Messages of the Day
July 2015

Wednesday, July 1, 2015

Fire Weather . . . Information and Outlooks for 2015!

Another zero in the rain gauge? Hot, dry weather during the summer can create ideal conditions for wildfires in many parts of the country. As you read this message, large fires are burning in several western states and throughout Alaska. To see where current wildfire activity is taking place across the country click here: ACTIVE FIRES.

Most NWS Weather Forecast Offices provide fire forecasts twice a day and provide warnings in close partnership with local, state and federal fire control agencies. Learn more about Wildland Fire Safety and the NOAA Storm Prediction Center's latest Fire Weather Outlooks for your part of the county by clicking on the underlined text.

The Incident Information System Website is another great resource for finding out where wildfires are currently burning. This site gives a vast amount of information that many of you will find very informative.

For additional info on wildfire prevention and other wildfire topics, visit the National Interagency Fire Center's web site by clicking here: NIFC

Want to learn more about Fire Weather? View the CoCoRaHS WxTalk Webinar presented by Liz Page of UCAR/COMET. You can do so by clicking here: WILDFIRE

Friday, July 3, 2015

"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.

Tuesday, July 6, 2015

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

It's July and that means it's time once again 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 a real-time "Significant Weather Report" when heavy precipitation falls during flooding monsoonal rains. Check out our “How to Measure Heavy Rainfall” animation.

To learn more about the North American monsoon, please take a look at this very informative page put together by the Tucson National Weather Service Office: “Monsoon”.

Friday, July 10, 2015

NOAA Extreme Weather Information Sheets (NEWIS)

As part of NOAA’s Weather Ready Nation, NOAA's National Centers for Environmental Information (NCEI), at the Stennis Space Center, produces the NOAA Extreme Weather Information Sheets (NEWIS). Published each year for the Atlantic hurricane season, the NOAA Extreme Weather Information Sheets provide critical information for contacting government officials and monitoring information resources.

To find out more about this great resource click here: "NEWIS".

Monday, July 13, 2015

How Does Your Rain Gauge Work?

When it rains, your gauge measures the amount of precipitation that falls through the area at the top of the gauge. When you read the gauge, you measure the depth of water that has fallen through the area and accumulated in the bottom, that is the depth of water.

How, you may ask, can this gauge work properly if the inner tube is 10 inches long but only records 1 inch depth of water? The reason has to do with accuracy. The National Weather Service (NWS) has adopted the criteria that the gauge should be able to measure to an accuracy of 0.01". The problem with a gauge that's 4" (CoCoRaHS) or 8" (NWS standard) in diameter, is that it's nearly impossible to read the depth to an accuracy of 0.01". That's where the funnel and inner tube come in.

The funnel of the CoCoRaHS gauge squeezes the water into the area of the inner tube, which is 1/10th of the area of outer cylinder (The NWS gauge has a similar funnel and inner tube). By reducing the area that the water falls into, the depth can be stretched by the same factor of 10. In this way, the total volume of water (area times depth) that fell through the top of the gauge and the total volume in the inner tube are the same. This stretching allows us to read the depth of water an accuracy of 0.01".

Incidentally, the Fort Collins, Colorado weather station has a CoCoRaHS and NWS gauge side-by-side and has been keeping track of their measurements for a number of years. The results show that both gauges record very similar amounts of precipitation. View the abstract from the AMS 15th Conference on Applied Climatology/13th Symposium on Meteorological Observations and Instrumentation (2005): "GAUGE".

Thursday, July 16, 2015

Weather Preparedness 2015

As part of NOAA's Weather Ready Nation, NOAA encourages you to "Be a Force of Nature" when it comes to extreme weather by learning about potential hazards. Help advance the Weather-Ready Nation by being prepared for the worst. NOAA's National Weather Service (NWS) and its partners encourage individuals, families, businesses and communities to know their risk, take action, and be an example when it comes to dangerous weather.

Look for seasonal campaigns for spring, summer and fall in your state — all designed to keep the public safe. Preparedness event topics include:

- Severe Weather Awareness Week
- Flood Safety Awareness Week
- Tsunami Preparedness Week
- Safe Boating Week
- Rip Current Awareness Week
- Lightning Safety Awareness Week
- Tornado Drill
- Monsoon Awareness Week
- Hurricane Preparedness Week
- Heat Awareness Day
- Avalanche Safety
- Winter Weather Awareness Week

To find out more visit: Weather Preparedness Events Calendar.

Monday, July 20, 2015

The CoCoRaHS iPhone and Android Apps

Would you like to submit your daily measurements from your smartphone? There is both a CoCoRaHS iPhone and Android app available. Both free to download thanks to the hard work of one of our CoCoRaHS volunteers, Steve Woodruff at Appcay in South Carolina.

The CoCoRaHS iPhone App is available at the Apple Store. Click here to download: "CoCoRaHS iPhone App".

The Android App can be downloaded via the Google play store by clicking here: "CoCoRaHS Android App"

These apps allow registered CoCoRaHS observers to submit their daily precipitation reports via their mobile devices. In addition, users can view past reports to ensure accuracy.

Thursday, July 23, 2015

Drought Categories . . . "The guy on the radio says we are in D3 . . . what's that all about?"

Did you know that drought has it's own scale? Have you ever heard of the classifications of drought that are used by the Enhanced Fujita Scale for tornadoes . . . *"that was an EF3"* or the Saffir-Simpson Scale for hurricanes . . . *"this one's a category two hurricane"*.

To find out more about about the categories of drought, please watch our newly released Assessing Drought in the United States animation and check out the U.S. Drought Monitor Classification Scheme page.

Still interested in drought? Be sure to visit the National Integrated Drought Information System's (NIDIS) U.S. Drought Portal. This is a rich resource of drought information across the United States.

One final reminder . . . please keep those precipitation observations coming in, especially on days when it doesn't rain (just report zero). Your observations are used each and every week in the preparation of the U.S. Drought Monitor.

PS - OK, you thought this message was going to be short didn't you . . . If you have an extra moment, please file a Drought Impact Report when drought is about in your area or you are recovering from drought. Thanks!

Sunday, July 26, 2015

Have you visited the CoCoRaHS Blog? It's one of our coolest features with great graphics!

The CoCoRaHS blog administered by Illinois state coordinator Steve Hilberg, covers a wide range of topics on weather and climate. Steve, the former director of the Midwest Regional Climate Center, brings his expertise and passion for the earth's atmosphere to the blog by highlighting interesting current events.

Some of the topics addressed this summer have been *" Record Rain in Southern California Just a Drop in the Bucket", "Improving Communication of the NWS Forecast", "Lightning Data - Where to Find It", "Lightning Safety - Rules to Live By", "Lightning Strike - A Life-Changing Experience", and "Where There is Thunder, There is Lightning"* just to name a few. These are well written pieces with fantastic graphics. If you haven't had a chance to view them, please take the time to. Steve usually posts a new topic mid-week

The blog is also interactive, meaning you can leave comments or messages for Steve and all our CoCoRaHS blog readers by clicking on comments below each post. This is located after the time stamp for each posting.

Please check out the blog and don't be shy if you want to talk weather and climate! To visit the blog please click here: "CoCoRaHS Blog".

We hope you'll visit the blog this week!

Thursday, July 30, 2015

Headed out for vacation or just away for a few days? The Multi-Day Precipitation report.

Many folks ask us what to do about reading their rain gauges when they will be out of town for a few days. Not to worry, we have a easy solution for that. It's called a "multi-day precipitation report".

Here's what you do. Make a note to yourself of the date when you last read your gauge. Then head off and enjoy your trip and don't even think about CoCoRaHS (unless you want to tell the relatives you are visiting how to be part of this exciting network). When you get back, wait until the next morning to take your observation at the regular time. Note the date and the amount that has accumulated in your gauge. Then go to the multi-day report, fill in the appropriate information . . . hit submit and there you have it. Your accumulated amount will not show up on the maps, but will certainly be recorded in our system and on your station record.

Finally, it's best not to say anything in the comments section that you plan to be away.

Hoping you have a fun trip planned during the weeks ahead . . . enjoy that vacation!