



# The Hoosier Observer

Indiana CoCoRaHS monthly e-newsletter

October 2023

## September 2023 Statistics

Total observers reporting	569
Observers with no missing reports	364
Percent of total	64
Average Daily Reports per Day	459
Max # of Daily Reports and Day	513/27
Significant Weather Reports	5
Condition Monitoring Reports	59
E-T Reports	200

## October Coordinator Update

It's been another great month for Indiana CoCoRaHS with our biggest day of the year occurring on September 27th where we had 513 stations report their precipitation. We love seeing those 500 report days and hope to sneak one or two more in by the end of the year.

As we move into the cooler season, don't forget to take your inner tube out ahead of those chilly nights to avoid any damage. If you are a seasonal observer and quit during the cool months we thank you again for your reporting and look forward to seeing you back in the spring.

We'd also like to recognize the six new Indiana observers (Allen [2], Elkhart, Jay, St. Joseph, Vanderburgh) that joined CoCoRaHS in the last

## September 2023 Precipitation

The statewide total precipitation for September 2023 was 1.31 inches, which was 1.98 inches below normal or 39.82 percent of normal. The entire state, except for far northwestern and isolated locations in central and southeastern Indiana, experienced below-normal precipitation. Northwest of Gary, Indiana measured 3-5 inches of rain. Boone, Ohio, and Switzerland Counties measured 1-4 inches of rain, which was slightly below to near normal for the month (Figure 1).

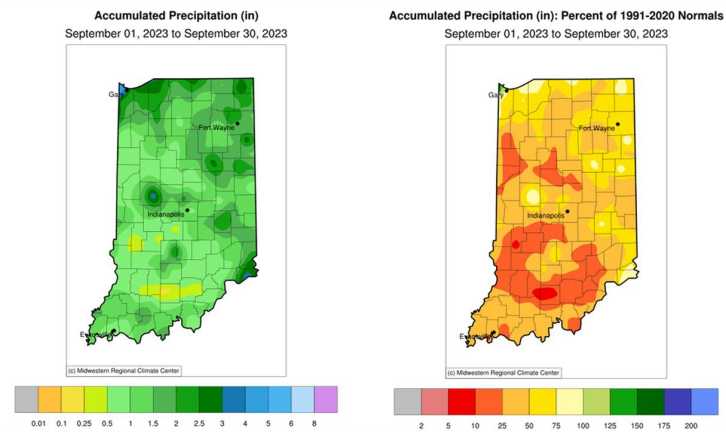


Figure 1: Left - Accumulated precipitation for September 2023. Right - Accumulated precipitation represented as the percent of 1991-2020 climatological average.

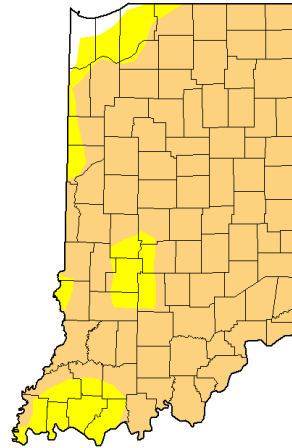
By the end of September, 98.62 percent of Indiana was in abnormally dry (D0) or moderate drought (D1) conditions in the US Drought Monitor (Figure 2). Crops quickly matured, lawns went dormant, and water levels dropped dramatically throughout the month.

month. Thanks for joining the team!

**Archived Newsletters**

If you are ever interested in viewing past issues of *The Hoosier Observer*, visit the [State Newsletter Archive](#) on the CoCoRaHS website and scroll down to Indiana. You may also access other state newsletters from this website as well.

**U.S. Drought Monitor  
Indiana**



**September 26, 2023**  
(Released Thursday, Sep. 28, 2023)  
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	1.38	98.62	85.30	0.00	0.00	0.00
Last Week 09-19-2023	6.82	93.18	32.80	0.00	0.00	0.00
3 Months Ago 06-27-2023	1.76	98.24	79.50	33.62	0.00	0.00
Start of Calendar Year 01-01-2023	6.84	93.16	58.37	1.34	0.00	0.00
Start of Water Year 09-23-2022	80.92	19.08	0.00	0.00	0.00	0.00
One Year Ago 09-27-2022	80.92	19.08	0.00	0.00	0.00	0.00

**Intensity:**  
 None (White)  
 D0 Abnormally Dry (Yellow)  
 D1 Moderate Drought (Orange)  
 D2 Severe Drought (Dark Orange)  
 D3 Extreme Drought (Red)  
 D4 Exceptional Drought (Dark Red)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:  
Richard Heim  
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[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

Figure 2: September 26, 2023 US Drought Monitor.

**Data from stations that had 100% reporting for September were as follows:**

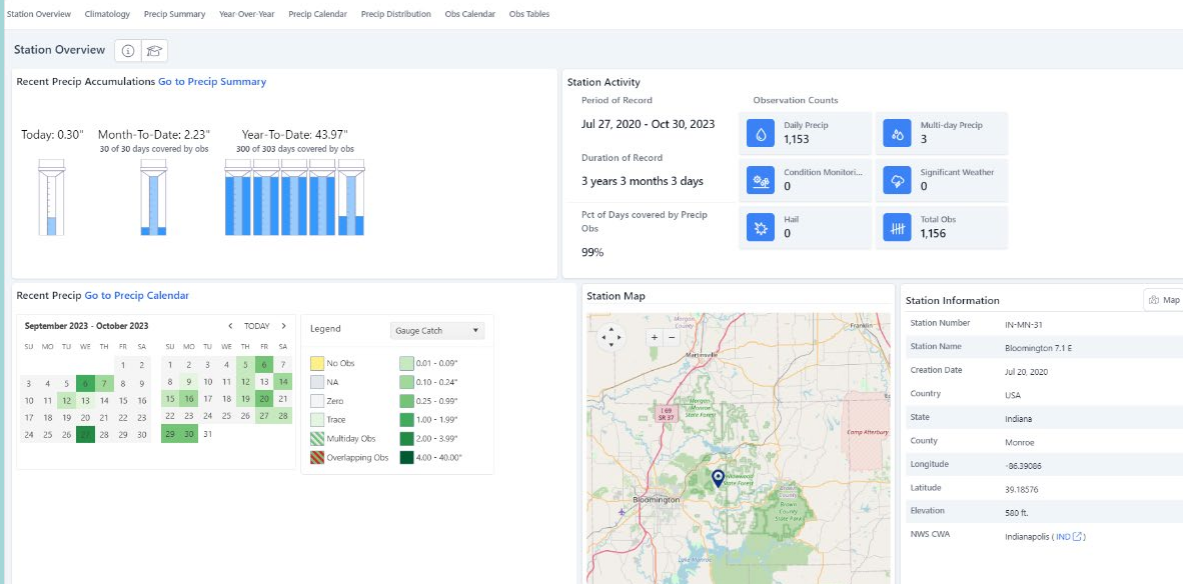
The highest precipitation total in Indiana (3.93 inches) was measured at BLOOMINGTON 7.1 E, located in Monroe County. ANGOLA 1.2 S, located in Steuben County, measured the second most precipitation, 3.67 inches. AURORA 3.6 SSE (Ohio County) measured 2.63 inches on September 27, which was the highest single day total in the state.

CLAY CITY 0.4 SE, located in Clay County, measured 0.12 inches, which was the lowest precipitation total in the state. MARTINSVILLE 3.2 E, located in Morgan County, measured 0.23 inches, which was the second lowest observation in the state for September 2023.

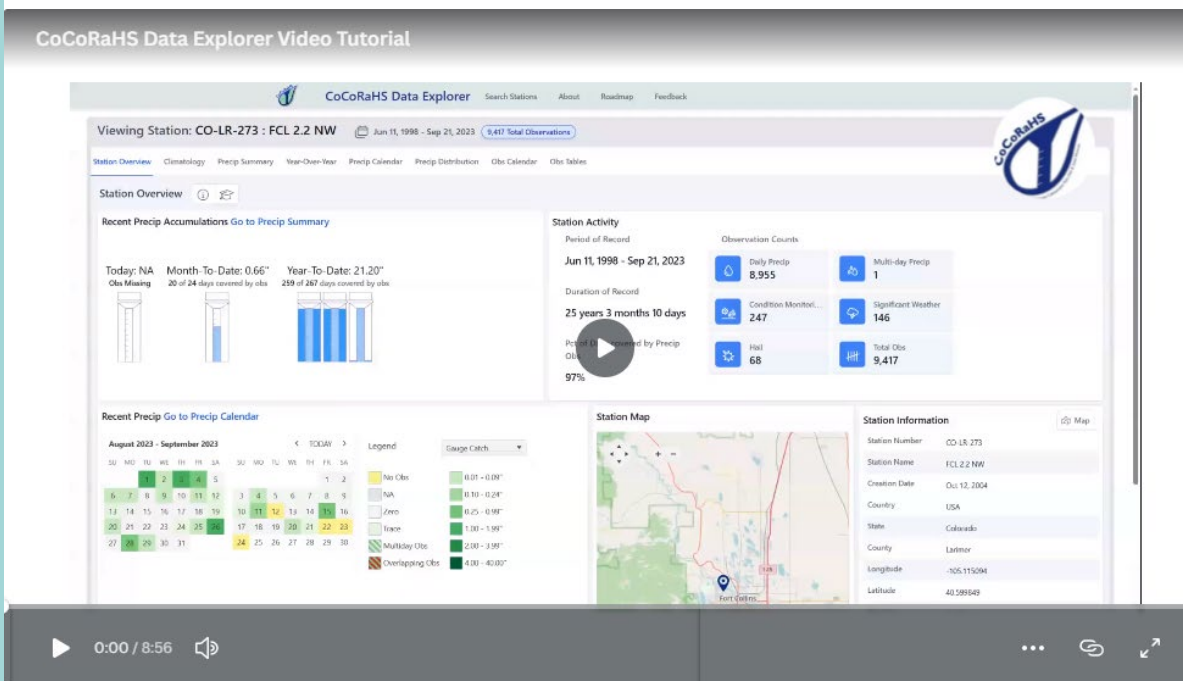
**New CoCoRaHS Data Explorer**

The [CoCoRaHS Data Explorer](#) was released on September 27th! Development of the CoCoRaHS Data Explorer was made possible by a grant from the NOAA's Office of Education, as well as donations from CoCoRaHS observers and supporters. The goal of the Data Explorer is to provide observers and other users easy access to their data using innovative data visualization products.

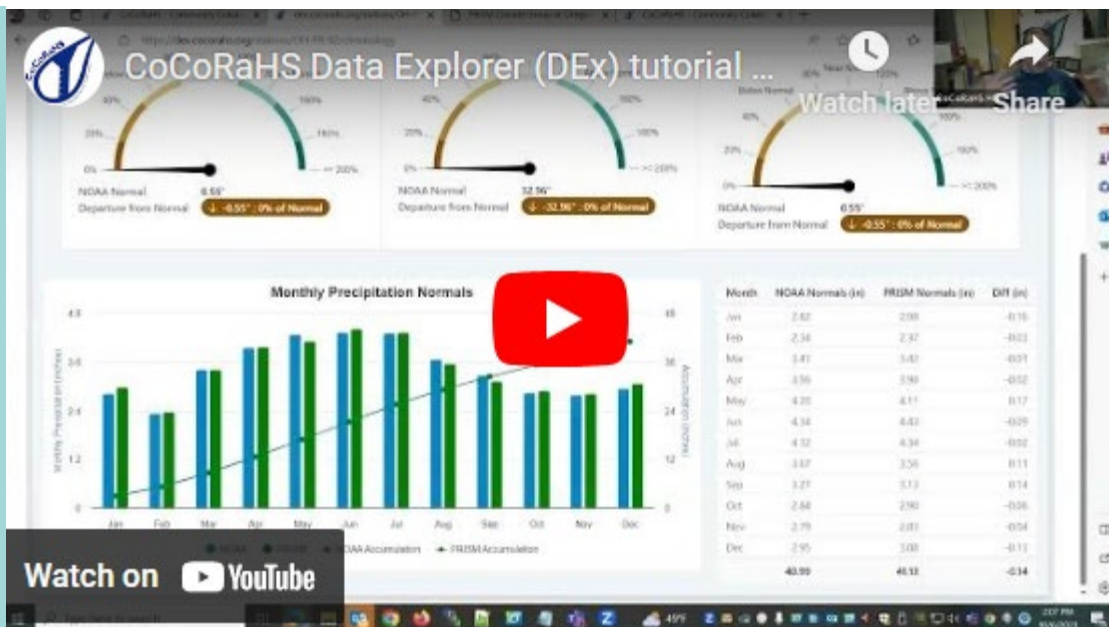
As with all things CoCoRaHS, the Data Explorer is a work in progress. We believe that it provides capabilities not previously available in other CoCoRaHS data tools. The Data Explorer will be improved based on [feedback](#) from observers and data users. Below is an example of the dashboard for Bloomington 7.1 E, located in Monroe County.



There are two tutorial videos - the first is a short version and the second is a deeper dive that covers many more features found in the tool:



**In-Depth tutorial - Recorded Webinar on YouTube:**



### Pre-Winter, Gauge Checkup

By: Steve Hilberg

It's still warm, but colder winter weather is not too far in the future. Now is a great time to do some basic rain gauge maintenance. Give your inner measuring tube a good cleaning, using a brush or rolled up newspaper to clean the bottom of the tube. If there is stubborn dirt or algae in the bottom, add a bit of household bleach to the tube before you brush it. Check your outer cylinder for any cracks. You may see some hairline cracks in the cylinder if it's been out a few years, but as long as the cracks are superficial and don't go all the way through the wall it's probably OK. If you have an extra cylinder or two you use for swapping out or for winter measurements, check them as well.

One thing that we sometimes forget to check is the mounting post. Be sure that it is vertical and isn't leaning one way or the other. If sunk into the ground, the post can loosen in the ground if it has been very dry. The easy way to check this is with a small level. You can rest the level across the funnel to see if the gauge is correctly aligned. If not, try to straighten the post and tamp some soil around the post to hold it in place. This is also a perfect time to make sure that there are no new obstructions that may be affecting gauge catch.



We've had a few questions about what to do with the rain gauge in freezing weather. The inner measuring tube can crack if a significant amount of water freezes in the tube due to its small diameter. Generally amounts up to 0.10" or so won't be a problem. Remember that if water freezes in the tube, you need to let it melt before you make your measurement. Water freezing in the outer tube generally won't be a problem. Once it regularly stays below freezing at night we recommend that observers remove the inner measuring tube and funnel, leaving just the outer cylinder in place to collect precipitation, especially if precipitation is expected followed by freezing temperatures. When snow is expected you will need to remove the funnel and inner measuring tube before any snow because the snow will clog the funnel. Many observers remove the funnel and inner tube for the winter so they don't have to worry about it in freezing weather. Many observers have found that having an extra outer cylinder to swap out on days with snow or ice in the gauge is very handy and keeps you from missing any precipitation that is falling at observation time.

Condition Monitoring Doesn't End with Warm Weather

By Steve Hilberg

Although the warm weather is waning, crops are being harvested, and the growing season is drawing to a close, we still need your [Condition Monitoring Reports](#). The Condition Monitoring Reports are used by state climatologists, the Drought Monitor authors, and others to monitor unusually dry or wet conditions. We can get the precipitation amounts easily, but the impacts of too little or too much precipitation comes from things like the Condition Monitoring Reports. You can see on the map above that Indiana was pretty dry overall in September, and rainfall deficits from the summer have carried into the fall. Condition monitoring is a little more difficult to assess once the growing season ends because many of the indicators we use are, well, dead and not growing. However, you can still provide an idea if soils are dry or wet, ponds or rivers are low or high, and other signs you can pick up from your environment. Consistency is really helpful with Condition Monitoring Report, i.e reporting on a regular basis, say once a week. Use a calendar reminder set to pop up on every Sunday (or day of your choice), a sticky note on your monitor, or anything else to remind you to submit a CMR for that week. Right now, you can only submit a [Condition Monitoring Report](#) on the website, not the app.

### **If You Move, or Change Your Email Address**

By Steve Hilberg

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 are increased by their continuity at a 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 [in-sco@purdue.edu](mailto:in-sco@purdue.edu) 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.



### **Indiana CoCoRaHS Coordinators**

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