

Storm Data and Unusual Weather Phenomena - January 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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INDIANA, Northeast

GRANT COUNTY --- 1.7 W FOWLERTON [40.42, -85.60], 1.1 WSW FOWLERTON [40.42, -85.59], 0.9 WNW FOWLERTON [40.43, -85.58], 1.3 WNW FOWLERTON [40.43, -85.59]

	01/13/13 23:00 EST	1	0	Flood (due to Heavy Rain)
	01/13/13 23:01 EST		0	Source: Broadcast Media

Local media reported that a 19 year old male lost control of his vehicle on State road 26, east of Fairmount, Indiana after encountering high water from a nearby stream that had flowed over the road. The vehicle flipped and the passenger compartment became submerged. A passing motorist contacted 911 and when responders arrived only one foot of the vehicle was visible. Deputies waded 30 to 40 feet off the road into roughly 3 feet of water and attached tow lines and subsequently pulled the vehicle out. The male was found unresponsive in the vehicle and was later pronounced dead at a local hospital.

Direct Fatalities: M19VE

A strong system moved through the region January 12th, bringing widespread rainfall to northern Indiana, along with a few thunderstorms. Rainfall amounts varied from three quarters of an inch in northwestern Indiana to one and one half to almost three inches along and east of Interstate 69 and south of U.S. 30. Ground conditions were frozen at the time with a frost depth of several inches. This allowed for all the precipitation to rapidly run off to streams, creeks and rivers and cause rises in water levels and low land flooding. Several roads were closed in the area of concern, with many that are typically impacted during river flooding or other high water events. A 19 year old male lost his life as a result of driving into flood waters where his vehicle flipped, filling the passenger compartment. A rapid response in personnel occurred, but by the time he was reached and the vehicle secured he was non responsive and later pronounced dead at a local hospital.

(IN-Z003) LA PORTE

	01/23/13 20:00 CST		0	Lake-Effect Snow
	01/24/13 07:00 CST		0	

An intense lake effect snow band dropped a quick 4 to 8 inches of heavy snow across northwest Indiana.

(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z007) STEUBEN, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z012) STARKE, (IN-Z013) PULASKI, (IN-Z014) MARSHALL, (IN-Z016) KOSCIUSKO, (IN-Z017) WHITLEY, (IN-Z018) ALLEN, (IN-Z024) WABASH, (IN-Z025) HUNTINGTON, (IN-Z026) WELLS, (IN-Z027) ADAMS

	01/27/13 17:00 CST		0	Winter Weather
	01/28/13 00:00 CST		0	

(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z007) STEUBEN, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z012) STARKE, (IN-Z013) PULASKI, (IN-Z014) MARSHALL, (IN-Z016) KOSCIUSKO, (IN-Z017) WHITLEY, (IN-Z018) ALLEN, (IN-Z024) WABASH, (IN-Z025) HUNTINGTON, (IN-Z026) WELLS, (IN-Z027) ADAMS

	01/27/13 18:00 EST		0	Winter Weather
	01/28/13 01:00 EST		0	

Light freezing rain spread north into the region ahead of a warm front during the evening hours of January 27th. Ice accretions near a tenth of an inch were common.

ELKHART COUNTY --- 1.4 S (EKM)ELKHART MUNI AR [41.70, -86.00]

	01/29/13 02:15 EST		0	Hail (1.00 in)
	01/29/13 02:16 EST		0	Source: Trained Spotter

MARSHALL COUNTY --- 0.9 NE TIPPECANOE [41.21, -86.11]

	01/29/13 13:50 EST		0	Hail (0.88 in)
	01/29/13 13:51 EST		0	Source: Trained Spotter

A trained spotter reported hail up to the size of nickels covering the ground. Visibility was reduced to one eighth of a mile during the hail fall.

ELKHART COUNTY --- 0.5 W ELKHART [41.68, -85.98]

	01/29/13 14:00 EST		0	Hail (0.75 in)
	01/29/13 14:01 EST		0	Source: Trained Spotter

A warm front was advancing north into the southern Great Lakes. Strong overrunning occurred north of the front with surface dew points climbing into the 40s and 50s. This allowed for isolated thunderstorm development. Although instability and moisture was low, plenty of shear allowed the stronger cells to maintain hail cores for an somewhat extended period of time. Isolated severe reports

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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were received.

(IN-Z004) ST. JOSEPH

	01/31/13 10:00 EST		0	Lake-Effect Snow
	01/31/13 23:59 EST		0	

Moderate to heavy lake effect snow showers accumulated to between 5 and 9 inches in spots January 31st into the morning hours of February 1st.

MICHIGAN, Extreme Southwest

(MI-Z077) BERRIEN

	01/23/13 18:00 EST		0	Lake-Effect Snow
	01/24/13 07:00 EST		0	

An intense lake effect snow band dropped a quick 4 to 12 inches of heavy snow across far southwest Lower Michigan.

(MI-Z077) BERRIEN

	01/27/13 17:00 EST		0	Ice Storm
	01/28/13 01:00 EST		0	

(MI-Z078) CASS, (MI-Z079) ST. JOSEPH, (MI-Z080) BRANCH, (MI-Z081) HILLSDALE

	01/27/13 18:00 EST		0	Winter Weather
	01/28/13 03:00 EST		0	

Light freezing rain spread north into the region ahead of a warm front during the evening hours of January 27th. Ice accretions near a tenth of an inch were common.

ST. JOSEPH COUNTY --- 3.8 SW WHITE PIGEON [41.76, -85.68]

	01/29/13 02:40 EST		0	Hail (1.00 in)
	01/29/13 02:41 EST		0	Source: Public

A warm front was advancing north into the southern Great Lakes. Strong overrunning occurred north of the front with surface dew points climbing into the 40s and 50s. This allowed for isolated thunderstorm development. Although instability and moisture was low, plenty of shear allowed the stronger cells to maintain hail cores for an somewhat extended period of time. Isolated severe reports were received.

(MI-Z077) BERRIEN, (MI-Z078) CASS

	01/31/13 09:00 EST		0	Lake-Effect Snow
	01/31/13 23:59 EST		0	

Moderate to heavy lake effect snow showers accumulated to between 6 and 10 inches in spots January 31st into the morning hours of February 1st.

OHIO, Northwest

(OH-Z001) WILLIAMS, (OH-Z002) FULTON, (OH-Z004) DEFIANCE, (OH-Z005) HENRY, (OH-Z015) PAULDING, (OH-Z016) PUTNAM, (OH-Z024) VAN WERT, (OH-Z025) ALLEN

	01/27/13 20:00 EST		0	Winter Weather
	01/28/13 01:00 EST		0	

Light freezing rain spread north into the region ahead of a warm front during the evening hours of January 27th. Ice accretions near a tenth of an inch were common.

Storm Data and Unusual Weather Phenomena - February 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
INDIANA, Northeast				
(IN-Z003) LA PORTE				
	02/02/13 01:00 CST	0		Heavy Snow
	02/02/13 19:00 CST	0		
(IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z014) MARSHALL				
	02/02/13 02:00 EST	0		Winter Weather
	02/02/13 18:00 EST	0		
An Alberta Clipper dropped between 2 and 4 inches of accumulating snow on the region, with heavier amounts in excess of 6 inches near the Lake Michigan shoreline in northwest Indiana.				
(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z007) STEUBEN, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z014) MARSHALL, (IN-Z016) KOSCIUSKO, (IN-Z017) WHITLEY, (IN-Z018) ALLEN				
	02/04/13 01:00 CST	0		Winter Weather
	02/04/13 10:00 CST	0		
(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z007) STEUBEN, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z014) MARSHALL, (IN-Z016) KOSCIUSKO, (IN-Z017) WHITLEY, (IN-Z018) ALLEN				
	02/04/13 02:00 EST	0		Winter Weather
	02/04/13 13:00 EST	0		
An Alberta Clipper brought accumulating snow to northeast Indiana on February 4th, with total accumulations generally ranging between 2 and 4 inches.				
(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z007) STEUBEN, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z012) STARKE, (IN-Z013) PULASKI, (IN-Z014) MARSHALL, (IN-Z015) FULTON, (IN-Z017) WHITLEY, (IN-Z018) ALLEN, (IN-Z020) WHITE, (IN-Z022) CASS, (IN-Z023) MIAMI, (IN-Z024) WABASH, (IN-Z025) HUNTINGTON, (IN-Z026) WELLS, (IN-Z027) ADAMS, (IN-Z032) GRANT, (IN-Z033) BLACKFORD, (IN-Z034) JAY				
	02/21/13 01:00 EST	0		Winter Weather
	02/22/13 09:00 EST	0		
(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z007) STEUBEN, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z012) STARKE, (IN-Z013) PULASKI, (IN-Z014) MARSHALL, (IN-Z015) FULTON, (IN-Z017) WHITLEY, (IN-Z018) ALLEN, (IN-Z020) WHITE, (IN-Z022) CASS, (IN-Z023) MIAMI, (IN-Z024) WABASH, (IN-Z025) HUNTINGTON, (IN-Z026) WELLS, (IN-Z027) ADAMS, (IN-Z032) GRANT, (IN-Z033) BLACKFORD, (IN-Z034) JAY				
	02/21/13 23:00 CST	0		Winter Weather
	02/22/13 07:00 CST	0		
A warm front lifting through the region brought a period of snow, sleet, and freezing rain to northern Indiana during the early morning hours of February 22.				
(IN-Z006) LAGRANGE, (IN-Z007) STEUBEN, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z013) PULASKI, (IN-Z015) FULTON, (IN-Z016) KOSCIUSKO, (IN-Z017) WHITLEY, (IN-Z018) ALLEN, (IN-Z020) WHITE, (IN-Z022) CASS, (IN-Z023) MIAMI, (IN-Z024) WABASH, (IN-Z025) HUNTINGTON, (IN-Z026) WELLS, (IN-Z027) ADAMS, (IN-Z032) GRANT, (IN-Z033) BLACKFORD, (IN-Z034) JAY				
	02/26/13 07:00 EST	0		Winter Weather
	02/26/13 14:00 EST	0		
A strong low pressure system lifting northeast through the Midwest and Great Lakes brought a period of moderate freezing rain to northern Indiana on February 26th. Ice accretions near a tenth of an inch were common.				
MICHIGAN, Extreme Southwest				
(MI-Z077) BERRIEN				
	02/02/13 01:00 EST	0		Heavy Snow
	02/02/13 18:00 EST	0		

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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(MI-Z078) CASS, (MI-Z079) ST. JOSEPH, (MI-Z080) BRANCH, (MI-Z081) HILLSDALE

02/02/13 02:00 EST	0	Winter Weather
02/02/13 17:00 EST	0	

An Alberta Clipper dropped between 2 and 4 inches of accumulating snow on the region, with heavier amounts in excess of 6 inches near the Lake Michigan shoreline in southwest Lower Michigan.

(MI-Z077) BERRIEN, (MI-Z078) CASS, (MI-Z079) ST. JOSEPH, (MI-Z080) BRANCH, (MI-Z081) HILLSDALE

02/22/13 01:00 EST	0	Winter Weather
02/22/13 09:00 EST	0	

A warm front lifting through the region brought a period of snow, sleet, and freezing drizzle to southern Michigan during the early morning hours of February 22.

(MI-Z077) BERRIEN, (MI-Z078) CASS

02/26/13 13:00 EST	0	Winter Weather
02/27/13 09:00 EST	0	

(MI-Z079) ST. JOSEPH, (MI-Z080) BRANCH, (MI-Z081) HILLSDALE

02/26/13 13:00 EST	0	Winter Storm
02/27/13 09:00 EST	0	

A strong low pressure system lifting northeast through the Midwest and Great Lakes brought a period of heavy snow and freezing rain to southern Michigan. Snow totals near 6 inches and ice accretions near a tenth of an inch were common.

OHIO, Northwest

(OH-Z001) WILLIAMS, (OH-Z002) FULTON, (OH-Z004) DEFIANCE, (OH-Z005) HENRY, (OH-Z015) PAULDING, (OH-Z016) PUTNAM, (OH-Z024) VAN WERT, (OH-Z025) ALLEN

02/04/13 06:00 EST	0	Winter Weather
02/04/13 15:00 EST	0	

An Alberta Clipper brought accumulating snow to northwest Ohio on February 4th, with total accumulations generally ranging between 2 and 4 inches.

(OH-Z015) PAULDING

02/05/13 08:00 EST	0	Dense Fog
02/05/13 09:00 EST	0	

Clear skies and a fresh snow pack allowed for the formation of fog across northwestern Ohio. Pockets of dense fog occurred with some locations reporting near zero visibilities. The fog played a factor in a 14 vehicle pile up on U.S. 24 in Paulding county when a SUV pulled out in front of a tanker carrying ethanol fuel. The driver of the SUV was pronounced dead at the scene. The accident resulted in 12 additional vehicles becoming involved in the scene as well as the rupture and release of 1,500 gallons of ethanol fuel into the median of U.S. 24. The highway was closed for several hours due to the clean up of both vehicles and the spilled fuel. Nine non-life-threatening injuries also resulted from the accident.

(OH-Z001) WILLIAMS, (OH-Z002) FULTON, (OH-Z004) DEFIANCE, (OH-Z005) HENRY, (OH-Z015) PAULDING, (OH-Z016) PUTNAM, (OH-Z024) VAN WERT, (OH-Z025) ALLEN

02/22/13 02:00 EST	0	Winter Weather
02/22/13 09:00 EST	0	

A warm front lifting through the region brought a period of snow, sleet, and freezing rain to northwest Ohio during the early morning hours of February 22.

(OH-Z001) WILLIAMS, (OH-Z002) FULTON, (OH-Z004) DEFIANCE, (OH-Z005) HENRY, (OH-Z015) PAULDING, (OH-Z016) PUTNAM, (OH-Z024) VAN WERT, (OH-Z025) ALLEN

02/26/13 08:00 EST	0	Winter Weather
02/26/13 14:00 EST	0	

Storm Data and Unusual Weather Phenomena - February 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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A strong low pressure system lifting northeast through the Midwest and Great Lakes brought a period of moderate freezing rain to northwest Ohio on February 26th. Ice accretions near a tenth of an inch were common.

Storm Data and Unusual Weather Phenomena - March 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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INDIANA, Northeast

(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z012) STARKE, (IN-Z013) PULASKI, (IN-Z014) MARSHALL, (IN-Z015) FULTON, (IN-Z016) KOSCIUSKO, (IN-Z017) WHITLEY, (IN-Z018) ALLEN, (IN-Z020) WHITE, (IN-Z022) CASS, (IN-Z023) MIAMI, (IN-Z024) WABASH, (IN-Z025) HUNTINGTON, (IN-Z026) WELLS, (IN-Z027) ADAMS, (IN-Z032) GRANT, (IN-Z033) BLACKFORD, (IN-Z034) JAY

03/05/13 13:00 CST	0	Heavy Snow
03/06/13 01:00 CST	0	

(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z012) STARKE, (IN-Z013) PULASKI, (IN-Z014) MARSHALL, (IN-Z015) FULTON, (IN-Z016) KOSCIUSKO, (IN-Z017) WHITLEY, (IN-Z018) ALLEN, (IN-Z020) WHITE, (IN-Z022) CASS, (IN-Z023) MIAMI, (IN-Z024) WABASH, (IN-Z025) HUNTINGTON, (IN-Z026) WELLS, (IN-Z027) ADAMS, (IN-Z032) GRANT, (IN-Z033) BLACKFORD, (IN-Z034) JAY

03/05/13 14:00 EST	0	Heavy Snow
03/06/13 04:00 EST	0	

A strengthening low pressure system tracking east through the Ohio Valley region dropped between 6 and 12 inches of heavy snow on northern Indiana, mainly during the afternoon and evening hours of March 5th.

(IN-Z018) ALLEN, (IN-Z020) WHITE, (IN-Z022) CASS, (IN-Z023) MIAMI, (IN-Z024) WABASH, (IN-Z025) HUNTINGTON, (IN-Z026) WELLS, (IN-Z027) ADAMS, (IN-Z032) GRANT, (IN-Z033) BLACKFORD, (IN-Z034) JAY

03/24/13 18:00 EST	0	Heavy Snow
03/25/13 13:00 EST	0	

(IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z008) NOBLE, (IN-Z012) STARKE, (IN-Z013) PULASKI, (IN-Z014) MARSHALL, (IN-Z015) FULTON, (IN-Z016) KOSCIUSKO, (IN-Z017) WHITLEY

03/24/13 21:00 EST	0	Winter Weather
03/25/13 13:00 EST	0	

A strengthening low pressure system tracking northeast through the Ohio Valley region dropped up to a foot of heavy wet snow on northern Indiana, mainly during the evening hours of March 24th and morning hours of March 25th.

MICHIGAN, Extreme Southwest

(MI-Z077) BERRIEN, (MI-Z078) CASS

03/05/13 13:00 EST	0	Heavy Snow
03/06/13 01:00 EST	0	

A strengthening low pressure system tracking east through the Ohio Valley region dropped between 6 and 12 inches of heavy snow on southwest Lower Michigan, mainly during the afternoon and evening hours of March 5th.

OHIO, Northwest

(OH-Z015) PAULDING, (OH-Z024) VAN WERT, (OH-Z025) ALLEN

03/05/13 18:00 EST	0	Heavy Snow
03/06/13 04:00 EST	0	

(OH-Z016) PUTNAM

03/05/13 18:00 EST	0	Winter Weather
03/06/13 04:00 EST	0	

A strengthening low pressure system tracking east through the Ohio Valley region dropped between 5 and 9 inches of heavy snow on northwest Ohio, mainly during the late afternoon and evening hours of March 5th.

(OH-Z024) VAN WERT, (OH-Z025) ALLEN

Storm Data and Unusual Weather Phenomena - March 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	03/24/13 22:00 EST		0	Heavy Snow
	03/25/13 13:00 EST		0	
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(OH-Z015) PAULDING, (OH-Z016) PUTNAM				
	03/24/13 23:00 EST		0	Winter Weather
	03/25/13 13:00 EST		0	

A strengthening low pressure system tracking northeast through the Ohio Valley region dropped between 5 and 9 inches of heavy wet snow on northwest Ohio, mainly during the morning hours of March 25th.

Storm Data and Unusual Weather Phenomena - April 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
INDIANA, Northeast				
MIAMI COUNTY --- CONVERSE [40.58, -85.87]				
	04/10/13 12:36 EST	0		Hail (1.00 in)
	04/10/13 12:37 EST	0		Source: Emergency Manager
HUNTINGTON COUNTY --- WARREN [40.68, -85.43]				
	04/10/13 12:45 EST	0		Hail (0.88 in)
	04/10/13 12:46 EST	0		Source: Fire Department/Rescue
GRANT COUNTY --- 0.9 SE SHADY HILLS [40.56, -85.66]				
	04/10/13 12:48 EST	0		Hail (0.88 in)
	04/10/13 12:49 EST	0		Source: Trained Spotter
HUNTINGTON COUNTY --- 3.0 NW MAJENICA [40.80, -85.49]				
	04/10/13 15:33 EST	0		Hail (0.88 in)
	04/10/13 15:34 EST	0		Source: Trained Spotter
HUNTINGTON COUNTY --- 1.1 W MARKLE [40.83, -85.35]				
	04/10/13 15:40 EST	0		Hail (1.00 in)
	04/10/13 15:41 EST	0		Source: Public
<p>A slow moving frontal boundary was located from central Illinois into western Ohio. An unstable air mass along and south of the front allow for clusters of thunderstorms to form, some of which briefly became severe.</p>				
LA PORTE COUNTY --- 0.5 E ALIDA [41.52, -86.89]				
	04/18/13 08:20 CST	0		Thunderstorm Wind (EG 50 kt)
	04/18/13 08:21 CST	0		Source: Law Enforcement
<p>Law enforcement officials reported a semi was blown over near the intersection of U.S. 6 and U.S. 421.</p>				
LA PORTE COUNTY --- 1.3 ESE HANNA [41.41, -86.76]				
	04/18/13 08:24 CST	0		Thunderstorm Wind (EG 50 kt)
	04/18/13 08:25 CST	0		Source: Law Enforcement
<p>Law enforcement reported another semi blown over on U.S. 30 at South County Road 300 West.</p>				
<p>A strong cold front was located across Illinois during the first part of the 18th. Ahead of it, a line of strong to locally severe thunderstorms had formed and moved into portions of northern Indiana. The outflow from the line quickly moved ahead and weakened the system, allowing for damage to be confined to the La Porte county area. Well ahead of the line, strong mixing of low level winds to the surface caused pockets of gradient wind based damage.</p>				
KOSCIUSKO COUNTY --- 1.4 S MONOQUET [41.26, -85.87], 2.0 SSW SILVER LAKE [41.04, -85.90], 4.8 SE SIDNEY [41.05, -85.69], 3.9 ENE PIERCETON [41.23, -85.65]				
	04/18/13 19:17 EST	0		Flood (due to Heavy Rain)
	04/19/13 11:00 EST	0		Source: County Official
<p>High water was noted on several roadways across mainly the southeastern part of the county where two to four inches of rain fell. This included portions of State Route 14 near Silver Lake.</p>				
GRANT COUNTY --- 2.5 N SIMS [40.54, -85.87], 2.9 S PT ISABEL [40.38, -85.84], 1.2 NNW MATTHEWS [40.40, -85.51], 1.3 WSW VAN BUREN [40.61, -85.52]				
	04/18/13 20:46 EST	0		Flood (due to Heavy Rain)
	04/19/13 09:00 EST	0		Source: Emergency Manager
<p>Emergency management officials reported several county roads impassable due to high water as three to four inches of rain fell across the county. Portions of State Route 18 in and around Marion had high water on them, forcing brief closures.</p>				
WHITLEY COUNTY --- 2.8 NNW LARWILL [41.22, -85.65], 4.7 S COLLAMER [41.00, -85.68], 4.9 S DUNFEE [41.01, -85.34], 0.1 SSW CHURUBUSCO [41.23, -85.32]				

Storm Data and Unusual Weather Phenomena - April 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	04/19/13 03:24 EST		0	Flood (due to Heavy Rain)
	04/19/13 16:00 EST		0	Source: Emergency Manager

Heavy rainfall across much of Whitley county caused over 50 county roads to experience high water issues. The greatest focus for flooding and a few road closures resulted from rapid water rises along the Eel River (impacting Collamer and South Whitley) and several of the local lakes (mainly around the Tri-Lakes area). No evacuations were noted, but high water did persist well into the 19th.

Numerous thunderstorms developed and persisted across portions of northern Indiana. The main axis of the heaviest precipitation was located either side of a Marion to Columbia City line where rainfall totals of 2 to 4 inches were common. This allowed several smaller rivers and creeks to rapidly respond and forcing high water into adjacent roadways. Drainage systems also had a difficult time keeping up with rainfall rates of 1 to 2 inches per hour. The rain ended during the evening hours of the 18th, but runoff and drainage problems continued into the 19th.

(IN-Z003) LA PORTE

04/29/13 01:00 CST	0	Dense Fog
04/29/13 01:01 CST	0	

Clearing skies and moist ground conditions allowed for the rapid development of dense fog during the late evening and overnight hours of April 28th into the 29th. Surface observations indicated visibilities of one quarter mile or less initially across far northwestern Indiana and then progressing southeast through the night. A 20 year old woman was pronounced dead at the scene of a one vehicle accident around 1 am CDT with the dense fog playing a large factor in the death. The county coroner reported that the vehicle left the roadway and crashed into a cement drainage culvert at a time when "very heavy pea soup fog" as in the area. Visibility locally in that area was less than one car length.

LAKE MICHIGAN

MICHIGAN CITY IN TO NEW BUFFALO MI COUNTY --- MICHIGAN CITY C-MAN STATION (MCY13) [41.73, -86.91]

04/07/13 00:15 EST	0	Marine Thunderstorm Wind (MG 49 kt)
04/07/13 00:16 EST	0	Source: C-MAN Station

Recorded at the Michigan City marine station.

Sufficient instability existed across the region to allow for the development of a line of showers that moved across southern Lake Michigan. While the convection was not able to grow sufficiently to produce lightning, the line did tap strong winds in the lower levels. This allowed for isolated gusts in excess of 50 mph as the line came ashore.

MICHIGAN CITY IN TO NEW BUFFALO MI COUNTY --- MICHIGAN CITY C-MAN STATION (MCY13) [41.73, -86.91]

04/18/13 09:20 EST	0	Marine Thunderstorm Wind (MG 45 kt)
04/18/13 09:21 EST	0	Source: C-MAN Station

A 52 mph wind gust was recorded at the Michigan City GLERL marine site as a line of thunderstorms came onshore.

A line of thunderstorms moved out of eastern Illinois into southern Lake Michigan, well ahead of a cold front across western Illinois. While the line began weakening with eastward progress, an isolated strong wind report was received.

OHIO, Northwest

ALLEN COUNTY --- 0.9 NE ALLEN CO ARPT [40.71, -84.02]

04/10/13 14:01 EST	0	Thunderstorm Wind (MG 59 kt)
04/10/13 14:02 EST	0	Source: ASOS

The automated weather observation system at the Allen County airport recorded a 68 mph wind gust as thunderstorms moved through.

ALLEN COUNTY --- 1.5 SSW LIMA [40.73, -84.11]

04/10/13 16:51 EST	0	Hail (1.00 in)
04/10/13 16:52 EST	0	Source: Trained Spotter

ALLEN COUNTY --- 1.5 SSW LIMA [40.73, -84.11]

Storm Data and Unusual Weather Phenomena - April 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	04/10/13 16:51 EST		0	Thunderstorm Wind (EG 52 kt)
	04/10/13 16:52 EST		0	Source: Trained Spotter

A trained spotter estimated wind gusts to 60 mph just south of Lima.

A slow moving frontal boundary was located from central Illinois into western Ohio. An unstable air mass along and south of the front allow for clusters of thunderstorms to form, some of which briefly became severe.

Storm Data and Unusual Weather Phenomena - May 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
INDIANA, Northeast				
LA PORTE COUNTY --- 1.7 WSW MICHIGAN CITY [41.71, -86.93]				
	05/28/13 20:27 CST	0		Thunderstorm Wind (EG 56 kt)
	05/28/13 20:28 CST	0		Source: Trained Spotter
A trained spotter reported a few large tree branches were blown down by thunderstorm winds.				
LA PORTE COUNTY --- 1.5 NNE LA CROSSE [41.34, -86.89]				
	05/28/13 20:53 CST	0		Thunderstorm Wind (EG 56 kt)
	05/28/13 20:54 CST	0		Source: Law Enforcement
Law enforcement officials reported widespread tree damage across much of La Porte county. In addition, power poles were blown down along US-421, north of Lacrosse.				
ST. JOSEPH COUNTY --- 2.1 E (SBN)MICHIANA ARPT S [41.70, -86.28]				
	05/28/13 22:10 EST	0		Thunderstorm Wind (EG 52 kt)
	05/28/13 22:11 EST	0		Source: Broadcast Media
A 60 mph wind gust was estimated a broadcast meteorologist.				
ST. JOSEPH COUNTY --- SBN MICHIANA ARPT [41.70, -86.32]				
	05/28/13 22:11 EST	0		Thunderstorm Wind (MG 52 kt)
	05/28/13 22:12 EST	0		Source: ASOS
The Automated Surface Observation System at the South Bend Regional Airport recorded a 60 mph wind gust.				
ST. JOSEPH COUNTY --- 1.7 ENE (SBN)MICHIANA ARPT S [41.71, -86.29]				
	05/28/13 22:12 EST	0		Thunderstorm Wind (MG 54 kt)
	05/28/13 22:13 EST	0		Source: Public
The public estimated a 62 mph wind gust.				
ST. JOSEPH COUNTY --- 0.7 N SOUTH BEND [41.68, -86.25]				
	05/28/13 22:15 EST	0		Thunderstorm Wind (EG 56 kt)
	05/28/13 22:16 EST	0		Source: Trained Spotter
A trained spotter reported multiple power poles were snapped in the middle. In addition, several trees were uprooted.				
ST. JOSEPH COUNTY --- 3.8 NE WOODLAND [41.61, -86.13]				
	05/28/13 22:26 EST	0		Thunderstorm Wind (MG 56 kt)
	05/28/13 22:27 EST	0		Source: Trained Spotter
A trained spotter recorded a 64 mph wind gust.				
ST. JOSEPH COUNTY --- 0.9 SE MISHAWAKA [41.66, -86.16]				
	05/28/13 22:30 EST	0		Thunderstorm Wind (EG 56 kt)
	05/28/13 22:31 EST	0		Source: Trained Spotter
A trained spotter reported a portion of a large tree was snapped near the base of the tree along North Main Street.				
A cluster of thunderstorms developed southwest of Chicago during the mid evening hours and moved rapidly east, taking on a bowing structure as it entered northwestern Indiana. Wind damage was reported across La Porte and St. Joseph counties before the line rapidly began weakening as it encountered a more stable air mass.				
ST. JOSEPH COUNTY --- 0.5 E GRANGER [41.75, -86.11]				
	05/31/13 01:37 EST	0		Thunderstorm Wind (EG 55 kt)
	05/31/13 01:38 EST	0		Source: Broadcast Media
Local media outlets reported several trees and tree branches snapped along a three block wide swath in Granger.				

Storm Data and Unusual Weather Phenomena - May 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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A line of strong to severe thunderstorms developed in central and northern Illinois during the evening hours of May 30th. This line moved east into northwestern Indiana, but was weakening as it arrived. One thunderstorm produced local damage in the Granger area.

KOSCIUSKO COUNTY --- 0.5 E PIERCETON [41.20, -85.71]

	05/31/13 20:30 EST	0	Thunderstorm Wind (EG 50 kt)
	05/31/13 20:31 EST	0	Source: Trained Spotter

A trained spotter reported a six to eight inch diameter, 20 foot long tree branch down across County Road 350 South, near State Route 13.

CASS COUNTY --- 3.3 S LEASES CORNER [40.82, -86.37], 3.7 SSW ROYAL CENTER [40.82, -86.53], 1.9 W ROYAL CENTER [40.87, -86.54], 0.1 NNW LEASES CORNER [40.87, -86.37]

	05/31/13 21:40 EST	0	Flood (due to Heavy Rain)
	05/31/13 23:59 EST	0	Source: Emergency Manager

Emergency management officials reported three to 6 inches of water on many roads between State Routes 16 and 17, north of County Road 400 North in the Royal Center area. Local rain gauges indicates upwards of 3 inches of rain fell during the evening hours. Heavy rain persisted into June 1st.

A convective complex developed across central Illinois late in the afternoon of May 31st, and grew slightly upscale into northwest Indiana late in the evening, producing isolated severe weather and some flooding issues. The initial complex weakened and produced an outflow boundary across southern third of the area from the late evening hours of the 21st into the morning hours of June 1st. Convection continued to regenerate north of this outflow boundary in west to east fashion beginning to set the stage for flash flooding concerns in portions of northern Indiana. Events and further details will also be listed in the June 2013 Storm Data.

LAKE MICHIGAN

MICHIGAN CITY IN TO NEW BUFFALO MI COUNTY --- MICHIGAN CITY C-MAN STATION (MCYI3) [41.73, -86.91]

	05/21/13 00:15 EST	0	Marine Thunderstorm Wind (MG 37 kt)
	05/21/13 00:16 EST	0	Source: C-MAN Station

A 43 mph wind gust was recorded at the Michigan City GLERL marine weather site.

A squall line extended from northeastern Illinois into Arkansas. The northern portion of this line moved over southern Lake Michigan, but was slowly weakening as it moved east. Strong winds were recorded at the Michigan City GLERL site as it came onshore. Once inland, no severe weather occurred.

MICHIGAN, Extreme Southwest

BERRIEN COUNTY --- GALIEN [41.80, -86.50]

	05/28/13 21:55 EST	0	Thunderstorm Wind (EG 56 kt)
	05/28/13 21:56 EST	0	Source: 911 Call Center

County dispatch reported numerous trees down across the southern portions of the county.

BERRIEN COUNTY --- 1.5 W BUCHANAN [41.83, -86.40]

	05/28/13 22:02 EST	0	Thunderstorm Wind (EG 56 kt)
	05/28/13 22:03 EST	0	Source: Trained Spotter

A trained spotter reported numerous large tree limbs down, up to a foot in diameter, on Gardner Rd.

A cluster of thunderstorms developed southwest of Chicago during the mid evening hours and moved rapidly east, taking on a bowing structure as it entered southwestern lower Michigan. Wind damage was reported across Berrien county before the line rapidly began weakening as it encountered a more stable air mass.

OHIO, Northwest

VAN WERT COUNTY --- 1.3 ENE MIDDLE PT [40.86, -84.41]

Storm Data and Unusual Weather Phenomena - May 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	05/30/13 15:56 EST		0	Thunderstorm Wind (EG 60 kt)
	05/30/13 15:57 EST		0	Source: Emergency Manager

Emergency management officials reported three telephone poles snapped 2 miles east of Middle Point.

PUTNAM COUNTY --- 0.5 W OTTOVILLE [40.93, -84.34]

05/30/13 16:09 EST	0	Hail (0.75 in)
05/30/13 16:10 EST	0	Source: Emergency Manager

DEFIANCE COUNTY --- 3.6 N HICKSVILLE [41.35, -84.76]

05/30/13 19:28 EST	0	Thunderstorm Wind (MG 54 kt)
05/30/13 19:29 EST	0	Source: Trained Spotter

Two trees, with some signs of rot, were blown down by strong winds. Several four to ten inch diameter branches were also down in the area. Power lines were reported down, likely from falling branches.

An unstable environment was in place across much of the region, allowing for scattered thunderstorm development. Shear profiles were rather weak, but sufficient to help a few storms organize somewhat and produce isolated severe weather.

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
INDIANA, Northeast				
WHITLEY COUNTY --- 2.5 SE COLLINS [41.17, -85.35], 4.2 S DUNFEE [41.02, -85.34], 2.6 SSW COLLAMER [41.03, -85.68], 0.6 SSE LARWILL [41.17, -85.63]				
	06/01/13 00:04 EST		0	Flash Flood (due to Heavy Rain)
	06/01/13 05:45 EST		0	Source: Emergency Manager
Three to over four inches of rain fell across much of the county, resulting in high water and flash flooding on many roads. Numerous fire calls were received of water running off from the ground into homes.				
WHITE COUNTY --- 0.5 E GUERNSEY [40.80, -86.79]				
	06/01/13 00:10 EST		0	Thunderstorm Wind (EG 50 kt)
	06/01/13 00:11 EST		0	Source: 911 Call Center
County officials reported power lines down.				
WHITE COUNTY --- 0.9 SE MONTICELLO [40.74, -86.74]				
	06/01/13 00:10 EST		0	Thunderstorm Wind (EG 55 kt)
	06/01/13 00:11 EST		0	Source: 911 Call Center
County officials reported trees and power lines down along Riverview Road.				
ALLEN COUNTY --- 1.0 NW EDGERTON [41.09, -84.81], 3.5 ESE GEORGETOWN [41.20, -84.81], 4.5 NNW ARCOLA [41.16, -85.33], 1.6 NNW ABOITE [41.02, -85.34]				
	06/01/13 00:44 EST		0	Flash Flood (due to Heavy Rain)
	06/01/13 05:45 EST		0	Source: Emergency Manager
Significant flash flooding occurred throughout Allen County during the early morning hours of June 1 as a result of three to five inches of rain falling within a few hours, especially across northern portions of Fort Wayne and surrounding communities. Numerous roads and intersections were closed due to high water. Many homes are affected by high water from private yards and ditches. Local official rescued several drivers from their stalled vehicles in flood waters, some over a foot deep. Several roads were washed out, including Lake Avenue, near Reed Rd. An apartment complex in this same area had to be evacuated due to high water. Much of the flooding occurred as a result of Spy Run Creek quickly overflowing its banks. The Fort Wayne Children's Zoo was closed for a day as high waters inundated the grounds, forcing the evacuation of nearly a thousand animals. Science Central also suffered flooding damage in a undeveloped portion of the building as well as parking facilities. This forced the closure of the site for June 1st. Damage estimates have not been received.				
FULTON COUNTY --- 1.7 WSW AKRON [41.04, -86.03]				
	06/01/13 00:55 EST		0	Thunderstorm Wind (EG 55 kt)
	06/01/13 00:56 EST		0	Source: State Official
County officials reported several trees down.				
MIAMI COUNTY --- 2.9 W MACY [40.96, -86.18]				
	06/01/13 01:00 EST		0	Thunderstorm Wind (EG 55 kt)
	06/01/13 01:01 EST		0	Source: Broadcast Media
Local television media reported uprooted trees as well as an antenna being blown down at Nyona Lake, near Macy.				
WHITE COUNTY --- 1.1 NW LEE [40.91, -86.99], 1.8 S SEAFIELD [40.72, -86.98], 0.7 ESE WHITE CO ARPT [40.72, -86.76], 0.7 S MONTICELLO [40.74, -86.75], 2.4 S BURNETTSVILLE [40.74, -86.58], 3.6 ENE HEADLEE [40.91, -86.58]				
	06/01/13 02:00 EST		0	Flash Flood (due to Heavy Rain)
	06/01/13 05:15 EST		0	Source: State Official
County officials reported numerous roads from Monon to south of Monticello flood with some washouts. Flowing water was a foot or more deep in some locations in and around Monon.				
KOSCIUSKO COUNTY --- 4.1 SE BARBEE [41.26, -85.66], 0.2 WNW WINONA LAKE [41.22, -85.85], 1.3 WNW MENTONE [41.18, -86.05], 2.8 W BEAVER DAM [41.08, -86.05], 0.8 WSW BEAVER DAM [41.04, -86.01], 3.1 SSW BEAVER DAM [41.04, -86.01], 5.5 ESE SIDNEY [41.07, -85.65]				
	06/01/13 02:31 EST		0	Flash Flood (due to Heavy Rain)
	06/01/13 05:15 EST		0	Source: NWS Employee

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<p>Torrential rainfall caused rapid run-off on already moist ground, resulting in nearly a dozen roads being closed due the flood waters. Several others roads that typically flood during heavy rain, were marked with high water signs. Spotters and radar estimates showed that between three and five inches of rain fell over a several hour period. The highest amount, 5.47 inches, was reported by an off duty NWS employee in the Winona lake area.</p>				

FULTON COUNTY --- 3.7 NW DELONG [41.17, -86.47], 3.1 ENE TALMA [41.17, -86.08], 2.4 NNW AKRON [41.08, -86.02], 2.9 ESE AKRON [41.04, -85.95], 4.3 SE AKRON [41.00, -85.95], 0.7 ESE GREENOAK [41.00, -86.17], 5.9 ESE FULTON [40.91, -86.17], 4.5 SW GRASS CREEK [40.91, -86.47]

	06/01/13 03:00 EST		0	Flash Flood (due to Heavy Rain)
	06/01/13 05:15 EST		0	Source: State Official

County officials reported numerous roads flooded across the county. A handful of washouts were also noted, including County Road 600 West, south of State Route 14. Spotter and radar estimates indicated that three to over five inches of rain fell across the area. The highest amount was from the Kewanna area where the public reported 5.50 inches of rain.

PULASKI COUNTY --- 6.4 NNW MEDARYVILLE [41.17, -86.93], 2.3 NE MONTEREY [41.17, -86.47], 3.0 ESE THORNHOPE [40.91, -86.47], 5.6 SW FRANCISVILLE [40.91, -86.93]

	06/01/13 04:11 CST		0	Flash Flood (due to Heavy Rain)
	06/01/13 05:15 CST		0	Source: Law Enforcement

Law enforcement officials reported numerous roads with water on them. Countless reports of stranded cars in flood waters were received by dispatch.

Convection moved into the region during the evening hours of May 31st. Although this weakened, the remnants of it provided a west to east focus for continued development of showers and thunderstorms. Precipitable water values of around 2 inches were in place, with training of cells common into the overnight hours of June 1st. To further complicate matters, the comma head of a large bow echo propagated northeast out of central Illinois into portions of northern Indiana. Severe weather occurred across parts of the area, but as the line encountered the existing boundary and a worked over atmosphere, it weakened below severe levels and contributed to the increased flash flooding that occurred. Radar estimates and eventual ground truth reports indicated that 3 to locally as much as 6 inches of rain fell.

GRANT COUNTY --- 1.1 SSE PT ISABEL [40.40, -85.82]

	06/09/13 23:54 EST		0	Thunderstorm Wind (EG 55 kt)
	06/09/13 23:55 EST		0	Source: Law Enforcement

Law enforcement officials reported tree branches down and a carport blown away near on County Road 800 West, south of County Road 1000 South. In addition, an empty grain silo was destroyed and blown away with a portion of a barn roof removed at a residence along County Road 100 South, east of County Road 800 West.

An upper level system moved through the region late on the 9th into the early hours of the 10th. A 30 to 35 knot low level jet was feeding moisture into the area, allowing for widely scattered showers and a few thunderstorms. A low-topped thunderstorm developed in southern Grant county and moved northeast, producing a local wet-microburst and some damage in the Point Isabel area.

PULASKI COUNTY --- 5.6 ESE MEDARYVILLE [41.05, -86.80]

	06/12/13 17:02 CST		0	Hail (0.88 in)
	06/12/13 17:03 CST		0	Source: Emergency Manager

PULASKI COUNTY --- 6.6 ESE MEDARYVILLE [41.05, -86.78]

	06/12/13 17:15 CST		0	Hail (1.75 in)
	06/12/13 17:16 CST		0	Source: Public

The public reported golf ball size hail at the intersection of State Routes 39 and 14.

PULASKI COUNTY --- 1.0 E WINAMAC [41.05, -86.60]

	06/12/13 17:37 CST		0	Hail (1.75 in)
	06/12/13 17:38 CST		0	Source: Emergency Manager

Emergency management officials reported golf ball size hail near Winamac.

PULASKI COUNTY --- 1.0 E WINAMAC [41.05, -86.60]

	06/12/13 17:38 CST		0	Hail (1.75 in)
	06/12/13 17:40 CST		0	Source: Trained Spotter

A trained spotter reported golf ball sized hail, which lasted for around two minutes. There was some minor damage to vehicles in the area.

PULASKI COUNTY --- 3.6 SSE LAWTON [41.05, -86.51]

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	06/12/13 17:39 CST		0	Hail (2.00 in)
	06/12/13 17:44 CST		0	Source: Social Media

Pictures of hen egg size hail was posted on a Facebook page. Comments indicated hail from the size of quarters to hen eggs fell for five minutes.

LA PORTE COUNTY --- 0.6 NNE UNION MILLS ARPT [41.48, -86.77]				
	06/12/13 18:44 CST		0	Thunderstorm Wind (EG 55 kt)
	06/12/13 18:45 CST		0	Source: Emergency Manager

Emergency management officials reported a large tree was blown down south of Union Mills. A few trees were also reported blown down across power lines in south central portions of the county.

LA PORTE COUNTY --- 2.1 E WELLSBORO [41.50, -86.73]				
	06/12/13 18:44 CST		0	Thunderstorm Wind (MG 52 kt)
	06/12/13 18:45 CST		0	Source: Trained Spotter

A trained spotter recorded a 60 mph wind gust near State Routes 39 and US 6.

FULTON COUNTY --- 1.7 WNW KEWANNA [41.03, -86.43]				
	06/12/13 19:00 EST		0	Hail (1.00 in)
	06/12/13 19:01 EST		0	Source: Public

The public reported penny to quarter sized hail northwest of Kewanna.

STARKE COUNTY --- 0.5 W KOONTZ LAKE LAKE [41.42, -86.49]				
	06/12/13 19:13 CST		0	Thunderstorm Wind (EG 60 kt)
	06/12/13 19:14 CST		0	Source: Public

The public reported two large trees were blown down. One caused a power line to fall and the other landed on a garage.

CASS COUNTY --- 0.5 W TWELVE MILE [40.87, -86.23]				
	06/12/13 20:30 EST		0	Thunderstorm Wind (EG 55 kt)
	06/12/13 20:31 EST		0	Source: Emergency Manager

Emergency management officials reported a large branch fell onto a home, penetrating the structure.

WHITE COUNTY --- 0.9 SW WOLCOTT [40.76, -87.04]				
	06/12/13 21:10 EST		0	Thunderstorm Wind (MG 56 kt)
	06/12/13 21:11 EST		0	Source: Trained Spotter

A trained spotter measured sustained winds of 45 mph for 15 minutes, with a peak gust of 65 mph.

WHITE COUNTY --- 1.3 WNW NORWAY [40.79, -86.77]				
	06/12/13 21:14 EST		0	Thunderstorm Wind (EG 55 kt)
	06/12/13 21:15 EST		0	Source: Emergency Manager

Emergency management officials reported several tree limbs down.

WHITLEY COUNTY --- CHURUBUSCO [41.23, -85.32]				
	06/12/13 21:24 EST		0	Hail (1.00 in)
	06/12/13 21:25 EST		0	Source: Amateur Radio

FULTON COUNTY --- 0.9 NE ATHENS [41.06, -86.12]				
	06/12/13 21:30 EST		0	Thunderstorm Wind (EG 60 kt)
	06/12/13 21:31 EST		0	Source: Public

The public reported an estimated three foot diameter tree branch was blown down. The branch landed on the roof of a home.

WHITLEY COUNTY --- 0.9 SW COLUMBIA CITY [41.16, -85.49]				
	06/12/13 21:30 EST		0	Thunderstorm Wind (EG 60 kt)
	06/12/13 21:31 EST		0	Source: Law Enforcement

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Law enforcement officials reported numerous trees down across the county.				
FULTON COUNTY --- 0.9 NE ATHENS [41.06, -86.12]				
	06/12/13 21:40 EST		0	Thunderstorm Wind (EG 60 kt)
	06/12/13 21:41 EST		0	Source: Public
The public reported a three foot diameter tree branch fell onto a house.				
ALLEN COUNTY --- HUNTERTOWN [41.23, -85.17]				
	06/12/13 21:45 EST		0	Hail (1.00 in)
	06/12/13 21:46 EST		0	Source: Broadcast Media
MIAMI COUNTY --- 0.7 N (GUS)GRISSOM AFB PER [40.66, -86.15]				
	06/12/13 21:46 EST		0	Thunderstorm Wind (EG 70 kt)
	06/12/13 21:47 EST		0	Source: Trained Spotter
Trained spotters estimated 70 to 80 mph wind gusts near the Grissom Air Reserve Base.				
WABASH COUNTY --- 3.3 NW WABASH [40.83, -85.87], 0.7 WNW WABASH [40.80, -85.83]				
	06/12/13 21:47 EST		0	Thunderstorm Wind (EG 83 kt)
	06/12/13 21:52 EST		0	Source: NWS Storm Survey
A National Weather Service survey of damage northwest of Wabash indicated the damage patterns were consistent with a downburst. The path noted here is the center point of the swath with a maximum width of around 3 miles at the start, to roughly 2/3rds of a mile wide at the end. In addition to extensive tree damage, a grain silo and two pole barns were completely destroyed, with the debris being blown to the southeast. Winds were estimated between 90 and 100 mph.				
MIAMI COUNTY --- 0.7 S MACY [40.96, -86.13]				
	06/12/13 21:59 EST		0	Thunderstorm Wind (EG 55 kt)
	06/12/13 22:00 EST		0	Source: Emergency Manager
Emergency management officials reported numerous power lines down between County Roads 500 and 600 North.				
MIAMI COUNTY --- DENVER [40.87, -86.08]				
	06/12/13 21:59 EST		0	Thunderstorm Wind (EG 60 kt)
	06/12/13 22:00 EST		0	Source: Emergency Manager
Emergency management officials reported a large tree down, as well as power lines, blocking State Route 19, near County Road 500 North. The road was impassable.				
MIAMI COUNTY --- 3.4 ESE CHILI [40.85, -85.97]				
	06/12/13 22:00 EST		0	Thunderstorm Wind (EG 60 kt)
	06/12/13 22:01 EST		0	Source: Trained Spotter
A trained spotter reported a large walnut tree was uprooted along east 600 North, east of Paw Paw Pike. A house suffered roof loss in the area, with a hog barn being partially destroyed.				
WELLS COUNTY --- 1.1 W BLUFFTON [40.73, -85.19]				
	06/12/13 22:02 EST		0	Thunderstorm Wind (EG 55 kt)
	06/12/13 22:03 EST		0	Source: Trained Spotter
A trained spotter reported a large tree blown down on the west side of Bluffton.				
GRANT COUNTY --- 0.9 SE SHADY HILLS [40.56, -85.66]				
	06/12/13 22:05 EST		0	Thunderstorm Wind (MG 58 kt)
	06/12/13 22:06 EST		0	Source: Trained Spotter
A trained spotter measures a 67 mph wind gust. Several four inch tree limbs were blown down in the area.				
GRANT COUNTY --- 0.9 SE SHADY HILLS [40.56, -85.66]				
	06/12/13 22:14 EST		0	Thunderstorm Wind (MG 56 kt)
	06/12/13 22:15 EST		0	Source: Trained Spotter

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
A trained spotter measured a 65 mph wind gust at the intersection of County Roads 300 West and 300 North.				
HUNTINGTON COUNTY --- 1.0 W HUNTINGTON [40.88, -85.50]				
	06/12/13 22:14 EST	0		Thunderstorm Wind (EG 60 kt)
	06/12/13 22:15 EST	0		Source: Emergency Manager
Emergency management officials reported numerous trees down throughout Huntington.				
ADAMS COUNTY --- 0.5 W MONROE [40.75, -84.94]				
	06/12/13 22:15 EST	0		Thunderstorm Wind (EG 55 kt)
	06/12/13 22:16 EST	0		Source: 911 Call Center
County officials reported a camper RV was blown over with small trees down in the area.				
HUNTINGTON COUNTY --- 1.7 WNW MILO [40.68, -85.50]				
	06/12/13 22:17 EST	0		Thunderstorm Wind (EG 60 kt)
	06/12/13 22:18 EST	0		Source: Emergency Manager
Emergency management officials reported numerous trees down across the entire county. A semi was blown over on southbound I-69, near mile marker 274.				
<p>Influenced by a highly unstable, but strongly capped atmosphere ahead of a frontal boundary moving out of Illinois, the combination of 3000 to 4000 J/kg surface based CAPE, mid-level lapse rates between 8 and 9 C/km and 0-6 km deep layer shear of 35 to 55 knots set the stage for rapid supercellular development. The convection transitioned to clusters of bowing segments as storms congealed producing an increased risk for high end damaging wind. Broad, but strong rotation established quickly in the initial storms, allowing for rapid production of hail, some exceeding gold ball size. Numerous funnel clouds were reported in the early stages of the event, indicating conditions were favorable for tornadic development. However, the development of tornadoes was severely limited due to just enough mixed layer inhibition in the lowest levels.</p>				
MIAMI COUNTY --- 0.3 SSE DENVER [40.87, -86.08]				
	06/22/13 14:25 EST	0		Thunderstorm Wind (EG 55 kt)
	06/22/13 14:26 EST	0		Source: Law Enforcement
Law enforcement officials reported a tree down near the intersection of County Roads 1400 North and 400 East. In addition, trees were reported down on State Route 19, near County Road 1500 North.				
HUNTINGTON COUNTY --- 1.4 N ANDREWS [40.87, -85.60]				
	06/22/13 15:05 EST	0		Thunderstorm Wind (EG 55 kt)
	06/22/13 15:06 EST	0		Source: Emergency Manager
Emergency Management officials reported several large tree limbs down in a cemetery location on River Road, west of State Route 105.				
HUNTINGTON COUNTY --- 0.9 W HUNTINGTON [40.88, -85.50]				
	06/22/13 15:15 EST	0		Thunderstorm Wind (EG 55 kt)
	06/22/13 15:16 EST	0		Source: Emergency Manager
Emergency management officials reported a large, healthy tree was blown down on Frederick Street, between Hannah and Herman Streets.				
HUNTINGTON COUNTY --- 1.2 SW HUNTINGTON [40.87, -85.50]				
	06/22/13 15:15 EST	0		Thunderstorm Wind (EG 55 kt)
	06/22/13 15:16 EST	0		Source: Emergency Manager
Emergency management officials reported a large tree limb down at Gardendale and Engle Streets. The limb was too large to be removed by two officers.				
HUNTINGTON COUNTY --- 1.2 SW MAHON [40.92, -85.40]				
	06/22/13 15:23 EST	0		Thunderstorm Wind (EG 55 kt)
	06/22/13 15:24 EST	0		Source: Emergency Manager
Emergency management officials reported a large tree limb was blocking the west bound lanes of US 24, near County Road 600 North.				
HUNTINGTON COUNTY --- 3.1 S BANQUO [40.66, -85.61]				

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	06/22/13 15:40 EST		0	Thunderstorm Wind (EG 55 kt)
	06/22/13 15:41 EST		0	Source: Emergency Manager

Emergency management officials reported a 10 by 20 foot section of shingles off a building at Gardens of Memory Cemetery near State Route 210 and 9. Spotter in the area estimated 65 mph winds.

HUNTINGTON COUNTY --- 3.2 SSE BANQUO [40.66, -85.60]

06/22/13 15:40 EST	0	Thunderstorm Wind (EG 55 kt)
06/22/13 15:41 EST	0	Source: Emergency Manager

Emergency management officials reported a tree down and several sheets of siding off a building on South County Road 800 West. Steel pole barn doors were also blown off on West 1100 South.

A moderately unstable, but weakly sheared environment was in place across the region. Several outflow boundaries acted on these ingredients, allowing for pulse-type thunderstorms to develop. The majority remained below severe limits. However, several reports of wind damage were received in Huntington County.

LA PORTE COUNTY --- 0.7 S MICHIGAN CITY [41.71, -86.90]

06/24/13 17:47 CST	0	Thunderstorm Wind (MG 52 kt)
06/24/13 17:48 CST	0	Source: Trained Spotter

LA PORTE COUNTY --- 0.7 S WESTVILLE [41.54, -86.90]

06/24/13 17:56 CST	0	Thunderstorm Wind (EG 50 kt)
06/24/13 17:57 CST	0	Source: Public

The public reported a large tree limb down across the road near the intersection of US 421 and Main Street.

LA PORTE COUNTY --- 0.7 N LA PORTE [41.61, -86.72]

06/24/13 18:00 CST	0	Thunderstorm Wind (EG 60 kt)
06/24/13 18:01 CST	0	Source: Public

The public reported a large tree limb down on Waverly Road in Laporte. Multiple trees were blown down in the area, with at least one onto a house.

STARKE COUNTY --- KNOX [41.30, -86.63]

06/24/13 18:10 CST	0	Thunderstorm Wind (EG 55 kt)
06/24/13 18:11 CST	0	Source: Law Enforcement

Law enforcement officials reported trees and utility lines down across the entire county.

MARSHALL COUNTY --- 0.9 SE LAPAZ [41.46, -86.31]

06/24/13 19:15 EST	0	Thunderstorm Wind (EG 55 kt)
06/24/13 19:16 EST	0	Source: Emergency Manager

Emergency management officials reported a tree fell onto a car on 4B Road. the occupants of the car were able to get out.

ST. JOSEPH COUNTY --- 0.5 E NEW CARLISLE [41.70, -86.51]

06/24/13 19:15 EST	0	Thunderstorm Wind (EG 60 kt)
06/24/13 19:16 EST	0	Source: Department of Highways

County highway officials reported a tree down onto Highway 2, near the county line. The tree was blocking all west bound lanes.

ST. JOSEPH COUNTY --- 0.5 E (SBN)MICHIANA ARPT S [41.70, -86.31]

06/24/13 19:20 EST	0	Thunderstorm Wind (MG 58 kt)
06/24/13 19:21 EST	0	Source: ASOS

The automated weather station at the South Bend Regional Airport measured a 67 mph wind gust.

ST. JOSEPH COUNTY --- 1.7 WNW SPORTSMAN ARPT [41.71, -86.15]

06/24/13 19:28 EST	0	Thunderstorm Wind (EG 56 kt)
06/24/13 19:29 EST	0	Source: Broadcast Media

Local media estimated 55 to 65 mph wind gusts along with several tree limbs being blown down.

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
ST. JOSEPH COUNTY --- 1.7 SE WOODLAND [41.55, -86.16]				
	06/24/13 19:34 EST		0	Thunderstorm Wind (MG 56 kt)
	06/24/13 19:35 EST		0	Source: Trained Spotter
ST. JOSEPH COUNTY --- 0.9 SE MISHAWAKA [41.66, -86.16]				
	06/24/13 19:35 EST		0	Thunderstorm Wind (MG 50 kt)
	06/24/13 19:36 EST		0	Source: Broadcast Media
The broadcast media measured a 58 mph wind gust at Old Reverewood in Mishawaka.				
ST. JOSEPH COUNTY --- 1.0 W MAPLE LANE [41.70, -86.25]				
	06/24/13 19:35 EST		0	Thunderstorm Wind (EG 55 kt)
	06/24/13 19:36 EST		0	Source: Broadcast Media
Local media reported numerous tree branches down in and around the campus of Notre Dame.				
MARSHALL COUNTY --- 0.9 SE PLYMOUTH [41.34, -86.31]				
	06/24/13 19:44 EST		0	Thunderstorm Wind (EG 50 kt)
	06/24/13 19:45 EST		0	Source: Emergency Manager
Emergency management officials reported utility lines down on Michigan Street.				
KOSCIUSKO COUNTY --- 0.7 N WARSAW [41.24, -85.83]				
	06/24/13 19:45 EST		0	Thunderstorm Wind (EG 52 kt)
	06/24/13 19:46 EST		0	Source: NWS Employee
An off duty NWS employee estimated 55 to 60 mph winds with the outflow from a thunderstorm, with small tree limbs were falling.				
KOSCIUSKO COUNTY --- 1.7 SE WARSAW ARPT [41.26, -85.83]				
	06/24/13 19:46 EST		0	Thunderstorm Wind (EG 55 kt)
	06/24/13 19:47 EST		0	Source: NWS Employee
An off duty NWS employee reported a large branch and power lines down northeast of Warsaw.				
ELKHART COUNTY --- 0.5 W ELKHART [41.68, -85.98]				
	06/24/13 19:50 EST		0	Thunderstorm Wind (EG 50 kt)
	06/24/13 19:51 EST		0	Source: Public
Multiple power lines, some arcing, were reported down near Francis and Blaine Street.				
KOSCIUSKO COUNTY --- 0.7 S VAWTER PARK [41.39, -85.70]				
	06/24/13 19:51 EST		0	Thunderstorm Wind (EG 60 kt)
	06/24/13 19:52 EST		0	Source: NWS Employee
An off duty NWS employee reported a two and one half foot (2.5 foot) diameter healthy tree snapped roughly five feet from the ground. A one and one half foot (1.5 foot) diameter healthy tree was snapped at the 15 foot level. A one foot tree limb was blown down with a six inch tree snapped at the base.				
ST. JOSEPH COUNTY --- 0.5 E GRANGER [41.75, -86.11]				
	06/24/13 19:55 EST		0	Thunderstorm Wind (EG 60 kt)
	06/24/13 19:56 EST		0	Source: Public
The public reported two large trees down just south of the Michigan state line in Granger.				
NOBLE COUNTY --- KIMMELL [41.40, -85.55]				
	06/24/13 20:01 EST		0	Thunderstorm Wind (EG 55 kt)
	06/24/13 20:02 EST		0	Source: Emergency Manager
Emergency management officials reported an eight inch diameter tree branch down at US 33 and County Road 750 West.				
WHITLEY COUNTY --- 0.5 W SOUTH WHITLEY [41.08, -85.63]				

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	06/24/13 20:02 EST		0	Thunderstorm Wind (EG 50 kt)
	06/24/13 20:03 EST		0	Source: Emergency Manager
Emergency management officials reported power lines down on West River Road.				
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NOBLE COUNTY --- 2.1 W ROME CITY [41.50, -85.42]				
	06/24/13 20:14 EST		0	Thunderstorm Wind (EG 55 kt)
	06/24/13 20:15 EST		0	Source: Emergency Manager
Emergency management officials reported a large tree branch was blown down across County Road 125 West at the west end of Waldron Lake.				
<hr/>				
ALLEN COUNTY --- 0.5 W (FWA)BAER FLD FT WAY [40.98, -85.19]				
	06/24/13 20:32 EST		0	Thunderstorm Wind (MG 55 kt)
	06/24/13 20:33 EST		0	Source: ASOS
The automated weather station at the Fort Wayne International Airport recorded a 63 mph wind gust.				
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ALLEN COUNTY --- 1.4 N TOWNLEY [41.04, -84.87]				
	06/24/13 20:57 EST		0	Thunderstorm Wind (EG 50 kt)
	06/24/13 20:58 EST		0	Source: Public
The public reported thunderstorm winds lifting and moving a camper trailer. It is unknown if the camper was expanded or not.				
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WHITLEY COUNTY --- 1.5 NNW COLUMBIA CITY [41.19, -85.49]				
	06/24/13 21:15 EST		0	Thunderstorm Wind (EG 50 kt)
	06/24/13 21:16 EST		0	Source: Public
The siding was blown off a house on County Road 200 North in Columbia City.				
<p>A very warm and unstable air-mass advected into the region. Outflow from morning convection and some mid/high clouds helped to keep the area capped for most of the day. Convection began firing over Iowa around 18 UTC and quickly formed into a forward propagating Mesoscale Convective System (MCS) that followed the instability gradient into northern Indiana during the evening hours. The storms were most intense as they entered Laporte County, and slowly weakened with time. Despite the weakening trend, damaging winds were reported well into the evening.</p>				
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LA PORTE COUNTY --- 0.7 S UNION MILLS [41.49, -86.78]				
	06/25/13 19:05 CST		0	Thunderstorm Wind (EG 56 kt)
	06/25/13 19:06 CST		0	Source: Public
The public estimated a 65 mph wind gust. Trees were observed blown down in the area.				
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STEBEN COUNTY --- FREMONT [41.73, -84.93]				
	06/25/13 19:55 EST		0	Thunderstorm Wind (EG 55 kt)
	06/25/13 19:56 EST		0	Source: Emergency Manager
Emergency management officials reported tree limbs blown down onto power lines.				
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STEBEN COUNTY --- 1.4 N HUDSON [41.55, -85.08]				
	06/25/13 20:25 EST		0	Thunderstorm Wind (EG 60 kt)
	06/25/13 20:26 EST		0	Source: Emergency Manager
Emergency management officials reported a two foot diameter tree was blown down.				
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STEBEN COUNTY --- HUDSON [41.53, -85.08]				
	06/25/13 20:25 EST		0	Thunderstorm Wind (EG 60 kt)
	06/25/13 20:26 EST		0	Source: Emergency Manager
Emergency management officials reported a two foot diameter tree was blown down.				
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ELKHART COUNTY --- 0.7 N WAKARUSA [41.54, -86.02]				
	06/25/13 20:35 EST		0	Thunderstorm Wind (EG 52 kt)
	06/25/13 20:36 EST		0	Source: Public

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
The public estimated a 60 mph wind gust. Large tree limbs were blown down in the area.				
LAGRANGE COUNTY --- 2.2 WSW ELMIRA [41.59, -85.24]				
	06/25/13 20:40 EST	0		Thunderstorm Wind (EG 52 kt)
	06/25/13 20:41 EST	0		Source: Trained Spotter
A trained spotter estimated a 60 mph wind gust.				
KOSCIUSKO COUNTY --- 0.5 E WARSAW [41.23, -85.82]				
	06/25/13 20:48 EST	0		Thunderstorm Wind (EG 52 kt)
	06/25/13 20:49 EST	0		Source: Trained Spotter
A trained spotter estimated a 60 mph wind gust. Penny size hail was also observed.				
KOSCIUSKO COUNTY --- 0.7 N NORTH WEBSTER [41.33, -85.70]				
	06/25/13 21:00 EST	0		Thunderstorm Wind (EG 56 kt)
	06/25/13 21:01 EST	0		Source: NWS Employee
Numerous tree limbs, ranging from three to eight inches in diameter, were observed blown down in and around the town of North Webster by an off duty NWS employee.				
KOSCIUSKO COUNTY --- 2.8 N NORTH WEBSTER [41.36, -85.70]				
	06/25/13 21:01 EST	0		Thunderstorm Wind (EG 56 kt)
	06/25/13 21:02 EST	0		Source: Official NWS Observations
A 65 mph wind gust was estimated at the NWS Forecast office.				
LA PORTE COUNTY --- 1.9 WSW MICHIGAN CITY [41.71, -86.93], 0.7 NNW MICHIANA SHRS [41.76, -86.82], 2.7 N LAKE PARK [41.76, -86.52], 4.7 N MILL CREEK [41.65, -86.53], 4.8 NNE MILL CREEK [41.64, -86.49], 2.4 E KANKAKEE [41.52, -86.50], 0.9 WSW SOUTH CENTER [41.47, -86.54], 1.6 NW HASKELLS [41.49, -86.92]				
	06/26/13 08:40 CST	0		Flash Flood (due to Heavy Rain)
	06/26/13 12:30 CST	0		Source: Emergency Manager
Emergency management officials reported widespread flooding of roads and basements with numerous road closures. Reports of basement collapses were received, with at least one road washout at the intersection of Johnson and Pahs Roads. The K&M Plaza in Michigan City suffered a complete roof collapse as a result of the heavy rain. Radar and spotter reports indicated that four to six inches of rain fell from Tuesday evening into Wednesday morning (June 25th into the 26th).				
An upper level disturbance moved through the region during the late afternoon and early evening hours. Strong shear, instability and steep mid level lapse rates all combined with the wave to produce numerous thunderstorms across Illinois. These storms moved into northern Indiana and continued to expand. Several reports of damaging winds were received along with some hail.				
CASS COUNTY --- ADAMSBORO [40.78, -86.27]				
	06/27/13 16:25 EST	0		Hail (1.00 in)
	06/27/13 16:26 EST	0		Source: Emergency Manager
CASS COUNTY --- ADAMSBORO [40.78, -86.27]				
	06/27/13 16:25 EST	0		Thunderstorm Wind (EG 52 kt)
	06/27/13 16:26 EST	0		Source: Emergency Manager
Emergency management officials estimated a 60 mph wind gust along the leading edge of the storm.				
MIAMI COUNTY --- 0.7 N (GUS)GRISSOM AFB PER [40.66, -86.15]				
	06/27/13 16:41 EST	0		Thunderstorm Wind (MG 50 kt)
	06/27/13 16:42 EST	0		Source: AWOS
Recorded at the Grissom Air Reserve Base.				
MIAMI COUNTY --- 0.7 N (GUS)GRISSOM AFB PER [40.66, -86.15]				
	06/27/13 16:42 EST	0		Hail (0.75 in)
	06/27/13 16:43 EST	0		Source: Emergency Manager

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
MIAMI COUNTY --- 0.7 S BUNKER HILL [40.66, -86.10]				
	06/27/13 16:45 EST	0		Hail (1.00 in)
	06/27/13 16:46 EST	0		Source: Emergency Manager
ST. JOSEPH COUNTY --- NORTH LIBERTY [41.53, -86.43]				
	06/27/13 18:38 EST	0		Hail (1.25 in)
	06/27/13 18:39 EST	0		Source: Public
Several reports were relayed by local media of hail ranging from the size of quarters to half dollars.				
MARSHALL COUNTY --- TEEGARDEN [41.47, -86.38]				
	06/27/13 18:42 EST	0		Hail (1.75 in)
	06/27/13 18:43 EST	0		Source: Public
MARSHALL COUNTY --- BOURBON [41.30, -86.12]				
	06/27/13 18:58 EST	0		Hail (2.00 in)
	06/27/13 18:59 EST	0		Source: Public
KOSCIUSKO COUNTY --- 0.7 S ATWOOD [41.26, -85.98]				
	06/27/13 19:15 EST	0		Thunderstorm Wind (EG 55 kt)
	06/27/13 19:16 EST	0		Source: Public
The public reported two trees were blown down onto a road near the Atwood Fire Station.				
HUNTINGTON COUNTY --- 2.7 ENE GOBLESVILLE [40.99, -85.47]				
	06/27/13 19:25 EST	0		Hail (1.00 in)
	06/27/13 19:26 EST	0		Source: Emergency Manager
ALLEN COUNTY --- 3.1 W GREENDALE [41.10, -85.18]				
	06/27/13 19:48 EST	0		Hail (1.00 in)
	06/27/13 19:49 EST	0		Source: Broadcast Media
ALLEN COUNTY --- 3.3 NE WESTLAWN [41.11, -85.20]				
	06/27/13 19:50 EST	0		Hail (1.00 in)
	06/27/13 19:51 EST	0		Source: Broadcast Media
ALLEN COUNTY --- 0.9 SW ARCOLA [41.09, -85.31]				
	06/27/13 19:51 EST	0		Thunderstorm Wind (EG 50 kt)
	06/27/13 19:52 EST	0		Source: Trained Spotter
A trained spotter reported large tree limbs down on Bass Road, near Hamilton Road.				
ALLEN COUNTY --- 3.0 ENE WESTLAWN [41.10, -85.20]				
	06/27/13 19:51 EST	0		Hail (2.00 in)
	06/27/13 19:52 EST	0		Source: Amateur Radio
ALLEN COUNTY --- 0.9 NW WESTLAWN [41.09, -85.26]				
	06/27/13 19:52 EST	0		Hail (1.75 in)
	06/27/13 19:53 EST	0		Source: Fire Department/Rescue
ALLEN COUNTY --- 4.3 SW ARI [41.22, -85.30]				
	06/27/13 20:00 EST	0		Thunderstorm Wind (EG 55 kt)
	06/27/13 20:01 EST	0		Source: Public
Law enforcement officials reported a barn suffered severe damage, including a roof being blown off.				
ADAMS COUNTY --- 0.7 N BERNE [40.66, -84.95]				

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	06/27/13 20:52 EST		0	Hail (0.88 in)
	06/27/13 20:53 EST		0	Source: Public

ADAMS COUNTY --- 0.9 NE CEYLON [40.63, -84.94]

	06/27/13 20:55 EST		0	Thunderstorm Wind (EG 55 kt)
	06/27/13 20:56 EST		0	Source: Emergency Manager

Emergency management officials reported the roof blown off a pole barn at South County Road 000 and 800 South. Several trees were also blown down in the area, with small stalks of corn flattened.

ADAMS COUNTY --- 0.9 SE GENEVA [40.59, -84.96]

	06/27/13 20:55 EST		0	Hail (1.00 in)
	06/27/13 20:56 EST		0	Source: Fire Department/Rescue

An upper level area of low pressure and associated jet streak allowed for favorable conditions for thunderstorm development across much of the southern Great Lakes. Numerous multicell and isolated supercell thunderstorms caused areas of wind damage as well as hail, some of which was on the large side.

LAKE MICHIGAN

MICHIGAN CITY IN TO NEW BUFFALO MI COUNTY --- MICHIGAN CITY C-MAN STATION (MCY13) [41.73, -86.91]

	06/24/13 19:00 EST		0	Marine Thunderstorm Wind (MG 41 kt)
	06/24/13 19:01 EST		0	Source: C-MAN Station

A 47 mph wind gust was recorded at the Michigan City GLERL observation site.

A very warm and unstable air-mass advected into the region. Outflow from morning convection and some mid/high clouds helped to keep the area capped for most of the day. Convection began firing over Iowa around 18 UTC and quickly formed into a forward propagating Mesoscale Convective System (MCS) that followed the instability gradient across southern Lake Michigan. The storms produced gusty winds as they came onshore.

MICHIGAN CITY IN TO NEW BUFFALO MI COUNTY --- 3.5 WNW MICHIGAN CITY C-MAN STATION (MCY13) [41.76, -86.97]

	06/25/13 20:41 EST		0	Marine Thunderstorm Wind (MG 41 kt)
	06/25/13 20:42 EST		0	Source: Buoy

A 47 mph wind gust was recorded at a seasonal buoy located just northwest of Michigan City.

An upper level disturbance moved through the region during the late afternoon and early evening hours. Strong shear, instability and steep mid-level lapse rates all combined with the wave to produce numerous thunderstorms across Illinois. These storms moved across southern Lake Michigan, with locally gusty winds observed as the storms came onshore.

MICHIGAN, Extreme Southwest

BRANCH COUNTY --- 0.7 S COLDWATER [41.94, -85.00]

	06/12/13 19:24 EST		0	Hail (1.00 in)
	06/12/13 19:25 EST		0	Source: Trained Spotter

Influenced by a highly unstable, but strongly capped atmosphere ahead of a frontal boundary moving out of Illinois, the combination of 3000 to 4000 J/kg surface based CAPE, mid-level lapse rates between 8 and 9 C/km and 0-6 km deep layer shear of 35 to 55 knots set the stage for rapid supercellular development. The convection transitioned to clusters of bowing segments as storms congealed producing an increased risk for high end damaging wind. Broad, but strong rotation established quickly in the initial storms, allowing for rapid production of hail, some exceeding golf ball size. Numerous funnel clouds were reported in the early stages of the event, indicating conditions were favorable for tornadic development. However, the development of tornadoes was severely limited due to just enough mixed layer inhibition in the lowest levels.

BRANCH COUNTY --- 2.1 NNW MATTESON [41.96, -85.21]

	06/17/13 21:04 EST		0	Thunderstorm Wind (EG 50 kt)
	06/17/13 21:05 EST		0	Source: Amateur Radio

Amateur radio operators reported a four inch diameter tree and some small tree limbs down near Sherwood.

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
BRANCH COUNTY --- 2.8 S HODUNK [41.98, -85.06]				
	06/17/13 21:13 EST		0	Thunderstorm Wind (EG 55 kt)
	06/17/13 21:14 EST		0	Source: Emergency Manager
Emergency management officials received several reports of trees down in northern parts of Branch county.				
Steep low level lapse rates and dry low levels ahead of a cold front, allowed for the development some a few thunderstorms across central Lower Michigan, which dropped southeast. A few of these storms clipped portions of Branch and St Joseph counties with isolated damaging wind gusts.				
BERRIEN COUNTY --- GALIEN [41.80, -86.50]				
	06/24/13 19:21 EST		0	Thunderstorm Wind (EG 56 kt)
	06/24/13 19:22 EST		0	Source: Law Enforcement
Local law enforcement officials reported numerous trees and power lines down across mainly the southern half of the county.				
BERRIEN COUNTY --- 0.5 E BUCHANAN [41.83, -86.36]				
	06/24/13 19:25 EST		0	Thunderstorm Wind (EG 55 kt)
	06/24/13 19:26 EST		0	Source: Public
Trees reported down at a nearby lake.				
ST. JOSEPH COUNTY --- 0.7 N THREE RIVERS [41.94, -85.63]				
	06/24/13 20:05 EST		0	Thunderstorm Wind (EG 50 kt)
	06/24/13 20:06 EST		0	Source: Trained Spotter
A trained spotter reported power lines down at South Hooker and Buck Street in Three Rivers.				
ST. JOSEPH COUNTY --- 2.6 SW MENDON [41.97, -85.48]				
	06/24/13 20:12 EST		0	Thunderstorm Wind (EG 55 kt)
	06/24/13 20:13 EST		0	Source: Amateur Radio
Amateur radio operators reported an eight inch tree limb down across the road at North Angling and Butler in Centreville.				
ST. JOSEPH COUNTY --- 1.7 NW COLON [41.97, -85.34]				
	06/24/13 20:15 EST		0	Thunderstorm Wind (EG 52 kt)
	06/24/13 20:16 EST		0	Source: Trained Spotter
A trained spotter estimated wind gusts to 60 mph. Two to four inch diameter tree branches were down on local roads.				
ST. JOSEPH COUNTY --- 2.1 SW KIRSCH MUNI ARPT [41.80, -85.48]				
	06/24/13 20:17 EST		0	Thunderstorm Wind (EG 50 kt)
	06/24/13 20:18 EST		0	Source: Fire Department/Rescue
Fire department officials reported utility lines down on US 12 and Stubey Road, west of Sturgis.				
A very warm and unstable air-mass advected into the region. Outflow from morning convection and some mid/high clouds helped to keep the area capped for most of the day. Convection began firing over Iowa around 18 UTC and quickly formed into a forward propagating Mesoscale Convective System (MCS) that followed the instability gradient into far southern Lower Michigan during the evening hours. The storms were most intense as they moved off the lake, but slowly weakened with time. Despite the weakening trend, damaging winds were reported well into the evening..				
CASS COUNTY --- 0.5 W DOWAGIAC [41.98, -86.11]				
	06/25/13 16:30 EST		0	Hail (0.75 in)
	06/25/13 16:31 EST		0	Source: Trained Spotter
CASS COUNTY --- MARCELLUS [42.03, -85.82]				
	06/25/13 17:10 EST		0	Hail (1.00 in)
	06/25/13 17:11 EST		0	Source: Law Enforcement
Law enforcement officials received several reports of quarter size hail.				

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
ST. JOSEPH COUNTY --- MOORE PARK [42.02, -85.63]				
	06/25/13 17:25 EST		0	Hail (0.75 in)
	06/25/13 17:26 EST		0	Source: Trained Spotter
ST. JOSEPH COUNTY --- 0.7 N THREE RIVERS [41.94, -85.63]				
	06/25/13 17:38 EST		0	Hail (0.75 in)
	06/25/13 17:39 EST		0	Source: Trained Spotter
BRANCH COUNTY --- 0.7 S SHERWOOD [41.99, -85.23]				
	06/25/13 17:58 EST		0	Thunderstorm Wind (EG 55 kt)
	06/25/13 17:59 EST		0	Source: Amateur Radio
Amateur radio operators reported a large tree down on near the intersection of Athens and Cline Road.				
BRANCH COUNTY --- 0.9 SW BRONSON ARPT [41.87, -85.19]				
	06/25/13 18:30 EST		0	Thunderstorm Wind (EG 55 kt)
	06/25/13 18:31 EST		0	Source: Broadcast Media
Local media reported numerous trees down around the Bronson area.				
HILLSDALE COUNTY --- 0.5 W HILLSDALE [41.92, -84.63]				
	06/25/13 18:40 EST		0	Thunderstorm Wind (EG 55 kt)
	06/25/13 18:41 EST		0	Source: Emergency Manager
Emergency management officials reported multiple trees down in the Hillsdale and surrounding areas.				
BRANCH COUNTY --- 2.3 SSW BRONSON [41.85, -85.22]				
	06/25/13 19:07 EST		0	Thunderstorm Wind (EG 55 kt)
	06/25/13 19:08 EST		0	Source: Emergency Manager
Emergency management officials reported a tree was blown down onto US 12.				
CASS COUNTY --- 4.6 SE MARCELLUS [41.98, -85.76]				
	06/25/13 19:08 EST		0	Thunderstorm Wind (EG 56 kt)
	06/25/13 19:09 EST		0	Source: Trained Spotter
A trained spotter estimated a 65 mph wind gust.				
BRANCH COUNTY --- 1.2 SE COLDWATER ARPT [41.92, -85.03]				
	06/25/13 19:11 EST		0	Thunderstorm Wind (EG 50 kt)
	06/25/13 19:12 EST		0	Source: Emergency Manager
Emergency management officials reported numerous power lines down from strong winds.				
BRANCH COUNTY --- 0.5 W BRONSON [41.88, -85.21]				
	06/25/13 19:14 EST		0	Thunderstorm Wind (EG 55 kt)
	06/25/13 19:15 EST		0	Source: Emergency Manager
Emergency management officials reported a tree was blown down onto power lines.				
BRANCH COUNTY --- 1.4 N KINDERHOOK [41.82, -85.00]				
	06/25/13 19:15 EST		0	Hail (1.00 in)
	06/25/13 19:16 EST		0	Source: Trained Spotter
BRANCH COUNTY --- KINDERHOOK [41.80, -85.00]				
	06/25/13 19:15 EST		0	Thunderstorm Wind (EG 55 kt)
	06/25/13 19:16 EST		0	Source: Emergency Manager
Emergency management officials reported a tree was blown down, blocking a local road. Power lines were also down in the area.				

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
BRANCH COUNTY --- 0.9 SW BRONSON ARPT [41.87, -85.19]				
	06/25/13 19:20 EST	0		Thunderstorm Wind (EG 55 kt)
	06/25/13 19:21 EST	0		Source: Emergency Manager
Emergency management officials reported numerous trees down.				
BRANCH COUNTY --- 2.8 S BRONSON ARPT [41.84, -85.19]				
	06/25/13 19:20 EST	0		Thunderstorm Wind (EG 58 kt)
	06/25/13 19:21 EST	0		Source: Emergency Manager
Emergency management officials reported a 12 inch diameter tree was blown down, blocking Orland Road.				
BRANCH COUNTY --- 1.5 NNE QUINCY [41.95, -84.87]				
	06/25/13 19:32 EST	0		Thunderstorm Wind (EG 55 kt)
	06/25/13 19:33 EST	0		Source: Emergency Manager
Emergency management officials reported a tree was blown down onto a power line.				
BRANCH COUNTY --- 1.7 NW QUINCY [41.95, -84.90]				
	06/25/13 19:32 EST	0		Thunderstorm Wind (EG 55 kt)
	06/25/13 19:33 EST	0		Source: Emergency Manager
Emergency management officials reported a tree was blown down onto power lines.				
BRANCH COUNTY --- ALGANSEE [41.83, -84.88]				
	06/25/13 19:36 EST	0		Thunderstorm Wind (EG 55 kt)
	06/25/13 19:37 EST	0		Source: Emergency Manager
Emergency management officials reported a tree was blown down, blocking Lester Road west of Ray.				
ST. JOSEPH COUNTY --- 0.7 N THREE RIVERS [41.94, -85.63]				
	06/25/13 19:40 EST	0		Thunderstorm Wind (EG 55 kt)
	06/25/13 19:41 EST	0		Source: Amateur Radio
Amateur radio operators reported a six inch diameter tree down on River Drive, near 6th Avenue.				
BRANCH COUNTY --- 0.9 SW BRONSON ARPT [41.87, -85.19]				
	06/25/13 19:44 EST	0		Hail (1.00 in)
	06/25/13 19:45 EST	0		Source: Law Enforcement
An upper level disturbance moved through the region during the late afternoon and early evening hours. Strong shear, instability and steep mid level lapse rates all combined with the wave to produce numerous thunderstorms. The storms moved off southern Lake Michigan and continued to expand and intensify as they moved east. Several reports of damaging winds were received along with some hail.				
BERRIEN COUNTY --- HARBERT [41.87, -86.63]				
	06/27/13 18:00 EST	0		Thunderstorm Wind (EG 60 kt)
	06/27/13 18:01 EST	0		Source: Emergency Manager
Emergency management officials reported a three to four block radius of Chikaming Township suffering widespread tree as well as structural damage. Tree damage ranged from large broken tree limbs to uprooted trees. Some of these trees impacted structures, causing roof damage. The location of the damage was immediately adjacent to the shores of Lake Michigan.				
An upper level area of low pressure and associated jet streak allowed for favorable conditions for thunderstorm development across much of the southern Great Lakes. Isolated wind damage was reported in Berrien county as a storm came onshore from Lake Michigan.				
OHIO, Northwest				
VAN WERT COUNTY --- 1.0 ESE WILLSHIRE [40.75, -84.80], 1.1 NNW WILLSHIRE OSBORN ARP [40.74, -84.79]				

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	06/12/13 22:27 EST		0	Tornado (EF0, L: 0.64 mi , W: 80 yd)
	06/12/13 22:30 EST		0	Source: NWS Storm Survey

A circulation touched down on the west side of Willshire, along State Road 81 near the Indiana/Ohio State Line. The tornado traveled southeast down Green Street to the intersection of Green Street and State Route 49. An eyewitness observed the funnel make contact with the ground in his yard, snap off two large trees and continue down the street. The survey revealed additional tree damage along the path. Another eyewitness observed condensation vortices being injected into the funnel as his garage was rolled off its foundation. A portion of a house roof was removed and thrown over a neighbor's home. A total of 13 homes suffered varying degrees of damage. The circulation was on the ground less than 3 minutes with a maximum width of 80 yards and maximum wind speeds around 85 mph. The same storm continued into Mercer County and later produced another weak tornado.

PUTNAM COUNTY --- CONTINENTAL [41.10, -84.27]

06/12/13 22:49 EST	0	Thunderstorm Wind (EG 60 kt)
06/12/13 22:50 EST	0	Source: Emergency Manager

Emergency management officials reported structural damage around Continental.

HENRY COUNTY --- 3.3 ESE NEW BAVARIA [41.19, -84.11], 3.4 ESE NEW BAVARIA [41.19, -84.11]

06/12/13 22:55 EST	0	Tornado (EF0, L: 0.04 mi , W: 25 yd)
06/12/13 22:56 EST	0	Source: NWS Storm Survey

Eyewitness reports and a National Weather Service Damage survey indicate a circulation quickly formed and touched down on the leading edge of a larger area of downburst winds along County Road Y, west of County Road 12A. The tornado caused some minor roof damage to a residence and snapped or uprooted several trees in the immediate area (DI: TH DOD: 3); some debarking of tree tops was observed. Wet ground likely aided uprooting of trees. Shortly after touchdown, the tornado became outflow dominant and quickly dissipated with debris being carried by straight line winds to the east. Maximum path length was 50 yards with a maximum width of 25 yards. Wind speeds were estimated at around 85 mph.

HENRY COUNTY --- 1.1 NNW HAMLER [41.25, -84.04], 1.2 N HAMLER [41.25, -84.03]

06/12/13 22:59 EST	0	Tornado (EF1, L: 0.43 mi , W: 50 yd)
06/12/13 23:01 EST	0	Source: NWS Storm Survey

A NWS survey of damage north of Hamler indicated a circulation quickly intensified and touched down onto a barn, destroying it and throwing the debris to the northeast for nearly a half mile (DI: SBO DI: 6). Several large trees in the immediate area were snapped. An adjacent soybean field indicated a convergent wind pattern which continued towards a small grove of trees where the tornado dissipated. The maximum width was 50 yards with maximum wind speeds estimated at 95 mph.

HENRY COUNTY --- 1.7 NNE HAMLER [41.25, -84.02]

06/12/13 22:59 EST	0	Thunderstorm Wind (EG 70 kt)
06/12/13 23:00 EST	0	Source: NWS Storm Survey

A NWS storm survey of damage at a farm indicated a combination of the remnant circulation of a tornado to the southwest of the site, as well as an anchoring failure, resulted in the collapse of a grain leg collapse and damage to several empty grain bins. The grain leg was anchored by a three point system, with the northeast side of the leg being unanchored. As the strong winds impacted an anchor on the southwest side, the leg began to buckle and shift, causing the bending of a large I-beam and the uplift of a cement block where an anchor was set to the northwest of the leg. The grain leg twisted and collapsed onto several bins. Given the failure of the anchoring, winds are estimated at around 80 mph.

HENRY COUNTY --- HAMLER [41.23, -84.03]

06/12/13 22:59 EST	0	Thunderstorm Wind (EG 61 kt)
06/12/13 23:00 EST	0	Source: NWS Storm Survey

Widespread tree and tree limb damage was noted in and around the town of Hamler by NWS officials while conducting surveys of tornado damage in the area. All damage within the town of Hamler was the result of straight line winds.

PUTNAM COUNTY --- NORTH CREEK [41.15, -84.22]

06/12/13 23:00 EST	0	Thunderstorm Wind (EG 60 kt)
06/12/13 23:01 EST	1	Source: Law Enforcement

Law enforcement officials reported numerous trees and power lines down from North Creek to Leipsic. A mobile home was overturned on the south side of North Creek, with one person suffering minor injuries.

HENRY COUNTY --- 1.9 S GRELTON [41.30, -84.00]

06/12/13 23:02 EST	0	Thunderstorm Wind (EG 70 kt)
06/12/13 23:03 EST	0	Source: NWS Storm Survey

Several power poles were observed broken or pushed down along County Road 7, north of County Road J.

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
HENRY COUNTY --- 2.0 SE MALINTA [41.30, -84.01], 2.0 SE MALINTA [41.30, -84.00]				
	06/12/13 23:02 EST	0		Tornado (EF1, L: 0.17 mi , W: 75 yd)
	06/12/13 23:03 EST	0		Source: NWS Storm Survey
<p>A NWS Storm survey indicated that a circulation rapidly touched down at a residence on the south side of County Road J. A detached garage suffered extensive damage, as well as an adjacent barn suffering total loss of its roof (DI: SBO, DOD: 4). The tornado continued northeast with debris from the residence impacting a two story home, causing the destruction of a porch, as well as a large hole punched into the west side of the upper story of the house (DI: FR12, DOD: 4). A large pine tree had the top half snapped off and then thrown roughly 50 feet to rest against other trees on the property. The tornado continued across a field into a small grove of trees, where the tornado likely became outflow dominant and dissipated. While damage to the second residence could indicate much stronger wind speeds, a maximum wind speed of 95 mph was estimated due to the impacts of larger debris from the point of touchdown. The maximum width of the tornado was around 75 yards.</p>				
HENRY COUNTY --- 1.9 W MC CLURE ARPT [41.30, -83.99], 1.8 W MC CLURE ARPT [41.30, -83.98]				
	06/12/13 23:03 EST	0		Tornado (EF0, L: 0.11 mi , W: 15 yd)
	06/12/13 23:04 EST	0		Source: NWS Storm Survey
<p>A NWS Storm survey of damage indicated that two weak and brief tornado occurred, separated by a quarter mile. A convergent, variable track pattern was noted in a wheat field. While the wheat was laid down, actual damage was minimal. The maximum width was 15 yards, with maximum winds of 70 mph.</p>				
HENRY COUNTY --- 2.1 S GRELTON [41.30, -83.99], 1.9 SSE GRELTON [41.30, -83.99]				
	06/12/13 23:03 EST	0		Tornado (EF0, L: 0.25 mi , W: 15 yd)
	06/12/13 23:04 EST	0		Source: NWS Storm Survey
<p>A NWS Storm survey of damage indicated that two weak and brief tornado occurred within a quarter mile of each other. One of these touchdowns caused the collapse of barn doors as well as one of the walls to be blown out. Corn in an adjacent field indicated a brief convergent pattern. The maximum width was 15 yards with a maximum wind speed of 70 mph.</p>				
HENRY COUNTY --- 2.6 S WESTHOPE [41.26, -83.92]				
	06/12/13 23:04 EST	0		Thunderstorm Wind (EG 65 kt)
	06/12/13 23:05 EST	0		Source: Emergency Manager
<p>Emergency management officials reported trees were blown down on County Road 3, between County Roads G and H.</p>				
HENRY COUNTY --- 1.6 W MC CLURE ARPT [41.30, -83.98]				
	06/12/13 23:05 EST	0		Thunderstorm Wind (EG 56 kt)
	06/12/13 23:06 EST	0		Source: NWS Storm Survey
<p>A barn was destroyed at this location, however several of the timbers were rotten. There was damage to trees on the property as well. The damage was likely the results of a circulation that had touched down just to the southwest of this location.</p>				
HENRY COUNTY --- 2.7 SSE NAPOLEON [41.34, -84.12]				
	06/12/13 23:05 EST	0		Thunderstorm Wind (EG 61 kt)
	06/12/13 23:06 EST	0		Source: Trained Spotter
<p>A trained spotter estimated a 70 mph wind gust at the intersection of County Road M and State Route 108.</p>				
<p>Influenced by a highly unstable, but strongly capped atmosphere ahead of a frontal boundary moving out of Illinois, the combination of 3000 to 4000 j/kg surface based CAPE, mid-level lapse rates between 8 and 9 C/km and 0-6 km deep layer shear of 35 to 55 knots set the stage for rapid supercellular development. The convection transitioned to clusters of bowing segments as storms congealed producing an increased risk for high end damaging wind. Broad, but strong rotation established quickly in the initial storms, allowing for rapid production of hail, some exceeding gold ball size. Numerous funnel clouds were reported in the early stages of the event, indicating conditions were favorable for tornadic development. However, the development of tornadoes was severely limited due to just enough mixed layer inhibition in the lowest levels.</p>				
FULTON COUNTY --- 1.2 SW FAYETTE [41.66, -84.34]				
	06/22/13 16:25 EST	0		Thunderstorm Wind (EG 55 kt)
	06/22/13 16:26 EST	0		Source: Trained Spotter
<p>A trained spotter reported an eight inch tree limb down onto a house on South Gorham Street.</p>				
HENRY COUNTY --- 2.6 NE MC CLURE [41.40, -83.90]				

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	06/22/13 19:00 EST		0	Thunderstorm Wind (EG 55 kt)
	06/22/13 19:01 EST		0	Source: Emergency Manager

Emergency management officials reported a tree down on County Road Q between County Road 2 and the Wood County Line.

A moderately unstable, but weakly sheared environment was in place across the region. Several outflow boundaries acted on these ingredients, allowing for pulse-type thunderstorms to develop. The majority remained below severe limits. However, a few reports of damage were received in northwestern Ohio.

FULTON COUNTY --- 0.9 SW DELTA [41.57, -84.01]

06/23/13 20:00 EST	50K	Lightning
06/23/13 20:01 EST	0	Source: Newspaper

Lightning was indirectly the cause of structure fire on the 300 block of Wood Street. Fire officials reported that lightning struck a power line near the residence, with the live line impacting the residence and immediately started a fire. The house was a total loss.

FULTON COUNTY --- 0.9 SW SWANTON [41.59, -83.89]

06/23/13 20:05 EST	0	Thunderstorm Wind (EG 55 kt)
06/23/13 20:06 EST	0	Source: Public

Several public reports were noted on social media of trees down in the town of Swanton.

FULTON COUNTY --- 0.9 SW SWANTON [41.59, -83.89]

06/23/13 20:19 EST	0	Hail (0.75 in)
06/23/13 20:20 EST	0	Source: Trained Spotter

An uncapped, unstable atmosphere was in place ahead of an outflow boundary that moved across northern Indiana into northwestern Ohio. Thunderstorms developed across the area, with the vast majority remaining below severe limits. One storm produced isolated damage in the Swanton area of Fulton county.

VAN WERT COUNTY --- 0.5 W WREN [40.80, -84.78]

06/24/13 21:06 EST	0	Thunderstorm Wind (EG 50 kt)
06/24/13 21:07 EST	0	Source: Trained Spotter

A trained spotter reported power lines down in the Wren area from strong winds.

A very warm and unstable air-mass advected into the region. Outflow from morning convection and some mid/high clouds helped to keep the area capped for most of the day. Convection began firing over Iowa around 18 UTC and quickly formed into a forward propagating Mesoscale Convective System (MCS) that followed the instability gradient into northwestern Ohio during the late evening hours. The storms had weakened considerably moving out of northern Indiana, with an isolated report of wind damage in Van Wert County.

WILLIAMS COUNTY --- EDGERTON [41.45, -84.75]

06/25/13 20:00 EST	0	Thunderstorm Wind (EG 55 kt)
06/25/13 20:01 EST	0	Source: Emergency Manager

Emergency management officials reported a tree was blown down, bringing down an electrical line.

An upper level disturbance moved through the region during the late afternoon and early evening hours. Strong shear, instability and steep mid-level lapse rates all combined with the wave to produce numerous thunderstorms across Illinois. These storms moved across northern Indiana and slowly started weakening as they entered northwestern Ohio. A few of the storms still produced damaging winds.

ALLEN COUNTY --- 0.5 NNE ALLEN CO ARPT [40.71, -84.03]

06/26/13 16:00 EST	0	Thunderstorm Wind (MG 59 kt)
06/26/13 16:01 EST	0	Source: ASOS

The automated weather sensor at the Lima airport recorded a 68 mph wind gust. Some power lines were noted in the area.

The northern fringe of an upper level system skirted the Allen county area, with a few thunderstorms developing. One of these storms collapsed near the Allen County airport in Lima.

DEFIANCE COUNTY --- 1.7 N NEY [41.40, -84.52]

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	06/29/13 15:34 EST		0	Funnel Cloud
	06/29/13 15:35 EST		0	Source: Emergency Manager

A well-defined funnel cloud was photographed near the start of sporadic damage. While the picture shows the funnel was roughly half way to the ground, no indications of a touchdown were found in nearby damage or by eyewitness reports.

DEFIANCE COUNTY --- 1.5 N NEY [41.40, -84.52]

06/29/13 15:35 EST	0	Thunderstorm Wind (EG 55 kt)
06/29/13 15:36 EST	0	Source: Emergency Manager

Several trees suffered limb damage on The Bend Road, just north of Beerbower Road. Metal sheeting on the property was blown a quarter mile southwest to the next damage location, where it may have impacted other objects.

DEFIANCE COUNTY --- 1.3 N NEY [41.40, -84.52]

06/29/13 15:36 EST	2K	Thunderstorm Wind (EG 56 kt)
06/29/13 15:37 EST	0	Source: Emergency Manager

A small garage was destroyed, likely from a combination of the strong winds and debris from damage to the northeast. A residence at this location suffered some roof damage as did a barn. A window was also broken in the barn.

DEFIANCE COUNTY --- NEY [41.38, -84.52]

06/29/13 15:39 EST	0	Thunderstorm Wind (EG 52 kt)
06/29/13 15:40 EST	0.50K	Source: Emergency Manager

Several small tree limbs were reported down across the town of Ney. A roughly six foot wide by 5 foot deep edge of a corn field on the southwest side of Ney was flattened. A wooden swing set next to the field was thrown into the field and destroyed.

An upper level low pressure system was centered over northern Ohio. A more fall like pattern of cool air aloft was in place, setting the stage for the development of showers and a few thunderstorms. Limited shear and instability kept most convection well below severe limits, with reports of cold air funnel clouds common given weak surface flow and cold air aloft. However, three weaker thunderstorms did congeal along an outflow boundary in northern Defiance County, causing rapid intensification and eventual collapse of the resultant storm. Radar data and visual observations showed the storm briefly exhibited mini supercell type structure with a well-defined wall cloud and funnel cloud.

Storm Data and Unusual Weather Phenomena - June 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details

Well defined funnel cloud resulting from the merger of three storms in a more typical cold air funnel environment.

Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
INDIANA, Northeast				
JAY COUNTY --- 1.7 SW PENNVILLE [40.48, -85.17]				
	07/02/13 15:50 EST	0		Thunderstorm Wind (EG 55 kt)
	07/02/13 15:51 EST	0		Source: State Official
Local officials reported two trees were blown down across County Road 1000 West, between County Roads 300 and 400 South.				
JAY COUNTY --- 2.1 SE PENNVILLE [40.48, -85.12]				
	07/02/13 15:55 EST	0		Thunderstorm Wind (EG 55 kt)
	07/02/13 15:56 EST	0		Source: State Official
Local officials reported large tree limbs were blown down on County Road 750 West, near County Road 300 South.				
WABASH COUNTY --- 1.7 SW HARTMAN [40.76, -85.87], 3.2 NNW HARTMAN [40.82, -85.88], 2.4 NNW WABASH [40.83, -85.84], 1.5 SW WABASH ARPT [40.75, -85.82]				
	07/02/13 23:40 EST	0		Flash Flood (due to Heavy Rain)
	07/02/13 23:45 EST	0		Source: State Official
Local officials reported Mill Creek went out of its banks near Wabash, sending water and several logs onto the roadway.				
An upper low was located over the northern Great Lakes. While no distinct fronts or waves were noted, enough instability and shear was in place across the region to allow for isolated thunderstorm development. The majority of these storms produced brief, heavy rainfall and gusty winds. Isolated wind damage was reported in Jay County with some flash flooding across portions of Wabash counties where storms continued to train over the same areas for a few hours.				
MARSHALL COUNTY --- 0.9 SE DONALDSON [41.36, -86.44]				
	07/10/13 11:00 EST	0		Thunderstorm Wind (EG 60 kt)
	07/10/13 11:01 EST	0		Source: Public
The public reported numerous uprooted trees in the area.				
MARSHALL COUNTY --- 0.9 SE PLYMOUTH [41.34, -86.31]				
	07/10/13 11:03 EST	0		Thunderstorm Wind (EG 60 kt)
	07/10/13 11:04 EST	0		Source: Public
The public reported a tree was partially blown down onto a garage in Plymouth.				
MARSHALL COUNTY --- 1.6 W BOURBON [41.30, -86.15]				
	07/10/13 11:21 EST	0		Thunderstorm Wind (EG 52 kt)
	07/10/13 11:22 EST	0		Source: Public
The public estimated a 60 mph wind gust. Pea sized hail and very heavy rain was reducing visibility to near zero.				
KOSCIUSKO COUNTY --- 1.3 WNW WARSAW [41.24, -85.85]				
	07/10/13 11:35 EST	0		Thunderstorm Wind (EG 55 kt)
	07/10/13 11:36 EST	0		Source: Public
The public reported a one foot diameter tree limb down onto a residence.				
KOSCIUSKO COUNTY --- LEESBURG [41.33, -85.85]				
	07/10/13 11:35 EST	0		Thunderstorm Wind (EG 55 kt)
	07/10/13 11:36 EST	0		Source: Social Media
Social media pages indicated that several trees and tree limbs were blown down in the town of Leesburg.				
KOSCIUSKO COUNTY --- 0.5 E SYRACUSE [41.42, -85.74]				
	07/10/13 11:42 EST	0		Thunderstorm Wind (EG 58 kt)
	07/10/13 11:43 EST	0		Source: NWS Employee

Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
An off duty NWS employee reported three tree branches that were one to two feet in diameter were found along State Route 14. A one foot diameter tree was snapped 15 feet above the base of the tree.				
WHITLEY COUNTY --- 0.5 W TUNKER [41.05, -85.56]				
	07/10/13 11:53 EST		0	Thunderstorm Wind (EG 52 kt)
	07/10/13 11:54 EST		0	Source: Fire Department/Rescue
Local fire officials estimated 60 mph winds at County Road 200 West and State Route 114. Pea size hail also occurred.				
HUNTINGTON COUNTY --- 2.8 N ANDREWS [40.89, -85.60]				
	07/10/13 12:25 EST		0	Thunderstorm Wind (EG 55 kt)
	07/10/13 12:26 EST		0	Source: Emergency Manager
Emergency management officials reported a large tree limb was blown down, blocking a portion of Maple Grove road, east of State Route 105.				
MIAMI COUNTY --- 2.0 NNE NEAD [40.75, -86.11], 1.0 WSW JUNCTION [40.74, -86.05]				
	07/10/13 12:28 EST		0	Tornado (EF1, L: 3.47 mi , W: 200 yd)
	07/10/13 12:33 EST	2	0	Source: NWS Storm Survey
A NWS storm survey indicated a circulation touched down in a corn field south of US-24 to the west of CountryMark refinery. The tornado then traveled along US-24 between South Cook Street and South Park Ave. Extensive tree damage was noted along the path with numerous uprooted or snapped trees. Minor roof or structural damage was noted in several houses where trees had fallen onto the roofs. Several businesses sustained minor facade or roof damage. The tornado then crossed the Wabash River and then uprooted 30 to 40 large, healthy trees in Maconaquah Park. The tornado continued across State Road 19 between Astrup Dr. and Parkway Terrace and then hit a grove of trees behind a church before lifting shortly thereafter. A 77 year old woman suffered a mild concussion as a result of her vehicle being flipped in the tornado. Eyewitnesses reported that she had just taken off her seat belt and was getting ready to go into the store when the strong winds impacted her van. Another person suffered a minor foot injury.				
CASS COUNTY --- 0.9 SW WALTON [40.66, -86.24]				
	07/10/13 12:30 EST		0	Thunderstorm Wind (EG 60 kt)
	07/10/13 12:31 EST		0	Source: Emergency Manager
Emergency management officials reported widespread tree and power line damage from Walton to Onward.				
HUNTINGTON COUNTY --- 2.7 WSW HUNTINGTON [40.87, -85.53]				
	07/10/13 12:30 EST		0	Thunderstorm Wind (EG 60 kt)
	07/10/13 12:31 EST		0	Source: Emergency Manager
Emergency management officials reported a tree was blown down, blocking Rangeline Road, west southwest of Huntington.				
HUNTINGTON COUNTY --- 3.2 SSE BIPPUS [40.91, -85.59]				
	07/10/13 12:30 EST		0	Thunderstorm Wind (EG 55 kt)
	07/10/13 12:31 EST		0	Source: Emergency Manager
Emergency management officials reported a large tree limb was blown down, blocking part of County Road 750 West, north of US-24.				
GRANT COUNTY --- 0.9 SE SHADY HILLS [40.56, -85.66]				
	07/10/13 12:45 EST		0	Thunderstorm Wind (MG 56 kt)
	07/10/13 12:46 EST		0	Source: Trained Spotter
A trained spotter measured a 64 mph wind gust and observed large tree limbs down.				
GRANT COUNTY --- 2.7 WSW SHADY HILLS [40.56, -85.72]				
	07/10/13 12:45 EST		0	Thunderstorm Wind (EG 52 kt)
	07/10/13 12:46 EST		0	Source: Trained Spotter
A trained spotter estimated a 60 mph wind gust.				
MIAMI COUNTY --- 0.7 N (GUS)GRISSOM AFB PER [40.66, -86.15]				
	07/10/13 12:45 EST		0	Thunderstorm Wind (MG 61 kt)
	07/10/13 12:46 EST		0	Source: AWOS
The automated weather sensor at the Grissom Air Reserve base recorded a 70 mph wind gust.				

Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
GRANT COUNTY --- 0.9 SE SHADY HILLS [40.56, -85.66]				
	07/10/13 12:50 EST		0	Thunderstorm Wind (EG 60 kt)
	07/10/13 12:51 EST		0	Source: Trained Spotter
A trained spotter reported numerous trees were blown down in Marion as well as across the county.				
GRANT COUNTY --- SHADY HILLS [40.57, -85.67]				
	07/10/13 12:50 EST		0	Thunderstorm Wind (EG 60 kt)
	07/10/13 12:51 EST		0	Source: Emergency Manager
Emergency management officials reported a tree was blown down onto Lawson Road, near State Route 15.				
BLACKFORD COUNTY --- 0.5 E ROLL [40.55, -85.37]				
	07/10/13 13:04 EST		0	Thunderstorm Wind (EG 65 kt)
	07/10/13 13:05 EST		0	Source: Trained Spotter
A trained spotter reported 10 to 15 three to four foot diameter trees were uprooted, as well as a two foot diameter tree being snapped.				
BLACKFORD COUNTY --- 0.5 E ROLL [40.55, -85.37]				
	07/10/13 13:04 EST		0	Thunderstorm Wind (EG 70 kt)
	07/10/13 13:05 EST		0	Source: Trained Spotter
A trained spotter measured an 80 mph wind gust before the anemometer broke.				
BLACKFORD COUNTY --- HARTFORD CITY [40.45, -85.37]				
	07/10/13 13:05 EST		0	Thunderstorm Wind (EG 60 kt)
	07/10/13 13:06 EST		0	Source: Trained Spotter
A trained spotter reported a tree was uprooted, with several large tree limbs blown down.				
BLACKFORD COUNTY --- MONTPELIER [40.55, -85.28]				
	07/10/13 13:05 EST		0	Thunderstorm Wind (EG 60 kt)
	07/10/13 13:06 EST		0	Source: Amateur Radio
Amateur radio operators reported numerous large trees were blown down.				
BLACKFORD COUNTY --- 1.3 ENE RENNER [40.48, -85.41]				
	07/10/13 13:07 EST		0	Thunderstorm Wind (EG 52 kt)
	07/10/13 13:08 EST		0	Source: Emergency Manager
Emergency management officials estimated a 60 mph wind gust at the intersection of County Roads 200 North and 200 West.				
JAY COUNTY --- 0.7 S PENNVILLE [40.49, -85.15]				
	07/10/13 13:08 EST		0	Thunderstorm Wind (EG 60 kt)
	07/10/13 13:09 EST		0	Source: County Official
County officials reported widespread tree and power lines down over the northern half of the county, with some roads blocked from debris.				
JAY COUNTY --- PORTLAND [40.43, -84.98]				
	07/10/13 13:18 EST		0	Thunderstorm Wind (EG 60 kt)
	07/10/13 13:19 EST		0	Source: Emergency Manager
Emergency management officials reported several trees were blown down onto camper trailers, with power lines laid out across trailers. Tents were blown over at the Jay county fair. No injuries were reported.				
JAY COUNTY --- PORTLAND [40.43, -84.98]				
	07/10/13 13:28 EST		0	Thunderstorm Wind (EG 60 kt)
	07/10/13 13:29 EST		0	Source: County Official
County officials reported two utility poles were blown down.				

Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Despite broken cloud cover across much of the region, unstable conditions took shape ahead of a cold front that moved southeast into the region. Isolated thunderstorms developed along the front and moved east, eventually expanding into a broken line that occasionally took on a bowing structure. Additional storms moved out of central Indiana and intersected the line, causing area of not only enhanced damage, but a brief EF1 that impacted the southern side of Peru.

NOBLE COUNTY --- 0.7 N LAOTTO [41.29, -85.20]

07/20/13 03:30 EST	20K	Lightning
07/20/13 03:31 EST	0	Source: Emergency Manager

Local media and emergency management officials reported a home in Laotta was struck by lightning around 430 am EDT. A resident of the home was awakened by the noise associated with the lightning strike. Five to ten minutes later smoke and fire was reported. The lightning struck an underground gas line and sparked a fire in the home in the heating ducts. This then spread to the kitchen. Firefighters were able to get the fire quickly under control. Damage was estimated at \$20,000.

A cold front moved through northern Indiana during the early morning hours of July 20th. Scattered thunderstorms developed along the front, but remained below severe limits. A report of a residence in Laotto being struck by lightning was received.

MICHIGAN, Extreme Southwest

CASS COUNTY --- MARCELLUS [42.03, -85.82]

07/21/13 19:25 EST	0	Thunderstorm Wind (EG 50 kt)
07/21/13 19:26 EST	0	Source: Social Media

Pictures were posted on a local media outlets social media page of large tree branches being blown down.

A weak upper level system moved through the central Great Lakes during the evening hours of the 21st. Widely scattered thunderstorms developed ahead of the system, with an isolated report of wind damage as one of the larger storms collapsed.

(MI-Z077) BERRIEN

07/27/13 14:35 EST	1	0	Rip Current
07/27/13 14:36 EST	0		

Direct Fatalities: M15IW

Gusty northwesterly winds moved across Lake Michigan in the wake of a strong cold front. Wave heights of three to six feet were common during the afternoon hours of the 27th. A 15 year old boy from Illinois was caught in a rip current and pulled away from shore. He was rescued and airlifted to a Chicago hospital, where he died several hours later.

OHIO, Northwest

PUTNAM COUNTY --- OTTAWA [41.02, -84.05]

07/02/13 18:00 EST	0	Hail (1.00 in)
07/02/13 18:01 EST	0	Source: Public

An upper low was located over the northern Great Lakes. While no distinct fronts or waves were noted, enough instability and shear was in place across the region to allow for isolated thunderstorm development. The majority of these storms produced brief, heavy rainfall and gusty winds. Isolated large hail was reported in the Ottawa area.

WILLIAMS COUNTY --- MELBERN [41.47, -84.65]

07/10/13 12:30 EST	0	Thunderstorm Wind (EG 61 kt)
07/10/13 12:31 EST	0	Source: Emergency Manager

Emergency management officials reported strong winds impacted a moving train near the town of Melbern. A few dozen empty train cars were pushed off the tracks. No injuries were reported. In addition, numerous trees, tree limbs and power poles were damaged in the town.

WILLIAMS COUNTY --- BRYAN [41.47, -84.55]

Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/10/13 12:40 EST		0	Thunderstorm Wind (EG 55 kt)
	07/10/13 12:41 EST		0	Source: Fire Department/Rescue
Local fire officials reported a power pole was blown down on Center Street, with large tree limbs down in the town.				
<hr/>				
DEFIANCE COUNTY --- 0.5 W DEFIANCE [41.28, -84.36]				
	07/10/13 13:00 EST		0	Thunderstorm Wind (EG 55 kt)
	07/10/13 13:01 EST		0	Source: State Official
County dispatch reported tree and power line damage across much of the county.				
<hr/>				
DEFIANCE COUNTY --- 0.5 W DEFIANCE [41.28, -84.36]				
	07/10/13 13:03 EST		0	Thunderstorm Wind (EG 55 kt)
	07/10/13 13:04 EST		0	Source: Emergency Manager
Emergency management officials reported a power pole was blown down onto a home on Adams Street. No injuries were reported.				
<hr/>				
HENRY COUNTY --- 0.7 N NAPOLEON [41.39, -84.13]				
	07/10/13 13:04 EST		0	Thunderstorm Wind (EG 55 kt)
	07/10/13 13:05 EST		0	Source: Emergency Manager
Emergency management officials reported multiple trees were blown down in the city of Napoleon.				
<hr/>				
HENRY COUNTY --- 0.7 N NAPOLEON [41.39, -84.13]				
	07/10/13 13:08 EST		0	Thunderstorm Wind (EG 65 kt)
	07/10/13 13:09 EST		0	Source: Emergency Manager
Emergency management officials reported widespread, significant wind damage across the county. Three utility trailers were pushed across the parking lot at the Emergency Operations Center.				
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VAN WERT COUNTY --- OHIO CITY [40.77, -84.62]				
	07/10/13 13:18 EST		0	Thunderstorm Wind (EG 55 kt)
	07/10/13 13:19 EST		0	Source: Emergency Manager
Emergency management officials reported a six inch diameter tree limb down in Ohio City.				
<hr/>				
HENRY COUNTY --- 2.6 SE ELERY [41.27, -84.04]				
	07/10/13 13:20 EST		0	Thunderstorm Wind (MG 56 kt)
	07/10/13 13:21 EST		0	Source: Trained Spotter
A trained spotter measured a 64 mph wind gust with an eight inch diameter tree limb down onto a truck.				
<hr/>				
HENRY COUNTY --- HAMLER [41.23, -84.03]				
	07/10/13 13:20 EST		0	Thunderstorm Wind (MG 56 kt)
	07/10/13 13:21 EST		0	Source: Trained Spotter
A trained spotter measured a 64 mph wind gust. Tree limbs in excess of eight inches were blown down by the strong winds.				
<hr/>				
VAN WERT COUNTY --- 0.5 W VAN WERT [40.87, -84.58]				
	07/10/13 13:21 EST		0	Thunderstorm Wind (EG 50 kt)
	07/10/13 13:22 EST		0	Source: Emergency Manager
Emergency management officials reported a power line fell onto a car in Van Wert. No injuries were reported.				
<hr/>				
ALLEN COUNTY --- 1.4 S ELMVIEW [40.66, -84.15]				
	07/10/13 13:47 EST		0	Thunderstorm Wind (EG 70 kt)
	07/10/13 13:48 EST		0	Source: Trained Spotter
Trained spotters estimated 80 mph wind gusts with multiple power lines down in the area.				
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ALLEN COUNTY --- 0.9 SW LIMA [40.74, -84.11]				

Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	07/10/13 13:50 EST		0	Thunderstorm Wind (EG 60 kt)
	07/10/13 13:51 EST		0	Source: Emergency Manager

Emergency management officials reported several trees down throughout the county.

HENRY COUNTY --- 4.0 SSW DESHLER [41.17, -83.94]

	07/10/13 13:50 EST		0	Thunderstorm Wind (MG 59 kt)
	07/10/13 13:51 EST		0	Source: Mesonet

A mesonet station north of Belmore recorded a 68 mph wind gust.

ALLEN COUNTY --- 0.9 NE ALLEN CO ARPT [40.71, -84.02]

	07/10/13 13:52 EST		0	Thunderstorm Wind (MG 55 kt)
	07/10/13 13:53 EST		0	Source: ASOS

The automated weather sensor at the Lima, Ohio airport recorded a 63 mph wind gust.

ALLEN COUNTY --- 0.5 W FT SHAWNEE [40.68, -84.13]

	07/10/13 13:53 EST		0	Thunderstorm Wind (MG 57 kt)
	07/10/13 13:54 EST		0	Source: Mesonet

A mesonet station at Fort Shawnee recorded a 66 mph wind gust.

Despite broken cloud cover across much of the region, unstable conditions took shape ahead of a cold front that moved southeast into the region. Thunderstorms moved out of northern Indiana into northwestern Ohio, producing pockets of damaging winds.

PUTNAM COUNTY --- 2.1 SW PRENTISS [41.13, -84.05]

	07/20/13 05:45 EST		0	Thunderstorm Wind (EG 55 kt)
	07/20/13 05:46 EST		0	Source: Trained Spotter

A trained spotter reported 15 trees of unknown size snapped off or blown over in a cemetery at the intersection of County Roads 10 and X.

PUTNAM COUNTY --- 2.1 W PRENTISS [41.15, -84.06]

	07/20/13 05:45 EST		0	Thunderstorm Wind (EG 55 kt)
	07/20/13 05:46 EST		0	Source: Trained Spotter

A trained spotter reported five turkey barns suffered roof damage along County Road 10. One power pole was snapped in the area with power lines down along nine pole spans.

A cold front moved through northwestern Ohio during the early morning hours of July 20th. Scattered thunderstorms developed along the front, with one storm producing locally damaging winds as it collapsed.

DEFIANCE COUNTY --- 1.0 W SHERWOOD [41.28, -84.40]

	07/27/13 16:15 EST		0	Thunderstorm Wind (EG 55 kt)
	07/27/13 16:16 EST		0	Source: Emergency Manager

Emergency management officials reported roof damage to roughly 15 homes, businesses and apartment complexes.

DEFIANCE COUNTY --- 0.5 W DEFIANCE [41.28, -84.36]

	07/27/13 16:16 EST		0	Thunderstorm Wind (EG 55 kt)
	07/27/13 16:17 EST		0	Source: State Official

County dispatch reported numerous trees were blown down in the city of Defiance.

DEFIANCE COUNTY --- 0.5 W DEFIANCE [41.28, -84.36]

	07/27/13 16:19 EST		0	Hail (0.75 in)
	07/27/13 16:20 EST		0	Source: Trained Spotter

DEFIANCE COUNTY --- 0.5 W DEFIANCE [41.28, -84.36]

	07/27/13 16:32 EST		0	Thunderstorm Wind (EG 50 kt)
	07/27/13 16:33 EST		0	Source: Trained Spotter

A trained spotter reported two inch diameter tree branches down onto two vehicles.

Storm Data and Unusual Weather Phenomena - July 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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A convergent boundary moved into northwestern Ohio during the late afternoon hours, interacting with a moderately unstable atmosphere. Surface temperatures warmed sufficiently to generate 500 to 1000 j/kg of surface based CAPE, with greater than 35 knots of shear. Isolated thunderstorm developed across northwestern Ohio, producing isolated downburst wind damage in Defiance county.

Storm Data and Unusual Weather Phenomena - August 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
INDIANA, Northeast				
KOSCIUSKO COUNTY --- 0.5 W SILVER LAKE [41.07, -85.89]				
	08/02/13 15:33 EST	0		Thunderstorm Wind (EG 50 kt)
	08/02/13 15:34 EST	0		Source: Law Enforcement
Local law enforcement officials reported numerous trees and tree limbs down.				
WABASH COUNTY --- 0.5 W LIBERTY MILLS [41.03, -85.74]				
	08/02/13 15:45 EST	0		Thunderstorm Wind (EG 55 kt)
	08/02/13 15:46 EST	0		Source: Public
The public reported two large trees were blown down.				
ALLEN COUNTY --- ABOITE [41.00, -85.32]				
	08/02/13 18:20 EST	0		Thunderstorm Wind (EG 50 kt)
	08/02/13 18:21 EST	0		Source: Trained Spotter
A trained spotter reported a tree was blown down onto power lines.				
ALLEN COUNTY --- 0.7 NNW DUNFEE [41.09, -85.34], 2.9 SSW ABOITE [40.96, -85.33], 1.8 S MONROEVILLE [40.94, -84.87], 1.8 NE ZULU [41.05, -84.87]				
	08/02/13 20:50 EST	0		Flash Flood (due to Heavy Rain)
	08/03/13 02:30 EST	0		Source: Broadcast Media
Local media reported flash flooding in portions of Fort Wayne. Several roadways had flowing water over them, with water past the bottom of car doors.				
KOSCIUSKO COUNTY --- 3.0 ESE NORTH WEBSTER [41.30, -85.65], 1.4 SW LEESBURG [41.31, -85.87], 3.2 SSW WINONA LAKE [41.18, -85.88], 3.3 ESE PIERCETON [41.17, -85.67]				
	08/02/13 20:52 EST	0		Flash Flood (due to Heavy Rain)
	08/03/13 02:30 EST	0		Source: NWS Employee
Numerous roads across the southern half of the county had flowing water. The greatest concentration was from North Webster south to Silver Lake, along and either side of State Route 15. County Road 450 North, one-quarter mile west of County Road 375 E was closed due to two feet of flowing water over the road. Three to five inches of rain fell in these areas.				
A cold front moved into northern Indiana during the afternoon and evening hours of August 2nd . A moist and somewhat unstable atmosphere was in place, allowing for the development of several thunderstorms. A weak disturbance aided in further development of storms. Numerous storms occurred along and either side of US 30. A few of the storms produced isolated wind damage along with some flooding and flash flooding.				
ST. JOSEPH COUNTY --- 0.7 N SOUTH BEND [41.68, -86.25]				
	08/07/13 13:15 EST	0		Hail (1.00 in)
	08/07/13 13:16 EST	0		Source: Broadcast Media
ST. JOSEPH COUNTY --- 0.7 N SOUTH BEND [41.68, -86.25]				
	08/07/13 13:15 EST	0		Thunderstorm Wind (EG 52 kt)
	08/07/13 13:16 EST	0		Source: Broadcast Media
Wind gust estimated by local media.				
ST. JOSEPH COUNTY --- 1.2 SE INDIAN VLG [41.71, -86.20]				
	08/07/13 13:27 EST	0		Hail (1.25 in)
	08/07/13 13:28 EST	0		Source: Trained Spotter
MARSHALL COUNTY --- BREMEN [41.45, -86.15]				
	08/07/13 15:58 EST	0		Thunderstorm Wind (EG 52 kt)
	08/07/13 15:59 EST	0		Source: Public
The public estimated a 60 mph wind gust.				

Storm Data and Unusual Weather Phenomena - August 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
NOBLE COUNTY --- 2.2 WSW MERRIAM [41.27, -85.47]				
	08/07/13 17:15 EST		0	Thunderstorm Wind (EG 50 kt)
	08/07/13 17:16 EST		0	Source: Emergency Manager

Emergency management officials reported trees and tree branches down onto a couple of utility lines on State Route 109, near the county line.

An outflow boundary from convection during the overnight hours of the 7th moved south into northern Indiana during the morning, stalling out. A cold front moved into the area during the afternoon hours. Pockets of moderate instability and favorable shear allowed for cluster of thunderstorms to develop. The strongest storms produced marginally severe hail and isolated wind damage.

LAKE MICHIGAN

NEW BUFFALO TO ST JOSEPH MI COUNTY --- ST JOSEPH BUOY (45026) [41.98, -86.62]				
	08/22/13 00:40 EST		0	Marine Thunderstorm Wind (MG 35 kt)
	08/22/13 00:41 EST		0	Source: Buoy

Measured by a buoy near the Cook Nuclear Plant.

MICHIGAN CITY IN TO NEW BUFFALO MI COUNTY --- MICHIGAN CITY C-MAN STATION (MCY13) [41.73, -86.91]				
	08/22/13 01:00 EST		0	Marine Thunderstorm Wind (MG 39 kt)
	08/22/13 01:01 EST		0	Source: C-MAN Station

Wind gust was recorded at the Michigan City C-Man station.

A weak disturbance and frontal boundary aided in the development of showers and thunderstorms during the early morning hours of the 22nd. A few of the storms produced 40 to 45 mph wind gusts.

Storm Data and Unusual Weather Phenomena - September 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
INDIANA, Northeast				
LAGRANGE COUNTY --- HOWE [41.72, -85.42]				
	09/11/13 17:05 EST	0		Thunderstorm Wind (EG 60 kt)
	09/11/13 17:06 EST	0		Source: Public
The public reported several 15 to 19 foot tall trees down in the area, some onto power lines.				
LAGRANGE COUNTY --- 2.8 N HOWE [41.76, -85.43]				
	09/11/13 17:07 EST	0		Thunderstorm Wind (EG 55 kt)
	09/11/13 17:08 EST	0		Source: Fire Department/Rescue
The Tri-Lakes Fire Department reported the roof off one building and the Hampton Inn suffering damage.				
STEBEN COUNTY --- 2.1 NW MOONLIGHT BAY [41.60, -85.06]				
	09/11/13 17:26 EST	0		Thunderstorm Wind (EG 60 kt)
	09/11/13 17:27 EST	0		Source: NWS Employee
An off duty NWS employee reported a concentrated area of uprooted trees on the southeast side of Golden Lake.				
STEBEN COUNTY --- 1.5 NNW MOONLIGHT BAY [41.60, -85.04]				
	09/11/13 17:27 EST	0		Thunderstorm Wind (EG 55 kt)
	09/11/13 17:28 EST	0		Source: Amateur Radio
Amateur radio operators reported trees and power lines down in the Pleasant Lake area.				
A strong cold front swept through the region interacting with a strongly sheared, moderately unstable environment. Numerous thunderstorms developed rapidly and produced isolated wind damage.				
MICHIGAN, Extreme Southwest				
HILLSDALE COUNTY --- 3.4 W LITCHFIELD [42.05, -84.82], 0.8 SSE MOSHERVILLE [42.06, -84.65], 0.9 SSE HILLSDALE [41.91, -84.61], 2.4 NW ALLEN [41.97, -84.80]				
	09/01/13 06:30 EST	0		Flash Flood (due to Heavy Rain)
	09/01/13 10:30 EST	0		Source: CoCoRaHS
Numerous roads were flooded in and around Litchfield and Hillsdale with ditches filled and several yards under water. A CoCoRAHS observer reported 5.35 inches of rain from the event.				
A strong warm front surged north into Lower Michigan during the early morning hours of the 9th. Steep lapse rates and abundant lift with the front along allowed for several rounds of showers and a few thunderstorms to persist across portions of far southern Lower Michigan. Reports of four to over five inches of rain were received across portions of Hillsdale County, especially in the Litchfield area where several roads were flooded and impassable.				
ST. JOSEPH COUNTY --- 0.7 N THREE RIVERS [41.94, -85.63]				
	09/11/13 15:53 EST	0		Thunderstorm Wind (EG 55 kt)
	09/11/13 15:54 EST	0		Source: Fire Department/Rescue
Local fire officials reported trees and power lines down.				
ST. JOSEPH COUNTY --- 0.7 N MENDON [42.01, -85.45]				
	09/11/13 15:57 EST	0		Thunderstorm Wind (EG 50 kt)
	09/11/13 15:58 EST	0		Source: Public
The public reported a tree of unknown size down onto a garage.				
BRANCH COUNTY --- 4.3 SW BRONSON [41.83, -85.25]				
	09/11/13 16:47 EST	0		Thunderstorm Wind (EG 50 kt)
	09/11/13 16:48 EST	0		Source: Emergency Manager

Storm Data and Unusual Weather Phenomena - September 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
Emergency management officials reported a tree down across a road southwest of Bronson.				
<hr/>				
BRANCH COUNTY --- 2.8 S BRONSON ARPT [41.84, -85.18]				
	09/11/13 16:56 EST		0	Thunderstorm Wind (EG 55 kt)
	09/11/13 16:57 EST		0	Source: Emergency Manager

Emergency management officials reported a tree of unknown size across a local road.

A strong cold front swept through the region interacting with a strongly sheared, moderately unstable environment. Numerous thunderstorms developed rapidly and produced isolated wind damage.

Storm Data and Unusual Weather Phenomena - October 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
OHIO, Northwest				
WILLIAMS COUNTY --- 0.5 E STRYKER [41.50, -84.41]				
	10/04/13 13:00 EST		0	Thunderstorm Wind (EG 50 kt)
	10/04/13 13:01 EST		0	Source: Emergency Manager

Emergency management officials reported trees and power lines down in the Stryker area.

A east-west oriented warm front was located near the Ohio/Michigan state line. While surface based CAPE was in excess of 1000 j/kg, extensive cloud cover limited the coverage and intensity of thunderstorm development. One thunderstorm produced isolated wind damage in Williams County, near Stryker.

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
INDIANA, Northeast				
(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH				
	11/12/13 00:00 CST	0		Lake-Effect Snow
	11/12/13 13:00 CST	0		
(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH				
	11/12/13 00:00 EST	0		Lake-Effect Snow
	11/12/13 13:00 EST	0		
(IN-Z012) STARKE				
	11/12/13 00:00 EST	0		Winter Weather
	11/12/13 13:00 EST	0		
<p>An intense lake effect snow band set up over northwest Indiana during the morning hours of Nov 12th. Localized snowfall amounts as high as 9 inches were reported.</p>				
LA PORTE COUNTY --- 1.5 SSE MICHIGAN CITY ARPT [41.68, -86.81]				
	11/17/13 12:36 CST	0		Thunderstorm Wind (EG 52 kt)
	11/17/13 12:37 CST	0		Source: Trained Spotter
<p>A trained spotter estimated wind gusts to 60 mph with trees and power lines down in the area.</p>				
LA PORTE COUNTY --- 0.7 S MICHIGAN CITY [41.71, -86.90]				
	11/17/13 13:37 CST	0		Thunderstorm Wind (EG 60 kt)
	11/17/13 13:38 CST	0		Source: Public
<p>The public reported a two foot diameter tree was uprooted and fell onto a home.</p>				
LA PORTE COUNTY --- 0.7 S WESTVILLE [41.54, -86.90]				
	11/17/13 13:37 CST	0		Thunderstorm Wind (EG 55 kt)
	11/17/13 13:38 CST	0		Source: Public
<p>The public reported a large tree fell onto State Route 421.</p>				
PULASKI COUNTY --- 0.4 SE MEDARYVILLE [41.08, -86.89], 2.8 ENE DENHAM [41.17, -86.67]				
	11/17/13 14:03 CST	0		Tornado (EF0, L: 13.18 mi , W: 100 yd)
	11/17/13 14:13 CST	0		Source: NWS Storm Survey
<p>A survey of damage in northern Pulaski county by emergency management and NWS officials revealed damage consistent with a EF1 tornado. The tornado touched down just southwest of U.S. 421 and Delaware Street in Medaryville. Several large, healthy trees suffered damage ranging from broken limbs to trees being snapped at the base (DI: TS DOD: 4). The tornado exited the town and remained over mainly rural areas moving across harvested fields and occasionally impacting groves of trees or center pivot irrigation systems. A barn was completely destroyed (DI: SBO DOD: 8) on North County Road 1050 West. The tornado entered the town of Denham impacting a grain bin, which was moved off its foundation and then flattened. The tornado cause minor tree damage and then lifted just before crossing into Starke county. The maximum wind speed is estimated at 110 mph..</p>				
LA PORTE COUNTY --- 1.3 NNE WANATAH [41.45, -86.89]				
	11/17/13 14:18 CST	0		Thunderstorm Wind (EG 55 kt)
	11/17/13 14:19 CST	0		Source: Trained Spotter
<p>A trained spotter reported a one foot diameter branch blown down near the intersection of County Road 1100 South and US-421.</p>				
WHITE COUNTY --- 7.7 W BADGER GROVE [40.57, -87.10], 2.3 NNE BADGER GROVE [40.61, -86.93]				
	11/17/13 14:43 EST	0		Tornado (EF2, L: 9.10 mi , W: 1200 yd)
	11/17/13 14:55 EST	0		Source: NWS Storm Survey

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<p>A survey of damage by NWS officials indicated that a tornado touched down in eastern Benton county and continued northeast into White county. Exact determination of maximum intensity was difficult due to vastly open country and lack of trees and other objects. The tornado moved into southwestern White county south of County Road 1200 South, where the garage door of a west facing pole barn was pushed in and some minor tree limb damage was noted. The tornado continued rapidly northeast and impacted a residence on 900 West where the chimney (above the roof) was knocked down with shingle damage noted to the home. In addition, a large propane tank and camper were rolled or pushed roughly 150 feet away with the camper being destroyed. The tornado moved into open fields where it remained for roughly four miles, crossing Interstate 65 between mile markers 188 and 190. The tornado briefly strengthened after crossing the interstate, snapping 10 18-24 inch diameter power poles (DI: ETL DOD: 4) at the ground along County Road 500 West, either side of State Route 18. A home on the intersection of these roads suffered minor window and roof damage. Just east of the intersection, a pole barn was destroyed (DI: SBO DOD: 8) with debris thrown upwards of three-quarters of a mile. The tornado finally lifted west of County Road 300 West and north of State Route 18. The tornado was on the ground for a combined distance of 12 miles from eastern Benton county into White county. A maximum width of roughly 1200 yards was determined with maximum wind speeds around 120 mph.</p>				

WHITE COUNTY --- 2.0 SSW SMITHSON [40.69, -86.88], 5.3 W CHALMERS [40.67, -86.95]				
	11/17/13 14:51 EST		0	Tornado (EF0, L: 4.15 mi , W: 300 yd)
	11/17/13 14:57 EST		0	Source: NWS Storm Survey

A NWS survey of damage revealed a tornado touched down in an open field 4 miles west of Chalmers, northwest of the intersection of County Road 600 South and 450 West. Tornado touched down in a field and moved northeast, crossing County Road 300 West, south of County Road 500 South where four 18 inch diameter power poles were snapped at the base (DI: ETL DOD: 4). The tornado then caused minor damage to siding and roofing at a home northeast of this location. A large pole barn in the same yard lost half of its roof, the barn next door to this residence was completely destroyed (DI: SBO DOD: 8) with debris from both locations being carried up to a mile to the northeast. Once final barn suffered minor roof damage before the tornado lifted two miles north of Chalmers east of County Road 75 West and south of County Road 350 S. Maximum wind speeds were estimated around 120 mph.

WHITE COUNTY --- 7.7 W BADGER GROVE [40.57, -87.10], 2.4 NNE BADGER GROVE [40.61, -86.93]				
	11/17/13 14:52 EST		0	Tornado (EF2, L: 9.23 mi , W: 900 yd)
	11/17/13 15:01 EST		0	Source: NWS Storm Survey

A review of radar data and damage details near the southwestern White county tornado revealed a separate tornado occurred roughly 10 minutes behind the first tornado. The tornado touched down west of County Road 1100 West and north of the White/Tippecanoe county line where it impacted a farm, destroying two barns (one large and one small) with debris being thrown more than a half mile away from the location. In addition, several healthy pine trees lost branches with a few being snapped at the trunk and then launched or dragged several hundred feet to the east. The tornado moved northeast and impacted a residence on US 231, south of County Road 1200 South. The entire roof of a one story home (DI: FR12 DOD: 6) was removed and thrown northeast into a field. Two by four boards were driven into the field up to 250 yards away. The tornado eventually crossed Interstate 65 hitting yet another farm with extensive barn and shed damage on County Road 500 West, south of State Route 18. Power pole damage was noted in this area as well, but was not clear if this was from the prior tornado just to the north. Northeast of this location, it appears that the tornado quickly dissipated or became harder to detect based on the earlier damage. Maximum winds are estimated at 120 mph.

WHITE COUNTY --- 1.3 WSW CHALMERS [40.66, -86.87]				
	11/17/13 14:55 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:00 EST		0	Source: Emergency Manager

Emergency management officials reported widespread wind damage across the southern part of the county, mainly from Brookston to Chalmers to the Cass county line.

WHITE COUNTY --- 0.5 W MONTICELLO [40.75, -86.76]				
	11/17/13 15:00 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:01 EST		0	Source: Public

The public reported a tree was uprooted in Monticello.

WHITE COUNTY --- 3.7 NNW BURNETTSTVILLE [40.82, -86.59], 3.3 NNE IDAVILLE [40.81, -86.61]				
	11/17/13 15:07 EST		0	Tornado (EF1, L: 0.81 mi , W: 150 yd)
	11/17/13 15:08 EST		0	Source: NWS Storm Survey

A survey of damage in northeastern White county revealed damage consistent with a brief EF1 touchdown. The tornado touched down in an open field northeast of the intersection of County Road 400 North and 1350 East before flipping 4 sections of a center pivot irrigation system. As the tornado moved northeast a trailer was impacted removing the roof and taking down half of the walls (DI: MHSW DOD: 4). A woman was in the trailer home at the time it hit but made it to the bathroom as it was falling apart and survived with no injury. Debris from the trailer was thrown north and northwest into an adjacent field. The tornado continued northeast into a grove of trees where it continued less than 50 feet before lifting one quarter mile southwest of the intersection of County Roads 500 North and 1450 East. The maximum wind speed is estimated at 100 mph.

ST. JOSEPH COUNTY --- 0.7 N SOUTH BEND [41.68, -86.25]				
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Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/17/13 15:10 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:11 EST		0	Source: Trained Spotter
A trained spotter reported a 16 inch tree down onto an car.				
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ST. JOSEPH COUNTY --- 3.2 SSE SOUTH BEND [41.63, -86.22]				
	11/17/13 15:10 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:11 EST		0	Source: Trained Spotter
A trained spotter reported a tree was uprooted and fell onto a house on the south side of the 4-H fairgrounds.				
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ST. JOSEPH COUNTY --- 0.5 E (SBN)MICHIANA ARPT S [41.70, -86.31]				
	11/17/13 15:11 EST		0	Thunderstorm Wind (MG 59 kt)
	11/17/13 15:12 EST		0	Source: ASOS
A 68 mph wind gust was recorded by the automated weather sensor at the South Bend Regional Airport.				
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ST. JOSEPH COUNTY --- 0.7 N SOUTH BEND [41.68, -86.25]				
	11/17/13 15:11 EST		0	Thunderstorm Wind (MG 57 kt)
	11/17/13 15:12 EST		0	Source: Trained Spotter
A trained spotter measure a 66 mph wind gust near the South Bend airport.				
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CASS COUNTY --- 1.4 WSW YOUNG AMERICA [40.56, -86.37], 0.5 NNE LINCOLN [40.63, -86.22]				
	11/17/13 15:17 EST		0	Tornado (EF3, L: 9.38 mi , W: 100 yd)
	11/17/13 15:27 EST		0	Source: NWS Storm Survey
An extensive NWS damage survey indicated a tornado that briefly reached low end EF-3 intensity southeast of Lafayette continued through Tippecanoe county and crossed into Cass county just north of the intersection of County Road 1400 South and the Carroll/Cass county line. The tornado remained over mainly open fields until moving near a residence on County Road 150 East, south of 1250 South where a home had its chimney blown off and a barn on the property suffered a blown out wall. The tornado continued northeast and cause minor shingle damage to three homes on County Road 1250, west of County Road 300 East. A small barn was destroyed with debris thrown into an adjacent field. The tornado briefly intensified as it entered a grove of trees north of County Road 1200 South and west of 400 East where every tree for the first 100 feet was snapped five to ten feet above the base (DI: TH DOD: 4). The tornado remained over mainly open fields, occasionally causing minor tree damage until crossing US 35 north of County Road 1000 S where power poles were broken (DI: ETL DOD: 4). The tornado quickly lifted a few miles southwest of the Grissom Air Reserve Base. A maximum intensity of EF2 was reached while in Cass county, with estimated winds of 120 mph.				
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ST. JOSEPH COUNTY --- 0.9 SE MISHAWAKA [41.66, -86.16]				
	11/17/13 15:18 EST		0	Thunderstorm Wind (MG 58 kt)
	11/17/13 15:19 EST		0	Source: Public
A measured wind gust of 67 mph was reported by the public.				
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ST. JOSEPH COUNTY --- 2.3 SSW MISHAWAKA [41.64, -86.19]				
	11/17/13 15:19 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:20 EST		0	Source: Emergency Manager
Emergency management officials reported eight inch pine trees down on the east side of Marion High School.				
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CASS COUNTY --- 0.8 NW LOGANSPOURT MUNI ARPT [40.73, -86.39], 1.4 N LOGANSPOURT MUNI ARPT [40.74, -86.38]				
	11/17/13 15:20 EST		0	Tornado (EF0, L: 1.13 mi , W: 150 yd)
	11/17/13 15:22 EST		0	Source: NWS Storm Survey
A survey of damage in the Logansport area indicated that a EF0 tornado touched down west of Logansport Bypass Road and north of County Road 250 South. The tornado moved northeast and did minor damage to the roof of a local warehouse before crossing the bypass. A home on West Clinton Street suffered complete loss of its roof from the tornado (DI: FR12 DOD: 4). However, impact occurred on a sun room that had structural issues and aided in the wind being able to lift the roof of the house. Minor tree damage was found along the remainder of the tornado track until it lifted northeast of the intersection of Lincoln and South Cicott Streets. The maximum wind speed was estimated at 85 mph.				
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CASS COUNTY --- 0.7 S GALVESTON [40.57, -86.18]				
	11/17/13 15:23 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:24 EST		0	Source: Public

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
The public reported the Bob Evans billboard sign was ripped in half by strong winds.				
FULTON COUNTY --- 0.9 NW ROCHESTER [41.08, -86.23]				
	11/17/13 15:24 EST	0		Thunderstorm Wind (EG 60 kt)
	11/17/13 15:25 EST	0		Source: Emergency Manager
Emergency management officials reported a 30 foot high pine tree snapped four feet above the base.				
MIAMI COUNTY --- 0.9 NW BENNETTS [40.59, -86.11]				
	11/17/13 15:26 EST	0		Thunderstorm Wind (EG 70 kt)
	11/17/13 15:27 EST	0		Source: Emergency Manager
Emergency management officials reported the McClures gas station awning was removed. Stop lights were ripped from their mounts.				
WHITLEY COUNTY --- 1.5 SSE ETNA [41.25, -85.56]				
	11/17/13 15:27 EST	0		Thunderstorm Wind (EG 55 kt)
	11/17/13 15:28 EST	0		Source: Emergency Manager
Emergency management officials reported a tree down across a road with power lines down.				
WHITLEY COUNTY --- 0.9 SW COLUMBIA CITY [41.16, -85.49]				
	11/17/13 15:28 EST	0		Thunderstorm Wind (EG 60 kt)
	11/17/13 15:29 EST	0		Source: Emergency Manager
Emergency management officials reported numerous trees down across the county, many onto roadways. A few barns also suffered roof damage.				
MARSHALL COUNTY --- ARGOS [41.23, -86.25]				
	11/17/13 15:29 EST	0		Thunderstorm Wind (EG 55 kt)
	11/17/13 15:30 EST	0		Source: Emergency Manager
Emergency management officials reported trees was blown down across Yearick and 1st Streets.				
BLACKFORD COUNTY --- HARTFORD CITY [40.45, -85.37]				
	11/17/13 15:30 EST	0		Thunderstorm Wind (EG 55 kt)
	11/17/13 15:31 EST	0		Source: Emergency Manager
Emergency management officials reported trees and power lines down across the county. No significant damage was reported.				
MIAMI COUNTY --- 0.7 N (GUS)GRISSOM AFB PER [40.66, -86.15]				
	11/17/13 15:30 EST	0		Thunderstorm Wind (MG 73 kt)
	11/17/13 15:31 EST	0		Source: AWOS
A 84 mph wind gust was recorded by automated weather equipment at the Grissom Air Reserve Base.				
MIAMI COUNTY --- 1.8 NW BUNKER HILL [40.69, -86.12], 2.7 NNE BUNKER HILL [40.70, -86.07]				
	11/17/13 15:30 EST	0		Tornado (EF1, L: 2.87 mi , W: 250 yd)
	11/17/13 15:33 EST	0		Source: NWS Storm Survey
A survey of damage by NWS and emergency management officials indicated a tornado occurred northeast of the Grissom Air Reserve base. The tornado touched down in a field southeast of the intersection of US 31 and County Road 500 South and then took the roof off of a hog barn. The tornado continued to travel east where it hit another hog barn and took off the roof and collapsed the walls (DI: SBO DOD: 6). One piece of wall (estimated near 1/2 ton) was thrown back into the eastern side of the building and smashed the exhaust system. The tornado then turned NE and did extensive tree damage to a grove of trees on county Road 50 West before hitting a trailer home where half of the walls were collapsed (DI: MHSW DOD:4) and insulation and pieces of debris were strewn out for a half mile to the NE. The tornado then lifted about a third of a mile northeast of the trailer. Maximum winds are estimated around 110 mph. Although the distance between the 2 points was around 2.6 miles, a variable track caused the actual distance to be closer to 2.9 miles long.				
KOSCIUSKO COUNTY --- 0.7 N BARBEE [41.31, -85.72]				
	11/17/13 15:32 EST	0		Thunderstorm Wind (MG 55 kt)
	11/17/13 15:33 EST	0		Source: NWS Employee
An off duty NWS employee reported extensive tree damage in North Webster, with several trees onto roadways.				

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
MIAMI COUNTY --- PERU [40.75, -86.07]				
	11/17/13 15:35 EST		0	Thunderstorm Wind (EG 52 kt)
	11/17/13 15:36 EST		0	Source: Emergency Manager

Emergency management officials estimated wind gusts of at least 60 mph with multiple power outages in the area.

KOSCIUSKO COUNTY --- 1.8 NNW BURKET [41.17, -85.99], 1.3 WNW PALESTINE [41.19, -85.97]				
	11/17/13 15:38 EST		0	Tornado (EF1, L: 1.05 mi , W: 250 yd)
	11/17/13 15:40 EST		0	Source: NWS Storm Survey

A survey of damage east of Mentone by a NWS Survey team revealed that a EF1 tornado produced damage along a roughly 1 mile path. Touchdown occurred southwest of the intersection of State Route 25 and County Road 800 West with the tornado quickly moving northeast and impacting a residence and barn on the southeast corner of the same intersection. A few small hardwood trees were snapped with the adjacent residence suffering minor shingle damage. An adjacent barn was shifted off its foundation with the north facing doors and wall buckled. As the tornado crossed State Route 25 it clipped a residence, causing roughly 75 percent of the roof and trusses to be ripped off and thrown to the north northwest about 250 yards. Power poles on the north side of the road were also blown down. As the tornado continued northeast it cause widespread tree damage in a wooded area, as well as minor structural damage to a home along South Tinkey Road. The tornado lifted shortly after this point, southeast of the intersection of Tinkey and Shilling Roads. Maximum wind speeds with the tornado are estimated at 100 mph.

ELKHART COUNTY --- 0.5 W ELKHART [41.68, -85.98]				
	11/17/13 15:40 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 15:41 EST		0	Source: Public

The public reported multiple trees down in the city.

ELKHART COUNTY --- 0.7 S WAKARUSA [41.52, -86.02]				
	11/17/13 15:42 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 15:43 EST		0	Source: Public

The public reported trees down, as well as silo and outbuilding damage on County Road 1 near Wakarusa.

GRANT COUNTY --- 1.4 SSW MIER [40.55, -85.84], 4.6 ENE JALAPA [40.65, -85.67]				
	11/17/13 15:42 EST		0	Tornado (EF2, L: 11.62 mi , W: 700 yd)
	11/17/13 15:52 EST		0	Source: NWS Storm Survey

A NWS survey of damage in Grant county indicated a tornado impacted a several mile long path. The tornado touched down on County Road 00 South, west of County Road 900 West where a hog barn suffered some roof damage. The tornado moved quickly northeast and intensified where it caused damage to two residences near the intersection of County Roads 300 North and 600 West. A large portion of the front wall of a one story home to collapse with subsequent removal of adjacent roof. A nearby home lost its entire roof (DI: MHSW DOD: 6). The tornado continued to intensify further approaching EF2 intensity as it cause extensive damage to a garage with the roof being removed and walls pushed down. Projectiles from the garage were found in the roof of the residence. EF2 intensity was reached around the intersection of County Road 325 West and Frances/Slocum Road where the top of a two story home was nearly removed (DI: FR12 DOD: 6). The tornado slowly weakened the remainder of its track impacting other residences with decreasing amounts and intensity of roof damage. Trees also suffered varying degrees of damage. The tornado cross briefly into Wabash county west of Grant County Road 00 West/Wabash County Road 600 East. The tornado was on the ground for over 11.5 miles with winds reaching a maximum intensity of around 125 mph.

WABASH COUNTY --- WABASH [40.80, -85.82]				
	11/17/13 15:42 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 15:43 EST		0	Source: Public

Damage was observed to cars and homes in the city. A home suffered partial roof damage with windows being blown out of a second story floor.

WABASH COUNTY --- 3.9 NE DISKO [41.04, -85.89], 4.6 NE DISKO [41.04, -85.88]				
	11/17/13 15:43 EST		0	Tornado (EF2, L: 0.67 mi , W: 150 yd)
	11/17/13 15:44 EST		0	Source: NWS Storm Survey

A survey of damage in Wabash county by a NWS Survey team revealed that a tornado that would eventually reach EF2 intensity produced damage starting just south of the Wabash/Kosciusko county line just west of State Route 15. The tornado destroyed a small shed (DI: SBO DOD:6) and caused minor roof damage to a residence before going over open fields. The tornado crossed into Kosciusko county approximately 4 tenths of a mile east of State Route 15, where it continued for an additional 3.5 miles. While in Wabash county, the tornado produced maximum wind speeds of around 85 mph (EF0) in Wabash county and was on the ground for about 7 tenths of a mile.

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
ELKHART COUNTY --- 1.4 N WAKARUSA [41.55, -86.02]				
	11/17/13 15:44 EST		0	Thunderstorm Wind (EG 50 kt)
	11/17/13 15:45 EST		0	Source: Public
The public reported a shed was thrown into a tree with a swing-set being blown over.				
KOSCIUSKO COUNTY --- 1.9 S SILVER LAKE [41.04, -85.88], 2.4 ENE SILVER LAKE [41.08, -85.83]				
	11/17/13 15:44 EST		0	Tornado (EF2, L: 3.47 mi , W: 150 yd)
	11/17/13 15:48 EST		0	Source: NWS Storm Survey
A survey of damage in Wabash and Kosciusko counties by a NWS Survey team revealed that a tornado touched down just south of the Wabash/Kosciusko county line, west of State Route 15. The tornado crossed into Kosciusko county approximately 4 tenths of a mile east of State Route 15 and continued to the northeast over mainly open fields, occasionally causing tree damage until it hit a farm on CR 300 W approximately half a mile south of SR 14. At this location there were 4 cattle barns completely destroyed with their contents thrown east-northeast into the field (DI:SBO DOD: 8). There were 600 cattle at the farm at the time the tornado hit and 10 of them were killed with another 10 injured. There was a two story home on this property that had part of the second story roof removed and the second story bedroom shifted as the east wall buckled outward. The debris field from this tornado continued to the NE and power poles were snapped at the base along SR 14. The tornado dissipated shortly after this as it crossed S County Farm Rd. The total path length across both counties was around 4.2 miles with a maximum estimated wind speed of 115 mph.				
GRANT COUNTY --- 0.7 N SWAYZEE [40.51, -85.83]				
	11/17/13 15:47 EST		0	Thunderstorm Wind (EG 74 kt)
	11/17/13 15:48 EST		0	Source: Trained Spotter
A trained spotter estimated wind gusts to 85 mph along with quarter size hail.				
WABASH COUNTY --- 1.5 NNE WABASH [40.82, -85.81]				
	11/17/13 15:48 EST		0	Thunderstorm Wind (MG 60 kt)
	11/17/13 15:49 EST		0	Source: Mesonet
A mesonet site recorded at 69 mph wind gust.				
KOSCIUSKO COUNTY --- 0.5 E PIERCETON [41.20, -85.71]				
	11/17/13 15:50 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:51 EST		0	Source: State Official
A state official reported a tree down south of Pierceton.				
GRANT COUNTY --- 0.9 SE SHADY HILLS [40.56, -85.66]				
	11/17/13 15:51 EST		0	Thunderstorm Wind (EG 70 kt)
	11/17/13 15:52 EST		0	Source: Trained Spotter
A trained spotter reported 50 to 60 trees down across the city. A semi was overturned near Meyer Road in southern Marion. The armory on State Route 18 suffered roof damage.				
WABASH COUNTY --- 3.0 ESE LA FONTAINE [40.65, -85.67], 3.0 ESE LA FONTAINE [40.65, -85.67]				
	11/17/13 15:52 EST		0	Tornado (EF2, L: 0.13 mi , W: 700 yd)
	11/17/13 15:53 EST		0	Source: NWS Storm Survey
A tornado which produced EF2 damage in Grant county briefly entered southern Wabash county, causing damage some minor damage to the roof and metal panels on a pole barn before quickly dissipating. The tornado intensity in Wabash county was on the lower end of EF0 and lasted roughly a minute at best.				
ELKHART COUNTY --- NEW PARIS [41.50, -85.83]				
	11/17/13 15:53 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 15:54 EST		0	Source: Amateur Radio
Amateur radio operators reported a 10 to 12 inch diameter tree was blown down across the road.				
KOSCIUSKO COUNTY --- 1.9 SSW OSWEGO [41.30, -85.80], 0.2 SW OSWEGO [41.32, -85.78]				
	11/17/13 15:54 EST		0	Tornado (EF1, L: 1.65 mi , W: 275 yd)
	11/17/13 15:56 EST		0	Source: NWS Storm Survey

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
<p>A survey of damage southwest of Oswego by a NWS Survey team revealed that a EF1 tornado produced damage along a roughly 1.7 mile path. Touchdown occurred in a harvested field southwest of the intersection of County Roads 450 North and 250 East. Several segments of a center pivot were flipped in this area. The tornado continued northeast crossing County Road 450 North, severely damaging 7 power poles, which were either snapped or bent at more than a 45 degree angle. One pole had 3 large transformers for the center pivot on it, with these being pushed on to the roadway. The tornado then impacted the Pines subdivision, northeast of 450 North and 250 East. Two to three dozen healthy pine trees between 30 and 50 feet tall were snapped or uprooted (DI: TS DOD: 4). One house was impacted on both sides with the roof being penetrated. Two vehicles had trees fall onto them, crushing them. The tornado moved through the remainder of the subdivision and adjacent properties with varying degrees of mainly roof and tree damage. The last noted damage involved a home on County Road 300 East, just south of Rader Road where moderate roof damage occurred and a narrow path of trees snapped in an adjacent wooded area. The tornado lifted shortly after this point prior to crossing Armstrong Road. Maximum wind speeds with the tornado are estimated at 95 mph.</p>				
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GRANT COUNTY --- 0.8 SSE ROSEBURG [40.51, -85.72], 0.8 SSE ROSEBURG [40.51, -85.72]				
	11/17/13 15:55 EST		0	Tornado (EF0, L: 0.04 mi , W: 20 yd)
	11/17/13 15:56 EST		0	Source: NWS Storm Survey
<p>A survey of damage in west central Grant county revealed damage consistent with a brief EF0 touchdown. The tornado touched down a quarter mile east of the intersection of County Roads 300 South and 300 West. A storage shed on the property sustained some roof damage (DI: SBO DOD: 2) with extensive tree damage also noted. The tornado quickly lifted after crossing County Road 300 South. The maximum wind speed is estimated at 80 mph.</p>				
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GRANT COUNTY --- 0.9 NE GAS CITY [40.49, -85.61]				
	11/17/13 15:55 EST		0	Thunderstorm Wind (EG 65 kt)
	11/17/13 15:56 EST		0	Source: Public
<p>A 50 foot section of wall and roof collapsed at the Dollar General Warehouse.</p>				
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GRANT COUNTY --- 0.9 SE SHADY HILLS [40.56, -85.66]				
	11/17/13 15:55 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:56 EST		0	Source: Trained Spotter
<p>Trained spotters reported many trees and power lines down throughout the county.</p>				
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GRANT COUNTY --- 1.3 ENE MARION [40.56, -85.56]				
	11/17/13 15:55 EST		0	Thunderstorm Wind (EG 65 kt)
	11/17/13 15:56 EST		0	Source: State Official
<p>County officials reported the Summit Village Trailer park was heavily damaged, with some mobile homes on top of each other.</p>				
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KOSCIUSKO COUNTY --- 1.4 N OSWEGO [41.34, -85.78]				
	11/17/13 15:55 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 15:56 EST		0	Source: NWS Employee
<p>A off duty NWS employee reported a 12 inch diameter tree was twisted and split on the north side of Lake Tippecanoe. Other tree damage was found in the general area.</p>				
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KOSCIUSKO COUNTY --- 1.5 NE OSWEGO [41.34, -85.76]				
	11/17/13 15:55 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:56 EST		0	Source: NWS Employee
<p>Several pine trees and other varieties of trees were snapped just south of the Lake Tippecanoe Country Club.</p>				
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KOSCIUSKO COUNTY --- 2.5 NE OSWEGO [41.35, -85.75]				
	11/17/13 15:55 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:56 EST		0	Source: NWS Employee
<p>Half of the east facing side of a older barn roof was blown off into an field to the north. A center pivot irrigation system in the same field has 2 segments flipped.</p>				
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HUNTINGTON COUNTY --- 2.3 SSE MAKIN [40.94, -85.56]				
	11/17/13 15:57 EST		40K	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:58 EST		0	Source: Emergency Manager
<p>Emergency management officials reported a pole barn/garage was completely destroyed with two cars inside damaged.</p>				

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
HUNTINGTON COUNTY --- 1.0 W HUNTINGTON [40.88, -85.50]				
	11/17/13 15:59 EST		0	Thunderstorm Wind (EG 50 kt)
	11/17/13 16:00 EST		0	Source: Public
The public reported several tree limbs down throughout the city.				
HUNTINGTON COUNTY --- 1.5 SSW MARKLE [40.81, -85.34]				
	11/17/13 16:02 EST		0	Thunderstorm Wind (MG 70 kt)
	11/17/13 16:03 EST		0	Source: Trained Spotter
A trained spotter measured a 81 mph wind gust. Several trees and tree limbs were blown down in the area with minor structural damage to homes.				
HUNTINGTON COUNTY --- 2.7 NNE ROANOKE [41.00, -85.35]				
	11/17/13 16:02 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 16:03 EST		0	Source: Trained Spotter
A trained spotter reported severe damage to a barn, with a large maple tree split on County Road 1200 North in Roanoke.				
NOBLE COUNTY --- KIMMELL [41.40, -85.55]				
	11/17/13 16:02 EST		0	Thunderstorm Wind (EG 61 kt)
	11/17/13 16:03 EST		0	Source: Public
The public estimated 60 to 70 mph thunderstorm wind gusts.				
WHITLEY COUNTY --- 2.9 SE RABER [41.05, -85.39]				
	11/17/13 16:04 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 16:05 EST		0	Source: Emergency Manager
Emergency management officials reported half of a barn roof was torn off.				
HUNTINGTON COUNTY --- 1.5 SSW MARKLE [40.81, -85.34]				
	11/17/13 16:07 EST		0	Thunderstorm Wind (MG 70 kt)
	11/17/13 16:08 EST		0	Source: Trained Spotter
A trained spotter reported several trees and tree limbs down.				
NOBLE COUNTY --- ALBION [41.40, -85.42]				
	11/17/13 16:08 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 16:09 EST		0	Source: Public
The public reported several trees down in the area, plus some damage to a local car wash.				
ALLEN COUNTY --- 1.3 WNW WAYNE DALE [41.03, -85.20]				
	11/17/13 16:10 EST		0	Thunderstorm Wind (EG 52 kt)
	11/17/13 16:11 EST		0	Source: Trained Spotter
A trained spotter estimated wind gusts to 60 mph with tree limbs of unknown soze blown down in the area.				
HUNTINGTON COUNTY --- 1.3 ESE WARREN [40.67, -85.41]				
	11/17/13 16:10 EST		0	Thunderstorm Wind (MG 51 kt)
	11/17/13 16:11 EST		0	Source: Mesonet
A mesonet station recorded a 59 mph wind gust.				
WELLS COUNTY --- 0.7 N BLUFFTON [40.74, -85.17]				
	11/17/13 16:15 EST		0	Thunderstorm Wind (MG 51 kt)
	11/17/13 16:16 EST		0	Source: Trained Spotter
A trained spotter reported a 59 mph wind gust.				
WELLS COUNTY --- 4.0 NNW UNIONDALE [40.88, -85.27]				

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/17/13 16:15 EST		0	Thunderstorm Wind (MG 56 kt)
	11/17/13 16:16 EST		0	Source: Mesonet
A mesonet station recorded a wind gust to 64 mph.				
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ALLEN COUNTY --- 2.3 ENE (FWA)BAER FLD FT WAY [40.99, -85.14]				
	11/17/13 16:17 EST		0	Thunderstorm Wind (EG 65 kt)
	11/17/13 16:18 EST		0	Source: Trained Spotter
A trained spotter reported three pole barns were destroyed with a grain silo having its top removed at the intersection of Ferguson and Thiele Roads.				
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NOBLE COUNTY --- 1.6 E WAKEFIELD VLG [41.47, -85.22]				
	11/17/13 16:17 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 16:18 EST		0	Source: Emergency Manager
Emergency management officials reported severe structural damage to a residence.				
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WELLS COUNTY --- 2.1 S VERA CRUZ [40.67, -85.08]				
	11/17/13 16:17 EST		0	Thunderstorm Wind (MG 55 kt)
	11/17/13 16:18 EST		0	Source: Trained Spotter
A trained spotter reported wind gusts to 63 mph along with power outages.				
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ALLEN COUNTY --- 0.5 E NEW HAVEN [41.07, -85.01]				
	11/17/13 16:22 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 16:23 EST		0	Source: Public
The public reported several trees down.				
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ALLEN COUNTY --- 0.7 N FT WAYNE [41.08, -85.13]				
	11/17/13 16:25 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 16:26 EST		0	Source: Amateur Radio
Amateur radio operators reported a 24 foot trailer overturned on Interstate 469, west of State Route 1. Trees were also blown down in the area.				
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STEBUBEN COUNTY --- ANGOLA [41.63, -85.00]				
	11/17/13 16:25 EST		0	Thunderstorm Wind (EG 56 kt)
	11/17/13 16:26 EST		0	Source: Emergency Manager
Emergency management officials reported multiple structures were damaged in Pleasant Lake. Power lines were blown down across the area as well. Winds estimated to 65 mph.				
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ADAMS COUNTY --- DECATUR [40.83, -84.93]				
	11/17/13 16:26 EST		0	Hail (1.00 in)
	11/17/13 16:27 EST		0	Source: Trained Spotter
A trained spotter reported quarter size hail.				
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ADAMS COUNTY --- DECATUR [40.83, -84.93]				
	11/17/13 16:26 EST		0	Thunderstorm Wind (EG 52 kt)
	11/17/13 16:27 EST		0	Source: Trained Spotter
A trained spotter reported wind gusts of at least 60 mph.				
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ALLEN COUNTY --- 1.4 S MONROEVILLE [40.95, -84.87]				
	11/17/13 16:32 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 16:33 EST		0	Source: Law Enforcement
Law enforcement officials reported two-thirds of a roof from a 140 foot hog barn was blown off.				
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ADAMS COUNTY --- 0.9 SE GENEVA [40.59, -84.96]				

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/17/13 16:50 EST		0	Thunderstorm Wind (MG 56 kt)
	11/17/13 16:51 EST		0	Source: Trained Spotter

A trained spotter reported wind gusts to 64 mph.

JAY COUNTY --- PORTLAND [40.43, -84.98]

	11/17/13 16:55 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 16:56 EST		0	Source: Emergency Manager

Emergency management officials reported some trees and tree limbs were blown down across portions of the county. Reports of leaning power poles were also received.

Deep low pressure moved across the northern Great Lakes, with a strong cold front trailing well south into Arkansas. A 50 to 60 knot low level jet aided in advecting in dewpoints greater than 60 degrees. 0-1km storm relative helicity values of 400 to 600 m2/s2 setup the perfect environment for individual thunderstorms to rapidly rotate. Numerous circulations were noted during the event, some significant, which produced swaths of wind damage as well as several weak to strong tornadoes. Given forward speed of 60 mph or more, the convection quickly translated across the area in a matter of hours.

(IN-Z004) ST. JOSEPH, (IN-Z014) MARSHALL

	11/26/13 23:00 EST		0	Lake-Effect Snow
	11/27/13 20:00 EST		0	

(IN-Z005) ELKHART

	11/26/13 23:00 EST		0	Winter Weather
	11/27/13 20:00 EST		0	

A band of heavy lake effect snow affected portions of north-central Indiana on November 27th. Snowfall totals of 5 to 10 inches occurred in a narrow band across St. Joseph County into northern Marshall County, with lighter snows on the periphery of this band.

MICHIGAN, Extreme Southwest

(MI-Z077) BERRIEN

	11/12/13 00:00 EST		0	Lake-Effect Snow
	11/12/13 13:00 EST		0	

An intense lake effect snow band set up over far southwest Lower Michigan during the morning hours of November 12th. Localized snowfall totals in excess of a foot were common.

BERRIEN COUNTY --- 0.7 S STEVENSVILLE [42.01, -86.52]

	11/17/13 14:55 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 14:56 EST		0	Source: Public

The public reported multiple trees were blown down on Red Arrow Highway. A tree was also down onto a local residence.

CASS COUNTY --- 2.1 N LA GRANGE [41.98, -86.05]

	11/17/13 15:25 EST		0	Thunderstorm Wind (EG 50 kt)
	11/17/13 15:26 EST		0	Source: Trained Spotter

A trained spotter found tree limbs down. Damage to a building was reported by the spotter, but no details were given on the amount of damage.

CASS COUNTY --- 1.5 WSW PARK SHR RESORT [41.90, -86.01], 1.2 W PARK SHR RESORT [41.90, -86.00]

	11/17/13 15:27 EST		0	Tornado (EF1, L: 0.38 mi , W: 50 yd)
	11/17/13 15:29 EST		0	Source: NWS Storm Survey

A survey of damage in the Cassopolis area by a NWS Survey team revealed that a EF1 tornado produced damage along a roughly four tenths of a mile path. Touchdown occurred on the southern outskirts of Cassopolis at a farm where a older two story barn was severely damaged with the entire second story of the barn being destroyed with damage thrown upward of 200 yards downstream (DI: SBO DOD 8). The tornado continued quickly northeast, passing across the northwestern part of the Ross Beatty Jr./Sr. High School property and impacting a detached two car garage, causing its total destruction (DI: SBO DOD: 6). Debris was thrown up to 500 yards northeast from the point of impact onto the Park Shore Golf Course, where several trees were snapped or uprooted. Maximum wind speeds with the tornado are estimated at 110 mph.

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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CASS COUNTY --- 1.5 NNW JONES [41.92, -85.81]				
	11/17/13 15:33 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 15:34 EST		0	Source: Trained Spotter

A trained spotter reported seven power poles were snapped. Other damage included the roof torn off a small shed and several center pivots being damaged. A snowmobile trailer was lifted and then tossed 100 yards.

ST. JOSEPH COUNTY --- CENTREVILLE [41.92, -85.53]				
	11/17/13 15:51 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 15:52 EST		0	Source: Public

The public reported trees and power lines down throughout the entire county.

BRANCH COUNTY --- 1.2 SW UNION CITY [42.06, -85.15]				
	11/17/13 16:10 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 16:11 EST		0	Source: Public

The public reported several trees down near Union Lake.

Deep low pressure moved across the northern Great Lakes, with a strong cold front trailing well south into Arkansas. A 50 to 60 knot low level jet aided in advecting in dewpoints greater than 60 degrees. 0-1km storm relative helicity values of 400 to 600 m2/s2 setup the perfect environment for individual thunderstorms to rapidly rotate with the lower values into far southern Lower Michigan. While favorable conditions existed, the area was just far enough north of the best conditions to keep the most severe weather away. However, isolated wind damage and one tornado was reported.

(MI-Z077) BERRIEN, (MI-Z078) CASS				
	11/26/13 23:00 EST		0	Lake-Effect Snow
	11/27/13 20:00 EST		0	

A band of heavy lake effect snow impacted portions of southwest Lower Michigan on November 27th. Snowfall totals of 8 to 16 inches occurred in a narrow band across eastern Berrien County and far western Cass County.

OHIO, Northwest

VAN WERT COUNTY --- 0.5 W VAN WERT [40.87, -84.58]				
	11/17/13 16:42 EST		0	Thunderstorm Wind (MG 54 kt)
	11/17/13 16:43 EST		0	Source: Mesonet

A 62 mph wind gust was recorded at the Van Wert Middle School.

DEFIANCE COUNTY --- 1.7 WNW THE BEND [41.29, -84.55]				
	11/17/13 16:47 EST		0	Thunderstorm Wind (EG 65 kt)
	11/17/13 16:48 EST		0	Source: Emergency Manager

Emergency management officials reported a CSX crossing gate was broken by the high winds. In addition, a power pole fell onto a house and car.

VAN WERT COUNTY --- 2.0 NW WETSEL [40.97, -84.46], 2.6 N WETSEL [40.99, -84.42]				
	11/17/13 16:47 EST		0	Tornado (EF1, L: 2.14 mi , W: 150 yd)
	11/17/13 16:49 EST		0	Source: NWS Storm Survey

A survey of damage in the northeastern part of Van Wert county by county emergency management officials and a NWS Survey team revealed that a EF1 tornado produced damage along a roughly two and one tenth mile long path. Touchdown occurred south of the intersection of Elm Sugar and Donner Road where several barns on two adjacent properties suffered damage. The northern most barn suffered extensive roof damage and loss of trusses (DI: SBO DOD: 4) with other barns suffering partial roof damage. The tornado continued northeast across open fields and occasional wooded areas, causing sporadic tree damage. A horse trailer was flipped over onto a truck at a residence on Middle Point Wetzel Road with a barn suffering minor roof damage. The tornado reached its end point at a business where some travel campers were flipped and some metal roofing was damaged. Maximum wind speeds with the tornado are estimated at 100 mph.

VAN WERT COUNTY --- 0.5 W WETSEL [40.95, -84.44]				
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Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/17/13 16:50 EST		0	Thunderstorm Wind (EG 50 kt)
	11/17/13 16:51 EST		0	Source: Emergency Manager

Emergency management officials reported three campers were rolled and several others knocked off their bases at a storage area. Power lines were also reported down in the area.

PUTNAM COUNTY --- 3.5 WNW DOUGLAS [40.96, -84.39], 2.6 WNW MUNTANNA [40.99, -84.34]

	11/17/13 16:52 EST		0	Tornado (EF2, L: 3.05 mi , W: 440 yd)
	11/17/13 16:54 EST		0	Source: NWS Storm Survey

Damage consistent with a tornado touchdown was found by a NWS survey team. The tornado touched down at a residence on Township Road 0, west of County Road 27 where a barn suffered some structural damage, with several hay wagons thrown or moved. The tornado continued rapidly northeast, impacting another barn on Route 66, north of Road N. The barn suffered more extensive damage with both wood rafters and lots of rood sheeting being torn off and carried through a field for nearly a mile. The tornado crossed the Putnam/Paulding county line near the intersection of Road 12 and Road 25m.

PAULDING COUNTY --- 2.1 SSE MANDALE [40.99, -84.34], 2.1 SSE MANDALE [40.99, -84.34]

	11/17/13 16:54 EST		0	Tornado (EF2, L: 0.02 mi , W: 440 yd)
	11/17/13 16:55 EST		0	Source: NWS Storm Survey

A tornado which originally touched down in Putnam county briefly crossed into Paulding county, near the intersection of Road M and Road 25m. A mobile home near the county line was impacted by the tornado, causing it to shift off its foundation with minor siding damage (DI: MHSW, DOD: 3). A barn also suffered some minor siding damage. The tornado quickly re-entered Putnam county shortly after.

PUTNAM COUNTY --- 2.6 WNW MUNTANNA [40.99, -84.34], 2.6 SSW KIEFERVILLE [41.07, -84.23]

	11/17/13 16:55 EST		0	Tornado (EF2, L: 8.04 mi , W: 440 yd)
	11/17/13 17:03 EST		0	Source: NWS Storm Survey

A tornado that originally touched down in Putnam county briefly crossed the Putnam/Paulding county line before re-entering Putnam county where is continued its rapid northeastward track over mainly open fields until entering the town of Cloverdale. Extensive tree damage as well as minor to moderate structural damage was noted across the town, with several power poles down. The greatest damage occurred to a church and a brick home. Both suffered extensive damages to some of the walls and the roof (DI: FR12 DOD: 7). A nearby home lost one of its walls (DI:FR12, DOD2) with adjacent hardwood trees suffering greater damage (DI: TH DOD: 4). The tornado exited town and continued northeast for several more miles over open fields and occasional wooded areas with sporadic tree damage noted until finally lifting five miles northeast of Cloverdale. Maximum winds are estimated at 130 mph with a total two county path length of around 11 miles.

PAULDING COUNTY --- 0.7 N MANDALE [41.03, -84.35]

	11/17/13 16:59 EST		0	Thunderstorm Wind (EG 55 kt)
	11/17/13 17:00 EST		0	Source: Emergency Manager

Emergency management officials reported a trailer was destroyed on Township Highway 48, east of State Route 66.

DEFIANCE COUNTY --- 0.7 N DEFIANCE MEML ARPT [41.34, -84.43]

	11/17/13 17:00 EST		0	Thunderstorm Wind (MG 52 kt)
	11/17/13 17:01 EST		0	Source: ASOS

A 60 mph wind gust was recorded by the automated sensor at the Defiance airport.

FULTON COUNTY --- 1.7 ESE PETTISVILLE [41.52, -84.19]

	11/17/13 17:15 EST		0	Thunderstorm Wind (MG 57 kt)
	11/17/13 17:16 EST		0	Source: Mesonet

A mesonet station recorded a 66 mph wind gust.

HENRY COUNTY --- 3.1 E TEXAS [41.42, -83.89]

	11/17/13 17:22 EST		0	Thunderstorm Wind (EG 60 kt)
	11/17/13 17:23 EST		0	Source: Emergency Manager

Emergency management officials reported a semi was overturned by the strong winds on US 24, near the Henry/Lucas county line. Numerous reports of trees and power lines being blown down were received across the county.

ALLEN COUNTY --- 0.5 W CAIRO [40.83, -84.09]

	11/17/13 17:31 EST		0	Thunderstorm Wind (MG 54 kt)
	11/17/13 17:32 EST		0	Source: Mesonet

Storm Data and Unusual Weather Phenomena - November 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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A 62 mph wind gust was recorded by a mesonet station.

ALLEN COUNTY --- 0.9 SW LIMA [40.74, -84.11]

11/17/13 18:00 EST	0	Thunderstorm Wind (MG 55 kt)
11/17/13 18:01 EST	0	Source: Mesonet

A mesonet station recorded a 63 mph wind gust.

Deep low pressure moved across the northern Great Lakes, with a strong cold front trailing well south into Arkansas. A 50 to 60 knot low level jet aided in advecting in dewpoints greater than 60 degrees. 0-1km storm relative helicity values of 400 to 600 m2/s2 setup the perfect environment for individual thunderstorms to rapidly rotate. Numerous circulations were noted during the event, some significant, which produced swaths of wind damage as well as several weak to strong tornadoes. Given forward speed of 60 mph or more, the convection quickly translated across northwestern Ohio over a few hour period.

Storm Data and Unusual Weather Phenomena - December 2013

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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INDIANA, Northeast

(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z007) STEUBEN, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z012) STARKE, (IN-Z013) PULASKI, (IN-Z014) MARSHALL, (IN-Z015) FULTON, (IN-Z016) KOSCIUSKO, (IN-Z017) WHITLEY, (IN-Z018) ALLEN, (IN-Z020) WHITE, (IN-Z022) CASS, (IN-Z023) MIAMI, (IN-Z024) WABASH, (IN-Z025) HUNTINGTON, (IN-Z026) WELLS, (IN-Z027) ADAMS, (IN-Z032) GRANT, (IN-Z033) BLACKFORD, (IN-Z034) JAY

12/13/13 21:00 EST	0	Winter Storm
12/14/13 20:00 EST	0	

(IN-Z003) LA PORTE, (IN-Z004) ST. JOSEPH, (IN-Z005) ELKHART, (IN-Z006) LAGRANGE, (IN-Z007) STEUBEN, (IN-Z008) NOBLE, (IN-Z009) DE KALB, (IN-Z012) STARKE, (IN-Z013) PULASKI, (IN-Z014) MARSHALL, (IN-Z015) FULTON, (IN-Z016) KOSCIUSKO, (IN-Z017) WHITLEY, (IN-Z018) ALLEN, (IN-Z020) WHITE, (IN-Z022) CASS, (IN-Z023) MIAMI, (IN-Z024) WABASH, (IN-Z025) HUNTINGTON, (IN-Z026) WELLS, (IN-Z027) ADAMS, (IN-Z032) GRANT, (IN-Z033) BLACKFORD, (IN-Z034) JAY

12/13/13 23:00 CST	0	Winter Storm
12/14/13 19:00 CST	0	

Light to moderate snow developed during the evening hours of December 13th and continued into December 14th as low pressure tracked northeast through the Ohio Valley. Total snow accumulations of 5 to 9 inches were common across northern Indiana.

MICHIGAN, Extreme Southwest

(MI-Z077) BERRIEN, (MI-Z078) CASS

12/14/13 00:00 EST	0	Winter Weather
12/14/13 20:00 EST	0	

(MI-Z079) ST. JOSEPH, (MI-Z080) BRANCH, (MI-Z081) HILLSDALE

12/14/13 00:00 EST	0	Winter Storm
12/14/13 21:00 EST	0	

Light to moderate snow developed during the early morning hours of December 14th and continued through much of the day as low pressure tracked northeast through the Ohio Valley. Total snow accumulations of 4 to 9 inches were common across southern Lower Michigan.

OHIO, Northwest

(OH-Z001) WILLIAMS, (OH-Z002) FULTON, (OH-Z004) DEFIANCE, (OH-Z005) HENRY, (OH-Z015) PAULDING, (OH-Z016) PUTNAM, (OH-Z024) VAN WERT, (OH-Z025) ALLEN

12/13/13 23:00 EST	0	Winter Storm
12/14/13 20:00 EST	0	

Light to moderate snow developed during the early morning hours of December 14th and continued through much of the day. Total snow accumulations of 6 to 9 inches were common across northwest Ohio.