

## Storm Data and Unusual Weather Phenomena - December 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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**TEXAS, South**

(TX-Z249) JIM HOGG, (TX-Z250) BROOKS, (TX-Z251) KENEDY, (TX-Z252) STARR, (TX-Z253) HIDALGO, (TX-Z254) WILLACY, (TX-Z256) COASTAL WILLACY, (TX-Z257) COASTAL CAMERON

12/01/13 00:00 CST	0	Drought
12/30/13 23:59 CST	0	

December started off dry and warm with a stretch of October like temperatures before a cold front pushed across the region plunging temperatures more than 40 degrees. Cold fronts continued to push across the Rio Grande Valley and Deep South Texas through the month bringing cooler temps but little relief for drought conditions other than occasional light rain and drizzle.

(TX-Z250) BROOKS, (TX-Z251) KENEDY

12/16/13 04:45 CST	0	Frost/Freeze
12/16/13 07:45 CST	0	

Clear, calm, and dry conditions set the state for radiational cooling of the ground and surfaces just above the ground overnight and through the early morning hours of Monday, December 16th. A cold front came through the region on December 14th. Afternoon humidity around 20 to 25 percent on December 15th with dew points in the low to mid 20s combined with the calm winds to allow temperatures to plummet after sunset; readings were in the mid to high 30s at or before midnight. After midnight, temperatures dropped to or below freezing across large portions of Kenedy and Brooks counties. The Falfurrias COOP site in Brooks County reported a low of 26 degrees, while in Kenedy County, the Sarita COOP site reported a low of 28 degrees and the Armstrong COOP site reported a low of 29 degrees. Decent moisture still near the top of the soil, left behind from the rains of November and held in place by a cool second week of December, aided frost development.

(TX-Z255) CAMERON

12/21/13 05:34 CST	6K	Strong Wind (MAX 42 kt)
12/21/13 10:59 CST	0	

A vigorous non-tropical upper level system, accompanied by relatively strong low pressure near the earth's surface moved across the Rio Grande Valley during the predawn hours of December 21st. This brought persistent sustained winds from the south near or just above 30 mph with long duration gusts of 40 mph or higher – in some cases (Harlingen/Valley Airport) for nearly all of 12 hours - in many locations along the U.S. 77/Interstate 69-E corridor. The long duration of gusts 40 mph or higher produced pockets of damage to unanchored light weight/high center-of-gravity objects, including portable toilets, basketball goals, and more. Unfastened signs were shredded or blown down, as were at least two poorly fastened roofs, one in Harlingen and another at Brownsville/South Padre Island International Airport.

(TX-Z249) JIM HOGG, (TX-Z250) BROOKS, (TX-Z251) KENEDY, (TX-Z252) STARR

12/24/13 00:00 CST	0	Drought
12/30/13 23:59 CST	0	

While a cold front and a series of upper level disturbances brought welcome relief to the Rio Grande Valley, the northern ranchlands and brush country did not fair as well. The rainfall associated with these features kept the greatest rain amounts far to the south, allowing for drought conditions to intensify during mid-December across the ranchlands and brush country.

(TX-Z248) ZAPATA, (TX-Z249) JIM HOGG

12/24/13 01:15 CST	0	Frost/Freeze
12/24/13 08:00 CST	0	

High pressure, clear skies, a drier airmass and light winds set the stage for radiational cooling of the ground and surface just above the ground overnight and through the morning hours of December 24th. After midnight, temperatures dropped below freezing across Zapata County for around 6 hours reaching a low of 29 degrees. In Jim Hogg County, temperatures reached freezing during the early morning hours and remained there for several hours.

(TX-Z249) JIM HOGG, (TX-Z250) BROOKS, (TX-Z251) KENEDY, (TX-Z252) STARR, (TX-Z253) HIDALGO, (TX-Z256) COASTAL WILLACY, (TX-Z257) COASTAL CAMERON

12/31/13 00:00 CST	0	Drought
12/31/13 23:59 CST	0	

A series of cold fronts and upper level systems pushed across the region from the last ten days of the month. The cold front that pushed across the region on the 21st dropped temperatures below normal, while a series of weak upper level disturbances slid over the cooler air and ultimately dropped almost 2 inches of rain across portions of the Upper Valley, 1 to 1 ½ inches across the Mid Valley, and ½ inch to nearly an inch across the Lower Valley. A stronger cold front swept across the Valley overnight on the 29th, and was

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followed by a strong upper level system. Strong atmospheric forcing produced an 18 hour period of steady, locally heavy rainfall on the 30th; calendar day records were set across the Valley with between 2 and 3 inches of soaking, bone chilling rain that left high standing water in fields across the region. Another batch of light to moderate rainfall would drop another ½ to ¾ inch across the mid and upper Valley on New Year's Eve Day. In all, between 3 and nearly 5 inches of rain fell across the entire Rio Grande Valley with 1 to 3 inches across the ranchlands during the final week of the year.