



The Hoosier Observer

Indiana CoCoRaHS monthly e-newsletter

July 2022

June 2022 Statistics

Total observers reporting	529
Observers with no missing reports	341
Percent of total	64
Average Daily Reports per Day	443
Max # of Daily Reports and Day	476 / 7
Significant Weather Reports	9
Condition Monitoring Reports	96
E-T Reports	225

We'd like to thank those that have diligently been entering Condition Monitoring reports lately with the expansion of drought conditions across much of the state. We continue to encourage everyone to fill them out as you have time. It helps officials across the state determine the extent and severity of drought conditions.

With the often isolated pockets of heavy rain that typically occur in the summer months, your CoCoRaHS reports are more important than ever. There was an area of heavy rain that fell across portions of Martin, Daviess, and Orange counties earlier in July which didn't have any CoCoRaHS reporters within the area of heaviest rain. This limited the NWS's ability to confirm the estimated amounts. We encourage everyone to not only report, but encourage others to report as well.

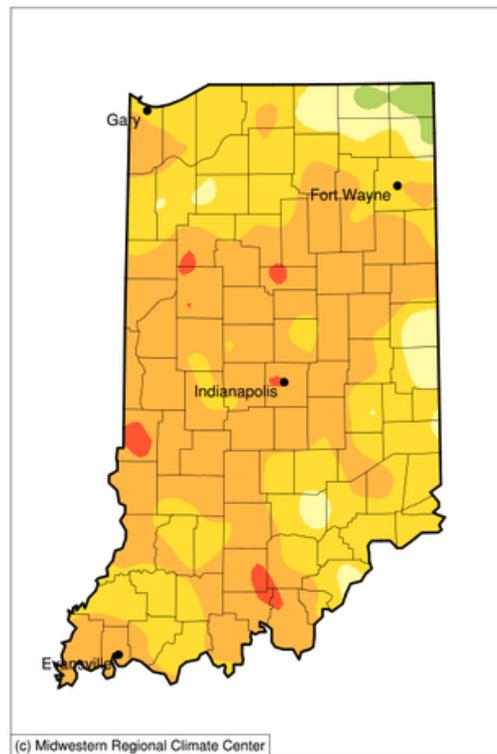
We'd also like to recognize the 5 new observers (Allen [2], Cass, Greene, Marion counties) who have joined in the last month. Thanks for joining the team!

June 2022 Precipitation in Indiana

June was drier than normal across most of Indiana. The statewide precipitation was 2.38 inches, which was 2.42 inches *below* the 1991-2020 climatological normal for the month. The map shown illustrates the percentage of the 1991-2020 normal precipitation for June 2022 indicating where the monthly precipitation was above or below normal. Aside from the far northeastern corner of Indiana, the rest of the state was near or below normal, with some locations only receiving amounts ranked in the lowest 5th to 10th percentile of years. Of the CoCoRaHS observers who provided data *every day*, the greatest precipitation total for the month was 4.84 inches at ANGOLA 4.1 N (Steuben County), whereas the lowest monthly precipitation total was only 0.61 inches at KOKOMO 1.6 NNW (Howard County). Of those with *complete monthly records*, the maximum 1-day total was 2.66 inches on June 7th at RENNELLAER 1.9 N (Jasper County).

Accumulated Precipitation (in): Percent of 1991-2020 Normals

June 01, 2022 to June 30, 2022



Rain Gauge Parts

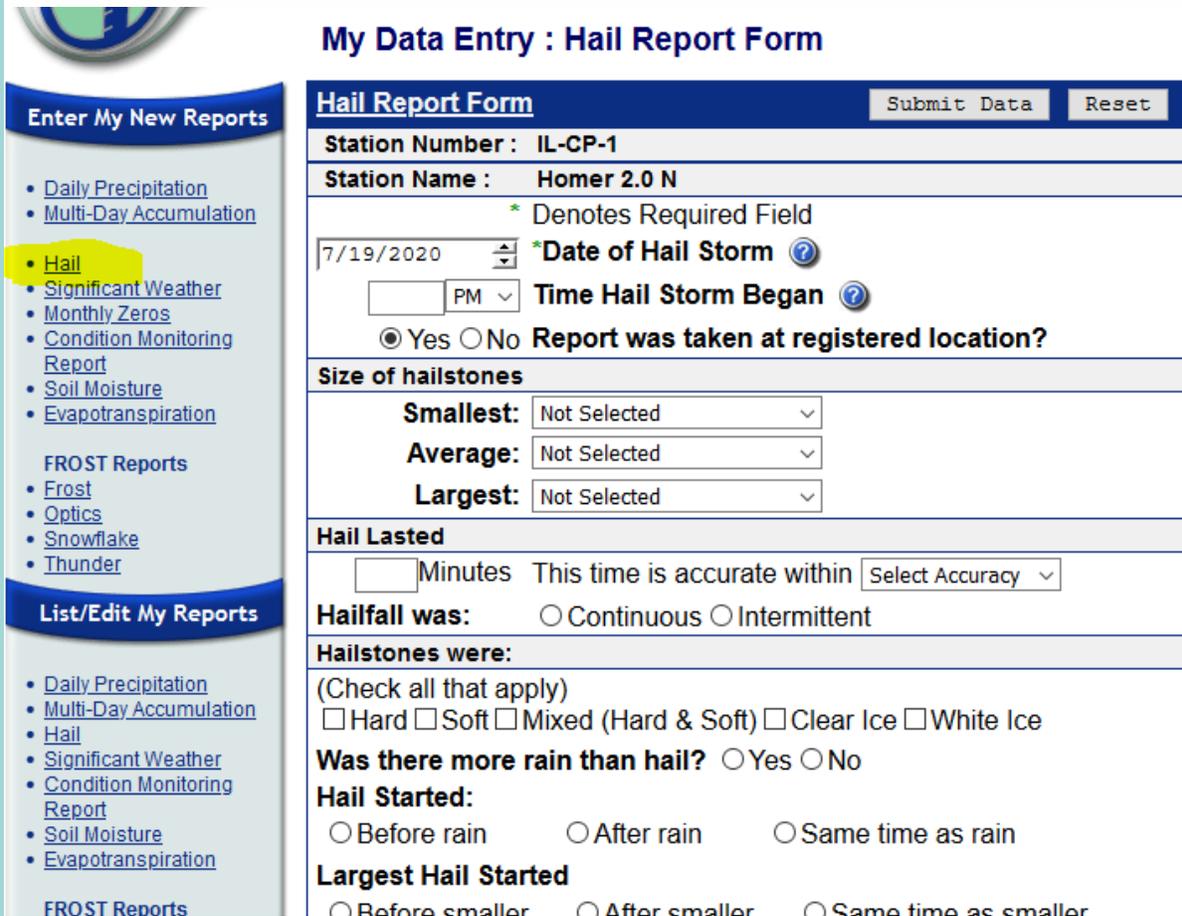
If your rain gauge had a rough winter and is showing signs of wear and tear, you don't have to mess with duct tape or glue to get your gauge through the summer. You can purchase replacement parts (e.g., outer cylinder, inner measuring tube, funnel, or bracket) without having to purchase the complete gauge. If your outer cylinder or inner measuring tube are cracked, or your funnel has a chunk missing, or your bracket breaks, go to <https://weatheryourway.com/collections.cocorahs-gauge->

[parts](#) to obtain replacements.

Observing and Reporting Hail

By Steve Hilberg

As you know, "hail" is part of the CoCoRaHS name. Spring and early summer are prime times for hail, especially the large variety. We often see observers mention hail in their comments, but then forget to submit a separate hail report. The CoCoRaHS hail database is the only one of its kind in the country. When you observe hail, please submit a hail report as soon as possible with as much information as you can provide (you can always go back and add to or edit your report later). As soon as you submit the hail report, it is also transmitted to your local National Weather Service office. These reports are critical in severe weather situations and may be one of the triggers for a severe thunderstorm warning, for example. You can find the link to the hail report in the left-hand menu once you log in.



My Data Entry : Hail Report Form

Hail Report Form Submit Data Reset

Station Number : IL-CP-1

Station Name : Homer 2.0 N

* Denotes Required Field

7/19/2020 *Date of Hail Storm ?

PM Time Hail Storm Began ?

Yes No Report was taken at registered location?

Size of hailstones

Smallest: Not Selected

Average: Not Selected

Largest: Not Selected

Hail Lasted

Minutes This time is accurate within Select Accuracy

Hailfall was: Continuous Intermittent

Hailstones were:

(Check all that apply)

Hard Soft Mixed (Hard & Soft) Clear Ice White Ice

Was there more rain than hail? Yes No

Hail Started:

Before rain After rain Same time as rain

Largest Hail Started

Before smaller After smaller Same time as smaller

Once the hail report displays, fill out as much information as you have at the time, but be sure to include the date, time, and size of the hailstones. Note that often there will be larger hailstones among a fall of smaller stones. For example, you may be observing many 1/4-inch stones (pea-size), and at the same time may see a few larger hailstones falling as well. Again, you may go back and update your report, for example, after you have had a chance to see if there was any damage. Note that the Hail report is NOT available on the mobile app, and you will need to go to the web site to access the form.

Safety is of critical importance! Observe from the safety of the building. DO NOT run outside to pick up or measure large hail stones in the middle of a storm. Stay away from windows, especially if the wind is blowing and/or there is lightning.

Hail size is easy to estimate by comparing the hail to the size of common objects, from coins to softballs. Not all hailstones are round. Some look like oblong potatoes or have jagged spikes protruding. When measuring hail or estimating its size, use the measurement along its longest axis.

You can download this handy [pocket hail size guide](#) from the CoCoRaHS web page. The ruler on the bottom is to scale and fits on a 3x5 card. Make multiple copies and keep one at home, in the car, or at work.

Hail Size Guide

Measure hail along the longest axis

Pea		1/4"
Mothball		1/2"
Penny		3/4"
Nickel		7/8"
Quarter	S E V E R E	1"
Half Dollar		1 1/4"
Ping Pong Ball		1 1/2"
Golf Ball		1 3/4"
Tennis Ball		2 1/2"
Baseball		2 3/4"
Grapefruit		4"
Softball		4 1/2"

If you observe hail, report it to the nearest National Weather Service Office. Complete a CoCoRaHS Hail Report on the web as soon as possible. Hail => 1" is criteria for a severe thunderstorm.



Finally, review hail measurement procedures by viewing our [CoCoRaHS hail measurement training animation](#). You can view hail reports on the CoCoRaHS interactive mapping system. In the Map Options window, select 'Hail' in the 'What' box, then click on 'Update Map'. The location of hail reports are plotted, and when you click on one of the dots, the full hail report is displayed.

Zeros and Drought

by Steve Hilberg

Drought is a fact this summer across the Midwest. Knowing where it has not rained is as important as knowing where it did rain when it comes to monitoring the development and decay of drought. The many users of the observations you take and enter into the CoCoRaHS database appreciate the efforts that you make to report your rainfall (or lack thereof). Every report is important, even on the days it does not rain or only rains in a few spots. That is especially true this time of year, when showers and thunderstorms can drop vastly different amounts of rain across short distances. Here is an example of a month's worth of observations that leaves questions to be answered. The total for the month is in the ballpark with nearby amounts, but is it accurate? The missing observations leave more questions than answers.

Date	Precip in.
03/01/2019	0.03
03/02/2019	--
03/03/2019	--
03/04/2019	0.13
03/05/2019	0.00
03/06/2019	--
03/07/2019	T
03/08/2019	T
03/09/2019	--
03/10/2019	0.86
03/11/2019	--
03/12/2019	--
03/13/2019	--
03/14/2019	0.11
03/15/2019	0.67
03/16/2019	--
03/17/2019	--
03/18/2019	--
03/19/2019	--
03/20/2019	--
03/21/2019	0.45
03/22/2019	0.06
03/23/2019	--
03/24/2019	--
03/25/2019	--
03/26/2019	--
03/27/2019	--
03/28/2019	--
03/29/2019	--
03/30/2019	--
03/31/2019	1.89
Totals :	4.20 in.

"No report" from this observer (--) could mean anything from "I didn't have any rain" to "I am on vacation and there is no one to observe" to "My dog ate the gauge". If we were doing a study involving monthly precipitation totals, this station would not be used because there are 20 missing observations in the month.

The reports of zero rain are just as important as the reports of two inches of rain. Zeros are a measurement - it means "I observed that I had no precipitation". In other words, **if you do not report on a day, we cannot assume zero**. It takes only seconds to enter that zero report. If you haven't been on the computer for a few days and need to enter zero reports, an easy way to do this is with the **Monthly Zeros report**. Select this report, and just check the box on the days on which you had a zero amount. Hit Submit, and you're done! The Monthly Zeros report is not available on the mobile app.

Each month, roughly 65 percent of our observer have complete data, helping paint that picture of precipitation patterns in the state. Join them and be a Zero Hero - get in the habit of submitting an observation each day!

If you Move or Change your Email Address

If you are moving to a new home and want to continue to participate in CoCoRaHS, please let us know as soon as possible. Your observations are tied to a specific location, so we don't want observations from your new location associated with your previous location. The value of the observations is increased by their continuity at

that location, so consider suggesting to the buyer or new tenant of your home that they participate in CoCoRaHS! We have a brochure that you can download, print and give to them.

When you know your new address, let us know. When you are ready, we will close your old station and open a new station at your new address (DO NOT sign up for CoCoRaHS again). Once that's done, you can enter observations from your new location. If you are moving to a different state, we can help you get in touch with that state coordinator so you can get started there.

Let us know if you change your email address so that your record is up to date. You can update your email address in the CoCoRaHS database yourself by logging in and clicking on My Account in the top line menu. Click on Edit in the My Information box. Make any corrections, then click save.

Please also send a message to andrew.j.white@noaa.gov with the email change as well, so we can update your address on our newsletter mailing list. This list is maintained separately from the main CoCoRaHS database.



Andrew White (andrew.j.white@noaa.gov)
Kyle Brown (kyle.brown@noaa.gov)
Beth Hall (bethhall@purdue.edu)

