



The Hoosier Observer

Indiana CoCoRaHS monthly e-newsletter

January 2021

December 2021 Statistics

Total observers reporting	485
Observers with no missing reports	290
Percent of total	60
Average Daily Reports per Day	389
Max # of Daily Reports and Day	422 / 12
Significant Weather Reports	15
Condition Monitoring Reports	29
E-T Reports	0
Max Daily Rainfall (County)	1.59" / (Harrison)

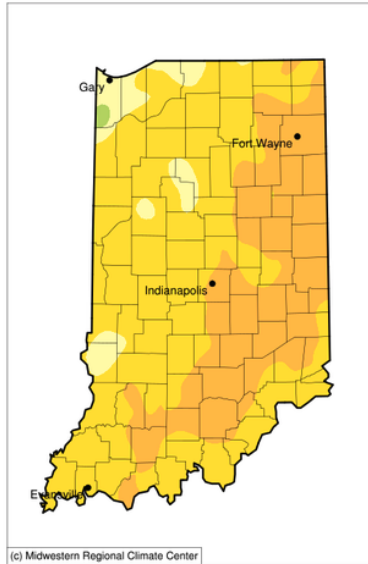
What a great year for Indiana CoCoRaHS. It's incredible to see the growth in the program and all the engagement we have gotten over the last year. We sincerely thank all of you for every single time you've gone out to check your precipitation, and for all the days you entered your zeroes. We've had several opportunities for snow and overall you have all done very well! The number of issues with data are much down compared to last year. I do quickly want to remind everyone that the "Total Snow on Ground" should be rounded to the nearest half inch, and not to the nearest tenth of an inch. That has been the most frequent error so far. To the 3 new observers (Hamilton, Lawrence, Lake) thanks for joining the team!

December 2020 Precipitation in Indiana

The December 2020 statewide precipitation was 2.94 inches -- 0.68 inches below the 1981-2010 average. The map shown illustrates the percentage of the 1981-2010 normal precipitation for December 2020. Of the observers that provided data *every day*, the greatest precipitation total for the month was 3.27 inches at ENGLISH 7.9 SSW (Crawford County), whereas the lowest monthly precipitation total was only 0.93 inches at BATESVILLE 6.7 S (Ripley County). Of those with complete monthly records, the maximum 1-day total was 1.59 inches on December 31 at ELIZABETH 1.4 N (Harrison County).

Accumulated Precipitation (in): Percent of 1981-2010 Normals

December 01, 2020 to December 31, 2020



(c) Midwestern Regional Climate Center



Stations from the following networks used: WBAN, COOP, FAA, GHCN, ThreadEx, CoCoRaHS, WMO, ICAO, NWSLI, Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 1/11/2021 9:47:11 AM CST

2020 Indiana CoCoRaHS Stats - In Review

Daily Reports - 137,678 (+25%)
Multi-Day Reports - 1834 (-6%)
New Stations - 233 (+177%)
New Stations that Joined and had >1 Report - 67%(+7%)
Daily Report with Comment - 18,473 (+17%)
Condition Monitoring Reports - 545 (+29%)
All stats compared to 2019

As you can see by the stats above, 2020 was been a banner year for CoCoRaHS across the state, and it is because of all the work you have put in. We find it incredible to have received over 130,000 reports just this year alone. We've gotten a lot of new observers and it is very humbling to see where we have gone in the last year. We can't wait to see where 2021 takes us and we invite you to continue to report and recruit your family and friends to join the team!

Reminder About Frost and Rime Icing

By Steve Hilberg

In the early part of the month, we had a couple of days where there was frost, and in one or two instances rime icing occurred. This is when ice crystals grow on objects as tiny fog droplets are deposited on them. Frost typically occurs on flat surfaces, while rime will coat tree branches and wires, providing a flopped Christmas tree look to the landscape. Your rain gauge may be coated in ice crystals, and some ice may be inside the gauge. As the wind picks up and/or sun comes out, the rime icing may blow off the trees. Neither frost nor rime are precipitation, *i.e.*, the ice did not fall from clouds. I saw a number of reports on these mornings of 0.01" or 0.02", most likely from melting the frost on the rain gauge (there was no precipitation in the previous 24 hours). IF you observed precipitation, it is really helpful if can you include a comment to that effect with your observation. However, do not report water in your gauge from melted frost, rime, or in the warmer months, dew.

A 'Hoosier Observer' Classic:

Weighing Your Precipitation

The "melt and measure" method of dealing with snow and ice in the gauge in the winter is sometimes time-consuming, and there's always a chance that you could spill the contents as you pour from outer cylinder into the inner measuring tube. There is a much easier way to deal with snow and ice in the rain gauge and the snow collected in snow cores that involves no melting and is very quick to do. The alternative is to weigh your outer cylinder and the contents, and convert that measurement into inches of precipitation. You can view the two-minute CoCoRaHS training animations on how to do this (<https://www.youtube.com/watch?v=OMBcOO4VTtY&t=2s>), but here's a quick description on how to accomplish this. You will need a decent kitchen scale that measures to the nearest gram. The first step is to weigh your empty, dry outer cylinder without the inner tube or funnel. Write down the weight. It might also be helpful to write the weight on the bottom of the cylinder with a permanent marker. The next time it rains or snows, bring in your outer cylinder. Be sure to wipe off the outside of the cylinder to remove any excess water. Then, weigh the cylinder and its contents. Subtract the weight of the cylinder from the total weight. **Divide the result by 201**, and you will have the amount of precipitation in inches. (An inch of water weighs 200.8 grams).

Here is an example: An outer cylinder plus the snow in it weighs a total of 510 grams. The outer cylinder weighs 445 grams. The weight of the snow in the gauge is $510 - 445 = 65$ grams. $65 \text{ g} \div 201 \text{ g/inch} = 0.32$ inch of precipitation.

Not only is this great during the winter, but you can also use this for any heavy precipitation you receive where the inner cylinder overflows. Pour the contents of the inner cylinder into the outer cylinder, and then weigh the outer cylinder plus the precipitation. Be sure the outside of the cylinder is dry before you weigh.

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)