

Storm Data and Unusual Weather Phenomena - August 2024

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
NORTH DAKOTA, Central and West				
RENVILLE COUNTY --- 3.1 SSE NORMA [48.66, -101.74]				
	08/06/24 17:45 CST		50K	Hail (2.50 in)
	08/06/24 17:50 CST		0	Source: Public
The hail combined with thunderstorm wind gusts to damage the roof and siding on a home.				
RENVILLE COUNTY --- 5.0 W TOLLEY [48.73, -101.93]				
	08/06/24 17:55 CST		0.20M	Thunderstorm Wind (EG 70 kt)
	08/06/24 17:59 CST		0	Source: Public
Seven hopper style bins were blown over.				
RENVILLE COUNTY --- 7.3 W TOLLEY [48.74, -101.98]				
	08/06/24 17:58 CST		0.10M	Hail (1.75 in)
	08/06/24 18:04 CST		0	Source: Public
The hail combined with thunderstorm wind gusts to destroy a wheat field.				
RENVILLE COUNTY --- 1.1 NW NORMA [48.71, -101.79]				
	08/06/24 18:00 CST		0.15M	Thunderstorm Wind (EG 70 kt)
	08/06/24 18:07 CST		0	Source: Public
A roof was blown off of a pole barn, and the walls were also damaged.				
RENVILLE COUNTY --- 3.9 SW NORMA [48.66, -101.83]				
	08/06/24 18:05 CST		0	Hail (1.00 in)
	08/06/24 18:10 CST		50K	Source: Public
The hail combined with thunderstorm wind gusts to cause crop damage in the area.				
BURKE COUNTY --- 6.2 S LIGNITE [48.79, -102.56]				
	08/06/24 18:10 CST		0	Hail (1.00 in)
	08/06/24 18:13 CST		0	Source: Public
BURKE COUNTY --- 1.1 SW POWERS LAKE [48.56, -102.65]				
	08/06/24 18:34 CST		0	Hail (1.50 in)
	08/06/24 18:37 CST		0	Source: Public
BURKE COUNTY --- 7.0 ESE POWERS LAKE [48.55, -102.48]				
	08/06/24 18:40 CST		0	Hail (1.00 in)
	08/06/24 18:45 CST		0	Source: Trained Spotter
WARD COUNTY --- 5.0 NW COULEE [48.59, -102.11]				
	08/06/24 18:45 CST		0	Hail (1.75 in)
	08/06/24 18:48 CST		0	Source: Public
WARD COUNTY --- 2.0 ESE (MIB)MINOT AFB [48.42, -101.33]				
	08/06/24 18:55 CST		0	Thunderstorm Wind (MG 59 kt)
	08/06/24 18:58 CST		0	Source: AWOS
WARD COUNTY --- 3.6 SSW DONNYBROOK [48.47, -101.89]				
	08/06/24 19:00 CST		0	Hail (1.00 in)
	08/06/24 19:04 CST		0	Source: Public
MCHENRY COUNTY --- 1.1 NW NORWICH [48.26, -101.00]				

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	08/06/24 19:18 CST		0	Hail (1.00 in)
	08/06/24 19:20 CST		0	Source: Public
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MCHENRY COUNTY --- 0.5 W NORWICH [48.25, -100.99]				
	08/06/24 19:20 CST		0	Hail (1.25 in)
	08/06/24 19:23 CST		0	Source: Public
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MOUNTRAIL COUNTY --- 7.7 S TAGUS [48.24, -101.96]				
	08/06/24 19:37 CST		0	Hail (1.25 in)
	08/06/24 19:42 CST		0	Source: Public
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WARD COUNTY --- 0.8 SW MAKOTI [47.96, -101.81]				
	08/06/24 20:03 CST		2K	Thunderstorm Wind (EG 52 kt)
	08/06/24 20:06 CST		0	Source: Trained Spotter
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A few tree branches blew down.				
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MCLEAN COUNTY --- 8.3 N TURTLE LAKE [47.64, -100.90]				
	08/06/24 21:02 CST		0.20M	Thunderstorm Wind (EG 70 kt)
	08/06/24 21:10 CST		0	Source: Emergency Manager
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Multiple trees were uprooted at Crooked Lake. Small sheds were destroyed, fences were blown down, and pontoons were flipped and some damaged.				
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MCLEAN COUNTY --- 3.6 NNW TURTLE LAKE [47.57, -100.92]				
	08/06/24 21:09 CST		0	Thunderstorm Wind (MG 64 kt)
	08/06/24 21:12 CST		0	Source: Mesonet
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MCLEAN COUNTY --- 8.5 NNE TURTLE LAKE [47.63, -100.82]				
	08/06/24 21:10 CST		50K	Thunderstorm Wind (EG 70 kt)
	08/06/24 21:15 CST		0	Source: Public
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Three large grain bins were partially caved in by the thunderstorm wind gusts.				
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MCLEAN COUNTY --- 1.7 NW TURTLE LAKE [47.54, -100.92]				
	08/06/24 21:12 CST		30K	Thunderstorm Wind (EG 70 kt)
	08/06/24 21:17 CST		0	Source: Public
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A center pivot irrigation system was flipped over and damaged.				
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MCLEAN COUNTY --- 3.6 NNW TURTLE LAKE [47.57, -100.92]				
	08/06/24 21:15 CST		0	Thunderstorm Wind (MG 62 kt)
	08/06/24 21:19 CST		0	Source: Mesonet
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BURLEIGH COUNTY --- 9.9 NNW WING [47.27, -100.33]				
	08/06/24 21:57 CST		0	Thunderstorm Wind (MG 63 kt)
	08/06/24 21:59 CST		0	Source: Mesonet
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Thunderstorms initiated near a surface low over southeast Saskatchewan before developing into a line of severe storms which moved southeast into northwest and north central North Dakota where elevated instability and strong deep layer shear were present. The storms contained a mix of large hail and severe winds initially, then towards the end of the episode severe winds prevailed. Over western Renville County, one severe storm caused extensive damage to crops and structures with hail to the size of tennis balls and winds gusting to 80 mph. Late in the episode, winds gusting to 80 mph caused extensive damage around the Turtle Lake area of McLean County, including around Crooked Lake where trees were uprooted, pontoons were flipped, and sheds were destroyed.				
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BURLEIGH COUNTY --- 9.1 NW BISMARCK [46.91, -100.88], 1.9 WSW (BIS)BISMARCK MUNI A [46.77, -100.79], 4.3 SW FT LINCOLN [46.77, -100.66], 7.7 NNE BISMARCK [46.91, -100.72]				
	08/13/24 16:14 CST		8M	Flash Flood (due to Heavy Rain)
	08/13/24 19:00 CST		0	Source: Emergency Manager

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<p>Torrential downpours with between two and five inches of rain moved through the Bismarck area as a very slow moving thunderstorm passed over . Storm sewer and drainage systems in the city were overwhelmed by the intense rain rates. Many downtown businesses took on water, resulting in damaged inventory along with business losses due to inaccessibility and time taken to recover. One of the primary medical centers in the downtown area had water pouring in from two side streets that damaged an MRI machine. The city of Bismarck government services also suffered significant damage . Many homes and apartment complexes sustained water damage, particularly in basements.</p>				

Torrential downpours with between two and five inches of rain moved through the Bismarck area as a very slow moving thunderstorm passed over. Storm sewer and drainage systems in the city were overwhelmed by the intense rain rates. Many downtown businesses took on water, resulting in damaged inventory along with business losses due to inaccessibility and time taken to recover. One of the primary medical centers in the downtown area had up to two inches of flooding on the main floor, which caused damage to the lower level, particularly to an MRI machine. This facility alone suffered damages in excess of 5 million dollars, primarily due to the damage caused to the MRI machine. The City of Bismarck government services suffered approximately a quarter-million dollars in damage, which included damage to property, infrastructure, and equipment. Many homes also sustained water damage, particularly in basements. One homeowner near the Elks swimming pool, which is just west of downtown, reported up to five feet of water in his basement. An apartment complex in central Bismarck had three feet of water in the lower level, with occupants having to evacuate for multiple days. Interestingly, just south of Bismarck, in Falconer Estates, there was a trace of rain.

BURLEIGH COUNTY --- 1.3 WSW BISMARCK [46.79, -100.79], 0.8 S BISMARCK [46.79, -100.77], 1.2 W (BIS)BISMARCK MUNI A [46.78, -100.78], 1.7 SW BISMARCK [46.78, -100.80]

08/14/24 12:00 CST	25K	Flash Flood (due to Heavy Rain)
08/14/24 13:30 CST	0	Source: Law Enforcement

Between 1.5 and 2.5 inches of rain fell.

Very heavy rain over several hours led to the second episode of flash flooding in the Bismarck area in less than 24 hours. This flash flooding was no where near as severe as the day before (13th) and was concentrated on the south side of the city. Several feet of water was flowing through some streets. Some basements took on water and some trailer homes were surrounded by flood waters.

MCKENZIE COUNTY --- 1.4 E WATFORD CITY [47.80, -103.25]

08/14/24 17:35 MST	0	Thunderstorm Wind (MG 52 kt)
08/14/24 17:38 MST	0	Source: AWOS

A line of thunderstorms moved through northwestern North Dakota during the late afternoon and evening hours. One storm became severe, producing 60 mph wind gusts near Watford City in McKenzie County.

WARD COUNTY --- 6.4 SSE SOUTH PRAIRIE [47.97, -101.23]

08/21/24 23:21 CST	0	Hail (0.88 in)
08/21/24 23:23 CST	0	Source: Public

A thunderstorm moving through southeast Ward County produced nickel size hail.

SIoux COUNTY --- 2.3 SSW SELFRIDGE [46.00, -100.95], 3.1 SSE SELFRIDGE [45.99, -100.91]

08/28/24 15:41 MST	9K	Tornado (EF1, L: 2.19 mi , W: 300 yd)
08/28/24 15:51 MST	0	Source: Storm Chaser

The tornado touched down in an open field south of Selfridge and moved to the south-southeast. Along its path, the tornado broke three wooden power poles which appeared to be aged. The tornado then proceeded into an open field with no other structures impacted. Based on the damage done the tornado was rated EF-1, and from that winds were estimated to be approximately 100 MPH.

SIoux COUNTY --- 1.7 NE SELFRIDGE [46.05, -100.91]

08/28/24 16:00 MST	0	Hail (1.00 in)
08/28/24 16:03 MST	0	Source: Public

MORTON COUNTY --- 6.3 N BREIEN [46.47, -100.91]

08/28/24 16:49 CST	0	Hail (2.00 in)
08/28/24 16:52 CST	0	Source: Public

SIoux COUNTY --- 3.7 NW FT YATES [46.12, -100.68]

08/28/24 16:55 MST	0	Thunderstorm Wind (EG 56 kt)
08/28/24 16:59 MST	0	Source: Trained Spotter

Thunderstorm wind gusts were estimated by a trained spotter.

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MORTON COUNTY --- 5.7 SSE ST ANTHONY [46.54, -100.89]				
	08/28/24 17:00 CST		0.13M	Hail (4.00 in)
	08/28/24 17:05 CST		0	Source: Broadcast Media
Mainly baseball size hail fell at this location, but one hailstone was measured at 4 inches in diameter. Significant damage occurred to roofs of buildings and to vehicles.				
MORTON COUNTY --- 4.9 ESE ST ANTHONY [46.60, -100.82]				
	08/28/24 17:02 CST		0	Hail (1.00 in)
	08/28/24 17:06 CST		0	Source: Trained Spotter
MORTON COUNTY --- 0.5 E ST ANTHONY [46.62, -100.91]				
	08/28/24 17:05 CST		0.45M	Thunderstorm Wind (EG 65 kt)
	08/28/24 17:10 CST		0	Source: Public
Thunderstorm wind combined with hail to cause significant damage to structures in St. Anthony. Homes had multiple windows completely broken out and siding was severely damaged with holes punched completely through.				
MORTON COUNTY --- 7.0 NE ST ANTHONY [46.68, -100.80]				
	08/28/24 17:05 CST		0	Hail (1.75 in)
	08/28/24 17:09 CST		0	Source: Public
SIOUX COUNTY --- 13.2 WSW SELFRIDGE [45.97, -101.19]				
	08/28/24 17:12 MST		0	Hail (1.75 in)
	08/28/24 17:15 MST		0	Source: Public
BURLEIGH COUNTY --- 1.4 W BISMARCK [46.80, -100.80]				
	08/28/24 17:25 CST		20K	Thunderstorm Wind (EG 61 kt)
	08/28/24 17:29 CST		0	Source: Public
A large tree branch broke off a tree and damaged a house.				
BURLEIGH COUNTY --- 2.4 NNW STERLING [46.85, -100.29]				
	08/28/24 17:30 CST		1K	Lightning
	08/28/24 17:31 CST	3	0	Source: Public
A NWS meteorologist interviewed one of the victims. Three teenage males were goose hunting when thunderstorms approached their area. They packed up their equipment and were walking to their pickup truck close by when all three were struck by lightning. The victims were knocked down, and when they were able to get up they continued their return to the pickup truck and drove to a hospital emergency room in Bismarck. One victim suffered a small brain bleed and reduced hearing. The second victim suffered a large cut in his hand along with a flash burn to his eyes. The third victim suffered tingling sensations in his right foot along with a headache. All the victims recovered from their injuries. The goose blinds they were carrying were severely damaged in the incident.				
BURLEIGH COUNTY --- 0.5 W (BIS)BISMARCK MUNI A [46.78, -100.76]				
	08/28/24 17:31 CST		0	Thunderstorm Wind (MG 52 kt)
	08/28/24 17:34 CST		0	Source: ASOS
BURLEIGH COUNTY --- 2.7 ESE (BIS)BISMARCK MUNI A [46.76, -100.70]				
	08/28/24 17:32 CST		0	Hail (1.00 in)
	08/28/24 17:35 CST		0	Source: Amateur Radio
BURLEIGH COUNTY --- 3.5 S (BIS)BISMARCK MUNI A [46.73, -100.74]				
	08/28/24 17:33 CST		0	Hail (1.75 in)
	08/28/24 17:36 CST		0	Source: Public
BURLEIGH COUNTY --- 2.5 ESE (BIS)BISMARCK MUNI A [46.77, -100.70]				
	08/28/24 17:35 CST		0	Hail (1.75 in)
	08/28/24 17:39 CST		0	Source: Trained Spotter

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BURLEIGH COUNTY --- 2.7 ESE (BIS)BISMARCK MUNI A [46.76, -100.70]				
	08/28/24 17:40 CST		0	Hail (1.75 in)
	08/28/24 17:44 CST		0	Source: Public
BURLEIGH COUNTY --- 2.8 SW STERLING [46.79, -100.32], 3.7 SSE STERLING [46.77, -100.24]				
	08/28/24 18:04 CST		0.30M	Thunderstorm Wind (EG 87 kt)
	08/28/24 18:09 CST		0.50M	Source: NWS Storm Survey
Straight line winds caused significant damage in and to the south of Sterling. On the south side of Sterling, a large grain bin in an elevator complex was dislodged and blew to the east-southeast. South of this location, a large sunflower field was significantly damaged with many parts of the field flattened. Along Highway 83, fifteen power poles were broken or significantly damaged on both sides of the highway.				
BURLEIGH COUNTY --- 0.7 N REGAN [47.16, -100.53]				
	08/28/24 18:10 CST		0	Hail (1.25 in)
	08/28/24 18:13 CST		0	Source: Broadcast Media
KIDDER COUNTY --- 0.2 NE STEELE [46.85, -99.90], 1.0 NNE STEELE [46.86, -99.89]				
	08/28/24 18:52 CST		0.60M	Tornado (EF1, L: 0.86 mi , W: 300 yd)
	08/28/24 18:55 CST		25K	Source: Trained Spotter
The tornado touched down in an oats field to the east-southeast of Steele, with the plants twisted and downed in multiple directions. Approximately one mile east of Steele the tornado crossed the path of a stopped train and about 40 empty railroad cars were knocked off the tracks. The tracks ran from west to east, with some cars falling north, and some falling south. In addition, near the derailed cars, a grove of hardwood trees suffered damage, with a few trees uprooted. The tornado then lifted one mile northeast of Steele. Based on the damage done this tornado was rated high-end EF-1, and from that wind speeds were estimated to be around 110 mph.				
EMMONS COUNTY --- LINTON [46.27, -100.23]				
	08/28/24 21:38 CST		0	Hail (1.00 in)
	08/28/24 21:41 CST		0	Source: Public
EMMONS COUNTY --- 7.1 ENE TEMVIK [46.42, -100.12]				
	08/28/24 21:56 CST		0	Hail (1.25 in)
	08/28/24 21:59 CST		0	Source: Trained Spotter
KIDDER COUNTY --- 15.2 S CRYSTAL SPGS [46.66, -99.48]				
	08/28/24 22:57 CST		0	Hail (1.00 in)
	08/28/24 23:00 CST		20K	Source: Trained Spotter
Some crop damage occurred.				
WELLS COUNTY --- 1.9 W HARVEY [47.77, -99.94]				
	08/28/24 23:25 CST		0	Hail (1.00 in)
	08/28/24 23:35 CST		0	Source: Trained Spotter
MCLEAN COUNTY --- 0.5 E TURTLE LAKE [47.52, -100.89]				
	08/29/24 00:05 CST		0	Hail (1.50 in)
	08/29/24 00:08 CST		0	Source: Public

Thunderstorms developed over southwest into south central North Dakota in an environment of very strong instability and elevated deep layer shear. The atmosphere remained capped until early in the evening when rapid thunderstorm development occurred. The initial severe storm produced a tornado near Selfridge in Sioux County, which broke power poles. Based on the damage done this this tornado was rated EF-1. Additional storms developed ahead of a frontal boundary, producing large hail and damaging winds. One storm over southern Morton County south of St. Anthony produced a four-inch diameter hailstone. In the town of St. Anthony, wind driven hail produced extensive damage to structures, with the siding shredded on some homes. Later in the evening, a storm passed over and to the south of Sterling in Burleigh County, producing 100 mph straight line winds which dislodged a large grain bin, broke or severely damaged 15 power poles, and significantly damaged a large sunflower field. The storm then moved towards Steele in Kidder County where it produced a tornado just to the east of town. The tornado crossed the path of a stopped train and knocked about 40 railroad cars off the tracks. An oats field was destroyed and several hardwood trees were snapped. This tornado was rated EF-1. Additional storms then continued through the evening producing hail over south central and parts of north central North Dakota before moving to

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the east and dissipating. Along with the severe weather, three male teenagers were struck by lightning to the north of Sterling in Burleigh County while returning to their vehicle after goose hunting. All three were injured and required medical attention at a hospital emergency room, but were able to quickly recover from their injuries.