

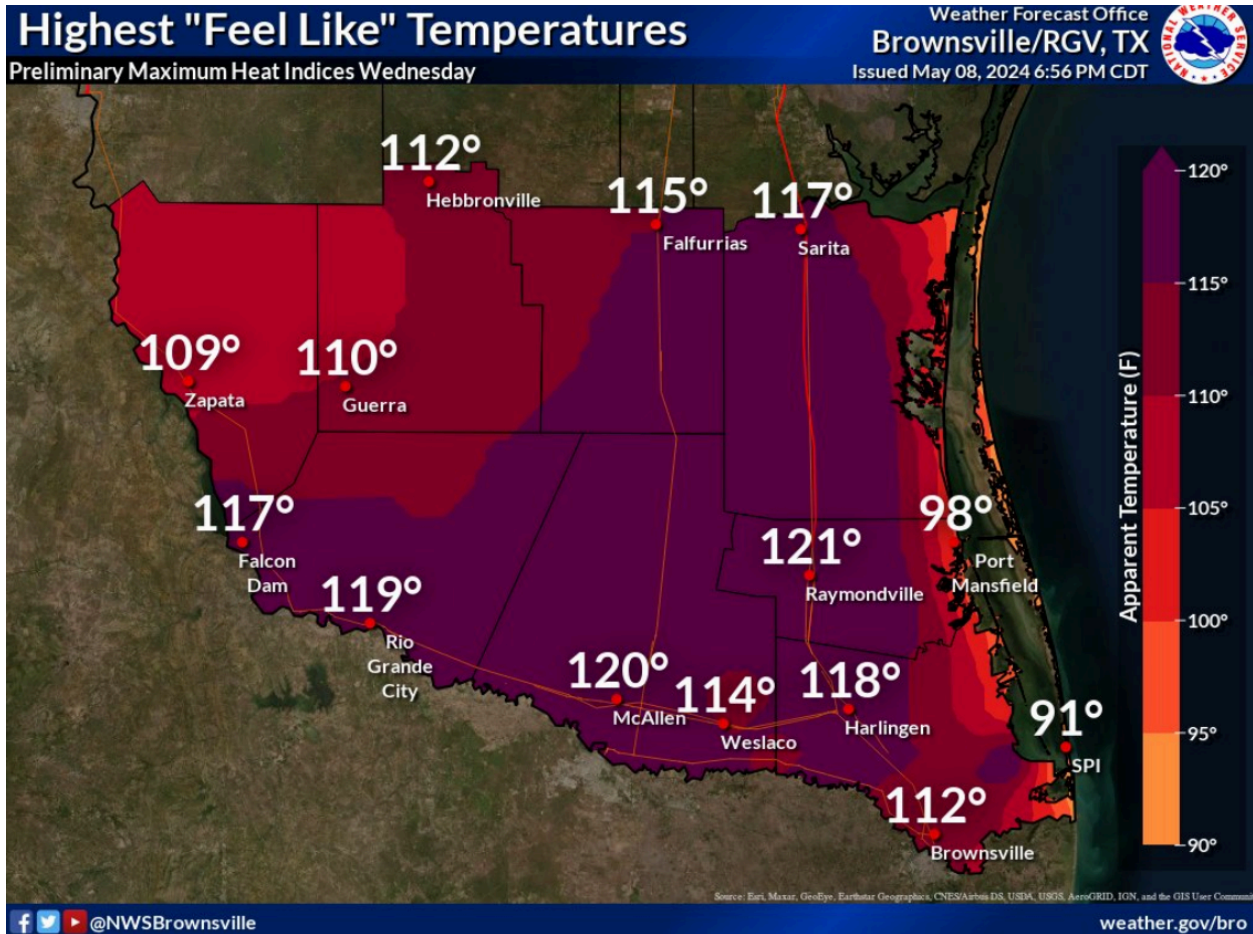
## Weekly Climate Summary: 5/5/2024-5/11/2024

### Climate in the News:

A continued rainy pattern set itself up over the State of Texas, as is typical for the month of May, climatologically the rainiest month of the year for the State. Areas across the State saw weekly rainfall totals approaching 10 inches, yet, as impressive as this is, it pales in comparison to the week prior, where some stations saw *single day* rainfall totals over 10 inches! When talking about the month of May and rain, one typically thinks of severe weather. This rang true in a very big way for certain places, as monster hail took aim at Johnson City, where a social media report of a ball of ice **6.25"** in diameter was noted. Such a large chunk of frozen water would require a thunderstorm updraft of potentially over 150 mph. While severe weather drew lots of attention, a more silent threat manifested itself across the southern reaches of the State. Saturated soils from recent rainfall, south winds transporting hot, muggy air from the Gulf of Mexico, and hot temperatures combined to give much of South and Southeast Texas some unprecedented heat index values. Amidst the weather chaos that was the week of May 5 to May 11, a powerful solar storm allowed the Aurora Borealis to be visible as far south as Texas, giving Texans a remarkable celestial event to witness, luckily, without the negative side effects of the significant weather.



*What can essentially be described as an 'ice meteorite' is sized up against a tape measure. This formidable hailstone was alleged to measure 6.25", potentially making it the second largest hailstone to pelt Texas since records have been kept, only behind the 6.42" behemoth that struck the Earth just outside of San Antonio on April 28, 2021. More accurate measurements of this hailstone are underway, and with such a small margin between this stone and the first place record holder, there is a small chance that this hailstone comes out as the new record largest hailstone. Pictured here the stone looks to be 6.00-6.25", but there is a high likelihood that the angle of the camera artificially distorts the apparent size of the hailstone. Courtesy of Katie Puckett in Johnson City.*



A map showing ridiculous heat across South Texas and the Lower Rio Grande Valley. These are actual heat index values for May 8. The next day, the heat shot up to unprecedented levels, as several locales broke record heat indices, and record high temperatures for the month of May. A heat index of 125°F was reported in Harlingen, as a temperature and dew point combo of 104°F and 79°F worked in conjunction to produce this nasty heat index value. Dew points of 80°F or slightly higher were noted across parts of extreme South Texas, indicating an unbelievably moist air mass. Map courtesy of NWS Brownsville.



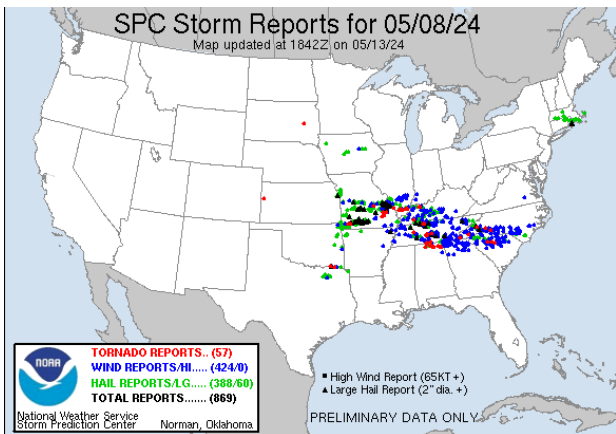
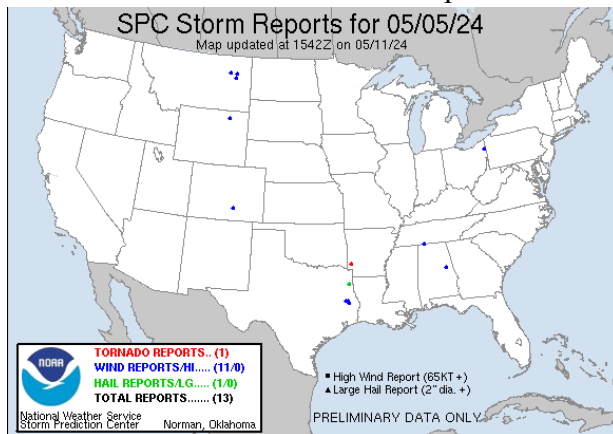
*Stunning image of the Northern Lights captured by Will Leverett nine miles south of Llano. A very powerful solar storm caused the Aurora Borealis to expand unusually far to the south. Photo obtained from LMT online.*

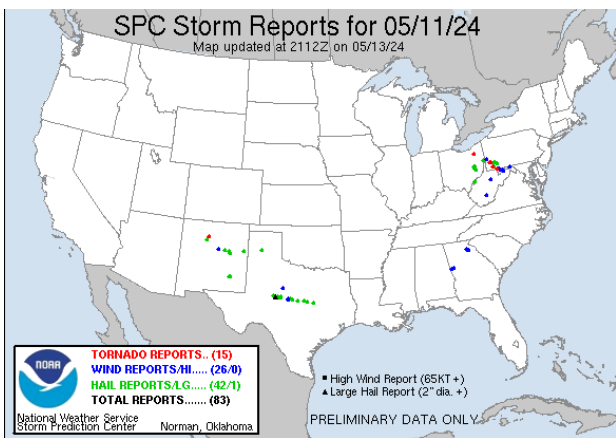
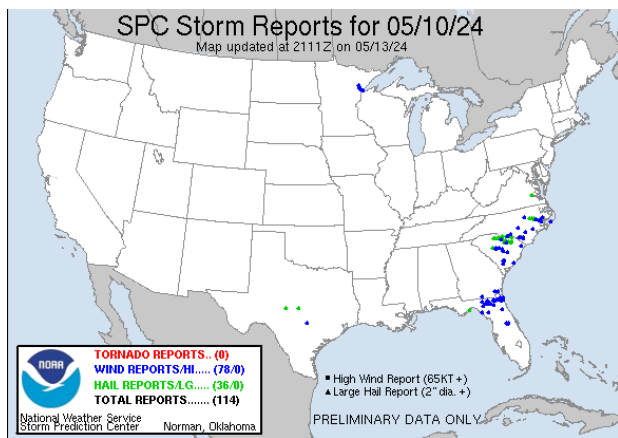
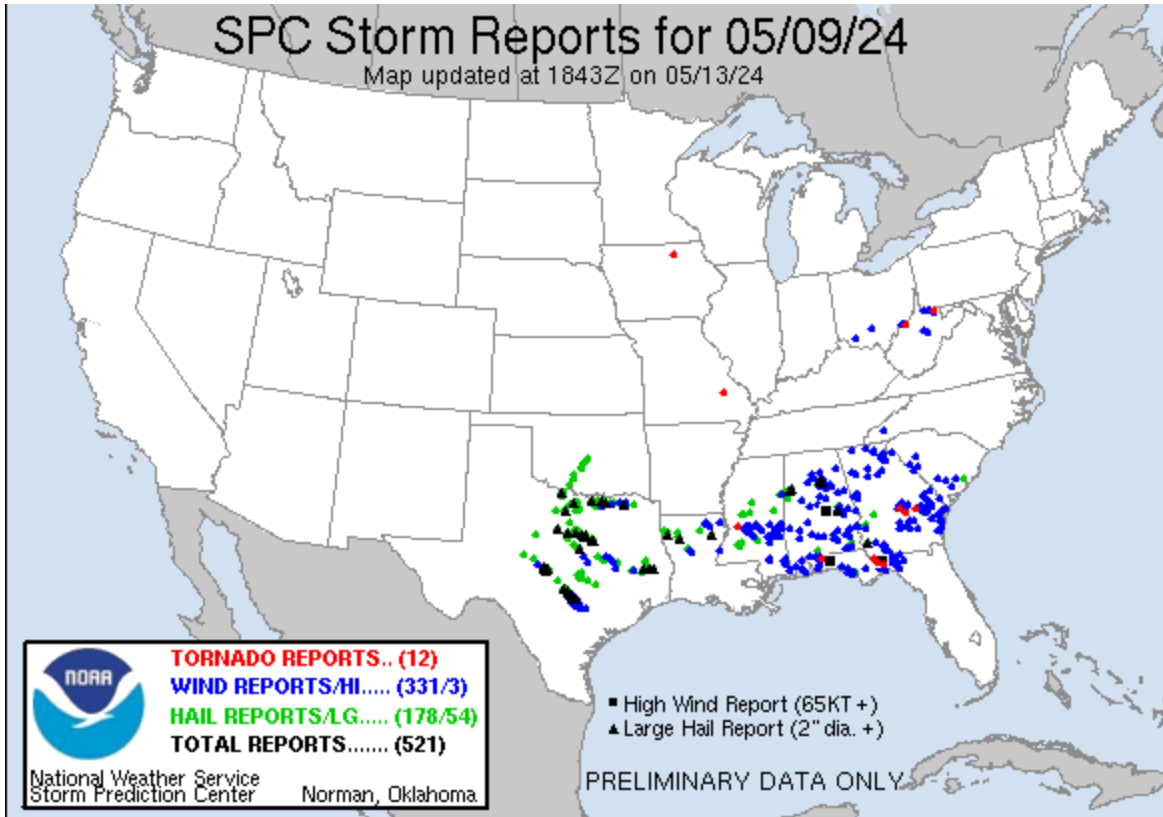
**Weather Synopsis:** The week of May 5-11 hosted more than one hazard for the State of Texas. The two prominent significant weather situations were the severe weather across the state and the excessive heat seen in South Texas.

**Severe Weather:** The week of May 5-11 tallied significantly fewer reports than the week prior, however, the magnitude of the events noted, particularly on May 9, were far beyond any event of the previous week. Overall, the week saw only spotty storm reports on most days, with a very spectacular outbreak on May 9, particularly favoring large hail as the primary threat.

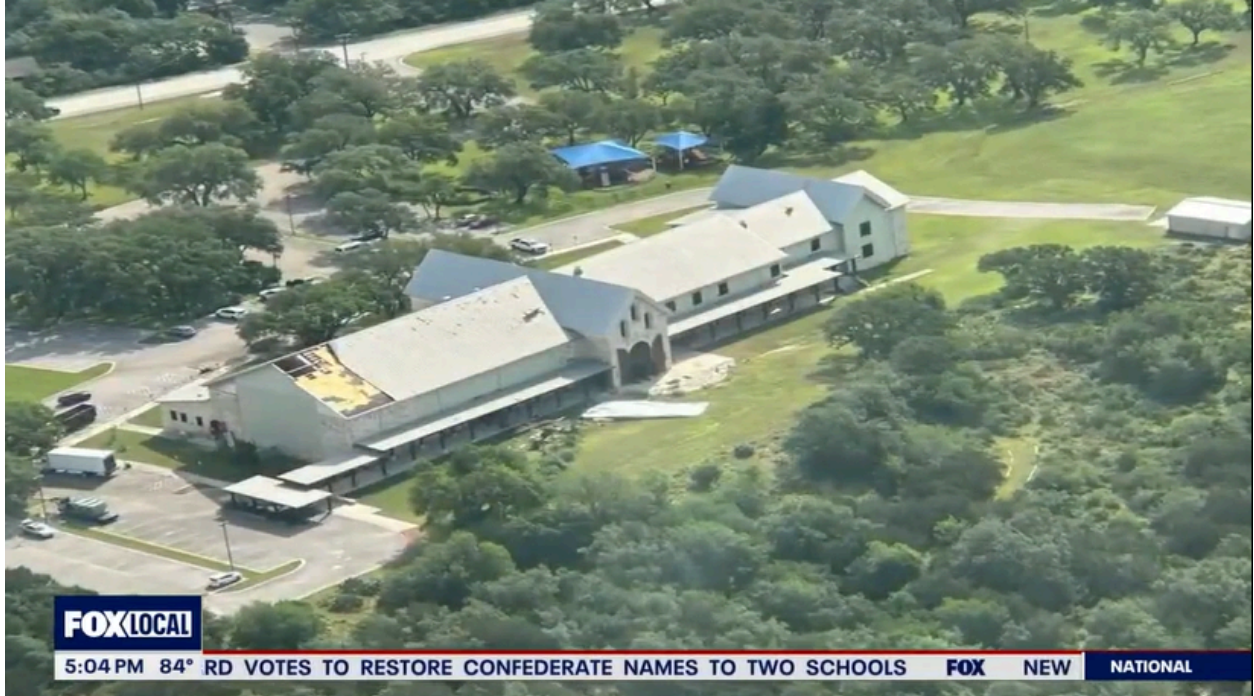
- ❖ **May 5** - Four severe storm reports were received by the Storm Prediction Center for the State of Texas. There were three wind reports, all in Angelina County and all of which were of unknown intensity. One hail report was submitted in Harrison County, with a reported maximum diameter of 1.00". No tornadoes were reported.
- ❖ **May 8-** After a two day period devoid of severe thunderstorms across Texas, all three severe weather hazards were reported on May 8 with a tally of 16 severe weather reports:
  - 3 wind reports with a maximum measured gust of 61 mph in Hunt County
  - 11 hail reports with a maximum reported diameter of **2.00"** in Lamar County
  - 2 tornado reports with neither tornado rated or resulting in injuries or fatalities

- ❖ May 9- The defining severe weather event of the week. This event was characterized by the tremendous size of some of the hailstones that fell. Besides the gargantuan hailstone in Johnson City that threatens to break records, several other reports of baseball (2.75" diameter) to softball size (4.50" diameter) hail were seen across the state. A total of 154 reports were seen, with over *three quarters* of all severe storm reports being for large hail. The categorization is as follows:
  - 34 wind reports, with the highest measured gust being 65 mph by a private weather station in San Marcos (Hays County).
  - **120** hail reports with the largest preliminary measurement of a hailstone being **6.25"** in Johnson City, Tx (Blanco County). Such a hailstone ranks among the largest seen in State history since reliable records have been kept.
  - Surprisingly, no tornadoes were reported in Texas on this day.
- ❖ May 10- After the prolific severe weather producer that was May 9, May 10 saw only three severe weather reports. Two reports of hail 1.50" in diameter were reported in San Saba and Menard Counties, and one severe wind report of unknown intensity caused damage in San Marcos in Hays County. No tornadoes were reported.
- ❖ May 11- A final severe weather episode to round out the week occurred just west and south of the Abilene area. A total of 22 reports were noted:
  - 3 wind reports were received with the highest measured gust being 72 mph in Coleman County
  - 19 hail reports were noted with the largest being **2.00"** in diameter in Coke County
  - 0 tornadoes were reported





*Maps of the severe storm reports received by the Storm Prediction Center on the week of May 5 to May 11, 2024. Only the days where severe weather reports were seen across the State of Texas are shown. On the days that saw severe weather, the general tendency was for low-end severe weather reports (hail <2.00", wind <75 mph), however, May 9 solidified the week as a memorable one from a severe weather standpoint, accounting for almost 80% of the week's storm report tally. In total, 199 severe weather reports (153 hail, 44 wind, and 2 tornadoes) were seen this week, fewer than the 280 from last week, however, the most significant reports this week far outdo what the week prior did. Courtesy: Storm Prediction Center.*



A truck in the parking lot of a hotel in Johnson City was damaged overnight in a storm May 9, 2024. (KXAN Photo/Todd Bailey)

Examples of damage seen from severe thunderstorms on May 9, 2024. At top, the First Baptist Church San Marcos saw part of its roof torn off by gusty winds from the storms as a nearby

*weather station measured a wind gust of 65 mph (photo courtesy Fox7Austin). At bottom, a gaping hole was left behind as monstrous hailstones rained from the sky in a hotel parking lot in Johnson City. A potential record breaker hailstone, 6.25" in diameter (preliminary measurements) fell nearby (photo courtesy Todd Bailey, obtained from KXAN Austin).*

**Excessive Heat:** While the severe weather episode of May 9, 2024 captured most of the attention, excessive heat was ongoing in South Texas.

From an absolute air temperature standpoint, several stations saw records fall. A two station sampler of records broken include:

Brownsville, Tx, records broken:

- Two record highs broken:
  - May 8, 2024 (95°F)
  - May 9, 2024 (104°F)
- The 104°F reading on May 9, 2024 also registers as the highest temperature the site has seen in the month of May, beating the previous record of 102°F set on May 22, 1916 and tied on two other occasions.
  - This is also 2°F shy of the highest *ever* recorded temperature seen at Brownsville (106°F set on March 27, 1984, (yes, March!) and tied on August 28, 2023)
- Through May 11, **9 record high minima** were established in 2024:
  - May 1, 2024 (78°F)
  - May 2, 2024 (80°F)
  - May 3, 2024 (79°F)
  - May 4, 2024 (78°F)
  - May 6, 2024 (79°F)
  - May 7, 2024 (80°F)
  - May 8, 2024 (80°F)
  - May 9, 2024 (80°F)
  - May 11, 2024 (80°F)
- Through May 12, 2024 has been the hottest May to date for Brownsville (records to 1898) with an average temperature of 86.1°F. This defeats the old month to date record of 84.9°F set in 2002.

McAllen, Tx, records broken:

- Two record highs broken
  - May 8, 2024 (104°F)
  - May 9, 2024 (**111°F**)
- The 111°F reading represents the highest temperature recorded at the station, tying the value set on June 22, 2017.
- Through May 11, 5 record high minima were established in 2024:
  - May 2, 2024 (79°F)
  - May 6, 2024 (79°F)
  - May 7, 2024 (80°F)
  - May 8, 2024 (81°F)
  - May 9, 2024 (80°F)

- May 10, 2024 (80°F)
- Through May 12, 2024 has the 2nd hottest May to date for McAllen (records to 1961) with an average temperature of 87.7°F, just shy of 2009's 87.9°F value

Looking at absolute temperatures tells only half the story, as the moisture content of the air was also *absurdly high*, with dew point temperatures approaching or even exceeding 80°F. Such values are exceedingly rare, even for the most humid locations. The high temperature, high moisture tag-team combined to score astoundingly high heat index (HI) values, in excess of **120°F** in locations.

A sample of some transcendently high HI values include

- A maximum HI of 124°F in Brownsville on May 9
  - Defeats Brownsville's May HI record of 115°F set on May 4, 1999
- A maximum HI of 125°F in Harlingen on May 9
  - Torches Harlingen's old May HI record of 121°F set on May 26, 1973
- A maximum HI of 122°F in McAllen on May 9
  - Scorches McAllens' old May HI record of 119°F set on May 13, 1995

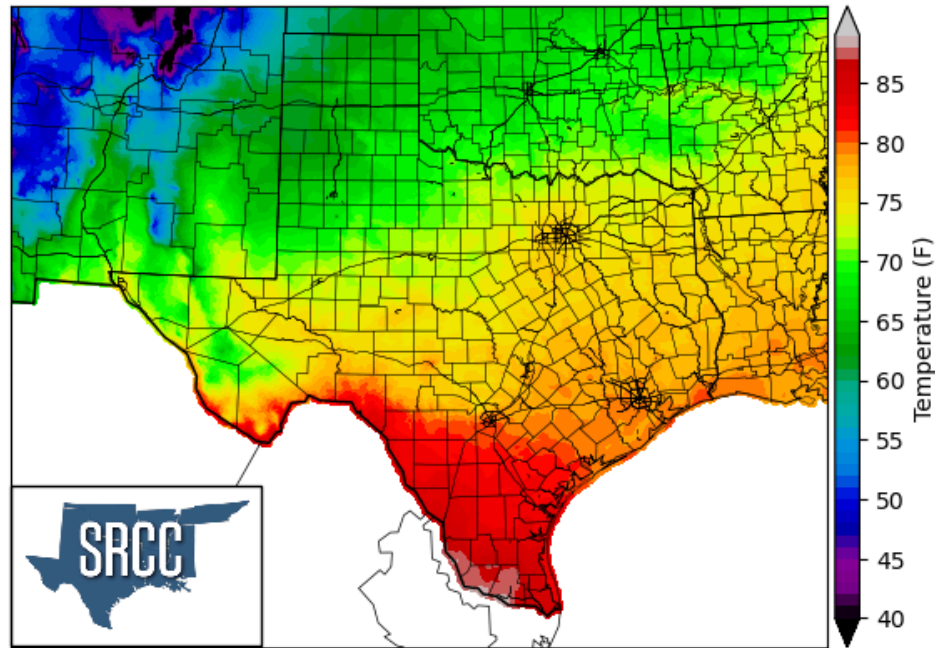
### **Temperature:**

The Statewide temperature told an interesting story for the State of Texas in the week of May 5-11, 2024. A significant early season heat wave impacted the southern tip of Texas, leading to some summer-like temperature averages across that region of the State. Elsewhere, warmer than normal temperature averages dominate, but nothing record-breaking was seen. Average weekly temperatures across the State ranged between 60°F and 90°F, with the high-elevation Guadalupe peak being an exception, and ranking as the coolest spot in Texas for the week of May 5-11 (average temperature wise). For Texas:

- The Guadalupe Peak Station in Culberson County saw the lowest weekly average at 56.2°F
- The McAllen Miller International Airport in Hidalgo County saw the highest weekly average at 89.0°F



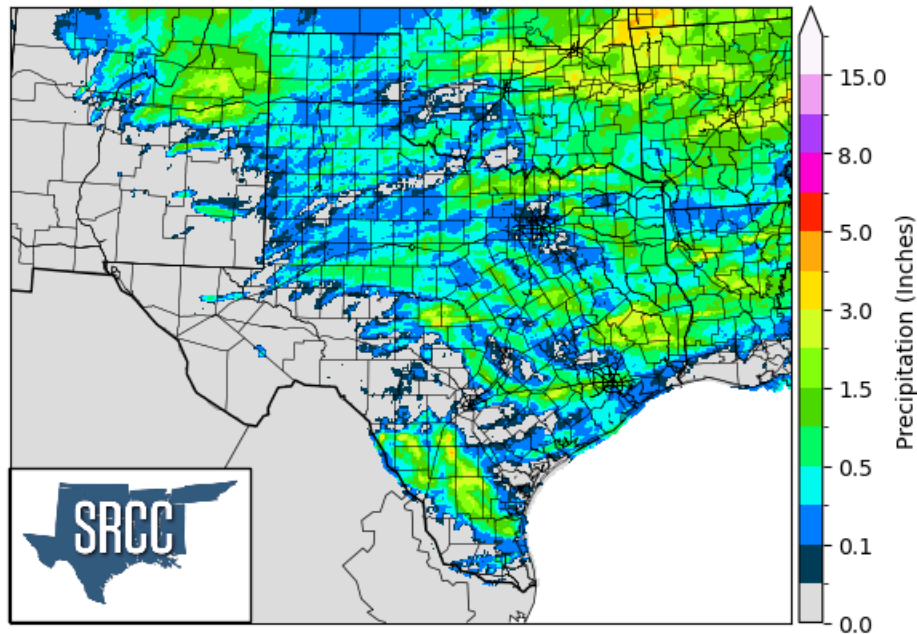
Average Temperature (F) May 5th - May 11th, 2024



**Precipitation:**

Precipitation quantities were much more relaxed than the week prior, with a more even distribution of precipitation totals across the state. The severe weather episodes of the week of May 5-11, though prolific in their own right, did not pose much of a flash flood threat due to the faster moving nature of thunderstorms.

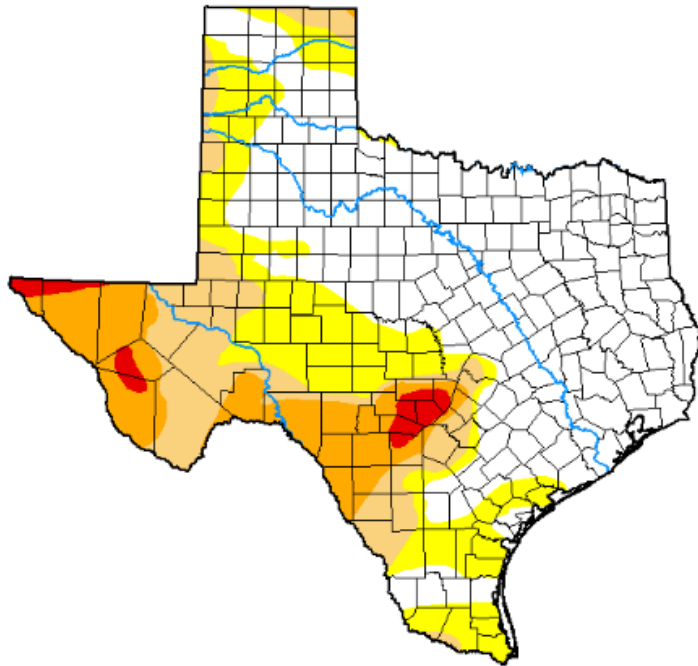
Accumulated Precipitation (Inches) May 5th - May 11th, 2024



With areas of appreciable rainfall being concentrated in regions without drought conditions, the U.S Drought Monitor reports minimal changes from the week prior.

## U.S. Drought Monitor Texas

**May 7, 2024**  
(Released Thursday, May 9, 2024)  
Valid 8 a.m. EDT



*Drought Conditions (Percent Area)*

|   | None  | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4    |
|---|-------|-------|-------|-------|-------|-------|
| <b>Current</b>                              | 53.52 | 46.48 | 26.41 | 13.21 | 2.05  | 0.00  |
| <b>Last Week</b><br>04-30-2024              | 52.78 | 47.22 | 27.41 | 13.40 | 2.05  | 0.00  |
| <b>3 Months Ago</b><br>02-06-2024           | 60.12 | 39.88 | 20.83 | 9.09  | 2.04  | 0.00  |
| <b>Start of Calendar Year</b><br>01-02-2024 | 39.60 | 60.40 | 39.47 | 17.78 | 5.68  | 0.68  |
| <b>Start of Water Year</b><br>09-26-2023    | 3.03  | 96.97 | 80.64 | 59.66 | 38.06 | 12.68 |
| <b>One Year Ago</b><br>05-09-2023           | 33.27 | 66.73 | 52.32 | 37.10 | 17.43 | 2.71  |

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>

Author:

Curtis Riganti  
National Drought Mitigation Center



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

### Statewide extremes:

-The hottest recorded temperature of the week was **112°F** at four different stations across Starr and Hidalgo Counties on May 9 and 10, 2024

-The coldest recorded temperature of the week was 37°F at the Hart Co-op site, in Castro County on May 7, 2024

-The most precipitation recorded in the week of May 5-11, 2024 was 9.30” at the Mullin 3.9 WSW CoCoRahs site in Mills County

-The rainiest day at any site across the State of Texas was May 5, 2024 at the Mullin 3.9 WSW CoCoRahs site in Mills County, where **9.18”** of rain were recorded on this day