

## Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<b>NORTH DAKOTA, Central and West</b>				
<b>BURKE COUNTY --- 2.7 ESE BATTLEVIEW [48.56, -102.73]</b>				
	07/05/13 15:35 CST		20K	Thunderstorm Wind (EG 56 kt)
	07/05/13 15:45 CST		0	Source: Public
A camper was blown over four miles west of Powers Lake on Highway 50.				
<b>BURKE COUNTY --- 1.1 SW POWERS LAKE [48.56, -102.65]</b>				
	07/05/13 15:38 CST		0	Thunderstorm Wind (EG 56 kt)
	07/05/13 15:45 CST		0	Source: Trained Spotter
Very heavy rain accompanied the strong winds.				
<b>MOUNTRAIL COUNTY --- 2.3 NW STANLEY [48.34, -102.42]</b>				
	07/05/13 16:27 CST		0	Thunderstorm Wind (EG 52 kt)
	07/05/13 16:32 CST		0	Source: Trained Spotter
Winds were estimated at over 60 miles per hour.				
<b>MOUNTRAIL COUNTY --- 2.3 SE BELDEN ARPT [48.15, -102.29]</b>				
	07/05/13 17:00 CST		0	Thunderstorm Wind (EG 52 kt)
	07/05/13 17:05 CST		0	Source: Trained Spotter
Very heavy rain accompanied the strong winds.				
<b>MOUNTRAIL COUNTY --- 0.5 W NEW TOWN [47.98, -102.49]</b>				
	07/05/13 17:12 CST		0	Thunderstorm Wind (EG 52 kt)
	07/05/13 17:17 CST		0	Source: Law Enforcement
Very heavy rain accompanied the strong winds.				
<b>MOUNTRAIL COUNTY --- 0.5 W NEW TOWN [47.98, -102.49]</b>				
	07/05/13 17:15 CST		5K	Thunderstorm Wind (EG 56 kt)
	07/05/13 17:18 CST		0	Source: Law Enforcement
Tree branches three inches in diameter were blown down in New Town.				
<b>WARD COUNTY --- 0.8 NNE DES LACS [48.26, -101.56]</b>				
	07/05/13 17:57 CST		0	Thunderstorm Wind (MG 69 kt)
	07/05/13 18:05 CST		0	Source: Public
<b>WARD COUNTY --- 0.9 W MINOT [48.23, -101.30]</b>				
	07/05/13 18:10 CST		0	Thunderstorm Wind (EG 52 kt)
	07/05/13 18:15 CST		0	Source: Public
Severe thunderstorm winds were reported in the city Minot.				
<b>WARD COUNTY --- 0.7 N SAWYER [48.09, -101.05]</b>				
	07/05/13 18:25 CST		0	Heavy Rain
	07/05/13 18:50 CST		0	Source: Broadcast Media
Heavy rainfall of 1.25 inches fell in 25 minutes in Sawyer.				
Lead shortwave impulses ejecting across the Northern Plains from a northern Rocky Mountain trough triggered strong to severe convection from eastern Montana into parts of North Dakota during the late afternoon and early evening. The strongest storms occurred along a west to east orientated surface boundary over northwest and north central North Dakota where they produced severe thunderstorm wind gusts.				
<b>SHERIDAN COUNTY --- 0.5 E DENHOFF [47.48, -100.26]</b>				

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/06/13 18:20 CST		0	Hail (1.75 in)
	07/06/13 18:25 CST		0	Source: Law Enforcement
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<b>SHERIDAN COUNTY --- 0.5 E DENHOFF [47.48, -100.26]</b>				
	07/06/13 18:20 CST		0	Thunderstorm Wind (EG 52 kt)
	07/06/13 18:25 CST		0	Source: Law Enforcement
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Large hail accompanied the strong winds.				
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<b>SHERIDAN COUNTY --- 9.1 S GOODRICH [47.34, -100.09]</b>				
	07/06/13 18:58 CST		0	Hail (1.75 in)
	07/06/13 19:05 CST		0	Source: Trained Spotter
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<b>KIDDER COUNTY --- 9.7 N TUTTLE [47.29, -99.99]</b>				
	07/06/13 19:01 CST		0	Hail (1.00 in)
	07/06/13 19:07 CST		0	Source: Trained Spotter
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<b>KIDDER COUNTY --- 9.7 N TUTTLE [47.29, -99.99]</b>				
	07/06/13 19:01 CST		0	Thunderstorm Wind (EG 52 kt)
	07/06/13 19:07 CST		0	Source: Trained Spotter
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Large hail accompanied the strong winds.				
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<b>KIDDER COUNTY --- 6.8 SSW PETTIBONE [47.03, -99.58]</b>				
	07/06/13 19:59 CST		0	Hail (0.75 in)
	07/06/13 20:05 CST		0	Source: Trained Spotter
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Severe Thunderstorm Watch number 393 was in effect during this event.				
A mid level shortwave trough moving northeast across Saskatchewan and Manitoba triggered late afternoon and evening convection along a surface cold front east of Highway 83 over central North Dakota. An isolated severe thunderstorm developed over Sheridan County, and tracked southeast into Kidder County where it eventually dissipated near Interstate 94. Large hail and severe thunderstorm winds accompanied this storm.				
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<b>MCKENZIE COUNTY --- 16.6 S FAIRVIEW [47.61, -104.02]</b>				
	07/08/13 16:55 MST		0	Hail (1.00 in)
	07/08/13 17:00 MST		0	Source: Trained Spotter
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<b>MCKENZIE COUNTY --- 16.6 S FAIRVIEW [47.61, -104.02]</b>				
	07/08/13 16:55 MST		0	Thunderstorm Wind (EG 52 kt)
	07/08/13 17:00 MST		0	Source: Trained Spotter
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Large hail accompanied the strong winds.				
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<b>MCKENZIE COUNTY --- 20.7 S EAST FAIRVIEW [47.55, -103.83]</b>				
	07/08/13 17:15 MST		0	Hail (0.75 in)
	07/08/13 17:20 MST		0	Source: Trained Spotter
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<b>GOLDEN VALLEY COUNTY --- BEACH [46.92, -104.00]</b>				
	07/08/13 17:30 MST		0	Thunderstorm Wind (EG 52 kt)
	07/08/13 17:40 MST		0	Source: CoCoRaHS
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Very heavy rain accompanied the strong winds.				
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<b>MCKENZIE COUNTY --- 13.8 S WATFORD CITY [47.60, -103.28]</b>				
	07/08/13 17:37 MST		0	Hail (2.00 in)
	07/08/13 17:47 MST		0	Source: Law Enforcement
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<b>MCKENZIE COUNTY --- 0.7 S GRASSY BUTTE [47.39, -103.25]</b>				

## Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/08/13 17:55 MST		0	Thunderstorm Wind (EG 65 kt)
	07/08/13 18:05 MST		0	Source: Trained Spotter

No damage was reported with these very strong winds.

<b>BILLINGS COUNTY --- 9.5 NE FAIRFIELD [47.28, -103.08]</b>				
	07/08/13 18:00 MST		75K	Thunderstorm Wind (EG 65 kt)
	07/08/13 18:10 MST		0	Source: Trained Spotter

Severe thunderstorm winds flipped over a calf shelter, blew down several power poles, and rolled hay bales through fencing.

<b>BILLINGS COUNTY --- 9.9 NNE FAIRFIELD [47.31, -103.13]</b>				
	07/08/13 18:00 MST		0	Thunderstorm Wind (MG 51 kt)
	07/08/13 18:05 MST		0	Source: COOP Observer

<b>BILLINGS COUNTY --- 5.5 NE FAIRFIELD [47.23, -103.13]</b>				
	07/08/13 18:05 MST		0	Funnel Cloud
	07/08/13 18:08 MST		0	Source: Trained Spotter

A brief funnel cloud was reported.

<b>GOLDEN VALLEY COUNTY --- 9.8 SE GOLVA [46.65, -103.81]</b>				
	07/08/13 18:30 MST		0	Thunderstorm Wind (EG 52 kt)
	07/08/13 18:40 MST		0	Source: Trained Spotter

Heavy rain accompanied the strong winds.

<b>DUNN COUNTY --- 0.9 E KILLDEER [47.37, -102.75]</b>				
	07/08/13 18:35 MST		0.18M	Thunderstorm Wind (EG 74 kt)
	07/08/13 18:45 MST		0	Source: Trained Spotter

There were multiple reports of up to eight inch in diameter trees snapped around Killdeer. A hanger at the Killdeer airport was destroyed, with several planes damaged or destroyed.

<b>SLOPE COUNTY --- 19.4 WNW AMIDON [46.56, -103.71]</b>				
	07/08/13 18:45 MST		0	Hail (1.00 in)
	07/08/13 18:50 MST		0	Source: Trained Spotter

<b>DUNN COUNTY --- 6.3 ENE EMERSON [47.22, -102.53]</b>				
	07/08/13 18:50 MST		25K	Thunderstorm Wind (EG 61 kt)
	07/08/13 19:00 MST		0	Source: Trained Spotter

The strong winds caused tree damage.

<b>DUNN COUNTY --- 0.5 W HALLIDAY [47.35, -102.34]</b>				
	07/08/13 18:53 MST		80K	Thunderstorm Wind (EG 70 kt)
	07/08/13 19:04 MST		0	Source: State Official

Severe thunderstorm winds tipped over campers, took power lines down, and ripped siding from several homes in Halliday.

<b>DUNN COUNTY --- 1.7 NE HALLIDAY [47.37, -102.31]</b>				
	07/08/13 19:05 MST		0	Thunderstorm Wind (EG 61 kt)
	07/08/13 19:15 MST		0	Source: Trained Spotter

Heavy rain accompanied the strong winds.

<b>MORTON COUNTY --- GLEN ULLIN [46.82, -101.83]</b>				
	07/08/13 20:25 CST		0	Thunderstorm Wind (EG 61 kt)
	07/08/13 20:35 CST		0	Source: Trained Spotter

Gust front severe winds.

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<b>MORTON COUNTY --- 0.9 W HEBRON [46.90, -102.05]</b>				
	07/08/13 20:29 CST		0	Thunderstorm Wind (EG 61 kt)
	07/08/13 20:39 CST		0	Source: Law Enforcement
Gust front severe winds.				
<b>MORTON COUNTY --- GLEN ULLIN [46.82, -101.83]</b>				
	07/08/13 20:30 CST		0	Thunderstorm Wind (EG 61 kt)
	07/08/13 20:40 CST		0	Source: Trained Spotter
Gust front severe winds.				
<b>MERCER COUNTY --- 2.4 ESE HAZEN [47.29, -101.58]</b>				
	07/08/13 20:35 CST		0	Thunderstorm Wind (MG 53 kt)
	07/08/13 20:45 CST		0	Source: AWOS
<b>MORTON COUNTY --- 4.3 E HEBRON [46.90, -101.94]</b>				
	07/08/13 20:35 CST		0	Thunderstorm Wind (EG 61 kt)
	07/08/13 20:45 CST		0	Source: Law Enforcement
Gust front severe winds.				
<b>MERCER COUNTY --- 2.4 ESE HAZEN [47.29, -101.58]</b>				
	07/08/13 20:55 CST		0	Thunderstorm Wind (MG 56 kt)
	07/08/13 20:59 CST		0	Source: AWOS
<b>MERCER COUNTY --- STANTON [47.32, -101.38]</b>				
	07/08/13 20:55 CST		5K	Thunderstorm Wind (EG 56 kt)
	07/08/13 20:59 CST		0	Source: Trained Spotter
Tree 18 inches in diameter knocked over.				
<b>MERCER COUNTY --- 1.2 SE PICK CITY [47.51, -101.45]</b>				
	07/08/13 20:56 CST		0	Thunderstorm Wind (EG 52 kt)
	07/08/13 21:05 CST		0	Source: Trained Spotter
A strong thunderstorm wind gust was reported.				
<b>MCLEAN COUNTY --- 2.0 NE GARRISON MUNI ARPT [47.65, -101.35]</b>				
	07/08/13 21:14 CST		0	Thunderstorm Wind (EG 65 kt)
	07/08/13 21:20 CST		0	Source: Trained Spotter
Heavy rain accompanied the strong winds.				
<b>MCLEAN COUNTY --- 0.9 W GARRISON [47.65, -101.44]</b>				
	07/08/13 21:15 CST		0	Thunderstorm Wind (MG 55 kt)
	07/08/13 21:20 CST		0	Source: ASOS
<b>BURLEIGH COUNTY --- 2.3 NE BISMARCK [46.82, -100.73]</b>				
	07/08/13 21:40 CST		0	Thunderstorm Wind (EG 52 kt)
	07/08/13 21:50 CST		0	Source: NWS Employee
Strong winds reduced visibilities to less than one mile along north Bismarck Expressway.				
<b>FOSTER COUNTY --- CARRINGTON ARPT [47.45, -99.15]</b>				
	07/08/13 23:35 CST		0	Thunderstorm Wind (MG 51 kt)
	07/08/13 23:45 CST		0	Source: AWOS
<b>FOSTER COUNTY --- CARRINGTON ARPT [47.45, -99.15]</b>				

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/08/13 23:44 CST		0	Thunderstorm Wind (MG 56 kt)
	07/08/13 23:51 CST		0	Source: AWOS
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<b>FOSTER COUNTY --- CARRINGTON [47.45, -99.13]</b>				
	07/08/13 23:45 CST		15K	Thunderstorm Wind (EG 56 kt)
	07/08/13 23:50 CST		0	Source: Emergency Manager
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Strong winds blew down several trees in Carrington.				
<b>Severe Thunderstorm Watch numbers 402 and 403 were in effect during this event.</b>				
A mid level shortwave trough moving east over north central Montana was the trigger for afternoon severe convection over central and eastern Montana. Widespread thunderstorms continued to track east into western North Dakota early in the evening and maintained their intensity due to a moderately unstable air mass over North Dakota. Large hail and severe thunderstorm wind gusts accompanied this initial surge of severe storms. By the mid evening the storms congealed into an eastward moving mesoscale convective system, where it produced severe thunderstorm winds across south central North Dakota and into the James River Valley.				
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<b>OLIVER COUNTY --- 11.3 NW HANNOVER [47.22, -101.62]</b>				
	07/09/13 14:19 CST		0	Hail (1.00 in)
	07/09/13 14:24 CST		0	Source: Trained Spotter
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<b>OLIVER COUNTY --- 0.7 S HANNOVER [47.11, -101.43]</b>				
	07/09/13 14:37 CST		0	Hail (1.75 in)
	07/09/13 14:46 CST		0	Source: Trained Spotter
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<b>MORTON COUNTY --- 5.5 N JUDSON [46.91, -101.26], 5.0 NNE JUDSON [46.90, -101.23]</b>				
	07/09/13 14:54 CST		95K	Tornado (EF0, L: 1.84 mi , W: 50 yd)
	07/09/13 14:57 CST		0	Source: Emergency Manager
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A tornado briefly touched down five miles north of Judson. Local emergency management reported the tornado damaged or destroyed three barns, and destroyed two grain bins on a farmstead. The damage reported corresponded to an EF0 on the Enhanced Fujita Scale. From that it was determined that wind speeds were on the order of 80 miles per hour.				
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<b>MORTON COUNTY --- 0.5 E MANDAN [46.83, -100.89]</b>				
	07/09/13 15:20 CST		0	Hail (0.88 in)
	07/09/13 15:25 CST		0	Source: Law Enforcement
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<b>BURLEIGH COUNTY --- 3.2 SW BISMARCK [46.77, -100.82]</b>				
	07/09/13 15:26 CST		0	Hail (1.00 in)
	07/09/13 15:28 CST		0	Source: Trained Spotter
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<b>LOGAN COUNTY --- 6.2 NNW LEHR [46.36, -99.41]</b>				
	07/09/13 16:27 CST		0	Hail (2.50 in)
	07/09/13 16:31 CST		0	Source: Trained Spotter
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<b>LOGAN COUNTY --- 5.5 S BURNSTAD [46.30, -99.62]</b>				
	07/09/13 16:50 CST		0	Hail (0.75 in)
	07/09/13 16:55 CST		0	Source: Trained Spotter
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Winds to fifty miles per hour accompanied the hail.				
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<b>MCINTOSH COUNTY --- 0.7 N WISHEK [46.26, -99.55]</b>				
	07/09/13 16:53 CST		0	Hail (1.00 in)
	07/09/13 17:00 CST		0	Source: Trained Spotter
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<b>MCINTOSH COUNTY --- 2.0 WNW WISHEK [46.26, -99.59]</b>				
	07/09/13 16:53 CST		45K	Thunderstorm Wind (EG 56 kt)
	07/09/13 17:00 CST		0	Source: Insurance Company

The severe thunderstorm winds blew two empty grain bins into a house causing damage, and destroyed a small wooden building.

## Storm Data and Unusual Weather Phenomena - July 2013

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<b>MCINTOSH COUNTY --- 16.4 ENE ASHLEY [46.09, -99.04]</b>				
	07/09/13 17:00 CST	0		Hail (1.75 in)
	07/09/13 17:05 CST	0		Source: Trained Spotter
<b>MCINTOSH COUNTY --- 7.3 NE ASHLEY [46.11, -99.27]</b>				
	07/09/13 17:14 CST	0		Hail (0.88 in)
	07/09/13 17:19 CST	0		Source: Trained Spotter
<b>DICKEY COUNTY --- 9.5 NW FORBES [46.04, -98.93]</b>				
	07/09/13 17:15 CST	0		Hail (1.75 in)
	07/09/13 17:20 CST	0		Source: Trained Spotter
<b>MCINTOSH COUNTY --- 5.2 NE ASHLEY [46.08, -99.29]</b>				
	07/09/13 17:15 CST	0		Hail (1.00 in)
	07/09/13 17:20 CST	0		Source: Trained Spotter
<b>DICKEY COUNTY --- 0.7 S FORBES [45.94, -98.78]</b>				
	07/09/13 17:35 CST	0		Hail (1.75 in)
	07/09/13 17:39 CST	0		Source: Public
<b>MCINTOSH COUNTY --- 7.7 E ASHLEY [46.03, -99.21]</b>				
	07/09/13 17:35 CST	0		Hail (2.00 in)
	07/09/13 17:39 CST	0		Source: Public
<p>A weak cold front draped from south central into southeast North Dakota was the focus for severe convection from the mid afternoon through the early evening. Isolated severe thunderstorms initially developed over Oliver County south of Lake Sakakawea, then tracked east southeast along the cold front into the southern James River Valley. One confirmed tornado, rated as an EF0, occurred over central Morton County north of Sweet Briar Lake. Besides this weak tornado, the severe thunderstorms also produced large hail and severe thunderstorm wind gusts.</p>				
<b>MCKENZIE COUNTY --- 31.1 S FAIRVIEW [47.40, -104.00]</b>				
	07/11/13 15:59 MST	0		Hail (0.88 in)
	07/11/13 16:04 MST	0		Source: Trained Spotter
<b>MCKENZIE COUNTY --- 28.6 S FAIRVIEW [47.44, -103.94]</b>				
	07/11/13 16:00 MST	0		Thunderstorm Wind (EG 52 kt)
	07/11/13 16:10 MST	0		Source: Trained Spotter
<p>Heavy rain accompanied the strong winds.</p>				
<b>GOLDEN VALLEY COUNTY --- 0.9 E BEACH [46.92, -103.98]</b>				
	07/11/13 16:02 MST	0		Thunderstorm Wind (MG 58 kt)
	07/11/13 16:07 MST	0		Source: AWOS
<b>DUNN COUNTY --- 7.9 NE NEW HRADEC [47.08, -102.76]</b>				
	07/11/13 17:33 MST	0		Thunderstorm Wind (MG 70 kt)
	07/11/13 17:40 MST	0		Source: Trained Spotter
<b>DUNN COUNTY --- 7.8 SW EMERSON [47.09, -102.75]</b>				
	07/11/13 17:35 MST	0		Hail (1.00 in)
	07/11/13 17:43 MST	0		Source: Trained Spotter
<b>DUNN COUNTY --- 5.6 NW MARSHALL [47.19, -102.41]</b>				
	07/11/13 18:02 MST	0		Thunderstorm Wind (EG 52 kt)
	07/11/13 18:08 MST	0		Source: Trained Spotter
<p>Small hail accompanied the strong winds.</p>				

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<b>WILLIAMS COUNTY --- 6.2 NW RAY [48.41, -103.27]</b>				
	07/11/13 18:35 CST	0		Hail (1.75 in)
	07/11/13 18:40 CST	0		Source: Trained Spotter
Severe Thunderstorm Watch number 410 was in effect during this event.				
Late afternoon convection was triggered over eastern Montana near an eastward moving surface cold front, and in the presence of a moderate to strongly unstable air mass. The storms maintained their intensity as they tracked into western North Dakota, producing large hail and severe thunderstorm wind gusts during the late afternoon and early evening hours.				
<b>MCKENZIE COUNTY --- 12.4 S EAST FAIRVIEW [47.67, -103.81]</b>				
	07/13/13 15:18 MST	0		Hail (2.00 in)
	07/13/13 15:25 MST	0		Source: Public
<b>MCKENZIE COUNTY --- 2.3 W WATFORD CITY [47.80, -103.33]</b>				
	07/13/13 15:48 MST	0		Hail (3.50 in)
	07/13/13 15:54 MST	0		Source: Law Enforcement
There were no reports of damage with this very large hail report.				
<b>WILLIAMS COUNTY --- 1.1 NW WILLISTON [48.16, -103.64]</b>				
	07/13/13 15:55 CST	0		Funnel Cloud
	07/13/13 15:56 CST	0		Source: Trained Spotter
A brief funnel cloud was observed.				
<b>WILLIAMS COUNTY --- 9.6 NW TRENTON [48.15, -104.02]</b>				
	07/13/13 16:00 CST	0		Hail (1.00 in)
	07/13/13 16:10 CST	0		Source: Public
<b>MCKENZIE COUNTY --- 0.9 E WATFORD CITY [47.80, -103.26]</b>				
	07/13/13 16:20 MST	0		Thunderstorm Wind (MG 54 kt)
	07/13/13 16:25 MST	0		Source: AWOS
<b>DIVIDE COUNTY --- 14.6 SSE FORTUNA [48.73, -103.56]</b>				
	07/13/13 16:32 CST	0		Hail (1.00 in)
	07/13/13 16:37 CST	0		Source: Public
<b>WILLIAMS COUNTY --- 3.7 NNW (ISN)SLOULIN FLD WIL [48.23, -103.68]</b>				
	07/13/13 16:45 CST	0		Hail (0.75 in)
	07/13/13 16:51 CST	0		Source: Trained Spotter
<b>WILLIAMS COUNTY --- 3.7 NNW (ISN)SLOULIN FLD WIL [48.23, -103.68]</b>				
	07/13/13 16:50 CST	0		Thunderstorm Wind (EG 52 kt)
	07/13/13 16:55 CST	0		Source: Trained Spotter
Heavy rain accompanied the strong winds.				
<b>MCKENZIE COUNTY --- 2.8 N GRASSY BUTTE [47.44, -103.25]</b>				
	07/13/13 16:52 MST	0		Thunderstorm Wind (EG 56 kt)
	07/13/13 16:58 MST	0		Source: Public
The strong winds resulted in broken tree branches.				
<b>BURKE COUNTY --- 3.5 ESE COTEAU [48.73, -102.25]</b>				
	07/13/13 17:45 CST	0		Thunderstorm Wind (MG 50 kt)
	07/13/13 17:50 CST	0		Source: Mesonet
<b>ADAMS COUNTY --- 2.1 SSE REEDER [46.09, -102.94]</b>				

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	07/13/13 17:53 MST		0	Thunderstorm Wind (EG 52 kt)
	07/13/13 17:58 MST		0	Source: Public

A severe thunderstorm wind gust was observed.

BOTTINEAU COUNTY --- 4.9 S ANTLER [48.90, -101.28]				
	07/13/13 18:19 CST		0	Thunderstorm Wind (MG 50 kt)
	07/13/13 18:25 CST		0	Source: Mesonet

BOTTINEAU COUNTY --- 6.5 SW ANTLER [48.91, -101.38]				
	07/13/13 18:19 CST		0	Thunderstorm Wind (EG 52 kt)
	07/13/13 18:25 CST		0	Source: Trained Spotter

The strong winds blew down small tree branches.

BOTTINEAU COUNTY --- 0.8 NNW BOTTINEAU [48.84, -100.44]				
	07/13/13 19:05 CST		0	Thunderstorm Wind (EG 52 kt)
	07/13/13 19:10 CST		0	Source: Trained Spotter

Heavy rain accompanied the strong winds.

ROLETTE COUNTY --- 2.4 WSW DUNSEITH [48.81, -100.10]				
	07/13/13 19:37 CST		0	Thunderstorm Wind (EG 61 kt)
	07/13/13 19:43 CST		0	Source: Trained Spotter

Heavy rain accompanied the strong winds.

ROLETTE COUNTY --- 2.3 NNW ROLLA [48.88, -99.62]				
	07/13/13 20:01 CST		0	Thunderstorm Wind (MG 50 kt)
	07/13/13 20:06 CST		0	Source: AWOS

**Severe Thunderstorm Watch number 413 was in effect during this event.**

**An eastward moving surface trough from far eastern Montana into western North Dakota, coupled with increasing large scale ascent associated with a mid level short wave impulse over southwest Saskatchewan, was the focus for scattered strong to severe thunderstorms over west and north central North Dakota during the late afternoon and evening hours. The thunderstorms produced large hail and severe thunderstorm wind gusts before dissipating around sunset.**

RENVILLE COUNTY --- 0.8 SSW MOHALL [48.76, -101.51]				
	07/15/13 22:00 CST		0	Thunderstorm Wind (EG 52 kt)
	07/15/13 22:10 CST		0	Source: Public

Heavy rain accompanied the strong winds.

**Tornado Watch number 415 was in effect during this event.**

**A warm frontal boundary across northeast Montana extending southeast through central North Dakota was the focus for tornado watch number 415 being issued in the mid afternoon. A long lived tornadic supercell tracked across Roosevelt County in northeast Montana, and dissipated as it neared the western North Dakota border. Thunderstorms continued across northwest and north central North Dakota during the evening, remaining sub-severe until a severe thunderstorm wind gust was reported at Mohall in Renville County.**

BURKE COUNTY --- 0.5 W LIGNITE [48.88, -102.56]				
	07/19/13 15:05 CST		0	Hail (1.50 in)
	07/19/13 15:10 CST		0	Source: Trained Spotter

MOUNTRAIL COUNTY --- 6.2 NNE STANLEY [48.40, -102.32]				
	07/19/13 17:50 CST		0	Hail (1.00 in)
	07/19/13 17:55 CST		0	Source: Public

**Scattered strong to severe thunderstorms developed along and ahead of a surface cold front over north central North Dakota in the late afternoon and early evening hours. Large hail accompanied two of the stronger storms.**



## Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<b>MCKENZIE COUNTY --- 9.0 S ARNEGARD [47.69, -103.44]</b>				
	07/21/13 13:00 MST		0	Hail (1.25 in)
	07/21/13 13:05 MST		0	Source: Trained Spotter
<b>MCKENZIE COUNTY --- 13.8 S WATFORD CITY [47.60, -103.28]</b>				
	07/21/13 13:37 MST		0	Hail (1.25 in)
	07/21/13 13:42 MST		0	Source: Park/Forest Service
<b>DUNN COUNTY --- 8.1 W MANNING [47.25, -102.94]</b>				
	07/21/13 14:15 MST		0	Hail (1.75 in)
	07/21/13 14:20 MST		0	Source: Social Media
Public report of large hail.				
<b>DUNN COUNTY --- 4.5 SW KILLDEER [47.32, -102.83]</b>				
	07/21/13 14:22 MST		0	Hail (1.00 in)
	07/21/13 14:29 MST		0	Source: Trained Spotter
<b>DUNN COUNTY --- 0.9 E KILLDEER [47.37, -102.75]</b>				
	07/21/13 14:25 MST		0	Hail (0.75 in)
	07/21/13 14:30 MST		0	Source: COOP Observer
<b>WILLIAMS COUNTY --- 5.5 S TIOGA [48.32, -102.94]</b>				
	07/21/13 14:30 CST		0	Hail (1.75 in)
	07/21/13 14:35 CST		0	Source: Public
<b>DUNN COUNTY --- 0.5 W HALLIDAY [47.35, -102.34]</b>				
	07/21/13 14:35 MST		0	Funnel Cloud
	07/21/13 14:36 MST		0	Source: COOP Observer
A brief funnel cloud was observed.				
<b>WILLIAMS COUNTY --- 8.6 SE RAY [48.26, -103.04]</b>				
	07/21/13 14:35 CST		0	Hail (0.75 in)
	07/21/13 14:40 CST		0	Source: Trained Spotter
<b>DUNN COUNTY --- 8.3 S WERNER [47.25, -102.47]</b>				
	07/21/13 14:40 MST		0	Hail (1.25 in)
	07/21/13 14:45 MST		0	Source: Trained Spotter
<b>MOUNTRAIL COUNTY --- WHITE EARTH [48.38, -102.77]</b>				
	07/21/13 14:45 CST		0	Hail (1.50 in)
	07/21/13 14:50 CST		0	Source: Social Media
Public report of large hail.				
<b>DUNN COUNTY --- 0.5 W HALLIDAY [47.35, -102.34]</b>				
	07/21/13 14:56 MST		0	Hail (2.00 in)
	07/21/13 15:01 MST		55K	Source: Public
The large hail resulted in crop damage.				
<b>DUNN COUNTY --- 1.4 W HALLIDAY [47.35, -102.36]</b>				
	07/21/13 14:57 MST		0.11M	Hail (2.50 in)
	07/21/13 15:04 MST		0	Source: Public
The large hail damaged vehicles and homes in the city of Halliday.				

## Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<b>DUNN COUNTY --- 2.7 WSW MARSHALL [47.11, -102.38]</b>				
	07/21/13 15:00 MST		0	Hail (1.25 in)
	07/21/13 15:10 MST		0	Source: Trained Spotter
<b>MOUNTRAIL COUNTY --- 0.5 W NEW TOWN [47.98, -102.49]</b>				
	07/21/13 15:14 CST		0	Hail (1.50 in)
	07/21/13 15:29 CST		0	Source: Law Enforcement
<b>STARK COUNTY --- 10.0 NE RICHARDTON [47.00, -102.20]</b>				
	07/21/13 15:15 MST		0	Hail (2.00 in)
	07/21/13 15:20 MST		0	Source: Trained Spotter
<b>MOUNTRAIL COUNTY --- 0.5 W NEW TOWN [47.98, -102.49]</b>				
	07/21/13 15:20 CST		0	Thunderstorm Wind (EG 52 kt)
	07/21/13 15:30 CST		0	Source: Law Enforcement
Large hail accompanied the strong winds.				
<b>STARK COUNTY --- 10.0 NE RICHARDTON [47.00, -102.20]</b>				
	07/21/13 15:20 MST		0	Hail (1.75 in)
	07/21/13 15:25 MST		0	Source: Public
<b>MOUNTRAIL COUNTY --- 5.9 ESE NEW TOWN [47.95, -102.36]</b>				
	07/21/13 15:40 CST		0	Hail (0.88 in)
	07/21/13 15:45 CST		0	Source: Public
<b>MOUNTRAIL COUNTY --- 0.9 NW NEW TOWN [47.99, -102.50], 0.9 NE NEW TOWN [47.99, -102.47], 1.0 ESE NEW TOWN [47.97, -102.46], 1.1 WSW NEW TOWN [47.97, -102.50]</b>				
	07/21/13 15:45 CST		65K	Flash Flood (due to Heavy Rain)
	07/21/13 17:25 CST		0	Source: Law Enforcement
Heavy runoff from thunderstorms resulted in a flash flood in the city of New Town. Water was a few feet deep in town and running into buildings.				
<b>MORTON COUNTY --- 0.9 W HEBRON [46.90, -102.05]</b>				
	07/21/13 16:24 CST		0	Hail (1.75 in)
	07/21/13 16:30 CST		0	Source: Fire Department/Rescue
<b>MORTON COUNTY --- 0.9 W HEBRON [46.90, -102.05]</b>				
	07/21/13 16:27 CST		0	Hail (2.75 in)
	07/21/13 16:35 CST		0	Source: Public
<b>MCHEMRY COUNTY --- 0.9 E DEERING [48.40, -101.03], 7.0 NNW GRANVILLE [48.36, -100.90]</b>				
	07/21/13 16:35 CST		0	Funnel Cloud
	07/21/13 16:42 CST		0	Source: Public
A funnel cloud was observed for several minutes. This funnel cloud eventually made contact with the ground as reported by an aircraft pilot. See the tornado entry for this same day in McHenry County.				
<b>MCHEMRY COUNTY --- 7.0 NNW GRANVILLE [48.36, -100.90], 3.0 N GRANVILLE [48.31, -100.83]</b>				
	07/21/13 16:42 CST		0	Tornado (EF0, L: 4.55 mi , W: 50 yd)
	07/21/13 16:51 CST		0	Source: Airplane Pilot
An aircraft pilot with the North Dakota Atmospheric Resource Board reported seeing a tornado, seeing evidence that it was in contact with the ground, in rural McHenry County. Doppler radar was used to narrow the more exact location. Follow up with emergency management indicated there were no reports of damage and so the tornado was rated EF0. Prior to touchdown a funnel cloud was observed for several minutes. See the funnel cloud entry for this same day in McHenry County.				
<b>MORTON COUNTY --- 6.4 SE GLEN ULLIN [46.75, -101.74]</b>				

## Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/21/13 16:45 CST		0	Hail (1.75 in)
	07/21/13 16:55 CST		0.18M	Source: Trained Spotter
The hail caused heavy damage to crops.				
<hr/>				
<b>MCHENRY COUNTY --- 6.0 SSW TOWNER [48.27, -100.45]</b>				
	07/21/13 17:15 CST		0	Hail (1.00 in)
	07/21/13 17:20 CST		0	Source: Trained Spotter
<hr/>				
<b>PIERCE COUNTY --- 1.1 NW BALTA [48.18, -100.05]</b>				
	07/21/13 17:55 CST		0	Hail (1.25 in)
	07/21/13 18:00 CST		75K	Source: Trained Spotter
The hail resulted in crop damage.				
<hr/>				
<b>MORTON COUNTY --- 2.8 N MANDAN [46.87, -100.89]</b>				
	07/21/13 18:09 CST		0	Hail (0.88 in)
	07/21/13 18:14 CST		0	Source: Public
<hr/>				
<b>BURLEIGH COUNTY --- 0.8 NW BISMARCK [46.81, -100.78]</b>				
	07/21/13 18:15 CST		0	Hail (0.88 in)
	07/21/13 18:20 CST		0	Source: Trained Spotter
<hr/>				
<b>MORTON COUNTY --- 0.5 E MANDAN [46.83, -100.89]</b>				
	07/21/13 18:20 CST		0	Hail (1.75 in)
	07/21/13 18:25 CST		0	Source: Law Enforcement
<hr/>				
<b>BURLEIGH COUNTY --- 0.8 NW BISMARCK [46.81, -100.78]</b>				
	07/21/13 18:21 CST		0	Thunderstorm Wind (EG 52 kt)
	07/21/13 18:30 CST		0	Source: Broadcast Media
Heavy rain accompanied the strong winds.				
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<b>BURLEIGH COUNTY --- 0.8 NW BISMARCK [46.81, -100.78]</b>				
	07/21/13 18:25 CST		0	Hail (0.88 in)
	07/21/13 18:30 CST		0	Source: Public
<hr/>				
<b>MORTON COUNTY --- 3.9 ESE MANDAN [46.80, -100.83]</b>				
	07/21/13 18:28 CST		0	Hail (1.00 in)
	07/21/13 18:33 CST		0	Source: Public
Tornado Watch number 428 was in effect during this event.				
An eastward moving surface cold front and upper level shortwave trough combined with strong instability and wind shear to trigger a severe weather outbreak across much of west and central North Dakota. Storms initiated during the mid afternoon over northwest North Dakota, and continued to develop east and south through the mid evening hours. Originally, the Tornado Watch was mainly north of Interstate 94, but was later expanded southward as severe storms moved southeast, and as thunderstorms over south central North Dakota became severe. Very large hail, severe thunderstorm wind gusts, and very heavy rain accompanied the storms. In addition, one confirmed tornado rated EF0 briefly touched down in rural McHenry County.				
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<b>HETTINGER COUNTY --- 0.8 SW MOTT [46.37, -102.33]</b>				
	07/29/13 12:00 MST		25K	Thunderstorm Wind (EG 61 kt)
	07/29/13 12:10 MST		0	Source: Public
The severe thunderstorm winds blew down several large tree limbs in the city of Mott, along with snapping a thirty foot tall tree in half.				
A severe thunderstorm moving through Hettinger County produced thunderstorm wind damage in the city of Mott.				
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<b>MORTON COUNTY --- 0.5 E MANDAN [46.83, -100.89]</b>				

## Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/30/13 23:45 CST		0	Hail (0.75 in)
	07/30/13 23:50 CST		0	Source: Trained Spotter

**MORTON COUNTY --- 1.5 SSE MANDAN [46.81, -100.89]**

	07/30/13 23:45 CST		0	Hail (1.00 in)
	07/30/13 23:50 CST		0	Source: Social Media

Public report of large hail.

**BURLEIGH COUNTY --- 2.0 NW BISMARCK [46.82, -100.80]**

	07/30/13 23:50 CST		0	Hail (1.00 in)
	07/30/13 23:56 CST		0	Source: Social Media

Public report of large hail.

**MORTON COUNTY --- 3.1 SE MANDAN [46.80, -100.85]**

	07/30/13 23:50 CST		0	Hail (1.25 in)
	07/30/13 23:55 CST		0	Source: Social Media

Public report of large hail.

**BURLEIGH COUNTY --- 0.8 NE BISMARCK [46.81, -100.76]**

	07/30/13 23:55 CST		0	Hail (0.75 in)
	07/30/13 23:59 CST		0	Source: Public

**BURLEIGH COUNTY --- 1.6 NW BISMARCK [46.81, -100.80]**

	07/30/13 23:55 CST		0	Hail (1.25 in)
	07/30/13 23:59 CST		0	Source: Broadcast Media

**BURLEIGH COUNTY --- 0.5 W MENOKEN [46.82, -100.53]**

	07/31/13 00:10 CST		0	Hail (0.75 in)
	07/31/13 00:15 CST		0	Source: Social Media

Public report of large hail.

**A weak frontal boundary north of Interstate 94 in south central North Dakota moved slowly south late in the evening of the 30th and into the early morning of the 31st. Enough elevated instability and bulk wind shear was present to trigger a severe thunderstorm over the Bismarck and Mandan metropolitan area where it produced large hail.**