



Southern



New England

January 2018

We got our widespread start to snow measuring. We also got our widespread start to a deep winter cold. Total reporting dropped but not as fast as the thermometer did.

A few new items in December. From the website, under “Maps”, scroll down some and find the Watershed Tool. The secret is out now as how your stations have been sorted by Watershed over this past year.

The Android mobile app for reporting has been updated to allow edit on Daily Reports. That should complete one major task. Regardless how you enter a Daily Report, website or mobile app, you should have the ability to edit your reports.

More on Snow Reporting. The amounts and percentages of snow reporting were strong this month. Along with the reporting came the mistakes that we are trying to minimize.

Instead of looking at 6 airport sites for precipitation totals, we added 22 additional airports. Wait until you see the differences between your totals and these airports’ totals.

Finish it up with a look where your snow reports appear.

Let’s 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-BA-1 Yarmouth 2.3 SSE
MA-WR-1 Milford 2.3 NNW

2000 Daily Reports

RI-NW-7 Little Compton 0.6 E

1000 Daily Reports

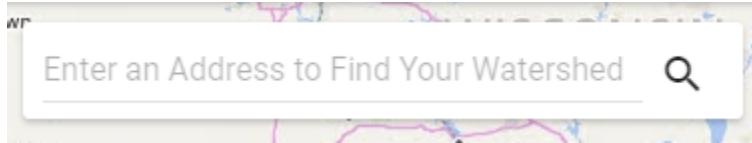
CT-HR-24 Collinsville 0.9 NW
MA-HD-13 Springfield 4.1 W
MA-PL-15 Abington 1.2 NNE

We tried to gather observers with 100 Daily Reports and 365 Daily Reports on this list. The range of create dates of those observers was wide ranging, so we decided not to do it.

One observer suggested that observers that make this list of 1000, 2000, 3000 Daily Reports be given a chance to write an article about their CoCoRaHS experiences. Excellent idea! The door is open. If someone mentioned in this “Grand” List segment wants to write, please do so and we will include it within a newsletter.

Watershed Tool

In December, a new tool has been released. Bookmark this link <https://cocorahs.erams.com> to use. Addresses are limited to our 50 states, District of Columbia, Puerto Rico and the US Virgin Islands. You can enter a US ZIP code, lat/long, city/state, street address with city/state into this text box.



While preparing this article, there was more success using Google Chrome than Internet Explorer as a web browser with this Tool.

A blue marker appears to mark the location you entered. Zoom in occurs by clicking where your mouse pointer is.

Watershed names appear with their 10 digit Hydrologic Unit Code (HUC)

There is a way to get precipitation reports with this tool. Caution: Closed stations appear with current stations.

With an awareness how the 10 digit HUC is structured, you can enter certain parts of the HUC into a URL.

With this tool, your station reports appear by their 10 digit HUC. Expand your knowledge beyond the county or state level, and see how certain areas are connected by how the water flows.

Use your own city/state, lat/long, and see how your locale connects by how the water flows. Learn another mapping dimension from this Watershed Tool.

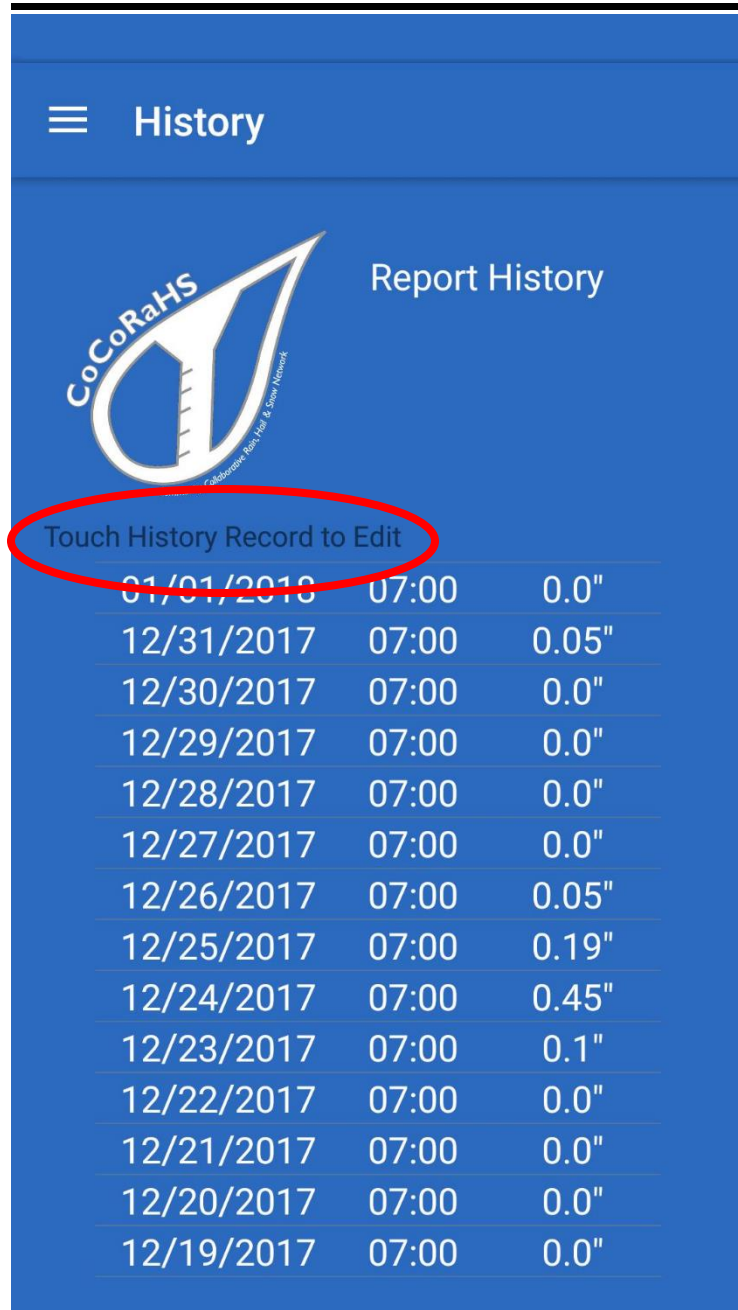
<https://cocorahs.erams.com/watersheds/01>

<https://cocorahs.erams.com/watersheds/0109>

<https://cocorahs.erams.com/watersheds/01090004>

<https://cocorahs.erams.com/watersheds/0109000401>

Touch to Edit on the Mobile App



The update is in place for Android devices. Version 2.2.3 of the app was published in late November and gives the functionality to touch a record in History to view or edit.

The mobile app for Apple has been updated to all edit on History reports.

The website was updated last year to allow edit of your reports, from the list displayed after submitting a Daily Report.

Please use the tools you have available to you to view or edit your reports.

Snow Reporting

With the snow events that came to us during the month of December, reporting mistakes occurred. How many? About 1%-2%. That doesn't seem that bad. There are over 200 reports per day. That doesn't seem that bad. You all do not submit your reports within the same hour or within the same few hours. The reporting mistakes occur throughout the day and night and into the next day.

In December's reporting, there were over 100 Daily Reports of NA for precipitation. Understand when you do report NA for precipitation, your precipitation total cannot be used accurately for the month and perhaps longer than the month. If you can only do one thing, try to report the melted amount that fell in your gauge.





Throughout the year, with each of your Daily Reports, and certainly within this Snow reporting season, there are 3 measuring and reporting tasks.

With the preface of safety coming first....

Task #1 – Liquid content of what fell within your gauge on its post.

Task #2 – New Snow fall

Task #3 – Snow Depth, total depth of snow and ice.

Task #1	Task #2	Task #3
Total Precip in.	New Snow in.  	Total Snow in.  

Task #1

- What? Measure the liquid content of whatever fell in the gauge.
- Why? This amount is added to all of your rainfall reports throughout the year.
- How? Use the inner cylinder with a measured amount of hot tap water. Pour the measured amount of hot tap water into the outer cylinder. Pour out the contents of the outer cylinder into the inner cylinder. Subtract the hot tap water to compute the difference. This is your liquid content.
- Report? This value is liquid content value first. **DO NOT REPORT SNOW FALL in the first value.**

Task #2

- What? Measure the new snow fall.
- Why? This amount is added to all of your snowfall reports throughout the year.
- How? A ruler in the fresh snow. Take an average over multiple locations. To the nearest 0.1".
- When? Measure when the snow stops or changes over to rain. Try not to let the snow accumulate more than or less than 6 hours without measuring and sweeping that location clear. All with the understanding that we work, we sleep, we have other aspects to our lives.
- Report? This value is second. Report "T" for Trace if this amount is less than 0.1". Report 0.00 when it is all rains!
- Additional task. Take a core measurement of this average snowfall and find the liquid content of it by using a measured inner cylinder quantity of hot tap water. See how this compares with liquid value in Task #1. It should be fairly close, unless the wind was blowing the snow horizontal. We have seen decimal point errors with this reported value.

Task #3

- What? Measure the total depth of snow and ice.
- Why? We define where the snow is and where it is not.
- How? A ruler in the snow pack. Take an average over multiple locations. To the nearest 0.5".
- Report? This value is the 4th value on the Daily Report Form. Report "T" for Trace if the snow depth is scattered across the terrain.
- Additional task. Once a week, take a core measurement of this average snow depth and find the liquid content of it by using a measured inner cylinder quantity of hot tap water. We call this custom "SWE Monday" We ask that everyone attempt this additional task with the Monday morning report.

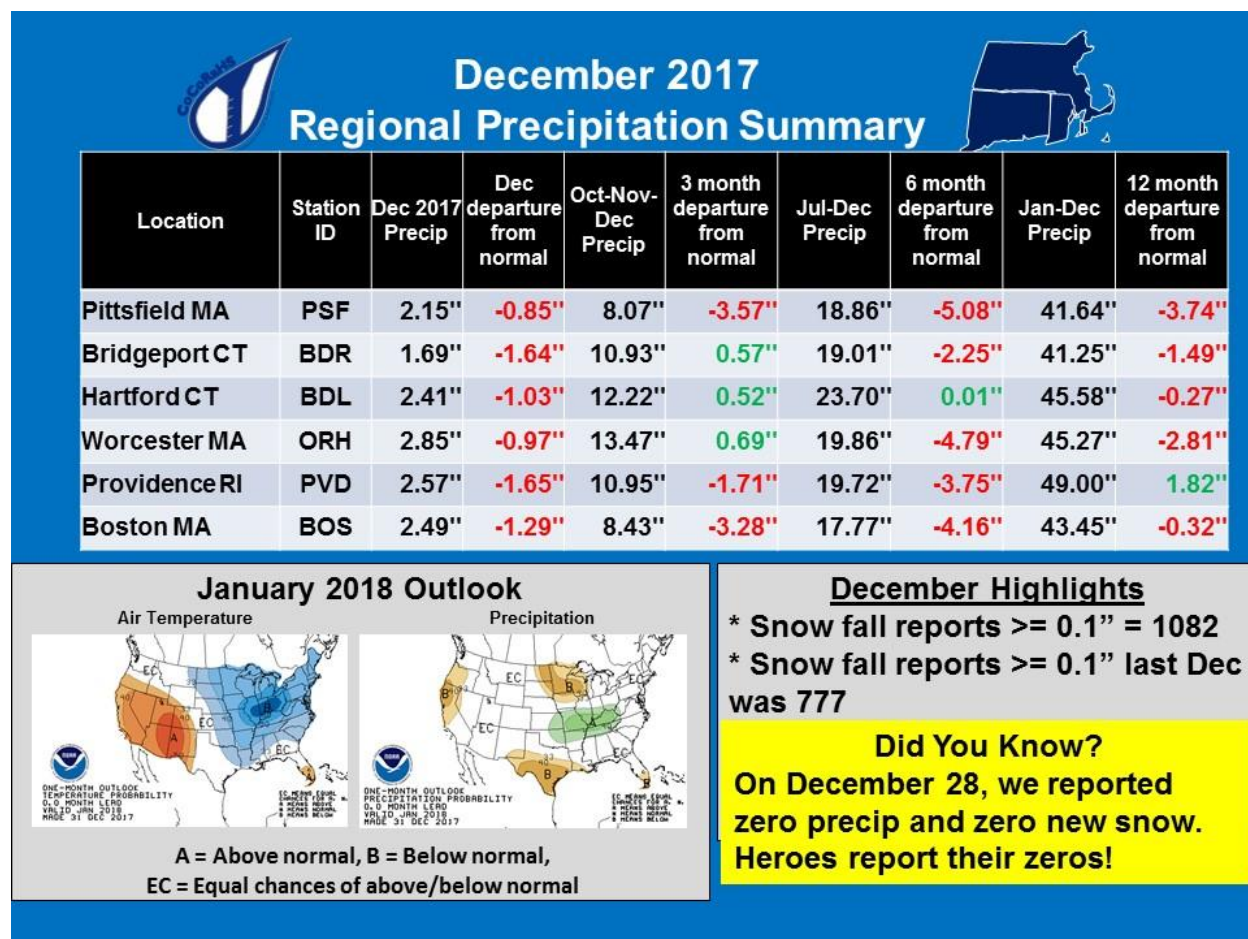
Do you think that the CoCoRaHS database is the one and only one spot your snow reports end up? In the next article, using the recent January snowstorm, we will show one other place your reports appear.

Please look over your values before you press "Submit"

Accuracy matters.

Detail and Summary for December 2017

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



Another month with below normal precipitation.

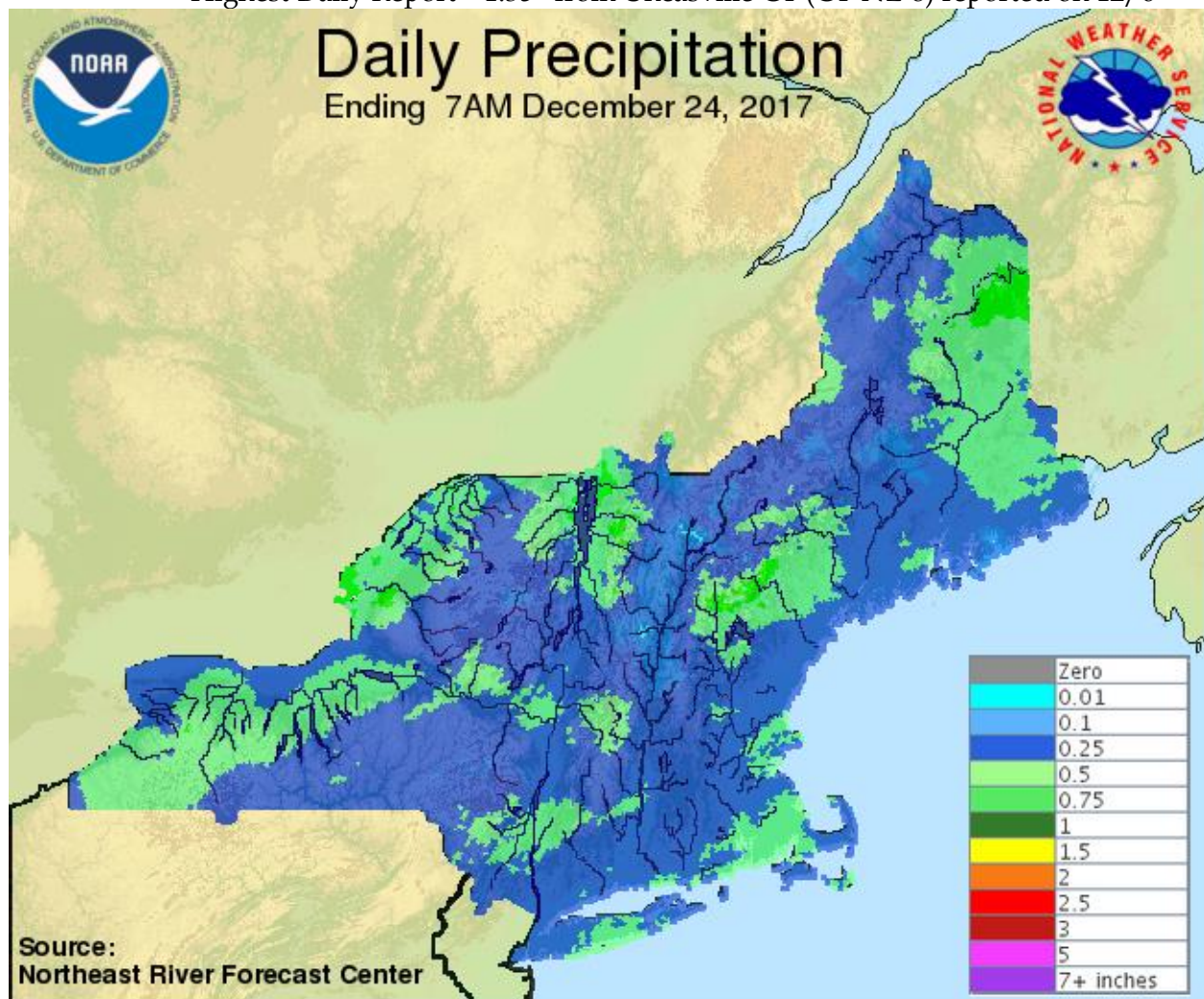
The month started with a quick burst of rain to start the 1st of the month. The only widespread significant rain occurred overnight between the 5th and 6th, with CT-NL-8 capturing 1.35". Snow came on the 9th. More rain for the 12th. Back to snow for the 14th-15th-16th. Thawing conditions melted the snow pack on the 18th- 19th. Light rain on the 24th. Light snow for the 25th. Into the deep freeze where we have been for the past two weeks. Light snow on Saturday the 30th. An unusually cold New Year's Eve.

Rain does not fall the same on all. Snow does not as well. Many stations reported their first 12" of snow of the season.

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

From your reports for December 2017

Observers reporting	317
Reported all 31 days	141
Completed by Multi-Day Reports	37
Missing 1 or 2 reports	18
Daily Reports	7397
Zero Reports	4166
Non-Zero Reports	3231
Daily Comments	1851
Multi-Day Reports	174
Condition Monitoring Reports	19
Significant Weather Reports	37
Snowfall Reports	5296
Snow Depth Reports	3235
SWE Reports	1092
Highest Daily Report	1.35" from Uncasville CT (CT-NL-8) reported on 12/6



With the Watershed Tool available, now you know how this all comes together by Watershed.

Several of you submitted a Multi-Day Report over New Year's Day. Because of the timing of the amount of precipitation around New Year's Day, several of those stations are included. 35 stations submitted a Daily Report of NA. 13 of those stations had their totals excluded from this list.

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

Watershed	Watershed Name	Station	Station Name	Precip
01070004	Nashua			
0107000401	North Nashua River	MA-WR-44	Westminster 0.6 WSW	2.97"
0107000401	North Nashua River	MA-WR-8	Fitchburg 1.6 SSW	2.12"
0107000401	North Nashua River	MA-WR-52	Fitchburg 2.3 N	3.06"
0107000401	North Nashua River	MA-WR-22	Fitchburg 2.0 NNE	2.88"
0107000402	Headwaters Nashua River	MA-WR-64	Sterling 3.7 WNW	2.82"
0107000402	Headwaters Nashua River	MA-WR-56	Sterling 4.3 NW	1.93"
0107000402	Headwaters Nashua River	MA-MD-25	Ayer 0.1 SW	2.83"
0107000403	Squannacook River	MA-MD-47	West Townsend 0.5 W	3.03"
01070005	Concord			
0107000501	Sudbury River	MA-MD-107	Framingham 1.7 E	3.05"
0107000501	Sudbury River	MA-MD-100	Sudbury 1.6 N	3.29"
0107000501	Sudbury River	MA-MD-88	Wayland 2.1 SSE	3.21"
0107000502	Concord River	MA-WR-28	Berlin 1.3 WSW	2.88"
0107000502	Concord River	MA-WR-42	Northborough 2.3 N	3.04"
0107000502	Concord River	MA-MD-83	Boxborough 1.4 SSE	3.09"
0107000502	Concord River	MA-MD-12	Acton 1.3 SW	3.43"
0107000502	Concord River	MA-MD-51	Maynard 0.7 ESE	2.98"
0107000502	Concord River	MA-MD-53	Acton 4.0 ENE	2.99"
0107000502	Concord River	MA-MD-62	Chelmsford 1.2 E	3.36"
01070006	Merrimack River			
0107000611	Spicket River	MA-ES-38	Methuen 1.6 NNE	2.55"
0107000612	Stony Brook - Merrimack River	MA-MD-104	Littleton 2.8 NNW	2.92"
0107000613	Shawsheen River	MA-MD-52	Lexington 0.6 SW	2.87"
0107000613	Shawsheen River	MA-MD-96	Lexington 0.3 NE	2.22"
0107000614	Powwow River - Merrimack River	MA-ES-20	Haverhill 0.7 N	3.11"
0107000614	Powwow River - Merrimack River	MA-ES-4	Groveland 0.5 WSW	3.15"
01080201	Middle Connecticut			
0108020106	Manhan River - Connecticut River	MA-HS-2	Westhampton 1.8 SW	3.04"

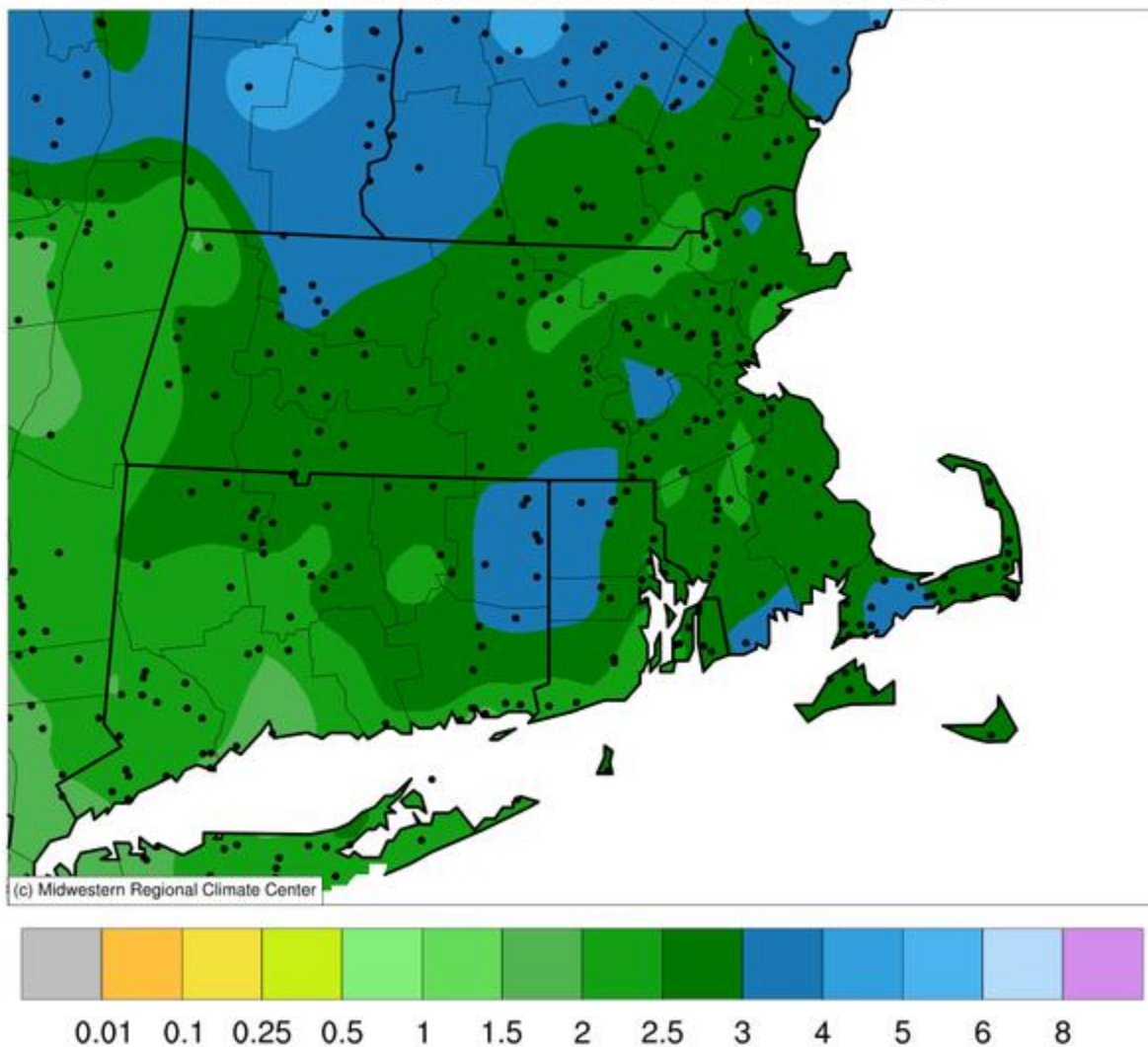
0108020106	Manhan River - Connecticut River	MA-HS-8	Williamsburg 1.2 WSW	2.90"
0108020106	Manhan River - Connecticut River	MA-HS-26	Easthampton 0.5 SW	2.82"
0108020106	Manhan River - Connecticut River	MA-FR-12	Sunderland 1.3 SE	2.88"
0108020107	Batchelor Brook - Connecticut River	MA-HD-22	Holyoke 1.0 ENE	2.26"
0108020107	Batchelor Brook - Connecticut River	MA-HD-13	Springfield 4.1 W	2.80"
01080203	Deerfield			
0108020305	Lower Deerfield River	MA-FR-17	Buckland 1.8 ESE	3.28"
0108020305	Lower Deerfield River	MA-FR-13	Conway 2.9 NW	3.24"
0108020305	Lower Deerfield River	MA-FR-10	Conway 0.9 SW	3.03"
01080204	Chicopee			
0108020404	Chicopee River	MA-HD-25	Ludlow 2.3 SW	2.49"
01080205	Lower Connecticut			
0108020502	Scantic River	CT-TL-15	Central Somers 0.3 N	2.93"
0108020503	Park River	CT-HR-39	Farmington 1.6 SW	3.16"
0108020503	Park River	CT-HR-11	West Hartford 2.7 SSE	2.60"
0108020503	Park River	CT-HR-19	Newington 0.8 ENE	4.52"
0108020504	Hockanum River	CT-HR-52	Central Manchester 0.8 N	2.48"
0108020504	Hockanum River	CT-TL-19	Vernon 2.8 N	2.68"
0108020505	Roaring Brook - Connecticut River	CT-HR-6	Wethersfield 1.2 WSW	2.83"
0108020505	Roaring Brook - Connecticut River	CT-HR-22	East Hartford 1.3 E	2.59"
0108020505	Roaring Brook - Connecticut River	CT-HR-7	Central Manchester 2.7 SW	2.81"
0108020506	Mattabeset River	CT-HR-15	Southington 3.0 E	2.06"
01080206	Westfield			
0108020601	Headwaters Westfield River	MA-HS-7	Plainfield 2.2 SW	3.44"
0108020601	Headwaters Westfield River	MA-HS-14	Plainfield 2.4 ESE	3.25"
0108020603	Outlet Westfield River	MA-HD-17	Southwick 2.5 WSW	2.71"
01080207	Farmington			
0108020701	Still River	CT-LT-15	Colebrook 1.0 NE	3.05"
0108020702	West Branch Farmington River	MA-BE-4	Becket 5.6 SSW	3.04"
0108020702	West Branch Farmington River	CT-LT-18	New Hartford Center 1.5 N	2.80"
0108020704	Headwaters Farmington River	CT-LT-9	New Hartford Center 3.2 SW	2.71"
0108020704	Headwaters Farmington River	CT-HR-24	Collinsville 0.9 NW	2.84"
0108020704	Headwaters Farmington River	CT-HR-28	North Canton 0.8 SSW	2.76"
0108020705	Salmon Brook	CT-HR-8	North Granby 1.3 ENE	2.91"
01090001	Charles			
0109000101	Plum Island Sound - Frontal Atlantic Ocean	MA-ES-24	Newburyport 0.8 SW	3.32"
0109000102	Ipswich River	MA-MD-85	Wilmington 2.2 WNW	3.55"
0109000102	Ipswich River	MA-MD-45	Wilmington 1.5 NE	3.05"
0109000102	Ipswich River	MA-ES-12	Boxford 2.4 S	2.87"
0109000102	Ipswich River	MA-ES-2	Beverly 2.8 NW	2.50"
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	2.61"
0109000103	Essex River - Frontal Atlantic Ocean	MA-ES-22	Rockport 1.0 E	3.18"
0109000104	Saugus River - Frontal Broad Sound	MA-MD-81	Wakefield 0.5 NNW	2.43"
0109000104	Saugus River - Frontal Broad Sound	MA-SF-2	Winthrop 0.2 N	2.40"
0109000104	Saugus River - Frontal Broad Sound	MA-ES-8	Marblehead 0.8 SW	2.57"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-67	Lexington 2.3 SE	2.83"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-7	Winchester 0.7 SE	2.70"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-44	Medford 1.2 W	2.85"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-11	Cambridge 0.9 NNW	2.72"
0109000105	Mystic River - Frontal Boston Harbor	MA-SF-10	Chelsea 0.8 N	3.46"
0109000106	Upper Charles River	MA-WR-1	Milford 2.3 NNW	2.82"
0109000106	Upper Charles River	MA-MD-106	Holliston 2.4 W	3.14"
0109000106	Upper Charles River	MA-MD-55	Holliston 0.7 W	3.38"
0109000106	Upper Charles River	MA-MD-42	Holliston 0.8 S	3.03"
0109000106	Upper Charles River	MA-NF-11	Millis 2.0 SW	3.03"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-NF-35	Wellesley 0.1 W	2.43"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-SF-1	Boston 0.5 WSW	1.75"
0109000108	Neponset River - Frontal Boston Harbor	MA-NF-1	Norwood 1.3 NW	3.04"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-NF-32	Quincy 1.8 WSW	1.95"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-NF-5	Weymouth 0.5 NW	2.83"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-PL-36	Hingham 0.8 ESE	3.19"
01090002	Cape Cod			
0109000201	North River - Frontal Massachusetts Bay	MA-PL-39	Plymouth 6.6 SE	3.18"
0109000202	Cape Cod	MA-BA-8	Falmouth 1.8 WSW	3.08"
0109000202	Cape Cod	MA-BA-2	Falmouth 3.1 NNW	2.69"
0109000202	Cape Cod	MA-BA-14	North Falmouth 0.5 ENE	2.99"
0109000202	Cape Cod	MA-BA-13	Falmouth 0.6 NNW	2.95"
0109000202	Cape Cod	MA-BA-3	Falmouth 3.0 E	2.44"
0109000202	Cape Cod	MA-BA-11	East Falmouth 1.4 ESE	2.71"
0109000202	Cape Cod	MA-BA-18	Waquoit 0.6 SSW	2.77"
0109000202	Cape Cod	MA-BA-47	Mashpee 2.4 WSW	2.83"
0109000202	Cape Cod	MA-BA-45	Sandwich 0.9 NNE	2.69"
0109000202	Cape Cod	MA-BA-59	Barnstable 3.6 W	3.14"
0109000202	Cape Cod	MA-BA-1	Yarmouth 2.3 SSE	2.88"
0109000202	Cape Cod	MA-BA-33	Brewster 1.5 ESE	2.83"
0109000202	Cape Cod	MA-BA-51	Orleans 3.0 S	3.25"
0109000202	Cape Cod	MA-BA-12	Orleans 1.1 E	2.79"
0109000202	Cape Cod	MA-BA-30	Eastham 0.6 SW	2.65"
0109000202	Cape Cod	MA-BA-43	Chatham 0.4 WSW	2.86"
0109000202	Cape Cod	MA-BA-65	Chatham 0.2 SSE	2.58"
0109000203	Mattapoissett River - Frontal Buzzards Bay	MA-PL-19	Rochester 1.2 NNW	3.11"

0109000204	Paskamanset River - Frontal Buzzards Bay	MA-BR-14	Dartmouth 2.5 SSW	3.15"
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-5	Little Compton 1.7 NW	2.73"
0109000205	Sakonnet Point - Frontal Rhode Island Sound	RI-NW-7	Little Compton 0.6 E	2.81"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-5	West Tisbury 2.9 N	3.10"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-9	West Tisbury 0.4 S	2.91"
01090003	Blackstone			
0109000301	Upper Blackstone River	MA-WR-41	Auburn 2.6 SW	2.85"
0109000301	Upper Blackstone River	MA-WR-43	Leicester 2.4 ESE	2.88"
0109000302	Lower Blackstone River	RI-PR-50	Harrisville 1.2 SSE	3.42"
0109000302	Lower Blackstone River	RI-PR-28	North Smithfield 0.7 SE	3.50"
0109000302	Lower Blackstone River	MA-NF-26	Bellingham 2.4 S	3.18"
0109000302	Lower Blackstone River	RI-PR-55	Cumberland Hill 3.3 NE	3.10"
01090004	Narragansett			
0109000401	Upper Taunton River	MA-BR-30	Taunton 3.9 N	2.35"
0109000401	Upper Taunton River	MA-NF-31	Stoughton 1.2 E	2.78"
0109000401	Upper Taunton River	MA-PL-23	Pembroke 2.8 SW	3.23"
0109000402	Middle Taunton River	MA-PL-31	Bridgewater 1.8 SE	3.06"
0109000403	Threemile River	MA-BR-33	Taunton 2.4 W	2.65"
0109000403	Threemile River	MA-BR-9	Taunton 2.6 NW	3.17"
0109000404	Ten Mile River	MA-BR-23	Attleboro 0.9 ENE	2.69"
0109000405	Wonnasquatucket River-Moshassuck River	RI-PR-33	Greenville 0.7 NNW	3.00"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-51	North Smithfield 0.6 S	3.22"
0109000407	Palmer River	MA-BR-2	Rehoboth 2.1 N	2.67"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-3	Norton 1.8 NNE	2.73"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-16	Somerset 0.4 SSE	2.45"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-19	Somerset 2.0 NNE	2.67"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-8	Dighton 1.1 WSW	2.77"
0109000409	Narragansett Bay	RI-KN-2	East Greenwich 2.3 ESE	2.70"
0109000409	Narragansett Bay	RI-PR-32	Providence 2.3 NE	2.56"
0109000409	Narragansett Bay	RI-BR-5	Barrington 1.3 WNW	2.42"
0109000409	Narragansett Bay	RI-NW-4	Middletown 1.1 SW	1.38"
0109000409	Narragansett Bay	RI-NW-16	Portsmouth 1.3 S	2.80"
0109000409	Narragansett Bay	RI-NW-11	Tiverton 0.8 SSW	2.84"
01090005	Pawcatuck-Wood			
0109000501	Wood River	RI-WS-1	Hope Valley 3.7 S	2.71"
0109000502	Upper Pawcatuck River	RI-WS-37	Kingston 2.4 SW	2.49"
0109000504	Frontal Block Island Sound	RI-WS-36	Charlestown 3.0 WSW	2.25"
01100001	Quinebaug			
0110000103	Fivemile River	CT-WN-4	East Killingly 1.3 SW	3.20"
0110000105	Mossup River	CT-WN-8	Moosup 1.7 NE	3.53"
0110000106	Pachaug River	CT-NL-21	Griswold 0.9 N	3.23"

01100002	Shetucket			
0110000201	Willimantic River	CT-TL-2	Staffordville 0.4 NNW	2.70"
0110000203	Shetucket River	CT-NL-10	Norwich 2.5 NNE	3.21"
01100003	Thames			
0110000302	Thames River-Frontal New London Harbor	CT-NL-6	New London 1.0 NNW	2.80"
0110000302	Thames River-Frontal New London Harbor	CT-NL-8	Uncasville-Oxoboxo Valley 1.6 ENE	3.35"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-29	East Lyme 0.5 SW	3.99"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-22	Central Waterford 2.7 SSW	2.23"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-24	Stonington 1.4 NNW	2.58"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-18	Stonington 0.5 NNE	2.23"
01100004	Quinnipiac			
0110000401	Quinnipiac River	CT-HR-23	Southington 0.9 SSE	2.11"
0110000401	Quinnipiac River	CT-NH-44	Wallingford Center 1.9 WNW	2.65"
0110000401	Quinnipiac River	CT-NH-43	Wallingford Center 3.3 NNW	2.49"
0110000401	Quinnipiac River	CT-NH-42	Wallingford Center 1.1 N	2.42"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-5	Westbrook Center 1.1 N	2.50"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-16	Milford 1.8 E	2.05"
01100005	Housatonic			
0110000501	Headwaters Housatonic River	MA-BE-11	Great Barrington 3.0 N	2.64"
0110000501	Headwaters Housatonic River	MA-BE-10	Pittsfield 2.0 NNW	2.86"
0110000506	Candlewood Lake-Housatonic River	CT-LT-22	New Milford 5.3 SSW	2.34"
0110000508	Still River - Housatonic River	CT-FR-43	Bethel 0.5 E	2.21"
0110000508	Still River - Housatonic River	CT-FR-41	Bethel 3.5 NNE	2.33"
0110000508	Still River - Housatonic River	CT-FR-9	Brookfield 3.3 SSE	2.11"
0110000510	Eightmile Brook - Housatonic River	CT-FR-44	Newtown 4.3 E	2.40"
0110000512	Outlet Naugatuck River	CT-NH-47	Seymour 1.5 NE	2.52"
0110000512	Outlet Naugatuck River	CT-NH-45	Naugatuck 1.7 NNE	2.24"
0110000512	Outlet Naugatuck River	CT-NH-22	Prospect 0.5 SW	2.35"
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-42	Monroe 0.1 SE	1.96"
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-23	Shelton 1.3 W	2.48"
01100006	Saugatuck			
0110000601	Saugatuck River - Frontal Long Island Sound	CT-FR-31	Newtown 4.6 SSW	2.53"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-3	New Canaan 1.9 ENE	2.49"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-25	Norwalk 2.9 NNW	2.17"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-20	Westport 2.5 ENE	2.24"
0110000604	Mianus River-Rippowam River	CT-FR-50	Darien 2.8 NW	2.07"
0110000604	Mianus River-Rippowam River	CT-FR-35	Darien 1.8 ENE	2.07"
02030203	Long Island Sound			
0203020300	Long Island Sound	NY-SF-114	Fishers Island 0.5 NE	2.24"

Accumulated Precipitation (in)
December 01, 2017 to December 31, 2017



“We do not live at the airport”

In our February 2016 newsletter, we printed a comparison of selected CoCoRaHS stations with their nearby airports equipped with an automated gauge. Going forward, we will update and include this table below and let you compare on your own.

Blue Hill Observatory and Orange Airport (Franklin County) were missing reports for December, so those stations are not included.

As you look over these totals, if your reaction is one of “That can’t be right.” “Way off!” “My totals are very different than these.”, those reactions would be expected. You do not have an automated gauge. And we do not live at the airport!

Location	Station ID	Dec 2017 Precip	Dec departure from normal	Oct-Nov-Dec Precip	3 month departure from normal	Jul-Dec Precip	6 month departure from normal	Jan-Dec Precip	12 month departure from normal
White Plains NY	HPN	1.45"	-2.87"	7.88"	-4.82"	16.19"	-9.10"	36.17"	-13.18"
Danbury CT	DXR	1.58"	-2.52"	9.01"	-4.05"	16.80"	-9.68"	33.41"	-16.46"
New Haven CT	HVN	1.30"	-2.31"	9.68"	-2.10"	15.34"	-8.77"	30.03"	-17.08"
Meriden CT	MMK	2.09"	-1.52"	11.62"	-0.16"	19.19"	-4.92"	36.02"	-11.09"
Hartford CT	HFD	2.25"	-1.10"	11.15"	-0.18"	20.00"	-2.47"	38.76"	-4.84"
Willimantic CT	IJD	2.09"	-2.16"	11.25"	-1.78"	19.39"	-5.71"	38.05"	-10.37"
New London CT	GON	0.51"	-3.22"	9.78"	-2.12"	15.90"	-7.93"	39.40"	-7.09"
Westerly RI	WST	2.00"	-1.76"	11.57"	-0.63"	18.69"	-5.37"	42.88"	-4.51"
Newport RI	UUU	2.29"	-1.47"	10.84"	-1.22"	18.07"	-5.07"	42.39"	-3.94"
New Bedford MA	EWB	2.92"	-1.05"	10.72"	-2.03"	19.33"	-4.41"	41.07"	-7.29"
Hyannis MA	HYA	2.30"	-1.98"	12.91"	0.04"	29.49"	5.88"	53.30"	5.61"
Nantucket MA	ACK	2.66"	-1.14"	9.38"	-2.77"	26.92"	3.73"	44.94"	0.52"
Marthas Vineyard MA	MVY	2.31"	-1.54"	7.64"	-4.82"	22.21"	-1.34"	46.05"	0.89"
Taunton MA	TAN	2.51"	-1.81"	10.97"	-2.14"	20.19"	-5.07"	43.14"	-6.60"
Plymouth MA	PYM	2.81"	-1.58"	10.52"	-2.61"	19.40"	-4.93"	46.36"	-2.79"
Norwood MA	OWD	2.26"	-1.82"	10.16"	-2.57"	18.47"	-5.64"	41.30"	-5.76"
Bedford MA	BED	1.64"	-2.04"	8.52"	-3.67"	17.53"	-5.59"	38.53"	-7.18"
Beverly MA	BVY	1.48"	-1.88"	8.16"	-3.82"	14.24"	-8.93"	37.95"	-8.23"
Lawrence MA	LWM	1.73"	-1.39"	6.57"	-4.55"	15.22"	-6.50"	36.02"	-7.14"
Fitchburg MA	FIT	2.50"	-1.22"	12.83"	0.58"	23.15"	-0.83"	47.37"	0.23"
Westfield MA	BAF	2.01"	-1.42"	10.74"	-1.56"	17.03"	-8.01"	38.45"	-9.94"
North Adams MA	AQW	1.63"	-1.75"	6.99"	-5.09"	16.68"	-8.25"	38.43"	-8.18"

Rulers of the Snow

You are the Rulers of the Snow. There are more check marks for complete reporting than in months past.

If you are able to, keep making a snowfall and snow depth report every day, rain, snow or sunshine.

All Days Reported

Station	Name	Dec 2017 Snowfall	All Days Precip	All Days Snowfall	All Days Snow Depth
MA-FR-13	Conway 2.9 NW	18.6"	✓	✓	✓
MA-FR-17	Buckland 1.8 ESE	18.5"	✓	✓	✓
MA-WR-6	Southbridge 0.6 E	18.2"			
MA-BE-4	Becket 5.6 SSW	17.8"	✓	✓	✓
MA-HS-14	Plainfield 2.4 ESE	17.5"	✓		✓
MA-ES-4	Groveland 0.5 WSW	16.6"	✓	✓	✓
MA-BE-10	Pittsfield 2.0 NNW	16.4"	✓		
MA-ES-20	Haverhill 0.7 N	16.1"	✓		
MA-WR-22	Fitchburg 2.0 NNE	15.2"	✓		
RI-PR-20	West Gloucester 3.4 SE	14.8"			
MA-MD-12	Acton 1.3 SW	14.6"	✓	✓	✓
CT-HR-15	Southington 3.0 E	14.4"	✓		
MA-MD-83	Boxborough 1.4 SSE	14.3"			
MA-FR-10	Conway 0.9 SW	14.0"	✓		
MA-ES-12	Boxford 2.4 S	13.9"	✓	✓	✓
MA-MD-47	West Townsend 0.5 W	13.8"	✓		
MA-HS-7	Plainfield 2.2 SW	13.6"			
CT-FR-23	Shelton 1.3 W	13.5"	✓	✓	✓
MA-ES-24	Newburyport 0.8 SW	13.5"	✓		
CT-HR-11	West Hartford 2.7 SSE	13.3"	✓	✓	
MA-HS-8	Williamsburg 1.2 WSW	13.3"	✓		
CT-TL-18	Hebron 5.3 NW	13.0"			
MA-WR-42	Northborough 2.3 N	12.9"	✓	✓	
MA-MD-88	Wayland 2.1 SSE	12.8"	✓	✓	✓
MA-MD-85	Wilmington 2.2 WNW	12.7"	✓		
CT-FR-3	New Canaan 1.9 ENE	12.6"	✓	✓	
CT-HR-25	Southington 0.4 NE	12.6"			
CT-HR-31	Bristol 2.7 WNW	12.5"			
MA-WR-44	Westminster 0.6 WSW	12.5"	✓		
MA-WR-56	Sterling 4.3 NW	12.5"	✓		

December 2017 as a calendar. A count of your Daily Reports by Date. Red colors are for the highest counts. Blue/green color for the lowest counts.

Our average was 239 reports per day. Our reporting was stronger in the beginning of the month, and weaker at the end of the month.

Will a January thaw reverse this trend?

December 2017						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					281 ¹	261 ²
257 ³	258 ⁴	265 ⁵	287 ⁶	266 ⁷	265 ⁸	256 ⁹
264 ¹⁰	246 ¹¹	248 ¹²	254 ¹³	241 ¹⁴	232 ¹⁵	229 ¹⁶
224 ¹⁷	228 ¹⁸	239 ¹⁹	242 ²⁰	235 ²¹	228 ²²	213 ²³
216 ²⁴	208 ²⁵	200 ²⁶	211 ²⁷	206 ²⁸	211 ²⁹	211 ³⁰
215 ³¹						

We printed this last month, and this month, we have Snow reporting records in numbers, and near records in percentages.

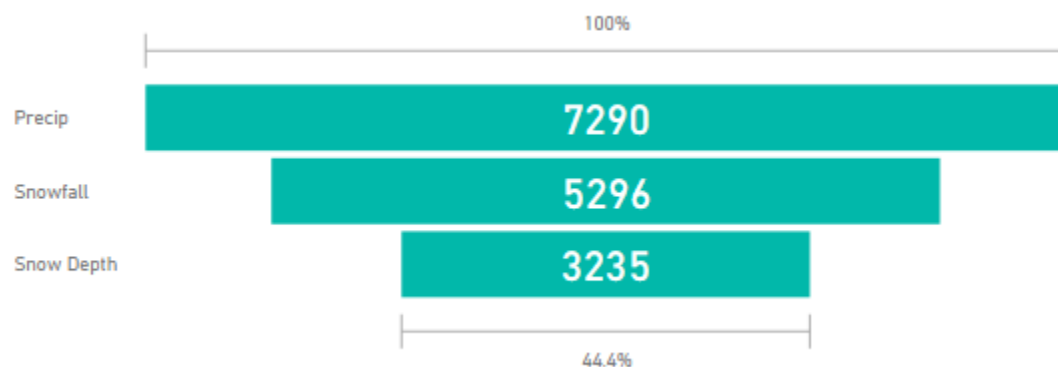
No “NA” records in the chart below. There were over 100 “NA” records for precipitation. Impressive to see over 72% of the Daily Reports with a snow fall report and over 44% of the Daily Reports with a snow depth report, only 2nd to the percentages within February 2017.

53 stations reported snow fall for all 31 days in December. 33 stations did the same for snow depth.

Look over your snow section with your Daily Report. If there is zero snow and/or snow depth, there are no zeros like snow zeros, regardless of rain or sunshine.

If you can measure the snow depth, make your best average to the nearest 0.5”. Less than 0.5” of snow depth, or that patchy, scattered, blotchy snow cover, should be reported as a “T” for Trace.

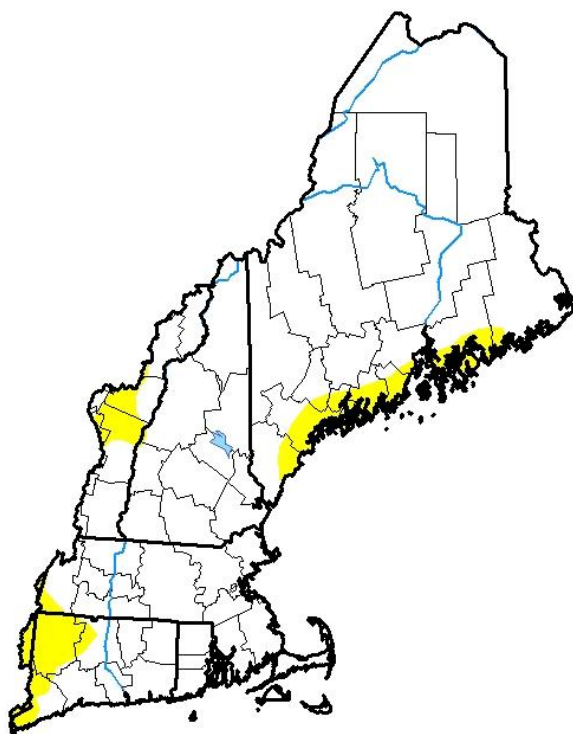
Do look over the [Snow Guide](#) and study the reporting scenarios. We strive to minimize reporting mistakes.



From the Drought Monitor.

D0 is creeping into western Connecticut. December was drier than normal for many of us. Every drop counts and zeros do too!

U.S. Drought Monitor New England Watershed



January 2, 2018

(Released Thursday, Jan. 4, 2018)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	91.20	8.80	0.00	0.00	0.00	0.00
Last Week 12-26-2017	91.97	8.03	0.00	0.00	0.00	0.00
3 Months Ago 10-03-2017	18.26	68.38	13.36	0.00	0.00	0.00
Start of Calendar Year 01-02-2018	91.20	8.80	0.00	0.00	0.00	0.00
Start of Water Year 09-26-2017	60.75	25.88	13.36	0.00	0.00	0.00
One Year Ago 01-03-2017	14.64	11.89	49.23	19.51	4.63	0.00

Intensity:

D0 Abnormally Dry D3 Extreme Drought
D1 Moderate Drought D4 Exceptional Drought
D2 Severe Drought

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

Author:

Eric Luebehusen
U.S. Department of Agriculture



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

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

Submit a CoCoRaHS report. It ends up with NOHRSC!

The National Operational Hydrologic Remote Sensing Center (NOHRSC) (pronounced no-risk) is based in Chanhassen MN, near Minneapolis. From there, they monitor snow depths and its water equivalent across North America.

In the February 2017 and the January 2016 edition of this newsletter, I wrote about this same topic.

So, where does CoCoRaHS fit in? Our reported values go to their database, directly, and are used in their Snow Data Assimilation (SNODAS) model.

Every day, a prediction is made where snow is going to increase with fresh snow, decrease with thawing temperatures or rain, or stay the same. What if the forecast was not correct? What if snow occurred instead of rain, or rain occurred instead of snow? Sometimes that happens here during the winter, right? The prediction model is compared with our actual reports and it's easy to tell where there are a cluster of discrepancies.

Satellites can monitor snow cover over a large area of land, as long as the skies are clear. When you take your morning observation, look up to the skies. If there are clouds above, the satellites cannot see whether or not there is snow on the ground below. Your reported values matter.

The website is <http://www.nohrsc.noaa.gov> You could spend hours looking around at all of the links and select dates from our past to look at.

A few snippets from our area. The widespread snow storm, a blizzard in some locations, from January 4, 2018, reported the next day.

Note: these data are unofficial and provisional.

Location and Date

Enter your "City, ST"

Closest 5 observations near Harrisville, RI Latest between 2018-01-05 06:00 UTC and 2018-01-06 06:00 UTC

41.97°N, -71.67°W (Elevation: 325 ft)

Raw Snowfall Observations

Station ID	Name	Elev. (ft)	Raw Snowfall (in)	Duration (hours)	Date (UTC)	Distance
RI-PR-50	HARRISVILLE 1.2 SSE, RI	486	11.00	24	2018-01-05 12	1 mi S
RI-PR-51	NORTH SMITHFIELD 0.6 S, RI	266	11.50	24	2018-01-05 11	6.5 mi E
RI-PR-28	NORTH SMITHFIELD 0.7 SE, RI	269	11.00	24	2018-01-05 12	6.8 mi E
RI-PR-33	GREENVILLE 0.7 NNW, RI	335	12.00	24	2018-01-05 12	7.9 mi SE
WNSR1	WOONSOCKET	141	11.10	24	2018-01-05 13	9.6 mi E

Sandwich MA, Norwalk CT, Conway MA included below.

Raw Snowfall Observations

Station ID	Name	Elev. (ft)	Raw Snowfall (in)	Duration (hours)	Date (UTC)	Distance
MA-BA-45	SANDWICH 0.9 NNE, MA	39	1.00	24	2018-01-05 13	0.8 mi N
ESNM3	EAST SANDWICH	164	0.90	24	2018-01-05 11	3.3 mi SSE
MA-BA-47	MASHPEE 2.4 WSW, MA	72	0.30	24	2018-01-05 14	8.7 mi SSW
MA-BA-14	NORTH FALMOUTH 0.5 ENE, MA	10	0.50	24	2018-01-05 11	10.2 mi SW
MA-PL-39	PLYMOUTH 6.6 SE, MA	95	2.00	24	2018-01-05 12	10.3 mi NW

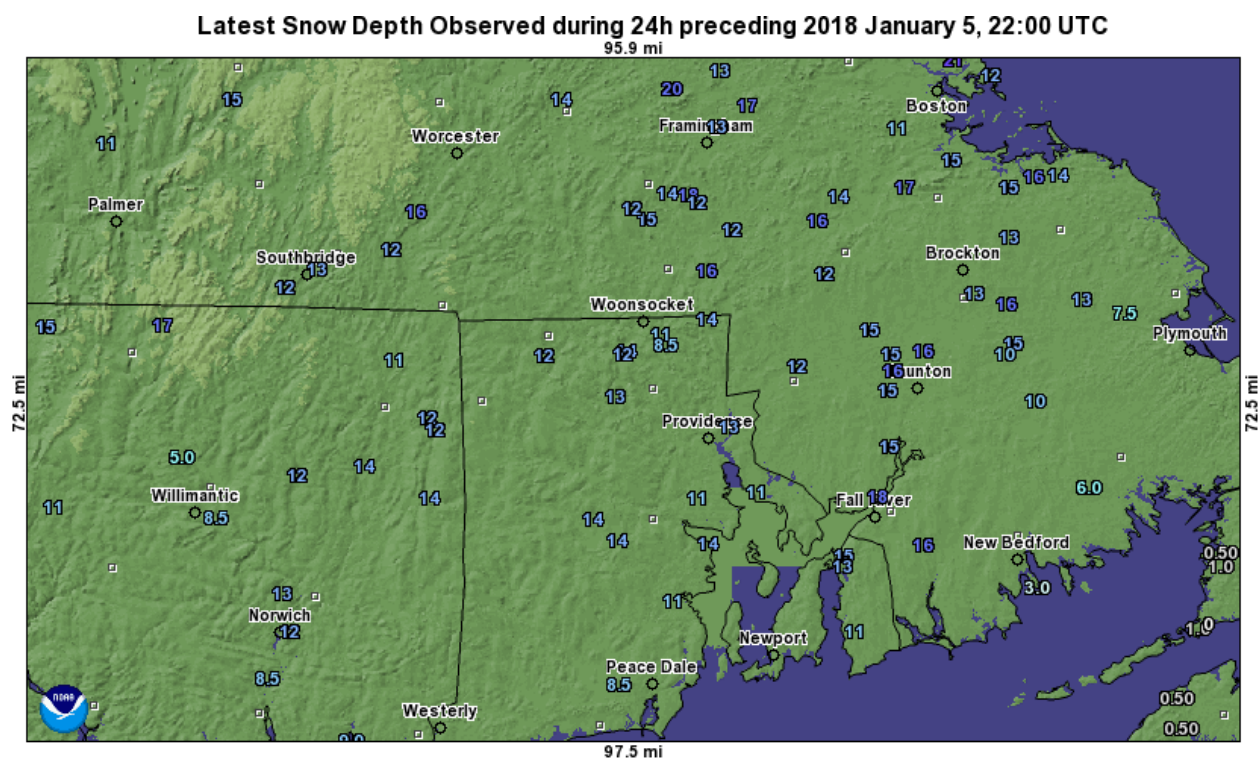
Raw Snowfall Observations

Station ID	Name	Elev. (ft)	Raw Snowfall (in)	Duration (hours)	Date (UTC)	Distance
CT-FR-25	NORWALK 2.9 NNW, CT	240	10.50	24	2018-01-05 12	2.3 mi WNW
CT-FR-3	NEW CANAAN 1.9 ENE, CT	259	9.10	24	2018-01-05 13	3.4 mi WNW
CT-FR-35	DARIEN 1.8 ENE, CT	33	9.00	24	2018-01-05 13	4.4 mi SW
CT-FR-20	WESTPORT 2.5 ENE, CT	39	9.50	24	2018-01-05 13	5.7 mi E
CT-FR-50	DARIEN 2.8 NW, CT	102	10.60	24	2018-01-05 12	5.9 mi WSW

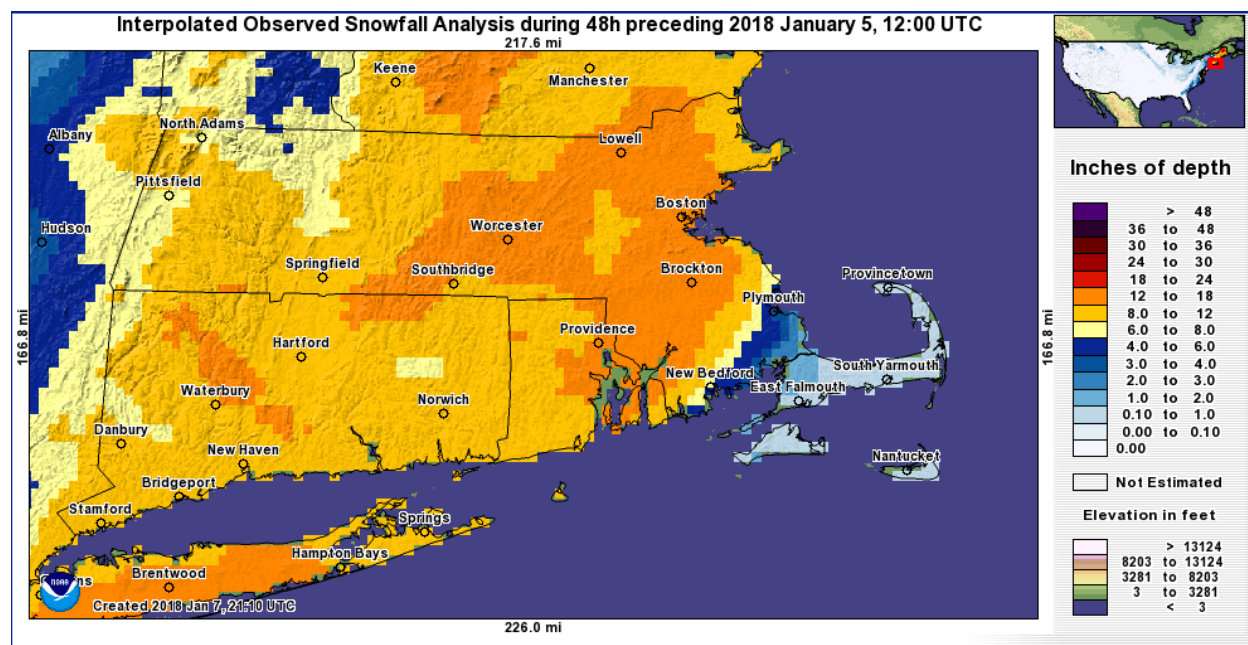
Raw Snowfall Observations

Station ID	Name	Elev. (ft)	Raw Snowfall (in)	Duration (hours)	Date (UTC)	Distance
MA-FR-10	CONWAY 0.9 SW, MA	564	7.00	24	2018-01-05 13	0.1 mi ESE
MA-FR-25	CONWAY 2.7 NW, MA	656	7.80	24	2018-01-05 13	2.5 mi NW
MA-FR-13	CONWAY 2.9 NW, MA	728	8.30	24	2018-01-05 12	2.8 mi NW
MA-FR-17	BUCKLAND 1.8 ESE, MA	945	5.20	24	2018-01-05 13	6.1 mi NNW
GRFM3	GREENFIELD NO. 3	131	8.00	24	2018-01-05 13	6.7 mi ENE

From the same day. With the “Interactive Maps” feature, you can use the mouse pointer on the map to left click, hold and draw a box to zoom into. Use the scroll bar, next to the lat/long box, to zoom out.



Tough to read those small numbers? Your snowfall reports from the January 4 snow storm helped make this colored contour map.

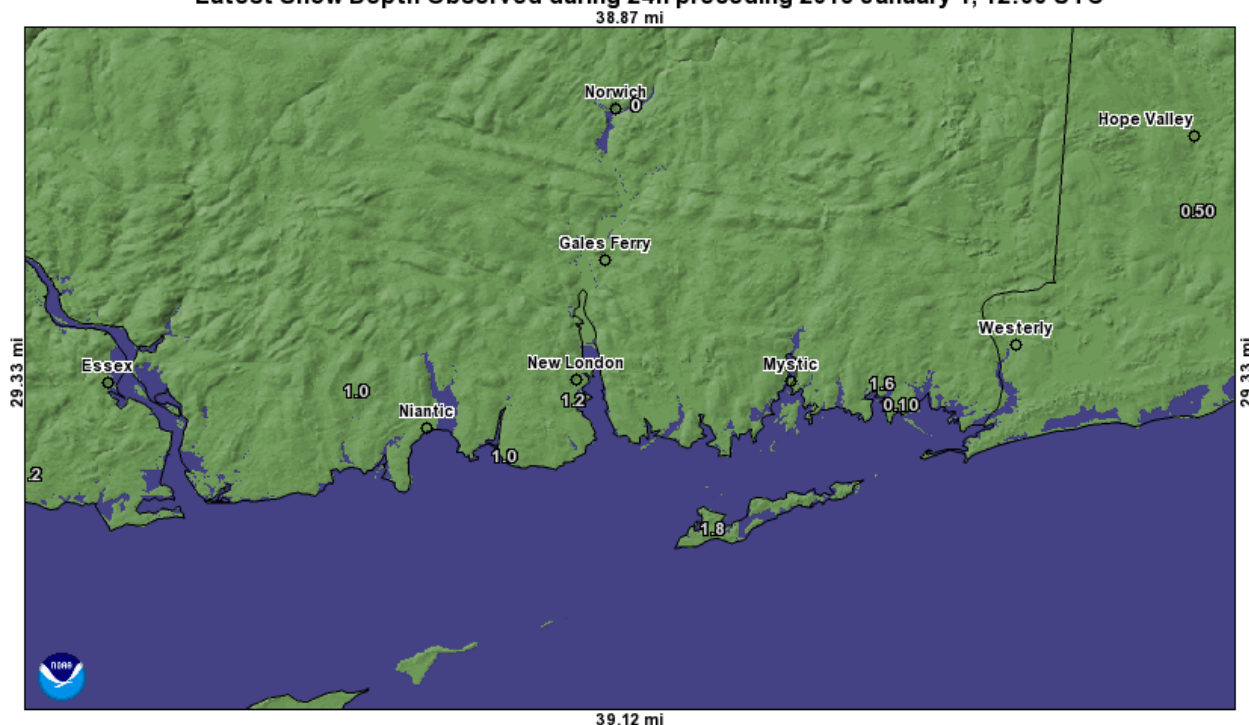


Snow Depth, on New Year's Day. Even on Fishers Island NY.

Snow Depth Observations

Station ID	Name	Elev. (ft)	Snow Depth (in)	Date (UTC)	Distance
NY-SF-114	FISHERS ISLAND 0.5 NE, NY	33	1.80	2018-01-01 12	0.6 mi NE
CT-NL-6	NEW LONDON 1.0 NNW, CT	62	1.00	2018-01-01 13	7.2 mi NW
CT-NL-22	CENTRAL WATERFORD 2.7 SSW, CT	36	1.00	2018-01-01 12	7.3 mi WNW
CT-NL-19	MYSTIC 0.9 W, CT	30	1.50	2018-01-01 13	7.6 mi NNE
CT-NL-24	STONINGTON 1.4 NNW, CT	49	1.60	2018-01-01 12	8.9 mi NE

Latest Snow Depth Observed during 24h preceding 2018 January 1, 12:00 UTC



Here's a link to a [text file](#) from our most recent snow storm in early January. Open up the file, press CTRL+F, enter your station ID, and find your station in this long list of snow fall reports.

As observers, we often ask "Does anyone look at our reports?" The answer time and time again is a resounding "Yes!" NOHRSC is another customer of ours where your reports are put to use. As observers in CoCoRaHS, you can make a contribution to it.

Wrap up

January is named after Janus, the two headed God. Our weather can be two headed in January. We've seen plenty of the one head of deep prolonged cold. We look forward to a January thaw.

Keep an eye on your funnel and inner cylinder should either of the two heads of winter weather appears. Your own gauges will have two appearances in January with and without the funnel and inner cylinder.

Daylight begins to increase in January. Early next month we will reach the midpoint of winter, followed by a groundhog that will come out and prognosticate winter's future from there.

We will probably not get the next monthly newsletter out in advance of this. February 6-7 marks the 40th anniversary of our area's Blizzard of 1978. Many people went off to work and school on that Monday morning.

Learn from each day and remember the valuable contribution that each one of you can make, measuring and reporting liquid precipitation, snowfall and snow depth. Participate in SWE Mondays.

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