# Climate and Weather Highlights for 2019

Temperatures averaged above normal for the year at Abilene and San Angelo. Precipitation for the year was below normal at both locations. Table 1 summarizes Year 2019 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 | 65.9° | +1.3° | 64.6° | 23.15” | -1.67” | 24.82” | 0.1” |
| San Angelo | 66.7° | +1.1° | 65.5° | 17.73” | -3.52” | 21.25” | Trace |

**Table 1: Year 2019 Temperature and Precipitation Data for Abilene and San Angelo.**

- At Abilene, 23rd warmest and 65th driest year on record (records date back to 1886)
- At San Angelo, 29th warmest and 49th driest year on record (records date back to 1907)

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 | 109° Aug. 26 | 81° Aug. 18 | 30° on Jan. 2 | 17° Mar. 5 | 2.17” on Apr. 23 |
| San Angelo | 109° Aug. 26 | 81° Aug. 18 | 32° on Jan. 2, Feb. 8, and Mar. 4 | 15° Mar. 5 | 2.68” on May 8 |

**Table 2: Additional Year 2019 Climate Data for Abilene and San Angelo.**

The number of days in 2019 with high temperatures 100 degrees or more were: 45 at San Angelo, 30 at Abilene, and 36 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 | Length of Growing Season | Normal Length of Growing Season *(1981-2010 Average)* | Departure from Normal |
|---|---|---|---|---|---|
| Abilene | Mar. 6 | Oct. 30 | 237 days | 234 days | +3 Days |
| San Angelo | Mar. 6 | Oct. 31 | 238 days | 231 days | +7 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 3 days longer than normal at Abilene, and 7 days longer than normal at San Angelo.

Total precipitation for the year is shown in Figure 1.

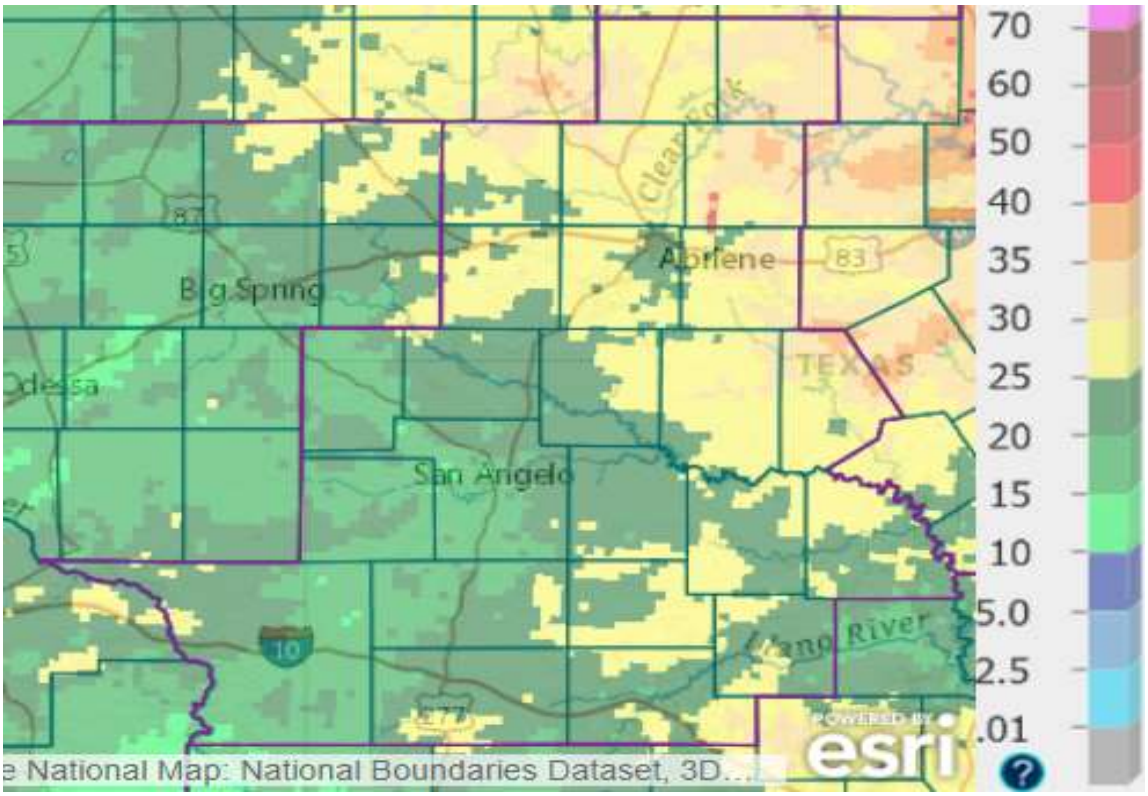


**Figure 1: Total Annual Precipitation for Year 2019. Scale on right is in inches.**

From Figure 1, total precipitation for the year ranged from less than 15 inches in small parts of the Concho Valley and Crockett County (light green shading), to more than 35 inches in small parts of the Big Country northeast of Abilene (orange shading).

Percentage of normal precipitation for the year is shown in Figure 2.

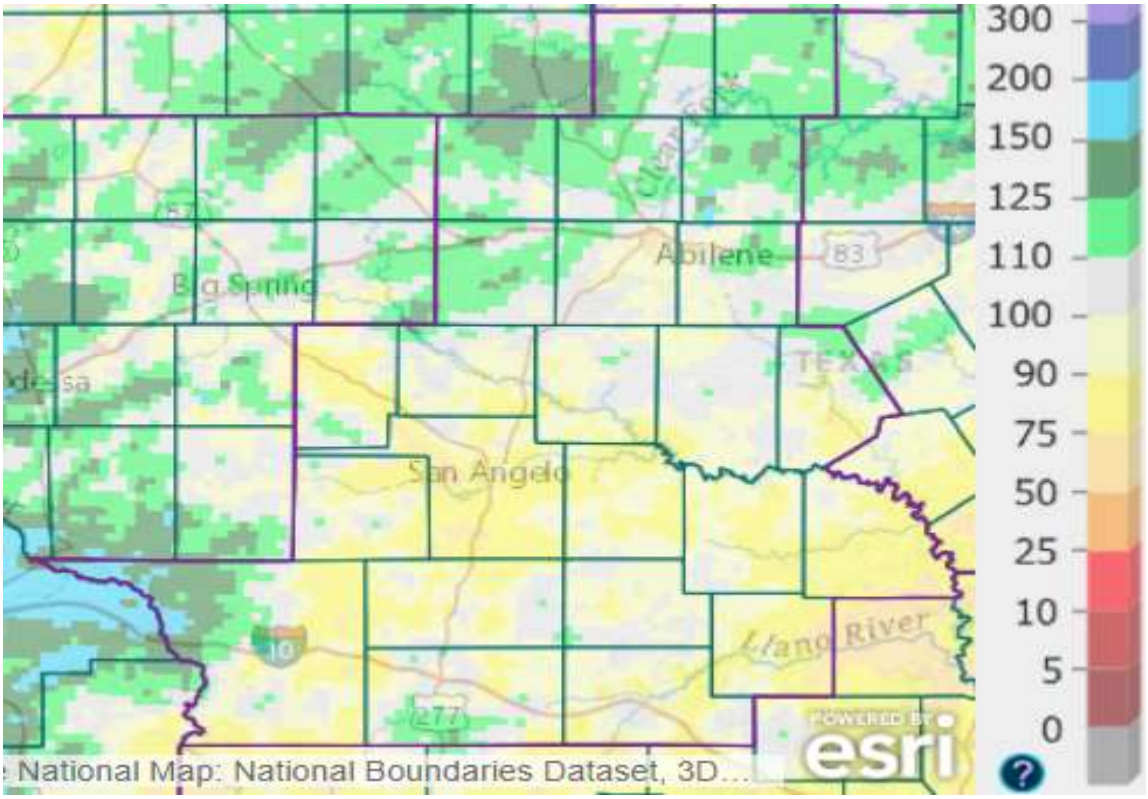


**Figure 2: Percentage of Normal Precipitation for Year 2019. Scale on right is in percent.**

The annual precipitation was above average (green shading in Figure 2) across much of the Big Country, in northwestern Crockett County, and in parts of eastern Brown and southern Sutton Counties. Annual precipitation was below normal (yellow shading in Figure 2) in the Abilene vicinity and south of Abilene, and in areas across the central and southern parts of west-central Texas.

**Weather Highlights:**

No major winter weather events occurred in 2019. On Veteran's Day in November (Nov. 11), light wintry precipitation occurred. Light snow and sleet were reported in the Big Country, with light freezing rain and sleet across central and southern parts of west-central Texas. With warm ground conditions and the light, patchy nature of the precipitation, however, no accumulations were reported. The coldest temperatures for the year occurred on March 5, when early morning lows were in the teens.

West-central Texas had an active severe weather season, beginning in March and continuing well into June. The first notable event began with an intense squall line on March 13. Typically, severe weather events most often occur during the afternoon and evening hours. An unusual aspect of the severe weather season this year was the predominance of late night and early morning severe weather events, including a tornado outbreak on May 18. These tornadoes, some significant, caused damage in the cities of Abilene and San Angelo, Ballinger, and other smaller communities. On June 23, strong downburst winds caused damage in Baird (Callahan County).

A very wet period occurred in April, May and June. A possible contributing factor was the prevalence of nighttime (and early morning) thunderstorm activity. Numerous thunderstorm lines and complexes moved across west-central Texas, with widespread coverage and heavy rainfall.

This wet period was followed by very hot and dry conditions in July, August and September. Upper level high pressure systems were in close enough proximity to be the prevailing weather influence across west-central Texas during that time period.

At San Angelo, rainfall for April through June was 11.85 inches, and this was the 10$^{th}$ wettest on record for this time period. Rainfall for July through September was 1.95 inches, and this was the 14$^{th}$ driest on record for this 3-month period.

At Abilene, April through June rainfall was 15.87 inches, and this was the 5$^{th}$ wettest on record for this time period. July through September rainfall was 1.55 inches, and this was the 5$^{th}$ driest on record for this 3-month period.

The average high temperature, for the August 1 through September 30 time period, was the hottest on record at San Angelo (99.6 degrees) and Abilene (98.2 degrees). In addition, for the entire month of September, daily high temperatures were 90 degrees or above at both locations. This was the first such occurrence on record for San Angelo and Abilene.

The sharp decline in rainfall in the July-September time frame, coupled with persistent heat and high evapotranspiration, resulted in the development, expansion and worsening of drought conditions. The contrast in drought conditions, near the end of the aforementioned wet and dry periods, can be seen with a comparison of U.S. Drought Monitor maps for Texas (Figure 3 on next page).

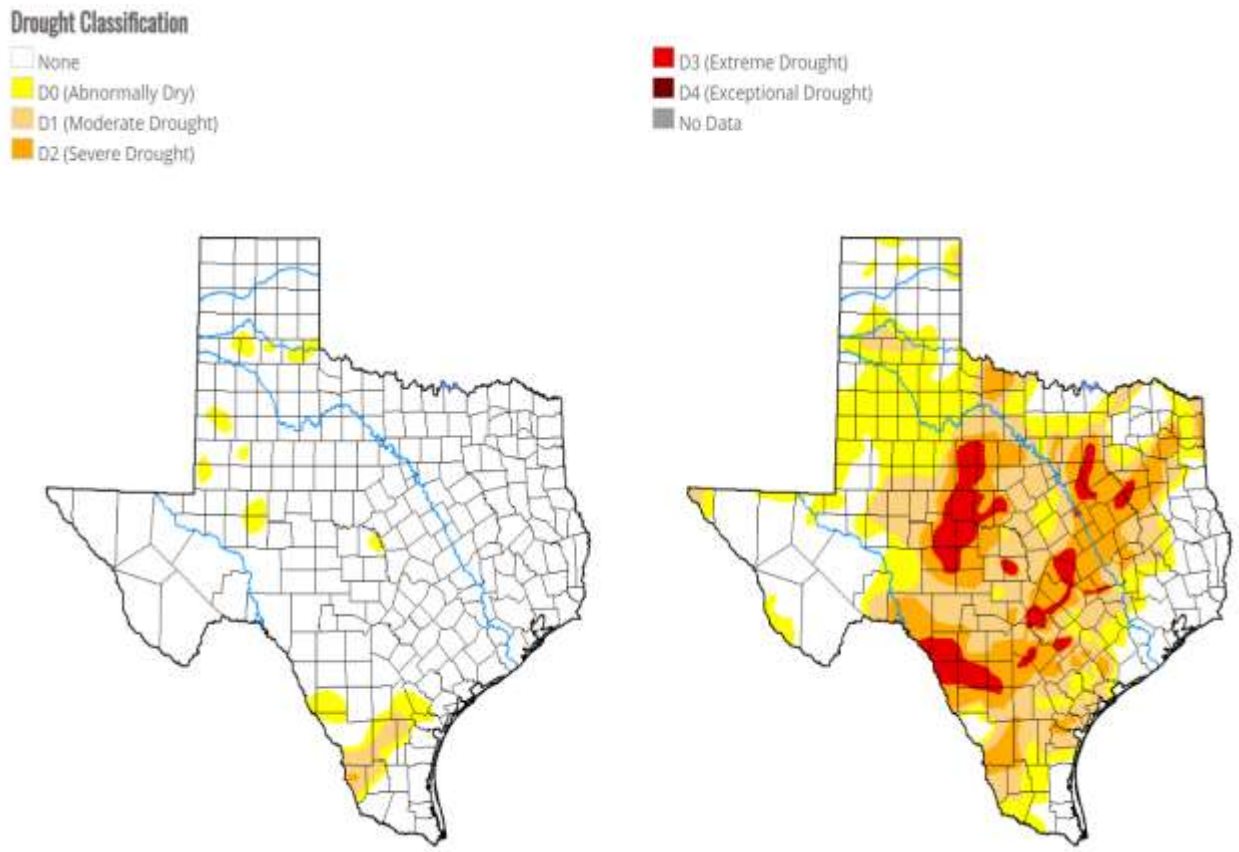


**Figure 3: Comparison of U.S. Drought Monitor maps for Texas. The left map is from July 2, and the right map is from October 1.**

The left map in Figure 3 shows the absence of drought conditions across west-central Texas, with a small area of Abnormally Dry conditions (yellow shading) in San Saba County. The right map in Figure 3 shows a large area of Severe (orange shading) to Extreme (red shading) Drought across west-central Texas.

October was marked by a sharp transition from summer-like conditions early in the month, to winter-like conditions late in the month. The monthly temperature range in October, between the warmest daily high temperature and coldest daily low temperature, was 77 degrees at Abilene and 76 degrees at San Angelo.

Temperatures averaged below normal in November, and above normal in December. A couple of rain events occurred in both months (early and late parts of each month).

Links to Individual Monthly Weather and Climate Summaries for 2019