

Storm Survey for Severe Weather Event May 22-26, 2014

An extended severe weather event occurred across Southeast New Mexico and West Texas from May 22-26, 2014. During the five day period there were 119 total warnings:

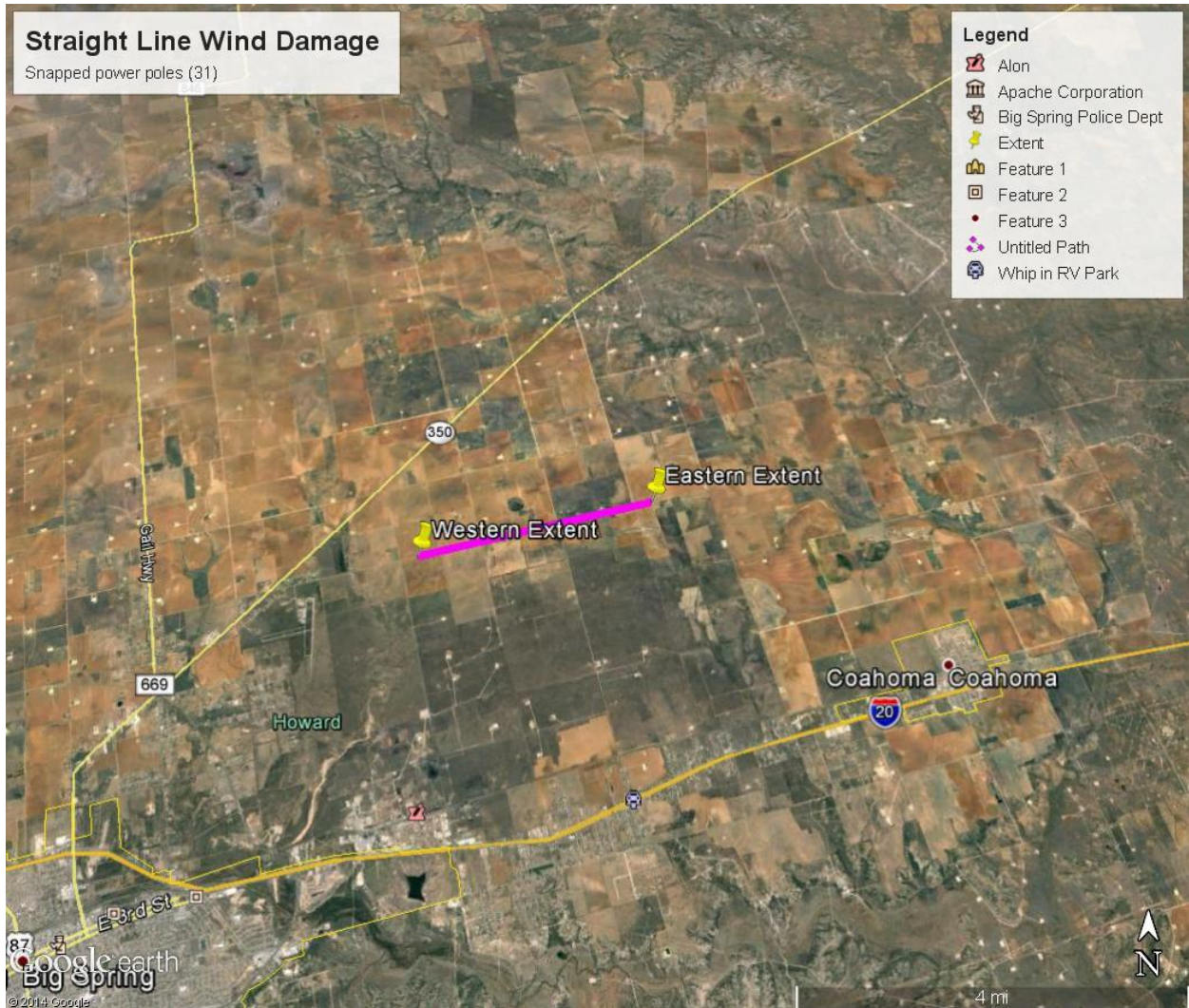
- 83 Severe Thunderstorm Warnings
- 19 Tornado Warnings
- 17 Flash Flood Warnings

A damage assessment was conducted on Tuesday, May 27, 2014 by National Weather Service Midland, TX meteorologists. The survey was conducted in areas that reported widespread damage from either straight line winds or from a tornado. In addition, there were numerous reports of large hail where car windows were destroyed, mainly in Eddy County, New Mexico during this event. It appears that the greatest amount of hail, some of it the size of baseballs was in the White City and Carlsbad area. Based on NWS warnings and calls from WFO Midland, several outdoor activities were cancelled at Carlsbad Caverns National Park; with the National Park being evacuated before the thunderstorms arrived. This potentially saved significant amount of damage to vehicles. A damage survey was not conducted in this area due to the lack of any widespread structural damage. Vehicle damage was from vehicles travelling through the area.

The damage assessment team looked at pictures, videos, spotter reports, public reports, and investigated the most likely locations where there might have been tornados. The survey team noted instances of straight line wind damage and confirmed four tornado touchdowns.

Straight Line Wind Damage:

In Howard County near Big Spring and Coahoma there was a three mile long stretch of Centerpoint Road where there were 31 power poles snapped. This was most likely the result of a Rear Flank Downdraft from a severe thunderstorm. Based on damage indicators the estimated wind speed was likely between 85-100 mph (EF-1 equivalent). The map below shows the stretch of road.

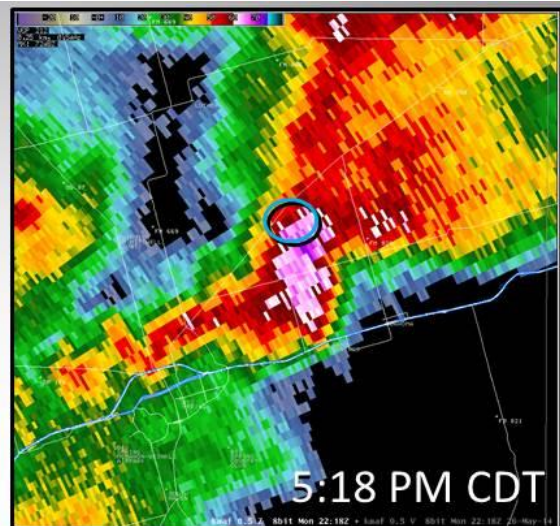
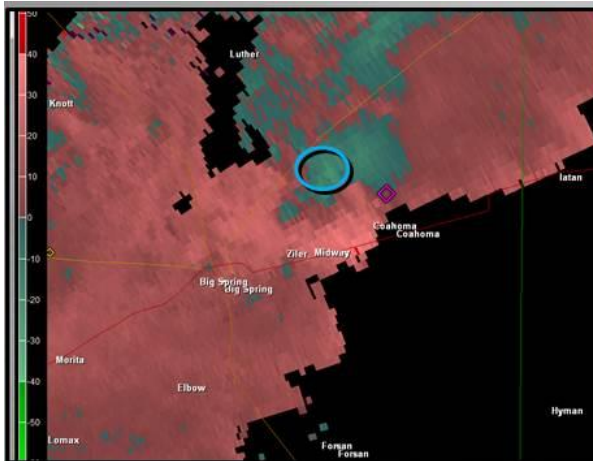


The picture below shows one of the snapped poles.



Tornado Damage:

In Howard County near the site of the straight line wind damage there was confirmed tornado damage. An Ampscot 640 pump jack was overturned. The pump jack has a weight of 78,000 lbs (including concrete base and piping). A study was performed by Dr. Craig Miller and Dr Greg Kopp from the University of Western Ontario, Department of Civil and Environmental Engineering, as well as to Dr. Kishor Mehta, Professor of Civil Engineering at Texas Tech University and a leading authority within the wind engineering community for the Notrees, TX tornado of May 14, 2010 where two smaller pump jacks (Ampscot 320 pump jacks) were overturned. The Notrees tornado was rated an EF-3. The damage survey team rated this tornado a high end EF-2 (111-135 mph). The rationale behind this rating is that since the pump jack was bigger it had a larger area for the wind to affect and the cement base was not anchored to the ground. Additionally, there was no damage to the tanks near the pump jack. The picture below shows the overturned pump jack, SRM and reflectivity radar imagery, and the location of the pump jack.



Here are other pictures of the overturned pump jack.





Due to the abundant rainfall, wet soil, and lack of vegetation it was not possible to determine the track of this tornado.

Three additional tornadoes were confirmed through pictures by spotters and the public. Since these tornadoes were of brief duration and did not produce any significant damage they were given a rating of EF-0 (65-85 mph). The following picture was courtesy of Jordan Matthews/Iain Sloan northwest of Coahoma, TX.



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Other locations that had verified tornadoes were near Marathon, TX and just east of Greenwood, TX.