

# The Catch

## **COCORAHS – MAY UPDATE AND ANSWERS TO YOUR QUESTIONS**

FORT COLLINS, CO — Thursday, May 14, 2009

### **Good morning, CoCoRaHS volunteers and friends**

If you are new to CoCoRaHS, we want to welcome you to the rain gauge team.

Every two or three weeks you'll get an e-mail like this from me at CoCoRaHS headquarters (the Colorado Climate Center here at Colorado State University in Fort Collins). This is one small way that we try to keep in touch, answer questions, and share some stories. There are now over 7,000 of us checking our rain gauges and reporting each day – and a few thousand more reporting occasionally -- or at least thinking about it. This is equivalent to a small but wonderful city of weather watchers. With your help we can now begin to capture the general rainfall patterns of most major storm systems sweeping across the country. In areas where there are many of us, we are able to document the local variations in storms that are so important for agriculture, commerce, transportation and of course our own safety. For example, after a long dry season rains returned central Florida earlier this week. Looking at the Florida maps Wednesday morning we can see that rainfall in Polk County (just east of Tampa Bay) ranged from over 4" to only 0.20" just a few miles away. This is the real essence of CoCoRaHS and why your data can be so incredibly important. No other network of accurate manual rain gauges is able to capture such detail.

<http://www.cocorahs.org/Maps/ViewMap.aspx?state=FL>

This is why we continue to pursue our lofty but desirable goal of at least one active volunteer per square mile over well populated areas to at least one per township (36 square miles) over rural areas. So welcome to CoCoRaHS. We're delighted to have you on the team, and we appreciate any new volunteers you can recruit that will help fill the gaps in our network.

## **Welcome West Virginia**

Speaking of gaps, West Virginia had been a void on our national map until two weeks ago. But since formally joining, more than 55 new volunteers have signed up and half have started to report. There weren't enough yet to capture the heavy rains that caused their extreme flooding last weekend, but hopefully we will get there. If you have friends or family in beautiful West Virginia, please encourage them to sign up.

## **Tropical Storm Fay**

I wanted to bring to your attention a new "Analysis" that we recently completed. Using only CoCoRaHS data from last August, Zach (from our staff) recently constructed an "animation" of storm total precipitation from Tropical Storm Fay. About 1000 of us were affected by this storm in the SE last year and it was your data reports that made this analysis possible. Check it out. It's under the Data Analysis link on the left side of the page.

[http://www.cocorahs.org/Content.aspx?page=TS\\_Fay](http://www.cocorahs.org/Content.aspx?page=TS_Fay)

We don't have the server power yet to routinely do "animations" but it's one of the great tools for putting our data to work understanding our climate in action.

## **Short Answers to Common CoCoRaHS Questions**

Hats off to Zach. Each day he handles anywhere from 40 to 125 questions via our [info@cocorahs.org](mailto:info@cocorahs.org) hotline. Zach had been a student helper but we added him to our staff one year ago to help keep up with all the questions from our volunteers. Zach is also the person who helps every new volunteer get set up with a station name and number and correct latitude/longitude coordinates. If you ever think your station is not in the right place on our maps, just write to Zach at:

Zach Schwalbe --- [zach@cocorahs.org](mailto:zach@cocorahs.org)

Here are a few of the very common questions we get and how to answer them

***1) I forgot my password, what do I do?***

Our computer remembers, so just go to our website [www.cocorahs.org](http://www.cocorahs.org) and click either "My Data Entry" or "Login" at the top of the page. Then click on Find your login info. You will then be asked for your station number (which you may not remember) or your e-mail address (which we hope you remember). Type that in, hit "Get Login Info" and in a few minutes or less you will get an e-mail from CoCoRaHS. If all else fails, contact Zach ?

***2) Do I have to report on days with no precipitation?***

The answer is "No", you don't have to, but "Yes" we really hope that you do. Unless you tell us it did no rain, we won't know for sure. For many reasons, like drought monitoring, knowing that it did not rain is just as important as knowing that it did. So if you can, please report. Also stations with complete data are more likely to be used in research and climate monitoring than stations with incomplete records. Remember you can use the "Monthly Zeros Report" to make it easy to fill in the zeros <http://www.cocorahs.org/Admin/MyDataEntry/MonthlyZerosReport.aspx>

***2a) How much is a trace?***

There does not have to be water inside your measuring tube in order for you to report a trace "T". If you feel sprinkles on your face, see a few drops on the window, or see some snow flakes flutter by, that is enough to make it a trace.

***3) What if I'm gone some of the year? Can I still participate in CoCoRaHS?***

The answer is YES. Report when you are home. When you are away either use the "Multiday Accumulation report form" to enter the total amount,

<http://www.cocorahs.org/Admin/MyDataEntry/MultiDayPrecipReport.aspx>

or just leave it blank and make a note in the comments when you return.

***4) I don't have an ideal spot for my rain gauge. Can I still participate?***

We want you to be a part of CoCoRaHS if at all possible. Few of us have perfect sites, but most of us can find a workable location for our gauge. Check out the Training Slide Show on the homepage for suggestions. Unless your yard is totally covered by trees or you live in a condo or apartment with only a balcony, chances are you can find a place to put a gauge that will get representative measurements most of the time. We

have several observers in downtown Chicago and their data still seem reasonable most of the time. But there may be times, depending on wind speed and direction, that your measurements are not representative. Please make note of this in your remarks. If you have a picture of your station showing the siting and obstructions, send it to us and we'll keep it in our files. That helps us interpret the data better.

### ***5) Do I need to enter "Comments" on my daily reports?***

Let's just say that your comments leave historic documentation of what you observed and what the day was like. Someday that information could be really useful – or at least very interesting. You can keep your own weather journal this way. Your words accompanying your precipitation report bring the data alive. Comments are not required, but they are very helpful -- especially when there has been interesting, severe or changeable conditions – or other interesting things (like bird migrations, curious animal behavior, first date of flower blossoms, etc.)

### ***6) Birds are messing up my gauge. What can I do?***

We get that question a lot this time of year. Here were answers given from polling our observers two years ago

--Use tape or strong rubber bands to attach toothpicks or thin, rigid wires to the rim of the gauge. Make sure they are no more than 2" apart and stick up (and maybe out a little) about 2" above the rim. (This method has worked for many of our volunteers with the worst bird problems).

-- Place "Tanglefoot" along the rim of the gauge. This, I presume, is a name brand for a sticky substance that is a proven commercial bird deterrent. There are likely other brands as well. (Note: Some of you vehemently opposed this idea).

-- Mount a ring of stakes with flags or streamers or shiny stuff around your gauge making sure they stick up a bit higher than the gauge.

-- Have a real cat nearby

-- Have a stuffed cat nearby

-- Have a rubber snake nearby

-- Have real snakes nearby

-- Mount a plastic owl nearby

-- Have an electronic owl nearby (Where do you find electronic owls???)

### ***7) Does anyone ever use my data?***

YES!!!! This question I particular like and we get it every week. I know it's hard to imagine that a bunch of volunteers with plastic rain gauges in our

yards could possibly be doing something that matters, but the fact is YOU ARE.

How is this possible? Simple. Our gauges are really good. Under most circumstances, our 4-inch diameter, high capacity gauges perform as well as the official National Weather Service Standard Rain Gauge that has been used for over 120 years documenting our nation's climate. We've found good places to install our gauges so that most of us are getting really good data. Also, since most of us are measuring about the same time each day (7 AM for most) this makes it easy to map and compare reports from one location to another. Many don't appreciate this, but measuring precipitation with electronic rain gauges is still less accurate than our manual readings, so there is great interest in our data from weather and water professionals.

Then there's the fact that there are so many of us - and in almost every state. This means that organizations that care about water nationwide can make good use of CoCoRaHS.

### **Who uses our CoCoRaHS data?**

-- National Weather Service forecast offices and the Hydrologic Prediction Center track CoCoRaHS reports every day to verify their weather forecasts. They instantaneously receive our Intense Precipitation and Hail reports to aid in severe weather warning and verification.

--National Weather Service River Forecast Centers are using CoCoRaHS data every day in predicting river levels and potential flooding all across the country.

-- National Weather Service and private meteorological businesses are using CoCoRaHS data to validate and adjust precipitation estimates from RADAR.

-- The National Operational Hydrological Remote Sensing Center accesses CoCoRaHS snow reports all winter to help in the assessment of snow cover and snow water content across the entire U.S. They particularly appreciate the observers who make the extra effort to report the total water content of snow on the ground each day in the winter. That is really important stuff.

-- The U.S. Department of Agriculture is looking at CoCoRaHS data regularly to assess crop development, potential drought stress and possible crop damage and erosion from flooding or from drought.

-- The National Drought Mitigation Center (Lincoln, NE) looks at CoCoRaHS data each week in the assessment of local and regional drought - and in anticipating areas that may be on the verge of drought.

-- NASA has used our hail data in assessing the risk of hail at Kennedy Space Center. NASA and NOAA scientists and educators have been using CoCoRaHS data to help validate satellite estimates of rainfall, soil moisture and evapotranspiration.

-- The media (newspapers, TV stations, internet news services) in many parts of the country are using CoCoRaHS data to provide more detail on local storm patterns.

-- Many local utilities look at CoCoRaHS data to help gauge inputs to their water supply and also project water demand.

-- All sorts of scientists and researchers have contacted us about using CoCoRaHS data for things ranging from designing hail resistant airplanes to studying the spread of West Nile virus.

-- And so on, and so on -- there are MANY more occasional and every day uses - and more organizations are learning about CoCoRaHS all the time

SO, when you submit a rainfall report from your plastic backyard rain gauge, please know that your data ARE important and ARE being used each and every day - rain or shine. Keep up the good work!

### **Get ready for a questionnaire**

We know we're learning a lot from CoCoRaHS and so are many other scientists -- but we also want to know if you are benefiting. Within the next few days, we will be circulating a questionnaire that will give you a chance to let us know what you think of CoCoRaHS. This is something new for us. We hope that you will take the time to respond. This may help us make some improvements -- and it might even help us raise support to continue CoCoRaHS.

### **Scouts**

Boy Scouts and Girl Scouts have really helped CoCoRaHS. One of our young weather enthusiasts organized a scout troop and made over 1,000 pads and donated them to us. That helped him earn his Eagle Scout badge. A girl scout helped make special boards for mounting hail pads. Local scout troops have come to visit our weather station and learn more about how we measure and track our weather.

If you are currently a boy scout or girl scout participating in CoCoRaHS, please drop me an e-mail. We're just curious. You've been such a big help.

## **Life on the farm**

This is a busy time of year -- almost too busy. Makes me think of the stories I've heard from our parents and grandparents describing working from before sunrise to after sunset all spring trying to get the soil ready and the crops planted. Trying to have enough food to keep the workers strong was a big deal.

Many of you have written to ask about "Angel" the great Great Pyrenees that got in trouble with the law (caught on the street with a chicken in her large, white mouth). Well the judge let us plea bargain and we got off with "Dog at Large" rather than being a chicken-eating public menace so the fine wasn't too bad and Angel was free to be a "good dog"

Ahh, but now we have another dog. Ever since our beloved Australian Shepherd died some weeks ago, my wife has been very sad. The empty hole was filled last week when Kathy took a drive over the mountains to Craig, CO and came home with a ranch-ready new Australian Shepherd puppy. She's bold, boisterous and her name is Lily. The new pup fits in well and hasn't chewed up everything (many things, but not everything). We've got a lot of training to do but she's a fast learner. The cats have taken it upon themselves to do some puppy training. After a few quick claws to the chops, she's leaving them alone.

We've got a goose setting on eggs now. This could get interesting. Last night I tripped in the dark after gathering the chicken eggs and managed to smash nearly a dozen. I'm still bummed about that.

## **Want to see previous messages?**

<http://www.cocorahs.org/Content.aspx?page=catch>

This is the link where you can go to see the periodic e-mails I've sent out every few weeks for the past several years. Click on "Archives" if you want to view previous messages.

## **Big storms -- and don't forget to report Intense Rain and Hail**

I feel like I nag a lot about this, but please don't underestimate the value of your reports. Do remember to use our "Intense Precipitation" and our "Hail" reports. It is the heart of thunderstorm season now and almost every day somewhere in the country is getting localized rainfall of 4" or greater. We've had quite a few reports up over 7" already and a few daily reports over 10" Your timely reports of big storms in progress can help

forecasters do a better job alerting others. It's worth the extra minute of your time.

**In closing**

Amazingly we're just a few weeks from the summer solstice. Summer heat follows. Take good care and we'll write again soon.

Nolan Doesken  
Colorado State University