

The Catch

COCORAHS MESSAGE -- BACK FROM VACATION AND IT DID RAIN

FORT COLLINS, CO — Saturday, July 22, 2006

Dear CoCoRaisins:

I got back from Michigan a few days ago but have not had time to write until now. Vacation included an interesting side trip to Toronto - more on that in a minute. Sure enough, I left town and the rains immediately moved into Colorado -- Ten straight days of widespread rains culminating in a statewide soaker July 8-9th bringing an average of one inch of rain statewide (very good for this part of the country. On the morning of July 9, 803 Colorado CoCoRaHS volunteers reported and 789 of them had rain to report. That is very unusual for summer to have such widespread moisture, but it was greatly needed and has helped suppress wild fires. I guess I'll have to leave more often. I actually took a spare gauge with me to upper Michigan and only picked up 0.51" in two weeks -- dry for there.

I just scanned the data from all 12 participating states and believe it or not, the greatest monthly total for July so far is not from Virginia, Indiana, Missouri, Texas or the other humid states, but it was right here in Colorado. The station near Penrose (west of Pueblo and the site of a huge killer-flood producing storm back in June 1921) has received 10.45" of rain already this month. Unfortunately, there was food damage there this time as well with several roads washed out.

Dozens of Colorado CoCoRaHS observers have had over 4" of rain this month, but here in Fort Collins, we are still dry with July totals in the city ranging from an inch down to only 0.60" in northeast parts of town -- so the stinking drought continues and we stand at less than 50% of our average precipitation so far this year. Dry areas for July also appear in parts of western Kansas and over quite a bit of northern and western Wyoming where a few locations have only had about 0.25" so far this month.

SO - keep those reports coming. It still amazes me that I can sit down at the computer and in just a few minutes (thanks to the efforts of over 2000 volunteers with our plastic rain gauges) know what happened at a very localized level in several states. I also see that well over 100 new applications to join CoCoRaHS

have come in this month while I was gone including a nice batch from Oklahoma. Finally, I've even seen a few reports from the District of Columbia.

By the way, those of you back in the DC area, thanks again for your soggy efforts back in late June. We captured much of that eastern storm. More than 40 of you picked up more than 10" of rain in a week, with a few stations topping out over 14". That was A LOT OF RAIN!

Upcoming Events

For those of you in easy range of northern Colorado, two events are coming up that I would like to draw your attention to.

1) On Tuesday, July 25 at 7 PM (3 days from now) CoCoRaHS is holding a special program at the Fort Collins Public Library Harmony Campus (S. Shields and Harmony -- watch for road construction on Shields). We will be presenting a brief history of how and why CoCoRaHS came to be -- the late July Fort Collins flash flood of 1997. We will also describe several other catastrophic storms that have occurred during the last few days of July and the first days of August -- a surprisingly active time of year for severe weather along the northern Front Range of Colorado. We will be showing what these storms have in common and why they are most likely to occur at this time of year. We will then do an alter call and see if we can sign up some more CoCoRaHS volunteers -- and do a quick training session using new training materials being developed by our CoCoRaHS partners at the Univ. of Oklahoma.

If you plan to attend, please RSVP to Henry at: hreges@atmos.colostate.edu or call 970 491-1196

2) On Monday, July 31, in collaboration with the Channel 7 weather team and Northern Colorado Water Conservancy District, we will be commemorating the 30th anniversary of the Big Thompson flash flood of July 31, 1976 and also participate in a water conservation fair. Remember, floods and droughts are both a concern and can occur at almost the same time. CoCoRaHS contributes greatly to the study of both floods and drought. Please find the details about this program on the CoCoRaHS calendar of events:

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

An RSVP is required for the evening portion of the program.

Why Toronto?

A special "Snow Measurement Workshop" was held July 10-12, 2006 in Toronto, Canada at the headquarters of Environment Canada (equivalent in some ways to the National Oceanic and Atmospheric Administration in the U.S.). I took a leave of absence from our vacation and had a lovely drive across the north shore of Lake Huron and through the nickel mining city of Sudbury, Ontario (lots of wild blueberries around there) enroute to Toronto (where it poured buckets full on 2 out of 3 days). Four of us from the U.S. attended. We discussed upcoming plans for attempting to measure and report snowfall and snow depth automatically using ultrasonic depth sensors. These sensors have been around for nearly 20 years, but have been getting steadily better and are now being introduced into official weather observing networks.

What you need to know is that CoCoRaHS data will be used in this study. In order to better interpret automated snow data, and in order to know how representative a point measurement may be of the surrounding areas, we will be looking closely at CoCoRaHS snowfall and depth observations -- especially in those parts of the network where we have large concentrations of volunteers. So yet another interesting application for the data we are collecting. I will keep you posted on the progress. We hope to have 16 sites in the U.S. installed and collecting data by November 1, 2006 from as far away as Caribou, ME, the shores of Lake Superior, Fairbanks, AK, Flagstaff, AZ as well as Fort Collins, CO, Cheyenne, WY and ten other sites. The Canadians will have several similar sites collecting data from the Canadian Rockies and Prairies east to St. John's Newfoundland. And if you thought you had trouble measuring snow -- you should see some of the pictures of Canadian weather stations. Anyway, it was a very useful meeting, and I felt very honored to be invited and to begin including CoCoRaHS in international endeavors.

CoCoRaHS also Heads South

We just shipped a box of rain gauges to El Salvador where a team of "Engineers Without Borders" is working with a community there that has water supply problems. Later in August, they will be setting up a network of rain gauges in the community at the base of a mountain and coffee plantation. Participants will empty their gauges daily and report their readings on a chalkboard set up beside the public well where everyone in town comes daily for fresh water. The engineers will then begin correlating rainfall in the small watershed there with water levels and output from the community well. Additional wells may be drilled based on the findings of this study.

If you would like to help with this study in a financial way, we would definitely appreciate it. I told them that we had no money in our budget for an El Salvador expansion, but that for the few hundred dollars it would cost to get started, I bet

we could get a few donations. If you are so inclined, please send a check in any amount to "Colorado State University" and in the "memo" write "CoCoRaHS El Salvador".

Mail your check to:

CoCoRaHS
Dept. of Atmospheric Science
Colorado State University
Fort Collins, CO 80523
Attn: El Salvador project

I will add up the contributions we get and report back to you with the results of this fund raising effort. Thanks very much.

Hail

If you live in Colorado, Wyoming, Kansas or New Mexico we STRONGLY encourage you to make sure you have a hail pad in place and some spares in your house. Our network of hail pads provides exceptional data for determining storm characteristics. There is nothing else like this anywhere in our country (although we have found several European countries with local hail pad networks). Your hail reports and damaged hail pads are very important for both damage surveys, storm documentation, severe weather warnings, but also for interpretation and calibration of weather radar such as the displays you may see on the evening news or on your computer. Hail is highly reflective on radar and can skew radar estimates of precipitation. Your hail reports -- and then your hail pads when you turn them in later -- lead to better understanding and better calibration of weather radars.

We have had so very many "I did not have a hail pad out -- sorry" comments this year that it has made me sad. We have worked hard to produce several thousand hail pads for distribution. We count on our volunteer leaders to help distribute hail pads at the community level, but each of you will have to take the initiative to contact your coordinator or find the nearest hail pad distribution center. We realize that our distribution systems have not been working well in all areas, so if you see a problem or find that a distribution center is out of supplies, please let us know. We are now 2/3 of the way through our typical hail season, but this is as good a time as any to get set up for measurement if you haven't already.

"An Inconvenient Truth"

I am not much of a movie-goer, but I did go see "An Inconvenient Truth" last

night with my wife. For those of you who like action films or romantic comedies, you will be - - - disappointed. But if you like a little science and a few things to think about, then you might want to go see it. I am not yet ready to share all my feelings about this movie and its scientific validity. I know it may include some exaggerations. But it is food for thought, and I'm chewing and digesting it right now. I'll get back to you on it. Even as we speak we are updating time series of Colorado temperature trends since the late 1800s and we will have the results in a few weeks.

I could go on and on, but . . .

I see from running a "Rainy Days Report" that we hit a record 1670 reports on July 10, of which nearly 3/4 received precipitation. But I think I better call it a day and shut down the computer. Thanks for continuing to help monitor our floods, our droughts, and everything in between. And also thanks for helping recruit new volunteers. New people are joining, some old timers are calling it quits, but we continue to move forward learning every step of the way.

Best wishes to all,

Nolan Doesken
CoCoRaHS