May 18th Tornado Event

On Friday, May 17, 2019, the Storm Prediction Center (SPC) issued the Day 1 Severe Weather Outlook, and included a portion of the San Angelo County Warning Area (CWA) in an Enhanced Risk and a larger portion of the CWA in a Slight Risk. (image 1) According to SPC's outlook, a surface trough was located along the New Mexico and Texas state-line, with a moist airmass east of a retreating dryline across West Texas. Strong instability was also in place with MLCAPE values between 3000 and 4000 J/Kg, along with 0-6km shear values between 40 to 50 kt.

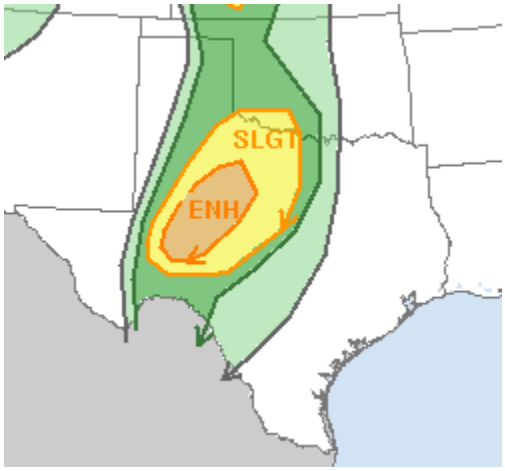

Image 1 - Day 1 Severe Weather Outlook

During the early morning hours of May 18th, a low-amplitude shortwave trough moved east across San Angelo's CWA. At 3:57 AM a Severe Thunderstorm Warning was issued for a storm in Irion County, just west of Mertzon. This storm continued to move east toward Tom Green County. At 4:49 AM, a Tornado Warning was issued for this storm. Within 10 minutes, a second warning was issued and it became clear the storm was headed for the City of San Angelo. The trajectory of this particular storm put it on a path with the Weather Forecast Office (WFO) and the co-located WSR-88D (KSJT).

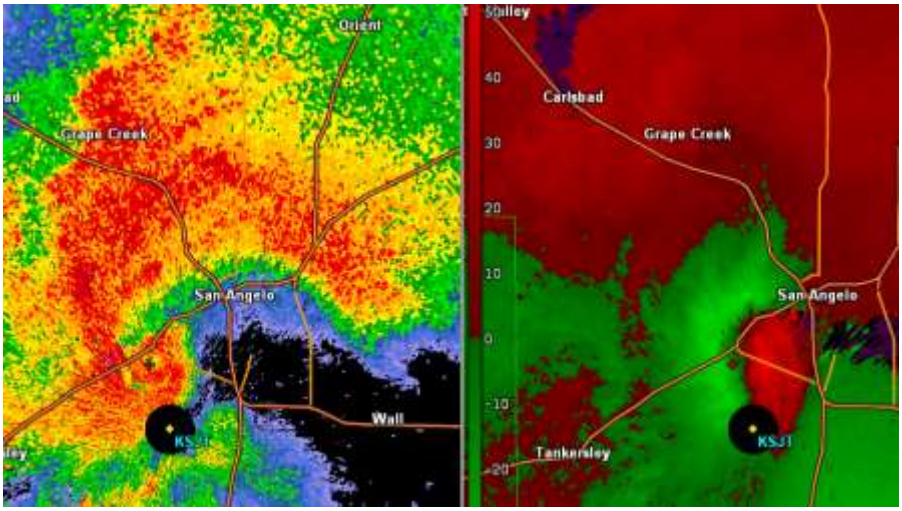

Image 2 - Reflectivity and SRM for San Angelo Storm

This resulted in the hand-off of operations to the Midland WFO while the San Angelo WFO forecasters sheltered-in-place. At 5:40 AM, as the tornadic supercell passed through San Angelo, a thunderstorm was moving northeast toward the city of Abilene, and had become severe. Less than 5 minutes later, that storm would also take on tornadic characteristics and move across the northwestern portion of Abilene. This storm would continue northeast, but

lose its tornadic signatures. The San Angelo storm moved northeast as well and hit the city of Ballinger and also northwest of Coleman. These thunderstorms congealed into a line of thunderstorms and moved east toward central Texas.

Image 3 – San Angelo Damage

The storm surveys revealed the southern storm, which passed through San Angelo, produced four known tornado tracks. The San Angelo tornado was strong enough to produce EF2 level damage, achieved wind speeds up to 125 MPH, and lasted for approximately 18 miles. The storm strengthened before reaching Ballinger and produced EF3 level damage, reach wind speeds of 145 MPH, and tracked for 19 miles. The northern storm, which passed through Abilene produced a 5-mile track, with EF2 level damage, and wind speeds up to 125 MPH. Numerous homes and business were damaged, resulting in displaced residents and widespread power outages. Two injuries were reported, but due to healthy lead times and quick actions taken, no fatalities were reported.

Image 4 - Ballinger Damage

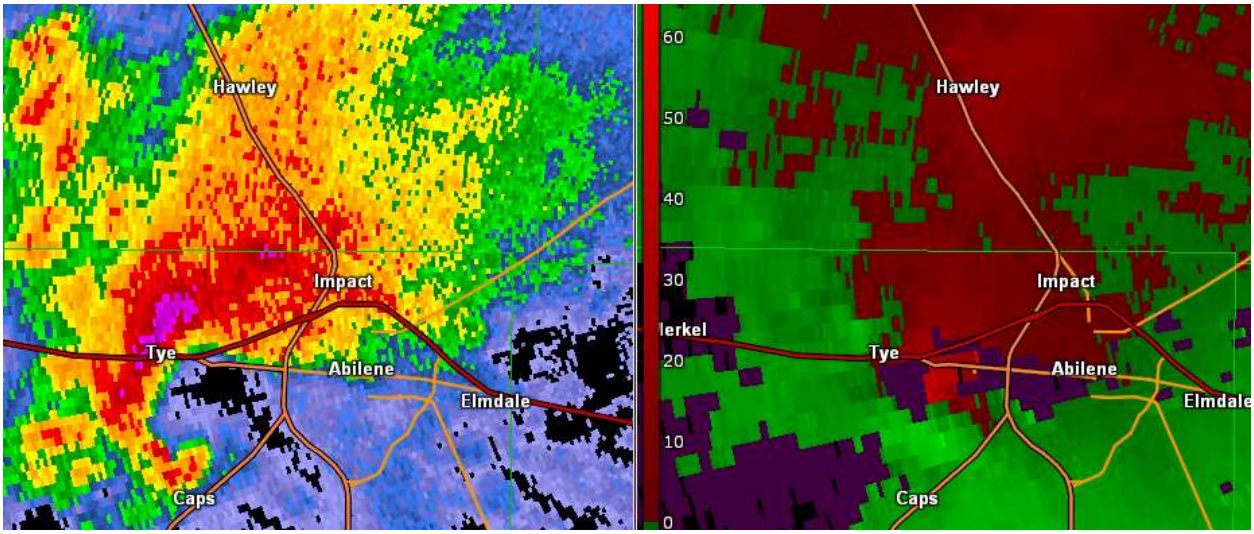

Image 5 - Reflectivity and SRM for Abilene Storm

Image 6 - Abilene Damage