

Storm Data and Unusual Weather Phenomena - January 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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OKLAHOMA, Western, Central and Southeast

(OK-Z012) GARFIELD, (OK-Z014) ROGER MILLS, (OK-Z021) BECKHAM, (OK-Z023) CADDO, (OK-Z024) CANADIAN, (OK-Z025) OKLAHOMA, (OK-Z027) GRADY, (OK-Z030) POTTAWATOMIE

01/06/10 18:00 CST	0	Winter Weather
01/07/10 00:00 CST	0	

A very strong cold front moved through Oklahoma, beginning late in the afternoon over northwest Oklahoma, and continuing southeast through the late evening hours. Temperatures ahead of the front were in the 40s, but quickly fell well below freezing within a couple of hours of the frontal passage. After sunset, a brief period of light freezing rain developed behind the front. The freezing rain changed to very light snow after one or two hours, but enough glaze accumulated on roadways and power lines to cause minor problems. Several accidents were reported, mainly over western and northwest Oklahoma. Gusty northwest winds combined with the ice on the power lines also caused brief, but widespread power outages over central Oklahoma. Well over 30,000 people were without power at its peak, but service was returned quickly for most residents and business'. The freezing rain moved southeast through the evening, with very few problems reported. Very dry air filtered in behind the front, quickly ending the precipitation and drying out the roadways.

PAYNE COUNTY --- CUSHING [35.98, -96.76]

01/20/10 18:30 CST	75K	Lightning
01/20/10 18:30 CST	0	Source: Newspaper

An oil tank was struck by lightning, with over 100 barrels of oil lost. The time was estimated. Monetary damages were also estimated.

MCCLAIN COUNTY --- WASHINGTON [35.06, -97.48]

01/20/10 18:52 CST	0	Hail (1.00 in)
01/20/10 18:55 CST	0	Source: Public

CLEVELAND COUNTY --- 2.6 WNW STANLEY DRAPER LAKE DAM [35.34, -97.39]

01/20/10 18:55 CST	0	Hail (1.00 in)
01/20/10 19:00 CST	0	Source: Trained Spotter

CLEVELAND COUNTY --- 2.7 SSW NORMAN [35.18, -97.45]

01/20/10 19:03 CST	0	Hail (1.00 in)
01/20/10 19:05 CST	0	Source: Public

The hail was reported near the intersection of Highway 9 and Chautauqua Avenue.

GARVIN COUNTY --- 2.0 E WYNNEWOOD [34.64, -97.12]

01/20/10 19:25 CST	75K	Lightning
01/20/10 19:25 CST	0	Source: Newspaper

A large barn was struck by lightning and burned to the ground. Monetary damages were estimated.

STEPHENS COUNTY --- 0.8 E DUNCAN [34.50, -97.95]

01/20/10 21:05 CST	0	Hail (1.00 in)
01/20/10 21:07 CST	0	Source: Amateur Radio

The hail was reported on the east side of town.

Thunderstorms developed over western Texas and moved northeast through Oklahoma, as a strong storm system approached from the southwestern United States. The thunderstorms developed ahead of a dry line that was located east of Lubbock. Coverage of the thunderstorms expanded into southeast Oklahoma, as better moisture was located there. Hail up to quarter size was reported over parts of central Oklahoma with this round of thunderstorms. Later in the evening, another area of strong to occasionally severe thunderstorms moved out of west Texas. These thunderstorms also moved northeast during the early evening hours. Hail once again reached quarter-size over south-central Oklahoma. No damage was reported with the hail.

(OK-Z004) HARPER, (OK-Z005) WOODS, (OK-Z006) ALFALFA, (OK-Z007) GRANT, (OK-Z008) KAY, (OK-Z009) ELLIS, (OK-Z010) WOODWARD, (OK-Z011) MAJOR, (OK-Z012) GARFIELD, (OK-Z013) NOBLE, (OK-Z014) ROGER MILLS, (OK-Z015) DEWEY, (OK-Z016) CUSTER, (OK-Z017) BLAINE, (OK-Z018) KINGFISHER, (OK-Z019) LOGAN, (OK-Z020) PAYNE, (OK-Z021) BECKHAM, (OK-Z022) WASHITA, (OK-Z024) CANADIAN, (OK-Z025) OKLAHOMA, (OK-Z026) LINCOLN

01/28/10 04:00 CST	0	Winter Storm
01/29/10 06:00 CST	0	

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(OK-Z023) CADDO, (OK-Z027) GRADY, (OK-Z028) MCCLAIN, (OK-Z029) CLEVELAND, (OK-Z030) POTTAWATOMIE, (OK-Z031) SEMINOLE, (OK-Z032) HUGHES, (OK-Z033) HARMON, (OK-Z034) GREER, (OK-Z035) KIOWA, (OK-Z036) JACKSON, (OK-Z037) TILLMAN, (OK-Z038) COMANCHE, (OK-Z039) STEPHENS, (OK-Z040) GARVIN, (OK-Z041) MURRAY, (OK-Z042) PONTOTOC, (OK-Z043) COAL, (OK-Z044) COTTON, (OK-Z046) CARTER, (OK-Z047) JOHNSTON	01/28/10 04:00 CST		14.60M	Ice Storm
	01/29/10 06:00 CST		0	
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(OK-Z007) GRANT, (OK-Z008) KAY, (OK-Z012) GARFIELD, (OK-Z013) NOBLE, (OK-Z018) KINGFISHER, (OK-Z019) LOGAN, (OK-Z020) PAYNE, (OK-Z024) CANADIAN, (OK-Z025) OKLAHOMA, (OK-Z026) LINCOLN, (OK-Z027) GRADY, (OK-Z028) MCCLAIN, (OK-Z029) CLEVELAND, (OK-Z030) POTTAWATOMIE, (OK-Z031) SEMINOLE, (OK-Z032) HUGHES, (OK-Z040) GARVIN, (OK-Z041) MURRAY, (OK-Z042) PONTOTOC	01/29/10 06:00 CST		0	Heavy Snow
	01/30/10 00:00 CST		0	
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(OK-Z043) COAL, (OK-Z046) CARTER, (OK-Z047) JOHNSTON	01/29/10 06:00 CST		0	Winter Weather
	01/29/10 18:00 CST		0	

A major winter storm impacted much of Oklahoma beginning on the morning of January 28th and continued through much of the day. While the storm produced a variety of wintry precipitation, its most significant impacts came with an extended period of heavy freezing rain across southern into parts of central Oklahoma. Significant icing on trees and power lines resulted in widespread damage to trees and power lines. The day before the winter storm was unusually warm for a January day in Oklahoma, with the high temperature at Oklahoma City at 65 degrees, which was 17 degrees above normal. However, that same day, a strong cold front was sweeping south down the Plains. By noon, the cold front had pushed into southern Kansas, bringing gusty north winds and a rapid decrease in temperature. Behind the front, temperatures were falling back into the 30s and 40s, and the freezing line at the surface was very near the Kansas-Nebraska border.

Overnight, and into the morning of January 28th, the cold front pushed through most of Oklahoma and all of western North Texas. The cold front had stalled to the south in northern Texas leaving a shallow cold air mass in place across much of the area to the north of the front, with the cold air gradually deepening towards northern Oklahoma. As an upper level low became better organized in the southwestern United States, it helped draw warm, moist air north from the Gulf of Mexico. This warm air was lifted over the dome of cold air and contributed to the development of widespread precipitation during the morning across much of Oklahoma. The shallow cold air mass north of the front placed a broad swath of southwest Oklahoma and central Oklahoma under-the-gun for a major icing event. During the afternoon, the precipitation increased in intensity, particularly over southwest Oklahoma, which then moved into parts of central Oklahoma. A pocket of drier air in the middle of the atmosphere quickly swept in behind the precipitation and started clearing it out of Oklahoma by late afternoon. At the same time, enough cooling was starting to occur in the warm layer of air aloft to change the precipitation over to sleet across parts of the area, including much of the Oklahoma City metropolitan area. Luckily, northern Oklahoma remained cold enough that snow was the dominant type, which accumulated several inches in some areas. During the evening hours, light snow continued over western and northern Oklahoma, while much of the remainder of the area, except for southeast Oklahoma, saw periodic freezing drizzle.

Overnight, and into the morning of the 29th, a surface low pressure developed over southeast Texas and began to move northeast towards western Louisiana. Behind this low, more widespread precipitation began to redevelop over west Texas. The area of precipitation pivoted through much of Oklahoma during the daytime hours in the form of snow. Localized heavier bands of snow produced reduced visibilities and substantial accumulations. One notable band set up from southeast Cleveland County, through northern Pottawatomie County, and into southwest Lincoln County. The large storm system finally moved east of the region by late evening on the 29th.

In total, the large storm system resulted in over 900 "slip-and-fall" accidents. Almost 90 accidents were reported, with over 200 non-life threatening injuries with the accidents. Almost 180,000 homes and business' were without power at the peak of the storm, several of which (mainly in SW Oklahoma) were without power for almost a week. The monetary value for the damage may not be known for a while, but estimates are well into the millions of dollars.

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Photo courtesy of Charles Kuster.

Ice glaze 4 miles west of Gotebo, OK. Picture courtesy of Charles Kuster.

TEXAS, Western North

WILBARGER COUNTY --- 6.6 SSW ODELL [34.26, -99.46]

01/20/10 19:20 CST	0		Hail (1.00 in)
01/20/10 19:22 CST	0		Source: Emergency Manager

WICHITA COUNTY --- BURKBURNETT [34.09, -98.56]

01/20/10 20:00 CST	0		Hail (1.00 in)
01/20/10 20:01 CST	0		Source: Broadcast Media

A couple of rounds of thunderstorms developed over western Texas and moved northeast into northern Texas, as a strong storm system approached from the southwestern United States. The thunderstorms developed ahead of a dry line that was located east of Lubbock. These thunderstorms remained below severe levels before intensifying over parts of Oklahoma. Later in the evening, another area of strong to occasionally severe thunderstorms moved out of west Texas. These thunderstorms also moved northeast, and produced hail up to quarter size in Wilbarger and Wichita counties. No damage was reported with the hail.

(TX-Z083) HARDEMAN, (TX-Z084) FOARD, (TX-Z085) WILBARGER

01/28/10 04:00 CST	0		Ice Storm
01/29/10 00:00 CST	0		

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(TX-Z086) WICHITA, (TX-Z087) KNOX, (TX-Z088) BAYLOR, (TX-Z089) ARCHER, (TX-Z090) CLAY	01/28/10 04:00 CST		0	Winter Weather
	01/29/10 18:00 CST		0	

A major winter storm impacted much of northern Texas from the morning of January 28th and continued through the day. The most significant impacts came with an extended period of freezing rain for Wilbarger, Hardeman, and Foard counties, which resulted in significant icing on trees and power lines. The day before the winter storm was unusually warm, as the high temperature at Wichita Falls was 67 degrees, which was 14 degrees above normal. However, that same day, a strong cold front was sweeping south down the Plains. On the morning of January 28th, the cold front pushed through western North Texas. Surface temperatures had fallen below freezing just north of the Red River and by mid morning, it had moved south of Wilbarger, Foard, and Hardeman counties. Temperatures farther east remained just above freezing, which included the Wichita Falls area. The cold front stalled to the south leaving a shallow cold air mass in place across much of the area to the north of the front. As an upper level low became better organized in the southwestern United States, it helped draw warm, moist air north from the Gulf of Mexico over the cold air at the surface. This contributed to the development of widespread precipitation during the early morning hours over northern Texas. The precipitation increased in intensity during the afternoon, and intense freezing rain moved through part of the area. Drier air swept in behind the precipitation and started clearing it out of north Texas by mid afternoon. Although only light freezing drizzle or sleet was reported for the rest of the evening, it only aggravated the already dire situation that occurred earlier in the day. Later that night, another area of precipitation had developed over parts of central Texas and moved north toward the Red River. The precipitation type was more snow with some embedded sleet, and accumulating snows occurred during the morning and afternoon of the 29th. Up to two inches of snow fell over mainly Wichita, Clay, and Archer counties.

By the time the storm system moved east of the area, thousands of trees were heavily damaged over the western portions of north Texas. Hundreds of power poles were down, and thousands were without power. Monetary damage estimates were not available due to the extensive nature of the damage.