

# August 2007 Climate Narrative For Southwest Lower Michigan

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## Overview

August weather in southwest Michigan was highlighted by a prolonged period of occasional rain from the 18<sup>th</sup> through the 21<sup>st</sup>, which brought an end to drought conditions that were being experienced across much of the area. Numerous severe weather events occurred from the 22<sup>nd</sup> through the 24<sup>th</sup>, including the first EF 3 intensity tornado to strike Michigan (Eaton county on the 24<sup>th</sup>) in over ten years.

		<b>Temperature (degrees F)</b>	<b>Precipitation (inches)</b>	<b>Snowfall (inches)</b>
<b>Grand Rapids</b>	<i>Reported</i>	73.3	6.10	0.0
	<i>Normal</i>	69.4	3.78	0.0
	<i>Departure</i>	3.9	2.32	0.0
<b>Lansing</b>	<i>Reported</i>	71.4	6.42	0.0
	<i>Normal</i>	68.4	3.46	0.0
	<i>Departure</i>	3.0	2.96	0.0
<b>Muskegon</b>	<i>Reported</i>	70.4	4.94	0.0
	<i>Normal</i>	68.5	3.77	0.0
	<i>Departure</i>	1.9	1.17	0.0

## **Temperatures**

Temperatures generally averaged around five to ten degrees above normal during the first two weeks of August. A brief period of cool weather developed from the 17<sup>th</sup> through the 21<sup>st</sup> followed by a return to temperatures averaging about five to ten degrees above normal through the remainder of the month.

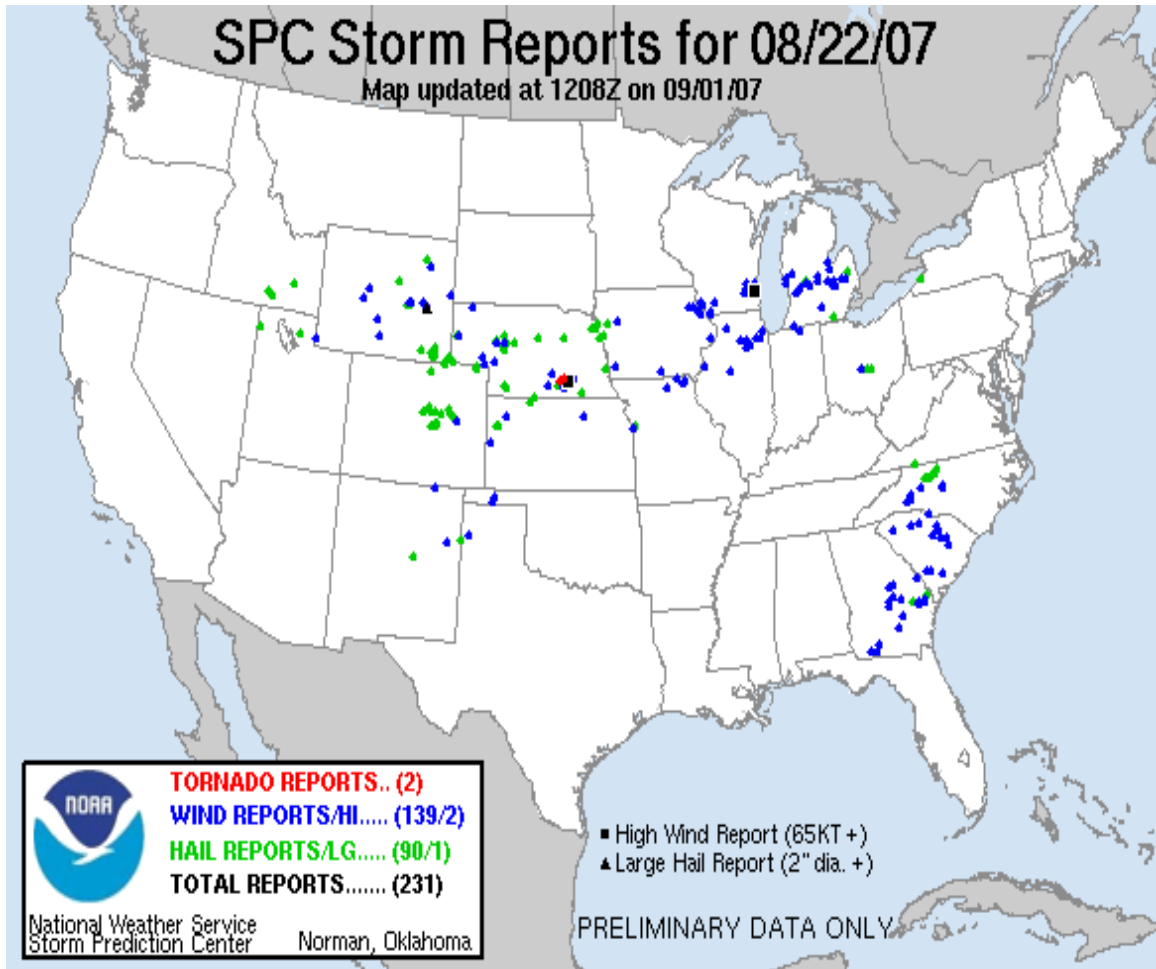
## **Precipitation**

Rainfall averaged above normal across much of central and southern lower Michigan in August. A new daily rainfall record of 2.34 inches was set in Grand Rapids on the 20<sup>th</sup>... breaking the previous record of 2.21 inches set in 1958. A new daily rainfall record of 2.53 inches was set in Lansing on the 20<sup>th</sup>... breaking the previous record of 1.26 inches set in 1994.

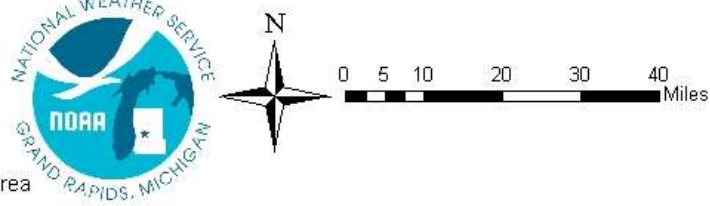
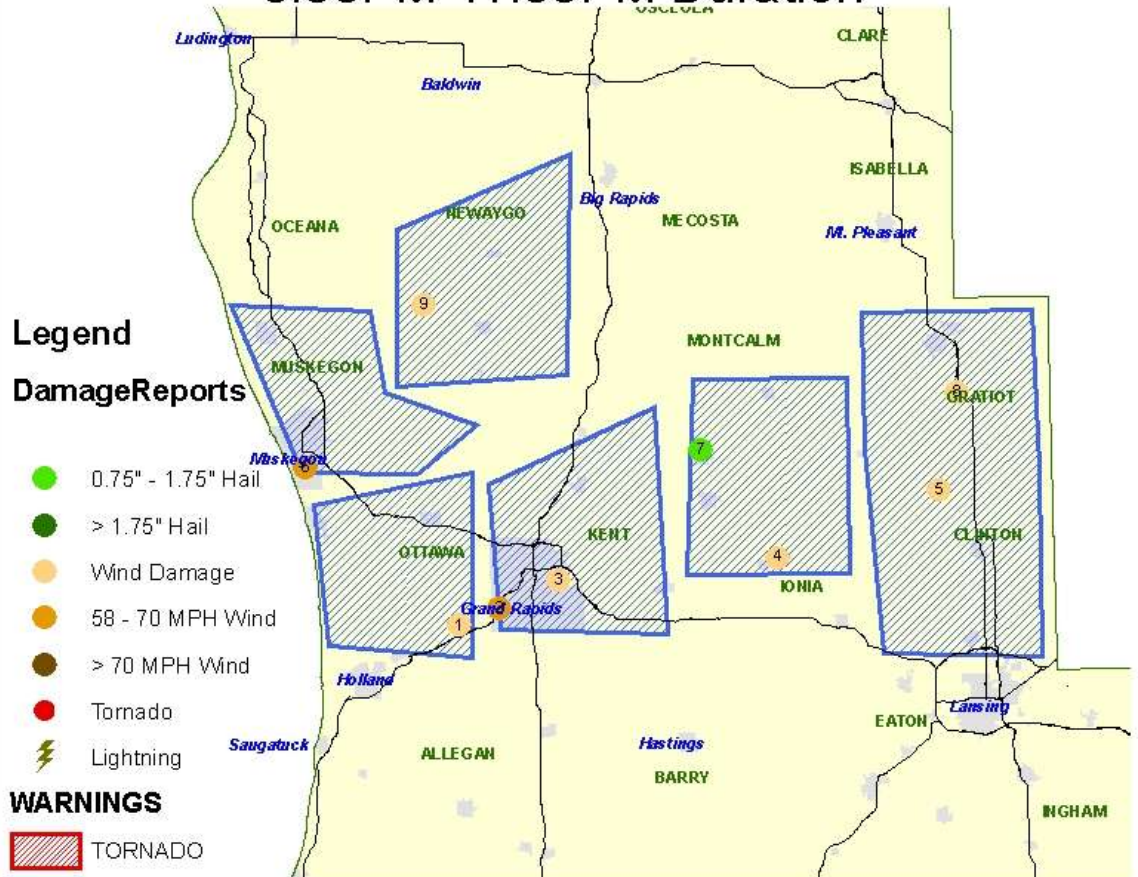
## Severe Weather Events for August 2007

There were numerous severe weather events occurring primarily from August 22<sup>nd</sup> through the 24<sup>th</sup>, highlighted by the first EF 3 intensity tornado to strike Michigan (in Eaton county on the 24<sup>th</sup>) in over ten years.

The first major severe thunderstorm event during this period occurred on August 22<sup>nd</sup>, when a round of severe thunderstorms produced numerous reports of wind damage just north of the I-96 corridor from Muskegon to Alma. There were reports of numerous power lines and downed trees and limbs.



# August 22, 2007 Severe Thunderstorm Event 8:00PM-11:00PM Duration



FID	Time	Location	Comments
0	746	PARMA	MULTIPLE TREES DOWN NEAR PARMA. (GRR)
1	100	HUDSONVILLE	NUMEROUS TREES DOWN IN THE CITY OF HUDSONVILLE AND GEORGETOWN TOWNSHIP (GRR)
2	55	GRANDVILLE	LARGE BRANCH IN YARD. (GRR)
3	110	EAST GRAND RAPIDS	LARGE DIAMETER TREE DOWN HALL AND LENOX. (GRR)
4	140	IONIA	NUMEROUS TREES DOWN IN COUNTY...MAINLY NORTH OF HIGHWAY M-21. (GRR)
5	158	2 E MAPLE RAPIDS	TWO 12 INCH DIAMETER TREES DOWN EAST OF MAPLE RAPIDS AND SOUTH OF ELSIE. (GRR)
6	25	NORTON SHORES	HENRY STREET. (GRR)
7	140	1 N GREENVILLE	(GRR)
8	210	ITHACA	A FEW TREES DOWN. ALSO TREES DOWN NEAR ALMA AND ASHLEY AROUND THE SAME TIME. (GRR)
9	45	FREMONT	A FEW TREES AND POWER LINES DOWN (GRR)

Another round of severe thunderstorms moved through southern Lower Michigan on August 23<sup>rd</sup>, resulting in widespread wind damage. Hundreds of thousands of people were left without power across southern Michigan due to all the downed power lines and trees and limbs falling on power lines. Severe thunderstorm wind gusts ranged from 58 to 75 m.p.h. At one point, there were almost 50,000 people left without power in Kalamazoo County alone.

An EF 0 tornado also struck northeast Montcalm county on the 23<sup>rd</sup>. Trained SKYWARN weather spotters from the Home Township Fire Department witnessed two brief tornadoes near the intersection of Cutler Road and Vickeryville Road around 4 pm EDT. The National Weather Service survey found two damage paths along Cutler Road, near the border of Home and Richland Townships.

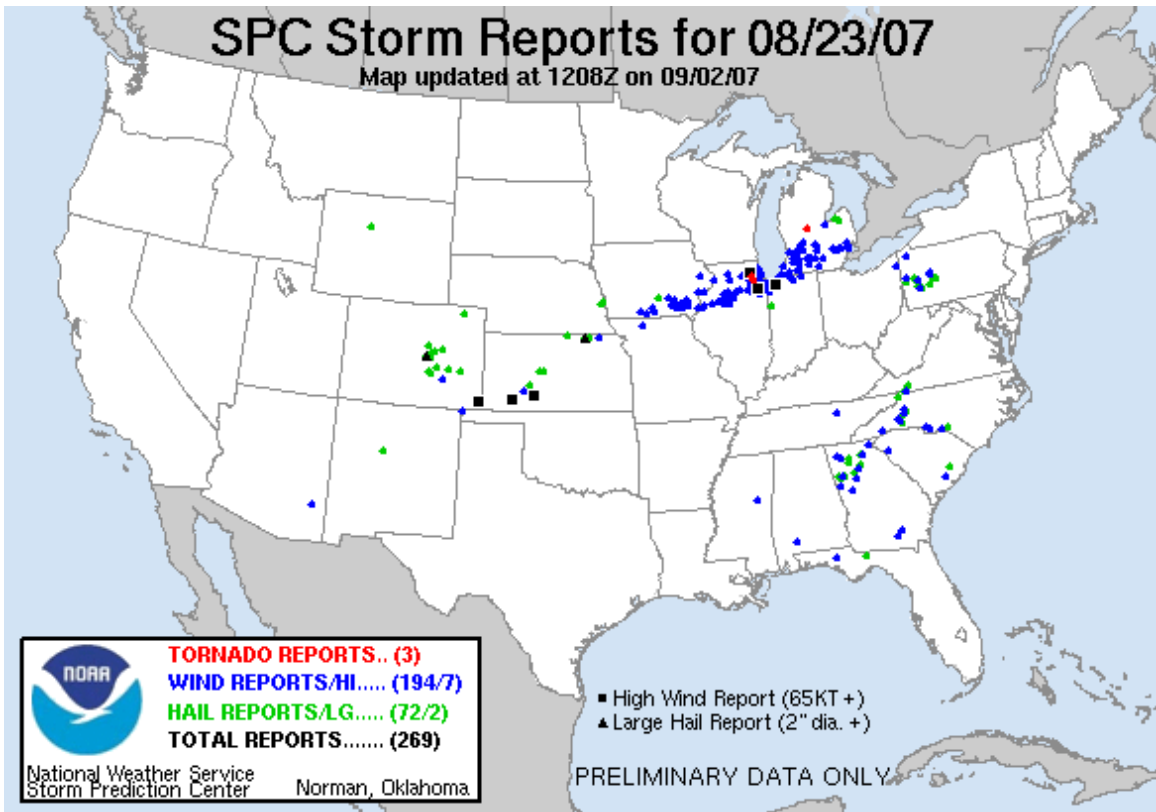
The first damage path was just north of Cutler Road and began about one mile west of the Cutler Road and Vickeryville Road intersection. It extended northeast approximately one mile and was approximately 100-200 yards wide. A vast majority of this was straight-line wind damage with indications of some tornado damage embedded within the main damage path.

The second damage path was just south of Cutler Road. It began just south of the intersection of Cutler Road and Vickeryville Road and ended near the Montcalm-Isabella County line. This damage path was also around 100-200 yards wide. There was evidence of some tornado damage within the damage path here as well.

Thousands of trees were uprooted or snapped off in the two damage paths. This damage is consistent with a rating of EF-1 on the Enhanced Fujita (EF) Scale with estimated wind speeds of 90-100 mph.

# SPC Storm Reports for 08/23/07

Map updated at 1208Z on 09/02/07



**TORNADO REPORTS.. (3)**  
**WIND REPORTS/HI..... (194/7)**  
**HAIL REPORTS/LG..... (72/2)**  
**TOTAL REPORTS..... (269)**

National Weather Service  
Storm Prediction Center Norman, Oklahoma

■ High Wind Report (65KT +)  
▲ Large Hail Report (2" dia. +)

PRELIMINARY DATA ONLY

# August 23, 2007 Severe Weather Outbreak

## Legend

### Damage Reports

- 0.75" - 1.75" Hail
- > 1.75" Hail
- Wind Damage
- 58 - 70 MPH Wind
- > 70 MPH Wind
- Tornado
- Lightning

### WARNINGS

- TORNADO
- SEVERE THUNDERSTORM
- SPECIAL MARINE WARNING
- Major Roads
- Cities
- Grand Rapids County Warning area





**Photos of Montcalm County EF 0 Tornado Damage**  
**(pictures taken by National Weather Service Grand Rapids, MI storm survey teams).**







The most significant severe weather event in August occurred on the 24<sup>th</sup>, when an EF 3 tornado struck Eaton County. It was the strongest tornado to strike the state of Michigan in over ten years. The tornado destroyed several homes and injured five people before it ended about 3 miles north-northeast of Potterville. The National Weather Service conducted a survey of the damage path Friday evening. Based on the damage, it appears this tornado produced winds near 140 mph, making it an EF3 on the Enhanced Fujita Scale.

The damage in Eaton County was the most severe along a path from M-50 just north of Kinsel Highway to just west of M-100 and Vermontville Highway, near Potterville. The damage path was 200 to 300 yards wide and 10 miles long. Around 15 homes were seriously damaged. A single story home had its roof blown off and windward facing walls blown in.

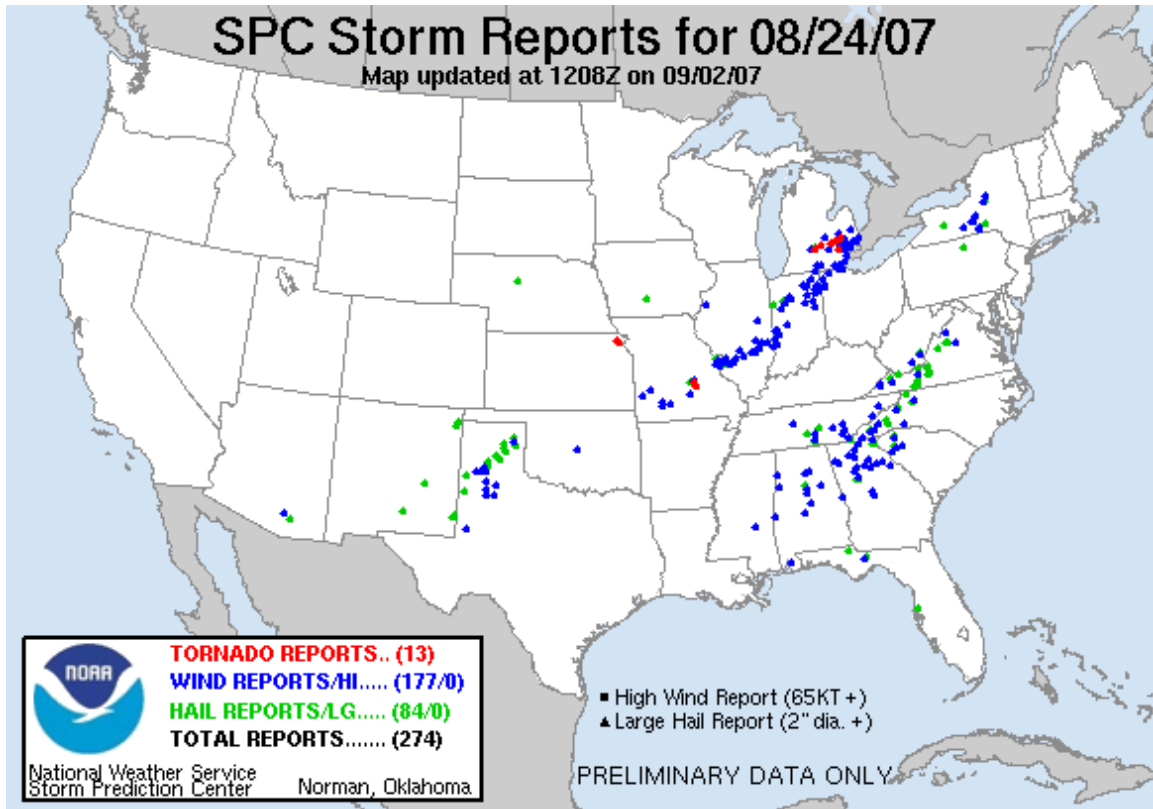
The majority of the roof and garage from this home was not found. A two story home across the street had its roof blown off and upper story front walls blown in. Other damage included the partial collapse of the upper story of a home and a home that was blown off its foundation. Most of the damaged homes were beyond repair.

Another tornado developed several minutes later near the Eaton-Ingham County line and moved across southern Lansing. A National Weather Service survey team found the first sign of damage near the intersections of Waverly and M-99.

The first significant damage was to the Stonegate mobile home park south of M-99. Many trees were down in this mobile home park, some on homes. The damage path continued northeast toward Interstate 96 across Grovenburg Rd. More tree damage was found on the north side of Interstate 96 along Haag Rd.

Rotation was seen in the damage path both at Stonegate and more so along Haag Rd. The damage path continued northeast across Miller Rd through neighborhoods where numerous trees were down, some on homes as well. The damage path crossed Cedar St, near the Fazoli's Restaurant where damage was noted to signs on both sides of the road. Damage continues northeast across Pennsylvania Ave north toward the intersections of Jolly and Aurelius and Dunckel and Jolly.

Tree damage was again noted in this area to a campground. Structural damage in Ingham County was limited to trees falling on homes and some siding being peeled back. The tornado path length was approximately six miles in length and around 300 yards wide. The tornado was rated an EF-1 on the Enhanced Fujita Scale.



# August 24, 2007 Severe Weather Outbreak



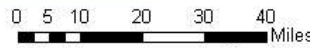
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FID	Time	Location	Comments
0	2025	2 N CHARLOTTE	BUILDING DAMAGE NEAR COCHRAN AND M50 (GRR)
1	2025	2 N CHARLOTTE	BUILDING DAMAGE NEAR COCHRAN AND M50 (GRR)
2	2030	2 NW POTTERVILLE	NEAR OTTO AND DOAN (GRR)
3	2055	2 E LANSING	TRANSFORMER DAMAGED NEAR INTERSECTION OF DUNCKEL AND JOLLY. (GRR)
4	2055	2 E LANSING	AT DUNCKEL AND JOLLY POSSIBLE TORNADO TOUCHDOWN CAUSING TRANSFORMER DAMAGE. (GRR)



**Pictures of Eaton County EF 3 Tornado Damage (all pictures taken by National Weather Service Grand Rapids, MI storm survey teams).**



