



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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TEXAS, South

TXZ248>255	Zapata - Jim Hogg - Brooks - Kenedy - Starr - Hidalgo - Willacy - Cameron				0	0			Winter Weather/Mix
	23	1800CST							
	25	0900CST							
TXZ250	Brooks				0	0			Sleet Storm
	24	1918CST							
		2030CST							
TXZ255	Cameron				0	0			Ice Storm
	24	1940CST							
		2030CST							

The Rio Grande Valley of Deep South Texas experienced one of its most memorable Christmas Holidays ever. A rare combination of weather events developed last week that produced several inches of snowfall, which in itself is quite rare in this region. However, to have snow fall on Christmas Eve and morning is a historical first according to the more than 150 years of weather data. This White Christmas is certainly one for the record books.

The freezing temperatures and snowfall were expected in South Texas and National Weather Service Offices were talking about the arrival of unseasonably cold temperatures prior to the holiday. Snowfall was mentioned as a possibility and as Christmas drew closer, snowfall became more likely as the weather forecast became more focused. We need to look back to the week before Christmas in order to recap the details of this historic event. Signals from the numerical weather forecast models suggested a strong cold front and arctic air mass would move southward along the Rocky Mountains into Texas and eventually over the Lower Texas Coast. This cold front moved through Brownsville, Wednesday afternoon (12/22/2004). A second reinforcing surge of arctic air followed the initial front, dropping temperatures into the 30s and low 40s late Thursday (12/23/2004). Maximum temperatures on Friday (12/24/2004) were in the upper 30s to low 40s across the Rio Grande Valley. Widespread moderate rain covered much of the area with most locations reporting one half of an inch to nearly one inch of liquid precipitation. The cold rain began to taper off on Christmas Eve as temperatures began to fall below freezing.

With the cold air trapped at the surface and wedged against the foothills of the Sierra Madre Oriental, an upper level low with Pacific moisture was moving east across Northern Mexico. Initially, reports of ice and sleet were received by the National Weather Service in Brownsville. The moisture and upward vertical motion generated by this upper level system caused snow to begin falling across Deep South Texas after 10 PM CST. The snow fall persisted through midnight into Christmas morning and eventually ended around 4 AM on (12/25/2004) leaving behind the first White Christmas ever recording in the Lower Rio Grande Valley of Texas, and most likely the first White Christmas ever in extreme Northeast Mexico. Temperatures that had plummeted to well below freezing Christmas morning quickly rose into the mid 30s by mid-morning.

Location Total Snowfall (in inches)

Brownsville 1.5
 Harlingen 1.5
 San Benito 1.5
 La Joya 1.5
 South Padre Island 2.5
 Port Isabel 3
 Rio Grande City 3
 Sarita 3
 McAllen 3.5
 Raymondville 3.5
 Hebronville 5

All in all, the snowfall was greeted with joy and excitement since it has been almost 110 years since the last measurable snow fell in the city of Brownsville. Most of the general population stayed alert until the early morning hours taking photographs and video footage of this once in a lifetime event.