

Storm Data and Unusual Weather Phenomena - December 2009

| Location | Date/Time | Deaths & Injuries | Property & Crop Dmg | Event Type and Details |
|----------|-----------|-------------------|---------------------|------------------------|
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GULF OF MEXICO

HIGH IS TO FREEPORT TX OUT 20NM COUNTY --- 3.3 SW GALVESTON [29.27, -94.86]

| | | |
|--------------------|---|-------------------------------------|
| 12/24/09 03:58 CST | 0 | Marine Thunderstorm Wind (MG 38 kt) |
| 12/24/09 03:58 CST | 0 | Source: ASOS |

Wind gust was measured at Scholes International Airport.

HIGH IS TO FREEPORT TX OUT 20NM COUNTY --- 0.7 WNW PLEASURE PIER [29.29, -94.79]

| | | |
|--------------------|---|-------------------------------------|
| 12/24/09 04:12 CST | 0 | Marine Thunderstorm Wind (MG 39 kt) |
| 12/24/09 04:12 CST | 0 | Source: Mesonet |

Wind gust was measured at Pleasure Pier PORTS.

A strong cold front moved through the area during the overnight hours and produced strong winds.

TEXAS, Central Southeast

(TX-Z238) GALVESTON

| | | |
|--------------------|---|---------------|
| 12/01/09 15:00 CST | 0 | Coastal Flood |
| 12/01/09 20:00 CST | 0 | |

A moderate easterly fetch across the northern Gulf of Mexico created minor coastal flooding along the Bolivar Peninsula.

(TX-Z226) WHARTON, (TX-Z227) FORT BEND, (TX-Z235) JACKSON, (TX-Z236) MATAGORDA, (TX-Z237) BRAZORIA

| | | |
|--------------------|---|--------------|
| 12/04/09 07:00 CST | 0 | Winter Storm |
| 12/04/09 16:00 CST | 0 | |

Moderate, to locally heavy, snow fell across portions of southeast Texas. This resulted in the region's earliest recorded snow fall.

Preceding this event, a strong upper level storm system moved across Texas. In the wake of this system, a very cold Canadian air mass descended as far south as the coastal regions of southern Texas. A shortwave disturbance, rounding the base of a southwestern Texas upper trough, is what provided the lift needed to generate precipitation that fell within this arctic air mass.

Light rain developed over the coastal bend region that expanded northeast into the Houston-Galveston County Warning Area. This light rain, falling though a deep sub-freezing thermal layer, turned to snow and sleet over the southwestern counties of Jackson, Matagorda, Fort Bend, northern Brazoria and western Harris on the morning of the 4th.

Evaporative cooling and efficient cold air advection, in tandem with the nearing shortwave disturbance, formed a 1 to 3 inch total snow accumulation band parallel to, and near, the Highway 59 corridor. North and west of a line from Columbus to Conroe experienced snow accumulations generally less than 1 inch. The heaviest snow banding of between 3 to 5 inches fell along a southwest-to-northeast orientated line across Wharton, Fort Bend, and northern Brazoria counties.

Due to the fact that there was most likely significant melting upon surface contact, and snow was partially melting through a near surface above-freezing layer, a 5:1 liquid equivalent-to-snow ratio was a good approximation.

AUSTIN COUNTY --- 1.3 WSW MILLLHEIM [29.86, -96.25]

| | | |
|--------------------|-----|------------------------------|
| 12/24/09 00:50 CST | 10K | Thunderstorm Wind (EG 52 kt) |
| 12/24/09 00:50 CST | 0 | Source: Law Enforcement |

Thunderstorm winds damaged the roof of a home and spread debris out at least 1/4 mile from the property.

A strong cold front moved through the area during the overnight hours and produced strong winds.