Counting Drops

The Indiana CoCoRaHS Newsletter

Newsletter

Summer 2010

Goodbye Snow and HELLO SUMMER!

Now with several periods of warm and humid conditions under our belt, the snowy winter may seem like a distant memory for Hoosiers. Thanks to all the Indiana CoCoRaHS observers who braved the cold weather and recorded snowfall, snow depth, and snow water equivalent reports besides the usual precipitation amounts! Your observations were quite valuable during the season, especially during the rounds of winter storms.

Overall the past winter was the 25th coldest and 23rd driest in the past 115 years of statewide records. It could have been much worse as Indiana barely escaped some massive winter storms that swirled around us. Our temperatures did bounce above and below freezing often this winter producing wintry mixes and freezing rain that frequently challenged drivers on Indiana roads. Heavy snow fell all across the state in late winter - in northwest Indiana where big snows are expected as well as in southeast Indiana where they aren't !

With Old Man Winter behind us, the warm season brings new observing challenges. Instead of snow storms and ice, severe thunderstorms and heavy rainfall become the main weather concerns. So what should you watch out for and what types of observations are helpful during the warm season?

Here are some examples of possible watches and warnings that the National Weather Service issues during the warm season and what type of weather can be reported through CoCoRaHS in each situation beyond the regular 24-hr precipitation amount:

Flash Flood Watch or Warning - Heavy rainfall may be occurring and causing a relatively high amount of precipitation to fall in a short period of time.

What to report? A **Significant Weather Report** including the amount of precipitation and the amount of time the rainfall occurred. Any degree of flooding can also be submitted.

Severe Thunderstorm Watch or Warning - Storms capable of producing hail and damaging winds may be occurring or about to occur.

What to report? A **Hail Report** can be submitted if you have a hail pad outside or can measure an actual hail stone after the storm has passed and it is safe to go outside. Heavy rainfall or flooding may also occur, which can be reported via the **Significant Weather Report**.

Remember also that when you leave for vacation, any precipitation in your gauge when you return can still be submitted as a **Multi-Day Accumulation Report**!

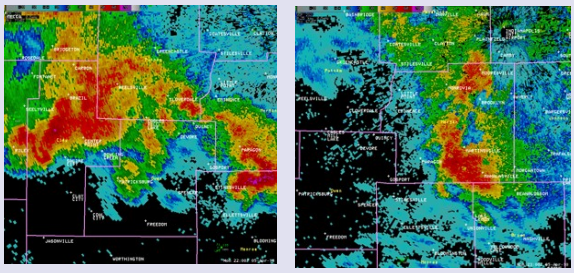
Inside this issue:

Featured Daily Report Comment:

(2/19/2010) *"The dog ate my snowfield! Luke, the wonder mutt "helped" me measure the snow this AM, and destroyed the area in his exuberant effort to assist CoCoRaHS. We'll have to improvise with some other area for a while. No worries… more snow is apparently on the way… whoopee."*

Highlighted Event: April 5 Hail Storms

On the evening of April 5, 2010 severe thunderstorms developed across central Indiana and produced some whopper hail stones!



Reports upwards of 2.5 to 3.0 inches were received and several pictures were sent via email to the National Weather Service in Indianapolis, including the one below with large hail next to a pear!

There was even 3.0 inch hail reported in Gosport, IN… that's bigger than a baseball! Your CoCoRaHS hail reports were among the official reports issued by the National Weather Service as Local Storm Reports (LSRs)! At the office we were monitoring the CoCoRaHS website for your reports, which included the following largest 4 reports:

2.00" IN-MG-14, Morgan County, 6:30 PM
2.00" IN-OW-6, Owen County, 6:30 PM
1.00" IN-HS-4, Hendricks County, 5:30 PM
1.00" IN-LW-13, Lawrence County

Hail reports such as these are extremely helpful to forecasters who need verification that a thunderstorm on radar is severe or not and if they are trying to get a better idea about the storm characteristics. Please be careful whenever recording hail stone sizes! Stay in a safe sheltered location until the storm has passed. Check out the CoCoRaHS website for instructions on how to make your own hail pad for taking measurements!

Ken's Question Korner

The brains behind Indiana CoCoRaHS, Ken Scheeringa of the Indiana State Climate Office at Purdue, will answer your tough questions. Submit a question to Ken at cocorahs@purdue.edu

Question: What is the difference between an NWS cooperative weather station and a CoCoRaHS station?

Answer: The cooperative weather station network (or "co-op" for short) is far older than the CoCoRaHS network, starting way back in the late 1800s. There are far fewer co-op stations than CoCoRaHS stations in Indiana (about 150 vs. about 1330) with the purpose of monitoring local climate over the long haul - across decades and centuries. Besides daily precipitation, many co-op volunteers record daily high and low temperature, snowfall, and in some cases data such as river stages and soil temperatures. Unlike CoCoRaHS, co-op observers are visited at least once annually by the NWS to insure instruments remain installed properly and that data are being collected and submitted accurately according to NWS standards. Co-op observers submit data daily to the NWS via the WxCoder program, and submit a monthly copy to the National Climatic Data Center (NCDC). NCDC edits and publishes all co-op data nationally to become part of the official national climate record. These records are useful to many users such as engineers, researchers, and attorneys who present the data in court cases.

Who Uses Your Report Data?

A better question might be who doesn't use your data, because the information from the CoCoRaHS program touches most of us in some way every day.

Most of us understand the importance of precipitation data to the meteorological community and know that the program is rapidly becoming an integral part of weather and hydrological predictions. The information actually goes well beyond these real time operational uses. Even though CoCoRaHS reports are not official climatological data, they are still archived and can be looked back on for research and all kinds of practical applications. The following is a list of some of the uses of your data... Can you think of others?

- Insurance claims
- Recreation
- Forensics
- Research
- Water resources and management designers
- Engineers
- Consultants
- Construction
- Industry
- Litigation
- Public utilities
- Transportation
- Manufacturing
- Natural hazards
- Agriculture
- Drought mitigation
- Communication
- Financial

So rest assured that in some way the data created by you, the CoCoRaHS observer, has an impact on our social, economical and political endeavors. Your efforts are a great benefit to us all even though we do it just because we like it and it is fun!

Observer of the Season

An observer who provided consistently good observations and reports during the winter months was chosen to be featured as the "Observer of the Season" and was asked several interview questions. The observer at station IN-LP-36 did such and didn't miss one day of reporting during the months of January and February. This observer provided the following responses when interviewed:

- **What grabbed your interest in the program?**

"I was trained as an Air Force combat weather observer in the early 60s and felt this program provided a good service to the "community". In other words, good old patriotic service."

- **What was the weirdest thing you've found in or near the gauge?**

"BIRDS! I have a family of Robins that visits every year and raises a new family in the front yard. They had stayed clear of the rain gage for the past couple of years, however, this year they decided that it was just too good a perch overlooking their hunting domain, my back yard, to resist. It seems they were having to share their bounty with several nesting Starlings in that area. Tooth picks taped one inch apart dissuaded them from lightening their takeoff load on their attacks into the rain gage."

- **What do you like or find most rewarding about the program?**

"It gives me a positive reason to get out of bed at a precise time every morning. Retirement does that kind of thing to you if you don't have positive reasons to continue on."

- **How does observing and reporting impact your day?**

"The early start, with something positive to do, lets me start writing in a consistently good mood. I write fiction every morning as a form of activity."

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E-mail:

Ken Scheeringa
cocorahs@purdue.edu

Adam Baker
Adam.Baker@noaa.gov

CoCoRaHS - Because Every Drop Counts!

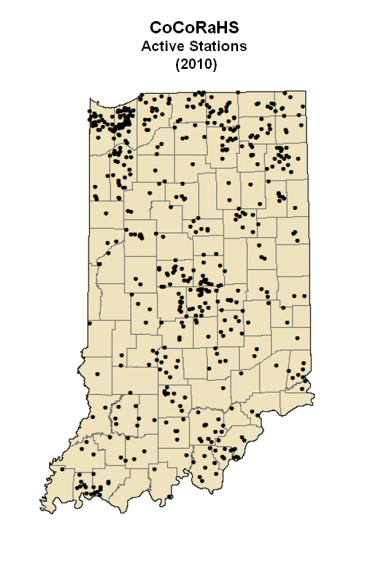
www.cocorahs.org

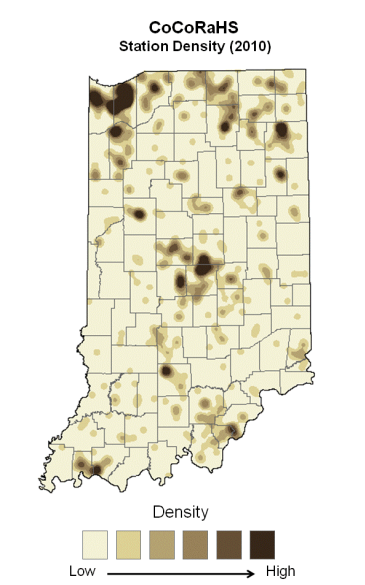
Thanks to Ken Scheeringa, Ed Terrell, Souleymane Fall, Dev Niyogi, and Sara Weisser for newsletter contributions!

More Observers Needed!

In order to get a good sample of precipitation reports across the entire state of Indiana, CoCoRaHS is in need of more observers to improve coverage across the counties listed to the right and others with low station density in the maps below. If you know of any family or friends that live in these areas and may be interested in joining the CoCoRaHS team, then please contact one of the coordinators!

- **Adams**
- **Benton**
- **Clinton**
- **Delaware**
- **Franklin**
- **Greene**
- **Jackson**
- **Jennings**
- **Knox**
- **Madison**
- **Miami**
- **Montgomery**
- **Parke**
- **Pulaski**
- **Randolph**
- **Scott**
- **Spencer**
- **Switzerland**
- **Tipton**
- **Union**
- **Vermillion**
- **Vigo**
- **Wabash**





Coming Soon to Hoosier CoCoRaHS...

This is an exciting time for Indiana CoCoRaHS! There are several new projects underway involving some innovative ideas from some of your coordinators. We plan to create a separate webpage with additional information on project updates, training opportunities, and how your valuable observation reports are being used. We are also planning other interactive ways to view the report data! As always, we welcome your ideas on where you would like the program to go! Please send us any thoughts or ideas of ways to improve the Indiana CoCoRaHS program!

Record Reports from Last Winter

Here are the seasonal record reports across Indiana from last Winter (Dec. 21, 2009 through March 20, 2010):

Greatest 24-hr new snow accumulation:

13.0", IN-LK-50 on Feb. 6, 2010 (Lake County, IN)

Greatest depth of total snow and ice on ground:

24.0", IN-LP-15 on Jan. 9, 2010 (La Porte County, IN)

Greatest 24-hr total precipitation (rain, melted snow, and melted ice):

1.77", IN-JS-16 on Mar. 14, 2010 (Jasper County, IN)