#### **Severe Weather Reports**

Weather Forecast Office Albuquerque, NM Issued January 4, 2020 1:15 PM MDT



2019 Severe Weather Reports						
Event	NWS ABQ County Warning Area	Statewide				
Tornado	15	18				
Hail	121	172				
Thunderstorm Wind Gust	52	68				
Flash Flood	25	34				
Total	213	292				



In 2019, there was a total of 292 severe weather reports across the state. To put this number in perspective, in 2018, there was a total of 280 reports, but in 2017, there were a total of 420 reports, while in 2016, there were 222 reports. This years number of reports is slightly above average. A total of 268 severe thunderstorm warnings were issued by our office, down slightly from the 329 severe thunderstorm warnings that were issued in 2018. The numbers may be deceiving though, as May and June were quite busy. More than half the days in May and June came with a severe thunderstorm risk for some portion of the Albuquerque County Warning Area, and everyday came with a threat for at least garden variety thunderstorms.

May 2019					June 2019								
SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
			1 MRGL	2 TSTM	∃ SLGT	4 SLGT						-	SLGT
5 MRGL	6 MRGL	7 SLGT	8 MRGL	9 TSTM	10 TSTM	11 TSTM	SLGT	SLGT	SLGT	SLGT	TSTM	MRGL	TSTM
12	13	14	15	16	17	18	TSTM	TSTM	MRGL	TSTM	SLGT	MRGL	SLGT
MRGL	1STM	1STM	TSTM 77	MRGL	TSTM 24	1STM	16 TSTM		SLGT	19 TSTM	Z0 TSTM	ZI TSTM	<sup>22</sup> SLGT
SLGT	SLGT	TSTM	MRGL	SLGT	TSTM	SLGT	23 MRGL	24 TSTM	25 MRGL	26 MRGL	27 MRGL	78 TSTM	<sup>29</sup> TSTM
MDT	MRGL	TSTM	TSTM	SLGT	SLGT		30 TSTM						

Left: Storm Prediction Center Convective Outlook Calendar showing the greatest risk category for any portion of the Albuquerque County Warning area. TSTM indicated general thunderstorms, MRGL indicates a marginal risk of severe thunderstorms, SLGT indicates a slight risk of severe thunderstorms, ENH (not shown) indicates a enhanced risk of severe thunderstorms, MDT indicates a moderate risk of severe thunderstorms, and HIGH (not shown) indicates a high risk of severe thunderstorms. Graphic courtesy of the Iowa Environmental Mesonet at Iowa State University

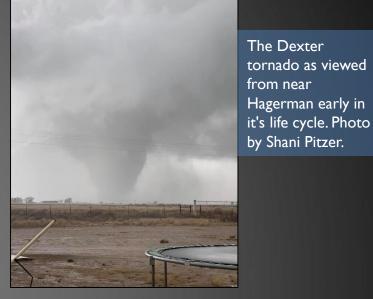
# 2019 Severe Weather Summary Top Severe Weather Events: #1 – March 12<sup>th</sup> -13<sup>th</sup>

A record breaking storm system brought heavy snow, rain, thunderstorms, fog and even a tornado to the Land of Enchantment. Abundant subtropical moisture streamed into New Mexico on the 12th, resulting in heavy snow across the mountains, rain at lower elevations and fog across much of the east central and southeast plains. The fog persisted through much of the afternoon, but we knew if a storm formed in this area, it would quickly go severe given the amount of instability and shear in the area. Late in the afternoon, thunderstorms quickly formed from the east slopes of the Sacramento Mountains northeastward and formed what is called a quasi-linear convective system (QLCS). The storms were low-topped, or not very tall, but the amount of shear was more than enough for storms embedded within the line to quickly rotate. One such storm developed a tornado approximately 15 miles south-southwest of Dexter. The tornado then quickly moved northeast through the community of Dexter. Six people sustained injuries and six homes were substantially damaged or destroyed. An additional dozen homes and structures sustained minor to moderate damage.

The following day, the storm system rapidly strengthened along the Front Range of the Rockies. This bomb cyclone with an associated cold front racing through New Mexico resulted in widespread wind gusts of 60 to 80 mph, the worst of which occurred across along and east of the Central Mountain Chain. Several semi-trailers were blown over and a cargo train with 26 cars was blown off a bridge and fell nearly 50 feet to the bottom of the Canadian River. Additionally, an avalanche occurred across from Taos Ski Valley which crossed a few roads and trapped a woman inside her house.

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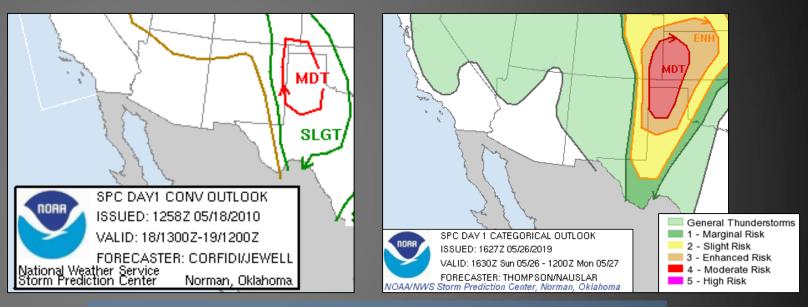
Damage to a home in Dexter. Photo by Jim Tucker.

Top Severe Weather Events: #2 – May 26th

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On May 26th, much of eastern New Mexico was at risk for severe weather. By late morning, the Storm Prediction Center had upgraded to moderate risk of severe thunderstorms for a sliver of northeast and east central New Mexico. This was the first moderate risk for any portion of the Albuquerque County Warning Area since May 18, 2010. However, 2010 was prior to the updated categorical outlooks, which did not include the "Enhanced" category, which falls between "Slight" and "Moderate" currently. For more information on the Storm Prediction Center categorical outlooks, click <u>here</u>.



Left: The Storm Prediction Center Day I Outlook issued on May 18, 2010. Right: The Storm Prediction Center Day I Outlook on May 26, 2019 and corresponding legend.

#### Top Severe Weather Events: #2 – May 26th

So, what happened? On May 26th, thunderstorms developed along a dryline in eastern New Mexico and quickly became severe with large hail, damaging thunderstorm wind gusts and several tornadoes. A violent supercell thunderstorm that moved through Union County during the late afternoon produced at least two tornadoes and three inch hail. Fortunately, no damage occurred due to the tornadoes. A line of storms also developed near the Caprock region, producing large hail and damaging wind gusts. At the southern edge of this line, a photogenic supercell produced a large wedge tornado near Dora. The tornado lasted nearly 30 minutes and tracked about 10 miles over predominately rural ranch and farmland in southern Roosevelt County. Fortunately, no injuries were reported. Two known properties were impacted including one 4 miles southeast of Dora and another approximately 5 ½ miles eastnortheast of Dora. Additionally, considerable damage to electrical infrastructure was noted, including ten consecutive power poles snapped several feet above the ground 1-2 miles east of Rogers on the north side of NM 237. Farther southwest, several high voltage power poles/structures were partially collapsed and associated lines downed. Additionally, a well-built hay barn that was originally an early 20th century church was completely destroyed. NWS Meteorologists also noted partial ground scouring along State Road 114 where the tornado crossed near Roosevelt County Road M. The Dora tornado was ranked an EF2 with winds estimated to be between 120 and 130 mph.



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May 26th, 2019 tornado near Dora at various times during its life cycle. All photos by Will Leverett.

**Top Severe Weather Events: #3 – June 2nd** 

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Thunderstorms first developed within the Rio Grande Valley on June 2nd, before shifting eastward across the plains. Large hail fell across the East Mountain communities and through Santa Fe from a cluster of storms that developed near Los Lunas. Multiple reports of golf ball size hail were received. As the storms shifted eastward, a tornado formed near Duran, though fortunately remained over open range land. The largest hail of the day was reported later in the afternoon in Chaves County, near the intersection of U.S. 285 and NM-559. All-in-all, 25 severe weather reports were received on this day.



Left: Golf ball size hail in Ponderosa in the East Mountains. Photo by J. Gutierrez Kruger. Middle: Larger than quarter size hail in Santa Fe. Photo by Daniel Chacon. Right: Two-inch hail in Dexter. Photo by Melanie Keithly.

#### **Other Interesting Severe Weather Facts**

The first documented snownado, or snowspout, occurred on February 17, 2019 between Pueblo Pintado and Torreon Navajo Mission in northwest New Mexico. Yes, it was snowing with temperatures in the low 30s, but a short-lived weak tornado developed!



February 17, 2019 snowspout in northwest New Mexico. Photos by Lydell Rafael.







August 5, 2019 Ute Park Flash Flood. Photo by Tom Vigil.

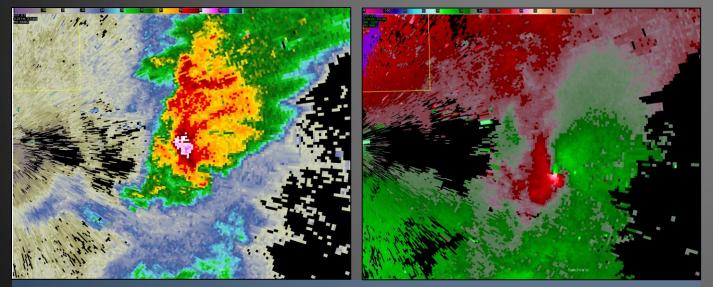
Similarly to last year, the monsoon brought several rounds of flash flooding to areas in and near Ute Park due to the burn scar. The worst of which came during a two-week period between late July and early August. Starting on July 28th, flash flooding impacted the Highway 64 corridor between Ute Park and Cimarron and caused the highway to be closed for a time. Just three days later, Saw Mill Canyon flooded. Though Eagle Creek and Hummingbird Lanes were impassible, there was minimal damage to structures. August 5th brought another round of flooding with a 5 to 6 foot surge of water through Eagle Creek and Hummingbird Lanes. Last but not least, Highway 64 at Turkey Creek flooded on August 7th.

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#### A tornado in December? You betcha!

While snow was occurring across much of northern and western NM, thunderstorms developed across portions of eastern NM. Along a back door cold front, one of the thunderstorms developed into a supercell, and produced a tornado that was on the ground for nearly 10 minutes. Three large power poles were snapped and toppled to the ground, four center pivot irrigation sections were flipped or destroyed, and dozens of small yucca plants were uprooted. The tornado missed a nearby residence by only 300 yards and barely missed the nearby Palla West Dairy. The tornado was rated EF-1. This is the latest tornado on record for the state of New Mexico. The previous latest tornado was December 26, 1966 in Pojoaque in northern Santa Fe County.



December 27, 2019 reflectivity (left) and velocity (right) radar images of the tornado in Curry County around the time three power poles were snapped (approximately 456pm).



Broken power pole. Photo by NWS Albuquerque.

#### **Severe Weather Stats**

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#### Tornado Rankings

Of the **18 tornadoes** that were reported in 2019, three were rated EF-2, two were rated EF-1, while the rest were rated EF-0.

### Biggest Hail Report

3 inches west of Clayton along Highway 56 on May 26th. Strongest Reported Thunderstorm Wind Gust

> 76 mph on March 12th at the Carlsbad Airport.

### **107 mph** in the high terrain of the southern Sacramento Mountains on March 13th.

**Highest Non-**

**Thunderstorm Wind** 

Gust

#### How does 2019 compare to normal?

Event Reports	Normal	2019	Verdict
Tornadoes	8 to 9 per year	18	Well Above Normal
Hail	~130 per year	172	Above Normal
Thunderstorm Wind Gusts	~35 per year	68	Well Above Normal
Flash Floods	~40 per year	34	Below Normal

Notes: At least one tornado has been reported each year since 1953, and before that it is likely that most tornadoes went unreported. The highest number of tornadoes ever reported was in 1991, when 31 tornadoes devastated parts of the state, especially Eddy and Lea counties. The average number of reports for most types of severe weather has steadily increased since 1950 due to increased awareness.



NM Severe Weather Events by Month

The graph on the left shows the distribution of New Mexico severe weather events by month. New Mexico's primary severe weather season is in the spring, though a secondary season often occurs in the fall. Interestingly, this years distribution was not bi-modal. Though there was a peak in reports during the months of May and June, relatively little severe weather occurred outside of those two months. This graph also shows that flash flooding in New Mexico is most frequent during monsoon season, but fortunately, little flash flooding occurred this summer.