

The Catch

COCORAHS – DOES ANYONE REALLY CARE?

FORT COLLINS, CO — Friday, May 9, 2008

Dear CoCoRaHS volunteers, friends, family, etc.

Greetings and good evening. I will get to the question in the subject line of this message in just a minute. First some other business.

First thunder and it was good

We finally had our first thunderstorm of the year here on the west side of Fort Collins, Colorado on Wednesday. The first thunder of the year has always been a treasured event for me -- at least it has been since I outgrew my fear of thunder. I'm sure my childhood fears were caused by all those nocturnal thunderstorms in the Midwest. Those same storms continue to this day startling children from deep sleep and sending them rushing to crawl into bed with a parent.

Big storm, little rain

Our first thunderstorm brought good old-fashioned crash-bang thunder, but unfortunately it almost forgot to drop any rain. May is supposed to be our wettest month of the year here with an average of almost 2.50", but 9 days into the month and we're only up to 0.11" I think my total since January 1 is only 2.27", less than 50% of average. That explains the dust out in the garden and corral.

Little storm, big rain

Quite the opposite happened on Monday afternoon in south central Texas (Comal County). There a tiny but determined thunderstorm only a couple miles across dropped over 7 inches of rain on one of our volunteers in less than two hours. Check out the daily precipitation map for Comal County, Texas for 5/6/2008.

<http://www.cocorahs.org/Maps/ViewMap.aspx>

This is one of the most localized extreme storms that CoCoRaHS has experienced, and it points out why your observations are so important and why reporting Zeros (0.00") makes a difference. Note the Zeros on the map just a few miles from the storm center. All reports were confirmed to be accurate.

Lightning, be careful!!

Some of our family of weather watchers have been struck by lightning during their lifetimes or have had extremely close calls. They asked me to remind all of you to please be cautious this year when it comes to lightning. The National Weather Service Slogan (we chuckle a bit, but they mean business) is "When Thunder Roars, Go Indoors" It sounds a little corny, but they have the right idea. None of us need to take chances when it comes to lightning. This would be a good time to review the lightning safety tips.

<http://www.lightningsafety.noaa.gov/>

We will bring this up again in a few weeks during the annual "Lightning Safety Week".

Comments -- they are good!

Don't forget that it is perfectly OK (and greatly appreciated) for you to type in notes to describe your weather conditions. Be brief, but write as much as you need to describe the situation. This morning there were some poignant comments from some of you in the southeastern states who had just had raging storms and some close calls from tornadoes. We are interested in your rainfall amounts, but we also care about the weather that is impacting your lives and your communities. Note the storms, the drought, the wildlife or whatever is impacting you.

To look at comments that others have written, go to:

<http://www.cocorahs.org/ViewData/ListDailyComments.aspx>

Choose a particular state or county or click on "Select State" and you'll see the comments from the whole country. Makes for some interesting reading while sipping your morning coffee.

Hail

We are well into the hail season and we now have national hail maps to quickly spot where hail storms have been hitting.

<http://www.cocorahs.org/Maps/ViewMap.aspx?type=hail>

I have noticed that many of you are mentioning hail in your daily precipitation report notes but you are not filling out a hail report. Only the hail information contained on "Hail Report Forms" will be mapped. You do not need to have hail pads in order to file hail reports.

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

If you want us to know about the hail you received, no matter how large or how small, then please submit a hail report. Try to report hail soon after it occurs. If possible, don't wait until the next morning to report.

Angel is our neighbor

Some of you have asked how Angel is doing. Angel is the very large Great Pyrenees dog that my wife brought home from our neighborhood animal rescue facility. The only problem was she "forgot to tell me". Anyway, Angel has found a new home, but she is living close by. Our college-student son and his roommates live about 400 feet away across a small pasture. They love Angel and she seems to like them more than she liked us. Now we can see her if we wish, and we can hear her barking in the distance. But we don't have to feed her.

But there is another animal problem and it starts with a G. The stupid geese and goslings are driving me crazy. The adult geese and the young ones are dooking it out and honking like you wouldn't believe. I am on my way to major hearing loss just by doing the chores. The chicks (baby chickens) are proving to be much easier to manage, and so far the cats haven't eaten any of them.

The old maple trees are becoming lumber

For those of you who happen to know where we live, you may have noticed the huge pile of logs lying in our front yard for many months. Last year when the county widened the road in front of our house, they claimed the line of old western maple trees in front of the old house and called them a safety hazard. Bah, humbug. Anyway, they cut them down and we let them lay. We finally tracked down a man with a portable sawmill and now we're getting them milled into lumber. I had finally made some progress cleaning the garage so we could

finally fit the car in, but now we've stacked it full of rough-cut maple that will take a year to dry.

While being a pretend lumber jack these last weeks, I've been admiring the rings of those trees -- nearly 100 years worth. One hundred years is nothing for trees in parts of the country, but for here those were old trees. This part of the country was nearly treeless until the late 1800s when the settlers dug the irrigation ditches and brought in irrigation water. Looking at those tree rings, I couldn't help but stop and wonder about all the weather those trees had experienced in their lifetimes.

CoCoRaHS visitors

This was a fun week for us at CoCoRaHS headquarters. CoCoRaHS leaders from several states (IL, ND*, KS, WY, UT and WA) met here to put together a plan for a national coordinating committee for volunteer precipitation measurement networks. Thanks to the Western Association of Agricultural Experiment Station Directors for supporting our meeting.

Does anyone really care?

Finally, back to the main point for this message.

Those of you who have been a part of CoCoRaHS for a long time know that we address this question from time to time. Yet, new and existing CoCoRaHS participants continue asking me "Does anybody actually look at my data? Does anyone really care? Am I wasting my time?"

I would like to make it very, very clear that your data reports are being used and they are being used DAILY and OFTEN by MANY. The uses of CoCoRaHS data vary from one region of the country to another and they also vary with the time of year. But here are just a few of the ways we know CoCoRaHS data are being used. There are probably many others.

Private and Government weather forecasters look at our rain, hail and snow reports to help their weather prediction and verification. Believe it or not, weather forecasters like to know how their forecasts work out. CoCoRaHS precipitation data allow them to see where it rained or snowed, where it didn't and how much.

Severe weather warnings. Timely reports of heavy rain, heavy snow and hail are used routinely by the National Weather Service to help predict and verify the occurrence of severe weather.

Hydrologic prediction. Hydrologists whose job it is to predict stream flows, river levels, reservoir volumes and water supplies use all the precipitation data they can get their hands on to try to improve their forecasts. Hydrologists all across the U.S. look at CoCoRaHS data often.

Weather radar correction and calibration. Radar has been used since World War 2 to track storms. More recently it has been used to quantitatively estimate the rainfall reaching the ground. These estimates are sometimes inaccurate unless adjusted for the amount of rain actually reaching the ground. CoCoRaHS reports that arrive promptly each morning and our "Intense Precipitation Reports" are used routinely to help correct and adjust radar rainfall estimates.

Research. Precipitation has an impact on many parts of nature, commerce and society. More and more scientists in a variety of diverse fields are finding out about CoCoRaHS measurements. Forest pathologists, for example, can sometimes track the spread of certain diseases that propagate best during wet weather. Mountain pine beetles, on the other hand, thrive best during drought. A local scientist was able to learn about the spread of the West Nile virus here in Colorado by tracking daily rainfall patterns to determine where and when mosquito populations hatched and spread. We know there are many other examples of research applications. If you know of some, feel free to write to let me know.

Engineering. We often take this for granted, but engineers that design our homes, offices, roads, etc. have to take precipitation into account. Hail data are used by engineers for developing roofing materials, for building airplanes, for designing roof trusses (based on the heaviest anticipated weight of accumulated snow), for designing storm sewers, bridges and culverts to handle flood waters, and much more.

Agriculture: Precipitation affects agriculture in so many ways. Farmers, ranchers, agribusinesses and commodities investors all follow weather prediction and national and international rainfall patterns. A few examples include monitoring crop development, crop yield prediction and assessment, diseases, insects, soil moisture assessments, market assessment and prediction. Many who are not involved in agriculture may not realize this, but the prices paid to farmers for many commodities vary daily based on observed and predicted weather conditions both here and abroad.

Water management: We hear from many municipal water providers who are using CoCoRaHS data to help assess available water supplies and current and projected customer demands based on local precipitation patterns.

Insurance fraud. Insurance claims adjusters have learned about CoCoRaHS as a way to verify if storms were present on days when damage claims were filed.

Recreation There are many ways that precipitation data are used for recreation applications. Fisherman may check recent rainfall amounts since rain can affect water levels, water clarity and water temperature. Rafters, canoeists, and kayakers watch for precipitation amounts and for melting snow that will affect water levels. Winter recreation pays close attention to snowfall, snow depth and water content for obvious reasons.

Then there are people like me -- climatologists. We have more uses for our CoCoRaHS data than you may ever realize. We monitor the development, spread and retreat of drought locally and across the nation. We track data year by year to determine common patterns, long term averages, probabilities and extremes. We look to see if there are areas that regularly receive more precipitation than others -- are there preferred storm tracks and rain shadows? It may take years to prove, but we are patient and constantly on the watch. We are very interested in the size, intensity and duration of different types of storms. Having many volunteers close together lets us begin to better understand the spatial variability of precipitation and how that varies from place to place and with the season of the year.

Have you read this far? Thanks. Hopefully you are now convinced that your simple daily effort to check your precipitation gauge and send in your report is a very worthwhile thing to do. Keep it up, and encourage others to join.

Have a great weekend. I need to get up early to help saw up some more logs tomorrow. The garden can wait another few days.

Nolan