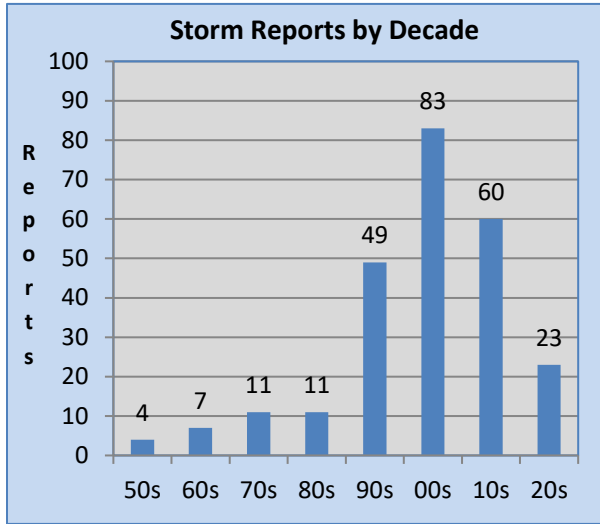


# Marinette County Severe Weather Facts (1950-2023)

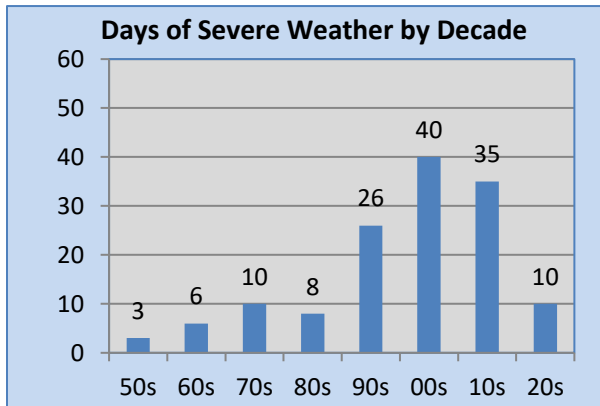
Updated: 01/01/24: Next Update: January 2025

## Storm Reports by Decade



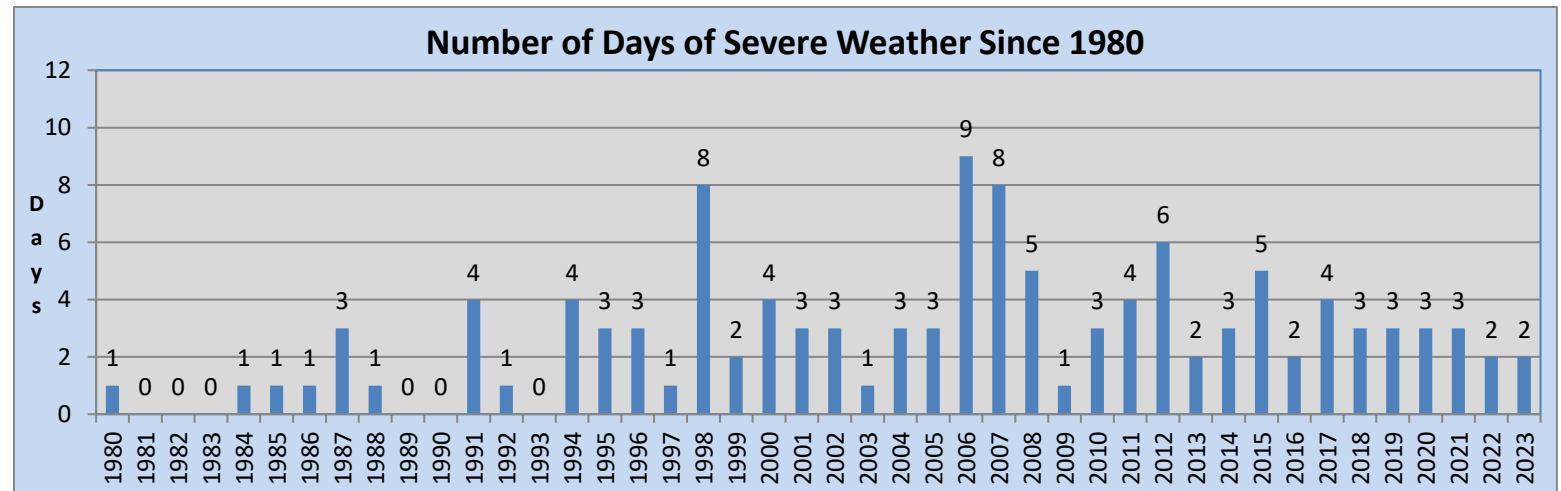
Since 1950 there have been 246 reports of large hail, damaging winds and tornadoes across Marinette County. The population boom of the 1980s and 1990s combined with the SKYWARN program led to an increase in the number of reports of severe weather during both decades. The number of reports increased 14% from the 2014-2023 period compared to the 1990s, one can't say for sure there has been an increase in severe weather across northeast Wisconsin. One possible reason for the apparent increase in reports is that in some instances, multiple reports were received from a single location for the same storm due to more spotters today. Another reason for the increase in storm reports has been the focus by the National Weather Service (NWS) to improve warning verification. 2007 was the most active year with eighteen reports followed by seventeen reports in 2006, fourteen reports in 2000, and 10 reports in 1994 and 2004, and nine reports in 2008. Since 1980, severe weather has not been documented in the following years: 1981, 1982, 1983, 1989, 1990 and 1993. In 2022, there were 2 reports of large hail, one on August 11 and the other report on October 24.

## Days of Severe Weather by Decade



In order to address the impact of multiple reports for the same storm, the data was examined by the number of severe weather days. Since the reports were sporadic during the 1950s through the 1970s, only data from 1980 to present was used. There has been a 15% increase in the number of days of severe weather from the 2014 to 2023 period compared to the 1990s. This trend can be attributed to the increase in population, technology advances in reporting severe weather, and greater severe weather awareness by the public. Since 2010, Marinette County averages 3.2 days of severe weather per year. The long-term average from 1980-2023 is 2.7 days. The most active year was 2006 with nine days of severe weather; followed by eight days of severe weather in 1998 and 2007, six days in 2012, and five days 2008 and 2015. In 2023, severe weather was reported on August 11 and October 24.

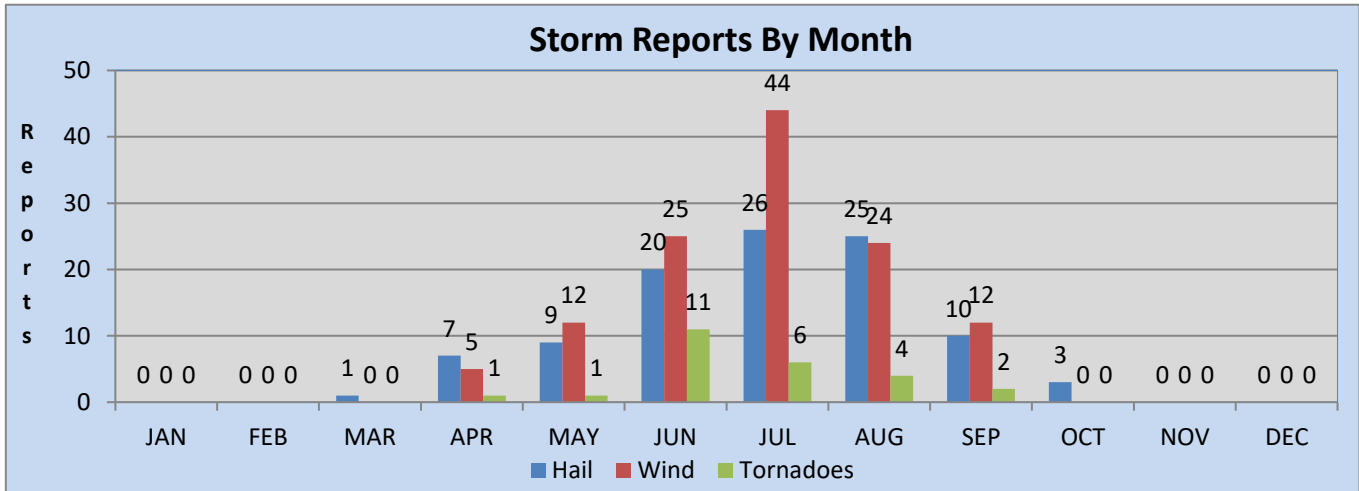
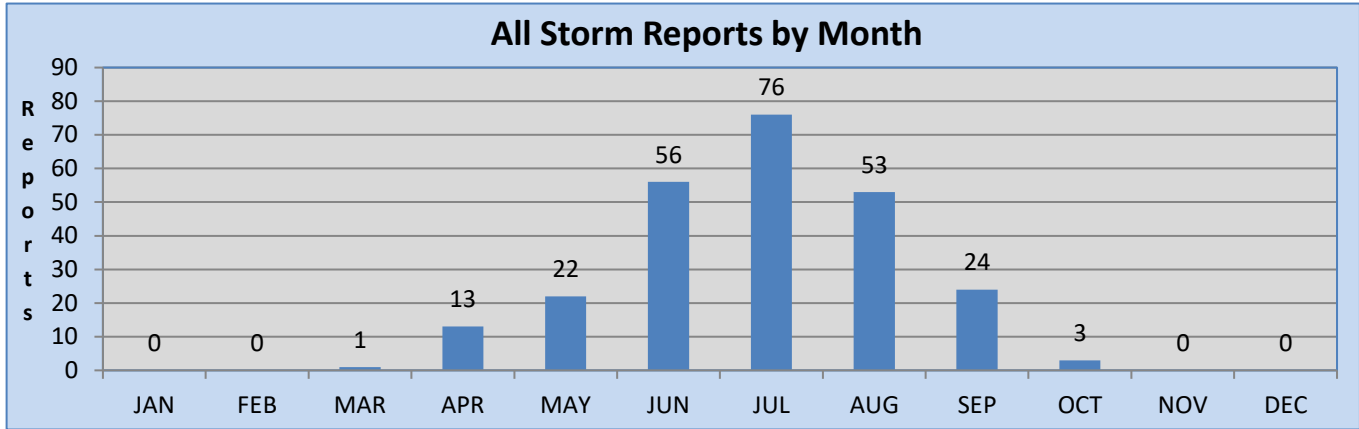
## Number of Days of Severe Weather Since 1980



# Marinette County Severe Weather Facts (1950-2023)

## Storm Reports by Month

Severe weather has been documented in Marinette County from March through October. There have been no documented reports from November through February. A rare event can occur in March. The earliest documented report of severe weather during the year occurred on March 29, 1998. Nickel size hail was reported six miles south southeast of Peshtigo. The severe weather season begins in earnest in April. The heart of the convective season is June and July and accounts for 53% of all severe weather reports. July is the peak month for severe weather and then quickly wanes by September. The warm season period of May through September accounts for 93% of all severe weather reports during the year. Severe weather can occur from time to time in September. The latest documented report of severe weather during the year occurred on October 28, 2014 when 1.50 inch hail was reported just south of Peshtigo. In 2023, hail 0.88 inch in diameter fell near McAllister on October 24<sup>th</sup>.

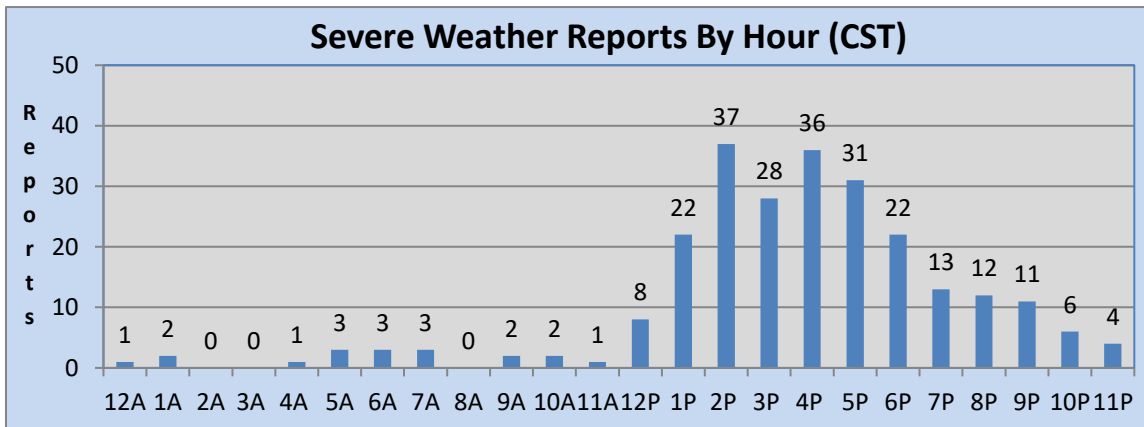
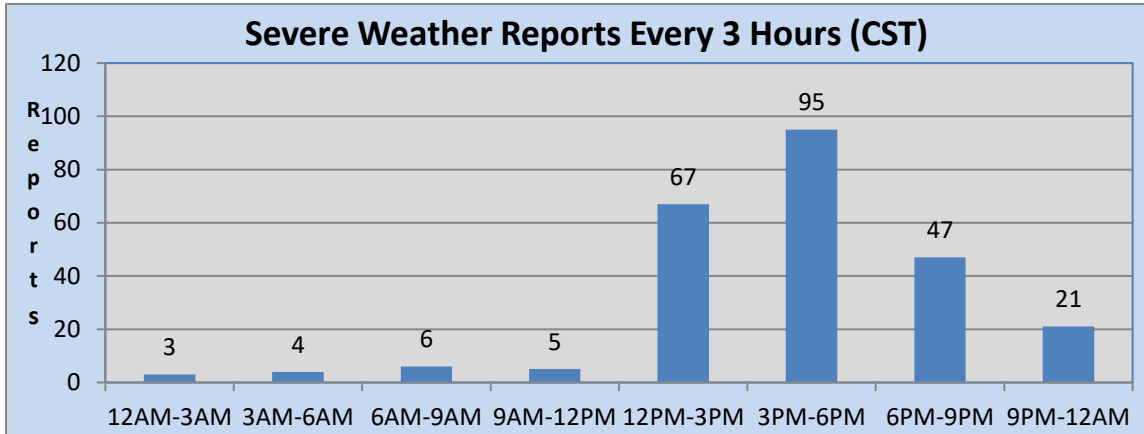


NOTE: The chart depicts storm type by month: (hail, wind/wind damage, tornadoes).

# Marinette County Severe Weather Facts (1950-2023)

## Storm Reports by Time of Day

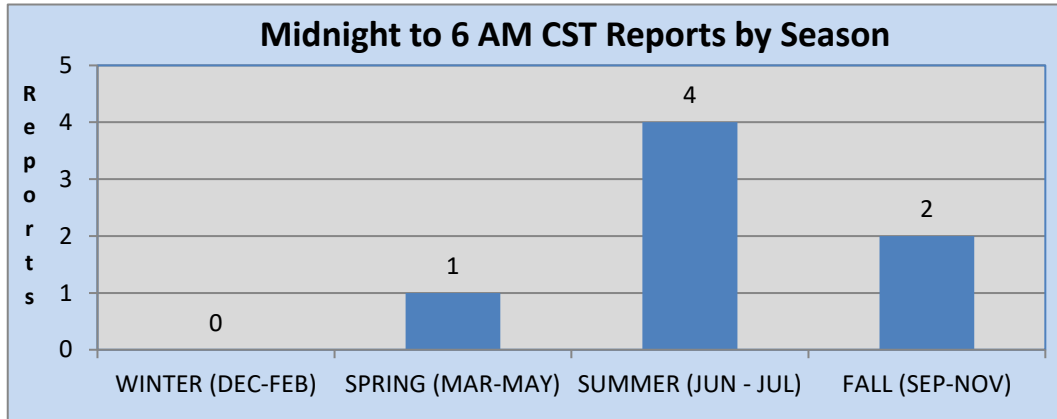
No matter the season, the afternoon and early evening hours are the peak time for severe weather across Marinette County. Overall, 81% of all severe weather reports occur between 1 PM and 9 PM CST. In Marinette County, severe weather reports increased sharply after 1 PM CST with a peak between 2 PM and 7 PM CST. The peak in the storm activity corresponds to peak afternoon heating when the atmosphere is most unstable. Of all the counties across north central and northeast Wisconsin, Marinette County is the least likely to see severe weather between midnight and 6 AM CST during the summer months. Many counties to the south and west of Marinette County see a minor peak in overnight convective activity from June through August.



# Marinette County Severe Weather Facts (1950-2023)

## Overnight Severe Weather Reports Midnight to 6 AM CST

There was a peak in the overnight reports (midnight to 6 AM CST) during the summer months (June through August) which accounted for 57% of all overnight severe weather reports during the year.



# Marinette County Severe Weather Facts (1950-2023)

## Marinette County Tornadoes

A record breaking 4 tornadoes were reported across the county in 2022, three were rated EF1 and one tornado was rated EF2. Since record keeping began in 1950, there have been 25 documented tornadoes in Marinette County. The strongest tornado which was ranked F4 which touched down from Pound to Marinette on August 19, 1968, around 4:10 PM CST. There have been two documented F/EF3 tornadoes. The last F3 tornado to strike the county occurred on July 4, 1986, when the tornado developed two miles south of Niagara and moved into upper Michigan. Six tornadoes were rated F/EF2 intensity, 13 tornadoes were rated F/EF1, and 3 tornadoes were rated F/EF0. The second most active year with 2 tornadoes occurred in 1958, 1968, 1971, 2000 and 2007. A tornado was reported across Marinette County for five consecutive years from 1970 to 1974. In 2011, a killer tornado moved across the county near Wausaukee on August 19<sup>th</sup>. The tornado killed one person. Since 1950, tornadoes have touched down in seventeen different years. A tornado strike in Marinette County occurs on average about near every three years.

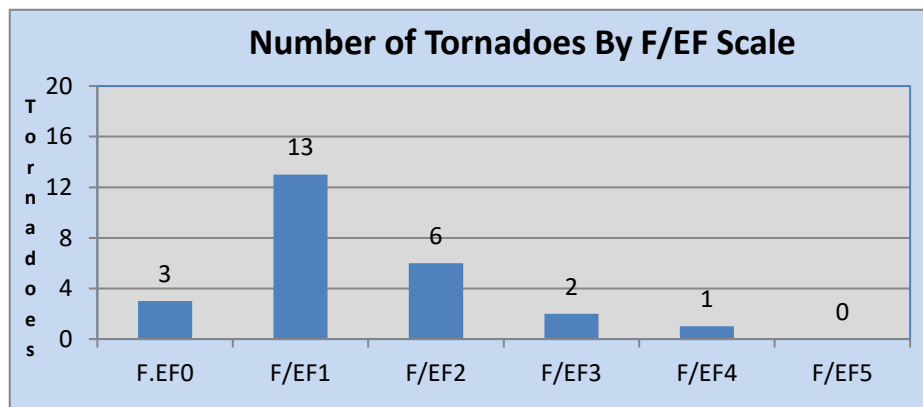
Event	Date			Time	Start / End Location	F/EF
#	Month	Day	Year	(CST)		Rank
1	5	17	1958	15:40	3 W Wausaukee	2
2	8	30	1958	15:26	6 SE Wausaukee	1
3	7	8	1959	16:54	Niagara	2
4	6	9	1964	15:00	Pound	2
5	6	30	1968	04:45	3 S Pembine	1
6	8	19	1968	16:10	3 SW Pound - Marinette	4
7	7	14	1970	14:00	McAllister	1
8	6	18	1971	13:45	5 W Marinette	1
9	9	28	1971	17:15-17:25	Hewitt - Middle Inlet	3
10	9	16	1972	16:05	4 NW Wabeno east southeast into UP	2
11	6	3	1973	18:15	2 NE Amberg	1
12	4	21	1974	15:25	4 NNW Crivitz	2
13	6	20	1979	14:30	Goodman	1
14	7	14	1984	20:35	1 SE Peshtigo	0
15	7	4	1986	19:00-19:25	2 S Niagara - Carney/Nadeau, MI	3
16	8	27	1994	21:41	1.5 S Wausaukee - 3 SE Wausaukee	1
17	7	27	2000	19:07-19:10	1.5 W - 1.1 WSW Harmony	0
18	7	27	2000	19:30	1.7 W Peshtigo	0
19	6	7	2007	16:37-16:40	0.5 W - 2.5 ENE Cedarville	1
20	6	7	2007	17:16-17:20	3.5 W Harmony - 1.2 N Harmony	1
21	8	19	2011	15:45-15:56	2.9 NW - 5.2 ESE Wausaukee	1
22	6	15	2022	17:31-17:35	9.4 WSW Athelstane - 7.7 W Athelstane	2
23	6	15	2022	17:34-17:41	0.7 WSW Middle Inlet - 0.6 ENE Wausaukee	1
24	6	15	2022	17:45-17:54	5.3 NNW Athelstane - 2.2 SE Beecher Lake	1
25	6	15	2022	18:00-18:04	2.7 ENE - 3.3 ENE Kremlin	1

# Marinette County Severe Weather Facts (1950-2023)

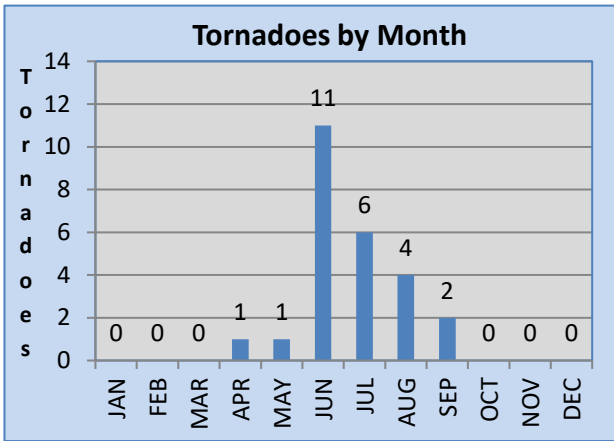
## F/EF2 or Greater Tornadoes in Marinette County

Event #	Date			Time (CST)	Start / End Location	F/EF Rank
	Month	Day	Year			
1	5	17	1958	15:40	3 W Wausaukee	2
2	7	8	1959	16:54	Niagara	2
3	6	9	1964	15:00	Pound	2
4	8	19	1968	16:10	3 SW Pound - Marinette	4
5	9	28	1971	17:15-17:25	Hewitt - Middle Inlet	3
6	9	16	1972	16:05	4 NW Wabeno - Upper Michigan	2
7	4	21	1974	15:25	4 NNW Crivitz	2
8	7	4	1986	19:00-19:25	2 S Niagara - Carney/Nadeau, MI	3
9	6	15	2022	17:31-17:35	9.4 WSW Athelstane - 7.7 W Athelstane	2

Additional tornado data can be found on the NWS Green Bay webpage at: <http://www.weather.gov/grb/severeclimate>



# Marinette County Severe Weather Facts (1950-2023)

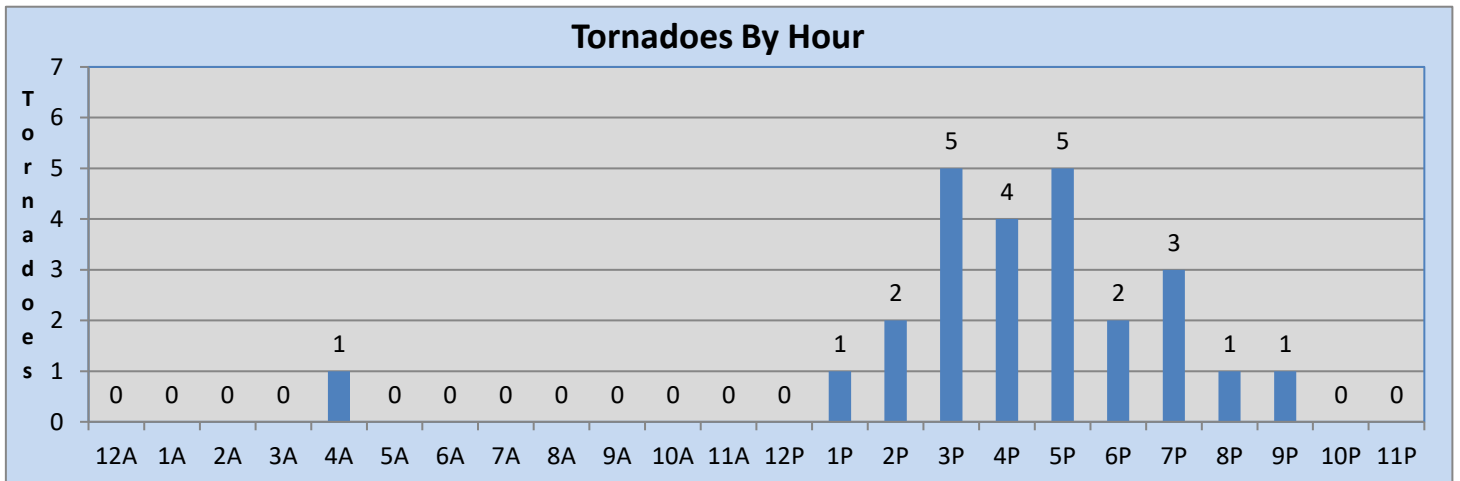


## Tornadoes by Month

Documented tornadoes have occurred in Marinette County from April through September. The earliest documented tornado during the year occurred on April 21, 1974, when the F0 tornado touched down four miles north-northwest of Crivitz. The tornado season peaks in June and July, which account for 68% of all tornado reports. The warm season months of May through September account for 96% of all tornadoes during the year. The latest tornado on record during the year occurred on September 28, 1971, when a F3 tornado touched near Hewitt and travelled to near Middle Inlet.

## Tornadoes by Hour

In Marinette County, twenty-four documented tornadoes (96%) have occurred between 1 PM and 10 PM CST. There have been no documented tornadoes between 10 PM and 3 AM CST and from 5 AM to 1 PM CST. A rare night-time tornado occurred on June 30, 1968 when a F1 tornado struck three miles south of Pembine at 4:45 AM CST.



# Marinette County Severe Weather Facts (1950-2023)

## Predominant Storm Reports – Wind and Hail Only

During March, large hail is the dominant weather event that is reported to the National Weather Service. For the remainder of the convective season, reports of high winds or wind damage are a little more likely to be reported than large hail.

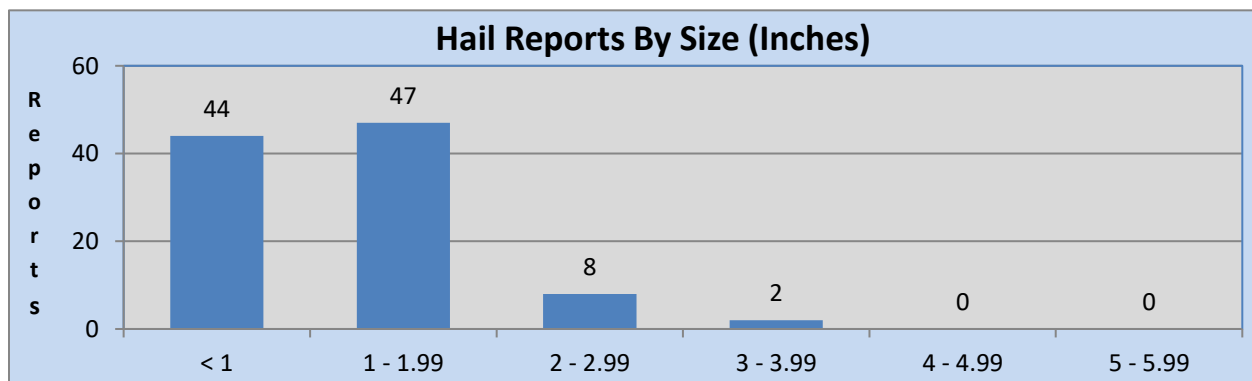
Month	% Hail Reports	% Wind or Wind Damage	Month	% Hail Reports	% Wind or Wind Damage
Jan	0.0	0.0	Jul	37.1	62.9
Feb	0.0	0.0	Aug	51.0	49.0
Mar	100.0	0.0	Sep	45.5	54.5
Apr	58.3	41.7	Oct	100.0	0.0
May	42.9	57.1	Nov	0.0	0.0
Jun	44.4	55.6	Dec	0.0	0.0
			Year	45.3	54.7

## Large Hail in Marinette County

There have been 10 documented reports of large hail two inches or greater in diameter across the county. The largest hail stone of 3.5 inches in diameter occurred ten miles west of Middle Inlet on June 8, 2000. The most recent large hail event of two inches or greater occurred on August 11, 2023 when 2.5-inch diameter hail was reported nearly a mile south of Middle Inlet. Overall, hail ranging in size from three quarters to one inch accounted for 73% of the documented large hail reports. Large hail reports of two inches or greater only accounted for 10% of the total hail reports.

## Hail over 2 inches

Event #	Date			Time (CST)	Start / End Location	Hail (Inches)
	Month	Day	Year			
1	6	8	2000	22:30	10 W Middle Inlet	3.50
2	8	19	1968	16:15	2 E Harmony	3.00
3T	7	14	1995	15:05	Athelstane	2.75
3T	6	8	1985	19:43	Marinette	2.75
3T	6	8	1985	19:17	Crivitz	2.75
6T	10	24	2023	13:23-13:24	Near Middle Inlet	2.50
6T	8	1	2006	16:18	3 S Peshtigo	2.50
8T	8	19	2011	15:10	Goodman	2.00
8T	7	20	2008	21:14	1.6 ENE Harmony	2.00
8T	9	11	2004	16:15	Beaver - 1 E Pound	2.00





# Marinette County Severe Weather Facts (1950-2023)

## Marinette County Summary

In Marinette County, the severe weather season begins in earnest in April and wanes quickly by September. Severe weather usually occurs in the afternoon and early evening hours. If you do experience severe weather, you are likely to see large hail early in the spring. Damaging winds or large hail is the predominant storm type in May, August and September. During June and July, the reports were evenly split between large hail and damaging winds and strong wind gusts. In the NWS Green Bay County Warning Area which includes 22 counties from central to northeast Wisconsin, Marinette County ranks tied 13<sup>th</sup> in the total number of storm reports and 9<sup>th</sup> in the number of tornado reports since 1950.

## Green Bay Forecast Area Severe Weather Climatology Summary

Across the Green Bay forecast area which covers 22 counties in north-central and northeast Wisconsin, severe weather has been documented in every month except February. This includes a rare event on January 24, 1967 in which a line of thunderstorms produced damaging winds across Brown, Winnebago, and Outagamie counties during the early evening hours. Another rare late season thunderstorm produced one inch hail in Florence County on December 5, 2001 while one inch hail was reported four miles west of St. Nazianz in Manitowoc County on December 20, 1967.

Tornadoes have occurred from March through December, with an extremely rare tornado outbreak occurring on December 1, 1970. On this date four tornadoes were reported across central and northeast Wisconsin during the morning. A strong area of low pressure brought unseasonably mild temperatures and severe thunderstorms to portions of central and northeast Wisconsin as a cold front swept across the state. The first tornado was reported twelve miles southeast of Marshfield in Wood County around 7 AM CST while another tornado was reported in the town of Hull in Portage County around 9 AM CST. Later that morning, a F2 tornado was reported in Waupaca and Shawano counties, from four miles southwest of Iola to near Marion and Pella. The last and strongest tornado occurred around 9:45 AM CST. The F3 tornado travelled from Medina in southwest Outagamie County to far southeast Shawano County, destroying about 20 barns and five homes.

Here are the strongest documented tornadoes in the Green Bay forecast area which covers 22 counties in central, north-central and northeast Wisconsin.

## F/EF4 Tornadoes

Event	Date			Time		Tor in GRB Service Area
#	Month	Day	Year	(CST)	Start / End Location	County or Counties
1	6	25	1950	21:00	1 W Woodboro - 5 NE Rhinelander	Oneida
2	9	26	1951	15:45-16:08	9 SSW Amherst - 2 SW Bear Creek	Portage-Waupaca
3	4	3	1956	13:45-13:53	Berlin - 2 W Omro	Wausara-Winnebago
4	8	19	1968	16:10	3 SW Pound - Marinette	Marinette
5	4	21	1974	14:40-15:08	5 S Ripon - Oshkosh	Winnebago
6	4	27	1984	15:20-15:40	1 NE Winneconne - Freedom	Winnebago-Outagamie
7	7	5	1994	15:43-15:55	2.5 NW Maribel - 0.5 W Cooperstown	Manitowoc

# Marinette County Severe Weather Facts (1950-2023)

## Green Bay Forecast Area Severe Weather Climatology Summary

The state record for the largest documented hail stone in Wisconsin occurred in Wausau on May 22, 1921. The hailstone measured 5.7 inches in diameter. More recently, a hailstone of 5.5 inches in diameter was reported in Port Edwards in southeast Wood County on June 7, 2007. In 2021, there were three reports of hail four inches in diameter or greater across northeast Wisconsin.

Hail	Month	Date	Year	Time (CST)	Start / End Location	County
5.70	5	22	1921	??	Wausau	Marathon
5.50	6	7	2007	15:23	Port Edwards - Wisconsin Rapids	Wood
4.50	9	7	2021	07:47-07:48	2 W Apple Creek	Outagamie
4.50	7	16	1997	14:15	8 NE Merrill	Lincoln
4.25	5	22	2011	15:05	0.8 NW Winchester	Winnebago
4.25	5	22	2011	14:35	0.5 E Redgranite	Waushara
4.10	9	7	2021	07:45-07:46	3 NE Greenville	Outagamie
4.00	9	7	2021	08:13-08:14	2 E Apple Creek	Outagamie
4.00	8	2	2015	13:32	2.8 S Brookside	Oconto
4.00	8	2	2015	13:24	0.5 E Abrams	Oconto
4.00	4	25	2008	17:50	0.8 SW Kings	Lincoln
4.00	7	1	2006	14:31	1 N Hayes - Suring	Oconto
4.00	3	29	1998	12:25	St. John	Calumet
3.75	9	7	2021	07:47-07:48	1 NW Little Chute	Outagamie
3.50	6	8	2000	22:30	10 W Middle Inlet	Marinette
3.25	7	1	2006	15:05	Oconto - 6 SE Oconto Falls	Oconto
3.00	10	24	2023	08:50-08:51	Nasonville	Wood
3.00	8	2	2015	14:06	Rudolph	Wood
3.00	5	22	2011	17:35	Plover	Portage
3.00	6	7	2007	15:50	5 W Langlade	Langlade
3.00	7	1	2006	19:29	Branch - Manitowoc	Manitowoc
3.00	4	18	2002	15:30	7 WSW Bloomville - 7 NW Bradley	Lincoln
3.00	8	9	2001	12:50	1S Sturgeon Bay	Door
3.00	6	5	1999	18:24	3 S - 8 SE Eagle River	Vilas
3.00	7	27	1989	10:50	1 N Oshkosh	Winnebago
3.00	8	19	1968	16:15	2 E Harmony	Marinette
3.00	7	19	1963	15:00	4 S Rhineland	Oneida
3.00	7	1	1956	11:00	5 E Green Bay	Brown