

## Storm Data and Unusual Weather Phenomena - December 2010

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

(TX-Z248) ZAPATA, (TX-Z249) JIM HOGG, (TX-Z250) BROOKS, (TX-Z251) KENEDY, (TX-Z252) STARR, (TX-Z253) HIDALGO

12/01/10 00:00 CST	0	Frost/Freeze
12/01/10 09:00 CST	0	

A dry cold front whipped across Deep South Texas during the morning of November 30th, bringing very low humidity along with much cooler temperatures compared with the prior day. Clear skies and calming winds allowed temperatures to plummet rapidly across the drying soils of large swaths of ranchland and brush country, including portions of the mid and upper Rio Grande Valley. Temperatures would bottom out in the mid and upper 20s in preferred colder spots, and around 30 to near freezing in slightly warmer locations, with freezing temperatures lasting anywhere from 4 to 9 hours.

The second freeze in less than a week continued the rapid pace of grass and brush curing.

(TX-Z250) BROOKS

12/01/10 13:30 CST	50K	Wildfire
12/02/10 04:00 CST	0	

Cured fuels, low humidity, and a tractor setting off sparks in high grass was the flammable combination to set off and rapidly spread a wildfire mainly across southwest Brooks County, though some of the fire impacted extreme northeastern Starr County and extreme northwestern Hidalgo County near Farm to Market Roads 755 and 1017. The fire rapidly grew to 2000 acres and would not be contained and controlled until early the morning of December 2nd.

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

12/09/10 02:00 CST	0	Frost/Freeze
12/09/10 08:00 CST	0	

Weak, but dry, high pressure building in behind a departing surface low over the western Gulf brought light north winds and rapidly falling evening temperatures on December 8th. By early morning of the 9th, freezing temperatures covered large portions of the of the King Ranch and surrounding locations in eastern Brooks County.

Local pocket of freezing temperatures occurred elsewhere in the Deep South Texas brush country, but durations were too short (i.e., Zapata County airport near Medina only touched 32 or 31 degrees for about an hour) or coverage was interpolated to be a small portion of a county's total area. Meteorologically, return southerly flow developed in these areas, including typically colder pockets.

In all these areas, the combination of freeze and frost continued to accelerate curing of fine and medium fuels (grasses and brush) which had grown thick during the generally wet first nine months of 2010.

(TX-Z248) ZAPATA, (TX-Z249) JIM HOGG, (TX-Z250) BROOKS, (TX-Z251) KENEDY, (TX-Z252) STARR

12/13/10 02:00 CST	0	Frost/Freeze
12/13/10 09:00 CST	0	

A fairly vigorous cool front swept through Deep South Texas early on December 12th, followed by strong high pressure with Canadian roots but not truly frigid air to arrive later on the 12th into the 13th. Clear and relatively calm conditions overnight allowed temperatures to fall near or just below freezing in rural Deep South Texas. In locations where the temperature remained just above freezing, dew points remained in the teens, and prolonged low wet bulb temperatures in the mid 20s likely created a "proxy" freeze for tender vegetation in neighborhoods and towns.

The very dry, cold morning further cured fine and medium fuels (grasses and brush); the freeze was the fourth of the season in a little more than two weeks.

(TX-Z248) ZAPATA, (TX-Z249) JIM HOGG, (TX-Z250) BROOKS, (TX-Z251) KENEDY, (TX-Z252) STARR, (TX-Z253) HIDALGO, (TX-Z254) WILLACY, (TX-Z255) CAMERON

12/26/10 02:00 CST	0	Frost/Freeze
12/26/10 08:30 CST	0	

A developing cold front, associated with the creation of the December Blizzard of 2010 from New Jersey to New England, pulled down dry, Canadian air with strengthening high pressure overnight on December 25th and well into the morning hours of December 26th. Breezes through the post midnight hours kept temperatures a hair above freezing in many areas, but calming winds by 2 AM or so allowed temperatures to fall more steadily, continuing for an hour or two after sunrise.

Lows fell well into the 20s in sheltered locations of rural Deep South Texas, and even reached 32 or lower in populated areas of the

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Lower and Mid Rio Grande Valley. The coldest temperatures of the winter thus far were felt from McAllen to Harlingen and Brownsville, where temperatures fell to a hair above freezing. For the lower Valley, all non urban areas west of highway 77 saw freezing temperatures on the 26th.

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(TX-Z248) ZAPATA, (TX-Z249) JIM HOGG, (TX-Z250) BROOKS, (TX-Z251) KENEDY

12/27/10 01:00 CST	0	Frost/Freeze
12/27/10 07:30 CST	0	

The coolest, full-sunshine day of the young winter on December 26th, where highs only reached the mid and upper 50s with continued very low humidity, set the stage for one more chilly night in Deep South Texas prior to rapid return of more seasonable weather later on the 27th. Across nearly all sheltered areas from the Rio Grande Plains through the King Ranch, temperatures fell to freezing shortly after midnight and continued until the predawn hours.

This would be the sixth minor freeze of the autumn/winter 2010 for locations from Zapata County to the King Ranch.

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(TX-Z248) ZAPATA, (TX-Z249) JIM HOGG, (TX-Z250) BROOKS, (TX-Z252) STARR, (TX-Z253) HIDALGO

12/28/10 00:00 CST	0	Drought
12/31/10 23:59 CST	0	

After a significantly wetter than average January through September, 2010, the spigot literally turned off for the vast majority of Deep South Texas for the final three months. The lack of rainfall, including many areas with zero measured precipitation since the last days of September, combined with nearly a dozen drying fronts that brought very to extremely low afternoon humidity for a day or two after, and six minor freezes which accelerated drying and curing of grasses and brush, led to a 180 degree turn from above to much above average wetness to pockets of severe drought at year's end.

The severe drought area included portions of counties west of the immediate coast, but was expected to continue and expand with the influence of a moderate to strong La Nina and the correlation to below average late winter and early spring rain and above average temperature.

Raw precipitation data at the end of December showed that most climate recording locations in Deep South Texas, including those with more than 100 years of information, had their driest October to December period on record. The exceptions were Rio Grande City, where two thirds of an inch fell at the tail of a cold front in mid October, and Raymondville, where a swath of light rain accompanied at least one front in November, pushing them into second place all time.