



Bottom Line Up Front:
Flash flooding made up more than half of all severe weather reports!

2022 Severe Weather Reports		
Event	NWS ABQ County Warning Area	Statewide
Tornado	2	2
Hail	37	57
Thunderstorm Wind Gust	38	55
Flash Flood	95	120
Total	172	234



2022 was similar to 2020 in that there were relatively few severe weather reports. In total, there was 234 severe weather reports across the state, though most were flash flooding reports. This is far less than the 328 reports in 2021, but more than what was received in 2020 (144 reports), and is below the average number of reports received over the last 10 years (approximately 320).

Only 119 severe thunderstorm warnings were issued by NWS Albuquerque, well below the 355 severe thunderstorm warnings that were issued in 2021 and also below the 2011-2020 average of 256. Conversely, 249 Flash Flood Warnings were issued this year, nearly double the amount of the next highest year (129 in 2013). 157 of the total Flash Flood Warnings that were issued by NWS Albuquerque were related to burn scar flooding.

Flash flooding stole the show this year, especially as it was related to burn scars. 63% of all Flash Flood Warnings that were issued were for burn scar flash flooding. Here's the breakdown:

Burn Scar	Number of Warnings
Hermits Peak/Calf Canyon	76
Cerro Pelado	28
Black	15
Bear Trap	12
McBride	12
Cooks Peak	10
Medio (2020)	2
Nogal Canyon	1
Luna (2020)	1

It's clear what areas thunderstorms tended to favor. Unfortunately, even lighter rains on burn scars can lead to flash flooding, while heavy rains can lead to catastrophic damages.



July 22nd Hermits Peak/Calf Canyon burn scar flash flooding damage along Tecolote Creek. Photo by NWS.



Aug 8th Hermits Peak/Calf Canyon burn scar flash flooding damage along El Llano Road. Photo by Bladen Breitreiter.



Aug 9th McBride burn scar flash flooding. Photo by Ira Pearson.

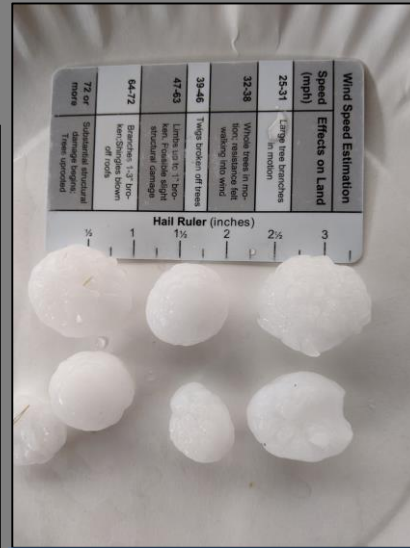
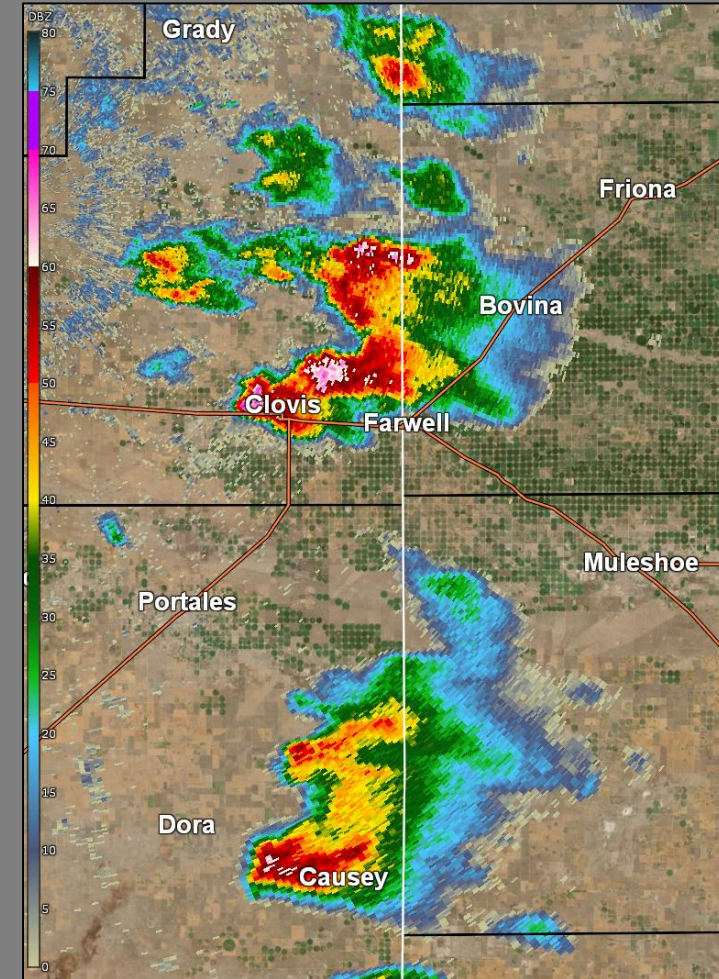


July 29th Hermits Peak/Calf Canyon flash flooding along Gallinas Creek. Photo by USFS BAER team.

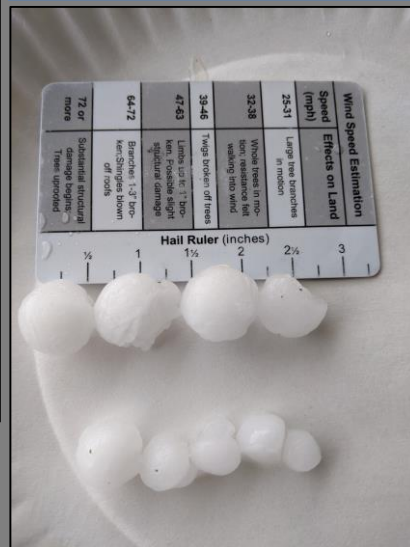
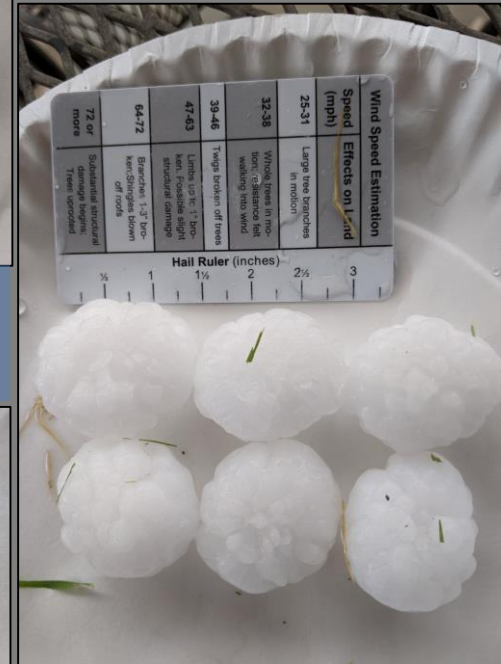
More information on this year's flash flooding can be found on this [Storymap](#) and in the [2022 Hydrology Highlights](#).



Low level moisture returned across eastern NM on May 23, 2022. As the dryline sharpened across the eastern plains, showers and thunderstorms developed by mid-afternoon. As these thunderstorms tracked through the eastern plains, they intensified and became severe just west of the New Mexico and Texas border. The main hazard with these storms was hail, particularly in Curry and Roosevelt counties where multiple spotters reported hail at least one inch in diameter. Heavy rain was also common with these thunderstorms as rain totals were around one to two inches. However, with such a dry and parched surface, only minor street ponding in Clovis was reported.



Hail up to half dollar size in Clovis on May 23rd. Photos by Dotty Willmon.



View of the severe storms via KFDX (Cannon Air Force Base). Image from 428pm MDT.

A series of backdoor cold fronts ushered moisture into New Mexico, setting the stage for repeated rounds of severe weather during the week of June 2nd through June 8th across central and eastern NM. On the 2nd, severe weather favored south central New Mexico, where 1" hail was reported at Gran Quivira and several White Sands Mesonet sites reported wind gusts over 60 mph. The dryline sharpened on the 3rd near the Central Mountain Chain. After storms developed, they moved toward the east and intensified. A thunderstorm in central San Miguel County likely produced the largest hail of the day with radar estimating two to three inch hail, however, its remote location provided no verification. Nonetheless, hail up to the size of golf balls was reported near Yeso. On the 7th, thunderstorms developed across the Sangre de Cristo Mountains and then tracked in an easterly direction onto the plains where they strengthened. The strongest thunderstorm of the day started near Wagon Mound and then made a right turn before tracking southeastward through Harding, San Miguel, and Quay counties. To the casual radar observer, this storm looked ominous due to sidelobe contamination in the velocity output, but spotter reports suggested there was very little rotation. However, a very small, weak landspout

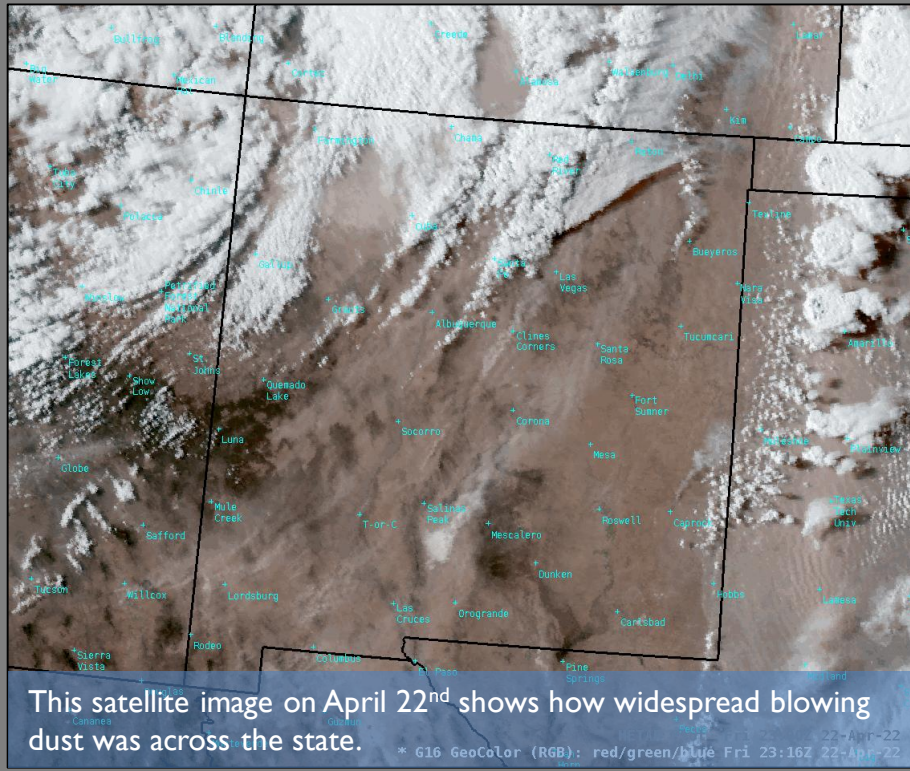


Landspout tornado approximately 12 miles northeast of Maes on June 7th. Photo by Brian McCaleb.



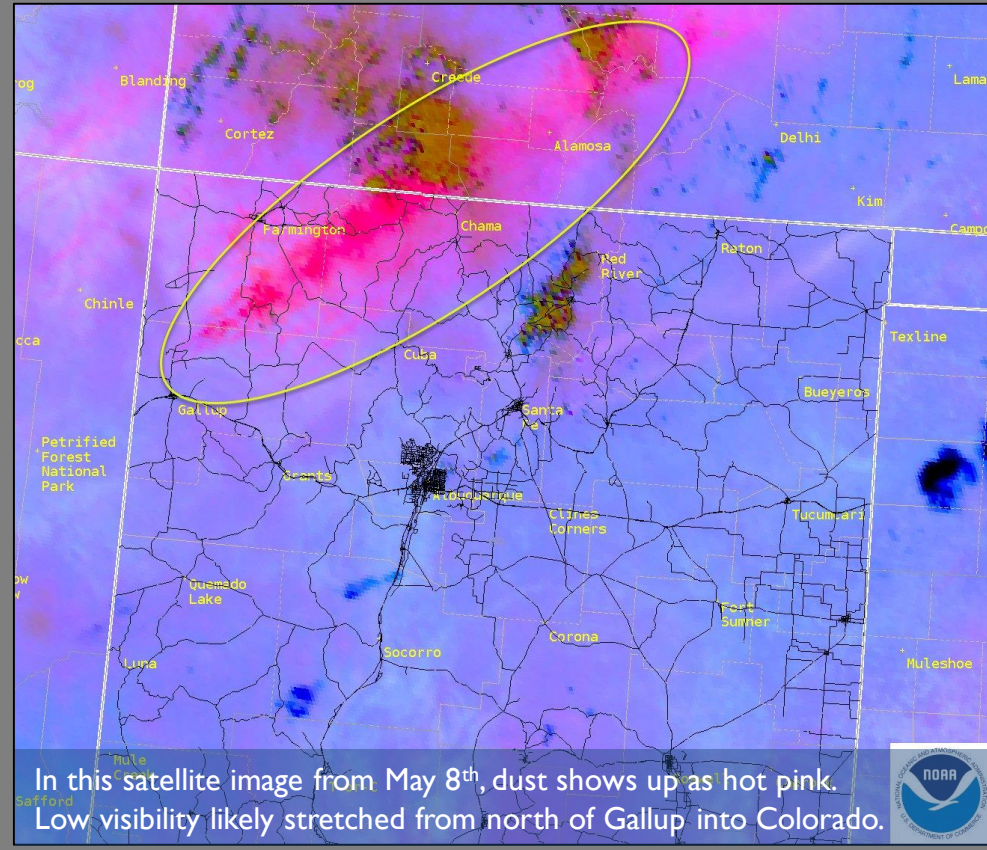
1.25" hail along Highway 64 near Cimarron Canyon on June 8th. Photo by Twitter user @ivisonphoto

briefly developed over open country. On the 8th, much of the eastern plains remain quite stable and under a blanket of low clouds. However a few short-lived thunderstorms developed in the Rio Grande Valley as well as across the high terrain of the Sangre de Cristo Mountains.



This satellite image on April 22nd shows how widespread blowing dust was across the state. * G16 GeoColor (RGB): red/green/blue Fri 23:16Z 22-Apr-22

Widespread high winds between 60 and 80 mph on April 22nd led to poor visibility in blowing dust across much of the state. Numerous sites, such as Farmington, Gallup, Santa Fe, and Albuquerque, reported reduced visibility to less than one quarter mile at times. This caused poor travel conditions, and major highways like Interstate 25 near Santa Fe were forced to close due to several traffic accidents.



In this satellite image from May 8th, dust shows up as hot pink. Low visibility likely stretched from north of Gallup into Colorado.



This webcam image from NMDOT on April 22nd at I-40 and State Highway 6 near Laguna Pueblo shows visibility was less than a quarter mile due to blowing dust.

There were several times this spring when strong winds activated a dust source region north of Gallup. Southwest winds would carry the dust northeastward across Chaco Canyon, Farmington and into Colorado. Visibility was often reduced below one quarter mile and in one instance, a spotter reported that visibility was only around 20 feet!

Though tornadoes were few and far between this year, we did receive a few reports of funnel clouds. One report of a funnel cloud came on June 27th near Crownpoint. Though the picture below shows it was well-developed, it was confirmed it never reached the ground. Two funnel clouds were reported on October 4th. One was near Edgewood, and another was over Twin Buttes Mesa near Navajo, NM. Just 4 days later on October 8th, another funnel cloud was reported near Bernardo.



Crownpoint funnel cloud on June 27th.
Photo by Lauren Pablo.



Edgewood funnel cloud on October 4th.
Photo by Kerry Jones.

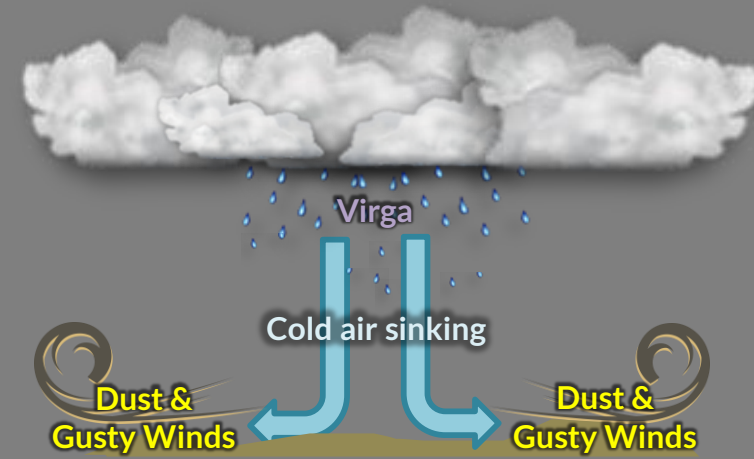


Bernardo funnel cloud on October 8th.
Photo by Lynda Herron.



Dry microburst in Belen on May 27th. Photo by Lori Grace.

We rarely get such textbook examples of weather phenomena, but we received just that on May 27th of a dry microburst in Belen. A dry microburst occurs when rain evaporates before it reaches the ground (otherwise known as virga) due to very dry air above the surface and below cloud base. The virga cools the air, allowing it to descend rapidly to the surface. The cool air spreads outward in all directions once it hits the ground. Often, the only indication is dust being kicked up. The picture on the left shows the center and left portion of the schematic below.



Tornado Rankings

Only two tornadoes, both landspouts, occurred in 2022. An **EF-0** was noted 17.8 miles southeast of Wagon Mound, and an **EF-U** (unknown) 10 miles north of Lake Valley.

Biggest Hail Report

2.75 inches
12.7 miles east-northeast of Bell Ranch on June 7th and 2 miles south of Lovington on May 1st.

Strongest Reported Thunderstorm Wind Gust

75 mph (estimated)
on May 24th 5 miles north of Monument and 1 mile north-northeast of Hobbs and again June 26th 0.7 miles north of Carlsbad.

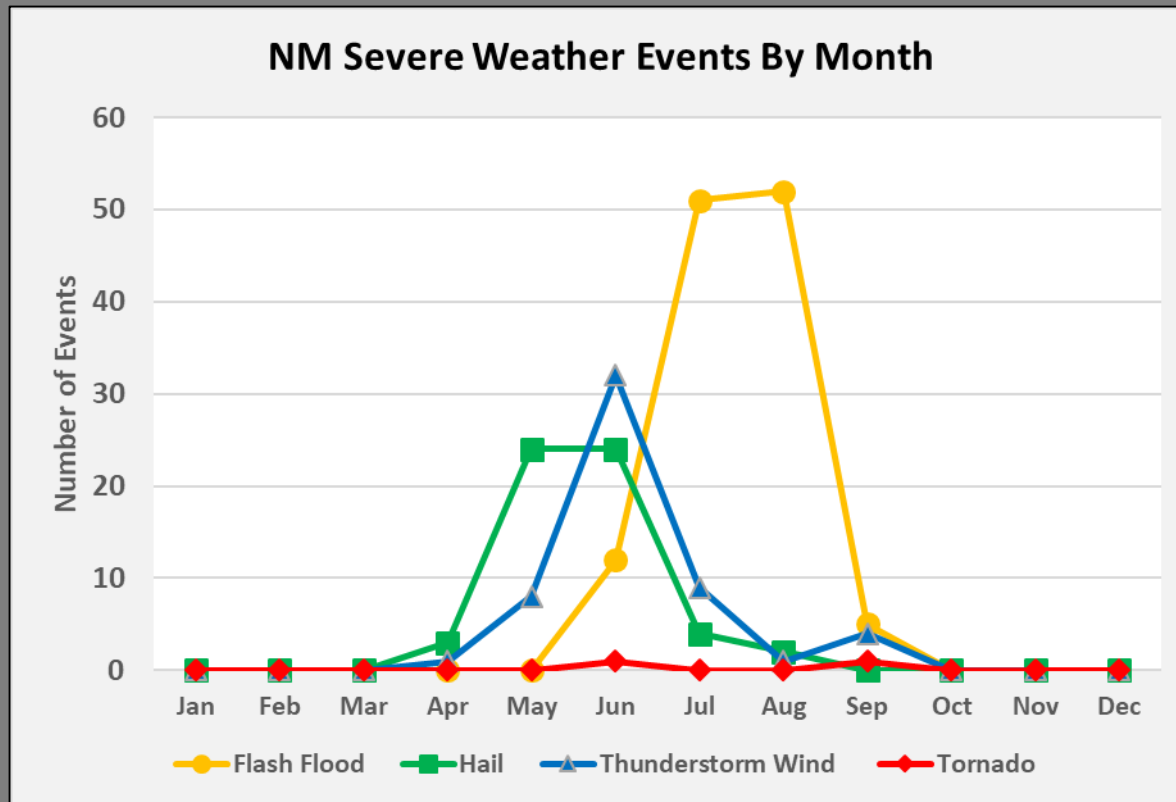
Highest Non-Thunderstorm Wind Gust

93 mph
on Kachina Peak at Taos Ski Valley on April 22nd.

How does 2022 compare to normal?

Event Reports	Normal	2022	Verdict
Tornadoes	9 to 10 per year	2	Below Normal
Hail	~150 per year	57	Well Below Normal
Thunderstorm Wind Gusts	~80 per year	55	Below Normal
Flash Floods	~75 per year	120	Well 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 and accessibility to reporting. Normal values are averaged over the last 10 years (2013-2022).



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, while the summer monsoon brings most of the flash flooding. While we did see a spring severe weather season, the fall season was largely absent after a very busy monsoon.