

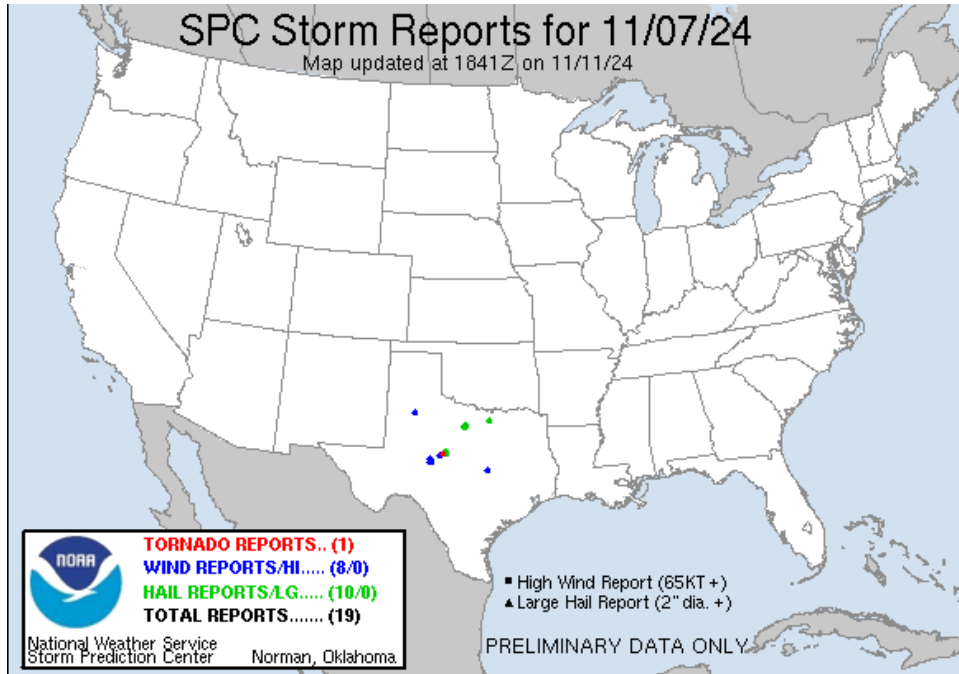
## Weekly Climate Summary: 11/3/2024-11/9/2024

### **I. Climate in the News:**

The first full week of November saw an active weather pattern that resulted in diverse weather for the Lone Star State. The development of a low-pressure system in the Texas Panhandle resulted in ample precipitation. The first snowfall of the season was also observed this past week for Texas, much of it being confined to the northwestern portions of the Texas Panhandle. This system also helped kick off some fall season severe weather this week with 39 total reports across the state from Storm Prediction Center. Temperatures across the state obeyed a rule where temperatures were cooler in the west and warmer in the east, likely due to the influence of the low-pressure system and associated cold front.



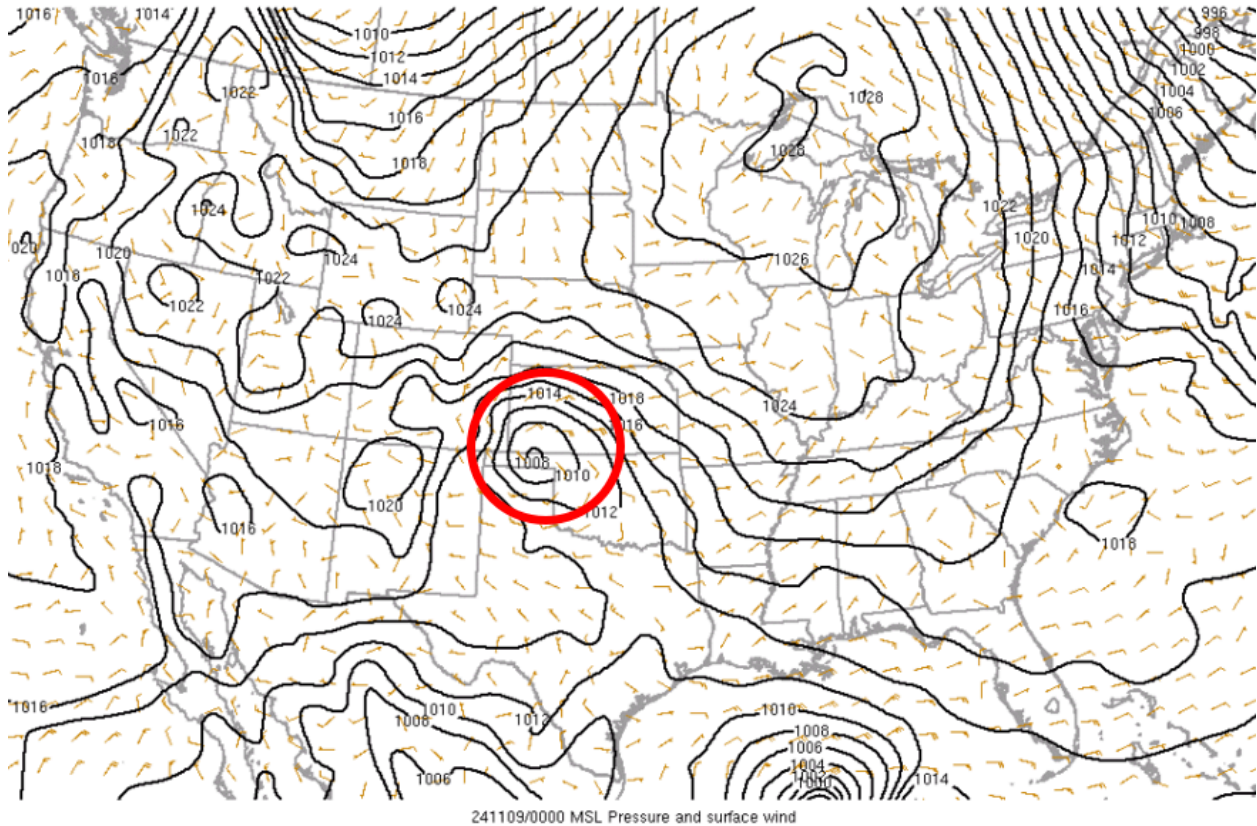
*This shot shows the view in Texline, TX on November 8, 2024, as significant snowfall impacted parts of the Texas Panhandle. This was the first snow of the season seen anywhere in Texas. Though the coverage of snowfall was not very impressive, banding features in the snow produced some impressive snowfall accumulation. This image is courtesy of the Pantex skyCam, obtained from a Facebook post by Texas Storm Chasers.*



*Map showing the severe weather reports received by the Storm Prediction Center on the day with the most severe weather reports in Texas for the week (19 total reports). Only Texas saw severe weather that day as thunderstorms produced one tornado, hail, and damaging winds.*

## **II. Weather Synopsis:**

The week of November 3-9, 2024 saw busy days from a weather standpoint mainly due to the low-pressure system in the Texas/Oklahoma Panhandles. The presence of this system dragged along a cold front that served as a seed for storm development, prompting severe weather. Cold air wrapping around the system and the induced lift from the system itself resulted in snow closer to the low. Areas of trialing thunderstorms also resulted in some impressive rainfall totals in some areas.



*An analysis of surface pressure across the United States shows the low-pressure system responsible for the active Texas weather through the nested contours in the red circle. These systems, also known as extratropical cyclones (fancy weather name, huh?) typically have an associated strong contrast in temperature which can result in rain, storms, and severe weather on the warm side and snow or even blizzard conditions on the cold side. Map courtesy of the Storm Prediction Center's Measosanalysis archive.*

The low and associated cold front were also influential in the eventual motion of what was Hurricane Rafael (which can be seen at the bottom of the map above). Once predicted to get close to the Louisiana coast, the cold front stalled the system well out in the Gulf of Mexico, where the atmospheric wind profile became unfavorable, and eventually caused the storm to dissipate. Though this hurricane remained out at sea, moisture from the system interacted with the cold front to produce impressive rainfall totals for parts of Southeast Texas near the coast.



*Map showing the track and intensity of Hurricane Rafael. Tropical systems in the Gulf of Mexico almost always bring impacts to the mainland United States, however, steering currents in the atmosphere in the case of Rafael kept the storm over water. As the storm stalled, wind shear began to erode the storm, eventually causing it to dissipate. Map courtesy of Wikipedia.org.*

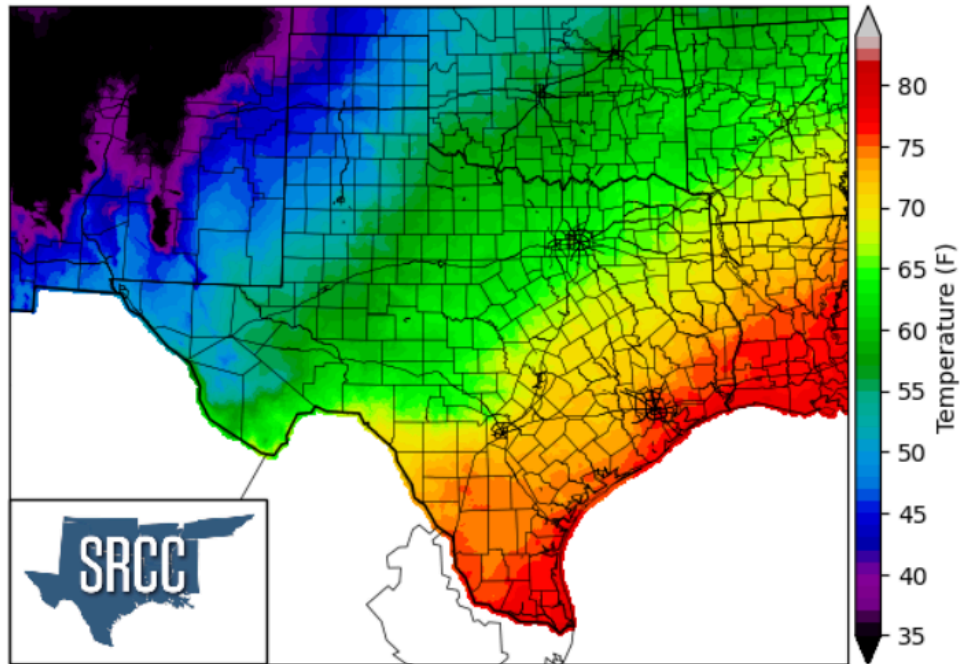
### **III. Temperature:**

The temperature for the week of November 3-9 varied spatially throughout the state. Areas west saw temperatures below normal, typically 2-5°F below normal in the Panhandle and Trans Pecos regions, and between 8-12°F above normal in SE TX. Departures were as low as 10°F below normal in Dallam County and as much as 15°F above normal in the Upper Texas Coast. Some at-a-glance temperature statistics for Texas are:

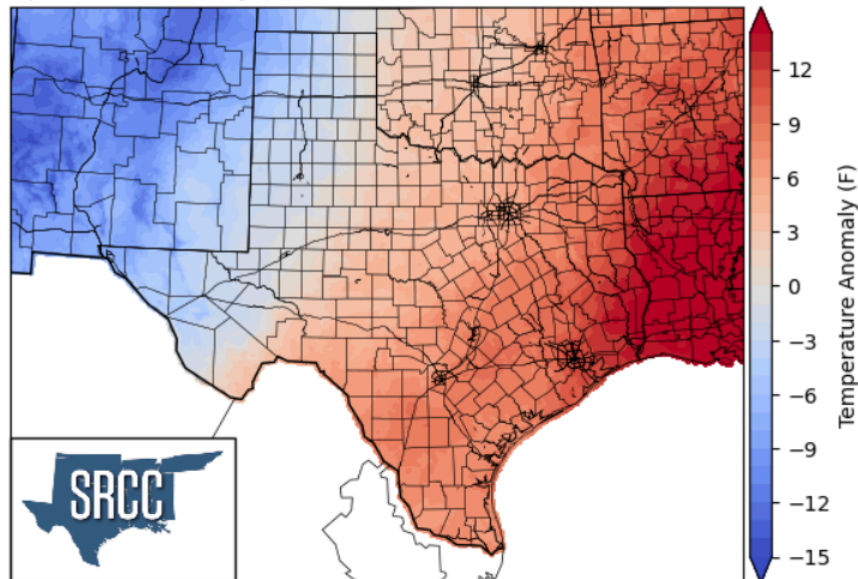
- **40.2°F** - weekly average at the Guadalupe Peak Texas RAWS site in Culberson County; the coldest in Texas
- **66.9°F** - the weekly average temperature of Texas stations
  - 6.6°F **below** that of the week before
- **81.4°F** - weekly average at the McAllen Miller International Airport in Hidalgo County; the hottest in Texas



Average Temperature (F) November 3-9, 2024



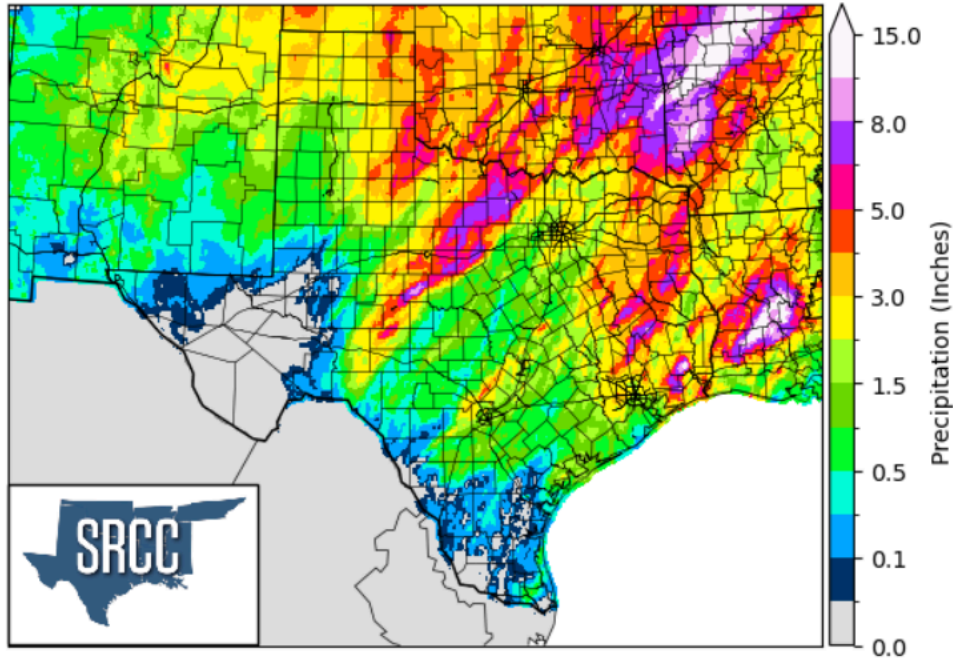
Mean Temperature Anomaly (F) November 3-9, 2024 vs 1991-2020 Normals



#### **IV. Precipitation**

Most of Texas saw appreciable precipitation during the week, with several rounds of rain delivering a much-needed dousing to the State. Looking at the precipitation map, several distinct bullseyes can be picked out, likely due to repeated rounds of thunderstorms. As mentioned before, Texas also saw its first snowfall of the season, with the most extreme weekly total being 24.0" of snow reported in Texline, TX.

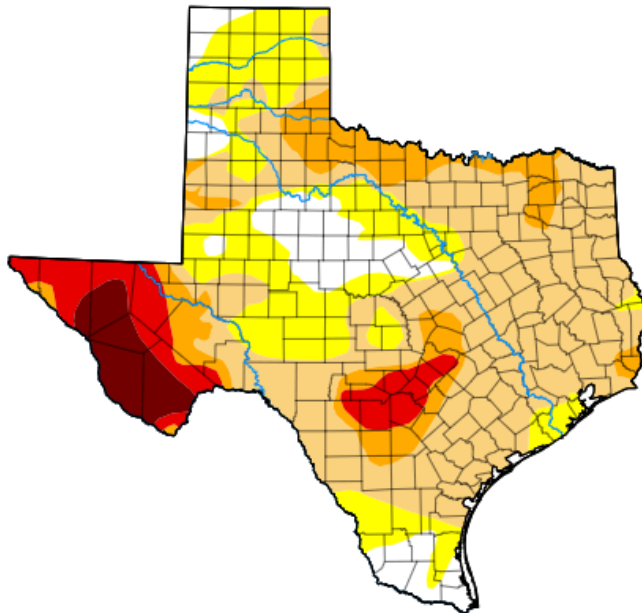
Accumulated Precipitation (Inches) November 3-9, 2024



Precipitation across the state this week helped establish some significant drought improvements across the state, with a large portion of real estate seeing at least one category of drought improvement from the week prior.

## Texas

[Home](#) / [Texas](#)



Map released: Thurs. November 7, 2024

Data valid: November 5, 2024 at 7 a.m. EST

### Intensity

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

### Authors

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## V. Statewide extremes

- The hottest recorded temperature of the week was **100°F** seen at the Faith Ranch Airport Dimmit County on November 4, 2024
- The coldest recorded September temperature was **27°F** seen at the Guadalupe Peak Texas site in Culberson County on November 8, 2024.
- The most precipitation recorded in the week of November 3-9, 2024 was **9.40"** at the Bluegrove 2.5 SE CoCoRaHS site in Clay County
- The rainiest day at any site across the state of Texas was November 3, 2024, when **6.26"** of rain fell at the Richmond 3.4 NE CoCoRaHS site in Fort Bend County