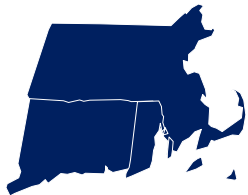


Community Collaborative Rain, Hail & Snow Network



# Southern



# New England

**October 2020**

Autumns colors are appearing, and the red colors will soon arrive from our mix of deciduous trees including this month's feature, the State Tree of Massachusetts, the American Elm.

September can be remembered as the month without precipitation and a two week stretch without any precipitation. As we say "Be a hero. Report your zeros." Your efforts in September were truly heroic, submitting over 9000 reports of zero precip, a single month record as well as an extremely high ratio of zeros to non-zeros.

As the daylight wanes, we start thinking about snow. Joe's feature article is about a new feature that the National Weather Service has put into production, a Winter Storm Severity Index. Not all winter weather events unfold equally, so read on to see what it is all about.

A record long list of stations that had complete reports, a list that stretches to 9 pages. Another record long list of the Rulers of the Snow. And a little something extra showing counts of zero precip days in Septembers past. We start it all off with our version of "The Grand List"

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.

### **4000 Daily Reports**

RI-WS-1	Hope Valley 3.7 S
MA-ES-8	Marblehead 0.8 SW

### **3000 Daily Reports**

MA-DK-5	West Tisbury 2.9 N
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### **2000 Daily Reports**

MA-MD-47	West Townsend 0.5 W
MA-HS-7	Plainfield 2.2 SW
MA-HD-13	Springfield 4.1 W

### **1000 Daily Reports**

CT-HR-52	Central Manchester 0.8 N
RI-KN-15	Warwick 4.3 SSW
RI-KN-17	East Greenwich 1.2 NNE

## **WSSI: Winter Storm Severity Index**

Joe DelliCarpini – Science & Operations Officer, NWS Boston/Norton MA

The Winter Storm Severity Index, or WSSI, is being produced by National Weather Service offices across the country and is intended to be used as a tool to help communicate a general level of expected impacts due to winter weather.

Currently, NWS offices issue watches, warnings, and advisories for winter weather based primarily on “yes/no” thresholds of accumulation and generally at the county level. In reality, impacts from winter weather are due to more than just snowfall amounts (one 5” snowstorm is not like the next 5” snowstorm). There can also be a large variation in conditions within individual counties.

Potential winter storm impacts are based upon the color scale shown below and are given for each element of a winter weather event (snow amount, snow load, blowing snow, ground blizzard, ice accumulation, and flash freeze).

### **WSSI Scale**

<b>Potential Winter Storm Impacts</b>	
	<b>No Impacts</b> Impacts not expected.
	<b>Limited Impacts</b> Rarely a direct threat to life and property. Typically results in little inconveniences.
	<b>Minor Impacts</b> Rarely a direct threat to life and property. Typically results in an inconvenience to daily life.
	<b>Moderate Impacts</b> Often threatening to life and property, some damage unavoidable. Typically results in disruptions to daily life.
	<b>Major Impacts</b> Extensive property damage likely, life saving actions needed. Will likely result in major disruptions to daily life.
	<b>Extreme Impacts</b> Extensive and widespread severe property damage, life saving actions will be needed. Results in extreme disruptions to daily life.

Keep in mind the WSSI is not a specific forecast for specific impacts. For example, a depiction of “moderate” severity does not mean transportation systems will be shut down. It is not meant to be the sole source of information about a winter storm. It should always be used in context with other NWS forecast and warning information. Also, the WSSI does not account for conditions that have occurred prior to the creation time. It only uses forecast information. Therefore, during an ongoing winter weather situation, the WSSI will not be representative of the entire event.

The WSSI uses non-meteorological data along with meteorological data to help forecast impacts. The non-meteorological factors used: Urban areas (for Snow Amount and Ice Accumulation), land use (decreases impacts for areas of reduced wind such as forests or high-density residential areas), and forest classification (used for Snow Load).

Let’s look at an example of how to interpret WSSI from last winter (January 20, 2019). In the bottom right image, you can see the “combined” WSSI depiction of all threats. This can be separated by the various components: the top left image shows the Snow Amount component, the top middle image shows the Snow Load component, and the top right image shows the Ice Accumulation component. From these images, you can infer that the primary impacts will come from icing from northeast Connecticut into the Providence and Boston areas, from heavy snowfall from eastern New York into Vermont, New Hampshire, and northwest Massachusetts, and from snow load from central Massachusetts to the seacoast of New Hampshire.



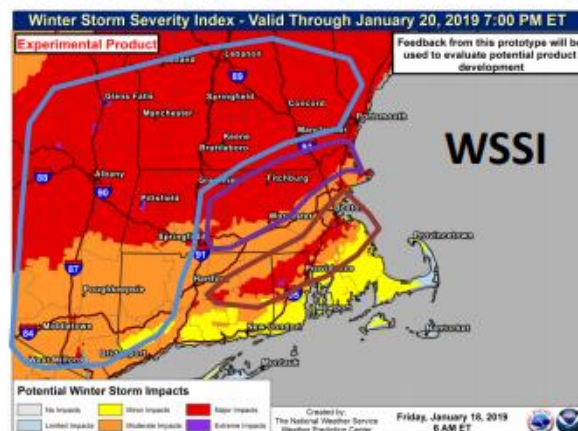
Bottom Right: WSSI depiction of all threats.

Top Left: The snow amount component matches the total WSSI around southern VT, western MA and NY.

Top Right: The ice accumulation component matches the WSSI for southeastern MA and northern RI.

Top Middle: The snow load component matches the WSSI for central MA and southeast NH.

Final interpretation: Expect the primary impacts to come from ice accumulations across northern RI northeastward toward Boston, MA. Expect impacts to come from heavy snowfall for VT and NY. There is a major threat for impacts from snow load across central MA through southeast NH.



You can find the WSSI map for the entire country at this link:

<https://www.wpc.ncep.noaa.gov/wwd/wssi/wssi.php>.

A zoomed-in version of the Northeast can be found here:

<https://www.wpc.ncep.noaa.gov/wwd/wssi/wssi.php?id=BOX>

<https://www.wpc.ncep.noaa.gov/wwd/wssi/wssi.php?id=OKX>

<https://www.wpc.ncep.noaa.gov/wwd/wssi/wssi.php?id=ALY>

Take a look at the WSSI maps this winter to help you prepare for winter weather events. Your feedback is needed too! Use the link in the top part of the WSSI page to provide [your input](#).

## **September Zeros**

Day after day, reporting zero precip. Brown grass and dust again. That is how I remembered our last weekend of September. I found myself covered in dust, working outside because this year, there was no Fall Festival at Connecticut Antique Machinery in Kent CT. Thinking back to previous years, spending the last Saturday in September in Kent CT, I can only remember two conditions: Dusty and dry grass or mushy and muddy. Either the nearby Housatonic River was flowing strong or only a light trickle. No in between or anything that resemble a simple average, or normal.

Time to dive into my precip reporting for all my Septembers' past. The data does go along with my recollections. Either way more than 4" of precip for the month, or less than 2" of precip for the month, along with more than 20 days of zero precip.

Turn to Joe and say "It's your turn to count your September zeros. I'll make a climatologist out of you yet!" Once Joe replies and sees what I see, then the call goes out to all of you. For those that responded, we thank you, and on the next page is what we found out.

Because the size of the table will not fit in the remaining space on this page, I will make a summary statement here and now: There are more aspects to look at in a month, than just the number of days of zero precip. Total precip being the obvious, number of days of more than 1" of precip being another, even to the small number of Traces (T) reported.

Look at your own Water Year Summaries and see the counts of days with precip that you reported. Or, just take a look at your own reporting for a month. Look at our total counts of zero and non-zero reports each month. Over 12 months, we average around 15-18 days of zero precip each month.

April and May usually have the least number of zero precip days. But September is repeatedly appearing to be the month with the greatest number of zero precip days, 20 and over.

On to the table!

We watch the weather! We define the climate! With complete counts of zero precip days and so much more, we define the climate.

### Count of Zero Precip Days in a 30-day month of September

Station	Name	Sept 2020	Sept 2019	Sept 2018	Sept 2017	Sept 2016	Sept 2015	Sept 2014	Sept 2013	Sept 2012	Sept 2011	Sept 2010	Sept 2009	Sept 2008	Average
RI-KN-2	East Greenwich 2.3 ESE	22	21	16	17	18	27	25	21	15	18	22	23	19	20
TNTM3	NWS Boston	24	22	16	18	17	25	24	18	16	19	18	21	19	20
MA-NF-1	Norwood 1.3 NW	23	22	12	16	14	24	24	18	15	18	17	23		19
CT-FR-9	Brookfield 3.3 SSE	24	22	13	22	18	24	23	22	15	18	19	21		20
MA-ES-12	Boxford 2.4 S	24	19	14	14	16	26	21	17	16					19
MA-MD-25	Ayer 0.1 SW	21	21	18	16	16	24								19
MA-MD-51	Maynard 0.7 ESE	20	21	17	16	16	23								19
CT-FR-43	Bethel 0.5 E	23	20	13	22	21									20
CT-NL-22	Central Waterford 2.7 SSW	22	21	15	17	17									18
CT-NH-45	Naugatuck 1.7 NNE	23	20	14	24										20
NY-SF-114	Fishers Island 0.5 NE	25	21	16	23										21
CT-HR-65	Newington 1.9 SSW	26	21	17											21
CT-TL-27	Willington 2.7 SE	24	19	19											21
MA-HD-25	Ludlow 2.3 SW	22	22	14											19
CT-MD-25	Middlefield 0.6 SE	23	21	14											19
RI-WS-47	Westerly 0.8 WNW	22	22	15											20
CT-HR-99	Suffield 3.6 ENE	25													25
CT-MD-31	Killingworth 07 WNW	22													22
MA-HD-30	Hampden 2.0 NW	25													25
MA-WR-88	Leicester 2.5 WSW	26													26
MA-HD-32	East Longmeadow 2.3 ESE	25													25
CT-TL-40	Coventry 0.3 NNE	22													22
MA-MD-173	Sudbury 2.7 WNW	25													25
	Average	23	21	15	19	17	25	23	19	15	18	19	22	19	21

Look at your own records and see your reporting in Septembers' past.

I'll make climatologists out of all of you yet!

## **News Items**

**Water Year Summaries:** As we start a New Water Year, take some time to look back at the Water Year that just ended. The Water Year Summaries for Year 2020 should be coming soon. Look for them here.

<https://www.cocorahs.org/WaterYearSummary/> and under “My Account” <https://www.cocorahs.org/Admin/MyProfile/MyProfile.aspx>

**PRISM Data:** From “My Account”, towards the bottom and to the right is a link to PRISM Data. That link may not work if you are using Google Chrome for a web browser. Try that same link with any other browser and the link should work.

Details	PRISM Portal
<a href="#">View</a>	<a href="#">PRISM Data</a>

**Single Month Records:** Like a broken record, we keep breaking our area’s single month records. Congratulations to all!!

- ✓ Daily Reports per day: 402
- ✓ Single day record of 438 reports on September 30<sup>th</sup>
- ✓ Rulers of the Snow stations: 84
- ✓ Zero Precip Reports: 9020
- ✓ Snow Fall Reports: 7167 (Background: On the website, report zero precip and automatically a report of zero snow fall goes with it. This is NOT true with the mobile app. Therefore, a month with a high number of zero precip reports will accompany a high number of snow fall reports. And conversely when we have a month with a low number of zero precip reports.)

And leading the entire network with:

- ✓ The highest % of snow depth reports. It just has to be. Nowhere else in the entire network do we get 30% of our Daily Reports with a snow depth report... in September. Thank you for committing to Snow Depth Reports in September.



## **Observer Tips**

**Significant Weather Reports:** Another name for these – Urgent Weather Reports. If there is something urgent you want to share about the weather, here are our reporting criteria

- **1” or more of rain in 1 hour or less.**
- **2” or more of rain.** We had 31 reports of 2” or more rain in September. We are asking for Significant Weather Reports when that occurs.
- **Flooding.**
- **Anything you feel is significant... or urgent!**  
**And snow is not that far away...**

**mPING app for Apple and Android:** For whatever meteorological phenomena comes our way, use mPING someday. Citizen science with a GPS enabled mobile device. Real time reporting. Real time mapping.

<http://mping.ou.edu/display>

**Build me a link!!** We ask you to use “Station Precip Summary” to check on your reporting. What if you had a link that you could bookmark or favorite so you could do so easily? Something like this link below

<https://www.cocorahs.org/ViewData/StationPrecipSummary.aspx?station=CT-FR-9&station2=MA-NF-1&station3=MA-BR-55&startdate=09/01/2020&enddate=9/30/2020>

Send us an email and say “**Build me a link**” and we will email you back with your own link to use. Want to see precip reported values from another station, too? Here is what we need from you in that email.

**Station1:** Well... that’s the point. To view at least one station. Most likely your own. Do let us know what your station is.

**Station2:** Optional.

**Station3:** Optional.

**Start Date:** Optional. Leaving the dates blank results in month-to-date

**End Date:** Optional.

For mobile device users, you can say “**Build me a QR Code!!**” too. Just give us the station and date range details.

Take out your mobile device and scan this QR Code. It works. It can work for your station too.



Change the link from “StationPrecipSummary” to “StationSnowSummary” and it can be an informative snow reporting season, looking at both your precip and snow totals. More details on that next month.

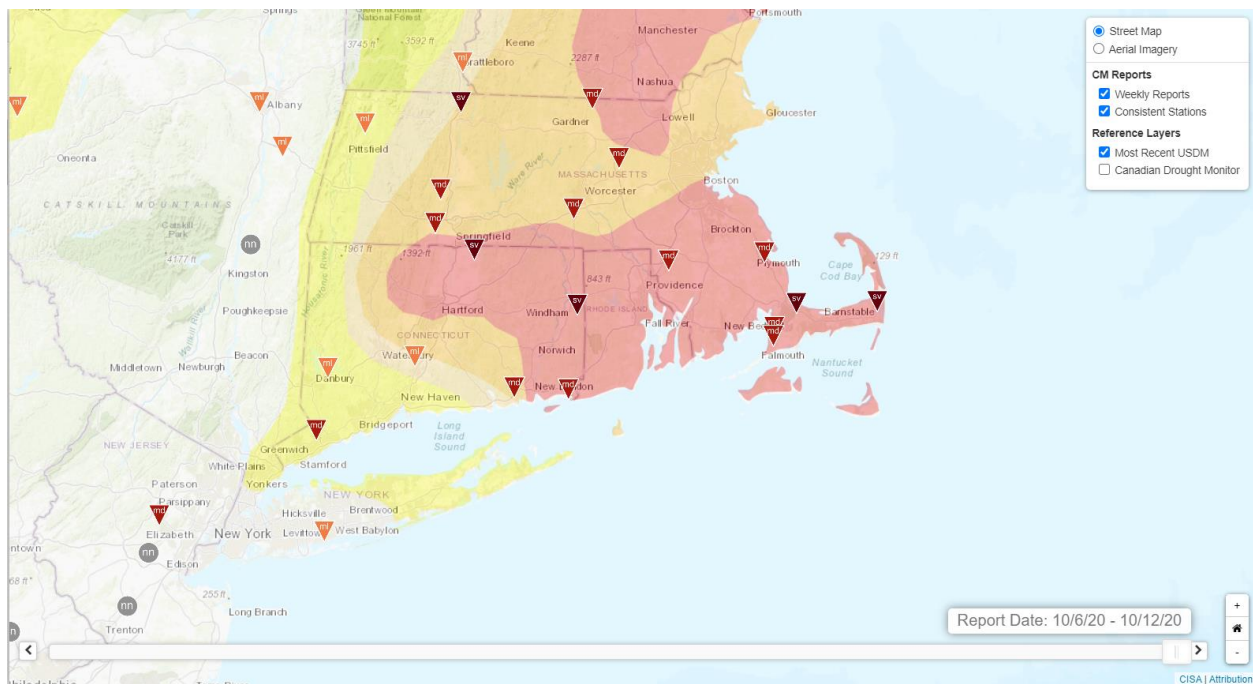
**Common Snow Reporting Mistake:** Do NOT report the snow fall measurement in the very first value, where you normally put rain or melted precip. You are all building a record of *precipitation totals* so you need to melt the snow in the gauge to obtain a precipitation amount. On a snowy day, precip reports such as 2.50” and 5.60” and others like this, really do appear overstated on the precip maps and misrepresent your precipitation total. More on snow reporting next month and beyond.

**Clean Gauge:** The zeros of September are behind us. When you have a sunny, rain-free day, take your gauge inside for a soap and water cleaning. ***Use nothing abrasive!*** A long wooden spoon and a cut-in-half, narrow sponge does the trick for me. Afterwards, the inner cylinder is left clean and the meniscus is small, making reading the gauge easier.

Have a little more time? Perform a leak check on your outer cylinder. Put an inch or two of water in the bottom of the outer cylinder and leave it on a surface for a few minutes or some part of an hour, and see if there is any liquid seeping or leaking out of the base of the outer cylinder. Have a leak free outer cylinder in place when the rains and snow come in the upcoming months.

**Condition Monitoring Reports:** Our tight-grouped cluster remains when looking at this map of reports, zoomed-out, continent-wide.

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.



**Stonington 0.5 NNE**  
Sun Oct 11 2020

A little over 0.4" of rain in the last week. Enough to green up some of the grass but it's still not growing. Local reservoir is getting lower. Still not as bad as 2016 but getting close.

CT-NL-18 -- General Awareness, Plants And Wildlife, Water Supply And Quality

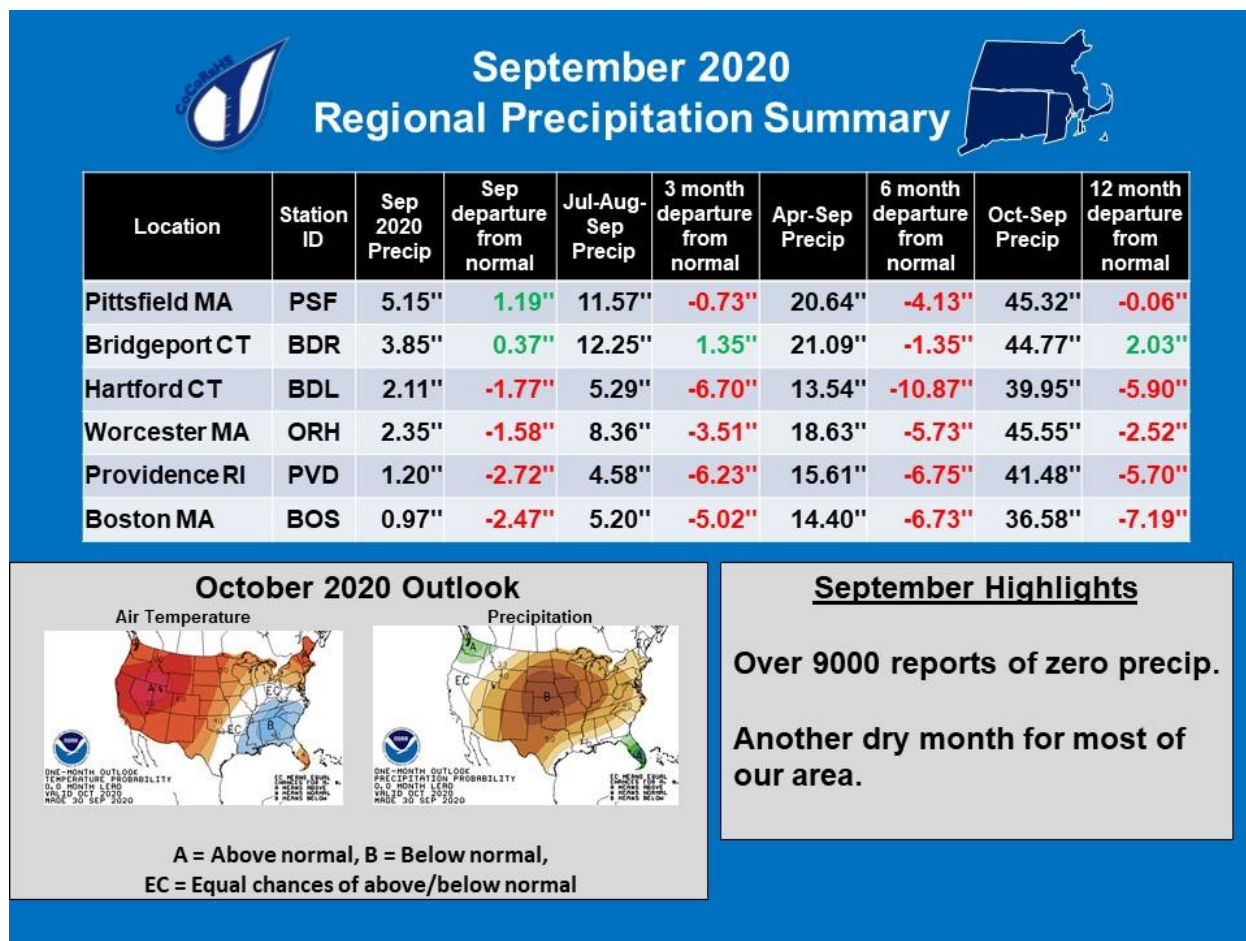
**Auburn 2.6 SW**  
Sun Oct 11 2020

close to severely dry, .16 rain so far this month-.14 for the last eight days, ground very dry, streams running very low, two nearby ponds at less than 50 percent capacity, woods dry and crunchy. Water regulations in place.

MA-WR-41 -- General Awareness, Agriculture, Fire, Plants And Wildlife, Water Supply And Quality

## **Detail and Summary for September 2020**

From the National Weather Service (NWS) Climate sites for Sept 2020.



Widespread rain on the 3<sup>rd</sup>, with 2"+ rain reported in Sheffield MA and Westfield MA. Labor Day weekend was rain free. Another round of rain on the 11<sup>th</sup>, with 1"+ reported in Essex County MA and a few places from West Haven CT to Fairfield CT.

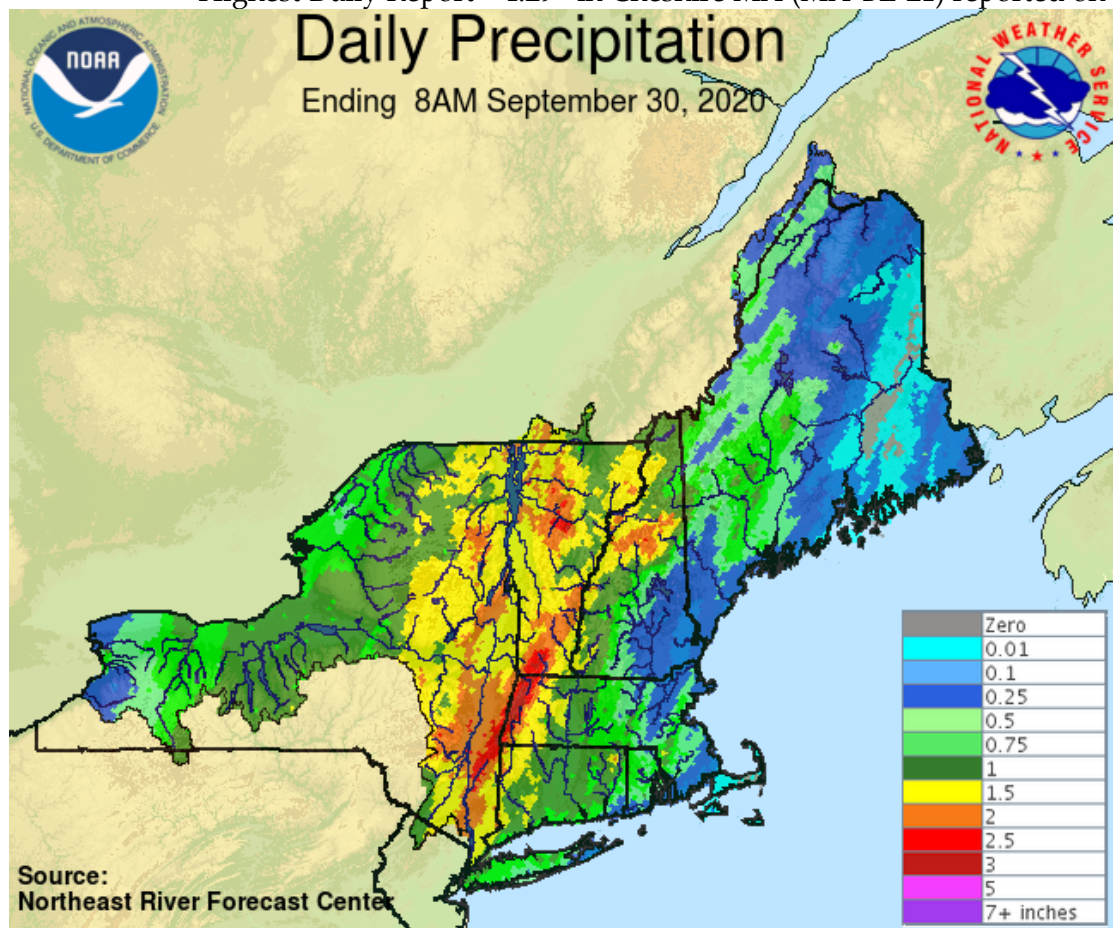
A long stretch of zero precip days, around 14 – 16 consecutive days until some light rain on the 28<sup>th</sup>. Rain on Cape Cod on the 29<sup>th</sup>. The main event was for the 30<sup>th</sup>, with 1" – 4" totals in the west and northwest parts of our region, noted by the map on the next page.

Do take in the next section with appreciation for your efforts.



## From your reports for September 2020

Observers reporting	473
Reported all 30 days	<b>301</b>
Completed by Multi-Day Reports	29
Missing 1 or 2 reports	54
Daily Reports	12,048
Zero Reports	<b>9,020</b>
Non-Zero Reports	3,038
Daily Comments	1,924
Multi-Day Reports	114
Condition Monitoring Reports	134
Significant Weather Reports	2
Hail Reports	0
Snowfall Reports	<b>7,167</b>
Snow Depth Reports	3,662
Total SWE Reports	2,578
Highest Daily Report	4.29" in Cheshire MA (MA-BE-21) reported on 9/30



A record 330 stations listed here. Congratulations! Keep breaking records!

Please! Do not get discouraged if your station is not listed. Look to see if you have any missing reports. Keep your reporting focus on not missing days. We are a group of very consistent reporters in the entire network.

Want to know more about watersheds? A CoCoRaHS animated video is on [YouTube](#).

Watershed	Watershed Name	Station Number	Station Name	Precip
01070004	Nashua			
0107000401	North Nashua River	MA-WR-44	Westminster 0.6 WSW	1.31"
0107000401	North Nashua River	MA-WR-8	Fitchburg 1.6 SSW	1.09"
0107000401	North Nashua River	MA-WR-22	Fitchburg 2.0 NNE	1.23"
0107000402	Headwaters Nashua River	MA-WR-56	Sterling 4.3 NW	1.45"
0107000402	Headwaters Nashua River	MA-WR-58	Lunenburg 0.6 NE	1.93"
0107000402	Headwaters Nashua River	MA-MD-25	Ayer 0.1 SW	1.23"
0107000403	Squannacook River	MA-MD-47	West Townsend 0.5 W	0.93"
0107000404	Nissitissit River-Nashua River	MA-MD-169	Pepperell 2.1 SSW	1.51"
01070005	Concord			
0107000501	Sudbury River	MA-MD-156	Marlborough 2.8 ENE	1.38"
0107000501	Sudbury River	MA-MD-89	Sudbury 3.6 W	1.41"
0107000501	Sudbury River	MA-MD-173	Sudbury 2.7 WNW	1.42"
0107000501	Sudbury River	MA-MD-107	Framingham 1.7 E	1.49"
0107000502	Concord River	MA-WR-30	Shrewsbury 1.6 NNE	2.09"
0107000502	Concord River	MA-WR-28	Berlin 1.3 WSW	1.91"
0107000502	Concord River	MA-WR-42	Northborough 2.3 N	2.11"
0107000502	Concord River	MA-MD-115	Hudson 1.4 NW	1.27"
0107000502	Concord River	MA-WR-55	Harvard 2.1 S	1.25"
0107000502	Concord River	MA-MD-12	Acton 1.3 SW	1.59"
0107000502	Concord River	MA-MD-51	Maynard 0.7 ESE	2.22"
0107000502	Concord River	MA-MD-62	Chelmsford 1.2 E	1.61"
01070006	Merrimack River			
0107000612	Stony Brook - Merrimack River	MA-MD-104	Littleton 2.8 NNW	1.04"
0107000613	Shawsheen River	MA-MD-52	Lexington 0.6 SW	0.98"
0107000613	Shawsheen River	MA-ES-48	Andover 0.6 E	2.21"
0107000614	Powwow River - Merrimack River	MA-ES-66	North Andover 0.3 NW	1.84"
0107000614	Powwow River - Merrimack River	MA-ES-20	Haverhill 0.7 N	2.01"
0107000614	Powwow River - Merrimack River	MA-ES-4	Groveland 0.5 WSW	1.85"

0107000614	Powwow River - Merrimack River	MA-ES-61	Amesbury 2.6 WSW	1.74"
0107000614	Powwow River - Merrimack River	MA-ES-59	Amesbury 1.2 N	2.51"
0107000614	Powwow River - Merrimack River	MA-ES-68	Newburyport 1.3 WNW	1.08"
0107000614	Powwow River - Merrimack River	MA-ES-64	Newburyport 0.4 NNW	1.51"
0107000614	Powwow River - Merrimack River	MA-ES-70	Newburyport 0.6 N	1.23"
0107000614	Powwow River - Merrimack River	MA-ES-56	Newburyport 1.0 ESE	1.79"
01080201	Middle Connecticut			
0108020106	Manhan River - Connecticut River	MA-HS-2	Westhampton 1.8 SW	3.89"
0108020106	Manhan River - Connecticut River	MA-HS-8	Williamsburg 1.2 WSW	4.34"
0108020106	Manhan River - Connecticut River	MA-HS-26	Easthampton 0.5 SW	3.53"
0108020106	Manhan River - Connecticut River	MA-HS-21	Northampton 0.6 ESE	3.43"
0108020106	Manhan River - Connecticut River	MA-HS-33	Amherst 2.9 SSW	2.35"
0108020107	Batchelor Brook - Connecticut River	MA-HD-22	Holyoke 1.0 ENE	2.83"
0108020107	Batchelor Brook - Connecticut River	MA-HD-13	Springfield 4.1 W	3.02"
0108020107	Batchelor Brook - Connecticut River	MA-HS-39	Belchertown 1.8 SW	3.30"
01080202	Miller			
0108020201	Upper Millers River	NH-CH-20	Rindge 3.2 ESE	1.77"
0108020202	Lower Millers River	MA-WR-80	Winchendon 3.2 S	1.97"
0108020202	Lower Millers River	MA-WR-40	Gardner 1.4 SSW	1.80"
01080203	Deerfield			
0108020303	North River	MA-FR-31	Colrain 3.7 WNW	3.02"
0108020303	North River	MA-FR-29	Colrain 0.8 WNW	2.49"
0108020305	Lower Deerfield River	MA-FR-17	Buckland 1.8 ESE	2.90"
0108020305	Lower Deerfield River	MA-FR-13	Conway 2.9 NW	2.85"
0108020305	Lower Deerfield River	MA-FR-10	Conway 0.9 SW	4.21"
01080204	Chicopee			
0108020401	Swift River	MA-FR-8	New Salem 3.1 S	2.67"
0108020402	Ware River	MA-WR-54	Barre 1.4 NNE	1.70"
0108020403	Quaboag River	MA-WR-75	Warren 2.4 WSW	2.73"
0108020404	Chicopee River	MA-HD-25	Ludlow 2.3 SW	2.98"
01080205	Lower Connecticut			
0108020501	Mill River - Connecticut River	CT-HR-82	Suffield 0.5 NNE	2.51"
0108020501	Mill River - Connecticut River	CT-HR-99	Suffield 3.6 ENE	2.37"
0108020501	Mill River - Connecticut River	CT-HR-57	Suffield Depot 3.3 NNE	2.33"
0108020501	Mill River - Connecticut River	MA-HD-33	Agawam 1.1 SSW	2.34"
0108020501	Mill River - Connecticut River	CT-HR-5	Enfield 1.5 SE	2.25"
0108020501	Mill River - Connecticut River	MA-HD-20	Wilbraham 3.7 SSW	1.94"
0108020501	Mill River - Connecticut River	MA-HD-30	Hampden 2.0 NW	1.91"
0108020502	Scantic River	CT-TL-26	Broad Brook 2.6 ESE	2.06"
0108020502	Scantic River	CT-TL-35	Somersville 0.2 ENE	2.07"
0108020502	Scantic River	MA-HD-32	East Longmeadow 2.3 ESE	2.13"

0108020502	Scantic River	CT-TL-41	Somers 0.3 S	2.24"
0108020502	Scantic River	CT-TL-15	Central Somers 0.3 N	2.02"
0108020503	Park River	CT-HR-39	Farmington 1.6 SW	1.99"
0108020504	Hockanum River	CT-HR-52	Central Manchester 0.8 N	1.24"
0108020504	Hockanum River	CT-HR-100	Manchester 0.4 ENE	1.22"
0108020504	Hockanum River	CT-TL-19	Vernon 2.8 N	1.42"
0108020505	Roaring Brook - Connecticut River	CT-HR-45	Wethersfield 1.9 SSW	2.12"
0108020505	Roaring Brook - Connecticut River	CT-HR-68	Rocky Hill 1.3 E	1.87"
0108020505	Roaring Brook - Connecticut River	CT-HR-22	East Hartford 1.3 E	1.45"
0108020506	Mattabesset River	CT-HR-15	Southington 3.0 E	2.42"
0108020506	Mattabesset River	CT-HR-80	Kensington 0.7 WSW	1.95"
0108020506	Mattabesset River	CT-HR-65	Newington 1.9 SSW	2.00"
0108020506	Mattabesset River	CT-MD-25	Middlefield 0.6 SE	2.27"
0108020506	Mattebesset River	CT-MD-28	Durham 2.2 SSW	2.76"
0108020507	Higganum Creek - Connecticut River	CT-MD-23	Higganum 0.7 N	1.73"
0108020507	Higganum Creek - Connecticut River	CT-MD-26	Higganum 0.8 NE	1.53"
0108020508	Salmon River	CT-MD-22	East Hampton 2.1 N	1.57"
0108020509	Eightmile River - Connecticut River	CT-MD-19	Ivoryton 0.9 WSW	1.55"
01080206	Westfield			
0108020601	Headwaters Westfield River	MA-HS-7	Plainfield 2.2 SW	3.77"
0108020601	Headwaters Westfield River	MA-HS-14	Plainfield 2.4 ESE	3.32"
0108020603	Outlet Westfield River	MA-HD-31	Westfield 1.6 SSW	3.66"
0108020603	Outlet Westfield River	CT-HR-88	Suffield Depot 6.0 WNW	2.78"
0108020603	Outlet Westfield River	MA-HD-28	Westfield 2.8 SE	3.38"
0108020603	Outlet Westfield River	MA-HD-29	West Springfield 1.6 SSW	3.03"
01080207	Farmington			
0108020701	Still River	CT-LT-15	Colebrook 1.0 NE	3.65"
0108020702	West Branch Farmington River	CT-LT-21	New Hartford Center 1.7 SSW	2.05"
0108020702	West Branch Farmington River	CT-LT-18	New Hartford Center 1.5 N	2.70"
0108020704	Headwaters Farmington River	CT-LT-9	New Hartford Center 3.2 SW	2.27"
0108020704	Headwaters Farmington River	CT-HR-70	Canton 1.5 W	2.79"
0108020704	Headwaters Farmington River	CT-HR-71	Bristol 2.7 NNE	2.83"
0108020705	Salmon Brook	CT-HR-8	North Granby 1.3 ENE	3.31"
0108020706	Outlet Farmington River	CT-HR-102	Windsor Locks 3.2 SW	2.18"
01090001	Charles			
0109000101	Plum Island Sound - Frontal Atlantic Ocean	MA-ES-46	Georgetown 1.3 ENE	1.46"
0109000101	Plum Island Sound - Frontal Atlantic Ocean	MA-ES-24	Newburyport 0.8 SW	1.30"
0109000102	Ipswich River	MA-MD-85	Wilmington 2.2 WNW	1.35"
0109000102	Ipswich River	MA-MD-125	Tewksbury 3.6 SSE	1.32"
0109000102	Ipswich River	MA-MD-45	Wilmington 1.5 NE	1.55"
0109000102	Ipswich River	MA-MD-160	Reading 1.2 N	2.29"



0109000102	Ipswich River	MA-ES-58	Middleton 1.4 SSW	2.01"
0109000102	Ipswich River	MA-ES-12	Boxford 2.4 S	2.44"
0109000103	Essex River - Frontal Atlantic Ocean	MA-ES-41	Danvers 0.8 ESE	2.83"
0109000103	Essex River - Frontal Atlantic Ocean	MA-ES-25	Gloucester 4.3 N	1.32"
0109000103	Essex River - Frontal Atlantic Ocean	MA-ES-22	Rockport 1.0 E	1.43"
0109000104	Saugus River - Frontal Broad Sound	MA-MD-81	Wakefield 0.5 NNW	1.65"
0109000104	Saugus River - Frontal Broad Sound	MA-MD-126	Melrose 0.5 NE	1.17"
0109000104	Saugus River - Frontal Broad Sound	MA-ES-45	Nahant 0.4 N	0.99"
0109000104	Saugus River - Frontal Broad Sound	MA-ES-8	Marblehead 0.8 SW	1.11"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-123	Lexington 1.3 SE	0.78"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-18	Belmont 0.2 ESE	1.00"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-7	Winchester 0.7 SE	0.83"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-44	Medford 1.2 W	0.71"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-11	Cambridge 0.9 NNW	1.39"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-170	Somerville 0.5 W	1.24"
0109000106	Upper Charles River	MA-WR-1	Milford 2.3 NNW	1.80"
0109000106	Upper Charles River	MA-MD-106	Holliston 2.4 W	1.74"
0109000106	Upper Charles River	MA-MD-55	Holliston 0.7 W	1.61"
0109000106	Upper Charles River	MA-MD-42	Holliston 0.8 S	1.84"
0109000106	Upper Charles River	MA-NF-62	Franklin 1.4 SW	1.16"
0109000106	Upper Charles River	MA-MD-158	Sherborn 1.1 NW	0.90"
0109000106	Upper Charles River	MA-NF-50	Millis 1.4 ENE	1.42"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-120	Natick 1.9 NNE	1.50"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-80	Lincoln 1.5 SW	0.93"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-119	Watertown 1.1 W	1.00"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-134	Somerville 0.5 SSE	1.36"
0109000108	Neponset River - Frontal Boston Harbor	MA-NF-1	Norwood 1.3 NW	1.12"
0109000108	Neponset River - Frontal Boston Harbor	MA-NF-54	Quincy 1.2 W	1.12"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-NF-39	Weymouth 2.3 N	1.22"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-PL-36	Hingham 0.8 ESE	0.85"
01090002	Cape Cod			
0109000201	North River - Frontal Massachusetts Bay	MA-PL-57	Hanson 1.8 N	1.17"
0109000201	North River - Frontal Massachusetts Bay	MA-PL-5	Kingston 3.3 WNW	1.30"
0109000201	North River - Frontal Massachusetts Bay	MA-PL-37	Scituate 1.2 NW	1.23"
0109000201	North River - Frontal Massachusetts Bay	MA-PL-48	Marshfield 1.5 NNW	0.96"
0109000201	North River - Frontal Massachusetts Bay	MA-PL-47	Plymouth 1.1 NNW	1.29"
0109000202	Cape Cod	MA-BA-2	Falmouth 3.1 NNW	1.26"
0109000202	Cape Cod	MA-BA-57	Falmouth 5.7 N	1.11"
0109000202	Cape Cod	MA-BA-14	North Falmouth 0.5 ENE	0.63"
0109000202	Cape Cod	MA-BA-13	Falmouth 0.6 NNW	1.44"
0109000202	Cape Cod	MA-BA-50	Falmouth 5.4 NNE	1.07"

0109000202	Cape Cod	MA-BA-17	East Falmouth 1.2 WNW	1.57"
0109000202	Cape Cod	MA-BA-3	Falmouth 3.0 E	0.92"
0109000202	Cape Cod	MA-BA-11	East Falmouth 1.4 ESE	0.95"
0109000202	Cape Cod	MA-BA-83	Mashpee 2.5 W	1.09"
0109000202	Cape Cod	MA-BA-18	Waquoit 0.6 SSW	1.12"
0109000202	Cape Cod	MA-BA-47	Mashpee 2.4 WSW	1.47"
0109000202	Cape Cod	MA-BA-45	Sandwich 0.9 NNE	0.92"
0109000202	Cape Cod	MA-BA-64	Sandwich 1.5 SSE	0.72"
0109000202	Cape Cod	MA-BA-79	Mashpee 0.8 SSW	0.95"
0109000202	Cape Cod	MA-BA-78	Mashpee 4.6 S	0.98"
0109000202	Cape Cod	MA-BA-10	East Sandwich 2.3 SE	0.91"
0109000202	Cape Cod	MA-BA-59	Barnstable 3.6 W	1.43"
0109000202	Cape Cod	MA-BA-60	Hyannis 0.7 WNW	1.10"
0109000202	Cape Cod	MA-BA-76	Barnstable 0.7 NE	1.21"
0109000202	Cape Cod	MA-BA-22	Yarmouth 0.9 NNW	1.37"
0109000202	Cape Cod	MA-BA-72	Yarmouth 2.0 S	1.39"
0109000202	Cape Cod	MA-BA-1	Yarmouth 2.3 SSE	1.60"
0109000202	Cape Cod	MA-BA-77	South Dennis 1.0 NW	1.73"
0109000202	Cape Cod	MA-BA-52	Truro 0.8 E	1.20"
0109000202	Cape Cod	MA-BA-27	Wellfleet 0.7 NW	1.49"
0109000202	Cape Cod	MA-BA-36	Harwich 2.6 ENE	1.84"
0109000202	Cape Cod	MA-BA-42	Orleans 1.8 S	2.09"
0109000202	Cape Cod	MA-BA-51	Orleans 3.0 S	2.28"
0109000202	Cape Cod	MA-BA-12	Orleans 1.1 E	1.91"
0109000202	Cape Cod	MA-BA-7	Wellfleet 3.0 E	1.68"
0109000202	Cape Cod	MA-BA-30	Eastham 0.6 SW	1.70"
0109000203	Mattapoisett River - Frontal Buzzards Bay	MA-PL-52	Plymouth 10.6 SSE	0.92"
0109000204	Paskamanset River - Frontal Buzzards Bay	MA-BR-14	Dartmouth 2.5 SSW	1.03"
0109000204	Paskamanset River - Frontal Buzzards Bay	MA-BR-52	New Bedford 4.3 N	0.87"
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-5	Little Compton 1.7 NW	0.86"
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-17	Tiverton 4.4 SSE	0.77"
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-7	Little Compton 0.6 E	0.97"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-5	West Tisbury 2.9 N	1.29"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-9	West Tisbury 0.4 S	1.36"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-18	Oak Bluffs 0.1 SW	0.70"
01090003	Blackstone			
0109000301	Upper Blackstone River	MA-WR-41	Auburn 2.6 SW	2.49"
0109000301	Upper Blackstone River	MA-WR-81	Worcester 1.6 SE	1.84"
0109000301	Upper Blackstone River	MA-WR-70	Grafton 1.5 W	2.33"
0109000301	Upper Blackstone River	MA-WR-69	Northbridge 1.7 WNW	1.06"
0109000302	Lower Blackstone River	RI-PR-50	Harrisville 1.2 SSE	1.12"

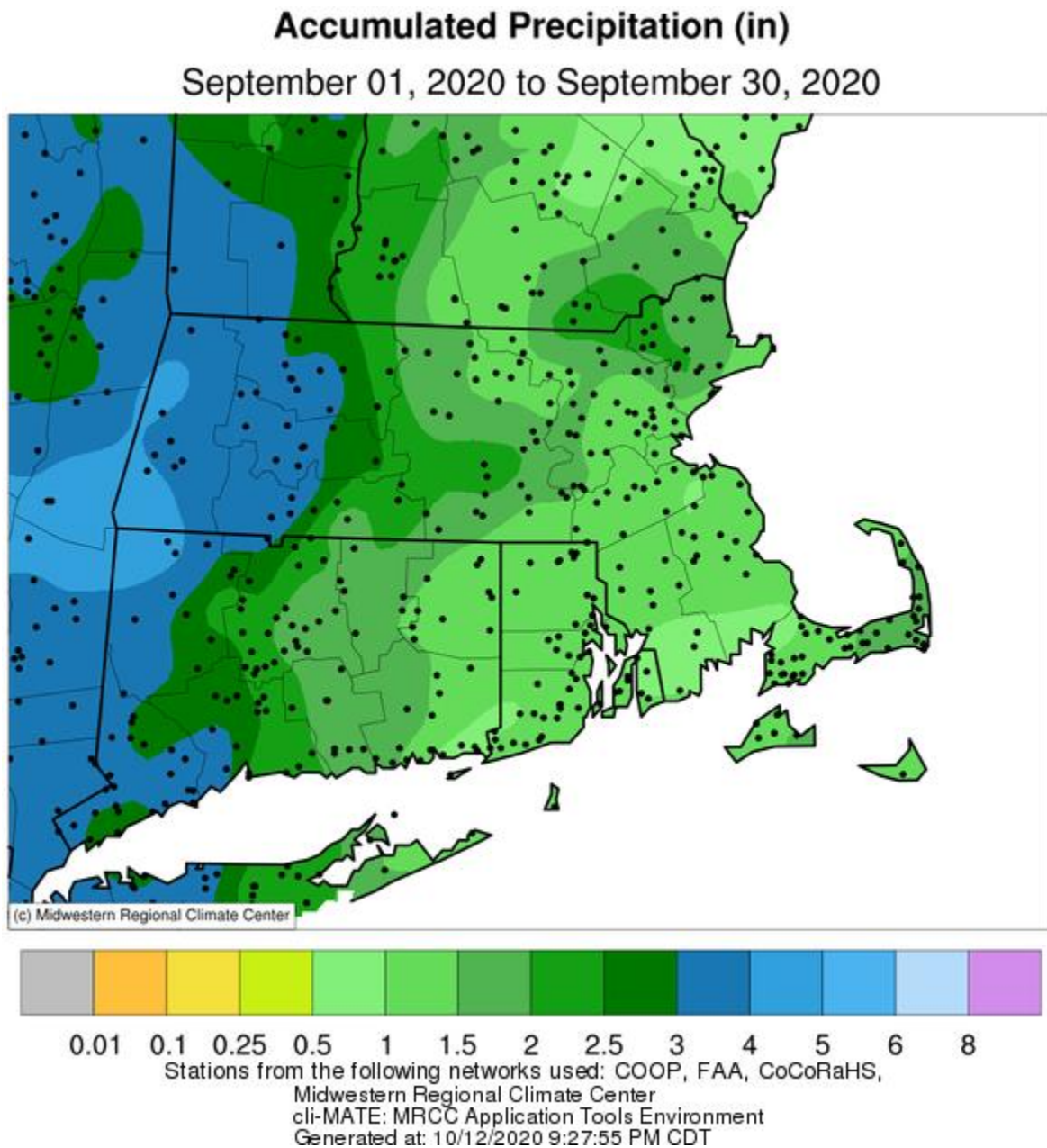
0109000302	Lower Blackstone River	RI-PR-28	North Smithfield 0.7 SE	0.89"
0109000302	Lower Blackstone River	RI-PR-89	Woonsocket 1.8 WNW	1.01"
0109000302	Lower Blackstone River	RI-PR-45	Manville 0.4 WSW	1.06"
0109000302	Lower Blackstone River	MA-NF-26	Bellingham 2.4 S	1.10"
0109000302	Lower Blackstone River	RI-PR-55	Cumberland Hill 3.6 NNE	1.03"
01090004	Narragansett			
0109000401	Upper Taunton River	MA-BR-30	Taunton 3.9 N	1.19"
0109000401	Upper Taunton River	MA-NF-31	Stoughton 1.2 E	1.53"
0109000401	Upper Taunton River	MA-PL-22	East Bridgewater 0.3 WSW	1.07"
0109000401	Upper Taunton River	MA-PL-15	Abington 1.2 NNE	0.54"
0109000401	Upper Taunton River	MA-PL-23	Pembroke 2.8 SW	1.56"
0109000402	Middle Taunton River	MA-PL-31	Bridgewater 1.8 SE	1.36"
0109000402	Middle Taunton River	MA-PL-17	Plympton 0.9 NNE	1.47"
0109000403	Threemile River	MA-NF-19	Foxborough 1.8 SSW	1.22"
0109000403	Threemile River	MA-BR-55	NWS Boston/Norton 2.5 ESE	1.34"
0109000404	Ten Mile River	MA-NF-58	Plainville 0.6 NNW	1.08"
0109000404	Ten Mile River	MA-BR-23	Attleboro 0.9 ENE	1.19"
0109000405	Wonnasquatucket River-Moshassuck River	RI-PR-33	Greenville 0.7 NNW	1.29"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-51	North Smithfield 0.6 S	0.95"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-82	Providence 1.6 NNW	1.05"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-53	Providence 1.7 N	0.97"
0109000406	Pawtuxet River	RI-KN-21	Coventry 1.9 NE	1.37"
0109000406	Pawtuxet River	RI-PR-57	Cranston 1.2 SSE	1.21"
0109000407	Palmer River	RI-BR-11	Bristol 2.0 NNW	1.06"
0109000407	Palmer River	MA-BR-2	Rehoboth 2.1 N	1.38"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-61	Mansfield 2.4 ENE	1.56"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-3	Norton 1.8 NNE	1.52"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-16	Somerset 0.4 SSE	1.04"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-58	Dighton 3.3 NNW	1.39"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-8	Dighton 1.1 WSW	1.31"
0109000409	Narragansett Bay	RI-KN-17	East Greenwich 1.2 NNE	1.32"
0109000409	Narragansett Bay	RI-WS-54	North Kingstown 2.7 WSW	1.07"
0109000409	Narragansett Bay	RI-WS-31	Kingston 7.5 NNE	1.27"
0109000409	Narragansett Bay	RI-KN-15	Warwick 4.3 SSW	1.08"
0109000409	Narragansett Bay	RI-KN-2	East Greenwich 2.3 ESE	1.42"
0109000409	Narragansett Bay	RI-KN-23	Warwick 3.2 NNE	1.25"
0109000409	Narragansett Bay	RI-KN-31	Warwick 0.8 ENE	1.02"
0109000409	Narragansett Bay	RI-PR-67	Providence 1.6 NE	1.18"
0109000409	Narragansett Bay	RI-PR-84	Providence 2.7 NNE	1.06"
0109000409	Narragansett Bay	RI-NW-18	Jamestown 0.3 SSE	1.38"
0109000409	Narragansett Bay	RI-BR-5	Barrington 1.3 WNW	1.27"

0109000409	Narragansett Bay	RI-NW-27	Newport 1.3 SW	1.37"
0109000409	Narragansett Bay	RI-NW-4	Middletown 1.1 SW	0.77"
0109000409	Narragansett Bay	RI-NW-19	Portsmouth 2.3 S	0.91"
0109000409	Narragansett Bay	RI-NW-16	Portsmouth 1.3 S	1.24"
0109000409	Narragansett Bay	MA-BR-63	Swansea 2.1 W	1.47"
0109000409	Narragansett Bay	RI-NW-28	Portsmouth 3.7 NNE	0.78"
0109000409	Narragansett Bay	RI-NW-20	Tiverton 1.0 SSW	0.95"
01090005	Pawcatuck-Wood			
0109000501	Wood River	RI-WS-1	Hope Valley 3.7 S	0.86"
0109000502	Upper Pawcatuck River	RI-WS-46	Westerly 3.4 E	1.21"
0109000502	Upper Pawcatuck River	RI-WS-42	Richmond 4.6 NNE	1.18"
0109000502	Upper Pawcatuck River	RI-WS-45	Charlestown 4.7 NNE	1.13"
0109000502	Upper Pawcatuck River	RI-WS-37	Kingston 2.4 SW	1.07"
0109000503	Lower Pawcatuck River	CT-NL-40	Pawcatuck 1.8 SSE	1.01"
0109000504	Frontal Block Island Sound	RI-WS-36	Charlestown 3.0 WSW	1.19"
0109000504	Frontal Block Island Sound	RI-WS-53	Charlestown 0.7 SE	1.08"
0109000504	Frontal Block Island Sound	RI-WS-26	Charlestown 1.1 ENE	1.07"
0109000504	Frontal Block Island Sound	RI-WS-55	Wakefield 0.8 ENE	1.08"
0109000504	Frontal Block Island Sound	RI-WS-52	Wakefield-Peacedale 3.1 NE	1.21"
01100001	Quinebaug			
0110000102	French River	MA-WR-88	Leicester 2.5 WSW	1.89"
0110000102	French River	CT-WN-2	North Grosvenor Dale 1.7 SSE	1.51"
0110000102	French River	MA-WR-68	Oxford 0.9 SSW	1.56"
0110000103	Fivemile River	CT-WN-6	Dayville 2.0 ENE	1.45"
0110000103	Fivemile River	CT-WN-4	East Killingly 1.3 SW	0.94"
0110000105	Moosup River	CT-WN-8	Moosup 1.7 NE	1.01"
0110000105	Moosup River	RI-KN-14	Greene 1.4 E	1.25"
0110000106	Pachaug River	CT-NL-21	Griswold 0.9 N	1.27"
01100002	Shetucket			
0110000201	Willimantic River	CT-TL-18	Hebron 5.3 NW	1.81"
0110000201	Willimantic River	CT-TL-33	Tolland 3.6 NNE	1.84"
0110000201	Willimantic River	CT-TL-40	Coventry 0.3 NNE	1.52"
0110000201	Willimantic River	CT-TL-32	Coventry 2.3 N	1.77"
0110000201	Willimantic River	CT-TL-24	Stafford Springs 0.8 NE	1.92"
0110000201	Willimantic River	CT-TL-2	Staffordville 0.4 NNW	1.57"
0110000202	Natchaug River	CT-TL-27	Willington 2.7 SE	1.83"
0110000202	Natchaug River	CT-TL-30	Mansfield Center 2.7 NE	1.30"
0110000202	Natchaug River	CT-WN-12	Eastford 2.0 W	1.43"
0110000203	Shetucket River	CT-WN-10	South Windham 1.3 NNE	1.54"
0110000203	Shetucket River	CT-NL-10	Norwich 2.5 NNE	1.59"
01100003	Thames			

0110000302	Thames River-Frontal New London Harbor	CT-NL-5	Oakdale 2.6 WNW	1.95"
0110000302	Thames River-Frontal New London Harbor	CT-NL-8	Uncasville-Oxoboxo Valley 1.6 ENE	1.82"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-38	Old Lyme 3.4 ESE	1.53"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-29	East Lyme 0.5 SW	1.79"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-32	Niantic 1.1 SW	1.54"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-22	Central Waterford 2.7 SSW	0.95"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-46	Mystic 3.4 NW	0.96"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-19	Mystic 0.9 W	0.90"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-24	Stonington 1.4 NNW	0.88"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-18	Stonington 0.5 NNE	0.93"
01100004	Quinnipiac			
0110000401	Quinnipiac River	CT-NH-14	Prospect 1.9 ENE	3.07"
0110000401	Quinnipiac River	CT-HR-55	Southington 1.7 WNW	2.52"
0110000401	Quinnipiac River	CT-HR-83	Plainville 1.7 SW	2.48"
0110000401	Quinnipiac River	CT-HR-23	Southington 0.9 SSE	2.09"
0110000401	Quinnipiac River	CT-HR-76	Southington 1.0 ENE	1.99"
0110000401	Quinnipiac River	CT-NH-44	Wallingford Center 1.9 WNW	2.55"
0110000401	Quinnipiac River	CT-NH-43	Wallingford Center 3.3 NNW	2.30"
0110000401	Quinnipiac River	CT-NH-75	Meriden 2.8 WSW	2.40"
0110000401	Quinnipiac River	CT-NH-42	Wallingford Center 1.1 N	2.47"
0110000401	Quinnipiac River	CT-NH-72	Northford 0.8 SW	3.33"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-NH-21	East Haven 3.5 SSW	2.17"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-NH-56	Guilford Center 2.7 WSW	1.97"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-NH-41	Madison Center 1.6 W	1.44"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-NH-50	Madison Center 4.1 N	1.95"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-31	Killingworth 0.7 WNW	2.15"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-21	Killingworth 2.6 ESE	2.16"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-27	Clinton 3.7 N	2.19"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-39	West Haven 0.8 W	3.86"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-57	New Haven 2.9 NNW	3.28"
01100005	Housatonic			
0110000501	Headwaters Housatonic River	MA-BE-11	Great Barrington 3.0 N	4.52"
0110000501	Headwaters Housatonic River	MA-BE-5	Tyringham 1.5 WNW	3.80"
0110000501	Headwaters Housatonic River	MA-BE-20	Lee 3.7 SE	3.63"
0110000501	Headwaters Housatonic River	MA-BE-22	Dalton 2.9 SW	4.35"
0110000502	Williams River - Housatonic River	MA-BE-23	Sheffield 1.6 NW	6.07"
0110000504	Macedonia Brook - Housatonic River	CT-LT-20	Warren 2.4 WNW	3.70"
0110000506	Candlewood Lake-Housatonic River	CT-LT-37	New Milford 3.1 WNW	4.05"
0110000506	Candlewood Lake-Housatonic River	CT-LT-22	New Milford 5.3 SSW	3.63"
0110000508	Still River - Housatonic River	CT-FR-82	Danbury 1.5 SE	3.14"
0110000508	Still River - Housatonic River	CT-FR-43	Bethel 0.5 E	2.89"

0110000508	Still River - Housatonic River	CT-FR-41	Bethel 3.5 NNE	2.77"
0110000508	Still River - Housatonic River	CT-FR-9	Brookfield 3.3 SSE	2.42"
0110000509	Pomperaug River	CT-LT-34	Woodbury Center 1.5 SSW	2.81"
0110000511	Headwaters Naugatuck River	CT-LT-7	Litchfield 2.3 NNE	2.42"
0110000511	Headwaters Naugatuck River	CT-LT-33	Torrington 1.1 SSE	2.72"
0110000512	Outlet Naugatuck River	CT-LT-14	Watertown 0.5 S	2.95"
0110000512	Outlet Naugatuck River	CT-NH-67	Waterbury 1.3 WNW	2.71"
0110000512	Outlet Naugatuck River	CT-NH-47	Seymour 1.5 NE	2.73"
0110000512	Outlet Naugatuck River	CT-NH-45	Naugatuck 1.7 NNE	3.06"
0110000512	Outlet Naugatuck River	CT-NH-22	Prospect 0.5 SW	3.19"
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-23	Shelton 1.3 W	3.45"
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-46	Stratford 0.2 ESE	3.95"
0110000513	Housatonic River - Frontal Long Island Sound	CT-NH-71	Milford 2.8 SSW	2.51"
01100006	Saugatuck			
0110000601	Saugatuck River - Frontal Long Island Sound	CT-FR-58	Ridgefield 3.6 N	3.75"
0110000601	Saugatuck River - Frontal Long Island Sound	CT-FR-64	Bethel 4.5 SSE	2.74"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-59	New Canaan 3.8 N	3.33"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-29	Ridgefield 1.9 SSE	3.76"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-63	Wilton 1.9 NW	3.40"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-3	New Canaan 1.9 ENE	3.25"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-25	Norwalk 2.9 NNW	3.18"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-20	Westport 2.5 ENE	2.80"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-68	Fairfield 1.1 SSE	3.20"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-60	Fairfield 1.5 NE	3.29"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-32	Monroe 0.8 W	2.85"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-70	Bridgeport 2.9 NNW	4.08"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-67	Trumbull 1.2 S	3.47"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-26	Stratford 0.9 W	4.00"
0110000604	Mianus River-Rippowam River	CT-FR-39	Stamford 4.2 S	2.79"
0110000604	Mianus River-Rippowam River	CT-FR-83	Darien 2.4 NW	3.22"
0110000604	Mianus River-Rippowam River	CT-FR-35	Darien 1.8 ENE	2.07"
0110000604	Mianus River-Rippowam River	CT-FR-66	Norwalk 1.4 ENE	3.32"
02020003	Hudson-Hoosic			
0202000306	Upper Hoosic River	MA-BE-21	Cheshire 0.5 NNW	5.06"
02020006	Middle Hudson			
0202000603	Wynants Kill - Hudson River	NY-AB-21	NWS Albany	2.75"
0202000606	Kinderhook Creek	MA-BE-24	Hancock 3.6 NNE	3.91"
02030203	Long Island Sound			
0203020300	Long Island Sound	NY-SF-114	Fishers Island 0.5 NE	1.13"

The blue colors, above 3", from the rains at the end of the month. Yet again, overall another dry month for our area.



**“We do not live at the airport”**

More rain to the west. Less rain to the east. This list averaged 1.83”, while our own stations averaged 1.89”, which continues to be drier than our normal of around 4”.

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

Location	Station ID	Sep 2020 Precip	Sep departure from normal	July-Aug-Sep Precip	3 month departure from normal	Apr-Sep Precip	6 month departure from normal	Oct-Sep Precip	12 month departure from normal
White Plains NY	HPN	3.49"	-1.23"	12.47"	-0.12"	21.43"	-3.93"	44.87"	-4.48"
Danbury CT	DXR	3.41"	-0.89"	13.42"	0.00"	22.38"	-4.20"	44.46"	-5.41"
New Haven CT	HVN	2.26"	-2.11"	7.69"	-4.64"	16.72"	-8.24"	39.54"	-7.57"
Meriden CT	MMK	2.24"	-2.13"	7.11"	-5.22"	20.27"	-4.69"	47.45"	0.34"
Hartford CT	HFD	1.74"	-1.74"	7.18"	-3.96"	15.30"	-7.60"	36.43"	-7.17"
Willimantic CT	IJD	1.09"	-2.86"	3.52"	-8.55"	16.95"	-7.59"	38.17"	-10.25"
New London CT	GON	0.30"	-3.70"	2.90"	-9.03"	12.49"	-11.81"	37.20"	-9.29"
Westerly RI	WST	0.93"	-2.99"	3.16"	-8.70"	13.45"	-10.52"	37.52"	-9.87"
Newport RI	UUU	1.11"	-2.82"	4.39"	-6.69"	13.39"	-9.58"	34.85"	-11.48"
New Bedford MA	EWB	0.43"	-3.17"	1.28"	-9.71"	8.64"	-14.49"	26.65"	-21.71"
Hyannis MA	HYA	1.06"	-2.81"	2.87"	-7.87"	11.99"	-10.31"	38.68"	-9.01"
Nantucket MA	ACK	1.43"	-2.61"	3.06"	-7.98"	13.24"	-8.45"	39.45"	-4.97"
Marthas Vineyard MA	MVY	0.78"	-3.42"	2.10"	-8.99"	13.96"	-7.60"	39.83"	-5.33"
Taunton MA	TAN	1.33"	-2.99"	4.45"	-7.70"	16.47"	-7.51"	42.23"	-7.51"
Plymouth MA	PYM	1.28"	-2.64"	5.20"	-6.00"	16.46"	-7.02"	46.69"	-2.46"
Norwood MA	OWD	1.76"	-1.97"	7.81"	-3.57"	23.80"	0.60"	46.93"	-0.13"
Bedford MA	BED	1.38"	-2.18"	5.64"	-5.29"	13.55"	-9.24"	33.96"	-11.75"
Lawrence MA	LWM	2.56"	-0.95"	8.89"	-1.71"	18.51"	-3.74"	41.39"	-1.77"
Fitchburg MA	FIT	1.23"	-2.62"	5.32"	-6.41"	14.50"	-9.66"	29.48"	-17.66"
Orange MA	ORE	3.16"	-0.39"	9.28"	-1.95"	17.23"	-5.59"	38.85"	-3.70"
Westfield MA	BAF	3.62"	-0.87"	8.54"	-4.20"	16.74"	-9.16"	39.44"	-8.95"
North Adams MA	AQW	3.65"	-0.46"	10.41"	-2.44"	17.48"	-8.27"	36.53"	-10.08"



## **Rulers of the Snow**

We are the Rulers of the Snow. We define where the snow is and where it is not.

A record long list of 84 stations that reported snow fall and snow depth for all days in September 2020.

Using the mobile app? Look at the 2<sup>nd</sup> page of the mobile app, and fill in those snow values. Start off the new Water Year with a new Make a snow fall and snow depth measurement with every Daily Report, if you can safely do so, ***all year round.***

Station	Name	Sep 2020 Snowfall	Station	Name	Sep 2020 Snowfall
MA-BE-21	Cheshire 0.5 NNW	0.0"	RI-WS-37	Kingston 2.4 SW	0.0"
CT-LT-15	Colebrook 1.0 NE	0.0"	RI-WS-42	Richmond 4.6 NNE	0.0"
CT-LT-34	Woodbury Center 1.5 SSW	0.0"	RI-WS-55	Wakefield 0.8 ENE	0.0"
CT-LT-9	New Hartford Center 3.2 SW	0.0"	RI-NW-18	Jamestown 0.3 SSE	0.0"
CT-FR-25	Norwalk 2.9 NNW	0.0"	RI-NW-7	Little Compton 0.6 E	0.0"
CT-FR-9	Brookfield 3.3 SSE	0.0"	MA-BR-55	NWS Boston/Norton 2.5 ESE	0.0"
CT-NH-43	Wallingford Center 3.3 NNW	0.0"	MA-BR-61	Mansfield 2.4 ENE	0.0"
CT-NH-57	New Haven 2.9 NNW	0.0"	MA-MD-115	Hudson 1.4 NW	0.0"
MA-FR-10	Conway 0.9 SW	0.0"	MA-MD-119	Watertown 1.1 W	0.0"
MA-FR-17	Buckland 1.8 ESE	0.0"	MA-MD-12	Acton 1.3 SW	0.0"
MA-FR-31	Colrain 3.7 WNW	0.0"	MA-MD-125	Tewksbury 3.6 SSE	0.0"
MA-HS-26	Easthampton 0.5 SW	0.0"	MA-MD-126	Melrose 0.5 NE	0.0"
MA-HS-7	Plainfield 2.2 SW	0.0"	MA-MD-156	Marlborough 2.8 ENE	0.0"
MA-HD-25	Ludlow 2.3 SW	0.0"	MA-MD-160	Reading 1.2 N	0.0"
MA-HD-28	Westfield 2.8 SE	0.0"	MA-MD-173	Sudbury 2.7 WNW	0.0"
MA-HD-30	Hampden 2.0 NW	0.0"	MA-MD-42	Holliston 0.8 S	0.0"
CT-HR-65	Newington 1.9 SSW	0.0"	MA-MD-47	West Townsend 0.5 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-MD-55	Holliston 0.7 W	0.0"
CT-TL-27	Willington 2.7 SE	0.0"	MA-MD-7	Winchester 0.7 SE	0.0"
CT-TL-35	Somersville 0.2 ENE	0.0"	MA-MD-81	Wakefield 0.5 NNW	0.0"
CT-MD-21	Killingworth 2.6 ESE	0.0"	MA-MD-85	Wilmington 2.2 WNW	0.0"
CT-MD-23	Higginum 0.7 N	0.0"	MA-ES-12	Boxford 2.4 S	0.0"
CT-MD-25	Middlefield 0.6 SE	0.0"	MA-ES-4	Groveland 0.5 WSW	0.0"

MA-WR-42	Northborough 2.3 N	0.0"	MA-ES-41	Danvers 0.8 ESE	0.0"
MA-WR-44	Westminster 0.6 WSW	0.0"	MA-ES-48	Andover 0.6 E	0.0"
MA-WR-54	Barre 1.4 NNE	0.0"	MA-ES-70	Newburyport 0.6 N	0.0"
MA-WR-75	Warren 2.4 WSW	0.0"	MA-NF-1	Norwood 1.3 NW	0.0"
MA-WR-8	Fitchburg 1.6 SSW	0.0"	MA-NF-54	Quincy 1.2 W	0.0"
CT-NL-10	Norwich 2.5 NNE	0.0"	MA-NF-58	Plainville 0.6 NNW	0.0"
CT-NL-21	Griswold 0.9 N	0.0"	MA-PL-15	Abington 1.2 NNE	0.0"
CT-NL-24	Stonington 1.4 NNW	0.0"	MA-PL-36	Hingham 0.8 ESE	0.0"
CT-NL-29	East Lyme 0.5 SW	0.0"	MA-BA-12	Orleans 1.1 E	0.0"
CT-NL-32	Niantic 1.1 SW	0.0"	MA-BA-2	Falmouth 3.1 NNW	0.0"
CT-NL-40	Pawcatuck 1.8 SSE	0.0"	MA-BA-3	Falmouth 3.0 E	0.0"
RI-PR-28	North Smithfield 0.7 SE	0.0"	MA-BA-47	Mashpee 2.4 WSW	0.0"
RI-PR-33	Greenville 0.7 NNW	0.0"	MA-BA-50	Falmouth 5.4 NNE	0.0"
RI-PR-45	Manville 0.4 WSW	0.0"	MA-BA-57	Falmouth 5.7 N	0.0"
RI-PR-51	North Smithfield 0.6 S	0.0"	MA-BA-72	Yarmouth 2.0 S	0.0"
RI-PR-82	Providence 1.6 NNW	0.0"	MA-BA-76	Barnstable 0.7 NE	0.0"
RI-KN-14	Greene 1.4 E	0.0"	MA-BA-77	South Dennis 1.0 NW	0.0"
RI-KN-2	East Greenwich 2.3 ESE	0.0"	NY-SF-114	Fishers Island 0.5 NE	0.0"

September 2020 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.

402 Reports per Day was our record reporting average for September. Labor Day was our low point. 12 days of over 400 Daily Reports. 438 Daily Reports for September 30<sup>th</sup> is a single day reporting record for us.

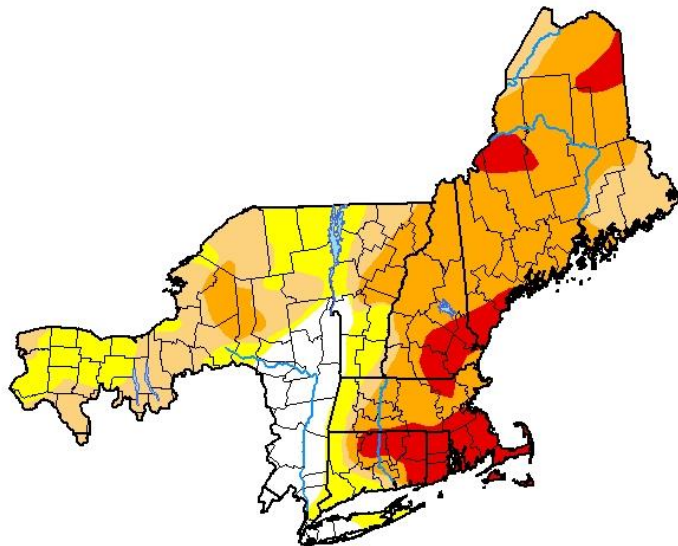
September 2020						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 394	2 417	3 432	4 405	5 386
6 389	7 381	8 391	9 394	10 401	11 426	12 396
13 398	14 393	15 398	16 403	17 404	18 406	19 400
20 399	21 394	22 395	23 395	24 393	25 398	26 394
27 390	28 429	29 409	30 438			

More D3 (Extreme Drought) conditions creeping into our area.

Keep monitoring and reporting Conditions where you are.

Every drop counts and zeros do too!

## U.S. Drought Monitor Northeast RFC



**October 6, 2020**

(Released Thursday, Oct. 8, 2020)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
<b>Current</b>	10.60	17.11	22.38	38.40	11.51	0.00
<b>Last Week</b> 09-29-2020	5.16	22.39	24.44	40.31	7.69	0.00
<b>3 Months Ago</b> 07-07-2020	5.52	45.23	45.30	3.95	0.00	0.00
<b>Start of Calendar Year</b> 12-31-2019	100.00	0.00	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> 09-29-2020	5.16	22.39	24.44	40.31	7.69	0.00
<b>One Year Ago</b> 10-08-2019	79.63	20.37	0.00	0.00	0.00	0.00

### Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

### Author:

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National Drought Mitigation Center



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

For a viewing explanation on the Drought Monitor, the CoCoRaHS animated video is on [YouTube](#).

## **Wrap up**

Our next WxTalk Webinar is slated for this Thursday, October 15<sup>th</sup>, titled ***Awesome or Awful? Ranking Winter Severity with the Accumulated Winter Season Severity Index (AWSSI)***. Joe's article mentions an Index for one snow event. See how the entire winter season is measured.

Some of us had our first frost and freeze in late September, ending the growing season. As October continues, be ready for freezing temps overnight. And with freezing temperatures, be ready to remove your funnel and inner cylinder should below freezing temperatures occur with liquid in the inner cylinder. Measure, write down and report your measurement at your regular time. When the warmer weather returns, so can your inner cylinder and funnel.

Do take in the changing colors throughout this month of October. Enjoy the beauty that makes New England unique. Where you can avoid the crowds and be outdoors, take in the harvests of apples, grapes, and cranberries this month.

With dry conditions, breezes, leaves falling and sunshine reaching the floor of the woods, October is one of our two Fire Weather Months. Along with April, just a few days without precipitation, sunshine, a breeze, and dry conditions can be enough to keep a small fire in our area.

17 animated videos in 60 minutes for experienced and new observers alike on [YouTube](#). We encourage you to view some or all of them, even as a refresher.

Daylight Saving time ends on November 1<sup>st</sup>. It is about to get dark early!

Another WxTalk Webinar will be on Thursday November 5<sup>th</sup>, titled ***The History of Commercial Weather Sector Innovation and Challenges of the Future***.

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