Community Collaborative Rain, Hail & Snow Network



September 2019

We begin National Rain Gauge Week. It is our network's time to shine, and to shine with reports of precipitation and zeros alike. Our quest is to submit 15,000 Daily Reports in a day, and to do that, we need everyone to report.

With this National Rain Gauge Week, it would be quite the accomplishment to break 10,000 Daily Reports in a 30-day month of September. Another record to break is our single day total of 366 Daily Reports.

Rhode Island broke its single month reporting record, and they led our growth to another month over 10,000 Daily Reports for the month. Rhode Island reported a staggering, a very high, 27.2 Daily Reports per Reporting Observer, putting their reporting effort higher than Delaware.

Our last set of Water Balance Charts are included. We thank our ET observers for the great work they have done this growing season.

Grand List, Observer Tips, Condition Monitoring Reports, and more.

The longest list of over 263 stations awaits. Congratulations to all, including our newest observers that made the list for the first time.

We have more than 400 Reporting Observers now! Let's get into it.

The "Grand" List

Congratulations to all of these observers from our three states who have recently passed a milestone of 1000 Daily Reports.

3000 Daily Reports

MA-BE-3 Stockbridge .2 NNE

2000 Daily Reports

CT-FR-23 Shelton 1.3 W MA-BA-36 Harwich 2.6 ENE MA-NF-11 Millis 2.0 SW

1000 Daily Reports

MA-NF-19 Foxborough 1.8 SSW RI-PR-50 Harrisville 1.2 SSE MA-MD-55 Holliston 0.7 W Wilbraham 3.7 SSW MA-NF-26 Bellingham 2.4 S

Observer Tips

Quality Assurance/Quality Control A new animated <u>video</u> has been released. Please take the 3 minutes and view it. Couple this video with another <u>video</u> released a few years ago about Comments / Observation Notes.

Two words summarize it all: Accuracy matters.

Your reported amounts, dates and times, are viewed and valued. We want to make sure, regardless of amount and when your reports are made, that they are as accurate as possible. As the "Quality" video explains, observers' reactions to questioning a report do range from "I didn't know anyone looked at my reports" to "My reports are never wrong."

There are layers of checks over your reported amounts, observation dates and times. Locally, we spend part of our morning and lunch hours looking over your reports and reading your Comments. As the new day continues, the staff at HQ in Colorado continue to check over reports. As this Monthly Newsletter is pieced together, we check over even more.

Mistakes tend to happen with reporting, not with measuring. With snow values being reported, mistakes multiply.

If your reported amount, date or time, does look out of place, someone will send you an email about it. Please reply to that message so that correct amount, date or time is made.

There are layers of checking that **you** can do with each one of your reports. They are...

- Decimal point errors are very common. Check over your report after your press submit, with either the website, or with the "History" function on the mobile app.
- Comments. Observation Notes. On the website. On the 1st page of the Android app. On the 2nd page of the iPhone/iPad app. Entering a Comment about the precipitation will often satisfy the suspicions of us all and quality checkers alike. Make a Comment that clarifies and verifies your report of precipitation. Repeat your reported amount

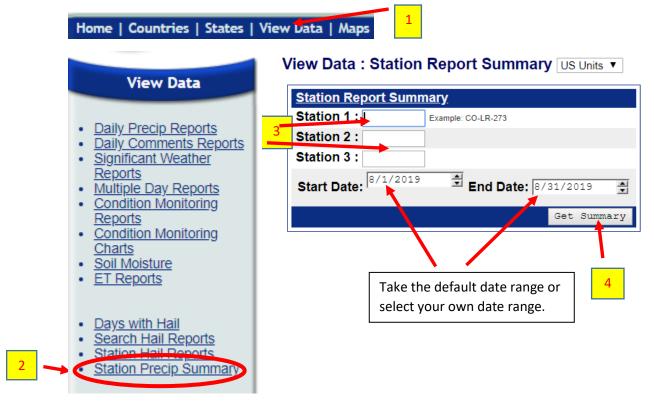
- within the Comment. That Comment serves as a double check to your reported amount.
- Observation times matter greatly on those 1 or 2 days a month it is precipitating during your morning observation. Be accurate with your Observation time, especially on those days when it is precipitating at your morning observation time.
- Take a day or more off? Submit a Multi-Day Report. A Daily Report with precip over multiple days does stand out when there was less precip or no precip that day.

Keep Quality in your reports all year round.

Cleaning the Gauge Now that summer's heat and humidity are behind us, a clean gauge now will probably last more than a few weeks. With these sunny dry days of September, there are many opportunities to take your gauge to the kitchen sink for a cleaning.

Leak Check your Outer Cylinder On a fine clear dry day, take in your outer cylinder, keep the underside from getting wet, fill the outer cylinder with an 1" or so of water and let the outer cylinder with water sit on a paper towel or dry surface to see if your outer cylinder has a hairline crack/leak. Repair or replace the outer cylinder if necessary. Chances are good, in October, that we all get a widespread 1"+ rain event that will test all of our outer cylinders. We all often get a 2"+ rain event sometime in October & November before the winter snows arrive.

Station Precip Summary This inquiry tool on the website allows you look at your station and two others. It will show missing reports, multi-day reports and it will total your precipitation.



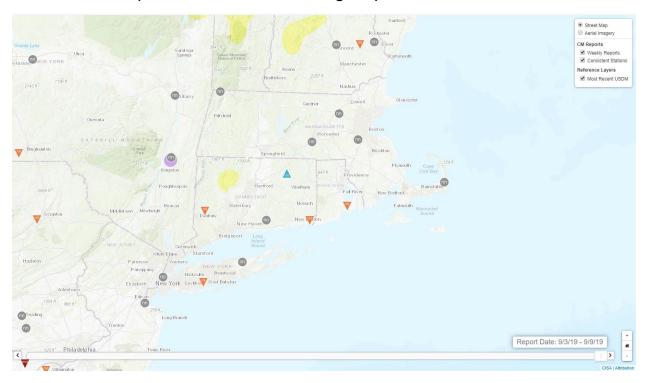
By the numbers.

- 1- View Data.
- 2- Station Precip Summary.
- 3- Enter 1, 2 or 3 stations.
- 4- Click on Get Summary

Condition Monitoring Reports: Another summer month where the zeros dominated our reporting, and the downpours came to some of us.

Keep up the reporting of Conditions in the months to come. One report a week is all that we seek. Develop a reputation of being a Consistent Station by submitting over 20 reports in a 52-week timeframe.

Our current map of Condition Monitoring Reports



Evapotranspiration (ET₀)



EVAPOTRANSPIRATION GAUGE

We are ending a terrific season of having 7 observers in our 3 states, actively taking referential evapotranspiration (ET₀) measurements, in addition to their normal precipitation measurements.

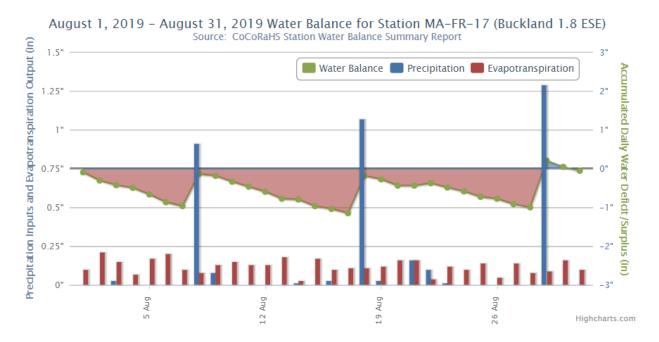
Making two measurements and two reports each day, these observers tell us all whether it was dry or wet during these warm weather months.

The Midwest Regional Climate Center developed <u>a map</u> of their own, using these ET and Water Balance totals. The CoCoRaHS website has a link to <u>Water Balance Charts</u>

Thank you to all of our observers who made these double measurements and double reports for precipitation and evapotranspiration. Whenever you want to end your ET measurements and reports is left up to you. If you can continue to our first frost or first freeze in October, please continue with your ET measurements and reports.

This is our final segment, our third consecutive month, highlighting our ET observers in our area. Read on to see three more Water Balance Charts from August.

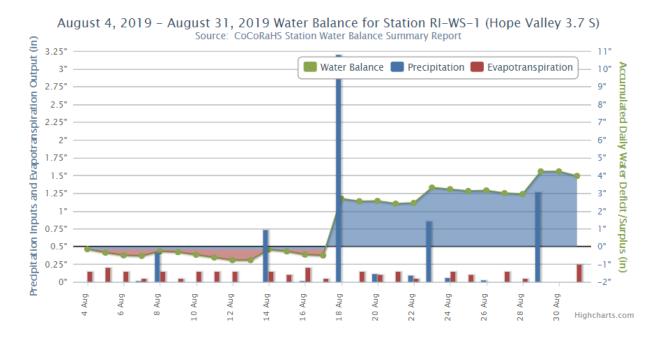
From Buckland MA, our newest ET observer.



Red bars are for Evapotranspiration. Blue bars are for precipitation.

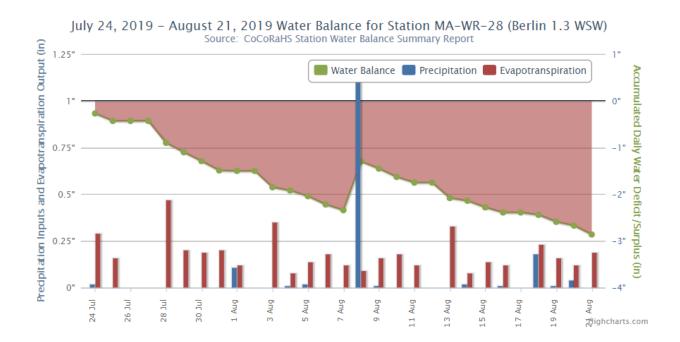
Commentary: Two Daily Reports of 1"+ rainfall reported here, keeping the Water Balance neutral.

From Hope Valley RI, one of Rhode Island's and New England's first observers.



Commentary: One 3" rain event to go along with a 1" rain event, and the water balance tips towards wet.

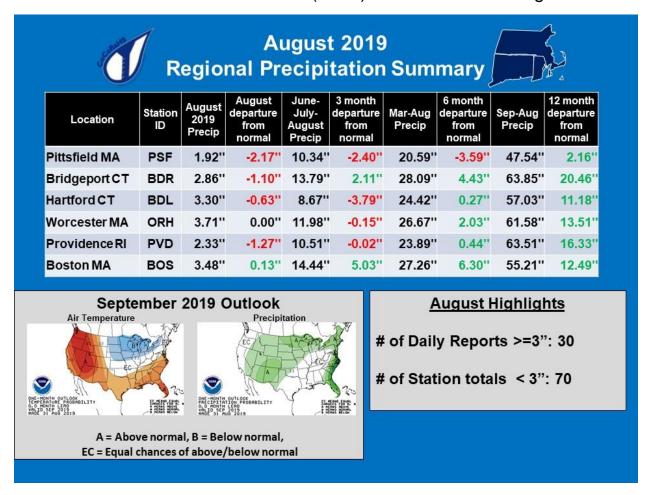
From Berlin MA, this observer leads our area having submitted over 630 ET reports, spanning the Year 2015, 2016, 2017, 2018 and now the 2019 growing season.



Commentary: This is certainly one exception where the 1" rain event does not keep the Water Balance near zero. This Chart does show a nearly 3" loss for this block of time.

Detail and Summary for August 2019

From the National Weather Service (NWS) Climate sites for August 2019.



As we typically see in the summer months, hit and miss rain showers... and your timely and valuable Significant Weather Reports.

The main event for August was reported on the 8th, noted by the map on the next page, as big rains came to Hartford, Windham, Providence, Norfolk and Middlesex (MA) counties.

Scraping through southern New London and Washington counties was a 1"+ event reported on the 14th. Rains in Rhode Island reported on the 20th. 3" & 4" rains in East Hartford CT and Manchester CT reported on the 22nd. More big rains in Eastern CT and Cape Cod for the 29th.

Take in the next section with appreciation of your efforts.

From your reports for August 2019

Observers reporting 406

Reported all 31 days 191

72 Completed by Multi-Day Reports

> 56 Missing 1 or 2 reports

> > Daily Reports 10034

6191 Zero Reports

Non-Zero Reports 3843

1743 **Daily Comments**

Multi-Day Reports 221

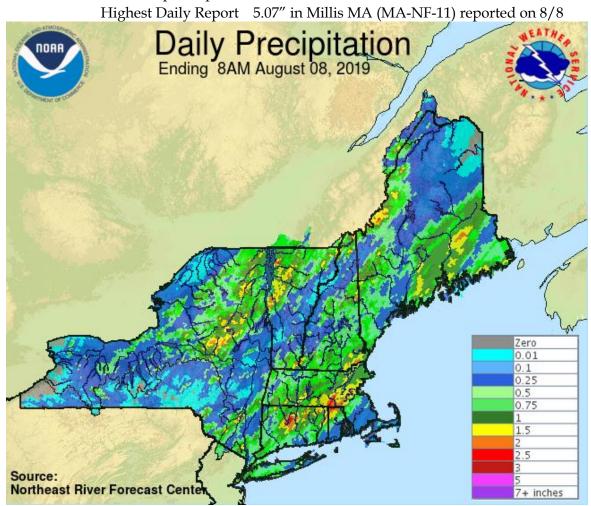
Condition Monitoring Reports 62

Significant Weather Reports 19

> Hail Reports 1

Snowfall Reports 5580

Snow Depth Reports 2683



Congratulations on yet another single month record!! 263 stations from our 3 states made this list!

August is a time to get away and a time to get together. It is obvious that many of you got away with so many Multi-Day Reports. Helpful to this record was that the beginning and end of the month were rain free, so many overlapping Multi-Day Reports were allowed into this list.

Station Precip Summary on the website, and the History function on the mobile app are two great tools to use to check for missing reports.

Take this long list in, so long that it spans over 8 pages. See how variable rain can be during these summer months, with some totals less than 2" and others over 9".

		Station		
Watershed	Watershed Name	Number	Station Name	Precip
01070004	Nashua			
0107000401	North Nashua River	MA-WR-44	Westminster 0.6 WSW	3.10"
0107000401	North Nashua River	MA-WR-8	Fitchburg 1.6 SSW	2.36"
0107000401	North Nashua River	MA-WR-52	Fitchburg 2.3 N	1.82"
0107000401	North Nashua River	MA-WR-22	Fitchburg 2.0 NNE	2.27"
0107000402	Headwaters Nashua River	MA-WR-64	Sterling 3.7 WNW	3.85"
0107000402	Headwaters Nashua River	MA-WR-56	Sterling 4.3 NW	4.01"
0107000402	Headwaters Nashua River	MA-MD-25	Ayer 0.1 SW	3.64"
0107000403	Squannacook River	MA-MD-47	West Townsend 0.5 W	2.17"
01070005	Concord			
0107000501	Sudbury River	MA-MD-156	Marlborough 2.8 ENE	4.83"
0107000501	Sudbury River	MA-MD-89	Sudbury 3.6 W	4.75"
0107000502	Concord River	MA-WR-28	Berlin 1.3 WSW	2.61"
0107000502	Concord River	MA-WR-18	Northborough 0.6 SSE	3.95"
0107000502	Concord River	MA-WR-42	Northborough 2.3 N	2.84"
0107000502	Concord River	MA-MD-115	Hudson 1.4 NW	3.36"
0107000502	Concord River	MA-MD-12	Acton 1.3 SW	5.07"
0107000502	Concord River	MA-MD-51	Maynard 0.7 ESE	4.44"
0107000502	Concord River	MA-MD-53	Acton 4.0 ENE	4.93"
0107000502	Concord River	MA-MD-62	Chelmsford 1.2 E	4.07''
0107000502	Concord River	MA-MD-34	Chelmsford 2.0 ENE	4.03"
01070006	Merrimack River			

0107000612 Stony Brook - Merrimack River MA-MD-104 Littleton 2.8 NNW 3.72"				T	
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0108020303 North River MA-FR-29 Colrain 0.8 WNW 2.27" 0108020305 Lower Deerfield River MA-FR-17 Buckland 1.8 ESE 3.72" 0108020305 Lower Deerfield River MA-FR-13 Conway 2.9 NW 3.30" 0108020305 Lower Deerfield River MA-FR-25 Conway 2.7 NW 2.92" 01080204 Chicopee Chicopee Chicopee Chicopee Serimfield 3.6 NW 3.83" 0108020403 Quaboag River MA-HD-26 Brimfield 3.6 NW 3.83" 0108020403 Quaboag River MA-WR-75 Warren 2.4 WSW 3.75" 0108020404 Chicopee River MA-WR-63 Rutland 3.1 SW 3.13" 0108020404 Chicopee River MA-HD-25 Ludlow 2.3 SW 4.51" 0108020501 Mill River - Connecticut River CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57"	01080203	Deerfield			
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0108020305 Lower Deerfield River MA-FR-13 Conway 2.9 NW 3.30" 0108020305 Lower Deerfield River MA-FR-25 Conway 2.7 NW 2.92" 010802040 Chicopee Chicopee Chicopee Chicopee Chicopee 0108020402 Ware River MA-WR-54 Barre 1.4 NNE 3.95" 0108020403 Quaboag River MA-HD-26 Brimfield 3.6 NW 3.83" 0108020403 Quaboag River MA-WR-75 Warren 2.4 WSW 3.75" 0108020404 Chicopee River MA-WR-63 Rutland 3.1 SW 3.13" 010802050 Lower Connecticut MA-HD-25 Ludlow 2.3 SW 4.51" 0108020501 Mill River - Connecticut River CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503	0108020303	North River	MA-FR-29	Colrain 0.8 WNW	2.27"
0108020305 Lower Deerfield River MA-FR-25 Conway 2.7 NW 2.92" 010802040 Chicopee Chicopee Chicopee Chicopee Conway 2.7 NW 2.92" 0108020402 Ware River MA-WR-54 Barre 1.4 NNE 3.95" 0108020403 Quaboag River MA-WR-65 Brimfield 3.6 NW 3.83" 0108020403 Quaboag River MA-WR-75 Warren 2.4 WSW 3.75" 0108020404 Chicopee River MA-WR-63 Rutland 3.1 SW 3.13" 01080205 Lower Connecticut MA-HD-25 Ludlow 2.3 SW 4.51" 0108020501 Mill River - Connecticut River CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-TL-26 Broad Brook 2.6 ESE 5.65" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" <t< td=""><td>0108020305</td><td>Lower Deerfield River</td><td>MA-FR-17</td><td>Buckland 1.8 ESE</td><td>3.72"</td></t<>	0108020305	Lower Deerfield River	MA-FR-17	Buckland 1.8 ESE	3.72"
01080204 Chicopee 0108020402 Ware River MA-WR-54 Barre 1.4 NNE 3.95" 0108020403 Quaboag River MA-HD-26 Brimfield 3.6 NW 3.83" 0108020403 Quaboag River MA-WR-75 Warren 2.4 WSW 3.75" 0108020403 Quaboag River MA-WR-63 Rutland 3.1 SW 3.13" 0108020404 Chicopee River MA-HD-25 Ludlow 2.3 SW 4.51" 01080205 Lower Connecticut CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-HR-5 Enfield 1.5 SE 5.65" 0108020502 Scantic River CT-HR-39 Farmington 1.6 SW 5.34" 0108020503 Park River CT-HR-49 West Hartford 1.1 W 5.00"	0108020305	Lower Deerfield River	MA-FR-13	Conway 2.9 NW	3.30"
0108020402 Ware River MA-WR-54 Barre 1.4 NNE 3.95" 0108020403 Quaboag River MA-HD-26 Brimfield 3.6 NW 3.83" 0108020403 Quaboag River MA-WR-75 Warren 2.4 WSW 3.75" 0108020403 Quaboag River MA-WR-63 Rutland 3.1 SW 3.13" 0108020404 Chicopee River MA-HD-25 Ludlow 2.3 SW 4.51" 01080205 Lower Connecticut CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-TL-26 Broad Brook 2.6 ESE 5.65" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020305	Lower Deerfield River	MA-FR-25	Conway 2.7 NW	2.92"
0108020403 Quaboag River MA-HD-26 Brimfield 3.6 NW 3.83" 0108020403 Quaboag River MA-WR-75 Warren 2.4 WSW 3.75" 0108020403 Quaboag River MA-WR-63 Rutland 3.1 SW 3.13" 0108020404 Chicopee River MA-HD-25 Ludlow 2.3 SW 4.51" 01080205 Lower Connecticut CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-HR-5 Enfield 1.5 SE 5.65" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	01080204	Chicopee			
0108020403 Quaboag River MA-WR-75 Warren 2.4 WSW 3.75" 0108020403 Quaboag River MA-WR-63 Rutland 3.1 SW 3.13" 0108020404 Chicopee River MA-HD-25 Ludlow 2.3 SW 4.51" 01080205 Lower Connecticut CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-TL-26 Broad Brook 2.6 ESE 5.65" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020504 Hockanum River CT-HR-49 West Hartford 1.1 W 5.00"	0108020402	Ware River	MA-WR-54	Barre 1.4 NNE	3.95"
0108020403 Quaboag River MA-WR-63 Rutland 3.1 SW 3.13" 0108020404 Chicopee River MA-HD-25 Ludlow 2.3 SW 4.51" 01080205 Lower Connecticut CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-TL-26 Broad Brook 2.6 ESE 5.65" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020403	Quaboag River	MA-HD-26	Brimfield 3.6 NW	3.83"
0108020404 Chicopee River MA-HD-25 Ludlow 2.3 SW 4.51" 01080205 Lower Connecticut CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-TL-26 Broad Brook 2.6 ESE 5.65" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020504 Hockanum River CT-HR-49 West Hartford 1.1 W 5.00" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020403	Quaboag River	MA-WR-75	Warren 2.4 WSW	3.75"
01080205 Lower Connecticut CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-TL-26 Broad Brook 2.6 ESE 5.65" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020503 Park River CT-HR-49 West Hartford 1.1 W 5.00" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020403	Quaboag River	MA-WR-63	Rutland 3.1 SW	3.13"
0108020501 Mill River - Connecticut River CT-HR-82 Suffield 0.5 NNE 4.40" 0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-TL-26 Broad Brook 2.6 ESE 5.65" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020503 Park River CT-HR-49 West Hartford 1.1 W 5.00" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020404	Chicopee River	MA-HD-25	Ludlow 2.3 SW	4.51"
0108020501 Mill River - Connecticut River CT-HR-57 Suffield Depot 3.3 NNE 3.74" 0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-TL-26 Broad Brook 2.6 ESE 5.65" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020503 Park River CT-HR-49 West Hartford 1.1 W 5.00" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	01080205	Lower Connecticut			
0108020501 Mill River - Connecticut River CT-HR-5 Enfield 1.5 SE 4.57" 0108020502 Scantic River CT-TL-26 Broad Brook 2.6 ESE 5.65" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020503 Park River CT-HR-49 West Hartford 1.1 W 5.00" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020501	Mill River - Connecticut River	CT-HR-82	Suffield 0.5 NNE	4.40''
0108020502 Scantic River CT-TL-26 Broad Brook 2.6 ESE 5.65" 0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020503 Park River CT-HR-49 West Hartford 1.1 W 5.00" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020501	Mill River - Connecticut River	CT-HR-57	Suffield Depot 3.3 NNE	3.74"
0108020502 Scantic River CT-TL-15 Central Somers 0.3 N 4.25" 0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020503 Park River CT-HR-49 West Hartford 1.1 W 5.00" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020501	Mill River - Connecticut River	CT-HR-5	Enfield 1.5 SE	4.57"
0108020503 Park River CT-HR-39 Farmington 1.6 SW 5.34" 0108020503 Park River CT-HR-49 West Hartford 1.1 W 5.00" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020502	Scantic River	CT-TL-26	Broad Brook 2.6 ESE	5.65"
0108020503 Park River CT-HR-49 West Hartford 1.1 W 5.00" 0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020502	Scantic River	CT-TL-15	Central Somers 0.3 N	4.25"
0108020504 Hockanum River CT-HR-52 Central Manchester 0.8 N 6.32"	0108020503	Park River	CT-HR-39	Farmington 1.6 SW	5.34"
	0108020503	Park River	CT-HR-49	West Hartford 1.1 W	5.00"
0108020504 Hockanum River CT-TL-19 Vernon 2.8 N 3.92"	0108020504	Hockanum River	CT-HR-52	Central Manchester 0.8 N	6.32"
	0108020504	Hockanum River	CT-TL-19	Vernon 2.8 N	3.92"

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0108020505	Roaring Brook - Connecticut River	CT-HR-6	Wethersfield 1.2 WSW	5.20"
0108020505	Roaring Brook - Connecticut River	CT-HR-68	Rocky Hill 1.3 E	2.99''
0108020505	Roaring Brook - Connecticut River	CT-HR-84	East Hartford 2.0 SSE	9.07''
0108020505	Roaring Brook - Connecticut River	CT-HR-22	East Hartford 1.3 E	6.44''
0108020506	Mattabesset River	CT-HR-15	Southington 3.0 E	4.07''
0108020506	Mattabesset River	CT-HR-80	Kensington 0.7 WSW	4.62"
0108020507	Higganum Creek - Connecticut River	CT-MD-23	Higganum 0.7 N	2.27"
0108020508	Salmon River	CT-TL-29	Hebron 1.6 SW	4.45"
01080206	Westfield			
0108020601	Headwaters Westfield River	MA-HS-7	Plainfield 2.2 SW	2.75"
0108020601	Headwaters Westfield River	MA-HS-14	Plainfield 2.4 ESE	3.75"
0108020603	Outlet Westfield River	MA-HD-28	Westfield 2.8 SE	2.92"
01080207	Farmington			
0108020701	Still River	CT-LT-15	Colebrook 1.0 NE	3.71"
0108020702	West Branch Farmington River	MA-BE-4	Becket 5.6 SSW	3.85"
0108020704	Headwaters Farmington River	CT-LT-9	New Hartford Center 3.2 SW	3.04"
0108020704	Headwaters Farmington River	CT-HR-70	Canton 1.5 W	3.19"
0108020704	Headwaters Farmington River	CT-HR-71	Bristol 2.7 NNE	5.22"
0108020704	Headwaters Farmington River	CT-HR-28	North Canton 0.8 SSW	2.24"
0108020705	Salmon Brook	CT-HR-60	North Granby 0.7 N	3.18"
0108020705	Salmon Brook	CT-HR-8	North Granby 1.3 ENE	2.65"
0108020706	Outlet Farmington River	CT-HR-35	Weatogue 0.7 E	3.34"
0108020706	Outlet Farmington River	CT-HR-61	Windsor Locks 2.5 W	4.04"
01090001	Charles			
0109000101	Plum Island Sound - Frontal Atlantic Ocean	MA-ES-46	Georgetown 1.3 ENE	3.83"
0109000101	Plum Island Sound - Frontal Atlantic Ocean	MA-ES-24	Newburyport 0.8 SW	4.41"
0109000102	Ipswich River	MA-MD-85	Wilmington 2.2 WNW	4.06"
0109000102	Ipswich River	MA-MD-125	Tewksbury 3.6 SSE	3.96"
0109000102	Ipswich River	MA-MD-45	Wilmington 1.5 NE	3.99"
0109000102	Ipswich River	MA-MD-69	North Reading 1.5 NW	3.44"
0109000102	Ipswich River	MA-ES-58	Middleton 1.4 SSW	4.27"
0109000102	Ipswich River	MA-ES-12	Boxford 2.4 S	4.19"
0109000102	Ipswich River	MA-ES-2	Beverly 2.8 NW	5.29"
0109000103	Essex River - Frontal Atlantic Ocean	MA-ES-41	Danvers 0.8 ESE	4.73"
0109000104	Saugus River - Frontal Broad Sound	MA-MD-81	Wakefield 0.5 NNW	4.30"
0109000104	Saugus River - Frontal Broad Sound	MA-MD-126	Melrose 0.5 NE	4.19"
0109000104	Saugus River - Frontal Broad Sound	MA-ES-45	Nahant 0.4 N	2.86"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-123	Lexington 1.3 SE	3.32"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-18	Belmont 0.2 ESE	4.99"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-7	Winchester 0.7 SE	4.46"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-44	Medford 1.2 W	4.66''
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0100000105	Mustic Diver Frontal Destan Harber	NAA NAD 11	Cambridge O. O. NINIM	5.62"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-11	Cambridge 0.9 NNW Chelsea 0.8 N	4.61"
	Mystic River - Frontal Boston Harbor	MA-SF-10	Milford 2.3 NNW	5.80"
0109000106	Upper Charles River	MA-WR-1		4.83"
0109000106	Upper Charles River	MA-MD-106	Holliston 2.4 W	
0109000106	Upper Charles River	MA-MD-55	Holliston 0.7 W	5.21"
0109000106	Upper Charles River	MA-MD-42	Holliston 0.8 S	4.21"
0109000106	Upper Charles River	MA-MD-158	Sherborn 1.1 NW	4.91"
0109000106	Upper Charles River	MA-NF-50	Millis 1.4 ENE	5.55"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-120	Natick 1.9 NNE	6.08"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-119	Watertown 1.1 W	5.27"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-134	Somerville 0.5 SSE	4.67"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-SF-1	Boston 0.5 WSW	3.43"
0109000108	Neponset River - Frontal Boston Harbor	MA-NF-1	Norwood 1.3 NW	4.84"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-NF-39	Weymouth 2.3 N	2.60"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-PL-36	Hingham 0.8 ESE	1.75"
01090002	Cape Cod			
0109000201	North River - Frontal Massachusetts Bay	MA-PL-43	Hanson 0.7 NW	1.49"
0109000201	North River - Frontal Massachusetts Bay	MA-PL-5	Kingston 3.3 WNW	1.94''
0109000202	Cape Cod	MA-BA-8	Falmouth 1.8 WSW	5.17"
0109000202	Cape Cod	MA-BA-2	Falmouth 3.1 NNW	4.88''
0109000202	Cape Cod	MA-BA-57	Falmouth 5.7 N	3.86"
0109000202	Cape Cod	MA-BA-13	Falmouth 0.6 NNW	4.53"
0109000202	Cape Cod	MA-BA-50	Falmouth 5.4 NNE	5.26"
0109000202	Cape Cod	MA-BA-17	East Falmouth 1.2 WNW	4.85"
0109000202	Cape Cod	MA-BA-3	Falmouth 3.0 E	3.54"
0109000202	Cape Cod	MA-BA-18	Waquoit 0.6 SSW	3.31"
0109000202	Cape Cod	MA-BA-47	Mashpee 2.4 WSW	4.75"
0109000202	Cape Cod	MA-BA-45	Sandwich 0.9 NNE	3.82"
0109000202	Cape Cod	MA-BA-79	Mashpee 0.8 SSW	3.64"
0109000202	Cape Cod	MA-BA-78	Mashpee 4.6 S	3.65"
0109000202	Cape Cod	MA-BA-10	East Sandwich 2.3 SE	3.53"
0109000202	Cape Cod	MA-BA-59	Barnstable 3.6 W	2.25"
0109000202	Cape Cod	MA-BA-22	Yarmouth 0.9 NNW	2.60''
0109000202	Cape Cod	MA-BA-72	Yarmouth 2.0 S	2.56"
0109000202	Cape Cod	MA-BA-77	South Dennis 1.0 NW	2.37"
0109000202	Cape Cod	MA-BA-52	Truro 0.8 E	2.23"
0109000202	Cape Cod	MA-BA-27	Wellfleet 0.7 NW	2.29"
0109000202	Cape Cod	MA-BA-37	Orleans 0.8 W	1.79"
0109000202	Cape Cod	MA-BA-51	Orleans 3.0 S	1.50"
0109000202	Cape Cod	MA-BA-12	Orleans 1.1 E	1.54"
0109000202	Cape Cod	MA-BA-7	Wellfleet 3.0 E	1.91"

0109000202	Cape Cod	MA-BA-30	Eastham 0.6 SW	1.33"
0109000202	Cape Cod	MA-BA-43	Chatham 0.4 WSW	2.34"
0109000202	Mattapoisett River - Frontal Buzzards Bay	MA-PL-19	Rochester 1.2 NNW	2.39"
0109000203	Mattapoisett River - Frontal Buzzards Bay	MA-BA-64	Sandwich 1.5 SSE	4.62"
0109000203	Paskamanset River - Frontal Buzzards Bay	MA-BR-14	Dartmouth 2.5 SSW	2.81"
0109000204	Paskamanset River - Frontal Buzzards Bay	MA-BR-52	New Bedford 4.3 N	3.86"
0109000204	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-5	Little Compton 1.7 NW	3.07"
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-17	Tiverton 4.4 SSE	2.61"
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-7	Little Compton 0.6 E	3.49"
0109000205	Sakonnet Point - Frontal Rhode Island Sound	MA-BR-37	Westport 0.9 ESE	2.92"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-5	West Tisbury 2.9 N	3.38"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-9	West Tisbury 0.4 S	2.79"
0109000207	Nantucket Island	MA-NT-1	Nantucket 3.8 WNW	4.15"
01090003	Blackstone	17,7,141 1		23
0109000301	Upper Blackstone River	MA-WR-41	Auburn 2.6 SW	4.98''
0109000301	Upper Blackstone River	MA-WR-43	Leicester 2.4 ESE	4.49''
0109000301	Upper Blackstone River	MA-WR-70	Grafton 1.5 W	4.99''
0109000302	Lower Blackstone River	RI-PR-50	Harrisville 1.2 SSE	7.17"
0109000302	Lower Blackstone River	RI-PR-28	North Smithfield 0.7 SE	6.27''
0109000302	Lower Blackstone River	RI-PR-63	Woonsocket 1.5 NW	4.95"
0109000302	Lower Blackstone River	RI-PR-45	Manville 0.4 WSW	4.26''
0109000302	Lower Blackstone River	MA-NF-26	Bellingham 2.4 S	6.05"
0109000302	Lower Blackstone River	RI-PR-59	Cumberland Hill 0.9 NW	4.66''
0109000302	Lower Blackstone River	RI-PR-55	Cumberland Hill 3.6 NNE	4.15"
01090004	Narragansett			
0109000401	Upper Taunton River	MA-BR-30	Taunton 3.9 N	1.65"
0109000401	Upper Taunton River	MA-NF-31	Stoughton 1.2 E	2.48"
0109000401	Upper Taunton River	MA-PL-22	East Bridgewater 0.3 WSW	2.62''
0109000401	Upper Taunton River	MA-PL-15	Abington 1.2 NNE	1.48''
0109000401	Upper Taunton River	MA-PL-23	Pembroke 2.8 SW	2.31"
0109000402	Middle Taunton River	MA-PL-31	Bridgewater 1.8 SE	1.93''
0109000402	Middle Taunton River	MA-PL-17	Plympton 0.9 NNE	1.79"
0109000403	Threemile River	MA-NF-19	Foxborough 1.8 SSW	2.33"
0109000403	Threemile River	MA-NF-52	Foxborough 0.5 SE	1.95"
0109000403	Threemile River	MA-BR-55	NWS Boston/Norton 2.5 ESE	2.82"
0109000404	Ten Mile River	MA-BR-23	Attleboro 0.9 ENE	4.37"
0109000405	Wonnasquatucket River-Moshassuck River	RI-PR-33	Greenville 0.7 NNW	6.62"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-51	North Smithfield 0.6 S	6.85"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-60	North Providence 0.9 E	2.98"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-53	Providence 1.7 N	2.46"
0109000406	Pawtuxet River	RI-PR-20	West Glocester 3.4 SE	9.37''

0109000406 Pawtuset River RI-RN-25 Coventry 2.7 WSW 3.75°					"
0109000407 Palmer River MA-BR-2 Rehoboth 2.1 N 2.51" 0109000408 Lower Taunton River - Frontal Mount Hope Bay MA-BR-16 Somerset 0.4 SES 2.24" 0109000408 Lower Taunton River - Frontal Mount Hope Bay MA-BR-8 Dighton 3.3 NNW 2.45" 0109000409 Narragansett Bay RI-WS-54 North Kingstom 2.7 WSW 3.23" 0109000409 Narragansett Bay RI-WS-50 North Kingstom 2.7 WSW 3.70" 0109000409 Narragansett Bay RI-WS-50 North Kingstom 7.5 NNE 3.11" 0109000409 Narragansett Bay RI-WS-31 Kingston 7.5 NNE 3.11" 0109000409 Narragansett Bay RI-WS-44 North Kingston 1.5 SSW 3.11" 0109000409 Narragansett Bay RI-WS-15 Warwick 4.3 SSW 3.26" 0109000409 Narragansett Bay RI-KN-15 Warwick 4.3 SSW 3.26" 0109000409 Narragansett Bay RI-WR-67 Providence 1.6 NE 2.50" 0109000409 Narragansett Bay RI-WR-8-1 Barrington 1.3 WNW 2.28"	0109000406	Pawtuxet River	RI-KN-25	Coventry 2.7 WSW	3.75"
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0109000503 Lower Pawcatuck River CT-NL-40 Pawcatuck 1.8 SSE 3.67" 0109000503 Lower Pawcatuck River RI-WS-30 Westerly 2.4 NNW 4.46" 0109000503 Lower Pawcatuck River RI-WS-47 Westerly 0.8 WNW 4.15" 0109000504 Frontal Block Island Sound RI-WS-36 Charlestown 3.0 WSW 3.09" 0109000504 Frontal Block Island Sound RI-WS-26 Charlestown 1.1 ENE 3.76" 0109000504 Frontal Block Island Sound RI-WS-55 Wakefield 0.8 ENE 2.60" 011000010 Quinebaug MA-WR-68 Oxford 0.9 SSW 5.33" 0110000102 French River CT-WN-4 East Killingly 1.3 SW 9.98" 011000103 Fivemile River CT-WN-8 Moosup 1.7 NE 6.09" 0110000105 Moosup River CT-NL-21 Griswold 0.9 N 4.91" 01100002 Shetucket She	0109000502	Upper Pawcatuck River	RI-WS-45	Charlestown 4.7 NNE	2.58''
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0109000503 Lower Pawcatuck River RI-WS-47 Westerly 0.8 WNW 4.15" 0109000504 Frontal Block Island Sound RI-WS-36 Charlestown 3.0 WSW 3.09" 0109000504 Frontal Block Island Sound RI-WS-26 Charlestown 1.1 ENE 3.76" 0109000504 Frontal Block Island Sound RI-WS-55 Wakefield 0.8 ENE 2.60" 01100001 Quinebaug 0110000102 French River MA-WR-68 Oxford 0.9 SSW 5.33" 0110000103 Fivemile River CT-WN-4 East Killingly 1.3 SW 9.98" 0110000105 Moosup River CT-WN-8 Moosup 1.7 NE 6.09" 011000010 Pachaug River CT-NL-21 Griswold 0.9 N 4.91" 01100002 Shetucket 0110000201 Willimantic River CT-TL-18 Hebron 5.3 NW 5.62" 0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE <td>0109000503</td> <td>Lower Pawcatuck River</td> <td>CT-NL-40</td> <td>Pawcatuck 1.8 SSE</td> <td>3.67''</td>	0109000503	Lower Pawcatuck River	CT-NL-40	Pawcatuck 1.8 SSE	3.67''
0109000504 Frontal Block Island Sound RI-WS-36 Charlestown 3.0 WSW 3.09" 0109000504 Frontal Block Island Sound RI-WS-26 Charlestown 1.1 ENE 3.76" 0109000504 Frontal Block Island Sound RI-WS-55 Wakefield 0.8 ENE 2.60" 01100001 Quinebaug	0109000503	Lower Pawcatuck River	RI-WS-30	Westerly 2.4 NNW	4.46''
0109000504 Frontal Block Island Sound RI-WS-26 Charlestown 1.1 ENE 3.76" 0109000504 Frontal Block Island Sound RI-WS-55 Wakefield 0.8 ENE 2.60" 01100001 Quinebaug NA-WR-68 Oxford 0.9 SSW 5.33" 0110000103 Fivemile River CT-WN-4 East Killingly 1.3 SW 9.98" 0110000105 Moosup River CT-WN-8 Moosup 1.7 NE 6.09" 0110000106 Pachaug River CT-NL-21 Griswold 0.9 N 4.91" 01100002 Shetucket CT-TL-18 Hebron 5.3 NW 5.62" 0110000201 Willimantic River CT-TL-7 Columbia 2.2 SSW 3.82" 0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0109000503	Lower Pawcatuck River	RI-WS-47	Westerly 0.8 WNW	4.15''
0109000504 Frontal Block Island Sound RI-WS-55 Wakefield 0.8 ENE 2.60" 01100001 Quinebaug CT-WN-4 Stafford 0.9 SSW 5.33" 0110000103 Fivemile River CT-WN-4 East Killingly 1.3 SW 9.98" 0110000105 Moosup River CT-WN-8 Moosup 1.7 NE 6.09" 0110000106 Pachaug River CT-NL-21 Griswold 0.9 N 4.91" 01100002 Shetucket CT-TL-18 Hebron 5.3 NW 5.62" 0110000201 Willimantic River CT-TL-7 Columbia 2.2 SSW 3.82" 0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0109000504	Frontal Block Island Sound	RI-WS-36	Charlestown 3.0 WSW	3.09"
01100001 Quinebaug MA-WR-68 Oxford 0.9 SSW 5.33" 0110000103 Fivemile River CT-WN-4 East Killingly 1.3 SW 9.98" 0110000105 Moosup River CT-WN-8 Moosup 1.7 NE 6.09" 0110000106 Pachaug River CT-NL-21 Griswold 0.9 N 4.91" 01100002 Shetucket CT-TL-18 Hebron 5.3 NW 5.62" 0110000201 Willimantic River CT-TL-7 Columbia 2.2 SSW 3.82" 0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0109000504	Frontal Block Island Sound	RI-WS-26	Charlestown 1.1 ENE	3.76''
0110000102 French River MA-WR-68 Oxford 0.9 SSW 5.33" 0110000103 Fivemile River CT-WN-4 East Killingly 1.3 SW 9.98" 0110000105 Moosup River CT-WN-8 Moosup 1.7 NE 6.09" 011000020 Pachaug River CT-NL-21 Griswold 0.9 N 4.91" 011000020 Shetucket CT-TL-18 Hebron 5.3 NW 5.62" 0110000201 Willimantic River CT-TL-7 Columbia 2.2 SSW 3.82" 0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0109000504	Frontal Block Island Sound	RI-WS-55	Wakefield 0.8 ENE	2.60"
0110000103 Fivemile River CT-WN-4 East Killingly 1.3 SW 9.98" 0110000105 Moosup River CT-WN-8 Moosup 1.7 NE 6.09" 0110000106 Pachaug River CT-NL-21 Griswold 0.9 N 4.91" 01100002 Shetucket CT-TL-18 Hebron 5.3 NW 5.62" 0110000201 Willimantic River CT-TL-7 Columbia 2.2 SSW 3.82" 0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	01100001	Quinebaug			
0110000105 Moosup River CT-WN-8 Moosup 1.7 NE 6.09" 0110000106 Pachaug River CT-NL-21 Griswold 0.9 N 4.91" 01100002 Shetucket CT-TL-18 Hebron 5.3 NW 5.62" 0110000201 Willimantic River CT-TL-7 Columbia 2.2 SSW 3.82" 0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0110000102	French River	MA-WR-68	Oxford 0.9 SSW	5.33"
0110000106 Pachaug River CT-NL-21 Griswold 0.9 N 4.91" 01100002 Shetucket ————————————————————————————————————	0110000103	Fivemile River	CT-WN-4	East Killingly 1.3 SW	9.98"
01100002 Shetucket CT-TL-18 Hebron 5.3 NW 5.62" 0110000201 Willimantic River CT-TL-7 Columbia 2.2 SSW 3.82" 0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0110000105	Moosup River	CT-WN-8	Moosup 1.7 NE	6.09"
0110000201 Willimantic River CT-TL-18 Hebron 5.3 NW 5.62" 0110000201 Willimantic River CT-TL-7 Columbia 2.2 SSW 3.82" 0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0110000106	Pachaug River	CT-NL-21	Griswold 0.9 N	4.91"
0110000201 Willimantic River CT-TL-7 Columbia 2.2 SSW 3.82" 0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	01100002	Shetucket			
0110000201 Willimantic River CT-TL-2 Staffordville 0.4 NNW 6.62" 0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0110000201	Willimantic River	CT-TL-18	Hebron 5.3 NW	5.62"
0110000202 Natchaug River CT-TL-27 Willington 2.7 SE 7.36" 0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0110000201	Willimantic River	CT-TL-7	Columbia 2.2 SSW	3.82"
0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0110000201	Willimantic River	CT-TL-2	Staffordville 0.4 NNW	6.62"
0110000202 Natchaug River CT-TL-30 Mansfield Center 2.7 NE 5.40"	0110000202	Natchaug River	CT-TL-27	Willington 2.7 SE	7.36"
0110000202 Natchaug River CT-WN-12 Eastford 2.0 W 5.77"	0110000202		CT-TL-30	Mansfield Center 2.7 NE	5.40"
	0110000202	Natchaug River	CT-WN-12	Eastford 2.0 W	5.77"

0110000203	Shetucket River	CT-WN-10	South Windham 1.3 NNE	4.15"
0110000203	Thames	CI-WIN-10	South Windham 1.3 NNL	4.13
01100003	Thames River-Frontal New London Harbor	CT-NL-5	Oakdale 2.6 WNW	4.49"
0110000302	Thames River-Frontal New London Harbor	CT-NL-6	New London 1.0 NNW	6.08"
0110000302	Thames River-Frontal New London Harbor	CT-NL-8	Uncasville-Oxoboxo Valley 1.6 ENE	5.90"
0110000302	Mystic River - Frontal Fishers Island Sound	CT-NL-38	Old Lyme 3.4 ESE	5.92"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-38	East Lyme 0.5 SW	6.27"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-29	Central Waterford 2.7 SSW	4.51"
0110000303	Mystic River-Frontal Fishers Island Sound	CT-NL-22	Mystic 3.4 NW	6.44"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-40	Mystic 1.6 W	5.53"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-37	Stonington 1.4 NNW	4.85"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-24 CT-NL-18	Stonington 0.5 NNE	3.82"
0110000303	Quinnipiac	CI-INL-10	Stoffington 0.3 MNE	3.62
01100004	Quinnipiac River	CT-NH-14	Prospect 1.9 ENE	3.56"
0110000401	Quinnipiac River Quinnipiac River	CT-NR-14 CT-HR-55	Southington 1.7 WNW	3.75"
0110000401	Quinnipiac River	CT-HR-83	Plainville 1.7 SW	3.73
0110000401	Quinnipiac River	CT-HR-23	Southington 0.9 SSE	4.31"
0110000401	Quinnipiac River	CT-HR-25	Southington 1.0 ENE	3.72"
0110000401	Quinnipiac River	CT-NH-44	Wallingford Center 1.9 WNW	2.90"
0110000401	Quinnipiac River	CT-NH-43	Wallingford Center 1.9 WNW Wallingford Center 3.3 NNW	3.01"
0110000401	Quinnipiac River	CT-NH-43	Wallingford Center 3.3 NAW Wallingford Center 1.1 N	3.27"
0110000401	Hammonasset River - Frontal Long Island Sound	CT-NH-50	Madison Center 4.1 N	3.41"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-21	Killingworth 2.6 ESE	3.32"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-27	Clinton 3.7 N	3.47"
0110000402	Mill River - Frontal Long Island Sound	CT-NH-16	Milford 1.8 E	3.39"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-39	West Haven 0.8 W	3.16"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-57	New Haven 2.9 NNW	3.69"
0110000403	Housatonic	C1-1111-37	New Haven 2.5 NNW	3.09
0110000501	Headwaters Housatonic River	MA-BE-11	Great Barrington 3.0 N	3.04"
0110000501	Headwaters Housatonic River	MA-BE-3	Stockbridge .2 NNE	2.72"
0110000501	Headwaters Housatonic River	MA-BE-10	Pittsfield 2.0 NNW	2.97"
0110000501	Headwaters Housatonic River	MA-BE-5	Tyringham 1.5 WNW	3.50"
0110000503	Konkapot River-Housatonic River	CT-LT-28	Canaan 4.2 ESE	4.03"
0110000504	Macedonia Brook - Housatonic River	CT-LT-20	Warren 2.4 WNW	5.10"
0110000506	Candlewood Lake-Housatonic River	CT-LT-22	New Milford 5.3 SSW	2.14"
0110000508	Still River - Housatonic River	CT-FR-43	Bethel 0.5 E	1.89"
0110000508	Still River - Housatonic River	CT-FR-9	Brookfield 3.3 SSE	2.15"
0110000511	Headwaters Naugatuck River	CT-LT-7	Litchfield 2.3 NNE	4.83"
0110000512	Outlet Naugatuck River	CT-NH-47	Seymour 1.5 NE	3.36"
0110000512	Outlet Naugatuck River	CT-NH-45	Naugatuck 1.7 NNE	5.24"
0110000512	Outlet Naugatuck River	CT-NH-22	Prospect 0.5 SW	4.23"
322000312	2 3 3 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	J 22		

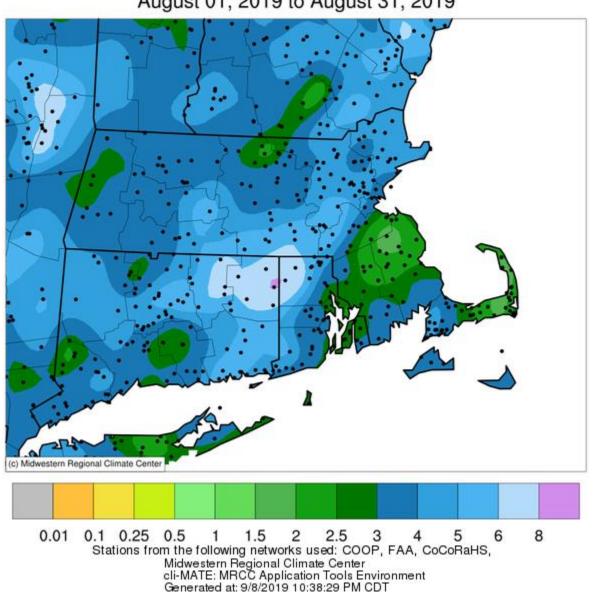
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0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-42	Monroe 0.1 SE	3.66''
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-23	Shelton 1.3 W	6.00''
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-46	Stratford 0.2 ESE	3.86"
01100006	Saugatuck			
0110000601	Saugatuck River - Frontal Long Island Sound	CT-FR-58	Ridgefield 3.6 N	2.13"
0110000601	Saugatuck River - Frontal Long Island Sound	CT-FR-31	Newtown 4.6 SSW	3.32"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-59	New Canaan 3.8 N	3.61"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-29	Ridgefield 1.9 SSE	3.98"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-63	Wilton 1.9 NW	4.44"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-3	New Canaan 1.9 ENE	3.56"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-25	Norwalk 2.9 NNW	3.55"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-20	Westport 2.5 ENE	3.87"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-60	Fairfield 1.5 NE	3.85"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-26	Stratford 0.9 W	3.75"
0110000604	Mianus River-Rippowam River	CT-FR-50	Darien 2.8 NW	4.18''
0110000604	Mianus River-Rippowam River	CT-FR-35	Darien 1.8 ENE	4.20''
02020003	Hudson-Hoosic			
0202000306	Upper Hoosic River	MA-BE-18	North Adams 3.0 WNW	3.41"
02020006	Middle Hudson			
0202000603	Wynants Kill - Hudson River	NY-AB-21	NWS Albany	3.24"
02030203	Long Island Sound			
0203020300	Long Island Sound	NY-SF-114	Fishers Island 0.5 NE	5.04"
		1 -	1	I

Blue colors are over 3". Green colors are under 3".

CT-WN-4 in East Killingly CT stands out as a pink dot, with close to 10" MA-WR-22 in Fitchburg MA stands out in pale green with less than 2.5"

Accumulated Precipitation (in)

August 01, 2019 to August 31, 2019



"We do not live at the airport"

Differences continue among the airport sites with their August precipitation.

Our network does not use automated gauges. And we do not live at the airport!

Location	Station ID	August 2019 Precip	August departure from normal	June- July- August Precip	3 month departure from normal	Mar- August Precip	6 month departure from normal	Sep- Aug Precip	12 month departure from normal
White Plains NY	HPN	2.71"	-1.45"	12.31"	0.19"	26.84"	1.68"	60.00"	10.65"
Danbury CT	DXR	1.66''	-2.88"	8.79"	-4.81''	22.12"	-4.26''	51.28"	1.41"
New Haven CT	HVN	2.98''	-0.97"	11.34"	-0.64''	25.60"	0.72"	56.28"	9.17''
Meriden CT	MMK	2.59"	-1.36"	5.86"	-6.12''	19.91"	-4.97''	55.36"	8.25"
Hartford CT	HFD	4.76''	1.10"	11.92"	0.27"	25.17"	2.18"	55.95"	12.35"
Willimantic CT	IJD	4.40''	0.37"	9.92"	-2.25"	22.97"	-2.04"	56.83"	8.41''
New London CT	GON	3.79"	-0.37"	14.73"	2.69"	28.58"	4.12"	52.21"	5.72"
Westerly RI	WST	4.41''	0.26"	17.49"	5.87"	32.14"	7.26"	67.25"	19.86"
Newport RI	UUU	2.25"	-1.45"	13.05"	2.08"	25.25"	1.69"	60.19"	13.86"
New Bedford MA	EWB	3.73"	-0.34"	14.05"	2.71"	21.72"	-2.69"	54.53"	6.17''
Hyannis MA	HYA	1.47''	-2.16"	10.88"	0.46''	23.36"	-0.04"	52.11"	4.42"
Nantucket MA	ACK	m	m	m	-5.42"	18.70''	-3.20"	44.40''	-0.02''
Marthas Vineyard MA	MVY	3.24"	-0.74"	10.67"	0.46''	22.60"	0.66''	52.83"	7.67''
Taunton MA	TAN	1.63''	-2.45"	10.35"	-1.11"	23.03"	-1.74"	58.67"	8.93''
Plymouth MA	PYM	2.96''	-0.83"	16.34"	5.11"	28.64"	3.83"	64.14"	14.99"
Norwood MA	OWD	2.46''	-1.41"	10.22"	-1.38"	23.68"	-0.24"	52.35"	5.29''
Bedford MA	BED	3.73"	0.08"	12.44"	1.15"	23.52"	0.04"	50.96"	5.25"
Beverly MA	BVY	3.16"	-0.22"	10.14''	-0.74''	22.41"	-1.20''	53.20"	7.02''
Lawrence MA	LWM	3.81"	0.39"	14.59"	3.43"	22.14"	-0.72"	42.78"	-0.38''
Fitchburg MA	FIT	3.99''	0.19"	13.19"	1.06''	24.96"	0.27"	55.92"	8.78''
Orange MA	ORE	5.05"	1.50"	14.46"	2.35"	25.50"	2.75"	54.11"	11.56"
Westfield MA	BAF	2.30"	-1.86"	8.58"	-4.02"	21.11"	-4.40''	56.71"	8.32"
North Adams MA	AQW	2.66''	-1.53"	13.03"	-0.67''	20.53"	-4.66''	42.37"	-4.24''

Rulers of the Snow

We are the Rulers of the Snow. August was a time to get away and fill out Multi-Day Reports, putting a dent into this total of 50 stations for August that reported precip, snow fall and snow depth for all days in August.

We continue to be pleased that snow fall and snow depth reporting is growing from last August and the August before that.

Make a snow fall and snow depth measurement and report, if you can safely do so, *all year round*.

Station	Name Aug 2019 Snowfall Station		Name	Aug 2019 Snowfall	
MA-BE-18	North Adams 3.0 WNW	0.0''	CT-NL-46	Mystic 3.4 NW	0.0''
MA-BE-4	Becket 5.6 SSW	0.0''	CT-NL-6	New London 1.0 NNW	0.0''
CT-LT-15	Colebrook 1.0 NE	0.0''	RI-PR-28	North Smithfield 0.7 SE	0.0''
CT-LT-9	New Hartford Center 3.2 SW	0.0''	RI-PR-33	Greenville 0.7 NNW	0.0''
CT-FR-25	Norwalk 2.9 NNW	0.0''	RI-PR-51	North Smithfield 0.6 S	0.0''
CT-FR-3	New Canaan 1.9 ENE	0.0''	RI-WS-42	Richmond 4.6 NNE	0.0''
CT-FR-9	Brookfield 3.3 SSE	0.0''	RI-NW-11	Tiverton 0.8 SSW	0.0"
CT-NH-43	Wallingford Center 3.3 NNW	0.0''	MA-BR-30	Taunton 3.9 N	0.0''
MA-FR-13	Conway 2.9 NW	0.0''	MA-BR-55	NWS Boston/Norton 2.5 ESE	0.0"
MA-FR-17	Buckland 1.8 ESE	0.0''	MA-MD-104	Littleton 2.8 NNW	0.0''
MA-FR-31	Colrain 3.7 WNW	0.0''	MA-MD-115	Hudson 1.4 NW	0.0"
MA-HD-25	Ludlow 2.3 SW	0.0''	MA-MD-119	Watertown 1.1 W	0.0''
CT-HR-22	East Hartford 1.3 E	0.0''	MA-MD-12	Acton 1.3 SW	0.0''
CT-HR-57	Suffield Depot 3.3 NNE	0.0''	MA-MD-126	Melrose 0.5 NE	0.0''
CT-HR-61	Windsor Locks 2.5 W	0.0''	MA-MD-156	Marlborough 2.8 ENE	0.0"
CT-HR-8	North Granby 1.3 ENE	0.0''	MA-MD-44	Medford 1.2 W	0.0''
CT-TL-18	Hebron 5.3 NW	0.0''	MA-MD-51	Maynard 0.7 ESE	0.0''
CT-TL-2	Staffordville 0.4 NNW	0.0''	MA-ES-12	Boxford 2.4 S	0.0''
CT-TL-27	Willington 2.7 SE	0.0''	MA-ES-4	Groveland 0.5 WSW	0.0''
CT-MD-21	Killingworth 2.6 ESE	0.0''	MA-ES-48	Andover 0.6 E	0.0''
CT-MD-23	Higganum 0.7 N	0.0''	MA-NF-1	Norwood 1.3 NW	0.0"
CT-WN-8	Moosup 1.7 NE	0.0''	MA-BA-12	Orleans 1.1 E	0.0''
CT-NL-21	Griswold 0.9 N	0.0''	MA-BA-3	Falmouth 3.0 E	0.0''
CT-NL-29	East Lyme 0.5 SW	0.0''	MA-BA-50	Falmouth 5.4 NNE	0.0''
CT-NL-40	Pawcatuck 1.8 SSE	0.0''	MA-BA-72	Yarmouth 2.0 S	0.0''

August 2019 as a calendar. A count of your Daily Reports by Date. Magenta colors are for the highest counts. Lime green color for the lowest counts. 366 Daily Reports is our single day record, set on June 11th this year. 324 Reports per Day was our reporting average for August.

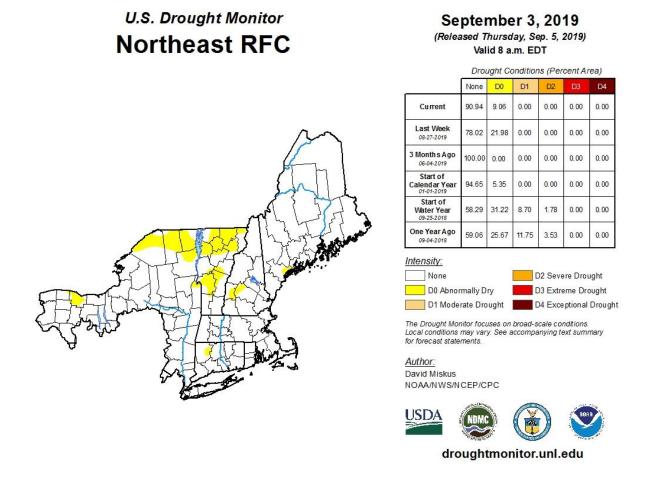
With Rain Gauge Week upon us, let's break that single day record, precip or zeros.

		Αι	igust 20)19		
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 343	2 325	3 318
4	5	6	7	8	9	10
322	320	332	331	364	327	323
11	12	13	14	15	16	17
309	308	318	333	318	314	304
18	19	20	21	22	23	24
319	314	327	321	336	327	311
25	26	27	28	29	30	31
310	315	321	318	364	325	317

D0 seems to be easing since last week.

From the Drought Monitor is this <u>tutorial page</u>. Not all drought is created equally, or even called the same.

Every drop counts and zeros do too!



For a viewing explanation on the Drought Monitor, the CoCoRaHS animated video is on <u>YouTube</u>.

Wrap up

Hurricane Dorian came by the Cape and the Islands this past Friday night into Saturday morning. Keep your guard up in the weeks to come for any further tropical cyclones. A good catch phrase for our locale about tropical cyclones: "If it's in the Bahamas, it's your business." We see this time and again, storms that come into the Bahamas will sometimes find their way to our locale. Make it your business to stay informed and prepared to act.

The Autumnal Equinox comes at 3:50AM EDT on September 23rd. Equal hours of daylight and darkness are coming. We begin the transition to early mornings and early evenings of darkness.

The end of the month ends the Water Year and <u>Water Year Summaries</u> will appear afterwards. Anytime in September or October is a good time to look over your station reporting and fill in missing reports where you can accurately do so.

Starting October 1, not only a new Water Year begins, but also a new snow fall reporting season begins. We have had snow in October before. Please take the opportunity to report snow fall and snow depth with every report. When the snowflakes do begin to fall, slow down and report the accurate amount.

Our next Weather Talk Webinar is scheduled for October 3rd. Part 2 of March's Webinar, "*Doppler on Wheels*." Summarizing a decade of work, learn more where Doppler Weather Radar is used with tornadoes, lake effect snows, tropical cyclones and more. All of these <u>WxTalk Webinars</u> are archived, so take the time and learn something you never knew about.

Thank you for all that you do for CoCoRaHS, whether in the past, present and in the days to come.