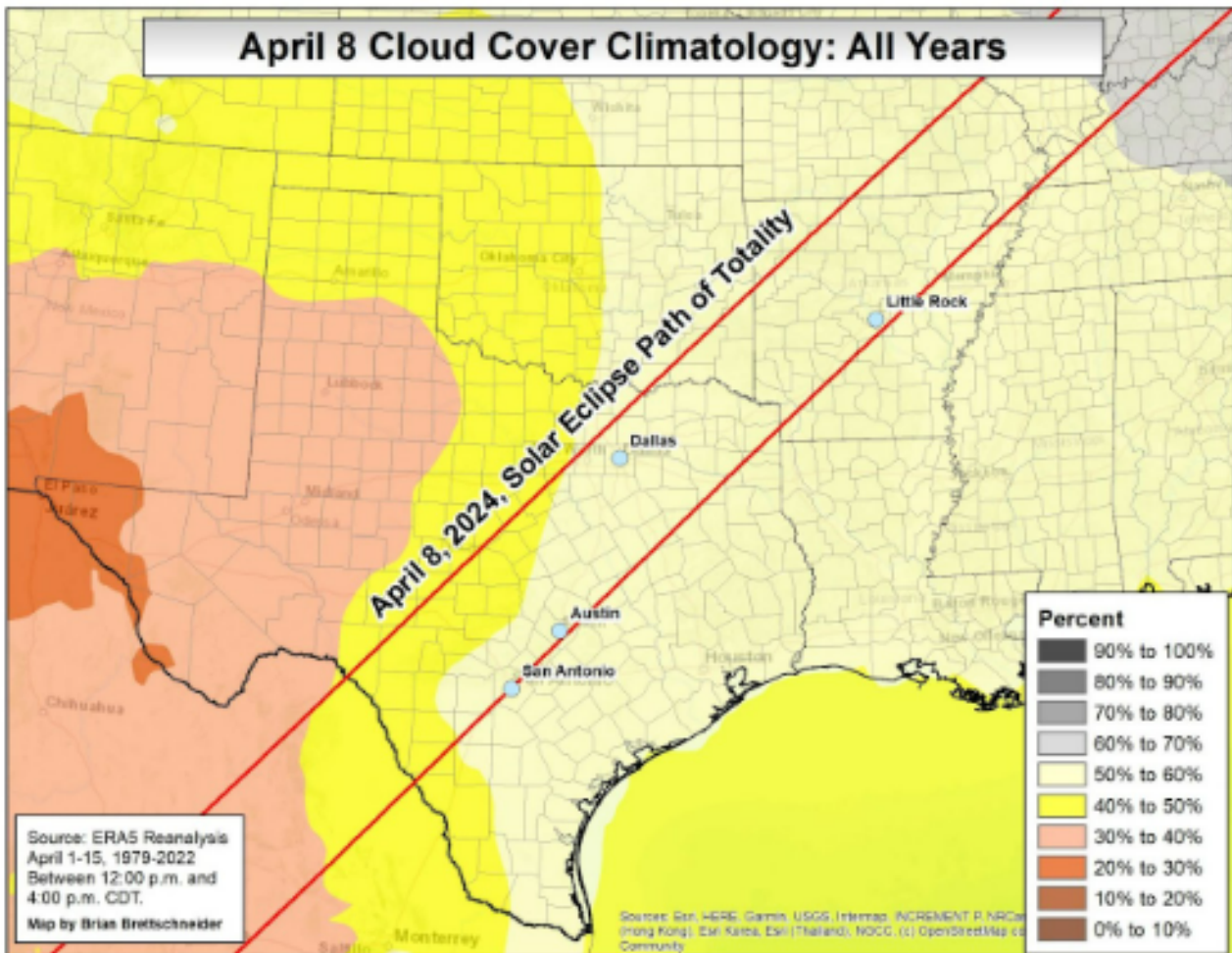


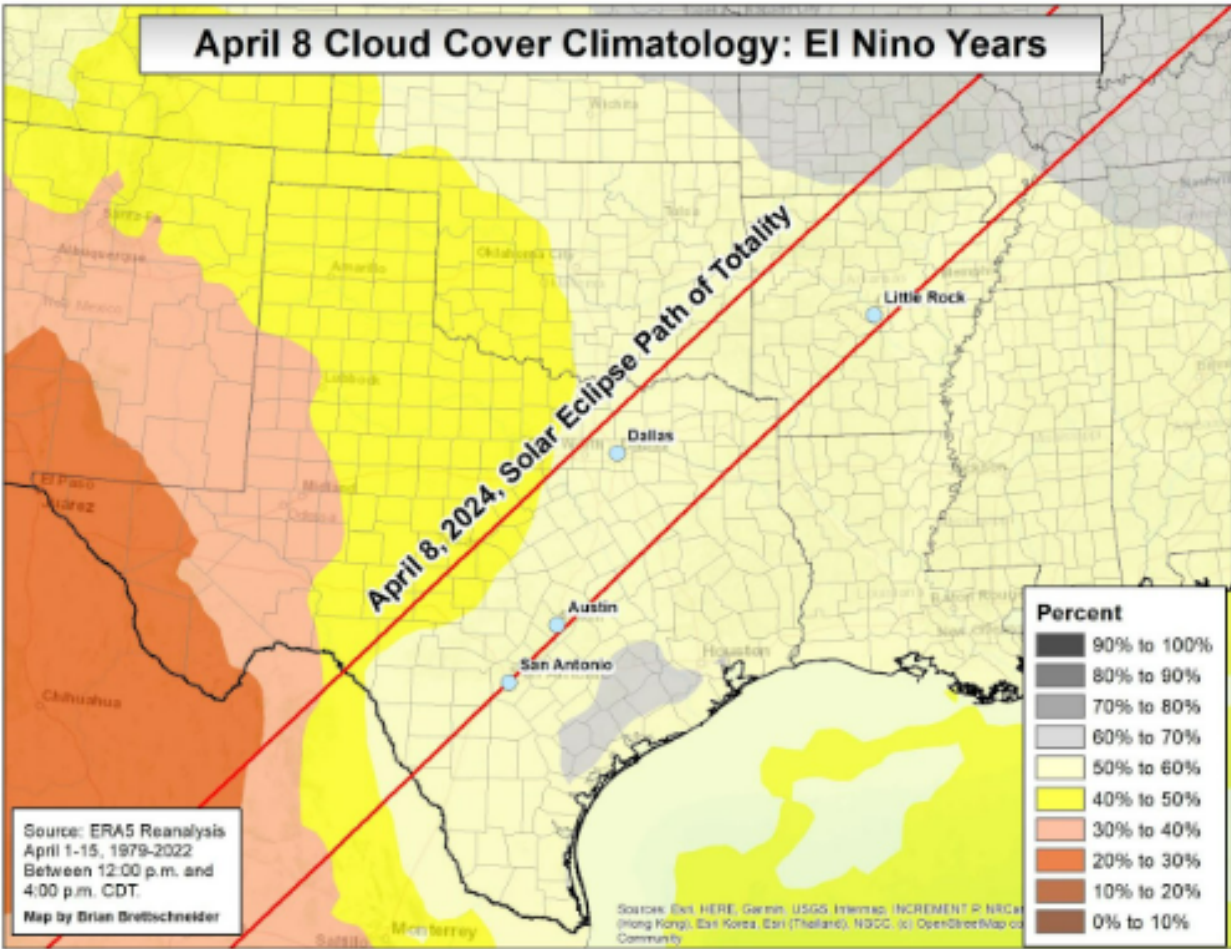
Weekly Climate Summary: 3/10/2024-3/16/2024

Climate in the News:

Looking ahead, we are now 3 weeks in advance from the total solar eclipse that will take place on April 8. The \$1,000,000 question is: how will viewing conditions be for the event? This far in advance, we can only look at climatology to see what is the likelihood for favorable viewing conditions. A map created by Brian Brettschneider from NOAA shows that areas in the path of totality near the Texas/Mexico border have the best chance of having favorable viewing conditions, whereas cloud cover tends to be more prevalent on April 8 for areas further northeast. Given that we are in an el niño year, the map at the bottom may be more relevant to assessing probabilities of favorable viewing conditions. This being said, climate is just an average of the same date over a range of years, and conditions could very much be different on the actual day of the event.



Map showing the average sky cover for the State of Texas between 12:00 pm and 4:00 pm Central Daylight Time from the time period between 1979 and 2022 (44 years). We see that cloud cover tends to be more sparse as we head westward across the State, mainly due to drier conditions with lower humidity. Courtesy: Brian Brettschneider and NOAA



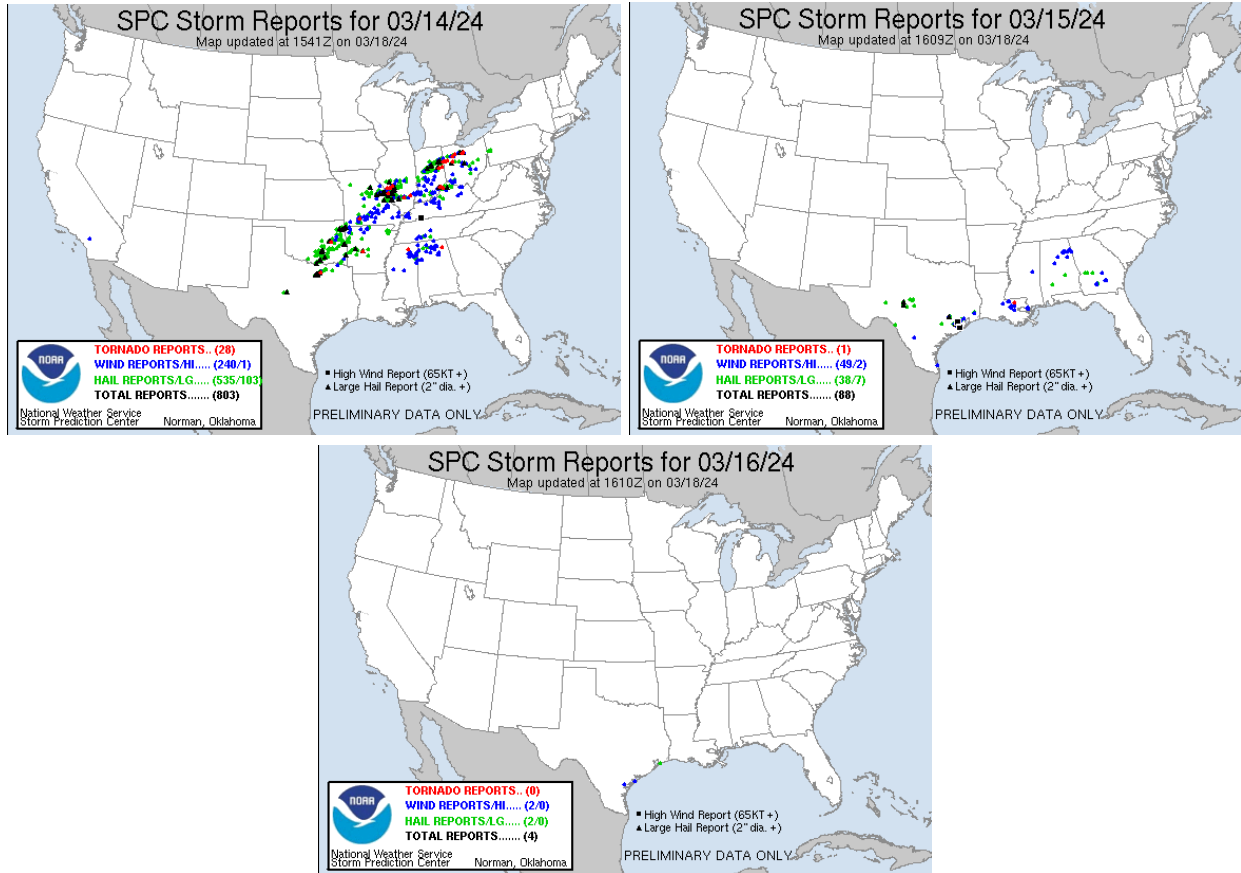
Given that the 2023-2024 cold season fell on an el niño year, this map may be more relevant to assessing probabilities of seeing clouds on the actual day of the event. This map shows the average cloud cover for the same time and date for years where el niño conditions were present. Courtesy: Brian Brettschneider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

Weather Synopsis:

Looking back, the week of March 10-16 was very active from a meteorological standpoint. A multi-day severe weather event took aim at much of the State beginning on March 14. Consecutive days of severe thunderstorms brought numerous reports of wind, hail, and a few tornados. Day by day we note the following:

- ❖ March 14 saw 29 severe weather reports across Texas, with a greater concentration in North Texas, with a brief EF0 tornado touching down 3 miles north of Frisco with maximum estimated winds of 85 mph. On this day, there were:
 - 2 wind reports with a max *estimated* speed of 60 mph in Red River county
 - 26 hail reports with a maximum hail diameter of 3” in Denton County
 - 1 tornado report in Collin County
- ❖ March 15 saw 59 severe weather reports across Texas, with an emphasis on South Central and Southeast Texas. The day saw:
 - 19 wind reports with a maximum *measured* gust to 77 mph in Fort Bend County

- 40 hail reports with the maximum reported diameter being 2.5” in Fort Bend and Austin Counties.
- 0 tornado reports
- ❖ **March 16** saw 4 severe weather reports across the State, mainly along the coast. On this day, we tallied:
 - 2 hail reports with the largest being 1.25” in Galveston County
 - 2 wind reports with a maximum *measured* gust of 60 mph in Calhoun County
 - 0 tornado reports



Maps of storm reports from the Storm Prediction Center showing the days where severe weather was observed across the State of Texas. 92 total reports were received between March 14-16, 2024 for the State of Texas. Reports consisted of mainly hail reports, with 68 total reports, followed by wind with 23 reports, and a lone tornado report in near Frisco, Tx.

Courtesy: Storm Prediction Center.

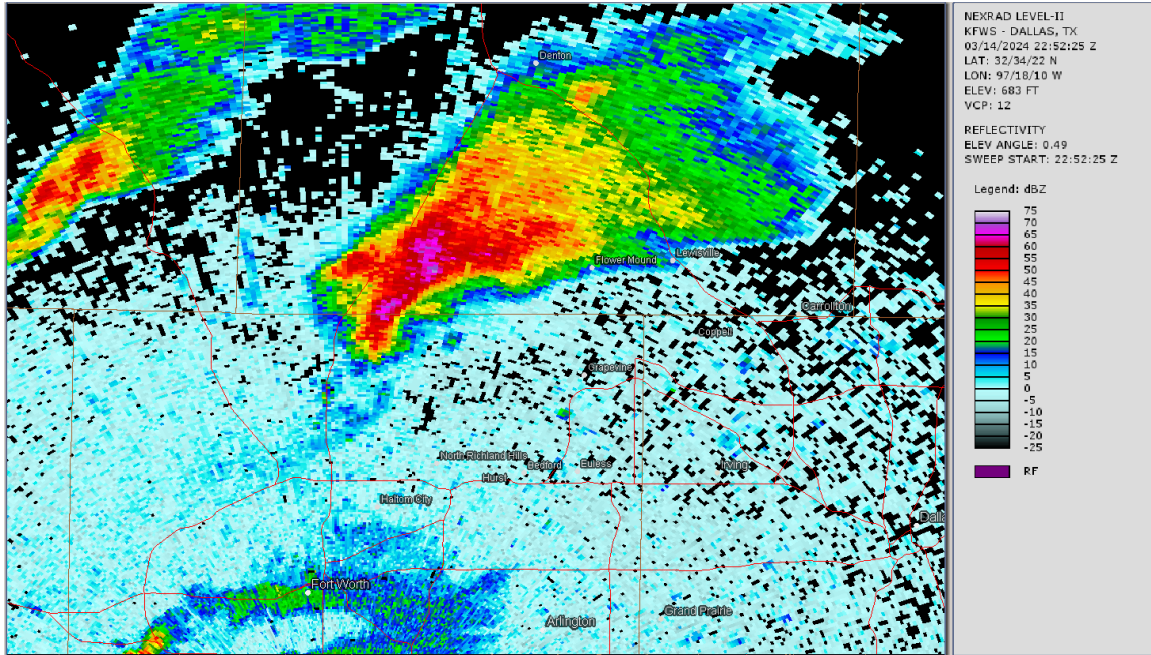
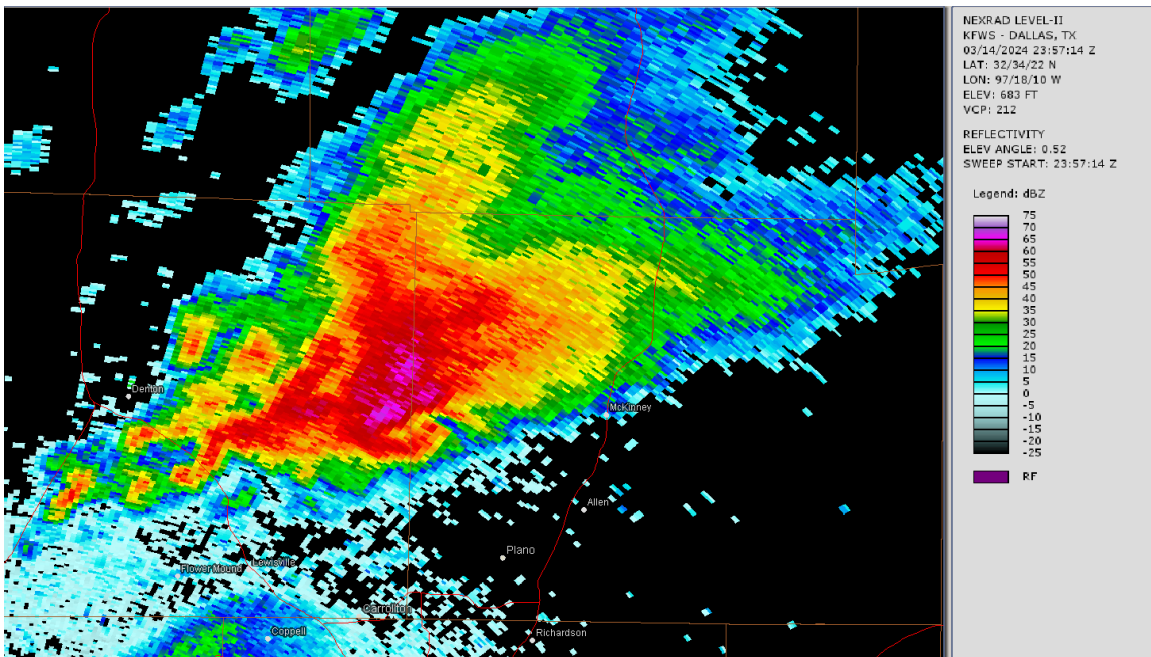
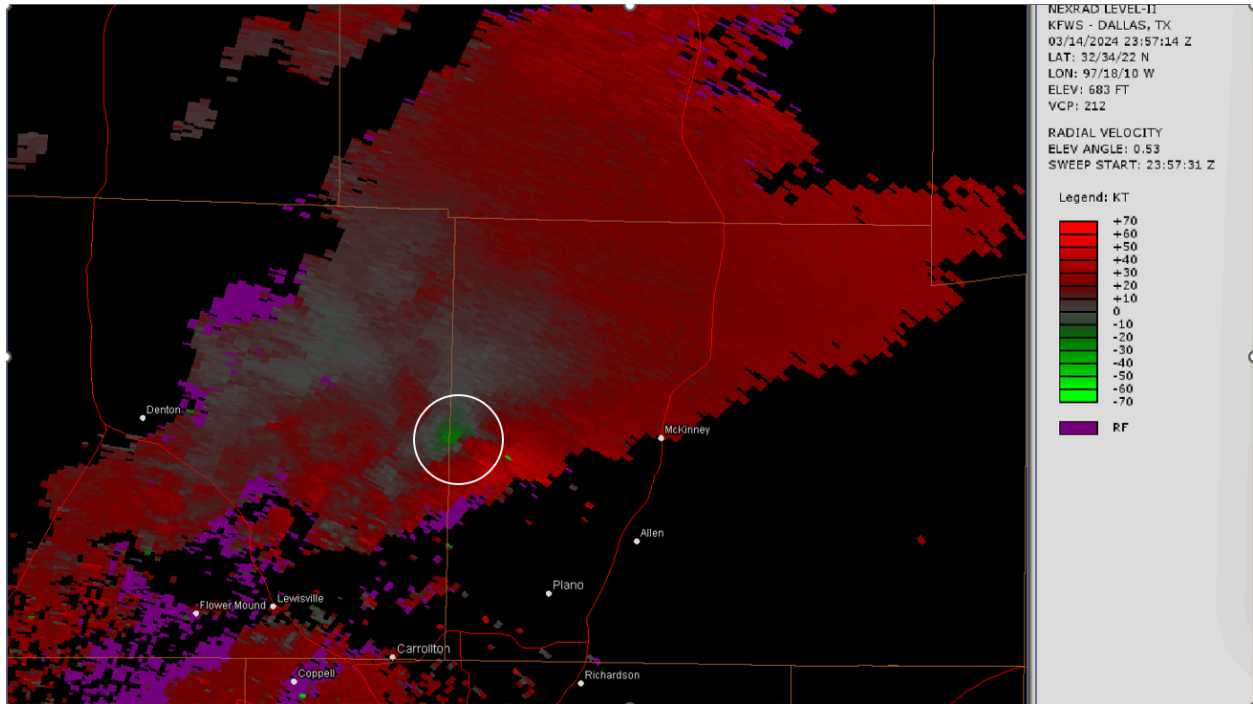


Image of the KFWWS radar reflectivity at 5:52 pm CDT on March 14, 2024. This snapshot was taken just before the 3.00" hail report in Denton County. The supercell in the center of the image is responsible for the large hail that fell in northern Tarrant and Denton Counties. Reflectivity values of up to 70 dBZ can be noted, typically only seen in storms producing very large hail. Courtesy: NOAA's weather and climate toolkit





KFWs radar reflectivity and velocity images at 6:57 pm CDT on March 14, 2024. This snapshot shows the storm responsible for the only tornado report in Texas for the severe weather event, and was taken about five minutes before the reported touchdown time. A rotation couplet can be noted in the radial velocity image where the green and red colors come together (in the white circle). The green shows winds coming toward the radar and the red shows winds going away. The close proximity of these colors shows rotation within the storm.

Courtesy: NOAA's weather and climate toolkit.



Damage in Frisco from the EF0 tornado that touched down. The total path length was less than a quarter mile, and its maximum wind speed was estimated to be 85 mph.

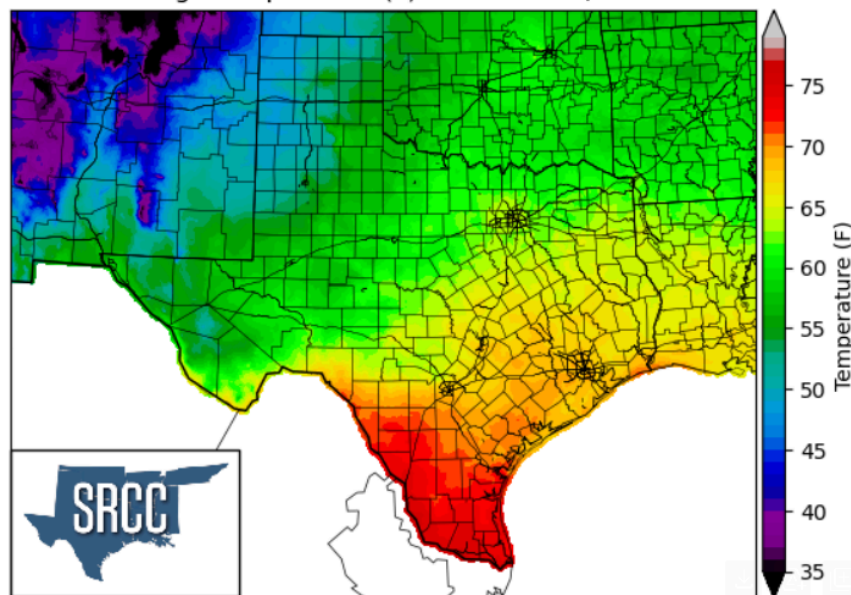
Courtesy: NWS Fort Worth

Temperature:

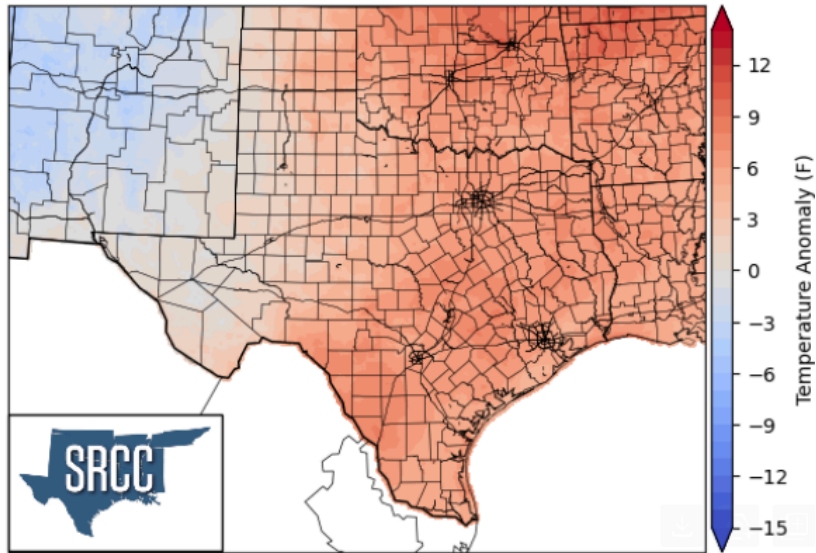
Continuing the recent stretch of warm weeks, the week of March 10-16 was above normal for virtually the entire state, except for the northern reaches of the Texas Panhandle. Average weekly temperatures across the state ranged from 45°F to 75°F, with the warmest locations being above the 75°F threshold. The statewide extremes in average weekly temperature are as follows:

- Dalhart FAA Airport in Dallam County saw the lowest weekly average at 47.1°F
- McAllen Miller International Airport in Hidalgo County saw the highest weekly average at 75.9°F

Average Temperature (F) March 10-16, 2024



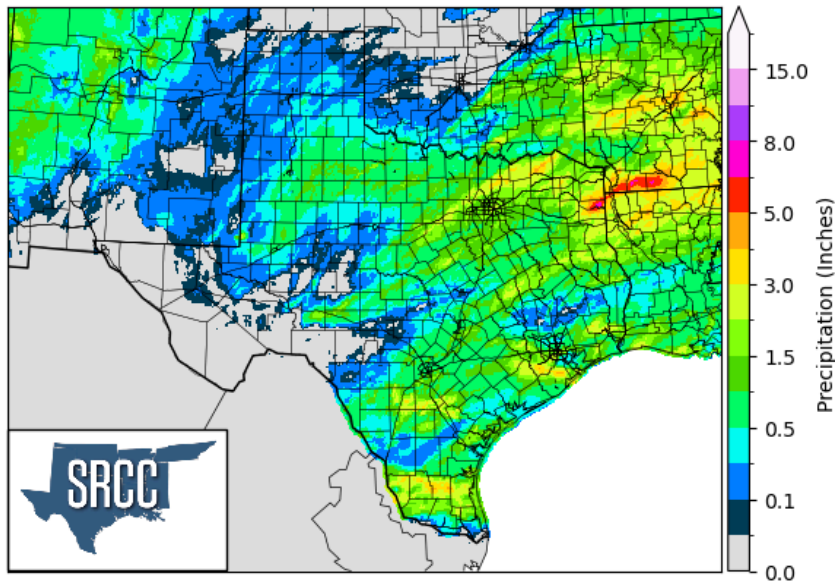
Mean Temp Anomaly (F) March 10-16, 2024 vs 1991-2020 Normals

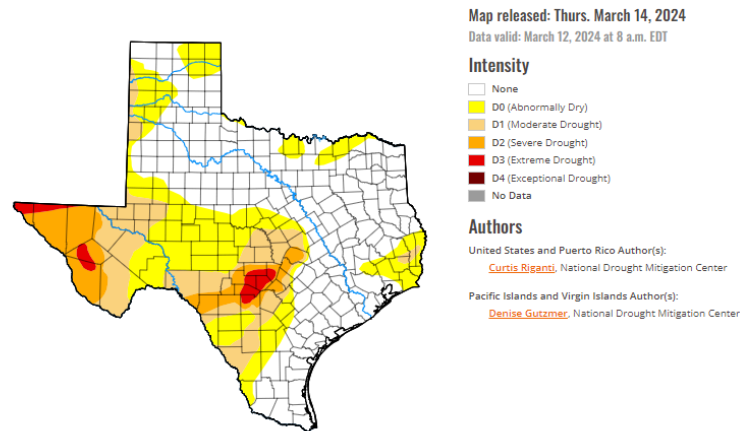


Precipitation:

With the multitude of severe weather reports came a healthy dose of precipitation for the State. Most of Texas saw measurable rain, with much of the State’s real estate being doused with over one inch of rain. Unfortunately, if we look at the drought monitor, we notice that the heaviest precipitation fell outside of the areas suffering most from drought conditions.

Accumulated Precipitation (Inches) March 10-16, 2024





Statewide extremes:

-The hottest recorded temperature of the week was 99°F at the Laredo International Airport and the Faith Ranch Airport in Webb and Dimmit Counties respectively on March 13, 2024.

-The coldest recorded temperatures of the week were 20°F seen at the Muleshoe National Wildlife Refuge and the Muleshoe 19S sites in Bailey County, the Bravo Co-op site in Hartley County, and the Dalhart FAA Airport in Dallam County on March 11, 2024 .

-The most precipitation recorded in the week of March 10-16, 2024 was 4.25” at the Paris 4.2NE CoCoRahs site in Lamar County.

-11 stations broke or tied record highs in the week of March 10-16, 2024.

-2 stations broke or tied record lows for the same week.