

Storm Data and Unusual Weather Phenomena - December 2020

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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TEXAS, South Panhandle

(TX-Z021) PARMER, (TX-Z022) CASTRO, (TX-Z023) SWISHER, (TX-Z026) CHILDRESS, (TX-Z027) BAILEY, (TX-Z028) LAMB, (TX-Z029) HALE, (TX-Z030) FLOYD, (TX-Z033) COCHRAN, (TX-Z034) HOCKLEY, (TX-Z035) LUBBOCK, (TX-Z039) YOAKUM, (TX-Z040) TERRY, (TX-Z041) LYNN	12/01/20 00:00 CST		0	Drought
	12/31/20 23:59 CST		0	

Drought conditions made a slight improvement through the month of December, mostly thanks to a three-day winter storm in the last few days of December. Exceptional drought (D4) to extreme drought (D3) conditions remained over much of the South Plains and extended into portions of the Rolling Plains and Childress County. Most of the Rolling Plains remained in abnormally dry (D0) to moderate drought (D1). However, overall, drought conditions made some improvements in all categories and counties.

A few light precipitation events occurred during the month of December but a widespread winter event occurred during the final three days of the month. A strong upper level storm system dived into northern Mexico which initially brought a line of thunderstorms to the eastern South Plains and Rolling Plains on the 29th. Colder air then filtered into the region changing rain over to snow on the 30th. As the system moved out over central Texas on the 31st, widespread snow fell over the Rolling Plains and portions of the eastern South Plains. Widespread snowfall of two to four inches was observed with isolated amounts up to 8.5 inches. The upper soil profile has benefited over the Rolling Plains from this rain and snowfall while the South Plains soil moisture content remained very low.

(TX-Z022) CASTRO, (TX-Z023) SWISHER, (TX-Z024) BRISCOE, (TX-Z025) HALL, (TX-Z026) CHILDRESS, (TX-Z030) FLOYD	12/13/20 03:00 CST		0	Winter Weather
	12/13/20 14:00 CST		0	

A potent, but moisture starved, upper level storm system traversed the South Plains region on the morning of the 13th. As the system passed it carried in colder air on gusty northerly winds. In addition, it was able to squeeze out a quick shot of moisture, primarily across the southern Texas Panhandle. Temperatures cooled enough that most of this precipitation fell in the form of snow. The system tracked steadily east-southeastward through the day. Most of the snow fell during the morning hours. The wintry precipitation quickly diminished and shifted east with the system during the afternoon hours.

Snowfall reports are from NWS cooperative weather observers and public reports:

2.1 inches at Tulia (Swisher County), 2.0 inches at Memphis (Hall County), 1.5 inches at Silverton (Briscoe County), 1.0 inch at Floydada (Floyd County), Childress (Childress County), Vigo Park (Swisher County), and Hart (Castro County).

CROSBY COUNTY --- RALLS [33.68, -101.38]	12/29/20 19:45 CST		0	Hail (0.88 in)
	12/29/20 19:45 CST		0	Source: Public

An advancing Pacific cold front on the evening of the 29th encountered warm and moist air creating a line of thunderstorms from the southeastern Texas Panhandle through the eastern South Plains. Within this line of thunderstorms, nickel size hail was produced in Ralls (Crosby County).

(TX-Z026) CHILDRESS, (TX-Z031) MOTLEY	12/30/20 02:00 CST		0	Winter Weather
	12/30/20 06:00 CST		0	

Following a round of thunderstorms on the evening of the 29th, colder air filtered into the region behind a cold front. Lingering precipitation, after the thunderstorm activity dissipated, changed from rain to snow as the colder air advected into the area. A few locations picked up light snowfall accumulations.

Snowfall totals are from NWS cooperative weather observers:

1.5 inches at Kirkland (Childress County), and 1.0 inch at Matador (Motley County) and Flomot (Motley County).

(TX-Z026) CHILDRESS, (TX-Z041) LYNN, (TX-Z042) GARZA	12/31/20 13:00 CST		0	Winter Storm
	12/31/20 23:59 CST		0	

(TX-Z030) FLOYD, (TX-Z031) MOTLEY, (TX-Z035) LUBBOCK, (TX-Z036) CROSBY, (TX-Z037) DICKENS, (TX-Z038) KING, (TX-Z043) KENT, (TX-Z044) STONEWALL

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	12/31/20 18:00 CST		0	Winter Weather
	12/31/20 23:59 CST		0	

A strong upper level low which brought thunderstorms and snow to the region on the 29th and 30th finally moved northeastward out of northern Mexico on the 31st. Following the precipitation on the 30th, a notable dry layer aloft moved overhead delaying the start of precipitation on the 31st until the afternoon and evening hours. Most areas on the South Plains were unable to moisten up enough to experience accumulating snowfall. Although this dry air reduced the amount of precipitation that made it to the ground, it promoted evaporative cooling, which allowed temperatures to quickly drop to and below freezing. This kept most of the precipitation in the form of snow and sleet. The snow quickly diminished from southwest to northeast early in the morning on 1 January. A widespread area of snowfall of two to three inches fell over the Rolling Plains and portions of the eastern South Plains. A narrow snow band developed over Garza County which produced up to 8.5 inches of snowfall. Note that this event began on 31 December and ended on 1 January.

Snowfall reports are from NWS cooperative weather observers, social media, and law enforcement:

8.5 inches at Post (Garza County), 6.0 inches at Lake Alan Henry (Garza County), 4.5 inches at Childress (Childress County), 4.0 inches at Tahoka (Lynn County), 3.5 inches at Slaton (Lubbock County), 3.5 inches at Jayton (Kent County), 3.0 inches at Matador (Motley County), 3.0 inches at Crosbyton (Crosby County), 2.5 inches at Dickens (Dickens County), 2.0 inches at Floydada (Floyd County), 1.6 inches at Aspermont (Stonewall County), and 1.0 inches at Guthrie (King County).