The Hoosier Observer

Indiana CoCoRaHS monthly e-newsletter

November 2024

The trend section in the graphic above provides a comparison between the current month's data and that of the previous calendar month. A change in the statistic of 5 or more is required for a trend arrow to be displayed as either up or down. If the change is less than 5, a white dash is used to indicate that the data remained relatively similar to the previous month.

Coordinator Update

Andrew White, NWS Indianapolis

We've noticed an uptick in observation errors over the last 2 weeks with the wetter pattern across Indiana. One of the most common errors has been mismatching the days that the precipitation fell which then leads to 2 days of corrections that need to be made. If entering data beyond the day of the observation or when doing the monthly zeroes page, be very careful with which day you are entering.

As we move into the winter months where overnight freezes become more frequent be sure to take care to remove the inner tube of your gauge to avoid any cracking or breaking. Some choose to remove the inner tube through early March which is the way to go if you aren't actively checking overnight temperatures.

We'd also like to recognize the 4 new Indiana observers (Bartholomew, Lawrence, Monroe, Orange Counties) that joined CoCoRaHS in the last month. Thanks for joining the team!

Indiana's Precipitation Report

Austin Pearson, Indiana State Climate Office

October 2024 marked an exceptionally dry period for Indiana, ranking as the second driest

October since record-keeping began in 1895. The state received a mere 0.34 inches of precipitation, a staggering 2.99 inches below normal, representing only 10 percent of the 1991-2020 climatological average. The dryness was further emphasized by the fact that 18 of Indiana's longest-recording NWS COOP stations, with over 70 years of data, documented their driest October on record. Moreover, nine CoCoRaHS stations reported zero precipitation for the entire month. While northern Indiana did experience some rainfall, with up to 3.0 inches in certain areas, this was still considerably below the typical October average for the region (Figure 1).

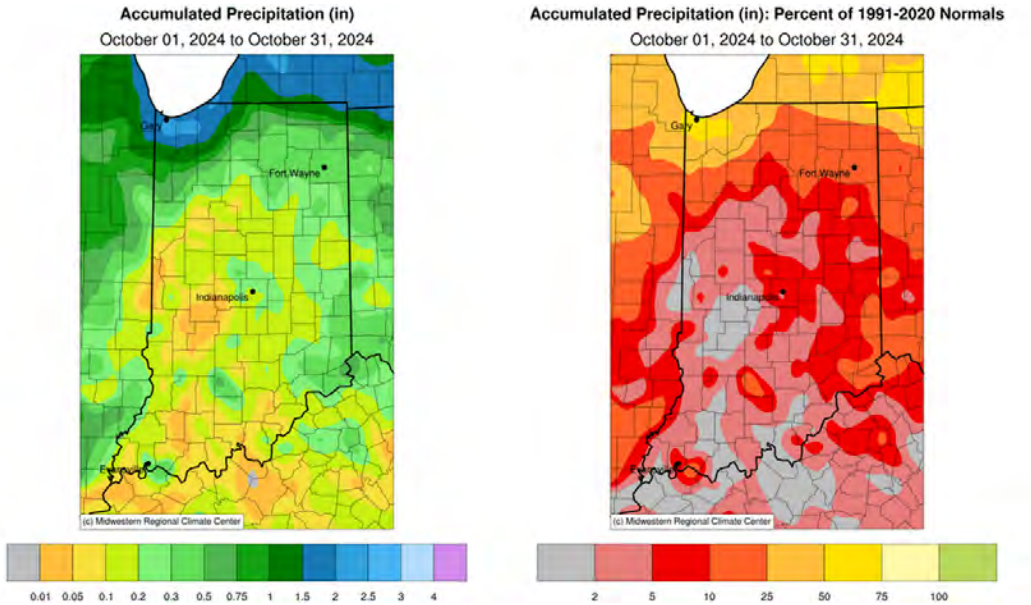


Figure 1: Left - October 2024 accumulated precipitation. Right - October 2024 accumulated precipitation represented as the percent of the 1991-2020 Normals.

November 2024 brought much-needed relief to Indiana, with increased moisture across most of the state, contrasting sharply with October. Southern Indiana experienced the most significant precipitation over the last 30 days, with totals exceeding 3.0 inches in many areas. The precipitation maps, which include data from both NWS COOP and CoCoRaHS stations, provide a comprehensive view of the rainfall distribution (Figure 2). The inclusion of CoCoRaHS data continues to enhance the spatial resolution of these maps, offering a more detailed picture of precipitation patterns across the state. While northern Indiana didn't receive as much rainfall as the southern regions, with most areas recording less than 2.0 inches, the northwestern part of the state fared better. Despite the lower totals in some northern areas, any precipitation was welcomed.

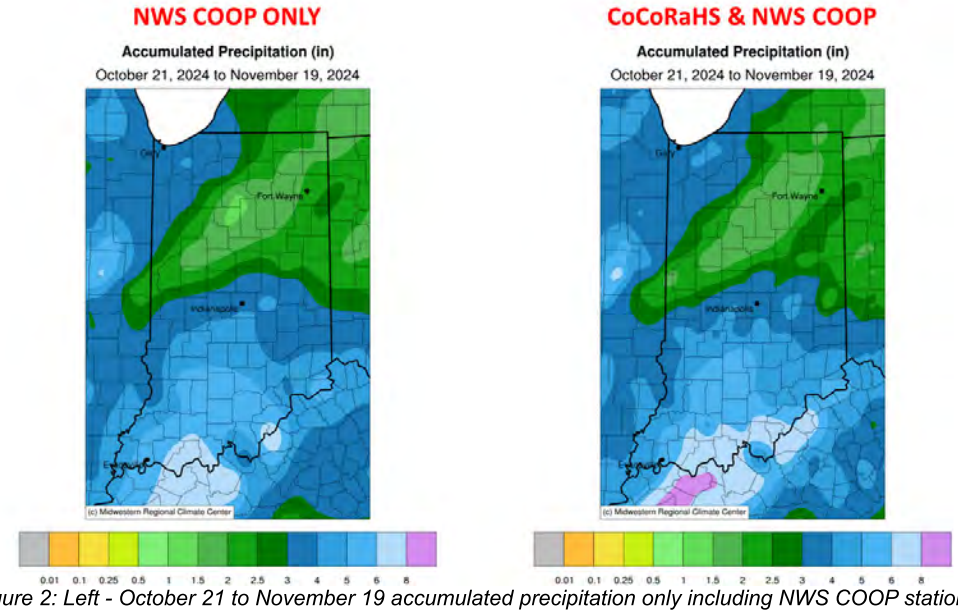


Figure 2: Left - October 21 to November 19 accumulated precipitation only including NWS COOP stations. Right - October 21 to November 19 accumulated precipitation including NWS COOP and CoCoRaHS stations.

Precipitation departures over the last 30 days have exhibited significant variability across Indiana. Central and northern regions of the state experienced deficits of up to 2.0 inches

below normal, while extreme southern Indiana saw surpluses reaching 4.0 inches above normal. This stark contrast in precipitation patterns resulted in a wide range of percentages relative to normal rainfall, spanning from 50 percent in some areas to over 200 percent in others. The increased rainfall, particularly in southern Indiana, has provided some much-needed relief to the drought conditions that had been plaguing the state. However, the uneven distribution of precipitation highlights the ongoing drought conditions in northern Indiana.

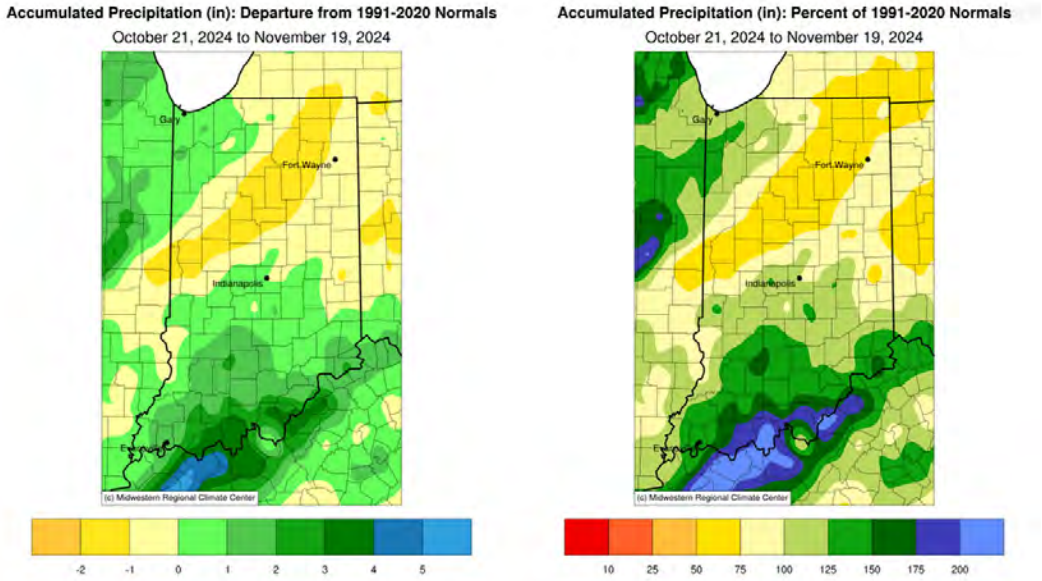


Figure 3: Left - October 21 to November 19 accumulated precipitation represented as the departure from the 1991-2020 normals. Right - October 21 to November 19 accumulated precipitation represented as the percent of the 1991-2020 normals.

The November 19, 2024 U.S. Drought Monitor revealed significant improvements in drought conditions for areas south of Indianapolis. However, a considerable portion of Indiana still remains affected by ongoing dry or drought conditions. Northern Indiana continues to experience lingering severe (D2) and moderate (D1) drought, reflecting the persistent moisture deficit in that region. The state's slight improvement marks a positive trend compared to previous weeks.

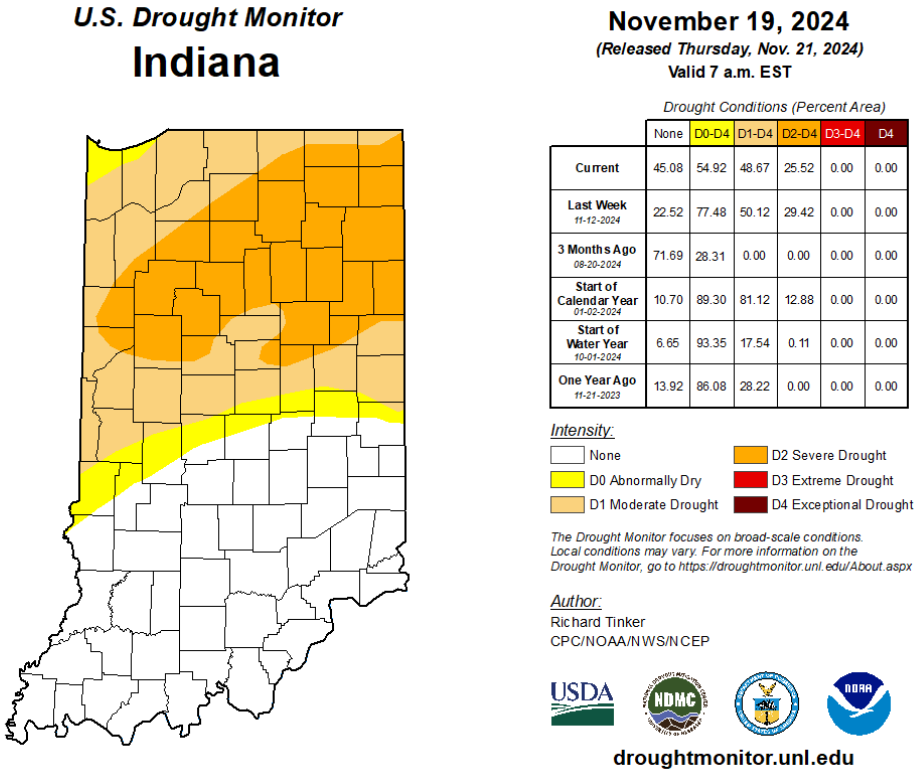
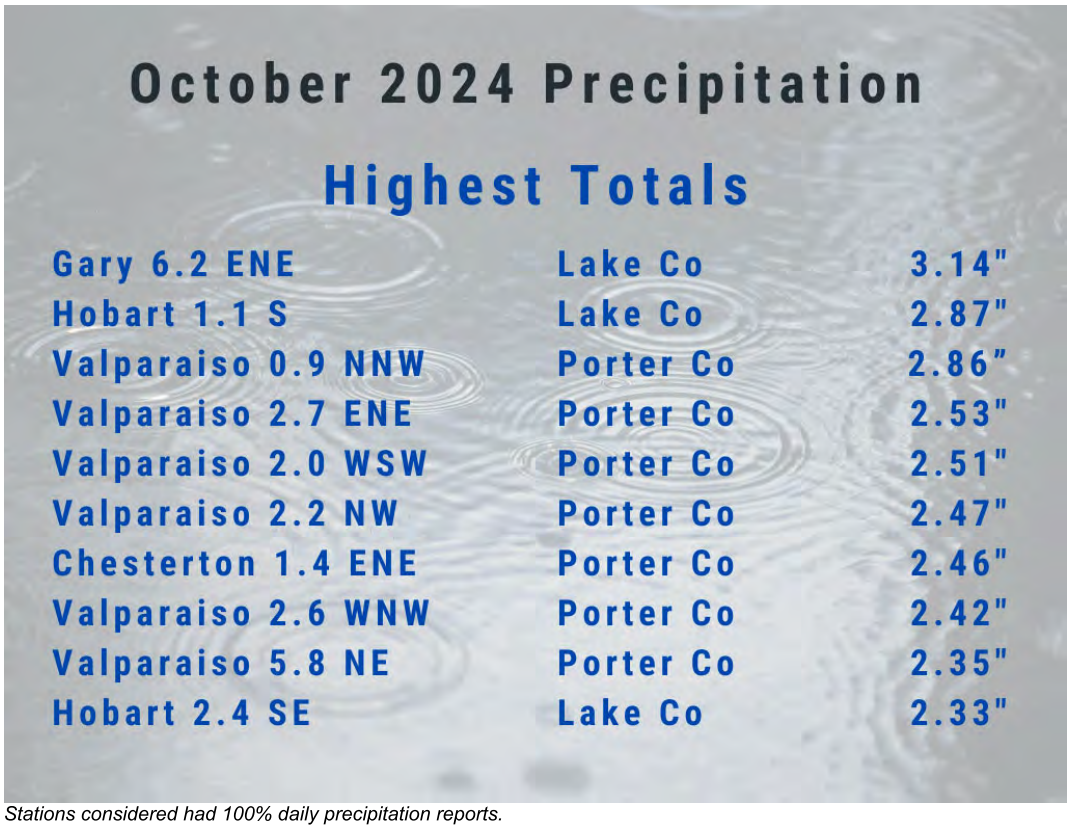
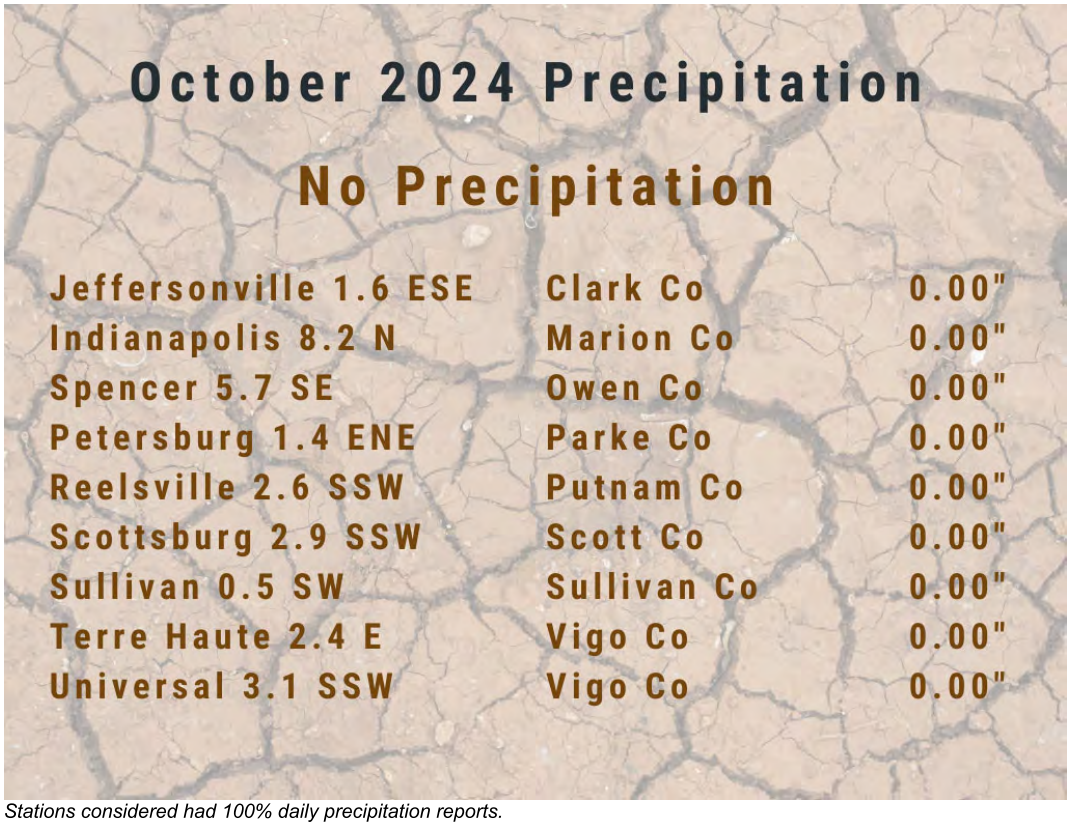


Figure 4: November 19, 2024 US Drought Monitor Map.



Stations considered had 100% daily precipitation reports.



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New CoCoRaHS Mobile App Available

Adapted from Steve Hilberg, CoCoRaHS

The new mobile app is a mobile-enabled web application. It looks like an app, acts like an app, and you can download it from either Google Play or the Apple store as an app. Here are some of the features of the new mobile app (CoCoRaHS HQ). You can also use this in your computer's web browser.

- Enter, list, and enter date for daily precipitation, hail, significant weather, and condition monitoring (E-T will be added in the future).
- A Monthly Zeros form
- A button to set all snow values to zero
- Buttons to quickly enter Trace and NA/Missing
- Quick link to the Data Explorer in the View Data menu
- Station specific Data Explorer shortcuts in the My Data / My Stations view
- Links to the interactive precip map and the Condition Monitoring map
- User settings to choose preferred
- Units display
- Light or Dark mode
- Mobile, Tablet, or Desktop layout
- Easy access to the primary CoCoRaHS web site through the More menu

To install the app, follow this link for complete instructions: **Installation Guide - CoCoRaHS Mobile App**

Both the iOS and Android versions (CoCoRaHS Observer) will continue to be available as long as they work. However, they are no longer supported, i.e. there will be no bugs fixed or improvements made. If there are changes to the Android or iOS operating systems that render the app unusable, it will be removed from the Google Play and Apple stores. We strongly encourage you to use the new mobile app.

Why is My Observation Set to 'NA'?

Steve Hilberg, CoCoRaHS

One morning you are reviewing your recent observations and you notice that one of them is now set to 'NA'. How did that happen?

Every day, observations go through a quality control process where observations that are suspected to be in error are set to 'NA'. A quality control "ticket" is then generated and forwarded to your regional coordinator for follow up. Most often these are reporting errors, not measurement errors. The amount may be correct, but it may have been entered for the wrong day, or it should have been submitted as a multi-day report, not a daily report. These are the most common errors we see. Before you rush to re-enter the value that was set to 'NA', please read the comments with your observation. When an observation is set to 'NA', there will be an explanation added to the comments for that observation. If you can correct the observation, please go ahead and do so. If you are contacted by your coordinator about the observation, please be considerate and respond to their email. If you have corrected it, let the coordinator know. If you need help, let them know that too. Our goal is to provide high quality data to our users, and we take data quality seriously.

Be sure to check your observation each day after you have entered it to avoid the kind of errors mentioned above!

Preparing for Winter Precipitation Measurements

By Steve Hilberg, CoCoRaHS

With freezing weather becoming more likely and some already measured in portions of the state, remember to remove your inner measuring tube and funnel from your rain gauge prior to any event that may be followed by freezing weather. This is also a good time to check both the inner tube and outer cylinder for leaks. If rain accumulates in the inner tube and freezes it could cause the tube to crack. Snow and other frozen precipitation do not pass through the funnel. It is usually easier to just leave the funnel and inner tube out the entire winter and not risk getting caught with them out in freezing weather. This does require you to pour any liquid precipitation from the outer tube into the inner tube to measure, similar to when you are measuring amounts more than an inch. Many observers find that having an extra outer cylinder is very handy not only during the winter, but also in the warm season. It's easy to swap out cylinders and bring

one in for melting and measuring, even if it is still snowing. You can order an extra outer cylinder at **www.weatheryourway.com**.

If you will be measuring and reporting the depth of new snow it's a good idea to have a snowboard. You can make your own snowboard by cutting a piece of 1/2" to 3/4" plywood to a 16' X 24" rectangle (you can make it a little larger if you wish) and then painting it white. Place the snowboard by your rain gauge or in an area that is not subject to drifting. Be sure to mark it with a flag or a driveway reflector so you can locate it once snow has fallen. If you don't want to bother with making your own, snowboards are now for sale through **www.weatheryourway.com**, made by the same company the produces the Tropo rain gauge.

This is a perfect time to review winter precipitation measurement procedures. One of the easiest and entertaining ways to do this is view the series of short training videos available on the CoCoRaHS YouTube channel (**https://www.youtube.com/user/cocorahs**). Look in the Training Animations line for "Setting Up for Measuring Snow" and start there. Then, when you have a bit more time, view our **"Winter Precipitation Measurements"** training slide program on the web site. Measuring and reporting snow is optional, but if you do then you need to be sure to follow the correct observation and reporting procedures.

If You Move, or Change Your Email Address

If you're moving to a new home and want to keep participating in CoCoRaHS, please let us know as soon as possible. Your observations are tied to a specific location, so we want to make sure that your new observations are correctly associated with your new address. Observations are most valuable when they are consistent at one location, so you might also suggest to the new owner or tenant of your current home that they consider joining CoCoRaHS. We have a **brochure** available for download, print, and distribution.

Once you have your new address, inform **us** so we can close your old station and set up a new one at your new location. Please avoid signing up for CoCoRaHS again yourself. Once we've set up your new station, you can start entering observations from your new location. If you're moving to a different state, we can connect you with the state coordinator there to help you get started.

If you change your email address, please update your record in the CoCoRaHS database by logging in, selecting "My Account" from the top menu, and clicking "Edit" in the "My Information" section. Make your updates and click "Save."

Also, send a quick message to **in-sco@purdue.edu** with your new email address so we can update our newsletter mailing list, which is maintained separately from the main CoCoRaHS database.

CoCoRaHS Newsletter Archive

If you are interested in viewing past issues of The Hoosier Observer, visit the **Newsletter Archive** located on the Indiana State Climate Office Website.

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