Storm Data and Unusual Weather Phenomena - September 2023

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

TEXAS, South Panhandle

(TX-Z033) COCHRAN

	09/09/23 20:26 CST	0	High Wind (MAX 52 kt)
	09/09/23 20:26 CST	0	

PARMER COUNTY --- 2.0 NE FRIONA [34.65, -102.71]

	09/09/23 21:25 CST	0	Thunderstorm Wind (MG 50 kt)
	09/09/23 21:25 CST	0	Source: Mesonet

A Texas Tech University West Texas mesonet site near Friona measured a wind gust of 58 mph.

A cold front which moved south of the region early on the ninth led to easterly upslope flow across much of the West Texas region into eastern New Mexico during the afternoon. Thunderstorms were able to form on the higher terrain of eastern New Mexico and move into the South Plains during the evening hours. A strong outflow boundary developed well out ahead of the line of thunderstorms producing a severe wind gust at the Texas Tech University West Texas mesonet site near Sundown (Cochran County). One severe thunderstorm severe wind gust occurred near Friona (Parmer County).

SWISHER COUNTY --- 7.7 SSW VIGO PARK [34.55, -101.54]

	09/10/23 18:40 CST	0	Hail (1.00 in)
	09/10/23 18:40 CST	0	Source: Broadcast Media

Local broadcast media relayed a report of quarter size hail approximately 13 miles east of Tulia.

PARMER COUNTY --- 2.0 NE FRIONA [34.65, -102.71]

	09/10/23 20:22 CST	0	Thunderstorm Wind (MG 59 kt)
	09/10/23 20:32 CST	0	Source: Mesonet

A Texas Tech University West Texas mesonet site near Friona measured severe wind gusts from 2022 CST through 2032 CST. A peak wind gust of 68 mph was measured at 2029 and 2030 CST.

HALL COUNTY --- 4.1 SE MEMPHIS [34.67, -100.48]

	09/10/23 23:30 CST	0	Thunderstorm Wind (EG 61 kt)
	09/10/23 23:30 CST	0	Source: Law Enforcement

Law enforcement in Hall County reported that railroad crossing arms were damaged from severe winds at Farm to Market Road 1619 and US Highway 287.

GARZA COUNTY --- 1.0 NE POST [33.19, -101.37]

	09/10/23 23:54 CST	0	Thunderstorm Wind (MG 51 kt)
	09/10/23 23:54 CST	0	Source: Mesonet

A Texas Tech University West Texas mesonet site near Post measured a wind gust of 59 mph. Additionally, tree limbs of unknown size were downed upstream in western Garza County south of Southland.

A couple rounds of severe thunderstorms occurred on the evening of the tenth. A stalled out outflow boundary was located from roughly Vigo Park (Swisher County) to Jayton (Kent County). Enhanced upslope flow along the edge of the caprock and strong instabilities generated an isolated severe supercell in Swisher County producing hail up to quarter size. The second round of severe thunderstorms initiated in eastern New Mexico and moved into the South Plains late in the evening hours. A southerly low level jet enhanced moisture advection and elevated instability allowing these storms to persist across the region. Severe thunderstorm winds were reported in Parmer County and Garza County along with wind damage in Hall County.

KING COUNTY --- 8.1 WSW GUTHRIE 6666 ARPT [33.59, -100.48]

	09/11/23 16:29 CST	0	Thunderstorm Wind (MG 56 kt)
	09/11/23 16:29 CST	0	Source: Mesonet

A Texas Tech University West Texas mesonet site near Guthrie measured a wind gust of 64 mph.

An approaching cold front interacted with strong instability creating a broken line of thunderstorms across the central South Plains into the central Rolling Plains. One of these storms became severe as it moved across King County producing a wind gust to 64 mph.

LAMB COUNTY --- EARTH [34.23, -102.40]

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	09/14/23 18:45 CST		0	Hail (1.75 in)
	09/14/23 18:45 CST		0	Source: Broadcast Media

Local broadcast media relayed a report of hail up to the size of golf balls.

LAMB COUNTY --- 1.0 NE AMHERST [34.03, -102.41]

09/14/23 19:49 CST	0	Thunderstorm Wind (MG 52 kt)	
09/14/23 19:49 CST	0	Source: Mesonet	

A Texas Tech University West Texas mesonet site near Amherst measured a wind gust of 60 mph.

HOCKLEY COUNTY --- ANTON [33.82, -102.17]

09/14/23 20:28 CST	0	Thunderstorm Wind (EG 61 kt)	
09/14/23 20:28 CST	0	Source: Public	

A report was received of several structures damaged by severe wind gusts . A roof was blown off of an outbuilding and into a nearby house . Additionally, a fence supported by steel posts was blown down and debris was found approximately 200 yards away.

LUBBOCK COUNTY --- 4.0 NNE SHALLOWATER [33.73, -101.95], 2.2 NNW LUBBOCK [33.61, -101.87]

09/14/23 20:54 CST	0	Thunderstorm Wind (MG 57 kt)	
09/14/23 21:15 CST	0	Source: Mesonet	

A swath of severe thunderstorm winds affected an area from Shallowater to Texas Tech University . On the campus of Texas Tech University, several utility poles were blown down. A Texas Tech University West Texas mesonet site near Shallowater measured a wind gust to 64 mph. Another mesonet on the campus of Texas Tech University measured severe wind gusts from 2117 CST through 2118 CST. A peak wind gust of 66 mph was measured at 2117 CST. Additionally, the Automated Surface Observing System at Lubbock Preston Smith International Airport measured a severe wind gust of 61 mph at 2115 CST.

LUBBOCK COUNTY --- 2.0 NW REESE VLG [33.62, -102.04], 2.0 NE SLATON [33.45, -101.63]

09/15/23 01:21 CST	0	Thunderstorm Wind (MG 68 kt)	
09/15/23 02:16 CST	0	Source: Mesonet	

An extensive swath of severe thunderstorm winds occurred from Reese Center across the city of Lubbock to Slaton. Numerous instances of damage occurred within this swath. Most damage was large tree limbs in excess of one foot in diameter downed by high winds. There was also various damage to homes and apartment buildings. Numerous Texas Tech University West Texas mesonet sites across Lubbock County observed severe thunderstorm winds . The peak wind gust measured by the Texas Tech University West Texas mesonet was 78 mph at Slaton at 0214 CST.

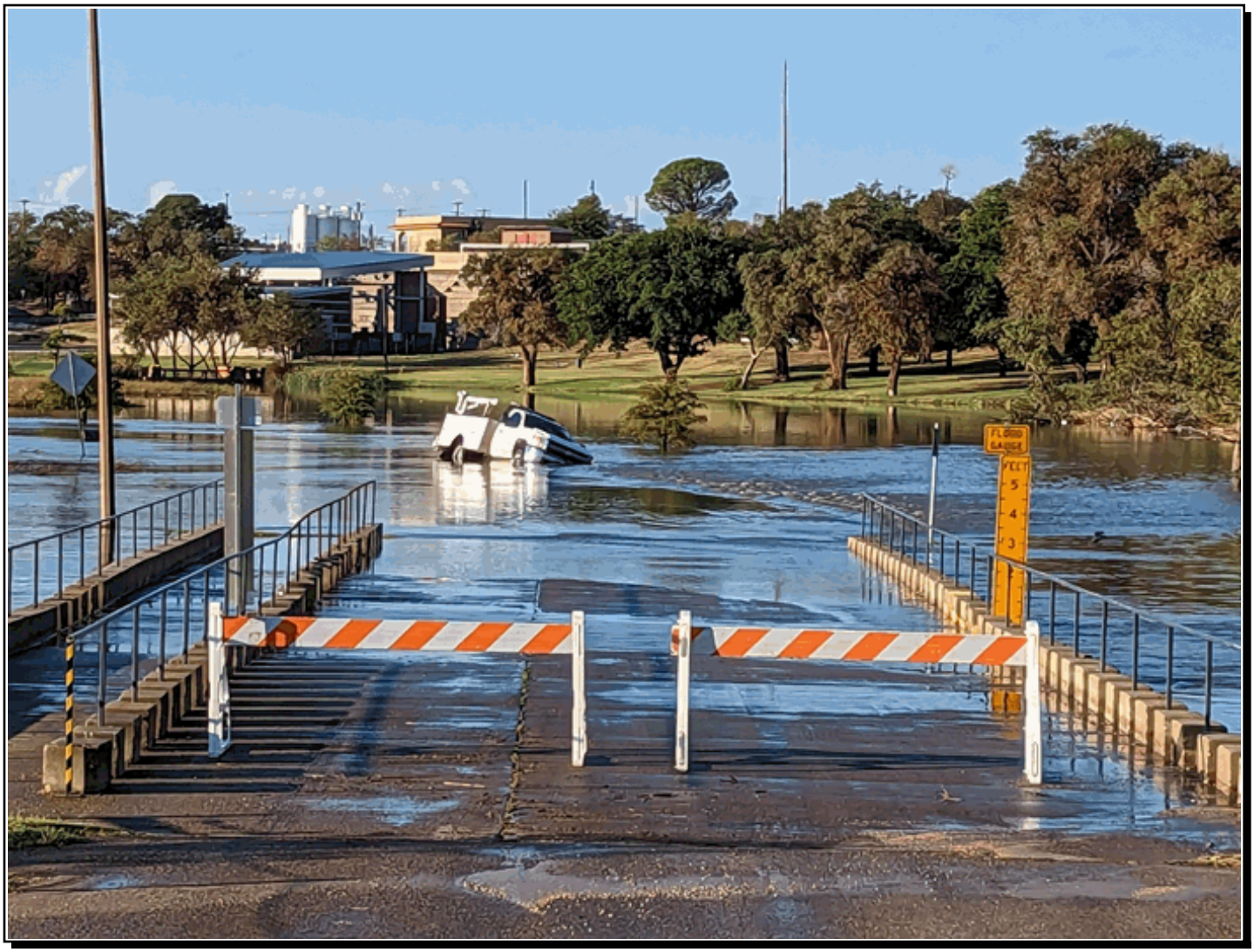
LUBBOCK COUNTY --- 1.3 S BROADVIEW [33.63, -101.95], 5.5 NNE BURRIS [33.60, -101.75], 3.9 WNW MIDWAY [33.54, -101.65], 1.1 N SLATON MUNI ARPT [33.50, -101.67], 0.8 W BURRIS [33.53, -101.79], 2.4 S CARLISLE [33.55, -101.96]

09/15/23 01:30 CST	0	Flash Flood (due to Heavy Rain)	
09/15/23 18:30 CST	0	Source: NWS Storm Survey	

Intense rain rates occurred with thunderstorm activity over central Lubbock County affecting the city of Lubbock in addition to the severe thunderstorm winds. Numerous vehicles became stalled out on the east side of the city of Lubbock. In addition, many roads were closed across Lubbock with water over the roadway. The flooding persisted well into the afternoon of the 15 th as the water moved downstream into Buffalo Springs Lake and Ransom Canyon . A Texas Tech University West Texas mesonet site on the campus of Texas Tech University measured 2.43 inches of rain in 20 minutes. At least one home experienced flooding at Ransom Canyon on the south side of the lake.

From late on the 14th through the early morning hours on the 15th, severe thunderstorms brought torrential rainfall, large hail, and several swaths of severe winds. Thunderstorms were initially isolated to widely scattered on the evening of the 14th. Sufficient vertical wind shear allowed some of the storms to rotate becoming supercells and tracking southeastward. The most intense storm developed in the southwest Texas Panhandle and tracked down US Highway 84 through Lubbock (Lubbock County). This storm produced golf ball size hail in Earth (Lamb County), 60 mph winds near Amherst (Lamb County) and wind damage in Anton (Hockley County). This same supercell went on to produce several observed severe wind gusts across central Lubbock County and damage on the campus of Texas Tech University. Following the evening supercell, a large complex of thunderstorm moved out of eastern New Mexico and across much of the South Plains and Rolling Plains through the early morning of the 15th. This complex of thunderstorms generated very intense winds as it approached and moved across Lubbock (Lubbock County) and Slaton (Lubbock County). A peak gust of 78 mph was measured by the Texas Tech University West Texas mesonet site in Slaton shortly after the storms produced wind gusts up to 69 mph within the city of Lubbock. The severe winds downed numerous large limbs and trees and damaged several roofs in and around Lubbock as they raced through. This large area of thunderstorms produced torrential rainfall as it moved through. The heaviest rain from this event was also focused where the strongest wind occurred, from Lubbock through Slaton and southwest Crosby County. Much of the rain fell in less than a half hour which led to extensive runoff and flooding. The runoff was directed down the North Fork Double Mountain Fork of the Brazos River downstream of Lubbock. Even well after the rain concluded many low spots and drainages were inundated with water and several roads were closed.

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



A truck attempted to drive through a flooded roadway near Mackenzie Park on the morning of the 15th. Photograph from the NWS storm survey team.

PARMER COUNTY --- 3.1 N HUB [34.58, -102.74], 8.2 N LAZBUDDIE [34.50, -102.61]

	09/15/23 22:11 CST	0	Thunderstorm Wind (EG 70 kt)
	09/15/23 22:29 CST	0	Source: Fire Department/Rescue

The volunteer fire chief in Friona and the NWS cooperative weather observer reported extensive damage to the south of Friona due to large hail and wind. At least six pivot irrigation system sprinklers were overturned in addition to downed utility poles along State Highway 86 west of State Highway 214. Numerous cattle were injured due to flying debris and hail. Over 200 head of cattle had to be put down due to their injuries. Hail up to baseball size was reported within this swath of severe winds and hail.

PARMER COUNTY --- 3.1 N HUB [34.58, -102.75], 8.2 N LAZBUDDIE [34.50, -102.62]

	09/15/23 22:11 CST	0	Hail (2.75 in)
	09/15/23 22:29 CST	0	Source: Fire Department/Rescue

The volunteer fire chief in Friona and the NWS cooperative weather observer reported extensive damage to the south of Friona due to large hail and wind. At least six pivot irrigation system sprinklers were overturned in addition to downed utility poles along State Highway 86 west of State Highway 214. Numerous cattle were injured due to flying debris and hail. Over 200 head of cattle had to be put down due to their injuries. Hail up to baseball size was reported within this swath of severe winds and hail.

DICKENS COUNTY --- 3.0 NNW MC ADOO [33.77, -101.00]

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	09/16/23 00:22 CST		0	Thunderstorm Wind (MG 78 kt)
	09/16/23 00:26 CST		0	Source: Mesonet

A wet microburst occurred over the town of McAdoo. A Texas Tech University West Texas mesonet site near McAdoo measured severe wind gusts from 0022 CST thorough 0026 CST. A peak wind gust of 90 mph was measured at 0024 CST.

GARZA COUNTY --- 5.5 SSW GRAHAM CHAPEL [33.08, -101.52]

09/16/23 02:29 CST	0	Thunderstorm Wind (MG 53 kt)
09/16/23 02:32 CST	0	Source: Mesonet

A Texas Tech University West Texas mesonet site near Graham measured severe wind gusts from 0229 CST thorough 0232 CST. A peak wind gust of 61 mph was measured at 0232 CST.

A consecutive night of intense thunderstorms with heavy rain swept across parts of northwest Texas late on the 15th through the early morning hours of the 16th. The strongest storms produced large hail and damaging winds. Particularly hard hit were portions of Parmer County several miles southwest through southeast of Friona, where baseball size hail was accompanied by severe winds that damaged six pivot irrigation sprinklers and a couple of dairy farms shortly after 2200 CST. Approximately 200 head of cattle were lost due to the storm which had to be put down due to their injuries. Later that night a wind gust of 90 mph was measured by the Texas Tech University West Texas Mesonet near McAdoo (Dickens County) at 0024 CST, though no known damage was confirmed in or near McAdoo.

CHILDRESS COUNTY --- 3.9 NNE KIRKLAND [34.44, -100.05]

09/19/23 16:52 CST	0	Hail (2.50 in)
09/19/23 16:52 CST	0	Source: Public

A report of baseball size hail in far eastern Childress County was relayed to the office from a trained spotter. No damage was reported.

A diffuse dryline mixed into the Rolling Plains on the afternoon of the 19th. Hot temperatures east of the dryline led to a deeply mixed boundary layer eroding a cap that was in place. Strong instability and moderate deep layer shear contributed to strong supercell development from the extreme southeastern Texas Panhandle into the northern Rolling Plains. One of these storms became severe in eastern Childress County producing hail up to baseball size.

MOTLEY COUNTY --- 1.0 S NORTHFIELD [34.27, -100.60]

09/24/23 19:38 CST	0	Thunderstorm Wind (MG 51 kt)
09/24/23 19:39 CST	0	Source: Mesonet

A Texas Tech University West Texas mesonet site near Northfield measured wind gusts of 59 mph from 1938 CST through 1939 CST.

COTTLE COUNTY --- 6.0 WSW PADUCAH [33.99, -100.40]

09/24/23 20:21 CST	0	Hail (1.75 in)
09/24/23 20:21 CST	0	Source: Emergency Manager

A local emergency manager in Cottle County reported hail ranging from quarter size to golf ball size approximately six miles to the west of Paducah along US Highway 62.

COTTLE COUNTY --- 10.0 SW PADUCAH [33.92, -100.42]

09/24/23 20:24 CST	0	Thunderstorm Wind (EG 54 kt)
09/24/23 20:30 CST	0	Source: Mesonet

A Texas Tech University West Texas mesonet site near Paducah measured intermittent severe wind gusts from 2024 CST through 2030 CST. A peak wind gust of 62 mph was measured at 2026 CST.

Despite large scale subsidence behind a departing upper level short wave trough and a cooler post frontal airmass, a single isolated severe thunderstorm developed in the extreme southeastern Texas Panhandle. Modest upslope flow in the post frontal air mass allowed a thunderstorm to develop along the edge of the caprock near Palo Duro Canyon State Park. This thunderstorm tracked to the southeast across the Rolling Plains producing several severe wind gusts and hail up to golf ball size.

(TX-Z033) COCHRAN, (TX-Z035) LUBBOCK

09/29/23 19:56 CST	0	High Wind (MAX 54 kt)
09/30/23 00:25 CST	0	

LUBBOCK COUNTY --- REESE VLG [33.60, -102.02]

09/29/23 22:15 CST	0	Thunderstorm Wind (MG 51 kt)
09/29/23 22:15 CST	0	Source: Mesonet

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

A Texas Tech University West Texas mesonet site at Reese Center measured a severe wind gust of 59 mph.

Moist mid-levels, a surface pressure trough, and strong surface heating allowed for thunderstorms to develop in eastern New Mexico by late afternoon. Storms slowly moved into the South Plains of West Texas through the evening. High winds associated with a strong outflow boundary occurred near Sundown as measured by a Texas Tech University West Texas mesonet. Very dry sub-cloud layers allowed one of these storms to produce a severe wind gust at Reese Center (Lubbock County). After thunderstorms moved through Lubbock County, a wake low developed which produced several high wind gusts across Lubbock County.

Peak wind gusts reported by the Texas Tech University West Texas mesonet are listed below:

59 mph at Shallowater (Lubbock County), and
59 mph at Lubbock Christian University (Lubbock County).

A peak wind gust of 62 mph was reported by the Automated Surface Observing System at Lubbock Preston Smith International Airport.