

Storm Data and Unusual Weather Phenomena - December 2022

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

(OK-Z001) CIMARRON, (OK-Z002) TEXAS, (OK-Z003) BEAVER

12/01/22 00:00 CST	0	Drought
12/31/22 23:59 CST	0	

Much of the Oklahoma and Texas Panhandles have remained dry throughout the year. During the month December there were a wide range of drought conditions from Exceptional Drought (D4) to Moderate Drought (D1) across the combined Panhandles. Soils remained short to very short on soil moisture. Drought conditions affected pastures in ranchers to sell upwards of 35% more cattle during the year compared to previous years. More than 70% of the cotton production across the Texas Panhandle and South Plains had failed due to the drought. This was one of the worst production seasons since the 1950's. One of the hardest hit areas was central to eastern portions of the OK Panhandle into the far north central TX Panhandle. Some parts of this area have received less than 10 inches of rainfall for the entire year.

(OK-Z001) CIMARRON, (OK-Z002) TEXAS

12/02/22 10:35 CST	0	High Wind (MAX 60 kt)
12/02/22 14:40 CST	0	

An upper level disturbance moved across the Rockies and had a well stacked jet associated. Strong winds aloft mixed down to the surface and produced wind gusts upwards of 65 to 72 mph in the far northwestern combined Oklahoma and Texas Panhandles. Other areas to the southeast would gust upwards of 60 mph. Overall several areas in the central and western Panhandles were able to have sustained winds over 35 mph for some period of time.

(OK-Z001) CIMARRON

12/03/22 15:48 CST	0	Wildfire
12/03/22 16:48 CST	0	

Prolonged drought conditions coupled with strong winds, low relative humidity, and receptive fuels contributed to critical fire weather conditions across the Oklahoma Panhandle.

BEAVER COUNTY --- 2.9 WSW BALKO [36.62, -100.73]

12/12/22 21:16 CST	0	Hail (2.50 in)
12/12/22 21:16 CST	0	Source: Trained Spotter

Estimated ping pong ball to tennis ball size hail while viewing through a window while sheltered in place.

BEAVER COUNTY --- 1.3 SE BALKO [36.62, -100.66], 2.1 E BALKO [36.63, -100.64]

12/12/22 21:21 CST	0	Tornado (EFU, L: 1.22 mi , W: 50 yd)
12/12/22 21:23 CST	0	Source: NWS Storm Survey

Tornado track was estimated based on photos and eye witness accounts. The tornado was moving northeast and was on the ground for just under 2 minutes. No damage was found, however the tornado didn't encounter any damage indicators along the path as it remained in open grasslands. Given the lack of damage indicators, an unknown rating has been assigned.

BEAVER COUNTY --- 5.5 S BEAVER [36.74, -100.52]

12/12/22 21:31 CST	0	Hail (1.50 in)
12/12/22 21:31 CST	0	Source: Public

BEAVER COUNTY --- 4.5 N ELMWOOD [36.68, -100.52], 4.8 N ELMWOOD [36.69, -100.51]

12/12/22 21:38 CST	0	Tornado (EF0, L: 0.66 mi , W: 50 yd)
12/12/22 21:39 CST	0	Source: NWS Storm Survey

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This tornado was documented by multiple storm chasers with photos and video as it crossed US270 south of Beaver, Oklahoma. The tornado was on the ground for approximately 1 minute. With no damage reported to the power lines that the tornado crossed along the highway and no other damage indicators along the path which remained in open grassland areas, the tornado was rated an EF0. The track and width were estimated based on eye witness reports, radar signatures and photographs.

A vigorous upper level storm system crossing the plains, combined with very strong wind shear, and modest instability created an environment capable of supporting supercells during the evening hours across the combined northeast Texas and eastern Oklahoma Panhandles. One supercell generated at least 2 brief tornadoes which did not produce damage, but were documented with video and photographs by storm chasers a few residents in the area. A few reports of hail between 1.5" and 2.5" were received across Beaver County as well.

(OK-Z002) TEXAS

12/22/22 00:45 CST	0	High Wind (MAX 51 kt)
12/22/22 00:45 CST	0	

None.

TEXAS, North Panhandle

(TX-Z001) DALLAM, (TX-Z002) SHERMAN, (TX-Z003) HANSFORD, (TX-Z004) OCHILTREE, (TX-Z005) LIPSCOMB, (TX-Z006) HARTLEY, (TX-Z007) MOORE, (TX-Z008) HUTCHINSON, (TX-Z009) ROBERTS, (TX-Z010) HEMPHILL, (TX-Z011) OLDHAM, (TX-Z012) POTTER, (TX-Z013) CARSON, (TX-Z014) GRAY, (TX-Z016) DEAF SMITH, (TX-Z017) RANDALL COUNTY, (TX-Z020) COLLINGSWORTH

12/01/22 00:00 CST	0	Drought
12/31/22 23:59 CST	0	

Much of the Oklahoma and Texas Panhandles have remained dry throughout the year. During the month December there were a wide range of drought conditions from Exceptional Drought (D4) to Moderate Drought (D1) across the combined Panhandles. Soils remained short to very short on soil moisture. Drought conditions affected pastures in ranchers to sell upwards of 35% more cattle during the year compared to previous years. More than 70% of the cotton production across the Texas Panhandle and South Plains had failed due to the drought. This was one of the worst production seasons since the 1950's. One of the hardest hit areas was central to eastern portions of the OK Panhandle into the far north central TX Panhandle. Some parts of this area have received less than 10 inches of rainfall for the entire year.

(TX-Z001) DALLAM, (TX-Z002) SHERMAN, (TX-Z006) HARTLEY, (TX-Z007) MOORE, (TX-Z008) HUTCHINSON, (TX-Z011) OLDHAM

12/01/22 10:15 CST	0	High Wind (MAX 63 kt)
12/02/22 16:32 CST	0	

An upper level disturbance moved across the Rockies and had a well stacked jet associated. Strong winds aloft mixed down to the surface and produced wind gusts upwards of 65 to 72 mph in the far northwestern combined Oklahoma and Texas Panhandles. Other areas to the southeast would gust upwards of 60 mph. Overall several areas in the central and western Panhandles were able to have sustained winds over 35 mph for some period of time.

(TX-Z006) HARTLEY, (TX-Z007) MOORE, (TX-Z013) CARSON, (TX-Z014) GRAY, (TX-Z020) COLLINGSWORTH

12/22/22 00:06 CST	0	High Wind (MAX 54 kt)
12/22/22 07:39 CST	0	

None.

(TX-Z001) DALLAM, (TX-Z007) MOORE, (TX-Z008) HUTCHINSON, (TX-Z010) HEMPHILL, (TX-Z011) OLDHAM, (TX-Z012) POTTER, (TX-Z013) CARSON, (TX-Z014) GRAY, (TX-Z016) DEAF SMITH, (TX-Z017) RANDALL COUNTY, (TX-Z018) ARMSTRONG, (TX-Z019) DONLEY

12/28/22 01:03 CST	0	High Wind (MAX 60 kt)
12/28/22 16:50 CST	0	

An upper disturbance moved across the southern Rockies with a well stacked jet associated. A surface low developed on the 27th and held it's position along southeast Colorado. Surface gradients stayed strong through the night from the 27th into the 28th. As a result

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winds managed to stay up all night and very warm overnight lows resulted across most areas in the mid to upper 50s. Some areas to the north and east that did not benefit from as much wind overnight ended up in the lower to mid 40s. As a strong 850 and 700 jet moved over the Panhandles it was pretty easy to mix the 850 winds down to the surface overnight with the warm mixed air in place. Amarillo was the first area to gust 58 mph around 2 AM and others followed gradually through the day. There was a little lull in the late morning, but winds picked up again in the afternoon and several areas would gust over 60 mph, with the highest area being Lake McClellan 2NW. This West Texas Mesonet site managed to gust to 69 mph. Other areas to note that had a very high wind gust were Fritch, Vega, Texline, Borger, Pampa, Panhandle, and Pantex. This was mostly focused along the Canadian River Valley. There were several areas that almost gusted to 58 but fell short a few mph. A few of those sites would be: Hereford, Miami, Dumas, & Adrian. This lined up very well with where the 850 and 700 mb jet streak moved over. If ample cloud cover had not stuck around and allowing temperatures to be warmer, these wind gusts could have potentially been higher.

(TX-Z008) HUTCHINSON

12/28/22 19:56 CST	0	Wildfire
12/28/22 21:59 CST	0	

Prolonged drought conditions coupled with strong winds, low relative humidity, and receptive fuels contributed to critical fire weather conditions across the Texas Panhandle.