

## Climate and Weather Summary for February 2021

Temperatures in February averaged well below normal at San Angelo and Abilene. Precipitation (liquid-equivalent) was well below normal at both locations. Table 1 summarizes February, 2021 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 February Precipitation (In.) |
|------------|--------------------------|----------------------------|---------------------------------|---------------------------|----------------------------|-------------------------------------|
| Abilene    | 40.1°                    | -8.5°                      | 48.6°                           | 0.38"                     | -0.98"                     | 1.36"                               |
| San Angelo | 42.6°                    | -7.7°                      | 50.3°                           | 0.39"                     | -0.96"                     | 1.35"                               |

**Table 1: February Climate Data for Abilene and San Angelo.**

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

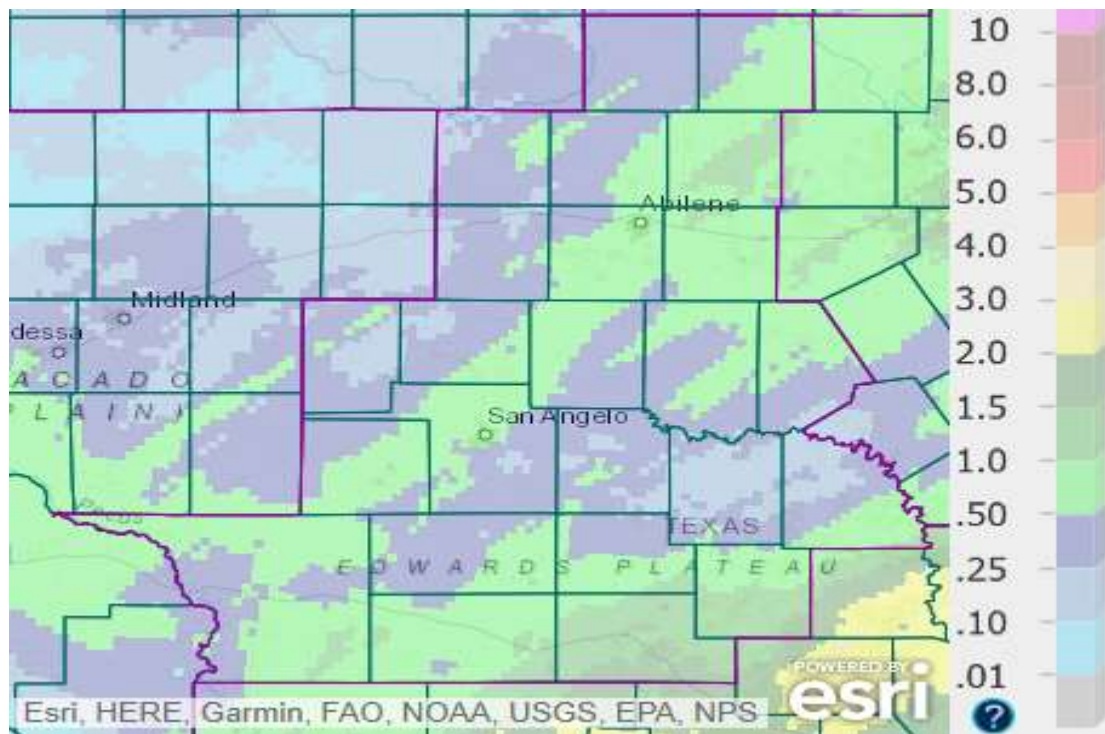
| Site       | Warmest High Temperature (°F) | Warmest Low Temperature (°F) | Coldest High Temperature (°F) | Coldest Low Temperature (°F) | Maximum Daily Precipitation (In.) |
|------------|-------------------------------|------------------------------|-------------------------------|------------------------------|-----------------------------------|
| Abilene    | 80° on Feb. 3                 | 53° on Feb. 3                | 13° on Feb. 15                | -4° on Feb. 16               | 0.24" Feb. 14                     |
| San Angelo | 82° on Feb. 3, 8              | 47° on Feb. 28               | 18° on Feb. 15                | -1° Feb. 15, 16              | 0.28" Feb. 14                     |

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

- Total snowfall for February was 10.1 inches at Abilene, and 10.1 inches at San Angelo.
- 2<sup>nd</sup> highest February monthly snowfall on record at Abilene.  
2<sup>th</sup> highest February monthly snowfall on record at San Angelo.
- Highest 1-day snowfall on record at Abilene (9.8 inches) and San Angelo (10.1 inches) on Feb. 14.
- Coldest February monthly average temperature on record (42.6 degrees) at San Angelo.  
6<sup>th</sup> coldest February monthly average temperature on record (40.1 degrees) at Abilene.

- Coldest temperature on record for the month of February tied at San Angelo (-1 on Feb. 15-16).
- Coldest daily average temperature on record at San Angelo on Feb. 15 (8.5 degrees).  
4<sup>th</sup> coldest daily average temperature on record at Abilene on Feb. 15 (5.5 degrees).
- Longest consecutive time period on record with temperatures at/below freezing at Abilene (252 hours) and San Angelo (164 hours).

A map of total precipitation for February is shown in Figure 1 (below).



**Figure 1: Total Precipitation for February.**

Precipitation for February varied across west-central Texas from less than one quarter of an inch, to between 1.5 and 2 inches. This precipitation was considerably below normal for much of the area (not shown).

### **February 2021 Weather Highlights**

The main weather highlight for February was the major winter storm and record cold conditions during the middle of the month.

Temperatures were generally above normal during the first week of February, with dry conditions. Highs were in the mid 70s to lower 80s on Feb. 3, and a new record high temperature of 82 degrees was set at San Angelo. Abilene recorded a peak wind gust of 44 on Feb. 4, with north winds following a cold frontal passage. San Angelo recorded a peak gust of 41 mph with south-southwest winds on Feb. 7.

With significant changes in the pattern aloft, an arctic airmass over Canada and the northern U.S. spilled south across the southern Plains and Texas during the second week of February. The leading edge of this arctic air was marked by a strong cold frontal passage on Feb. 8-9. During the next few days, freezing drizzle and fog occurred across much of the area, with temperatures below freezing. This deposited a thin glaze of ice on the roads, especially across northern and central parts of the area. On Feb. 11, showers of freezing rain occurred across southeastern parts of west-central Texas. Some freezing rain and sleet occurred farther north across the Concho Valley. The ice on roadways caused hazardous driving conditions.

A major snowstorm occurred on Valentine’s Day (Feb. 14). The heaviest snowfall was across the Big Country and Concho Valley areas. A map of snowfall for Feb. 14 is shown in Figure 2.



**Figure2: Total Snowfall for Feb. 14.**

New records were set for the highest one-day snowfall amounts at Abilene (9.8 inches) and San Angelo (10.1 inches). The previous one-day snowfall records were 9.3 inches at Abilene (set Apr. 5, 1996) and 10.0 inches at San Angelo (set Feb. 16, 1919).

For the vast majority of snow events in west-central Texas, the snow is typically wet with higher water content. With temperatures much below freezing during the Valentine’s Day event, however, this was a rare powdery snow with low water content. The snow event occurred as an upper level storm system moved east into the area.

The photo below shows snow in San Angelo on Feb. 14.



With another surge of arctic air into west-central Texas on Feb. 14, temperatures (initially in the mid teens to mid 20s) dropped into the single digits. Wind chill values plunged below zero with brisk north winds.

This was followed by record cold temperatures Feb. 15-16, as a strong high pressure system settled into the area. Only on rare occasions have temperatures in west-central Texas have dropped below zero. With this setup, temperatures dropped to early morning lows of zero to -5 degrees across most of the northern and central parts of west-central Texas, and in the single digits in southern parts of the area.

The San Angelo lows of -1 on Feb. 15-16 tied for the coldest temperature on record for the month of February. This record was previously set Feb. 2, 1985. At Abilene, new daily record lows were set on Feb. 15 (-2 degrees) and Feb. 16 (-4 degrees).

New record cold daily high temperatures were set at Abilene (13 degrees) and San Angelo (18 degrees) on Feb. 15. Across most of west-central Texas, highs were only in the teens.

The below pictures show mostly sunny skies with a snowy landscape in San Angelo on Feb. 15.





Temperatures across the area remained very cold and much below normal into the morning of Feb. 19. Light mixed winter precipitation affected various parts of west-central Texas Feb. 16-18. Light snow affected the Big Country on the 16<sup>th</sup>. Snowfall of 2-6 inches occurred across southern parts of the area and the I-10 corridor on the 18<sup>th</sup>. Freezing fog occurred in the Concho Valley on the 17<sup>th</sup>.

Another new cold record was set, for the number of consecutive days and hours with temperatures at/below freezing at Abilene and San Angelo.

#### Abilene:

New record of 10 days and 12 hours, or 252 hours.

Start: Thursday, Feb. 9 at 1252 AM.

End: Friday, Feb. 19 at 1252 PM.

The previous record at Abilene was 202 hours in Dec, 1983.

Start: Dec. 15, 1983 at 3 AM.

End: Dec 26, 1983 at 1 PM.

#### San Angelo:

New record of 6 days and 8 hours, or 152 hours.

Start: Wednesday, Feb. 10 at 451 PM.

End: Wednesday, Feb. 17 at 1251 AM.

The previous record at San Angelo was 6 days (144) hours in December, 1946 into February, 1947.

Start: Dec. 31, 1946.

End: Feb. 5, 1947.

This cold outbreak for Texas has been compared to what occurred in December, 1989.

Temperatures finally climbed above freezing on Dec. 19 with sunny skies.

#### Major Winter Weather Impacts

**Driving conditions were very hazardous with snow packed roadways, in the days following the Feb. 14 major snow event. Wind chills were dangerously cold Feb. 14-15, with values as cold as -10 to -20 degrees on the early morning of the 15<sup>th</sup>.**

**With a combination of the major winter storm and record cold temperatures, power outages were widespread across the area and across the state of Texas. There was considerable damage across the state with frozen and burst water pipes.**

**The city of Abilene experienced a loss of water, as a result of power loss to water treatment plants.**

**In San Angelo, numerous breaks to water lines resulted in the loss of water for several days in much of the city.**

A significant warming trend followed Feb. 20-23 with dry conditions, generally clear skies, and breezy south-southwest winds. High temperatures were 70-75 degrees on Feb. 22, and in the mid 70s to around 80 on Feb. 23.

Conditions were wetter and much cooler on Feb. 25, with the approach of an upper level disturbance from the west. Skies were cloudy and highs ranged from the mid 40s north to upper 50s south. Showers and a few thunderstorms occurred east of a Throckmorton to Abilene to Junction line during the overnight hours of Feb. 25-26.

The month ended with above normal temperatures (Feb. 26-28). Areas of dense fog (with visibilities at or below one quarter of a mile) occurred across central and southern parts of west-central Texas on the early morning of Feb. 27.

**[Additional Tabular and Graphical Daily Climate Data](#)**