

Messages of the Day
December 2013

Thursday, December 5, 2013

Measuring Freezing Rain + Snow Training Shorts

Freezing rain will most likely make an appearance in some parts of the country this month. How does one measure it? Good question. For a quick primer please click here: [FREEZING RAIN](#).

The title of this message mentions snow training shorts, what are those? We're not talking about weather apparel here, these are short animations showing how to measure precipitation in wintery weather. Please take a look: [CoCoRaHS SNOW SHORTS](#).

Additional training on both subjects can be found on our [CoCoRaHS Training Slide Show Page](#).

Thanks for your observations in wintery weather.

Tuesday, December 10, 2013

**The "Five For CoCoRaHS" Year-End Fundraiser
... now through January 15, 2014**

It's time for our annual year-end fundraiser!

At the end of each year we hold an on-line fundraiser providing the opportunity to make a donation to the CoCoRaHS Network. There is certainly no obligation to give as you already help out immensely by taking your daily observations, but many CoCoRaHS volunteers have also offered to help financially and this makes a big difference. 100% of these gifts go directly to support CoCoRaHS activities and supplement any outside funding (grants, etc.) that we receive. Donations help support web development, training, outreach and supplies. Your giving goes a long way to help sustain the network throughout the year and provide opportunities for the future. We greatly thank you.

Our traditional "Five For CoCoRaHS" campaigns have asked folks to give just five dollars. Please consider giving **\$5.00** to this campaign. Although the amount may seem small, the donations add up quickly and have great impact.

For those who wish to give above and beyond this amount we have a nice "thank you" gift awaiting you: At the **\$50 level and above** we will send you a thunderstorm t-shirt, the latest in our "CoCoRaHS Precipitation Series" t-shirts as a thank you gift. At the **\$100 level and above** we will send you thunderstorm t-shirt in a long sleeve version as a thank you gift. Please consider giving today.

Click here to make a donation: ["DONATE"](#)

Those who wish to mail in their donation, click on the donate button above and follow the instructions for donating by postal mail.

Contributions to CoCoRaHS are deductible as charitable contributions within the limits of the Internal Revenue Code. Please consult with your tax professional.

Please note that all donations received will go directly to the support of the CoCoRaHS Network and its sustainability. No funds received will be used to support the National Weather Service, which is a great advocate of CoCoRaHS.

Thank you very much for being a part of CoCoRaHS!

Your friends on the CoCoRaHS staff

Friday, December 13, 2013

The "Five For CoCoRaHS" Year-End Fundraiser ... continues through January 15, 2014

It's time for our annual year-end fundraiser! This year's goal is 5,000 donations.

To those who have given to our annual year-end fundraiser, we thank you for your support! If you have yet to make a donation please consider giving \$5.00.

For more information and to access the donation portal click here: ["INFO/DONATE"](#).

"Sunrise, sunset . . . boy, it gets dark awfully early these days!"

Do you find yourself going to work and coming home in the dark? This is the time of year that many of us are keenly aware of sunrise and sunset as perhaps one comes way too late, and the other comes way too early. In just about two weeks we reach the shortest day of the year (winter solstice on December 21st) and as we move into January many of us will be getting another two minutes of daylight each day (more in the higher latitudes).

If you're interested in sunrise/sunset times, and how they change for anywhere in the country, you may wish to pay a visit to the U.S. Naval Observatory website: ["Naval Observatory"](#)

They also specialize in such obscure, but critically important information such as twilight -- the amount of light visible before sunrise and after sunset.

For those of you who miss those long sunny evenings, just remember that Daylight Savings Time, observed in many states, is not that far away. It begins on March 9th in 2014.

Tuesday, December 17, 2013

Windchill . . . “It feels colder than you think!”

When the wind blows it often feels much colder than what the thermometer says. Just ask those folks at the Green Bay and Buffalo football games! One way to quantify what you are experiencing is known as the "wind chill factor". The AMS Glossary of Meteorology defines it as: "*a means of quantifying the threat of rapid cooling during breezy or windy conditions that may result in hypothermia in cold conditions.*"

The National Weather Service provides a great “windchill chart” on their “Windchill: Frequently Asked Questions, Terms and Definitions” page. To find out more about windchill click here: [“The Windchill Page”](#).

And one last thing . . . don’t forget to wear a hat!

Thursday, December 19, 2013

Flakes, but no accumulation!

An observer from North Carolina writes: "*If you physically observe snow during the 24-hr period preceding your observation, but it all melts once it hits the ground (or melts overnight), what's the best way to report in CoCoRaHS that the snow actually occurred and that it may have contributed some to total water in the gage?*"

Great Question! Here's our answer: "If snow falls but all melts on contact with the ground without ever reaching a depth of 0.1" or greater, then report "T" for "New Snow" and 0.0" for the total depth of snow on the ground."

Saturday, December 21, 2013

"2015 CoCoRaHS Rain Gauge Calendar" Winter Photos Wanted!

As the end of the year approaches, we are asking our CoCoRaHS volunteers to e-mail us photos of their rain gauges with winter backgrounds for our possible "2015 CoCoRaHS Rain Gauge Calendar". We hope to publish the calendar during the summer of 2014. We are currently looking into the feasibility of doing this. Our last calendar in 2011 was very popular: [“photo of calendar”](#).

What we are looking for are artistic high-quality, high-resolution photos (jpeg format) of your rain gauge with winter backgrounds and in winter conditions. These should be of "the gauge" only and should not include people in them. Close-up shots of the gauge are best. They can be artistic and creative. We will narrow down our final photos in the late spring of 2014.

Please e-mail your photo to Henry Reges at: hreges@atmos.colostate.edu with the words "Rain Gauge 2015 Calendar Photo - Winter" in the subject line. Please include the name of the photographer for credit purposes, as well as the location - city, state - of the gauge (ex- John Smith: Columbus, Ohio). Finally

include in the text of your message that "you give CoCoRaHS permission to publish the photo and use it for other possible CoCoRaHS promotions".

We will ask for additional "winter and spring" gauge photos through the first part of 2014, so if you have the opportunity, keep your camera handy and keep shooting! . . . dusty gauges, full gauges, dew on the gauge, animals in the gauge, special lighting circumstances, rainbows in the background, lightning bolts in the background, etc. -- be creative, all photos should be natural, no photo-shopping please.

Thanks. The CoCoRaHS team.

Tuesday, December 24, 2013

"Ten to One?" . . . the "odds" are "perhaps sometimes"!

Does ten inches of fresh snow melt down to one inch of water content? Usually not, but sometimes.

It is remarkable that the 10:1 snow-to-water-content "myth" has survived this long. Cleveland Abby, a renowned 19th Century scientist and meteorological observer wrote in the 1888 Treatise on Meteorological Apparatus and Methods, "The measurement of the height of water by assuming ten inches of snow to one inch of water is subject to a large range of error because of the wide variability of this ratio for different kinds of snow . . ." Almost 125 years later, the topic is still debated.

All we need to do is look at the many shapes and sizes of snow flakes to realize that the water content of snow will vary. CoCoRaHS data quickly show the large variations that are possible. Very dry and fluffy snow falling with light winds and cold temperatures may have 0.30" or less water in ten inches of new snow. On the other side, very wet snow may have more water -- two inches of water from ten inches of snow is not that unusual. For sleet (ice pellets) the water content can be even more. That is why it is so important to independently measure both the accumulation of new snow, the water content of that snow, and the total depth of new and old snow on the ground. Furthermore, it doesn't take long to tell when you're out walking, playing or shoveling snow. You can feel the mass and the resistance from a dense, wet snow.

Like it or hate it, snow is amazing stuff. For more information about the curious and dynamic properties of snow click here: <http://ccc.atmos.colostate.edu/pdfs/snowbook.pdf>

Saturday, December 28, 2013

Blizzard

During the winter months, several parts of the country will experience blizzard conditions at one time or another. If your area falls into that category, please read the following message before you consider venturing outside for any length of time.

Here's the definition straight out of the American Meteorological Society's Glossary of Meteorology:

"Blizzard -- A severe weather condition characterized by high winds and reduced visibilities due to falling or blowing snow. The U. S. National Weather Service specifies a wind of 30 knots (35 miles per hour) or greater, sufficient snow in the air to reduce visibility to less than 400m (0.25 miles). Earlier definitions also included a condition of low temperatures, on the order of -7 degrees C (20F) or lower, or -12C (10F) or lower (severe blizzard). The name originated in the United States but it is also used in other countries. In

the Antarctic the name is given to violent autumnal winds off the ice cap. In southeast France, the cold north wind with snow is termed blizzard. Similar storms in Russian Asia are the 'buran' and 'purga'. In popular usage in the United States and in England, the term is often used for an heavy snowstorm accompanied by strong winds."

Coming straight from the NWS web site they define **Blizzard** as: "A blizzard means that the following conditions are expected to prevail for a period of 3 hours or longer:

- Sustained wind or frequent gusts to 35 miles an hour or greater; and
- Considerable falling and/or blowing snow (i.e., reducing visibility frequently to less than ¼ mile)."

The National Weather Service issues blizzard warnings and is a great place to go for up the to minute forecasts for your local area. (<http://www.weather.gov/>)

Monday, December 30, 2013

The "Five For CoCoRaHS" Year-End Fundraiser ... continues through January 15, 2014 ... donate by Dec 31st to possibly qualify for a 2013 charitable tax deduction

We are now in the middle of our annual year-end fundraiser! So far we have had over 1,300 individual contributions, bringing us closer to the fundraiser goal is 5,000 donations.

To those who have already given to our annual year-end fundraiser, we thank you for your support! If you have yet to make a donation please consider giving \$5.00 today.

For more information and to access the donation portal click here: ["INFO/DONATE"](#).

Sleet ... "That other frozen stuff"!

A CoCoRaHS observer asks "What is sleet and how do I measure it when it makes it's rare appearance in my state?"

Here's our answer: Sleet is precipitation that leaves the cloud as rain, but on its way down freezes into little balls of ice before reaching the ground. Sleet is measured and reported in the same manner as snow. You melt the contents of your gauge to get the water content, and you measure the accumulation of sleet on the ground or on your snow board, and report that as "New Snowfall" and as "Total Snow and Ice on Ground at Observation Time". Please note "sleet" in your comments so we know that it fell at your location.