



SKYWARN

Spotter Newsletter

Spring 2019

Welcome from all of us at the NWS Detroit/Pontiac office! It is the beginning of a new year across Southeast Michigan and time for the spring edition of the SKYWARN Spotter Newsletter!

Be sure to check out our website for the latest information and forecasts, as well as follow us on Facebook and Twitter.

Latest News...

- Michigan Severe Weather Awareness Week March 24-30.

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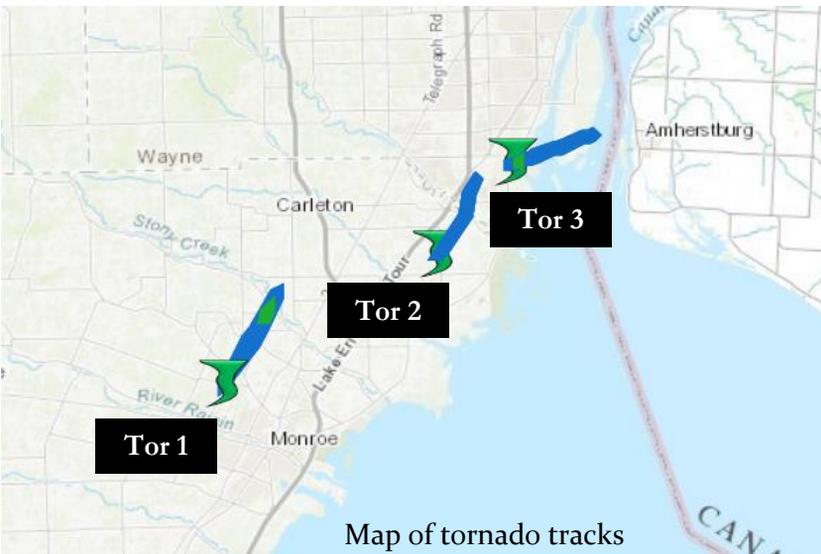
After a very benign year in terms of severe weather, the 2018 severe weather season ended with a tornado event. Specifically, three tornadoes hit Southeast Michigan during the evening of September 25th.

A robust upper trough approached the western Great Lakes on September 25, while low pressure developed over northern Lower Michigan along a cold front draped over the region. Ahead of this cold front, southwest winds brought warm and moist air (dew points exceeding 70 degrees in a few areas) to Southeast Michigan during the daytime and evening hours. This air mass paired with ample wind shear (bulk wind shear of greater than 40 kt and low level helicity exceeding $100 \text{ m}^2/\text{s}^2$) was sufficient for a couple rounds of thunderstorms to move through the area. One round of storms developed over West Michigan in the afternoon and moved northeast into the Tri-Cities area by early evening. No damage was reported from these storms, but almost 2 inches of rain fell around Midland.

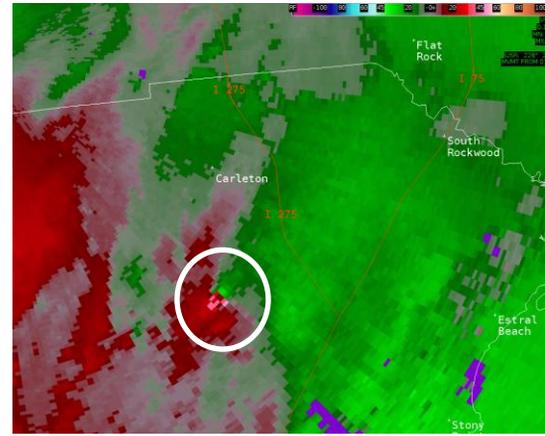
Another round of storms formed near the Michigan/Ohio border in the evening and moved through our southeastern counties. These storms strengthened quickly and produced three tornadoes over northern Monroe and southern Wayne Counties in addition to heavy rainfall.

Here are a couple photos from the damage in Frechtown Township





Map of tornado tracks



Storm relative velocity image from the Frenchtown Twp tornado; Note the circulation associated with the tornado is circled.

Frenchtown Township tornado in Monroe County (Tor 1)

Rating:	EF-1
Estimated peak wind:	95-100 mph
Path length /Statute/:	4.3 miles
Path width /Maximum/:	520 yards
Fatalities:	0
Injuries:	0
Start date:	SEP 25 2018
Start time:	823 PM EDT
Start location:	41.9562 / -83.4321
End date:	SEP 25 2018
End time:	832 PM EDT
End location:	42.0099 / -83.3892

SURVEY SUMMARY: The path began as weak EF0 damage, mainly to trees, until near Reinhardt and Heiss roads where it became a solid EF0. The tornado reached EF1 strength near Toben and South Stony Creek roads where roofing material was removed leaving exposed trusses and windows that were blown out of homes in the area. Garage doors were also blown in and many trees were damaged and uprooted. EF0 damage to siding and tree limbs was noted before the tornado dissipated near North Stony Creek road and the railroad tracks.

South Rockwood/Rockwood tornado in Monroe/Wayne Counties (Tor 2)

Rating:	EF-0
Estimated peak wind:	60-65 mph
Path length /Statute/:	3.8 miles
Path width /Maximum/:	200 yards
Fatalities:	0
Injuries:	0
Start date:	SEP 25 2018
Start time:	845 PM EDT
Start location:	42.0356 / -83.264
End date:	SEP 25 2018
End time:	852 PM EDT
End location:	42.0870 / -83.225

SURVEY SUMMARY: An EF0 tornado began in Berlin Township in Monroe County just south of Sigler Road on North Dixie Highway. The tornado remained at EF0 strength throughout the entire path length, before dissipating near the intersection of Meadow Lane and Osterreich Road in Wayne County near the border of Brownstown Charter Township and the city of Gibraltar. Damage included multiple limbs and large trees downed, along with missing shingles to a house near the end of the tornado path.



Gibraltar tornado in Wayne County (Tor 3)

Rating:	EF-1
Estimated peak wind:	95-100 mph
Path length /Statute/:	3.5 miles
Path width /Maximum/:	250 yards
Fatalities:	0
Injuries:	0
Start date:	SEP 25 2018
Start time:	855 PM EDT
Start location:	42.0914 / -83.2059
End date:	SEP 25 2018
End time:	902 PM EDT
End location:	42.1079 / -83.1462

SURVEY SUMMARY: An EF1 tornado began just to the west of W Jefferson Ave and south of Gibraltar Road. The tornado remained at EF1 strength up to the Navarre Street and Young Drive area, before weakening to EF0 strength for the remainder of the path. The tornado then crossed the Detroit River before dissipating at the north end of Elba Island in Grosse Ile Township. Damage included multiple large limbs and trees downed, a roof partially blown off and powerlines downed.

For Reference: EF Scale: The Enhanced Fujita Scale Classifies Tornadoes into the following categories.

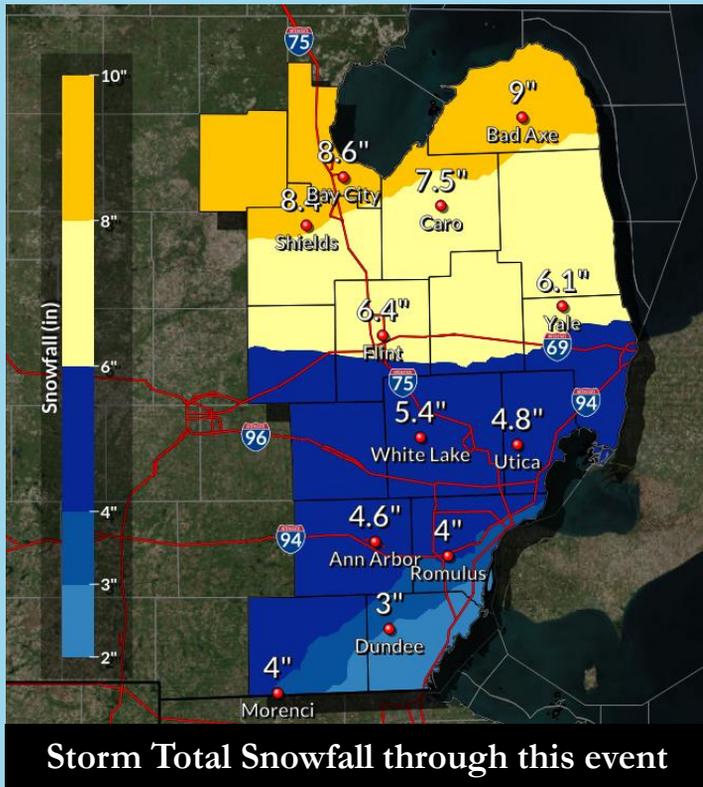
- EF0...Weak.....65 to 85 mph
- EF1...Weak.....86 to 110 mph
- EF2...Strong....111 to 135 mph
- EF3...Strong....136 to 165 mph
- EF4...Violent...166 To 200 mph
- EF5...Violent...>200 mph

This storm system also produced three tornadoes on the other side of the Detroit River in Canada on the evening of the 25th. Below is a maps of where these tornadoes occurred.

TORNADO SUMMARY TUESDAY SEPTEMBER 25, 2018



January 28, 2018 Winter Storm



A strong low pressure system brought several inches of snow to many portions of the Great Lakes region, with Southeast Michigan seeing that snow throughout the day on Monday, January 28. This snow quickly exited the area Monday evening, with only some locations seeing additional snowfall overnight on Monday. Snowfall totals across Southeast Michigan ranged from 2 inches in Monroe County to 10 inches over Bay and Huron Counties. The coldest air of the season then filtered in behind the departing system, bringing dangerous cold wind chills for the couple of days following this event.

Record Cold Temperatures Jan 30 – January 31

An arctic blast followed the snow storm that occurred earlier in the same week and brought record cold the Great Lakes region and parts of the northern plains.

This cold air outbreak set eight low temperature records Wednesday and Thursday at our official climate sites.

Low <u>Max</u> Temp °F			Record Broken/Tied	Low <u>Min</u> Temp °F		
DETROIT	Observed	Record		DETROIT	Observed	Record
Wednesday January 30	1 (2019)	7 (1951)	☐	Wednesday January 30	-13 (2019)	-4 (1951)
Thursday January 31	3 (2019)	7 (1920)		Thursday January 31	-14 (2019)	-7 (1920)
FLINT	Observed	Record		FLINT	Observed	Record
Wednesday January 30	2 (2019)	8 (1951)		Wednesday January 30	-14 (2019)	-16 (1951)
Thursday January 31	3 (2019)	6 (1971)		Thursday January 31	-14 (2019)	-8 (1963)
TRI-CITIES	Observed	Record		TRI-CITIES	Observed	Record
Wednesday January 30	8 (2019)	8 (1951)	Wednesday January 30	-10 (2019)	-17 (1951)	
Thursday January 31	6 (2019)	5 (1920)	Thursday January 31	-12 (2019)	-15 (1994)	



Training dates are also posted on our homepage. Check our web page periodically for additional updates to this schedule. In some cases, class size is limited. Please contact the local Emergency Management Office for more information.

February to March Dates

DATE	COUNTY	CITY	ADDRESS	TIME
February 27	Livingston	Hamburg Twp	Fire Department 3666 M-36, Pinckney, MI 48169	7 PM – 830 PM
February 28	Washtenaw	Ypsilanti	Ypsilanti Township Civic Center 7200 S Huron River Dr, Ypsilanti, MI 48197	7 PM – 830 PM
March 5	Oakland	Novi	Novi City Hall 45175 W 10 Mile Rd	7 PM – 830 PM
March 6	Oakland	Pontiac/Waterford	Oakland County Executive Office Building 2100 Pontiac Lake Rd, Waterford Twp, MI 48328	7 PM – 830 PM
March 7	Midland	Midland	Yet to be determined	7 PM – 830 PM
March 8	Wayne	Wyandotte	Wyandotte Copeland Center 2306 4th St, Wyandotte, MI 48192	7 PM – 830 PM
March 9	Wayne	Garden City	Garden City Presbyterian Church 1841 Middlebelt Rd, Garden City, MI 48135	10 AM – 12 PM
March 13	St Clair	Port Huron	St Clair County Building 200 Grand River Ave #203, Port Huron, MI 48060	7 PM – 9 PM
March 14	Macomb	Warren	Warren Civic Center Library 1 City Square, Warren, MI 48093	6 PM – 8 PM
March 20	Wayne	Livonia	Livonia Civic Center Library 32777 Five Mile Road, Livonia, MI 48154	7 PM – 9 PM
March 21	Washtenaw	Ann Arbor	Yet to be determined	1 PM – 230 PM
March 23	Oakland	Pontiac/Waterford	Oakland County Executive Office Building 2100 Pontiac Lake Rd, Waterford Twp, MI 48328	10 AM – 1130 AM 1 PM – 230 PM
March 23	Oakland	Pontiac/Waterford	Oakland County Executive Office Building 2100 Pontiac Lake Rd, Waterford Twp, MI 48328	1 PM – 230 PM
March 25	Oakland	Southfield	Southfield Library 26300 Evergreen Rd, Southfield, MI 48076	6 PM – 730 PM
March 26	Sanilac	Sandusky	Firebird Theater 280 E Sanilac Road	7 PM – 9 PM
March 28	Wayne	Dearborn	Fairlane Town Center 19000 Hubbard Dr, Dearborn, MI 48126	9 AM – 1030 AM
March 28	Lapeer	Lapeer	PIX Theater 172 W Nepessing St, Lapeer, MI 48446	7 PM – 830 PM
March 30	Genesee	Flint	Genesee County Building – 3 rd Floor Auditorium 1101 Beach St #29, Flint, MI 48502	10 AM – 1130 AM

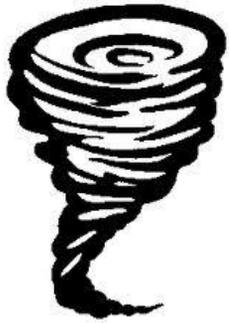


April Dates

DATE	COUNTY	CITY	ADDRESS	TIME
April 2	Monroe	Temperance	Bedford Branch Library 8575 Jackman Rd, Temperance, MI 48182	630 PM – 8 PM
April 4	Oakland	Rochester	Rochester Fire Department 277 E 2nd St, Rochester, MI 48307	7 PM – 830 PM
April 6	Macomb	Clinton Twp	Macomb Intermediate School District 37623 Garfield Rd # 110, Clinton Twp, MI 48036	10 AM – 12 PM
April 8	Oakland	Holly/Groveland Township	Groveland Twp Fire Department 14645 Dixie Hwy # B, Holly, MI 48442	7 PM – 9 PM
April 10	Oakland	Canton	Canton Twp Police Department 1150 S Canton Center Rd, Canton, MI 48188	7 PM – 830 PM
April 11	Lenawee	Adrian	Sienna Heights University – Dominican Hall Reuckert Auditorium 1247 E Siena Heights Dr, Adrian, MI 49221	7 PM – 830 PM
April 13	Washtenaw	Ann Arbor	Pioneer High School 601 W Stadium Blvd, Ann Arbor, MI 48103	10 AM – 1130 AM
April 23	Bay	Bay City	To Be Determined	7 PM – 830 PM

DETROIT BOAT SHOW
February 16–24, 2019
Cobo Center

Come visit the NWS at the
61st Annual Spring Boating
Expo at the CoBo Center!
detroitboatshow.net/



State Wide Tornado Drill
Wednesday, March 27 1:00 PM – 1:30 PM

WeatherFest

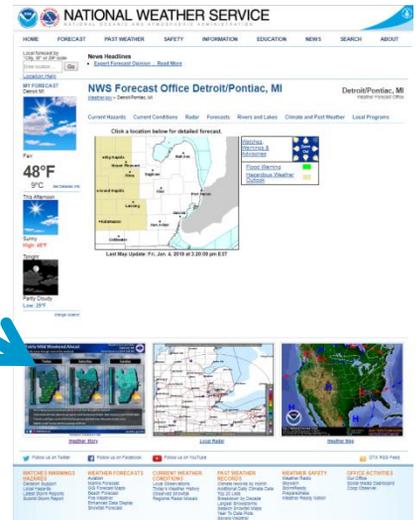
Date: May 13

Location: Southfield Public Library

Time: 1 PM to 6 PM



Many of you have likely noticed the Graphical Forecast page [link](#) near the bottom left on the NWS Detroit Homepage (just to the left of the radar image link). This is the Weather Story link. When clicking on this page, you will find a graphical forecast. In some instances, especially during busy weather, there will be multiple tabs each with a graphical forecast element.



Some information that can be found under these weather story tabs, in addition to general forecast information and outlooks include:

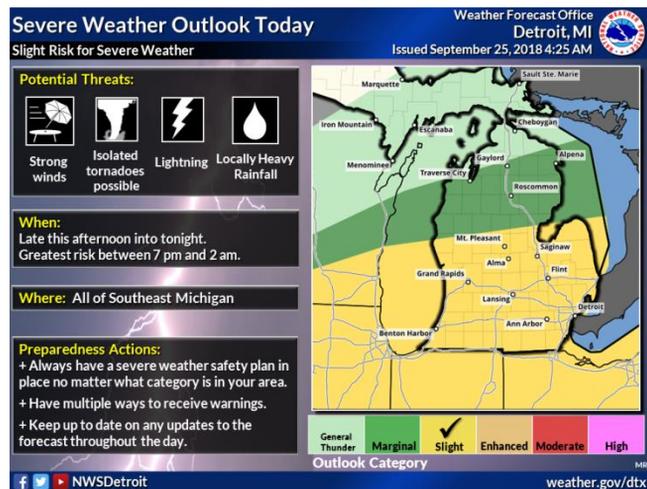
Winter Weather

- Location and time of watches, warnings and advisories.
- Forecast snowfall totals and start/end times of accumulating snow.
- Forecast ice accumulations during freezing rain.
- Main hazards associated with the winter weather.
- Below is an example from this past November.



Severe Weather

- Storm prediction center convective outlooks (zoomed in over Michigan).
- Severe Thunderstorm or Tornado Watches (warnings are too short fused to place in a graphics but do automatically populate on the map on the front of the NWS Detroit website).
- Most likely time period of severe weather.
- Main hazards expected with the severe weather.
- Below is an example from this past September.



Other Hazardous Weather

- Flooding; timing and location.
- Rainfall amounts during heavy rain.
- Dense fog potential, location and any advisories
- Lake shore flooding; areas impacted.
- Hazardous marine conditions on Lake Huron, St Clair and western Lake Erie; storm force winds, gales, small craft advisories (during boating season).



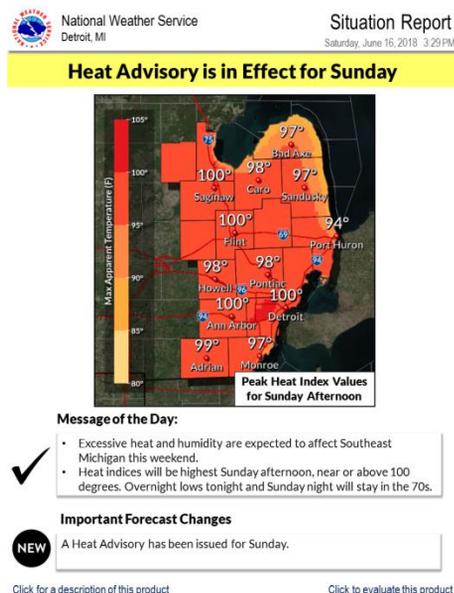
Short Term Forecasts Valid 1 to 4 hours:

- A radar image followed by a short fused forecast.
- Potential hazards over the next couple hours.
- Locations to be impacted as a result of short fused weather.
- Below is an example of a thunderstorm complex advancing across the area.



SitRep (Situation Report):

- Issued during forecast high impact weather conditions.
- When one is in effect, the [link](#) will be located in the top right corner on the NWS Detroit Homepage and will be a yellow rectangle box with the words Situation Report on it.
- The link takes you to another page which gives a quick overview of the forecast and potential hazards.
- These will typically be issued for forecast winter storms, larger scale severe weather events and with potential for significant flooding.



Communicate the 3 W's!

WHEN

WHAT

WHERE

Example Report

“Hello, my name is _____ and I have a storm report for you. At 5:35pm, we had golf ball size hail near the intersection of Eleven Mile and Woodward Ave in Royal Oak. It lasted for about 5 minutes and caused some damage to siding and cars.”

Also try to include other important info – damage, injuries, etc.

Send photos if you can

1-800-808-0006

Reports ONLY – answered 24/7



nwslidtx@noaa.gov



NWSDetroit



@NWSDetroit
#miwx



Amateur Radio

K8DTX@winlink.org

Contact local net control for info



Have you heard of CoCoRaHS? The CoCoRaHS program (Community Collaborative Rain Hail and Snow network) is separate from the NWS spotter network. However, reports from this program are shared among the NWS and other government agencies, media and educational institutions. Participants in this program report their 24-hour rain and/or snow reports every morning around 7 AM on a website.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Welcome to CoCoRaHS! "Volunteers working together to measure precipitation across the nations."

Reports received today 1/07/2019 as of 11:43 AM EST

Daily	Multi-Day	SigWX	Hail	Condition	Total
7,583	174	1	0	28	5

Daily Precipitation (inches x.xx) 1/7/2019

10 for CoCoRaHS

Your gifts support CoCoRaHS activities such as educational programs, outreach, supplies, data

\$102,355 3,247 Raised Donors

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Things to know about...
Rain
Hail
Snow

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celebrating 20 YEARS 1998 - 2018

Sign-up on the CoCoRaHS webpage www.cocorahs.org

View [on-line training slide shows](#)





NWS web sites useful for obtaining forecasts:

Local Hazardous Weather Information

<http://www.crh.noaa.gov/dtx/svr.php>

Hazardous Weather Outlook (HWO)

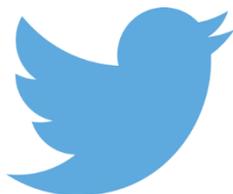
<http://www.crh.noaa.gov/dtx/outlook.php>

Storm Prediction Center (SPC)

<http://www.spc.noaa.gov>



weather.gov/detroit



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