NY CoCoRains

Newsletter

January 2025

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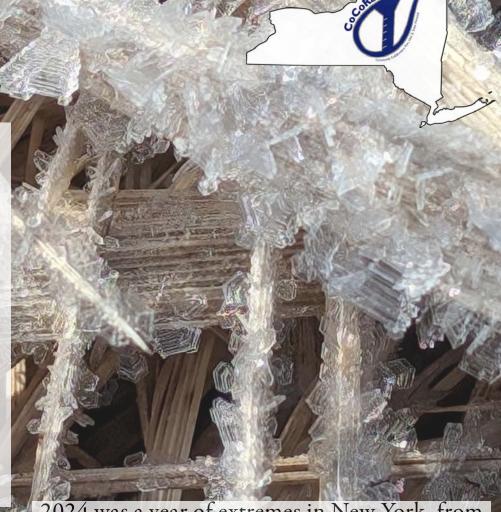
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2024 was a year of extremes in New York, from record low precipitation and drought to recordsetting rainfall and flash flooding. All of your efforts as CoCoRaHS observers give us a clearer picture of how these conditions played out across the state. In fact, this newsletter features a new section called "CoCoRaHS Data in Action" to show you just how helpful your observations are to so many folks! As always, feel free to reach out to your county or regional coordinator or

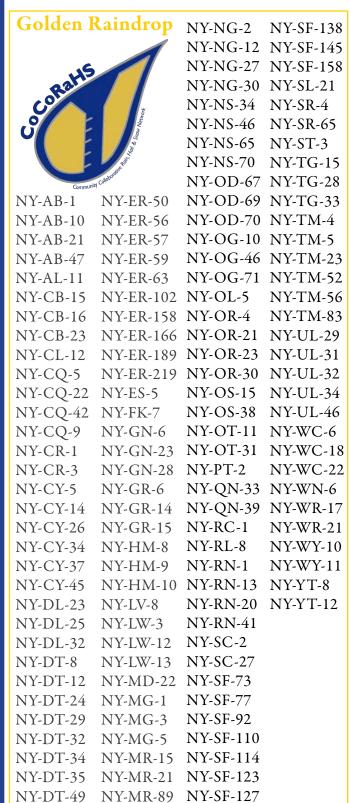
me! Thanks for reading!

- Samantha Borisoff, NYS Coordinator

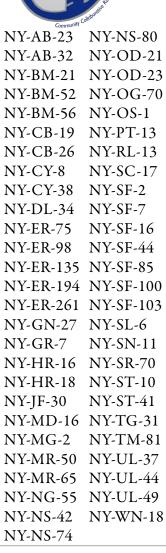


Observer Recognition

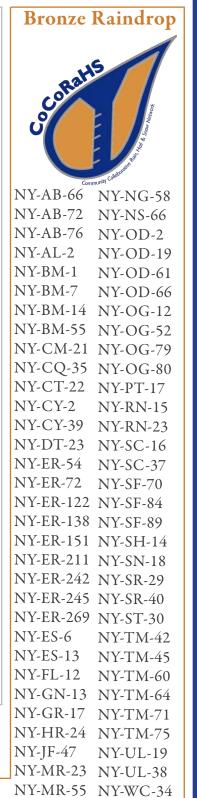
We appreciate all of our volunteers! Consistent precipitation reports, even the zeros, are essential to the CoCoRaHS network and those who use its data. As a special thank you to those observers who report nearly every day, we have created the golden, silver, and bronze raindrop awards. This newsletter is highlighting observers who reported 99% (golden raindrop), 95% (silver raindrop), and 90% (bronze raindrop) of all days from June 1 through December 31.







NY-WR-10



Observer Profile: NY-SL-21 by Dan Kelly, NWS Buffalo

Peter Ostrum, originally from Ohio, attended Cornell University, earning a Doctor of Veterinary Medicine in 1984. After graduation, he spent a year at the University of Florida in Gainesville, enjoying the lightning capital of the U.S. Wanting to move back to the northern climate, Dr. Ostrum applied to the Countryside Veterinary Clinic in Lowville. He told them he would try it for a year and has never left the area. He married Loretta Lepkowski, who grew up near Constableville on the



Credit: Loretta Lepkowski

Tug Hill, in 1987. While at the Veterinary Clinic, he worked closely with Dr. Harry O'Connor (our Lowville Coop Observer), who really sparked an interest in weather for Dr. Ostrum. Unfortunately, Dr. O'Connor passed away suddenly with just shy of 40 years of service as an NWS Coop Observer. Pete was eager to take over weather observations for Lowville. However, his house on Duncan Road was initially thought to be too far south from Lowville to be climatologically compatible, but later was set up as a Coop Station, then relocated in 2018 after his move to Chase's Lake, and his CoCoRaHS observations began. The increase in elevation to the east into the Adirondack Park results in more snow at the Chase's Lake location versus his Glenfield location. This makes these observations of great interest to the NWS, as eastern Lewis County has very few observation sites. Pete's precipitation observations are not only critical to the NWS in the forecasting of potential flooding on the Black River, but are also heavily utilized by the Hudson River and Black River Regulating District in their operations in the North Country. Additionally, Dr. Ostrum has graciously welcomed taking evapotranspiration observations, in support of the U.S. Drought Monitor, as well as frost depth and snow core observations, which provide ground condition data for forecasting spring runoff and the resulting impacts on the Black River.

Some memorable weather events include the destructive EF-3 tornado that caused significant damage to the Snow Ridge Ski Resort and surrounding residences on August 7, 2024. He was concerned that the storm may topple some of the large red pine trees near his house. Dr. Ostrum also recalls visiting his parents in Kansas and being fascinated by the fantastic lightning from the large Mesoscale Convective Systems that frequent the Midwest during the warm months. Working as a veterinarian, Pete would frequently travel to farms across the North Country to care for sick farm animals, having to be aware of the rapidly changing weather conditions east of Lake Ontario. He was in Sackets Harbor helping a sick animal when the weather rapidly deteriorated. A trip that would normally take an hour and a half took four times as long and he experienced whiteout conditions, evidenced by his vet truck totally covered with snow. Dr. Ostrum retired from the Countryside Veterinary Clinic this past December after 38 years. However, he still works at Dairy Health and Management Services in Lowville, as well as serving on the Board of Directors at Cornell Cooperative Extension of Lewis County. Additionally, he works with the ski patrol at Snow Ridge Ski Resort in Turin. Pete and Loretta have two grown children and have just become new grandparents!

NEEDED: County Coordinators

by Samantha Borisoff, NYS Coordinator

County coordinators are an important part of CoCoRaHS, becoming the primary contact for many volunteers. New York has 62 counties but only 26 of them have county coordinators! A special thank you to each of our 13 county coordinators - Andrew Miller, Anthony Martello, Bob Bellinger, Heather Kenyon, Jeffrey Meredith, Jim Maryinuk, Keith Eichner, Michael Cohn, Mike Evans, Mike Kruse, Nora Quinlan, Scott McKim, and Steven Jaquish. As you can see, there is a need for more county coordinators. These coordinators help support CoCoRaHS in many ways including...



Credit: Joe Villani NWS Albany

- Provide support for volunteers in their county. Follow-up with new observers, making sure that they have what they need to get started.
- Become familiar with the CoCoRaHS website and training materials.
- Help organize and attend local training sessions as needed.
- Help recruit new volunteers through local press releases, local service organizations, or other creative means.

Other opportunities, if you are willing:

- Help volunteers with the installation of their equipment if they are unable to do so.
- Go through the list of observers in your area ("Admin" function on the website) and check the status of "dropouts." Mark the stations "closed" or help to reactivate them.
- Write a periodic email or newsletter to engage county volunteers.

And if you're really, really willing:

- Check data routinely. Spot errors. Contact observers verifying questionable data.
- Organize social events and volunteer appreciation.
- Help update station information on the website.
- Help find local sponsors to help cover the costs of maintaining the network.
- Be aware of spatial distribution of active stations—recruit new or reactivate older stations to maintain or attain good coverage within your area.
- Share info about CoCoRaHS with potential users who might benefit from the data.

The efforts of our county coordinators are truly appreciated! Are you interested in helping out? A list of counties that have coordinators can be found here: https://www.cocorahs.org/Content.aspx?page=coord_NY. If your county is NOT on the list, the county coordinator role is vacant, so please reach out to a regional coordinator or me!

CoCoRaHS Data in Action

by Samantha Borisoff, NYS Coordinator

We want you to know just how important your observations are to so many people, so we are launching "CoCoRaHS Data in Action." The goals are to show you how different groups are using CoCoRaHS data and to highlight other organizations that you might find interesting or want to get involved with. In this issue, we are featuring the Community Science Institute (CSI). Through grant funding, CSI was able to supply a limited amount of rain gauges to observers within the Cayuga Lake Watershed. You can learn more about CSI here and read about their rain gauge initiative here.



Credit: Christina Stark

Please provide a brief description of your organization:

Community Science Institute is a 501(c)3 nonprofit organization located in Ithaca, NY. Our mission is to inspire and empower communities to safeguard water resources by cultivating scientific literacy through volunteer water quality monitoring, certified laboratory analyses, and education. At CSI, we offer three main types of programming 1) volunteer water quality monitoring of streams and lakes, 2) fee-for-service drinking water testing, and 3) outreach and education about water science.

How did your organization find out about CoCoRaHS and why did it get involved?

We first learned about CoCoRaHS through our partners at Seneca Lake Pure Waters Association. We saw that they had published a call for volunteers in one of their regular email communications.

This got us curious about CoCoRaHS and the potential benefits it could have for our organization and volunteers. We decided to get involved with CoCoRaHS for two main reasons: 1) rainfall data is a useful tool for our water quality monitoring programs and 2) it seemed like an accessible way to get volunteers involved with water monitoring that did not require traveling to sampling locations or climbing down steep streambanks. The accessibility of the program really appealed to us.

How does your organization use CoCoRaHS data?

I check the CoCoRaHS map almost every day to check rainfall near the streams that we monitor in the Cayuga Lake watershed. This helps me get a sense of what flow is like in the smaller streams in our watershed that do not have USGS flow gages. These data have been critical this year in allowing us to capture stormwater events.

...answer continues on next page



Credit: David Weinstein

CoCoRaHS Data in Action Continued

These monitoring events are important because most pollutants are loaded into Cayuga Lake during stormwater conditions. However, these events are tricky to coordinate because we don't have a lot of time to anticipate when they might occur. Having the CoCoRaHS data allows me to see the rainfall in the days leading up to a heavy rain event to determine if that rain event will be enough to significantly increase flow. On the flip side, the CoCoRaHS data are valuable for understanding when the water in streams might be too low to sample. In the days leading up to scheduled baseflow monitoring events, I check the gauges to ensure that we've had enough rain to fill the creeks to satisfactory



Credit: Sheila Dean

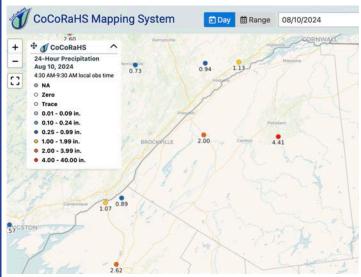
level. If not, we move forward with rescheduling the event to a later date. I also encourage our stream monitoring volunteers to keep an eye on the gauges near their streams as well. In our article, we also mention that our project to distribute free gauges also allowed us to recruit new volunteers. More than half of the gauges that we distributed went to folks who were not current CSI volunteers.

Is there anything you'd like CoCoRaHS observers to know?

Keep up the good work! Your efforts are a huge help with CSI's efforts to monitor water quality in our streams and lakes. If you love the CoCoRaHS interactive map, you might also like CSI's public water quality database where we publish the results of our volunteer-collected data, which can be found here.

Annual Recap

NWS Burlington: St. Lawrence Valley Flooding by Seth Kutikoff



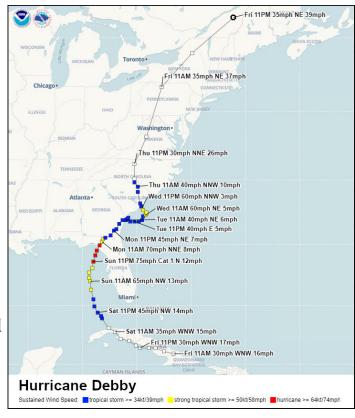
On August 9, a 50 to 70 mile swath of very heavy rain fell in central portions of St. Lawrence County into northwestern Franklin County in northern New York on the western flank of Tropical Storm Debby. Reported amounts ranged from 3 to 7 inches. From our CoCoRaHS observer's notes in Hannawa Falls, who measured 4.41 inches of rain: "Devastating. Over 100 St. Lawrence County roads closed during storm (app, 3pm to 6pm, Aug 9). Over 50 roads still closed at noon today. Multiple bridges out. Most damage was in middle of county - northern St. Lawrence River side and high elevations in southern part

had much less rain and damage. Several buildings collapsed in county." Farther west, field and street flooding was reported by our CoCoRaHS observer in Heuvelton with 2 inches of rain, but they were spared the destruction that occurred just to the east.

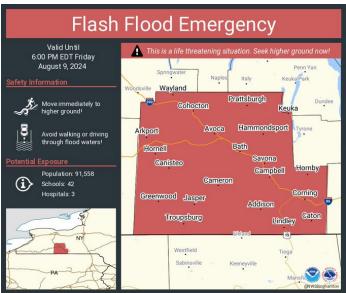
Annual Recap Continued

NWS Binghamton: Steuben County Flooding by Ben Lott

On May 17, 2024, the NWS Binghamton office hosted the Steuben County Emergency Manager for a presentation on the flash flooding from Tropical Storm Fred in 2021. Little did we all know that three months later, the remnants of Hurricane Debby would do something similar. After making a double landfall, first in western Florida and then in South Carolina, Hurricane Debby weakened as it moved inland and then turned towards the Northeast on August 8. Ahead of the remnants of Debby, scattered showers developed over Central New York and Northeastern Pennsylvania on the 8th. Then on August 9, the remnants of Debby brought widespread rain to the region. With warm, tropical moisture present, rainfall totals of 2 to 4 inches were observed in Steuben County. CoCoRaHS NY-ST-44 near Bath was one of the highest reports with 3.70 inches of rain between August



8 and 10. Prior to this event, July and the first week of August were also quite active with multiple systems including the remnants of Hurricane Beryl. Due to above-normal rainfall during this period,



On August 9, NWS Binghamton issued a Flash Flood Emergency for Steuben County. This is the highest level alert for flash flooding, signifying a dangerous, lifethreatening situation. soils became saturated prior to the arrival of the remnants of Debby. The resultant flooding due to the heavy rainfall and saturated soil conditions was devastating for Steuben County. Several roads became impassable as multiple inches of water covered the roadways. There were also reports of roads and bridges completely washed out. Flooding on the Tuscarora Creek and surrounding tributaries devastated homes and businesses with the villages of Greenwood and Jasper being the hardest hit. Some homes were pushed off their foundations and floated downstream into bridges. Dozens of people were rescued from their homes and vehicles, but fortunately, there were no casualties reported. Damage assessments estimated tens of millions of dollars in damage across the county.

Annual Recap Continued

2024 - The Year of Twisters in New York State by David Thomas, NWS Buffalo

New York State is not known to have an abundance of tornadoes, and is many states away from what is commonly known as tornado alley. However, the year 2024 had many more tornadoes than normal for the state. In fact, the 32 tornadoes that spun across New York State were more than three times the average of 10 tornadoes a year. Many of the 2024 tornadoes occurred in Western New York and then points eastward along counties bordering the Mohawk River Valley.





Damage in Central New York from an EF-2 tornado in July 2024. Credit: NWS Binghamton

Of these tornadoes, most were classified as either EF0 or EF1, producing damage to homes, buildings, and barns, as well as felling many trees. There were two EF2 tornadoes. The first occurred on July 10 in Western New York, tearing a three-mile long path across Eden in southern Erie County. Damage was primarily to hardwood trees and multiple farm buildings. On July 16, the second EF2 tornado spun a 5-mile long path across Central New York. The tornado ripped through the City of Rome, producing substantial structural damage to downtown, toppling buildings and churches.

What produced the outbreak of tornadoes in 2024? There were several factors that contributed to the record amount. The remnants of Hurricane Beryl passed over New York State on July 10 spawning even tornadoes in the state. A mid-level shortwave trough with considerable spin from earlier convection passed over New York on July 16 and this produced 10 tornadoes through central and eastern portions of the state. Additionally, the National Weather Service is now able to verify tornadoes from satellite imagery. Polar orbiters, including the Sentinel-1 satellite, orbit around 500 miles over earth's surface. These high-resolution satellites are able to take images on a daily basis, with resolution so fine they can display damage

that resulted from a tornado. This is especially helpful to a survey team when a tornado touches down in rural, hard-to-reach areas such as the Adirondacks, Catskills, or Tug Hill Plateau.

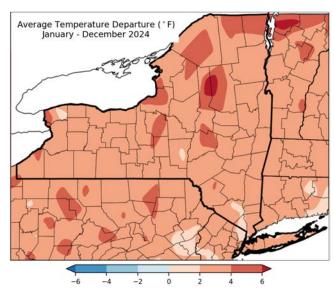
Tornadoes, much like rainfall or snowfall reports from CoCoRaHS spotters, are predicted better with in-the-field observations from the public. Trained spotters informing the National Weather Service of cloud or storm development help in the warning process, much like precipitation reports help with issuing flash flood warnings or winter storm warnings for example. Reports of storm damage help officials when completing a field survey, with the final reports used by many including climate centers, government and private organizations, and those in education fields.

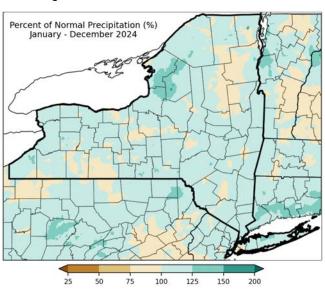
Annual Recap Continued

New York State Summary by Samantha Borisoff

2024 was New York's warmest year since recordkeeping began in 1895. The state's annual average temperature of 49.0°F was 3.0°F warmer than normal. Notably warm months included the secondwarmest February, sixth-warmest May, and 10th-warmest June.

Multiple locations such as Buffalo, Rochester, Syracuse, Watertown, Albany, and Central Park experienced their warmest year on record, with Albany and Central Park beating records set just last year in 2023. Meanwhile, 2024 was among the 10 warmest years on record for places like Binghamton and Islip.





New York's annual precipitation total for 2024 was 44.15 inches, which was 0.60 inches above normal. The state saw its sixth-wettest January and fifthwettest August. However, February was the state's fifth driest. The year ranked among the 10 wettest years on record for sites such as Watertown and Binghamton.

A particularly notable month was October, which became not just the driest October but the all-time driest month on record for LaGuardia Airport, Islip, and Central Park.

The greatest annual precipitation total at a New York CoCoRaHS site was 64.27 inches at NY-OD-2.

Second place was NY-HM-9 with 63.59 inches. The five wettest sites are listed below. The greatest daily gauge catch of the year was 9.56 inches at NY-SF-100 on August 19, with two other sites—NY-SF-84 and NY-SF-134—also recording over 9 inches of precipitation that day.

In contrast, the lowest annual precipitation total at a site that reported at least 90% of days (328) in 2024 was NY-MR-15 with 31.06 inches. A close second was NY-ST-30 with 31.94 inches.

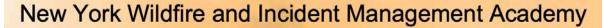
586 Stations with 137609 Reports over 366 Days

Station Name	<u>Precip</u> <u>Sum</u>	<u>Day</u> Precip	<u>Total</u> <u>Precip</u> <u>in.</u> ↓
Point Rock 0.6 SE	60.83	3.44	64.27
Hoffmeister 2.0 E	60.94	2.65	63.59
Port Jefferson Station 0.3 SSW	60.30	2.57	62.87
Centereach 1.3 NE	57.09	3.23	60.32
West Carthage 0.3 ENE	57.78	0.88	58.66
	Point Rock 0.6 SE Hoffmeister 2.0 E Port Jefferson Station 0.3 SSW Centereach 1.3 NE West Carthage 0.3 ENE	Station Name Precip Sum in. Point Rock 0.6 SE 60.83 Hoffmeister 2.0 E 60.94 Port Jefferson Station 0.3 SSW 60.30 Centereach 1.3 NE 57.09	Station Name Precip Sum In. Day Precip In. Point Rock 0.6 SE 60.83 3.44 Hoffmeister 2.0 E 60.94 2.65 Port Jefferson Station 0.3 SSW 60.30 2.57 Centereach 1.3 NE 57.09 3.23

New York Wildfires

by Tim Morrin, Southern NY Coordinator

An emerging deficit of rainfall across most of New York rapidly developed into record-breaking dry periods that have been unprecedented in some cases. CoCoRaHS observers across the state dutifully recorded their zeros and assisted climate specialists to determine the magnitude of the rapidly-expanding drought. These exceedingly dry conditions led to wildfires across the region, and some of the largest, and unfortunately, deadly fires have been across the southern region of New York. Wildland firefighters from all across the state and beyond mobilized into the region to assist in containing and putting out these fires. A significant number of these wildfire specialists have been trained at the New York Wildfire and Incident Command Academy. Here is some information about the Academy...



Quality training through interagency cooperation

- Formed in 1997 after two severe wildfires raced across portions of the Pine Barrens in Suffolk County, NY. A need for more formal and comprehensive training was realized.
- Run by the Central Pine Barrens joint planning and policy commission, this Academy has trained over 7300 firefighters and emergency response personnel.
- NYWIMA's goal is to provide all-hazards, wildfire, and incident management training in a safe learning environment for first responders, public safety personnel, emergency services workers, firefighters and incident managers and to foster greater networking opportunities and partnerships among participants from federal, state and local agencies.



New York Wildfire and Incident Management Academy

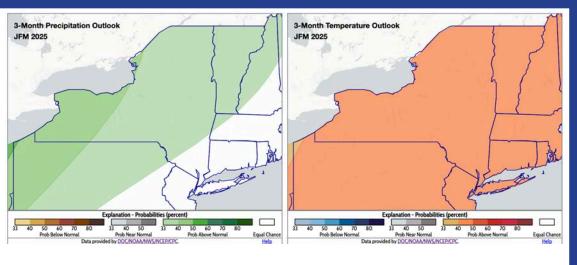
NYWIMA operations follow these five objectives:



- Train students to National Incident Management System (NIMS) and National Wildfire Coordinating Standards (NWCG).
- Develop qualified trainers and instructors for Wildfire and Incident Management Courses.
- Develop awareness of all-hazards and fire management and fire fighting safety among first responders, public safety personnel, emergency services workers, fire fighting organizations, incident managers and public officials.
- Encourage interagency cooperation, coordination, exchange of experience, education and technology transfer from all levels of government.
- Develop a group of interagency leaders to build upon the first four goals in the metropolitan New York and Northeast Region.

Outlooks by Samantha Borisoff, NYS Coordinator

For January– March, NOAA's Climate Prediction Center favors wetter-thannormal conditions



for all areas but southeastern New York, with the greatest likelihood generally in western New York. This is linked to La Niña, which <u>has finally arrived</u> and is expected to stick around through early spring. Equal chances of below-, near-, or above-normal precipitation were forecast for the rest of the state. Normal precipitation for the period includes 7.17 inches in Rochester, 7.41 inches in Watertown, 8.08 inches in Syracuse, 8.73 inches in Buffalo, and 11.46 inches in Islip.

Above-normal temperatures are favored for January–March across New York. Normal average temperatures for the period include 19.5°F in Lake Placid, 23.8°F in Watertown, 26.4°F in Binghamton, 28.7°F in Buffalo, 29.0°F in Albany, and 37.5°F in New York City.

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