

Top Wisconsin Weather Events of 2007

National Weather Service

Feb. 23-26 Winter Storms: Three winter storms struck large parts of Wisconsin over a 4 day period, with 6 to 12-hour lulls in between. Round #1 occurred overnight Feb. 23 into the early morning hours of Feb. 24, and deposited 8-16" from the west-central counties to the southeast corner of the state. Galesville came in with 15.8." Round #2 hit overnight Feb. 24 and deposited 8 to 13" from west-central Wisconsin to the southeastern corner. Up to 13" fell in northeastern Dunn County in this round. Round #3 started on Feb. 25 and affected mainly the northeastern counties where 6 to 14.5" fell, with Door County having the maximum amounts. Collectively, some locations had a total snowfall of 20 to 25 inches over the 4-day period, which was about 30-50% of a typical winter season total.

March 1-2 Winter Storm: A winter storm event (with blizzard conditions in Douglas County) affected the northern three-fourths of Wisconsin. Snow in excess of 6" fell north of a line from Viroqua to Port Washington, with maximum amounts of 12 to over 18" over the northwest and northeast parts of the state. The winds during the Douglas County blizzard gusted to 57 mph reported. Many roads were closed or impassable, and dozens of schools closed.

June 1-6 Severe Storms: Scattered severe storms occurred every day during this period thanks to a slow-moving upper-level low pressure. Spiral bands or lines of storms produced damaging winds, large hail, isolated low-end flash floods, and eight weak tornadoes reported in Lafayette, Washington, Shawano and Grant Counties.

June 7 Severe Weather Outbreak: A severe weather outbreak occurred across the northern half of the state. Fast moving supercell thunderstorms generated damaging straight-line winds, large hail, and tornadoes. Five tornadoes spun up in central and northeast Wisconsin. A long-track tornado touched down at 4:31 pm east of Mattoon in Shawano County and continued northeast to the Oconto-Marinette County line. The tornado track was just over 40 miles, and the tornado was over 1/2 mile wide at times. This was the longest tornado track in the U.S. in 2007.

Over 14,000 acres of trees were snapped or flattened and many dozens of buildings were damaged or destroyed. The twister was rated an EF3 on the Enhanced Fujita scale, with estimated winds of 140 to 160 mph. Damage by this tornado exceeded \$15 million (property and timber). The most severe structural damage occurred 3.5 miles east of the city of White Lake in Langlade County. The Bear Paw Outdoor Adventure Resort sustained severe damage. Nearly every building was damaged or destroyed.

As the tornado moved northeast into the Nicolet National Forest in Oconto County, it flattened tens of thousands of trees as it headed toward Highway 64. The damage path near Highway 64 was three-quarters of a mile wide. The twister caused damage four miles north of the city of Mountain on Highway 32, in the town of Riverview, with estimated winds of around 130 mph. The width of the tornado in this area was almost 1/2 mile. Overall severe storms on June 7 (including the near-record hail storm – see below) resulted in about \$60.8 million in damage.

June 7 Near-Record Hail Storm: The June 7 severe weather outbreak also produced a 5.5 inch hailstone that fell in Port Edwards in Wood County. This is the second largest hailstone in Wisconsin weather history (the largest hailstone in Wisconsin was 5.7" in diameter which fell in Wausau in May 1921). Damage from the hail storm in Wood County caused \$45 million to at least 6,000 homes and businesses.

July 17-18 Flash Flooding: A flash flood event occurred over southern Crawford and Grant Counties after heavy rains of 4 - 7 inches fell overnight. Numerous mud and rock slides occurred on the steep bluffs along the Mississippi River. Near Prairie du Chien, 7.31 inches of rain was measured. In Bagley, the combination of several drainage basins that converge near the village, and the damming effect of debris build-up along area bridges, led to a rapid rise in water levels to about 3 to 4 feet deep in the village. At least 300 homes in the village had water/sewer problems. Grant County received a U.S. Small Business Administration disaster declaration which provided over \$450,000 in low interest loans to residents and businesses impacted by this flooding event.

Drought: The year began with moderate (D1) to extreme (D3) across the northern third of Wisconsin. During late February and early March, several bouts of heavy snow helped to alleviate some of the drought conditions. However a dry spring (up to 2 inches below normal across much of the state) caused the drought to slowly spread across the northern third of Wisconsin once again. This dryness continued into late July. During June and July much of the state saw 2 to 4 inch precipitation deficits. The effect of this dryness was amplified by unusually warm temperatures (1 to 3 degrees above normal). This caused the drought to spread across almost all (85 %) of Wisconsin.

With the exception of the southern two tiers of counties, the state was either in moderate or severe drought. Record August rains across the southern half of the state quickly alleviated the drought across this area. Meanwhile the drought intensified across the northern third of the state. By mid September, severe to extreme drought covered much of this area. From mid September through mid October, several slow moving cold fronts moved through the northern Wisconsin. This resulted in precipitation being 4 to 6 inches above normal across north central and northwest Wisconsin. This alleviated the drought across these areas. Meanwhile the dryness continued across northeast Wisconsin. Green Bay had their driest November ever with only 0.11 inches falling into the rain bucket. As of early December, only northeast Wisconsin (just 10.55% of the state) was in drought (moderate).

August Record Rains & Flooding: Record rains caused moderate to major flash flooding from the La Crosse area through Madison to Racine and Kenosha in August. The NWS reported 143 new daily precipitation records were established. Sixty of these records occurred between August 18–20. The record rains caused numerous mud/debris slides, road closures, flooded homes and businesses. Total damage to property and crops was at least \$112.4 million, with most of it in west-central and southwestern Wisconsin.

Fourteen counties received a federal disaster declaration for flooding that occurred from August 18-31. The counties in the declaration were Columbia, Crawford, Dane, Grant, Green, Iowa, Jefferson, Kenosha, La Crosse, Racine, Richland, Rock, Sauk and Vernon. More than 5,000 individuals and families from the declared counties requested federal assistance with more than \$7.5 million in federal grants from FEMA for housing assistance and other needs were provided. The U.S. Small Business Administration also reported 329 approved federal low interest loans of over \$8.4 million dollars for disaster assistance.

FEMA also approved Crawford, La Crosse, Richland, Sauk and Vernon Counties for the Public Assistance program which provides federal funds for debris removal, emergency services related to the disaster, and repairing or replacing damaged public facilities, such as roads, buildings and utilities. FEMA provides 75% of eligible costs with the State of Wisconsin providing 12 1/2 percent and the rest is the local share. Over 140 local governments in the declared counties requested assistance for more than \$12 million.

Heavy rains began late on August 18 with most locations in the southern third of the state picking up 3 to 7 inches. However 10 -12 inches fell in parts of La Crosse and Vernon Counties. Additional rounds of thunderstorms with heavy rains occurred throughout the week causing most rivers and streams to exceed flood stages. The Root River Canal at Raymond reached an all-time record-high crest of 11.66 feet on August 21. A crest of 19.35 feet at Soldiers Grove on the Kickapoo River was the 2nd highest in history.

Here's a listing of locations that established new Wettest Month Records:

Wettest Month of Record Information			
Location	New Record	Previous Record	Previous Aug. Record
Viroqua	21.74"	14.34" (May 2004)	13.69" (1980)
Readstown	21.57"	12.91" (Sep 1965)	12.71" (1980)
Gays Mill	21.06"	12.18" (May 2004)	8.72" (1990)
Richland Center	20.81"	12.81" (July 1978)	12.11" (1940)
Dodgeville	20.02"	11.90" (July 1993)	11.31" (1981)
Genoa Dam 8	19.80"	12.80" (Aug 1959)	12.80" (1959)
Westby 3ENE	18.94"	13.37" (Aug 1990)	13.37" (1990)
La Farge	18.38"	13.76" (May 2004)	6.28" (2001)
Lake Mills	17.75"	12.03" (Jul 1902)	8.60" (1959)
Afton	17.39"	9.32" (Jun 1993)	7.89" (1998)
La Crosse WFO	17.00"	10.46" (May 2004)	8.89" (1998)
Ontario	16.99"	13.29" (Jul 1978)	12.39" (1980)
Prairie du Sac-Hydro	16.91"	12.59" (Sep 1965)	11.41" (1980)
Stoughton	16.37"	11.19" (May 2004)	9.11" (1936)
Clinton	16.24"	12.55" (Sep 1970)	12.41" (1979)
Brodhead	15.57"	13.59" (Sep 1938)	13.38" (1940)
Monroe	15.43"	14.53" (Jun 1993)	11.47" (1979)
Madison Airport	15.18"	10.93" (July 1950)	9.49" (1980)
Lodi	15.18"	6.00" (Aug 2006)	6.00" (2006)
Mazomanie	14.92"	11.53" (May 2004)	3.91" (2004)
Baraboo	14.73"	14.79" (Jul 1993)	11.73" (1980)
La Crosse 4NNW	14.66"	11.76" (May 2004)	4.80" (2004)
UW-Charmany Farm	14.58"	11.47" (Jun 1996)	9.64" (2001)
Reedsburg-1NE	14.49"	12.89" (Sep 1965)	11.79" (1980)
Watertown	14.39"	13.50" (Sep 1965)	9.19" (1995)
Cashton	14.05"	11.95" (Aug 1979)	5.48" (2006)
Hillsboro	13.99"	13.81" (Aug 1908)	13.81" (Aug 1908)
Galesville	13.87"	11.89" (Sep 1980)	9.45" (1990)
Platteville	13.78"	12.60" (Jun 1969)	8.41" (1940)
Prairie du Chien	13.77"	12.92" (Aug 1928)	12.92" (1928)
La Crosse Airport	13.75"	12.09" (Oct 1900)	9.84" (1980)
Gay Mills	12.65"	12.18" (May 2004)	8.72" (1990)
Lancaster	12.48"	11.80" (Aug 1928)	11.80" (1928)
Mauston	11.91"	11.79" (Sep 1965)	10.58" (1980)
Friendship	9.43"	9.06" (May 2004)	7.22" (2004)

Seven locations recorded their wettest day ever on one of the days in August 2007. The following table shows the details.

Wettest Day Ever Information		
Location	Pcpn Amount	Previous wettest day
Viroqua	9.22" (19 th)	8.57" (Jul 22, 1917)
Westby 3ENE	7.17" (19 th)	4.37" (Aug 4, 1990)
Genoa Dam 8	7.10" (19 th)	6.13" (Jul 21, 1951)
Stoughton	6.03" (19 th)	5.05" (Sep 1, 1981)
Lake Mills	5.59" (19 th)	5.11" (Sep 8, 1941)
Hillsboro	4.64" (19 th)	4.15" (Aug 27, 1959)
Afton	4.22 (5 th)	3.25" (Aug 5, 1998)

Five additional locations established a new wettest August day record for precipitation. The following table shows the details.

Wettest August Day		
Location	New Record	Previous Wettest August Day
Racine	4.10" (19 th)	3.75" (Aug 4, 1924)
La Crosse Municipal Airport	4.05" (18 th)	2.84" (Aug 22, 1973)
Lone Rock Tri County Airport	3.84" (18 th)	2.64" (Aug 4, 1982)
Galesville - 1S	3.30" (19 th)	3.15" (Aug 31, 1962)
Oshkosh Wittman Regional Airport	1.63" (19 th)	1.32" (Aug 27, 2005)

Total August 2007 rainfall was generally 15" or more south of a line from La Crosse to Baraboo to Madison to Lake Mills to Delevan. Normal August rainfall is 4 to 4.5". Some spots in Vernon, Crawford, Richland, Iowa, Dane, and Green counties exceeded 20" for the month. Viroqua (Vernon Co.) measured the greatest amount of 21.74", which is a new record for the wettest month in Wisconsin, and a new state August record. The old record for the wettest month in Wisconsin belonged to Port Washington (Ozaukee Co.) with 18.33" in June, 1996, and the old state August record was 16.61 inches in Phelps in August 1966. Refer to the following graphic of August rain amounts for additional information.

August 13 Thunderstorm: A powerful thunderstorm complex produced a damage swath of 2 to 4 miles wide in St Croix County from New Richmond to Glenwood City. At least 109 homes and 48 barns were damaged, including two homes and five barns destroyed. One home had its entire upper story blown off. Based on a NWS damage survey, an estimated wind gust of 90 mph occurred. This may have been the strongest thunderstorm wind gust of the year in Wisconsin.

December 1 Winter Blast: A winter storm/ice storm affected all of Wisconsin (first widespread storm of the season), dumping generally 3 to 6 inches of snow and sleet across the southern counties, 4 to 8 inches of snow and sleet across the central counties, and up to 8 to 10 inches of snow across the far northwestern counties. The precipitation began as snow, but changed to sleet and then freezing rain over all but northwest Wisconsin. Sleet accumulations of 1 to 2 inches were noted over the southern and central counties, and ice accumulations of ¼ to ½ inch affected the southern counties. Hundreds of vehicle accidents occurred, and numerous airplane flights were cancelled, as well as numerous civic functions.

Other Miscellaneous Information

Tornadoes: Eighteen tornadoes spun up in Wisconsin this year, 3 below normal. The Enhanced F-scale (EF) rates the strength of the tornadoes and based on the most intense damage within the path. Most of the tornadoes in Wisconsin are EF0 or EF1 in strength. According to the National Weather Service - total yearly damage to property and crops was about \$15.795 million, with \$15.4 million attributed to the June 7 EF3 tornado.

Date	EF Scale	County	Date	EF Scale	County
March 31	EF0	Grant County	June 3	EF0	Grant County
May 26	EF0	Grant County	June 3	EF0	Grant County
May 26	EF0	Polk County	June 7	EF2	Marathon County
June 1	EFO	Lafayette County	June 7	EF0	Wood County

June 1	EF0	Lafayette County	June 7	EF3	Shawano, Menominee, Langlade and Oconto Counties (40 mile track)
June 2	EF0	Washington County	June 7	EF1	Marinette County
June 3	EF1	Washington County	June 7	EF1	Marinette County
June 3	EF0	Shawano County	Sept. 27	EF0	Racine County
June 3	EF0	Grant County	Oct. 8	EF0	Price County

Temperatures

Coldest Temperature - -35 degrees at Gurney (Iron County) on February 6 & 7.

Warmest Temperature – July 8 was the hottest day in Wisconsin with most locations reaching the mid to upper 90s. The highest official reading was 99 degrees at both Grantsburg (Burnett County) and Crivitz High Falls (Marinette County).

Snowfall Extremes: Upson (Iron County) had the most snow in the 2006-07 season with 175.8 inches, while Menomonie (Dunn County) had the least with 29.0 inches.

Directly-related Fatalities & Injuries: There were two directly-related fatalities and six directly-related injuries as a result of extreme weather in 2007. There was one directly-related fatality (golfer in Madison, Dane County on August 27) due to lightning, and one directly-related fatality due to flash flooding (man swept away in his truck in southern Richland County on August 19 and body found on September 15). Four people were injured (directly-related) in tornadoes on June 7 – two in Oconto County and one each in Langlade and Marinette Counties. One person was injured (directly-related) by broken windshield glass due to large hail impact (Portage County), and one person was injured (Monroe Co.) when a tree fell onto a camper during thunderstorm winds.

There were three additional indirect-related lightning fatalities and two indirectly-related injuries in Madison at a bus stop incident on August 22. A mother and daughter waiting for a bus were electrocuted when lightning struck a power line and caused it to fall onto a flooded street on which they were standing, while another child was injured. A passenger on the bus was killed, and the driver was injured, both having been shocked after coming off the bus to help.

(Note: there were many deaths and injuries related to vehicle accidents in which weather was a factor, especially in winter. However these are not tallied as directly-related fatalities or injuries since driving too fast for road conditions is usually the reason for the incident.)

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