

3" HAIL, 3" RAINS AND 3 FEET OF SNOW

FORT COLLINS, CO — Tuesday, March 14, 2006

"As the Days Grow Longer, the Storms Grow Stronger" (old weather folklore -- source unknown).

And sure enough, March is living up to expectations. Missouri got pummeled by hail and tornadoes, and at least one of our new CoCoRaHS volunteers had their rain gauge smashed by hail. (Thanks very much for submitting "Hail Reports" as soon as the storm ended. This is very important to the National Weather Service and others.) At the same time, Indiana has been soaked. After only one rainy day in many weeks, Indiana has now had rain 8 days in a row. Many of the new crew of CoCoRaHS observers measured over 5 inches or rain in the past week and one has a monthly total over 8"—and it's only March 13th.

Drought-stricken southern Colorado has been blessed with 6 days in a row of snow—not enough to end a drought, but enough to make a big difference and help hold them over an extra few weeks. Some of the moisture reached New Mexico, and nearly half of New Mexico enjoyed a little precipitation this weekend. Albuquerque picked up their first significant snow of the entire winter (about 2") to bring their winter precipitation (water content) total since October 20 to a rousing one half inch.

366 Comments

As weather began turning wild last week, your "Observation Notes" also became more descriptive. Out of 1081 CoCoRaHS precipitation reports on March 9th, over 800 of us reported measurable precipitation (at least 0.01") and nearly 400 of us added some narration to describe what we experienced. Your comments, which we can sort by date, state, and county, help paint a picture that goes well beyond the numerical observations. You are all modern historians laying down a history of weather and it's impacts on your community. Those comments are greatly appreciated!

Dealing with Melting Snow

Those of us in Colorado, Wyoming, New Mexico and western Kansas have battled a moving target while attempting to measure snow this past week. How can we all be consistent in our measurements when the snow melts almost

before it reaches the ground? Well, this is a tough challenge -- almost as difficult as measuring snow in a blizzard (well, not quite).

Here are a few pointers:

1) The more I measure snow (and I've measured plenty), the more I recognize that it is impossible to get 6 people to all measure and report the same way, let alone 1200 of us. But if we follow some basic guidelines, we'll get close.

2) If it snowed, but all snow melted on contact with the ground and there was NO accumulation on your snowboard, please report T not 0.0 While it is true that there was NO Accumulation, the standard convention is to report T for "Depth of New Snow" in order to indicate that some of the precipitation fell as snow. If you put down 0.0 we would think you had rain instead of snow.

3) If snow accumulates on the grass but not on your snowboard, then what? Snow boards are not always the best place to measure, especially if a layer of water forms and causes new snow to melt on contact. Use your best discretion, and measure on the grass, the roof of your car, or any other surface that seems to be doing a better job of catching the new snow before it melts.

4) If it snows and accumulates but has melted by the time you get back or are able to take a measurement, then what? Our goal is to report the greatest accumulation of new snow in the past 24 hours prior to melting or settling. But this requires being there to see and measure it. That's simply not always practical or even reasonable to expect. If we're not there, we will never know for sure. An age-old trick of the sharp weather observer is called "wise estimation". A good estimate is sometimes better than a precise but unrepresentative measurement. So look at the amount of moisture in your gauge, assess approximate accumulations, and then make a good estimate. And ALWAYS give an explanation in the "Observer Notes" so we know what you were dealing with.

5) Uncertain??? Then please ask. We have volunteers all over the country willing and able to answer your snow measurement questions. I really wish we could all get together in some snowy auditorium where we could all measure snow together under various conditions—that would go a long way towards putting us all on the same page. As it is, our data are already very good. Sure we have some struggles and some bad days. But all in all, we're doing good.

6) Other options? You bet! If you can't figure it out, or you just don't want the hassle with keeping your balance out in the snow, then just enter NA Wait a few more weeks and our winter season will be history.

FYI as of this AM, we had 7 active CoCoRaHS volunteers with 3 feet or more of snow still on the ground. In other areas, our warm early March weather has resulted in considerable settling/compaction and some early melting. Our winner

for today, with a March 13 snow depth of 66 inches, is our Crested Butte 6.2 N observer at the Rocky Mountain Biological Research Institute at Gothic, Colorado. This exceptional observer only joined CoCoRaHS a bit over a year ago, but has well over 30 years of complete weather records as well as documentation of thousands of avalanches, and books and books of biological observations as well. If you have yearnings to study plant and animal life at high elevations, that is a spectacular place to do so.

Hail —Be Ready to Report

As our Missouri observers quickly discovered, it is hail season now. If you are in Colorado, New Mexico, or Wyoming (our hail pad states) please make sure you have a supply of pads on hand to get you through the season. I suggest a minimum of two pads and ideally four. Remember, for best results, pads should be fastened to a smooth, solid backing such as a piece of wood. They will blow away instantly if not well fastened. Even if you just set a brick on each edge, that's better than nothing. For many of us, it could be several weeks before we see hail, but this is the time to get ready. Thanks to our recent hail pad party, we have hundreds of pads on hand and are getting them sent out to all of our county coordinators who have requested them. If we're going to have to get hit by some hail, we might as well measure it and try to learn something.

What comes next?

I don't know, but when it happens, report it :-)

Thanks everyone,

Nolan