

Welcome to The Texas CoCoRaHS Observer Newsletter

The purpose of this newsletter is to keep observers informed of the latest news, events, training, and happenings related to the CoCoRaHS program here in Texas, as well as news about the latest weather patterns affecting each region of Texas seasonally.

Inside this issue

Texas State Summary	1
By: John Nielsen-Gammon	
East Texas Summary	3
By: Davyon Hill	
West TX Summary	6
By: James DeBerry	
North Texas Summary	10
By: Greg Story	
El Paso-Far West TX Summary	18
By: Conner Dennhardt	
Wichita Falls Summary	20
By: Charles Kuster	
Brazos Valley Summary	23
By: Leah Mathews	
Southeast Texas Summary	25
By: Ron Havran	
Rio Grande Valley Summary	29
By: Barry Goldsmith	
West Central Texas Summary	40
By: Joel Dunn	
Corpus Christi Summary	47
By: Nicholas Price	
Austin/San Antonio Summary	53
By: Mack Morris	
Summer Weather Outlook	61
By: Bob Rose	
Closing & Contact	62
Information	

Texas Spring Weather Summary

By: John Nielsen-Gammon, Texas State Climatologist



CoCoRaHS observers are not the only people who care enough about the weather to make and report weather observations.

"Because Every Drop Counts, As Do All Zeros"

Texas Spring Summary (continued)

Lots of people have weather stations, and nowadays those stations often automatically upload their data via the internet to a centralized data collection system. However, those stations are usually located somewhere convenient rather than somewhere well-suited for taking representative observations. Y'all have carefully sited your rain gauges so that they are level and rain can fall freely into them no matter which way the wind blows, without extra splashes or drips.

You DID carefully site your gauge, didn't you?

There is one group of observers who might be more careful than you. That's partly because they have to worry about good locations for temperature measurements as well as precipitation measurements. It's also partly because the local National Weather Service office has the ultimate say on where the instruments are going to be located. These weather enthusiasts are part of the Cooperative Observer Program, or COOP program.

The COOP program was born in the early 1890s, about the same time that the U.S. Weather Bureau was established. The USWB consolidated old Army observing sites and state-level volunteer observers before rapidly expanding the network. In a few years there were enough in every state that the United States' Climate Division historical data set could calculate reliable climate values for every part of the US.

A second burst of expansion took place in the late 1940s, helped on in no small measure by the presence of a climatologist in charge of the USWB. By the 1970s, the program was at or near its peak, with many thousands of COOP observers throughout the United States.

Society and technology both change, and in this case they both changed in ways that harmed the COOP program. First, people became more mobile, not tied to small farms or hometown businesses. That made it difficult to find people committed to making observations day in, day out, for many years. Second, automated stations came into existence, and if you just look at the weather as a snapshot, you might not really care that the data you see comes from a new station rather than one that's been around for a hundred years. You might even prefer the new one.

But the old one has something that the new one does not: historical continuity. As climatologists, we want to know the long-term averages, and it's equally important to tease out any long-term trends. If the data from 2024 is from one place and the data from 2025 is from another, how are you supposed to determine trends?

The number of COOP stations continues to diminish. In April 2015, decent observations were obtained from 312 stations in Texas alone. By April 2025, that number had dropped to 199. Now, with staffing shortages at many, if not most, local National Weather Service offices, those numbers are likely to dwindle even farther.

How would you like to contribute more profoundly to the Texas climate record? Do you have a nice open place to take observations, yet reasonably close to an electric power source? Can you put together a team of observers that collectively can plan on making daily weather observations throughout the year?

If you answered yes to all three questions, reach out to someone in your local NWS Office, who might be your local CoCoRaHS coordinator. Tell them you're interested. You might be in a place where we already have COOP observations. Or you might be in a data gap. Or, best of all, there might be a COOP station nearby that's about to retire, and you can step in and keep extending your local climate record.

Or, you might like what you're doing with CoCoRaHS just fine. In which case we say, "Thank you!!"

East Texas Weather Summary

Active Weather Pattern continued through the Meteorological Spring

By: Davyon Hill (Lead Meteorologist/National Weather Service-Shreveport)

Much like the preceding winter months, an active weather pattern continued through the meteorological spring. This led to more above average precipitation during the months of March, April, & May across East Texas. The majority of the region's CoCoRaHS sites reported rainfall well above the National Weather Service 4" to 5" monthly average for the spring months. This was especially true during the month of April, where many sites along and north of Interstate 20 reported total rainfall amounts as high as 9" to 13". A good portion of his rainfall fell on 4th & 5th of the month and again on the 30th, were record rainfall was reported at East Texas National Weather Service climate locations. Between Bowie, Cass, Morris, and Titus counties, several CoCoRaHS sites recorded between 7" to 9" alone from the 4th through the 5th of April. On the 30th, record rainfall amounts of 3.37" and 4.88" were reported at the Tyler and Longview National Weather Service sites respectively. The above normal precipitation extended into the month of May, where most of the East Texas CoCoRaHS sites reported 6" to 9" of precipitation. Like April, the majority of this rainfall occurred on a couple of days of the month (May 6th & 26th). Record rainfall amounts of 3.02" and 3.67" were reported at the Tyler and Longview National Weather Service sites respectively on the 26th.

RECORD EVENT R	EPORT			
NATIONAL WEATH	ER SERVI	CE SHREV	EPORT LA	
319 AM CDT SUN	APR 6 2	025		
DAILY MAXIMU	M RAINFA	ALL RECOR	DS BROKEN ON	APRIL 04, 2025 FOR
THE FOLLOWING L	OCATIONS	5		
LOCATION	OLD	RECORD	NEW RECORD	YEARS OF DATA
TEXARKANA AR	2.31"	IN 1989	5.28"	RECORDS SINCE 1896
TYLER TX	2.05"	IN 1917	3.68"	RECORDS SINCE 1896
DAILY MAXIMU FOLLOWING LOCAT	M RAINFA	ALL RECOR	DS BROKEN ON	APRIL 05, 2025 FOR THE
LOCATION	OLD	RECORD	NEW RECORD	YEARS OF DATA
TEXARKANA AR	1.70"	IN 1953	2.15"	RECORDS SINCE 1896

Figure 1: Record Rainfall April 4th – 5th2025, Image courtesy of NWS Shreveport



Left: April 4th Interstate 30 Flooding in Texarkana / Right: May 26th Underpass Flooding in Kilgore, TX Images courtesy of Weather & Radar USA (Left) & KLTV-TV (Right)

East Texas Weather Summary (continued)

East Texas also received the typical bouts of spring severe weather to accompany the above normal precipitation. Quarter size hail reports were issued for locations across the region by the National Weather Service on various days throughout the spring, but on the evening of March 30th, a cluster of severe thunderstorms produced hail ranging from golf ball to tennis ball size in Cherokee, Rusk, and Shelby counties. Several tornadoes were also reported during spring 2025, with the majority occurring on March 4th and April 4th. The National Weather Service reported six EF-1 tornadoes on March 4th and 5 total tornadoes on April 4th, including two separate EF-2 tornadoes on April 4th in and around the towns of Bogata (Red River County) and Lone Star (Morris County).



Figure 3: Hail on March 30th 2025, Image courtesy of NWS Shreveport



Fig.4: April 4th Tornado/Tornado Damage Left: EF-2 Tornado near Bogata, TX / Right: EF-2 Damage at Lakeview Baptist Assembly in Lone Star, TX Images courtesy of Jasper & Shawnee Conway (Left) & Longview News Journal (Right)

East Texas Weather Summary (continued)

As a recap, above normal precipitation continued as we moved into the spring months of 2025. Because of this, droughtfree conditions remain across the region. This could generally be beneficial as we head into the upcoming months, as the summer is climatologically the driest season of the year for East Texas.



Fig.5: Drought Monitor Mar. 4th, 2025 – May. 27th, 2025 Image courtesy of National Drought Mitigation Center

Training/Observing Tip

What to do with dew?

On mornings with very heavy dew, moisture may condense on the funnel of your gauge and then drip into the measurement cylinder. Should that be reported as precipitation?

The answer is NO. Dew is condensation on the surface, not precipitation from the sky. If you find moisture in your gauge from dew, do not include that in your precipitation report.

Dew may be a valuable source of water, however, for plants, animals and insects. If you observe heavy dew, report that in your "Observation Notes"

Thanks for participating in CoCoRaHS!

West Texas Regional Summary

March Dust Storms and High Wind Events change to Thunderstorms and Abundant Rainfall for April and May

By: James DeBerry, Meteorologist, Hydrology Program Manager, NWS Midland, CoCoRaHS Coordinator

March Summary

March, in typical fashion, was characterized mainly by dust storms and high wind events. However, the spring convective season got off to a start near the end of the month, on March 27-28th. Thunderstorms developed mainly along and west of the Pecos. However, no hydrologic activity was reported.

Monthly radar precipitation estimates ranged from nothing over most of Southeast New Mexico to up to 3" in southern Pecos County. However, the highest observed rainfall was 1.30 in Chisos Basin in Brewster County. Average rainfall across West Texas and Southeast New Mexico was 0.12".



Figure 1: March Precipitation

April Summary

Spring ramped into high gear in April, as the nocturnal low-level jet developed most every night, advection drove rich Gulf moisture into West Texas and Southeast New Mexico. A dryline to one degree or another sharpened up each afternoon, and thunderstorms resulted along and east of it. Unfortunately, most activity was severe. However, a few hydrologic events worth noting occurred.

On April 19th, thunderstorms developed in Upton County, closing streets and stranding vehicles 3 miles north of Rankin.

On the 26th, thunderstorms flash-flooded the Black River upstream of Malaga in Eddy County. A couple of swift water recues were needed for vehicles stranded at low water crossings across the river, one of which was swept downstream. Fortunately, the rescues were successful. Other roadways in the vicinity were closed due to flooding.

On April 30th, thunderstorms developed near Snyder in Scurry County, flooding area roads and stranding vehicles.

Monthly radar precipitation estimates ranged from as little as a trace in parts of the Rio Grande Valley to up to 8" in southern Upton County. Indeed, the highest observed rainfall was 5.02" in McCamey in Upton County. Average rainfall was 1.07".



Figure 2: April Precipitation

West Texas Regional Summary (continued)

May Summary

May was fairly active as upper-level storm systems moved through West Texas and Southeast New Mexico, but most activity was severe weather, rather than hydrologic in nature. As a result, little flooding was observed and/or reported.

On May 27th, thunderstorms developed in Eddy County, and localized flooding result in some road closures there.

On the 29th, thunderstorms developed over Lea County and the northern Permian Basin during the evening. Multiple reports of flash flooding were reported in Dawson, Howard, and Lea Counties, prompting road closures. Water rescues at low water crossings were reported in Big Spring in Howard County, and floodwaters even got into an apartment building. Flash flooding was also reported on US Highway 67 west of Belding in Pecos County.

Despite the lack or reports, rainfall was fairly abundant.

Monthly radar precipitation estimates ranged from no rain over parts of the Presidio Valley to up to 6" in the northern Lea County. Highest observed rainfall was 3.81" in Big Lake in Reagan County. Average rainfall was 1.29".



Figure 3: May Precipitation

Overall, as of the end of spring 2025, drought severity followed the Pecos River, which was generally in severe drought. Conditions to the west quickly deteriorated to exceptional. To the east, conditions quickly improved. In the northern and eastern Permian Basin, as well as the Western Low Rolling Plains, no drought was observed, at least temporarily. Area reservoirs are at 55.4% conservation capacity as of June 1st.



Training/Observing Tip

Be a Hero Report Your Daily Zeros

Thanks for participating in CoCoRaHS and for entering your precipitation reports.

We realize that it takes time to enter your data each day. It may be more interesting to measure and report precipitation when there is something in your gauge. But keep in mind that it is just as important to know when and where it DIDN'T rain as it is to know where it DID rain. We even care about trace (T) amounts. Your reports of 0.00" for dry days are greatly appreciated. This data is used every day in the drought forecasting models that produce drought maps for the U.S. Drought Monitor Maps. CoCoRaHS daily reports are single largest data source for U.S. Drought Monitor Mapping.

North Texas Regional Summary

Twenty-one Significant Storm Systems affected North Texas weather this Season By: Greg Story, North Texas CoCoRaHS Regional Coordinator

Reviewing the weather of the past several months, in October 2024 it was extremely dry statewide, with portions of south central and western Texas receiving no rainfall at all. In November it turned very wet over the northwest third of the state, with above to much above normal precipitation observed. The southeast two thirds of Texas had near to below normal rainfall. In December it was wet over about the eastern third of the state with above normal precipitation. Meanwhile, it was very dry over the western third of Texas with much below normal precipitation. In January 2025 above normal precipitation was observed from central into Northeast Texas, as well as along the Gulf coast. Meanwhile, dry weather with below normal precipitation was noted over much of West Texas, especially the southwest. In February it was dry over much of Texas, especially the southern and western portions. The only location which saw above normal precipitation was the extreme eastern and southeast parts. In March there was much above normal rainfall over Deep South Texas, but that was the only location that did. Most of Texas had below normal precipitation, with much below normal amounts across the southwest. In April the weather pattern shifted and the northwest two thirds of Texas had near to above normal rainfall. Only the southeastern third saw near or below normal precipitation. In May most of the state saw near to above normal rainfall. Only far West Texas experienced below normal amounts.



Figure 1: Percent of normal precipitation map for March 2025. The dark green, blue and purple colors indicate above normal precipitation; the beige, yellow and light green colors indicate near normal, while the orange, red, dark red and brown colors indicate below normal precipitation. March had much above normal rainfall over Deep South Texas, but that was the only location that did. Most of Texas had below normal precipitation, with much below normal amounts across the southwest.

At DFW airport in March 2025 there was 1.67" of rainfall. The normal amount of rain in March at DFW is 3.30" so this total is - 1.63" below normal for the month.

In Waco for March 2025, there was 1.28" of rainfall. The normal amount in March is 3.31" so Waco was -2.03" below normal for the month.

For each month, I will highlight the more significant weather events. I know I am giving you a lot of information, and it is my intent for you to pick your "favorite" storm or to look at a particular date each month to see what happened. Which days did you report your heaviest precipitation amounts? You can read about those days here and compare what you observed against the maximum amounts.

There were about nine storm systems which affected our weather in March. Here are the highlights of the weather for the month.

March 2:

An upper air disturbance moved quickly across North Texas during the afternoon and evening of the 2nd and produced some showers and a few thunderstorms. While the rainfall was light in most locations, some areas did get amounts of 1.05" southwest of Cedar Hill and 0.90" south of Ovilla.

March 3 - 4:

A strong upper level low pressure system crossed the southern plain states late on the 3rd and into the 4th. Showers and strong thunderstorms developed along and ahead of the dryline that crossed Texas. The maximum rainfall amounts were 2.12" west of Rockwall and 1.95" south of Ovilla. Widespread wind damage was observed across North Texas the morning of the 4th. The showers and thunderstorms moved out of the state by early afternoon. Residual rainfall reports on the 4th included 2.29" at Jacksonville and 1.94" south southwest of Kilgore.

March 8 - 9:

A cold front passed through Texas on the 8th. Meanwhile a strong upper level low pressure system progressed eastward from New Mexico from the 8th through the 9th. Showers and thunderstorms developed in the early morning hours of the 8th over the western parts of North Texas, and this rain spread eastward across especially North Texas through the day. Prior to sunrise on the 8th the heaviest rainfall was 1.20" south of Hawley and 1.02" east northeast of Merkel. In the DFW area there was 0.97" near Palmer. Then during the day on the 8th, the heaviest rainfall in North Texas was north northwest of Gordonville with 1.34". But elsewhere in Texas there was 2.02" at Conroe and 1.72" northwest of The Woodlands. The precipitation moved out of the state on the 9th as the upper low moved east. Residual rainfall amounts were all less than 0.15".

March 12:

A fast moving upper air disturbance combined with the dryline to produce some showers and thunderstorms from central into Northeast Texas. Due to the speed of the storms, heavy rainfall did not occur but there was 1.07" west northwest of Carmine and 0.90" northwest of La Grange.

March 14 – 15:

A powerful low pressure system passed North of Texas on the 14th and 15th which pushed the dryline across most of Texas. Some showers and thunderstorms developed along and ahead of the dryline from central into east Texas late on the 14th into the 15th. Prior to dawn on the 15th the heaviest rainfall amounts were 0.93" southwest of Alto and also at Lyons. Most of the heavier thunderstorms exited the state by noon on the 15th. Residual rainfall amounts were light, with 0.61" being measured at Presidio and 0.44" near Del Rio.

March 23 – 24:

A cold front moved across Texas on the 23rd into the morning of the 24th. Showers and thunderstorms developed along and ahead of this front from south Central Texas into Northeast Texas. Most of the rain on the 23rd developed after the front moved through North Texas, leaving DFW dry. But elsewhere in the state there was 2.13" west southwest of Stagecoach, 1.93" west northwest of Tanglewood Forest, and 1.83" southwest of Austin. North Texas had some rain on the morning of the 24th, with residual rainfall reports of 1.70" measured west southwest of Wylie and 1.63" east southeast of Denison.

March 25:

An upper air disturbance moved across northern Texas late on the 25th into the morning of the 26th and produced some showers and thunderstorms. The thunderstorms produced a lot of hail, especially along and south of the Red River. The rainfall amounts were not terribly heavy, with 1.25" measured at Monkstown and 1.08" east southeast of McKinney.

March 26 – 28:

A slow moving upper air disturbance moved east out of Mexico starting on the 26th, which continued to generate rainfall for several days as it passed. Rainfall initially developed across South Texas on the 26th, with residual light rainfall over extreme North Texas. The rainfall became extremely heavy over Deep South Texas where 7.90" was observed just northwest of Laguna Vista and 7.02" northwest of Port Isabel. Widespread rainfall continued across South Texas on the 27th, while more isolated rainfall spread over central and North Texas as well. Rainfall amounts on the 27th in North Texas included 2.15" south southwest of Killeen, 1.66" at Corsicana, and 1.47" northwest of Crandall. Extremely heavy rainfall with catastrophic flooding occurred over Deep South Texas. There was 13.99" west of Harlingen and 12.00" south of Lozano. On the 28th the rain shifted more to the eastern third of the state, and by midnight most of the rain moved east of the state. The heaviest rainfall on the 28th was 3.85" northeast of Town Bluff (at B A Steinhagen Lake) and 3.59" south southwest of Jasper.

March 29 – 30:

Showers and thunderstorms developed along and ahead of the dryline the afternoon and night of the 29th into the 30th over northern and southeastern Texas. Over North Texas there was 1.81" north northeast of Aquilla and 0.92" north of Hamilton. But over Southeast Texas totals up to 3.52" west southwest of Galveston were observed. Those thunderstorms moved east on the 30th, but new thunderstorms developed along and ahead of a cold front during the afternoon and nighttime. The rainfall amounts over North Texas were under 1" on the 30th, but over East Texas there was 3.70" at Center and 3.23" northwest of Appleby.



Figure 2: April 2025 percent of normal precipitation map. The dark green, blue and purple colors indicate above normal precipitation; the light yellow and light green colors indicate near normal, while the brown, orange, red and dark red colors indicate below normal precipitation. In April the weather pattern shifted and the northwest two thirds of Texas had near to above normal rainfall. Only the southeastern third saw near or below normal precipitation.

At DFW airport in April 2025 5.22" of rainfall was recorded. The normal amount of rain in April is 3.22" so Dallas was +2.00" above normal for the month.

In Waco for April 2025, 4.44" of rainfall was recorded. The normal amount in April is 3.30" so Waco was +1.14" above normal for the month.

There were five storm systems which affected our weather in April. Here are the highlights of the weather for the month.

April 2 - 6:

A weak cold front moved into North Texas on the 2nd. Showers and a few thunderstorms developed the morning of the 2nd, but became stronger over Northeast Texas during the afternoon and evening. Then the front stalled and became stationary across central and Northeast Texas during the early morning hours of the 3rd. More showers and thunderstorms developed primarily over the northern half of the state on either side of this front. The maximum rainfall amounts on the 2nd were 1.40" at Paris and 1.36" northeast of Breckenridge. The rain shifted into Northeast Texas through the morning into the afternoon of the 3rd before ending. But new showers and thunderstorms developed over West Texas late on the 3rd and into the morning of the 4th. This rain shifted into North Texas through the morning of the 4th and into Northeast Texas late in the day. The maximum rainfall amounts on the 3rd were 1.49" northeast of Aspermont and also northwest of Knox City. The next wave of showers and thunderstorms developed over West Texas. The maximum rainfall amounts in Texas on the 4th were 7.62" north of Hawkins and 6.78" east of Lindale. The heaviest rainfall in North Texas was west northwest of Duncanville with 2.62". Showers and thunderstorms persisted on the 5th, especially over East Texas as an upper level low pressure system finally moved across the region, but the rain was lighter. Residual rainfall amounts on the 6th were 0.25" or less.

April 18 - 21:

A deep upper atmospheric low pressure system formed over northwest New Mexico late on the 18th into the 19th. Ahead of this low, showers and thunderstorms developed primarily over western and northern Texas late on the 18th and into the 19th. In North Texas the morning of the 19th there was 1.21" north of Gainesville and 1.12" south southwest of Runaway Bay. But elsewhere in Texas 1.79" fell southwest of Knickerbocker and 1.12" occurred northwest of Cisco. The initial thundershowers weakened on the 19th, but new showers and thunderstorms developed during the afternoon and evening from Southwest Texas into the western parts of North Texas. This rain worked its way slowly east through the night of the 19th into the 20th, with extremely heavy rainfall noted along the Red River. The heaviest rainfall amounts were 9.53" just northeast of Nocona, 5.50" at Bonita, and 5.18" near Bryson. As the upper level low pressure system moved eastward on the 20th, the rainfall shifted into east Texas. Locally heavy rain fell for the second day in a row. On the 20th an observer had 8.32" south of Woodville and 4.65" southeast of Livingston. During the day on the 21st the majority of the showers and thunderstorms were confined to the Gulf Coast, and this rain dissipated by evening. Residual rainfall amounts from the 21st included 6.83" at Port Mansfield and 5.48" southwest of Alvin.

April 22 – 24:

A couple of upper air disturbances interacted with the dryline to produce some showers and thunderstorms during this period. Initially thunderstorms developed the afternoon and evening of the 22nd over west and Southwest Texas. There also were some showers due to the sea breeze along the Gulf coast. The rain areas merged during the late evening hours and produced some locally heavy rainfall. The heaviest rain totals over North Texas were 2.64" north of Grand Prairie, 2.51" southwest of Dallas, and 2.39" near Caddo. Elsewhere in Texas on the 22nd 4.17"fell east northeast of La Grange and 3.14" at Barksdale. The rain shifted into East Texas by the afternoon of the 23rd, but new thunderstorms developed over northwest and Southwest Texas. These thunderstorms merged into one large area of rain early on the 24th which covered much of Texas. The heaviest rainfall in North Texas on the 23rd was at Terrell with 1.39" and east southeast of Kaufman with 0.91". Elsewhere in Texas there was 5.63" at Orange and 3.90" south southeast of Dayton. The showers and thunderstorms continued to move eastward across northern, central and eastern Texas on the 24th and dissipated by evening. The maximum rainfall amounts on the 24th were southeast of Malone which had measured 4.05" and west southwest of Corsicana which had 4.00".

April 25 – 26:

There were some showers which developed due to the sea breeze front from central into Southeast Texas on the 25th. But by far and away the heaviest rainfall came from thunderstorms which developed along the dryline across West Texas. The heaviest rainfall on the 25th was 5.83" south southwest of Anton and 2.47" west of Goodlett. The dryline also produced thunderstorms on the 26th over West Texas, with 2.73" observed northwest of Seymour and 1.40" west of Crosbyton.

April 29 – 30:

A strong upper level low pressure system developed over Arizona on the 29th, and as it advanced eastward it created numerous showers and thunderstorms along the dryline across West Texas. These showers and storms advanced east later on the 29th into the morning of the 30th, as well as into far North Texas. The heaviest rainfall on the 29th was 4.00" east northeast of Odell, 3.75" west southwest of Hamlin and 3.42" northwest of Seymour. The area of thunderstorms formed into a mesoscale convective system (MCS) the morning of the 30th and continued with very heavy rainfall over northern and eastern Texas. The complex of thunderstorms moved southeast and moved out of Texas early in the morning hours of the 1st. At DFW airport the rainfall of 2.40" was a daily maximum rainfall record for April 30. The previous record was 1.85" in 1905. The heaviest rainfall in North Texas on the 30th was south southwest of Runaway Bay with 4.25" and northwest of Sanger with 3.54". But over Northeast Texas there was 6.24" southwest of Whitehouse, 5.84" at Fairfield and 5.72" north of Bullard.



Figure 3: Percent of normal precipitation map for May 2025. The dark green, blue and purple colors indicate above normal precipitation; the beige, light yellow and light green colors indicate near normal, while the brown, orange, red and dark red colors indicate below normal precipitation. In May most of the state saw near to above normal rainfall. Only far West Texas experienced below normal amounts.

At DFW airport in May 2025 4.51" of rainfall was measured. The normal amount of rain in May is 4.78" so Dallas was very close to normal at -0.27" for the month.

In Waco for May 2025 4.35" of rainfall was measured. The normal amount in May is 4.44" so Waco also was very close to normal for the month at -0.09".

There were seven significant storm systems which affected our weather in May. Here are the highlights of the weather for the month:

May 1 - 2:

A stationary front across Central Texas was the focal point for showers and thunderstorms on the 1st, additionally, there were some thunderstorms over West Texas along the dryline. The maximum rainfall amounts on the 1st were 4.78" north northwest of Burnet, 4.25" near Hearne, and 3.07" west of Gause. The initial showers and thunderstorms moved over East Texas on the 2nd. Meanwhile, a complex of thunderstorms moved southeastward out of Oklahoma into northern and Central Texas. Some locally heavy rainfall occurred. The showers and thunderstorms moved across Southeast and Deep South Texas and eventually left the state early on the 3rd. The heaviest rain over North Texas was southwest of Eagle Mountain Lake with 2.07" and at Hillsboro with 1.58". But elsewhere in Texas on the 2nd there was a report received of 6.90" west of La Grange and 5.60" north northwest of Schulenburg.

North Texas Regional Summary (continued)

May 5 - 8:

A low pressure system aloft developed over southern Arizona early on the 5th, and this low moved slowly eastward. Prior to dawn on the 5th, showers and thunderstorms developed across West Texas. The heaviest rainfall prior to sunrise on the 5th was 1.59" north of Dimmitt and 1.05" at Muleshoe. The rainfall spread eastward during the day on the 5th across a good part of the state. The maximum rainfall on the 5th over North Texas was southeast of Little River with 2.12", south of Midlothian with 1.12", and west southwest of Lake Worth with 1.05". Elsewhere in Texas an observer measured 4.98" northwest of Brenham and 4.48" west northwest of Carmine. The large area of showers and thunderstorms continued to progress slowly eastward during the day on the 6th. By late in the day on the 6th into the morning of the 7th the rain was confined to Deep South Texas and the Texas Gulf Coast. The maximum rainfall over North Texas on the 6th was at Athens with 2.68", Paris with 2.54", and northeast of Sachse with 2.09". But over Southeast Texas 7.23" was measured east northeast of Bon Wier and 5.61" was observed south southeast of Kirbyville. A few thunderstorms developed late on the 7th over Southwest Texas, and some rain occurred along the sea breeze front in Southeast Texas. All the rain was isolated in nature. Rainfall amounts for the 7th included 1.39" northwest of Junction and 0.58" west northwest of League City. Some rain lingered into the 8th along the Texas Gulf coast. Rainfall amounts on the 8th included 3.82" near Port Mansfield and 3.73" at Victoria.

May 16 - 20:

The dryline became active from the 16th through the 18th, and its movement created showers and thunderstorms each day. Then a cold front brought showers and thunderstorms late on the 19th into the 20th. Showers and storms developed on the 16th across portions of Northern and Central Texas. The heaviest rainfall on the 16th was 1.37" southeast of Midlothian, while in Central Texas a measured 1.30" of rainfall fell west northwest of Leander. The thundershowers died off late on the 16th, but in a similar fashion storms redeveloped on the 17th. The maximum rainfall in North Texas on the 17th was 1.34" northeast of Bridgeport and 1.33" near Trinidad. Elsewhere in Texas 1.56" was recorded east southeast of Mason. These thunderstorms died off after sundown on the 17th. Showers and thunderstorms redeveloped on the 18th and were more widespread than the previous two days. The largest rainfall totals were 2.27" northwest of Decatur and 1.99" northeast of Bridgeport. Most of those thunderstorms died off late on the 18th, but new areas of rain and thunderstorms developed again on the 19th. The rainfall was heaviest along the Red River. The maximum rainfall totals on the 19th were 1.96" north northwest of Gordonville and 1.80" north of Gainesville. As the cold front moved across Texas late on the 19th into the 20th, most of the rain on the 20th was along and ahead of this front over southern and eastern Texas. Residual rainfall amounts on the 20th included 1.10" southeast of Dayton and south of Spurger.

May 22 – 23:

A complex of thunderstorms moved out of Oklahoma into the western parts of North Texas on the 22nd. These thunderstorms then moved toward the Texas Hill Country and south Central Texas late on the 22nd into the early morning hours of the 23rd and produced very heavy rainfall. The maximum rainfall amounts were 5.56" east northeast of Brownwood and 5.00" west southwest of Mullin.

May 25 – 27:

An area of thunderstorms over Northwest Texas and Southwest Oklahoma developed into a mesoscale convective system (MCS) and moved into northern Texas late on the 25th into the morning of the 26th. Some locally heavy rainfall occurred, with the heaviest rainfall at Arthur City with 4.96", 4.45" south southwest of Kilgore, and 4.44" east of Longview. The MCS moved southeastward the morning of the 26th, then additional showers and thunderstorms occurred across northern and west Central Texas during the afternoon and evening. These thunderstorms moved southeastward and finally moved out of Texas the morning of the 27th. The maximum rainfall amounts on the 26th were 5.98" west southwest of Belton and 5.17" southeast of Little River.

May 27 – 28:

A subtle upper air disturbance interacted with a stationary front to produce showers and thunderstorms, starting in Southwest Texas on the 27th, which then spread eastward and northeastward into Central and South Texas late on the 27th into the morning of the 28th. The heaviest rainfall reports in North Texas were northwest of Rising Star with 1.25" and north northeast of Stephenville with 1.22". But heavy rain occurred over South Texas, with 4.65" observed north of Hollywood Park and 3.45" southwest of Rockport. These showers and thunderstorms advanced eastward toward East Texas during the day on the 28th. Then in the afternoon and evening additional thunderstorms developed across Central Texas. Then all of the rainfall dissipated by midnight. The maximum rainfall amounts on the 28th were 3.10" east of Brownsville and 3.08" near Austin.

North Texas Regional Summary (continued)

May 29 – 30:

A new cluster of thunderstorms developed along the dryline on the 29th over West Texas which developed into an MCS and moved toward the south central parts of the state. The rain continued into southern and eastern Texas on the 30th. The heaviest rainfall on the 29th was 3.30" north northeast of D`Hanis and 3.12" west of Uvalde. The rainfall dissipated or moved out of the state later on the 30th. The largest rainfall totals on the 30th were 2.76" south of Yoakum and 2.31" west of Hochheim.



Figure 4: Spring season observed precipitation map for 2025. The red, brown, and tan colors indicate the higher precipitation totals, while the light green, navy and light blue colors show the lightest amounts.



Figure 5: Percent of Normal Precipitation map for spring 2025. The purple, blue and dark green colors indicate above normal precipitation. The brown, orange, and red colors indicate below normal amounts.

At DFW airport for the March through May Spring season there was 11.40" of rainfall. The normal amount for the spring season is 11.30" so DFW was very close to normal at +0.10". In Waco for the spring season, there was 10.07" of rainfall measured. The normal amount for the spring season is 11.05" so Waco was -0.98" below normal for the season.

North Texas Regional Summary (continued)



Figure 6: Current Drought Monitor for Texas as of June 5. The results of the wet weather of the past three months show up well on this drought monitor, with moist soil moisture conditions over all of northern and eastern Texas. But the results of the lack of heavy rainfall from this spring also show up well over southwestern Texas and parts of the Hill Country. The areas in Texas that are abnormally dry (or worse) decreased from 80% to 43% in the past three months. This means 57% of the state has moist soil moisture conditions. About 36% of the state is experiencing some level of drought. Portions of far west Texas and parts of the Hill Country are experiencing the worst drought category, which is exceptional drought (covering 12% of the state).

Thanks again for your dedication in making all your weather observations! I'd like to share a few reminders in closing. First, we know it is summer vacation season and there will be days you may not home to report your 24-hour rainfall observation. Upon your return, you can make a multi-day accumulation report. Simply submit the total amount of rain in your gage that fell while you were away. There is a link on the CoCoRaHS reporting page you can use for this purpose. Second, all CoCoRaHS data is quality controlled each day. The intent is for us to recognize reporting errors that may occur. So, one of us may contact you on occasion in case we have any question about one of your reports. If you have difficulty making your observations or have questions on how to report them, please feel free to contact me or your county coordinator. Third, be confident in knowing your rainfall reports are used every day. As one example, CoCoRaHS data is incorporated by the National Weather Service at the West Gulf River Forecast Center for use in their soil moisture accounting flood forecasting models. So please continue to submit your reports. The more rainfall reports that are collected, the better the chances of determining the highest rainfall totals during rainfall events. And when it doesn't rain, your zero reports make it easier to determine the exact location of and the magnitude of drought. We appreciate it when you report zero rainfall on the days it did not rain.

Thanks to all of you, and have a great summer season!

Greg Story

El Paso/Far-West Texas Regional Summary

Exceptional Drought Conditions Plague West Texas By: Connor Dennhardt, Lead Meteorologist - National Weather Service El Paso

Springtime in El Paso, TX is typically the driest time of the year. On average, only **0.84**" of precipitation falls seasonally at El Paso International Airport. High winds and blowing dust are the more common weather impacts as strong southwest flow keeps moisture from the Gulf of Mexico well off to the east of the region. This season was one of the dustiest on record due to the severe drought conditions and prolonged winter dryness. The most notable high wind events were recorded on March 18th, April 1st, and May 13th, where observations in El Paso recorded gusts over 60 mph. Gusty afternoon winds were common this season, with the El Paso International Airport recording more than 34 daily peak gusts exceeding 40 mph. The last freeze in El Paso this year was a seasonably late April 6th, and a trace of snowfall was recorded likely from graupel or sleet. El Niño-neutral conditions were in place this spring season, with minimal changes expected to the ENSO cycle this summer.



Figure 1: U.S. Drought Monitor for WFO El Paso and Seasonal (90-day) Precipitation Totals from 2020-2025.

The main headline for El Paso's weather over the past few seasons has been the onset of a historic drought across West Texas and southern New Mexico, with the U.S. Drought Monitor placing the region in Extreme (D3) to Exceptional (D4) drought status as of early June. Far West Texas has now recorded 10 consecutive seasons with below normal precipitation, dating back to the winter 2022-23 season. The region has only received 40-60% of expected precipitation since January 2023, a stretch of two and a half years. The primary reason for the ongoing drought is a lack of monsoon rainfall during the 2023 and 2024 summer seasons. El Paso's monsoon season stretches from June 15th to September 30th and accounts for more than 60% of the area's average annual rainfall. The past two summers have fallen well below normal, exacerbating crop moisture and irrigation requirements in the Rio Grande valley and other farming communities.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly
2020	-0.12	0.38	1.78	-0.17	-0.22	-0.48	-0.11	-1.62	-0.93	-0.41	-0.43	-0.61	-2.95
2021	-0.21	0.00	-0.24	0.07	-0.25	1.64	3.22	0.79	-1.05	-0.59	-0.09	-0.04	3.24
2022	-0.36	0.00	-0.09	-0.17	-0.43	0.51	-1.34	1.17	0.13	1.32	-0.31	-0.29	0.13
2023	-0.16	0.01	-0.19	-0.17	-0.32	-0.70	-1.28	-0.23	-0.57	-0.24	-0.16	-0.43	-4.45
2024	-0.13	0.09	-0.20	-0.15	-0.43	-0.02	-0.24	-1.07	-1.02	-0.54	0.29	-0.63	-4.06
2025	-0.35	-0.37	-0.20	0.22	-0.43	-							

Figure 2: Monthly Precipitation Departure from Normal since 2020 for El Paso, Texas.

El Paso/Far-West Texas Regional Summary (continued)

March was a mostly dry month with several wind and dust events. The only notable span of measurable precipitation occurred March 13-15, where observers around El Paso County reported **0.05-0.15**". The rest of the month featured mostly Pacific lows crossing the southern Rockies to our north and bringing dry, windy conditions. Precipitation was a little higher further west into Arizona, but still well below normal. The Trans-Pecos region of Texas was almost completely dry. For El Paso, monthly precipitation totals finished between **0.05-0.15**", well below normal for an already dry time of year.

The start of April was a much-needed improvement in precipitation. Most measurable reports for the month occurred April 4-6 as the combination of an upper low pressure system and cold front intrusion brought scattered showers and well below normal temperatures. The high terrain of southern New Mexico saw snowfall on April 6th. El Paso recorded a very late-season freeze the morning of April 6th, reaching 32 degrees. Precipitation totals varied greatly across El Paso County, with the eastern portion of the metro receiving much more due to the placement of banded precipitation. Observers in east El Paso reported **0.10-0.20**". The rest of the month finished almost completely dry, resulting in a tight gradient of below normal precipitation for southwest New Mexico and above normal precipitation for most of far West Texas.

May was almost completely dry for the region, with the only measurable reports coming in on May 6th. Monthly totals ranged from **0.00-0.05**". The official station at El Paso International Airport recorded only a trace of rain for the month of May.

Figure 3: AHPS Precipitation Analysis for March-May 2025 in southwest New Mexico and far West Texas

Season precipitation totals ranged from **0.10-1.00**", a large range due to the early April event. The highest local precipitation centered over El Paso's Lower Valley and much of Hudspeth County. Most CoCoRaHS reporters in El Paso finished well below normal for the 92-day season. El Paso International recorded a season total of only **0.43**", falling short of the climate average of **0.84**" and now reaching 5 straight drier-than-normal spring seasons. Far West Texas remains in Extreme to Exceptional drought status and looks to remain that way headed into a monsoon season where rainfall is desperately needed.

The spring season featured 36 active observers in El Paso County, and 2 in Hudspeth County. A total of 1,695 daily reports were submitted, along with 23 multiple-day reports. Only 108 daily reports had measurable precipitation, which means 94% of total reports were **T** or **0.00**". No Condition Monitoring or Significant Weather reports were posted this season. Thanks again to all our local observers who participated in the 2025 spring season!

Wichita Falls Regional Summary

Spring Brings Record Rainfall and Severe Weather By: Charles Kuster, Meteorologist, National Severe Storms Laboratory

We experienced a very active spring in terms of severe weather this year. Every county in our area had at least one report of severe weather, with April being the most active month (Fig. 1). April started off with four straight days of severe weather somewhere in our area but the most active day by far was April 29. On this day, a strong supercell produced two EF2 tornadoes near Seymour, with significant damage noted at the Seymour airport. The same storm that produced these tornadoes also produced 106 mph winds near Seymour, 2.5" hail near Seymour, and 95 mph winds near Benjamin (Fig. 2). In addition to these reports, 3.0" hail near Knox City, 92 mph winds near Knox City, and 70 mph winds near Burkburnett also occurred on April 29. Many CoCoRaHS stations also reported 24-hour rainfall of 2–3" for this event. Severe weather also continued into May, though was much less widespread (Fig. 1c), and with the most significant report of the month being 74 mph winds at Knox City on May 24.

Figure 1: Preliminary storm reports from the Storm Prediction Center for a) March, b) April, and c) May of 2025. Red triangles are tornado reports, green circles are hail reports, and blue squares are wind reports.

Figure 2. Radar reflectivity (left) and velocity (right) depicting the strong supercell that produced tornadoes, severe hail, and damaging winds across Knox and Baylor County on April 29, 2025. The small squares indicate location and magnitude of various storm reports, with the orange boxes indicating hail reports, the green boxes indicating wind reports, and the purple boxes indicating tornado reports. In the velocity data, red colors indicate winds blowing away from the radar (located near Frederick, Oklahoma) and green colors indicate winds blowing towards the radar.

Wichita Falls Regional Summary (continued)

Overall, the region experienced well-above normal precipitation and temperatures this spring (Fig. 3). The month of April also saw record rainfall in Wichita Falls where 10.35" of rain fell during the month. The previous monthly record was 8.50" which was set in 1957. All CoCoRaHS stations recorded at least 8.5" of rain during April with several approaching and even exceeding 12" of rain (Fig. 4)!

Figure 3. Departure from normal a) precipitation and b) temperature for the beginning of March 2025 through the end of May 2025. Warm colors indicate below normal precipitation (a) and above normal temperatures (b), while cool colors indicate above normal precipitation (a) and below normal temperatures (b).

In total this spring, we experienced 59 dry days (all CoCoRaHS stations reported less than 0.05") and 33 wet days (at least one CoCoRaHS station reported 0.05" or more). For comparison, last spring the region experienced 63 dry days and 29 wet days. March had seven wet days and April and May both had 13 wet days. Thanks to all of the rainfall, nowhere in our area is currently experiencing drought conditions according to the U.S. Drought Monitor (available online at https://droughtmonitor.unl.edu/). Thanks to everyone for measuring all of the rain that occurred over this season, your reports and dedication are much appreciated!

Wichita Falls Regional Summary (continued)

Figure 4. CoCoRaHS rainfall totals for April 2025.

Training/Observing Tip

Moving to a New Address Location – Please Contact Us to Set Up Your New GPS Map Location

Before moving please contact us at texas@cocorahs.org, you will need to have us assign a new station name and number, even if you only move a few blocks. This is very important because when you move your CoCoRaHS station data point will stay behind at the GPS location for that data point on the map. You will keep your login and password and we will save your data from your previous CoCoRaHS location and archive it indefinitely. But in order for your new station location to display at its proper location on the rainfall data map you will need to have us assign a new station name and number. Just drop us an email at texas@cocorahs.org and we'll take care of everything so you will be able to enjoy precipitation observing at your new location.

Brazos Valley Regional Summary

Spring 2025 Precipitation Summary

Bryan-College Station/Brazos Valley Region

By: Leah Mathews, Texas A&M University, Office of the State Climatologist of Texas

Summary:

This spring was mild and had normal rainfall. Average temperatures flip-flopped between cooler-than-normal and slightly warmer-than-normal weekly. Rainfall was also lacking for the first half of spring, leaving a station in Washington County 24 days without rainfall in March. Dry conditions made drought a concern for most of the spring, impacting Washington, Burleson, and Brazos counties the most. Fortunately, milder temperatures continued, and a late return of rain in May removed drought almost completely from the Brazos Valley Region! CoCoRaHS observers in the region who captured all the rain events reported between 8.26" and 19.28".

Page 24

Brazos Valley Regional Summary (continued)

Observer Statistics:

There were no CoCoRaHS observer reports in Madison County. Twenty-two stations within the Brazos Valley region reported precipitation values for all 90 days within the spring period and another 20 stations missed fewer than 10 days of recorded values (79 or more). In total, there were 44 CoCoRaHS observers with a sufficient number of single and multi-day observations to provide a seasonal total precipitation amount.

Season Statistics:

Wettest day: 4.98", May 6th, Washington County Wettest seasonal total: 19.28", Grimes County Driest seasonal total: 8.26", Washington County Soggy Socks Award (longest spell of daily reports with measurable rain): 7 days, May 20th- May 26th, Walker County Dusty Soles Award (longest spell of daily reports without measurable rain): 24 days, March 4th - March 27th, Washington County

Training/Observing Tip

Multi-Day Ac	cumulation
My Data Entry : Daily Precipitation Report Form	Roth Conhunity Collaborative Rain, Hail & Show Network
24-Hour Precipitation Report Form	Home Countries States View Data Nape - My Data My Account Admin Lagout
Station: COLR40: Test Station * Denotes Required Field * Observation Date 1 For observations spanning more than 24 hours	My Data Entry : Multi-Day Precipitation Report Form
Enter Multi-Day Accumulation	Multiple Day Accumulation Form Benet
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On your daily precipitation report form there is a handy link to take you to the multi-day precipitation form to enter in your multiday precipitation total for any timeframe greater than 24 hours from your previous daily report.

Southeast Texas Regional Summary

Dry and Dusty March then Heavy Thunderstorms in places during April and May

By: Ron Havran, Southeast Texas Regional Coordinator, HCFCD

March

Dry conditions prevailed over all of Southeast Texas to start off spring. Temperatures were well above normal everywhere. Only Jasper County had average CoCoRaHS observer rainfall totals over 5.00". Rainfall totals were very low with the southwestern portion of Southeast Texas the driest with Brazoria and Fort Bend counties under 2.00" for the month. Dust and smoke filtered into Southeast Texas from wildfires in Central Texas and high winds in West Texas brought dust into the region. Haze covered skies were common. Lots of very windy days in March which is usual but peak winds where on the higher than usual side.

Figure 1: Observed March Precipitation

Figure 2: March Departure from Normal Precipitation

April

Temperatures continued much above normal and the lack of rain continued in April. There were areas that did start to get heavy thunderstorms at times during the month from passing disturbances, but many counties had very low rainfall totals again. See table 1 and table 2 for individual county rainfall average totals from CoCoRaHS observer reports.

Figure 3: Observed April Precipitation

Figure 4: April Departure from Normal Precipitation

May

The month of May finally did have storm systems move further into Southeast Texas and brought much needed rainfall. With more days of rain across the region temperatures were not above normal as much. Figures 5 and 6 show areas that received abundant rains and the areas with lesser amounts. The driest counties in Southeast Texas in the months of March and April had been experiencing drought conditions. The Brazos River has been the dividing line between drought and normal conditions. Rainfall in May has helped stop the spread of drought conditions into Southeast Texas. See tables 1 and 2 for rainfall totals in May. Most of Southeast Texas is drought free. Notice the dry areas west of Houston that had below normal rainfall in May below.

Figure 5: Observed May Precipitation

Figure 6: May Departure from Normal Precipitation

90 Day Season Totals

See fig. 8 for 90 day departure from normal showing above normal rains northwest of Beaumont and below normal rainfall in the Houston area. The counties of Harris, Waller, Fort Bend, and Austin had rainfall departures of 4.00" to 8.00" for the spring.

Figure 7: Southern Region Observed 90 Day Precipitation

Figure 8: Spring 90 Day Departure from Normal Precipitation

County	March	April	May	Spring Total
	AVG.	AVG.	AVG.	Mar May
Austin	2.01	1.65	3.84	7.50
Brazoria	1.78	3.85	6.01	11.64
Chambers	3.54	4.66	6.53	14.73
Colorado	2.44	1.04	5.11	8.59
Fort Bend	1.78	1.68	4.47	7.93
Galveston	2.87	3.13	5.91	11.91
Harris	2.21	2.96	4.99	10.16
Jackson	3.57	1.17	6.24	10.98
Liberty	2.75	4.77	6.95	14.47
Matagorda	2.92	2.35	6.02	11.29
Montgomery	2.83	3.79	6.68	13.30
Polk	3.88	6.26	6.33	16.47
San Jacinto	2.35	5.75	6.49	14.59
Wharton	2.64	0.59	6.29	9.52
Region Totals	2.68	3.12	5.85	11.65

Color indicates highest avg. rainfall total for a county in a month Color indicates lowest avg. rainfall total for a county in a month

Note: Counties without a significant # of observers reporting are not listed on the chart.

Table 1: Houston/Galveston Section Observer Spring Precipitation by County

County	March	April	iviay	Spring Total
	AVG.	AVG.	AVG.	MarMay
Hardin	4.09	3.66	6.72	14.47
Jasper	5.37	4.06	7.98	17.41
Jefferson	2.06	2.87	6.46	11.39
Orange	2.56	6.21	6.07	14.84
Tyler	4.49	5.42	5.91	15.82
Region Totals	3.71	4.44	6.63	14.79

Table 2: Golden Triangle Section Observer Spring Precipitation by County

		March Climate							
Site Location (record start)	Hi	Lo	Mean	Departure	Rain	Normal	Departure		
Bush Airport (1888)	79.7	57.1	68.4	4.6	1.91	3.47	-1.56		
Hobby Airport (1930)	79.3	58.9	69.1	4.4	1.50	3.28	-1.78		
Galveston (1871)	75.6	61.5	68.6	3.4	2.26	3.02	-0.76		
Sugar Land (2000)	80.0	57.0	68.5	3.8	0.86	3.49	-2.63		
			April Clima	ate					
Site Location (record start)	Hi	Lo	Mean	Departure	Rain	Normal	Departure		
Bush Airport (1888)	83.9	65.2	74.6	4.6	1.93	3.95	-2.02		
Hobby Airport (1930)	82.1	66.1	74.1	3.6	4.78	4.08	0.70		
Galveston (1871)	79.3	69.1	74.2	2.7	1.69	2.06	-0.37		
Sugar Land (2000)	83.8	64.1	73.9	3.6	0.94	4.26	-3.32		
			May Clima	ate					
Site Location (record start)	Hi	Lo	Mean	Departure	Rain	Normal	Departure		
Bush Airport (1888)	89.4	70.8	80.6	3.2	4.94	5.01	-0.07		
Hobby Airport (1930)	87.2	72.0	79.6	2.0	3.98	5.42	-1.44		
Galveston (1871)	84.3	74.1	79.2	1.0	6.19	3.04	3.15		
Sugar Land (2000)	89.4	70.8	80.1	2.2	4.78	5.24	-0.46		

Houston/Galveston Temperature & Rainfall Data for 2025 Spring Season

Table 3: Houston Galveston Section Climate Data for Spring 2025

Golden Triangle Temperature & Rainfall Data for 2025 Spring Season

	March Climate							
Site Location	Hi	Lo	Mean	Departure	Rain	Normal	Departure	
Beaumont Port Arthur	77.1	54.9	66.0	2.7	1.20	3.63	-2.43	
Beaumont Research Center	76.5	54.6	65.5	3.1	0.81	3.89	-3.08	
Orange 9N	74.8	52.3	63.6	3.3	2.84	3.52	-0.68	
			April Clima	ate				
Site Location	Hi	Lo	Mean	Departure	Rain	Normal	Departure	
Beaumont Port Arthur	80.8	63.4	72.1	2.8	3.40	3.92	-0.52	
Beaumont Research Center	80.7	63.9	72.3	3.7	0.37	3.65	-3.28	
Orange 9N	78.8	61.8	70.3	4.3	1.72	4.18	-2.46	
			May Clima	ate				
Site Location	Hi	Lo	Mean	Departure	Rain	Normal	Departure	
Beaumont Port Arthur	85.4	68.7	76.6	0.1	8.39	4.70	3.69	
Beaumont Research Center	84.7	68.7	76.7	0.9	4.27	5.06	-0.79	
Orange 9N	83.0	67.2	75.1	1.6	4.72	5.14	-0.42	

Table 4: Golden Triangle Section Climate Data for Spring 2025

Lower Rio Grande/Brownsville Regional Summary

A State of Drought, Broken by the Occasional Devastating Flood March 26-28 Historic Rains Follow on Heels of Flash Drought

By: Barry Goldsmith, Warning Coordination Meteorologist, NWS Brownsville/Rio Grande Valley

Picture. 1: From Drought: Parched ranchland in Zapata County on March 19th, 2025, as Extreme (Level 3 of 4) Drought developed across the Rio Grande Plains and Brush Country.

Picture 2: To Flood: Record seasonal, and in some cases event (any time of year), rainfall across much of the populated RGV on March 27th left widespread urban and field flooding across the region – a little over a week after drought conditions had worsened to Moderate (level 1) to extreme (level 3) for most locations. Photo credit: Top left – Cameron County Precinct 2. Top right: Texas Department of Transportation. Bottom: NWS Brownsville/Rio Grande Valley.

Lower Rio Grande/Brownsville Regional Summary (continued)

Figure 1. Annotated rainfall map for spring 2025 across the Lower Rio Grande Valley/Deep South Texas region. Annotated values (in inches) are from selected CoCoRaHS observers (with a few cooperative and mesonet to fill gaps) with sufficient and trusted values for the season.

Figure 2: Spring (March-May) 2025 rainfall observations from multiple networks, including the ASOS, AWOS, HADS, the Texas Mesonet, and RAWS, among others.

Figure 3. Rainfall percentage of average, March through May, 2025. Heavier rainfall once again favored the lower Valley (Cameron and eastern Willacy) where up to 600 percent of the seasonal average fell. Nearly all areas ended up at or above average, though closer to average in northern Zapata/Jim Hogg/Brooks, and a pocket of southwestern Hidalgo.

Figure 4. U.S. Drought Monitor improvements between March 18th and June 3rd, courtesy of the March 26-28 rainfall and additional scattered rain events in April and May.

	Five Ho	ottest for Mo	ost Valley Loca	ations							2	
Maximum 3-Month Mean Avg Temperature for Brownsville Area, TX (ThreadEx)			Temperature ThreadEx)		Maximum 3-Month Mean Avg Temperature for McAllen Area, TX (ThreadEx)				 Maximum 92-Day Mean Avg Temperature for HARLINGEN, TX (missing 2024 di Click column heading to sort ascending, click again to sort descend 			
colun	in heading to	p sort ascending, click	again to sort descending	Click colur	nn heading ti	o sort ascending, click	again to sort descending.	Rank	Value	Ending Date	Missing Days	
ank	Value	Ending Date	Missing Davs	Rank	Value	Ending Date	Missing Days	1	80.1	2023-06-01	13	
1	80.0	2024-05-31	0	4	00.6	2017.05.21	A A A A A A A A A A A A A A A A A A A	2	79.5	2020-06-01	8	
2	70.0	2024-00-01	0		00.0	2017-03-31	0	3	78.9	1953-06-01	2	
2	19.9	2020-00-01	0	2	80.5	2020-05-31	0	5	78.0	1955-06-01	1	
3	78,7	2011-05-31	0	3	80.4	2024-05-31	0	6	77.9	2006-06-01	0	
4	78.6	2025-05-31	0	4	80.4	2011-05-31	0	7	77.9	1929-06-01	1	
5	78.5	2006-05-31	0	5	80.3	2025-05-31	1	8	77.8	1933-06-01	0	
6	78.3	2017-05-31	0	6	80.0	2016-05-31	0	9	77.7	2011-06-01	3	
7	78.1	2012-05-31	0	7	70.0	1001.05.31	0	10	77.6	2017-06-01	2	
0	77.7	1001.05.31	0	0	70.0	0040 05 04	0	12	77.5	2022-06-01	0 9**	
0	77.0	1331-03-31	0	0	19.8	2018-03-31	0	13	77.5	1927-06-01	0	
9	11.6	2018-05-31	0	9	79.4	2006-05-31	0	14	77.3	2016-06-01	5	
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Figure 5. Top-ranked temperatures for most available long-term climate stations across the Rio Grande Valley. For a second year in a row, nearly all stations ranked among the top ten warmest, and most were among the top five. Weslaco and Rio Grande City finished above 2024, which featured all-time record-shattering heat in May.

Information/Resources Online for Observers: Access to Training Material and Frequently Asked Questions.

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Main Menu	General Information	Frequently Asked Questions	Volunteer Training Instructions	Things know abo
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Figure 6. A comparison of U.S. International Boundary and Water Commission (IBWC) combined percentage of conservation capacity for Amistad and Falcon International Reservoirs between the start of June 2024 (top) and the start of June 2025 (bottom). Values were little changed between early June 2024 and early June 2025. The combined low values were among lowest on record since each dam was constituted (Falcon in 1954; Amistad in 1971).

Month-by-Month Summary

March 2025 was a month of record across the Lower Rio Grande Valley, bringing full truth to the old adage that "Texas is a State of perpetual drought broken by the occasional (devastating) flood". The month opened warm to hot by afternoon, but clear and pleasant – even cool at times – on many mornings following weak wind shifts from south to north. Ahead of the wind shifts, heat spikes with very low humidity occurred on the 8th and again on the 14th, where triple-digit temperatures arrived for the first time of the young year, mainly along and west of IH-69C/US-281 from Brooks/Hidalgo to Zapata. The combination of wind, heat, and very low humidity peaked during the period from March 8 to 17, when afternoon relative humidity fell below 20 percent daily across the upper Valley, Rio Grande Plains, and Brush Country – with mid-Valley locations seeing 5-7 days of similarly low humidity.

The combination of warm to hot temperatures and very low humidity created a flash drought event, especially from Brooks/Hidalgo to Zapata. The combination of these conditions with occasionally gusty winds from the northwest following wind shift lines, and flash-drying grasses and brush, aided the spread of nine separate wildfires, including eight in Hidalgo and one in Willacy County, between March 4th and 17th. Fortunately, early warning and messaging had local fire services on alert – and most of the wildfires remained below 100 acres. Two wildfires that exceeded 100 acres were the result of prescribed burns to multiply acreage during favorable weather that followed conditions that supported more rapid spread. The largest non-prescribed assisted burn (130 acres) was caused by unwarranted trash/debris burning on the Mexican side of the Rio Grande south of Donna.

By March 18th, all areas except a sliver of southeast Willacy and the eastern half of Cameron were in drought, with severe (level 2 of 4) drought extended into central Kenedy, western Willacy, and a sliver of western Cameron, including La Feria and Santa Rosa. Extreme (level 3 of 4) drought covered most of Jim Hogg, Starr, and all of Zapata. Cattle ranchers began culling herds and hauling water into dry zones, and early season crops, including new citrus and certain grains, showed signs of stress. These conditions continued until March 26th. And then...

Historic Rains Swamp the Valley

Between March 26 and 27, an unusually strong upper-level disturbance for our latitude and time of year moved from northwest Mexico toward central Texas. The disturbance slowed as it approached west-central Texas (Big Bend region) on the 27th, and brought impressive atmospheric lift above the Rio Grande Valley, while fairly deep southerly flow brought early summer-like tropical moisture into the system. Repeated small-scale energy impulses rotated around the slow-moving system from the evening of March 26th through the pre-dawn hours of March 28th, providing sufficient lift for multiple bands of torrential rain-producing thunderstorms – storms which also produced at least two tornadoes and several other wind damage reports as well.

But the story was devastating flooding. Late evening heavy rain-producing thunderstorms across the upper Valley/Rio Grande Plains on the 26th shifted into the lower Valley (Cameron/Willacy) during the pre-dawn of March 27th, priming the pump with local mainly nuisance flooding – but more than 3" of rain between Harlingen and Port Isabel. The real "show" began during the noon hour of the 27th, when the first slow-moving but intense squall line moved into eastern Starr County before plowing through Hidalgo County during the rest of the afternoon, reaching Cameron and Willacy County toward sunset. This band dropped an estimated 3 to 5" in Starr, 4 to 7" in Hidalgo, and 5 to 9"+ in Cameron/southern Willacy where it slowed and allowed additional cells to 'train' along the line. These cells would form into another band and drop another 3+ inches of rain from southeast Hidalgo through southern and eastern Willacy, before a final and fast-moving squall line developed in Starr County before midnight and whipped across the rest of the Valley, exiting the coast just after 2 AM on the 28th.

Total measured and estimated rainfall across the heavily populated RGV ranged from 8" to more than 19", with the highest totals between Santa Rosa, Harlingen, and Rio Hondo (Cameron). For most of this region, the event was rated a 1/100 to 1/200 probability (annual return interval, or ARI) event, with a few areas estimated at 1/500 ARI. More than 5,000 structures were impacted, with more than 2,000 having major damage or destruction. The damage totals, unknown as of this writing, were likely to be well north of \$100 million when the assessment is complete. Read the full report on this historic, epic event here.

Page 35

Lower Rio Grande/Brownsville Regional Summary (continued)

Figure 7. Measured and estimated rainfall for March 15th through early March 19th, 2024. Annotated values are a combination of CoCoRaHS, ASOS (NWS) and AWOS (FAA) four-day totals.

Location	County	Since	Event Rainfall	March Rank	Annual Rank	Prior Record (year)
Harlingen/Cooperative	Cameron	1912	15.18**	1	3	17.07 (1991)
Harlingen/Valley	Cameron	1953*	13.98#	1	1	N/A
Bayview/Cam Co Airport	Cameron	1999	13.10	1	1	N/A
Port Isabel	Cameron	1896***	11.18	1	8	19.43 (1984)
Raymondville	Willacy	1911	10.60	1	5	14.39 (1967)
McAllen	Hidalgo	1942	9.13	1	2	9.42 (1980)
Port Mansfield	Willacy	1958	9.02	1	13	14.9 (2007)
Weslaco 2 miles east	Hidalgo	1914	8.60	1	4	15 (1933)
Brownsville	Cameron	1878	6.74	1	67(t)	24.16 (1886)
McCook	Hidalgo	1942	4.30	1	N/A	14.09 (1967)

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Table 1	Three-day	/ rainfall	in inches au	nd rankings fo	r March and t	he calendar v	ear at NWS	maintained l	ocations
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Notes:

*Harlingen/Valley only included data from 1953-1962 and 1997-present.

**Rainfall between 7 AM March 27 and 7 AM March 28 was rounded to 10 inches, and likely an estimate.

***Missing data between 1970-74 and 2015-2019.

#Lightning struck nearby and knocked the sensor offline before rains ended.

April: The "Valley Wind Machine" (prevailing south to southeast flow) was a dominant feature in April – but it didn't necessarily come with persistent hazy and polluted weather as it sometimes does. That said, April began rather ugly - hazy, hot, and humid with moderate to unhealthy for sensitive groups air quality, and south to southeast winds that brought local gusts over 60 mph around Brownsville on the 2nd. The hazy, hot, humid conditions ended abruptly on the 5th, and were followed by the coolest and most pleasant days of the month on the 6th and 7th. This began a nine-day period of pure blue skies and full sunshine with low to moderate humidity, along with comfortable mornings – plenty sufficient to dry things out following the historic late March rainfall.

Humidity returned by the 18th, and somewhat sultry nights and warm to hot days would close out the month, with a brief exception on the 20th and 21st, when a weak front washed out over the upper Valley but had sufficient lift to produce scattered showers and thunderstorms on the 20th. A small but potent area of thunderstorms dumped nearly 7" (6.83" to be exact) at Port Mansfield during the mid to late morning of the 21st, with some minor street flooding.

The warm to hot start and final ten days bookended the period of pleasant weather between April 6-16 – but dry and still seasonably-hot afternoons during that period were enough to nudge temperatures to 0.5 to nearly 2 degrees above the 1991-2020 30-year average. Combined with the warmer than average March, the stage was set for another top five-to-ten warmest spring for most of the Rio Grande Valley.

Figure 8. Bias-corrected rainfall from 7 AM CT April 21 through 7 AM CT April 22. The rainfall shown occurred during the mid to late morning of April 21.

May picked up where April left off – warm to hot and humid with scattered rain that kept any resurgence or worsening of drought out of the picture. A band of decent rainfall in Starr County on May 2nd was followed by a small pocket near the Cameron County coast on the 3rd. The month's "main event" occurred on May 7th and 8th, courtesy of an embedded upper-level disturbance in westerly flow aloft displaced farther south than typical for this time of year. A cluster of hail-producing thunderstorms sliced across the Brush Country and Coastal Plain during the pre-dawn hours of May 7th, dropping between 1-2" across Jim Hogg and Zapata. This was just an appetizer for the more pronounced and widespread events of May 8th. Early morning rains formed on

old boundaries in Willacy and northern Cameron, with afternoon and early evening clusters impacting Brooks and Kenedy. The story of the day was a robust and large-hail producing supercell that formed in southern Webb and peaked in Jim Hogg and northern Starr. Hail up to baseball-sized (2.75") was reported by chasers in this area – though the ultimate size may have been even higher. The cell showed impressive longevity moving into Hidalgo County, producing hail between 1" and 1.75" while sliding into the populated section of the county. A small but <u>intense microburst</u> pounded a 1x1 square mile area of north McAllen just before sunset with 80-85 mph wind. Measured rainfall from CoCoRaHS and other observers ranged from 0.5" to more than 3", with peak values of 3.82" in Port Mansfield, 3.25" in north-central Brooks, and 2.7" in southwest Jim Hogg.

Picture Above: A storm chase team looking into the shelf cloud ahead of a high-precipitation (HP) supercell in Jim Hogg County, on the afternoon of May 8, 2025. Photo courtesy of Bill Turner, NWS Dodge City, KS.

The associated front brought a pleasant early May weekend with morning lows in the 60s and afternoon highs in the 80s to lower 90s, along with lower humidity. The break was short-lived, as hot, humid, breezy conditions returned in force by the 13th – with triple-digit afternoons west of IH-69C/US 281 and sultry mornings with wake-up temperatures near 80. The heat dominated most of the remainder of May – and while the month ended up falling well short of the all-time record-shattering heat of 2024, most areas ended up among their top-five to ten hottest on record. As for rain? The month wasn't quite done yet. One more multi-day round of localized rainfall occurred on May 28th, with an overnight mesoscale-convective system rolling out of the lee of the Sierra Madre and across the Brush Country/Rio Grande Plains before daybreak, continuing across most of the lower/mid Valley during the morning of the same day before exiting into the Gulf.

Total rainfall for the event ranged from 1 to 3" in Zapata, Jim Hogg, Brooks, Starr, northern Hidalgo, Willacy, and Cameron County. Some areas, including locations in southern Hidalgo, missed out on the heavier rains. Some higher totals included 2.65" in southwest Jim Hogg, 2.26" in north-central Starr, 2.30" just south of Raymondville (Willacy), and 2.5 to 3.1" just north and east of downtown Brownsville.

Despite the top-five to top-ten record heat in May, the periodic thunderstorms and occasional wind shifts (from southeast to east), as well as more infrequent trapping inversions set up by long-fetch southeast flow bringing pollutants from spring burning in eastern Mexico and the Yucatán helped keep the notoriously periodic unhealthy for sensitive groups or worse air quality at bay in May 2025. Moderate air quality was dominant, which is closer to the average for this time of year.

Figure 9: Measured and estimated (bias-corrected) rainfall for May 2025 (not annotated). "Winners" included eastern Cameron, eastern Willacy, and eastern Kenedy, as well as a pocket from central hidalgo through northern Starr and much of Zapata. "Losers" included locations in southeast Starr and southern Hidalgo, along/south of IH2/US 83.

Figure 10: Air quality trends from May 10 through June 9, 2025, for the Brownsville/McAllen reporting area. These values were more in line with what is expected for the month of May, when compared with the poorer air quality of May, 2024.

Spring 2025 will be remembered mostly for the rapid-onset of severe to extreme drought, broken by a devastating late March flood whose impact was still being assessed in June, with assessments and total impacts to be completed later in 2025. The remainder of spring continued a two-year trend of top ten warmest temperatures – a trend that needs to be monitored over the coming years. Sprinkled within the warm to hot and rain-free periods were additional thunderstorm events, particularly in May, which kept any re-appearance of severe to extreme drought away while producing several instances of large hail and a few cases of damaging wind.

The combination of rain events allowed 2025 to rank among the top ten wettest springs, with totals rivaling some of the wettest August-October periods in Harlingen and Port Mansfield, and likely other locations – the peak of tropically-derived moisture and our known "rainy season". While the rains generally helped water supplies, especially for Cameron and Willacy, the situation of the rain, combined with the heat, did not. Some of the record March 26-28 rains ended up in runoff over parched soils, with another share could only be used temporarily by moisture-starved soils before a prolonged clear, warm to hot, and dry period ended much of the natural use by mid-April. Finally, most of the welcome rains missed the inflow regions of Amistad and Falcon International Reservoir, which remained at or near record seasonal lows – similar to this time in 2024. When water was delivered, it had to compete with above to much above average evaporation rates due to the hot and breezy conditions that dominated most of spring 2025.

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5	12.30	2025-05-31	0	5	11.22	2015-05-31	0	5	13.31	1976-05-31	0
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Figure 11. Rainfall rankings for selected Rio Grande Valley cities during spring 2025. Harlingen's total, which ranked #1, was likely well over 20", but reporting inconsistencies with the March 27th flood indicated incomplete data. Rio Grande City "missed" the heaviest rainfall on March 26-27 but also on later events in April and May, which explains its spring ranking in the middle of the period of record

Abilene/San Angelo Regional Summary

March Dust to Plentiful rains in April/May Boosting Reservoirs By Joel Dunn, Meteorologist, Observation Program Lead

March

March delivered a dynamic mix of weather events across West Central Texas. The first few days of the month were marked by several rounds of severe thunderstorms, bringing lightning, hail, and strong winds. These early storms served as a dramatic reminder that springtime weather in Texas can turn volatile in a heartbeat.

In addition to thunderstorms, one of the most notable features of March was the unprecedented recurrence of blowing dust. Six Dust Storm Warnings were issued during the month of March. For perspective, only eleven such warnings had been issued across the region since 2019, highlighting the unusual severity and frequency of these dusty episodes.

Image 1 - Lake Nasworthy during a Blowing Dust Warning

These dust events were largely the result of strong winds and parched ground conditions. With <u>limited moisture</u> and vegetation to anchor the soil, high winds easily kicked up widespread dust, reducing visibility and impacting air quality.

Much of this active weather was fueled by persistent warmth. March temperatures across West Central Texas averaged several degrees above normal. This warm air not only primed the atmosphere for thunderstorm development early in the month but also contributed to increased evaporation and worsening drought conditions as the weeks progressed.

Image 2: Departure from Normal Temperature

Image 3: Departure from Normal Precipitation

	Observed Rainfall	Normal Rainfall	Departure From Normal
Abilene	0.64"	1.73"	-1.09"
San Angelo	0.12"	1.48"	-1.36"
Junction	0.54"	2.02"	-1.48"

Table 1 - Observed, Normal and Departure from Normal precipitation for March 2025

Image 4 - Comparison between March 4th and March 25 drought monitor map

This persistent dryness had serious consequences for drought conditions in the region. The U.S. Drought Monitor showed a northward expansion of drought across West Central Texas during March. Most concerning was the introduction of D3, or Extreme Drought, across parts of the Northwest Hill Country, indicating a significant and deepening lack of moisture.

In summary, March 2025 was a month of dramatic weather shifts. From severe thunderstorms and blowing dust to unseasonably warm temperatures and expanding drought, West Central Texas faced a full spectrum of springtime challenges. With soil moisture dwindling and drought intensifying, the region now turns its attention to April in hopes that more beneficial rainfall will arrive.

April

April brought a refreshing and welcome shift in the weather pattern for West Central Texas, breaking the dry spell that had plagued the region in previous months. Several rounds of precipitation moved through the area during the month, delivering widespread rainfall that helped replenish local reservoirs and soften the grip of drought. For many residents, the sound of steady rain and rolling thunder was a comforting reminder of spring's promise of renewal.

Rainfall totals for April ended well above average across much of the region. Instead, the rainfall was frequent enough to allow meaningful soil saturation and runoff, providing significant hydrological benefits across both urban and rural areas.

	Observed Rainfall	Normal Rainfall	Departure From Normal
Abilene	5.98" - <u>Record</u>	1.86"	+4.12"
San Angelo	2.71"	1.47"	+1.24"
Junction	2.40"	1.82"	+0.58"

 Table 2 - Observed, Normal and Departure from Normal precipitation for April 2025

One notable impact of this rainfall was in the Big Country, where Abilene experienced one of its wettest Aprils on record. In fact, this year marked the 8th wettest April on record for the city, with rain gauges capturing totals that far exceeded normal climatological expectations. This not only eased short-term drought conditions but also offered a reprieve for agricultural interests preparing for the growing season.

Image 5 - Hydrograph for the North Concho River near Carlsbad, TX

Rivers and reservoirs across the region also responded impressively. The North Concho River reached Minor Flood Stage, a sign of just how much water was returning to the system. A significant portion of this runoff flowed into O.C. Fisher Reservoir, raising its stage height by 3 feet—a notable recovery for a water body that had been steadily declining in previous months.

Similarly, the Middle Concho River brought a needed boost to Twin Buttes Reservoir, increasing its level by 9 feet. Although the rivers did not reach flood stage, their visible response highlighted the health of the watershed and reflected the broader benefits of this prolonged wet period.

Image 6 - Hydrograph of Twin Buttes Reservoir from April 19-25

Of course, this much-needed rainfall came with a cost. April also delivered its fair share of severe weather, a common tradeoff during active spring months. The region saw 110 Severe Thunderstorm Warnings, including 12 Tornado Warnings and 10 Flash Flood Warnings. Hail, damaging winds, and occasional tornadic activity served as stark reminders that springtime rainfall in Texas often carries an edge of danger.

In summary, April was a month of replenishment and revival. After months of dry conditions, West Central Texas finally saw the return of sustained rainfall. While the storms brought hazards, the overall impact was overwhelmingly positive—easing drought, boosting reservoirs, and signaling a hopeful start to the warm season. As we move into May, the region remains alert for continued severe weather, but grateful for the water now stored in its soils, rivers, and lakes.

May

May lived up to its reputation as the peak of severe weather season in West Central Texas, bringing a month packed with thunderstorm activity, powerful winds, and fluctuating rainfall patterns. A total of 170 warnings were issued across the region, including numerous severe thunderstorm alerts and several tornado warnings. This surge in warnings was a clear reflection of the unstable atmosphere that defined much of the month, fueled by the clash of warm, moist Gulf air with intruding cold fronts and upper-level disturbances.

Despite the high volume of severe weather, rainfall was not as widespread or consistent as it had been in April. In fact, areas along and north of Interstate 20—including much of the Big Country—missed out on substantial rainfall and ended the month with below-normal precipitation.

Image 7 - Precipitation Departure from Normal for the month of May 2025

However, farther south, rainfall was more generous, even as far south as Interstate 10. The city of Junction celebrated its 10th wettest May on record, a testament to the frequent rounds of storms that passed through the Hill Country. San Angelo, too, located in the heart of the Concho Valley, ended the month with its 11th wettest May, indicating that even though rainfall was spotty, some areas did receive significant amounts.

Table 8 - Chart with daily precipitation for the month of May across Abilene, San Angelo and Junction

These generous rains were a welcome gift for drought-stricken areas near and south of Interstate 10. The rain soaked into dry soils, replenished shallow groundwater supplies, and even helped recharge some area reservoirs. While this precipitation made a noticeable dent in drought conditions, the drought was not completely removed by the end of May, with pockets of abnormally dry to moderate drought still present in the southern tier of counties.

	Observed Rainfall	Normal Rainfall	Departure From Normal	Table 3 - Observed, Normal and
Abilene	2.80"	3.21"	-0.41"	Departure from
San Angelo	5.49" - <u>Record</u>	3.05"	+2.44"	Normal precipitation
Junction	3.76" - <u>Record</u>	3.16"	+0.60"	for April 2025

Temperature-wise, May brought a taste of summer. While the Big Country managed to avoid triple-digit heat for the time being, other areas were not as lucky. San Angelo and Junction both recorded their first 100°F day on May 13th, marking an early start to the hot season.

After the initial surge in temperatures, Junction experienced a string of sweltering afternoons, ultimately logging four more days at or above the century mark. San Angelo, though hot, fared slightly better with only two additional 100°F days. These early heatwaves, combined with the spotty rainfall, began to dry out areas that had recently received rain, reinforcing the region's typical weather pendulum.

In summary, May brought a classic springtime cocktail of storms, heat, and hope. While severe weather was frequent and rainfall unevenly distributed, the generous rains in southern areas provided measurable drought relief. With June now on the horizon, residents of West Central Texas brace for the full onset of summer, hopeful that any heat will be tempered by continued opportunities for rain.

Training/Observing Tip

Rain Gauge Cleaning

It can be a challenge keeping your rain gauge from looking grungy this time of year. Birds like to use them as perches and occasionally a rest room, bugs and spiders slide down the funnel and can't get out, and after a period of warm and wet or humid weather gunk can start accumulating in the bottom of the inner measuring tube. For the sake of accurate measurements we don't want dirt and bugs in the inner measuring tube. You can clean the inner measuring tube by pouring a little household cleaner in the tube (a couple of hundredths worth). That will help dissolve any algae (the green stuff). You can also use liquid dish washing detergent. Use a soft bottle brush with a handle long enough to reach the bottom of the tube to clean out the bottom, and then rinse thoroughly. Paper towels wrapped around the brush clean the bottom of the tube well. If your outer tube needs cleaning, it is large enough to wash in a sink with any dish washing detergent.

Page 47

Corpus Christi Regional Summary

Moderate to Extreme Drought during Spring for the Region By: Nicholas Price, Meteorologist, National Weather Service Corpus Christi

Figure 1: Spring Season Precipitation Outlook

The Climate Prediction Center had forecasted the area receiving likely below our average rainfall for the spring (Figure 1). Observers across the Coastal Plains and Victoria Crossroads were a part of the lucky bunch in terms of rainfall for March (Figure 2). Though majority of the rain came during the latter portion of the month due to above normal moisture in the region combining with an upper-level disturbance. This dropped about 2-5 inches across the region with the highest amounts falling in the Victoria Crossroads and portions of the Coastal Plains. This allowed for a generally positive departure from normal rainfall amount for just about all of the area, with the highest amount being in the Coastal Plains around Mathis, TX. Observers in that city alone saw around a 4.5 inch departure from normal rainfall given the 6+ inches of rain that fell there (Figure 3). Despite these elevated amounts in a short period of time, just about all of the area remains in severe to extreme drought at the conclusion of the month of March (Figure 4).

Figure 2: March 2025 Estimated Rainfall Totals

Figure 3: March 2025 Estimated Departure from Normal Rainfall

U.S. Drought Monitor March 25, 2025 (Released Thursday, Mar. 27, 2025) Texas Valid 8 a.m. EDT Drought Conditions (Percent Area) None D0-D4 D1-D4 D2-D4 Current 13.85 86.15 69.66 47.72 28.69 13.76 Last Week 03-18-2025 14.56 85.44 62.46 43.44 26.05 13.76 3 Month s Ago 12-24-2024 32.90 67.10 53,89 24,83 12.99 6.30 Start of Calendar Ye 36.81 63.19 43.63 21.45 13.26 6.30 Start of Water Yea 10-01-2024 26.09 73.91 34.39 16.62 8.91 3.36 One Year Ago 03-26-2024 0.00 55.21 44.79 24.48 9.85 1.97 Intensity: None D2 Severe Drought D0 Abnormally Dry D3 Extreme Drought D1 Moderate 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.asp Author: Brad Rippey U.S. Department of Agriculture USDA

Corpus Christi Regional Summary (continued)

Figure 4: U.S. Drought Monitor Summary for the month of March

Figure 5: April 2025 Estimated Rainfall Totals

During the month of April there was a dramatic decrease in rain across the region. Observers to the west didn't eclipse more than a quarter of an inch. Areas to the east received some rain though totals only topped around 1.5-1.9 inches of rain during the month (Figure 5). The majority of the rain for the month fell during the latter portions of the month once again. This was thanks similar situation to last month with a disturbance combining with sufficient moisture in the region. Unfortunately, the rain didn't fall in areas that potentially needed it a little more such as the western portions of the region where our reservoirs are. The lack of rainfall amounts in the region contributed to an observed average departure from normal rainfall of about 1-2 inches across much of the area (Figure 6). Observers along the coast saw around their typical rainfall for the month. These factors contributed to a further expansion of extreme drought conditions across the western portions of the region. Overall, the region still remained in at least moderate to extreme drought for the month of April (Figure 7).

Figure 6: April 2025 Estimated Departure from Normal Rainfall

Figure 7: Drought Monitor Map for April 29, 2025

The region saw a lot more rainfall for the month of May thanks to multiple passing disturbances. These disturbances dropped an average of about 2-4 inches of rain with some observers seeing totals around 5-7 inches of rain (Figure 8). Observers in the Victoria Crossroads and portions of the Coastal Bend saw the most benefit from the disturbances, though once again the most of the western region wasn't as fortunate. Despite the increased rainfall totals across the region much of the area, observers only saw right around or just above their normal amounts for rainfall for the month. Observers in Cotulla were among the only areas that saw well above their normal rainfall total for the month with around 3.00 (Figure 9). While there were some very minor improvements during this month's drought summary in some spots in South Texas, majority of the area still remained moderate to extreme drought (Figure 10).

Figure 8: May Estimated Rainfall Totals

Figure 9: May 2025 Estimated Departure from Normal Rainfall

Figure 10: Drought Monitor Map for May 27, 2025

Austin/San Antonio Regional Summary

Very warm and dry start to Spring ends with wet and cooler pattern, alleviating short term drought concerns, but long term issues persist

By Mack Morris, Meteorologist at NWS Austin/San Antonio

March 2025

Spring 2025 started out warm, with the first two days of the month in the 80s, and mornings in the 50s and 60s. Our "rainy" season in South Central Texas didn't get off to a great start as dry weather for much of February leading up to the month of March meant increased fire weather concerns.

On the morning of March 4th, a brief round of showers and thunderstorms preceded a powerful cold front that would bring the highest fire danger to the region in over a decade. Despite many CoCoRaHS receiving between $\frac{1}{4}$ and $\frac{1}{2}$ " of rainfall in the early morning hours, it wasn't enough to stave off extreme fire weather conditions in the afternoon.

A powerful low-pressure system moved across the Central US on March 4, 2025, bringing a Pacific front that moved across South-Central Texas during the early morning hours. Dry air and very strong westerly winds quickly followed behind the front. Extreme to near-historic fire weather conditions prevailed from the late-morning to late-afternoon hours, with widespread gusts of 50-60 mph and isolated reports of higher gusts. The highest winds were generally experienced between 12 PM and 3 PM. Relative humidity's bottomed out below 20% throughout South-Central Texas, with many areas recording values below 10%.

Figure 1: Anatomy of a Windstorm

Numerous fires were reported and observed on satellite imagery throughout South-Central Texas, beginning in the late-morning hours and continuing into the evening. During the late afternoon and evening hours, a rare widespread blowing dust event unfolded across our region as plumes of West Texas and Panhandle dust kicked up by the winds spread across South-Central Texas, reducing visibilities for many.

Austin/San Antonio Regional Summary (continued)

In between these two events, a brief round of thunderstorms moved through Bastrop County in the early morning hours of March 15th. Hail was observed by numerous CoCoRaHS observers in Bastrop County. The largest hail noted on morning reports on the 15th was .50" hail, but even bigger hail was noted up to ping pong ball size in the storm reports from the Storm Prediction Center.

The dry weather continued through the middle of March with yet another significant fire, this time in Gillespie County, named the Crabapple fire. The fire occurred on the 15th of March, burning 9,858 acres, which was the most in a fire in/near our CWA since the Holcombe Road Fire that burned 25,958 acres along the Val Verde/Crockett line on 20 April 2020. One of our other forecasters at NWS Austin/San Antonio put together a graphic depicting the number of hours with critical fire weather at Gillespie County Airport. "While not the most extreme fire weather conditions ever observed in Gillespie County, 15 March 2025 (when the fire started) may have featured the most prolonged critical fire weather ever observed at KT82/Gillespie County Airport, at least since 2002. The station recorded 9 hourly observations meeting critical fire weather conditions between 10 AM and 6 PM. The next highest count since 2002 is 6, tied among several days."

Figure 2: Critical Fire Weather Conditions at Gillespie County Airport

The month of March remained active with a round of severe storms on both March 23rd and 24th, particularly for Kerr County, Bexar County, Hays, and Travis Counties. Several supercells developed in the Hill Country and moved east over time. One of these storms produced significant hail near Kerrville. CoCoRaHS in the area reported heavy hail for up to 15 minutes straight! Another observer noted the same length of time for the hail to fall to the east of Kerrville. Hail to baseball size was reported via the Storm Prediction Center reports feature near Methodist Encampment in Kerrville. This storm went on to produce large, damaging hail to the northwest of San Antonio as well. CoCoRaHS observers in Boerne reported up to 1" diameter hail along with 1 to 1.5" of much-needed rainfall.

Austin/San Antonio Regional Summary (continued)

Meanwhile, up in the Austin metropolitan area, a CoCoRaHS station near Buda reported hail falling for nearly 45 minutes! And, near Dripping Springs, hail up to 1" in diameter and ferocious winds were reported. In fact, southwest Austin had their biggest rain event since February 12th, with between 1 and 2" of much-needed rainfall on the southwest side of town north and east through downtown. With regard to the strong winds, Austin Bergstrom International Airport measured a 61 mph wind gust out of the storms on the 23rd.

Another heavy rain event occurred March 26th-27th. Initially, more significant rain was expected, with the possibility of 3-7" of rain not out of the question for the Hill Country eastward through the I-35 Corridor and Coastal Plains. However, things didn't quite pan out as expected as a large complex of storms over the Corpus Christi CWA ended up blocking northward inflow into South Central Texas. Nevertheless, significant rainfall still occurred and beneficial rainfall at that.

Figure 3: Heavy rainfall from March 26th-27th event

The last day of March featured a quick round of significant hail in Medina and Bexar Counties. Hail up to 2" in diameter was measured via SPC local storm reports and several CoCoRaHS observers in Alamo Ranch, Westover Hills, and Leon Valley reported significant hail up to the size of grapes (~ 1" in diameter). Observers in Mico reported hail up to Golf ball size and rainfall around 2" which is supported in the very isolated location in northeastern Medina County via MRMS data. Rainfall was generally light with these storms, between 0.25 and 0.75", but appreciated.

Austin/San Antonio Regional Summary (continued)

Figure 4: Hail up to 2" in diameter near SeaWorld via X.

April 2025

April started out active with a strong cold front arriving on the weekend the Final Four was hosted in San Antonio. Our active weather pattern from March carried over into the month of April with back and forth temperatures and stormy weather.

The Final Four for the Division I NCAA Men's Basketball tournament was hosted in San Antonio the weekend of April 4-7th and the weather was active once again. Beneficial rains arrived with a strong cold front on Saturday, April 5th. The heaviest rains occurred over the Edwards Plateau and Hill Country, with totals ranging between 1 and 3" over Kerr and Gillespie Counties. Several CoCoRaHS Observers around Fredericksburg and points south and west noted how "wonderful" the rain was, especially with a fairly dry Spring up to this point. Some observers in Kerr County to the west of Kerrville did note some small hail up to pea size, but otherwise, it was just a good soaking rain.

The month of April started with temperatures in the 80s and even low 90s by the 3rd and 4th, but a strong Spring-time cold front brought an end to the abnormally warm temperatures, with highs plummeting into the 50s and 60s on the 5th and 6th. Spring had a couple more cold nights left in her pocket on the 7th and 8th with mornings in the 30s and even a light freeze the morning of the 8th for the Hill Country and portions of the Edwards Plateau.

Warm and dry weather returned for the second week of April with highs generally in the mid-80s to low 90s. Some relief arrived in the form of a weak cold front on the 19th when another cold front, this time not quite as strong, moved through South Central Texas. Mornings cooled quite a bit, from the upper 60s and lower 70s down into the 40s and 50s from the 20th through the 21st. Beneficial rains arrived on Easter weekend with many locations seeing between 0.50 and 1.5" Saturday into Easter Sunday.

The following week, on April 22nd and 23rd, a significant hailstorm moved through Georgetown, Round Rock, and Hutto, with Quarter to Baseball size hail observed. At least one notable report from the comments sections in CoCoRaHS reports are detailed next page. It was noted that in Georgetown, significant foliage damage to trees with green leaves all over the ground and significant amounts of half dollar sized hail. Numerous photos were sent in via social media with large hail in Williamson County.

Austin/San Antonio Regional Summary (continued)

Figure 5: Large hail from Georgetown/Round Rock relayed via X.

Significant rainfall also occurred April 22-23rd, particularly over Lavaca, Fayette, Bexar, and Kerr Counties. Numerous reports of 2-3" of rain were reported in the locations above. Unfortunately, it only provided short term drought relief for the region.

One last big weather event occurred on the final day of April, with gigantic hail in and around Jourdanton. While CoCoRaHS in the area didn't report significant rainfall or hail, photos from social media came in showing hail greater than baseball size in the area. Additional significant hail to baseball size was observed near Taylor and to east of Georgetown in Williamson County. A quick burst of 1 to 2" of rain occurred in Williamson County along with the hail.

Figure 6: Hail up to apple size in and around Jourdanton via social media

Austin/San Antonio Regional Summary (continued)

MAY 2025

May started out busy just like April ended. Significant rains occurred over Llano, Burnet, and Williamson Counties on the 1st of the month. Additionally, an EF1 tornado occurred over extreme northern Burnet County about 10 miles NNW of Briggs. Baseball size hail also occurred near Buchanan Dam on the evening of the 1st as well. Gusty winds from storm outflow was noted in New Braunfels, Seguin, and portions of Guadalupe County on the evening of the 1st as well. One observer on the east side of Lake Buchanon reported that all of their oak trees were stripped of their leaves from hail. Another observer on the north end of the lake reported baseball size hail and hail covering the yard at one point. Most of the significant rainfall was in and around Buchanon Lake and just to the east in and around the city of Burnet itself, with CoCoRaHS reporting 2 to nearly 5" of rain. The storm responsible moved east and impacted northern Williamson County, dropping 1 to 1.5" of rain there as well.

Figure 7: Tornado near Briggs on May 1st via social media

Figure 8: Heavy rain near 5" caused flooding on the east

Austin/San Antonio Regional Summary (continued)

Significant rainfall also occurred the following day, particularly over Fayette County and the city of La Grange. Between 4 and 7" of rain fell over the city and to the west, northwest, and southwest of La Grange.

Cooler weather followed the first couple chaotic days of May through the 11th of the month with highs in the 70s and 80s and mornings in the 50s and 60s. There were two more days, May 5th and 6th which featured CoCoRaHS observers in Williamson, Bastrop, Lee, and Travis County receiving several inches of rainfall before a drier stretch occurred for the next 7-10 days. One of the earliest heat waves on record began on May 13th and lasted through the 17th, with highs in the 100 to 110 degree range throughout South Central Texas. All time May high temperatures were in jeopardy leading up to the event, but ultimately additional cloud cover helped to prevent temperatures from warming as much as previously thought.

Figure 9: Early season heatwave May 14th at Austin

The last 9 days of May and the Spring season were active, with several heavy rain events spaced out over the 9 day period. Starting on the 22nd and ending on the 31st, most locations, with the exception being along the Rio Grande, received between 2 and 7" of rainfall. Most of this beneficial rainfall would result in short term drought relief for the region, but did put a slight dent in the drought particularly over the northern and eastern parts of the area.

Figure 10: 10 Day Estimated Rainfall May 21-May 31st

Page 60

Austin/San Antonio Regional Summary (continued)

The final notable event that occurred during the Spring months in South Central Texas occurred on the evening of May 28th in the Austin metro. A significant Microburst occurred in Austin, starting near the Westover Hills neighborhood and pushing south and east through downtown Austin, and eventually ending near Austin Bergstrom International Airport.

Figure 11: Anatomy of a Microburst

An intense supercell developed over northwestern Burnet County and tracked southeast through the evening of the 28th, producing significant hail, wind and rain. Some of the highest gusts were between 65 and 85 mph, with a measured gust at Austin Bergstrom International of 77 mph as the storm moved through. Hail reports were numerous in addition to the high winds. Overall, Spring 2025 was an active one, with all types of weather observed, from wildfires, tornadoes, floods, giant hail, microbursts, and extreme heat. We wrapped four seasons into one in South Central Texas this Spring.

Figure 12: Path of May 28th Supercell and Microburst through Austin

Summer Weather Outlook

By: Bob Rose, Lower Colorado River Authority Meteorologist

Welcome to summer! Texas summers can often be brutal, with long stretches of extreme temperatures and limited rain. And of course, don't forget the unbearable humidity! It seems brutal summers have become now a part of life in the Lone Star State. Heading into summer, questions swirl around whether this summer be another one for the record books, or will Mother Nature give us a small break as she did in 2024?

This summer's degree of heat and rainfall will likely be determined largely by the position of the summer heat dome, the strength of the onshore flow off the Gulf of Mexico, and possible impacts from an active tropical weather season.

Computer forecast solutions are in good agreement telling us that without an influence from El Niño or La Niña, the center of this summer's subtropical ridge of high pressure, or heat dome, will likely set up just to the west of Texas, stretching from northern Mexico to the central Rockies. This will place most of Texas on the eastern periphery of heat dome. The hottest temperatures and driest weather are often found under the center of the heat dome. Areas on the periphery of the heat dome tend to have readings that aren't quite as sizzling hot along with a little rain. This summer, Texas temperatures are expected be hotter than normal, but not as quite as hot as those in the summer of 2022 and 2023.

With the center of the heat dome expected to spend much of the summer just to the west of Texas instead of directly over it, this should allow for the development of occasional periods of rain and thunderstorms across the state. The clockwise circulation around the heat dome is expected to help pull atmospheric disturbances from the Plains states as well as the Gulf into Texas, resulting in periodic rain showers and thunderstorms. This pattern doesn't look overly wet, but at the same time, it shouldn't be totally dry.

Finally, the combination of very warm sea surface temperatures in the Gulf and Caribbean Sea along with ENSO neutral conditions across the tropical Pacific are expected to provide a favorable environment for hurricane development and intensification. The National Hurricane Center is calling for 13-19 named storms this year and parts of Texas could be affected by potential storms moving into the western Gulf.

Putting all these factors together, the summer outlook calls for warmer than normal temperatures and near normal rain. The temperature looks to average between 1 and 2 degrees above normal, which is quite hot and borderline brutal! But not nearly as hot as the summers of 2022 and 2023. There will be rain from time to time, with amounts averaging close to normal summertime averages.

The North American Multi-Model Ensemble, consisting of six coupled models from North American climate modeling centers, also indicates the period from July through September will contain warmer than normal temperatures and near normal rainfall:

Temperature Forecast Precipitation Forecast The North American Multi Model Ensemble June forecast for July-August-September

CoCoRaHS Webinars & Information

The Week of June 17th -- Happy Twenty-Seventh Anniversary CoCoRaHS!

This week we celebrate CoCoRaHS Twenty-Seventh Anniversary. The CoCoRaHS website was launched June 17, 1998 -- officially marking the beginning of our volunteer rain gauge network. One hundred beginner weather observers reported that day. We now have close to 28,000 rain gauge observers who send in reports regularly or occasionally. Let's celebrate our 27th anniversary this month with everyone sending in their CoCoRaHS daily precipitation reports and setting a new all-time record for most CoCoRaHS reports in one day.

For those of you who did not know, the number of reports received each day is listed just above the national map on our home page.

Thanks very much for all of your reports and being part of our CoCoRaHS team!

Questions, Comments, and Suggestions about this newsletter are welcomed at the above email addresses.