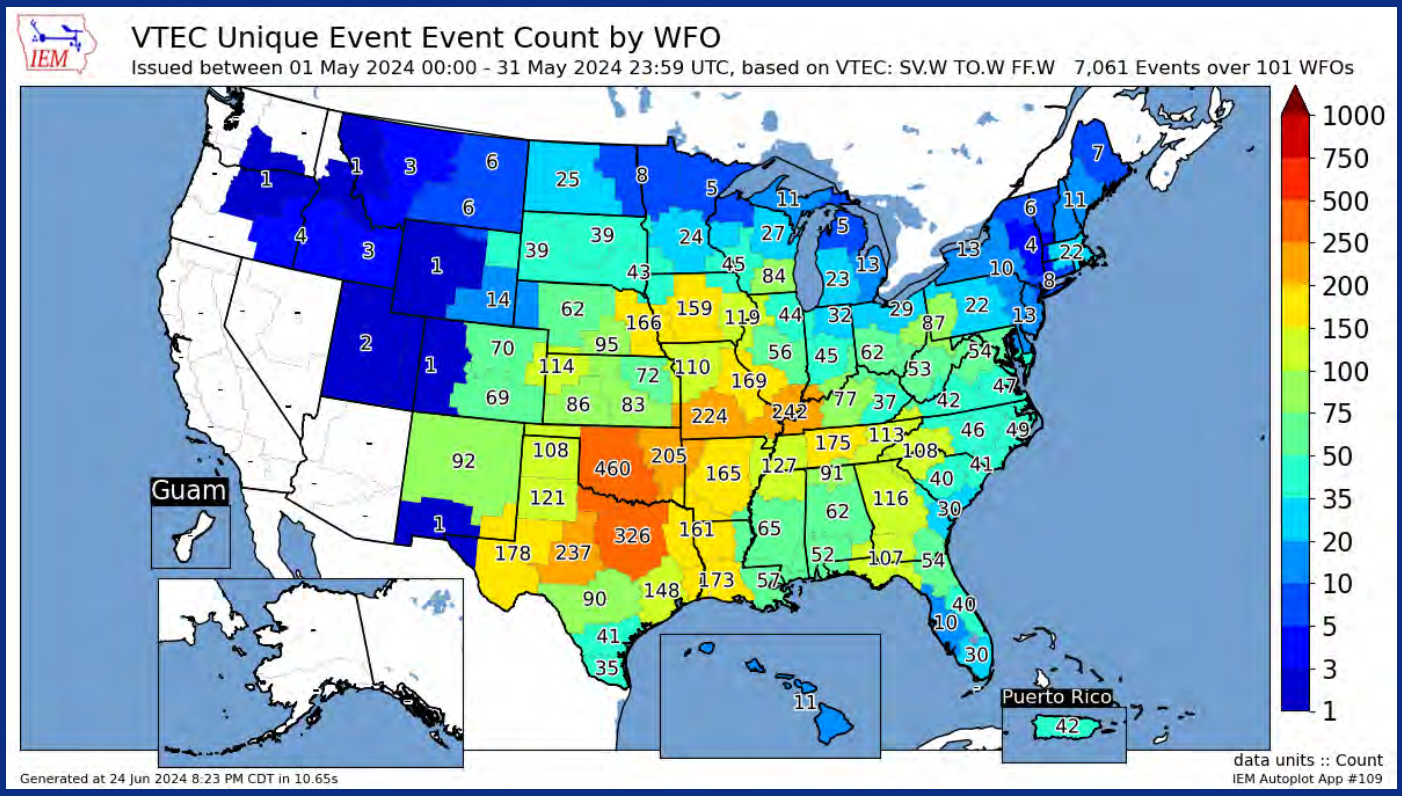
BECAUSE EVERY DROP COUNTS!

MONTHLY NEWSLETTER

JUNE 2024 - ISSUE 14

Phew, What a Busy May!



It was an incredibly active month of May across Middle Tennessee. For the entire month, NWS Nashville issued 175 Warnings — including Severe Thunderstorm, Tornado, and Flash Flood Warnings. The image above shows the total of all these warnings issued by each NWS office during May 2024. In fact, this is the most warnings issued by NWS Nashville in a single month since April 2011.

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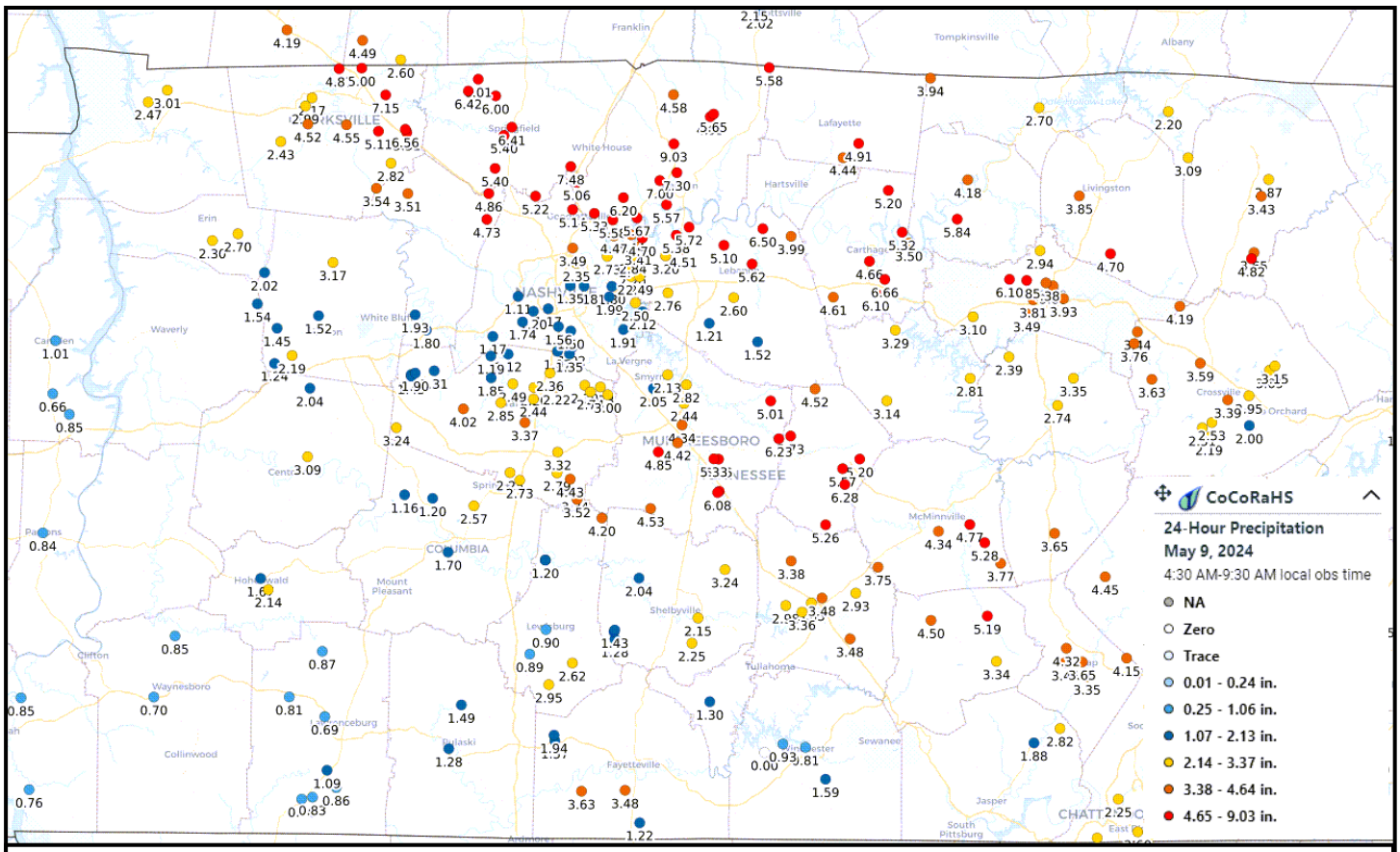

CoCoRaHS precipitation reports from the morning of May 9, 2024. The yellows and oranges represent the highest precipitation totals with over 7 inches measured in spots.

The most significant event of the month was the May 8th and 9th event when multiple rounds of severe storms impacted the area. Nearly every county reported some form of wind damage, large hail up to the size of apples was reported, and four tornadoes were confirmed, including an EF-3 in Columbia. Of course, there was significant flooding as well, especially across portions of Robertson and Sumner counties. This was also the first time NWS Nashville ever issued a Tornado Emergency and a Flash Flood Emergency during the same event.

Now that the weather is finally quieting down and we're getting into a poor typical, summertime pattern, I would like to extend a heartfelt thank you to all of YOU for the reports. We, of course, see all of your daily precipitation reports. But we also see your hail and significant weather reports which many of you used to share hail pictures or tell us about the flooding ongoing. Those reports do come to us at the NWS in real-time, and are invaluable. So thank you for a job well-done.

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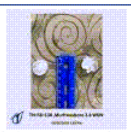
Hail Reports

Hail Report

Hail Report Information

Station Number:	TN-RD-138
Station Name:	Murfreesboro 3.4 WSW
Date:	5/26/2024 3:30 PM
Submitted	5/27/2024 8:51 AM
Taken at registered location:	True
Notes:	



Click to enlarge image.

Hailstone Information

Largest Size:	1 1/4" Half Dollar Size
Average Size:	1/2" Grape
Smallest Size:	1/4" Pea Size
Stone Consistency:	Hard, Clear Ice, White Ice

Hail Storm Information

Duration Minutes:	10
Duration Accuracy:	3min
Timing:	Continuous
More Rain than Hail:	False
Hail Started:	After rain
Largest Hail Started:	After smaller hail
Damage:	no damage

Hail pad information

Angle of Impact:	
Number of Stones On Pad:	
Distance Between Stones On Pad:	
Depth Of Stones on Ground:	
Has Samples:	False

Did you know that you can submit a hail report directly to the National Weather Service from your CoCoRaHS report? It's true. Your Daily Precipitation Report is not the only type of report you'll find in your CoCoRaHS account.

When hail falls at your station and you know the size of it, pull up your hail report in your CoCoRaHS account. There you can select the size of the hail, how long the hail lasted, and if there was any damage. The best part of these hail reports is that when you hit submit, they come directly to a NWS meteorologist's workstation and can be very valuable information during severe weather.

Significant Weather Reports

Significant Weather Report

Station Number: TN-MT-85 **Station Name: Clarksville 13.6 SSE**

Observation Date:	5/8/2024 6:15 PM
Submitted	5/08/2024 6:25 PM
Notes:	Thunderstorms with heavy rain and lightning with tornado warning, Creek out of bank, photograph of hail nearby that was jagged and over 2 inches wide
Precip Duration Minutes:	105
Gauge Catch:	2.23 in.
Total Gauge Catch:	2.23 in.
Snowfall:	NA
Snowpack Depth:	NA
Flooding:	Unusual

It's not just hail reports that come directly to your local NWS office! Significant Weather Reports do too.

Whenever flooding or heavy snow occurs at your station, you can use this report to document it. What type of flooding are you seeing? Minor, unusual, severe, or extreme? The note section is also valuable to add additional information or context to your report.

As soon as you hit submit, this report also comes directly to a NWS meteorologist's workstation, and is yet another way that you can provide valuable information during severe weather.

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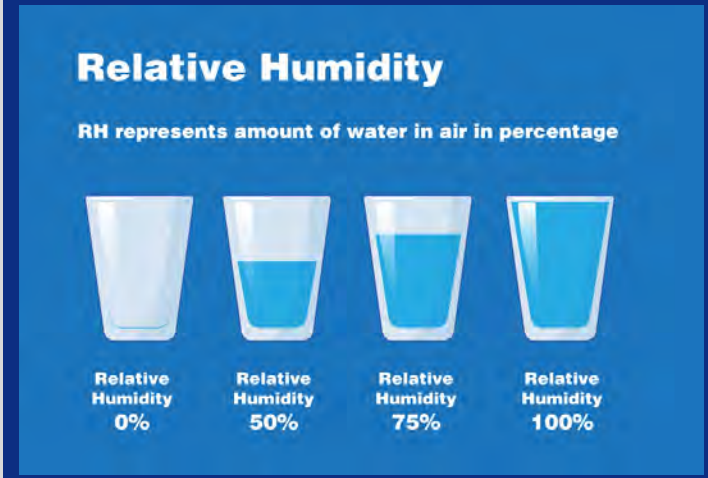
The Science of Auroras

Were you captivated by the northern lights display last month? It was quite the display, and hopefully you got a chance to witness the aurora right here in Middle TN. Do you know the science behind the northern lights?

The sun not only sends light and heat, it also sends a lot of other energy and particles. Fortunately, we have a magnetic field around our Earth that protects us from most of it. But during a solar storm, a large amount of these particles slams into Earth and enters the upper-levels of the atmosphere. It's here where the Sun's particles interact with the gases in our atmosphere to create the beautiful light display knows as an aurora.

The colors of an aurora are determined by what type of gas the Sun's particles interact with. Green is produced when the Sun's particles interact with high concentrations of oxygen. Red is also produced because of oxygen, but oxygen that is higher up in the atmosphere. Blues and purples are produced when Sun particles interact with nitrogen.

The Science of Relative Humidity



Have you ever heard of the phrase "but at least it's a dry heat"? A lot of people have their opinions on if dry heat or humid heat is better.

When we talk about dry vs. humid heat, we're talking about the amount of moisture that is in the atmosphere. And that's important because how much moisture is in the atmosphere plays a part in how your body responds to the heat.

Sweating is your body's natural mechanism for keeping you cool. In drier climates, when a person sweats, that sweat is able to quickly evaporate into the air. However, in humid climates, the air is already full of moisture. So when you sweat, it can't as easily evaporate into the air. Therefore, your body has a harder time cooling down.

But a drier heat isn't less dangerous. Heat is heat, and whether it's humid or not, you should be staying properly hydrated to avoid heat-related illnesses. Stay safe this summer!

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Meet Wayne!

Wayne is one of the longest serving CoCoRaHS observers in Middle Tennessee, reporting in Williamson County since 2007! But Wayne's interest in weather began long before then with his mother keeping a daily record of the weather for over 70 years. Wayne grew up in Clarksville and attended Austin Peay University. On the weekends, Wayne does a bird count for the Cornell University School of Ornithology, and he is also an amateur astronomer. Wayne's favorite part about CoCoRaHS is seeing the daily reports from around the state, and his most memorable event is the flood of 2010.

I would love to recognize and highlight YOU in these newsletters! If you're interested, tell me about yourself via this form.

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