West Texas/Southeast New Mexico Climate Summary for January 2017

Midland/Odessa Texas

U.S. National Weather Service Midland, TX

@NWSMidland

January 2017 Precipitation and Temperature Summary

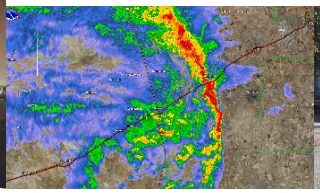
January 1st-15th: The New Year began with an unusually stormy day. A dip in the jet stream over the western United States and a surface low that moved eastward across the desert Southwest brought moisture, thunderstorms, and wind to West Texas and southeast New Mexico. Wind damage occurred from a line of thunderstorms that raced eastward across the northern Permian Basin on the 1st with some of the highest recorded wind gusts of 69mph in Hobbs, NM, 67mph in Pine Springs, TX and 60mph at Midland Intl Airport. The highest rainfall amounts were 0.74" at Hobbs, NM on the 1st and 0.45" at Seminole, TX on the 2nd. By the 5th, a strong polar front entered the region and dropped temperatures well below average for a few days. High temperatures were 10-20°F below normal, and low temperatures were in the single digits and teens at many locations including:11°F at Carlsbad Caverns National Park (NP) on the 5th, 10°F in Odessa, TX on the 6th, and 7°F in Artesia, NM on the 7th. From January 9th-12th the cold air migrated northeast and a strong ridge of high pressure developed in its wake. Temperatures rebounded to more than 20°F above average at Midland Intl Airport where daily records of 80°F and 83°F were broken on the 9th and 11th respectively. During this stretch of days other notable high temperatures included 85°F in Fort Stockton, TX on the 9th, 82°F in Big Spring, TX on the 12th, and 92°F at Rio Grande Village, TX on the 12th. Another upper level disturbance entered the region on the 14th-15th which allowed a cut-off low to form over northern Mexico. With abundant moisture in place and moderate instability, strong thunderstorms occurred throughout the Permian Basin. A wind gust of 59mph was recorded at Persimmon Gap, TX and quarter size hail occurred in Hobbs, NM. The highest rainfall amounts on the 15th included: 1.36" in Gail, TX, 1.14" at Mt Locke, and 0.81" at Midland Intl Airport which set a new daily record. Temperatures were at or below normal from the 13th-15th with most locations in the upper 30s to lower 50s. However, there was exceptionally warm highs along the Rio Grande River.

January 16th-31st: The second half of January was punctuated by fluctuating temperatures as a stationary front developed across West Texas. High temperatures on the 16th were above normal at most locations including 63°F in Odessa and 62°F in Alpine. On the 17th, cold air from the north pushed the stalled front south of the region and dropped high temperatures below normal. Light rain fell on the 17th with the highest amounts in Big Lake, TX (0.44"), Big Spring, TX (0.35"), and Snyder, TX (0.36"). A warming trend occurred from the 18th-20th as strong winds from the south brought warmer air into the region. Wind speeds were strong enough to warrant issuance of numerous high wind advisories and warnings for consecutive days. The highest wind gusts occurred on the 21st including: 84mph at Guadalupe Pass, TX, 59mph in Artesia, NM, 53mph in Fort Stockton, TX, and 53mph at Midland Intl Airport. On the 23rd-24th an upper ridge of high pressure intensified over Texas causing temperatures to soar well above normal. High temperatures were in the mid 70s across the Permian Basin into southeast New Mexico and upper 80s around the lower Trans Pecos and Rio Grande River valley. A dry cold front swept through the region on the 25th and lowered temperatures to near normal. Colder arctic air spread southward across the southern plains and reached West Texas by the 26th-27th. Low temperatures were below freezing across much of the area on the 26th including 16°F in Artesia, NM and 20°F in Pecos, TX and Lamesa, TX. On the 27th, an influx of moisture from the Gulf of Mexico interacted with a frontal boundary in place across West Texas and resulted in snow showers over the Permian Basin. Trace snow accumulations occurred in Midland, TX and Odessa, TX and further south into Wink, TX, Big Lake, TX and the Chisos Mountains in Big Bend NP. A warming trend occurred from the 28th-31st with high temperatures gradually increasing to above average by the end of January.

Wind damage to a mobile home in Pecos County on Jan 1st

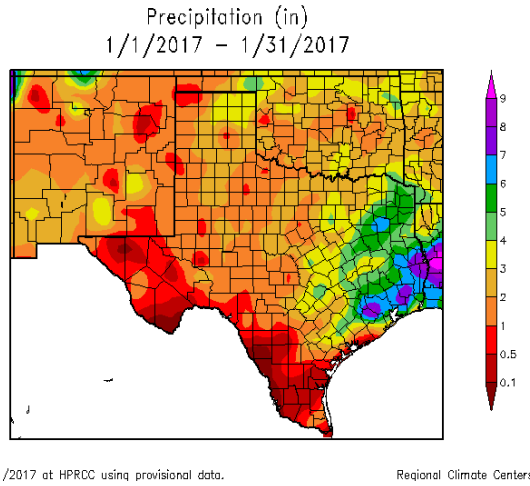
Fog over Odessa, TX on Jan 14th

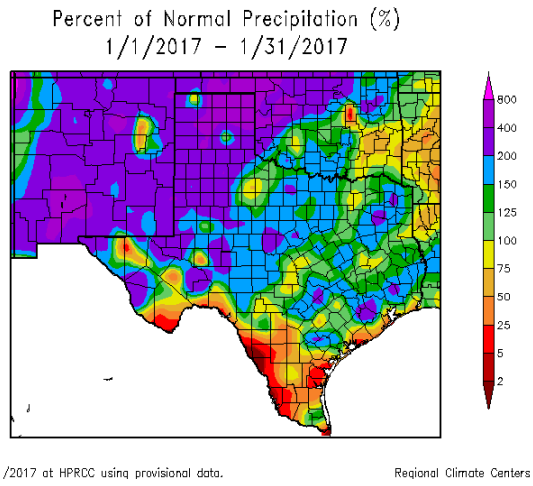
Radar image of strong storms moving through Midland, TX on Jan 15th



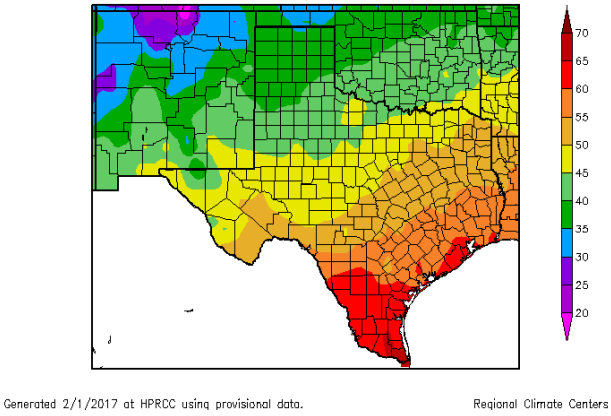
Wind damage to a church in Pecos, TX on Jan 21st

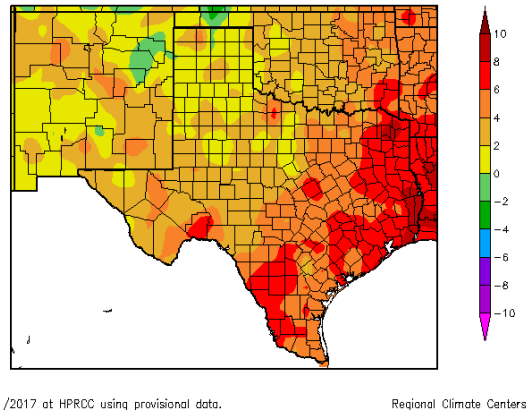
Snow covering the Chisos Mountains on Jan 27th



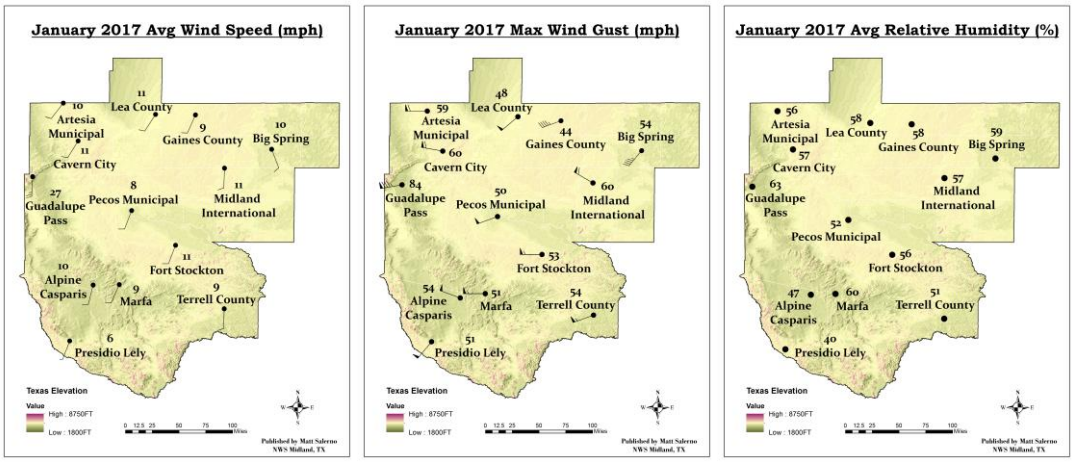


Almost all of West Texas was wetter than normal in January. Some counties received greater than 200% of normal precipitation after many locations saw rainfall totals between 1" and 2". Drier areas included Big Bend NP and the Guadalupe Mountains.

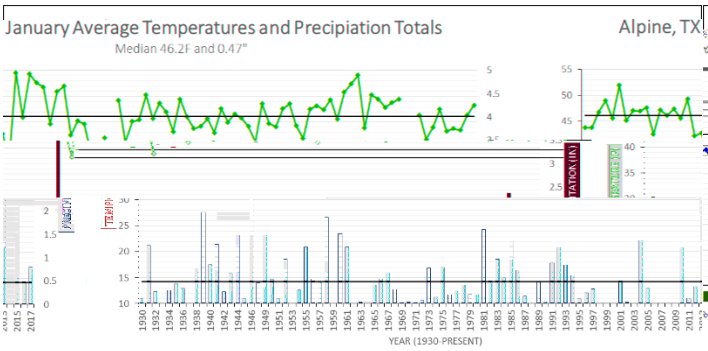


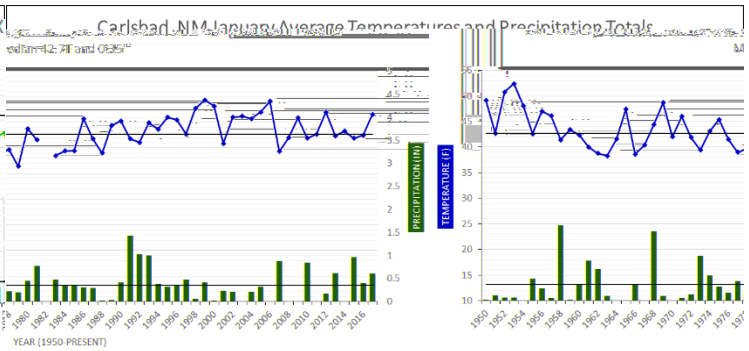


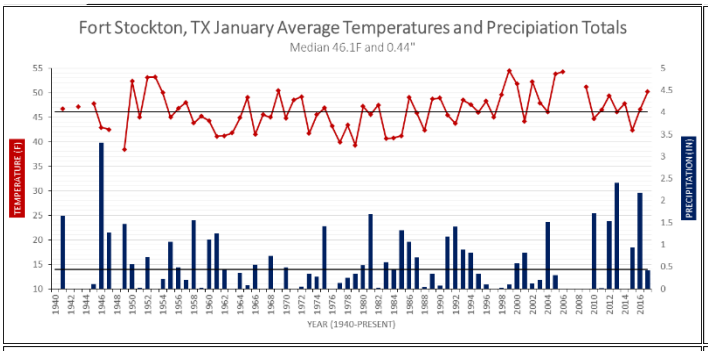
Average temperatures were warmer than normal across West Texas. Most counties were 2-4°F above normal with average temperatures between 45-50°F. The warmest spots in the region were Brewster, Pecos, and Terrell counties.

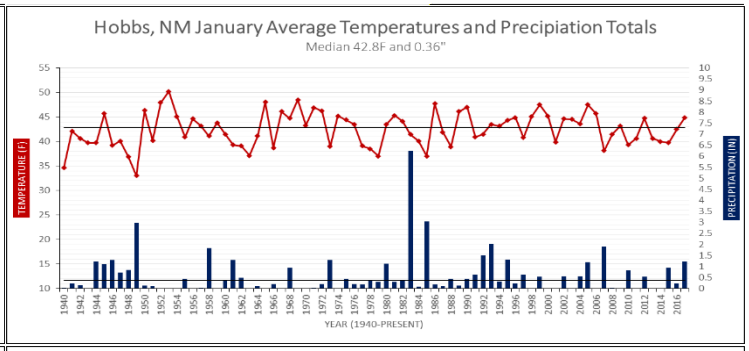


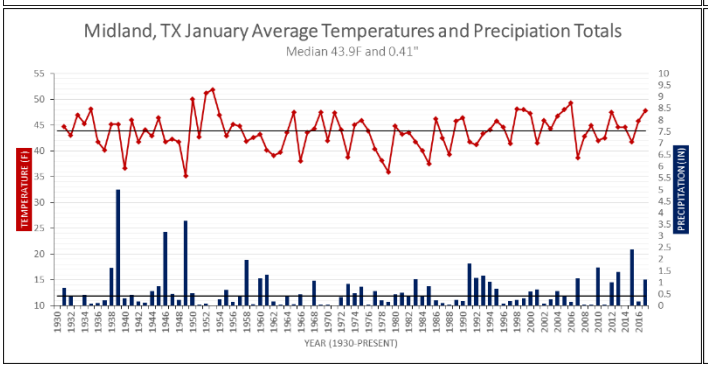
The three maps above illustrate wind and relative humidity data from automated weather stations at airports and at Guadalupe Pass. Average wind speeds were between 6 and 11mph with the exception of 27mph at Guadalupe Pass. Strongest wind gusts were generally out of the west with highest gust of 84mph at Guadalupe Pass. Average RH values varied from 40% to 63%.

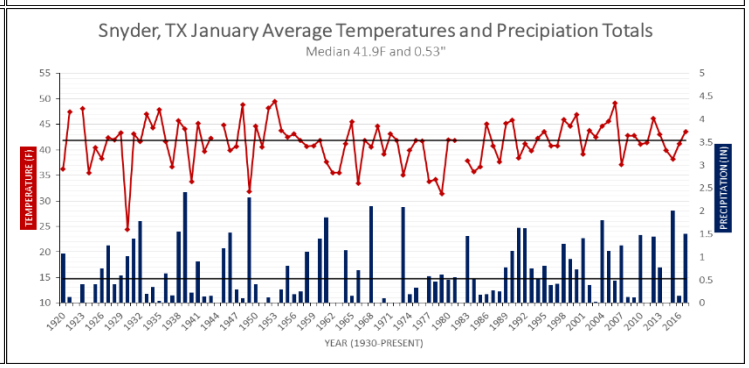












Note: Each site has a slightly different period of record. Data gaps within each graph indicates missing data for those years.

January Temperature and Precipitation	Avg Temp (°F)	Departure from Avg (°F)	Temp Ranking (Period of Record)	Precip (In.)	Departure from Avg (In.)	Precip Ranking (Period of Record)
Alpine COOP	48.3	+1.7	24th Warmest	0.80	+0.25	23rd Wettest
Carlsbad	46.6	+3.3	14th Warmest	0.61	+0.22	14th Wettest
Fort Stockton COOP	50.2	+3.9	11th Warmest	0.41	-0.21	37th Driest
Hobbs COOP	44.9	+2.8	21st Warmest	1.22	+0.70	13th Wettest
Midland Intl	47.8	+3.9	9th Warmest	1.12	+0.56	16th Wettest
Snyder COOP	43.6	+2.2	28th Warmest	1.50	+0.85	13th Wettest

The graphs above depict January temperature and precipitation records for six individual weather stations at selected cities. All six locations were warmer than average this January with the largest departure from average of +3.9°F at Fort Stockton, TX and Midland Intl Airport. Midland Intl Airport recorded the 9th warmest January on record which was expected to due to numerous days with high temperatures in the 60s and 70s and a couple record breaking high temperatures in the 80s. Of the six cities, the lowest average monthly temperature occurred at Snyder, TX where low temperatures were colder overall. Precipitation was above average at 5 of 6 locations. The wettest city was Snyder, TX with precipitation totaling 1.50" for the month. Both Snyder, TX and Hobbs, NM experienced their 13th wettest January on record with the majority of precipitation occurring over a two day period during the 15th and 16th. All locations besides Fort Stockton, TX had a wetter January 2017 than January 2016.