NY CoCoRaHS Newsletter

June 2022

Contents:

Welcome to our first newsletter! Our goal in creating this was to connect with each of you, our wonderful CoCoRaHS observers. We're grateful for all you do! This newsletter is meant to showcase your achievements, highlight the many ways your observations are important, and provide interesting weather-related information. We plan to release newsletters twice a year, likely in January and June. If you'd like to provide feedback, be featured in our observer profile, or submit a photo for use in the newsletter, please email cocorahs@cornell.edu.

Thanks for reading!

- Samantha Borisoff, NYS Coordinator

Photo by NY-TG-20

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 January 1 through May 31.

Golden Raindrop

NY-AB-1
NY-AB-21
NY-AB-32
NY-AB-66
NY-AL-11
NY-BM-55
NY-CB-15
NY-CB-16
NY-CL-7
NY-CL-12
NY-CM-21
NY-CM-24
NY-CN-9
NY-CN-16
NY-CQ-5
NY-CQ-9
NY-CQ-22
NY-CQ-27
NY-CR-1
NY-CR-3
NY-CY-5
NY-CY-14
NY-CY-26
NY-DL-32
NY-DT-10
NY-DT-12
NY-DT-24
NY-DT-32
NY-DT-34
NY-DT-35
NY-ER-39
NY-ER-50
NY-ER-53
NY-ER-56
NY-ER-57
NY-ER-59
NY-ER-75
NY-ER-102
NY-ER-122
NY-ER-135
NY-ER-158
NY-ER-166
NY-ER-177
NY-ER-189
NY-ER-194
NY-ER-219
NY-ER-234
NY-ES-5
NY-FK-7
NY-GR-6
NY-GR-7
NY-GR-14
NY-GR-15
NY-LV-8
NY-LW-3
NY-LW-12
NY-MD-16
NY-MD-22
NY-MG-1
NY-MG-5
NY-MR-15
NY-MR-21
NY-MR-84
NY-NG-2
NY-NG-12
NY-NG-27
NY-NG-30
NY-NG-55
NY-NS-66
NY-OD-2
NY-OD-21
NY-OD-43
NY-OD-60
NY-OG-10
NY-OG-46
NY-OG-70
NY-OG-71
NY-OL-5
NY-ON-15
NY-OR-4
NY-OR-17
NY-OR-21
NY-OS-1
NY-OS-15
NY-OS-20
NY-OS-38
NY-OT-11
NY-PT-2
NY-QN-33
NY-QN-39
NY-RC-1
NY-RL-8
NY-RN-1
NY-RN-13
NY-RN-20
NY-SC-16
NY-SC-27
NY-SF-2
NY-SF-16
NY-SF-34
NY-SF-44
NY-SF-73
NY-SF-77
NY-SF-92
NY-SF-103
NY-SF-114
NY-SF-123
NY-SF-127
NY-SF-138
NY-SL-6
NY-SR-4
NY-ST-3
NY-ST-41
NY-TG-28
NY-TM-23
NY-TM-45
NY-UL-28
NY-UL-29
NY-UL-31
NY-UL-32
NY-UL-34
NY-WC-6
NY-WC-18
NY-WC-22
NY-WN-6
NY-WN-18
NY-WR-21
NY-WY-10
NY-WY-11
NY-YT-12

Silver Raindrop

NY-AB-23
NY-BM-21
NY-BM-52
NY-CB-19
NY-CQ-39
NY-CQ-41
NY-CQ-42
NY-DL-25
NY-ER-63
NY-ER-178
NY-ER-208
NY-ER-236
NY-ER-242
NY-FL-7
NY-HM-8
NY-HM-10
NY-HR-18
NY-JF-30
NY-KN-25
NY-MD-10
NY-MR-23
NY-MR-26
NY-MR-50
NY-MR-65
NY-NG-32
NY-NS-7
NY-NS-65
NY-OD-23
NY-OG-12
NY-OG-52
NY-OR-18
NY-OR-19
NY-RN-15
NY-RN-24
NY-SC-2
NY-SF-100
NY-SF-110
NY-SF-148
NY-ST-10
NY-TM-4
NY-TM-5
NY-UL-20
NY-UL-37
NY-WC-11
NY-WC-20
NY-WC-35
NY-WC-37
NY-YT-8

Bronze Raindrop

NY-AB-10
NY-AB-47
NY-BM-4
NY-BM-14
NY-CQ-35
NY-CT-25
NY-CY-8
NY-DL-28
NY-DL-34
NY-DT-23
NY-DT-29
NY-ER-86
NY-ER-96
NY-ER-98
NY-ER-138
NY-ER-151
NY-GN-13
NY-GN-20
NY-GN-6
NY-HM-9
NY-HR-16
NY-JF-44
NY-MG-2
NY-MG-3
NY-NS-42
NY-NS-46
NY-OD-19
NY-OT-14
NY-OT-35
NY-SC-17
NY-SC-26
NY-SF-84
NY-SF-85
NY-SR-16
NY-SR-29
NY-SR-40
NY-ST-30
NY-SY-1
NY-TM-18
NY-TM-42
NY-TM-47
NY-UL-38
NY-UL-39
NY-WC-32
NY-WR-17
NY-WS-10

CoCoRaHS NY Turns 15!

In September 2007, New York became the 22nd state to join CoCoRaHS. Many of the first CoCoRaHS observers were part of the NWS SKYWARN spotter program and also spotters from the Central NY Rain and Snow Spotter Network, which dated back to the early 1990s. The data from those observers helped calibrate radar rainfall and snowfall estimates in the earliest Doppler radars. Several are still with CoCoRaHS today! In fact, Central New York CoCoRaHS regional coordinator Jim Brewster is among the longest active CoCoRaHS observers. He is joined by over 40 active observers who will be receiving 15-year service awards later this year!

Observers Celebrating 15 Years of Service

NY-AB-1	NY-CN-2	NY-LW-2	NY-OG-72	NY-ST-10
NY-AL-2	NY-CR-1	NY-MD-10	NY-OR-2	NY-ST-3
NY-BM-1	NY-CR-3	NY-MD-22	NY-OR-21	NY-SY-1
NY-BM-4	NY-CT-2	NY-NG-2	NY-OS-1	NY-TG-5
NY-BM-7	NY-CY-2	NY-OD-2	NY-OT-2	NY-TG-8
NY-BM-14	NY-DL-32	NY-OD-4	NY-RN-1	NY-TM-3
NY-CM-6	NY-HM-1	NY-OG-10	NY-SF-2	NY-TM-4
NY-CM-7	NY-HR-16	NY-OG-12	NY-SF-7	NY-TM-5
NY-CM-10	NY-LV-1	NY-OG-71	NY-SR-4	NY-UL-31

Observer Profile

Each newsletter, we will introduce you to a CoCoRaHS observer. This time, we are featuring Bob Gaza, who is among those celebrating 15 years with CoCoRaHS!

Why did you join CoCoRaHS?

As a professional meteorologist, local weather observing has always been of particular interest to me. I was overseeing the Eastern NY Weather Observing Network that was originated as a collaborative effort between NYSDEC, where I work, and SUNYA back in the mid 70's. I was an observer for that network since 1988, so when I heard about CoCoRaHS, I wanted to support what I thought was as an excellent program. So I began sending in my data to CoCoRaHS.

Picture courtesy of CoCo HQ

Observer Profile

This picture of Bob was taken during the December 26–27, 2010 snowstorm. His location accumulated 23.1" but the Albany airport only had 8.5".

Why do you enjoy being an observer?

I've loved weather, and snow in particular, since I was a youth growing up in Chicago. In Chicago, my parents had a wind vane on the garage, a barometer in the hallway of our home, and a thermometer out their bedroom window. I would go from instrument to instrument monitoring each reading, looking at the cloud chart they bought me, and evaluating this information in light of local weather broadcasts on TV and radio.

Tell us a little about yourself :

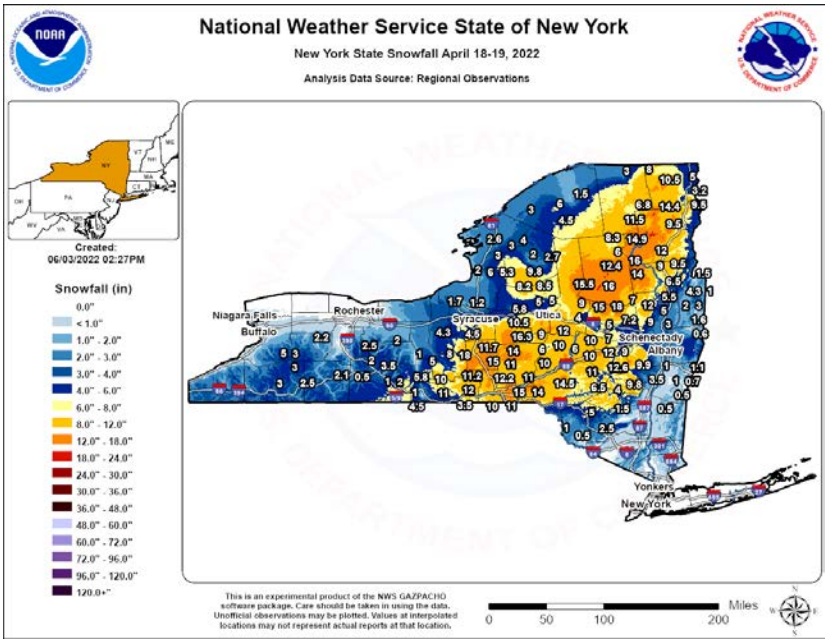
Since weather and weather observing was a hobby as a youth, a well-known meteorologist on a Chicago news station visited our high school introducing interested parties to career opportunities in meteorology. He mentioned Northern Illinois University (NIU) as offering a meteorology degree program. That's all I needed to hear, so I applied to NIU and got my bachelor's degree there. Since I couldn't get enough meteorological learning, I applied to grad school and went to the university that offered my chief area of interest (synoptic-dynamic meteorology) and received the most snow... SUNYA. I finally graduated from SUNYA with a Ph.D. Having become a Christian during these years, I determined to find work in the field in the Albany area in order to stay with the Baptist church I was attending. During that time I was led to NYSDEC in Albany. I eventually met my future wife at the church, have now been working at NYSDEC for over 30 years. I also enjoy, sports, especially hockey, health-nutrition, medical science, and fishing with my 3 boys.

What is your favorite weather or memorable weather event?

As already intimated, snow/snowstorms is my favorite weather. Though I have been skiing, I love snow for the white beauty, the tranquility it brings, and the way snow can paralyze a city and bring temporary relief from the rat-race of society. My most memorable weather event is a toss-up between the 3-day Chicago blizzard of January 25-27, 1967 where 27" fell at O'Hare Airport, the 3-day snowstorm in central Rensselaer County (where we live) on December 5-7, 2003 when we measured 39", and the October 4, 1987 snowstorm when central Rensselaer County received 20" of heavy, wet snow which resulted in one of the greatest natural disasters in Albany's history. I couldn't close without mentioning the great March blizzard of 1888 which I didn't experience, but do love to study and read about.

April 18-19 Nor'easter

Low pressure, that formed in East Texas, became a late season Nor'easter and impacted New York from the evening of April 18th into the 19th. This spring storm caused a variety of weather across the state, from heavy wet snow in the interior to heavy rains, gusty winds, and coastal flooding along the coast.

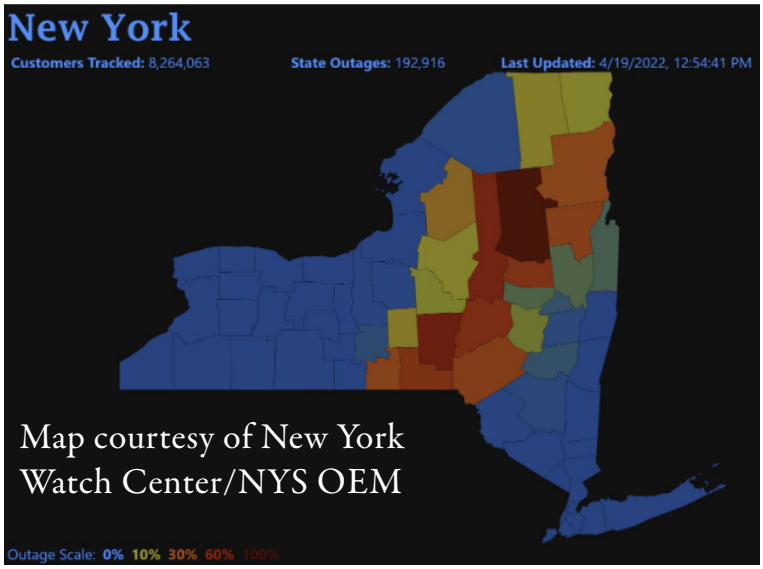


NWS Albany: The wet, heavy snow event on April 18–19 was rather unusual by mid to late April standards and the fact that it occurred without a cold air mass in place ahead of the system. In fact, since the incoming storm intensified as it tracked towards New England, it generated its own cold air through what's called evaporative cooling processes. This occurs when precipitation falls through dry air beneath the clouds and as the precipitation evaporates, the air cools down. Eventually this process will allow precipitation to transition to snow. In the case of the April 18–19 event, this resulted in a very wet snow event where the higher terrain areas including the Adirondacks, the Helderbergs, and the eastern Catskills observed 6–12 inches of wet snow with locally higher amounts up to 12–16 inches in the Adirondacks. The fact that this event occurred overnight also assisted in rain transitioning to snow and allowed it to stick. While the higher terrain observed the most impressive snow amounts, the valley did not escape unscathed and rain eventually transitioned to snow through evaporative cooling process overnight April 18 into April 19. Generally 1–3 inches fell in the valley. The wet snow combined with gusty winds overnight also resulted in power outages with a considerable number of outages in the eastern Catskills.

NWS Binghamton: A heavy wet snow was produced by the storm with snowfall amounts ranging from just a slushy coating, in the lower valleys and metro areas of the Finger Lakes region and Southern Tier, up to around 15 inches over the higher elevations of the Catskills and Leatherstocking regions. This wet snow caused damage to trees, wires, and power poles which led to widespread power outages and a disruption of daily activities. Tens of thousands of central New York residents were without power, some for up to 3 to 4 days.


Photo courtesy of NWS Binghamton

April 18-19 Nor'easter



Map courtesy of New York Watch Center/NYS OEM

NWS Buffalo: The April 18–19 late season snow event missed Western New York's two largest cities of Buffalo and Rochester, but had notable impacts across areas east of both Lake Erie and Lake Ontario. As the center of the storm tracked across New England heavy, wet snow fell late on the 18th and into the 19th. The greatest impacts from this storm occurred on the Tug Hill of Lewis County where lake enhanced snow combined with the widespread snow produced snow totals up to a foot and a half. One observer in Lewis County (Chases Lake CoCoRaHS) reported that there was no electricity and many trees down, but was able to send in their weather observation through their solar power. The greatest snow recorded on the Tug Hill was near Constableville NY with 19.0 inches measured. Gusty winds combined with snow east of Lake Erie to produce late season tricky travel conditions on both the 18th and 19th. A CoCoRaHS station in Kennedy NY recorded 6.9 inches of snow with this two day event. As is typical in late season events, the greatest snow totals were found across higher terrain. A benefit to the local forecast office is to have a good density of reports, knowing what elevation separates the heavy snow accumulation from the more manageable amounts. Every report is much appreciated! The coldest air of the month preceded this storm system, with both Buffalo and Rochester measuring the coldest temperature on the morning of April 18, before the snowflakes fell.

NWS Burlington: Snow ratios were extremely low in this snowstorm. Typically anything 8:1 or lower is considered a very wet snow; reported values were lower, even below 5:1! Consider that snow ratios are inversely related to density of snow, so that for every inch of snowfall, a 5:1 ratio is twice as heavy as a 10:1 snow ratio. At the same time, very heavy snowfall rates were observed. Liquid equivalent of 0.3" to 0.43" was observed in one hour in northern New York. Even with a very wet snow ratio of 5:1, that gets you 1.5 to 2 inches of snow in one hour. Considering how the snow caked onto surfaces in a manner comparable to ice accretion, modest wind speeds resulted in weighted down tree limbs. CoCoRaHS observer NY-ES-12 in Saranac Lake reported extensive damage including many fallen birch trees. Meanwhile, CoCoRaHS observer NY-CL-12 in Saranac commented, "Almost 7 in. of wet concrete snow", having received 0.80 inches of snow water equivalent or a snow to liquid ratio of 8.1 to 1.

NWS New York: This summary focuses on the southeast portions of New York, NYC and Long Island. Although snow evaded the coastal region, a whipping rainstorm did not. With a full moon just a few days before, the tides were abnormally high during the onslaught of southeast wind. Tidal departures raised some eyebrows across the coastal communities, and the NWS jumped into action, issuing coastal flood bulletins for the local coastal locals. The storm was gratefully a quick mover, but in spite of that, over 2 inches of rain fell across numerous portions of NYC and surrounding locations. This caused some local street flooding along with the coastal minor inundations.

How CoCoRaHS Observations are Used

Your observations, including the zeros, are important and are used by many organizations every day!

Your precipitation reports can help hydrologists monitor for flood potential, the agriculture industry pinpoint locations experiencing drought stress and declining soil moisture, and golf course managers determine how much to water their greens.

Who uses CoCoRaHS Observations?

- Weather Forecasters
- Hydrologists
- Water Managers
- Researchers
- Agriculture
- Climatologists
- Insurance Industry
- Engineering
- Recreation
- Many others...

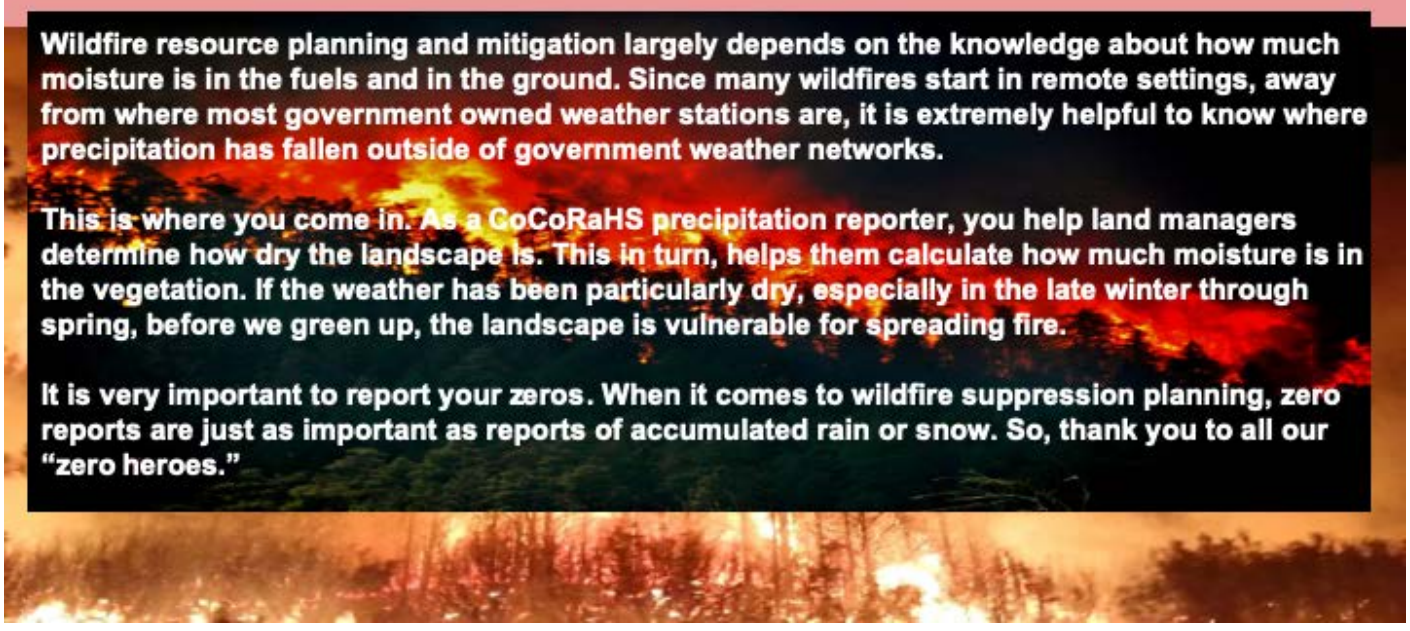
Your snow reports can help water managers know if spring snowmelt might recharge aquifers, climatologists track changes in snowfall patterns, and engineers design roofs that can safely bear the weight of accumulated snow.

Your significant weather reports are received immediately by forecasters at the National Weather Services offices across the state, helping them better predict severe weather, decide when to issue a warning, and verify weather conditions.

This list goes on and on! So thanks for all you do and keep up the good work!

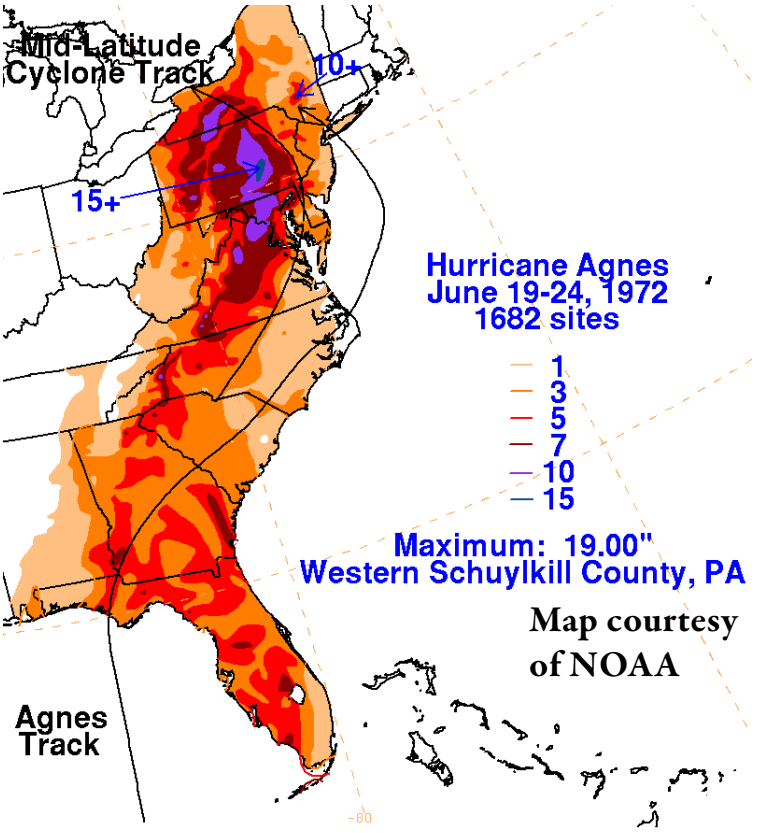
CoCoRaHS and Wildfires - Your Reports Help!

by Tim Morrin, NWS New York



50th Anniversary of the Infamous Hurricane "Agnes" Flood

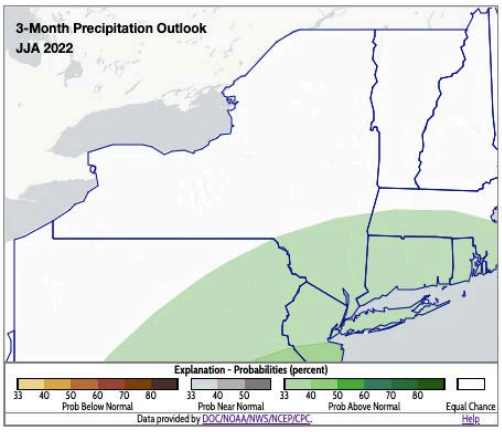
by Jim Brewster, NWS Binghamton

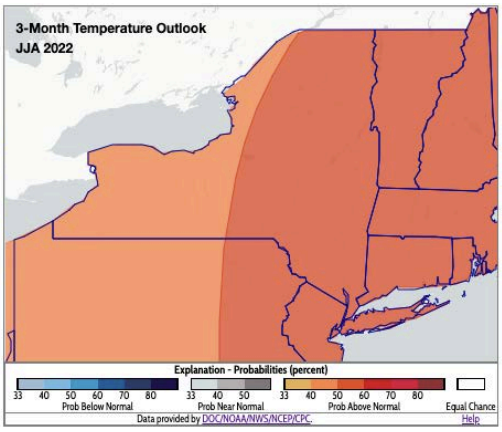


June marks the 50th anniversary of the great Hurricane Agnes flood of 1972. Agnes began near Mexico's Yucatan Peninsula on June 14, 1972 and achieved a Category 1 hurricane status in the Gulf of Mexico on June 18. By the time it moved into the Mid-Atlantic states on June 22, it had weakened to a Tropical Depression. As we all now know, the strength of the winds in the cyclone were not the problem. Copious amounts of rainfall surged well out ahead of Agnes and interacted with a strong cold front moving through New York. This situation is what is known in the meteorological business as a "predecessor rainfall event" and can bring a deluge of torrential rainfall to a region well inland, long before the remnants of a tropical cyclone arrive. Flash flooding and river flooding were well underway before the actual rainfall associated with the heart of Agnes arrived, and she was just the entity that was the final straw to complete the disaster. We mention this historical event, not just to acknowledge its place in history, but to point out how critically important your CoCoRaHS observations are. Back in 1972, rainfall gauges were few and far between across New York, and although they did a reasonable job of documenting the event at their location, there were considerable gaps in the data across the affected areas. In order to have done a better job of predicting the extreme nature of flooding those days, it sure would have been great to have the much higher density of dedicated CoCoRaHS observers in place. In fact, the more recent severe flood events of tropical storms "Irene" and "Lee" proved exactly this point as your observations were critical in the forecasting and warning for those two storms.

Photo courtesy of NWS Binghamton

Outlooks





Summer is expected to be warmer than normal for New York, according to NOAA's Climate Prediction Center. This doesn't mean that we won't get some cooler-than-normal days, though. It means that the three-month summer period from June through August will likely average out to be warmer than normal. In addition, there's an increased chance for a wetter-than-normal summer for Long Island, New York City, and parts of the Hudson Valley and Catskills.

This hurricane season is expected to be another busy one! NOAA's Atlantic Hurricane Outlook says an above-average season is most likely, predicting 14–21 named storms, of which 6–10 could become hurricanes, including 3–6 major hurricanes. An above-average season is favored due to factors such as current La Niña conditions and warmer-than-average sea surface temperatures. The season runs from June 1–November 30, peaking from mid-August to late October. The first named storm of the season, Tropical Storm Alex, formed on June 5. This would be the seventh consecutive above-average season.

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