



# National Weather Service

## Storm Data and Unusual Weather Phenomena



January 2001

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

### WISCONSIN, Southeast

**WIZ046-056>058-063>064-069>070**      **Marquette - Sauk - Columbia - Dodge - Dane - Jefferson - Rock - Walworth**

<b>12</b>	<b>0500CST</b>				<b>0</b>	<b>0</b>			<b>Fog</b>
	<b>1100CST</b>								

Dense fog developed during the early morning hours thanks to some snowmelt the day before, light winds, and a cloud cover that broke up. Visibilities were reduced to 1/8 to 1/4 mile. Commuters were forced to drive slowly, but there were still about 2 dozen vehicle accidents. Several schools delayed the start of classes by a couple hours, and many airplane arrivals and departures were delayed.

**WIZ056-062-067>068**      **Sauk - Iowa - Lafayette - Green**

<b>12</b>	<b>1900CST</b>				<b>0</b>	<b>0</b>			<b>Fog</b>
<b>13</b>	<b>0300CST</b>								

Dense fog developed during the evening hours thanks to some snowmelt during the daylight hours, the day before, light winds, and mostly clear skies. Visibilities were reduced to 1/8 to 1/4 mile. Commuters were forced to drive slowly, but there were still about a dozen vehicle accidents.

**WIZ062-067>069**      **Iowa - Lafayette - Green - Rock**

<b>14</b>	<b>1300CST</b>				<b>0</b>	<b>0</b>			<b>Fog</b>
	<b>2100CST</b>								

Dense fog developed during the early afternoon hours thanks to some snowmelt, preceding light rain, and light southeast winds. Visibilities were reduced to 1/8 to 1/4 mile. Commuters were forced to drive slowly, but there were still about a dozen vehicle accidents. Several airplane arrivals and departures were delayed.

**WIZ052-060**      **Sheboygan - Ozaukee**

<b>14</b>	<b>1400CST</b>				<b>0</b>	<b>0</b>			<b>Fog</b>
	<b>2359CST</b>								

Dense fog developed during the afternoon hours thanks to some snowmelt during the day, preceding light rain, and light southeast winds. Visibilities were reduced to 1/8 to 1/4 mile. Commuters were forced to drive slowly, but there were still about a half dozen vehicle accidents.

**WIZ056>059-063>066**      **Sauk - Columbia - Dodge - Washington - Dane - Jefferson - Waukesha - Milwaukee**

<b>14</b>	<b>1700CST</b>				<b>0</b>	<b>0</b>			<b>Fog</b>
	<b>2100CST</b>								

Dense fog developed during the late afternoon hours thanks to some snowmelt, preceding light rain, and light southeast winds. Visibilities were reduced to 1/8 to 1/4 mile. Commuters were forced to drive slowly, but there were still about 2 dozen vehicle accidents. Many airplane arrivals and departures were delayed.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



February 2001

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

#### Racine County

**Burlington to  
Racine**

**09 0428CST 0 0 30K Lightning**

Lightning struck a power substation in Burlington (Racine Co.), and Racine (Racine Co.), resulting in power outages from Burlington east to Racine, as well as across the western one-third of Kenosha County. About 2350 customers lost power for about 5.5 hours.

Synoptically, a strong low pressure moved from the southern Rockies through the southern plains and then through Minnesota on Feb 9th. Ahead of the low, southerly winds pulled warm, moist air into southern Wisconsin, as temperatures maxed out in the 35 to 48 degree range. Thunderstorms and cloud-to-ground lightning were reported across southeastern Wisconsin

**WIZ057>060-063>066-068>072**

**Columbia - Dodge - Washington - Ozaukee - Dane - Jefferson - Waukesha - Milwaukee - Green - Rock - Walworth - Racine - Kenosha**

**09 0600CST 0 0 325K Flood**  
**10 1200CST**

Heavy rains, in some cases, setting new daily records across south-central and southeast Wisconsin, resulted in most rivers reaching or exceeding flood stage. Thunderstorms and cloud-to-ground lightning were reported across the southeastern counties. In addition, the heavy rains and partial snow melt of a 7 to 12 inch snow pack led to widespread flooding of farm fields, road side ditches, and other low spots. Consequently, water covered or flowed across many roads. Backed-up sewers and ice-jamming/damming made the situation worse in Milwaukee and Ozaukee Counties where water backed up into many basements and backyards. For the calendar day of the 9th, Milwaukee Mitchell Field measured 1.09 inches, breaking the old record of .83 inches. Likewise, Madison's Truax Field (Dane Co.) set a new daily record of 1.29 inches. The 2-day total for the 8th and 9th came to 1.75 inches in Madison and 2.33 inches in Milwaukee. In Waterford (Racine Co.), the 2-day total was 2.48 inches.

Commuting times for workers during the morning hours of the 9th were substantially increased and dozens of schools were closed. The heavy rains damaged an electrical substation insulator that caused power failures in Burlington (Racine Co.), Greenfield (Milwaukee Co.), and Memomonee Falls (Waukesha Co.). About 1100 customers were without power for several hours. During the afternoon hours of the 9th, colder air pushed in, changing the rain to freezing rain and then snow. Gusty northwest winds to 30 mph resulted in blowing snow and reduced visibilities. Many icy patches developed on water-covered roads, resulting in at least 400 vehicle accidents. About a dozen people were treated for injuries in area hospitals (indirect injuries).

Mainstream flooding was the worst along the Fox River in Kenosha County, and the Root River Canal near Raymond in Racine County. The Fox River near New Munster (Kenosha Co.) went above its 10 foot flood stage at 0800CST on the 9th and remained above flood stage until 1230CST on Feb 24th. It crested at 11.92 feet at 0500CST on Feb 16th. The Root River Canal near Raymond went above its 9 foot flood stage at 0600CST on the 9th and remained above flood stage until 0300CST on Feb 12th. It crested at 11.11 feet at 1015CST on Feb 10th. Once again, many homes along these rivers had water in their basements as well as backyards, etc.

Synoptically, a strong low pressure moved from the southern Rockies through the southern plains and then through Minnesota on Feb 9th. Ahead of the low, southerly winds pulled warm, moist air into southern Wisconsin, as temperatures maxed out in the 35 to 48 degree range.



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February 2001

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					Killed	Injured	Property	Crops	

### WISCONSIN, Southeast

**WIZ062-067>068**

**Iowa - Lafayette - Green**

24	1900CST	0	0		<b>Fog</b>
25	0200CST				

Moist southeast winds and recent snow melt combined to develop dense fog across south-central Wisconsin. Visibilities were reduced to 1/8 to 1/4 mile, resulting in about a dozen vehicle accidents. On the weather map, a warm front was moving north through northern Illinois.

**WIZ046>047-051>052-  
056>060-063>066-069>072**

**Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Dane - Jefferson  
- Waukesha - Milwaukee - Rock - Walworth - Racine - Kenosha**

24	2130CST	0	0		<b>Fog</b>
25	0200CST				

Moist southeast winds and recent snow melt combined to develop dense fog across south-central and southeast Wisconsin. Visibilities were reduced to 1/8 to 1/4 mile, resulting in about 100 vehicle accidents, and delays in dozens of flight arrivals and departures at airports. On the weather map, a warm front was moving north through northern Illinois.

**WIZ066-068**

**Milwaukee - Green**

25	0800CST 1000CST	0	0	82K	<b>High Wind</b>
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High winds, gusting to around 60 mph out of the southwest, raked Milwaukee and Green Counties. Peak gusts of 60 mph were measured at a couple commercial TV stations in Milwaukee County (and at couple schools in their weather networks). In addition, a peak gust of 58 mph was measured at Milwaukee Mitchell Field. Several large trees and power lines were toppled in Milwaukee County. In Green County, the powerful winds got underneath and lifted the rubber roof of a City of Monticello administrative building. The roof was partially damaged, and several nearby large trees were toppled.

Elsewhere across south-central and southeast Wisconsin, peak wind gusts of 40 to 55 mph were noted during the period of 0500CST through 1000CST. There were numerous reports of small tree branches knocked out of trees. These strong southwest winds were associated with a deep low pressure which moved northeast through Minnesota through northwestern Wisconsin to Lake Superior.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



March 2001

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

**WIZ052-060-066-071>072 Sheboygan - Ozaukee - Milwaukee - Racine - Kenosha**

12	1400CST 1900CST				0	0			Fog
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Dense fog developed near and along the Lake Michigan shoreline and reduced visibilities to 1/4 mile or less. About two dozen vehicle accidents were noted, and several dozen airline flights were delayed at Milwaukee Mitchell Field and other area airports. The dense fog developed just north of an advancing warm front after light rain had moved through

**WIZ046>047-051-056>059-063>065-070 Marquette - Green Lake - Fond Du Lac - Sauk - Columbia - Dodge - Washington - Dane - Jefferson - Waukesha - Walworth**

22	0000CST 1000CST				0	0			Fog
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Dense fog developed over southern Wisconsin and reduced visibilities to 1/4 mile or less. About 3 dozen vehicle accidents were noted, and many airplane flights were delayed or canceled at area airports. The combination of light winds and clear skies triggered the dense fog development. Scattered light precipitation preceded this dense fog event by several hours.

**WIZ062-067>069 Iowa - Lafayette - Green - Rock**

22	0100CST 0900CST				0	0			Fog
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Dense fog developed over southern Wisconsin and reduced visibilities to 1/4 mile or less. About a dozen vehicle accidents were noted, and many airplane flights were delayed or canceled at area airports. The combination of light winds and clear skies triggered the dense fog development. Scattered light precipitation preceded this dense fog event by several hours.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



April 2001

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

#### Ozaukee County

<b>Mequon</b>	<b>05</b>	<b>1500CST</b>			<b>0</b>	<b>3</b>	<b>20K</b>		<b>Lightning</b>
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Lightning struck a home, resulting in major structural damage to the chimney and roof, but there was no fire. Three landscape workers were injured when the lightning bolt split from the chimney and struck them while they were loading their truck

#### WIZ056-062-067

##### Sauk - Iowa - Lafayette

	<b>06</b>	<b>0000CST 0600CST</b>			<b>0</b>	<b>0</b>			<b>Fog</b>
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Dense fog developed overnight...reducing visibilities to 1/8 to 1/4 mile. About a dozen vehicle accidents were reported.

#### Sheboygan County

<b>Greenbush to Howards Grove</b>	<b>07</b>	<b>0128CST 0145CST</b>			<b>0</b>	<b>0</b>	<b>400K</b>		<b>Thunderstorm Wind (G78)</b>
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A severe thunderstorm, packing estimated winds gusts to 78 knots (90 mph), raked the northern part of Sheboygan County. A tree fell on and damaged a home near Greenbush. Near the village of Rhine Center a barn was significantly damaged, and one home sustained major damage as it's roof was ripped off. Another barn north of Plymouth was damaged. In addition, several farm sheds across the northern part of the county were also destroyed. A total of 4 agricultural buildings had minor damage and 4 had major damage. Several road signs were bent, and one car was damaged by bricks which were ripped off a home's chimney. Near Howards Grove a 30 foot long trailer was rolled over. Several homes also sustained minor roof damage. The County of Sheboygan spent about \$50,000 to clear trees and branches from area roads.

#### WIZ046>047-056>059-062>072

##### Marquette - Green Lake - Sauk - Columbia - Dodge - Washington - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha

	<b>07</b>	<b>0200CST 0830CST</b>			<b>0</b>	<b>0</b>			<b>Fog</b>
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Dense fog developed overnight, reducing visibilities to 1/8 to 1/4 mile. About 3 dozen vehicle accidents were reported. Numerous airline flights were delayed or canceled at local airports.

#### WIZ051>052-060

##### Fond Du Lac - Sheboygan - Ozaukee

	<b>07</b>	<b>0630CST 1000CST</b>			<b>0</b>	<b>0</b>			<b>Fog</b>
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Dense fog developed toward daybreak, reducing visibilities to 1/8 to 1/4 mile. Airplane departures and landings were postponed or canceled. About a dozen vehicle accidents were reported.

#### WIZ046>047-051>052-056>060-062>072

##### Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha

	<b>07</b>	<b>1300CST 1800CST</b>			<b>0</b>	<b>1</b>			<b>High Wind (G57)<sup>M</sup></b>
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Widespread gradient high winds raked south-central and southeast Wisconsin for 5 hours. Maximum winds gusts were in the 50 to 57 knot range (58 to 66 mph). There were numerous reports of felled trees and broken tree branches, roof shingles and rain gutters torn from homes, and chain-link fence damage. The strongest sustained winds and gusts occurred mostly between 1400 and 1600CST. The 57 knot (66 mph) maximum gust was observed at the Milwaukee Betty Brinn Museum. A gust of 55 knots (63 mph) was observed by a severe weather spotter near Dousman (Waukesha). About 49,000 customers lost electricity at one time or another.

A tractor-trailer driver on Interstate 90 near Janesville (Rock Co.) was injured when his truck was blown over. The wind gusts capsized a boat east of the Hoan Bridge in the nearshore waters of Lake Michigan, but the occupants were rescued. In the city of Salem (Kenosha Co.), the high winds pushed a dumpster into a parked law enforcement vehicle which resulted in major damage. In the city of Kenosha (Kenosha Co.), the high winds toppled a 50-foot tall antenna onto a home, resulting in roof and rain gutter damage. Grass fires were noted in the counties of Milwaukee, Washington, Columbia, Walworth, Racine, Waukesha, Green, and Rock. At least 400 acres burned in Walworth County.

Synoptically, deep low pressure moved northeast through central Minnesota to northern Wisconsin. Southwest winds at 850 mb (about 5000 feet AGL) were in the 60 to 65 knot range over eastern Iowa into southern Wisconsin. At 500mb (about 18,000 feet



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### WISCONSIN, Southeast

AGL) they were 80 to 90 knots.

#### Green County

2 W New Glarus	08	2130CST			0	0			Hail(0.75)
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#### Rock County

Janesville	08	2200CST			0	0			Hail(0.75)
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Isolated severe thunderstorms generated large hailstones.

#### Sheboygan County

Howards Grove to Random Lake	11	1400CST 1800CST			0	0			Urban/Sml Stream Fld
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Intense rainfall up to 2.10 inches in only 2 hours generated widespread small stream and urban flooding across the eastern half of Sheboygan County. Water depths on low roads ranged from 6 inches to 2 feet. Dozens of motor vehicles stalled or became stranded. Part of State Highway 32 was blocked between 1600 and 1730CST. There were numerous reports of minor basement flooding, but not as damaging as the 1998 flooding, due to mitigation efforts made since that event. In Howards Grove, Pigeon Creek swelled 100 feet out of it's bank to flood nearby fields and backyards. Associated lightning strikes in scattered thunderstorms across south-central and southeast Wisconsin during the afternoon hours left 23,000 customers with electrical power during the afternoon and early evening hours.

#### Rock County

Hanover to Footville	11	1403CST			0	0			Thunderstorm Wind (G70)
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#### Rock County

4 S Evansville to Edgerton	11	1420CST			0	0	300K		Thunderstorm Wind (G60)
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#### Dane County

5 SE Stoughton	11	1440CST			0	0			Thunderstorm Wind (G55)
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Scattered severe thunderstorms with intense wet microbursts visited parts of south-central Wisconsin. Between Hanover and Footville in Rock County, the powerful winds toppled trees and power poles, damaged about a dozen barns and sheds, took a roof of a storage building, and tore some siding off a residential home. Between Evansville and Edgerton (Rock Co.), other storms toppled more trees and power lines, and near Stoughton (Dane Co.), the winds toppled several trees. About 1200 customers were without electricity at one time or another.

#### WIZ056>057

##### Sauk - Columbia

11	1500CST			0	0			Flood
16	1200CST							

Recent heavy rainfalls caused widespread flooding of creeks, streams, and rivers in Sauk County, and the western part of Columbia County. In the city of Rock Springs (Sauk Co.), 1.80 inches of rain fell on April 11th. In nearby Wisconsin Dells (Columbia Co.), 1.21 inches was measured. This rain fell on top of saturated soils. Fencing around the Mirror Lake dam sluiceway was damaged by the high water levels. Mirror Lake is located southwest of Lake Delton in northeastern Sauk County. In addition, boat docks located at the confluence of Dells Creek and the Wisconsin River in Sauk County were completely under water. Clogged storm sewers in the Lake Delton area caused water to back up and flood local roads. The Blackhawk area of Portage also had flooding, which typically occurs when the Wisconsin River at Portage reaches the 18-foot level. The Wisconsin River crested at 18.12 feet in Portage at 0630CST on April 13, 2001, 1.12 feet above flood stage. This crest can be considered as a 5-year flood. It was still around the 18-foot level until April 16th. A couple lowland roads in Portage were temporarily closed on April 11th during the heavy rains.

#### WIZ058>060-064>065-070 Dodge - Washington - Ozaukee - Jefferson - Waukesha - Walworth

11	1830CST 2000CST			0	0			High Wind (G58) <sup>M</sup>
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Gradient high winds raked parts of southeast Wisconsin for a short period of time. However, there were numerous reports of toppled





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## Storm Data and Unusual Weather Phenomena



May 2001

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

<b>Rock County</b>									
1.5 NW Evansville	03	1750CST			0	0			Thunderstorm Wind (G51)
<b>Dane County</b>									
3 S Stoughton	03	1800CST			0	0			Hail(1.00)
<b>Green County</b>									
3 E Dayton	03	1800CST			0	0	100K		Thunderstorm Wind (G51)
<b>Jefferson County</b>									
1.5 NW Palmyra	03	1840CST			0	0			Hail(0.75)

Scattered severe thunderstorms affected a small part of south-central and southeast Wisconsin with damaging straightline winds and large hail. In northeast Green County, the powerful thunderstorm winds blew a barn down. In northwest Rock County near Evansville, large trees were toppled by the thunderstorm winds.

<b>Dane County</b>									
Waunakee	10	0100CST			0	0			Thunderstorm Wind (G50)
<b>Dodge County</b>									
Reeseville to Hustisford	10	0130CST 0150CST			0	0			Thunderstorm Wind (G56)
<b>Washington County</b>									
Hartford	10	0210CST			0	0			Thunderstorm Wind (G56)
<b>Green Lake County</b>									
Green Lake	10	1525CST			0	0			Hail(0.75)

A severe thunderstorm generated powerful winds that knocked many large tree branches down in and around Waunakee (Dane Co.) A thunderstorm pulsed to severe limits and produced a wet microburst that toppled trees and power poles from around Reeseville to Hustisford in Dodge County. Another severe thunderstorm produced powerful winds that leveled trees and power lines in Hartford (Washington Co.).

<b>Dodge County</b>									
1 E Randolph	14	0929CST			0	0			Hail(1.00)
<b>Marquette County</b>									
Westfield	14	0950CST			0	0			Hail(0.75)
<b>Jefferson County</b>									
Johnson Creek	14	0959CST			0	0			Hail(0.88)
<b>Jefferson County</b>									
3 SE Sullivan	14	1021CST			0	0			Hail(1.50)
<b>Racine County</b>									
Burlington	14	1030CST			0	0			Hail(1.50)
<b>Waukesha County</b>									
Eagle	14	1030CST			0	0			Hail(1.00)
<b>Green Lake County</b>									
Princeton	14	1035CST			0	0			Hail(0.75)
<b>Walworth County</b>									
East Troy to East Delavan	14	1045CST			0	0			Hail(0.88)
<b>Green Lake County</b>									
5 SSW Markesan	14	1050CST			0	0			Hail(0.75)
<b>Dodge County</b>									
Beaver Dam	14	1106CST			0	0			Hail(0.88)
<b>Columbia County</b>									
2 NE Friesland	14	1115CST			0	0			Thunderstorm Wind (G52)



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					Killed	Injured	Property	Crops	
<b><u>WISCONSIN, Southeast</u></b>									
<b>Kenosha County</b>									
Silver Lake	14	1119CST			0	0			Hail(1.00)
<b>Dodge County</b>									
Watertown	14	1128CST			0	0	150K		Hail(2.50)
<b>Jefferson County</b>									
Watertown	14	1132CST			0	0	300K		Hail(3.75)
<b>Dodge County</b>									
1 N Alderley	14	1140CST			0	0			Hail(0.75)
<b>Waukesha County</b>									
Oconomowoc to 3 NE Okauchee	14	1143CST 1148CST			0	0			Hail(1.75)
<b>Jefferson County</b>									
2 E Concord	14	1150CST			0	0			Hail(0.75)
<b>Waukesha County</b>									
North Prairie	14	1204CST			0	0			Hail(1.75)
<b>Milwaukee County</b>									
West Allis	14	1210CST			0	0			Hail(0.75)
<b>Waukesha County</b>									
New Berlin	14	1215CST			0	0			Hail(1.00)
<b>Racine County</b>									
Waterford	14	1222CST			0	0	50K		Hail(1.50)
<b>Kenosha County</b>									
2 E Twin Lakes	14	1245CST			0	0			Hail(1.00)
<b>Waukesha County</b>									
Brookfield	14	1250CST			0	0	3K		Lightning
<b>Kenosha County</b>									
Somers	14	1255CST			0	0			Hail(1.00)
<b>Kenosha County</b>									
Kenosha	14	1330CST 1530CST			0	0			Urban/Sml Stream Fld

Several clusters of severe thunderstorms moved southeast through parts of south-central and southeast Wisconsin during the late morning and early afternoon hours. They produced predominately damaging, large hail stones, ranging in diameter from 3/4 inch on up to an incredible 3.75 inches! Most reports indicated that hailstones were in the 1 to 2 inch diameter range, and at many locations the hailstones left the ground white. Isolated wind damage was noted in Columbia County where large trees and some power lines were toppled near Friesland.

The city of Watertown, which straddles the Dodge and Jefferson County line, sustained the worst hail damage. Hail fell for about 10 to 15 minutes, with the largest stones of 2.50 to 3.75 inches falling for about 1 to 2 minutes. One person was injured when the large hail stones landed on their head. Roughly 7500 motor vehicles were damaged - namely broken windows and numerous dents in the sheet metal. It was noted that some of the hood dents looked as if a person had driven their fist into the sheet metal! Seven (7) greenhouses belonging to a city florist received serious glass damage, as well as plant damage. In addition, many skylight windows in residential homes and businesses were shattered. On the north side of Watertown, the large hail stripped bark off trees. Local residents mentioned that they had never seen anything like this hailstorm. The ground was white, and the hail didn't melt completely for several hours.

Many motor vehicles in the Waterford area of western Racine County sustained hail damage. In the city of Brookfield, a moving car was struck by lightning. The driver was unhurt, but the vehicle's electrical system was fried, a rear window was shattered, the two rear tires were left in shreds, and holes 6 inches deep and 3 feet wide were blown in the pavement. Small stream and urban flooding was noted in the city of Kenosha. Pike Creek flowed over its banks in Washington Park. Rainfall totals of 1 to 2 inches in 1 hour were noted across parts of southeast Wisconsin as the storms rolled southeastward.

Synoptically, low pressure moved southeast from the South Dakota-North Dakota border, with a warm front extending southeast through southern Wisconsin to northern Indiana. A strong low-level jet pumped warm, moist, unstable air directly into southern Wisconsin up over the warm front position. Upper level lapse rates became steep as colder air moved in from the northwest. No



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May 2001

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### WISCONSIN, Southeast

thunderstorm activity was noted west of a line from Portage (Columbia Co.) to Waterloo (Jefferson Co.) to Delevan (Walworth Co.).

#### Sheboygan County

2.5 N Waldo	16	0040CST			0	0			Hail(1.00)
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#### Sheboygan County

3 S Sheboygan	16	0100CST			0	0			Hail(0.75)
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#### WIZ052-059>060

#### Sheboygan - Washington - Ozaukee

17		0000CST			0	0			Fog
		0630CST							

Winds off of Lake Michigan pulled moist air inland that led to dense fog formation after several hours of nighttime radiational cooling. Visibilities were zero to 1/8 mile near the shoreline, and 1/8 to 1/4 mile inland. About a dozen vehicle accidents were noted. Local airplane traffic was also delayed until the fog burned off.

#### Columbia County

Rio	21	0735CST			0	0	100K		Lightning
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Lightning struck a 154-year-old church, resulting in a fire that substantially damaged the structure. About one-third of the roof was damaged as well as the inside contents underneath the hole.

#### WIZ052-059>060

#### Sheboygan - Washington - Ozaukee

24		1930CST			0	0			Fog
		0630CST							

Dense fog developed over southeast Wisconsin after light winds off Lake Michigan pulled moist air into the region. Clear skies aided in the nighttime radiational cooling. Visibilities were reduced to 1/8 to 1/4 mile. About a dozen vehicle accidents were noted and local airport traffic was delayed.

#### WIZ065>066-070>072

#### Waukesha - Milwaukee - Walworth - Racine - Kenosha

24		2100CST			0	0			Fog
		0700CST							

Dense fog developed over southeast Wisconsin after light winds off Lake Michigan pulled moist air into the region. Clear skies aided in the nighttime radiational cooling. Visibilities were reduced to 1/8 to 1/4 mile. About a dozen vehicle accidents were noted and local airport traffic was delayed.

#### WIZ058-063>064-068>069 Dodge - Dane - Jefferson - Green - Rock

25		0300CST			0	0			Fog
		0600CST							

Dense fog developed over southeast and south-central Wisconsin after light winds off Lake Michigan pulled moist air into the region. Clear skies aided in the nighttime radiational cooling. Visibilities were reduced to 1/8 to 1/4 mile. About a dozen vehicle accidents were noted and local airport traffic was delayed.

#### WIZ052-060-066-071>072 Sheboygan - Ozaukee - Milwaukee - Racine - Kenosha

25		2030CST			0	0			Fog
		0630CST							

Dense fog developed over southeast Wisconsin after light winds off Lake Michigan pulled moist air into the region. Clear skies aided in the nighttime radiational cooling. Visibilities were reduced to 1/8 to 1/4 mile. About two dozen vehicle accidents were noted and local airport traffic was delayed.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



June 2001

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

**WIZ046>047-056>057-062>063-068**      **Marquette - Green Lake - Sauk - Columbia - Iowa - Dane - Green**

<b>07</b>	<b>1730CST</b>								
<b>08</b>	<b>0100CST</b>				<b>0</b>	<b>0</b>			<b>Fog</b>

Very dense fog developed during the early evening across parts of south-central Wisconsin, but broke up before sunrise the next day. Visibilities were reduced to 1/16 to 1/4 mile. About a dozen vehicle accidents were noted in local newspapers, and several airplane flights were delayed at area airports. The very dense fog was the result of radiational cooling, clear skies, and light and variable winds. Surface dewpoints were in the 50 to 55 degree range.

**Marquette County**

<b>5 W Westfield to Packwaukee</b>	<b>11</b>	<b>1950CST 2010CST</b>							
					<b>0</b>	<b>0</b>	<b>15K</b>		<b>Thunderstorm Wind (G55)<sup>M</sup></b>

**Green Lake County**

<b>2 SSW Marquette</b>	<b>11</b>	<b>2000CST 2001CST</b>	<b>0.2</b>	<b>30</b>					
					<b>0</b>	<b>0</b>	<b>100K</b>		<b>Tornado (F0)</b>

A brief, weak, tornado damaged one home, one barn, and uprooted several trees. This tornado was embedded in a solid line of thunderstorms, and apparently formed on the left side of a pronounced downburst on the leading edge of the line. On the Milwaukee-Sullivan WSR-88D, a mesocyclone and tornado-vortex signature were observed

**Sauk County**

<b>Baraboo to Sauk City</b>	<b>11</b>	<b>2009CST 2030CST</b>							
					<b>0</b>	<b>0</b>	<b>25K</b>		<b>Thunderstorm Wind (G55)</b>

**Fond Du Lac County**

<b>Countywide</b>	<b>11</b>	<b>2010CST 2045CST</b>							
					<b>0</b>	<b>0</b>	<b>50K</b>		<b>Thunderstorm Wind (G55)</b>

**Green Lake County**

<b>3 NE Dalton</b>	<b>11</b>	<b>2010CST</b>							
					<b>0</b>	<b>0</b>	<b>100K</b>		<b>Thunderstorm Wind (G55)</b>

**Columbia County**

<b>Pardeeville</b>	<b>11</b>	<b>2013CST</b>							
					<b>0</b>	<b>0</b>	<b>25K</b>		<b>Thunderstorm Wind (G61)</b>

**Dodge County**

<b>4 N Fox Lake to 4 E Fox Lake</b>	<b>11</b>	<b>2013CST 2025CST</b>	<b>8</b>	<b>75</b>					
					<b>0</b>	<b>0</b>	<b>700K</b>		<b>Tornado (F1)</b>

A tornado spun up 4 miles north of Fox Lake in northwest Dodge County, and moved southeast through the grounds of the Fox Lake State Correctional Institute, before dissipating 4 miles east of Fox Lake. At the Correctional Institute, the tornado bent several fence sections, cut off power, burst two water mains, and smashed windows in the recreation hall. Security guards reported a "lifting" force and "popping ears" as the tornado passed overhead. Northeast and east of Fox Lake, the tornado destroyed 2 barns, severely damaged a third barn, and damaged 1 home, 3 silos, and 2 pole sheds. Although the maximum path width was 75 yards, the average path width was closer to 40 yards.

**Milwaukee County**

<b>Wauwatosa</b>	<b>11</b>	<b>2024CST</b>							
					<b>0</b>	<b>0</b>	<b>25K</b>		<b>Lightning</b>

**Dodge County**

<b>2 E Beaver Dam to 1 NNW Rubicon</b>	<b>11</b>	<b>2025CST 2045CST</b>							
					<b>0</b>	<b>0</b>	<b>200K</b>		<b>Thunderstorm Wind (G70)</b>

**Dane County**

<b>Waunakee</b>	<b>11</b>	<b>2035CST</b>							
					<b>0</b>	<b>0</b>	<b>10K</b>		<b>Thunderstorm Wind (G55)</b>

**Sheboygan County**

<b>Elkhart Lake to Cedar Grove</b>	<b>11</b>	<b>2035CST 2058CST</b>							
					<b>0</b>	<b>0</b>	<b>25K</b>		<b>Thunderstorm Wind (G70)</b>

**Dodge County**

<b>1 NNW Rubicon to 2 ESE Rubicon</b>	<b>11</b>	<b>2045CST 2049CST</b>	<b>2.9</b>	<b>50</b>					
					<b>0</b>	<b>0</b>	<b>25K</b>		<b>Tornado (F0)</b>



# National Weather Service

## Storm Data and Unusual Weather Phenomena



June 2001

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

### WISCONSIN, Southeast

A weak (F0) tornado spun up 1 mile north/northwest of Rubicon in southeast Dodge County, and moved southeast before exiting the county at a point 2 miles east/southeast of Rubicon. While in Dodge County, it pulled down or uprooted many trees. This tornado then moved through Washington County, giving a glancing blow to the city of Hartford. Associated winds were in the 52 to 61 knot range (60 to 70 mph).

#### Washington County

<b>2.2 WNW Hartford to 1.4 SE Hartford</b>	<b>11</b>	<b>2049CST 2056CST</b>	<b>3.4</b>	<b>75</b>	<b>0</b>	<b>0</b>	<b>400K</b>		<b>Tornado (F1)</b>
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This tornado entered Washington County 2.2 miles west/northwest of Hartford, after spinning up just north/northwest of Rubicon in Dodge County. It traveled southeast and intensified to a F1 rating (winds about 78 to 87 knots, or 90 to 100 mph) as it cut across the southwest part of Hartford. This tornado inflicted minor damage on 250 homes, major damage to 5 homes, and minor damage to 3 businesses. Additional tornado-related costs, such as debris removal, protective measures, etc, amounted to \$102,100.

#### Waukesha County

<b>Countywide</b>	<b>11</b>	<b>2050CST 2120CST</b>			<b>0</b>	<b>0</b>	<b>75K</b>		<b>Thunderstorm Wind (G52)<sup>M</sup></b>
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#### Ozaukee County

<b>Countywide</b>	<b>11</b>	<b>2100CST 2115CST</b>			<b>0</b>	<b>0</b>	<b>75K</b>		<b>Thunderstorm Wind (G55)</b>
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#### Milwaukee County

<b>Countywide</b>	<b>11</b>	<b>2110CST 2130CST</b>			<b>0</b>	<b>0</b>	<b>50K</b>		<b>Thunderstorm Wind (G61)<sup>M</sup></b>
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#### Jefferson County

<b>Lake Mills to Ft Atkinson</b>	<b>11</b>	<b>2114CST 2120CST</b>			<b>0</b>	<b>0</b>	<b>30K</b>		<b>Thunderstorm Wind (G56)</b>
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#### Washington County

<b>Richfield to Germantown</b>	<b>11</b>	<b>2116CST 2120CST</b>			<b>0</b>	<b>0</b>	<b>10K</b>		<b>Thunderstorm Wind (G52)</b>
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#### Rock County

<b>Countywide</b>	<b>11</b>	<b>2125CST 2150CST</b>			<b>0</b>	<b>0</b>	<b>50K</b>		<b>Thunderstorm Wind (G52)</b>
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#### Walworth County

<b>East Troy</b>	<b>11</b>	<b>2130CST</b>			<b>0</b>	<b>0</b>	<b>25K</b>		<b>Thunderstorm Wind (G55)</b>
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#### Green County

<b>Albany</b>	<b>11</b>	<b>2134CST</b>			<b>0</b>	<b>0</b>	<b>5K</b>		<b>Thunderstorm Wind (G52)</b>
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#### Kenosha County

<b>Twin Lakes to Bristol</b>	<b>11</b>	<b>2145CST 2200CST</b>			<b>0</b>	<b>0</b>	<b>15K</b>		<b>Thunderstorm Wind (G52)</b>
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#### Racine County

<b>Burlington to Racine</b>	<b>11</b>	<b>2145CST 2200CST</b>			<b>0</b>	<b>0</b>	<b>15K</b>		<b>Thunderstorm Wind (G54)<sup>M</sup></b>
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#### Walworth County

<b>Walworth</b>	<b>11</b>	<b>2150CST</b>			<b>0</b>	<b>0</b>	<b>5K</b>		<b>Thunderstorm Wind (G52)</b>
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A powerful squall line plowed through most of south-central and southeast Wisconsin during the late evening hours of June 11, 2001, resulting in widespread damage to trees, power lines, and power poles. There were many reports of damage to residential homes, businesses, and motor vehicles, caused by falling trees/branches. Maximum wind gusts were in the 64 to 78 knot range (74 to 90 mph) in parts of Sheboygan, Dodge, and Washington counties, and 50 to 63 knots (58 to 73 mph) elsewhere. In addition, three (3) tornadoes formed in a meso low-pressure on the left side of a pronounced down-burst located on the leading edge of the squall line. One of the tornadoes, rated F0, briefly affected the area southwest of the village of Marquette (Green Lake Co.). Later on, the same meso-low-pressure/down-burst couplet generated a F1 tornado that affected the area north and east of Fox Lake (Dodge Co.). The last tornado (F1) spun up near Rubicon (Dodge Co.) and moved southeast into Washington County, giving the city of Waterford a glancing blow. Refer to individual narratives on these 3 tornadoes under the tornado events for June 11th. Significant county reports follow.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



June 2001

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

Marquette County: A tree fell on and damaged a home in Packwaukee. Near Westfield, ten (10) calf pens were destroyed.

Green Lake County: A brief tornado (F0) damaged a home, barn, and several trees about 3 miles southwest of Marquette. In addition, near Dalton, two (2) barns were severely damaged by down-burst winds

Fond du Lac County: a boat in the Fond du Lac harbor sustained wind damage.

Sheboygan County: Hurricane-force winds over-turned a barn four (4) miles north of Beechwood.

Dodge County: A F1 tornado traveled from a point 4 miles north of Fox Lake to 4 miles east of Fox Lake. A tornado spun up near Rubicon and then moved southeast into Washington County just north of State Highway 60. Along its path in Dodge County, only F0 damage was observed. Elsewhere, in the village of Neosho, a residential home was damaged by felled trees. In a rural area near Hustisford, the roof of a home was partially ripped off and several farm outbuildings were damaged

Washington County: The tornado that spun up near Rubicon (Dodge Co.) intensified to a F1 rating as it moved southeast through the southwest part of Hartford, before dissipating southeast of the city. This tornado inflicted wind or tree damage to more than 250 residential homes and business.

Waukesha County: Down-burst winds pushed over a barn near the village of Lannon. Most of the tree and power-line damage was noted in the Oconomowoc to Waukesha area, and in the North Prairie to Eagle area

Milwaukee County: tree/power-line damage across much of county. Several cars sustained damaged from felled trees. Mitchell Field had a measured maximum wind gust of 60 knots (69 mph). Lightning struck a Wauwatosa home, resulting in a roof/attic fire

As the squall line moved through south-central and southeast Wisconsin, heavy rains reduced visibilities to 100-200 feet at some locations. Total rainfall for the event was impressive, and exceeded 2 inches in some spots. West Allis (Milwaukee Co.) registered 2.70 inches, Watertown (Jefferson Co.) and Janesville (Rock Co.) measured 2.64 inches, Madison's Truax Field came in with 1.94 inches, and Milwaukee Mitchell Field recorded 1.75 inches. Most small streams reached near-bankfull stages, and the Fox River at New Munster, in western Kenosha County, eventually exceeded its 10 foot flood stage by 2.25 feet early at 0000CST on June 14, 2001.

The squall line was the tail extension of an intense bow-echo that struck the east-central Wisconsin counties of Waushara, Winnebago, Calumet, and Manitowoc with hurricane-force, down-burst winds. Twenty-four hours earlier, the bow-echo/squall line was a cluster of thunderstorms over eastern Montana. Synoptically, a warm front extended from central Minnesota to southwest Wisconsin to just south of Chicago. Aloft, a 500mb short-wave trough moved east across North Dakota and then moved southeast across Minnesota and Wisconsin. Strong warm-air advection between 850 and 700mb fueled the thunderstorm complex

#### **Iowa County**

Mineral Pt	12	0142CST							Hail(0.75)
<b>Dodge County</b>									
2.5 WNW Danville	12	0312CST			0	0			Hail(1.75)
<b>Green County</b>									
3 E Monroe to 1 E Monroe	12	0430CST			0	0			Thunderstorm Wind (G52)

Isolated, pulse-type, severe thunderstorms popped up during the overnight hours across parts of south-central and southeast Wisconsin. The large hail near Danville (just east of the city of Columbus in Columbia Co.) covered the ground. Several large trees were toppled by powerful wind gusts (estimated at 52 knots, or 60 mph), just east of Monroe in Green County.

#### **Sauk County**

Lake Delton	14	1335CST 1340CST			0	0			Thunderstorm Wind (G52)
<b>Columbia County</b>									
Wisconsin Dells	14	1340CST			0	0			Hail(0.75)
<b>Marquette County</b>									
Montello	14	1350CST			0	0			Thunderstorm Wind (G52)
<b>Columbia County</b>									
4 N Pardeeville	14	1420CST			0	0			Thunderstorm Wind (G52)
<b>Columbia County</b>									
3 W Arlington	14	1450CST			0	0			Thunderstorm Wind (G52)
<b>Green County</b>									
Countywide	14	1450CST 1525CST			0	0			Thunderstorm Wind (G52)
<b>Dane County</b>									
Middleton	14	1458CST			0	0			Funnel Cloud



# National Weather Service

## Storm Data and Unusual Weather Phenomena



June 2001

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

#### Columbia County

1 E Poynette	14	1500CST			0	0	15K		Lightning
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#### Dane County

Madison	14	1500CST			0	0			Thunderstorm Wind (G52)
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#### Dane County

Madison	14	1510CST 1700CST			0	0			Urban/Sml Stream Fld
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#### Lafayette County

Shullsburg	14	1840CST			0	0			Thunderstorm Wind (G52)
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#### Green County

4 SW Monroe	14	1900CST			0	0			Thunderstorm Wind (G52)
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#### Green County

New Glarus	14	1915CST			0	0			Thunderstorm Wind (G52)
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#### Rock County

5 W Janesville	14	1915CST			0	0			Thunderstorm Wind (G52)
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#### Walworth County

2.5 NW Delavan	14	1935CST			0	0			Thunderstorm Wind (G54) <sup>M</sup>
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Scattered short lines or clusters of severe thunderstorms, with large hail and powerful, damaging, straight-line, down-burst winds affected parts of south-central and southeast Wisconsin. There were many reports of toppled large trees. Lightning struck a home east of Poynette, resulting in some fire damage to the roof and attic. Torrential rains accompanied the severe storms. Minor urban and small stream flooding was reported in and near Madison (Dane Co.). Spotters in the Madison area noted that rain totals were in the 1 to 2 inch range in one hour.

Synoptically, a low pressure moved northeast along a cold front that stretched from Iowa through Minnesota. A plume of low-level moisture pushed into southern Wisconsin. Maximum daytime temperatures on the 14th were in the upper 80s to lower 90s, with surface dewpoints in the upper 60s to lower 70s. Training of thunderstorm cells enhanced the rainfall totals over Dane County.

#### Marquette County

Montello	16	1815CST			0	0			Thunderstorm Wind (G56)
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#### Marquette County

5 N Westfield to Neshkoro	16	1820CST 1830CST			0	0			Thunderstorm Wind (G52)
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#### Dodge County

7 W Waupun to Waupun	16	1826CST			0	0			Thunderstorm Wind (G56)
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#### Columbia County

7 ESE Wisconsin Dells to Dekorra	16	1830CST 1840CST			0	0			Thunderstorm Wind (G52)
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#### Green Lake County

1.5 SW Marquette to Green Lake	16	1830CST 1840CST			0	0	10K		Thunderstorm Wind (G52)
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#### Fond Du Lac County

Alto to Waupun	16	1845CST 1850CST			0	0			Thunderstorm Wind (G52)
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#### Dodge County

Beaver Dam	16	1910CST			0	0			Thunderstorm Wind (G52)
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#### Fond Du Lac County

Campbellsport	16	1910CST			0	0			Thunderstorm Wind (G52)
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# National Weather Service

## Storm Data and Unusual Weather Phenomena



June 2001

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

around Fox Lake. Up to 1.80 inches of rain fell in a short period of time in the Baraboo to Lake Delton area of Sauk County, resulting in urban and small stream flooding in that county. Water depths affected roads in northeast Sauk and northwest Dodge Counties where it was reported to be 6 inches to 2 feet deep. Lightning-initiated fires destroyed two barns on separate farms near Mifflan (Iowa Co.).

Synoptically, an upper-level, short-wave trough moved through the Great Lakes region. Instability along the trough was sufficient to allow thunderstorm development. The thunderstorm cells moved southeastward.

#### **Fond Du Lac County**

<b>Fond Du Lac</b>	<b>18</b>	<b>1530CST 1540CST</b>			<b>0</b>	<b>0</b>	<b>25K</b>		<b>Lightning</b>
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Intense, frequent lightning strikes accompanied thunderstorms moving through the city of Fond du Lac. Several power poles and lines were downed by the lightning strikes.

#### **Sheboygan County**

<b>Cedar Grove</b>	<b>30</b>	<b>1600CST</b>			<b>0</b>	<b>0</b>			<b>Thunderstorm Wind (G52)</b>
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#### **Jefferson County**

<b>Waterloo</b>	<b>30</b>	<b>1813CST</b>			<b>0</b>	<b>0</b>			<b>Hail(0.75)</b>
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#### **Jefferson County**

<b>Johnson Creek</b>	<b>30</b>	<b>1845CST</b>			<b>0</b>	<b>0</b>			<b>Thunderstorm Wind (G52)</b>
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#### **Racine County**

<b>2 E Wind Pt</b>	<b>30</b>	<b>1925CST</b>			<b>0</b>	<b>0</b>			<b>Waterspout</b>
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Severe thunderstorms affected parts of southeast Wisconsin with large hail and damaging, straight-line, down-burst winds. In addition, a brief waterspout was noted near Wind Point (Racine Co.). Large trees were toppled by powerful thunderstorm winds in Cedar Grove (Sheboygan Co.), and near Johnson Creek in Jefferson County. Synoptically, thunderstorms fired up along a cold front and pre-frontal trough punching southeast through Wisconsin. Surface dewpoints ahead of the front were in the lower 70s. Maximum daytime temperatures were in the mid to upper 80s. Cell movement was to the east/southeast.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



July 2001

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

#### Lafayette County

5 N Shullsburg      03      1825CST                0      0           50K      Hail(0.75)

#### Dodge County

Mayville to Theresa      03      2040CST  
2045CST                0      0                Thunderstorm Wind (G56)

#### Washington County

2 W Allenton to Allenton      03      2055CST                0      0                Hail(0.75)

Scattered severe thunderstorms affected parts of south-central and southeast Wisconsin during the evening hours of July 3rd. Damaging straight-line winds and large hail were reported. The hail near Shullsburg (Lafayette Co.) damaged some of the corn crop. Two (2) inches of rain accompanied the hail near Shullsburg. Powerful downburst winds (estimated around 65 mph/56 knots/) toppled large trees and power lines in the Mayville to Theresa area of eastern Dodge county. Synoptically, a west-east orientated cold front slid southeast through southern Wisconsin. Air temperatures ahead of the front were 80 to 85 and surface dewpoints were in the mid to upper 60s. There was distinct veering of the winds across the front. In addition, about 50 knots of deep layer wind shear and a CAPE of 1400 existed. The wet bulb zero height was 9500 AGL.

#### Jefferson County

1 E Lake Mills      17      0747CST                0      0      25K      Lightning  
Lightning struck a home, resulting in a fire which damaged the roof and attic

#### WIZ052-060-066-071>072 Sheboygan - Ozaukee - Milwaukee - Racine - Kenosha

18      0000CST  
0600CST                0      0                Fog

Dense fog developed overnight, lowering visibilities to 1/8 to 1/4 mile. Dozens of airplane flights at local airports were delayed. About a dozen vehicle accidents were noted in area newspapers.

#### WIZ052-060-066-071>072 Sheboygan - Ozaukee - Milwaukee - Racine - Kenosha

18      2200CST  
19      0700CST                0      0                Fog

Dense fog developed overnight once again. Visibilities were reduced to 1/8 to 1/4 mile. Dozens of airplane flights were delayed, and there were about a dozen vehicle accidents.

#### WIZ051-058>059-064>065-070

#### Fond Du Lac - Dodge - Washington - Jefferson - Waukesha - Walworth

19      0200CST  
0700CST                0      0                Fog

Dense fog developed overnight once again. Visibilities were reduced to 1/8 to 1/4 mile. About a dozen vehicle accidents were noted in local newspapers.

#### WIZ059-064>066-068>072 Washington - Jefferson - Waukesha - Milwaukee - Green - Rock - Walworth - Racine - Kenosha

21      0000CST                2      0           Excessive Heat  
22      1500CST

The first, significant round of excessive heat for the summer of 2001 affected parts of south-central and southeast Wisconsin. Medical examiner reports indicated that two people died from heat exposure in Milwaukee County - a female (52), and a male (34). Their deaths occurred at the end of this heat event, or a couple days later. At least eighty (80) people who attended the Country Thunder music festival in western Kenosha County were medically treated on-site for the affects of heat exhaustion. Across the remainder of southeast Wisconsin, dozens of other people were treated or heat exhaustion at hospitals. Overnight heat index values were in the 80 to 90 range, and reached 105 to 110 for several hours during the afternoon hours on the 21st and 22nd. Maximum air temperatures were in the lower 90s while surface dewpoints were in the lower to mid 70s. Overnight minimum air temperatures were in the lower to mid 70s. Although the core period of the excessive heat was on the 21st and 22nd, very warm and muggy conditions actually started on the 20th and persisted through the 23rd. Milwaukee's maximum and minimum air temperatures at Mitchell Field for this period were: 87/71, 90/76, 90/71, 91/74. While excessive heat conditions were observed well inland, those locations near the Lake Michigan shoreline were slightly cooler. The long duration of this heat wave was a contributing factor toward the 2 deaths. M34PH, F52PH



# National Weather Service

## Storm Data and Unusual Weather Phenomena



July 2001

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

### WISCONSIN, Southeast

#### Washington County

Hartford to Germantown	22	1340CST 1405CST			0	0	30K	Thunderstorm Wind (G52)
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#### Ozaukee County

2 W Cedarburg to Mequon	22	1405CST 1415CST			0	0	30K	Thunderstorm Wind (G52)
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#### Walworth County

2 E Zenda	22	1435CST			0	0		Thunderstorm Wind (G52)
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#### Kenosha County

Twin Lakes	22	1440CST			0	0		Thunderstorm Wind (G52)
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#### Kenosha County

Twin Lakes	22	1443CST			0	4		Lightning
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Scattered severe thunderstorms rumbled through southeast Wisconsin during a very warm and muggy afternoon. Powerful, downburst, straight-line winds (estimated around 60 mph /52 knots/) accompanied the storms, resulting in toppled trees, power lines, and power poles. In addition, 4 people were injured when lightning struck tent support poles at the Country Thunder music festival near Twin Lakes in western Kenosha County. They were holding the poles as they waited out the powerful thunderstorm winds affecting that area. About 11,200 customers across the southern parts of Washington and Ozaukee Counties lost electrical power due to the toppled trees and power lines.

WIZ051>052-058>060-064>066-069>072

Fond Du Lac - Sheboygan - Dodge - Washington - Ozaukee - Jefferson - Waukesha - Milwaukee - Rock - Walworth - Racine - Kenosha

30		0300CST 0700CST			0	0		Fog
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Dense fog developed overnight, reducing visibilities to 1/8 to 1/4 mile. Dozens of airplane flights were delayed. About a dozen vehicle accidents were noted in local newspapers. As with many other dense fog episodes in southern Wisconsin, rain (showers and thunderstorms) fell the day before. Light east-northeast surface airflow combined with clear skies to allow for the dense fog development.

WIZ046>047-051>052-056>059-062>065-067>070-072

Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Iowa - Dane - Jefferson - Waukesha - Lafayette - Green - Rock - Walworth - Kenosha

31		1100CST 2359CST			0	0		Excessive Heat
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This was the second period of excessive heat, during the summer of 2001, to affect parts of south-central and southeast Wisconsin. Afternoon heat index values on the 31st reached 105 to 110 for several hours, while they stayed in the 85 to 100 range during the evening hours. maximum afternoon air temperatures were in the lower to mid 90s, with surface dewpoints in the lower to mid 70s. Although official numbers are not available, several people were probably treated at hospitals due to the affects of heat exhaustion. For July 31, 2001, Madison (Dane Co.) recorded a maximum air temperature of 95, tying the daily record set back in 1988. Ft. Atkinson (Jefferson Co.) and Wisconsin Dells (Columbia Co.) both registered a high of 97. The 31st was the hottest day, to date, for the summer of 2001. Several utility companies reported new daily record demands for electricity, and public swimming pools reported large numbers of swimmers. The excessive heat on the 31st persisted to about 9pm on August 1, 2001.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



August 2001

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

#### Dane County

<b>Madison</b>	<b>01</b>	<b>2300CST</b>			<b>0</b>	<b>0</b>	<b>25K</b>		<b>Lightning</b>
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Lightning struck the middle turret on the south side of the historic 1894 Red Gym on the UW-Madison campus (Dane Co). The outerbrick in a 4' by 6' area was blown out, much of the inner brick crumbled, and a hole was knocked out in a ventilation duct, for a total of \$25,000 in damage.

#### Columbia County

<b>Countywide</b>	<b>02</b>	<b>0030CST 0700CST</b>			<b>0</b>	<b>0</b>			<b>Urban/Sml Stream Fld</b>
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Two rounds of thunderstorms with very heavy rains pounded south-central Wisconsin, the first one during the evening hours of August 1st, and the second round during the pre-dawn hours of August 2nd, resulting in widespread, urban/small stream flooding over the western part of the county. About 4 to 5 inches of rain fell across the western part of Columbia County during the same time period. Luckily, this rain came in two rounds separated by about 4 to 6 hours. Water reached the bumpers of cars in the Wisconsin Dells area.

#### Iowa County

<b>Countywide</b>	<b>02</b>	<b>0030CST 0700CST</b>			<b>0</b>	<b>0</b>			<b>Urban/Sml Stream Fld</b>
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Two rounds of thunderstorms with very heavy rains pounded south-central Wisconsin, the first one during the evening hours of August 1st, and the second round during the pre-dawn hours of August 2nd, resulting in widespread, countywide urban/small stream flooding. In northwest Iowa County, water covered Highway 14 west of County HWY K, restricting traffic to only one lane for several hours. WSR-88D Doppler radar estimates and unofficial rainfall reports strongly suggest that around 10 inches of rain fell over the northeast corner of Iowa County in the 24 hours ending around 0700CST on August 2nd. Luckily, this rain came in two rounds separated by about 4 to 6 hours.

#### Dane County

<b>Mazomanie</b>	<b>02</b>	<b>0100CST</b>			<b>0</b>	<b>0</b>	<b>30K</b>		<b>Lightning</b>
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A home in Mazomanie suffered roof damage due to a lightning fire.

#### Dane County

<b>Waunakee</b>	<b>02</b>	<b>0140CST</b>			<b>0</b>	<b>0</b>	<b>40K</b>		<b>Lightning</b>
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A home in Waunakee sustained heavy fire damage due to a lightning strike.

#### Dane County

<b>3 SW Sun Prairie</b>	<b>02</b>	<b>0145CST</b>			<b>0</b>	<b>0</b>	<b>10K</b>		<b>Lightning</b>
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A home about 3 miles southwest of Sun Prairie sustained fire damage to its roof and attic.

#### Dane County

<b>Madison</b>	<b>02</b>	<b>0200CST</b>			<b>0</b>	<b>0</b>	<b>20K</b>		<b>Lightning</b>
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The Trinity Church in Madison sustained damage when it's steeple collapsed due to a lightning fire.

#### Rock County

<b>Countywide</b>	<b>02</b>	<b>0200CST 0700CST</b>			<b>0</b>	<b>0</b>			<b>Urban/Sml Stream Fld</b>
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Two rounds of thunderstorms with very heavy rains pounded south-central Wisconsin, the first one during the evening hours of August 1st, and the second round during the pre-dawn hours of August 2nd, resulting in widespread, countywide urban/small stream flooding. In Rock County, water entered many basements between Janesville and Edgerton where 3.28 to 4.56 inches of rain fell. Luckily, this rain came in two rounds separated by about 4 to 6 hours.

#### Dane County

<b>Countywide</b>	<b>02</b>	<b>0300CST 0630CST</b>			<b>0</b>	<b>0</b>	<b>250K</b>		<b>Flash Flood</b>
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# National Weather Service

## Storm Data and Unusual Weather Phenomena



August 2001

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

Two rounds of thunderstorms with very heavy rains pounded south-central Wisconsin, the first one during the evening hours of August 1st, and the second round during the pre-dawn hours of August 2nd, resulting in flooding or flash flooding in Dane, Iowa, and Sauk Counties. The worst flash flooding occurred in the Black Earth Creek drainage basin of northwest Dane County, especially in the cities of Black Earth and Mazomanie, where at least 10,000 sand-bags were used. Flash flooding also occurred in scattered locations between the village of Roxbury and Middleton. Many roads had gravel shoulder washouts were noted, and numerous homes sustained water damage after water levels reached 2 to 4 feet in depth. Many roads were blocked by fast-flowing water up to 2 to 3 feet deep in spots. The heavy rains damaged the ceiling and light fixtures in Madison Middle School. Also in Madison, a building, containing four radio stations, suffered flood damage to it's contents after water reached a depth of 2.5 feet on the lowest floor. Radio broadcasts were interrupted for a couple hours. Several UW-Madison campus buildings and several other Madison school buildings had water reported in their basements. In DeForest, a construction site was damaged due to a mudslide onto an adjacent road. A 3-mile stretch of a trail between Verona and Fitchburg suffered washout damage. Northwest of Mt. Horeb, a man was saved by a farm couple, after he lost control of his vehicle on a water-covered road near Bohn Creek, and flipped over into the creek. Much tree litter was noted on roads and lawns in and around the city of Madison. Twenty-four hour rainfall amounts in Dane County, ending around 0700CST on August 2nd, ranged from around 3 inches in the eastern part to 9 to over 11 inches in Black Earth. It is unknown how much more than 11 inches fell in Black Earth, since that rain gage over-flowed! In the first round of heavy rains, Mazomanie recorded 2 inches within 20 minutes! Other 24-hour totals in Dane County include 8.7 inches in Mazomanie, 7.89 inches near Waunakee, 7.53 inches west of Middleton, 5.47 inches in McFarland, 5.35 inches in Blue Mounds, and 4 to 6 inches across the city of Madison. For the calendar day of August 2nd, Madison's Truax Field set a new daily rainfall record of 3.40 inches, breaking the old record of .71 inches set back in 1963.

#### Sauk County Countywide

<b>02</b>	<b>0430CST 0700CST</b>	<b>0</b>	<b>0</b>	<b>150K</b>	<b>Flash Flood</b>
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Two rounds of thunderstorms with very heavy rains pounded south-central Wisconsin, the first one during the evening hours of August 1st, and the second round during the pre-dawn hours of August 2nd, resulting in flooding or flash flooding in Dane, Iowa, and Sauk Counties. Flash flooding occurred in scattered locations across Sauk County, but the worst was between Baraboo and Devil's Lake State Park. A road in Baraboo washed out, allowing a semi-trailer tractor to sink into the mud. Washouts of camp sites occurred in the State Park area, and many other roads across the county had gravel shoulder washouts. In Sauk County, Reedsburg measured 6.07 inches, and 5.96 inches fell in Prairie du Sac.

#### WIZ056-058>060-062- 064>072

Sauk - Dodge - Washington - Ozaukee - Iowa - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha

<b>03</b>	<b>0000CST 0800CST</b>	<b>0</b>	<b>0</b>	<b>Fog</b>
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Dense fog developed overnight and reduced visibilities to zero to 1/4 mile. At least a couple dozen vehicle accidents were noted in newspapers, and many airplane flights were delayed or cancelled. The dense fog was the result of clear skies, a light northeast wind, and evaporation of moisture from rains on August 2nd.

#### WIZ046>047-051>052- 056>060-062>072

Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha

<b>06 09</b>	<b>1100CST 2200CST</b>	<b>4</b>	<b>0</b>	<b>Excessive Heat</b>
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# National Weather Service

## Storm Data and Unusual Weather Phenomena



August 2001

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

This excessive heat episode was the third, and longest, of the 2001 summer in south-central and southeast Wisconsin. Daytime heat indices reached 105 to 110, and stayed above 80 at night. Maximum air temperatures were in the lower to mid 90s, while dewpoints were in the mid 70s. Milwaukee Mitchell Field (Milwaukee Co.) had maximum air temperatures of 92, 94, 95, and 95, for the 6th, 7th, 8th, and 9th of August, while Madison had 90, 93, 90, and 91, respectively. The 95's in Milwaukee were the highest readings for the summer of 2001. On the 9th, the city of Waukesha (Waukesha Co.) had 97, while Kenosha (Kenosha Co.) came in with 96. Two fatalities were reported in Milwaukee County - a male, age 67, and a female, age 75. Both were found indoors. The Kenosha County medical examiner reported two heat-related fatalities - a male, age 56 (indoors), and a female, age 8 (outdoors), who also suffered from asthma. Newspaper accounts indicated that dozens of people were treated at hospitals across south-central and southeast Wisconsin for heat-related illnesses (not true "injuries"). For example, a golfer (male, age 46) in Kenosha County, who collapsed and was taken to a hospital in critical condition, ultimately survived. Their body temperature had reached 108 degrees! Attendance was sharply down at various county fairs, at the State Fair in West Allis (Milwaukee Co.), at beaches along the Lake Michigan shoreline, and at local municipal pools. In addition, several senior citizen events were cancelled due to the heat. Most commercial outlets reported that their supply of air conditioners were sold out. Milwaukee area hospitals reported about a dozen cases of severe asthma on average each day during this heat wave, about twice the normal number per day during summer. Ozone levels reached dangerous values, prompting the state DNR to issue Ozone Action Days for southeastern Wisconsin. Electrical companies reported near-record or record daily electrical usage. M67PH, F75PH, M56PH, F8OU

#### **Sheboygan County**

<b>2 S Waldo</b>	09	1605CST							<b>Thunderstorm Wind (G52)</b>
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#### **Dane County**

<b>Madison</b>	09	1625CST 1630CST							<b>Thunderstorm Wind (G56)</b>
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#### **Rock County**

<b>Orfordville</b>	09	1630CST				25K			<b>Thunderstorm Wind (G52)</b>
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#### **Washington County**

<b>1 NW Hartford</b>	09	1630CST 1815CST							<b>Thunderstorm Wind (G52)</b>
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#### **Waukesha County**

<b>Waukesha</b>	09	1640CST							<b>Thunderstorm Wind (G52)</b>
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#### **Milwaukee County**

<b>West Allis to Milwaukee</b>	09	1650CST 1715CST				1	75K		<b>Thunderstorm Wind (G52)</b>
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#### **Milwaukee County**

<b>Milwaukee</b>	09	1700CST 1830CST							<b>Urban/Sml Stream fld</b>
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#### **Walworth County**

<b>Richmond</b>	09	1728CST							<b>Thunderstorm Wind (G52)</b>
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#### **Walworth County**

<b>3 E Spring Prairie</b>	09	1755CST							<b>Thunderstorm Wind (G52)</b>
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#### **Racine County**

<b>Burlington to Racine</b>	09	1800CST 1810CST							<b>Thunderstorm Wind (G52)</b>
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#### **Kenosha County**

<b>Kenosha</b>	09	1815CST				0	0	25K	<b>Thunderstorm Wind (G52)</b>
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Scattered clusters of thunderstorms, some severe, moved east-southeast through south-central and southeast Wisconsin during the late afternoon and early evening hours. They eventually merged into a line of storms as they moved into Racine and Kenosha Counties. Damaging straight-line winds, gusting to an estimated 50 to 56 knots (58 to 65 mph), toppled large trees and/or power lines and poles near Waldo (Sheboygan Co.), east of Spring Prairie (Walworth Co.), near Richmond (Walworth Co.), in the Burlington to Racine area (Racine Co.), around the city of Kenosha (Kenosha Co.), just northwest of Hartford (Washington Co.), from West Allis into Milwaukee (Milwaukee Co.), from the UW-Madison campus to the Capital Square in Madison (Dane Co.), in the city of Waukesha (Waukesha Co.), and in/near Orfordville (Rock Co.). One person was injured at the State Fair Park in West Allis when the powerful thunderstorm winds blew a fence onto that person's head. Two homes and several vehicles in the city of Milwaukee sustained tree damage. In Orfordville, two buildings were damaged by toppled trees. Utility companies reported that nearly 40,000 customers lost electrical power as the storms passed through, 19,000 of them in Milwaukee County alone. Very heavy rains of 1 to 2 inches accompanied the storms, resulting in urban flooding in the city of Milwaukee. Manhole covers popped in the city and there were reports of 6 inches of water covering some of the city's streets.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



August 2001

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

#### Sheboygan County

Elkhart Lake to Cedar Grove	12	1910CST 1930CST			0	0	25K		Thunderstorm Wind (G56)
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#### Sheboygan County

Sheboygan	12	1920CST 2030CST			0	0			Urban/Sml Stream Fld
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A short line of severe thunderstorms rolled southeast through the county of Sheboygan. Accompanying powerful downburst winds, estimated to be 50 to 56 knots (58 to 65 mph), toppled large trees across most of the county, especially in the area from Elkhart Lake to Cedar Grove. Some power lines sustained tree damage, mainly in the Plymouth area, and also in the city of Sheboygan. Brief heavy rains of 1 to 1.5 inches resulted in minor urban flooding in the city of Sheboygan, where 4 inch water depths on some roads were reported, and water got into some buildings.

#### Green Lake County

Kingston to Markesan	18	1500CST 1700CST			0	0			Urban/Sml Stream Fld
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#### Rock County

Milton	18	1630CST 1800CST			0	0			Urban/Sml Stream Fld
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#### Dodge County

3 ESE Beaver Dam	18	1655CST			0	0			Hail(1.00)
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Slow moving thunderstorms dumped heavy rains of 1.5 to 2.5 inches within two hours, resulting in scattered urban and small stream flooding. Ponding of water on roads was reported across southern Green Lake County, as well as around Milton (Rock Co.). Isolated large hail also accompanied the storms. There were several reports of non-damaging hail up to 1/2 inch in diameter in Milton, Beaver Dam (Dodge Co.), and southeast Marquette County. Synoptically, an upper-level low pressure moved southeast from Minneapolis to Dubuque to Chicago, putting southern Wisconsin on the north side where -15 C temperatures were found at 500 mb. Surface air temperatures were in the mid to upper 70s and surface dewpoints were in the lower 60s.

#### Fond Du Lac County

Waupun	22	0255CST			0	0	20K		Lightning
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#### Fond Du Lac County

Waupun	22	0255CST			0	0			Thunderstorm Wind (G52)
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#### Washington County

West Bend	22	0328CST			0	0			Thunderstorm Wind (G52)
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#### Washington County

West Bend	22	0335CST			0	0	17K		Lightning
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#### Dodge County

Farmersville	22	0345CST			0	0	75K		Lightning
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#### Dodge County

Juneau to Mayville	22	0345CST 0400CST			0	0			Thunderstorm Wind (G52)
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#### Dodge County

Juneau	22	0345CST 0600CST			0	0			Urban/Sml Stream Fld
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#### Ozaukee County

Port Washington	22	0350CST			0	0	15K		Lightning
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#### Washington County

West Bend	22	0400CST 0600CST			0	0			Urban/Sml Stream Fld
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Scattered, early morning severe thunderstorms, packing damaging downburst winds, and many lightning strikes, moved through



# National Weather Service

## Storm Data and Unusual Weather Phenomena



August 2001

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

### WISCONSIN, Southeast

southeast Wisconsin. Estimated winds gusts around 52 knots (60 mph) toppled large trees or broke off many large tree limbs in the Waupun area (Fond du Lac), the central part of Dodge County from Juneau to Mayville, and in the West Bend area (Washington Co.). Lightning strikes damaged 5 power stations in the Waupun area, and started a fire that completely burned a barn near Farmersville (Dodge Co.). Brief, heavy rains accompanied the storms, resulting in urban/small stream flooding in and around Juneau (Dodge Co.). The Emergency Management of Dodge County reported 2.50 inches of rain at Juneau with many area roads under 1/2 to 1 foot of water. Visibility during the heavy rains was as low as 50 yards. In addition, small hail (1/4 inch in diameter) was reported around Juneau, as well as in Milwaukee County. Several lightning strikes around West Bend (Washington Co.) and Port Washington (Ozaukee Co.), knocked out power lines and/or transformers, resulting in 2000 customers in those cities losing electrical power. One lightning bolt struck a West Bend home, starting a self-extinguishing fire that left about \$1200 in damage. In addition, 2.5 to 3.0 inches of rain fell in the West Bend area during the pre-dawn hours, leading to urban flooding in that city. West Bend residents said the streets looked like "waterfalls."

#### **Milwaukee County**

<b>Milwaukee</b>	22	1230CST 1400CST			0	0			<b>Urban/Sml Stream Fld</b>
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Thunderstorms dumped around an inch of rain in 30 minutes, resulting in urban flooding in the city of Milwaukee. Law enforcement officials reported that water depths reached 2 feet on Interstate 94 westbound at 26th Street. No damage was noted, but interstate traffic was backed up for a couple hours.

#### **WIZ062-067>069**

<b>Iowa - Lafayette - Green - Rock</b>	22	2100CST			0	0			<b>Fog</b>
	23	0800CST							

Very dense fog developed overnight, reducing visibilities to between zero and 1/4 mile. Several vehicle accidents were noted. The dense fog was the result of evaporation of rain which fell on August 22nd, weak north-northeast surface winds, and partly cloudy skies.

#### **WIZ046>047-051>052-056>059-063>065-070**

<b>Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Dane - Jefferson - Waukesha - Walworth</b>	22	2200CST			0	0			<b>Fog</b>
	23	0800CST							

Very dense fog developed overnight, reducing visibilities to between zero and 1/4 mile. Several vehicle accidents were noted. One in northwest Jefferson County resulted in 1 death and 3 injuries (all indirectly-related). An accident on Interstate 90/94 near Highway 19 involving three semi-tractor trailers resulted in 2 injuries (indirectly-related). Another accident just northeast of Madison involved a car and train. The driver of the car was killed (indirectly-related to fog). Many airplane flights were delayed. The dense fog was the result of evaporation of rain which fell on August 22nd, weak north-northeast surface winds, and partly cloudy skies.

#### **WIZ060-066-071>072**

<b>Ozaukee - Milwaukee - Racine - Kenosha</b>	23	0100CST 0800CST			0	0			<b>Fog</b>
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Very dense fog developed overnight, reducing visibilities to between zero and 1/4 mile. Several vehicle accidents were noted, and many airplane flights were delayed. The dense fog was the result of evaporation of rain which fell on August 22nd, weak north-northeast surface winds, and partly cloudy skies.

#### **Kenosha County**

<b>3.5 NE Paris to 3.7 NE Paris</b>	25	1640CST 1641CST	0.2	30	0	0	10K		<b>Tornado (F0)</b>
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# National Weather Service

## Storm Data and Unusual Weather Phenomena



August 2001

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

A weak tornado spun up in north-central Kenosha County, about 3.5 miles northeast of Paris. It pushed over an old shed, a TV antenna, and uprooted several trees on a property located on the south side of County Hwy KR. Based on damage, wind speeds were probably in the 70 to 78 knot range (80 to 90 mph). This tornado exited Kenosha County about 3.7 miles northeast of Paris, or .8 miles east of the intersection of KR and D, and entered Racine County about 2.8 miles east-southeast of Union Grove. It proceeded northeast toward the intersection of Interstate 94 and Highway 11, and eventually dissipated 1.8 miles northwest of Sturtevant. Synoptically, a 500 mb circulation center moved northeast through southeast Wisconsin at the time of the tornado. Scattered thunderstorms associated with the low moved northeast at about 30 mph. Maximum air temperatures during the afternoon were in the lower 80s with surface dewpoints in the mid to upper 60s.

**Racine County**

<b>2.8 ESE Union Grove to 1.8 NW Sturtevant</b>	<b>25</b>	<b>1641CST 1650CST</b>	<b>4.3</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>25K</b>	<b>10K</b>	<b>Tornado (F1)</b>
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This weak tornado spun up in north-central Kenosha County, about 3.5 miles northeast of Paris. It exited Kenosha County about 3.7 miles northeast of Paris, or .8 miles east of the intersection of KR and D, and entered Racine County about 2.8 miles east-southeast of Union Grove. It proceeded northeast toward the intersection of Interstate 94 and Highway 11, and eventually dissipated 1.8 miles northwest of Sturtevant. Luckily, the tornado circulation wasn't at ground level the entire time, and traveled part of the time over some swamp land, otherwise there would have been more damage. In Racine County, the tornado intensified to the top of the F1 rating (winds about 87 to 96 knots, or 100 to 110 mph), and demolished a hay shed, damaged a pole barn (horse trailer inside was pushed through a closed door), flattened some fence, uprooted or snapped many trees, damaged a road sign, damaged a Sheriff Department speed trailer at the I-94/Hwy 11 intersection, and flattened some corn crop. A couple of power line poles were also damaged. Eyewitness reports indicated that the tornado briefly consisted of multiple vortices, and sounded like a jet engine. Average path length was about 25 yards. Synoptically, a 500 mb circulation center moved northeast through southeast Wisconsin at the time of the tornado. Scattered thunderstorms associated with the low moved northeast at about 30 mph. Maximum air temperatures during the afternoon were in the lower 80s with surface dewpoints in the mid to upper 60s.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



September 2001

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

<b>Jefferson County</b>									
2 SE Waterloo	03	1435CST			0	0			Hail(0.75)
<b>Waukesha County</b>									
Dousman	03	1525CST			0	0			Thunderstorm Wind (G50)
<b>Jefferson County</b>									
3 WSW Palmyra	03	1530CST			0	0			Thunderstorm Wind (G50)
<b>Racine County</b>									
Wind Lake	03	1545CST			0	0			Thunderstorm Wind (G50)
<b>Waukesha County</b>									
Big Bend to Muskego	03	1545CST 1555CST			0	0			Thunderstorm Wind (G56)
<b>Walworth County</b>									
Linton to Genoa City	03	1637CST 1645CST			0	0			Thunderstorm Wind (G50)

Scattered, short lines or clusters of severe thunderstorms moved through southeast Wisconsin during the afternoon hours. Powerful straight-line downburst winds toppled many large trees near Palmyra (Jefferson Co.), across southern Waukesha County from Dousman to Big Bend to Muskego, in Wind Lake (Racine Co.), and from Linton to Genoa City in Walworth County. Nickle-size hail was also noted southeast of Waterloo (Jefferson Co.). Law enforcement officials and trained spotters estimated wind gusts to be in the 50 to 56 knot range (58 to 65 mph). Synoptically, the severe storms developed ahead of a cold front pushing east across Wisconsin, along a cloud/no cloud line. Surface dewpoints around 70 with maximum air temperatures in the 84 to 88 degree range produced Lifted Indices of -4 to -6.

<b>Columbia County</b>									
Lodi to 5 NE Portage	07	1135CST 1145CST			0	0			Thunderstorm Wind (G52)
<b>Green Lake County</b>									
Princeton to 7 W Berlin	07	1150CST 1200CST			0	0			Thunderstorm Wind (G52)
<b>Marquette County</b>									
5 E Montello	07	1150CST			0	0			Thunderstorm Wind (G50)
<b>Dane County</b>									
Windsor	07	1155CST			0	0			Thunderstorm Wind (G50)
<b>Dodge County</b>									
Beaver Dam	07	1307CST			0	0			Thunderstorm Wind (G52)

The first of two rounds of severe thunderstorms to affect southern Wisconsin on September 7th struck parts of the south-central and southeast counties in the early afternoon hours. Powerful straight-line downburst winds toppled many large trees east of Montello (Marquette Co.), in the northwest part of Green Lake County north of Princeton, in the Windsor area (Dane Co.), and in the Beaver Dam area (Dodge Co.). Law enforcement officials and trained spotters estimated wind gusts to be in the 50 to 52 knot range (58 to 60 mph). The storms weakened as they moved east into Fond du Lac and Jefferson Counties where winds gusts were only in the 30 to 40 knot range (35 to 46 mph). Synoptically, the severe storms developed ahead of a cold front pushing east across Wisconsin, while the parent low pressure moved northeast through northwest Wisconsin. Surface dewpoints were in the lower 70s with maximum air temperatures in the mid 80s.

<b>Iowa County</b>									
Rewey to Dodgeville	07	1745CST 1755CST			0	0			Thunderstorm Wind (G56)
<b>Lafayette County</b>									
Benton to Shullsburg	07	1745CST 1758CST			0	0			Thunderstorm Wind (G56)



# National Weather Service

## Storm Data and Unusual Weather Phenomena



September 2001

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<b>WISCONSIN, Southeast</b>									
<b>Sauk County</b>									
Lake Delton to 4.3 SE Lake Delton	07	1805CST 1810CST			0	0	75K		Thunderstorm Wind (G65)
<b>Dane County</b>									
Madison	07	1810CST 1815CST			0	0			Thunderstorm Wind (G50)
<b>Green County</b>									
Monroe	07	1810CST			0	0			Thunderstorm Wind (G52)
<b>Columbia County</b>									
Portage to Lodi	07	1820CST			0	0			Thunderstorm Wind (G56)
<b>Rock County</b>									
Beloit	07	1820CST 1930CST			0	0			Urban/Sml Stream Fld
<b>Rock County</b>									
1 SW Evansville	07	1820CST			0	0			Thunderstorm Wind (G56)
<b>Marquette County</b>									
Endeavor to Packwaukee	07	1825CST 1830CST			0	0			Thunderstorm Wind (G52)
<b>Rock County</b>									
Beloit	07	1825CST			0	0	10K		Thunderstorm Wind (G56)
<b>Green Lake County</b>									
3 NE Kingston to Berlin	07	1830CST 1850CST			0	0			Thunderstorm Wind (G56)
<b>Columbia County</b>									
3 S Cambria	07	1855CST			0	0			Thunderstorm Wind (G56)
<b>Jefferson County</b>									
1 S Palmyra	07	1920CST			0	0			Thunderstorm Wind (G52)
<b>Walworth County</b>									
Walworth to Elkhorn	07	1930CST 1945CST			0	0			Thunderstorm Wind (G56)
<b>Waukesha County</b>									
1 SW Oconomowoc	07	1940CST			0	0			Thunderstorm Wind (G52)
<b>Dane County</b>									
Madison	07	2100CST 2300CST			0	0			Urban/Sml Stream Fld

The second of two rounds of severe thunderstorms to affect southern Wisconsin on September 7th struck parts of the south-central and southeast counties in the early evening hours. A north-south line of storms moving east through southern Wisconsin generated powerful straight-line downburst winds that toppled many large trees in parts of Iowa, Lafayette, Sauk, Columbia, Marquette, Green Lake, Dane, Green, Rock, Jefferson, Waukesha, and Walworth Counties. Scattered power outages were also noted, resulting in the loss of electrical power to about 1000 customers in southeast Wisconsin. Law enforcement officials and trained spotters estimated wind gusts to be in the 50 to 56 knot range (58 to 65 mph). However, thunderstorm winds probably topped out around 65 knots (75 mph) in the area about 4 miles southeast of Lake Delton where newspaper accounts indicated that a silo and pole shed were blown down, and other buildings were damaged. One of the large trees that were toppled in Beloit damaged two vehicles, and trapped passengers in one of them for about one hour. In addition, heavy rains of 1 to 2 inches accompanied some of the storms, resulting in flooded roads in and around Madison (Dane Co.) and Beloit (Rock Co.). Water depths on some of Madison's and Beloit's roads were 1 to 2 feet deep in low spots, and several vehicles in Madison stalled. In Beloit, up to 1.64 inches of rain was measured, while 1.85 inches fell at Madison's Truax Field. Synoptically, low pressure moved northeast through northwest Wisconsin. Surface dewpoints were in the lower 70s with maximum air temperatures in the mid 80s. The individual thunderstorm cells moved northeast at 35 to 43 knots (40 to 50 mph).



# National Weather Service

## Storm Data and Unusual Weather Phenomena



September 2001

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

#### Dane County

Verona	08	0120CST			0	0	5K		<b>Thunderstorm Wind (G61)</b>
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An isolated microburst generated by a severe thunderstorm resulted in tree or structural damage on seven properties on the northwest side of the city of Verona in the pre-dawn hours. One shed was destroyed a shed, and one home sustained minor roof damage due to toppled trees. In addition, a couple backyard decks and a free-standing wooden swing-set were damaged. Based on newspaper pictures, maximum wind gusts were probably in the 61 knot range (70 mph), and damage was estimated at about \$5,000. The severe thunderstorm followed two rounds of severe weather that occurred over parts of south-central and southeast Wisconsin on September 7, 2001.

#### Green County

Monroe	18	2000CST			0	0			<b>Heavy Rain</b>
	19	0600CST							

#### Iowa County

Dodgeville	18	2000CST			0	0			<b>Heavy Rain</b>
	19	0600CST							

#### Jefferson County

3 SE Sullivan	18	2000CST			0	0			<b>Heavy Rain</b>
	19	0600CST							

#### Kenosha County

Kenosha Muni Arpt	18	2000CST			0	0			<b>Heavy Rain</b>
	19	0600CST							

#### Lafayette County

7 N Argyle to Argyle	18	2000CST			0	0			<b>Heavy Rain</b>
	19	0600CST							

#### Milwaukee County

Milwaukee Mtchell Ar to Milwaukee	18	2000CST			0	0			<b>Heavy Rain</b>
	19	0600CST							

#### Rock County

Beloit	18	2000CST			0	0			<b>Heavy Rain</b>
	19	0600CST							

#### Walworth County

Genoa City	18	2000CST			0	0			<b>Heavy Rain</b>
	19	0600CST							

#### Waukesha County

Eagle	18	2000CST			0	0			<b>Heavy Rain</b>
	19	0600CST							

Several rounds of moderate to heavy rains dumped .75 to 2.22 inches of rain across parts of south-central and southeast Wisconsin. Many locations had 1 to 1.5 inches during the overnight hours. The Racine city area (Racine Co.) recorded 2.16 to 2.22 inches (probably record amounts for the 24 hour period ending at 0600CST on September 19, 2001), resulting in minor urban flooding. There were other scattered reports of water briefly covering some roads in low-lying areas across the remainder of south-central and southeast Wisconsin. Additional rainfall reports include: Clinton WWTP (Rock Co.) 1.38 inches, Kenosha Municipal Airport 1.38 inches, Blanchardville (7 N Argyle, Lafayette Co.) 1.33 inches, Genoa City (Walworth Co.) 1.28 inches, Milwaukee Mitchell Field (Milwaukee Co.) 1.25 inches, Eagle 1.15 inches (amateur radio operator), Ft. Atkinson WWTP 1.06 inches, Beloit College (Rock Co.) 1.04 inches, and the Dodgeville WWTP (Iowa Co.) 0.92 inches. These heavy rains ultimately lead to total September 2001 rainfall amounts (TV school network reports) of 6.42 inches in Brodhead (Green Co.), 7.03 inches in Barneveld (Iowa Co.), 7.72 inches in Janesville (Rock Co.), 6.92 inches in Lake Geneva (Walworth Co.), 6.03 inches in Wisconsin Dells (Columbia Co.), 6.63 inches on the southwest side of Madison (Dane Co.).



# National Weather Service

## Storm Data and Unusual Weather Phenomena



September 2001

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

**WIZ058>060-064>066-069>072 Dodge - Washington - Ozaukee - Jefferson - Waukesha - Milwaukee - Rock - Walworth - Racine - Kenosha**

<b>19</b>	<b>0130CST 0330CST</b>				<b>0</b>	<b>0</b>			<b>Strong Wind</b>
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Strong, east-northeast winds gusting to 31 to 49 knots (36 to 57 mph), raked parts of south-central and southeast Wisconsin during the pre-dawn morning hours on September 19, 2001. The majority of the gusts were in the 31 to 40 knot range (36 to 46 mph), however a gust of 49 knots (57 mph) was recorded at the NWS Forecast office southeast of Sullivan (Jefferson Co.) at 0220CST. A gust of 43 knots (49.5 mph) was noted at Carthage College on the northside of the city of Kenosha (Kenosha Co.), and a gust of 41 knots (47 mph) was recorded at Milwaukee Mitchell Field (Milwaukee Co.) at 0230CST. Law enforcement officials and newspaper accounts reported that small tree branches were knocked out of trees, resulting in scattered power outages. Synoptically, the strong winds were the result of a tight surface pressure gradient on the north side of a deepening low pressure that moved northeast through northern Illinois. The low moved through the northern part of the city of Chicago, IL, to the mid-point of Lake Michigan east of Milwaukee, WI. Surface observation stations recorded pressure falling rapidly as the wind gusts increased in magnitude.

### **Racine County**

#### **Racine**

<b>20</b>	<b>2200CST</b>				<b>0</b>	<b>0</b>	<b>9K</b>		<b>Lightning</b>
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Lightning struck and exploded a 100-foot tall tree in the city of Racine (Racine Co.), resulting in debris damage to 6 homes within 200 feet. Mainly window and roof damage was noted. The \$9,000 in damage is an estimate based on newspaper accounts.

**WIZ056>057-062-067 Sauk - Columbia - Iowa - Lafayette**

<b>29 30</b>	<b>2300CST 0800CST</b>				<b>0</b>	<b>0</b>			<b>Fog</b>
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Dense fog developed during the overnight hours over parts of south-central and southeast Wisconsin and persisted until the mid-morning hours. Visibilities were reduced to 1/8 to 1/4 mile, resulting in delayed school openings and delayed airplane traffic. Newspaper accounts noted several vehicle accidents. The dense fog was the result of clearing skies and a light west-northwest surface flow behind a weak front that passed through the area earlier.

**WIZ070>072 Walworth - Racine - Kenosha**

<b>29 30</b>	<b>2300CST 0700CST</b>				<b>0</b>	<b>0</b>			<b>Fog</b>
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Dense fog developed during the overnight hours over parts of south-central and southeast Wisconsin and persisted until the mid-morning hours. Visibilities were reduced to 1/8 to 1/4 mile, resulting in delayed school openings and delayed airplane traffic. Newspaper accounts noted several vehicle accidents. The dense fog was the result of clearing skies and a light west-northwest surface flow behind a weak front that passed through the area earlier.

**WIZ063>065-068>069 Dane - Jefferson - Waukesha - Green - Rock**

<b>30</b>	<b>0200CST 0800CST</b>				<b>0</b>	<b>0</b>			<b>Fog</b>
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Dense fog developed during the overnight hours over parts of south-central and southeast Wisconsin and persisted until the mid-morning hours. Visibilities were reduced to 1/8 to 1/4 mile, resulting in delayed school openings and delayed airplane traffic. Newspaper accounts noted several vehicle accidents. The dense fog was the result of clearing skies and a light west-northwest surface flow behind a weak front that passed through the area earlier.

**WIZ047-051>052-058>059 Green Lake - Fond Du Lac - Sheboygan - Dodge - Washington**

<b>30</b>	<b>0300CST 0800CST</b>				<b>0</b>	<b>0</b>			<b>Fog</b>
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Dense fog developed during the overnight hours over parts of south-central and southeast Wisconsin and persisted until the mid-morning hours. Visibilities were reduced to 1/8 to 1/4 mile, resulting in delayed school openings and delayed airplane traffic. Newspaper accounts noted several vehicle accidents. The dense fog was the result of clearing skies and a light west-northwest surface flow behind a weak front that passed through the area earlier.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



October 2001

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

#### WIZ046>047-056>057-062 Marquette - Green Lake - Sauk - Columbia - Iowa

01	2300CST		0	0	
02	0630CST				Fog

Dense fog developed overnight across parts of south-central Wisconsin, lowering visibilities to 1/8 to 1/4 mile. Some schools opened 2 hours late and local airplane traffic was delayed.

#### WIZ064>065-069>072 Jefferson - Waukesha - Rock - Walworth - Racine - Kenosha

22	0200CST		0	0	
	0800CST				Fog

Dense fog developed overnight across parts of south-central and southeast Wisconsin, lowering visibilities to 1/8 to 1/4 mile. Some schools opened 2 hours late and local airplane traffic was delayed.

#### WIZ058>059 Dodge - Washington

22	0330CST		0	0	
	0900CST				Fog

Dense fog developed overnight across parts of south-central Wisconsin, lowering visibilities to 1/8 to 1/4 mile. Some schools opened 2 hours late and local airplane traffic was delayed.

#### Green County

Juda	23	2110CST	0	0	Hail(0.75)
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#### Green County

Browntown	23	2119CST	0	0	Hail(1.75)
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#### Green County

Brodhead	23	2125CST	0	0	Hail(1.75)
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#### Green County

4 S Monroe to Monroe	23	2135CST	0	0	Hail(1.00)
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#### Rock County

Orfordville	23	2136CST	0	0	Hail(0.88)
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#### Rock County

2 E Afton to Janesville	23	2157CST	0	0	Hail(1.75)
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#### Walworth County

5 NNE Darien to 4 SSW Whitewater	23	2205CST	0	0	Hail(1.75)
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#### Rock County

Avalon	23	2206CST	0	0	Hail(1.75)
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#### Rock County

2 WSW Shopiere	23	2209CST	0	0	Funnel Cloud
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#### Walworth County

2.5 NNE Lyons	23	2300CST	0	0	Hail(1.00)
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#### Racine County

Burlington	23	2315CST	0	0	Hail(0.75)
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#### Kenosha County

1.8 ENE Paris	23	2329CST	0	0	Hail(0.75)
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#### Racine County

Racine	23	2345CST	0	0	100K Hail(2.75)
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#### Racine County

Racine	24	0100CST 0700CST	0	0	50K Urban/Sml Stream Fld
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Rare, out-of-season severe thunderstorms, with up to golf-ball to baseball-size hail, pelted parts of southern Wisconsin during the overnight hours of October 23, 2001. The storms cut a swath from southern Green County to the Janesville/Beloit area in Rock County, to the area east of Elkhorn (Walworth Co.), to the southern part of the city of Racine (Racine Co.). The largest hailstones, and consequently the greatest amount of damage, occurred in the southern part of city of Racine. In Racine, many vehicles were



# National Weather Service

## Storm Data and Unusual Weather Phenomena



October 2001

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

dented, several skylight windows were smashed, the roofs of several residential homes were damaged, and one sunroom was demolished by the large hailstones. Eyewitness reports indicated that the hailstorm duration was about 15 to 20 minutes as a series of thunderstorm cells trained west to east across the same part of the city. Consequently, rainfalls of about 1.50 inches occurred, based on WSR-88D Doppler radar estimates. Newspapers reported that 2.80 inches of rain fell in the city of Janesville, but there were no reports of flooding. Rain-water accumulated into a 3 to 4 foot deep river on Kearney Ave. in the city of Racine, which stalled a couple cars and then spilled over into several basements. Two people had to climb onto the roof of their vehicle. The rain-water accumulation was due to hail-stripped leaves clogging storm sewers. This same rain-water river washed hail into mounds 1 to 2 feet deep on Kearney Ave, forcing local residents to shovel and snow-blow the hail to the side. A couple city roads had to be plowed! A two-apartment home in the city of Racine was severely damaged when its basement wall collapsed due to urban flooding triggered by the heavy rains and leave-clogged storm sewers. Six people were evacuated from the building. The monetary damage amount assigned to the hailstorm in Racine is an estimate based on newspaper accounts. Synoptically, the hailstones were the result of elevated convection north of warm front that was over northern Illinois. The warm front extended back to a low pressure over central Minnesota. South of the warm front, surface dewpoints were in the lower 60s. WSR-88D Doppler imagery indicated that several of the thundestorms had mesocyclones extending from about 7000 to 20,000 feet AGL, but there was only one funnel cloud report.

**WIZ046>047-051>052-062>065-067>068-070>071** **Marquette - Green Lake - Fond Du Lac - Sheboygan - Iowa - Dane - Jefferson - Waukesha - Lafayette - Green - Walworth - Racine**

<b>24</b>	<b>2200CST</b>	<b>0</b>	<b>0</b>	<b>Strong Wind</b>
<b>25</b>	<b>2130CST</b>			

Widespread, strong, west to southwest, post-cold-frontal winds gusting to 35 to 49 knots (40 to 57 mph) raked south-central and southeast Wisconsin for almost 24 hours on October 24-25, 2001. Most locations had gusts of 43 to 48 knots (50 to 55 mph). There were numerous reports of small tree branches breaking off and hitting power lines, resulting in scattered power outages. Additionally, there were reports of wind damage to traffic lights in Madison (Dane Co.) and several other cities. Monetary damage amounts were not available. In Madison (Dane Co.) an old maple tree broke in two and fell onto an automobile. About 5000 customers, mostly in Waukesha, Milwaukee, Walworth, Racine, and Kenosha counties, were without electrical power at one time or another. The persistent strong winds generated sizable waves on the larger inland lakes. On the Lake Geneva (Walworth Co.), wave action damaged a boat docking station belonging to a youth camp. Synoptically, the strong winds were the result of deep low pressure which moved through northwest Wisconsin to over Lake Superior.

**WIZ066-069-072** **Milwaukee - Rock - Kenosha**

<b>25</b>	<b>0000CST</b>	<b>0</b>	<b>0</b>	<b>High Wind (G56)<sup>M</sup></b>
	<b>1800CST</b>			

High winds gusting to 52 to 56 knots (60 to 65 mph) raked small parts of Milwaukee, Rock, and Kenosha counties, resulting in several damage reports. These high winds were associated with widespread, strong, west to southwest, post-cold-frontal winds gusting to 35 to 49 knots (40 to 57 mph) that affected the remainder of south-central and southeast Wisconsin for almost 24 hours on October 24-25, 2001. In Oak Creek (Milwaukee Co.) the high winds jarred an elevated restaurant sign loose, causing an exit ramp for Interstate-94 to be closed for several hours until repairs could be made. A gust of 56 knots (65 mph) was recorded at a school (belonging to a TV-station weather network) in Milton (Rock Co.). A TV-station observer in Salem (Kenosha Co.) reported a gust of 52 knots (60 mph). There were numerous reports of small tree branches breaking off and hitting power lines, resulting in scattered power outages. Additionally, there were reports of wind damage to traffic lights in several cities. Monetary damage amounts were not available. About 5000 customers, mostly in Waukesha, Milwaukee, Walworth, Racine, and Kenosha counties, were without electrical power at one time or another. Synoptically, the strong winds were the result of deep low pressure which moved through northwest Wisconsin to over Lake Superior.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



November 2001

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

### WISCONSIN, Southeast

**WIZ062>065-067>072 Iowa - Dane - Jefferson - Waukesha - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

<b>15</b>	<b>2230CST</b>	<b>0</b>	<b>0</b>	<b>Fog</b>
<b>16</b>	<b>0900CST</b>			

Dense fog developed overnight across parts of south-central and southeast Wisconsin, lowering visibilities to near zero to 1/4 mile. The lowest visibilities were found in river valleys west of a line from Madison (Dane Co.) to Beloit (Rock Co). Local airplane traffic was delayed until visibilities improved. Several vehicle accidents were noted in newspapers. In northwest Dane County near Mazomanie on Highway 78, the driver of a vehicle was killed when the vehicle struck a horse standing on the road (fatality indirectly related to fog). Visibility was reported to be about 10 feet around the accident time of about 0145CST on November 16th. Sixteen children were injured (indirectly related to fog) when a truck struck a Monticello (Green Co.) school bus at 0746CST on the 16th. Once again, poor visibility was an indirect factor in this accident. The dense fog resulted from the combination of clear skies and light winds after a couple days of rain.

Concurrent with the dense fog episode were very warm temperatures across south-central and southeast Wisconsin. Maximum temperatures on November 15th reached 66 in Madison and 65 in Milwaukee. Milwaukee set a new daily, record-high, minimum temperature of 55 on November 16th. This warmth contributed to new record high, average, monthly temperatures of 46.0 in Madison (10.6 degrees above normal), and 47.4 in Milwaukee (9.7 degrees above normal). The old monthly records were 44.8 for Madison, and 47.1 in Milwaukee, both set back in 1931. In addition, Milwaukee Mitchell Field didn't receive any snow during the month of November, 2001. The only other snow-less November in Milwaukee occurred in 1999. Madison's Truax Field recorded only a trace of snow in November 2001, tying the record minimum November snowfall of a trace set back in 1999, 1965, 1948, and 1939. New daily, record-high, minimum temperatures were set in Milwaukee on November 2nd and 16th, and in both Madison and Milwaukee on the 25th.



# National Weather Service

## Storm Data and Unusual Weather Phenomena



December 2001

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

**WIZ067>069 Lafayette - Green - Rock**

<b>02</b>	<b>0100CST</b>	<b>0600CST</b>			<b>0</b>	<b>0</b>			<b>Fog</b>
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Light winds, abundant low-level moisture, and clear skies led to the formation of dense fog which reduced visibilities to 1/8 to 1/4 mile. Several vehicle accidents were noted in local newspapers.

**WIZ056>059-062>065 Sauk - Columbia - Dodge - Washington - Iowa - Dane - Jefferson - Waukesha**

<b>02</b>	<b>0230CST</b>	<b>1000CST</b>			<b>0</b>	<b>0</b>			<b>Fog</b>
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Light winds, abundant low-level moisture, and clear skies led to the formation of dense fog which reduced visibilities to 1/8 to 1/4 mile. Several vehicle accidents were noted, and airplane traffic was delayed

**WIZ066-070>072 Milwaukee - Walworth - Racine - Kenosha**

<b>02</b>	<b>0400CST</b>	<b>0900CST</b>			<b>0</b>	<b>0</b>			<b>Fog</b>
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Light winds, abundant low-level moisture, and clear skies led to the formation of dense fog which reduced visibilities to 1/8 to 1/4 mile. Several vehicle accidents were noted in local newspapers, and airplane traffic was delayed

**WIZ046>047-051>052-060 Marquette - Green Lake - Fond Du Lac - Sheboygan - Ozaukee**

<b>02</b>	<b>0600CST</b>	<b>1000CST</b>			<b>0</b>	<b>0</b>			<b>Fog</b>
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Light winds, abundant low-level moisture, and clear skies led to the formation of dense fog which reduced visibilities to 1/8 to 1/4 mile. Several vehicle accidents were noted in local newspapers, and airplane traffic was delayed

**WIZ046>047-051>052-056>060-062>072 Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

<b>05</b>	<b>1200CST</b>	<b>2000CST</b>			<b>0</b>	<b>0</b>	<b>105K</b>		<b>Strong Winds</b>
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Strong, gradient, widespread winds from the south to southwest affected south-central and southeast Wisconsin during the afternoon and early evening hours of December 5, 2001. Sustained speeds were in the 22 to 26 kts range (25 to 30 mph), with gusts to 39 to 43 kts range (45 to 50 mph). Scattered power outages were noted due to the strong winds either breaking tree branches or pushing branches onto power lines. Some of the higher gusts were due to convective enhancement as a series of short lines or clusters to showers and thunderstorms moved west to east across southern Wisconsin. Individual thunderstorm cells moved northeast at 61 kts (70 mph)! The strong winds were related to a deep low pressure moving northeast through Minnesota to north of Lake Superior, with a trailing cold front moving east across Wisconsin. Daytime maximum temperatures ahead of the front were in the 60 to 70 degree range, or 28 to 35 degrees above average! Milwaukee's maximum of 68 set a new daily record for the 5th as well as a new all-time December maximum (old record was 64 on December 3, 1998). Madison's maximum of 64 set a new daily record for the 5th as well as a new all-time December maximum (old record was 62 on December 5, 1998). Janesville, Kenosha, West Allis, and Waukesha topped out at 70. Both Madison and Milwaukee tied or set new daily maximum temperatures and high minimum records on December 4, 2001, as well. Newspapers reported that golfers were still out on the links, some flowers were blooming, very little, if any, frost was in the ground, and inland lakes had no ice cover!

**WIZ046>047-051-056>058-062>064-067>069 Marquette - Green Lake - Fond Du Lac - Sauk - Columbia - Dodge - Iowa - Dane - Jefferson - Lafayette - Green - Rock**

<b>16</b>	<b>1915CST</b>	<b>1915CST</b>			<b>0</b>	<b>0</b>			<b>Fog</b>
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Abundant low-level moisture and light winds led to the development of dense fog which reduced visibilities to 1/8 to 1/4 mile. Several vehicle accidents were noted in newspapers and some airplane traffic was delayed. On December 16, 2001, Madison and Milwaukee recorded new high minimums of 37 and 41, respectively. Through Dec 16th, Milwaukee average temperature was 40.4,



# National Weather Service

## Storm Data and Unusual Weather Phenomena



December 2001

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

or an incredible 13.5 degrees above normal, and 3 degrees above the warmest December on record (1877)! Colder air during the last week of December, 2001, lowered the monthly average several degrees. Madison recorded its latest measurable snowfall in a winter season when 2/10 of an inch of snow finally fell on December 23, 2001. By the end of December 2001, Milwaukee Mitchell Field would measure only 9.4 inches of snow for the entire calendar year of 2001, breaking the old "minimum" record of 14.5 inches set in 1922!