



National Weather Service

Storm Data and Unusual Weather Phenomena



December 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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GULF OF MEXICO

GMZ335 Morgans Point	Galveston Bay 06	2348CST			0	0			Marine Tstm Wind (MG34) Measured at Morgans Point PORTS.
GMZ355 9 SW Galveston	High Is To Freeport Tx Out 20Nm 21	0930CST			0	0			Waterspout Sighted off Jamaica Beach.

TEXAS, Central Southeast

TXZ213>214-226>227- 235>236-238	Harris - Chambers - Wharton - Fort Bend - Jackson - Matagorda - Galveston				0	0			Heavy Snow
	24	2100CST							
	25	0500CST							

A rare and record breaking snowfall occurred Christmas Eve into early Christmas morning across Southeast Texas. For the first time in recorded history, some areas experienced their first white Christmas. The northernmost edge of the snow ran from a Cotulla to Cuero to Sugar Land to Winnie line. Snowfall totals ranged from about an inch (in Pasadena) to around 12 inches (in Brazoria) across the region.

An arctic cold front had pushed across Southeast Texas on Wednesday (December 22nd) dropping temperatures below freezing, so plenty of cold air was in place Christmas Eve when the snow began. What made this event unusual was not just the cold air being in place, but the depth of the cold air that was in place over the area. Before the heavy snow began on the night of Christmas Eve, the entire depth of the atmosphere over Southeast Texas was below freezing. Normally when winter weather events occur in Southeast Texas, the depth of the cold air is much shallower, resulting in ice (freezing rain or sleet) being a lot more common than snow.

The morning of Christmas Eve, a strong upper level low was evident on satellite across northern Mexico. Ahead of this system, some snow began across Southeast Texas, but the dry atmosphere kept the snowfall light during the day, resulting in only trace amounts or a light dusting through late afternoon. Eventually, the atmosphere moistened up by late in the day as the upper level low approached from the west.

The upper low moved across South Texas during the nighttime hours Christmas Eve, resulting in a band of heavy snowfall just north of the track of the system. The band of heaviest snowfall, about 20 miles wide, was centered from Victoria to Edna to Bay City to Lake Jackson. In this area, approximately 9 to 12 inches of snow fell. All areas south of a line from around Garwood to Needville to Friendswood to Texas City saw at least 3 inches of snow, with 4 inches falling on Galveston Island and 6 inches reported in Angleton and Alvin. North of this area, the snowfall totals dropped off rapidly. Snowfall totals of around an inch occurred in Clear Lake and Missouri City, with accumulations in Houston generally ranging from a dusting to around an inch. The heavier snowfall occurred over the coastal counties south of Houston because this area had more moisture in the atmosphere (being closer to the Gulf), and was also closer to the track of the upper level low. As you headed north and got north of Interstate 10, the atmosphere was too dry to support much more than just a few flurries.