WINTER WEATHER WORKSHOPS, PLUS SOME TIPS FOR DEALING WITH WIND, RAIN

FORT COLLINS, CO — Tuesday, November 8, 2005

A winter weather learning opportunity—if you're near Denver—read on

A quick reminder for those of you in range of the NW Denver Metro area. Tomorrow (Wednesday, Nov 9) from 7–10 PM is the 2nd Annual Winter Weather Workshop. It will be at the Omni Interlocken Hotel in Broomfield just off the Boulder Turnpike. This workshop is sponsored by KMGH TV and will be MC'd by Mike Nelson (Denver Channel 7).   Chris Spears, our former CoCoRaHS coordinator for the Denver area, is now Weather Producer for KMGH and he would appreciate an RSVP if you plan to attend. Give the first and last name of each person attending as well as a phone number or e-mail contact. Chris's e-mail is: Chris_Spears@kmgh.com

I will be giving a presentation on the history of Colorado blizzards and snowstorms. There will be some great talks and videos on topics such as avalanches, downslope windstorms, upslopes and winter weather safety. Surprisingly, 4 out of the six speakers are CoCoRaHS volunteers. I'm not exactly sure what that means, but its interesting.

There will even be drawings and prizes. Steve Hamilton, our Denver metro-area coordinator will be there along with Henry Reges, our national coordinator. We'll have a supply of snow rulers, extra rain gauges, and outer cylinders if you need to stock up on supplies before hard winter arrives. Also, if you're still storing some damaged hail pads from this summer that you forgot to turn in, this would be a good time (if you get my drift).

Dealing with winter measurement adversity

On Saturday AM a quick snow squall moved through NW Fort Collins. AT 7 AM (scheduled observation time) it was mild and the sun was just rising, but by 8 AM it was dark and a furious snow squall began. The snow blew horizontally, and all melted before accumulating on the ground or grass, but the ground was totally wet and small puddles of water formed along the street. Obviously more than a trace of water fell. By 8:20 AM it was over and by 8:40 the sun was out again.

How do you deal with a situation like this and what should you report?

First of all, it IS appropriate and even recommended to go out and check your gauge right away as soon as the snow ended and not wait until 7 AM the next morning. I have two gauges out and the one I checked right away had 0.02". With a storm like this, chances are that any moisture in the gauge would evaporate by the next day, especially if you had the funnel and inner tube out. When I checked my other gauge with the funnel removed, there was absolutely nothing left in it.   We have seen time and again that the funnel needs to be out to do a decent job catching snow, but when the funnel is out evaporation rates are significant, even in cold weather. So the best measurement of the water content of this wet, wind-driven snow would have been 0.02"

Now, what about snowfall? Since it obviously snowed but nothing accumulated, you would need to report T (Trace) for your 24-hour snowfall total.   If 1.0" accumulated with the squall but then melted during the day, the proper snowfall report would be 1.0   Since it all melted, your total depth of snow on the ground the next morning at 7 AM would be 0.0

By the way, our computer program automatically enters NA for your total snow depth unless you make the effort to change it. If you measure the total depth of old and new snow on the ground, then make sure you enter what you measure—including zeroes. Just delete the NA and type in your observed amount.

What if it's raining or snowing at 7 AM??

Here in Colorado, it rarely rains or snows at 7 AM from late spring into fall. But during the cold season, precipitation can fall any time of the day or night. For our many new volunteers in the eastern U.S. night and morning rains are common. If it is not precipitating when you take your morning observation, then it doesn't matter much if you measure at 5 AM, 6 AM, 7 AM, 8 AM or even 9 AM. Regardless, your readings will be the same. But if it is precipitating, then your time of observation really matters. If you measure at 7 AM but your neighbor waits until 8:30 AM after another 0.12" of rain fell, then the daily maps are going to be a bit skewed. I know that you sometimes have no choice, but if you do, try hard to read right at 7 AM whenever precipitation is falling.

If you must read your gauge at an earlier or later time, that's fine but PLEASE be sure to accurately enter the actual time you read and emptied your gauge. Your monthly totals will still add up OK, no matter how you do it, but our daily maps will be best if observation times are very similar among observers.

How do CoCoRaHS data compare to data from official networks such as the National Weather Service?

If you've been measuring precipitation for long -- especially in winter -- you know that it can be tough. But the same problems that make things hard for us are also faced by official weather observers all over the world. Sometimes I wish our gauges were a bit bigger, and sometimes I wish we had better locations to mount our gauges that weren't so affected by wind or weren't so close to trees or buildings. But by making a concerted effort, we can do as well or better than almost any other data source.

Is it OK to go back and enter or edit data from past days?

This question comes up often. The answer is "Yes!!"   If you miss or forget to enter data for a day, a week or even a month, you can always go back and enter the data later. Just make sure you get the dates right :-)

If you do make a blunder and enter incorrect data, remember you can also view and edit your past reports.

CoCoRaHS Training materials and resources

Please get to know the website. Take a few minutes to click on each item on the menu -- the observer instructions, the Power Point presentation (if you have high speed), and the data maps and reports that can help guide you. For those with high speed connections we will even have a video posted soon about how to measure snow. If you are a teacher or know some science teachers, you might take a look at our lesson plans and teaching ideas. We only have a few ideas posted for classroom activities, but it's a start.

Renewable Energy Questionnaire

Our graduate students who conducted the renewable energy survey were overwhelmed with the responses they got. Over 450 CoCoRaisins took the time to complete their survey—so many that they are having trouble getting their class project completed on time. They have agreed to post survey results when they are finished, so we'll let you know what they learned.

The future—you can help

FYI, we are currently working to complete a new funding proposal to the National Science Foundation to help support CoCoRaHS expansion, data collection and education for the next few years. Wish us well, and if you feel motivated to write an e-mail letter mentioning what you have learned by participating in CoCoRaHS, how your community has benefited and why you think CoCoRaHS is worth

continuing, we would sure appreciate it. We plan to continue one way or another, but NSF support has been instrumental in helping us get to where we are today. Address your letter to "To Whom it May Concern" and send it to me as a regular text e-mail message (Not an attachment). I will assemble these letters of support to enclose with our proposal.

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CoCoRaHS volunteers passing on

An interesting reality of operating a volunteer network like this is that each new day brings new data and more precipitation maps and patterns. But it also means we are one day older. Since CoCoRaHS started, a surprising number of our volunteers have passed away or had to give this up due to physical ailments and limitations. Others have learned they have serious health problems that will affect them for the rest of their lives. Others have lost spouses and other loved ones. With that in mind, please enjoy what each new day brings, and get as much out of life as you can. And while you're at it, it's OK to continue to marvel at the weather :-) and pass your fascination on to the next generation however you can.

With appreciation,

Nolan Doesken