

West Texas & Southeast New Mexico October 25th – 27th Winter Event



Ice laid across the farms and roadways near Tarzan, TX (Photo credit to Arturo Galindo)

The end of October was a roller coaster ride for the region as temperatures remained above normal for several weeks prior to what would be a rare, early season winter storm across much of West Texas and southeastern New Mexico. Snow and ice were common across the northern half of the region with major ice accumulations centered around the Northeast Permian Basin. The entire event was caused by a very rare arctic airmass plunging south from Canada, making its presence felt over the southern plains.

Temperatures the afternoon of the 25th were very warm across much of West Texas and southeastern New Mexico, but a sharp cold front was quickly moving south into the area, dropping temperatures rapidly over the northern Permian Basin and Northern Lea county in New Mexico. By 2 PM that afternoon, temperatures ranged from the upper 80s to low 90s along the I-20 corridor, to the 50s across areas where the front had passed (Snyder, Lamesa, Colorado City, and Tatum). Gusty Northeast winds were prevalent behind the boundary with temperatures plunging as much as 30 degrees in

the first three hours behind the cold front. Midland/Odessa would eventually see the front around 4-5 PM CDT with temperatures falling steadily behind gusty, dusty northeast winds. By night fall, temperatures were steadily falling across the northern half of the region with 30s already occurring in the northern Permian Basin and Tatum, NM.

This would set the stage for a prolonged icing event for portions of the area. A weak system out in the western US would make advancement into the area by late Monday as the cold air was firmly in place across all of West Texas and southeastern New Mexico. Sub-freezing temperatures were already common over areas like Snyder, Lamesa, and Tatum in New Mexico during the early evening hours of Monday as cold air continued to funnel into the region. As the disturbance moved overhead, light showers began to develop across western areas, moving northeast across a good chunk of the Permian Basin and southeastern New Mexico. Due to warmer air aloft, the precipitation was all in the form of rain, but temperatures just above the ground and at the surface were all below freezing. This led to areas of freezing rain north of I-20, especially around Snyder where as much as 0.5" of precipitation fell overnight Monday into early Tuesday morning with temperatures between 29-31 degrees. Ice formed on many surfaces, causing trees to bend and much of the roads to become very slick. Some lighter icing was reported for areas like Gail and Colorado City as well, but this was just a precursor to what would be a very icy Tuesday.



Downed trees were common across Snyder, TX where up to 0.5" of ice fell in the first round of freezing rain. (Photo Credits to Nathan Hines)

As our first system moved out, low clouds with drizzle and mist lingered for all of the area. Areas where temperatures hovered near or below freezing, light ice accretion was still prevalent, leading to slick conditions to remain an issue for those affected. Meanwhile, a strong storm system was approaching the region from the west, making its presence known by Tuesday evening. The colder air aloft associated with this storm system allowed for precipitation to turn from liquid to frozen with sleet and snow being reported across the Guadalupe mountains and western Eddy county Tuesday evening. Another round of showers and even thunderstorms pulsed over the Upper Trans-Pecos, eventually expanding in coverage to the east and north as the system moved closer to western Texas. Moderate to heavy precipitation in the form of sleet, freezing rain, and eventually snow fell over the western half of the Permian Basin, including Midland/Odessa on Tuesday night, causing areas to become very slick once again. On the eastern side of the Permian Basin, slightly warmer temperatures aloft were able to hang on throughout the storm, leading to another prolonged period of freezing rain and a little sleet. This is where the ice storm affects were really felt as trees and powerlines began to sag under the weight of the ice.



A collage of pictures from Southeast New Mexico showing the ice and snow impacts in the area. (Photo Credits to everyone who submitted photos during the course of the event)



A collage of pictures west Texas showing the ice and snow impacts in the area. (Photo Credits to everyone who submitted photos over the course of the event)

This was truly a marvel for West Texas and southeastern New Mexico as these types of events are very rare for the time of year, and typically are not common until the winter months (Dec.–Feb.). Much of the Permian Basin saw over 0.1” of ice accretion on trees, powerlines, and elevated surfaces, even if they didn’t get the steady freezing rain like some. In fact, the Midland/Odessa area never saw more than 0.1” of precipitation during the entire event, but the ice accumulated very efficiently due to the persistent freezing mist and drizzle. This made for some beautiful, icy images of trees around the area, including at the NWS forecast office in Midland, TX!



Ice accretion on a sagging branch on a tree at the NWS Midland Office (Photo Credit to Matthew Johnson, Meteorologist)


The worst impacts were felt in Snyder and the surrounding areas of the northeast Basin where over 0.75" of precipitation fell in the 48-hour period. Ice amounts of up to 0.5" were common in places around Scurry, Mitchell, Borden, and sections of Howard County. This type of heavy icing often results in very dangerous conditions; therefore, an Ice Storm Warning had been issued for these areas. Even outside the worst hit areas, slick roads, bent trees, bushes, and ice-covered signs were common. Even as far south as the I-10 corridor, some ice and sleet were found as the storm moved across the area.

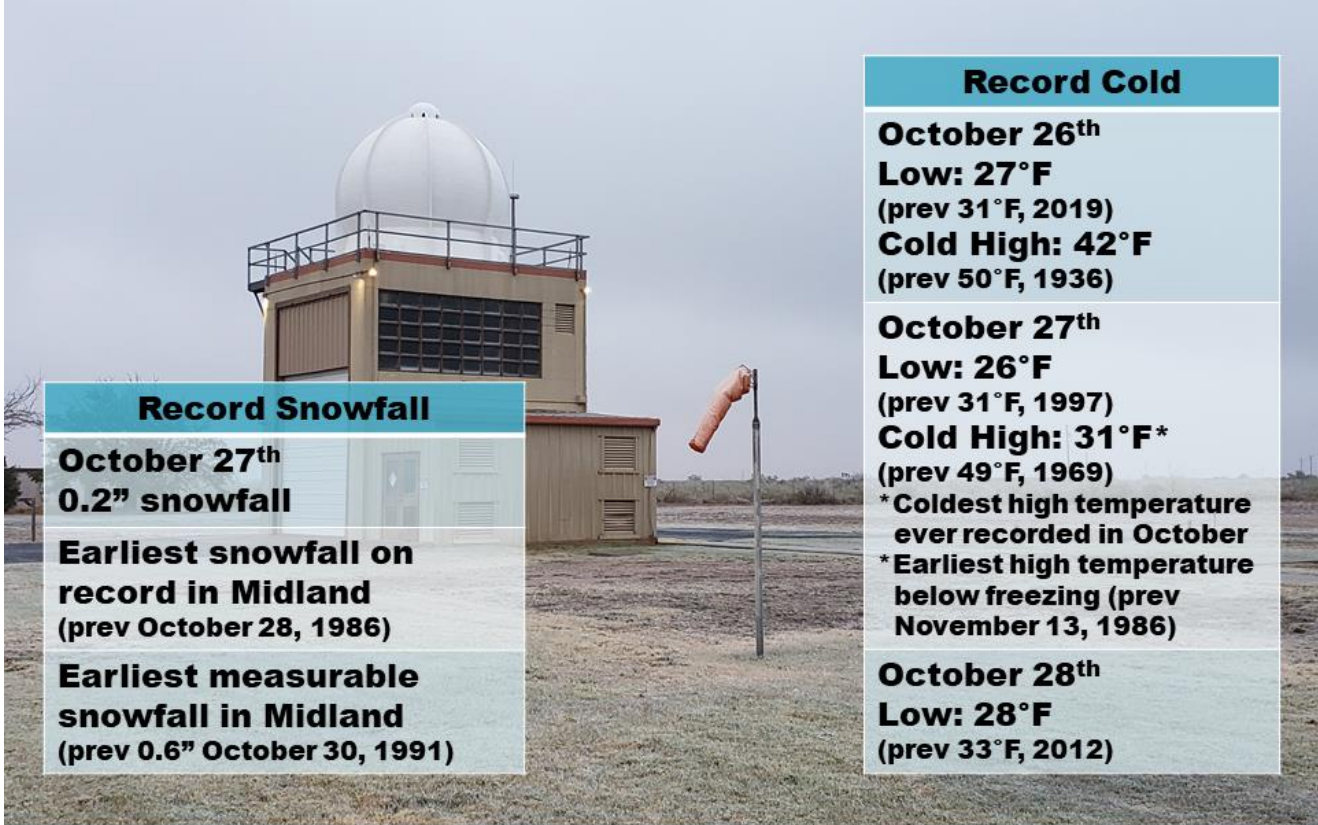
There were several low temperature records broken at Midland International Air and Spaceport during the three-day span, including the lowest high temperature ever recorded for the month of October (31 degrees on Oct. 27th). On average, temperatures were around 30 to 40 degrees below normal on Tuesday the 27th, a testament to a truly frigid airmass.

Record Breaking Winter Storm

Midland, October 26 – October 28, 2020

Weather Forecast Office
Midland/Odessa, TX
Issued October 28, 2020 8:34 AM CT





Record Snowfall




October 27th
0.2" snowfall
Earliest snowfall on record in Midland
(prev October 28, 1986)
Earliest measurable snowfall in Midland
(prev 0.6" October 30, 1991)

Record Cold

October 26th
Low: 27°F
(prev 31°F, 2019)
Cold High: 42°F
(prev 50°F, 1936)

October 27th
Low: 26°F
(prev 31°F, 1997)
Cold High: 31°F*
(prev 49°F, 1969)
*Coldest high temperature ever recorded in October
*Earliest high temperature below freezing (prev November 13, 1986)

October 28th
Low: 28°F
(prev 33°F, 2012)

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Numerous records were broken during the historic cold spell, including the "Coldest October High" and Earliest Snowfall on record for Midland (Credit to NWS Midland)

Coordination efforts between the office and local partners such as school Administrators and decision personnel, Emergency Managers at all levels, broadcast meteorologists, TxDOT, and other critical safety personnel were key in preparing our communities for this historic winter weather event. We can't thank them and the community enough for taking the necessary precautions in making safety the number one priority during this once-in-a-generation event for late October.

A special thank you to all who sent in pictures and reports to our office during and after this event. Ground truth reports during a winter weather event, particularly of precipitation type and accumulations, are very critical to our meteorologists and our warning operations.