West Texas/Southeastern New Mexico July 2017 Climate Summary

Midland/Odessa Texas

U.S. National Weather Service Midland, TX

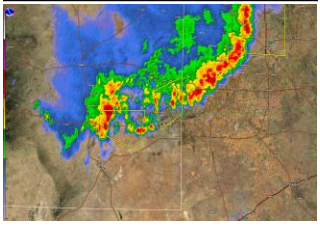
@NWSMidland

July 2017 Temperature, Precipitation, Humidity, and Wind Summary

July 1st-15th: On July 1st, temperatures were near normal and humidity was elevated across west Texas and southeastern New Mexico. High temperatures on the 1st were generally in the mid 90s with lows in the 60s and 70s. Storms developed over the higher terrain in the afternoon. Rainfall totals on the 1st included 0.66" at Artesia, NM and 0.32" at Marfa, TX. During the early morning hours of the 2nd, a line of severe thunderstorms formed in southeastern New Mexico and dropped southward. Severe thunderstorm warnings were issued for wind gusts up to 70 mph in Eddy and Lea counties. Rainfall totals included 0.72" at Seminole, TX and 0.61" at Tatum, NM. Temperatures increased to well above normal on the 3rd with highs in the upper 90s to mid 100s while strong storms developed in the mountains and the central Permian Basin. Precipitation amounts on the 3rd included 0.76" at Fort Stockton, TX and 0.36" at Midland International Air & Spaceport (MAF). The 4th of July was another hot and humid day with scattered thunderstorms mainly in the mountains and the eastern Permian Basin. A line of storms moved into the Permian Basin from the Texas Panhandle after sunset. Severe thunderstorm warnings were issued for wind gusts over 60 mph in Gaines and Winkler Counties. Highest rainfall totals on the 4th included 1.47" at McCamey, 0.64" at Monahans, and 0.58" at Wink, TX. High pressure over the southern plains weakened and temperatures around the region fell below normal from the 5th-7th. Highs were in the upper 80s to lower 90s with lows in the 60s. Storms continued to develop each day due to a steady influx of Gulf of Mexico moisture. Rainfall during this period included 1.48" at Big Lake, TX on the 5th, 1.70" at Chisos Basin, TX on the 6th, and 0.30" at Mt. Locke, TX on the 7th. Regional temperatures steadily increased from the 8th-10th while precipitation was mainly confined to the eastern Permian Basin. Precipitation totals included 0.20" at Big Spring, TX on the 8th, and 0.02" at Snyder, TX on the 9th. High temperatures were near normal from the 11th-15th. Storms developed daily as moisture remained in place over the region. The Davis Mountains and Big Bend National Park measured the highest rainfall totals. Greatest precipitation amounts occurred on the 14th which included 2.48" in Dryden, 1.89" in Alpine, and 0.93" in Marfa, TX. Showers and storms expanded in coverage on the 15th to include the Permian Basin and southeastern New Mexico as temperatures remained at or below normal.

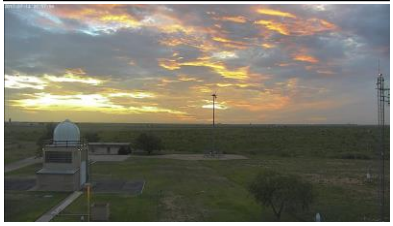
July 16th-31st: On the 16th, thunderstorms developed over Big Bend National Park, the Davis Mountains, and parts of the Permian Basin. Peak rainfall totals were 1.15" at Cope Ranch, TX, and 1.12" at Mt. Locke, TX. High temperatures were in the 80s across the higher terrain and mid 90s elsewhere. A similar situation unfolded from the 17th-21st with widely scattered storms developing during the afternoon hours each day. Greatest rainfall totals during this timeframe included 1.74" at Presidio, TX on the 18th, 1.19" at Valentine, TX on the 19th, 0.90" at Pine Springs, TX on the 20th, and 0.61" at Seminole, TX on the 21st. The atmosphere was particularly unstable over the central Permian Basin on the 22nd as high temperatures increased up to 5°F above normal. Strong storms formed over Midland and Ector Counties and became severe as they moved into Midland and Odessa, TX. A wind gust of 66 mph was recorded at MAF and torrential rain caused flash flooding in both cities. Carlsbad and Loving, NM also experienced a strong thunderstorm on the 22nd that produced flash flooding. Highest precipitation totals on the 22nd included 0.94" at MAF, and 0.52"at Odessa, TX. Widely scattered showers and thunderstorms continued around the area as high temperatures remained near normal on the 23rd and 24th. Precipitation amounts included 1.65" at Balmorhea, TX and 1.00" at Carlsbad, NM on the 23rd, and 0.75" at Mt. Locke, TX on the 24th. A ridge of high pressure strengthened over the region from the 25th-30th. High temperatures increased well above normal into the upper 90s and mid 100s as rainfall was confined to the higher terrain. An isolated thunderstorm produced over 2.00" of rain in one hour at Tatum, NM on the 26th and a rainfall total of 1.57" was recorded at Mt. Locke, TX on the 29th. On the 31st, moisture increased as the upper-level ridge moved west. Low pressure developed in southeastern New Mexico and a complex of storms formed and moved eastward during the overnight hours. The National Weather Service in Midland issued a Flash Flood Watch for southeastern New Mexico and the northern Permian Basin. Heavy rain and flash flooding occurred in Hobbs, and Carlsbad, NM where rainfall totaled 1.41" and 0.55" respectively.

Radar image of severe thunderstorms approaching southeastern NM on July 2nd

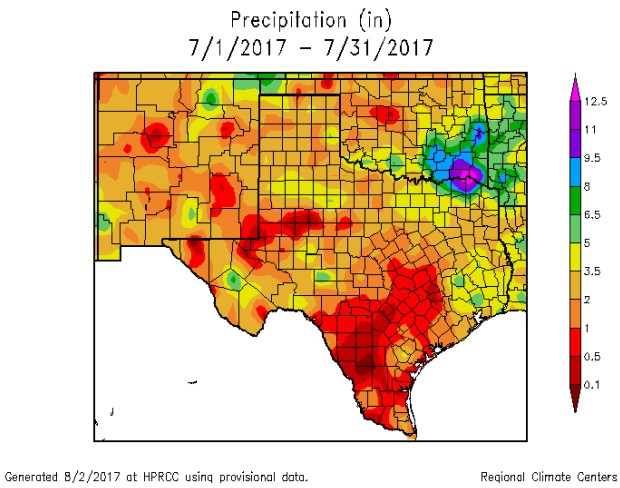


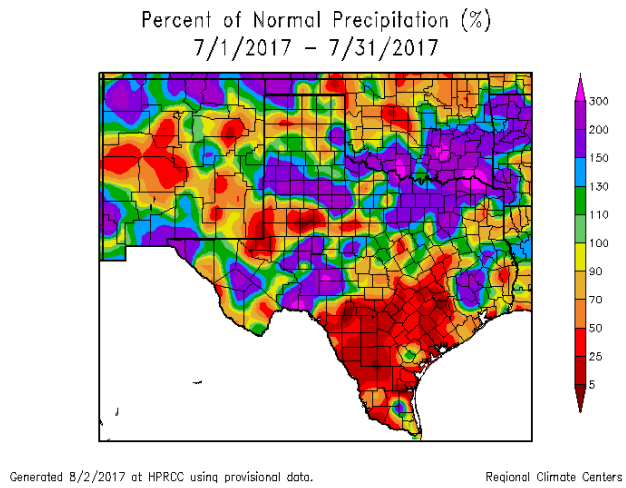
Isolated thunderstorm with lightning south of Lake J.B. Thomas, TX on July 4th

Sunset over the National Weather Service Midland office on July 14th

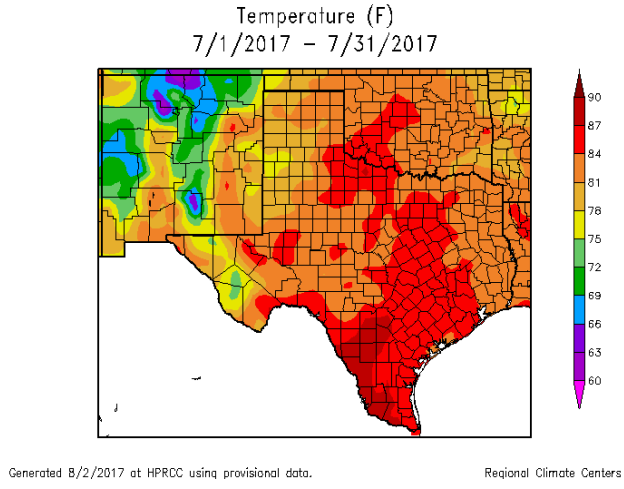


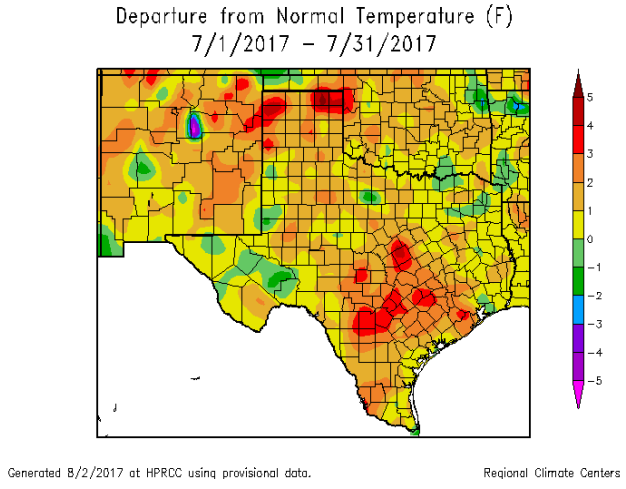
Flash flooding in Midland, TX on July 22nd



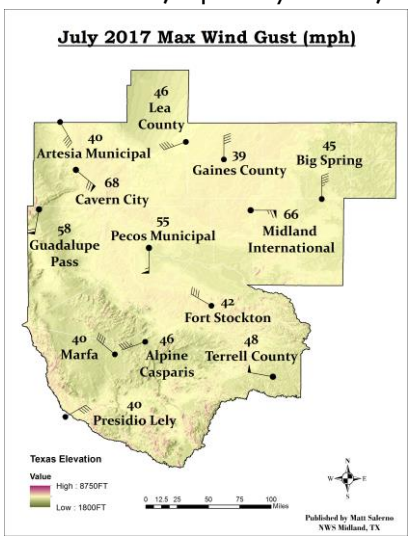


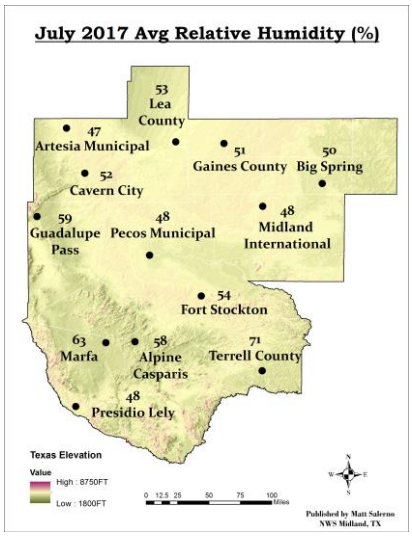
July precipitation in west Texas and southeastern New Mexico ranged from 0.08" at Big Spring, TX to 12.27" at Mt. Locke, TX. The wettest regions included the Davis Mountains and Glasscock, Upton, Reagan, and Terrell Counties. The driest region was the central Permian Basin which included Borden, Dawson, Martin, Howard, Loving, Ward, and Winkler Counties.



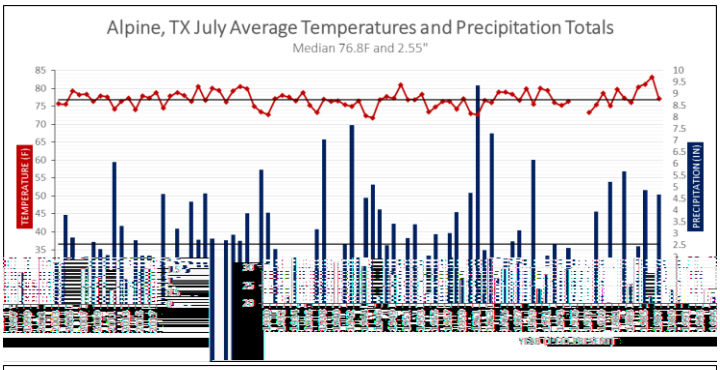


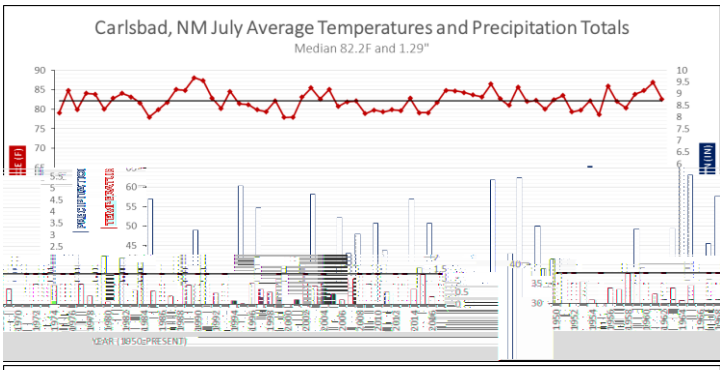
Average July temperatures ranged from around 71°F at Mt. Locke to nearly 90°F at Big Bend National Park. Temperatures were around 1°F below normal in Pecos, Reeves, and Terrell Counties and in the mountains. Above normal temperatures were most prevalent in the central Permian Basin, especially in Ector, Midland, and Martin Counties.

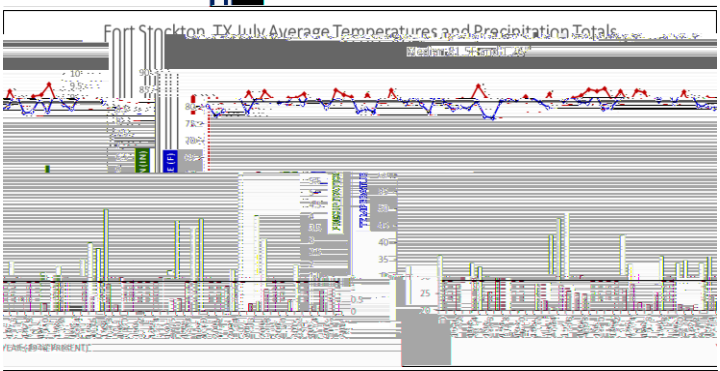


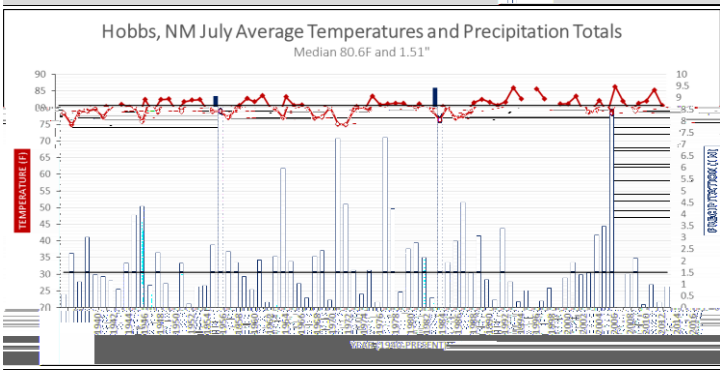


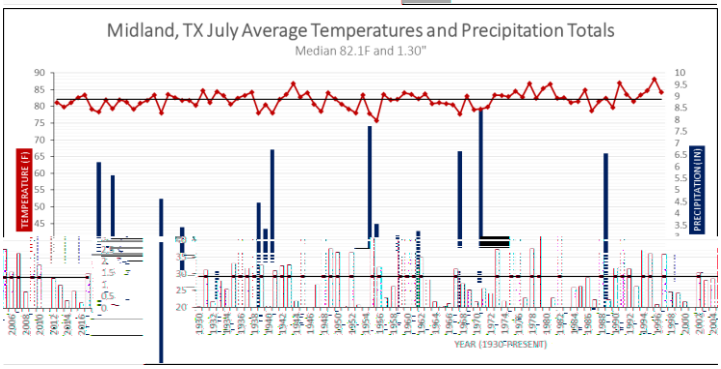
Average July wind speeds ranged from 6 mph at Alpine, TX, and Presidio, TX to 14 mph at Guadalupe Pass, TX. The highest wind gust recorded was 68 mph at Carlsbad, NM. Average relative humidity values ranged from 47% to 71%.

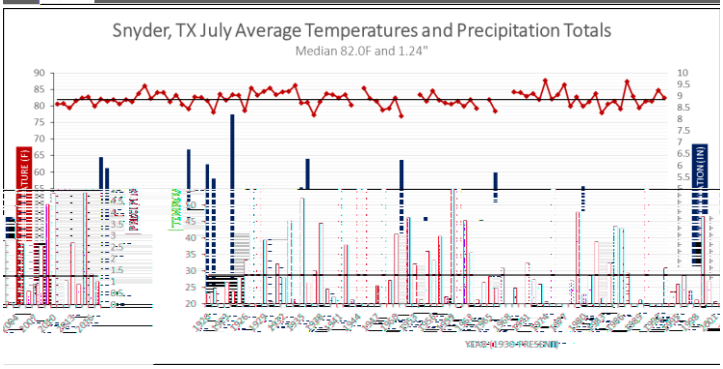












Note: Each location has a slightly different period of record. Data gaps within each graph indicate missing data for those years.

July 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	77.1	+0.2	T-38th Warmest	4.67	+1.90	15th Wettest
Carlsbad Airport	82.7	+1.2	T-30th Warmest	1.56	-0.27	T-39th Driest
Fort Stockton COOP	81.3	-0.4	T-35th Coolest	1.95	+0.42	T-23rd Wettest
Hobbs COOP	80.6	+0.4	T-38th Warmest	0.90	-1.16	T-21st Driest
Midland International	84.2	+2.1	T-12th Warmest	1.48	-0.34	T-48th Driest
Snyder COOP	82.5	+0.4	T-38th Warmest	1.01	-1.00	T-38th Driest

The graphs above provide July temperature and precipitation data for six individual weather stations at select cities. Five out of the six locations were warmer than normal. MAF had the warmest average July temperature at 84.2°F which was 2.1°F above normal and the 12th warmest on record. Fort Stockton, TX was slightly cooler than normal with an average July temperature of 81.3°F. All six locations had a decrease in average July temperatures from the previous year. Two out of six locations had above normal precipitation. The highest July rainfall total was 4.67" at Alpine, TX which was the 15th wettest on record. Fort Stockton, TX also had a wetter than normal July with a rainfall total of 1.95". Locations that were drier than normal included Carlsbad, NM, Hobbs, NM, MAF, and Snyder, TX. The driest of the four locations was Hobbs, NM which recorded under 1.00" of rainfall. In summary, Alpine, TX had the wettest and coolest July of the six locations while Hobbs, NM was the driest and MAF was the warmest.