



National Weather Service

Storm Data and Unusual Weather Phenomena



August 2003

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons	Estimated Damage	Character of Storm	
					Killed	Injured	Property	Crops

LAKE MICHIGAN

LMZ643	Sheboygan To Pt Washington Wi							
Sheboygan	01	0239CST			0	0		Marine Tstm Wind (MG53)
LMZ643	Sheboygan To Pt Washington Wi							
Port Washington	01	0300CST			0	0		Marine Tstm Wind (EG56)
LMZ644	Pt Washington To North Pt Lt Wi							
2 N Whitefish Bay	01	0430CST			0	0		Marine Tstm Wind (EG50)

The remains of severe thunderstorms moved out over the Lake Michigan nearshore waters during the pre-dawn hours. Strong downburst winds toppled large trees along the shoreline, based on spotter reports

WISCONSIN, Southeast

WIZ057>060-062>072	Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha							
	01	0000CST			0	0		Drought
	31	2359CST						

Drought conditions returned to parts of south-central and southeast Wisconsin during the month of August, 2003. The jet stream and associated low pressure systems stayed north of Wisconsin, resulting in few cold front passages. Conditions worsened from abnormally dry (D0 rating) to a moderate drought (D1 rating) as the month progressed. This drought continued into September, 2003, and ultimately reached the severe category (D2). Crop and fruit tree farms without irrigation capability were especially affected. Corn, soybeans, and alfalfa hay crops were severely stressed thanks to many sunny days with warm to hot temperatures in the 80s and 90s. In addition, ornamental flowers and many trees were severely stressed across south-central and southeast Wisconsin. Some trees, especially young ones, dropped their leaves. Harvest yields were expected to be severely reduced. In Lafayette County, farmers were expected to experience 35 to 40% damage to corn, 50% to damage to soybeans, and 35% damage to the hay crop. In general, there was no 3rd hay drop which is normally harvested in August. In addition, some farmers by late August chopped corn for silage much earlier than normal; and some chopped soybeans for silage as well - a very rare occurrence. Crop damage may reach into the millions of dollars once the harvest is completed.

Many locations received less than 1.00 inches of rain, and several spots had less than one-half of an inch. Only 0.57 fell at Milwaukee Mitchell Field (Milwaukee Co.) during August, and during the period of August 9-24 no measurable rain was recorded at this location. For the period of Jan 1, 2003 through August 31, 2003, only 13.17 inches of precipitation was recorded at Mitchell Field, or 10.97 inches below normal. The month of May, 2003, was the only month at Mitchell Field with above normal rainfall for 2003 through the end of August, 2003. Things weren't much better in the Madison (Dane Co.) area, where only 0.87 inch of rain fell for the month at Truax Field. Both the Milwaukee and Madison August monthly rainfall totals were 3.46 inches below normal. The hottest day of the 2003 summer for Milwaukee occurred on August 21st when 96 degrees was recorded. Madison topped out at 94 on the 26th. Milwaukee experienced 6 days during the month with maximum temperatures of 90 or higher, while Madison came in with 7 days. Milwaukee's average August monthly temperature was 73.3 degrees, or 2.7 above normal, while Madison averaged 71.9 degrees which was 2.8 above normal. Looking back into July, 2003, the dry pattern set in on July 16th. Thereafter, very little rain occurred. The 3-month summer period of June-July-August 2003 was the driest in 3 decades in West Bend (Washington Co.), where only 5.11 inches fell (7.82 inches below normal). Similar conditions were experienced throughout southern Wisconsin. This drought continued into September, 2003.



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WISCONSIN, Southeast

Green County									
Brodhead	01	0113CST			0	0			Hail(1.00)
Rock County									
4 S Edgerton to 4 SE Edgerton	01	0132CST			0	0	50K		Hail(0.02)
Dane County									
4.5 NW Rockdale	01	0150CST			0	0			Hail(1.25)
Rock County									
4 NE Milton	01	0155CST			0	0			Hail(1.00)
Waukesha County									
Merton to Menomonee Falls	01	0248CST 0310CST			0	0			Thunderstorm Wind (EG56)
Washington County									
7 S Hartford to Germantown	01	0255CST 0315CST			0	0	10K		Thunderstorm Wind (EG52)
Waukesha County									
3.6 NE Merton	01	0255CST			0	0	25K		Hail(1.00)
Ozaukee County									
Mequon	01	0300CST			0	0	15K		Hail(1.00)
Ozaukee County									
Newburg to Port Washington	01	0300CST 0315CST			0	0			Thunderstorm Wind (EG56)
Washington County									
2 NNW West Bend	01	0305CST 0310CST			0	0			Thunderstorm Wind (EG52)
Milwaukee County									
Fox Pt	01	0430CST			0	0			Thunderstorm Wind (EG50)

An upper low dropped into Wisconsin, which contributed to the development of thunderstorms across the south-central and southeast parts of the state. Strong thunderstorm winds up to an estimated 56 knots (65 mph) knocked down trees at scattered locations across the area. The powerful winds toppled large trees onto a truck in Richfield (Washington Co.), severely damaging the trailer. Up to 1.75" diameter hail wrecked havoc on several farms south to southeast of Edgerton (Rock Co.), damaging corn, soybean, and tobacco crops. A small tobacco plot on one farm was a "total loss." The damage swath was about 1 mile wide and 4 miles long. Lightning ignited a fire at the Mequon Office Park in Mequon (Ozaukee Co.) which severely damaged an office building, and destroyed a business's furniture and computers. Hail damage to several fruit farms was also noted in Mequon. Roughly 4,500 customers in southeast Wisconsin lost electrical power due to lightning strikes and/or tree debris hitting power lines. The hardest hit locations were Port Washington (Ozaukee Co.), West Bend (Washington Co.), and Menomonee Falls (Waukesha Co.).

Lafayette County									
Darlington	02	1255CST			0	0			Hail(0.75)
Rock County									
Janesville	02	1808CST			0	0			Hail(0.75)
Columbia County									
1 E Wisconsin Dells	02	1825CST			0	0			Hail(0.88)
Columbia County									
Cambria	02	1935CST			0	0			Hail(0.75)
Dodge County									
4 S Randolph	02	2025CST			0	0			Hail(0.75)

Hail reached up to 0.88" in diameter at Wisconsin Dells (Sauk Co.).



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<u>WISCONSIN, Southeast</u>									
Sheboygan County 2 NW Plymouth	03	1223CST			0	0			Funnel Cloud
Milwaukee County Greenfield	03	1245CST			0	0	10K		Lightning
Racine County Union Grove	03	1300CST			0	0			Hail(0.75)
Washington County West Bend	03	1300CST 1430CST			0	0			Heavy Rain
Washington County West Bend	03	1314CST			0	0			Thunderstorm Wind (EG52)
Racine County Union Grove	03	1315CST			0	0			Heavy Rain
Washington County West Bend	03	1330CST			0	0			Hail(0.75)
Washington County 1.4 NW Wayne	03	1346CST			0	0			Hail(0.75)
Jefferson County Waterloo to 7 SE Waterloo	03	1400CST 1530CST			0	0			Heavy Rain
Dane County East Bristol	03	1425CST 1427CST			0	0			Hail(0.75)
Washington County 7.5 S Hartford	03	1426CST			0	0			Hail(1.00)
Columbia County 10 WSW Columbus	03	1428CST 1435CST			0	0			Hail(0.75)
Dane County East Bristol	03	1430CST 1445CST			0	0		10K	Hail(0.75)
Dodge County 2 S Waupun	03	1430CST			0	0	5K		Thunderstorm Wind (EG52)
Jefferson County 3 SE Ft Atkinson	03	1452CST			0	0			Hail(0.75)
Dodge County Burnett	03	1458CST			0	0			Hail(0.75)
Rock County 4 E Milton to 4 E Emerald Grove	03	1600CST			0	0		25K	Hail(1.00)
Green County Monticello	03	1747CST			0	0			Hail(0.75)

Remnants of the upper level low-pressure system that passed through the first of the month brought a secondary surface wave into the southeast part of the state, sparking the development of thunderstorms, some of which produced severe weather. Hail struck several cities throughout the southeast part of the state, and reached up to 1.00" in diameter in Merton (Waukesha Co). East of Milton (Rock Co.) the hail covered the ground while damaging some crops. Heavy rains of 2" to 4" fell across parts of Dodge, Washington, Jefferson, Racine, Kenosha, and Milwaukee counties leading to problems with ponding water or urban-type flooding. Water depths on roads in West Bend reached 3 feet, resulting in stalled cars. Some large trees were downed by strong thunderstorm winds that reached up to an estimated 52 knots (60 mph) in scattered locations. Lightning struck a garage and started a fire in Greenfield (Waukesha Co.), leaving approximately \$5K in damage, primarily to the SUV parked inside.



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WISCONSIN, Southeast

Iowa County									
3 NE Edmund	20	1820CST			0	0			Thunderstorm Wind (EG56)
Sauk County									
2.5 SSW Lake Delton	20	1920CST			0	0			Thunderstorm Wind (EG52)
Columbia County									
Wisconsin Dells	20	1930CST			0	0			Thunderstorm Wind (EG52)
Marquette County									
4.8 SE Endeavor to 6 ENE Montello	20	1949CST			0	0			Thunderstorm Wind (MG52)
Green Lake County									
2.1 WSW Marquette	20	2005CST			0	0			Thunderstorm Wind (EG56)

A cold front moving across the south-central part of the state into a moist, unstable airmass triggered thunderstorms the evening of the 20th. Powerful, gusty winds topped out at an estimated 56 knots (65 mph), knocking down trees in the cities of Edmund (Iowa Co.) and Marquette (Green Lake Co.), as well as at Mirror State Park (Sauk Co.) and Wisconsin Dells (Columbia Co.). Damage at these locations consisted of toppled trees and power-lines. Electrical power was out for about 2 hours in Wisconsin Dells

Racine County									
Kansasville	25	1901CST			0	0			Hail(0.75)
Kenosha County									
1.5 S Paris to 1.6 NW Pleasant Prairie	25	1910CST 1916CST			0	0			Hail(1.00)
Up to 1.00" diameter hail fell just south of Paris (Kenosha Co.).									
Sauk County									
Lake Delton	28	1850CST 2000CST			0	0			Heavy Rain
Sauk County									
Lake Delton	28	1850CST			0	0			Thunderstorm Wind (EG50)
Columbia County									
9 E Wisconsin Dells	28	1910CST			0	0			Thunderstorm Wind (EG52)
Marquette County									
3 NE Briggsville	28	1915CST			0	0			Hail(0.75)
Sauk County									
2 WSW Reedsburg to 2 N Rock Spgs	28	1920CST 1930CST			0	0	2K		Thunderstorm Wind (EG56)

Severe weather developed as a surface trough trailing a surface low pushed through the state, and warm, moist air fed into the developing convection. Winds gusted up to 56 knots (65 mph) at Reedsburg (Sauk Co.), knocking down trees, as well as power lines; in one specific case, onto a barn. Scattered hail reports reached up to 0.75" in diameter, and rainfall rates reached 1-2" an hour.