

Storm Data and Unusual Weather Phenomena - July 2021

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
NORTH DAKOTA, Central and West				
(ND-Z001) DIVIDE, (ND-Z002) BURKE, (ND-Z003) RENVILLE, (ND-Z004) BOTTINEAU, (ND-Z005) ROLETTE, (ND-Z009) WILLIAMS, (ND-Z010) MOUNTRAIL, (ND-Z011) WARD, (ND-Z012) MCHENRY, (ND-Z013) PIERCE, (ND-Z017) MCKENZIE, (ND-Z018) DUNN, (ND-Z019) MERCER, (ND-Z020) OLIVER, (ND-Z021) MCLEAN, (ND-Z022) SHERIDAN, (ND-Z023) WELLS, (ND-Z025) FOSTER, (ND-Z031) GOLDEN VALLEY, (ND-Z032) BILLINGS, (ND-Z033) STARK, (ND-Z034) MORTON, (ND-Z035) BURLEIGH, (ND-Z036) KIDDER, (ND-Z037) STUTSMAN, (ND-Z040) SLOPE, (ND-Z041) HETTINGER, (ND-Z042) GRANT, (ND-Z043) BOWMAN, (ND-Z044) ADAMS, (ND-Z045) SIOUX, (ND-Z046) EMMONS, (ND-Z047) LOGAN, (ND-Z048) LA MOURE, (ND-Z050) MCINTOSH, (ND-Z051) DICKEY				
	07/01/21 00:00 CST		0	Drought
	07/31/21 23:59 CST		0	
<p>July started with a D3 to D4 drought over most of western and central North Dakota. The exceptions were parts of the James River Valley, a large portion of southwest North Dakota, and a small portion of Northwest North Dakota. Most of the exception areas were in a D2 drought. By the end of the month changes included some improvement on the western edge of the D4 designation over much of the Lake Sakakawea region, though the eastern edge did expand some into Wells County. In addition, the D3 designation expanded southeast farther into Foster, Stutsman, Dickey, and a small portion of LaMoure County.</p>				
LOGAN COUNTY --- 11.1 ENE NAPOLEON [46.54, -99.55]				
	07/03/21 17:20 CST		0	Hail (1.50 in)
	07/03/21 17:23 CST		20K	Source: Broadcast Media
The hail caused some crop damage.				
STUTSMAN COUNTY --- 4.0 WNW MEDINA [46.90, -99.38]				
	07/03/21 17:39 CST		0	Hail (1.00 in)
	07/03/21 17:42 CST		0	Source: Public
LOGAN COUNTY --- 12.2 WSW GACKLE [46.54, -99.35]				
	07/03/21 18:00 CST		0	Hail (1.25 in)
	07/03/21 18:04 CST		0	Source: Public
<p>A compact short-wave trough moved over central North Dakota resulting in thunderstorm development. Instability was elevated and deep layer shear was marginal. This was enough, though, for large hail to develop over parts of the James River Valley. The largest hail was the size of a ping pong ball, which occurred northeast of Napoleon in Logan County.</p>				
ADAMS COUNTY --- HETTINGER ARPT [46.02, -102.65]				
	07/05/21 16:53 MST		0	Thunderstorm Wind (MG 55 kt)
	07/05/21 16:56 MST		0	Source: ASOS
<p>Thunderstorms developed in an area of modest instability and enhanced deep layer shear over southwest North Dakota as a short-wave trough approached. One storm became severe over Adams County, producing a wind gust of 63 mph at the Hettinger Airport.</p>				
DIVIDE COUNTY --- 9.0 S ALKABO [48.74, -103.88]				
	07/08/21 15:51 CST		0	Thunderstorm Wind (MG 50 kt)
	07/08/21 15:54 CST		0	Source: Mesonet
SLOPE COUNTY --- 16.8 NW AMIDON [46.62, -103.61]				
	07/08/21 15:52 MST		0	Hail (1.25 in)
	07/08/21 15:55 MST		0	Source: Public
SLOPE COUNTY --- 2.4 W AMIDON [46.48, -103.37]				
	07/08/21 16:11 MST		0	Hail (1.75 in)
	07/08/21 16:15 MST		0	Source: Public
SLOPE COUNTY --- 2.4 SW AMIDON [46.46, -103.36]				
	07/08/21 16:17 MST		0	Hail (1.75 in)
	07/08/21 16:20 MST		0	Source: Trained Spotter
WILLIAMS COUNTY --- 3.5 S HANKS [48.55, -103.80]				

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	07/08/21 16:25 CST		0	Thunderstorm Wind (MG 50 kt)
	07/08/21 16:28 CST		0	Source: Mesonet
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SLOPE COUNTY --- 15.4 SSE AMIDON [46.29, -103.15]				
	07/08/21 16:48 MST		0	Hail (1.75 in)
	07/08/21 16:51 MST		0	Source: Trained Spotter
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WILLIAMS COUNTY --- 5.4 SW (ISN)SLOULIN FLD WIL [48.13, -103.74]				
	07/08/21 16:59 CST		0	Thunderstorm Wind (MG 53 kt)
	07/08/21 17:02 CST		0	Source: Mesonet
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WILLIAMS COUNTY --- 7.2 NW (ISN)SLOULIN FLD WIL [48.26, -103.75]				
	07/08/21 16:59 CST		0	Thunderstorm Wind (MG 51 kt)
	07/08/21 17:02 CST		0	Source: ASOS
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MCKENZIE COUNTY --- 2.4 ENE WATFORD CITY [47.81, -103.23]				
	07/08/21 17:03 MST		0	Thunderstorm Wind (MG 53 kt)
	07/08/21 17:06 MST		0	Source: Mesonet
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BOWMAN COUNTY --- 3.4 W BUFFALO SPGS [46.17, -103.30]				
	07/08/21 17:15 MST		0	Thunderstorm Wind (MG 55 kt)
	07/08/21 17:17 MST		0	Source: AWOS
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ADAMS COUNTY --- 3.6 ESE REEDER [46.10, -102.88]				
	07/08/21 17:20 MST		0	Hail (1.00 in)
	07/08/21 17:22 MST		0	Source: Public
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ADAMS COUNTY --- 4.3 E REEDER [46.12, -102.86]				
	07/08/21 17:24 MST		0	Hail (1.00 in)
	07/08/21 17:26 MST		0	Source: Trained Spotter
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WILLIAMS COUNTY --- 3.5 N RAY [48.40, -103.17]				
	07/08/21 17:26 CST		0	Thunderstorm Wind (MG 54 kt)
	07/08/21 17:29 CST		0	Source: Mesonet
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BILLINGS COUNTY --- 10.4 S FAIRFIELD [47.03, -103.20]				
	07/08/21 17:39 MST		0	Hail (1.75 in)
	07/08/21 17:45 MST		0	Source: Public
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MCKENZIE COUNTY --- 3.9 SSW GRASSY BUTTE [47.35, -103.29]				
	07/08/21 17:40 MST		0	Thunderstorm Wind (EG 52 kt)
	07/08/21 17:43 MST		0	Source: Trained Spotter
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Thunderstorm wind gusts were estimated by a trained spotter.				
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WILLIAMS COUNTY --- 11.6 SSE WHEELOCK [48.16, -103.11]				
	07/08/21 17:42 CST		0	Thunderstorm Wind (MG 50 kt)
	07/08/21 17:45 CST		0	Source: Mesonet
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DUNN COUNTY --- 7.8 WNW NEW HRADEC [47.06, -103.02]				
	07/08/21 17:44 MST		0	Hail (1.00 in)
	07/08/21 17:47 MST		0	Source: Trained Spotter
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HETTINGER COUNTY --- 10.0 NNW REGENT [46.56, -102.60]				
	07/08/21 19:18 MST		0	Hail (1.00 in)
	07/08/21 19:21 MST		0	Source: Public

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HETTINGER COUNTY --- 1.5 NNW REGENT [46.44, -102.56]				
	07/08/21 19:26 MST		0	Thunderstorm Wind (EG 61 kt)
	07/08/21 19:29 MST		0	Source: Public
Thunderstorm wind gusts were estimated by the public.				
HETTINGER COUNTY --- 0.8 SW MOTT [46.37, -102.33]				
	07/08/21 19:44 MST		0	Thunderstorm Wind (EG 52 kt)
	07/08/21 19:47 MST		0	Source: Law Enforcement
Thunderstorm wind gusts were estimated by law enforcement.				
An upper level low along with a surface trough approaching western North Dakota led to thunderstorms developing during the late afternoon and evening hours. Some of these storms became severe in an environment of strong instability and deep layer shear. The largest hail was the size of golf balls, and occurred in Billings and Slope counties. The strongest wind gust was 70 mph, and occurred near Regent in Hettinger County.				
MOUNTRAIL COUNTY --- LOSTWOOD [48.48, -102.42]				
	07/09/21 19:30 CST		0	Funnel Cloud
	07/09/21 19:45 CST		0	Source: Public
A long-lasting funnel cloud was produced by an isolated shower over Mountrail County in an area of elevated low-level lapse rates.				
WARD COUNTY --- 1.1 SW MINOT [48.22, -101.30]				
	07/16/21 06:42 CST		0	Hail (1.00 in)
	07/16/21 06:45 CST		0	Source: Public
BURLEIGH COUNTY --- 2.5 NE STERLING [46.85, -100.25]				
	07/16/21 11:23 CST		0	Thunderstorm Wind (MG 55 kt)
	07/16/21 11:26 CST		0	Source: Mesonet
BURLEIGH COUNTY --- 2.0 NE STERLING [46.84, -100.25]				
	07/16/21 11:30 CST		0.10M	Thunderstorm Wind (EG 65 kt)
	07/16/21 11:34 CST		0	Source: Broadcast Media
Several semi-trailers were turned over by thunderstorm wind gusts near Sterling.				
Thunderstorms formed in the early morning over far north central North Dakota along the nose of a low-level jet in an unstable environment with elevated shear. The thunderstorms dropped one-inch diameter hail at Minot in Ward County before moving to the south-southeast. As one storm moved through the Sterling area in Burleigh County, strong wind gusts from the storms toppled multiple semi-trailers with estimated wind gusts of 75 mph. The thunderstorm then weakened and dissipated.				
MERCER COUNTY --- 9.0 S BEULAH [47.14, -101.79]				
	07/16/21 19:06 CST		0	Hail (1.00 in)
	07/16/21 19:09 CST		0	Source: Public
STARK COUNTY --- 7.9 NNE ANTELOPE [46.95, -102.12]				
	07/16/21 19:15 MST		0	Hail (1.75 in)
	07/16/21 19:17 MST		0	Source: Public
STARK COUNTY --- 6.4 NNE ANTELOPE [46.93, -102.13]				
	07/16/21 19:28 MST		0	Hail (1.75 in)
	07/16/21 19:31 MST		0	Source: Public
MERCER COUNTY --- 13.8 SSW BEULAH [47.08, -101.87]				
	07/16/21 19:30 CST		0	Hail (2.00 in)
	07/16/21 19:33 CST		0	Source: Public
MERCER COUNTY --- 19.4 S GOLDEN VLY [47.00, -102.03]				

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	07/16/21 20:08 CST		0	Hail (1.75 in)
	07/16/21 20:10 CST		0	Source: Public

An isolated thunderstorm developed near Hazen in Mercer County, became severe, and moved to the south-southwest along a corridor of elevated instability before rapidly dissipating as it moved through Stark County. The storm produced a swath of large hail along its path. The largest hail reported was the size of a hen egg, which occurred south-southwest of Beulah in Mercer County.

BOTTINEAU COUNTY --- 8.6 W ANTLER [48.97, -101.46]

07/17/21 18:52 CST	0	Hail (1.00 in)
07/17/21 18:57 CST	0	Source: Public

A thunderstorm along the Canadian border over far north central North Dakota became severe, producing one-inch diameter hail over Bottineau County east of Sherwood.

MCHENRY COUNTY --- 10.4 S BERWICK [48.22, -100.25]

07/19/21 16:45 CST	0	Hail (2.00 in)
07/19/21 16:48 CST	0	Source: Public

MCHENRY COUNTY --- 11.0 ENE KARLSRUHE [48.16, -100.40]

07/19/21 17:22 CST	0	Thunderstorm Wind (EG 52 kt)
07/19/21 17:25 CST	0	Source: Public

The public estimated thunderstorm wind gusts to 60 mph.

MCHENRY COUNTY --- 1.0 ESE KARLSRUHE [48.09, -100.60], 7.7 ENE KARLSRUHE [48.15, -100.47]

07/19/21 17:30 CST	0.10M	Thunderstorm Wind (EG 65 kt)
07/19/21 17:35 CST	0.20M	Source: Public

Thunderstorm wind gusts to 75 mph combined with hail to the size of golf balls to cause significant damage. Window screens were shredded on a home and a camper, windows were broken and siding damaged. A nearby potato field was shredded, and a corn field was about 50 percent damaged. Cottonwood trees were blown over, and cut hay was blown away.

MCHENRY COUNTY --- 6.5 NE KARLSRUHE [48.16, -100.51]

07/19/21 17:30 CST	0	Hail (1.75 in)
07/19/21 17:33 CST	0	Source: Public

ROLETTE COUNTY --- 1.5 NNE MYLO [48.65, -99.59]

07/19/21 17:51 CST	0	Hail (1.00 in)
07/19/21 17:54 CST	0	Source: Trained Spotter

MCHENRY COUNTY --- 4.2 E KARLSRUHE [48.09, -100.53]

07/19/21 18:07 CST	0	Hail (2.75 in)
07/19/21 18:10 CST	0	Source: Public

MCHENRY COUNTY --- 1.4 S BALFOUR [47.93, -100.53]

07/19/21 18:10 CST	0	Hail (1.00 in)
07/19/21 18:13 CST	2K	Source: Public

Drifts of hail were noted as the hail was combined with 60 mph wind gusts. The garden was flattened.

MCHENRY COUNTY --- 1.5 SSE BALFOUR [47.93, -100.52]

07/19/21 18:10 CST	0	Thunderstorm Wind (EG 52 kt)
07/19/21 18:13 CST	0	Source: Public

The public reported thunderstorm wind gusts of 60 mph.

MCHENRY COUNTY --- 1.4 S BALFOUR [47.93, -100.53]

07/19/21 18:15 CST	0	Thunderstorm Wind (EG 56 kt)
07/19/21 18:19 CST	0	Source: Public

The public reported thunderstorm wind gusts to 65 mph.

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MCHEMRY COUNTY --- 1.4 S BALFOUR [47.93, -100.53]				
	07/19/21 18:15 CST		0	Hail (1.50 in)
	07/19/21 18:19 CST		2K	Source: Public
The hail combined with wind gusts to 65 mph to ruin a garden.				
MCHEMRY COUNTY --- 2.8 N KIEF [47.89, -100.53]				
	07/19/21 18:20 CST		0	Thunderstorm Wind (EG 52 kt)
	07/19/21 18:23 CST		0	Source: Public
The public reported thunderstorm wind gusts to 60 mph.				
Thunderstorms developed during the evening hours over north central North Dakota along a variety of surface boundaries moving through the area. This was in an environment of very strong instability and deep layer shear. A few storms became severe, with the most intense storms occurring over McHenry County where reports of baseball size hail and estimated wind gusts to 75 mph occurred.				
BOWMAN COUNTY --- 3.4 W BUFFALO SPGS [46.17, -103.30]				
	07/22/21 14:55 MST		0	Thunderstorm Wind (MG 55 kt)
	07/22/21 14:58 MST		0	Source: AWOS
ADAMS COUNTY --- HETTINGER ARPT [46.02, -102.65]				
	07/22/21 15:53 MST		0	Thunderstorm Wind (MG 52 kt)
	07/22/21 15:55 MST		0	Source: ASOS
HETTINGER COUNTY --- 2.1 NNE BENTLEY [46.36, -102.06]				
	07/22/21 16:37 MST		0	Thunderstorm Wind (MG 53 kt)
	07/22/21 16:39 MST		0	Source: Mesonet
OLIVER COUNTY --- 0.7 N CENTER [47.13, -101.30]				
	07/22/21 19:00 CST		35K	Thunderstorm Wind (EG 61 kt)
	07/22/21 19:04 CST		0	Source: Public
A small grain bin was blown out of the yard, and shingles were blown off the west side of a house.				
Thunderstorms developed ahead of a surface low and approaching short-wave trough. Some of these thunderstorms produced severe wind gusts. The strongest gust occurred near Center in Oliver County, with estimated winds of 70 mph.				
EMMONS COUNTY --- 3.1 SSW TEMVIK [46.33, -100.28]				
	07/23/21 19:54 CST		0	Thunderstorm Wind (MG 50 kt)
	07/23/21 19:57 CST		0	Source: Mesonet
MCINTOSH COUNTY --- 5.3 W WISHEK [46.26, -99.66]				
	07/23/21 20:23 CST		0	Thunderstorm Wind (MG 59 kt)
	07/23/21 20:27 CST		0	Source: Public
MCINTOSH COUNTY --- 4.8 N DANZIG [46.20, -99.47]				
	07/23/21 20:50 CST		2K	Thunderstorm Wind (EG 61 kt)
	07/23/21 20:53 CST		0	Source: Public
A large cottonwood tree broke over onto a road.				
MCINTOSH COUNTY --- 10.1 E ASHLEY [46.02, -99.16]				
	07/23/21 21:15 CST		0	Thunderstorm Wind (EG 52 kt)
	07/23/21 21:18 CST		0	Source: COOP Observer

A COOP Observer estimated thunderstorm wind gusts to 60 mph.

Thunderstorms developed as a weak cold front dropped through southern North Dakota. Some of the storms became severe, producing strong wind gusts. The strongest reported wind gusts were estimated at 70 mph, which occurred near Green Lake in McIntosh County.

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<hr/>				
KIDDER COUNTY --- 6.9 S CRYSTAL SPGS [46.78, -99.47]				
	07/26/21 17:45 CST		0	Hail (1.25 in)
	07/26/21 17:48 CST		0	Source: Public

Thunderstorms formed along a convergence line over south central North Dakota. One storm became severe south of Crystal Springs in Kidder County, producing half-dollar size hail.