Climate and Weather Highlights for 2018

Temperatures averaged above normal for the year, and to a greater extent at San Angelo than Abilene. Precipitation for the year was well-above normal at both locations. Table 1 summarizes Year 2018 temperature, precipitation, and departure from normal for Abilene and San Angelo.

Site	Average Temperature (°F)	Departure from Normal (°F)	Normal Average Temperature (°F)	Total Precipitation (In.)	Departure from Normal (In)	Normal Annual Precipitation (In.)	Total Snowfall (In.)
Abilene	64.9°	+0.3°	64.6°	33.92"	9.10"	24.82"	3.5"
San Angelo	66.8°	+1.3°	65.5°	34.06"	12.81"	21.25"	Trace

Table 1: Year 2018 Temperature and Precipitation Data for Abilene and San Angelo.

- 4th wettest year on record at San Angelo (annual precipitation 34.06 inches)
- 14th wettest year on record at Abilene (annual precipitation 33.92 inches)

Additional annual temperature and precipitation data for Abilene and San Angelo is summarized in Table 2.

Site	Warmest High Temperature (°F)	Warmest Low Temperature (°F)	Coldest High Temperature (°F)	Coldest Low Temperature (°F)	Maximum Daily Precipitation (In.)
Abilene	106° Jul. 19- 22	80° Jul. 20, Aug. 28	23° on Jan. 1	5° on Jan. 17	2.71" on Oct. 9
San Angelo	109° on Jul. 23	79° Jun. 3, 23-24, Jul. 19	24° on Jan. 1	10° Jan. 17	3.25" on Oct. 17

Table 2: Additional Year 2018 Climate Data for Abilene and San Angelo.

The number of days in 2018 with high temperatures 100 degrees or more were: 47 at San Angelo, 25 at Abilene, and 29 at Junction. The *average annual number of days* with high temperatures 100 degrees or more are 18 at San Angelo, and 12 at Abilene.

The growing season information for the year is summarized in Table 2, for Abilene and San Angelo.

Site	Last Spring Freeze	First Autumn Freeze	Growing		Departure from Normal
Abilene	Apr. 15	Nov. 10	208 days	234 days	-26 Days
San Angelo	Apr. 15	Nov. 10	208 days	231 days	-23 Days

Table 3: Growing Season Information for Abilene and San Angelo.

The growing season (number of days between the last spring freeze and the first autumn freeze) was between 3 and 4 weeks shorter than normal at Abilene and San Angelo.

Total precipitation for the year is shown in Figure 1.

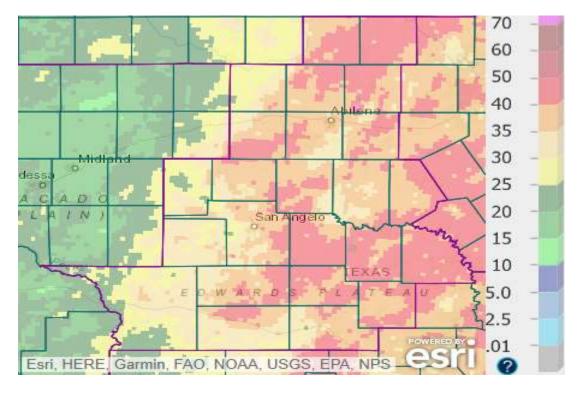


Figure 1: Total Annual Precipitation for 2018. Scale on right is in inches.

From Figure 1, total precipitation for the year ranged from less than 25 inches in parts of Sterling County, western and southern Crockett County (green shaded areas), to more than 40 inches farther to the east in west-central Texas (numerous areas with red shading).

Departure from normal precipitation for the year is shown in Figure 2.

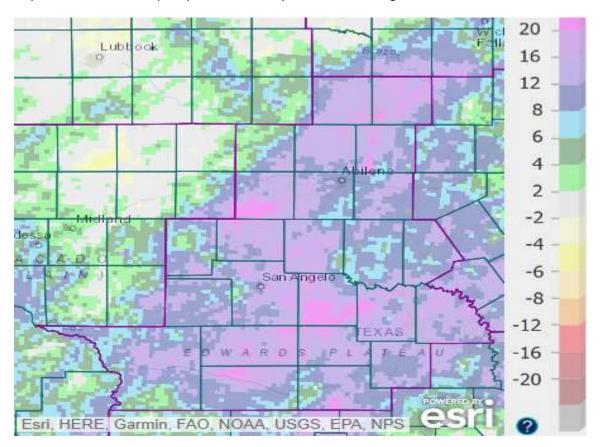


Figure 2: Departure from Normal Precipitation for Year 2018. Scale on right is in inches.

The annual precipitation was well-above normal (light blue, dark blue and purple shading in Figure 2) for most of <u>west-central Texas</u>.

Weather Highlights:

Winter

January and the first half of February were marked by rather dry conditions and large swings in temperatures. The monthly temperature range (from warmest high temperature to coldest low temperature) in January was 72 degrees at Abilene and 67 degrees at San Angelo. In February, the monthly temperature range was 66 degrees at Abilene, and 63 at San Angelo.

The coldest temperatures for the year occurred in early and middle January. Early morning low temperatures on Jan. 17 were in the single digits across much of the <u>Big Country</u>, and parts of the <u>Concho Valley and Heartland areas</u>. A new record low of 10 degrees was set at San Angelo. Temperatures were also very cold on New Year's Day and Jan. 2. Lows on Jan. 1 were in the single digits and teens, and a record low of 9 degrees was tied at Abilene. On Jan. 2, a new record low maximum temperature (25 degrees) was set at San Angelo. Across west-central Texas, highs were mostly in the lower to mid 20s on Jan. 1, and mostly in the 20s on Jan. 2.

The most significant winter weather (2 events) occurred in December. On Dec. 8, rain changed to snow across parts of the northern third of west-central Texas, as an upper level trough moved east into the area. The highest snowfall amounts (3-4 inches) occurred across the Big Country area from Abilene northwest across Fisher County and north across Haskell County. Abilene officially recorded 3.0 inches of snow with this event. A mixed rain and snow event occurred Dec. 13-14, as an upper level storm system tracked east across the region. Accumulating snowfall occurred, mainly in areas with slightly higher elevation across the northern half of west-central Texas. The heaviest snow affected areas of Nolan County, where accumulations were 5-8 inches at some locations. Snowfall accumulations of 1-3 inches occurred in parts of the Big Country and northern Concho Valley.

Some winter precipitation also occurred on Feb. 21 across the Big Country area, where a mix of freezing rain and sleet resulted in icy road conditions and hazardous travel.

Spring

Rather dry conditions prevailed through much of March. With the combination of dry vegetation, lack of rainfall, and periodic gusty winds with low relative humidity values, a few grass and brush fires occurred during the first half of March. Temperatures were very warm on a few occasions. A pattern change late in the month brought stormy and wet conditions to west-central Texas on Mar. 26-27. A severe weather event affected parts of the northern half of west-central Texas on Mar. 26.

In April, Monthly precipitation was well-below normal at Abilene and San Angelo. This was the 10th driest April on record at San Angelo; Abilene tied its 8th driest April on record. Temperatures in April averaged below normal at San Angelo, and to a greater extent at Abilene.

Much of April was marked with a roller coaster type pattern with the temperatures, and windy conditions. Several wildfires (grass fires) were reported. The largest fires occurred Apr. 13-17, affecting parts of southeastern Jones County, northern Crockett County, and Mason County.

The majority of rainfall for April occurred with an event late in the month (Apr. 24-25). Severe weather was limited to a couple of storms on Apr. 24.

May was much more active with severe weather. Severe weather events occurred May 2-3, May 14-17, and May 25. Significant damage occurred with a severe storm in Richland Springs (San Saba County) on May 25. San Angelo recorded its 4th warmest and 8th wettest May on record. Abilene recorded its 6th

warmest May on record. Several episodes of strong to severe thunderstorms affected various parts of west-central Texas on June 4-8.

Summer

Hot and dry conditions, usually prevalent in the summer, occurred during much of June and July, and in the early and late parts of August. The number of days for the year with high temperatures at or above 100 degrees were 47 at San Angelo, 25 at Abilene, and 29 at Junction. On several occasions in June and July, record high temperatures or record high minimum temperatures were set or tied at San Angelo, and to a lesser extent at Abilene. A noteworthy record was also set in July. The number of consecutive days with high temperatures 108 degrees or hotter was 5 at San Angelo (July 19-23), surpassing 4 days in 1994 (June 26-29). The number of consecutive days with high temperatures 106 degrees or hotter at Abilene was 4 days (July 18-22), surpassing 3 such days in 2012 (August 1-3) and numerous other years.

Significant rainfall occurred during the second week in August, along with cooler temperatures. After an extensive period of expanding and worsening drought conditions during the summer, this rainfall was beneficial in the short term for the area. With rather limited runoff, however, only very minor increases to area lake and reservoir levels were recorded.

Fall

The fall weather was marked by record-setting wet weather, major flash flood events in September and October, and significant rises in water levels on area reservoirs.

The table below shows September and October rainfall at San Angelo and Abilene.

Location	September Rainfall	October Rainfall
San Angelo	6.66 in.	11.37 in.
Abilene	5.75 in.	12.09 in.

San Angelo and Abilene both recorded their wettest October on record. October Rainfall was the 3rd wettest of any month on record at Abilene, and 2nd wettest of any month on record at San Angelo. San Angelo also recorded its 9th wettest September. Numerous rain events occurred in September with showers, thunderstorms and heavy rainfall. October was exceedingly wet across west-central Texas.

In September, a major flash flood occurred in Sonora on Sep. 21. Rainfall amounts of 7-8 inches occurred in a 3-hour time span, in hilly terrain just northwest of Sonora. The excessive water runoff led to major flash flooding in Sonora. Many homes were flooded in Sonora. Flooding also resulted in road closures along a portion of Interstate 10 in Sutton County, and on U.S. Highway 277 north of Sonora.

In October, a major flash flood occurred in Junction on Oct. 8. During the overnight hours of Oct. 7-8, repeat shower and thunderstorm activity affected the southeastern part of west-central Texas, with very heavy rainfall. Rainfall amounts of 6-12 inches occurred along the South Llano River basin, in central and southern Kimble County. Excessive water runoff in hilly terrain caused major flash flooding along parts of the South Llano River, in Junction and south of Junction. This necessitated water rescues at an RV park in Junction, adjacent to the South Llano River. Unfortunately, there were 4 fatalities as a result of the flash flood. Several Farm to Market roads were closed in the Northwest Hill Country, due to flooding. In addition, Highway 377 was closed south of Junction.

A couple of tornadoes also occurred in October. The remnants of former tropical system Sergio (from the eastern Pacific Ocean) tracked east into the area and brought showers and thunderstorms with heavy rainfall to northern and central parts of west-central Texas on Oct. 13. Some of the thunderstorms were strong to severe, and a couple of tornadoes caused damage. In southern Tom Green County, a tornado caused damage 6-9 miles west-southwest of Christoval. This tornado (rated EF-2 on the Enhanced Fujita Scale) uprooted or snapped numerous trees and caused significant damage to a home. In Brady (Mcculloch County), a tornado (rated EF-0) caused tree and roof damage.

Repeated heavy rain events during October on saturated soil led to substantial water runoff, and resulted in appreciable increases in area reservoir levels.

With the well-above normal rainfall and increased cloud cover in September and October, temperatures for both months averaged below normal at San Angelo and Abilene. In September, San Angelo and Abilene recorded no days with high temperatures 100 degrees or more, and only 2 days with highs 90 or above.

In contrast to September and October, conditions were much drier in November. A significant change to unusually cold conditions occurred Nov. 12. Temperatures fell into the 30s during the day, following passage of a strong cold front. With brisk north winds, wind chill values dropped into the 20s in the afternoon. Some patchy light drizzle and snow flurries occurred in northern and central parts of west-central Texas. Early morning lows were in the 20s across much of the area on Nov. 13, with wind chill values in the teens. Despite sunny skies, highs on the 13th were more than 20 degrees below normal, and only in the 40s. The coldest low temperatures, in the upper teens to lower 20s across most of the area, occurred on the early morning of the 14th . The weather pattern was fairly quiet during the second half of November.

The weather pattern was fairly active in December, and events included gusty winds, winter weather, and severe weather. December precipitation was well-above normal across much of west-central Texas, including at Abilene and San Angelo. This was the 6th wettest December on record at Abilene, and 8th wettest December on record at San Angelo. Temperatures in December averaged slightly above normal. The severe weather event occurred Dec. 26, with a squall line of thunderstorms which moved east across the Big Country and Concho Valley areas.

<u>Links to Individual Monthly Weather and Climate Summaries for 2018</u>