

## Storm Data and Unusual Weather Phenomena - May 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<b>NORTH DAKOTA, Central and West</b>				
<b>MCHENRY COUNTY --- 4.4 WSW VELVA [48.05, -101.02], 2.3 SE VELVA [48.05, -100.89], 2.1 NNE VELVA [48.10, -100.92], 5.4 NW VELVA [48.12, -101.02]</b>				
	05/01/13 00:00 CST		50K	Flood (due to Heavy Rain / Snow Melt)
	05/31/13 23:59 CST		0	Source: Emergency Manager
A late season rapid snow melt caused flooding along the Souris (Mouse) River through southwest McHenry County. Additionally, there were necessary releases from upstream dams in North Dakota and Saskatchewan, Canada, due to rapid snow melt there. Some roads near the river were damaged.				
<b>WARD COUNTY --- 2.0 ENE FOXHOLM [48.38, -101.53], 4.4 WSW MINOT [48.21, -101.37], 2.5 SE SAWYER [48.05, -101.02], 3.1 NNE SAWYER [48.12, -101.02], 2.4 WNW SURREY [48.24, -101.18], 4.6 E FOXHOLM [48.38, -101.47]</b>				
	05/01/13 00:00 CST		0.15M	Flood (due to Heavy Rain / Snow Melt)
	05/31/13 23:59 CST		0	Source: Emergency Manager
A late season rapid snow melt caused flooding along the Souris (Mouse) River and Des Lacs River through Ward County. Additionally, there were necessary releases from upstream dams in North Dakota and Saskatchewan, Canada, due to rapid snow melt there. Homes in the Project Road area near Burlington took on water. Many county and township roads near the rivers were damaged.				
<b>A late season rapid snow melt caused flooding along the Souris (Mouse) River and Des Lacs River through north central North Dakota. Additionally, there were necessary releases from upstream dams in North Dakota and Saskatchewan, Canada, due to rapid snow melt there. Homes in the Project Road area near Burlington took on water. Many county and township roads near the river were damaged. This flood began in April and continued into June as spring rains added water to the basin.</b>				
<b>WILLIAMS COUNTY --- 2.0 SE TIOGA [48.38, -102.90]</b>				
	05/13/13 22:20 CST		0	Thunderstorm Wind (MG 59 kt)
	05/13/13 22:30 CST		0	Source: AWOS
<b>WARD COUNTY --- 4.2 S SOUTH PRAIRIE [47.99, -101.30]</b>				
	05/13/13 23:37 CST		0	Thunderstorm Wind (MG 51 kt)
	05/13/13 23:42 CST		0	Source: Amateur Radio
<b>STUTSMAN COUNTY --- 0.8 NW (JMS)JAMESTOWN MUNI [46.94, -98.69]</b>				
	05/14/13 04:56 CST		0	Thunderstorm Wind (MG 51 kt)
	05/14/13 05:01 CST		0	Source: ASOS
As scattered thunderstorms moved east across west and central North Dakota, isolated reports of severe thunderstorm wind gusts were received. Downdraft CAPE was at around 1000 at the time of the reports.				
<b>(ND-Z021) MCLEAN, (ND-Z033) STARK, (ND-Z035) BURLEIGH</b>				
	05/14/13 02:10 CST		0	High Wind (MAX 60 kt)
	05/14/13 12:20 CST		0	
Strong winds developed along a west to east moving cold front.				
<b>BOWMAN COUNTY --- 3.6 NNW HALEY [46.02, -103.14]</b>				
	05/17/13 17:34 MST		0	Thunderstorm Wind (EG 52 kt)
	05/17/13 17:45 MST		0	Source: Trained Spotter
Pea size hail accompanied the strong winds.				
<b>ADAMS COUNTY --- 7.6 NE HAYNES [46.05, -102.36]</b>				
	05/17/13 19:05 MST		0	Thunderstorm Wind (EG 52 kt)
	05/17/13 19:10 MST		0	Source: Trained Spotter
Heavy rain accompanied the strong winds.				
<b>ADAMS COUNTY --- 11.8 NE HAYNES [46.11, -102.33]</b>				
	05/17/13 19:15 MST		0	Thunderstorm Wind (EG 52 kt)
	05/17/13 19:20 MST		0	Source: Trained Spotter

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Heavy rain accompanied the strong winds.				
<b>ADAMS COUNTY --- 17.0 ENE HAYNES [46.09, -102.16]</b>				
	05/17/13 19:29 MST		1K	Thunderstorm Wind (EG 52 kt)
	05/17/13 19:34 MST		0	Source: Trained Spotter
The strong winds destroyed lawn furniture.				
<b>GRANT COUNTY --- 6.2 N LARK [46.54, -101.39]</b>				
	05/17/13 20:53 MST		0	Thunderstorm Wind (EG 52 kt)
	05/17/13 20:58 MST		0	Source: Trained Spotter
Heavy rain accompanied the strong winds.				
<b>Scattered thunderstorms moving across southwest and far south central North Dakota produced severe thunderstorm wind gusts.</b>				
<b>GRANT COUNTY --- 8.8 WSW SHIELDS [46.20, -101.31]</b>				
	05/18/13 16:45 MST		0	Hail (1.75 in)
	05/18/13 16:55 MST		0	Source: Trained Spotter
<b>SLOPE COUNTY --- 16.6 NNW MARMARTH [46.52, -104.04]</b>				
	05/18/13 19:38 MST		25K	Hail (1.75 in)
	05/18/13 19:43 MST		0	Source: Emergency Manager
Windows at a farmstead were broken by the large hail and buildings were damaged.				
<b>KIDDER COUNTY --- 6.4 SSE ROBINSON [47.06, -99.74]</b>				
	05/18/13 19:45 CST		0	Thunderstorm Wind (EG 56 kt)
	05/18/13 19:50 CST		0	Source: Trained Spotter
Pea size hail accompanied the strong winds.				
<b>KIDDER COUNTY --- 3.6 SSE LAKE WILLIAMS [47.08, -99.58]</b>				
	05/18/13 19:48 CST		0	Hail (1.00 in)
	05/18/13 19:53 CST		0	Source: Trained Spotter
<b>STUTSMAN COUNTY --- 0.7 N MEDINA [46.89, -99.30]</b>				
	05/18/13 20:24 CST		0	Thunderstorm Wind (EG 61 kt)
	05/18/13 20:29 CST		0	Source: Public
Large hail accompanied the strong winds.				
<b>STUTSMAN COUNTY --- 6.2 N MEDINA [46.97, -99.30]</b>				
	05/18/13 20:33 CST		0	Hail (1.25 in)
	05/18/13 20:39 CST		0	Source: Trained Spotter
<b>Severe Thunderstorm Watch number 173 was in effect during this event.</b>				
<b>A subtle short wave upper level trough ejecting into the Northern Plains acted to further destabilize the atmosphere by weakening a capping inversion within an environment of 1000 Joules/KG of CAPE and 30 knots of effective wind shear. Large hail and severe thunderstorm winds occurred during this event.</b>				
<b>STARK COUNTY --- 0.7 N BELFIELD [46.89, -103.20]</b>				
	05/25/13 06:25 MST		0	Hail (1.00 in)
	05/25/13 06:30 MST		0	Source: Public
<b>MCKENZIE COUNTY --- 28.6 S FAIRVIEW [47.44, -103.94]</b>				
	05/25/13 07:35 MST		0	Hail (0.88 in)
	05/25/13 07:40 MST		0	Source: Trained Spotter
<b>Scattered thunderstorms over western North Dakota produced large hail during the mid morning hours of the 25th.</b>				

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<b>STARK COUNTY --- 2.9 SSE (DIK)DICKINSON MUNI [46.76, -102.78]</b>				
	05/25/13 12:35 MST		0	Thunderstorm Wind (MG 52 kt)
	05/25/13 12:40 MST		0	Source: Trained Spotter
<b>STARK COUNTY --- 3.5 S (DIK)DICKINSON MUNI [46.75, -102.79]</b>				
	05/25/13 12:49 MST		0	Hail (1.75 in)
	05/25/13 12:55 MST		0	Source: Public
<b>BOWMAN COUNTY --- 0.5 W SCRANTON [46.15, -103.14]</b>				
	05/25/13 13:30 MST		0	Hail (1.00 in)
	05/25/13 13:36 MST		0	Source: Fire Department/Rescue
<b>BOWMAN COUNTY --- GASCOYNE [46.12, -103.08]</b>				
	05/25/13 13:43 MST		0	Hail (1.00 in)
	05/25/13 13:48 MST		0	Source: Trained Spotter
<b>ADAMS COUNTY --- 0.8 SE REEDER [46.11, -102.94]</b>				
	05/25/13 14:00 MST		0	Hail (0.75 in)
	05/25/13 14:05 MST		0	Source: Trained Spotter
<b>ADAMS COUNTY --- 6.2 S REEDER [46.03, -102.94]</b>				
	05/25/13 14:00 MST		10K	Hail (2.75 in)
	05/25/13 14:10 MST		0	Source: Public
There was damage to buildings and automobiles.				
<b>ADAMS COUNTY --- 0.8 SE REEDER [46.11, -102.94]</b>				
	05/25/13 14:10 MST		0	Hail (0.88 in)
	05/25/13 14:15 MST		0	Source: Public
<b>ADAMS COUNTY --- 3.5 S BUCYRUS [46.02, -102.79]</b>				
	05/25/13 14:10 MST		0	Hail (0.88 in)
	05/25/13 14:15 MST		0	Source: Law Enforcement
<b>ADAMS COUNTY --- 0.5 W HETTINGER [46.00, -102.64]</b>				
	05/25/13 14:35 MST		0	Hail (1.50 in)
	05/25/13 14:45 MST		0	Source: Trained Spotter
<b>ADAMS COUNTY --- 1.4 W HETTINGER [46.00, -102.66]</b>				
	05/25/13 14:35 MST		0	Hail (1.00 in)
	05/25/13 14:41 MST		0	Source: Law Enforcement
<b>ADAMS COUNTY --- 4.2 S BUCYRUS [46.01, -102.79]</b>				
	05/25/13 15:06 MST		0	Hail (1.00 in)
	05/25/13 15:12 MST		0	Source: Public
<b>ADAMS COUNTY --- 15.8 E HAYNES [45.96, -102.14]</b>				
	05/25/13 15:55 MST		0	Hail (1.00 in)
	05/25/13 16:00 MST		0	Source: Mesonet
<b>GRANT COUNTY --- 1.7 NW HEIL [46.40, -101.72]</b>				
	05/25/13 16:00 MST		0	Hail (0.75 in)
	05/25/13 16:05 MST		0	Source: Law Enforcement
<b>GRANT COUNTY --- 1.7 NW HEIL [46.40, -101.72]</b>				
	05/25/13 16:00 MST		0	Thunderstorm Wind (EG 61 kt)
	05/25/13 16:05 MST		0	Source: Law Enforcement

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Heavy rain accompanied the strong winds.

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**ADAMS COUNTY --- 17.3 E HAYNES [45.97, -102.11]**

	05/25/13 16:50 MST		0	Hail (1.00 in)
	05/25/13 16:55 MST		0	Source: Trained Spotter

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**GRANT COUNTY --- 5.7 SSW RALEIGH [46.29, -101.33]**

	05/25/13 16:55 MST		0	Heavy Rain
	05/25/13 17:35 MST		0	Source: Trained Spotter

Measured 1.4 inches of rain in 40 minutes.

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**SIOUX COUNTY --- 11.9 SW SOLEN [46.29, -101.00], 13.8 NNW SELFRIDGE [46.22, -101.03], 3.8 W SELFRIDGE [46.04, -101.01], 5.6 WNW FT YATES [46.10, -100.74], 3.8 SW CANNON BALL [46.36, -100.66]**

	05/25/13 19:45 MST		0.25M	Flash Flood (due to Heavy Rain)
	05/25/13 23:35 MST		50K	Source: Law Enforcement

Torrential rain, with reports up to six inches, resulted in a flash flood over central Sioux County. The reports were consistent with Doppler Radar rain estimates. State Highway 6 was closed due to a foot of water flowing rapidly over the road at mile marker 18. Numerous county and tribal roads were flooded and had severe wash outs. Culverts were washed completely out in some cases.

**Tornado Watch number 217 was in effect during this event.**

Thunderstorms developing in the afternoon, in the warm sector of an area of low pressure, continued into the evening as an upper level short wave trough moved into the Dakotas. While the tornado threat did materialize as predicted, steep mid-level lapse rates, Mean Layer CAPE over 2000 Joules/KG, and deep layer shear to 45 knots supported updraft longevity and resulted in numerous reports of large hail. As the evening progressed the storms formed into a well-organized quasi-linear storm complex over south central North Dakota, producing damaging winds and torrential rain. The heaviest rain, up to six inches in central Sioux County, led to flash flooding from Selfridge to Porcupine.