

## Weekly Climate Summary: 3/24/2024-3/30/2024

### Climate in the News:

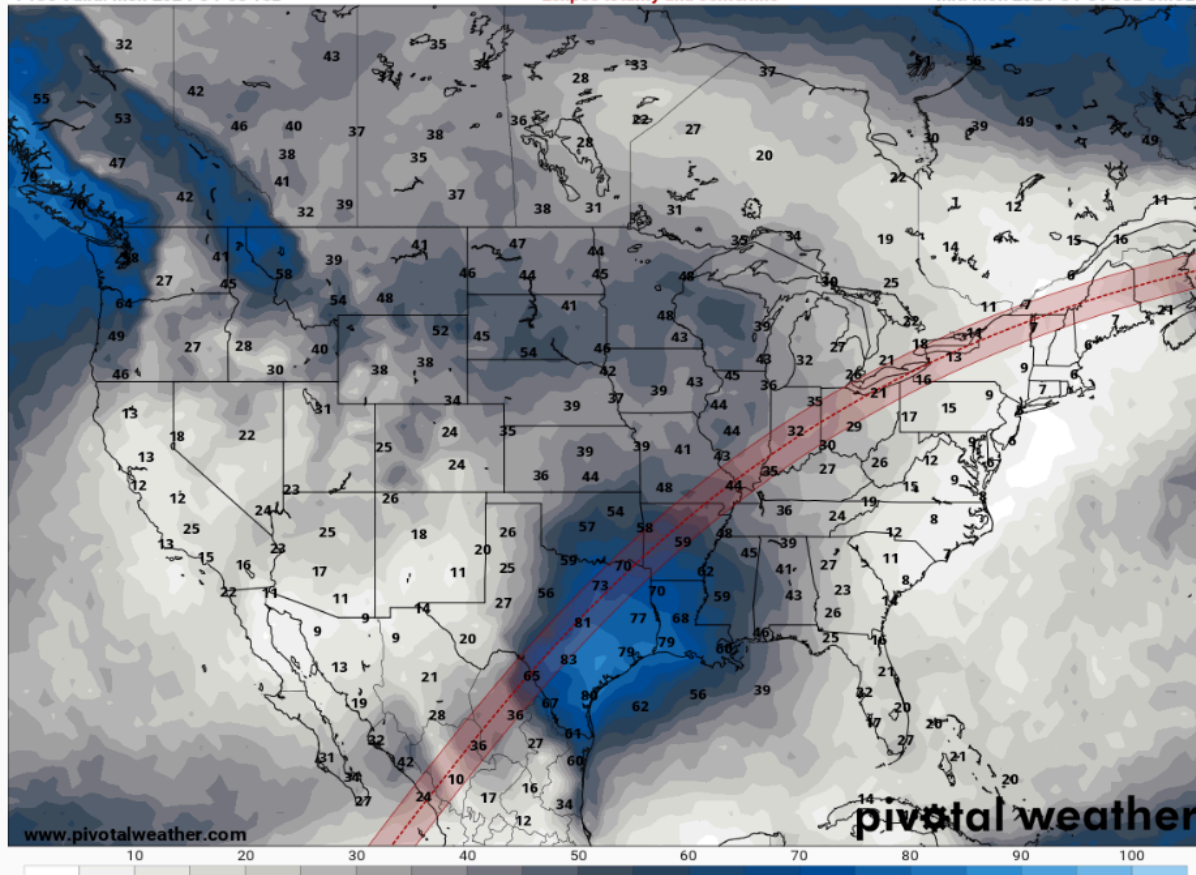
The long awaited total solar eclipse of 2024 is now one week away! Being at this range, we can begin to resolve potential weather conditions with some degree of clarity. Unfortunately, the pattern seems to favor more cloudy and wet conditions than clear, optimal viewing conditions for the State of Texas. A few forecast models now go out far enough to resolve the day of the eclipse, and there tends to be an agreement in at least some cloud cover along the path of totality on the day in question. Without delving too deeply into the details, the upper-air pattern will set up in a way that brings passing disturbances into Texas between April 7-10. Given that surface flow looks to be predominantly from the south and southeast, this would provide ample moisture for these disturbances to work with and create clouds and possibly precipitation. The Global Forecast System model has high surface moisture content, which if lifted by one of these disturbances can lead to a veil of low clouds. Additionally, the presence of southwesterly flow aloft could provide upper level moisture, enhancing the moisture profile of the atmosphere, favoring more wet conditions, and encouraging clouds at different levels of the atmosphere, further deteriorating viewing conditions for the solar eclipse.

#### Cloud Cover, Total %, mean of last 4 runs

F186 Valid: Mon 2024-04-08 18z

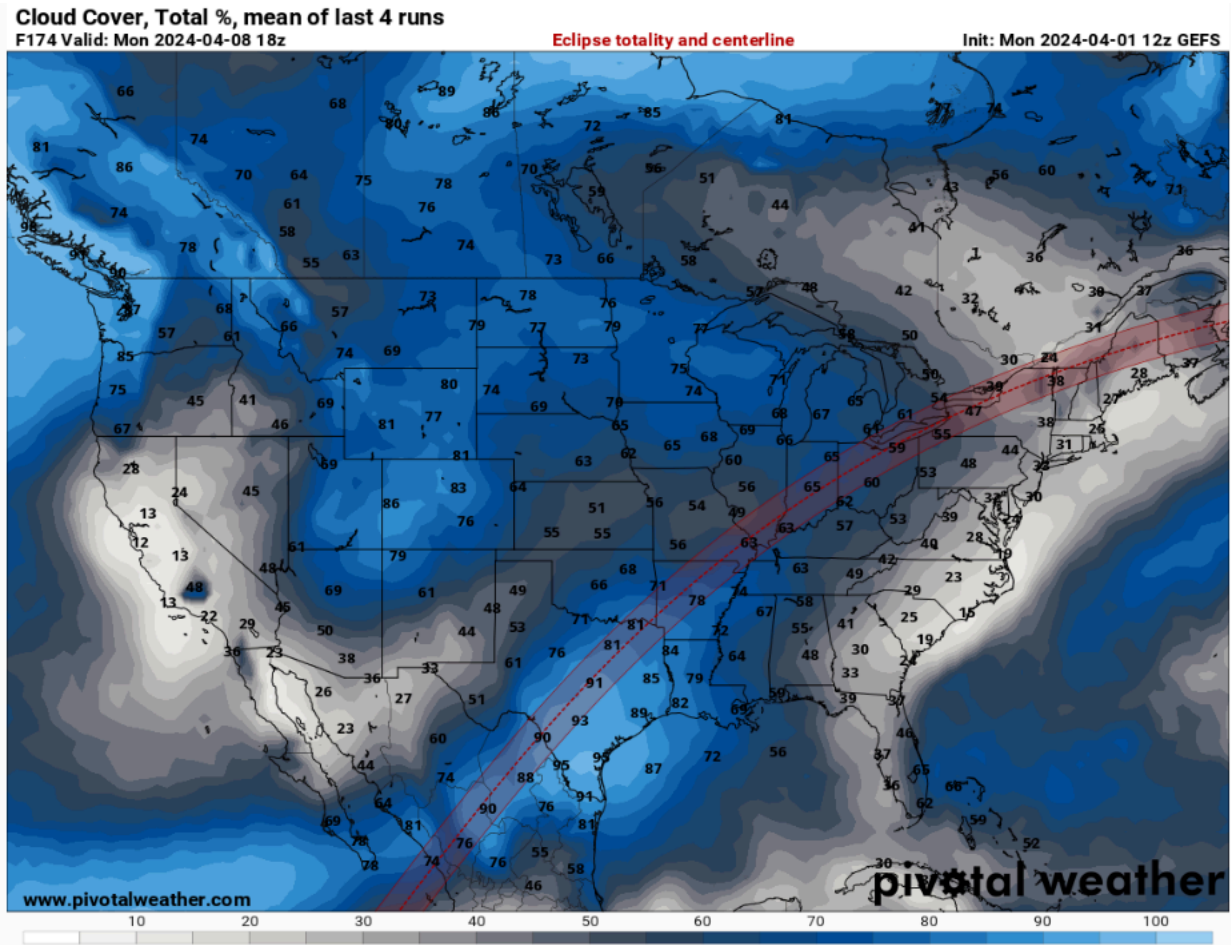
Eclipse totality and centerline

Init: Mon 2024-04-01 00z CMCE



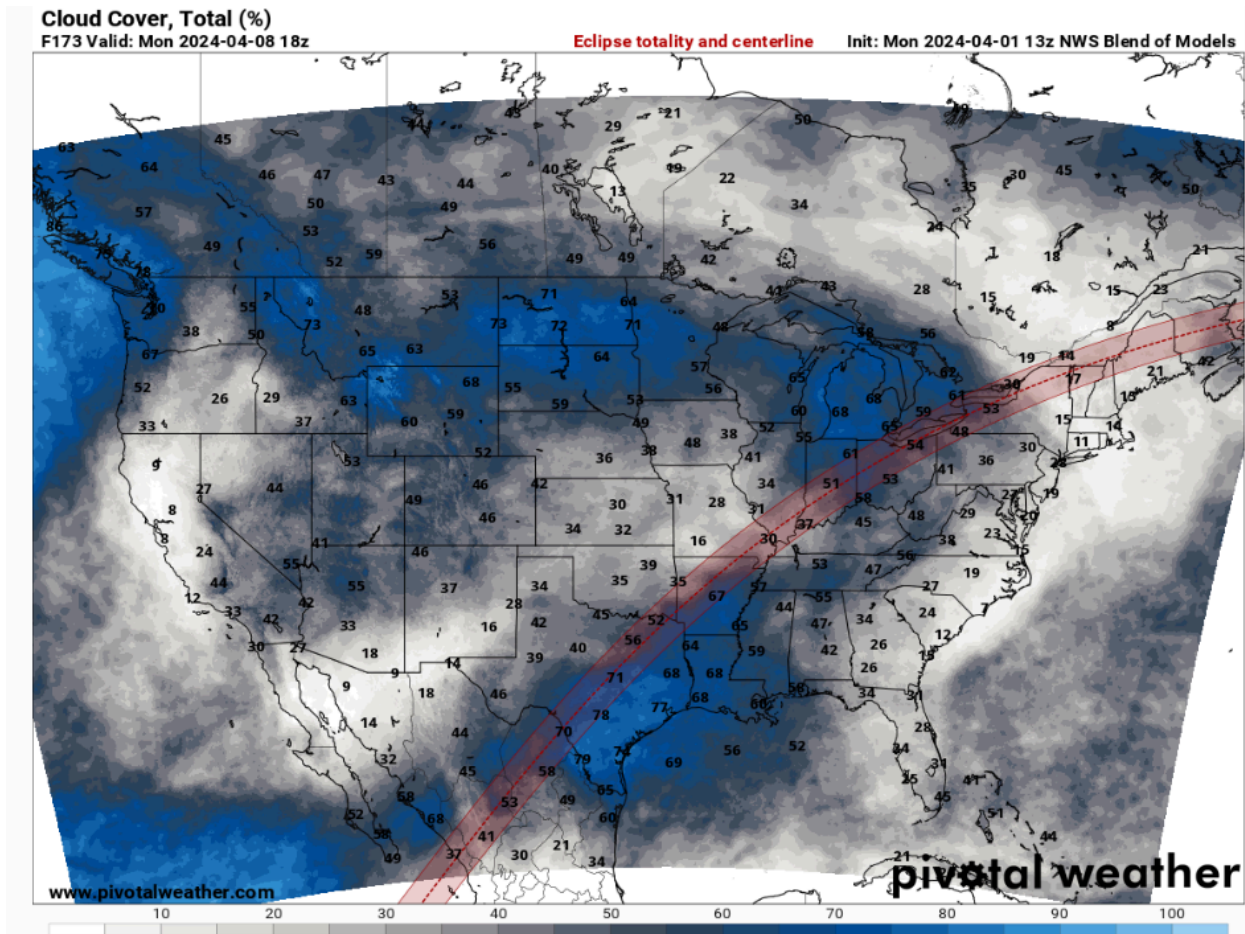
*Map showing the most likely cloud cover across the contiguous United States according to the Canadian Meteorological Center weather forecast model. A large swath of Texas looks to potentially be dealing with significant cloud cover on the day of the eclipse according to this model.*

Courtesy: Pivotal Weather.



Map showing the likely cloud sky coverage according to the Global Forecast System model. The models agree in the placement of the most significant cloud cover, but vary slightly in the amount of cloud cover. Though this is far out, agreement between models builds confidence that the outcome may in fact pan out.

Courtesy: Pivotal Weather.



*The National Blend of Models (NBM) is a computer system by the National Weather Service (NWS) that blends the outputs of multiple models and essentially ‘averages’ them. This map shows a general idea of what models that go out far enough to forecast the day of the eclipse believe will happen. Again, it is a good idea to look at multiple models in order to obtain the most likely outcome. With such agreement, the outlook is unfavorable for viewing conditions across the State of Texas.*

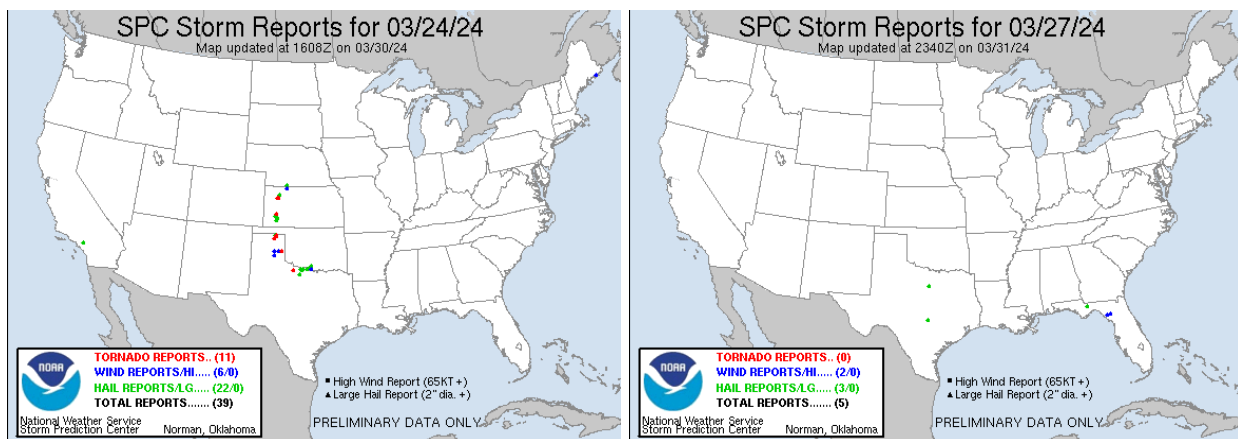
*Courtesy: Pivotal Weather*

**Weather Synopsis:** The week of March 24-30 saw severe thunderstorms to kick off the week. Outside of thunderstorms the State saw windy conditions of March 24, with areas of the Texas Panhandle seeing wind gusts well into severe limits (58 mph) without the presence of thunderstorms.

**Severe Weather:** Severe thunderstorms broke out in the eastern portions of the Texas Panhandle on March 24. These storms produced damaging winds, hail, and a few weak tornadoes. These storms fired along an advancing pacific cold front, which later caught up to a slow moving dryline to the south, firing off a line of thunderstorms that marched east. The northern section of this line produced a secondary focus for severe weather, producing another confirmed tornado near Lake Kemp, with several hail and wind reports. The southern extent of the line was devoid of severe weather reports, and marched along producing mainly heavy rain, and non-severe wind

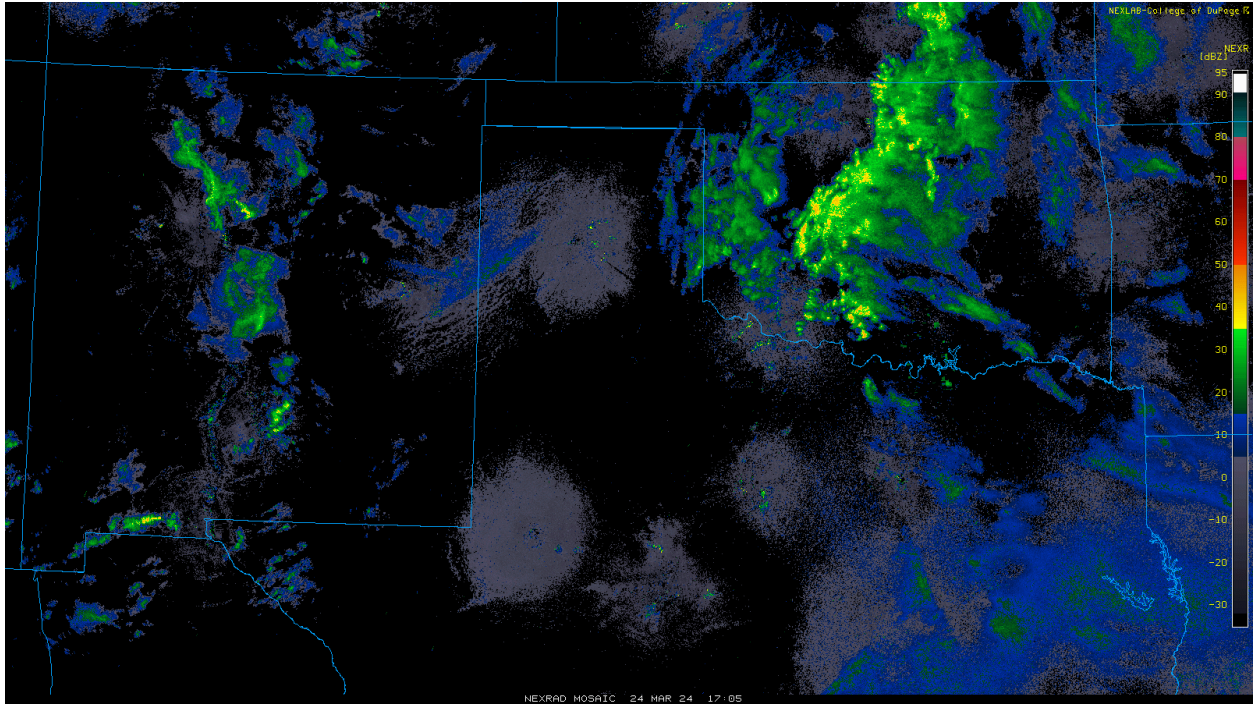
gusts of 30-40 mph. Throughout the remainder of the week, isolated thunderstorms produced 2 hail reports on the 27th. The severe weather reports can be broken down into the following:

- ❖ March 24 saw 19 severe weather reports across Texas, with an emphasis on the Texas Panhandle and the Childress-Wichita Falls area. The day saw:
  - 4 wind reports, with a maximum measured gust of 67 mph in Donley County
  - 9 hail reports with the maximum reported diameter being 1.75”
  - 6 tornado reports, all unrated (caused no substantial damage)
  
- ❖ March 27 saw 2 severe weather reports across Texas, both hail reports of 1.00” diameter hail in Travis and Parker Counties.



*Maps of storm reports from the Storm Prediction Center showing the days where severe weather was observed across Texas. 21 total reports were received between the two days where severe weather was observed for the State of Texas. Reports consisted of mainly hail reports, with 11 total reports, followed by tornadoes with 6 reports, and wind with 4 reports.*

*Courtesy: Storm Prediction Center.*



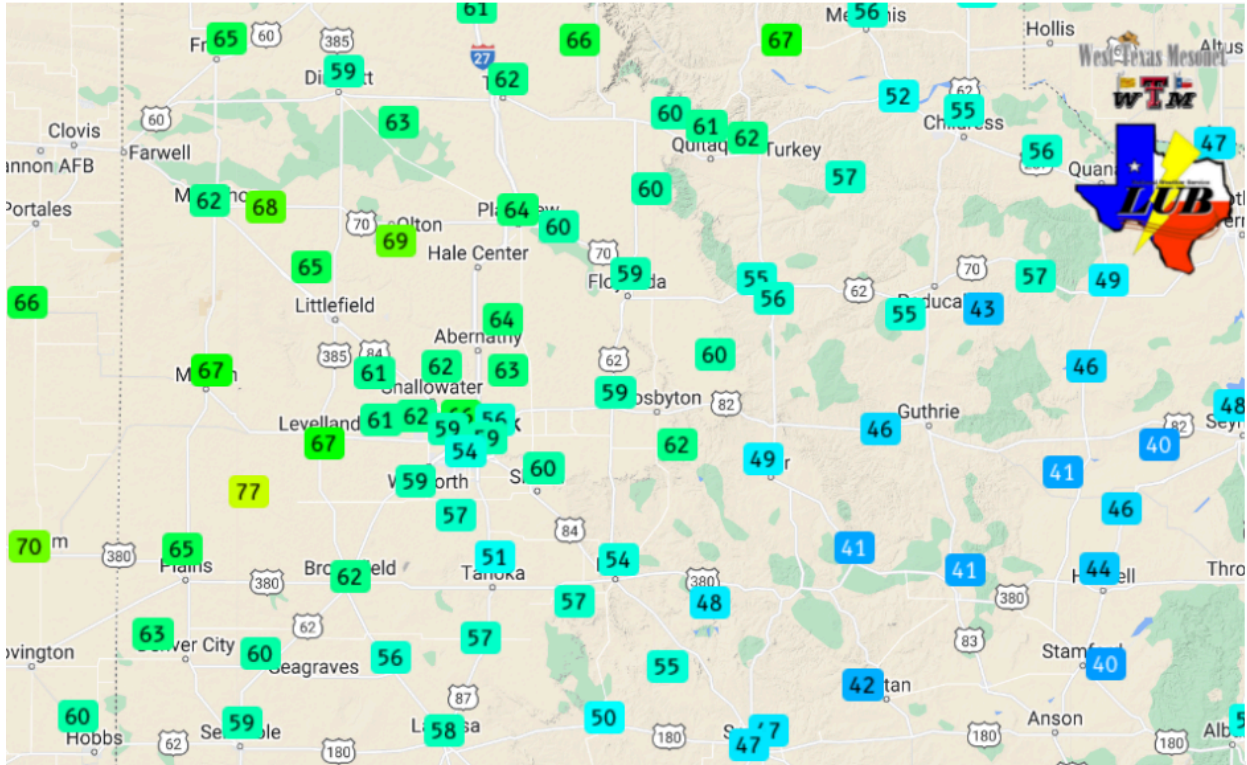
*Mosaic radar loop showing storm evolution between 12:05 and 8:05 CDT on March 24. The bulk of the severe weather reports were from the initial round of storms in the eastern Texas Panhandle. Near the end of the loop, storms can be seen firing along a line, with the northern portions of this line producing more scattered severe weather reports. The swirl at the top of the image is a powerful storm system responsible for intense winds across the Texas Panhandle behind the areas affected by severe weather.*

*Courtesy: National Weather Service and College of DuPage*



*Screenshot from a video captured of the tornado that touched down in Perryton, Tx. No substantial damage was reported with this tornado, leading to no official rating.  
Courtesy: Video shot by Latisha Sena, obtained from ABC7 Amarillo.*

**Strong winds:** Outside of observed thunderstorms, March 24 saw some incredibly strong winds blow through the Texas Panhandle. Gusts of 70 mph or greater were observed in places due to a powerful storm system located near the Colorado-Nebraska border. These winds caused blowing dust and spotty damage across the Texas Panhandle. Windy conditions were seen across Texas on the 24th, with places like DFW and College Station seeing wind gusts to 40 mph.



Maximum wind gusts measured on Sunday (24 March 2024). The data are courtesy of the West Texas Mesonet. The peak wind speeds measured on Sunday can be [VIEWED HERE](#).

Map showing the highest measured wind gusts across the Texas Panhandle on March 24. Many areas saw wind gusts 50-60 mph, with select locations seeing extreme winds gust past 70 mph. A West Texas Mesonet near Sundown takes the crown with a 77 mph measured gust!

Courtesy: National Weather Service and West Texas Mesonet

Mar 25, 1:53 am	50	21	32	WSW	22	G38	10.00		FEW180	993.90	26.12	29.45	
Mar 25, 12:53 am	52	20	28	W	26		10.00		CLR	993.90	26.13	29.46	65 52 73 52
Mar 24, 11:53 pm	52	20	28	W	23	G36	10.00		CLR	994.00	26.13	29.46	
Mar 24, 10:53 pm	54	19	25	WSW	28	G39	9.00		FEW	994.50	26.13	29.46	
Mar 24, 9:53 pm	57	16	20	W	33	G47	5.00	Blowing dust	SCT	993.90	26.12	29.45	
Mar 24, 8:53 pm	60	17	18	W	37	G45	3.00	Blowing dust	SCT SCT100	993.00	26.09	29.42	
Mar 24, 8:34 pm	61	15	16	WSW	31	G41	3.00	Blowing dust	SCT SCT100		26.08	29.41	
Mar 24, 7:53 pm	62	17	17	WSW	37	G59	2.50	Blowing dust	SCT SCT100 SCT200	992.30	26.08	29.40	
Mar 24, 6:53 pm	66	16	14	WSW	38	G68	2.00	Blowing dust	SCT SCT100 BKN190	991.70	26.07	29.39	T 73 66
Mar 24, 5:53 pm	69	20	15	WSW	39	G80	2.50	Blowing dust	SCT SCT110 BKN190	990.90	26.06	29.38	
Mar 24, 4:53 pm	70	24	18	SW	43	G84	2.50	Blowing dust	SCT SCT080 SCT110	990.70	26.05	29.37	
Mar 24, 3:53 pm	70	29	22	SW	47	G87	2.00	Blowing dust	SCT SCT060 OVC140	991.20	26.07	29.39	T
Mar 24, 2:53 pm	71	26	18	WSW	39	G84	2.50	Blowing dust	SCT BKN060 OVC100	991.30	26.08	29.40	T
Mar 24, 2:49 pm	72	27	19	WSW	40	G87	2.00	Blowing dust	SCT SCT028 BKN060	26.07	29.39	T	
Mar 24, 2:41 pm	71	26	18	WSW	43	G83	2.50	Blowing dust	SCT BKN028 OVC100	26.08	29.40	T	
Mar 24, 2:09 pm	67	30	25	SW	32	G73	3.00	Lt rain, Blowing dust, Squalls	SCT080 BKN100 OVC150	26.09	29.42	T	
Mar 24, 2:02 pm	69	31	24	SW	46	G73	2.00	Lt rain	BKN100 OVC150	26.10	29.43	T	
Mar 24, 1:53 pm	70	33	26	SSW	23	G43	9.00		SCT090 OVC150	992.50	26.09	29.42	
Mar 24, 12:53 pm	72	40	31	SSW	28	G43	10.00		SCT070	993.60	26.13	29.46	72 55
Mar 24, 11:53 am	69	45	42	SSW	23	G37	10.00		FEW030 FEW150 FEW260	994.90	26.16	29.49	
Mar 24, 10:53 am	64	50	60	SSW	31	G38	10.00		FEW020 FEW150 FEW260	995.50	26.16	29.50	
Mar 24, 9:53 am	60	50	69	S	25	G35	10.00		FEW010 FEW150 FEW260	996.30	26.17	29.51	
Mar 24, 9:46 am	59	50	72	S	25	G35	10.00		FEW009 FEW150 FEW260	26.18	29.52		
Mar 24, 8:53 am	57	49	74	S	23	G32	10.00		BKN130 BKN150 BKN260	997.40	26.20	29.54	
Mar 24, 7:53 am	56	47	72	S	21	G33	10.00		BKN120 BKN150 BKN260	997.80	26.22	29.56	
Mar 24, 6:53 am	55	46	72	S	18		10.00		SCT250	998.20	26.23	29.57	59 54
Mar 24, 5:53 am	56	46	69	S	15		10.00		BKN250	998.40	26.24	29.58	
Mar 24, 4:53 am	57	45	64	S	14	G25	10.00		BKN250	998.40	26.24	29.58	
Mar 24, 3:53 am	58	45	62	S	24	G32	10.00		BKN220	998.40	26.26	29.61	
Mar 24, 2:53 am	58	45	62	S	23	G32	10.00		SCT200 OVC250	1000.50	26.29	29.64	
Mar 24, 1:53 am	54	49	83	SSE	15		10.00		BKN190 OVC250	1001.90	26.31	29.66	
Mar 24, 12:53 am	54	50	86	SE	14		10.00		BKN250	1003.10	26.33	29.69	62 54 63 40

Weather observations from Lubbock on March 24, 2024. Winds pick up significantly around 1:00 pm CDT, and continue above 'severe thunderstorm criteria' for several hours until dusk. Lubbock's peak measured gust was 73 mph, just under hurricane force.



*Pontoon boat rolled by the intense wind on Sunday (24 March 2024). The picture is courtesy of the West Carlisle Volunteer Fire Department member Kevin Hendricks.*

*Wind gusts over 60 mph typically leave behind some kind of damage indicator, such as a toppled pontoon boat in this case.*

*Image courtesy of the National Weather Service and Kevin Hendricks.*

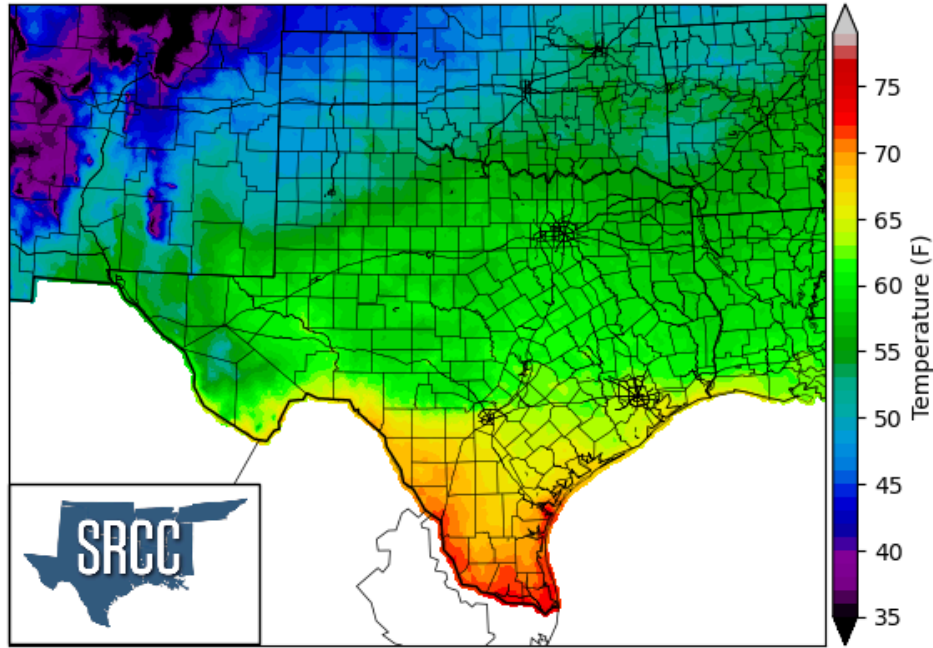
### **Temperature:**

The chilly conditions that characterized the beginning of the week gave way to slightly warmer than average conditions to round out the week, but overall, the net was a week where temperature anomalies were below normal. Average weekly temperatures across the state generally ranged from 45°F to 75°F, with the coldest station below the lower threshold. The statewide extremes in average weekly temperature are as follows:

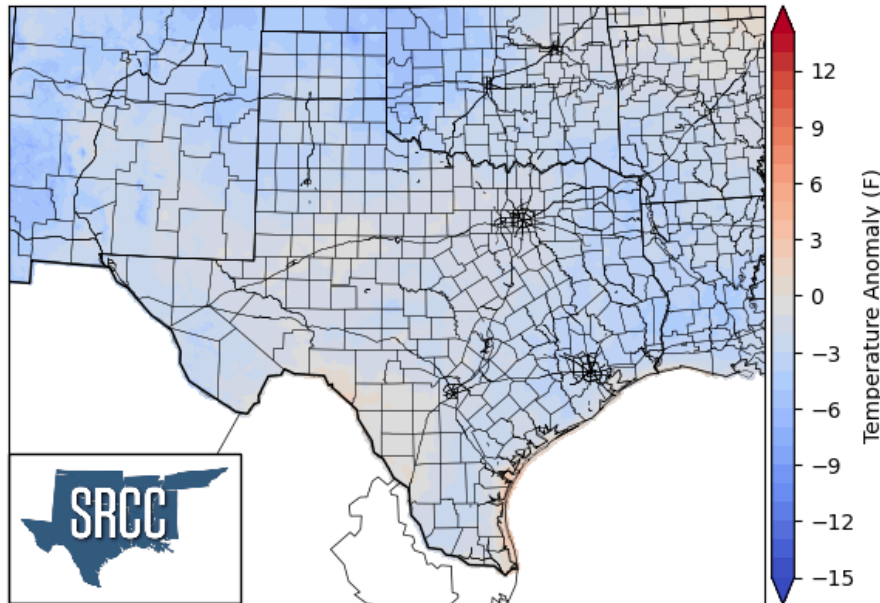
- The Follett Co-op station in Lipscomb County saw the lowest weekly average at 44.4°F
- The Brownsville South Padre Island International Airport in Cameron County saw the highest weekly average at 74.5°F



Average Temperature (F) March 24-30, 2024



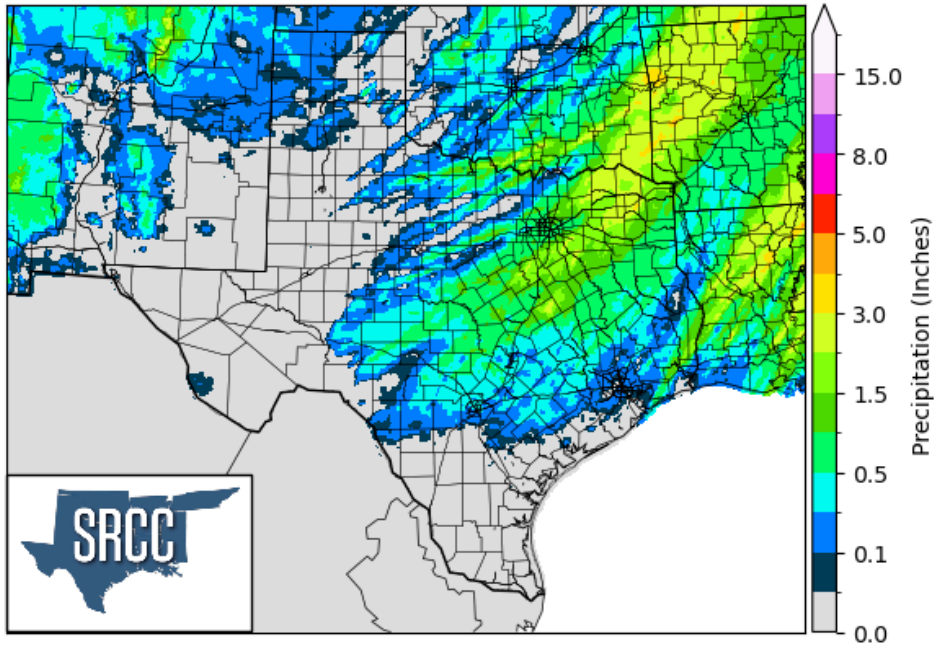
Mean Temp Anomaly (F) March 24-30, 2024 vs 1991-2020 Normals



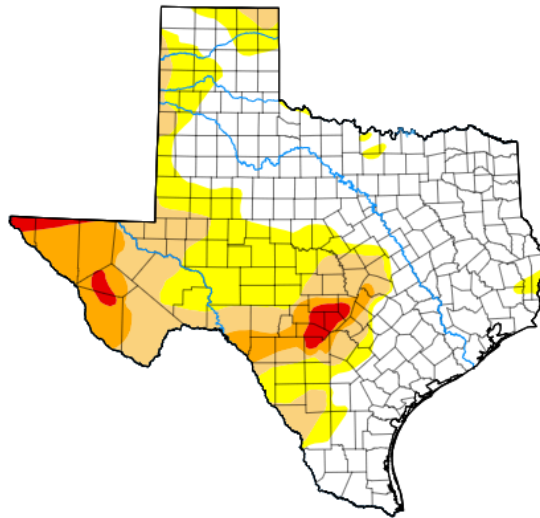
**Precipitation:**

The week of March 24-30 saw mainly the eastern and northeastern portions of the State seeing appreciable rainfall. These regions have already accumulated a respectable amount of rainfall for the month of March, so these totals only compound on the soggy conditions. Areas with notable drought such as southwest Texas and the Trans Pecos Region missed out on significant rainfall.

Accumulated Precipitation (Inches) March 24-30, 2024



## Texas



Map released: Thurs. March 28, 2024  
Data valid: March 26, 2024 at 8 a.m. EDT

### Intensity

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

### Authors

United States and Puerto Rico Author(s):  
[Brad Rippey](#), U.S. Department of Agriculture  
Pacific Islands and Virgin Islands Author(s):  
[Richard Heim](#), NOAA/NCEI

### Statewide extremes:

-The hottest recorded temperature of the week was 99°F at the Rio Grande Village Co-op station in Brewster County on March 30, 2024.

-The coldest recorded temperature of the week was 18°F seen at the Gruver Co-op site in Hansford County and the Muleshoe 19S Airport in Bailey County on March 27, 2024 and March 26, 2024 respectively.

-The most precipitation recorded in the week of March 24-30, 2024 was 2.83” at the Paris, Tx Co-op site in Lamar County.

-1 stations broke or tied a record high in the week of March 24-30, 2024.

-11 stations broke or tied record lows for the same week.