



*Bottom Line Up Front:  
Much more active than 2020, particularly in the late Spring and Summer!*

2021 Severe Weather Reports		
Event	NWS ABQ County Warning Area	Statewide
Tornado	16	16
Hail	104	121
Thunderstorm Wind Gust	78	113
Flash Flood	58	78
Total	256	328



In 2021, there was a total of 328 severe weather reports across the state. This was over two times as many reports as what was received in 2020 (144 reports), and is slightly above the normal number of reports received in a given year. To put this number in perspective, in 2019, there was a total of 292 reports, in 2018, there was a total of 280 reports, and in 2017, there were a total of 420 reports.

A total of 355 severe thunderstorm warnings were issued by NWS Albuquerque, well above the 198 severe thunderstorm warnings issued by our office in 2020 and above the 2011-2020 average of 256.

The following slides show the top severe weather events in chronological order.

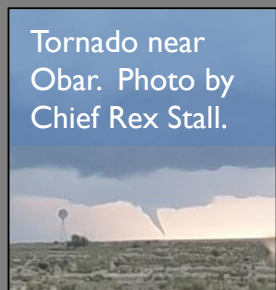


Landspout near Abo. Photo by Crystal Forni.



Landspout near Abo. Photo by Dr. Fransiska Dannemann Dugick.

Landspout near Kewa Pueblo. Photo by Will Grant.



Tornado near Obar. Photo by Chief Rex Stall.

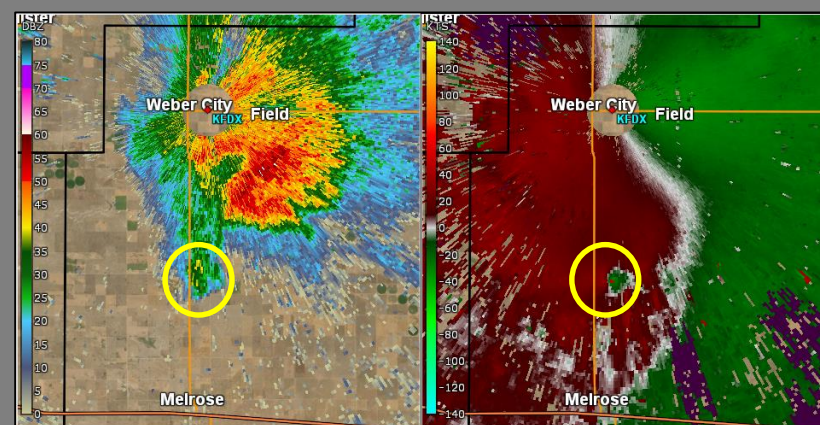


Penny-size hail in Santa Fe. Photo by Dave Polaschek.



Hail Accumulation on I-25 near Santa Fe. Photo by Julie Carson.

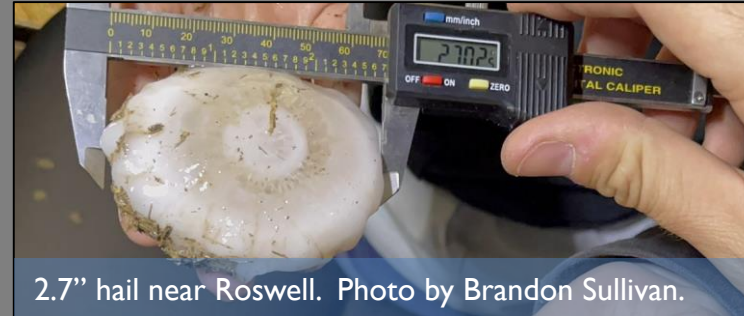
On most severe weather days, the action starts early in the afternoon. That was not so on May 17<sup>th</sup>. A weak boundary draped across the Rio Grande Valley was a focus for landspouts during the morning hours. At least 3 landspouts were reported from near Kewa Pueblo south toward Abo. Given the high cloud bases, these landspout tornadoes were seen from far distances and caused quite a commotion. Fortunately, no known damage occurred from these tornadoes, but other storms produced abundant amounts of hail in and around Santa Fe. Additional storms formed early in the afternoon and shifted northeastward across much of the plains. Storms initially had a hail threat, but transitioned into a strong wind threat as they moved across the northeast plains. A few storms produced supercellular tornadoes as well, including near Obar (in Quay County) and Melrose (in Roosevelt County). The tornado near Melrose was very close to the Cannon AFB radar allowing for a close look at what appeared to be a low-precipitation supercell.



View of the tornadic circulation via KFDX. The circulation moved north-northwest crossing Highway 268. Image from 423pm MDT.



May 28<sup>th</sup> was one of the most active days of the year. It started around 4 am MDT when quarter to golf ball size hail occurred near Forrest in Quay County. By early afternoon, additional thunderstorms erupted over Colfax and San Miguel counties. One storm went on to produce twin tornadoes near Maxwell, though most photos only captured one of the two. One tornado was a landspout, while the other was a mesocyclonic, or supercellular, tornado. Storms continued to become more numerous through the afternoon and evening hours. Lincoln, Chaves, Curry and Roosevelt counties were especially hard hit with hail and damaging wind gusts. Hail up to 3 inches in diameter was reported on Highway 285 south of Roswell, golf ball size hail was reported in Portales, while damaging winds knocked down power poles in parts of Clovis and west of Hagerman. Another short-lived tornado also occurred north of Arabela and this storm also produced 2 inch diameter hail. It was a long afternoon and evening of severe weather that ravaged much of eastern NM.



2.7" hail near Roswell. Photo by Brandon Sullivan.



Tornado near Maxwell. Photo by Raton Fire Dept.



2" hail near Roswell. Photo by Andrew Guidarelli.



Hail in Capulin. Photo by Dale Mark.



Snapped power pole near Hagerman. Photo by Jim Tucker.



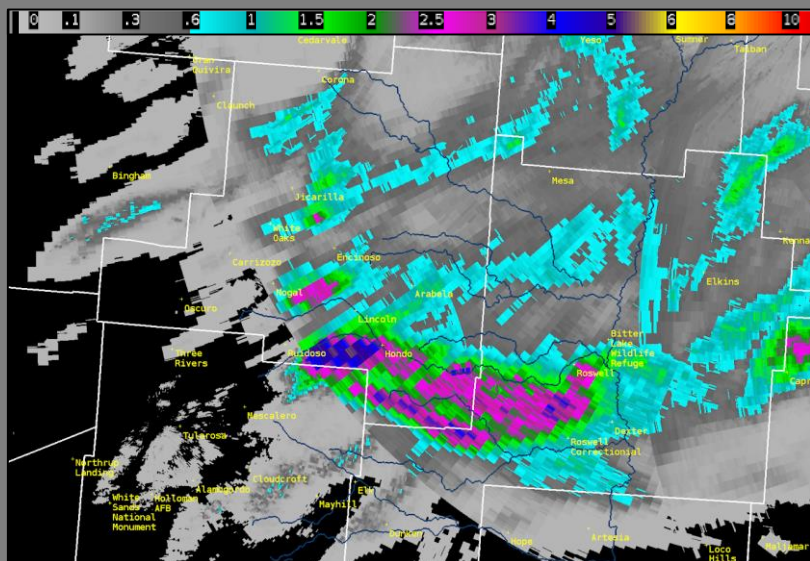
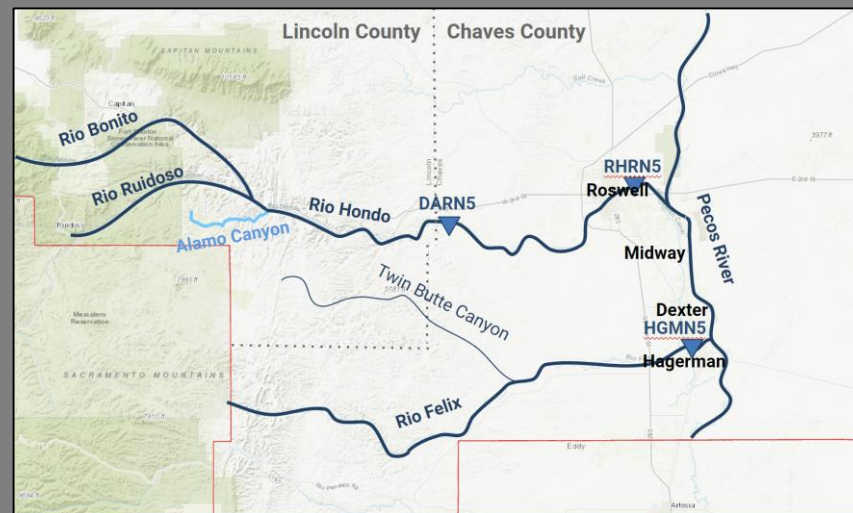
Hail in Portales. Photo by David Bowman.



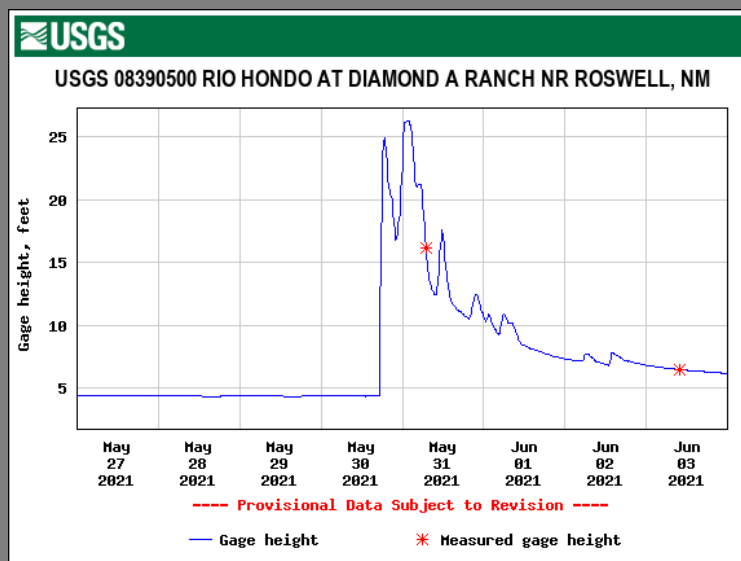
Accumulated hail in Vaughn. Webcam image courtesy of NMDOT.



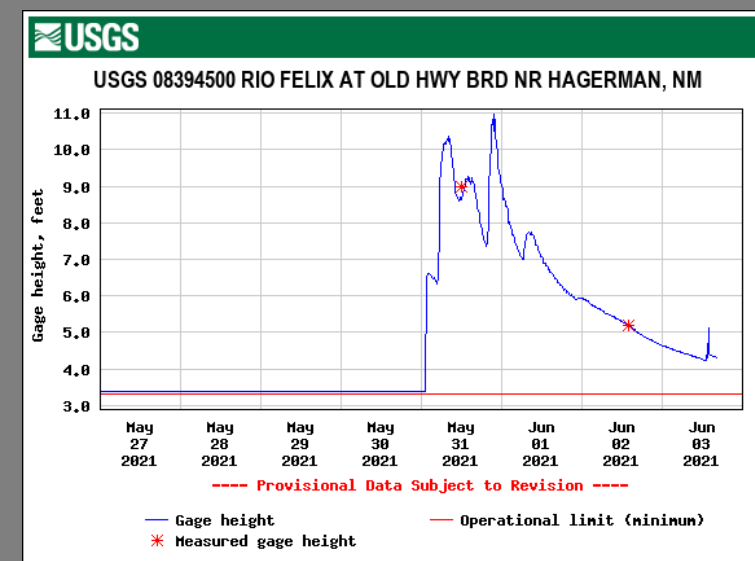
Rainfall started during the late morning hours of May 30<sup>th</sup>, wetting the soils across much of Lincoln County. By early afternoon, a severe thunderstorm developed over south central Lincoln County, dropping 2.5 to 5 inches of rain east of Ruidoso and south of Highway 70 in mountainous terrain. Flooding quickly ensued, and unfortunately one fatality occurred when an individual attempted to cross a flooded low water crossing on Alamo Canyon Road. These storms shifted east-southeast across Lincoln and Chaves counties, eventually impacting the south side of Roswell and the communities of Midway, Dexter and Hagerman. The Roswell Airport picked up 3.03 inches of rain, with 1.86 inches of that occurring in one hour. There is approximately a 3000 ft drop in elevation between the flooding east of Ruidoso and Roswell. As such, storms were shifting in the same direction as the water was flowing, quickly swelling the rivers. A 20 foot rise on the Rio Hondo was noted during the evening of the 30<sup>th</sup>.



Storm total accumulation shows over 4 inches of radar estimated precipitation between Ruidoso and Hondo, and over 2 inches of precipitation in a swath to Roswell.



A 20 foot rise was noted on the Rio Hondo at Diamond A Ranch (DARN5; near the Lincoln-Chaves County) line during the early evening of May 30<sup>th</sup>.

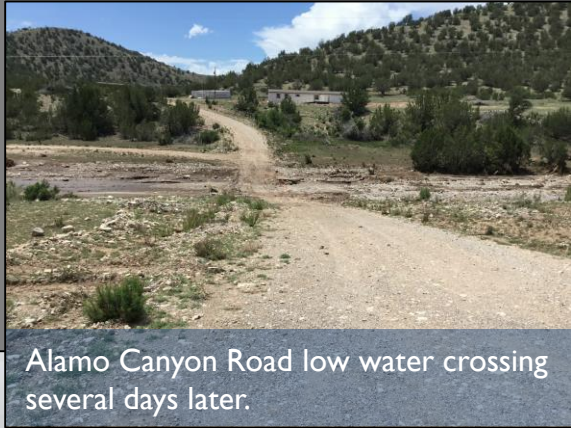


A 7 foot rise was noted on the Rio Felix in Hagerman (HGMN5) during the early morning hours of May 31<sup>st</sup>.



During the evening of the 30<sup>th</sup>, a levee broke west of the Roswell Airport, unable to handle the water. This combined with water continuing to race downhill from the mountainous terrain to the west, resulted in several water rescues and homes inundated through the evening hours. Highway 285 was reported to have 3 to 4 feet of water over the roadway. Flooding continued into May 31<sup>st</sup> when Roswell picked up an additional 1.65 inches of rainfall. The two-day total of 4.68 inches at the Roswell Airport was the 9<sup>th</sup> highest two-day rainfall total on record. Recall, the period leading up to this event was exceptionally dry. The same amount of rainfall that fell in the two-day period at the

end of May, was the same amount of rain that fell from March 13, 2020 through May 29, 2021. Though the flooding was the main story, there was also quite a bit of severe weather as well. These same storms that produced lots of rainfall also dropped large hail and showed rotation occasionally. Other storms produced tornadoes during the afternoon of May 30<sup>th</sup>, including one near San Jon and another near Moses. The action started quickly again on the 31<sup>st</sup> with a pair of landspouts reported in Socorro County. Up to quarter size hail was also reported in the Albuquerque metro area during the afternoon as well.



Alamo Canyon Road low water crossing several days later.



Flooding along west Hobson Road in Roswell. Photo courtesy of Karen Sanders.

Flooding in Hagerman. Photo by Jim Tucker.



Flooding in Midway. Photo by Jim Tucker.



Tornado near San Jon. Photo by Jon Ball.



Landspout in Veguita. Photo by Casey Crosbie.



Flooding in Dexter. Photo by Aaron Coats.

Flooding in Hagerman. Photo by Jim Tucker.



Severe thunderstorms erupted just east of the Central Mountain Chain during the afternoon of June 12<sup>th</sup>, with most noted around the Las Vegas area. After dropping 2 inch hail in Las Vegas, one storm continued to propagate southeastward toward San Augustin and became quite photogenic. Several storm chasers snapped photos of a beautiful classic supercell that went on to produce a tornado. The tornado path was just over 4.5 miles long and occurred in an uninhabited area within a series of river and/or arroyo beds where there was plenty of vegetation, mainly juniper. It was this vegetation that enabled NWS forecasters to find the damage path in Sentinel-2 satellite data. Sentinel-2 is a collection of two polar orbiting satellites with the goal of monitoring variability in land surface conditions with high resolution. The storms continued to shift east-southeast through the evening, producing periods of heavy rain, hail and strong winds as they tracked across east-central NM.

Hail in Las Vegas. Photo by Kevin Smith.



Tornado near San Augustin. Photo by Jessica Moore.

Tornado near San Augustin. Photo by Spencer Dant.



Southern NM received most of the severe weather on this day. Storms developed over the higher terrain of west central and south central New Mexico before shifting southward through the afternoon. Large hail and flooding plagued the Roswell area while large hail and damaging wind gusts plagued much of Otero County. Golf ball size hail was reported near Cloudcroft and covered the ground near Boles Acres. Storms became more of a hail threat later in the evening as they crossed Doña Ana County. Damaging wind speeds in excess of 60 and 70 mph were reported near Santa Teresa, Las Cruces and White Sands. In fact, large trees were blown down across the New Mexico State University campus. The strongest wind speed of the day was a whopping 92 mph east-northeast of Doña Ana. Flash flooding also closed a portion of U.S. Highway 70.

Berrendo Creek flooding. Photo by James Tucker.



Hail in Roswell. Photo by James Tucker.



Hail in Roswell. Photo by James Tucker.



Flooding in Roswell. Photo by James Tucker.





Though several hail reports were noted on May 22<sup>nd</sup> around Santa Fe and Capitan, none were larger than the two inch hail that fell near Rociada. This hail blanketed the landscape, looking like snow had just fallen. Much like what happens when snow occurs, roads became slick in the area.

Large hail in Rociada on May 22<sup>nd</sup>. Photos by Polly Mullen (top) and Shannon Atencio (bottom).



Another such event happened a few weeks earlier, near Mesa along Highway 285 in northwest Chaves County. On May 3<sup>rd</sup>, copious amounts of hail, both large and small, fell across the landscape for approximately 30 minutes. Trees were defoliated while trucks had dents and broken windshields. Sheep were injured and several baby lambs were killed.



Abundant amounts of hail near Mesa and an injured sheep due to the hail. Photos by Sandra Barraza.



Damage caused by a microburst on May 9<sup>th</sup>. Photos courtesy of NWS Damage Survey.

May was a busy month. On May 9<sup>th</sup>, a microburst with estimated 70 to 90 mph winds caused significant damage in and around Grady as well as in far southern Quay County. A National Weather Service damage survey team found 17 downed electrical transmission line poles due to the microburst north-northwest of Grady. A couple of the poles were snapped at the base while others were snapped halfway up the pole. Several downed trees and broken limbs were noted. A few residences also had damage including a peeled off metal roof, a downed tv antenna, tossed and destroyed carport as well as an overturned storage shed.

On July 6<sup>th</sup>, over two inches of rain breached the Belen Highline Canal which caused flooding along Main Street. Several homes and businesses were damaged from the water. The New Mexico Governor signed an executive order declaring a State of Emergency in Valencia County due to the flooding.





### Tornado Rankings

It's suspected the strongest tornado occurred on June 12<sup>th</sup> 7.4 miles northeast of San Augustin, but was officially ranked as an **EF-U** (unknown) due to an insufficient amount of damage indicators and accessibility.

### Biggest Hail Report

**3.07 inches**  
7 miles southeast of the Las Vegas Airport on June 12<sup>th</sup>.

### Strongest Reported Thunderstorm Wind Gust

**95 mph**  
on August 21<sup>st</sup> 3 miles north-northwest of Hobbs.

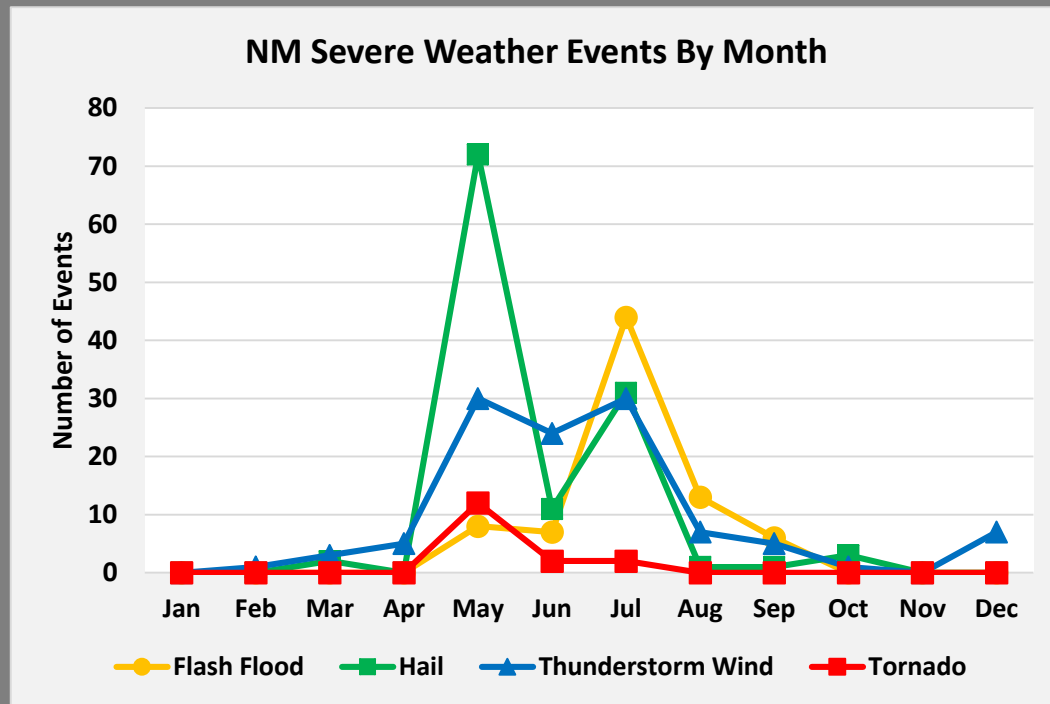
### Highest Non-Thunderstorm Wind Gust

**103 mph**  
on Kachina Peak at Taos Ski Valley on December 15<sup>th</sup>.

How does 2021 compare to normal?

Event Reports	Normal	2021	Verdict
Tornadoes	8 to 9 per year	16	Above Normal
Hail	~130 per year	121	Near Normal
Thunderstorm Wind Gusts	~35 per year	113	Well Above Normal
Flash Floods	~40 per year	78	Above 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.



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 year's distribution was not bi-modal. Instead, hail reports ramped up through May, with an interesting secondary peak in July before steadily declining through the rest of the year. Wind reports peaked during the spring and early summer months. This is a testament to the lack of low level moisture during that time of the year. Flash flooding in New Mexico is most frequent during monsoon season, though started early this year, in May, with repeated rounds of thunderstorm activity across Lincoln and Chaves counties.