

The Catch

COCORAHS – SEPTEMBER SUNSHINE, STORMS AND SURVEYS

FORT COLLINS, CO — Wednesday, September 9, 2009

Good morning --

For those who are new to CoCoRaHS, welcome! Nearly 700 new volunteers have signed up since August 1st. If you are new to CoCoRaHS, welcome aboard. Review the CoCoRaHS training materials, get your gauge set up and ready, and begin reporting your precipitation measurements. If you have any questions about getting started, please let us know.

49 States plus one

On September 1st, Arizona and Delaware joined the CoCoRaHS effort. That brings us up to 49 participating states. We already have 22 new recruits from Delaware and 275 in Arizona (not bad for a desert state). Minnesota now stands out like the proverbial “sore thumb” on our national maps. But don’t be misled. Minnesota is the leader, not the follower, when it comes to volunteer rain gauge networks. You may notice that the 4”-diameter, high-capacity clear plastic rain gauges that we use for CoCoRaHS are all manufactured in Minnesota. Minnesota has had its own network of hundreds of volunteers going back several decades.

<http://climate.umn.edu/HIDENsityEdit/HIDENweb.htm>

We will be working with the staff of the Minnesota State Climatology office in the coming months to share data resources so that the data from their great network feeds into CoCoRaHS. Then we will truly have a “national network”. We never planned on having a national network - but thanks to all of you it has happened!

End of summer

We had fantastic weather here in northern Colorado (Fort Collins) for our Labor Day weekend - warm 80s during the day with afternoon

thunderheads and a few brief scattered storms to keep things interesting. But there's a change in the air. The towering cumulus and cumulonimbus (thunderheads) are giving way to fewer and flatter clouds. The sun is setting much earlier and nights are getting chilly. Some of the garden plants are yellowing and looking tired (and we haven't even gotten our first ripe tomato yet). We took a drive into Rocky Mountain National Park on Sunday, and the aspen trees part way up Trail Ridge Road were already starting to turn golden. Fall is approaching quickly – maybe too quickly. Another sign of the season was the return of widespread rainfall to the Pacific Northwest this week.

Dry Weather

As we begin this fall transition, the stormy weather patterns of summer across the Midwest and East have taken a break. Florida also dried out for a few days. There was a stretch of 5 days in a row last week with less than 1,750 CoCoRaHS reports each day of measurable (0.01" or greater) precipitation out of a total of over 7,500 daily reports. (Much of spring and summer the number of reports of measurable precipitation was in the 2,000 – 4,000 range and we even hit 5,000 a time or two) We had a nationwide dry spell in mid May and two really dry days in early April (less than 1,000 reports of measurable precipitation), but this stretch last week was our longest run of nationwide dry weather in a long time.

Big Smoke!

Leading off the dry spell were three days last week where the sky here in northern Colorado was a strange orangish brown and where the nearby mountains disappeared from view. Even though we are 1,000 miles away from Los Angeles, we were enshrouded in the smoke from their giant wild fire. Fortunately, the air has cleared here. I can barely imagine what it must have been like closer to the fire.

September Survey

We are waiting for the final approval to post our CoCoRaHS survey for you to take. It could be today or tomorrow. I'll let you know ASAP. We've never done anything like this, but it should provide important information about how things are going, what you are learning and how we can improve the project. Even if you are new to the CoCoRaHS or have never actively participated in taking rainfall measurements, we would still like your help.

Since CoCoRaHS began several years ago, "Citizen Science" – where volunteers help scientists study all sorts of stuff – has become very

popular. It started with bird counts many years ago and has spread to many other fields. Professors and graduate students at several universities are examining CoCoRaHS and other “Citizen Science” projects to see how and why they work and how they can be improved..

<http://www.birds.cornell.edu/citscitolkit>

9,000 – We can do it! -- September 21–23 Blitz

I need your help. Even if you have not been reporting your rainfall (or lack thereof), please plan on logging in and reporting your precipitation September 21, 22 and 23. Let’s see if we can finally reach 9,000 daily reports. Better yet, let’s shoot for 10,000. Our last campaign was June 1–2 when we aimed for 8,000 daily reports and eventually reached 8,700. This time let’s make sure we surpass 9,000. If you have forgotten your password to enter data, our computer will help you. Just click “Login” at the top of the webpage, and follow the instructions to find your login information

<http://www.cocorahs.org/FindLoginInfo.aspx>

Zeros matter

Many of you are new to CoCoRaHS, and may not realize that “zero” (i.e. “No Precipitation”) is important data, too. It’s not very interesting measuring and reporting zero, but it is valuable information. CoCoRaHS data are increasingly being used by scientists for assessing the development of drought conditions and in studying localized rainfall patterns. So if you can motivate yourself, please send in those 0.00” reports. Also, remember that we have a “Monthly zeros” reporting form so you can go back at any time and fill in zeros.

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

Beans and zucchini – Good, Tomatoes and corn -- Bad

It has not been a great gardening year for us. Our fruit trees all bloomed early and were zapped by an April hard freeze. The three leaf-stripping hail storms earlier in the summer followed by unusually cool and cloud weather here in northern Colorado really set us back But somehow the green beans and zucchini overcame adversity and are doing just great. We’ve picked at least seven 5-gallon buckets of beans and they’re still coming on strong. Zucchini are going crazy – as usual, and

our late season broccoli is excellent. We usually don't plant sweet corn because it takes so much water. But last year we had a fine crop so we tried it again. Drat -- the only folks eating corn from our garden this year are the raccoons, and they are feasting. They like to harvest about 2 days before I do, so they get first dibs. They've trashed the garden. I think the mule deer may have found it, too. I'm bummed. As for tomatoes -- it's Sept 9th and we haven't had a single ripe tomato yet. Maybe we can squeeze out 4-5 more weeks before frost and get a few red ones.

Five inch rains

With thousands of CoCoRaHS rain gauges spread across the country, we are now able to examine some aspects of the frequency and area of large storms. Results are affected by the number and location of our stations, so the more rain gauges we have in the more places, the better we are able to sample and study.

Regardless of where you are in the country, five inches of rain in 24-hours is a lot. Using our daily reports, I went back to see how many rains of 5" or greater in a day we've had this year. Here is what our data show.

January 2009: 8 reports of 5" or greater

February: 24 reports

March: 76 reports, largest 13.50"

April: 100 reports, largest 10.63"

May: 77 reports, largest 11.72"

June: 12 reports, largest 11.12" (This was an extremely unusually low number of heavy rains for the month of June. Future years will likely show many more.)

July: 25 reports, largest 8.36"

August: 49 reports, largest 9.55"

September 1-8: 26 reports, largest 8.00"

Ranking by daily amount, so far in 2009 there have been 21 daily reports of 9" of rain or greater, the largest being 13.50". (yes, we do see rains that totally fill our gauges to the top if we don't empty them)

There have been 11 reports between 8 and 8.99", 52 reports of 7 –7.99", 84 reports of 6 – 6.99" and 203 reports between 5 and 5.99". I don't have the exact number, but there were around 660 reports in the range between 4 and 4.99" and well over 1400 in the 3 – 3.99" range.

There is much more analysis to be done here, but this shows that while large events happen, they aren't that common. Anywhere in the country, a rainfall amount of 6" or more in a day is uncommon and extreme. Over 8" is a big deal. Tropical storms have a huge impact on the statistics of heavy rains and there just haven't been many so far this year. Last year, Tropical Storm Fay single handedly delivered 15 CoCoRaHS reports of greater than 10" of rain in 24 hours and 194 reports over 5"

As a side note, rains of 5" or more in a day are nearly unheard of over parts of the western states like Utah, Nevada and Arizona. When they do occur there, the flooding is terrible. Meanwhile, a five-inch rain in Florida or other areas with sandy soils may produce little or no flooding.

Keep your reports coming, and thanks to all of you who have struggled to read and empty a gauge with that much water in it.

Heading to Texas

Next month (October 7–8), a nationwide meeting of drought monitoring experts will be held in Austin, Texas. CoCoRaHS has been invited to the meeting since we are becoming an ever-greater source of drought information. In the next few months we will introduce a "Drought Impacts Report" option where, if you are facing drought in your area, you can describe the types of impacts you are experiencing. We've already noticed some incredible descriptions of drought in some of your "observation notes". By adding a special report option, we will be able to communicate your drought experiences directly with the National Drought Mitigation Center and their nationwide Drought Impact reporting system <http://droughtreporter.unl.edu/>

For those of you who live near Austin, TX, we will have a get together for all interested CoCoRaHS volunteers on the evening of October 6th at the Lower Colorado River Authority offices. You will be getting an invitation from your local coordinator. I hope to see you there.

A few fleas

Not sure how she got them, but a few fleas recently showed up in the thick white coat of Angel, the Great Pyrenees. Fleas are not common here in northern Colorado. Fortunately, the situation is under control.

Our 6-month old Australian Shepherd puppy is frisky, flea free, and doing fine. My supply of work gloves has been depleted and she even chewed up the wooden handle of a wheelbarrow (I didn't see that one coming). But her young teeth are in great shape.

National Weather Service versus Farmers' Almanac

I've always been amazed at the popularity of the Farmer's Almanac. I get calls every year around this time to comment on their weather forecasts for the coming winter. This year is especially "exciting". The Farmer's Almanac released their winter forecast for very cold and snowy over the north central U.S. At the same time, the National Weather Service's Climate Prediction Center updated their official forecast to show higher probabilities of being warmer than average over that same area thanks to the El Nino conditions over the tropical Pacific, <http://www.cpc.noaa.gov/products/predictions/90day/> Californians and south Texans are cheering on "El Nino" since it correlates with beneficial above average winter rainfall for their areas. We'll all see how this plays out in the months ahead.

Snow?

Well, not yet -- but history has been known to deliver September snowy surprises here in the Rocky Mountain region. It's been at least a decade, but we had early September snow not that long ago. The day we moved to this little old farmhouse in 1995 was a story of its own -- 8" of wet snow and large tree limbs from our elm and western maple trees strewn over our roof, yard, driveway and street. It made for good stories, but it was miserable at the time.

So please enjoy these next few weeks of late summer and autumn. Winter is coming soon.

Enjoy September, send in your reports Sept 21-23, and be ready to help with the CoCoRaHS "September Survey".

Sincerely,

Nolan Doesken
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