

The Catch

WHOPPING RAINS, SNOW, HAIL—WHAT NEXT?

FORT COLLINS, CO — Tuesday, June 7, 2005

CoCoRaHS participants, friends, and just curious:

May ended and June began as it often does in this part of the country—dry over the Southwest but stormy as all get out over the northern Rockies (including snow) and the Central Great Plains (including severe thunderstorms).

Here are some selected precipitation totals for the week May 29 - June 5. It was a really, really wet one for some areas (my house included where 3.26" of rain in a week has the grass as green as it ever gets this time of year), but not so wet for others. The table below only includes totals for stations that reported every day. By the way, a total of 1123 stations reported into CoCoRaHS at least once this past week. That total does not include the hundreds of volunteers in our sister program, NeRAIN, in Nebraska. Close to 500 of you reported every day without missing—not bad for a holiday week at the beginning of summer. So this was a very, very good week.

Who's Wet, and Who's Not

Weekly precipitation summary, covering the period beginning 7 AM on Sunday, May 29 through 7 AM on Sunday, June 5.

Colorado's wettest locations

The wettest weather in Colorado was found from the Hayden area of Routt County eastward to western Logan County. Here are some totals from the wettest stations I could find. Many, many stations in these areas exceed 3.00" for the week. The 3.54" weekly total at Walden is truly exceptional for any time of year as that equals about 1/3 of their total average annual precipitation. More than 3" of moisture NW of Kremmling also is a huge total for that area for any time of the year

Hayden	3.03"
Kremmling 12.5 NW	3.04"

Steamboat Springs 1.1 E	3.76"
Walden	3.54"
Fort Collins 8.2 E	4.14"
Lyons 4.8 N	4.52"
Loveland 7 SE	4.65"
Greeley 4 NW	4.15"
Greeley 0.8 SW	4.12"
Wiggins 0.2 SSE	3.67"
Sterling 15 WNW	3.72"

Not all areas in these counties were totally soaked. There were a few spots in Larimer and Weld Counties, for example with less than 2.00" for the week. But still, this is a lot of moisture at a time when it really makes a huge difference in total water supplies and plant growth.

Heading up into southern Wyoming we found similar totals. Laramie, WY averaged about 3.50" of water content (including some tree-damaging wet snows), and the Cheyenne area picked up between 3.20 and 4.17" for the week. The most rainfall reported in Wyoming and Colorado combined was a whopping 5.23" SE of Yoder in Goshen County (up towards Torrington).

By comparison, the areas from Glendo, Douglas and Casper west to Riverton received around 1.00" of moisture, and the farther north you went in Wyoming the less rain fell. Around Cody, for example, weekly totals were only 0.15 - 0.20"

It also got drier the farther south you went in Colorado and on into New Mexico. Except for a very wet area of Aurora and the southeast Denver metro area where locally over 3" of rain fell (mostly in a short period on the afternoon of June 3), most areas around Denver got less than 2" dropping off quickly to less than 1" south of Castle Rock. A few raucous storms pounded the eastern plains. The station at Last Chance 6.1 N totaled 4.80" for the week. Two stations in SW Yuma County near Joes reported 4.60 and 4.24", respectively. But for the most part, things got drier and drier the farther south you went. Stations from Alamosa west to Cortez in southern Colorado mostly got less than 0.20" with a few local traces. West central Colorado did get some moisture and the Grand Junction area got a few tenths.

In New Mexico, where the spread of CoCoRaHS volunteers is growing but still limited, weekly rainfall varied from a high of 0.66" near Angel Fire down to zero or just a few hundredths at many stations from Albuquerque south to Las Cruces. Dry weather there this time of year is normal.

Kansas, where CoCoRaHS is just getting started, showed beneficial rains of 1-2" at many locations but much more in some areas. All stations in Geary County, for example, totally over 5" for the week including a soggy 8.96" 6.7 miles SSW of Junction City (I am learning my Kansas counties, towns and cities, but I have a

long way to go -- they have lots of them). That gives some of us drylanders something to think about.

Hail

There were also 122 reports of hail during the week that arrived on the CoCoRaHS website plus 31 reports of intense rain. Thanks very much for making this special effort to submit these reports.

Hail and Intense Rain Reports

When you are experiencing hail or heavy rain, please know that your report may be of great value. Confirmation of hail and heavy rain is something that GREATLY aids the National Weather Service in issuing and verifying severe thunderstorm and flood warnings. If you are already a "Severe Weather Spotter" for the NWS, then please use their phone system to call in your reports FIRST and then send in your CoCoRaHS report when you can safely use your computer.

While the NWS is most interested in large hail of 3/4 inch diameter or greater, CoCoRaHS is interested in any and all sizes of hail. Our studies (and we plan to share some more results very soon) are looking at frequencies, durations, stone sizes, hardness, swath characteristics and pretty much anything we can learn about hail. We are working closely with radar scientists to relate what the weather radar systems can detect with what actually is observed at the ground. Your reports are essential for this research as are your hail pads so please remember to report (Kansas and New Mexico only have limited supplies of hail pads, but we're trying to get more out.)

We notice that many of you are putting hail remarks in your daily precipitation report the next morning. That is good! Keep doing that! But please also submit a specific hail. When you click "My Data" at the top of page, you will then see all the different reports you can submit on the upper left hand menu. Just click "Hail" and away you go. Remember that for hail and intense rain reports, the date you put on the form needs to be the date the hail actually fell. We've been getting a lot of reports of hail falling at 7 AM the day after the storm actually occurred, so make sure you get those dates and times correct. Even if you don't know the exact time the hail fell, still send in a report with the correct date. If you were not there when they hail fell, just leave the hail sizes blank. Only fill out the info that you are sure of. We'll fill those stone sizes later when we analyze your hail pad.

Intense Rain

We've had many questions about when to report "Intense Rain". Pretty much anytime the rainfall rate is two inches per hour or more for at least 5 minutes (this would be at least 0.17" in 5 minutes, or anytime the rainfall for an entire hour has been at least 0.30", it is worth sending in a report. You don't need to get soaking wet out in the storm trying to read to the nearest 0.01". If you can just get us a reasonable approximation it could be valuable.

Remember, CoCoRaHS came into existence when a huge rain fell here in Fort Collins back in 1997—more than 10" in 5 hours and more than 14" in a little over a day over a portion of the city. That night NO ONE called in to report heavy rain—me included. We do not want that situation to happen again. That is one of several reasons we are so motivated to keep CoCoRaHS going and growing. Your daily report the next morning is GREAT to help analyze and verify what did happen, but a timely report during an intense storm (which will be automatically and instantly forwarded to the appropriate National Weather Service office and will produce an alert message on one of their computers) or a phone call to NWS if you are a trained severe weather spotter could save lives. Don't wait for your neighbor to send the report. Take the initiative yourself. Most of our largest flash flood-producing storms occur from May through early October, so THIS IS THE TIME.

You are appreciated

Thanks, again, for all your help. And thank you also for some of the great photos a few of you sent in. We have plans (low priority, but we're at least thinking about it) where you could attach photos as a part of your reports to become part of our weather history archive that we are creating day by day. By the way, we've done a quick count and sometime before the end of the year one of you will be the one who will submit the 1,000,000th precipitation report since the project started. That's amazing. Perhaps we will celebrate.

Best to all of you, wet or dry.

Nolan

P.S. And if you have questions about reporting hail or intense rain, just let us know and we'll try to help.