June 2024 Climate Summary

Significant Weather Events:

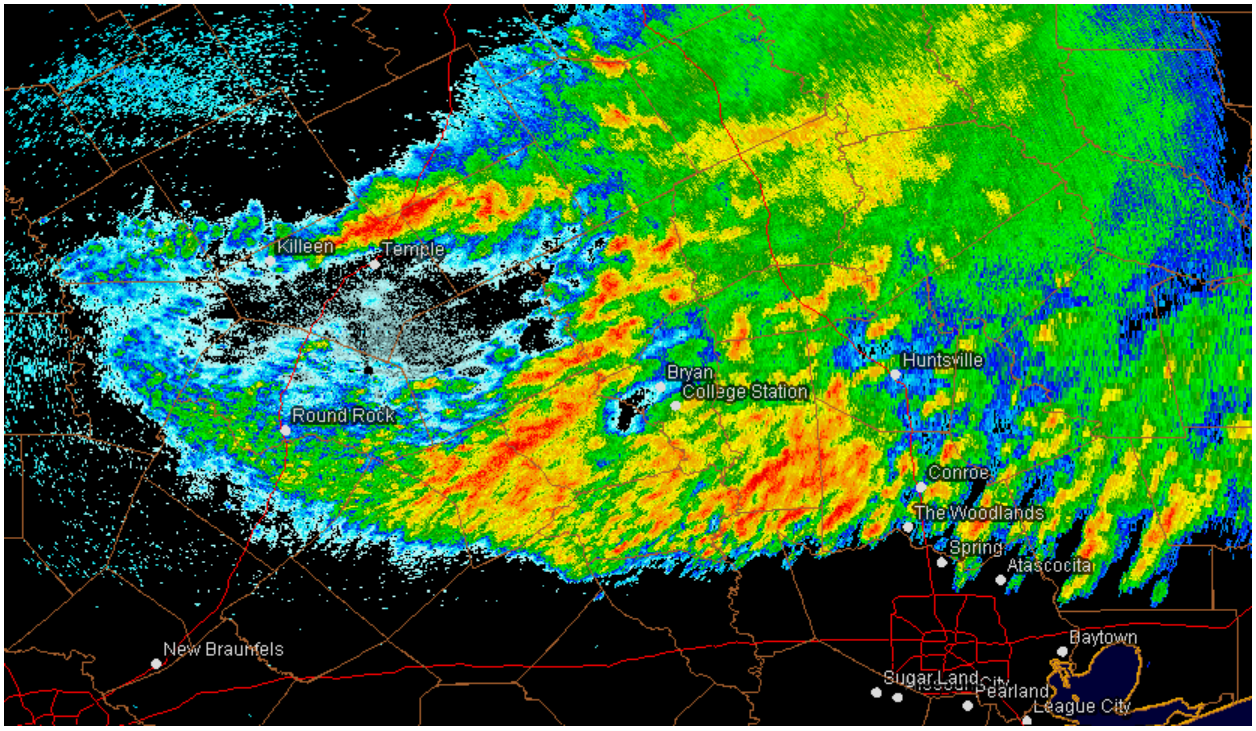
As May evolved into June, Texas weather seriously tapered to more quiet conditions, which is typical for the evolution of spring into summer. An unfortunate consequence of this is that the heat spread throughout the state. Hot temperatures, contained in South Texas for the month of May, have overspread most of the state during the month of June, but with varying levels of humidity depending on the region of the state. Consistent rounds of thunderstorms that were the concluding factor for the month of May tapered near the beginning of the month, bringing an end to the seemingly relentless severe weather, and establishing a pattern where only isolated thunderstorms would rumble across a select few portions of the state. Tropical Storm Alberto formed and made landfall mid-month in Mexico, yet its large expanse of precipitation and large wind radius still resulted in appreciable impacts in the southern parts of the state, virtually eradicating the drought present in the region. After the dissipation of Tropical Storm Alberto, the month of June ended on a hot and dry note for most of the state.

Significant Dates:

- June 1-3: The first few days were marked by a remarkable severe weather event, one that saw what may have been the largest hailstone in Texas records as a hailstone, potentially ***7.00”*** in diameter, fell in Vigo Park (Swisher County). Records of this nature take a long time to process and confirm, so as of this writing, such a hailstone is still being considered for a potential record. The first day of June also saw wind gusts, estimated to be at ***100 mph*** destroy a shed and an RV as well as capsize several boats in Calhoun County.
- June 5: Arguably the last significant thunderstorm complex to move through a large portion of the State. This storm complex is responsible for a large part of the June 2024 total rainfall for North and northeast Texas.

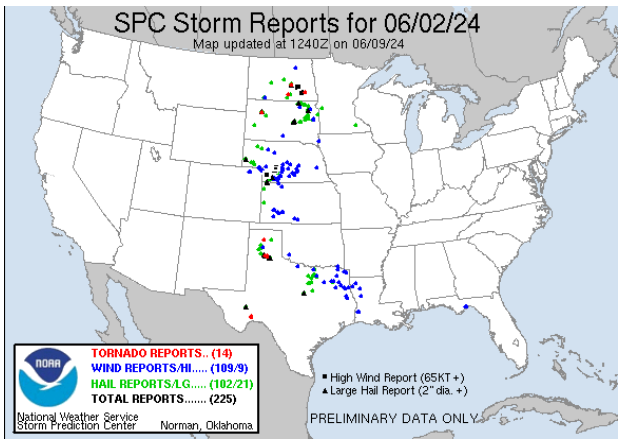
- June 18-21: The effects of Tropical Storm Alberto were felt, particularly across the Rio Grande valley. Effects ranged from showers and light rain, along with significantly cooler daytime high temperatures in areas like Austin, College Station, and Houston to 3-5 inch rainfall totals with instant wind gusts to 50-60 mph in the lower Rio Grande Valley. Brownsville saw a 56 mph wind gust at 6:02 am on June 20, 2024.

- June 23-30: The hottest temperatures of 2024 were seen across a large section of the state. DFW saw their first 100°F reading of 2024 on June 23, which is about a week earlier than their typical 1st triple digit day of the year (July 1). Other places across Texas such as Houston, Austin, and Lubbock all tied or broke their hottest temperatures of the year



Val Castor
last Monday

Monster size hail - 3 miles WNW of Vigo Park, TX 7:37pm 6/2/24 - set a new record for hail size recorded in Texas - 7.25" from the previous record of 6.4" in Hondo, TX in 2021.



A view of some of the major meteorological events that occurred in June 2024. At top, a sizeable thunderstorm complex approaches the Houston area from the North. This complex produced gusty winds and rainfall totals of 0.50-2.00" of rain as it passed through. Image courtesy of NOAA's Weather and Climate Toolkit.

Middle left: A view of a hailstone that fell in Vigo Park on June 2, 2024. Preliminary measurements of this stone indicate that a hail diameter at or above 7.00" or more may have been achieved by this hailstone, making it a contender for the largest hailstone in Texas state history (since records have been kept), beating the previous record of 6.42" in Hondo, Tx on April 28, 2021. Image courtesy of Val Castor.

Middle right: A map showing the severe weather reports on June 2, 2024, the day when the mammoth hailstone fell. Image courtesy the Storm Prediction Center.

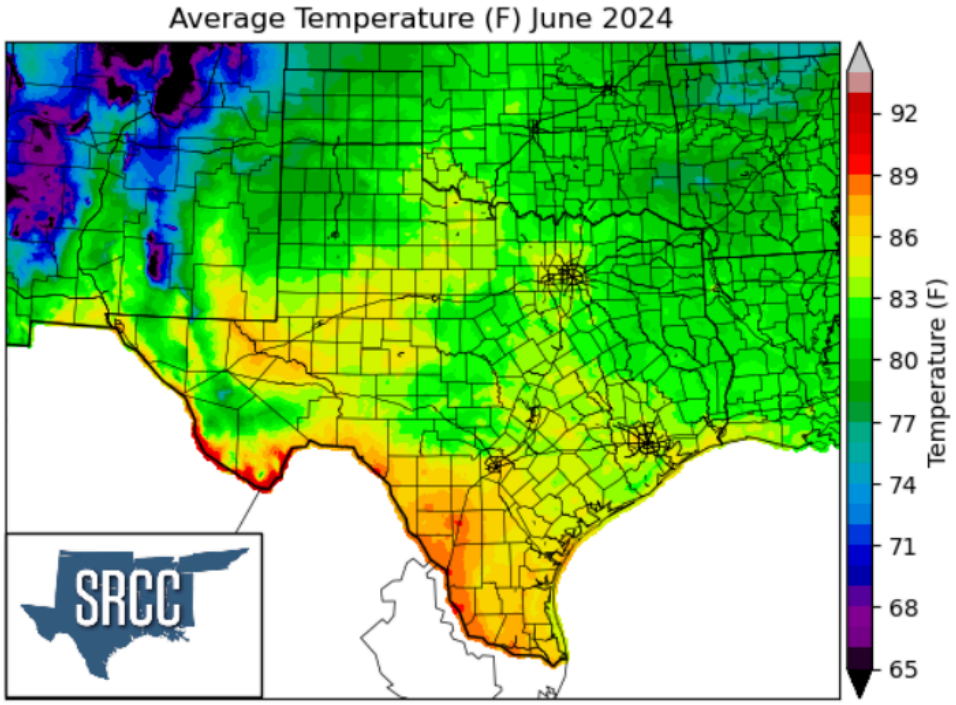
At bottom: The track of Tropical Storm Alberto. Though the center of the storm's path went into México, the large expanse of the storm's rainbands and gusty winds still brought impacts to the lower Rio Grande Valley.

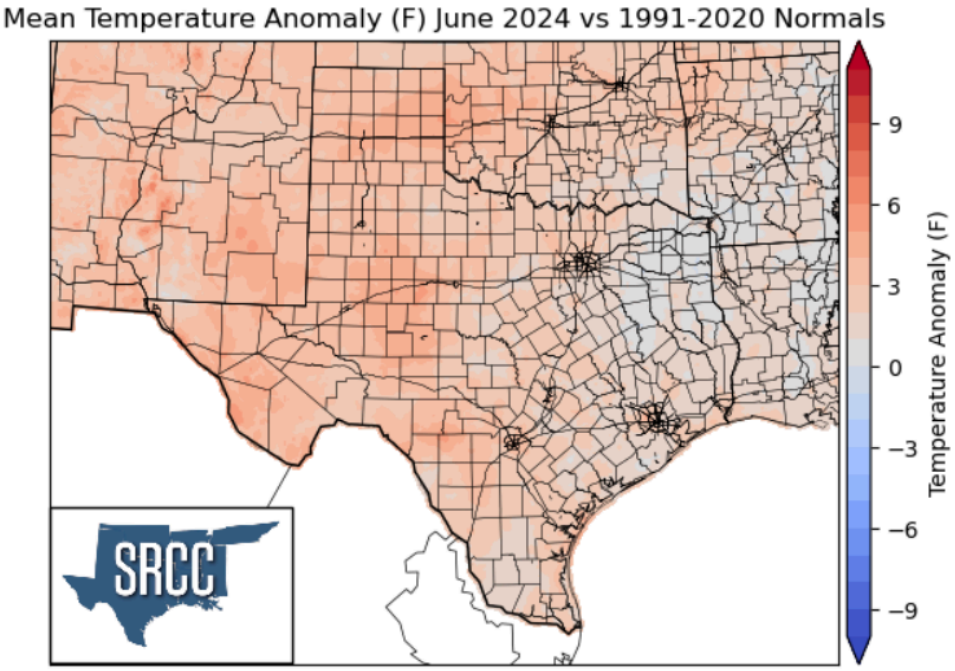
Temperature:

Unsurprisingly, June 2024 was a hot month for Texas, yet, as compared to May 2024, it was not quite as record breaking. Most of the state saw monthly temperatures between 2°F and 5°F above normal for June, a sizable departure for a summer month. June 2024 was among the top ten hottest Junes for the following stations: El Paso (89.3°F; hottest June on record), Corpus Christi (87.2°F; hottest), Brownsville (88.3°F; hottest), Lubbock (82.0°F; 7th hottest June), Amarillo (80.6°F; 4th hottest).

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

- The coolest monthly average temperature was 69.7°F at the Guadalupe Peak Texas RAWS site in Culberson County
- The hottest monthly average temperature was 92.9°F at the Rio Grande Village Co-op site in Brewster County
- The hottest recorded temperature across the State was ***115°F*** at the Rio Grande Village Co-op site in Brewster County on June 17, 2024
- The coldest recorded temperature was 51°F seen at the Muleshoe Co-op site and airport in Bailey County on June 4, 2024





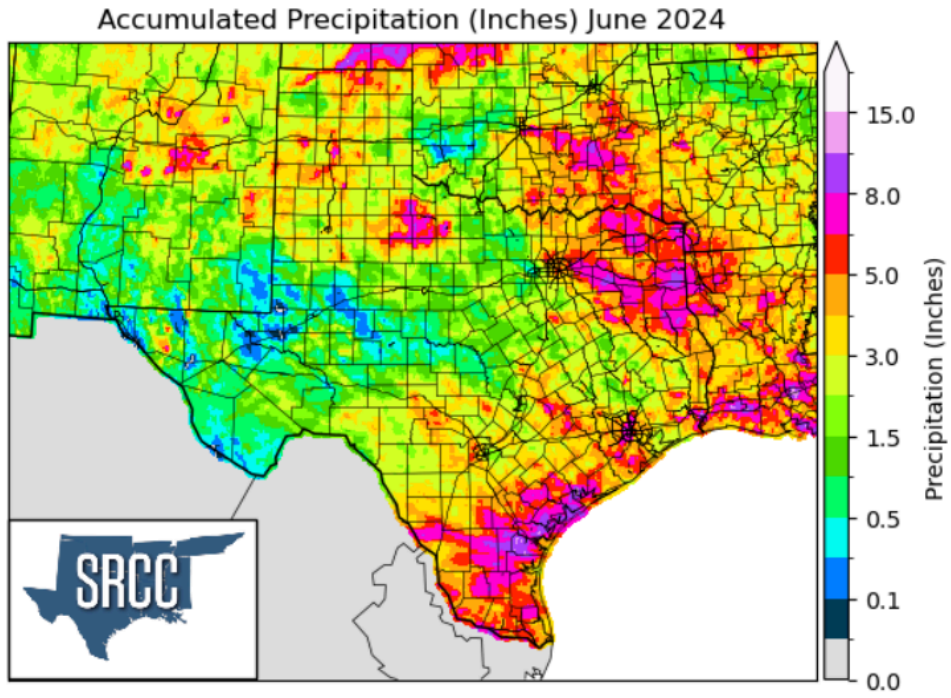
Precipitation:

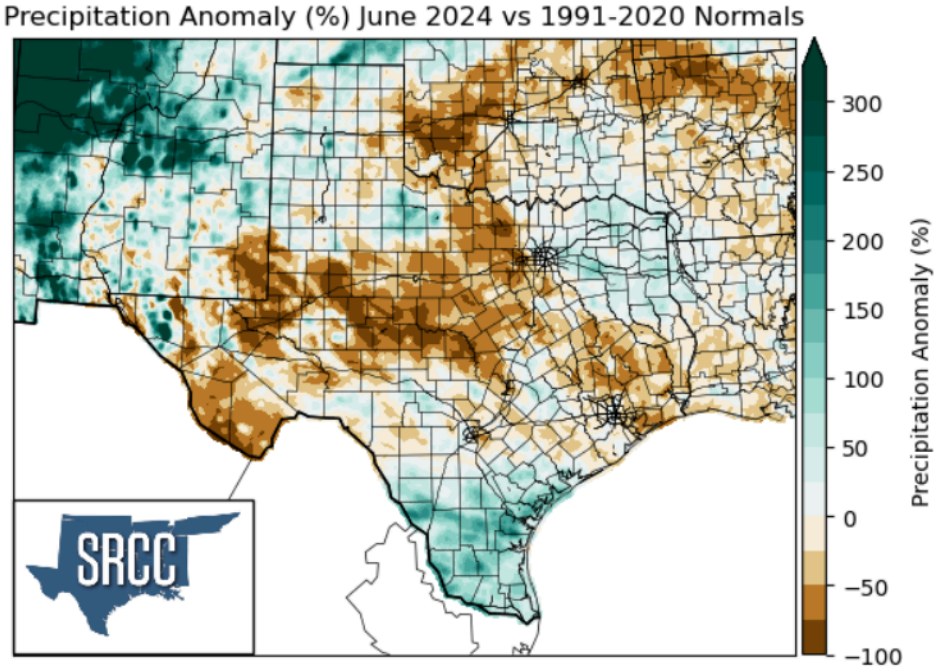
It is almost as if the spigot has shut off for much of the State of Texas as we entered June 2024. While April and May of this year broke many records in terms of high precipitation accumulations for many stations, June was more of a lackluster rain producer for much of the State. A few exceptions to this rule were found in Deep South Texas as the effects of Alberto compounded significant rainfall totals here. With this said, while May 2024 had areas blast through the 30.00" of rain monthly total threshold, June 2024 struggled to break the 10.00" rainfall mark even for the rainiest locations across the state. This brings forth the point that, while for May, we had to adjust the rainfall scale to go up to 40.00", we had to readjust the scale in the rainfall map to go up to only 15.00" for June 2024 so that the rainfall totals would be easier to read.

The state can be subdivided into a few key regions when it comes to describing precipitation amounts for June 2024. The panhandle had precipitation fairly in line with climate normals, mainly brought by afternoon thunderstorms, and a few storm complexes early in the month. Northeast Texas also saw near to slightly above normal precipitation, mainly from overnight or early morning thunderstorm complexes dropping down from Oklahoma early in the month. And Deep South Texas saw above normal rainfall, thanks almost exclusively to the effects from Tropical Storm Alberto. Outside of these areas, the state saw precipitation totals mainly below normal, which in turn helped amplify the hot temperatures seen throughout the month.

Some Precipitation extremes across the State are:

- Highest monthly total: 10.56” at the Point Comfort Co-op site in Calhoun County
- The highest calendar day total across the State was ***8.35”*** at the Rockport 3.0 NNW CoCoRahs site in Aransas County on June 20, 2024. This observation was done at 7:00 am local time on June 20, so it is possible that this may not be a strict calendar day total, but it is still a 24 hour total.

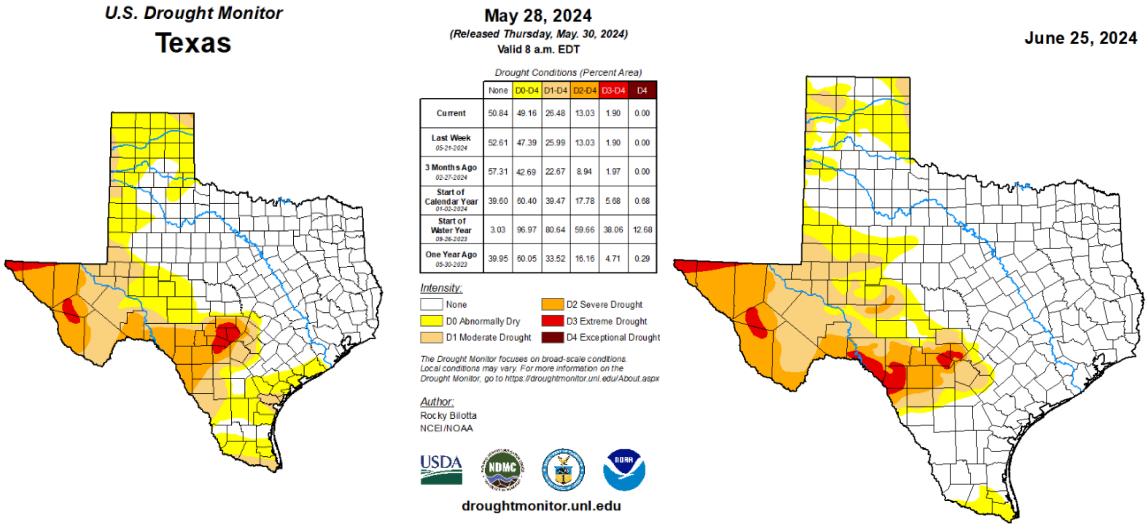




Drought:

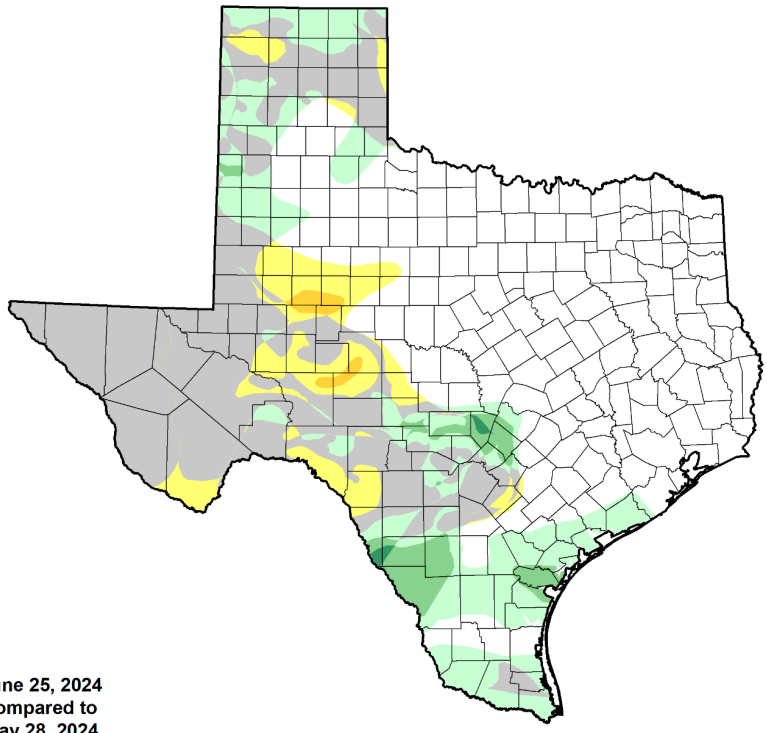
While nowhere near as prolific of a rainfall producer as April or May 2024, June 2024 managed to shift its most significant precipitation totals to areas undergoing drought, which helped aid in significant changes to the drought monitor across the State of Texas. Many areas in the lower Rio Grande Valley saw significant improvements in drought while areas in a steeper rainfall deficit saw some degradation.

Drought category	End of May (May 28, 2024)	End of June (June 25, 2024)	Change
Abnormally dry or greater	49.2%	38.7%	-10.5%
Moderate drought or greater	26.5%	25.1%	- 1.4%
Severe drought or greater	13.0%	12.0%	- 1.0%
Extreme drought or greater	1.9%	2.3%	+ 0.4%
Exceptional drought	0.0%	0.0%	0.0%



U.S. Drought Monitor Class Change - Texas

4 Week



June 25, 2024
compared to
May 28, 2024

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