SPOTTER NEWSLETTER
Fall 2022

Upcoming Dates

- November 1, 2022– Winter Spotter Webinar
- November 6th – 12th, 2022 – Michigan Winter Weather Awareness Week
- December 3th, 2022– Skywarn Recognition Day

In this Issue

Welcome to the fall edition of the SKYWARN Spotter Newsletter!

Hello from all of us at the NWS Detroit/Pontiac office! We thank you again for all of your severe weather reports this spring and summer.

With winter already making itself known, it is time to start thinking about the winter weather season and Winter Spotter Training. This year, we are finally back to in-person training. We will also still be offering a virtual training session. We hope you enjoy this year's presentation, whether it is virtual or in person.

As always, be sure to check out our website for the latest information and forecasts. Supplementary forecast information can also be found at:

Southeast Michigan Severe Stats

Stat	2022 (through Oct. 31)	Average (2008-2019)
Warnings Issued	62	97
Severe Reports Received	103	189
Severe Weather Detection Rate	91%	82%
Average Lead Time	24.8 min	25.9 min
Tornadoes	3	5

The 2022 severe weather season was heading towards historically low numbers until two events in August brought the numbers up little. Overall, southeast Michigan still came in well below the average in terms of warnings issued, reports received, and number of tornado occurrences.

Lake Fenton Tornado
July 11, 2022

House near Lake Fenton

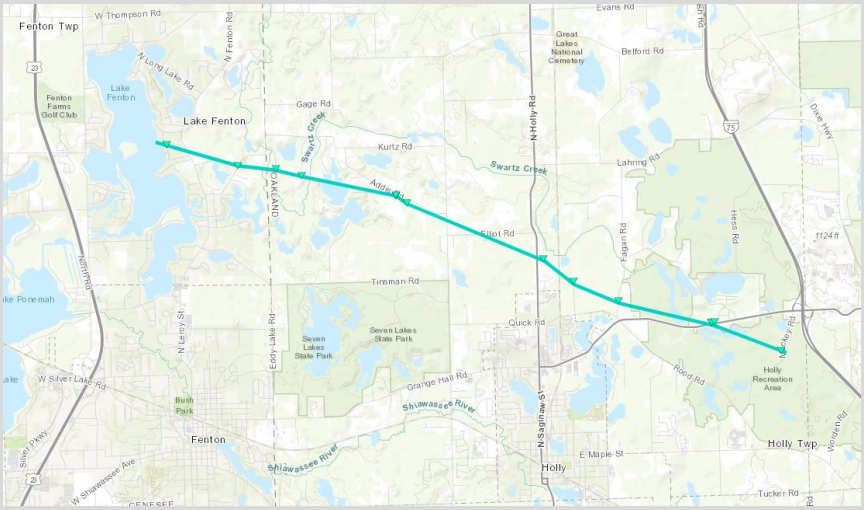
Vinyl Siding Panels

Metal Roofing

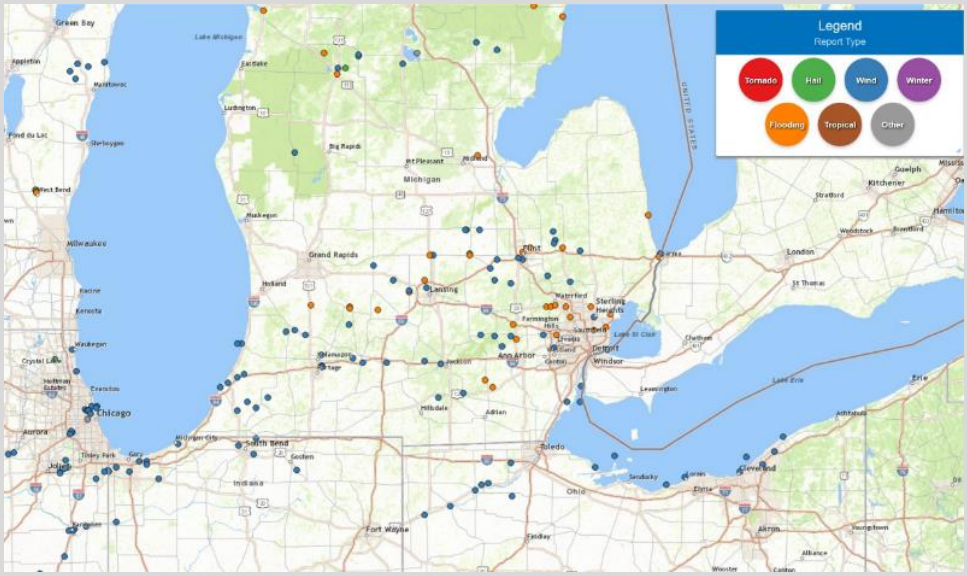
Weakened thunderstorms traversed Lake Michigan during the afternoon hours on July 11, 2022, and largely dissipated upon arrival to Southeast Michigan. A second round of convection worked through late that evening ahead of an advancing cold front as a more unstable environment developed ahead of an advancing cold front. Severe thunderstorm warnings were issued between I-69 and M-59 from 10:41 PM until 1 AM as the strongest lead storm progressed eastward. The storm produced an EF-0 tornado that touched down near the eastern shores of Lake Fenton before lifting 3 miles ESE of Holly, just west of I-75. Several homes, outbuildings, and trees sustained varying degrees of damage. Damaging severe thunderstorm wind gusts redeveloped as the storm crossed through Lapeer causing additional tree and utility line damage.

Date	July 11, 2022
Time (Local)	11:33 PM - 11:42 PM EDT
EF Rating	EF-0
Est. Peak Winds	65 mph
Path Length	7.5 miles
Max Width	40 yards
Injuries/Deaths	0/0

EF0 EF1 EF2 EF3 EF4 EF5 TSTM UKN



An organized line of thunderstorms brought widespread strong to severe thunderstorms across SE MI through the afternoon and evening hours. Thunderstorms initially became more organized across the Tri-Cities and northern Thumb during the early afternoon and brought widely scattered wind gusts between 50-60 mph, which resulted in numerous reports of downed trees and powerlines. Severe thunderstorms continued to expand southward during the late afternoon, while new storms developed just ahead of the initial line, along an expanding outflow boundary. Given the moderate to strong instability in place, thunderstorms continued to produce widely scattered damaging wind gusts as they approached the northern Metro region. A Mesoscale Convective Vortex (MCV) eventually caught up with the line in the evening hours which continued the threat of severe weather across the Metro region. Over 100,000 homes and businesses were without power after the thunderstorms moved through. For an addition in-depth environmental overview, please see the 'Environment' Section.



Madison Heights, MI / Credit: Suzanna Costa

Lake Orion, MI / Credit: Ben Redmon

Novi, MI / Credit: Nick Dewhirst

Livonia, MI / Credit: Twitter @Erinfay

August 29, 2022 Squall Line

Royal Oak, MI / Credit: Ryan Jake Jakubowski

Ann Arbor, MI
Credit: Johnny Delpizzo

Monroe, MI
Credit: Mike Frey

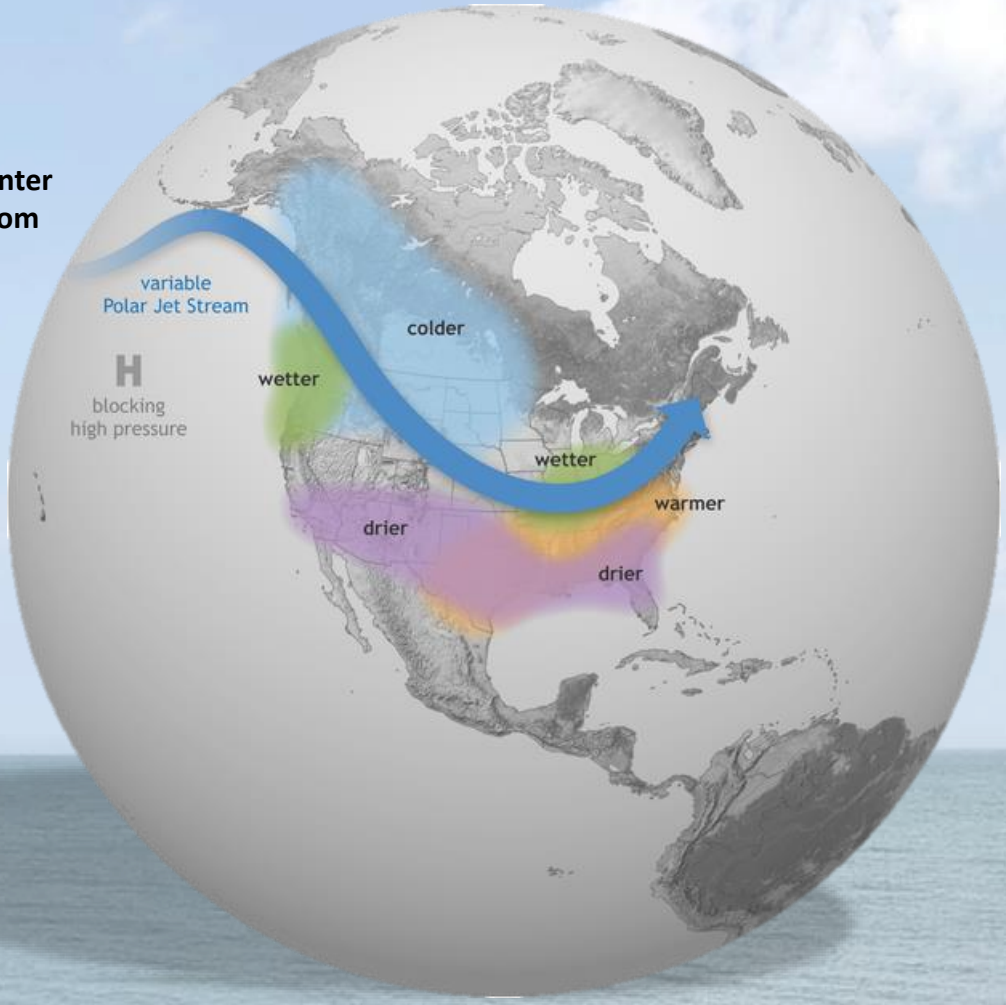
Wolverine Lake, MI
Credit: Nolan Waters

A squall line raced across southern lower Michigan during the afternoon and evening of August 29, 2022, leaving widespread wind damage in its path. This line of storms developed ahead of a cold front and tracked into the region from the Chicago area, expanding in coverage and intensity as they encountered a warm, muggy, and unstable atmosphere over Southeast Michigan. Gusts of 60 to 75 mph were responsible for damage to trees, power lines, and property and left over 375,000 customers without power. Several gustnadoes were reported along the leading edge of the strong gust front in Cambridge Twp, Highland Twp, Putnam/Hamburg Twp, Richmond, and Fort Gratiot, producing localized corridors of enhanced damage.

La Niña Continues!

There is a 75% chance of La Niña during the Northern Hemisphere winter (December-February) 2022-23, with a 54% chance for ENSO-neutral in February-April 2023.

Image: Typical Winter La Niña pattern from NOAA Climat.gov

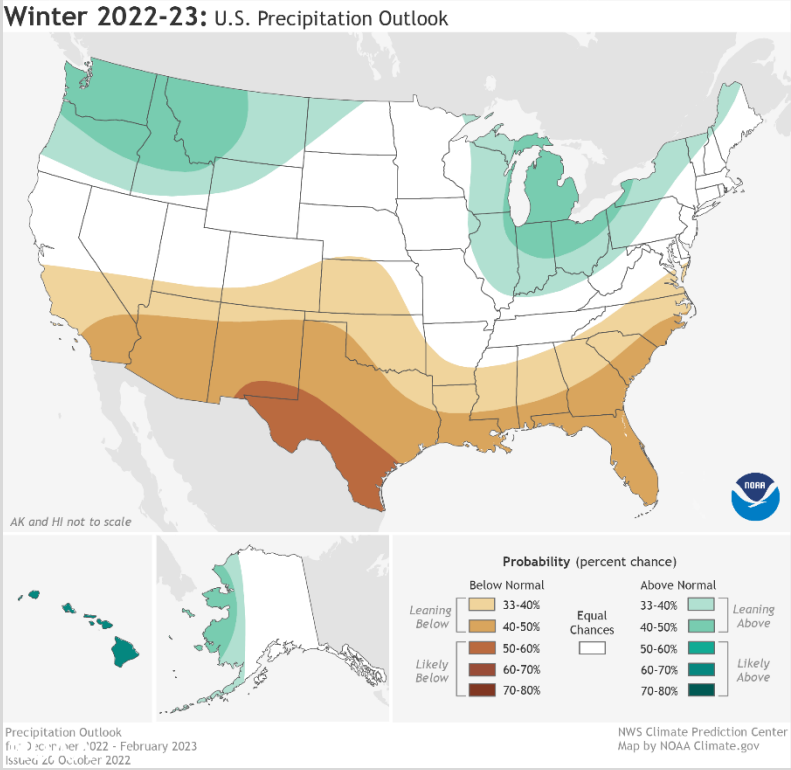


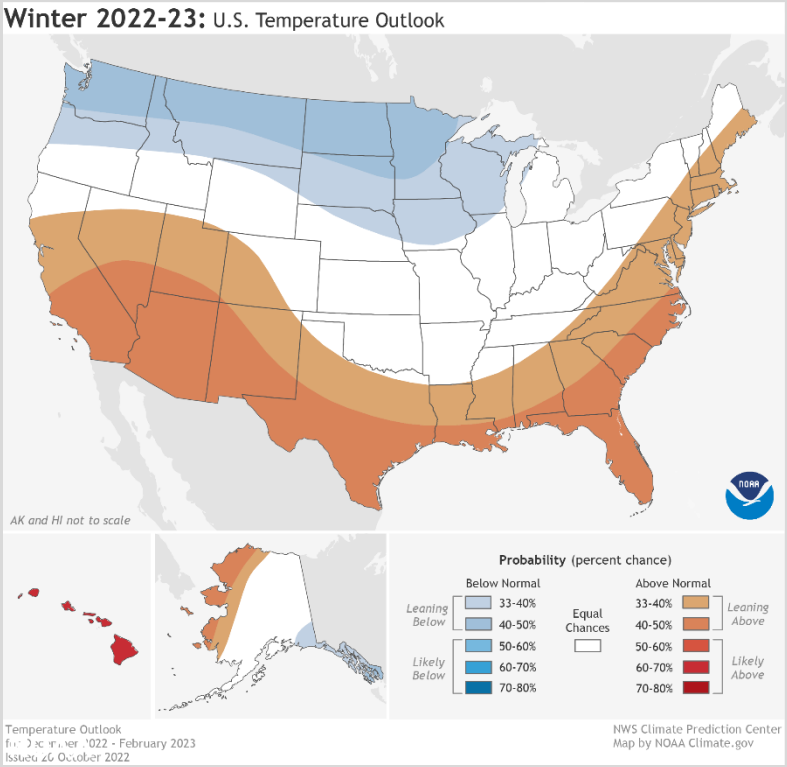
This means we will likely be facing the third La Niña winter in a row. This is the third time in our historical record of ENSO (El Niño-Southern Oscillation, the whole El Niño and La Niña system), which dates back to 1950, that we have had three La Niña winters in a row.

Precipitation Outlook

- Wetter-than-average conditions are most likely in western Alaska, the Pacific Northwest, northern Rockies, Great Lakes and Ohio Valley.
- The greatest chances for drier-than-average conditions are forecast in portions of California, the Southwest, the southern Rockies, southern Plains, Gulf Coast and much of the Southeast.
- The remainder of the U.S. falls into the category of equal chances for below-, near-, or above-average seasonal total precipitation.

Southeast Michigan has a 40-50% chance of above normal precipitation this winter. Note: this is not a snowfall outlook.





Temperature Outlook

- The greatest chance for warmer-than-average conditions are in western Alaska, and the Central Great Basin and Southwest extending through the Southern Plains.
- Warmer-than-average temperatures are also favored in the Southeastern U.S. and along the Atlantic coast.
- Below-normal temperatures are favored from the Pacific Northwest eastward to the western Great Lakes and the Alaska Panhandle.

All of Southeast Michigan has Equal Chances for above or below normal temperatures this winter.

Link to Video of the NOAA Winter Outlook

A virtual winter spotter training course will be held on

Tuesday November 1, 2022

7:00 – 8:30 pm

Pre-registration is required

Topics Covered:

- Review of last year's winter weather
- Outlook for the coming winter
- Severe winter weather such as:
  - Snow,
  - Freezing rain
  - Snow squalls
  - High winds
  - Flooding
  - And more!
- Winter spotter reporting guidelines
- Winter weather safety information.

Webinar Registration Steps:

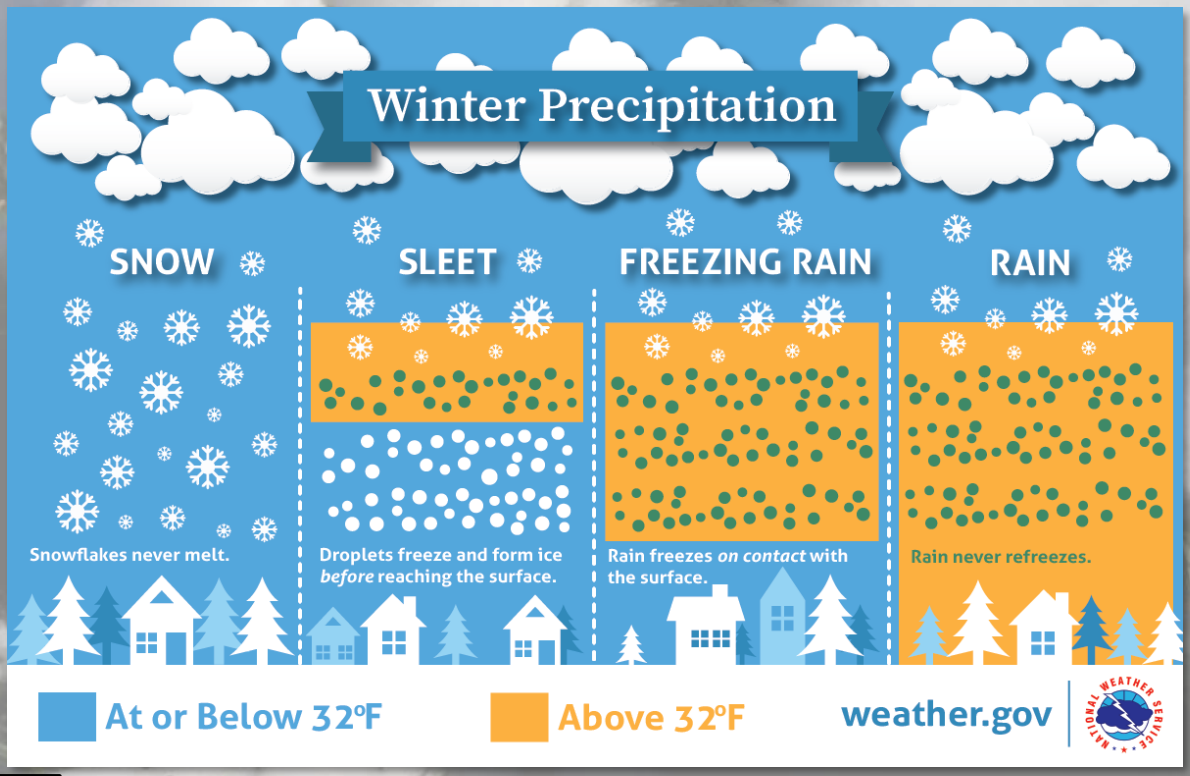
1. Register for the webinar via the link listed below.
2. You will receive a confirmation email. Use the link in this email to join the webinar a few minutes before 7pm on November 9th, 2021.

Click For The Winter Skywarn Registration Link

In-Person Winter Spotter Training

Topics covered will be the same as the virtual presentation, which is featured on the previous page.

Date / Time	Location	Address
Wednesday, Nov. 9th @ 7 PM	Waterford Oaks Conference Center	2800 Watkins Lake Rd Waterford, MI



Reporting Methods:

1-800-808-0006
Reports ONLY – answered 24/7

NWSDetroit

@NWSDetroit
#miwx

nwslidtx@noaa.gov

There are many forecast challenges involved with winter storms. Snowfall amounts and precipitation types can vary drastically over short distances! Timely and accurate reports from our spotters are vital to our operations and help ensure that our forecast is on track.

Send photos via social media!

Snow – nearest tenth of an inch (e.g. 3.4”)

- When the first inch has fallen, then each additional two inches
- Storm total snowfall
- 12-hour snowfall amounts around 8am and 8pm

Flooding

- Any flooding that covers roads, impedes traffic, or threatens property
- Ice jams/blockages

Rain – nearest hundredth of an inch (e.g. 1.78”)

- Amounts of one inch or greater over 24 hours

Dense Fog

- Visibility of a quarter mile or less
- When fog is impacting travel

Ice – nearest tenth of an inch (e.g. 0.2”)

- Any freezing rain or sleet
- Ice that is having impacts on travel, damaging trees, and/or downing power lines

High Winds

- Wind gusts of 40 mph or greater
- Any damage caused by strong winds (trees, roofs, siding, etc.)

In late June, FEMA released a BIG update to their app, which is highly personalized for you and your family.

- ✓ Receive real-time weather alerts
- ✓ Find nearby resources
- ✓ Locate emergency shelters
- ✓ ….and more!

https://www.fema.gov/about/news-multimedia/mobile-products

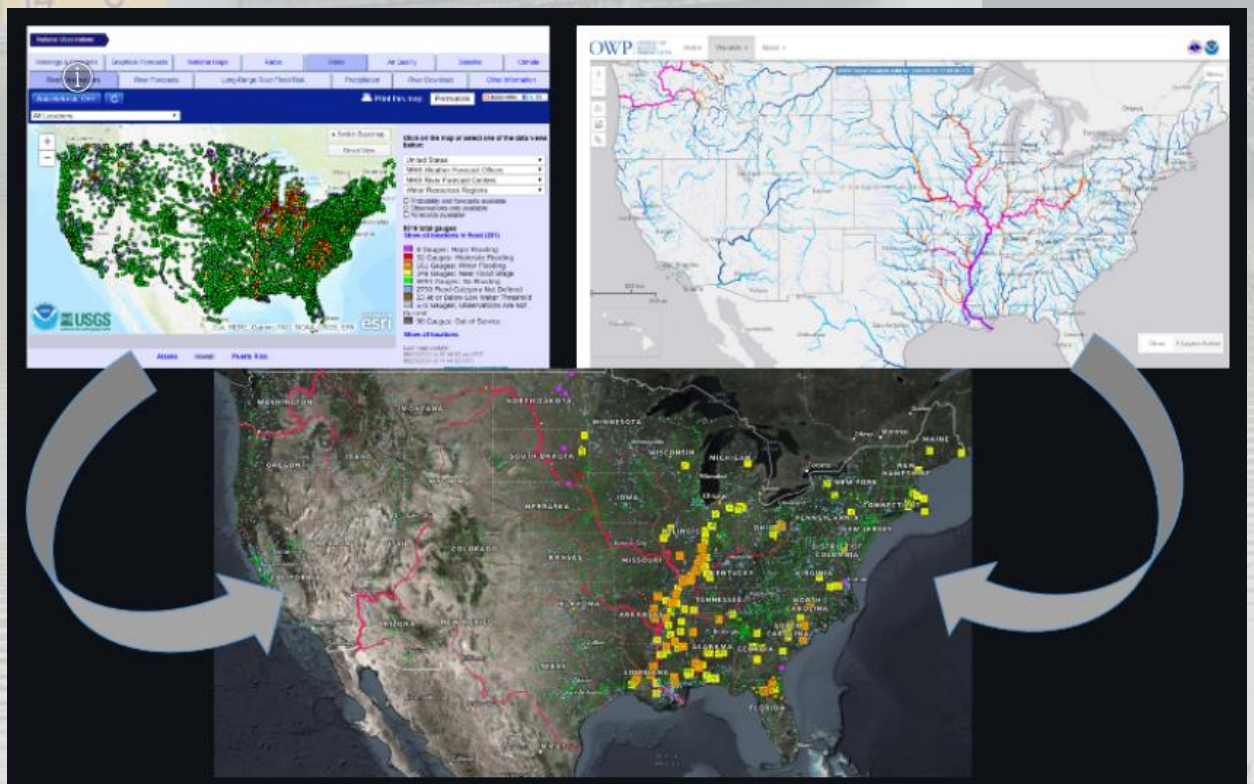
Download the FEMA App Today

Get Access to:

- Weather Alerts
- Disaster Resources
- Preparedness Tips

Link to the NWS Winter Safety Campaign Page

Our 20+ year-old AHPS website is going to be replaced by the National Water Prediction Service (NWPS). To help introduce the look and feel of NWPS, we have created a user-centric StoryMap. This StoryMap contains descriptions of NWPS features, along with a set of short tutorial videos highlighting different aspects of the map and hydrograph displays. Current timeline for this replacement is to have a stability test during the 2022-2023 winter with implementation in the spring of 2023.



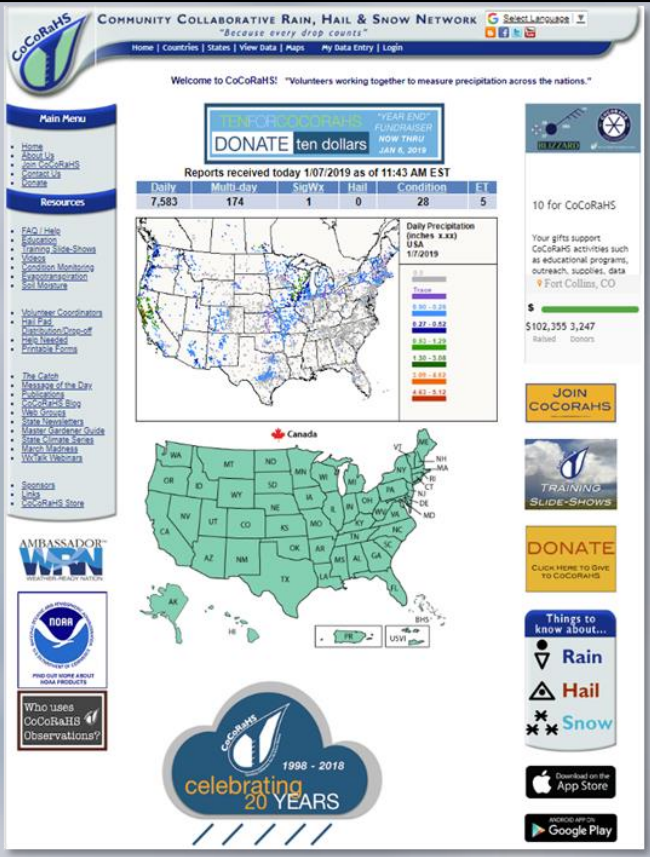
NWPS combines current AHPS data and introduces the National Water Model

A User's Guide to NWPS

Link to the website
www.cocorahs.org

CoCoRaHS stands for the Community Collaborative Rain Hail and Snow Network. This program is separate from the National Weather Service spotter network. The program is a national program and the precipitation reports are shared among the National Weather Service and other government agencies, the 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.

The CoCoRaHS website has several resources for training on how get started a measure winter precipitation.



Training Materials

"In Depth" Snow Measuring
https://cocorahs.org/media/docs/measuringSnow2.1.pdf

Measuring Ice Accretion
https://www.cocorahs.org/media/docs/Training_IceAccreation.pdf

Animated Training Video Shorts
https://www.youtube.com/playlist?list=PL86DC4C330F518387

More online training slide shows.

Who Uses CoCoRaHS data?

Weather Forecasters
Hydrologists
Water Management
Researchers
Agriculture
Climatologists
Engineering
Recreation
Insurance Industries
...and many others!

National Weather Service
Detroit/Pontiac

Website
weather.gov/detroit

Address
9200 White Lake Road
White Lake, MI 48386

Phone
248-620-9804

Email
w-dtx.webmaster@noaa.gov

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