

Storm Data and Unusual Weather Phenomena - October 2010

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

ADAMS COUNTY --- 0.8 SW BUCYRUS [46.06, -102.79]				
	10/08/10 22:35 MST		0	Hail (0.88 in)
	10/08/10 22:45 MST		0	Source: Law Enforcement

ADAMS COUNTY --- 0.8 SW BUCYRUS [46.06, -102.79]				
	10/08/10 22:35 MST		0	Thunderstorm Wind (EG 52 kt)
	10/08/10 22:45 MST		0	Source: Law Enforcement

An estimated wind gust of 60 mph was received.

ADAMS COUNTY --- 8.3 NNE REEDER [46.23, -102.89]				
	10/08/10 22:38 MST		0	Hail (1.00 in)
	10/08/10 22:45 MST		0	Source: Emergency Manager

ADAMS COUNTY --- 8.3 NNE REEDER [46.23, -102.89]				
	10/08/10 22:38 MST		5K	Thunderstorm Wind (EG 61 kt)
	10/08/10 22:45 MST		0	Source: Emergency Manager

Strong thunderstorm winds combined with large hail resulting in siding damage to a home.

HETTINGER COUNTY --- 3.2 WSW NEW ENGLAND [46.51, -102.91]				
	10/08/10 23:22 MST		0	Hail (1.00 in)
	10/08/10 23:28 MST		0	Source: Law Enforcement

Surface low pressure centered over the central Dakotas combined with an upper level shortwave trough to trigger an area of thunderstorms over southwest North Dakota during the late evening hours of Friday, October 8th. Thunderstorm activity then continued into the early morning of Saturday, October 9th. An elevated area of unstable air and steep mid level lapse rates provided a favorable environment for marginal severe hail and an enhanced threat for strong thunderstorm winds.

Several severe thunderstorm warnings were issued, and several severe weather reports were received.

(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				
	10/26/10 11:00 CST		0	High Wind (MAX 61 kt)
	10/27/10 17:00 CST		0	

(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-Z034) MORTON, (ND-Z035) BURLEIGH, (ND-Z036) KIDDER, (ND-Z037) STUTSMAN, (ND-Z042) GRANT, (ND-Z045) SIOUX, (ND-Z046) EMMONS, (ND-Z047) LOGAN, (ND-Z050) MCINTOSH				
	10/26/10 14:00 CST		0	Blizzard
	10/27/10 14:00 CST		0	

An intense storm system which developed across northern Minnesota brought widespread high winds and periods of blizzard conditions to west and central North Dakota on Tuesday, October 26, and Wednesday, October 27, 2010.

In the early morning hours of October 26th, an area of surface low pressure ejecting out of the central plains rapidly intensified across central and northern Minnesota. This was in response to a very strong jet streak moving through the central plains, creating an area of high mid level divergence over the upper Mississippi Valley region. The central pressure of the surface low continued to drop, with low pressure records being set across parts of Minnesota and Wisconsin. Over North Dakota on the back side of this low, a very strong pressure gradient developed as the surface low intensified, resulting in widespread high sustained winds of 40 to near 50 mph, and peak wind gusts to near 70 mph Tuesday into Wednesday.

Wrap around precipitation developed underneath a strong TROWAL (TRough Of Warm Air aLoft) from the north to the south-southeast over the Dakotas, with precipitation changing from rain to snow as cold air was pulled into the system. When combined with the very high winds, widespread blizzard conditions developed across much of the state, with the worse conditions occurring Tuesday night

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and Wednesday morning. Storm total snowfall amounts were highest across the Turtle Mountain area, where up to thirteen inches was reported. The southern James River Valley received the least amount of snow, with only an inch reported.

Impacts from this episode varied across the state. The high winds and blizzard conditions resulted in scattered power outages in both rural and urban areas, downed trees, some school closures, multiple traffic accidents, and numerous travel advisories and alerts issued by the North Dakota Highway Patrol and Department of Transportation.