The Hoosier Observer

Indiana CoCoRaHS monthly e-newsletter

July 2025

INDIANA COCORAHS SCOREBOARD

June 2025

TREND	STATISTIC	TOTAL
–	TOTAL OBSERVERS REPORTING	619
▲	OBSERVERS WITH NO MISSING REPORTS	352
–	PERCENT OF TOTAL	57
–	AVERAGE DAILY REPORTS PER DAY	489
–	MAX # DAILY REPORTS AND DAY	536/19
–	# DAYS WITH 400+ REPORTS	30
–	# DAYS WITH 500+ REPORTS	9
▲	SIGNIFICANT WEATHER REPORTS	27
▲	CONDITION MONITORING REPORTS	56
▲	EVAPOTRANSPIRATION REPORTS	228
–	NEW OBSERVERS	11

The trend section in the graphic above compares this month's data to the same month from the previous year. A change of 10 or more is necessary for a trend arrow to be displayed as either pointing up or down. If the change is less than 10, a white dash is used to indicate that the data is similar to that of the previous year.

Coordinator Update

Andrew White, NWS Indianapolis

In June this year, we had our highest proportion of stations that missed a complete month by just one report in recent memory. We've still got a great group of you that consistently are reporting daily, but we'd also like to reiterate the importance of checking for your missing zeroes when the monthly reminder email comes out.

We observed a slight increase in the condition monitoring reports and significant weather reports in June. Both of those supplemental pieces of data are very valuable in both assessing drought conditions and helping the National Weather Service identify areas of locally very heavy rain for Flash Flooding.

We'd also like to recognize the 11 new Indiana observers (Blackford, Elkhart, Floyd, Hamilton, Lake, Monroe, Marion [2], Montgomery, Noble, Vanderburgh) that joined CoCoRaHS in the last month. Thanks for joining the team!

Indiana's Precipitation Report

Austin Pearson, Indiana State Climate Office

In June 2025, Indiana received a total of 5.45 inches of precipitation, which is 0.65 inches above the normal or 114% of normal. The statewide average temperature was 73.5°F, exceeding the 1991-2020 climate normal by 2.3°F. As with summertime thunderstorms, there

was quite a bit of variability across the state. A large swath in central Indiana received between 5 and 7.5 inches of rain, whereas other areas saw less than 4 inches of precipitation (Figure 1). The highest totals occurred in two areas: 1) northcentral Indiana (Howard, Clinton, Tipton, and Madison Counties) and 2) southern Indiana (Monroe, Greene, Sullivan, Daviess, Martin, Owen, Clay, and Lawrence Counties). Monroe County topped the charts for the highest rainfall totals in June, with Bloomington 1.7 NNW receiving 12.83 inches and Bloomington 4.3 NW getting 11.51 inches. Many areas faced flood risks due to heavy rain. On June 14, **Kokomo, Indiana**, experienced severe flash floods after receiving up to 7 inches of rain in a short period. The rain struck already saturated ground, worsening the flooding.

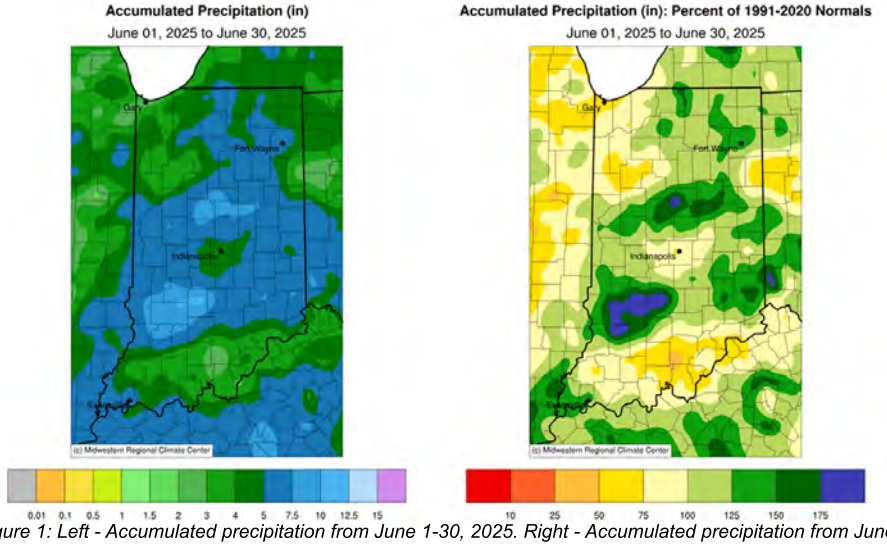


Figure 1: Left - Accumulated precipitation from June 1-30, 2025. Right - Accumulated precipitation from June 1-30, 2025, represented as the percent of the 1991-2020 climatological average.

How did June's precipitation appear on the US Drought Monitor? At the start of June, nearly 32 percent of the state was experiencing either abnormally dry (D0) or moderate drought (D1) conditions, all located in north central Indiana (Figure 2). By the end of the month, some relief was visible in this area as the D1 zone was divided into two parts, and D0 conditions slightly improved. Just over 23 percent of the state was considered in D0 or D1.

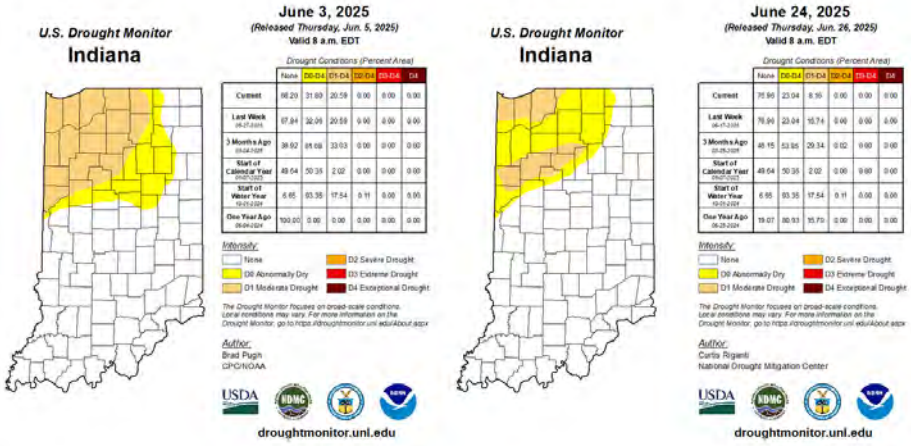
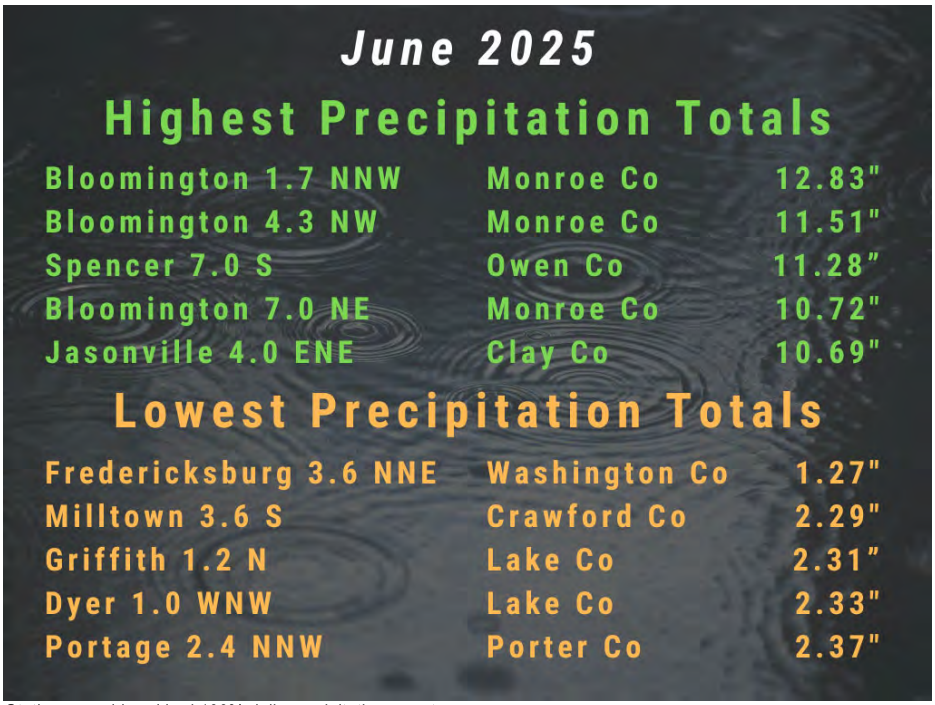


Figure 2: Left - June 3, 2025 US Drought Monitor. Right - June 24, 2025 US Drought Monitor



Stations considered had 100% daily precipitation reports.

What goes into creating a US Drought Monitor Map?

Austin Pearson, Indiana State Climate Office

The United States Drought Monitor is a drought status map that is released every Thursday, and you've probably seen this map in the media, which contains painted blobs of yellow, orange, and red. The US Drought Monitor shows where drought is located and how bad it is across the United States and its territories. There are six classifications in the drought monitor: normal conditions, abnormally dry (D0), and four levels of drought: moderate (D1), severe (D2), extreme (D3), and exceptional (D4). Further details of the classifications can be seen below.

D0	Dryland crops and rangeland are stressed
	Lawns are brown; gardens are watered more frequently
D1	Crop growth is stunted; supplemental feed for livestock begins
	Blue-green algae blooms appear
	Creek and pond levels are low
D2	Corn and soybeans are in poor condition; irrigation increases; hay and crop yields are low
	Wildlife encroach on urban areas for water
	Lawns go dormant
	County-level burn bans are implemented; brush fires occur more frequently
	Creeks, ponds and wetlands are dry; lake levels drop; well levels are low; water restrictions begin
D3	Corn is a total loss with no ears; corn is cut for feed; soybeans are severely dry; supplemental hay for livestock is increased; other row crops are impacted
	Farmers' markets are curtailed or canceled
	Fireworks are banned; fire departments are strained
	Gardening businesses struggle
	Trees and shrubs show drought stress or are dying; deer disease increases; fish kills occur; vegetation is dying
	Lake and reservoir levels are very low
D4	Farmers sell cattle; feed costs are high; producers haul hay from outside of the state
	Communities and businesses tied to water activities and agriculture experience economic losses
	Water restrictions are implemented statewide; water shortage warnings are issued statewide

How does this map get created? Let's take a look under the hood, shall we? Each week, the Indiana State Climate Office coordinates a drought call for Indiana where representatives such as the National Weather Service, the US Department of Agriculture, and state government agencies provide comments and input on ongoing conditions across the state. A lot of information goes into these 30-minute meetings - the Indiana State Climate Office

presents various products such as precipitation maps, drought indices, river gauge stream flows, groundwater, and reported drought impacts. An initial recommendation map is created by the Indiana State Climate Office and presented to the various Indiana representatives, and tweaked from that point forward.

The recommendation is sent to the national US Drought Monitor authors by Tuesday morning each week (even if Indiana is experiencing wet conditions). The US Drought Monitor authors are also comparing our recommendation to more than 100 maps of data. Most of the time, the maps are pretty close to the state committee's final recommendation. Other times, there can be more back and forth until the final map is created. Additional information can be found on the **US Drought Monitor About page**.

If you have questions about the process, you may also email **in-sco@purdue.edu**.

The Seven Habits (+2) of Highly Effective CoCoRaHS Observers

Steve Hilberg, CoCoRaHS Headquarters

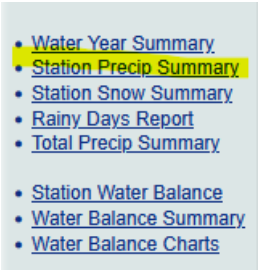
Back in 1989, Stephen Covey published a popular book, "The Seven Habits of Highly Effective People". Over the years, I came up with a list that I think applies to CoCoRaHS and wrote a **blog post** detailing the list. Here's a short summary.

1. **Report every day.** One of the attributes of a good climate record is consistent, regular observations.
2. **Report zeros!** This goes hand-in-hand with #1. Effective observers know that zero is a number and a measurement. A missing measurement does not mean "it did not rain". It's just missing.
3. **Make sure to have the correct observation time.** The correct observation time helps those using the precipitation data to interpret it correctly.
4. **Check submissions AFTER hitting the Submit button.** Effective observers always remember to check their observation after they have submitted it on the CoCoRaHS website.
5. **Keep a local record of observations.** Even the most conscientious observer can get sidetracked and forget to enter the observation on any given day. Effective observers keep a separate written record of their observations for a period of time as a backup "just in case".
6. **Review your observations at the end of the month.** Effective observers check their observations at the end of the month to be sure that all days are accounted for and there are no obvious errors. This is where that written record can save the day.
7. **Periodically review training materials.** Effective observers review the training animations and other training information on the website from time to time as needed.
8. **Follow correct procedures.** Effective CoCoRaHS observers use the 4-inch standard rain gauge, make their observation at about the same time each day, and submit their observations using the correct form (Daily Report for daily observations, Multi-Day Report for multi-day accumulations).
9. **Enjoy what you do**!

Comparing Your Observations to Nearby Stations

Steve Hilberg, CoCoRaHS Headquarters

We know observers like to compare their observations to others around them. Looking at the map is one way to do it, but there is another option that allows you to compare daily observations for up to three stations for a selected time period. You will find this on the View Data menu on the website. Choose "Station Precip Summary" in the left-hand menu.



Once you select this, a page will display that you can fill out with the information to run the comparison.

View Data : Station Report Summary US Units

Station Report Summary

Station 1 : Example: CO-LR-273

Station 2 :

Station 3 :

Start Date: < 7/1/2025 > **End Date:** < 7/7/2025 >

Get Summary

This is what the result will look like, with totals at the bottom.

Stations:	
IL-CP-1 Homer 2.0 N Lat: 40.060999 Lon: -87.96377	IL-CP-64 Champaign 2.4 SSE Lat: 40.084008 Lon: -88.240344

* indicates Multi-Day Accumulation Report

Station	IL-CP-1	IL-CP-64
Date	Precip in.	Precip in.
07/01/2025	T	0.70
07/02/2025	0.00	0.00
07/03/2025	0.00	0.00
07/04/2025	0.00	0.00
07/05/2025	0.00	0.00
07/06/2025	0.00	0.00
07/07/2025	0.72	0.52
Totals :	0.72 in.	1.22 in.

Use Care When Entering a Series of Observations - Check and Check Again!

Steve Hilberg, CoCoRaHS Headquarters

One of the most common errors we see in the data occurs when observers enter two or more observations simultaneously. We tend to see these when observers go back to enter data; they might not have had a chance to enter it at the time the observations were made. Frequently, observations are switched when entered, for example, entering yesterday's amount for today and today's amount for yesterday's date. They usually stand out clearly when comparing the amount to the nearest observations on the map. Another tool we use to check data is the Quantitative Precipitation Estimate produced by the NWS. This estimate of precipitation is based on radar and rain gauge data. Between these two, we are usually fairly confident in most cases when identifying "transposed" observations.

The bottom line is to be careful when entering observations for two or more days at the same time and check your observations after they are entered. The easiest way to compare is to look at observations for the same date in your county using the View Data menu, or look at the maps for each day.

Periodically review your data using the CoCoRaHS Data Explorer. Many errors can be avoided by checking your observation confirmation each day after it is entered. It's a good habit to get into.

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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