Storm Data and Unusual Weather Phenomena - July 2018

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

OKLAHOMA, Panhandle

(OK-Z001) CIMARRON

	07/02/18 20:10 CST	0	High Wind (MAX 54 kt)
	07/02/18 20:10 CST	0	

A line of convection moving east out of northern New Mexico held together and produced a wind gust of 62 MPH for far western Cimarron County, OK during the evening hours on the 2nd of July.

(OK-Z002) TEXAS

	07/03/18 01:21 CST	0	High Wind (MAX 50 kt)
	07/03/18 01:21 CST	0	

Outflow from convection raced north from main thunderstorm complex and produced 58 MPH wind gust in Texas County, OK.

TEXAS COUNTY --- 10.6 NE EVA [36.92, -101.78]

	07/19/18 15:10 CST	0	Thunderstorm Wind (MG 57 kt)
	07/19/18 15:10 CST	0	Source: Mesonet

TEXAS COUNTY --- 0.9 NW (GUY)GUYMON MUNI ARP [36.69, -101.51]

	07/19/18 18:06 CST	0	Thunderstorm Wind (MG 56 kt)
	07/19/18 18:06 CST	0	Source: ASOS

Showers and thunderstorms developed across the Oklahoma Panhandle and northwest Texas Panhandle this afternoon in close proximity to a surface boundary coupled with steep lapse rates from triple digit temperatures and some low level moisture and associated atmospheric instability. Due to rather large surface temperature and dewpoint spreads along with corresponding high downdraft CAPE, storms developed and produced damaging wind gusts across the central OK Panhandle and the northeast TX Panhandle through the early evening hours on the 19th.

CIMARRON COUNTY --- 6.9 SE KENTON [36.83, -102.88]

	07/22/18 20:50 CST	0	Thunderstorm Wind (MG 61 kt)
	07/22/18 20:50 CST	0	Source: Mesonet

CIMARRON COUNTY --- 6.9 SE KENTON [36.83, -102.88]

	07/22/18 21:00 CST	0	Thunderstorm Wind (MG 52 kt)
	07/22/18 21:00 CST	0	Source: Mesonet

CIMARRON COUNTY --- 1.5 SSW KEYES [36.80, -102.26]

	07/22/18 21:39 CST	0	Thunderstorm Wind (MG 50 kt)
	07/22/18 21:39 CST	0	Source: Broadcast Media

A upper level disturbance rode over a large upper level high pressure system centered over central Texas. As a result, storms developed along a good moist axis across the OK Panhandle. A complex of thunderstorms moved east across the KS/OK border the evening of the 22nd. However, a rather strong outflow boundary was generated which moved quickly to the southeast which generated severe wind gusts across the western OK Panhandle in several locations.

TEXAS COUNTY --- 0.9 SE HOOKER [36.86, -101.21]

	07/25/18 22:22 CST	0	Thunderstorm Wind (EG 70 kt)
	07/25/18 22:22 CST	0	Source: Emergency Manager

Roofed ripped off trailer, damage to 4 or 5 trailers on NE side of Hooker. Winds estimated 70 to 80 mph.

TEXAS COUNTY --- 0.9 SW HOOKER [36.86, -101.23]

	07/25/18 22:25 CST	0	Thunderstorm Wind (MG 61 kt)
	07/25/18 22:25 CST	0	Source: Mesonet

BEAVER COUNTY --- 0.7 S BEAVER [36.81, -100.52]

	07/25/18 22:45 CST	0	Thunderstorm Wind (EG 70 kt)
	07/25/18 22:45 CST	0	Source: Emergency Manager

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Several reports of damage to buildings with trees blown down in and around Beaver. Winds estimated at 70 to 80 mph.

An established complex of thunderstorms working south across western Kansas approached the Oklahoma Panhandle during the late evening hours of the 25th and early morning hours on the 26th. Across the OK Panhandle, DCAPE values of 1300-1500 J/Kg along with effective shear of 30-40 kts was enough energy after sunset to establish to some extent the line of thunderstorms moving south. Severe wind gusts and thunderstorm damage was a result of this line of storms as it moved south. Line of thunderstorms finally weakened below severe limits by the time it crossed south into the TX Panhandle.

TEXAS COUNTY --- 0.7 S OPTIMA [36.74, -101.35]

	07/29/18 22:14 CST	0	Thunderstorm Wind (EG 61 kt)
	07/29/18 22:14 CST	0	Source: Law Enforcement

Late report thunderstorm wind gust.

TEXAS COUNTY --- 0.6 E HARDESTY [36.62, -101.19]

	07/29/18 22:45 CST	0	Thunderstorm Wind (EG 52 kt)
	07/29/18 22:45 CST	0	Source: Trained Spotter

Late report thunderstorm wind gust.

First round of convection occurred across portions of the southeast Texas Panhandle starting around the late afternoon on the 29th. Meso-scale conditions of deep mixing profile with nearby residual outflow boundaries from the previous day in-conjunction with DCAPE values of 1500-1700 J/Kg and 30-40 kts of effective shear allowed one supercell to develop in the diurnal heating in the afternoon hours. Drifting southeast across the boundary, it produced a few reports of severe wind gusts along with thunderstorm damage. While this was ongoing, a complex of supercells all the way in southeast Wyoming within the best synoptic/dynamic setup within the best positioning of the upper level jet with strong mid level lapse rates and similar DCAPE values and 40-50 kt shear along and just ahead of a south bound moving cold front across the Plains. Some of these individual cells eventually merged into a complex of storms going further into the evening hours as MUCAPE and daytime heating became more limited. The frontal lift was the main support for these storms by the time they reached the OK/TX Panhandles. By the time the thunderstorms reached the OK Panhandles, damaging winds became the main threat as they moved through the northern Panhandles. One supercell did manage to move across the OK and far north central TX Panhandle that did show some good mid level rotation and at one point had a few separate couplets in the rotation, but no tornado was reported with that particular storm. Main thunderstorm complex finally weakened by the early morning hours on the 30th as the line of storms finally exited the Panhandle.

TEXAS, North Panhandle

MOORE COUNTY --- 0.9 NE DUMAS MUNI ARPT [35.86, -102.01]

	07/10/18 22:15 CST	0	Thunderstorm Wind (MG 50 kt)
	07/10/18 22:15 CST	0	Source: AWOS

A thunderstorm within a cluster of storms developed right over Dumas, TX in a high DCAPE low bulk shear environment where the core of the thunderstorm collapsed over the AWOS site in Dumas which measured 58 MPH thunderstorm wind gust.

GRAY COUNTY --- 1.5 NNE PAMPA [35.55, -100.96]

	07/14/18 16:30 CST	0	Thunderstorm Wind (EG 65 kt)
	07/14/18 16:30 CST	0	Source: Emergency Manager

Part of a roof blown off a new barn, some brick damage to a church, a couple large tree limbs down, and a few leaning power poles. Time estimated.

GRAY COUNTY --- 2.4 ENE PAMPA [35.54, -100.93]

	07/14/18 16:30 CST	0	Thunderstorm Wind (MG 60 kt)
	07/14/18 16:30 CST	0	Source: Mesonet

A series of outflow boundaries in a high MUCAPE/DCAPE and low bulk shear environment produced pulse storms in which one collapsed over parts of Gray County, TX producing a severe wind gusts with reported damage.

ARMSTRONG COUNTY --- 12.2 SW CLAUDE [34.98, -101.50]

	07/15/18 14:43 CST	0	Thunderstorm Wind (MG 61 kt)
	07/15/18 14:43 CST	0	Source: Mesonet

An outflow boundary generated from convection to the east raced west across portions of the southern TX Panhandle in a high CAPE/low shear environment. Core collapse of storm in-conjunction with outflow boundary produced a severe wind gust in Armstrong

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County.				
LIPSCOMB COUNTY --- 0.6 W BOOKER [36.45, -100.54]				
	07/19/18 17:59 CST		0	Thunderstorm Wind (MG 54 kt)
	07/19/18 17:59 CST		0	Source: Broadcast Media

Showers and thunderstorms developed across the Oklahoma Panhandle and northwest Texas Panhandle this afternoon in close proximity to a surface boundary coupled with steep lapse rates from triple digit temperatures and some low level moisture and associated atmospheric instability. Due to rather large surface temperature and dewpoint spreads along with corresponding high downdraft CAPE, storms developed and produced damaging wind gusts across the central OK Panhandle and the northeast TX Panhandle through the early evening hours on the 19th.

LIPSCOMB COUNTY --- 0.6 W BOOKER [36.45, -100.54]				
	07/28/18 23:32 CST		0	Thunderstorm Wind (MG 55 kt)
	07/28/18 23:32 CST		0	Source: Broadcast Media

A complex of thunderstorms more organized across the OK Panhandle did move SE into the TX Panhandle with the assistance of an outflow boundary in this high DCAPE, low shear environment. These storms did produce a severe wind gust across the NE TX Panhandle.

DONLEY COUNTY --- 0.9 NE CLARENDON [34.94, -100.89]				
	07/29/18 19:13 CST		0	Thunderstorm Wind (EG 52 kt)
	07/29/18 19:13 CST		0	Source: Public

Estimated by the public who called in for the report.

DONLEY COUNTY --- 0.9 NE CLARENDON [34.94, -100.89]				
	07/29/18 19:17 CST		0	Thunderstorm Wind (EG 52 kt)
	07/29/18 19:17 CST		0	Source: Law Enforcement

Tree knocked down on powerline.

DONLEY COUNTY --- 3.5 WNW CLARENDON [34.94, -100.96]				
	07/29/18 19:20 CST		0	Thunderstorm Wind (EG 52 kt)
	07/29/18 19:20 CST		0	Source: Law Enforcement

One car flipped over 4 miles west of Clarendon on Highway 287.

DONLEY COUNTY --- 3.6 NW LELIA LAKE [34.94, -100.82]				
	07/29/18 19:21 CST		0	Thunderstorm Wind (EG 52 kt)
	07/29/18 19:21 CST		0	Source: Law Enforcement

One car flipped over 4 miles east of Clarendon on Highway 287.

OCHILTREE COUNTY --- 2.8 N FARNSWORTH [36.32, -100.97]				
	07/29/18 23:30 CST		0	Thunderstorm Wind (EG 52 kt)
	07/29/18 23:30 CST		0	Source: Trained Spotter

Late report of thunderstorm wind gust and an inch of rain.

First round of convection occurred across portions of the southeast Texas Panhandle starting around the late afternoon on the 29th. Meso-scale conditions of deep mixing profile with nearby residual outflow boundaries from the previous day in-conjunction with DCAPE values of 1500-1700 J/Kg and 30-40 kts of effective shear allowed one supercell to develop in the diurnal heating in the afternoon hours. Drifting southeast across the boundary, it produced a few reports of severe wind gusts along with thunderstorm damage. While this was ongoing, a complex of supercells all the way in southeast Wyoming within the best synoptic/dynamic setup within the best positioning of the upper level jet with strong mid level lapse rates and similar DCAPE values and 40-50 kt shear along and just ahead of a south bound moving cold front across the Plains. Some of these individual cells eventually merged into a complex of storms going further into the evening hours as MUCAPE and daytime heating became more limited. The frontal lift was the main support for these storms by the time they reached the OK/TX Panhandles. By the time the thunderstorms reached the OK Panhandles, damaging winds became the main threat as they moved through the northern Panhandles. One supercell did manage to move across the OK and far north central TX Panhandle that did show some good mid level rotation and at one point had a few separate couplets in the rotation, but no tornado was reported with that particular storm. Main thunderstorm complex finally weakened by the early morning hours on the 30th as the line of storms finally exited the Panhandle.

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