

Messages of the Day
July 2013

Tuesday, July 2, 2013

"Significant Weather Reports" . . . Wow, look at that rain coming down!

We wish to thank many of you for your "Significant Weather Reports" during the past several months. They go directly to your local National Weather Service Office in real-time and provide critical information for the possible issuance of flash flood and severe weather warnings. They can really make a difference in your community.

Some of you who are new to CoCoRaHS may not be familiar with filing real-time "Significant Weather Reports". They are used to report significant weather occurring at your location any time of day or night such as heavy downpours, freezing rain or bursts of heavy snow or sleet. Any weather that you think may disrupt travel or outdoor work may warrant a "Significant Weather Report"

Here's the ["Significant Weather Report Form"](#) on our website.

How hard does it need to rain or snow to send in a "Significant Weather Report"? There is no universal definition. What it takes to cause flooding varies through the year and from place to place. In general, any rain of at least 0.30" in an hour could be considered "heavy rain". Use your own judgment, and if you feel it is raining very hard, go ahead and report it. It is better to be safe than sorry. Your local National Weather Service Office may set their own thresholds, so contact them for more information.

If you would like to view the reports of significant weather from other observers click here: ["View Significant Weather Reports"](#)

Also, remember that even if you submit a significant weather report, you still need to send in your normal daily "24-hour" report.

Thanks for helping!

**CoCoRaHS WxTalk Webinar for July 2013:
"Rainwater Harvesting - Catching and Using It"**

Rainwater harvesting will be the focus of our next ["WxTalk Webinar"](#) on July 25th. "***Rainwater Harvesting - Catching and Using It***" will be presented by Billy Kniffen of the American Rainwater Catchment Systems Association (ARCSA).

Space is limited to the first 500 registrants, so register today! We will notify the first 500 who register of their acceptance to the Webinar. Those who aren't able to attend will be able to watch this episode on-line the following day.

REGISTRATION INFO

Title: Webinar #20 - CoCoRaHS WxTalk: "Rainwater Harvesting - Catching and Using It"

Date: Thursday, July 25, 2013

Time: 1:00 PM Eastern, Noon Central, 11:00 AM Mountain, 10:00 AM Pacific

"This month's Webinar will discuss the process used to collect rainwater from a rain barrel to whole house to commercial size installations. We will discuss the sizing requirements, conveyance, collection tanks, per-filtration/screening, and delivering the water when needed by bgoth gravity and pump pressure. We will discuss supply and demand and finally use of rainwater for irrigation, pets, wildlife, water features and in-home potable and non-potable use."

Reserve your seat now by registering here: [RAINWATER](#)

Our August CoCoRaHS WxTalk Webinar: "Atlantic basin seasonal hurricane prediction and the forecast for the 2013 Atlantic hurricane season" by Phil Klotzbach and Bill Gray of Colorado State University will take place on August 15th. Stay tuned for an upcoming announcement on how to register.

Friday, July 5, 2013

When is a sprinkle a trace "T"?

Many folks have asked this question. Our answer is that as long as you see or feel the drops, it is a trace and should be reported as a T. There are little traces and big traces (that actually put some moisture into the gauge) and this can be noted in the "Observation Notes". As long as precipitation falls from the sky and reaches the ground so that you can see or feel it -- it is worth reporting as a trace.

Thanks for participating in CoCoRaHS!

Monday, July 8, 2013

How's your garden growing this year? Check out the CoCoRaHS "Climate Resources Guide for Master Gardeners"!

CoCoRaHS has an on-line guide for gardeners out there on our master gardeners: [Climate Resources for Master Gardeners Page](#). The HTML version of this "[Guide](#)", introduces elements of large scale and local climate important to gardeners. An overview of climate patterns and differences are shown. Links to local climate information are provided. Topics include: Climate & Gardening, Sunshine, Temperature, Humidity and Dew Point, Precipitation, Wind, Evapotranspiration, Climate Resources, Climate Change and CoCoRaHS.

We hope that you'll take a look at it, use it for your own gardening needs and pass along the URL link to other gardeners you know who may be interested in gaining a better understanding of climate and how climate might effect their local gardening efforts . . . it won't be long now (perhaps you already have) until it's time to harvest those juicy beefsteak tomatoes and fresh sweet corn!

Saturday, July 13, 2013

"Dew Point" . . . When it starts to feel sticky outside, think about the Dew Point

"Dew point" is a term most of us have probably heard, but the meaning may not be clear unless you've had some meteorology background. Dew point is a good way of quantifying the amount of water vapor in the atmosphere. It is a more meaningful term in some respects than "Relative Humidity", which we have heard talked about often. Unlike relative humidity, dew point is a temperature. Specifically, it is the temperature that you would need to cool the air to for the air to reach saturation (100% humidity). At that temperature, cloud droplets may begin to form or dew will be deposited on surfaces in contact with the air. The higher the dew point the more moisture is in the air. Here in Colorado, when the dew point gets higher than about 52 degrees F, we think it's really humid. But in the South, Midwest and East, you would think that air is really dry. There you don't notice it feeling sticky until the dew point is over 65 or 70 degrees.

A good way to get an idea about how humid the air is, is to check for condensation on a glass of ice water. In the winter you hardly ever get water on the outside of a glass (unless you're down by the Gulf of Mexico), but when the dew point is high, condensation on our glasses forms easily.

Monday, July 15, 2013

"The North American Monsoon" and "Significant Weather Reports"

It's July and that means it's time to talk about the North American Monsoon.

The word "monsoon" comes from the Arabic word mausim, meaning season. Basically, it describes a seasonal wind shift over a region that is usually accompanied by a dramatic increase in precipitation. Many of us are familiar with the Indian-Asian monsoon that brings heavy rains during the summer months over widespread areas of India and SE Asia. Although these rains often produce major flooding, they are vital to agriculture and the economy. Because so much of the world's population live in this region, a delayed or reduced rainfall season can have a devastating effect on the livelihood of a significant fraction of the world's population.

Many other parts of the world experience monsoons, including North America. Our North American monsoon (also known as the Mexican monsoon) typically occurs between July-September and is relatively small compared to the Asian monsoon. However, in parts of NW Mexico, over 50% of the annual rainfall comes in this 3-month period. The rains provide a critical source of replenishment for water resources of Mexico and the SW United States.

CoCoRaHS volunteers can play an important role and possibly save lives by sending in real-time ["Significant Weather Report"](#) when heavy precipitation falls from flooding monsoonal rains.

To learn more about the North American monsoon, check out: ["Monsoon"](#)

Thursday, July 18, 2013

The Heat Index . . . What's That?

The Heat index (HI) is sometimes referred to as the "apparent temperature". The HI, given in degrees F, is a measure of how hot it feels when relative humidity (RH) is added to the actual air temperature.

So if the temperature was 85F and the Relative Humidity was 85% the Heat Index value would be 99F. Believe me, that's an uncomfortable value. Many parts of the country have had heat index values over 100F the past couple of weeks. Thanks to the invention of air conditioning many are fortunate to find relief from the heat during these hot summer days. For those who do not have air conditioning it's important to try to keep cool.

The US Army has created a great "Heat Index calculator" (along with other conversions) that you can use to determine the heat index at your particular location: "[Weather Conversion Calculators](#)". It's about halfway down the page. NOAA's Weather Prediction Center has one on their homepage as well: "[WPC Heat Index Calculator](#)"

Here is a list of possible heat disorders that could result for people in high risk groups when the HI reaches a certain value:

Heat Index of 130F or higher = Heat stroke or sunstroke likely.

Heat Index between 105 - 129F = Sunstroke, muscle cramps, and/or heat exhaustion likely. Heatstroke possible with prolonged exposure and/or physical activity.

Heat Index between 90 - 105F = Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.

Heat Index between 80 - 90F = Fatigue possible with prolonged exposure and/or physical activity.

For additional information on "[HEAT](#)" and "[HEAT STRESS](#)" click on those words.

On a final note, animals such as dogs are very susceptible to heat stroke. Don't forget to find a shady, cool spot for your pets, they will be thankful you did.

Thursday, July 25, 2013

Water is Precious

Many of us are familiar with the verse "Water, water everywhere, nor any drop to drink" from Samuel Coleridge's poem: "[The Rime of the Ancient Mariner](#)". Most of us, however, probably don't realize how true those words are in terms of the amount of freshwater available to us.

Have you ever wondered where our water is stored? As you probably guessed, most of it is in the oceans. In fact, over 97% of all water on the planet is too salty for us to drink. Of the remaining 3% that is freshwater, about 2% is tied up in ice caps and glaciers and about 0.9% is stored as water in the ground. That leaves less than 0.1% of the world's total water supply to be split up between rivers, lakes, and the atmosphere (stored as water vapor)!

The next time you empty your gauge, remember how precious that freshwater is.

More information about the water cycle can be found at: ["USGS"](#) and also by viewing the CoCoRaHS animation short: ["THE WATER CYCLE"](#)

Saturday, July 27, 2013

CLEAN UP TIME!

Is your rain gauge inner-cylinder starting to look a little grungy these days? It's that time of year! For most of us dirt will eventually build up on the bottom of your CoCoRaHS rain gauge inner-cylinder. In humid climates, algae growth can also be a bother.

If you want to keep your gauge clean and looking like new, put some warm water with a little gentle liquid hand soap in the tube and let it soak for a few minutes. Then twist a thin soft towel and spin it into the cylinder until it reaches the bottom. This will wipe out most of the dirt. It is not recommended to use a firm bottle brush to clean the gauge, nor is using your automatic dishwasher (This will gradually scuff and haze the inside of the gauge).

Another method is to take a newspaper, roll it to make a tight cylinder, and then rotate the paper on the inside of the tube all the way to the bottom. It will usually clean out the dirt.

If you have other great solutions for keeping your gauge clean and looking like new, send them to: info@cocorahs.org with a subject line "Clean Gauge".

Tuesday, July 31, 2013

What is the real shape of a raindrop?

Based on pictures we've seen in magazines, on TV, and elsewhere, most of us would guess that raindrops are shaped like a teardrop. It turns out that this is not the real shape of a raindrop. Small raindrops (< 1mm in diameter) are spherical, like a round ball. This is because a sphere is the shape that requires the least amount of energy for the drop to hold itself together.

As drops grow bigger than a millimeter or so, they start to become flat along their bottom edge as they fall, due to the resistance of air flowing around the drop. By the time a drop reaches 2-3 mm in diameter, it looks more like a hamburger bun than a sphere. Drops bigger than about 6 mm in diameter are relatively rare because the air resistance tends to cause the drops to breakup as they fall.