

2020 Severe Weather Summary

Severe Weather Reports

Weather Forecast Office
Albuquerque, NM
Issued December 29, 2020 5:20 PM MDT



Bottom Line Up Front:

Few tornadoes, flash floods and hail events occurred in 2020, but there was still quite a bit of wind!

2020 Severe Weather Reports		
Event	NWS ABQ County Warning Area	Statewide
Tornado	5	6
Hail	41	48
Thunderstorm Wind Gust	49	77
Flash Flood	12	13
Total	107	144



In 2020, there was a total of 144 severe weather reports across the state. 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. The total number of reports for 2020 was well below average.

A total of 198 severe thunderstorm warnings were issued by NWS Albuquerque, well below the 268 severe thunderstorm warnings issued by our office in 2019 and below the 2011-2020 normal of 256.

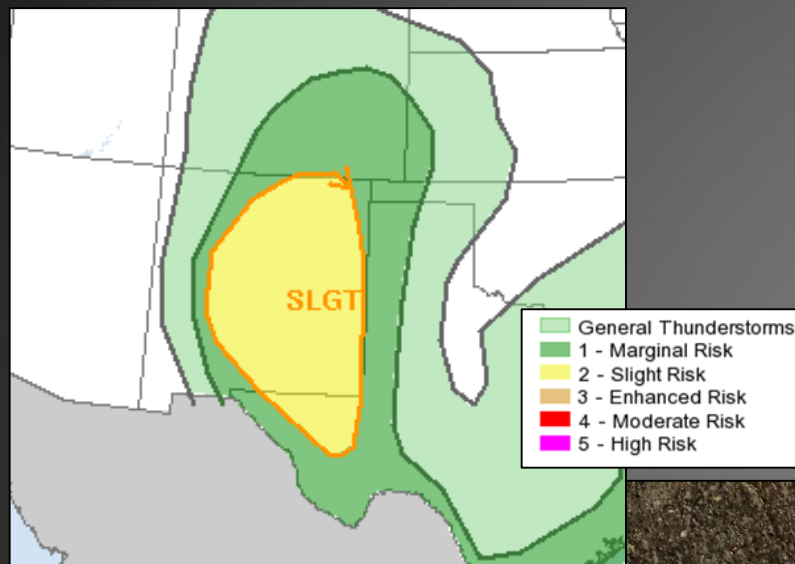
It's interesting to note that of the 48 hail reports this year, only 25 were of one inch in diameter or greater. The rest were penny (0.75") and nickel (0.88") size hail.

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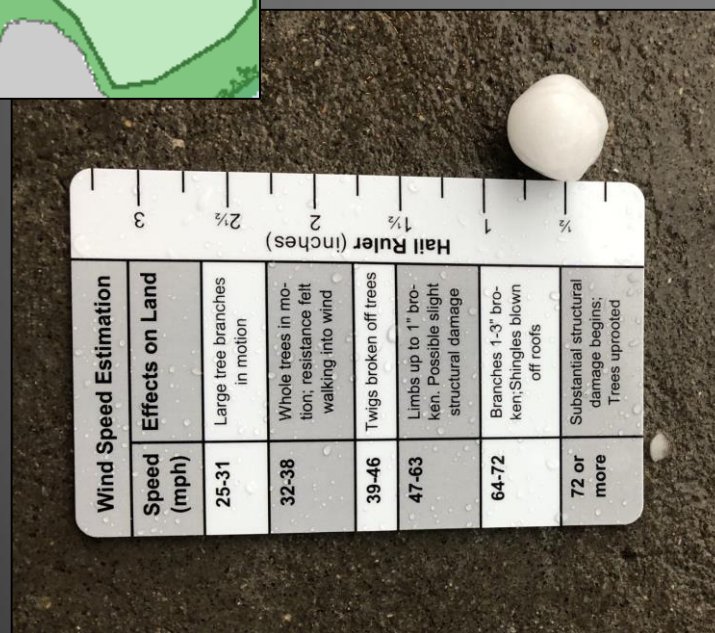
Top Severe Weather Events: #1 – June 23rd

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Top: The Storm Prediction Center Day 1 Outlook issued on June 23, 2020. Right: Near penny size hail at NWS Albuquerque.



Wind Speed Estimation		Hail Ruler (Inches)	
Speed (mph)	Effects on Land	1	2
25-31	Large tree branches in motion	1/2	1
32-38	Whole trees in motion; resistance felt walking into wind	1 1/4	2
39-46	Twigs broken off trees	1 1/2	2 1/2
47-63	Limbs up to 1" broken. Possible slight structural damage	2	3
64-72	Branches 1-3" broken; Shingles blown off roofs	2 1/2	3 1/2
72 or more	Substantial structural damage begins; Trees uprooted	3	4

A strong backdoor cold front that moved through the state the previous day replenished moisture across the area for the severe event on June 23, 2020. With northwest flow aloft, deep shear and instability was in place throughout central and eastern NM. Storms initially formed early in the afternoon over the northern high terrain before moving east-southeast into the Rio Grande Valley and eastern plains. The most intense thunderstorms were across the eastern plains where storms that produced large hail and damaging winds continued into the evening hours. A strong thunderstorm also affected the Albuquerque metro area, and penny sized hail fell at the Albuquerque WFO.

On this day, the Storm Prediction Center issued slight risk for severe thunderstorms, initially across much of eastern New Mexico, then expanding westward as conditions continued to look favorable. This was the only slight risk issued this year for the Albuquerque Metro Area.

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Top Severe Weather Events: #2 – July 26th

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The richest plume of monsoon moisture of the entire season set up over New Mexico on the weekend of July 25-26, 2020. The combination of several days of heavy rainfall with widespread showers and thunderstorms set the stage for flash flooding across the region. Rainfall amounts over the 48-hour period averaged three to five inches in the area from Socorro County north and east across the Manzano Mountains into the high plains of eastern New Mexico. A quick burst of torrential rainfall around Madrid flooded several arroyos and damaged a couple roadways. Flash flooding occurred along parts of State Road 1 near Luis Lopez and washed one truck into the water. Another flash flood impacted the area around San Antonio resulting into the closure of U.S. Highway 380. Arroyos overflowed their banks between Bloomfield and Aztec, resulting in a few road closures and some minor damage to a couple homes. Minor flooding occurred in many other parts of the state including Aztec, Edgewood, Albuquerque, Gallup, and Dulce. Fortunately, there were no injuries from these thunderstorms.



Top: Flash flooding along Highway 380 in San Antonio. Photo by Andy Sanchez. Bottom: Flash flooding in Madrid. Photos by Annie Whitney.

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Top Severe Weather Events: #3 – July 31st

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A fresh recharge in moisture, north to south steering flow with abundant shear and instability led to the development of numerous showers and storms during the early to mid afternoon hours on July 31st. Several of these storms were strong to severe as they progressed southward across the eastern plains and through the Rio Grande Valley. A storm near Las Vegas dumped hail up to the size of golf balls with very heavy rainfall and strong winds. Another storm moved south across Interstate 25 near San Jose and produced quarter size hail. Storms that developed over the Jemez Mountains moved south through Cochiti Pueblo with quarter size hail before blasting through the Albuquerque metro area with damaging winds and heavy rainfall. Ruidoso also experienced severe weather with quarter size hail and heavy rainfall. Minor flooding was reported in many areas as well. Swift runoff into the urban drainage system in Albuquerque washed two individuals down the Embudo Arroyo. One individual was rescued, however, the other died in the flood waters.



Left: Golf ball size hail in Las Vegas. Photo by Nate Archuleta. Right: Quarter size hail in Ruidoso. Photo by Emergency Manager Joe Kenmore.



Significant amounts of hail on the north side of Las Vegas. All photos by Dwight Torres.

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Other Interesting Severe Weather Facts

Four of the six tornadoes that occurred this year were landspouts! These are extremely hard to detect and warn for. We always appreciate your photos and videos of these and all severe weather!



Top Left: Northwest Albuquerque August 15th courtesy of Scott Overpeck. Top Right: Near Pleasant Hill March 17th courtesy of Cesar Chavez. Bottom Left: March 21st near Bloomfield. Snapshot taken from video courtesy of Lydell Rafael. Bottom Right: Near Veguita on July 15th relayed by Casey Crosbie.

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Damaged residence near Midway on May 19th. Photos by Midway EMS.

It seems like every year, at least one rogue wind event occurs in Chaves County. Whether from a strong outflow boundary, a dry microburst, or something else, Chaves County seems to be a magnet for damage from these events. This year was no exception. On May 19th, a dry microburst downed at least two power poles, power lines, and significantly damaged a poorly constructed residence near Midway. Then on July 24th, a 68 mph wind gust was recorded at the Roswell airport. These strong straight-line winds downed power lines and snapped several power poles, as well as damaged roofs, fences, and trees along East Hobson Road on the south side of Roswell.



Downed power pole in Roswell on July 24th. Photo by Jim Tucker.

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Tornado Rankings

All 6 tornadoes that occurred this year were rated **EF-0** and had path lengths less than one mile long.

Biggest Hail Report

2.5 inches
west of Portales on
June 22nd.

Strongest Reported Thunderstorm Wind Gust

83 mph
on August 23rd east-
northeast of Doña Ana
(north of Las Cruces).

Highest Non- Thunderstorm Wind Gust

89 mph
at Sandia Peak Tramway
on September 8th.

How does 2020 compare to normal?

Event Reports	Normal	2020	Verdict
Tornadoes	8 to 9 per year	6	Below Normal
Hail	~130 per year	48	Well Below Normal
Thunderstorm Wind Gusts	~35 per year	77	Above Normal
Flash Floods	~40 per year	13	Well 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.

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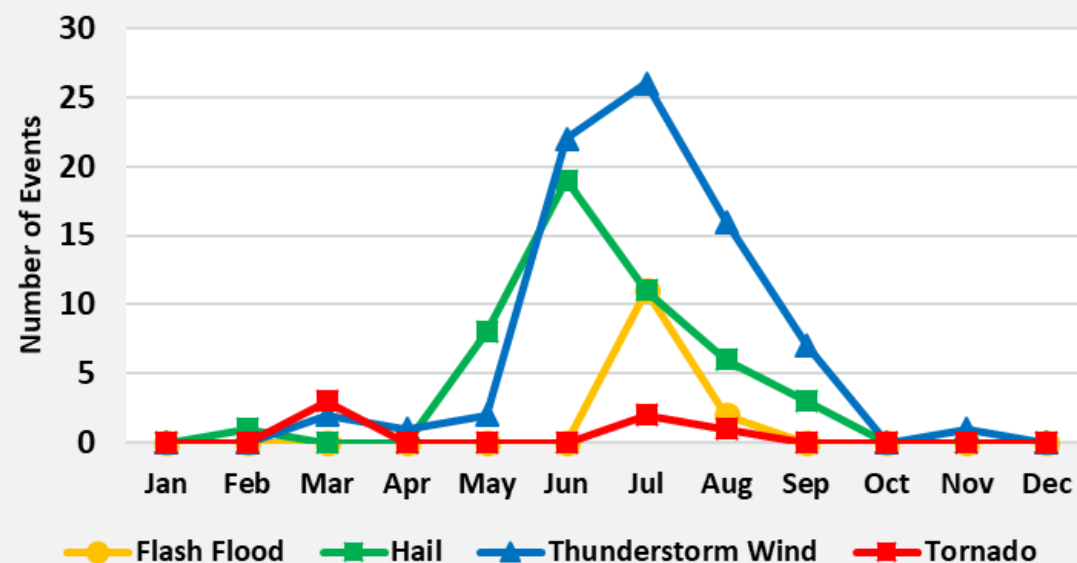
Severe Weather Events By Month

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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 year's distribution was not bi-modal. Instead, hail reports ramped up through May and June before steadily declining through the summer, while wind reports peaked during the summer months. This is a testament to the lack of moisture during the monsoon. There were a few flash flood reports, however, and this graph also shows that flash flooding in New Mexico is most frequent during monsoon season. Fortunately, little flash flooding occurred this summer.