



NWS Looking for More Volunteer Observers

Join the Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS) Today!

Reason #1 to join:

→ Your reports are **used by meteorologists at the National Weather Service every single day.**

→ CoCoRaHS observations help us:

- ◆ Verify forecasts
- ◆ Calibrate radar rainfall estimates
- ◆ Forecast and warn for flash flooding and river flooding
- ◆ Understand local effects, such as those from terrain and lakes
- ◆ And MUCH MORE!

What is CoCoRaHS?

CoCoRaHS, or the Community Collaborative Rain, Hail, and Snow network, is a grassroots network of volunteers of all ages and backgrounds working together to measure and map precipitation.



Image courtesy Dave Johnson, MN-SL-18

CoCoRaHS Observers:

- Must use standard rain gauge equipment (~\$45)
- Report daily (ideally)
- Can be ANYONE!





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Reason #2 to join:

- Your reports are **used by hydrologists!**
 - ◆ Hydrologists predict streamflows, river levels, reservoir volumes, water supplies, and flood potential.
 - ◆ **CoCoRaHS rain and snow observations are extremely valuable** because observers report daily and use standard, NWS-accepted equipment.
 - ◆ Your observations with standard equipment are more accurate than many automated weather stations!

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Reason #3 to join:

→ Your observations are **used by researchers!**

→ Examples of research using CoCoRaHS data:

- ◆ Precipitation observations can be used to understand and predict disease spread in humans, animals, and plants.
- ◆ Mosquito control operations use CoCoRaHS to track where and when mosquitoes will hatch.
- ◆ Some stations have been recording for long enough to be a part of climate change research.

The screenshot shows a Google Scholar search for 'cocorahs' with approximately 1,470 results. The search interface includes filters for 'Articles', 'Any time', 'Sort by relevance', 'Any type', and 'Create alert'. Several search results are visible, each with a title, author information, and a brief description of the research.

Search results include:

- [HTML] CoCoRaHS: The evolution and accomplishments of a volunteer rain gauge network** by HW Reges, N Doesken, J Turner. Bulletin of the ... 2016 - journals.ametsoc.org
- [HTML] Who received the most rain today?: An analysis of daily precipitation extremes in the contiguous United States using CoCoRaHS and COOP reports** by PE Goble, NJ Doesken, L Durre. Bulletin of the ... 2019 - journals.ametsoc.org
- Putting the capital 'A' in CoCoRaHS: an experimental programme to measure albedo using the Community Collaborative Rain, Hail & Snow (CoCoRaHS) Network** by E Burakowski, CP Wake, JE Dobb. Hydrological ... 2013 - Wiley Online Library
- [HTML] CoCoRaHS observers contribute to "condition monitoring" in the Carolinas: A new initiative addresses needs for drought impacts information** by K Lackstrom, A Farris, D Eckhardt. Bulletin of the ... 2017 - journals.ametsoc.org
- [PDF] CoCoRaHS (the Community Collaborative Rain, Hail and Snow network)—The accidental network: Evolving collaborations** by HW Reges, RC Cifelli, NJ Doesken. 17th Symposium on ... 2008 - media.cocorahs.org
- CoCoRaHS in Missouri: Four years later, the importance of observations** by JT Moon III, PE Guinan, DJ Snider. Transactions of the ... 2009 - meridian.allenpress.com





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Reason #4 to join:

→ Your reports are **used in the agriculture industry!**

- ◆ Farmers, ranchers, agribusiness, and commodities investors track weather predictions and observations. This influences:
 - Crop deployment (when and what to plant)
 - Crop yield prediction
 - Track/predict disease and insects
 - Soil moisture assessments

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Reason #5 to join:

→ Your reports are **used by forensic scientists and the insurance industry**

- ◆ CoCoRaHS reports, as official NWS data, may be used to verify storms
- ◆ CoCoRaHS data can be used to:
 - Prevent fraudulent claims
 - Verify hail, heavy rain/snow, or flooding
 - Provide meteorological reconstruction of past weather events for litigation purposes, especially from remarks section of daily reports.

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Image courtesy Tessa Levens, WI-BY-29





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Reason #6 to join:

→ Your reports are **used by engineers who design homes, offices, roads, and more!**

- ◆ Roof drains, slopes, and gutter designs are based on rainfall and snowfall data.
- ◆ More reports help ensure the infrastructure in our communities are made to withstand the stress of our weather.
- ◆ This data is especially important for designing parking lots, culverts, storm seward, drainage areas, bridges, etc.

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Photo courtesy of Jason Jensen, DNR Conservation Pilot





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Reason #7 to join:

→ You'll **provide valuable weather information for your community!**

- ◆ Across the mid Mississippi and lower Ohio Valleys, other accurate precipitation data is far spread out and does not capture all local variations in weather.
- ◆ A higher density observation network provides a clearer picture of what happened!
- ◆ This provides your local community with high-quality local data!

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CoCoRaHS rainfall observations on September 3, 2022 in Owensboro, KY shows the drastic range in amounts from one side of town to the other.





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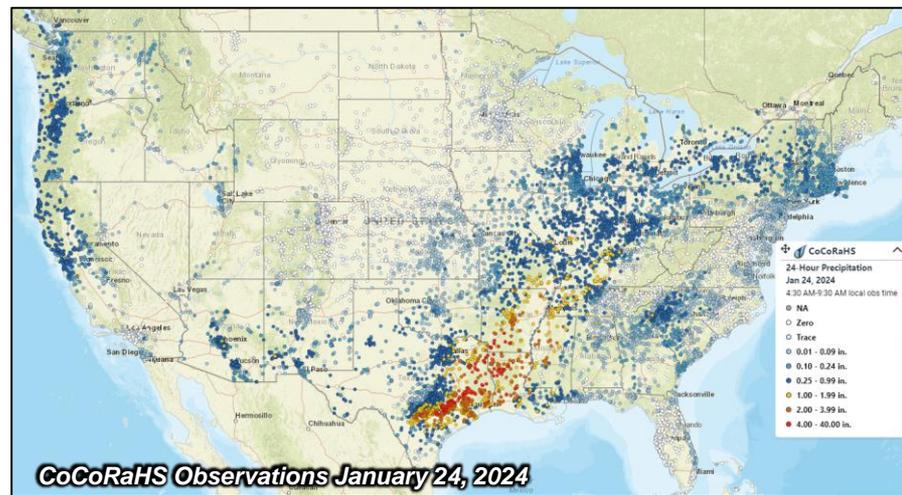
Reason #8 to join:

→ You're joining **a massive network of volunteers!**

- ◆ *There are currently over 20,000 active observers!*
- ◆ CoCoRaHS was founded in 1998 at Colorado State University after devastating flash flooding showed the need for high-density, high-quality observations.
- ◆ Sponsored by NOAA and the National Science Foundation.

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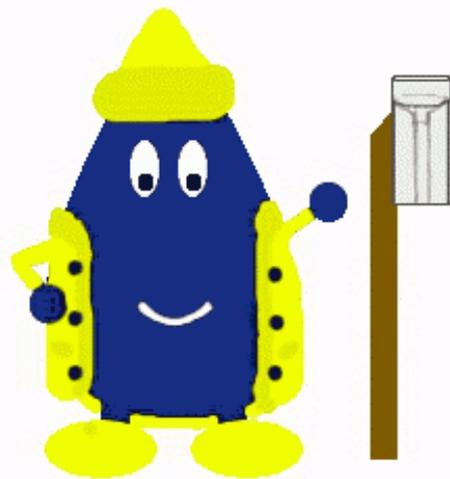
Reason #9 to join:

→ Taking daily weather observations is a **great way to teach kids science!**

- ◆ Kids of all ages learn about their environment, how to read a scientific instrument, do data entry, and then can use their own data to do scientific analysis!
- ◆ CoCoRaHS has lesson plans available for teachers to involve the program into their curriculum!
 - Classrooms can submit multi-day reports on Monday to cover weekend precipitation

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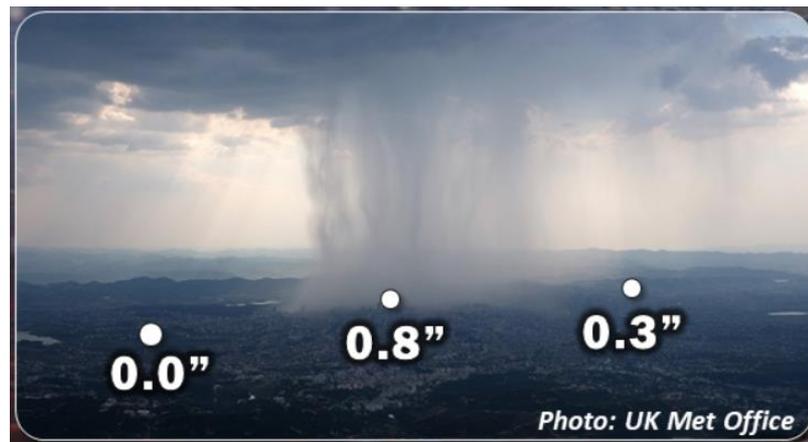
Reason #10 to join:

→ Your reports **provide pin-point accuracy we can't find anywhere else!**

- ◆ Showers and thunderstorms produce high variable rainfall!
- ◆ While our radar can estimate rainfall, your reports provide “ground truth”!
- ◆ Having this information can lead to better warnings and forecasts!

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Reason #11 to join:

→ Your reports **are official National Weather Service data!**

- ◆ We'll use your reports for official "local storm reports" - which are archived in **the official weather record.**
- ◆ Reports will be shared on our website and with the media - you might just see your report on TV!



Storm Reports			
Preliminary Local Storm Report...Summary			
National Weather Service Paducah KY			
404 PM CDT Thu Jul 20 2023			
..TIME...	..EVENT...	..CITY LOCATION...	..LAT..LON...
..DATE...	..MAG....	..COUNTY LOCATION..ST..	..SOURCE...
..REMARKS..			
0900 AM	Rain	6 ENE Hazel	36.54N 88.22W
07/20/2023	M6.76 inch	Calloway KY	Mesonet
Mesonet station FW3304 New Concord KY 2 day rainfall total.			
0845 AM	Rain	6 ENE Hazel	36.54N 88.22W
07/20/2023	M6.86 inch	Calloway KY	Mesonet
Mesonet station FW3304 New Concord KY 2 day rainfall total.			
0840 AM	Rain	1 W Carbondale	37.72N 89.23W
07/20/2023	M5.40 inch	Jackson IL	Cocorahs
Cocorahs station IL-JK-31 Carbondale 0.7 W 2 day rainfall total.			
0808 AM	Rain	5 ESE Simpson	37.44N 88.67W
07/20/2023	M5.83 inch	Pope IL	Mesonet
Mesonet station DSFI2 Dixon Springs IL 2 day rainfall total.			
0714 AM	Rain	1 SSE Bandana	37.13N 88.94W
07/20/2023	M9.51 inch	Ballard KY	Cocorahs
Cocorahs station KY-BA-3 Kevil KY 4.6 NW 2 day rainfall total.			
0700 AM	Rain	1 SSE Cobden	37.52N 89.25W
07/20/2023	M5.04 inch	Union IL	Cocorahs
Cocorahs station IL-UN-6 Cobden IL 0.8 SSE 2 day rainfall total.			





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Reason #12 to join:

→ It's easy and fun!

- ◆ Once the equipment (rain gauge) is installed, checking it daily takes just a few minutes.
- ◆ Tracking your backyard weather helps you better understand how the weather in your location varies from other places.
- ◆ There is a new Data Explorer to use to interrogate and interact with anyone's station



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Station Activity

Period of Record
Jan 1, 2013 - Mar 11, 2024

Duration of Record
11 years 2 months 10 days

Observation Counts

Daily Precip 4,086	Multi-day Precip 0
Condition Monitori... 0	Significant Weather 0
Hail 0	Total Obs 4,086

