

## Storm Data and Unusual Weather Phenomena - November 2015

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<b>LAKE HURON</b>				
<b>INNER SAGINAW BAY SW OF POINT AU GRES TO BAY PORT MI COUNTY --- SAGINAW BAY LIGHT [43.81, -83.72]</b>				
	11/06/15 06:10 EST	0		Marine Thunderstorm Wind (MG 55 kt)
	11/06/15 06:10 EST	0		Source: Trained Spotter
<b>OUTER SAGINAW BAY SW OF ALABASTER TO PORT AUSTIN MI TO INNER SAGINAW BAY COUNTY --- GRAVELLY SHOALS LIGHT [44.02, -83.54]</b>				
	11/06/15 06:20 EST	0		Marine Thunderstorm Wind (MG 43 kt)
	11/06/15 06:20 EST	0		Source: C-MAN Station
<b>HARBOR BEACH TO PORT SANILAC MI 5NM OFFSHORE TO US/CANADIAN BORDER COUNTY --- 1.4 N HARBOR BEACH [43.85, -82.65]</b>				
	11/06/15 07:00 EST	0		Marine Thunderstorm Wind (EG 61 kt)
	11/06/15 07:00 EST	0		Source: Trained Spotter
A thunderstorm which produced estimated 70 mph winds over Harbor Beach moved into Lake Huron.				
<b>PORT AUSTIN TO HARBOR BEACH MI 5NM OFFSHORE TO US/CANADIAN BORDER COUNTY --- 1.4 N HARBOR BEACH [43.85, -82.65]</b>				
	11/06/15 07:00 EST	0		Marine Thunderstorm Wind (EG 61 kt)
	11/06/15 07:00 EST	0		Source: Trained Spotter
A thunderstorm which produced estimated 70 mph winds over Harbor Beach moved into Lake Huron.				
<b>HARBOR BEACH TO PORT SANILAC MI 5NM OFFSHORE TO US/CANADIAN BORDER COUNTY --- 6.0 E PORT SANILAC [43.43, -82.43]</b>				
	11/06/15 07:30 EST	0		Marine Thunderstorm Wind (MG 60 kt)
	11/06/15 07:30 EST	0		Source: Mariner
<b>PORT SANILAC TO PORT HURON MI 5NM OFFSHORE TO US/CANADIAN BORDER COUNTY --- 6.0 E PORT SANILAC [43.43, -82.43]</b>				
	11/06/15 07:30 EST	0		Marine Thunderstorm Wind (MG 60 kt)
	11/06/15 07:30 EST	0		Source: Mariner
<b>PORT SANILAC TO PORT HURON MI COUNTY --- 0.9 SE PORT SANILAC [43.42, -82.54]</b>				
	11/06/15 07:30 EST	0		Marine Thunderstorm Wind (MG 34 kt)
	11/06/15 07:30 EST	0		Source: C-MAN Station
Thunderstorms moving through Saginaw Bay and nearshore waters of Southern Lake Huron produced wind gusts in excess of 50 knots.				
<b>LAKE ST CLAIR</b>				
<b>LAKE ST CLAIR (U.S. PORTION) COUNTY --- 0.5 E ST CLAIR SHORES [42.47, -82.87]</b>				
	11/06/15 07:50 EST	0		Marine Thunderstorm Wind (MG 34 kt)
	11/06/15 07:50 EST	0		Source: C-MAN Station
A thunderstorm moving into Lake St. Clair produced wind gust to near 40 mph.				
<b>MICHIGAN, East</b>				
<b>SAGINAW COUNTY --- (MBS)TRI CITY APT SA [43.53, -84.08]</b>				
	11/06/15 05:49 EST	0		Thunderstorm Wind (MG 50 kt)
	11/06/15 05:49 EST	0		Source: ASOS
<b>BAY COUNTY --- 0.9 SW BAY CITY [43.59, -83.89]</b>				
	11/06/15 06:00 EST	0		Thunderstorm Wind (EG 56 kt)
	11/06/15 06:00 EST	0		Source: 911 Call Center

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Numerous trees and power lines reported blown down.				
<b>TUSCOLA COUNTY --- 0.7 N CARO [43.49, -83.40]</b>				
	11/06/15 06:20 EST		0	Thunderstorm Wind (EG 56 kt)
	11/06/15 06:20 EST		0	Source: 911 Call Center
Six trees were reported blown down, along with wires.				
<b>HURON COUNTY --- 1.1 W BAD AXE [43.80, -83.02], 0.5 WNW BAD AXE [43.80, -83.01]</b>				
	11/06/15 06:46 EST		15K	Tornado (EF0, L: 0.61 mi , W: 25 yd)
	11/06/15 06:47 EST		0	Source: NWS Storm Survey
An NWS damage survey found a brief tornado that began just south of M-53 at Barrie Road in Bad Axe. The tornado bent over two billboards with I-beams, partially blew off a roof, and caused extensive tree damage before lifting near M-53 and Western Avenue in Bad Axe. Peak winds were estimated to be 85 mph.				
<b>HURON COUNTY --- 0.5 E BAD AXE [43.80, -82.99], 2.4 NE BAD AXE HURON ARPT [43.80, -82.94]</b>				
	11/06/15 06:50 EST		5K	Thunderstorm Wind (EG 74 kt)
	11/06/15 06:52 EST		0	Source: NWS Storm Survey
An NWS damage survey confirmed a swath of downburst winds just south and east of the city of Bad Axe. The damage began along Bad Axe Road just northwest of Huron County Memorial Airport, which reported a wind gust of 73 mph at 6:50 am EST. The swath continued northeastward toward the intersection of M-19 and M-142 East of Bad Axe. There was extensive tree damage in the damage swath. Mostly pine trees were snapped in half and uprooted.				
<b>LAPEER COUNTY --- LAPEER [43.05, -83.32]</b>				
	11/06/15 06:50 EST		25K	Thunderstorm Wind (EG 65 kt)
	11/06/15 06:50 EST		0	Source: 911 Call Center
Trees and power lines reported down in and around Lapeer and across eastern part of the county. Signs were also blown down.				
<b>HURON COUNTY --- 1.4 N HARBOR BEACH [43.85, -82.65]</b>				
	11/06/15 07:00 EST		0	Thunderstorm Wind (EG 61 kt)
	11/06/15 07:00 EST		0	Source: Trained Spotter
One 8 inch and one 6 inch diameter tree was snapped. Multiple power lines downed, along with flag pole snapped.				
<b>SANILAC COUNTY --- 1.3 SE CASH [43.34, -82.76], 3.1 W APPLGATE [43.34, -82.69]</b>				
	11/06/15 07:13 EST		40K	Tornado (EF1, L: 3.64 mi , W: 150 yd)
	11/06/15 07:17 EST		0	Source: NWS Storm Survey
An NWS damage survey determined that a tornado began about 0.5 miles east of the intersection of Marlette and Loeding Roads 6.5 miles west-southwest of Applegate. Near the corner of Marlette and Ruth Roads, the tornado destroyed the roof and two walls of a manufactured single-wide home. Extensive tree damage occurred east of there. The tornado also destroyed 3 small barns before lifting in a field just northeast of the intersection of Marlette and Tubbs Roads. Peak winds were estimated to be 90 mph.				
<b>SANILAC COUNTY --- 3.3 SE CASH [43.32, -82.73]</b>				
	11/06/15 07:13 EST		0	Thunderstorm Wind (EG 52 kt)
	11/06/15 07:13 EST		0	Source: NWS Storm Survey
A few small trees and large limbs downed.				
<b>SANILAC COUNTY --- 5.1 SE MELVIN [43.12, -82.81]</b>				
	11/06/15 07:13 EST		0	Thunderstorm Wind (EG 56 kt)
	11/06/15 07:13 EST		0	Source: NWS Storm Survey
Three trees were uprooted and 1 snapped near school complex.				
<b>ST. CLAIR COUNTY --- 4.0 NW FARGO [43.15, -82.70], 3.6 NNW FARGO [43.15, -82.67]</b>				
	11/06/15 07:20 EST		25K	Tornado (EF0, L: 1.21 mi , W: 75 yd)
	11/06/15 07:21 EST		0	Source: NWS Storm Survey

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An NWS damage survey confirmed a brief tornado east of Yale in St. Clair county. This tornado touched down around 0.25 miles east of the intersection of Kilgore and Jeddo Roads and traveled eastward along Jeddo Road before lifting just east of the intersection with Duce Road. Three outbuildings or barns were destroyed and another had its roof partially peeled off. There were also 5 to 10 snapped or uprooted trees and two snapped power poles. Peak winds were estimated to be 85 mph.

A sharp cold front interacted with a record warm airmass over Southeast Michigan during the morning of November 6. A narrow line of showers developed along the front and raced across the region between 5 and 8 am. Some of the particularly intense showers were able to pull down strong winds located just above the surface, resulting in several reports of wind damage. The strongest wind gusts were located around the Tri-Cities and Thumb regions. There was one particularly strong swath of downburst winds just south and east of Bad Axe, estimated at up to 85 mph. The Huron County Memorial Airport just south of Bad Axe recorded a wind gust of 73 mph.

Along the line of showers, a few surges of stronger winds develop, which allowed three brief tornadoes to spin up. Two of the tornadoes that occurred near Bad Axe and Yale were rated EF-0 with peak winds of 85 mph, and one near Applegate was rated EF-1 with peak winds of 90 mph. These three tornadoes doubled the previous number of November tornadoes in Southeast Michigan from 3 to 6 (since 1950). Two of the tornadoes occurred between 7 and 8 am, making these the first tornadoes to occur during this hour on record.

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(MI-Z055) SANILAC, (MI-Z060) SHIAWASSEE, (MI-Z061) GENESEE, (MI-Z062) LAPEER, (MI-Z063) ST. CLAIR, (MI-Z068) LIVINGSTON, (MI-Z069) OAKLAND, (MI-Z070) MACOMB, (MI-Z075) WASHTENAW, (MI-Z082) LENAWE	11/21/15 06:00 EST	0	Heavy Snow
	11/21/15 21:00 EST	0	

The winter season started off with a bang as a strong winter storm hit across the Plains and Midwest. Less than two days prior, Southeast Michigan saw temperatures in the 60 degree range before temperatures quickly cooled off back below freezing as the winter storm took hold. A strong area of low pressure took shape out on the central plains on Friday and strengthened as it moved east over the Mid-Mississippi River Valley. Snowfall reports of around 12 inches were reported over parts of southern Wisconsin and Northern Illinois. The system then took aim on Michigan, bringing with it 1"+ hour snowfall rates to portions of Southeast Michigan during the afternoon and early evening hours on Saturday. Washtenaw, Livingston, Oakland, and Genesee counties were the hardest hit in terms of total snowfall amounts ranging from 10 inches to over 16 inches. Howell, MI came in with the highest snowfall amount at 16.8 inches. The NWS Detroit/Pontiac office in White Lake, MI measured 15.5" by the time the storm wrapped up which is the largest snowstorm the office has seen since it was built in 1994.

Here are some additional higher snowfall reports:

- Clarkston (4 miles southwest) 15.5 inches.
- Manchester (5 miles north) 14.2 inches.
- Holly 14.0 inches.
- Hartland 14 inches.
- Milford 14 inches.
- Lum 12.0 inches.
- Peck (2 miles west) 12.0 inches.
- Cement City (2 miles southeast) 10.0 inches.
- Linden 10.0 inches.
- Armada (2 miles south) 10.0 inches.
- Durand 8.2 inches.
- Yale 8.2 inches.
- Garden City 8.2 inches.
- Livonia 7.0 inches.