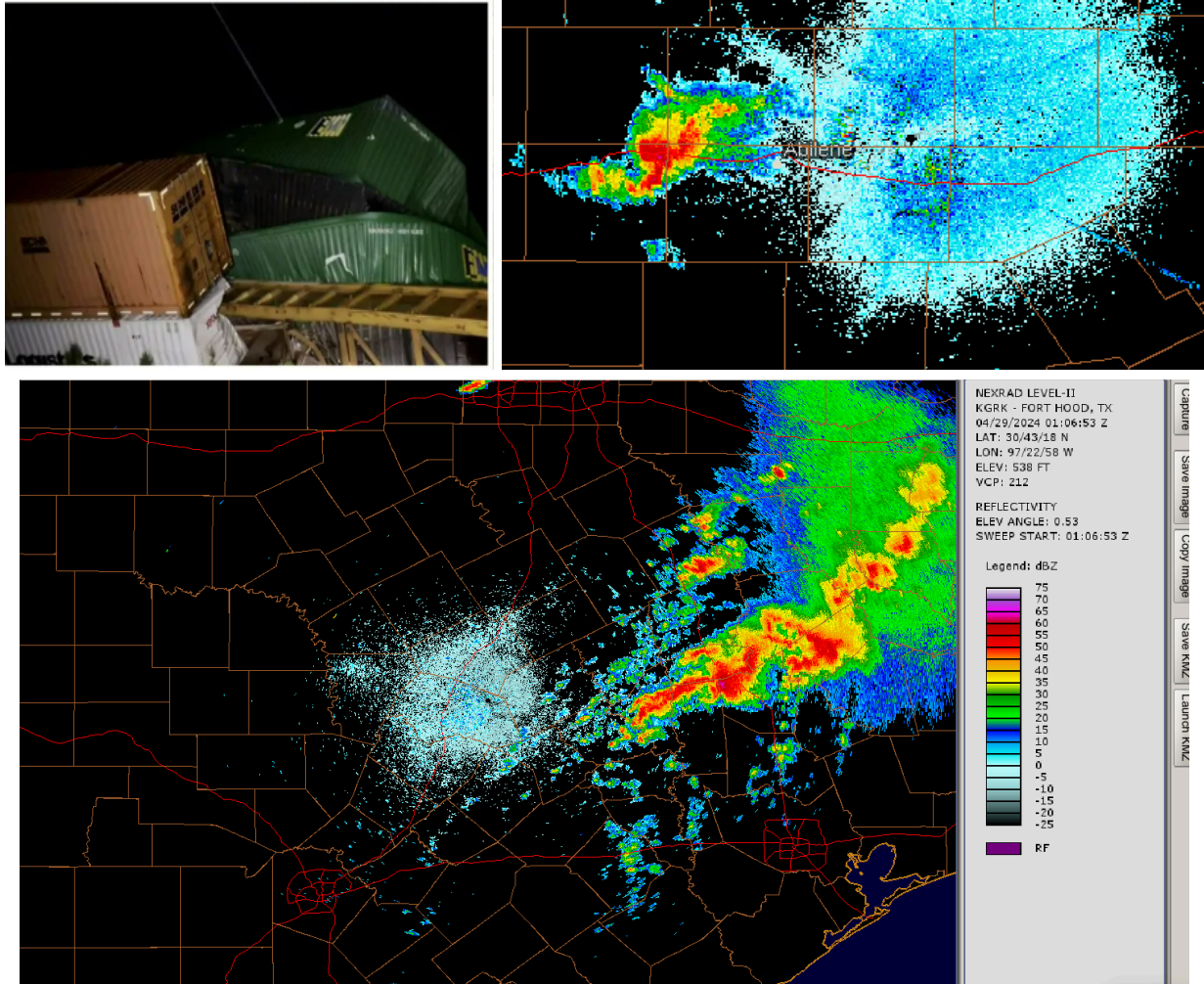
### **Significant Dates:**

- April 1- A severe weather outbreak to begin the month set the stage for what the rest of the month had in store for Texas.
  - 83 total severe weather reports with 67 hail and 16 wind reports
  - On this day, both the highest measured wind gust and the largest hailstone were seen, with an **88 mph** wind gust reported in Shackelford County and a **4.50"** diameter hailstone reported in Parker County
  - No tornadoes were reported on this day
- April 8- The Solar eclipse of 2024 drew millions of spectators to the path of totality, which stretched across Texas. Thick cloud cover in the morning cleared to allow many to see the astronomical wonder in its full glory. As many as 59 severe weather reports were noted across the state on this day as well.
- April 9 - Arguably the most significant severe weather day for Texas in April 2024. A total of **130** severe weather reports were received by the Storm Prediction Center, the most for the State in April 2024. There were 73 hail, 55 wind, and 2 tornado reports.

- This day tied April 1 for the highest measured wind gust across the state, with an **88 mph** gust reported, this time in Briscoe County
  - Two confirmed tornadoes were reported on this day, an EF1 tornado in Katy (Harris Co.) with estimated peak winds of 90 mph, and an EF2 tornado in Port Arthur (Jefferson Co) with estimated peak winds of 120 mph
  - Hail **4.25"** in diameter was reported in Burnet County, and a measured wind gust of 60 mph was observed at DFW airport
- April 10 - A day with a dual personality. Training thunderstorms produced mind-blowing quantities of rain. Several locations across Tyler and Jasper counties saw calendar day totals greater than 10.00". A departing low pressure system resulted in widespread wind gusts between 40 and 55 mph across North Texas.
    - Town Bluff Dam saw the highest calendar day rainfall total for Texas in April 2024, with **12.31"** of rain on this day. Combined with several other heavy rain events led to this site seeing a **22.06"** rainfall total for the April 2024, its rainiest April on record, and its second rainiest month on record, only behind August 2017 (29.32"; largely from Hurricane Harvey)
    - A CoCoRaHS station in Woodville Tx saw **11.50"** of rain. This is almost half of its April 2024 total of **23.07"**, which is the highest total recorded across Texas for the month.
    - The Dallas-Fort Worth Metroplex was buffeted by some strong winds, with some stations recording non-thunderstorm gusts over 50 mph
      - DFW airport saw a maximum gust to 48 mph, the strongest non-thunderstorm gust (NTG) gust the site since January 12, 2024 (50 mph)
      - Fort Worth Meacham saw a maximum gust to 52 mph, its highest NTG since January 8, 2024 brought a **64 mph** gust (likely its highest recorded NTG gust on record)
      - Dallas-Love saw a maximum gust to 47 mph, its highest NTG since January 8, 2024 (54 mph)
- April 13-19 - A Mid April heat wave struck the Trans Pecos region, with several locations soaring into the triple digits for several days. Weekly average temperatures (accounting for both highs and lows) being in the mid 80's for several stations.
- April 15 - Strong wind gusts were seen across parts of Texas.
    - El Paso reported a non-thunderstorm wind gust of 57 mph.
    - College Station reported strong southeast winds, associated with light evaporating precipitation. A 49 mph gust was reported between 10 and 11 pm, making it the station's highest recorded wind speed for April 2024.

- April 20 - A slow moving frontal boundary served as the focus for widespread heavy rain.
  - Many stations saw daily rainfall totals between 1 and 3 inches.
  - DFW saw its rainiest April 20 on record with 2.34” of rain for the date.
  - College Station also saw record rainfall, with 2.88” of rain for the date at the site.
  
- April 23-28 - Texas faced a multi day severe weather event as 153 reports of severe weather were seen across the state in this six day period.
  - April 23 saw mainly wind reports (6) and one hail report. Wind gusts of up to 65 mph were measured, and estimated 80 mph wind gusts in Taylor county derailed a train. A reprieve was seen on April 24, with no severe weather reports.
  - April 25 saw 7 severe weather reports with 3 hail and 4 wind reports. This was a transition day as the following days were marked by many reports across the state
  - April 26, 27, and 28 saw 39, 37, and 63 severe weather reports ravage the state respectively with (14, 4, 46; April 26, 27, and 28 respectively) wind reports, (12, 31, 10) hail reports and (13, 2, 7) tornado reports.
  
- April 28 - This day was so significant that it deserves a secondary mention on its own. Other than the severe weather seen, an axis of heavy rainfall set up over the Bryan-College Station area causing significant flooding in and around the campus of Texas A&M University. College Station Easterwood airport saw 5.43” of rain on this day, breaking many records such as:
  - The rainiest April day on record, beating the previous record of 5.17” set on April 12, 1969 by over a quarter of an inch
  - Rainiest day at the site since Hurricane Harvey produced 7.45” on August 27, 2017
  - April 2024 totaled 9.33” of rain at College Station, making it the third rainiest April on record for the site, only behind 1957 (12.50”) and 1921 (11.15”)
- April 30 - In one last gasp of severe weather from April 2024, Texas saw 6 total reports, all being from hail mainly across the western reaches of the state.





*A view of some of the major meteorological (and astronomical) events that occurred in April 2024. At top, a stunning picture of the April 8, 2024 solar eclipse during the ‘diamond ring’ phase captured by Texas A&M meteorology student Priscilla Marin.*

*Below this, two images detailing the destruction of two distinct tornadoes on April 9. At left, a destroyed church in Port Arthur after the highest rated tornado of April 2024 in Texas*

*swept through. Winds were estimated to have peaked at 120 mph, landing this tornado squarely within the EF2 category (courtesy: News4SanAntonio). To the right of this image, damage to a Firestone Complete Auto Care shop in Katy after an EF1 tornado, with estimated peak winds of 90 mph (Courtesy: ABC13 Houston).*

*3rd row left: a partial train derailment west of Abilene due to extremely powerful thunderstorm winds, estimated to have topped 80 mph (photo courtesy: Yahoo! News). 3rd row right: KDYX radar reflectivity image of the storm responsible for the strong winds that resulted in the train derailment three minutes before the damage occurred.*

*4th row: KGRK radar reflectivity image showing a narrow band of thunderstorms set up over the Bryan-College Station area, resulting in monumental rainfall totals, including the **5.43” daily rainfall total on April 28**, ranking as the **rainiest April day for KCLL**, the **third rainiest spring day**, and the **15th rainiest calendar day on record** (records to 1888; about 50,000 days of data). The highest daily total for April 28 was 11.80” at a CoCoRaHS site in Trinity County (gauge read at 7:00 am local time on April 29, may include some rain that fell in the first seven hours of April 29)*

*At bottom, a black sedan stranded after driving into a creek hidden amidst a parking lot as multiple days of heavy rain flooded the surrounding area. The creek was invisible to the driver at the time she drove in, illustrating the importance of drivers not venturing into water that is deep enough to obscure the road surface below (Courtesy ABC 13 Houston).*

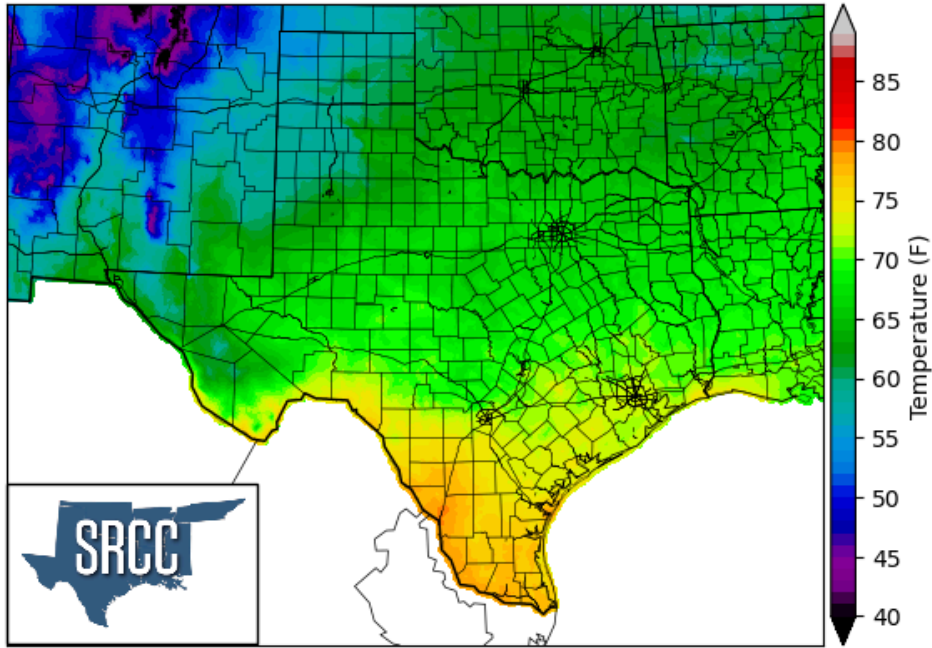
### **Temperature:**

April 2024 continued the anomalously warm trends from February and March 2024. The month saw no extremely large departures from normal throughout the month, however, persistent days with positive departures accrued an above normal status for the month of April 2024 in terms of temperature. The warmest period across the State was mid month, generally between April 12 and April 20, with parts of west Texas experiencing several days above the triple digits for highs, a feat not too out of the ordinary for the region, as they typically record some of the first substantial heat waves of the year in Texas. A cold front ended this warm spell on the 20th. Temperatures then warmed to slightly above normal values again to end the month.

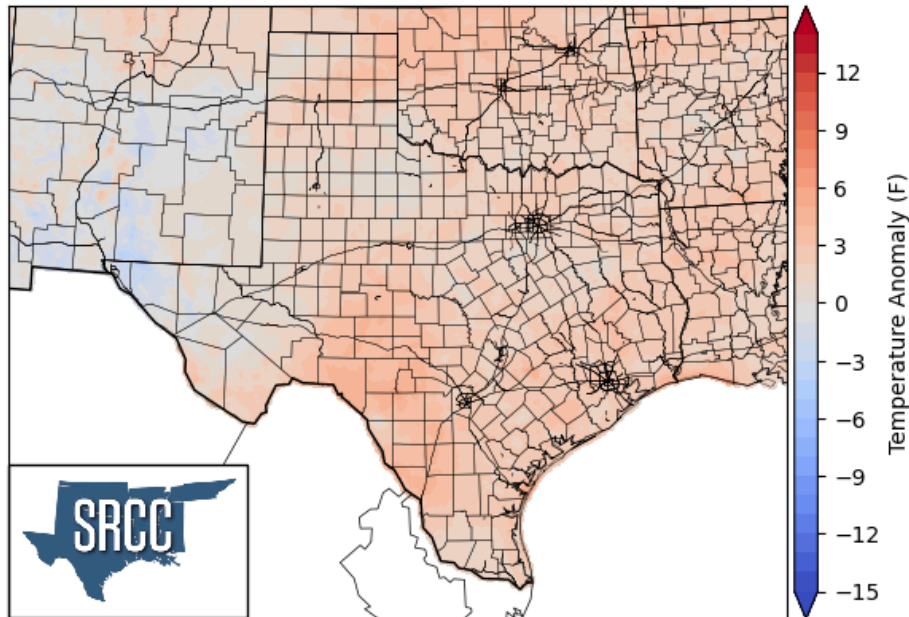
The extremes across the State for April 2024 are as follows:

- The coldest monthly average temperature was 55.5°F at the Bravo Co-op site located in Hartley county
- The warmest monthly average temperature was 79.4°F at the McAllen Miller International Airport in Hidalgo County and the Laredo International Airport in Webb County.
- The hottest recorded temperature across the State was 111°F at the Rio Grande Village Co-op site in Brewster County on April 16, 2024.
- The coldest recorded temperature was 27°F seen at three sites, all in Bailey County on April 3, 2024 and April 4, 2024

Average Temperature (F) Apr 1-30 2024



Mean Temp Anomaly (F) Apr 1-30 2024 vs 1991-2020 Normals

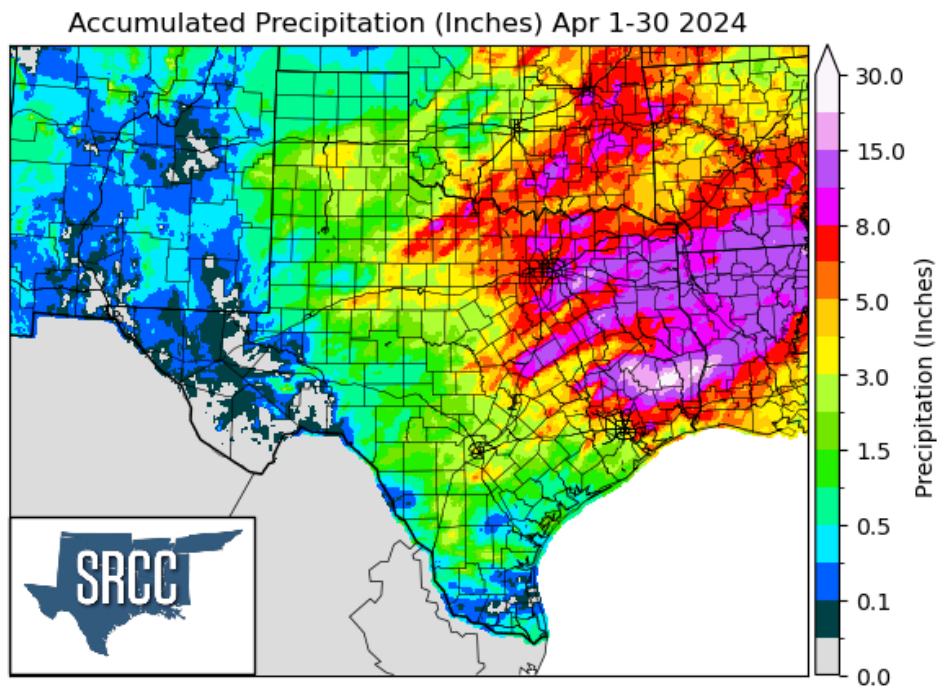


**Precipitation:**

Precipitation was abundant in much of Texas for the month of April 2024, especially across eastern portions of the state. In several locations, training bands of thunderstorms set up, resulting in some absurdly high rainfall totals, leading to multiple instances of flooding. Rainfall across the state was so high, that we even needed to change our rainfall scale to go up to 30", when it normally stops at 20"! Tyler County seemed to take the brunt of heavy precipitation for

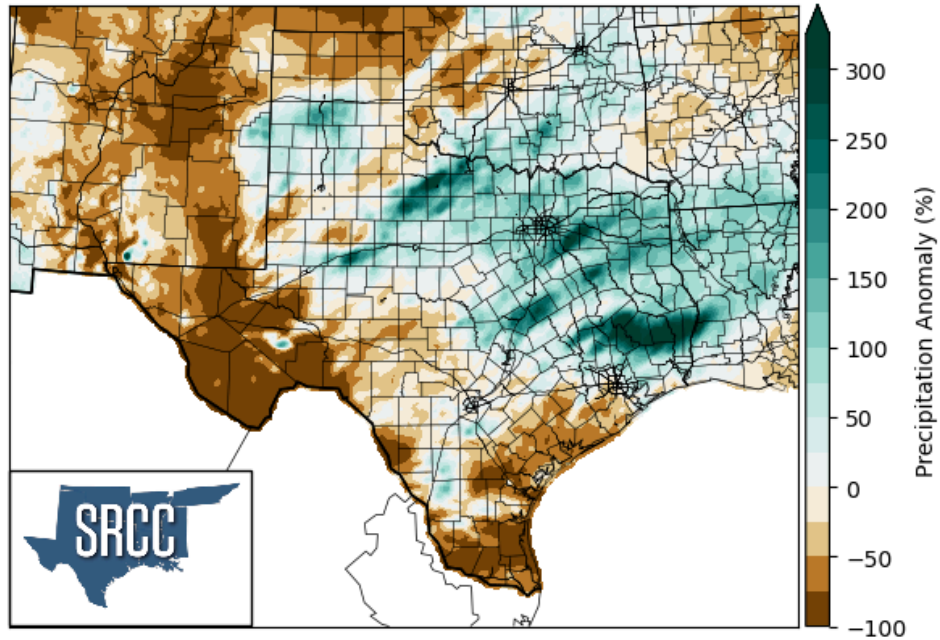
the month, with monthly total amounts of close to 2 feet noted. As is typical, precipitation amounts tapered the further west and southwest you went, with the Trans Pecos region missing out on appreciable rainfall. This is problematic since these regions are currently experiencing drought conditions.

- The highest monthly precipitation total was **23.07"** at the Woodville 7.2 S CoCoRahs site in Tyler County
  - According to the Texas State Climatologist, John Nielsen-Gammon, this total is the second highest April rainfall total in Texas, only behind the rainfall total of **26.68"** seen in April 1966 at the Gladewater Co-op site in Gregg County.
- The lowest monthly precipitation totals were 0.00" (of the stations that reported all 30 days in April) in several locations, specifically across the Trans Pecos region.





Precip. Anomaly (%) Apr 1-30 2024 vs 1991-2020 Normals



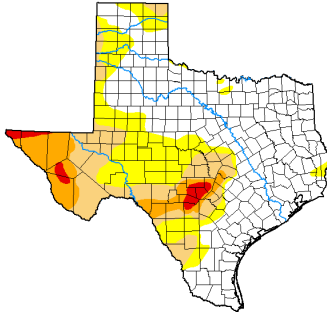
**Drought:**

Ironically, though many places in Texas received a deluge during the month of April, drought conditions generally expanded across the state, with all categories except exceptional drought seeing an increase in coverage. The month of April 2024 can be thought of as a very wet month, but in the sense that the dousing of rain was concentrated in areas that had not been affected by drought. Consequently, this resulted in no drought change in these areas. Portions of real estate with drought conditions actually saw scant rainfall totals, allowing the areas of existing drought to expand.

<b>Drought category</b>	<b>End of March (March 26, 2024)</b>	<b>End of April (April 30, 2024)</b>	<b>Change</b>
Abnormally dry or greater	44.8%	47.2%	+2.4%
Moderate drought or greater	24.5%	27.4%	+2.9%
Severe drought or greater	9.9%	13.4%	+3.5%
Extreme drought or greater	2.0%	2.1%	0.1%
Exceptional drought	0.0%	0.0%	0.0%

April 30, 2024

**U.S. Drought Monitor  
Texas**



**March 26, 2024**  
(Released Thursday, Mar. 28, 2024)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0/D1	D2/D3	D3/D4	D4
Current	55.21	44.79	24.48	9.85	1.97
Last Week (3/19/2024)	54.13	45.87	24.33	9.88	1.97
3 Months Ago (12/26/2023)	40.22	59.78	29.21	17.38	5.98
Start of Calendar Year (1/1/2024)	39.60	60.40	39.47	17.78	5.98
Start of Water Year (10/1/2023)	3.03	96.97	80.64	59.65	38.06
One Year Ago (04/28/2023)	19.12	80.88	67.24	45.35	17.33

**Intensity:**

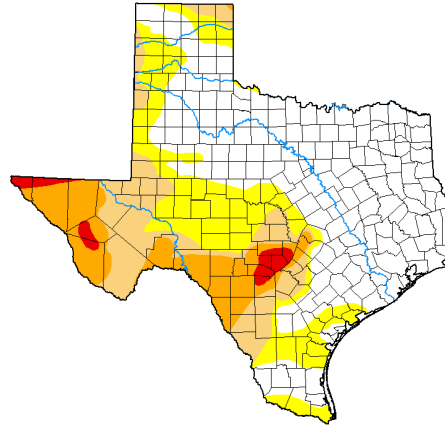
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/about.aspx>

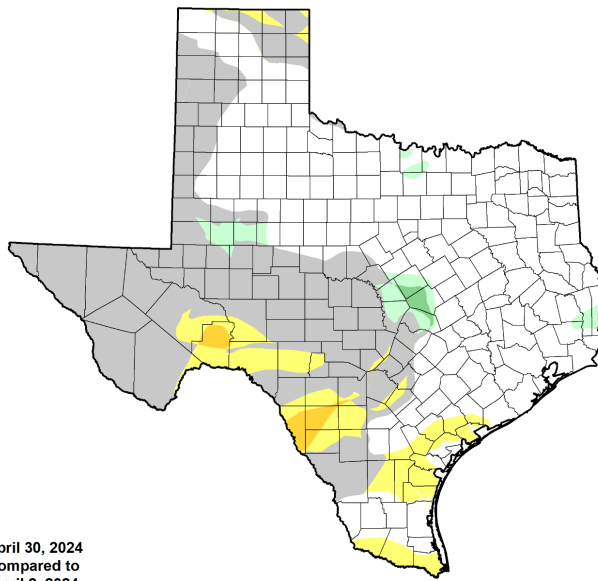
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[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)



**U.S. Drought Monitor Class Change - Texas  
4 Week**



April 30, 2024  
compared to  
April 2, 2024

[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)



- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement