



# Southern



# New England

**February 2017**

We are halfway there. Halfway through the heating season. Halfway between the Winter Solstice and the Spring Equinox. The Old Farmer's Almanac would make a reference to having half your wood and half your hay.

It's Groundhog Day! Today the Groundhog emerged from his a burrow and a perfect shadow he did see. Six more weeks of winter it shall be!

February is the shortest month of the year, a month with ~10% fewer days than the others. It also happens to be our driest month of the year. Network wide, our reporting tends to be the lowest during February as well.

Our shortest month of the year should result in the shortest newsletter of the year too. The newsletter is under 20 pages. Cheer for a small victory.

We have a quick summary of a recent blog entry on Effective Habits on your craft as an observer. On this mid-point of winter, we have two articles on the very last value of our Daily Report form, Total Snow Water Equivalent (SWE). SWE is an acronym that will be repeated throughout this newsletter and we have plenty of information to show you why it is, where and how it is valuable to provide the liquid equivalent of the snow.

This shouldn't take long. Let's get into it!

## **Effective Habits**

A recent blog entry was made describing Effective Habits of CoCoRaHS observers. The Illinois State Coordinator, Steve Hilberg, writes the CoCoRaHS blog, in addition to his State Coordinator efforts and performing quality checks on our entries. Safe to say that after 10 years in being involved in all of that, Steve has seen many ways how our volunteer efforts go well and how they go wrong.

Here's a summary of what was written. Supporting details are in this [link](#).

- 1) Report every day.
- 2) Report zeros. Snow fall and snow depth too.
- 3) Make sure to have the correct observation time.
- 4) Check submissions AFTER hitting the submit button.
- 5) Keep a local record of observations.
- 6) Review observations at the end of the month.
- 7) Periodically review the training materials.
- 8) Follow correct procedures. Know when to use a Multi-Day Report, Hail Report, and Significant Weather Report.
- 9) Enjoy what they do.

Comments with a report is another good habit! This list could get even longer after you get done reading what we have written about SWE.

Steve recently introduced his state's observers to our Snow Guide, the text and all of the scenarios within. We all learn from each other in CoCoRaHS.

Learn from these habits and the others that we pass on to you each month.

## **Detail and Summary for January 2017**

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

<b>Location</b>	<b>Station ID</b>	<b>Jan 2017 Precip</b>	<b>Jan departure from normal</b>	<b>Nov-Dec-Jan Precip</b>	<b>3 month departure from normal</b>	<b>Aug-Jan Precip</b>	<b>6 month departure from normal</b>
Pittsfield MA	PSF	2.72"	-0.20"	8.59"	-1.26"	16.93"	-5.68"
Bridgeport CT	BDR	3.28"	0.18"	10.94"	1.12"	21.08"	0.18"
Hartford CT	BDL	3.49"	0.26"	9.28"	-1.28"	18.06"	-4.68"
Worcester MA	ORH	3.91"	0.42"	11.60"	0.01"	25.40"	1.49"
Providence RI	PVD	4.96"	1.10"	11.56"	-1.03"	21.84"	-2.20"
Boston MA	BOS	4.25"	0.89"	10.20"	-0.93"	18.76"	-3.10"

At last, our Climate Sites are responding to recent months of precipitation, slowly reducing their precipitation deficits.

The two headed nature of January's weather was on display for all of us to experience. It was warm after New Year's Day, rain on the 3<sup>rd</sup>, widespread snow on the 7<sup>th</sup> with Blizzard Warnings for the southeast part of MA, warm air returned for the 12<sup>th</sup> and 13<sup>th</sup>, back to the cold on the 16<sup>th</sup> & 17<sup>th</sup>, sleet on the 23<sup>rd</sup>, rain on the 24<sup>th</sup>, ending with lake effect snowflakes that came east for the last weekend of the month.

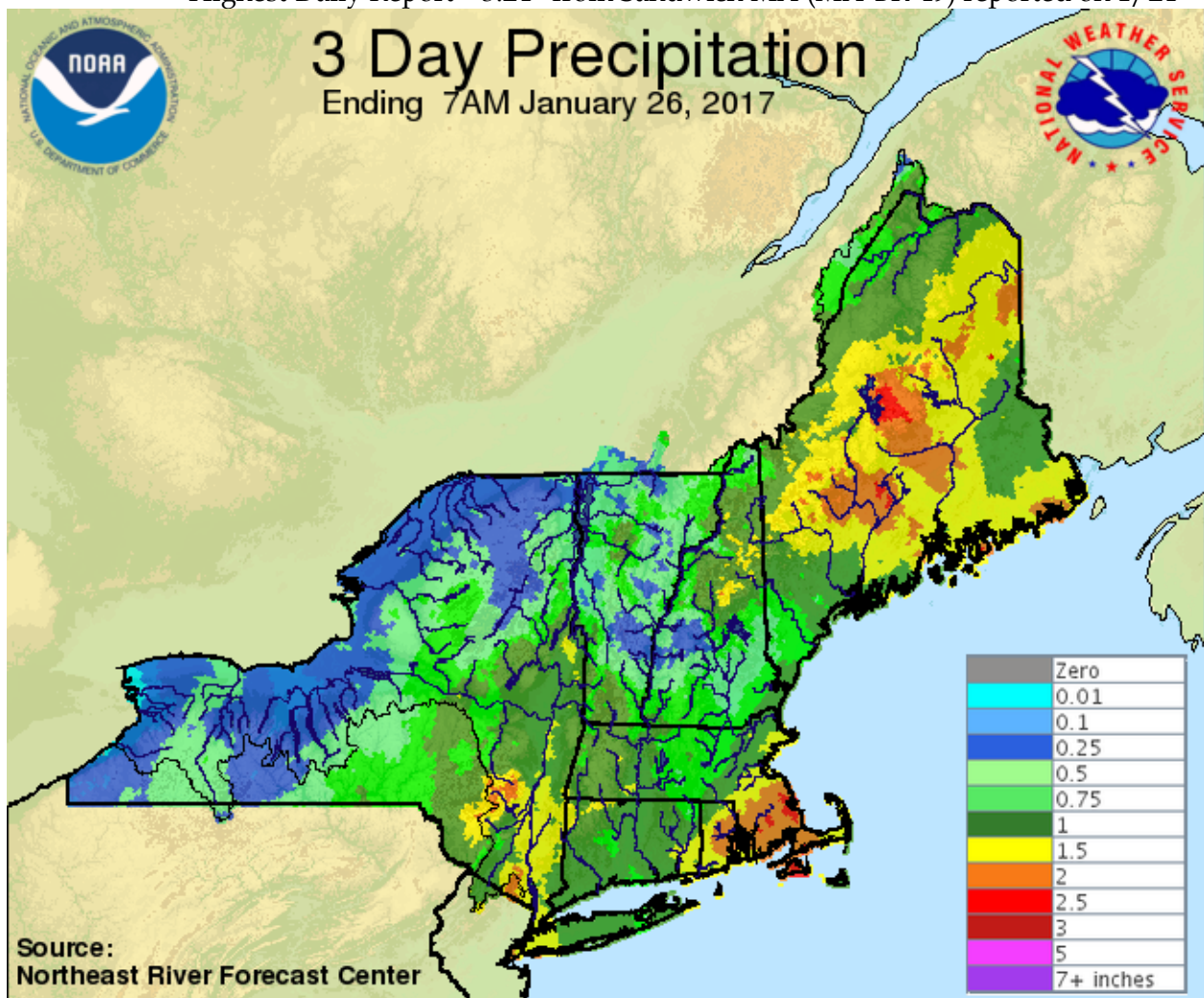
Reporting declined 1% from December. This is typical of winter time reporting here and throughout other states in the northern half of our continent. The colder the air temperatures, as seen in the Upper Midwest, the more the decline in reporting is. Our January was mild on temperatures, so our decline was not that significant. Reporting will reach a relative low point in February before rebounding in March.

Recent emphasis on Total SWE is showing in your reports. 211 SWE Monday reports were submitted in January, about 40 reports each of the 5 Mondays in January. A total of 1012 SWE reports for the month which exceeds surrounding states, so keep up the great work. After you see where your SWE reports go, surely these number will increase even more.

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

## From your reports for January 2017

Observers reporting	273
Reported all 31 days	120
Completed by Multi-Day Reports	11
Missing 1 or 2 reports	52
Daily Reports	6747
Zero Reports	2983
Non-Zero Reports	3764
Daily Comments	1744
Multi-Day Reports	124
Condition Monitoring Reports	20
Significant Weather Reports	30
Snowfall Reports	4176
Snow Depth Reports	2685
Total SWE Reports	1012
Highest Daily Report	3.24" from Sandwich MA (MA-BR-49) reported on 1/24



<b>Watershed</b>	<b>Watershed Name</b>	<b>Station</b>	<b>Station Name</b>	<b>Precip</b>
01060003	Piscataqua-Salmon Falls			
0106000310	Hamptom River - Frontal Atlantic Ocean	MA-ES-1	Salisbury 3.7 NW	4.23"
01070004	Nashua			
0107000401	North Nashua River	MA-WR-13	Leominster 1.5 S	3.64"
0107000403	Squannacook River	MA-MD-47	West Townsend 0.5 W	3.66"
01070005	Concord			
0107000502	Concord River	MA-MD-12	Acton 1.3 SW	4.30"
0107000502	Concord River	MA-MD-51	Maynard 0.7 ESE	4.00"
0107000502	Concord River	MA-WR-28	Berlin 1.3 WSW	3.95"
0107000502	Concord River	MA-WR-42	Northborough 2.3 N	3.68"
0107000502	Concord River	MA-WR-55	Harvard 2.1 S	3.79"
01070006	Merrimack River			
0107000614	Powwow River - Merrimack River	MA-ES-20	Haverhill 0.7 N	3.88"
0107000614	Powwow River - Merrimack River	MA-ES-27	Amesbury 1.2 ENE	4.63"
0107000614	Powwow River - Merrimack River	MA-ES-29	North Andover 1.9 SSE	3.93"
01080201	Middle Connecticut			
0108020106	Manhan River - Connecticut River	MA-FR-12	Sunderland 1.3 SE	2.78"
0108020106	Manhan River - Connecticut River	MA-HS-2	Westhampton 1.8 SW	4.90"
0108020106	Manhan River - Connecticut River	MA-HS-8	Williamsburg 1.2 WSW	3.69"
0108020106	Manhan River - Connecticut River	MA-HS-10	Northampton 1.6 NE	3.33"
0108020107	Batchelor Brook - Connecticut River	MA-HD-13	Springfield 4.1 W	3.83"
0108020107	Batchelor Brook - Connecticut River	MA-HD-22	Holyoke 1.0 ENE	3.07"
01080202	Miller			
01080203	Deerfield			
0108020305	Lower Deerfield River	MA-FR-10	Conway 0.9 SW	4.02"
0108020305	Lower Deerfield River	MA-FR-13	Conway 2.9 NW	4.55"
0108020305	Lower Deerfield River	MA-FR-17	Buckland 1.8 ESE	4.56"
01080204	Chicopee			
01080205	Lower Connecticut			
0108020501	Mill River - Connecticut River	CT-HR-5	Enfield 1.5 SE	3.49"
0108020503	Park River	CT-HR-9	West Hartford 2.7 NNW	4.27"
0108020503	Park River	CT-HR-11	West Hartford 2.7 SSE	3.54"
0108020503	Park River	CT-HR-39	Farmington 1.6 SW	3.99"
0108020505	Roaring Brook - Connecticut River	CT-HR-6	Wethersfield 1.2 WSW	3.81"
0108020505	Roaring Brook - Connecticut River	CT-HR-22	East Hartford 1.3 E	4.13"
0108020505	Roaring Brook - Connecticut River	CT-HR-40	Glastonbury Center 4.0 ENE	3.34"
0108020506	Mattabasset River	CT-HR-15	Southington 3.0 E	4.32"
0108020506	Mattabasset River	CT-HR-18	Berlin 2.4 SSE	3.88"
01080206	Westfield			

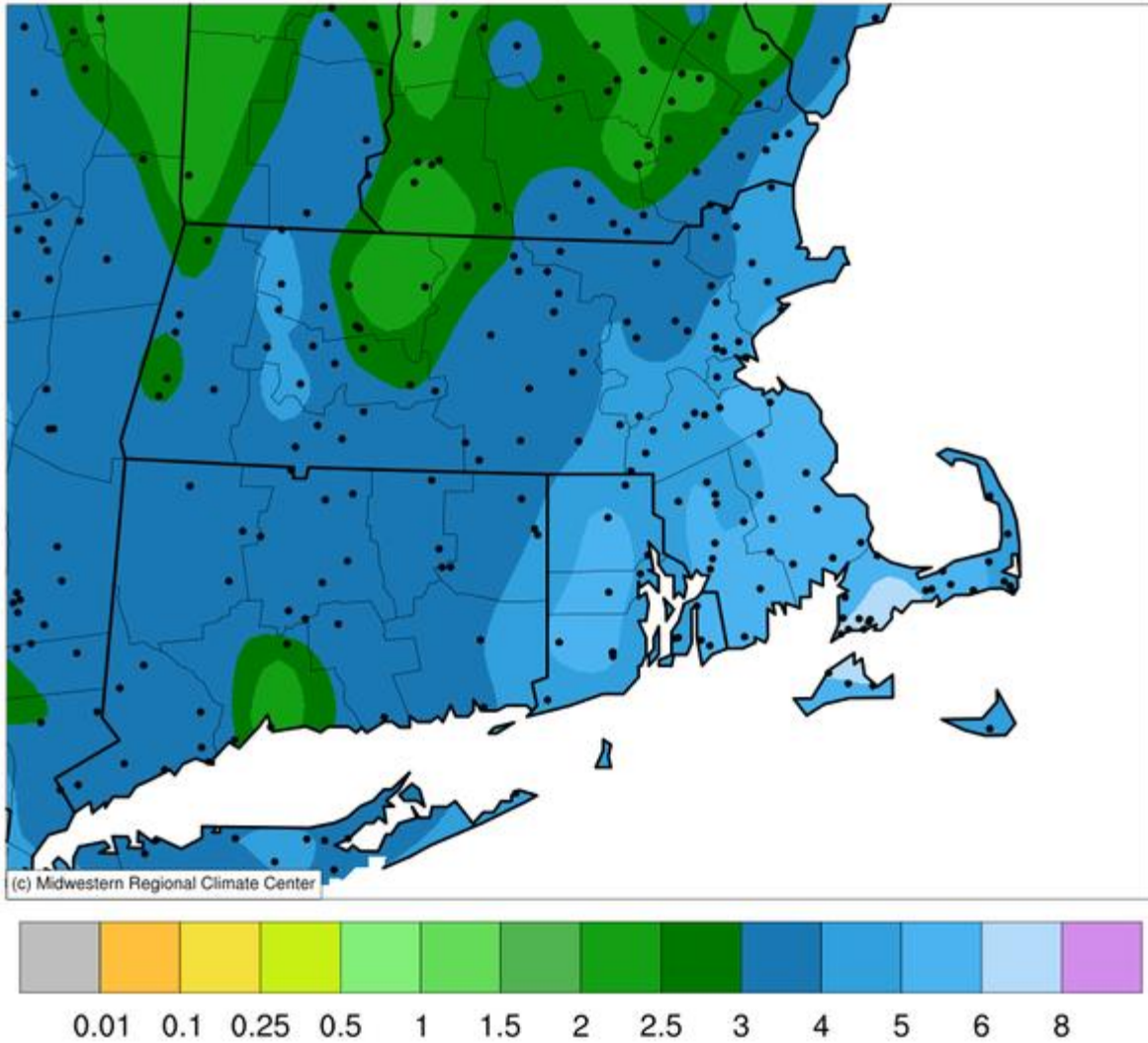
0108020601	Headwaters Westfield River	MA-HS-7	Plainfield 2.2 SW	4.42"
0108020601	Headwaters Westfield River	MA-HS-14	Plainfield 2.4 ESE	4.33"
0108020603	Outlet Westfield River	MA-HD-17	Southwick 2.5 WSW	4.01"
01080207	Farmington			
0108020701	Still River	CT-LT-5	Winsted 2.6 NNW	4.56"
0108020701	Still River	CT-LT-15	Colebrook 1.0 NE	3.90"
0108020702	West Branch Farmington River	MA-BE-4	Becket 5.6 SSW	3.55"
0108020704	Headwaters Farmington River	CT-HR-24	Collinsville 0.9 NW	3.82"
0108020704	Headwaters Farmington River	CT-LT-9	New Hartford Center 3.2 SW	3.64"
0108020705	Salmon Brook	CT-HR-8	North Granby 1.3 ENE	3.87"
0108020706	Outlet Farmington River	CT-HR-35	Weatogue 0.7 E	4.16"
01090001	Charles			
0109000102	Ipswich River	MA-ES-2	Beverly 2.8 NW	3.23"
0109000102	Ipswich River	MA-ES-12	Boxford 2.4 S	3.96"
0109000102	Ipswich River	MA-MD-45	Wilmington 1.5 NE	3.69"
0109000104	Saugus River - Frontal Broad Sound	MA-ES-8	Marblehead 0.8 SW	5.08"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-7	Winchester 0.7 SE	4.23"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-11	Cambridge 0.9 NNW	4.73"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-44	Medford 1.2 W	4.18"
0109000105	Mystic River - Frontal Boston Harbor	MA-SF-10	Chelsea 0.8 N	5.18"
0109000106	Upper Charles River	MA-MD-42	Holliston 0.8 S	4.27"
0109000106	Upper Charles River	MA-MD-55	Holliston 0.7 W	4.50"
0109000106	Upper Charles River	MA-NF-11	Millis 2.0 SW	4.50"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-43	Somerville 0.8 SSE	4.28"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-NF-27	Quincy 1.5 SW	4.70"
01090002	Cape Cod			
0109000201	North River - Frontal Massachusetts Bay	MA-PL-5	Kingston 3.3 WNW	6.31"
0109000202	Cape Cod	MA-BA-2	Falmouth 3.1 NNW	6.19"
0109000202	Cape Cod	MA-BA-3	Falmouth 3.0 E	6.60"
0109000202	Cape Cod	MA-BA-14	North Falmouth 0.5 ENE	4.15"
0109000202	Cape Cod	MA-BA-18	Waquoit 0.6 SSW	6.64"
0109000202	Cape Cod	MA-BA-19	East Falmouth 0.7 NW	6.18"
0109000202	Cape Cod	MA-BA-33	Brewster 1.5 ESE	5.93"
0109000202	Cape Cod	MA-BA-43	Chatham 0.4 WSW	5.06"
0109000202	Cape Cod	MA-BA-45	Sandwich 0.9 NNE	5.57"
0109000202	Cape Cod	MA-BA-49	Sandwich 3.5 SSE	7.40"
0109000202	Cape Cod	MA-BA-51	Orleans 3.0 S	5.80"
0109000203	Mattapoisett River - Frontal Buzzards Bay	MA-PL-19	Rochester 1.2 NNW	5.85"
0109000204	Paskamanset River - Frontal Buzzards Bay	MA-BR-14	Dartmouth 2.5 SSW	5.62"
0109000205	Skonnet Point - Frontal Rhode Island Sound	RI-NW-7	Little Compton 0.6 E	5.16"
01090003	Blackstone			

0109000301	Upper Blackstone River	MA-WR-32	Auburn 1.9 ESE	4.24"
0109000301	Upper Blackstone River	MA-WR-41	Auburn 2.6 SW	3.87"
0109000302	Lower Blackstone River	MA-NF-16	Bellingham 4.7 S	4.59"
0109000302	Lower Blackstone River	MA-NF-26	Bellingham 2.4 S	4.23"
0109000302	Lower Blackstone River	RI-PR-45	Manville 0.4 WSW	5.23"
0109000302	Lower Blackstone River	RI-PR-50	Harrisville 1.2 SSE	4.91"
01090004	Narragansett			
0109000401	Upper Taunton River	MA-BR-30	Taunton 3.9 N	5.27"
0109000401	Upper Taunton River	MA-PL-15	Abington 1.2 NNE	4.83"
0109000403	Threemile River	MA-BR-9	Taunton 2.6 NW	5.63"
0109000403	Threemile River	MA-BR-33	Taunton 2.4 W	5.44"
0109000404	Ten Mile River	MA-BR-23	Attleboro 0.9 ENE	4.75"
0109000405	Wonnasquatucket River-Moshassuck River	RI-PR-33	Greenville 0.7 NNW	5.47"
0109000407	Palmer River	MA-BR-2	Rehoboth 2.1 N	4.62"
0109000407	Palmer River	MA-BR-35	Swansea 4.6 WNW	4.91"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-3	Norton 1.8 NNE	5.31"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-8	Dighton 1.1 WSW	5.26"
0109000409	Narragansett Bay	RI-NW-4	Middletown 1.1 SW	3.96"
0109000409	Narragansett Bay	RI-NW-11	Tiverton 0.8 SSW	6.50"
0109000409	Narragansett Bay	RI-PR-32	Providence 2.3 NE	4.56"
0109000409	Narragansett Bay	RI-WS-31	Kingston 7.5 NNE	5.59"
01090005	Pawcatuck-Wood			
0109000502	Upper Pawcatuck River	RI-WS-32	Kingston 6.9 NNW	5.41"
0109000502	Upper Pawcatuck River	RI-WS-37	Kingston 2.4 SW	4.35"
0109000504	Frontal Block Island Sound	RI-WS-36	Charlestown 3.0 WSW	5.37"
01100001	Quinebaug			
0110000106	Pachaug River	CT-NL-21	Griswold 0.9 N	4.04"
01100002	Shetucket			
0110000201	Willmantic River	CT-TL-2	Staffordville 0.4 NNW	3.70"
0110000202	Natchaug River	CT-TL-4	Mansfield Center 1.9 SW	3.92"
0110000203	Shetucket River	CT-NL-10	Norwich 2.5 NNE	4.71"
0110000203	Shetucket River	CT-WN-10	South Windham 1.3 NNE	3.51"
01100003	Thames			
0110000302	Thames River-Frontal New London Harbor	CT-NL-6	New London 1.0 NNW	4.29"
0110000302	Thames River-Frontal New London Harbor	CT-NL-8	Uncasville-Oxoboxo Valley 1.6 ENE	4.73"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-18	Stonington 0.5 NNE	4.70"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-22	Central Waterford 2.7 SSW	4.27"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-24	Stonington 1.4 NNW	4.51"
01100004	Quinnipiac			
0110000401	Quinnipiac River	CT-HR-23	Southington 0.9 SSE	3.22"
0110000401	Quinnipiac River	CT-NH-14	Prospect 1.9 ENE	4.25"

0110000401	Quinnipiac River	CT-NH-30	Cheshire Village 2.2 SE	2.71"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-5	Westbrook Center 1.1 N	3.43"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-NH-33	Madison Center 1.4 WNW	3.78"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-16	Milford 1.8 E	3.47"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-29	Hamden 3.0 WSW	3.94"
01100005	Housatonic			
0110000501	Headwaters Housatonic River	MA-BE-10	Pittsfield 2.0 NNW	3.15"
0110000501	Headwaters Housatonic River	MA-BE-11	Great Barrington 3.0 N	2.83"
0110000508	Still River - Housatonic River	CT-FR-9	Brookfield 3.3 SSE	3.93"
0110000508	Still River - Housatonic River	CT-FR-41	Bethel 3.5 NNE	3.56"
0110000508	Still River - Housatonic River	CT-FR-43	Bethel 0.5 E	3.65"
0110000510	Eightmile Brook - Housatonic River	CT-FR-44	Newtown 4.3 E	4.17"
0110000511	Headwaters Naugatuck River	CT-LT-17	Thomaston 1.2 N	2.89"
0110000512	Outlet Naugatuck River	CT-NH-22	Prospect 0.5 SW	4.17"
0110000512	Outlet Naugatuck River	CT-NH-26	Prospect 1.5 NW	4.03"
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-23	Shelton 1.3 W	3.73"
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-42	Monroe 0.1 SE	3.56"
01100006	Saugatuck			
0110000601	Saugatuck River - Frontal Long Island Sound	CT-FR-31	Newtown 4.6 SSW	3.70"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-3	New Canaan 1.9 ENE	4.11"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-25	Norwalk 2.9 NNW	3.65"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-29	Ridgefield 1.9 SSE	3.78"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-32	Monroe 0.8 W	4.20"
0110000604	Mianus River-Rippowam River	CT-FR-35	Darien 1.8 ENE	3.64"
0110000604	Mianus River-Rippowam River	CT-FR-37	Stamford 0.4 WNW	4.08"



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

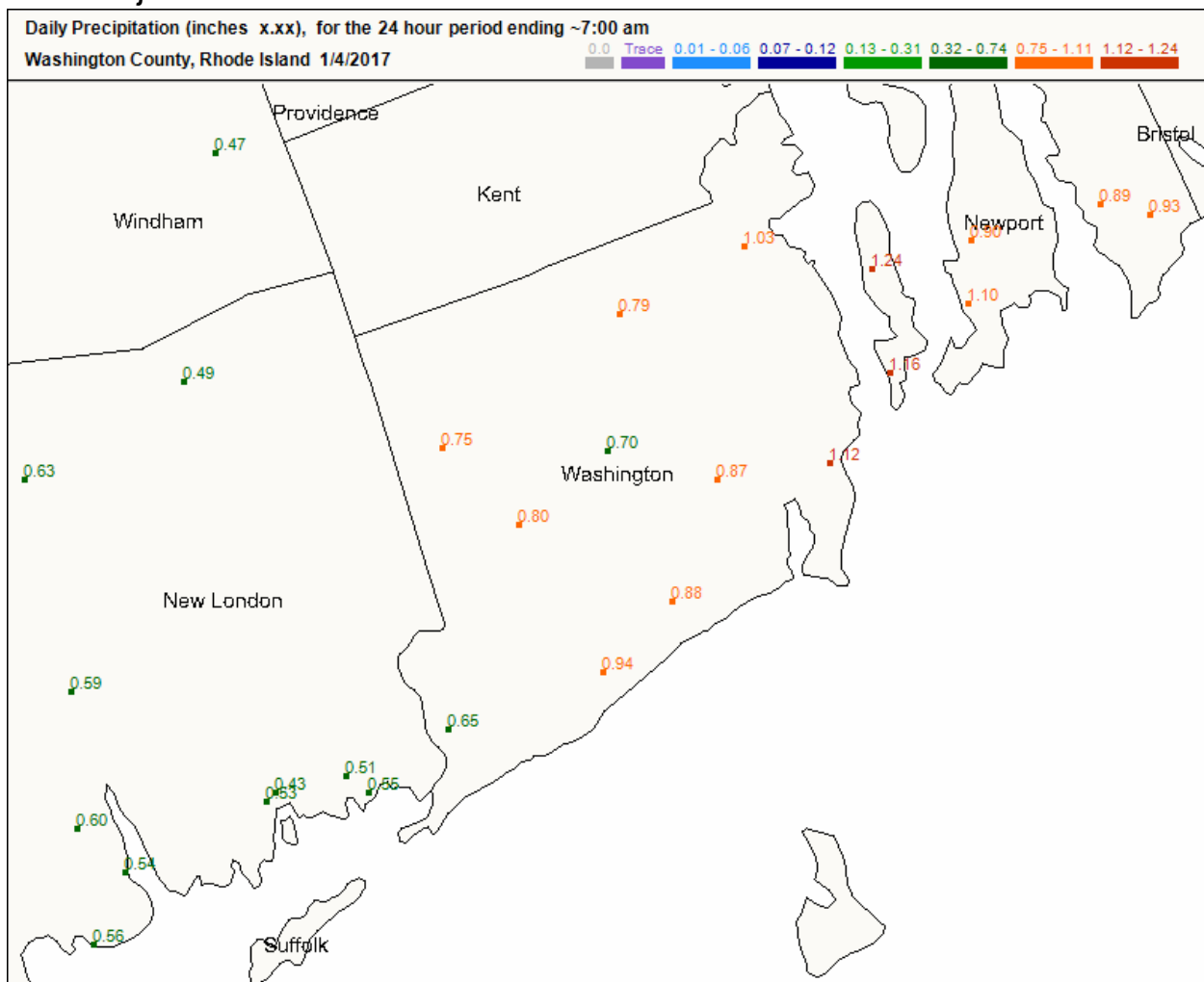


## **Map of the Month – Washington County RI**

Known as South County, the southern most county in Rhode Island is very different than other south facing coastlines. None of the rivers carved their way to the shoreline. The Pawcatuck River joins with the Wood River and flows west towards Westerly, along the border with Connecticut.

Washington County has about 125,000 residents on 329 sq miles of land. Our network began in New England with Rhode Island, and Washington County still has its first observer still active, RI-WS-1. Block Island had an observer on it in 2012, and we would like to have another observer there this year to stay even longer.

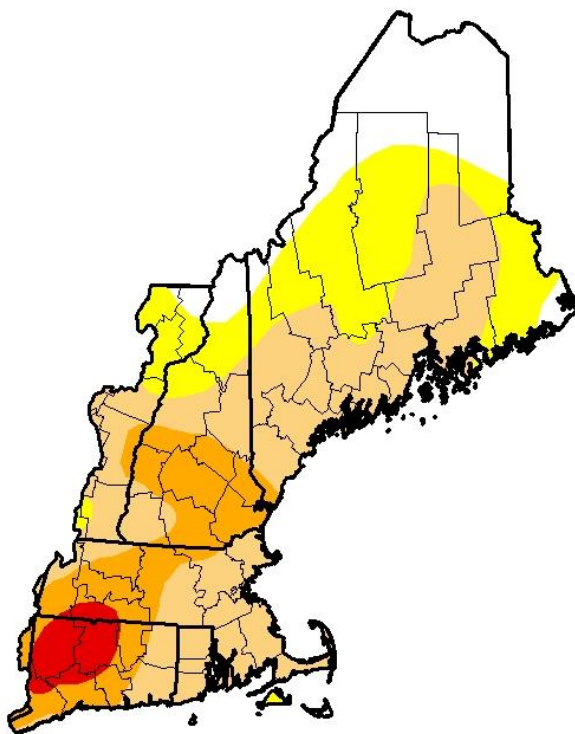
We have grown here in the past year, and we would like to grow some more. If you know of someone who wants to be part of this growth, ask them to join us at CoCoRaHS.



From the Drought Monitor.

Every week, there seems to be a slight improvement. It took months to develop this drought. It may takes months to eliminate it. Every drop counts and zeros do too!

## U.S. Drought Monitor New England Watershed



**January 31, 2017**

(Released Thursday, Feb. 2, 2017)

Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0	D1	D2	D3	D4
<b>Current</b>	17.07	23.55	40.29	15.41	3.68	0.00
<b>Last Week</b> <i>1/24/2017</i>	17.07	14.75	48.95	14.66	4.58	0.00
<b>3 Months Ago</b> <i>11/1/2016</i>	7.68	13.64	46.34	27.74	4.60	0.00
<b>Start of Calendar Year</b> <i>1/3/2017</i>	14.71	12.55	48.74	19.42	4.58	0.00
<b>Start of Water Year</b> <i>9/27/2016</i>	26.52	15.24	18.41	25.39	14.44	0.00
<b>One Year Ago</b> <i>2/2/2016</i>	57.25	33.36	9.39	0.00	0.00	0.00

*Intensity:*

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe 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 Simeral*

*Western Regional Climate Center*



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

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

## **Rulers of the Snow**

In December, the snow fell on the western part of our region. In January, the snow fell on the eastern part of our region. Keep [Page 3](#) from this [Newsletter](#) in mind during and after this winter season. You are the Rulers of the Snow.

Station	Name	Jan 2017 Snowfall	All Days Precip	All Days Snowfall	All Days Snow Depth
MA-PL-6	Middleborough 5.5 E	21.0"			
MA-PL-5	Kingston 3.3 WNW	20.3"	✓		
MA-BR-14	Dartmouth 2.5 SSW	19.9"	✓		
MA-BA-2	Falmouth 3.1 NNW	19.3"	✓		
MA-PL-23	Pembroke 2.8 SW	19.2"			
MA-PL-2	Sagamore Beach 1.0 NW	19.0"			
MA-BA-18	Waquoit 0.6 SSW	18.8"	✓	✓	
MA-BA-3	Falmouth 3.0 E	18.4"	✓	✓	✓
MA-DK-9	West Tisbury 0.4 S	18.4"			
MA-PL-24	Whitman 1.1 WSW	18.1"	✓		
MA-PL-19	Rochester 1.2 NNW	18.0"			
MA-BR-37	Westport 0.9 ESE	17.6"			
MA-BA-47	Mashpee 2.4 WSW	17.3"			
MA-BA-50	Falmouth 5.4 NNE	16.8"			
MA-DK-2	Vineyard Haven 0.8 WSW	16.7"			
MA-BR-9	Taunton 2.6 NW	16.6"	✓		
MA-BA-45	Sandwich 0.9 NNE	16.5"	✓		
MA-PL-31	Bridgewater 1.8 SE	16.2"			
MA-BA-49	Sandwich 3.5 SSE	16.1"			
RI-NW-11	Tiverton 0.8 SSW	16.0"	✓	✓	
MA-BA-19	East Falmouth 0.7 NW	16.0"	✓		
MA-BR-33	Taunton 2.4 W	16.0"	✓		
MA-DK-5	West Tisbury 2.9 N	16.0"			
MA-PL-22	East Bridgewater 0.3 WSW	15.9"			
MA-BA-13	Falmouth 0.6 NNW	15.6"			
MA-BA-43	Chatham 0.4 WSW	15.5"	✓	✓	
MA-PL-30	Duxbury 3.7 W	15.5"			
MA-BA-8	Falmouth 1.8 WSW	15.3"			
RI-WS-31	Kingston 7.5 NNE	15.2"	✓		
MA-BA-27	Wellfleet 0.7 NW	15.0"			
MA-PL-15	Abington 1.2 NNE	15.0"	✓	✓	✓
MA-BR-8	Dighton 1.1 WSW	14.6"	✓	✓	✓

## **Who takes in CoCoRaHS data?**

### **NOHRSC does!**

Snowfall may evoke images of winter recreation to snarled travel. As CoCoRaHS observers, we measure snow fall and snow depth, and cut cores and melt them as well. In our area, snow is a source of water that will eventually melt.

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 January 2016 edition of this newsletter, I wrote about this same topic. Again, I had the pleasure to talk with one of the members of this team, Tim Szeliga.

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

SWE is a valuable measurement. With our recent snow events, we have seen snow depths settle within the first few hours or days, but the SWE value stays roughly the same. SWE tells many how much liquid is in the snow pack. Participation in SWE Monday, even with a report of zero, and making a total SWE report with a fresh snow event, establishes the density of the snow pack and helps the SNODAS model.

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.

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.

The website is <http://www.nohrsc.noaa.gov> On a cold winter's day, 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 event from Jan 7-8.

**Snow Information**  
 National Analyses  
 Interactive Maps  
 3D Visualization  
 Airborne Surveys  
 Snowfall Analysis  
 Satellite Obs  
 Forecasts  
 Data Archive  
 SHEF Products

**Observations near**  
 Falmouth MA  
 Go

Nearest observations to  
**Falmouth, MA**

Note: these data are unofficial and provisional.

Location and Date  
 Enter your "City, ST"

English | 2017 | January | 8 | - | +

Closest 5 observations near Falmouth, MA Latest between 2017-01-08 06:00 UTC and 2017-01-09 06:00 UTC  
 41.55°N, -70.61°W (Elevation: 7 ft)

Station ID	Name	Elev. (ft)	Snow Water Equivalent (in)	Date (UTC)	Distance
MA-BA-11	EAST FALMOUTH 1.4 ESE, MA	23	1.45	2017-01-08 13	4.6 mi ENE
MA-BA-18	WAQUOIT 0.6 SSW, MA	43	1.18	2017-01-08 12	5.1 mi ENE
MA-DK-5	WEST TISBURY 2.9 N, MA	171	1.30	2017-01-08 13	9.6 mi SSW
MA-DK-9	WEST TISBURY 0.4 S, MA	46	1.28	2017-01-08 12	12.5 mi SSW
MA-PL-5	KINGSTON 3.3 WNW, MA	79	1.25	2017-01-08 11	33.1 mi NNW

From the following SWE Monday. 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.

National Operational Hydrologic Remote Sensing Center  
**Interactive Snow Information**

Navigation Tools: Home Help Comments

**Redraw Map**

Select Physical Element  
SWE (24 hrs)

Select Date  
2017 | January | 9 | 22:00 UTC

Snap to nearest time

Select Overlays

**Hydrologic Features**

- RFC Basins  Label
- Other Basins  Label
- HUCs (6 digit)
- RFC Boundaries
- Rivers and Streams
- Lakes and Reservoirs

**Political Features**

- County Boundaries
- CWA Boundaries
- State Boundaries
- National Boundaries

**Point Features**

- Stations  Label
- Cities  Label
- Flight Lines  Label
- Climate Stns.  Label
- Skiing  Label

**Transportation Features**

- Roads and Highways

**Other features**

- NSA Disc. Regions
- NSA Disc. Subregions
- NSA Modelling Tiles

Map Preferences  
English units

Latest Snow Water Equivalent Observed during 24h preceding 2017 January 9, 22:00 UTC

**Inches of water equivalent**

- > 30
- 20 to 30
- 18 to 20
- 16 to 18
- 14 to 16
- 12 to 14
- 10 to 12
- 8 to 10
- 6 to 8
- 4 to 6
- 2 to 4
- 1 to 2
- 0.00 to 1

Not Estimated

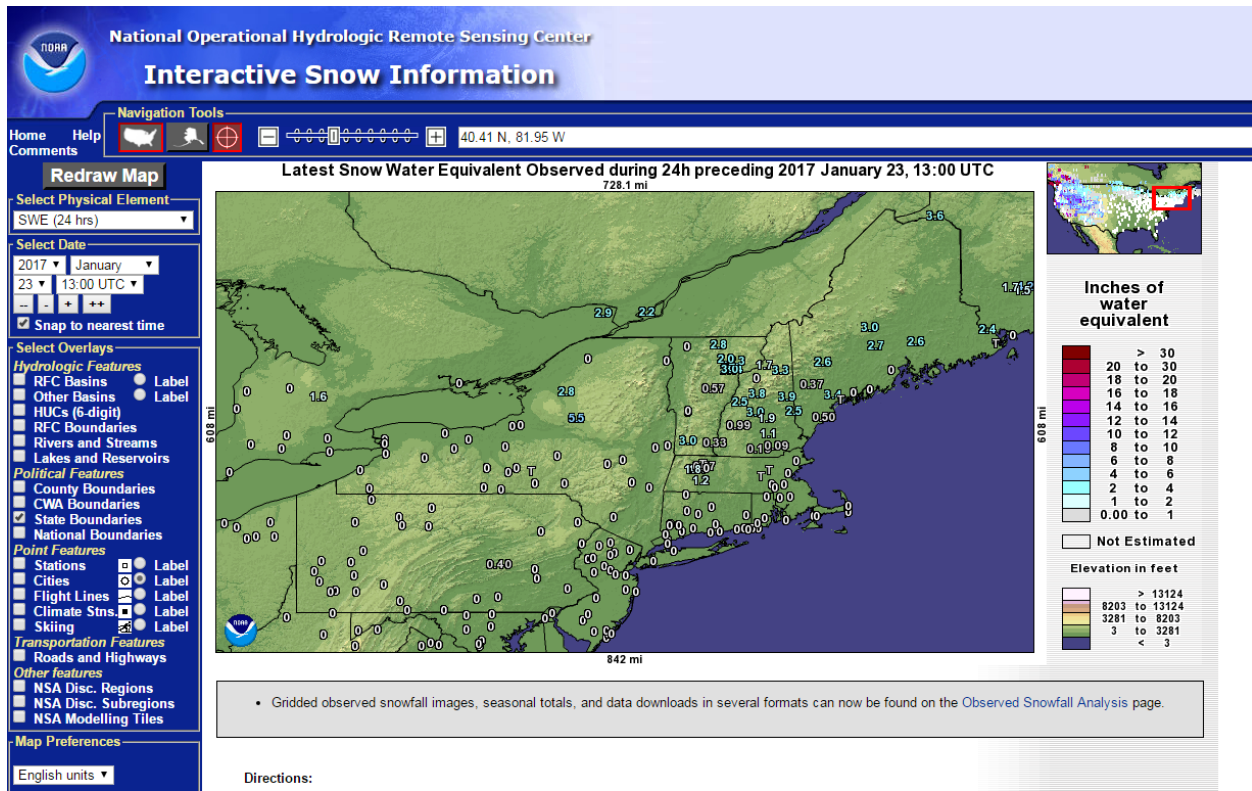
**Elevation in feet**

- > 13124
- 8203 to 13124
- 3281 to 8203
- 3 to 3281
- < 3

• Gridded observed snowfall images, seasonal totals, and data downloads in several formats can now be found on the Observed Snowfall Analysis page.

Directions:

A wider view of another SWE Monday.



Here's a link to a [text file](#) from our most recent SWE Monday. See if your station is included. Yes, that is over 50" of SWE in the mountains of California, Washington and Nevada. Our reports are combined with other networks.

We believe that precipitation is important and highly variable. We measure and report precipitation every day. Four additional values about snow fall and snow depth are available on our Daily Report form that add more dimensions and more value to our participation in CoCoRaHS.

Through an established design of our network, four out of five of our reported values go directly to NOHRSC, and are combined with reports from other networks. Accuracy matters, so please get the decimal point in the correct location.

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.

# **We Need Your SWE!**

By Joe DelliCarpini – Science & Operations Officer, NWS Taunton MA

Did you know your reports of snow water equivalent (SWE) and snow depth are used heavily by your National Weather Service office?

Here at the Forecast Office in Taunton MA, your observations help us assess flood potential during the winter and spring months. When we are forecasting a warmup accompanied by rainfall, we can calculate the snowmelt potential which helps give us a better sense if river and stream flooding is likely to occur. But in order to do that, we need to know how much snow is on the ground and how much water is in that snow.

Our neighbors at the Northeast River Forecast Center (NERFC) heavily rely on your snow depth and SWE reports. Their hydrologic model calculates the depth of the snow, its water content, and simulates its melting. This is not only useful for forecasting river flooding but for daily river flows as well. Having observations from CoCoRaHS helps ensure the model is calibrated properly.

Some of our biggest flood events have been associated with rain accompanied by significant snowmelt. The Great Flood of 1936 brought devastating floods to Massachusetts and Connecticut, particularly across the Merrimack River and the Connecticut River Valleys. The combination of rainfall and melted snow (yes, SWE!) produced major to record flooding on many rivers, including the main stem Connecticut and Merrimack rivers, which remain the worst floods on record today. Numerous bridges were destroyed between the freshwater floods and the ice jam damage. Along the Merrimack River from southern New Hampshire into Massachusetts, there was widespread damage and destruction of mills and manufacturing plants. In the City of Springfield which was not yet protected by a levee, a large percentage of the residents were affected by the floodwaters.

More about this flood in this [link](#)

What if there is no snow on the ground? Report zeros! Even that information can be very helpful.



## **Wrap up**

The Groundhog has spoken. With a perfect shadow of me, six more weeks of winter it shall be. Understood that the coin flip is just as accurate in these past 30 years, but it does make you wonder about a time before all of this technology at our fingertips where we did look toward the animals in the area to be our long range weather forecasters and climatologists. Celebrate this halfway mark.

As CoCoRaHS observers, you submit various reports of numbers and text from one location. Four weekends a year, you can submit photographs of a certain location in your local area. President's Day Weekend, February 18-20, is the first of four Field Photo Weekends of the year. A [video](#) explains in detail this way to contribute terrain photographs.

Keep leading the way with your snowfall, snow depth and SWE measurements and reports. In the next 2-3 months, on those all-rainy winter days, it is important and valuable to report zero for snow fall, and a snow depth value. Think about a forecast model that may have expected snow where you are.

Keep referring to the Snow Guide on your State Page. Soon it will be updated for the new month from what we learned this month.

Next month, the plan is to have the newsletter come out on the 2<sup>nd</sup> of the month, as we kick off our annual recruiting drive, titled "March Madness."

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