

The Catch

COCORAHS—THE CALM BEFORE WHATEVER COMES NEXT

FORT COLLINS, CO — Friday, November 2, 2007

Good evening weather folks.

We had a heavy frost this morning with temperatures down in the 20s. I couldn't find an ice scraper for the windshield of the car – looked everywhere but it disappeared over the summer. I tried driving with my head out the window, but that wasn't too comfortable. Eventually the combination of defroster and windshield wiper opened up a clear spot on the windshield so I could see the road. Don't worry, I wasn't going far or fast -- but I guess driving with a frost-covered windshield may be about as bright as standing out in a big aluminum-poled tent in the middle of a thunderstorm -- with feet in the water and crowded close to 35 first-time friends.

Lightning overhead -- What should I have done?

Since I last wrote, I have discussed my recent lightning experience with a number of experts including the chief meteorologists (Meteorologist's-in-Charge, MIC for short) of over 25% of our country's National Weather Service Forecast Offices. Quite a few of you also took the time to write me with your suggestions. Now I think I know what I should have done when that heavy thunderstorm developed right overhead.

Basically, I'm lucky to be alive. Very easily there could have been several fatalities and many injuries that afternoon (Oct 13) as we all huddled under wet tents with our feet in flowing water and lightning striking the ground close by in all directions from the football stadium.

Since it was raining so hard and hail was bouncing around, it was not easy to make the right decision. What I should have done was abandon the semi-comfort of the tent and head swiftly and directly for my car -- or for the closest car that would let me in. It would have been a bit weird and frightening to have several thousand people splashing across the expansive parking lot in search of their cars while lightning continued to smack the ground. But the experts say that would have been smarter than staying under the tents. Another acceptable solution would have been to rush towards the stadium and take cover in the walkways under the stadium.

That would have required the security guards foregoing the ticket taking and the required pat searches. I'm not sure if they are allowed to do that.

All in all, I'm glad that particular adventure is over, and I hope we all learned something from it. Thanks to this experience, I will be meeting with our public affairs office and events coordinators to see if any policy changes are needed. But I do have a question that some of you may be able to answer. What about the new inflatable tents that are getting so popular for events like this? The air pressure holds up the tents while large metal stakes and ropes hold them in place. Are the people in those tents also at risk?

A few months to think about it

It is November and our thunderstorm season is now over. We may not hear a single rumble of thunder now for several months. I know that's not the case for many of you, but here our thunderstorms are highly seasonal and are very rare until well into next spring. I'll miss them, but there are other things to look forward to (like snow), then next spring we'll welcome them again with new enthusiasm.

Time change

With the one-week delay of the return of Standard Time this fall, the mornings have been so dark. It's good for sleeping, but not for much else. Don't forget to set your clocks back one hour Saturday night and enjoy an extra hour of sleep. But don't forget your CoCoRaHS reports :-)

Respite from rain

Weather patterns across the country are quiet now. For 3 out of the past 4 days, we've had rain (or snow) at less than 8% of our reporting stations compared to 15-40% most of the summer and early fall. Only a handful of locations have gotten more than an inch of rain this week and most of those were in Florida (and one up near Valdez in Alaska).

The tropical storm didn't quite reach Florida, but now Noel is a hurricane out over the Atlantic. It is unlikely that it will hit the U.S. but its' NNE track may take it straight to Canada. Yes, eastern Canada DOES get hit by hurricanes occasionally. Many of you are accustomed to closely tracking hurricanes, but here in the Rockies and over the northern plains, most of us don't pay much attention. If you do want to follow the end of the 2007 hurricane season, take a look at the National Hurricane Center website.

<http://www.nhc.noaa.gov/>

Nearly 4,000

October 18th now stands out as our most active measurement day. Almost 3,900 of us read our gauges and reported that day. Furthermore, 2,140 of us reported measurable precipitation. It will be amazing when we hit our first 10,000 report day -- maybe 2009??

Welcome Alabama and Kentucky

Today we are pleased to welcome two new states to CoCoRaHS. Alabama has already signed up over 275 CoCoRaHS volunteers and Kentucky is about to begin a major volunteer recruiting effort. Next up is Oregon who will get started December 1st. Louisiana, a state that really knows rain, will be our first new state in 2008.

Avoiding errors!

The "Message of the Day" which you see each time you enter a CoCoRaHS report via the website, has been reminding you all week to check your data and avoid making mistakes. Some occasional errors are inevitable with a group like ours with thousands of entries every day -- some by new observers measuring and reporting for the first time.

There are good reasons to be careful and to try to avoid making errors. Many are looking at our data, and some are taking our data directly into massive data processing applications. For example the incredibly useful "Precipitation Analysis" maps try to estimate precipitation each day for the entire country. CoCoRaHS reports contribute significantly to this product by providing high definition "ground truth" measurements to adjust, correct and calibrate their radar-rainfall estimates.

http://www.srh.noaa.gov/rfcshare/precip_analysis_new.php

What are our most common errors? Here is a list

Over 18% of the errors we find are precipitation reports entered on the WRONG DATE. This error is most common for people who enter their reports days or weeks later. Sometimes we just forget when it fell, but more often we report the rainfall amount for the calendar day when the rain fell INSTEAD of entering the date when the 7 AM observation was taken. In other words, if it rained Tuesday

afternoon and you check your gauge Weds AM, the precipitation should be reported for Wednesday's date.

Nearly 17% of the errors we discover are accumulated multi-day precipitation amounts that are entered as a single daily precipitation amount. For example, if you are gone for the weekend and come back and find water in your gauge Monday AM, some of us have been entering that amount as our Monday AM report. In fact, unless you know exactly when the moisture fell, you should click the "Multi-day Accumulation" entry instead of "Daily Precipitation" entry.

Additional common errors are:

Misreading the rain gauge

Entering zero by mistake

Getting the decimal point wrong (i.e. reporting 4.00 or 40.00 when you meant to report 0.40)

Typos (e.g. typing .82 when you meant 0.28)

Entering the time of observation into the rainfall amount. This may sound silly, but many have accidentally entered 7.00 into the daily rainfall report when they were trying to enter their time of observation.

Then there is the subject of snow. No matter how much we encourage snow training, when the snow finally arrives, our mistakes flourish.

Here are some common snow reporting errors:

Entering the new snow in the "precipitation" entry (i.e. 6.5" of snow is entered as 6.50" inches of precipitation and 0.0" of snowfall.) That is one that really gets our attention.

Entering 0.0 as the snowfall instead of the accumulation of new snow. -- I don't know why that is such a common error. Sometimes it's because the snow that fell has already melted by the 7 AM observation. If you did not measure the maximum depth of the new snow prior to melting/settling, then just type in M or NA instead of leaving the snowfall amount as 0.0 In other words -- if it snowed and accumulated in the past but is melted by the time of observation, you should enter as your "New Snow" amount the depth of new snow that had accumulated before it settled and melted rather than the amount that is still left at 7 AM. The "Total Snow Depth" would be reported as zero if the snow had all melted.

If you want to see a good (bad) example of this, check out the recent first new snow of the season map for the Denver Metro area (October 22, 2007)

I've seen enough problems measuring snow that I could write a book. Actually, I did write a book: <http://climate.atmos.colostate.edu/snowbooklet.shtml>

Unfortunately, it is nearly out of print and I probably won't have time to update it.

Be ready for your next snow

Before the next snow arrives, please make sure you are ready and able to measure and report snow and its water content. Check the instructions and watch the video if you can. Several states are currently holding training sessions and refresher classes, so check the state pages:

<http://www.cocorahs.org/States.aspx> and attend a training session if one is nearby.

Watch the season's change

For some, autumn is a favorite season and for others the prolonged darkness gets depressing. But make the best of it. Regardless of what the forecast says take in a bit of fresh air. The next few months will be colder -- too cold for some. But that's where our hardiness came from. The cloud progressions will change (they already are) and so will the precipitation patterns (you'll see that soon). The jet stream overhead will quicken. You will see more sun dogs at sunset and more rings around the moon at night -- that is, if you take the time to look. Low pressure centers will form east of the Rockies and sweep across the country. Perhaps a few Nor'easters will spin up off the East Coast. With La Nina conditions in the tropical Pacific, some forecasters anticipate that the storm track may be farther north this winter than last. Regardless, it will be interesting to see, since no two winters are ever the same.

I appreciate your interest and your efforts

Sincerely,

Nolan Doesken
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