

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
NORTH DAKOTA, Central and West				
MCLEAN COUNTY --- GARRISON [47.65, -101.42]				
	07/01/10 00:19 CST		0	Thunderstorm Wind (EG 56 kt)
	07/01/10 00:30 CST		0	Source: Public
Heavy rain accompanied the strong thunderstorm winds.				
MCLEAN COUNTY --- COLEHARBOR [47.55, -101.22]				
	07/01/10 00:23 CST		0	Thunderstorm Wind (EG 61 kt)
	07/01/10 00:34 CST		0	Source: Public
Heavy rain accompanied the strong thunderstorm winds.				
MCHENRY COUNTY --- TOWNER [48.35, -100.40]				
	07/01/10 01:40 CST		0	Thunderstorm Wind (EG 52 kt)
	07/01/10 01:50 CST		0	Source: Public
Strong winds accompanied large hail.				
MCHENRY COUNTY --- TOWNER [48.35, -100.40]				
	07/01/10 01:40 CST		0	Hail (1.00 in)
	07/01/10 01:55 CST		0	Source: Public
MCHENRY COUNTY --- 4.8 N TOWNER [48.42, -100.40]				
	07/01/10 01:58 CST		5K	Thunderstorm Wind (MG 74 kt)
	07/01/10 02:07 CST		0	Source: Public
The intense thunderstorm winds were measured with a private weather station. The winds resulted in an old garage blown down.				
ROLETTE COUNTY --- 3.0 SE ROLETTE [48.64, -99.78]				
	07/01/10 02:30 CST		0	Hail (1.00 in)
	07/01/10 02:40 CST		0	Source: COOP Observer
ROLETTE COUNTY --- 0.8 NNW BELCOURT [48.84, -99.74]				
	07/01/10 02:55 CST		5K	Thunderstorm Wind (EG 50 kt)
	07/01/10 03:05 CST		0	Source: Law Enforcement
Numerous tree branches were reported down.				
ROLETTE COUNTY --- 1.1 NW ROLLA [48.86, -99.62]				
	07/01/10 03:00 CST		5K	Thunderstorm Wind (EG 50 kt)
	07/01/10 03:10 CST		0	Source: Law Enforcement
Brief power outages occurred in Rolla due to the strong winds.				
<p>During the early to mid evening hours of Wednesday, June 30th, Severe Thunderstorm Watch number 434 was issued for southwest and west central North Dakota in anticipation of strong to severe thunderstorms over southeastern Montana advecting northeast into North Dakota. These thunderstorms were associated with a weak mid level wave lifting northeast into the Northern Plains. The watch was later expanding to include north central North Dakota as a nocturnal low level jet developed and intensified across the Dakotas, helping to sustain severe convection into the early morning hours of Thursday, July 1st.</p>				
<p>Several additional severe thunderstorm warnings were issued early Thursday morning. Several reports of severe thunderstorm wind gusts and two reports of large hail were received.</p>				
Please see the storm data entry for June 30th for additional reports related to this episode.				
WILLIAMS COUNTY --- 0.5 W WILLISTON [48.15, -103.63]				
	07/02/10 00:25 CST		0	Thunderstorm Wind (EG 52 kt)
	07/02/10 00:35 CST		0	Source: Law Enforcement

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Strong winds were reported in the city of Williston, resulting in power bumps and displaced trash dumpsters.				
WILLIAMS COUNTY --- 0.5 W GRENORA [48.62, -103.94]				
	07/02/10 00:35 CST		0	Thunderstorm Wind (EG 52 kt)
	07/02/10 00:45 CST		0	Source: Public
Very heavy rain accompanied the strong thunderstorm winds.				
WILLIAMS COUNTY --- 0.5 W ZAHL [48.57, -103.69]				
	07/02/10 00:50 CST		0	Thunderstorm Wind (EG 52 kt)
	07/02/10 01:00 CST		0	Source: Public
The strong thunderstorm winds were reported at a camp ground in Zahl.				
DIVIDE COUNTY --- 0.8 SSW CROSBY [48.91, -103.29]				
	07/02/10 01:09 CST		0	Thunderstorm Wind (MG 50 kt)
	07/02/10 01:16 CST		0	Source: Department of Highways
DIVIDE COUNTY --- 5.5 N NOONAN [48.96, -103.01]				
	07/02/10 01:30 CST		0	Thunderstorm Wind (EG 52 kt)
	07/02/10 01:39 CST		0	Source: Law Enforcement
Very heavy rain and frequent lightning accompanied the strong winds.				
<p>In the late evening hours of Thursday, July 1st, Severe Thunderstorm Watch number 437 was issued for western North Dakota, in anticipation of a bowing multicellular thunderstorm moving eastward over eastern Montana, towards western North Dakota and towards an increasingly moist and unstable environment. Over time, the northern section of the thunderstorm sustained its strength while the southern half dissipated. The storm moved across northwest North Dakota during the early morning hours of Friday, July 2nd, and prompted several severe thunderstorm warnings. Several reports of severe thunderstorm wind gusts were received.</p>				
ADAMS COUNTY --- 17.7 NNE HAYNES [46.21, -102.34]				
	07/02/10 17:23 MST		0	Hail (1.25 in)
	07/02/10 17:38 MST		0	Source: Trained Spotter
An isolated and short-lived severe thunderstorm resulted in one report of large hail over Adams County in southwest North Dakota.				
MOUNTRAIL COUNTY --- 1.4 E NEW TOWN [47.98, -102.45]				
	07/02/10 22:41 CST		0	Hail (1.00 in)
	07/02/10 22:53 CST		0	Source: Public
MOUNTRAIL COUNTY --- 0.5 W STANLEY [48.32, -102.39]				
	07/02/10 23:45 CST		0	Hail (0.75 in)
	07/02/10 23:52 CST		0	Source: Trained Spotter
WARD COUNTY --- KENMARE [48.67, -102.08]				
	07/03/10 00:00 CST		0	Hail (1.00 in)
	07/03/10 00:10 CST		0	Source: Public
BURKE COUNTY --- 11.9 S COTEAU [48.58, -102.28]				
	07/03/10 00:04 CST		0	Hail (1.00 in)
	07/03/10 00:11 CST		0	Source: Public
WARD COUNTY --- KENMARE [48.67, -102.08]				
	07/03/10 00:05 CST		0	Hail (1.75 in)
	07/03/10 00:13 CST		0	Source: Public
RENVILLE COUNTY --- 0.8 SSW MOHALL [48.76, -101.51]				
	07/03/10 00:45 CST		0	Hail (1.00 in)
	07/03/10 00:55 CST		0	Source: Public

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WILLIAMS COUNTY --- 2.8 E BONETRAILL [48.42, -103.79]				
	07/03/10 00:50 CST		0	Hail (1.75 in)
	07/03/10 00:59 CST		0	Source: Public
WILLIAMS COUNTY --- 2.8 NW SPRING BROOK [48.28, -103.51]				
	07/03/10 01:18 CST		0	Hail (1.00 in)
	07/03/10 01:25 CST		0	Source: Public
BOTTINEAU COUNTY --- 6.9 S WESTHOPE [48.82, -101.02]				
	07/03/10 01:22 CST		0	Hail (1.00 in)
	07/03/10 01:32 CST		0	Source: Public
WILLIAMS COUNTY --- 4.2 N EPPING [48.34, -103.36]				
	07/03/10 01:35 CST		0	Hail (1.75 in)
	07/03/10 01:45 CST		0	Source: Public
WILLIAMS COUNTY --- 0.5 W WILLISTON [48.15, -103.63]				
	07/03/10 02:51 CST		0	Hail (1.75 in)
	07/03/10 03:03 CST		0	Source: NWS Employee
RENVILLE COUNTY --- 0.8 SSW SHERWOOD [48.96, -101.63]				
	07/03/10 03:50 CST		0	Hail (2.00 in)
	07/03/10 04:02 CST		0	Source: Trained Spotter
<p>Scattered thunderstorms which developed earlier over eastern Montana eventually propagated northeast into northwest and north central North Dakota later in the evening of Friday, July 2nd and through the early morning hours of Saturday, July 3rd. The best forcing was confined along a surface boundary which stretched northeast from eastern Montana across northern North Dakota.</p> <p>Numerous severe thunderstorm warnings were issued, along with numerous reports of large hail.</p>				
MOUNTRAIL COUNTY --- 6.2 SW PARSHALL ARPT [47.88, -102.24]				
	07/05/10 13:58 CST		0	Hail (1.00 in)
	07/05/10 14:01 CST		0	Source: Trained Spotter
MOUNTRAIL COUNTY --- 6.4 ESE NEW TOWN [47.95, -102.35]				
	07/05/10 14:15 CST		0	Hail (1.50 in)
	07/05/10 14:25 CST		0	Source: Broadcast Media
WARD COUNTY --- 0.5 W RYDER [47.92, -101.68]				
	07/05/10 14:48 CST		35K	Hail (1.75 in)
	07/05/10 14:58 CST		0.25M	Source: Newspaper
<p>Large hail up to the size of golf balls broke windows and damaged crops in and around the town of Ryder.</p>				
MCHENRY COUNTY --- 0.7 S KARLSRUHE [48.09, -100.62]				
	07/05/10 16:18 CST		0	Hail (1.00 in)
	07/05/10 16:24 CST		0	Source: Law Enforcement
MCHENRY COUNTY --- 1.1 SE KARLSRUHE [48.09, -100.60]				
	07/05/10 16:18 CST		0	Hail (0.88 in)
	07/05/10 16:23 CST		0	Source: Trained Spotter
<p>An area of surface low pressure and its associated cold front pushing east across North Dakota coincided with an approaching mid level short wave trough to trigger afternoon scattered thunderstorms over northwest and north central North Dakota Monday, July 5th.</p> <p>Several reports of large hail were received.</p>				
DUNN COUNTY --- 1.7 NE HALLIDAY [47.37, -102.31]				

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	07/10/10 17:25 MST		0	Hail (1.00 in)
	07/10/10 17:27 MST		0	Source: Trained Spotter
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DUNN COUNTY --- 0.5 W HALLIDAY [47.35, -102.34]				
	07/10/10 17:42 MST		0	Hail (0.88 in)
	07/10/10 17:47 MST		0	Source: COOP Observer
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MERCER COUNTY --- 0.7 N GOLDEN VLY [47.29, -102.07]				
	07/10/10 17:45 MST		0	Hail (0.88 in)
	07/10/10 17:50 MST		0	Source: Public
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MERCER COUNTY --- 0.7 N ZAP [47.29, -101.92]				
	07/10/10 17:53 MST		0	Hail (1.00 in)
	07/10/10 17:56 MST		0	Source: Public
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MERCER COUNTY --- 0.7 S BEULAH [47.26, -101.78]				
	07/10/10 18:07 MST		0	Hail (0.88 in)
	07/10/10 18:12 MST		0	Source: Trained Spotter
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MCLEAN COUNTY --- 0.8 NW UNDERWOOD [47.46, -101.14]				
	07/10/10 21:16 CST		0	Hail (0.88 in)
	07/10/10 21:25 CST		0	Source: Law Enforcement
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BURLEIGH COUNTY --- 7.8 NE WILTON [47.26, -100.70]				
	07/10/10 21:46 CST		0	Hail (1.00 in)
	07/10/10 22:06 CST		0	Source: Trained Spotter
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<p>A weak mid level disturbance combined with increasing instability parameters along a surface cold front to trigger convection across portions of west and central North Dakota during the evening hours of Saturday, July 10th.</p> <p>Several reports of large hail were received.</p>				
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MOUNTRAIL COUNTY --- 2.8 N MANITOU [48.37, -102.64], 2.7 NNE MANITOU [48.37, -102.61]				
	07/12/10 19:16 CST		0	Tornado (EF0, L: 1.43 mi , W: 30 yd)
	07/12/10 19:20 CST		0	Source: Trained Spotter
<p>This tornado touched down in rural Mountrail County. It impacted no structures and so there were no reports of damage. It was rated EF0.</p>				
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MOUNTRAIL COUNTY --- 1.1 NW ROSS [48.33, -102.55]				
	07/12/10 19:30 CST		0	Funnel Cloud
	07/12/10 19:32 CST		0	Source: Trained Spotter
<p>This funnel cloud lasted for two minutes, and did not reach the surface.</p>				
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STARK COUNTY --- 0.5 W DICKINSON [46.88, -102.79]				
	07/12/10 19:45 MST		0	Hail (1.00 in)
	07/12/10 20:00 MST		0	Source: Law Enforcement
<p>Rotating wall clouds were also observed over Dickinson. There were no confirmed reports of funnel clouds.</p>				
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STARK COUNTY --- 0.9 E DICKINSON [46.88, -102.76]				
	07/12/10 19:50 MST		0	Hail (1.25 in)
	07/12/10 20:00 MST		0	Source: Public
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MOUNTRAIL COUNTY --- 4.7 NE STANLEY [48.37, -102.31]				
	07/12/10 20:21 CST		0	Hail (1.50 in)
	07/12/10 20:30 CST		0	Source: Trained Spotter
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MOUNTRAIL COUNTY --- 5.0 NNW PALERMO [48.39, -102.28]				

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/12/10 20:23 CST		0	Hail (2.00 in)
	07/12/10 20:32 CST		0	Source: Trained Spotter
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BOWMAN COUNTY --- 2.0 NE BUFFALO SPGS [46.19, -103.20]				
	07/12/10 22:15 MST		0	Hail (0.88 in)
	07/12/10 22:19 MST		0	Source: Trained Spotter
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WILLIAMS COUNTY --- 0.5 W WILLISTON [48.15, -103.63]				
	07/12/10 23:36 CST		0	Thunderstorm Wind (MG 55 kt)
	07/12/10 23:44 CST		0	Source: Official NWS Observations
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WILLIAMS COUNTY --- 4.3 NNE (ISN)SLOULIN FLD WIL [48.24, -103.63]				
	07/12/10 23:51 CST		0	Hail (0.88 in)
	07/12/10 23:53 CST		0	Source: Public
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WILLIAMS COUNTY --- 9.4 SE ALAMO [48.47, -103.35]				
	07/13/10 01:10 CST		2K	Thunderstorm Wind (EG 56 kt)
	07/13/10 01:20 CST		0	Source: Trained Spotter

The strong thunderstorm winds resulted in a quonset door blown in.

In the mid afternoon hours of Monday, July 12th, Severe Thunderstorm Watch number 461 was issued for far western North Dakota. This was in anticipation of thunderstorms developing ahead of a potent short wave trough advecting northeast across the central Rockies and into the Northern High Plains region. Ahead of this feature, strong moisture advection combined with steep lapse rates and strengthening vertical shear parameters to create a favorable atmosphere for organized storms.

Severe Thunderstorm Watch number 463 was issued later Monday evening to include all of west and portions of central North Dakota, as ongoing severe thunderstorms over western North Dakota were expected to continue and advect to the east along and ahead of a frontal boundary stretched across the western Dakotas.

Several severe thunderstorm and tornado warnings were issued. Several reports of large hail, two reports of severe thunderstorm winds, and one confirmed tornado occurred during this episode.

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KIDDER COUNTY --- 15.1 SSE STEELE [46.65, -99.77]				
	07/13/10 13:10 CST		0	Hail (0.75 in)
	07/13/10 13:15 CST		0	Source: Trained Spotter
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KIDDER COUNTY --- 13.8 S STEELE [46.65, -99.92]				
	07/13/10 13:20 CST		0	Heavy Rain
	07/13/10 13:20 CST		0	Source: Public
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KIDDER COUNTY --- 10.4 S CRYSTAL SPGS [46.73, -99.46]				
	07/13/10 13:30 CST		0	Heavy Rain
	07/13/10 13:30 CST		0	Source: COOP Observer
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KIDDER COUNTY --- 10.4 S CRYSTAL SPGS [46.73, -99.46]				
	07/13/10 13:30 CST		0	Hail (0.88 in)
	07/13/10 14:00 CST		0	Source: Trained Spotter
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KIDDER COUNTY --- 10.4 S CRYSTAL SPGS [46.73, -99.46]				
	07/13/10 13:30 CST		0	Thunderstorm Wind (EG 61 kt)
	07/13/10 14:00 CST		0	Source: COOP Observer

Rainfall of 2.62 inches fell in 45 minutes.

A few barns near Napoleon were reported to sustain damage from the strong thunderstorm winds. Damage amounts were not available.

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STUTSMAN COUNTY --- 11.4 SSE CLEVELAND [46.73, -99.02]				

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	07/13/10 13:45 CST		0	Heavy Rain
	07/13/10 13:45 CST		0	Source: Trained Spotter
Rainfall of 1.75 inches fell in 45 minutes.				
STUTSMAN COUNTY --- (JMS)JAMESTOWN MUNI [46.93, -98.68]				
	07/13/10 14:55 CST		5K	Lightning
	07/13/10 14:55 CST		0	Source: Newspaper
Lightning was determined to be the cause of a minor fire in the attic of a home.				
STUTSMAN COUNTY --- (JMS)JAMESTOWN MUNI [46.93, -98.68], 2.9 NW JAMESTOWN [46.93, -98.75], 3.3 SW JAMESTOWN [46.87, -98.76], 0.4 ESE STATE HOSPITAL [46.88, -98.66]				
	07/13/10 15:00 CST		15K	Flash Flood (due to Heavy Rain)
	07/13/10 17:00 CST		0	Source: Newspaper
Street flooding occurred in parts of Jamestown. Water was deep enough to force street closures. In some areas running water eroded soil. The damage was minor.				
STUTSMAN COUNTY --- 2.8 N MONTPELIER [46.74, -98.59]				
	07/13/10 15:00 CST		30K	Thunderstorm Wind (EG 61 kt)
	07/13/10 15:20 CST		60K	Source: Trained Spotter
The strong straight line thunderstorm winds resulted in a tree uprooted, a grain bin tipper over, a small wooden building destroyed, and crop damage.				
STUTSMAN COUNTY --- 0.5 W MONTPELIER [46.70, -98.59]				
	07/13/10 15:03 CST		0	Thunderstorm Wind (EG 52 kt)
	07/13/10 15:21 CST		0	Source: COOP Observer
No reports of damage accompanied the strong thunderstorm winds.				
STUTSMAN COUNTY --- 0.8 NW JAMESTOWN [46.91, -98.71]				
	07/13/10 15:10 CST		0	Heavy Rain
	07/13/10 15:10 CST		0	Source: Public
An estimated report of two inches of rain fell over the southern part of Jamestown.				
<p>Tornado Watch number 467 was issued in anticipation of rapid thunderstorm development over south central and eastern North Dakota during the afternoon hours of Tuesday, July 13th. Thunderstorms were expected to initiate and strengthen ahead of an eastward moving surface front and an associated strong upper level trough lifting through the Northern High Plains region.</p> <p>One report of large hail, three reports of strong thunderstorm winds, and several reports of heavy rain were received. The heavy rain also resulted in flooding in the city of Jamestown.</p>				
HETTINGER COUNTY --- 5.9 NW BURT [46.44, -102.22]				
	07/13/10 21:15 MST		10K	Hail (1.75 in)
	07/13/10 21:23 MST		0	Source: Trained Spotter
Strong winds accompanied the large hail. The large hail resulted in damage to siding on a garage.				
GRANT COUNTY --- NEW LEIPZIG [46.37, -101.95]				
	07/13/10 21:30 MST		0	Hail (2.50 in)
	07/13/10 21:41 MST		0	Source: Trained Spotter
Specific damage estimates from the large hail were not available. This was the first wave of large hail for New Leipzig during this episode.				
GRANT COUNTY --- 2.0 S ELGIN [46.37, -101.85]				
	07/13/10 21:32 MST		0	Funnel Cloud
	07/13/10 21:33 MST		0	Source: Fire Department/Rescue
Elgin fire officials who were out spotting saw a funnel cloud just south of Elgin. The funnel did not reach the surface and quickly retreated back into the storm. The funnel cloud was made visible by lightning.				

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GRANT COUNTY --- ELGIN [46.40, -101.85]				
	07/13/10 21:33 MST		0	Hail (2.00 in)
	07/13/10 21:43 MST		0	Source: Public
Specific damage estimates from the large hail were not available. This was the first wave of large hail in Elgin for this episode.				
GRANT COUNTY --- ELGIN [46.40, -101.85]				
	07/13/10 21:33 MST		0	Thunderstorm Wind (EG 52 kt)
	07/13/10 21:43 MST		0	Source: Public
Strong thunderstorm winds accompanied the large hail.				
GRANT COUNTY --- 0.8 SW RALEIGH [46.36, -101.31]				
	07/13/10 22:00 MST		25K	Hail (1.50 in)
	07/13/10 22:11 MST		50K	Source: Trained Spotter
Strong thunderstorm winds accompanied the large hail, and resulted in windows on the west side of a house broken.				
GRANT COUNTY --- 4.5 ESE BRISBANE [46.33, -101.39]				
	07/13/10 22:00 MST		15K	Hail (1.50 in)
	07/13/10 22:10 MST		50K	Source: Public
The large hail resulted in two skylights and one window broken.				
GRANT COUNTY --- 6.4 SSW RALEIGH [46.28, -101.33]				
	07/13/10 22:05 MST		45K	Hail (1.50 in)
	07/13/10 22:15 MST		50K	Source: Trained Spotter
The large hail resulted in damaged vehicles at the Prairie Learning Center in Saint Gertrude.				
GRANT COUNTY --- 0.8 SW RALEIGH [46.36, -101.31]				
	07/13/10 22:08 MST		0	Hail (1.75 in)
	07/13/10 22:16 MST		50K	Source: Emergency Manager
HETTINGER COUNTY --- 0.5 W REGENT [46.42, -102.56]				
	07/13/10 22:08 MST		0	Hail (1.00 in)
	07/13/10 22:16 MST		0	Source: Trained Spotter
BOWMAN COUNTY --- 0.5 E BOWMAN [46.18, -103.39]				
	07/13/10 22:09 MST		0	Hail (1.50 in)
	07/13/10 22:19 MST		50K	Source: Emergency Manager
HETTINGER COUNTY --- 0.5 W REGENT [46.42, -102.56]				
	07/13/10 22:14 MST		0	Thunderstorm Wind (EG 52 kt)
	07/13/10 22:24 MST		0	Source: Law Enforcement
Large hail accompanied the strong thunderstorm winds.				
BOWMAN COUNTY --- 2.0 NE BUFFALO SPGS [46.19, -103.20]				
	07/13/10 22:15 MST		0	Hail (0.88 in)
	07/13/10 22:23 MST		0	Source: Trained Spotter
GRANT COUNTY --- 2.4 NW FREDA [46.37, -101.21]				
	07/13/10 22:15 MST		50K	Hail (1.25 in)
	07/13/10 22:25 MST		0.10M	Source: Trained Spotter
Strong thunderstorm winds combined with the large hail resulting in crop damage and all west side windows on a home broken.				
HETTINGER COUNTY --- 0.5 W REGENT [46.42, -102.56]				

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	07/13/10 22:18 MST		75K	Hail (1.75 in)
	07/13/10 22:27 MST		50K	Source: Emergency Manager

City officials in Regent reported minor hail damage.

BOWMAN COUNTY --- 13.1 S RHAME [46.04, -103.65]

	07/13/10 22:20 MST		2K	Hail (1.75 in)
	07/13/10 22:29 MST		0.15M	Source: Emergency Manager

The large hail broke out the windsheild on a truck.

HETTINGER COUNTY --- 0.8 SW MOTT [46.37, -102.33]

	07/13/10 22:22 MST		0.75M	Hail (2.75 in)
	07/13/10 22:32 MST		0.50M	Source: Emergency Manager

County officials reported up to baseball size hail in Mott. All vehicles left outside received major damage. The north side of homes sustained siding damage and broken windows. Roofs were also damaged from the large hail.

HETTINGER COUNTY --- BURT [46.37, -102.15]

	07/13/10 22:22 MST		0.40M	Hail (4.25 in)
	07/13/10 22:32 MST		0.50M	Source: Emergency Manager

County officials reported up to softball size hail in Burt. All vehicles left outside received major damage. The north side of homes sustained siding damage and broken windows. Roofs were also damaged from the large hail.

GRANT COUNTY --- 2.8 S RALEIGH [46.33, -101.31]

	07/13/10 22:24 MST		0	Hail (2.75 in)
	07/13/10 22:34 MST		0.25M	Source: Public

Specific damage estimates from the large hail were not available.

SIOUX COUNTY --- 7.8 SSW CANNON BALL [46.28, -100.63]

	07/13/10 22:40 MST		1.50M	Hail (5.00 in)
	07/13/10 22:55 MST	2	0.50M	Source: NWS Storm Survey

A North Dakota state record tying hailstone of five inches in diameter fell at Prairie Knights Casino and Resort. The resort, and all vehicles outside, sustained severe damage from the extreme hail. One of these large hail stones crashed through the windshield of a car, injuring the two occupants. This tied the record size five inch diameter hailstone in Mercer County on August 3, 1969.

GRANT COUNTY --- NEW LEIPZIG [46.37, -101.95]

	07/13/10 22:50 MST		1M	Hail (2.75 in)
	07/13/10 23:00 MST		0.50M	Source: Public

This was the second wave of very large hail to hit New Leipzig during this episode. Homes throughout the city experienced broken windows, damaged siding, and damaged shingles. Vehicles sustained heavy damaged as well.

HETTINGER COUNTY --- 0.8 SW MOTT [46.37, -102.33]

	07/13/10 22:54 MST		0.10M	Hail (1.75 in)
	07/13/10 23:02 MST		0.10M	Source: Public

Another round of large hail impacted the city of Mott.

ADAMS COUNTY --- 7.6 N BUCYRUS [46.18, -102.79]

	07/13/10 23:00 MST		0	Hail (0.75 in)
	07/13/10 23:08 MST		0	Source: Trained Spotter

SIOUX COUNTY --- CANNON BALL [46.39, -100.59]

	07/13/10 23:02 MST		0.75M	Hail (4.25 in)
	07/13/10 23:10 MST		0.25M	Source: Public

This was the first of three waves of very large hail to impact the city of Cannon Ball during this episode. Severe damage to vehicles, homes, and crops occurred.

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
GRANT COUNTY --- ELGIN [46.40, -101.85]				
	07/13/10 23:03 MST		2M	Hail (4.25 in)
	07/13/10 23:13 MST		0.75M	Source: Public
This was the second wave of very large hail to hit Elgin during this episode. Homes throughout the city experienced broken windows, damaged siding, and damaged shingles. Vehicles sustained heavy damaged as well.				
ADAMS COUNTY --- 0.5 W HETTINGER [46.00, -102.64]				
	07/13/10 23:25 MST		0	Hail (1.00 in)
	07/13/10 23:35 MST		0	Source: Trained Spotter
GRANT COUNTY --- ELGIN [46.40, -101.85]				
	07/13/10 23:30 MST		65K	Lightning
	07/13/10 23:30 MST		0	Source: NWS Storm Survey
A lightning strike caused a house fire in Elgin. The lightning bolt struck the chimney of the house, traveling into the basement starting a fire in the electrical wiring on all three levels of the home. When arriving on scene, fire officials reported that a metal antenna on the chimney of the home was glowing bright orange. No injuries or fatalities occurred. The home was determined to be a complete loss.				
GRANT COUNTY --- 4.9 S LEITH [46.28, -101.65]				
	07/14/10 00:00 MST		0	Hail (2.00 in)
	07/14/10 00:12 MST		0.35M	Source: Trained Spotter
The large hail resulted in heavy damage to wheat and sunflower crops.				
SIOUX COUNTY --- SOLEN [46.39, -100.80]				
	07/14/10 00:10 MST		0.10M	Hail (4.25 in)
	07/14/10 00:20 MST		0.40M	Source: Public
Damage amounts were estimated based on the extreme hail size.				
EMMONS COUNTY --- LINTON [46.27, -100.23]				
	07/14/10 00:15 CST		0.50M	Hail (2.50 in)
	07/14/10 00:25 CST		0.65M	Source: Newspaper
Damage was sustained to area homes and vehicles. Crop damage was reported to be severe across central Emmons County.				
SIOUX COUNTY --- CANNON BALL [46.39, -100.59]				
	07/14/10 00:21 MST		0.10M	Hail (4.25 in)
	07/14/10 00:30 MST		0.15M	Source: Public
This was the second wave of very large hail to impact Cannon Ball during this episode, resulting in further damage to homes, vehicles, and crops.				
MORTON COUNTY --- 0.7 N FLASHER [46.46, -101.23]				
	07/14/10 00:45 CST		0	Hail (1.00 in)
	07/14/10 00:53 CST		0	Source: Trained Spotter
SIOUX COUNTY --- CANNON BALL [46.39, -100.59]				
	07/14/10 01:08 MST		50K	Hail (1.75 in)
	07/14/10 01:15 MST		50K	Source: Public
This was the third wave of large hail to impact the city of Cannon Ball during this episode.				
STUTSMAN COUNTY --- 8.7 E STREETER [46.66, -99.17], 11.8 E STREETER [46.66, -99.10], 0.9 ESE CLEVELAND [46.88, -99.10], 1.8 WSW CLEVELAND [46.87, -99.15]				
	07/14/10 01:10 CST		80K	Flash Flood (due to Heavy Rain)
	07/14/10 04:00 CST		0	Source: NWS Storm Survey
Several low lying areas of County Highway 67 from north of Gackle to Interstate 94 showed signs of recent flash flooding. Water was flowing freely over one area, with severe erosion noted at other low lying areas along the highway.				

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
MORTON COUNTY --- 7.1 SW HUFF [46.55, -100.76]				
	07/14/10 01:15 CST		0	Hail (1.50 in)
	07/14/10 01:25 CST		0.10M	Source: Trained Spotter
The large hail was accompanied by strong thunderstorm winds.				
EMMONS COUNTY --- 6.0 SW HAZELTON [46.42, -100.37]				
	07/14/10 01:30 CST		20K	Hail (1.75 in)
	07/14/10 01:43 CST		50K	Source: Mesonet
Broken windows resulted from the large hail.				
LOGAN COUNTY --- 0.6 WSW GACKLE [46.63, -99.14]				
	07/14/10 01:40 CST		25K	Thunderstorm Wind (EG 65 kt)
	07/14/10 01:50 CST		0	Source: NWS Storm Survey
The severe thunderstorm winds blew down numerous tree branches, including one tree snapped off on the west side of Gackle. Other wind damage included a flag pole bent over and a television antenna blown off of a roof.				
LOGAN COUNTY --- 9.9 N FREDONIA [46.47, -99.14]				
	07/14/10 01:40 CST		35K	Thunderstorm Wind (EG 70 kt)
	07/14/10 01:50 CST		0	Source: Mesonet
A kill chute weighing about 1500 pounds was blown over. The strong thunderstorm winds also tore shingles off of a roof.				
EMMONS COUNTY --- 0.7 S HAZELTON [46.47, -100.28]				
	07/14/10 01:43 CST		0	Hail (1.50 in)
	07/14/10 01:52 CST		0	Source: Public
EMMONS COUNTY --- HAZELTON [46.48, -100.28]				
	07/14/10 01:44 CST		0	Hail (1.75 in)
	07/14/10 01:54 CST		0	Source: Public
LA MOURE COUNTY --- 3.2 SE NORTONVILLE [46.52, -98.69]				
	07/14/10 01:55 CST		0	Thunderstorm Wind (EG 70 kt)
	07/14/10 02:10 CST		50K	Source: NWS Storm Survey
Corn fields across central LaMoure County were flattened by strong thunderstorm winds. Local residents were unsure if the corn was a partial or complete loss.				
LA MOURE COUNTY --- 4.6 S NORTONVILLE [46.48, -98.73]				
	07/14/10 01:55 CST		0	Thunderstorm Wind (EG 70 kt)
	07/14/10 02:10 CST		50K	Source: NWS Storm Survey
Corn fields across central LaMoure County were flattened by strong thunderstorm winds. Local residents were unsure if the corn was a partial or complete loss.				
LA MOURE COUNTY --- 7.0 NE EDGELEY [46.45, -98.61]				
	07/14/10 01:55 CST		0	Thunderstorm Wind (EG 70 kt)
	07/14/10 02:10 CST		50K	Source: NWS Storm Survey
Corn fields across central LaMoure County were flattened by strong thunderstorm winds. Local residents were unsure if the corn was a partial or complete loss.				
STUTSMAN COUNTY --- 0.5 W MONTPELIER [46.70, -98.59]				
	07/14/10 02:00 CST		0	Thunderstorm Wind (EG 61 kt)
	07/14/10 02:11 CST		0	Source: COOP Observer
Heavy rain accompanied the strong thunderstorm winds.				
LA MOURE COUNTY --- 1.5 WSW GRAND RAPIDS [46.44, -98.40]				

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/14/10 02:02 CST		60K	Thunderstorm Wind (EG 78 kt)
	07/14/10 02:13 CST		0	Source: NWS Storm Survey

Intense straight line thunderstorm winds damaged outbuildings on a farmstead just west of Grand Rapids. The roof on a barn was partially ripped off and a flag pole was bent over.

LA MOURE COUNTY --- 0.1 SW GRAND RAPIDS [46.45, -98.37]

	07/14/10 02:04 CST		0.65M	Thunderstorm Wind (EG 91 kt)
	07/14/10 02:15 CST		50K	Source: NWS Storm Survey

The most severe wind damage observed during the storm survey in LaMoure County occurred in the town of Grand Rapids. Significant and widespread tree damage was observed, including numerous mature hardwood trees uprooted or snapped in half. Damage was also sustained to buildings, which consisted of roof damage, damage to pole barns, and several grain bins destroyed. Hay bales of 1300 pounds were also blown up to 500 yards across farm fields.

The peak estimated wind speed of 105 mph was assigned based on damage indicators from the Enhanced Fujita Scale. It was later learned that wind sensing instruments on wind towers 10 miles west of Edgeley recorded a peak wind gust of 103 mph during the storm.

EMMONS COUNTY --- KINTYRE [46.55, -99.95]

	07/14/10 02:05 CST		0	Hail (1.00 in)
	07/14/10 02:12 CST		0	Source: Law Enforcement

LA MOURE COUNTY --- 1.7 SE GRAND RAPIDS [46.43, -98.35]

	07/14/10 02:07 CST		50K	Thunderstorm Wind (EG 78 kt)
	07/14/10 02:18 CST		0	Source: NWS Storm Survey

Large field irrigators were tipped over between Grand Rapids and LaMoure.

LA MOURE COUNTY --- 0.7 NNW LA MOURE [46.36, -98.30]

	07/14/10 02:09 CST		0.25M	Thunderstorm Wind (EG 78 kt)
	07/14/10 02:14 CST		0	Source: NWS Storm Survey

Widespread tree damage was observed in the city of LaMoure, with most damage consisting of tree branches snapped off of trees. Some areas of the city also had trees uprooted or snapped in half. A pole barn west of LaMoure sustained heavy roof damage along with two large doors blown into the building.

LOGAN COUNTY --- 0.7 N NAPOLEON [46.51, -99.77]

	07/14/10 02:09 CST		1.50M	Hail (2.75 in)
	07/14/10 02:18 CST		1M	Source: Newspaper

The large hail damaged many area homes, campers, and vehicles. Damage to crops was limited as despite the large size of the hail, the aerial coverage of hail was spotty according to insurance adjusters.

LOGAN COUNTY --- 1.4 S NAPOLEON [46.48, -99.77]

	07/14/10 02:10 CST		45K	Hail (2.75 in)
	07/14/10 02:19 CST		0.20M	Source: Emergency Manager

LOGAN COUNTY --- 9.4 NNE BURNSTAD [46.51, -99.56]

	07/14/10 02:12 CST		25K	Hail (1.75 in)
	07/14/10 02:31 CST		0.10M	Source: Mesonet

The large hail resulted in vehicle damage and some crop damage.

LA MOURE COUNTY --- 7.2 E MARION [46.61, -98.18]

	07/14/10 02:15 CST		8K	Thunderstorm Wind (EG 61 kt)
	07/14/10 02:21 CST		0	Source: Trained Spotter

Strong thunderstorm winds caused a small storage building under construction to collapse.

LOGAN COUNTY --- 1.6 WNW GACKLE [46.64, -99.16]

	07/14/10 02:15 CST		0	Hail (1.00 in)
	07/14/10 02:22 CST		0	Source: Mesonet

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<hr/>				
LOGAN COUNTY --- 5.6 NNE BURNSTAD [46.45, -99.56]				
	07/14/10 03:00 CST		0	Thunderstorm Wind (EG 52 kt)
	07/14/10 03:06 CST		0	Source: Public
<p>Damage was not reported with this severe thunderstorm wind gust.</p> <p>Large scale forcing associated with a dynamic upper level trough coincided with very strong deep layer shear and very steep mid level lapse rates to trigger rapid thunderstorm development and intensification across southwest and south central North Dakota. Thunderstorms began in the late evening hours of Tuesday, July 13th, and lasted into the early morning hours of Wednesday, July 14th.</p> <p>Severe Thunderstorm Watch number 469 was initially issued late Tuesday evening for portions of southwest and most of south central North Dakota through the early morning hours of Wednesday, with rapid thunderstorm development across the southwest already underway. Tornado Watch number 470 was issued early Wednesday morning for far south central North Dakota as intense supercellular thunderstorms with very large hail continued to develop and move east across far southwest and south central parts of the state. The intense thunderstorms eventually transitioned from very large hail producers to damaging wind producers as they moved east of the Missouri River and towards and into the James River Valley region.</p> <p>Multiple severe thunderstorm and tornado warnings were issued. Numerous reports of large hail, including a record tying hailstone, and several reports of damaging thunderstorm winds were received during this episode.</p> <p>Damage from the very large hail was extensive and extreme. Hardest hit were Hettinger, Grant, Sioux, and Emmons Counties, where baseball to softball size hail fell. Some homes had hailstones crash completely through the roof. The large hail also killed several farm animals, and injured other livestock and pets. A North Dakota record tying hailstone, five inches in diameter, fell at Prairie Knights Resort located in eastern Sioux County. In addition, some areas in these counties experienced more than one wave of large hail. Later Wednesday morning, straight line winds up to 105 mph resulted in extensive damage over portions of Logan and LaMoure Counties.</p>				
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DICKEY COUNTY --- 0.5 W FULLERTON [46.17, -98.43]				
	07/17/10 14:49 CST		0	Hail (1.50 in)
	07/17/10 14:58 CST		0	Source: Emergency Manager
<hr/>				
DICKEY COUNTY --- 3.0 ESE CLEMENT [46.14, -98.19]				
	07/17/10 15:08 CST		0	Hail (1.75 in)
	07/17/10 15:17 CST		0	Source: Law Enforcement
<hr/>				
DICKEY COUNTY --- 3.0 ESE CLEMENT [46.14, -98.19]				
	07/17/10 15:15 CST		0	Hail (2.75 in)
	07/17/10 15:22 CST		0	Source: Law Enforcement
<hr/>				
DICKEY COUNTY --- 0.8 NW OAKES [46.14, -98.09]				
	07/17/10 15:21 CST		0	Hail (1.75 in)
	07/17/10 15:28 CST		0	Source: Trained Spotter
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DICKEY COUNTY --- 0.8 NE GUELPH [46.03, -98.22]				
	07/17/10 15:47 CST		0	Hail (1.00 in)
	07/17/10 15:55 CST		0	Source: Trained Spotter
<p>A shortwave trough moving across northern North Dakota forced a baroclinic zone southeastward through the Dakotas during the afternoon hours of Saturday, July 17th. This caused the erosion of a capping inversion in place across southeastern North Dakota, leading to the development and intensification of thunderstorms in the James River Valley region south of Jamestown.</p> <p>Several reports of large hail were received over Dickey County.</p>				
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DIVIDE COUNTY --- 0.8 NNW NOONAN [48.89, -103.01]				
	07/20/10 14:12 CST		0	Hail (1.00 in)
	07/20/10 14:21 CST		0	Source: Trained Spotter
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DIVIDE COUNTY --- 1.5 SSW NOONAN [48.86, -103.01]				
	07/20/10 14:15 CST		0	Funnel Cloud
	07/20/10 14:17 CST		0	Source: Storm Chaser

This funnel cloud was short lived and never reached the surface.

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
PIERCE COUNTY --- 3.7 E WOLFORD [48.50, -99.62]				
	07/20/10 15:01 CST		0	Funnel Cloud
	07/20/10 15:03 CST		0	Source: Broadcast Media
A brief funnel cloud formed.				
WARD COUNTY --- 3.5 S MAKOTI [47.92, -101.79]				
	07/20/10 16:24 CST		0	Hail (1.00 in)
	07/20/10 16:31 CST		0	Source: Public
OLIVER COUNTY --- 6.9 S HANNOVER [47.02, -101.43]				
	07/20/10 16:29 CST		0	Hail (1.00 in)
	07/20/10 16:36 CST		0	Source: Law Enforcement
MCLEAN COUNTY --- MAX [47.82, -101.30]				
	07/20/10 17:01 CST		0	Hail (0.75 in)
	07/20/10 17:11 CST		0	Source: Trained Spotter
BURLEIGH COUNTY --- 0.8 NW BISMARCK [46.81, -100.78]				
	07/20/10 17:10 CST		0	Hail (1.00 in)
	07/20/10 17:18 CST		0	Source: Public
BURLEIGH COUNTY --- 2.8 N BISMARCK [46.84, -100.78]				
	07/20/10 17:12 CST		0	Hail (0.75 in)
	07/20/10 17:17 CST		0	Source: Law Enforcement
MCHENRY COUNTY --- 6.9 S DENBIGH [48.22, -100.59]				
	07/20/10 17:33 CST		0	Funnel Cloud
	07/20/10 17:35 CST		0	Source: Fire Department/Rescue
A funnel cloud briefly formed, then dissipated.				
BOTTINEAU COUNTY --- 0.5 W BOTTINEAU [48.83, -100.44]				
	07/20/10 17:45 CST		0	Hail (1.00 in)
	07/20/10 17:55 CST		0	Source: Public
WELLS COUNTY --- 5.6 S BOWDON [47.39, -99.59]				
	07/20/10 21:20 CST		0	Hail (1.75 in)
	07/20/10 21:30 CST		0.10M	Source: Emergency Manager
The large hail resulted in crop damage.				
STUTSMAN COUNTY --- 0.7 S WOODWORTH [47.14, -99.30]				
	07/20/10 22:00 CST		0	Hail (1.50 in)
	07/20/10 22:07 CST		0	Source: Public
Thunderstorms developing ahead of an upper level short wave trough across eastern Montana, were expected to spread eastward into northwest and portions of central North Dakota during the afternoon and evening hours of Tuesday, July 20th. Severe Thunderstorm Watch number 503 was issued as a result.				
Numerous severe thunderstorm warnings were issued. Several reports of large hail and three reports of funnel clouds were received during this episode.				
BOWMAN COUNTY --- 7.0 SW BOWMAN ARPT [46.10, -103.51]				
	07/23/10 09:45 MST		0	Hail (1.50 in)
	07/23/10 09:55 MST		0	Source: Trained Spotter
BOWMAN COUNTY --- 3.5 S BOWMAN [46.13, -103.39]				

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/23/10 10:00 MST		0	Thunderstorm Wind (MG 52 kt)
	07/23/10 10:05 MST		0	Source: Department of Highways
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BOWMAN COUNTY --- 4.0 SW GASCOYNE [46.08, -103.14]				
	07/23/10 10:05 MST		10K	Thunderstorm Wind (EG 61 kt)
	07/23/10 10:10 MST		35K	Source: Department of Highways
<p>The strong thunderstorm winds resulted in damage to a grain bin and some crop damage.</p>				
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BOWMAN COUNTY --- 5.0 S SCRANTON [46.08, -103.13]				
	07/23/10 10:05 MST		0	Hail (1.50 in)
	07/23/10 10:10 MST		0	Source: Department of Highways
<hr/>				
BOWMAN COUNTY --- 5.0 S SCRANTON [46.08, -103.13]				
	07/23/10 10:05 MST		0.15M	Thunderstorm Wind (EG 74 kt)
	07/23/10 10:15 MST		0.10M	Source: Fire Department/Rescue
<p>Significant damage was done on a farm. Empty grain bins were torn from their foundations and rolled up fence wire was rolled through pastures. Many trees were uprooted and fence posts were broken off at ground level. Quarter size hail also fell and crops were damaged. There was concern that the damage was tornadic. However, after speaking with eye witnesses and obtaining damage descriptions and viewing photos it was determined that it was not tornado damage.</p>				
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ADAMS COUNTY --- 3.6 WSW HETTINGER ARPT [46.00, -102.72]				
	07/23/10 10:50 MST		0	Hail (0.88 in)
	07/23/10 10:55 MST		0	Source: Public
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ADAMS COUNTY --- 16.8 E HAYNES [45.97, -102.12]				
	07/23/10 11:25 MST		0	Hail (0.75 in)
	07/23/10 11:34 MST		0	Source: Trained Spotter
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ADAMS COUNTY --- 14.1 ENE HAYNES [46.05, -102.20]				
	07/23/10 11:30 MST		0	Hail (0.75 in)
	07/23/10 11:40 MST		0	Source: Trained Spotter
<p>An isolated severe thunderstorm produced several reports of large hail and two reports of severe thunderstorm winds over southwest North Dakota during the late morning and early afternoon hours of Friday, July 23rd.</p>				
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SLOPE COUNTY --- 11.8 NNW AMIDON [46.63, -103.44], 9.8 N AMIDON [46.62, -103.33]				
	07/26/10 16:38 MST		0	Tornado (EF0, L: 5.34 mi , W: 30 yd)
	07/26/10 16:50 MST		0	Source: NWS Storm Survey
<p>This tornado occurred in open country and impacted no structures. There was no damage. The tornado was produced by a high based thunderstorm and was visible from as far away as Beach, North Dakota, around 40 miles away. The tornado was rated EF0. The National Weather Service received no fewer than five reports of the event in real time, from different directions. This made it difficult in determining exactly where the tornado occurred. Location was determined with assistance of the Slope County Sheriff.</p>				
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ADAMS COUNTY --- 60.6 N REEDER [46.99, -103.12]				
	07/26/10 16:55 MST		0	Thunderstorm Wind (EG 52 kt)
	07/26/10 17:04 MST		0	Source: NWS Storm Survey
<p>The severe thunderstorm winds were accompanied by large hail.</p>				
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BILLINGS COUNTY --- 12.6 NE FRYBURG [46.99, -103.12]				
	07/26/10 16:55 MST		20K	Hail (1.00 in)
	07/26/10 17:04 MST		0	Source: NWS Storm Survey
<p>The large hail was accompanied by severe thunderstorm winds. This combination resulted in damage to windows and siding on the west side of a home.</p>				
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BURKE COUNTY --- 3.7 SSW KINCAID [48.83, -102.78]				
	07/26/10 17:10 CST		0	Hail (1.25 in)
	07/26/10 17:20 CST		0	Source: Trained Spotter

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
BURKE COUNTY --- 5.5 SE COTEAU [48.69, -102.24], 6.3 SE COTEAU [48.68, -102.23]				
	07/26/10 17:50 CST		0	Tornado (EF0, L: 0.75 mi , W: 25 yd)
	07/26/10 17:52 CST		0	Source: NWS Employee
This tornado occurred in the open country. It was on the ground briefly and impacted no structures. There was no damage. The tornado was rated EF0.				
DUNN COUNTY --- 0.5 W HALLIDAY [47.35, -102.34]				
	07/26/10 18:00 MST		45K	Hail (2.00 in)
	07/26/10 18:11 MST		0.15M	Source: COOP Observer
Hail up to two inches in diameter was observed in Halliday. Reports of crop damage were received, along with broken windows in Halliday.				
WARD COUNTY --- 0.7 N SAWYER [48.09, -101.05]				
	07/26/10 18:05 CST		0	Hail (2.75 in)
	07/26/10 18:13 CST		0	Source: Public
This was the first of two waves of large hail to impact the community of Sawyer during this episode.				
WARD COUNTY --- 3.5 S KENMARE [48.62, -102.08]				
	07/26/10 18:09 CST		0	Hail (1.00 in)
	07/26/10 18:15 CST		0	Source: Trained Spotter
WARD COUNTY --- 0.7 N SAWYER [48.09, -101.05]				
	07/26/10 18:19 CST		0	Hail (1.75 in)
	07/26/10 18:25 CST		0	Source: Public
This was the second of two waves of large hail to impact Sawyer during this episode.				
MCHEMRY COUNTY --- 0.7 S VELVA [48.06, -100.93]				
	07/26/10 18:23 CST		0	Hail (0.88 in)
	07/26/10 18:31 CST		0	Source: Trained Spotter
MCHEMRY COUNTY --- 2.0 ESE VELVA [48.06, -100.89]				
	07/26/10 18:35 CST		0	Hail (2.50 in)
	07/26/10 18:41 CST		0	Source: Public
MCHEMRY COUNTY --- 0.5 W VOLTAIRE [48.02, -100.84]				
	07/26/10 18:49 CST		0	Hail (2.50 in)
	07/26/10 18:57 CST		0	Source: Public
MCLEAN COUNTY --- 4.8 SE EMMET [47.60, -101.58]				
	07/26/10 18:55 CST		50K	Hail (1.75 in)
	07/26/10 19:01 CST		0	Source: Public
The large hail was accompanied by 50 mph winds at Camp of the Cross. Damage was sustained to vehicles along with broken windows on a chapel.				
MCLEAN COUNTY --- 7.8 SSE EMMET [47.55, -101.57]				
	07/26/10 18:55 CST		45K	Hail (1.75 in)
	07/26/10 19:09 CST	1	0	Source: Newspaper
Large hail was reported at the Triangle Y Camp, resulting in damage to vehicles. One person was injured when a hailstone struck the person's foot.				
MCLEAN COUNTY --- GARRISON [47.65, -101.42]				
	07/26/10 18:59 CST		0	Hail (1.00 in)
	07/26/10 19:10 CST		0	Source: Public
WARD COUNTY --- 1.4 S (MIB)MINOT AFB [48.41, -101.37]				
	07/26/10 19:07 CST		0	Hail (1.00 in)
	07/26/10 19:16 CST		0	Source: Public

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
MCHENRY COUNTY --- 1.6 W BALFOUR [47.95, -100.56], 1.4 SE BALFOUR [47.94, -100.50]				
	07/26/10 19:13 CST		30K	Tornado (EF0, L: 2.82 mi , W: 30 yd)
	07/26/10 19:18 CST		0	Source: Newspaper
A brief tornado touchdown occurred at a farmstead near Balfour. The tornado destroyed an outbuilding and did no other damage. The damage was consistent with EF0 tornado damage from the Enhanced Fujita Scale. From that it was determined that the wind speeds were around 80 mph.				
MCHENRY COUNTY --- 0.5 W BALFOUR [47.95, -100.54]				
	07/26/10 19:18 CST		15K	Thunderstorm Wind (EG 61 kt)
	07/26/10 19:30 CST		0	Source: Public
The strong thunderstorm winds blew down several trees.				
DUNN COUNTY --- 6.3 ENE EMERSON [47.22, -102.53]				
	07/26/10 19:22 MST		5K	Thunderstorm Wind (EG 52 kt)
	07/26/10 19:30 MST		0	Source: Trained Spotter
Estimated winds of 60 mph resulted in some minor tree damage.				
MCHENRY COUNTY --- 0.5 W BALFOUR [47.95, -100.54]				
	07/26/10 19:24 CST		0	Hail (2.75 in)
	07/26/10 19:33 CST		0	Source: Law Enforcement
MCHENRY COUNTY --- DRAKE [47.92, -100.37]				
	07/26/10 19:28 CST		0	Hail (1.75 in)
	07/26/10 19:36 CST		0	Source: Public
MCHENRY COUNTY --- 2.0 NE TOWNER [48.37, -100.37]				
	07/26/10 19:42 CST		0	Hail (1.00 in)
	07/26/10 20:02 CST		0	Source: COOP Observer
MCLEAN COUNTY --- GARRISON [47.65, -101.42]				
	07/26/10 20:00 CST		0	Hail (1.75 in)
	07/26/10 20:15 CST		0	Source: Public
MCLEAN COUNTY --- GARRISON [47.65, -101.42]				
	07/26/10 20:03 CST		0.10M	Thunderstorm Wind (MG 62 kt)
	07/26/10 20:08 CST		0.15M	Source: ASOS
The strong winds combined with large hail resulting in extensive damage in and around the city of Garrison. Damage was sustained to a building under construction west of Garrison, several trees being uprooted, a railroad crossing twisted off, and crop damage reported to fields south and southwest of Garrison.				
MCHENRY COUNTY --- 4.2 N BALFOUR [48.01, -100.54]				
	07/26/10 20:07 CST		60K	Thunderstorm Wind (EG 70 kt)
	07/26/10 20:19 CST		0	Source: NWS Storm Survey
The strong thunderstorm winds resulted in extensive tree damage and destroyed a pole barn.				
PIERCE COUNTY --- 5.3 SW ORRIN [48.02, -100.24]				
	07/26/10 20:12 CST		0	Hail (1.00 in)
	07/26/10 20:20 CST		0	Source: Trained Spotter
MCHENRY COUNTY --- DRAKE [47.92, -100.37]				
	07/26/10 20:15 CST		0	Heavy Rain
	07/26/10 20:15 CST		0	Source: Public

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
MCHENRY COUNTY --- 0.2 E DRAKE [47.92, -100.37], 0.6 W DRAKE [47.92, -100.38], 0.8 NW DRAKE [47.93, -100.38], 0.7 NNE DRAKE [47.93, -100.36]				
	07/26/10 20:31 CST		75K	Flash Flood (due to Heavy Rain)
	07/26/10 22:31 CST		0	Source: Fire Department/Rescue

Officials reported up to two feet of water covering streets in Drake. The Mayor of Drake reported street damage from the water in the northwest corner of the town. Water damage was also reported to homes due to water entering basements.

WELLS COUNTY --- 3.1 SW HARVEY ARPT [47.77, -99.98]				
	07/26/10 20:38 CST		0	Funnel Cloud
	07/26/10 20:39 CST		0	Source: Public

A brief funnel cloud appeared before quickly dissipating.

MCCLEAN COUNTY --- 5.5 N MERCER [47.56, -100.71]				
	07/26/10 20:42 CST		20K	Thunderstorm Wind (EG 61 kt)
	07/26/10 20:51 CST		0	Source: Trained Spotter

Trees four to five inches in diameter were blown down.

WILLIAMS COUNTY --- 2.7 WSW SPRING BROOK [48.23, -103.52]				
	07/26/10 20:45 CST		0	Hail (1.00 in)
	07/26/10 20:50 CST		0	Source: Trained Spotter

BILLINGS COUNTY --- 12.6 NE FRYBURG [46.99, -103.12]				
	07/26/10 21:00 MST		95K	Thunderstorm Wind (EG 74 kt)
	07/26/10 21:10 MST		0	Source: NWS Storm Survey

Intense thunderstorm winds resulted in damage to outbuildings on a farm. Specifically, one pole barn was destroyed, with the debris from the pole barn damaging two grain bins, a small garage, and vehicles on the farm. Based on reports from local officials and photographs of the damage, it was determined a microburst occurred.

Severe Thunderstorm Watch number 537 was issued for west and north central North Dakota in the late afternoon hours of Monday, July 26th. This was in anticipation of thunderstorms developing and increasing in intensity during the evening along a west to east oriented surface front, stretching from northeastern Montana into north central North Dakota. Organized storm development was expected as a mid level short wave impulse lifted into northeastern Montana, combined with a moderately unstable atmosphere and ample deep layer wind shear.

Early in the evening, Tornado Watch number 538 was issued for northern North Dakota, where low boundary layer dew point depressions and stronger low level wind shear coincided. This was also where isolated severe thunderstorms were ongoing, along with one confirmed tornado touchdown having already occurred.

Numerous severe thunderstorm and several tornado warnings were issued. Numerous reports of large hail, several reports of severe thunderstorm wind gusts, one report of flash flooding, and two confirmed tornadoes occurred during this episode.

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Photo by MaRanda Hardmeyer

BURLEIGH COUNTY --- 6.2 S WING [47.04, -100.28]

07/27/10 02:25 CST		8K	Lightning
07/27/10 02:25 CST		0	Source: Newspaper

Time of this event is based on radar. Lightning struck an old barn and started a fire sometime early Tuesday morning, July 27th. The barn was allowed to burn itself out. A tractor inside the barn was also destroyed.

Lightning struck a barn in rural Burleigh County in South Central North Dakota. The barn was completely destroyed.

WILLIAMS COUNTY --- 0.5 W WILLISTON [48.15, -103.63]

07/29/10 17:47 CST		0	Hail (1.00 in)
07/29/10 17:54 CST		0	Source: Trained Spotter

WILLIAMS COUNTY --- 0.5 W EPPING [48.28, -103.63]

07/29/10 18:15 CST		50K	Hail (2.50 in)
07/29/10 18:24 CST		0	Source: Trained Spotter

The large hail resulted in broken windows in the town of Epping.

MCKENZIE COUNTY --- 18.0 N ALEXANDER [48.11, -103.63]

Storm Data and Unusual Weather Phenomena - July 2010

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/29/10 18:19 MST		3K	Thunderstorm Wind (EG 61 kt)
	07/29/10 18:28 MST		0	Source: Law Enforcement
The strong thunderstorm winds resulted in a thirty foot elm tree blown down.				
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WILLIAMS COUNTY --- 0.5 W WILLISTON [48.15, -103.63]				
	07/29/10 19:10 CST		0	Thunderstorm Wind (MG 53 kt)
	07/29/10 19:20 CST		0	Source: ASOS
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MCKENZIE COUNTY --- 1.6 ENE GRASSY BUTTE [47.41, -103.22]				
	07/29/10 19:20 MST		30K	Thunderstorm Wind (EG 61 kt)
	07/29/10 19:30 MST		0	Source: COOP Observer
The strong thunderstorm winds resulted in widespread tree damage, with numerous tree limbs broken off.				
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MCKENZIE COUNTY --- 6.6 NE GRASSY BUTTE [47.46, -103.14]				
	07/29/10 19:30 MST		0	Thunderstorm Wind (EG 52 kt)
	07/29/10 19:40 MST		0	Source: Trained Spotter
Heavy rain accompanied the strong thunderstorm winds.				
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WILLIAMS COUNTY --- WILLISTON [48.15, -103.62]				
	07/29/10 19:30 CST		25K	Lightning
	07/29/10 19:30 CST		0	Source: Newspaper
Lightning struck a mobile home in Williston, resulting in a fire to the residence. Nobody was injured in the fire.				
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DUNN COUNTY --- 0.5 W HALLIDAY [47.35, -102.34]				
	07/29/10 20:27 MST		0	Thunderstorm Wind (EG 52 kt)
	07/29/10 20:36 MST		0	Source: Law Enforcement
Estimated winds of 60 mph were reported.				
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MERCER COUNTY --- 0.7 S BEULAH [47.26, -101.78]				
	07/29/10 20:54 MST		70K	Thunderstorm Wind (EG 52 kt)
	07/29/10 21:06 MST		0	Source: Newspaper
Estimated winds of 60 mph were reported. A light pole at a gas station in Beulah was blown over, along with several trees in the town of Beulah blown down. Blown over trees or branches knocked utility lines to the ground, momentarily disrupting power.				
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MCLEAN COUNTY --- 6.3 S ROSEGLEN [47.66, -101.85]				
	07/29/10 21:06 CST		0	Thunderstorm Wind (EG 52 kt)
	07/29/10 21:15 CST		0	Source: Trained Spotter
Heavy rain accompanied the strong thunderstorm winds.				
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MERCER COUNTY --- 2.4 ESE HAZEN [47.29, -101.58]				
	07/29/10 21:09 MST		0	Thunderstorm Wind (MG 56 kt)
	07/29/10 21:15 MST		0	Source: AWOS
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STARK COUNTY --- 0.5 W DICKINSON [46.88, -102.79]				
	07/29/10 21:13 MST		0	Thunderstorm Wind (EG 61 kt)
	07/29/10 21:21 MST		0	Source: Public
Estimated winds of 70 mph were reported.				
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RENVILLE COUNTY --- 3.2 W GRANO [48.62, -101.65]				
	07/29/10 21:15 CST		0	Hail (1.00 in)
	07/29/10 21:22 CST		0	Source: Law Enforcement
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RENVILLE COUNTY --- 3.4 NE NORMA [48.73, -101.71]				

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/29/10 21:16 CST		0	Thunderstorm Wind (EG 52 kt)
	07/29/10 21:23 CST		0	Source: Law Enforcement

Estimated winds of 60 mph were reported.

MCLEAN COUNTY --- GARRISON [47.65, -101.42]

	07/29/10 21:55 CST		0	Thunderstorm Wind (EG 52 kt)
	07/29/10 22:03 CST		0	Source: Public

Estimated winds of 60 mph were reported.

MCLEAN COUNTY --- 0.9 W GARRISON [47.65, -101.44]

	07/29/10 21:57 CST		0	Thunderstorm Wind (MG 56 kt)
	07/29/10 22:02 CST		0	Source: ASOS

MORTON COUNTY --- 0.5 W HEBRON [46.90, -102.04]

	07/29/10 22:14 CST		0	Thunderstorm Wind (EG 61 kt)
	07/29/10 22:22 CST		0	Source: Law Enforcement

Estimated winds of 70 mph were reported.

Severe Thunderstorm Watch number 550 was issued for much of west and north central North Dakota in the late afternoon hours of Thursday, July 29th. This was in anticipation of strong to severe thunderstorms over northeast Montana advecting east into western North Dakota Thursday evening along a trough of surface low pressure, with intensity sustained by an incoming mid level disturbance.

Isolated severe thunderstorms initially moved into northwest North Dakota early Thursday evening, with convective activity transitioning into linear segments during the mid to late evening hours before dissipating.

Multiple severe thunderstorm warnings were issued. Several reports of large hail and multiple reports of severe thunderstorm winds were received during this episode.

SIOUX COUNTY --- 30.9 W SELFRIDGE [45.98, -101.57]

	07/31/10 15:14 MST		0	Hail (1.50 in)
	07/31/10 15:22 MST		0	Source: Trained Spotter

Heavy rain accompanied quarter to ping pong sized hail.

ROLETTE COUNTY --- 5.2 WSW BELCOURT [48.81, -99.84]

	07/31/10 19:22 CST		0	Thunderstorm Wind (MG 55 kt)
	07/31/10 19:30 CST		0	Source: RAWS

An area of low level convergence near a surface warm front, coupled with moderate instability, resulted in scattered thunderstorm development over northern South Dakota and far southern North Dakota during the late afternoon hours of Saturday, July 31st. Severe Thunderstorm Watch number 555 was issued earlier in anticipation of this activity. One severe thunderstorm moving across far southern Sioux County resulted in a report of severe hail.

Later Saturday evening, Severe Thunderstorm Watch number 556 was issued across northern North Dakota in anticipation of strong to severe thunderstorms over far south central Canada pushing south into North Dakota. One severe thunderstorm over Rolette County generated a severe thunderstorm wind gust.