

Storm Data and Unusual Weather Phenomena - December 2008

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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NORTH DAKOTA, Central and West

(ND-Z001) DIVIDE, (ND-Z002) BURKE, (ND-Z003) RENVILLE, (ND-Z004) BOTTINEAU, (ND-Z005) ROLETTE, (ND-Z009) WILLIAMS, (ND-Z010) MOUNTRAIL, (ND-Z011) WARD, (ND-Z012) MCHENRY, (ND-Z013) PIERCE, (ND-Z017) MCKENZIE, (ND-Z018) DUNN, (ND-Z019) MERCER, (ND-Z020) OLIVER, (ND-Z021) MCLEAN, (ND-Z022) SHERIDAN, (ND-Z023) WELLS, (ND-Z025) FOSTER, (ND-Z031) GOLDEN VALLEY, (ND-Z032) BILLINGS, (ND-Z033) STARK, (ND-Z034) MORTON, (ND-Z035) BURLEIGH, (ND-Z036) KIDDER, (ND-Z037) STUTSMAN, (ND-Z040) SLOPE, (ND-Z041) HETTINGER, (ND-Z042) GRANT, (ND-Z043) BOWMAN, (ND-Z044) ADAMS, (ND-Z045) SIOUX, (ND-Z046) EMMONS, (ND-Z047) LOGAN, (ND-Z048) LA MOURE, (ND-Z050) MCINTOSH, (ND-Z051) DICKEY

12/13/08 12:00 CST	0	Blizzard
12/14/08 23:00 CST	0	

A significant winter storm impacted all of western and central North Dakota beginning Saturday, December 13th, and lasting through much of Sunday, December 14th. A blizzard warning was posted well in advance of the storm, with the warning lead time more than a full day in advance. The blizzard warning encompassed the entire National Weather Service Bismarck County Warning Area, 36 counties, all of which verified.

Heavy snow and blizzard conditions, significant snow combined with very strong winds and near zero visibility, forced numerous road closures and the issuance of no travel advisories throughout Saturday and Saturday night. A statewide no travel advisory was then issued early Sunday morning by the North Dakota Department of Transportation. Conditions improved west to east later Sunday afternoon and into Sunday evening as snow ended and winds subsided. Wind chill warnings were then issued in the storm's wake, Sunday afternoon through Monday morning, for wind chill temperatures ranging from 40 below to near 55 below zero (See Storm Data entry for December 14 and 15).

A significant upper level trough moved onshore into the Pacific Northwest Friday afternoon the 12th, then deepened southeastward into the Intermountain West Friday night. This resulted in southwest flow aloft and large scale ascent spreading east-northeast towards the Northern Plains early on Saturday, as well as triggering lee-side cyclogenesis across the high plains of Wyoming. Surface low pressure then pushed east into the central plains Saturday afternoon and evening, coinciding with several shortwave impulses ejecting from the base of the upper trough and into North Dakota. Moderate to heavy snow spread across west and central North Dakota Saturday morning through Saturday night, then slowly dissipated west to east early Sunday morning through Sunday evening. Total snow amounts by Monday morning the 15th were as much as 13.8 inches at Williston. Bismarck had a foot, and six to eight inches of snow was common from Minot through Jamestown. The least amount of snow, two to five inches, fell across the far southwest and far south central areas, along the South Dakota border, and the far northeast, Rolette County.

Strong north to northeast winds of 25-35 mph, with gusts to 40 mph, combined with the moderate to heavy snow, as well as the deep snow cover already of the ground, to create widespread blizzard conditions across all of western and central North Dakota.

(ND-Z001) DIVIDE, (ND-Z002) BURKE, (ND-Z003) RENVILLE, (ND-Z004) BOTTINEAU, (ND-Z005) ROLETTE, (ND-Z009) WILLIAMS, (ND-Z010) MOUNTRAIL, (ND-Z011) WARD, (ND-Z012) MCHENRY, (ND-Z013) PIERCE, (ND-Z017) MCKENZIE, (ND-Z018) DUNN, (ND-Z019) MERCER, (ND-Z020) OLIVER, (ND-Z021) MCLEAN, (ND-Z022) SHERIDAN, (ND-Z023) WELLS, (ND-Z025) FOSTER, (ND-Z031) GOLDEN VALLEY, (ND-Z032) BILLINGS, (ND-Z033) STARK, (ND-Z034) MORTON, (ND-Z035) BURLEIGH, (ND-Z036) KIDDER, (ND-Z037) STUTSMAN, (ND-Z040) SLOPE, (ND-Z041) HETTINGER, (ND-Z042) GRANT, (ND-Z043) BOWMAN, (ND-Z044) ADAMS, (ND-Z045) SIOUX, (ND-Z046) EMMONS, (ND-Z047) LOGAN, (ND-Z048) LA MOURE, (ND-Z050) MCINTOSH, (ND-Z051) DICKEY

12/14/08 18:00 CST	0	Extreme Cold/Wind Chill
12/15/08 12:00 CST	0	

After a significant winter storm that brought a blizzard to western and central North Dakota moved out of the Northern Plains, wind chill continued to be a problem. Strong cold air advection combined with gusty northwest winds and resulted in wind chill temperatures of 40 to 55 below zero from Sunday night the 14th, through Monday morning the 15th.

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12/20/08 06:00 CST	0	Extreme Cold/Wind Chill
12/21/08 12:00 CST	0	

Strong cold air advection combined with gusty northwest winds resulted in wind chill temperatures of 40 below to near 50 below zero from Saturday the 20th, through Sunday morning the 21st.

(ND-Z021) MCLEAN

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	12/21/08 20:00 CST	1	0	Cold/Wind Chill
	12/22/08 17:00 CST		0	

This was a two day subset of a prolonged cold snap across North Dakota. Temperatures on the 21st at Garrison ranged from a high of ten below zero to a low of 21 below. On the 22nd the low was 25 below. A male, 74 years old, died of exposure after his vehicle became stuck and he walked away from it.

Direct Fatalities: M74OU

(ND-Z019) MERCER, (ND-Z020) OLIVER, (ND-Z021) MCLEAN, (ND-Z033) STARK, (ND-Z034) MORTON

12/26/08 19:00 CST	0	Heavy Snow
12/27/08 13:00 CST	0	

An area of surface low pressure pushing into the central plains brought light to moderate snowfall to much of western and central North Dakota from Friday afternoon the 26th, through Saturday morning the 27th. A band of heavy snow developed over central North Dakota during this event, as an associated upper level disturbance pushed slowly to the northeast. Storm total snowfall amounts ranged from six to seven inches over Mclean, Morton, and Oliver Counties.

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12/29/08 22:00 CST	0	Heavy Snow
12/30/08 14:00 CST	0	

A fast moving surface low pressure system developed a band of moderate to heavy snow from northwest North Dakota, southeast through much of central North Dakota, Monday night, December 29th, and lasting through the early afternoon of Tuesday, December 30th. Storm total snow amounts ranged from three to four inches around the perimeter of the heavy snow band to around one foot within the center. In addition, occasional winds of 20 to 35v mph a produced considerable blowing and drifting snow and resulted in the issuance of no travel advisories over several counties Monday night into Tuesday morning.