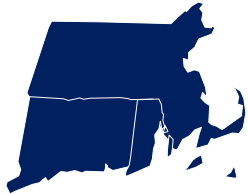




# Southern



# New England

**November 2017**

We started the new Water Year with weeks of warm and dry, followed by the last week of two large rain events and one event with strong wind. Whether using generator power or a neighbor's internet connection, you found a way to get your reports in and break a few reporting records.

The mobile reporting app has added a new functionality for the iOS devices: The ability to change your Daily Report without having to go to the website.

With 14 counties in Massachusetts, 8 in Connecticut and 5 in Rhode Island, we have featured all 27 counties in our "Map of the Month" segment over the past 27 months. This month's feature on Bristol County MA closes our series. We hope you have enjoyed reading about each area, one month, one county at a time.

There is a slightly different look to our Precip inquiry screen on the website. Just in time for our snow season.

October started snow reporting season. The snowflakes started to fly and lightly accumulate with the cold air in early November. See how snow reporting with our states compares with others within our international network.

A record number of complete stations listed and more. Let us begin.

## **The “Grand” List**

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

### **3000 Daily Reports**

MA-ES-8	Marblehead 0.8 SW
RI-PR-17	Cranston 4.1 E
MA-ES-2	Beverly 2.8 NW
CT-FR-9	Brookfield 3.3 SSE

## **When was the last time....?**

Many of you *were* experiencing dry conditions. Answer this question by looking at your [station's reports](#). When was the last time you submitted a Daily Report for more than 1” of precipitation? Exclude the Multi-Day reports. Daily Reports only.

Have you found the answer? Having started this article in the middle of October, find the Daily Report of more than 1” before the end of October.

What contributes to making our conditions dry? What contributes to our station becoming over/under the normal of 4” of precipitation for a month? Is it a ratio of zeros to non-zeros reported? Is it these 1”+ precipitation events?

Take a look at your [Water Year Summary](#). Keeping within our area, take a look at someone else's Water Year Summary. Aside from looking at the 12 month total of precipitation and snowfall, make a count of the number of Daily Reports more than 1”+, more than 1.5”, more than 2”, more than 0.5” and so on.

What do you see? The answer is going to be different for many of you.

As you participate in our network, submitting report after report, reading through these newsletters, looking for your monthly total, looking at the monthly totals of the others, ask yourself periodically\

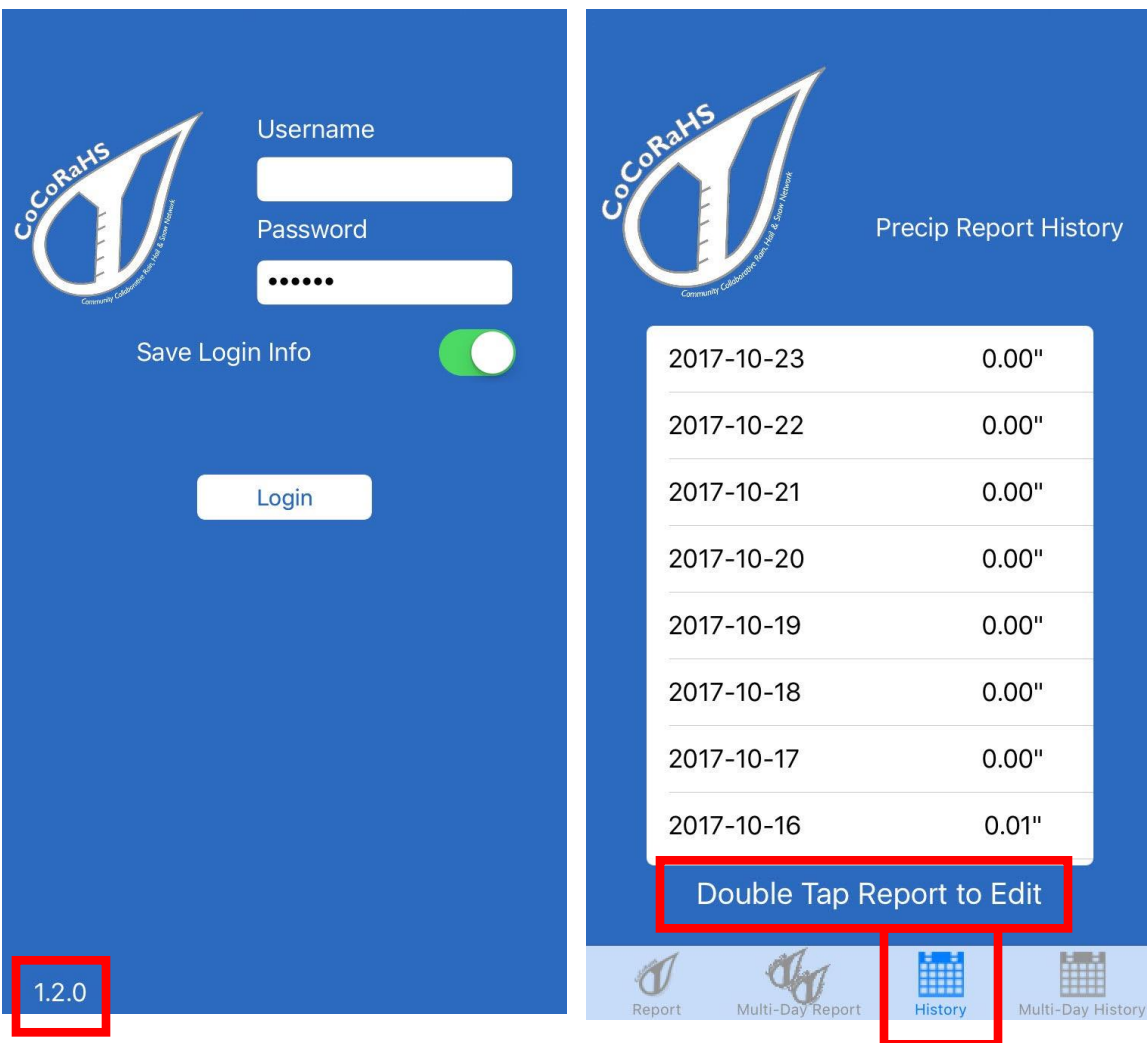
When was the last time....? How many times a year does this happen? And find the answer.

## **Edit Reports with the iPhone Mobile App**

Mobile app users of Apple devices that find themselves needing to change a Daily Report can do so with the latest update to the app.

For Android users, the same function is in beta testing. No promises, but this feature should be available with Android in the months to come.

Screen prints below are from an iPhone. iPad users will find their screens to be slightly different because of the difference in layout formats.



- 1) Mobile app login screen must say 1.2.0 for the app version for the Edit functionality.
- 2) Select the History Function.
- 3) Scroll to find the report to edit. Double Tap a Report, one of the rows in the History, to Edit.

Logout    Precip Report    Details

**CoCoRaHS**  
Community Collaborative Rain, Hail & Snow Network

US Units (in)  
Precipitation Report

Observation Date: 2017-10-23

Observation Time: 07:00

Rain/Melted Snow: NA

More Details

Trace Precip

Cancel    **Submit**

Report    Multi-Day Report    History    Multi-Day History

4) Edit the report. Press Submit to save the changes.

Two items to mention about mobile app reporting, whether it is with Apple iOS or Android.

A good time to repeat this pearl of wisdom: **Mistakes happen with reporting, not with measuring.** This is especially true with the use of mobile app reporting. Large fingers on a small screen is a recipe for mistaken entries. We regularly see mistakes, across the network, with mobile app reporting decimal points, 18.00” instead of 0.18” as an example.

Please slow down and check over your reported entries **BEFORE** you press “Submit” and spend a little time with the “History” function checking over your reported measurements. It is now easier to change mistaken

entries, but do try to avoid mistaken entries before pressing “Submit”

Last point: With either your mobile device, or with a web browser on a computer, periodically inquire on the CoCoRaHS website. See what other observers are experiencing through the map or through the “Scoreboard” above the map on the website. Reporting your own measurements is just one of many dimensions of being an observer. Experience another dimension by seeing the reports of others.

# Snow Values

During all of these years before, there was no quick and comprehensive location to see all 5 reported values from your Daily Report. The website has recently been changed to display all 5 reported values.

As is the case with many of our website inquiry tools, you can change the sort sequence of the records by clicking on the column name, or the icon.

**Search Daily Precipitation Reports**

Station Fields:   Station Number  Station Name




Location:

Date Range:

Start Date:  End Date:

Precip Value:  Operator

Searched: Stations in USA. Report date on 10/31/2017.


Date	Time	Station Number	Station Name	Total Precip in.	New Snow in.  	Total Snow in.  	State	County	View	 Maps
------	------	----------------	--------------	------------------	--	---	-------	--------	------	--

From left to right. Total Precip is first reported value, your 24 hour precip value, your melted amount in the gauge. Next, there are icons that look like a snowflake and a water droplet. The snow values are under the snowflake icon. The melted amounts of those snow values are under the water droplet icon. All 5 values on the Daily Report are now available on this [inquiry screen](#).

With snowfall occurring here and around the network, take a look at this updated inquiry screen, change the sort sequence by clicking on the column header, and learn from the reporting of others.


# Detail and Summary for October 2017

From the National Weather Service (NWS) Climate sites for Oct 2017.



## October 2017


### Regional Precipitation Summary




Location	Station ID	Oct 2017 Precip	Oct departure from normal	Aug-Sep-Oct Precip	3 month departure from normal	May-Oct Precip	6 month departure from normal	Nov-Oct Precip	12 month departure from normal
Pittsfield MA	PSF	4.51"	-0.20"	11.88"	-0.88"	26.10"	0.48"	43.95"	-1.43"
Bridgeport CT	BDR	7.37"	3.73"	12.91"	1.83"	23.34"	1.39"	45.35"	2.61"
Hartford CT	BDL	8.77"	4.40"	13.68"	1.50"	28.45"	3.39"	47.92"	2.07"
Worcester MA	ORH	8.83"	4.15"	12.93"	0.61"	25.52"	0.59"	48.32"	0.24"
Providence RI	PVD	5.44"	1.51"	10.75"	-0.70"	25.36"	3.43"	50.09"	2.91"
Boston MA	BOS	4.14"	0.20"	9.45"	-1.28"	21.78"	0.45"	45.11"	1.34"

**November 2017 Outlook**

Air Temperature



Precipitation



A = Above normal, B = Below normal, EC = Equal chances of above/below normal

**October Highlights**

- \* Count of 2"+ Daily Reports = 333
- \* Last Oct 2"+ Daily Reports = 92

**Did You Know?**  
**On October 25, we submitted 301 Daily Reports. Congrats to all who crossed this milestone with us for the first time!**

Roughly 1" of rain fell between two small events in the first 3 weeks of the month. Conditions were very dry during these first 3 weeks.

Two large rain events at the end of October yielded monthly totals we have not seen in years, have erased many red deficit figures, and given many of us our normal 50" of precip for the past 12 months. Single day rain totals in excess of 3"-5", something we have not seen this widespread since Irene came in August 2011.

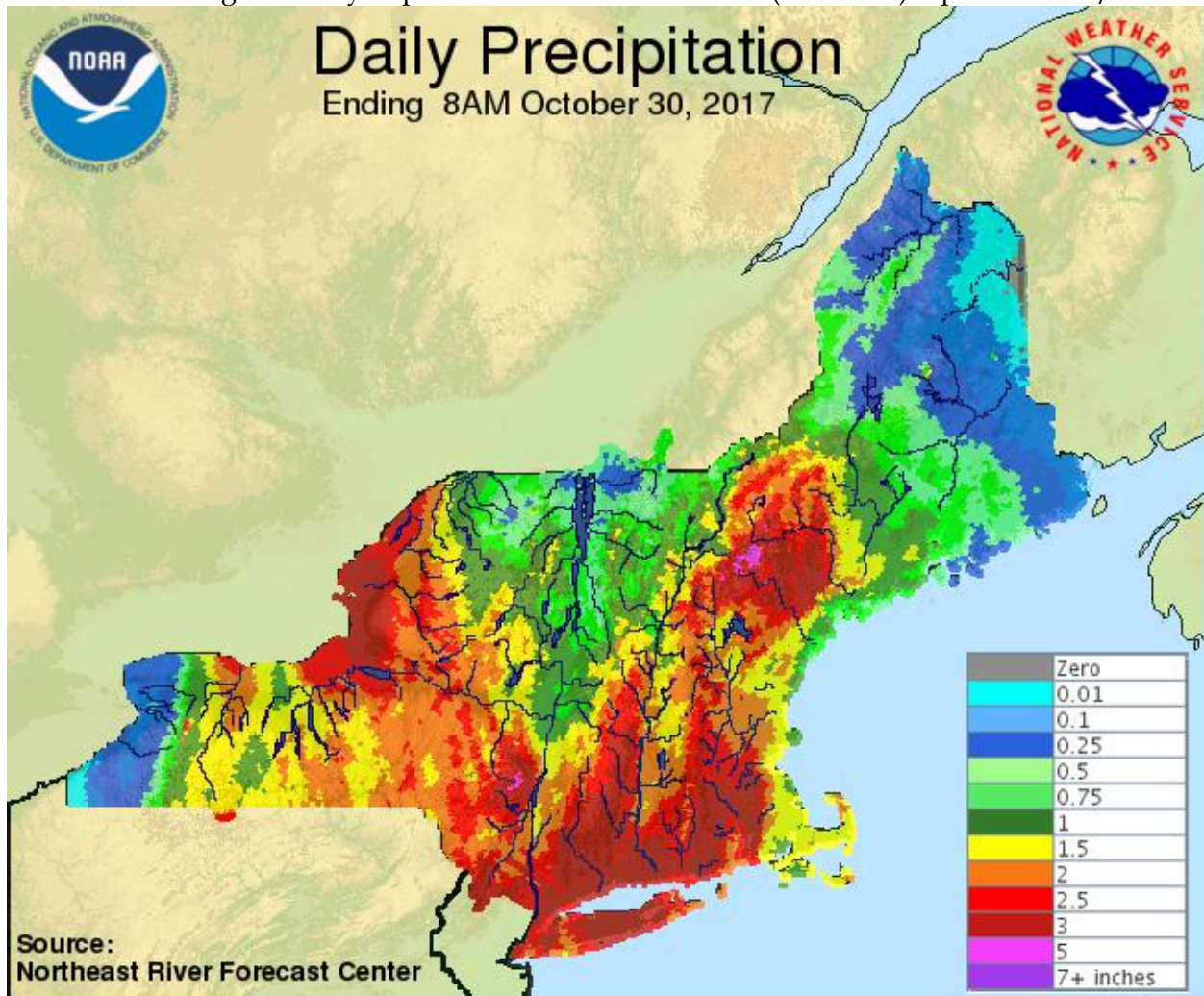
Comments have increased for these past two months. Thank you and continue to make Comments with your reports.

Take in this next section of your reports with appreciation of your efforts.



## From your reports for October 2017

Observers reporting	331
Reported all 31 days	145
Completed by Multi-Day Reports	54
Missing 1 or 2 reports	26
Daily Reports	7993
Zero Reports	4641
Non-Zero Reports	3352
Daily Comments	1491
Multi-Day Reports	218
Condition Monitoring Reports	41
Significant Weather Reports	47
Snowfall Reports	4052
Snow Depth Reports	1555
SWE Reports	968
Highest Daily Report	5.84" from Monroe CT (CT-FR-32) reported on 10/30



Putting together this table of stations was the easiest effort before a newsletter in many months. Thank you all for keeping your reporting complete for this first month of the Water Year. 60% of the stations were complete. Only 8% of the stations missed one or two reports.

The station from Fishers Island got us to our goal and record breaking 200 stations with complete reporting.

September 30 was a Saturday. It rained during the overnight into the early morning hours, so that precipitation counted for September, not October. There were another 20 stations that started a Multi-Day Report on that Saturday, and they kept their reporting complete for the remainder of October. Thank you for doing so.

Below is the longest list of complete stations ever put together for this monthly newsletter. At last, a month with many stations over our normal of 4" and some near or over 10". Enjoy the length and variability of it.

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

Watershed	Watershed Name	Station	Station Name	Precip
01060003	Piscataqua-Salmon Falls			
0106000310	Hampton River - Frontal Atlantic Ocean	MA-ES-1	Salisbury 3.7 NW	4.55"
01070004	Nashua			
0107000401	North Nashua River	MA-WR-44	Westminster 0.6 WSW	10.02"
0107000401	North Nashua River	MA-WR-22	Fitchburg 2.0 NNE	9.44"
0107000401	North Nashua River	MA-WR-13	Leominster 1.5 S	9.78"
0107000402	Headwaters Nashua River	MA-WR-64	Sterling 3.7 WNW	9.23"
0107000402	Headwaters Nashua River	MA-WR-56	Sterling 4.3 NW	9.83"
0107000402	Headwaters Nashua River	MA-WR-53	Clinton 0.2 E	8.72"
0107000402	Headwaters Nashua River	MA-MD-25	Ayer 0.1 SW	5.85"
0107000403	Squannacook River	MA-MD-47	West Townsend 0.5 W	9.09"
01070005	Concord			
0107000501	Sudbury River	MA-MD-90	Marlborough 0.1 SW	5.52"
0107000501	Sudbury River	MA-MD-89	Sudbury 3.6 W	6.31"
0107000501	Sudbury River	MA-MD-75	Sherborn 2.3 WNW	5.39"
0107000501	Sudbury River	MA-MD-88	Wayland 2.1 SSE	4.54"
0107000502	Concord River	MA-WR-30	Shrewsbury 1.6 NNE	8.60"
0107000502	Concord River	MA-WR-28	Berlin 1.3 WSW	8.06"



0107000502	Concord River	MA-WR-42	Northborough 2.3 N	6.86"
0107000502	Concord River	MA-WR-55	Harvard 2.1 S	7.39"
0107000502	Concord River	MA-MD-83	Boxborough 1.4 SSE	6.02"
0107000502	Concord River	MA-MD-12	Acton 1.3 SW	6.21"
0107000502	Concord River	MA-MD-51	Maynard 0.7 ESE	5.87"
0107000502	Concord River	MA-MD-53	Acton 4.0 ENE	5.39"
01070006	Merrimack River			
0107000611	Spicket River	MA-ES-38	Methuen 1.6 NNE	4.96"
0107000612	Stony Brook - Merrimack River	MA-MD-105	Littleton 0.9 WSW	7.49"
0107000612	Stony Brook - Merrimack River	MA-MD-93	Westford 1.5 SSW	4.66"
0107000613	Shawsheen River	MA-MD-52	Lexington 0.6 SW	5.55"
0107000613	Shawsheen River	MA-MD-96	Lexington 0.3 NE	3.08"
0107000614	Powwow River - Merrimack River	MA-ES-3	Haverhill 3.6 WNW	6.54"
0107000614	Powwow River - Merrimack River	MA-ES-20	Haverhill 0.7 N	5.86"
0107000614	Powwow River - Merrimack River	MA-ES-4	Groveland 0.5 WSW	4.11"
0107000614	Powwow River - Merrimack River	MA-ES-27	Amesbury 1.2 ENE	5.92"
01080201	Middle Connecticut			
0108020106	Manhan River - Connecticut River	MA-HS-8	Williamsburg 1.2 WSW	8.97"
0108020106	Manhan River - Connecticut River	MA-HS-26	Easthampton 0.5 SW	8.60"
0108020106	Manhan River - Connecticut River	MA-HS-12	Northampton 0.4 S	8.11"
0108020106	Manhan River - Connecticut River	MA-HS-20	Easthampton 1.3 ESE	9.07"
0108020106	Manhan River - Connecticut River	MA-HS-10	Northampton 1.6 NE	8.09"
0108020106	Manhan River - Connecticut River	MA-FR-12	Sunderland 1.3 SE	7.52"
0108020107	Batchelor Brook - Connecticut River	MA-HD-22	Holyoke 1.0 ENE	6.25"
0108020107	Batchelor Brook - Connecticut River	MA-HD-13	Springfield 4.1 W	7.67"
01080202	Miller			
01080203	Deerfield			
0108020305	Lower Deerfield River	MA-FR-17	Buckland 1.8 ESE	10.24"
0108020305	Lower Deerfield River	MA-FR-13	Conway 2.9 NW	10.46"
0108020305	Lower Deerfield River	MA-FR-10	Conway 0.9 SW	8.67"
01080204	Chicopee			
0108020402	Ware River	MA-WR-54	Barre 1.4 NNE	8.52"
0108020403	Quaboag River	MA-WR-63	Rutland 3.1 SW	7.99"
01080205	Lower Connecticut			
0108020501	Mill River - Connecticut River	CT-HR-5	Enfield 1.5 SE	9.45"
0108020502	Scantic River	MA-HD-20	Wilbraham 3.7 SSW	8.75"
0108020502	Scantic River	CT-TL-15	Central Somers 0.3 N	8.44"
0108020503	Park River	CT-HR-39	Farmington 1.6 SW	8.30"
0108020503	Park River	CT-HR-49	West Hartford 1.1 W	9.05"
0108020503	Park River	CT-HR-11	West Hartford 2.7 SSE	9.31"
0108020504	Hockanum River	CT-HR-52	Central Manchester 0.8 N	7.26"

0108020504	Hockanum River	CT-TL-16	Vernon 3.5 NNE	7.32"
0108020505	Roaring Brook - Connecticut River	CT-HR-6	Wethersfield 1.2 WSW	8.71"
0108020505	Roaring Brook - Connecticut River	CT-HR-51	Wethersfield 1.3 S	7.57"
0108020505	Roaring Brook - Connecticut River	CT-HR-22	East Hartford 1.3 E	7.51"
0108020505	Roaring Brook - Connecticut River	CT-HR-40	Glastonbury Center 4.0 ENE	7.87"
0108020506	Mattabeset River	CT-HR-15	Southington 3.0 E	9.09"
0108020507	Higganum Creek - Connecticut River	CT-MD-2	Portland 0.9 S	8.15"
01080206	Westfield			
0108020601	Headwaters Westfield River	MA-HS-14	Plainfield 2.4 ESE	8.24"
0108020603	Outlet Westfield River	MA-HD-17	Southwick 2.5 WSW	9.58"
01080207	Farmington			
0108020702	West Branch Farmington River	MA-BE-4	Becket 5.6 SSW	6.90"
0108020702	West Branch Farmington River	CT-LT-18	New Hartford Center 1.5 N	6.84"
0108020704	Headwaters Farmington River	CT-LT-9	New Hartford Center 3.2 SW	8.95"
0108020704	Headwaters Farmington River	CT-HR-24	Collinsville 0.9 NW	9.30"
0108020704	Headwaters Farmington River	CT-HR-28	North Canton 0.8 SSW	9.91"
0108020705	Salmon Brook	CT-HR-8	North Granby 1.3 ENE	10.01"
0108020706	Outlet Farmington River	CT-HR-35	Weatogue 0.7 E	9.45"
01090001	Charles			
0109000101	Plum Island Sound - Frontal Atlantic Ocean	MA-ES-24	Newburyport 0.8 SW	4.26"
0109000102	Ipswich River	MA-MD-85	Wilmington 2.2 WNW	6.23"
0109000102	Ipswich River	MA-MD-45	Wilmington 1.5 NE	5.38"
0109000102	Ipswich River	MA-ES-12	Boxford 2.4 S	4.79"
0109000102	Ipswich River	MA-ES-2	Beverly 2.8 NW	4.76"
0109000103	Essex River - Frontal Atlantic Ocean	MA-ES-41	Danvers 0.8 ESE	4.29"
0109000104	Saugus River - Frontal Broad Sound	MA-MD-81	Wakefield 0.5 NNW	3.66"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-67	Lexington 2.3 SE	5.37"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-7	Winchester 0.7 SE	5.66"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-44	Medford 1.2 W	6.06"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-11	Cambridge 0.9 NNW	6.07"
0109000105	Mystic River - Frontal Boston Harbor	MA-SF-10	Chelsea 0.8 N	5.96"
0109000106	Upper Charles River	MA-WR-1	Milford 2.3 NNW	6.21"
0109000106	Upper Charles River	MA-MD-106	Holliston 2.4 W	6.10"
0109000106	Upper Charles River	MA-MD-55	Holliston 0.7 W	5.65"
0109000106	Upper Charles River	MA-MD-42	Holliston 0.8 S	5.06"
0109000108	Neponset River - Frontal Boston Harbor	MA-NF-1	Norwood 1.3 NW	5.40"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-NF-5	Weymouth 0.5 NW	5.65"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-PL-36	Hingham 0.8 ESE	4.99"
01090002	Cape Cod			
0109000202	Cape Cod	MA-BA-8	Falmouth 1.8 WSW	5.93"
0109000202	Cape Cod	MA-BA-2	Falmouth 3.1 NNW	5.84"

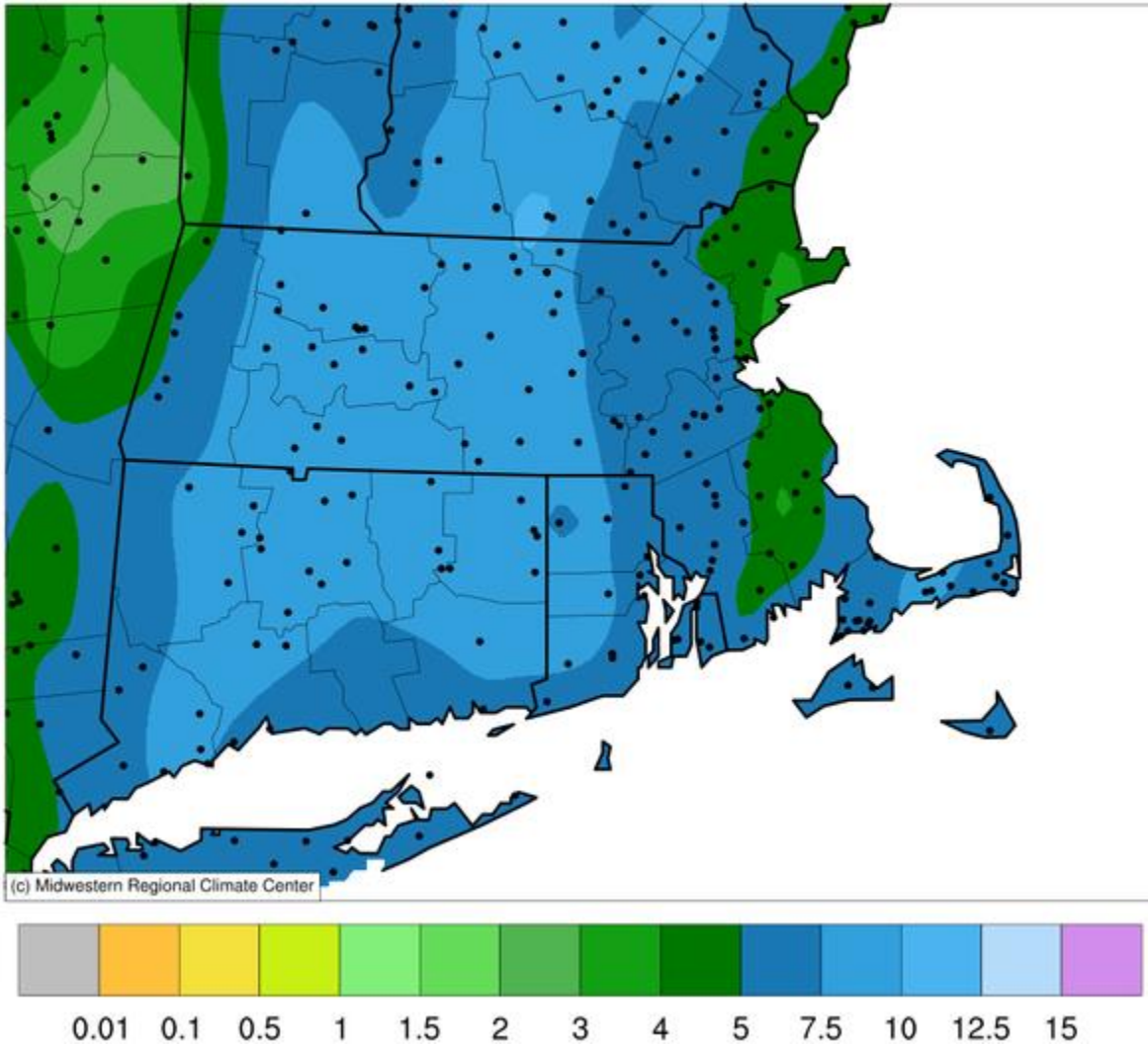
0109000202	Cape Cod	MA-BA-14	North Falmouth 0.5 ENE	5.96"
0109000202	Cape Cod	MA-BA-13	Falmouth 0.6 NNW	5.85"
0109000202	Cape Cod	MA-BA-17	East Falmouth 1.2 WNW	5.61"
0109000202	Cape Cod	MA-BA-3	Falmouth 3.0 E	5.59"
0109000202	Cape Cod	MA-BA-18	Waquoit 0.6 SSW	6.40"
0109000202	Cape Cod	MA-BA-47	Mashpee 2.4 WSW	6.45"
0109000202	Cape Cod	MA-BA-45	Sandwich 0.9 NNE	6.16"
0109000202	Cape Cod	MA-BA-10	East Sandwich 2.3 SE	7.11"
0109000202	Cape Cod	MA-BA-59	Barnstable 3.6 W	8.48"
0109000202	Cape Cod	MA-BA-22	Yarmouth 0.9 NNW	8.66"
0109000202	Cape Cod	MA-BA-1	Yarmouth 2.3 SSE	8.22"
0109000202	Cape Cod	MA-BA-33	Brewster 1.5 ESE	7.49"
0109000202	Cape Cod	MA-BA-52	Truro 0.8 E	6.77"
0109000202	Cape Cod	MA-BA-36	Harwich 2.6 ENE	6.68"
0109000202	Cape Cod	MA-BA-51	Orleans 3.0 S	7.22"
0109000202	Cape Cod	MA-BA-12	Orleans 1.1 E	7.02"
0109000202	Cape Cod	MA-BA-30	Eastham 0.6 SW	6.74"
0109000203	Mattapoisett River - Frontal Buzzards Bay	MA-PL-19	Rochester 1.2 NNW	4.49"
0109000203	Mattapoisett River - Frontal Buzzards Bay	MA-BA-64	Sandwich 1.5 SSE	6.48"
0109000204	Paskamanset River - Frontal Buzzards Bay	MA-BR-14	Dartmouth 2.5 SSW	4.48"
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-5	Little Compton 1.7 NW	7.61"
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-7	Little Compton 0.6 E	7.00"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-5	West Tisbury 2.9 N	6.91"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-9	West Tisbury 0.4 S	6.30"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-2	Vineyard Haven 0.8 WSW	5.61"
0109000207	Nantucket Island	MA-NT-1	Nantucket 3.8 WNW	6.47"
01090003	Blackstone			
0109000301	Upper Blackstone River	MA-WR-41	Auburn 2.6 SW	9.30"
0109000301	Upper Blackstone River	MA-WR-43	Leicester 2.4 ESE	9.49"
0109000302	Lower Blackstone River	RI-PR-50	Harrisville 1.2 SSE	8.29"
0109000302	Lower Blackstone River	RI-PR-28	North Smithfield 0.7 SE	7.34"
0109000302	Lower Blackstone River	RI-PR-45	Manville 0.4 WSW	7.83"
0109000302	Lower Blackstone River	MA-NF-26	Bellingham 2.4 S	5.36"
0109000302	Lower Blackstone River	MA-NF-16	Bellingham 4.7 S	5.87"
0109000302	Lower Blackstone River	RI-PR-55	Cumberland Hill 3.3 NE	5.34"
01090004	Narragansett			
0109000401	Upper Taunton River	MA-PL-22	East Bridgewater 0.3 WSW	4.22"
0109000401	Upper Taunton River	MA-PL-15	Abington 1.2 NNE	4.32"
0109000401	Upper Taunton River	MA-PL-23	Pembroke 2.8 SW	4.46"
0109000402	Middle Taunton River	MA-PL-17	Plympton 0.9 NNE	4.17"
0109000403	Threemile River	MA-NF-19	Foxborough 1.8 SSW	6.80"

0109000403	Threemile River	MA-NF-8	Foxborough 0.4 S	7.06"
0109000403	Threemile River	MA-BR-33	Taunton 2.4 W	8.02"
0109000403	Threemile River	MA-BR-9	Taunton 2.6 NW	7.96"
0109000404	Ten Mile River	MA-BR-17	North Attleboro 0.8 E	4.93"
0109000405	Wonnasquatucket River-Moshassuck River	RI-PR-33	Greenville 0.7 NNW	8.29"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-51	North Smithfield 0.6 S	7.46"
0109000405	Wonnasquatucket River-Moshassuck River	RI-PR-48	Providence 1.2 NNW	6.82"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-53	Providence 1.7 N	4.09"
0109000406	Pawtuxet River	RI-PR-20	West Glocester 3.4 SE	10.37"
0109000407	Palmer River	MA-BR-2	Rehoboth 2.1 N	7.23"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-3	Norton 1.8 NNE	7.20"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-16	Somerset 0.4 SSE	6.70"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-19	Somerset 2.0 NNE	6.23"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-8	Dighton 1.1 WSW	7.95"
0109000409	Narragansett Bay	RI-WS-31	Kingston 7.5 NNE	8.14"
0109000409	Narragansett Bay	RI-KN-2	East Greenwich 2.3 ESE	6.74"
0109000409	Narragansett Bay	RI-PR-32	Providence 2.3 NE	6.13"
0109000409	Narragansett Bay	RI-BR-5	Barrington 1.3 WNW	6.61"
0109000409	Narragansett Bay	RI-NW-4	Middletown 1.1 SW	5.36"
0109000409	Narragansett Bay	RI-NW-16	Portsmouth 1.3 S	5.12"
0109000409	Narragansett Bay	RI-NW-11	Tiverton 0.8 SSW	6.57"
01090005	Pawcatuck-Wood			
0109000501	Wood River	RI-WS-1	Hope Valley 3.7 S	7.83"
0109000502	Upper Pawcatuck River	RI-WS-37	Kingston 2.4 SW	7.90"
0109000502	Upper Pawcatuck River	RI-WS-40	West Warwick 7.7 S	8.82"
0109000503	Lower Pawcatuck River	RI-WS-35	Westerly 1.0 SW	7.83"
0109000504	Frontal Block Island Sound	RI-WS-36	Charlestown 3.0 WSW	8.26"
01100001	Quinebaug			
0110000102	French River	CT-WN-2	North Grosvenor Dale 1.7 SSE	8.54"
0110000103	Fivemile River	CT-WN-6	Dayville 2.0 ENE	8.94"
0110000103	Fivemile River	CT-WN-4	East Killingly 1.3 SW	9.25"
0110000105	Mossup River	CT-WN-8	Moosup 1.7 NE	9.63"
0110000106	Pachaug River	CT-NL-21	Griswold 0.9 N	8.22"
01100002	Shetucket			
0110000201	Willimantic River	CT-TL-18	Hebron 5.3 NW	9.93"
0110000201	Willimantic River	CT-TL-2	Staffordville 0.4 NNW	8.48"
0110000202	Natchaug River	CT-TL-4	Mansfield Center 1.9 SW	9.08"
0110000202	Natchaug River	CT-WN-12	Eastford 2.0 W	7.25"
0110000203	Shetucket River	CT-WN-10	South Windham 1.3 NNE	7.63"
0110000203	Shetucket River	CT-NL-10	Norwich 2.5 NNE	8.61"
0110000203	Shetucket River	CT-NL-28	Lisbon 2.0 SW	5.30"

01100003	Thames			
0110000302	Thames River-Frontal New London Harbor	CT-NL-5	Oakdale 2.6 WNW	9.60"
0110000302	Thames River-Frontal New London Harbor	CT-NL-6	New London 1.0 NNW	7.18"
0110000302	Thames River-Frontal New London Harbor	CT-NL-8	Uncasville-Oxoboxo Valley 1.6 ENE	8.39"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-22	Central Waterford 2.7 SSW	6.83"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-19	Mystic 0.9 W	6.30"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-24	Stonington 1.4 NNW	6.89"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-18	Stonington 0.5 NNE	6.76"
01100004	Quinnipiac			
0110000401	Quinnipiac River	CT-NH-14	Prospect 1.9 ENE	9.14"
0110000401	Quinnipiac River	CT-NH-30	Cheshire Village 2.2 SE	9.07"
0110000401	Quinnipiac River	CT-NH-44	Wallingford Center 1.9 WNW	6.87"
0110000401	Quinnipiac River	CT-NH-42	Wallingford Center 1.1 N	8.87"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-NH-41	Madison Center 1.6 W	7.52"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-15	Clinton 3.5 N	7.35"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-5	Westbrook Center 1.1 N	7.14"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-11	Westbrook Center 1.5 NE	6.04"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-16	Milford 1.8 E	6.42"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-39	West Haven 0.8 W	5.62"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-38	Wallingford Center 2.3 WNW	9.08"
01100005	Housatonic			
0110000501	Headwaters Housatonic River	MA-BE-11	Great Barrington 3.0 N	4.84"
0110000501	Headwaters Housatonic River	MA-BE-10	Pittsfield 2.0 NNW	5.23"
0110000508	Still River - Housatonic River	CT-FR-43	Bethel 0.5 E	7.38"
0110000508	Still River - Housatonic River	CT-FR-41	Bethel 3.5 NNE	6.65"
0110000508	Still River - Housatonic River	CT-FR-9	Brookfield 3.3 SSE	6.53"
0110000510	Eightmile Brook - Housatonic River	CT-FR-44	Newtown 4.3 E	8.94"
0110000512	Outlet Naugatuck River	CT-NH-45	Naugatuck 1.7 NNE	9.25"
0110000512	Outlet Naugatuck River	CT-NH-22	Prospect 0.5 SW	10.04"
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-23	Shelton 1.3 W	9.74"
01100006	Saugatuck			
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-29	Ridgefield 1.9 SSE	6.55"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-3	New Canaan 1.9 ENE	6.26"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-25	Norwalk 2.9 NNW	5.67"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-20	Westport 2.5 ENE	8.22"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-52	Trumbull 1.1 W	9.66"
0110000604	Mianus River-Rippowam River	CT-FR-12	Stamford 3.3 NW	6.37"
0110000604	Mianus River-Rippowam River	CT-FR-50	Darien 2.8 NW	4.59"
0110000604	Mianus River-Rippowam River	CT-FR-35	Darien 1.8 ENE	4.38"
02030203	Long Island Sound			
0203020300	Long Island Sound	NY-SF-114	Fishers Island 0.5 NE	6.59"



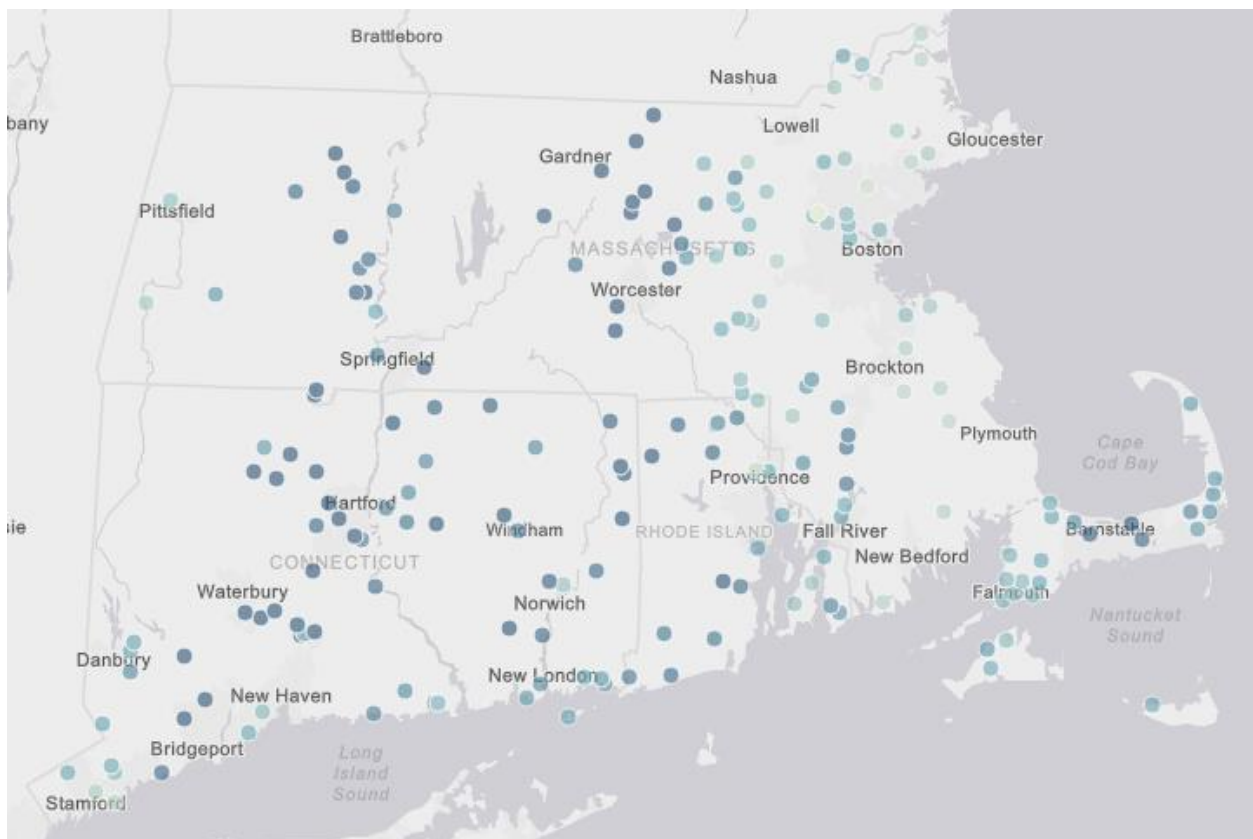
**Accumulated Precipitation (in)**  
October 01, 2017 to October 31, 2017



It's taken over two years of monthly newsletter writing to FINALLY find a free or an affordable tool where a map of dots can be created with the lat/long that is with your station's reporting summary.

The map below is October 2017 monthly precip totals of those stations with complete reporting. Darker colors are the higher amounts, the lighter colors are the lesser amounts. No scaling to display or values to put on the dots.

Just like the map on the page above, the highest rain totals were in the middle part of our region... and Cape Cod.



## **Map of the Month – Bristol County MA**

Bristol County's origin dates back to colonial times, when the county was created by the Plymouth Colony on June 2, 1685 and named after its "shire town" (county seat), Bristol. The Plymouth Colony, along with the Massachusetts Bay Colony, the Maine Colony and several other small settlements were re-chartered in 1691, by King William, to become The Province of Massachusetts Bay.

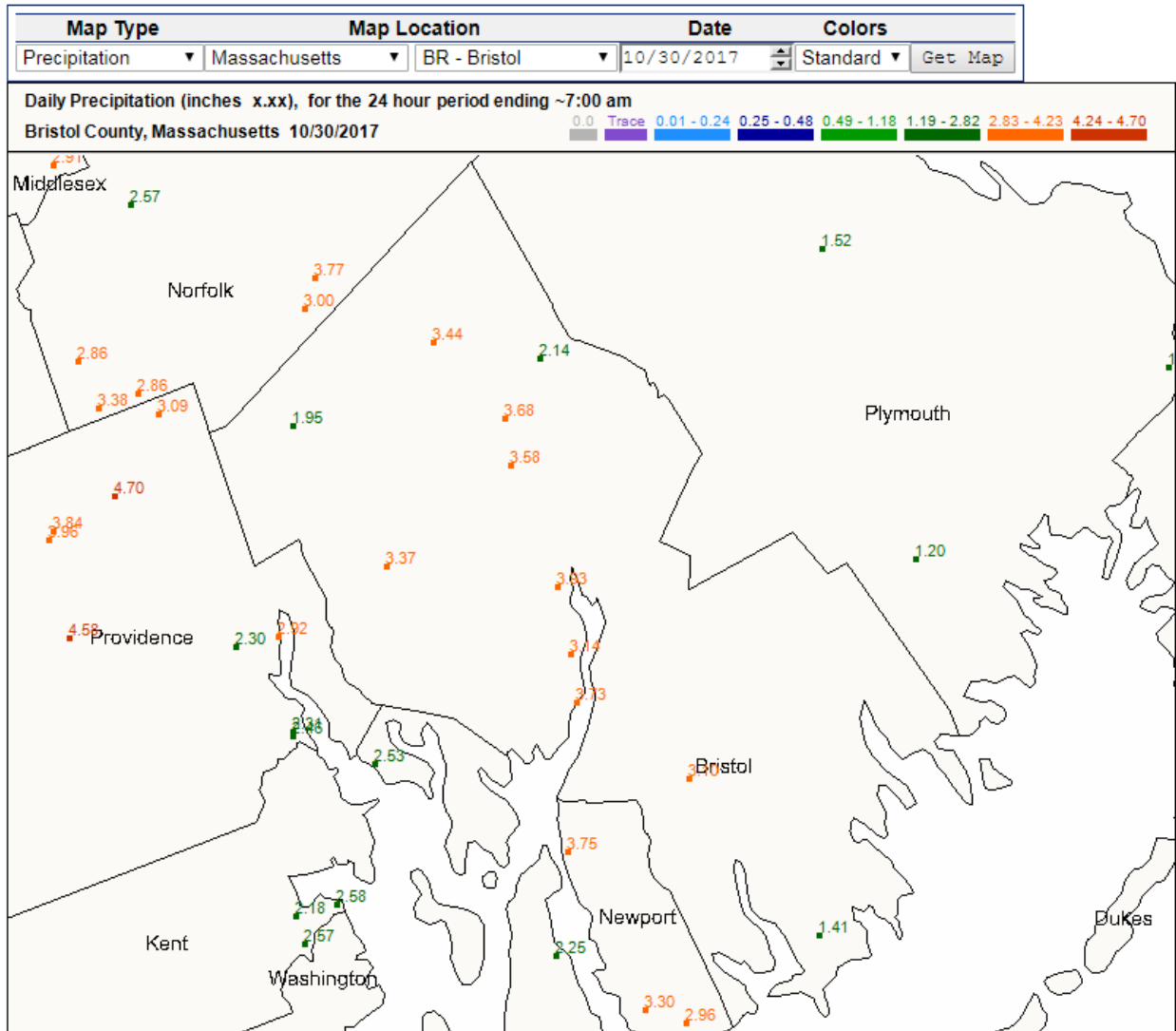
The towns of Bristol, Barrington, and Warren were awarded to Rhode Island in 1746 as part of the settlement of a long-running boundary dispute, forming Bristol County, Rhode Island. At the same time, Cumberland, Rhode Island was carved out of Attleborough, Massachusetts and annexed to Providence County, Rhode Island; Tiverton and Little Compton were transferred to Newport County, Rhode Island. East Freetown was officially purchased by Freetown, Massachusetts, from Tiverton in 1747, and so remained on the Massachusetts side. After the departure of Bristol, Taunton was made the shire town of the county.

Today, Bristol County Massachusetts includes four cities (Attleborough, Fall River, New Bedford, and Taunton) and sixteen communities. The county has a total area of 691 square miles, of which 553 square miles is land and 138 square miles is water. The highest point in Bristol County is Sunrise Hill at 390 feet above sea level located in North Attleborough. It is only one of 22 counties nationwide with the same name to border each other over state lines.

Bristol County has been the home of the National Weather Service's Boston area office since November 1993 when it moved to Taunton from Logan International Airport. In early 2018, the office will relocate to Norton, but will still call Bristol County its home.

Watersheds include the Taunton River, the second largest watershed in the state at 562 square miles which contains 94 square miles of wetlands and 221 lakes or ponds, as well as the Buzzards Bay, Narragansett Bay, and Ten Mile River.

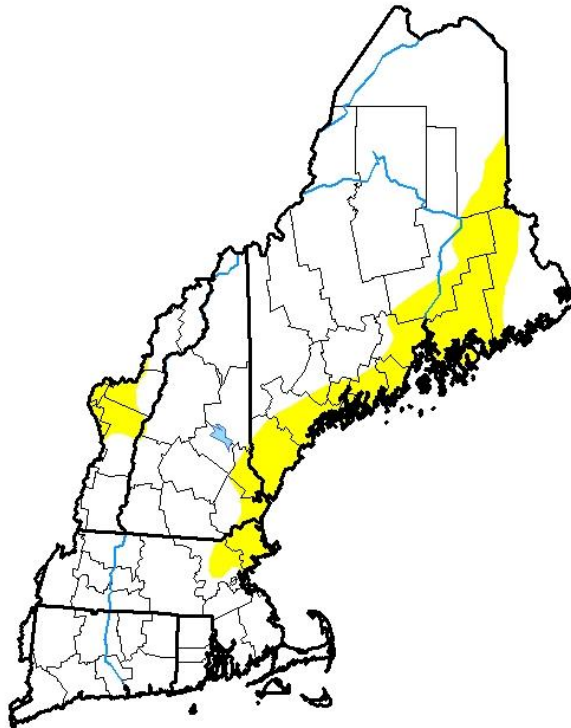
We have many active observers in Bristol County but can always use more! If you know of someone who might be interested in measuring and mapping precipitation, ask them to join CoCoRaHS.



From the Drought Monitor.

The rains at the end of October erased the developing drought from September into mid-October. Every drop counts and zeros do too!

## U.S. Drought Monitor New England Watershed



**November 7, 2017**  
(Released Thursday, Nov. 9, 2017)  
Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0	D1	D2	D3	D4
<b>Current</b>	82.41	17.59	0.00	0.00	0.00	0.00
<b>Last Week</b> <small>10-31-2017</small>	82.41	17.59	0.00	0.00	0.00	0.00
<b>3 Months Ago</b> <small>08-08-2017</small>	66.22	24.77	9.01	0.00	0.00	0.00
<b>Start of Calendar Year</b> <small>01-03-2017</small>	14.64	11.89	49.23	19.61	4.63	0.00
<b>Start of Water Year</b> <small>09-26-2017</small>	60.75	25.88	13.36	0.00	0.00	0.00
<b>One Year Ago</b> <small>11-08-2016</small>	6.82	13.75	46.71	28.07	4.64	0.00

*Intensity:*

- D0 Abnormally Dry
- D1 Moderate Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

*Author:*

David Miskus  
NOAA/NWS/NCEP/CPC



<http://droughtmonitor.unl.edu/>

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



## **Snow Reporting**

We have made progress in this area this during this year. We would like to see all of you in the habit of reporting snow all days, days of no snow, days with all rain, days of no precipitation.

With Snow Fall, also known as New Snow, show to everyone that sees your report what amount of snow fell, 0 or your measured amount. If snow fell, and if you are able to safely do so, measure and report that non-zero value. "T" for Trace for a few flakes, or didn't amount to 0.1" of snow, which is usually a strong dusting.

Snow Fall reporting is easier when all rain fell. You report the precipitation value as you always do. Change the snow fall value from NA to 0. Prove to everyone else that what fell was all rain. Our Snow Fall reporting can be even higher if all of you can do that.

With Snow Depth reporting. In newsletters past, it has been mentioned that you are "The Rulers of the Snow", and "We define where the snow is where it is not." Your Snow Depth reporting does more.

Snow Depth reporting verifies what the satellites can see, and it defines what the snow depth is when the cloud cover does not allow the satellites to see our surface. With a day or consecutive days of overcast skies, our satellite technology cannot see what you can see for snow! Snow Depth reporting also adds to your record. You can see which days you had snow cover and which days the snow cover is 0. When you leave Snow Depth as "NA", your own record is uncertain when the snow cover was 0. Snow Depth only needs to be accurate to the nearest 0.5" inch. Make your best measurements and average them, and round it off to the nearest 0.5". A "T" for Trace when the snow cover is scattered and less than 0.5" thick.

Rather than type for pages and pages about measuring and reporting of snow, our [Snow Guide](#) has been added to our State site. Take some time to read or re-read it, including the reporting scenarios included. Ask Joe or Matt if you have questions, especially before the snow comes in.

The next two pages come from looking at our start to this season of Snow Reporting, starting on October 1. See how your state and others compare. Snow Fall Reporting in Florida and The Bahamas?

Ask yourself what you can do differently to make your Station's Snow Fall and Snow Depth Reporting as complete as it can be.

The blue and white table below are percentages and corresponding ranks of Snow Fall and Snow Depth reports from Daily Reports that do NOT have a value = 'NA' . From the set of October 2017 Daily Reports. Downloaded on Saturday night, November 4, 2017.

Dig in and learn.

Country	Postal Code	State/Province	% Reports with Snow Fall	% Reports with Snow Fall Rank	% Reports with Snow Depth	% Reports with Snow Depth Rank
USA	AL	Alabama	57%	27	1%	55
USA	AK	Alaska	61%	15	50%	1
USA	AZ	Arizona	83%	2	0%	58
USA	AR	Arkansas	59%	21	1%	56
USA	CA	California	78%	4	3%	45
USA	CO	Colorado	74%	6	15%	17
USA	CT	Connecticut	52%	38	20%	6
USA	DC	District of Columbia	29%	60	0%	61
USA	DE	Delaware	46%	53	0%	59
USA	FL	Florida	41%	57	1%	57
USA	GA	Georgia	55%	29	2%	51
USA	HI	Hawaii	22%	61	0%	62
USA	ID	Idaho	66%	12	16%	13
USA	IL	Illinois	47%	52	9%	32
USA	IN	Indiana	45%	54	6%	37
USA	IA	Iowa	44%	55	11%	22
USA	KS	Kansas	55%	30	4%	42
USA	KY	Kentucky	50%	40	4%	43
USA	LA	Louisiana	54%	31	1%	54
USA	ME	Maine	59%	19	20%	7
USA	MD	Maryland	51%	39	10%	25
USA	MA	Massachusetts	49%	47	17%	12
USA	MI	Michigan	41%	58	12%	21
USA	MN	Minnesota	49%	45	13%	19
USA	MS	Mississippi	61%	16	3%	50
USA	MO	Missouri	60%	18	3%	44

USA	MT	Montana	72%	9	15%	15
USA	NE	Nebraska	13%	65	5%	41
USA	NV	Nevada	90%	1	10%	26
USA	NH	New Hampshire	57%	26	16%	14
USA	NJ	New Jersey	48%	48	10%	30
USA	NM	New Mexico	71%	10	3%	49
USA	NY	New York	47%	50	12%	20
USA	NC	North Carolina	52%	33	3%	48
USA	ND	North Dakota	70%	11	9%	31
USA	OH	Ohio	47%	49	10%	23
USA	OK	Oklahoma	57%	25	3%	47
USA	OR	Oregon	52%	37	10%	29
USA	PA	Pennsylvania	49%	46	6%	38
USA	PR	Puerto Rico	19%	62	0%	63
USA	RI	Rhode Island	59%	20	30%	5
USA	SC	South Carolina	52%	36	2%	52
USA	SD	South Dakota	57%	24	7%	36
USA	TN	Tennessee	58%	22	3%	46
USA	TX	Texas	64%	14	1%	53
USA	UT	Utah	79%	3	10%	24
USA	VT	Vermont	49%	43	7%	35
USA	VI	Virgin Islands	18%	63	0%	64
USA	VA	Virginia	50%	42	5%	40
USA	WA	Washington	49%	44	8%	33
USA	WV	West Virginia	52%	34	8%	34
USA	WI	Wisconsin	47%	51	17%	10
USA	WY	Wyoming	72%	8	19%	9
Canada	AB	Alberta	57%	23	6%	39
Canada	BC	British Columbia	52%	35	17%	11
Canada	MB	Manitoba	53%	32	10%	28
Canada	NB	New Brunswick	73%	7	46%	2
Canada	NL	Newfoundland & Labrador	66%	13	31%	4
Canada	NT	Northwest Territories	50%	41	15%	16
Canada	NS	Nova Scotia	61%	17	20%	8
Canada	ON	Ontario	36%	59	10%	27
Canada	PE	Prince Edward Island	75%	5	41%	3
Canada	QC	Quebec	17%	64	0%	65
Canada	SK	Saskatchewan	56%	28	13%	18
Bahamas	BHS	Bahamas	44%	56	0%	60
		October 2017 Average	56%		7%	

## **Dare to Compare**

Last November's newsletter was filled with pages of comparisons of our reporting statistics to other states in the network. We grew by tremendous percentages last year and it was worth the effort to show to all of you where our states compared with others. This year, not as much growth as the year before, but still more than 10% year-over-year growth is noteworthy.

The record breaking 200 stations with complete reporting this month, especially those with Multi-Day reports with the record of 218 Multi-Day Reports submitted, encouraged some further in-depth look into more records and rankings we established this month.

- ★ Reported on Wednesday October 25, 2017 from rain the night before. Single Day reporting record of 301+ Daily Reports established. Single Day reporting records tied (RI) or broken (CT & MA) 93 CT + 177 MA + 31 RI = 301... +1 for Fishers Island NY.
- ★ Rhode Island. Smashed their single month reporting record of 810 reports, established in May 2017. 876 Daily Reports. Can 1000 Daily Reports be far away? 21 stations out of 34 reporting stations reported all 31 days for October. Rhode Island leads the network with that percentage.
- ★ Massachusetts tied its single month reporting record of 4749 set in May 2017. MA-PL-37 submitted the last two record tying reports.
- ★ Middlesex County MA. At last, breaking through 1000 Daily Reports, ending at 1052 Daily Reports. Based upon October's reporting of US Counties, ranked #8 out of 42 Counties with population over 1 million residents, and tied for #24 overall.
- ★ Barnstable County MA. Based upon October's reporting of US Counties, ranked #7 out of 99 Counties with population between 200,000 and 300,000 residents.
- ★ Worcester County MA & Fairfield County CT. Based upon October's reporting of US Counties, ranked #7 and #8 respectively out of 38 Counties with population between 750,000 and 1 million residents.

Congratulations to all who were a part of the reporting this month and longer!

## **Wrap up**

Thanksgiving is a unique holiday, a day in which we pause to give thanks.

Thanks to you, the volunteer observers of this Southern New England region. This month of October's reporting was remarkable. You do something special every day, every month, every season and every year. You capture the variability of precipitation like no other network ever built. You watch the weather. You define the climate.

We experienced mid-late winter snows, drought relief in the spring, a dry summer, flooding rains in mid-August on Cape Cod, tropical systems late in September and late in October. Through it all we continued to grow by more than 10% in reporting stations and in reports over the past 12 months. Thank you for your commitment to why we do what we do.

The staff at Headquarters would like to express their thanks, at this time of the year, to the observers who reported from October 2016 to September 2017. Login in to your account on the website and access [My Account](#) . Towards the upper right, within your 2017 Water Year, click on the link for Certificate. That action will download a pdf file containing your Certificate of Appreciation, where you can view or print it. Please pass on your feedback about this Certificate to the team at Headquarters at [info@cocorahs.org](mailto:info@cocorahs.org)

The recent newsletter from Nolan started with the word, "Thanks". Every one of our monthly newsletters concludes with a word of thanks and this season of Thanksgiving will conclude in the same way. Thank you for all that you do for CoCoRaHS, whether in the past, present and in the days to come.