CoCoRaHS OBSERVER

Autumn 2010

*Tell the National Weather Service How Much Rain **You** Got!*

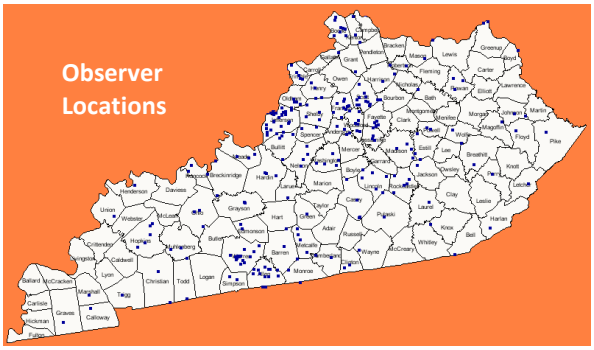
A thunderstorm lighting up the night over Scott County on June 14. *Photo by KY-SC-1*

CoCoRaHS (Community Collaborative Rain, Hail, and Snow Network) is a unique, non-profit, community-based network of volunteers of all ages and backgrounds working together to measure and map precipitation (rain, hail and snow). By using low-cost measurement tools and utilizing an interactive website, the goal is to provide the highest quality data for natural resource, education, and research applications.

The network has grown by leaps and bounds in recent years, but we still need many more observers — especially in Kentucky. While Indiana and Tennessee have over 1,100 observers apiece, Kentucky had only 344 as of September 1.

It's easy to join CoCoRaHS — simply sign up at the website (www.cocorahs.org). All you need to participate is a rain gauge (the website tells you how to get one) and a connection to the Internet either through your own computer or a friend's.

Check out the CoCoRaHS website or contact your local National Weather Service office for more information on this useful and fun program today! We look forward to your reports!



In This Issue...

Snow Tips and Tricks

In the coming months the sweltering 100° heat of this past summer will be only a memory, and snowflakes will once again dance in the air. Venturing outside on frosty mornings to measure snow provides CoCoRaHS customers with crucial snowfall and snow depth information. These snow data are used to verify weather forecasts, determine the geographical extent of snow cover, gauge the potential for spring flooding, for forecasting soil moisture profiles, and myriad other uses. Here are some brief pointers on dealing with snowfall:

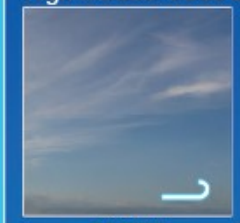
- Before it snows, remove the funnel and inner tube from your rain gauge (actually it's good to remove them before any freezing weather).
- A snowboard is the best surface on which to measure snow. A snowboard is simply a piece of plywood, usually around 2' x 2', painted white, that can be set on a flat spot away from obstructions (often near your rain gauge).
- Place a small flag near your snowboard so you can find it when it is buried under snow.
- After you've measured the snow depth on your snow board, clear the board and place it on top of the snow pack, ready for the next snowfall.
- Snow*fall*, measured in inches and tenths, is the amount of new snow that has fallen in the past 24 hours. Snow *depth*, measured in inches, is the amount of snow on the ground at any given time. You can use a regular ruler, or a special snow stick that is marked in tenths of inches (available at www.weatheryourway.com).
- Please do not automatically assign a 10:1 ratio to the snow to get the water equivalent. Rather, melt the snow in the outer tube to get the correct amount of liquid. The best way to do that is to add a known amount of warm water to the snow to melt it, then subtract out the amount of warm water that you added. Measure the amount of water by pouring it from the big outer tube through the funnel into the inner tube.
- When the snow is drifted, measure in several spots and average the drifted and undrifted areas to get a representative snow depth.
- If you're feeling ambitious, you can take a "core sample." Use your big outer gauge tube to remove a plug of snow from your snowboard (or where ever there is a representative amount of snow depth). Melt the snow in the tube, and report the liquid amount of water as your core value. This tells scientists how much water is locked up in that snow cover, ready to flow into creeks and rivers when it melts.
- Please try to report a snow depth even if no precipitation has fallen.
- If snow falls but doesn't accumulate, report a trace of snowfall.
- Sleet is counted as snow. Freezing rain is counted as rain.
- It helps if you use your plain text comments section to describe or clarify your observations.
- See http://www.cocorahs.org/Content.aspx?page=training_slideshows for all the snow training you need!

SKY WATCHER CHART

High Clouds: cloud bases 16,000 - 50,000ft (5-15km)

http://www.weather.gov/os/brochures/cloudchart.pdf

Typical Types: Cirrus (Ci), Cirrostratus (Cs), Cirrocumulus (Cc)



H1: Cirrus
In the form of filaments, strands, or hooks

H2: Cirrus
Dense, in patches or sheaves, not increasing, or with tufts

H3: Cirrus
Often anvil shaped remains of a cumulonimbus

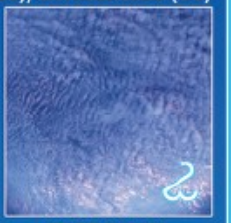
H4: Cirrus
In hooks or filaments, increasing, becoming denser

H5: Cirrostratus
Cirrus bands, increasing, below 45° elevation

H6: Cirrostratus
Cirrus bands, increasing, veil above 45° elevation

H7: Cirrostratus
Translucent, completely covering the sky

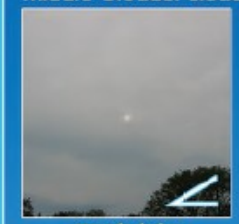
H8: Cirrostratus
Not increasing, not covering the whole sky



H9: Cirrocumulus
Alone or with some cirrus or cirrostratus

Middle Clouds: cloud bases 6,500 - 23,000ft (2-7km)

Typical Types: Altostratus (As), Altocumulus (Ac), Nimbostratus (Ns)



M1: Altostratus
Mostly semi-transparent, sun or moon may be dimly visible

M2: Altostratus or Nimbostratus
Dense enough to hide the sun or moon

M3: Altocumulus
Semi-transparent, one level, cloud elements change slowly

M4: Altocumulus
Lens-shaped, or continually changing shape and size

M5: Altocumulus
One or more bands or layers, expanding, thickening

M6: Altocumulus
From the spreading of cumulus or cumulonimbus

M7: Altocumulus
One or more opaque layers, w/ altostratus or nimbostratus

M8: Altocumulus
With cumulus-like tufts or turrets

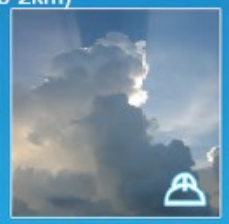
M9: Altocumulus
Chaotic sky, cloud bases at several levels

Low Clouds: cloud bases Up to 6,500 ft (0-2km)

Typical Types: Stratus (St), Stratocumulus (Sc), Cumulus (Cu), Cumulonimbus (Cb)

L1: Cumulus
Cumulus of fair weather with flattened appearance

L2:Cumulus
Moderate/strong vertical extent, or towering cumulus

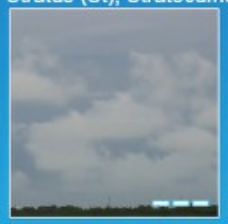


L3: Cumulonimbus
Tops not fibrous, outline not completely sharp, no anvil

L4: Stratocumulus
From the spreading and flattening of cumulus

L5: Stratocumulus
Not from the spreading and flattening of cumulus

L6: Stratus
In a continuous layer and/or ragged shreds



L7: Stratus Fractus
and/or Cumulus Fractus occure with rain or snow

L8: Cumulus & Stratocumulus
Not spreading, bases at different levels

L9: Cumulonimbus
With fibrous top, often with an anvil

Mammatus
Drooping underside of heavy, rain-saturated clouds

Tornado
Rapidly rotating column under a cumulonimbus cloud that touches the ground

Wall Cloud
Lowering of the rain free base of a thunderstorm, often prior to tornado formation

Shelf Cloud
Represents the leading edge of strong winds in advance of a thunderstorm

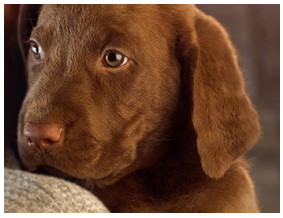
Wave Cloud
Formed by strong horizontal winds over uneven terrain

Special photo credit thanks to Jim W. Lee, Eric Kurth, Brian Klimowski, and Eric Helgeson

Precipitation Facts for Summer 2010

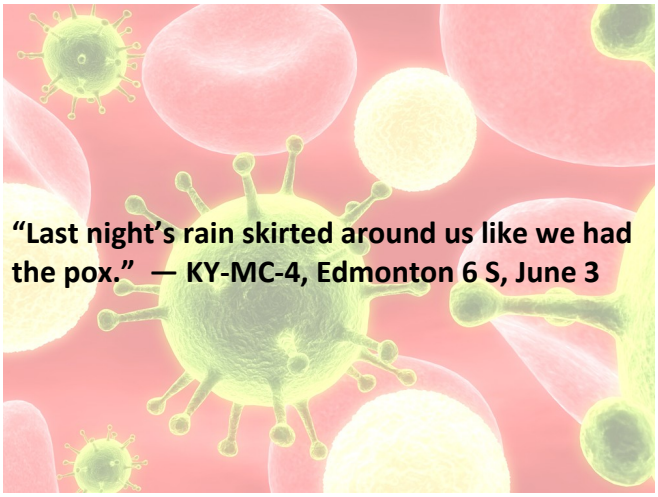
Most rainfall: 24.17" at Tompkinsville 12.1 WNW, KY-MO-1
Least rainfall*: 5.88" at Hanson 2.2 NE, KY-HP-1
Wettest day: 6.58" August 18-19 at Tompkinsville 12.1 WNW, KY-MO-1
Wettest day averaged across the state: August 18-19 with a statewide average rainfall amount of 0.73"
*at stations that missed no more than 3 days

"Got a chocolate lab puppy last week — finally decided on a name: CoCo. My own CoCoRaHS mascot." — KY-AL-3, Scottsville 4.9 NE, July 5



A Big CoCoRaHS Welcome to the 17 New Observers Who Joined Us This Summer!

Bedford 1.9 SE
Bowling Green 0.4 WNW
Harrods Creek 0.5 NE
Cynthiana 11.8 NNE
Stanford 0.5 NW
Midway 0.4 NNE
Taylorsville 6.1 NW
Bowling Green 3.8 WSW
Versailles 1.2 S
Plum Springs 0.8 NNW
Bowling Green 2.5 WNW
Smiths Grove 0.3 SE
Richmond 1.7 SW
Lyndon 1.1 E
Sadieville 5.6 SSW
Bowling Green 1.8 SW
Scottsville 5.5 N



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Your Rain Gauge Could Become Famous!

The folks at CoCoRaHS HQ are already planning the 2012 CoCoraHS calendar, and they need your photos! Take an interesting snapshot of your rain gauge, snow board, or the area where you take your measurements, and submit them to CoCoRaHS. You may just see your humble gauge grace the pages of the 2012 CoCoRaHS calendar. Send your pictures to us here at the Louisville NWS office, w-lmk.webmaster@noaa.gov, and we'll forward them along.

Newspaper Ads

CoCoRaHS is always in need of more observers, and we are constantly looking for new ways to promote the program. Recently we contacted area newspapers to request space to introduce readers to CoCoRaHS. A few papers graciously provided free space for us, for which we are truly grateful. So, don't be surprised if you see a small notice in your local paper about CoCoRaHS, and make sure everyone else sees it too!

These Newsletters Are for *You*

What would you like to see discussed in these Kentucky CoCoRaHS newsletters? Drop us an e-mail and let us know! Just send a quick note to w-lmk.webmaster@noaa.gov with your suggestions.