November 2024 Climate Summary

Significant Weather Events:

November is the closest month to winter chill outside of the actual meteorological winter months of December, January, and February. With a normal statewide average temperature of 56.0°F (1991-2020 average), November is normally the fourth coldest month of the year. The typical November has temperatures dancing, from the warmth of the mild Gulf air brought on by gusty southerly winds to the robust arctic air intrusions brought on by frequent cold fronts. November 2024 was similar in behavior to most Novembers in regards to temperature variability, yet, coming off the heels of the hottest October in state climatological history, the warm air intrusions were a little warmer, and the cold air intrusions were not as cold as the typical November. With a 60.3°F monthly average, the month ended much warmer than average, enough to rank as the 3rd warmest November in Texas records. Statewide precipitation told a different story, as November 2024 was quite rainy in relation to the typical November, a stark contrast to October 2024 which was a month characterized by unusually low precipitation totals statewide.

Significant Dates:

- November 1-4: A powerful upper-level low swung by, which, combined with surface fronts and boundaries, provided ample lift to support rounds of thunderstorms. Multi-day precipitation totals were the highest in the northern sections of the state. Many of these regions saw the majority of their November precipitation total in these first few days of the month. This system was also responsible for a handful of severe weather reports across the state.

- November 4: Low pressure to the west and high pressure to the east resulted in gusty south-to-southeast winds across much of south and southeast Texas. Wind gusts over 40 mph were commonplace, with College Station and Houston recording gusts of 46 and 41 mph respectively. Winds coming off the Gulf of Mexico in Brownsville were the strongest with a *non-thunderstorm* gust of 54 mph being reported here.

- November 5: Election day saw precipitation clearing from west to east across the state, leaving many voters dry as they cast their ballots for the next President of the United States.

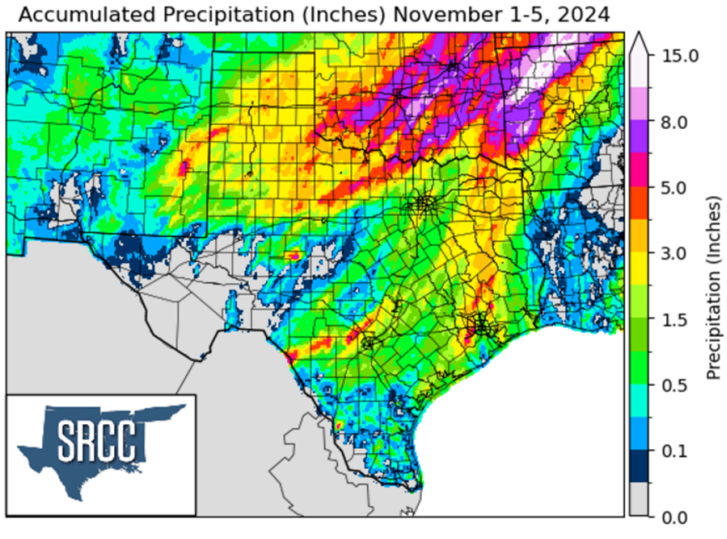
- November 4-8: Hurricane Rafael formed in the Gulf of Mexico. The storm intensified to become the strongest hurricane ever in the Gulf of Mexico during November according to modern records(tied Kate in 1985 with maximum 1-minute sustained winds of 120 mph). The hurricane remained well out at sea so that its impacts were minimal and indirect to the mainland U.S.

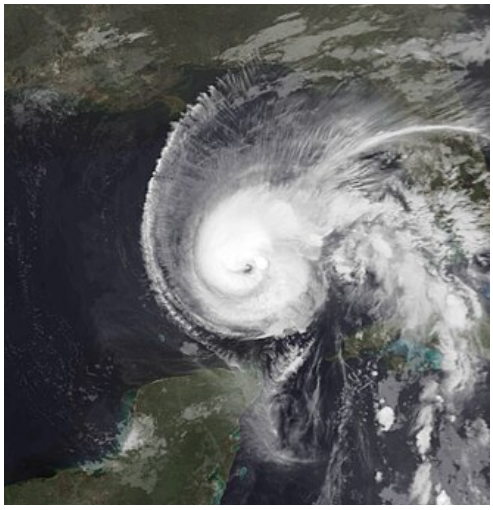
- November 7-8: Severe weather again rumbled across the State as 20 reports were received by the Storm Prediction Center during these two days. The first significant snowfall anywhere across Texas this fall coated the northwestern corner of the Texas Panhandle during this time. Over a foot of snow was reported in Texline, TX.

- November 13-14: A reinforcing shot of cooler air paid a visit to Texas as a cold front moved through. The lack of significant atmospheric moisture allowed this frontal passage to be devoid of precipitation.

- November 17-18: A low-pressure system and associated cold front fired off a line of thunderstorms that marched to the east. Much of Texas cashed in on appreciable rainfall from this system along with some strong to severe wind gusts. The line produced 16 instances of winds gusting over severe criteria. The highest gust associated with the thunderstorms was a 66 mph gust reported at the McKinney airport. Other notable wind reports that were not severe were 52 mph (DFW), 51 mph (Fort Worth Meacham), 48 mph (Dallas Love), and 47 mph (College Station).

- November 20-27: A series of cold fronts helped establish cooler temperatures with progressively colder air following the passage of each one. A significant portion of the state saw its first freeze of the season.





Nov 4, 10:00 am	84	73	70	91	SSE	29G37	10.00
Nov 4, 9:55 am	86	73	66	93	SSE	29G37	10.00
Nov 4, 9:53 am	86	72	63	92	SSE	30G54	10.00
Nov 4, 9:50 am	86	73	66	93	SSE	31G40	10.00
Nov 4, 9:49 am	86	73	66	93	SSE	31G54	10.00
Nov 4, 9:45 am	88	73	63	96	SSE	31G43	10.00
Nov 4, 9:40 am	84	73	70	91	SSE	24G33	10.00
Nov 4, 9:35 am	84	73	70	91	SSE	23G29	10.00
Nov 4, 9:33 am	85	73	68	92	S	25G44	10.00
Nov 4, 9:30 am	86	73	66	93	S	30G44	10.00
Nov 4, 9:25 am	86	73	66	93	SSE	32G44	10.00
Nov 4, 9:20 am	86	73	66	93	SSE	28G33	10.00
Nov 4, 9:15 am	84	73	70	91	SSE	29G39	10.00
Nov 4, 9:10 am	84	73	70	91	SSE	33G44	10.00
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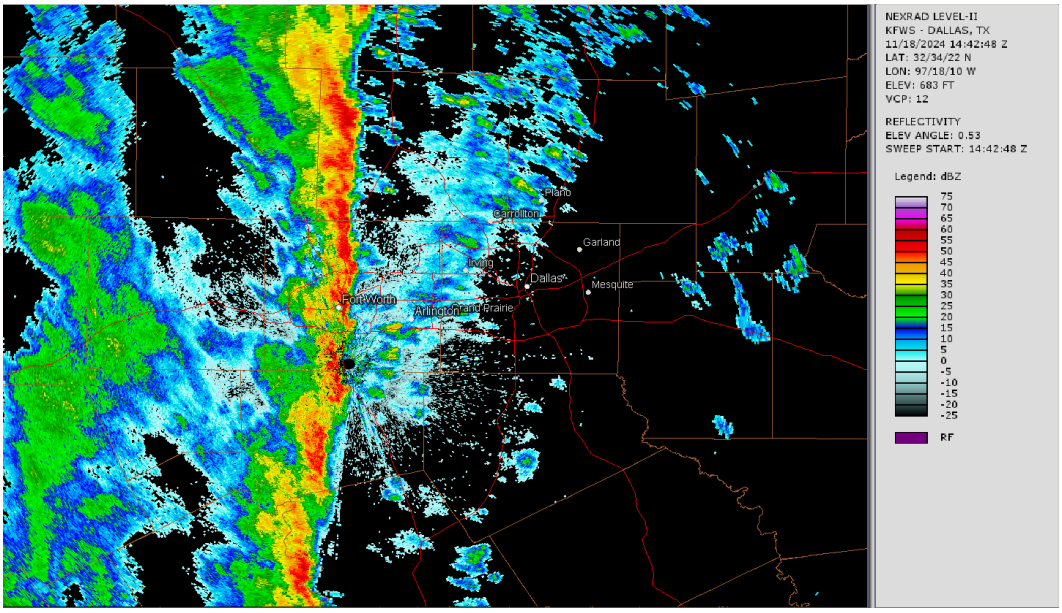
Nov 4, 9:00 am	86	73	66	93	SSE	29G35	10.00



An image compilation of some of the major weather events in November.

At the top left is a map showing the accumulated precipitation for the first five days of November. A sizable area of 3-5 inch totals were seen across the northern and eastern parts of the state. A finger of heavier precipitation totals extends down from Oklahoma from Cooke, Montage, and Clay counties to Shackelford and Jones counties where 5-8 inch totals were seen.

At the top right, Hurricane Rafael churns over the Gulf of Mexico at peak intensity on November 8. Despite having major impacts in Jamaica and parts of Central America, the storm stayed over the Gulf of Mexico for much of its life, limiting the impacts on the Mainland U.S.

Second row: five-minute observations from Brownsville, TX between 9 and 10 am local time on November 4. Some very powerful winds unassociated with thunderstorms resulted from the large-scale weather pattern. Two gusts of 54 mph were reported in this one-hour interval, the strongest winds the station had seen since June 20, 2024 (56 mph), when Tropical Storm Alberto made its pass to the south.

Third row: Significant snow cover in Texline, TX. This was the first significant snow of the season anywhere in Texas.

Bottom image: a well-formed squall line rolls through North Texas. Just a few minutes after this snapshot, a warning was issued for the potential of wind gusts up to 65 mph. The warning was verified in McKinney, as the airport there saw a gust to 66 mph.

Temperature:

A solid conclusion to a hot autumn, November delivered a low-quality taste of winter, so much that statewide temperature anomalies ran well above normal.

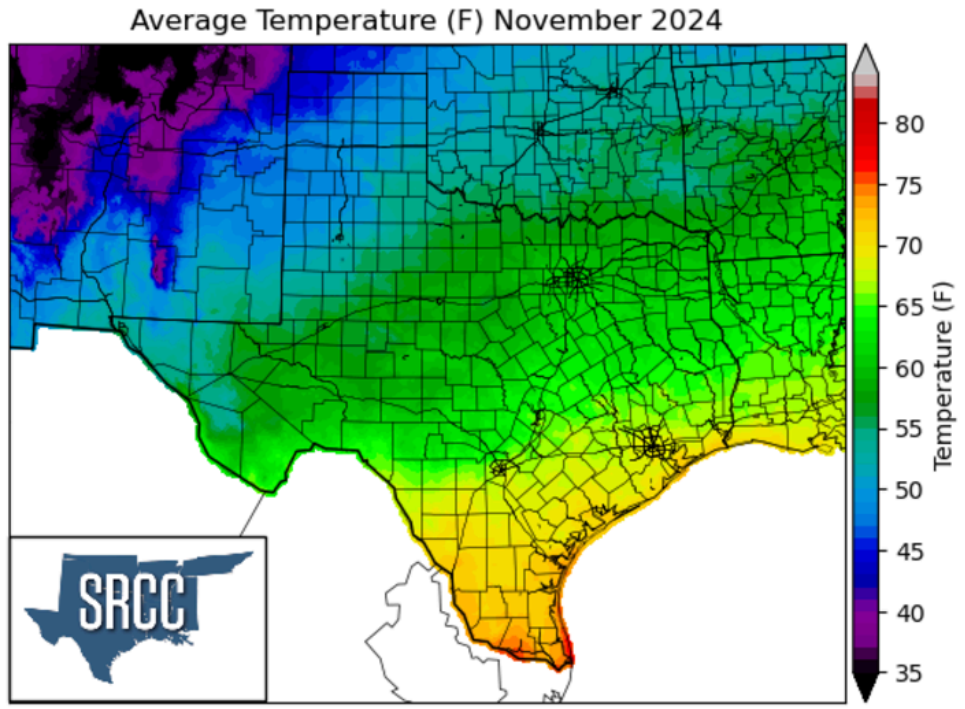
Unusual November warmth meant that fall 2024's statewide average temperature was 70.4°F, making it the hottest fall on record, beating out 1931's 69.9°F average, and is 4.0°F above the 1991-2020 statewide climate normal.

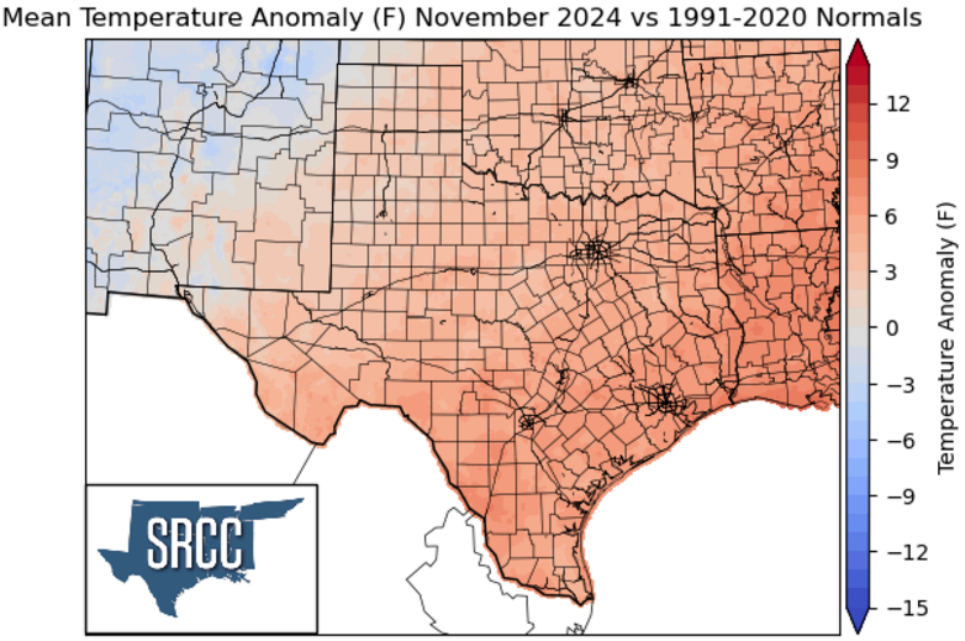
Revisiting some of the same stations that were torched with record-breaking October heat, we find that many of these stations had November 2024 rank among their hottest Novembers, yet the departures and ranks were not as egregious as in October.

-Lubbock; 54.0°F (10th warmest November on record)
-El Paso; 57.1°F (9th warmest November)
-DFW; 61.7°F (9th warmest November)
-San Antonio; 66.8°F (3rd warmest November)
-Austin; 66.0°F (4th warmest November)
-College Station; 67.5°F (2nd warmest November)
-Tyler; 62.6°F (3rd warmest November)
-Midland; 57.0°F (7th warmest November)
-Waco; 62.0°F (13th warmest November)
-Houston; 69.3°F (2nd warmest November)

Some at a glance statewide temperature statistics for November 2024 are:

- **45.8°F -** monthly average at the Dalhart FAA Airport; the coolest in Texas
- **62.2°F** - the average monthly temperature of the 382 Texas reporting stations
    - 5.0°F above that of November 2023
    - 11.5°F below that of last month
- **76.3°F** - monthly average at the McAllen Co-op site in Hidalgo County; the warmest in Texas
- The hottest recorded November temperature in Texas was **100°F** seen at the Faith Ranch Airport in Dimmit County on November 4, 2024
- The coldest recorded November temperature was **17°F** seen at two Muleshoe sites in Bailey County on November 29, 2024. This is the coldest temperature seen anywhere in the state since February 29, 2024





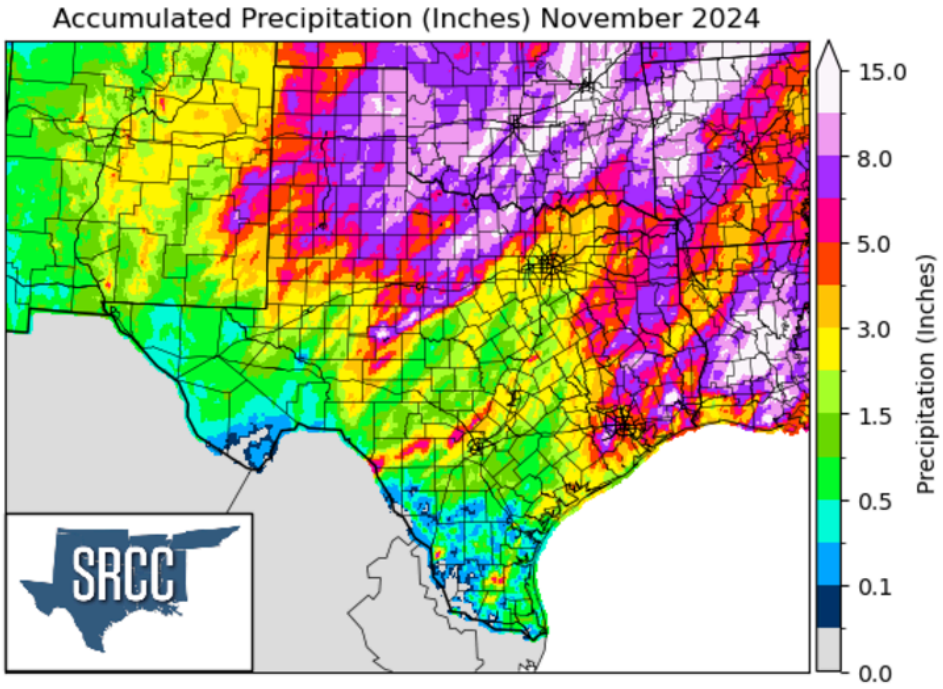
Precipitation:

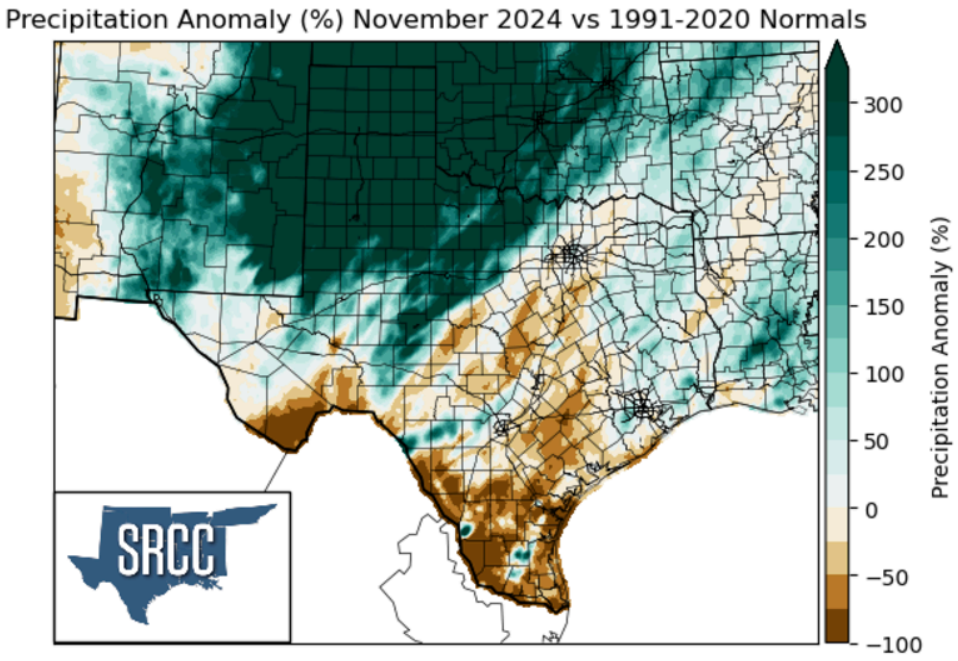
November was quick to distance itself from October's arid tendencies, as the month opened on a rather soggy note for many folks on the northern and eastern reaches of the state. High precipitation totals early on ensured that many of these locations ended with above-normal precipitation accumulations for the month. Almost all of the accumulated precipitation in

November was a product of the precipitation in the first ten days along with the line of thunderstorms that marched across the state Mid-month. The statewide precipitation average for the month (accounting for geographical distribution) was 2.68”, clocking as the 27th rainiest November on record.

Some at-a-glance precipitation statistics across the state are:

- Average of Texas stations (not accounting for geographical distribution): **2.64”**
    - 2.41” above last month
    - 1.13” above November 2023
- Highest monthly total: **14.03”** at the Lumberton 1.2 WNW CoCoRahs site in Hardin County
- The rainiest day at any site across the State of Texas was November 9, 2024, where **7.12”** of rain was reported at the Kountze 1.1S CoCoRahs site in Hardin County





Drought:

November acted as damage control to October's drought degradation. With a sprinkling of early-season deluges and a dash of mid-month squall line, the month cooked up a feast of high precipitation totals in northern and eastern Texas. This allowed drought to improve on almost every metric, by a significant amount. Some areas along the Red River saw as much as four-class drought improvement. Other areas in the Texas Panhandle and East Texas saw anywhere from one to three-class drought improvement. This bodes well as we enter a La Niña winter, one where persistent bouts of precipitation are less favored than usual.

Drought category	End of October (October 29, 2024)	End of November (November 26, 2024)	Change
Abnormally dry or greater	91.1%	67.0%	-24.1%
Moderate drought or greater	73.7%	49.9%	-23.8%
Severe drought or greater	49.5%	21.7%	-27.8%
Extreme drought or greater	16.3%	13.0%	- 3.3%
Exceptional drought	4.6%	6.3%	+ 1.7%

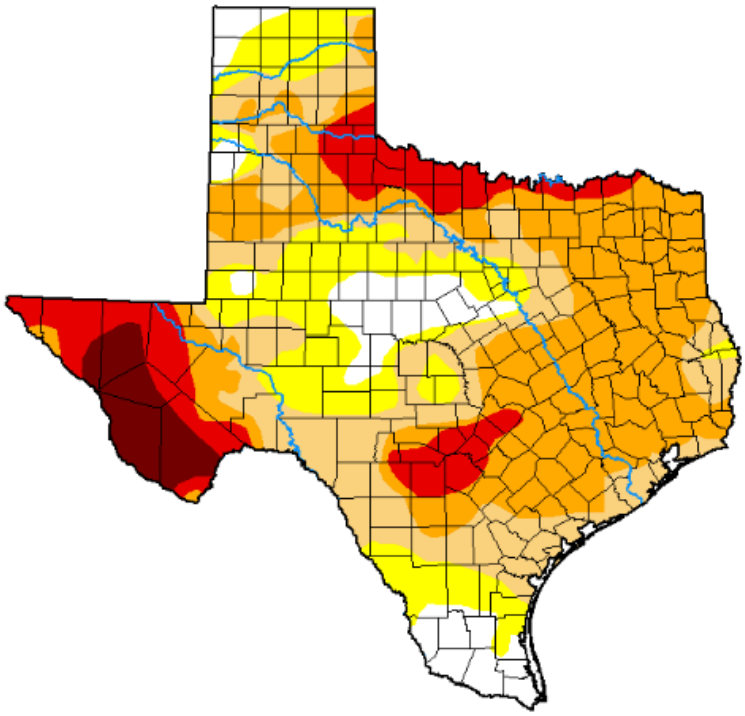
U.S. Drought Monitor

Texas

October 29, 2024

(Released Thursday, Oct. 31, 2024)

Valid 8 a.m. EDT



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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National Drought Mitigation Center

droughtmonitor.unl.edu

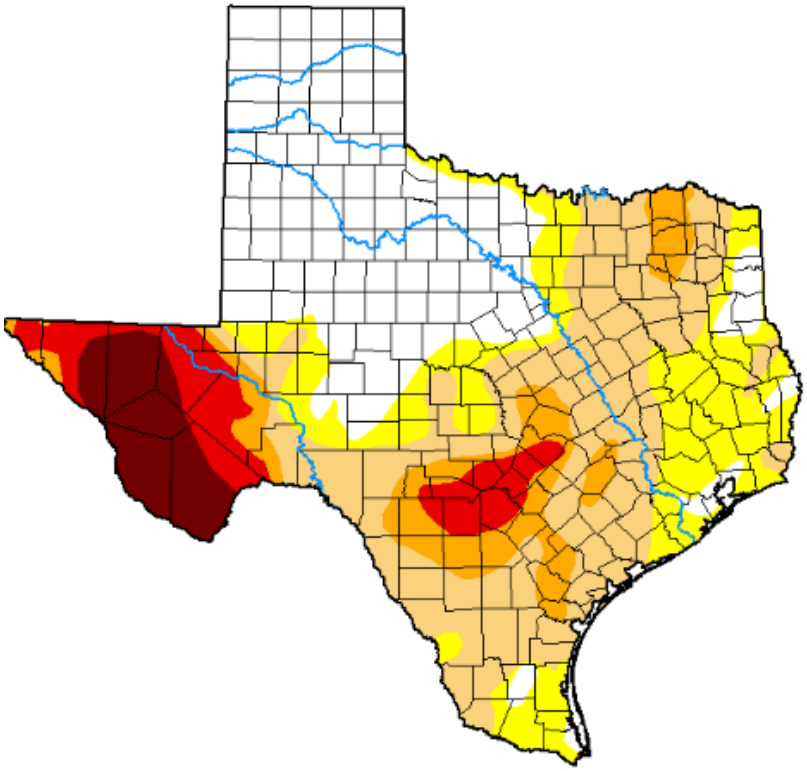
U.S. Drought Monitor

Texas

November 26, 2024

(Released Wednesday, Nov. 27, 2024)

Valid 7 a.m. EST



Intensity:

- None
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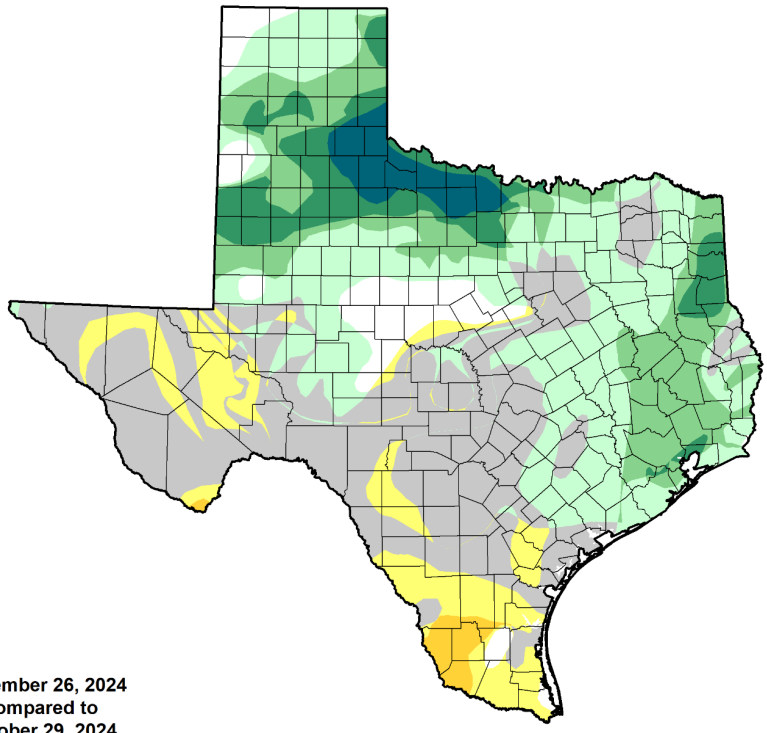
U.S. Drought Monitor Class Change - Texas

4 Week



November 26, 2024
compared to
October 29, 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