



# Southern



# New England

**December 2016**

The snowflakes came in November to remind us that winter is upon us. We prepare for winter with our low cost rulers and gauges.

Our daylight may be reaching its lowest point of the year, but our reporting continues to shine brightly. Read on and see the record number of stations reporting all days.

The background story to the recent addition to our training videos is given. Snow has found its way to the Berkshires. Reporting of snow is mentioned before it comes east to the shorelines. A new weather satellite that was launched last month and has found its way to orbit.

We use email to communicate with you, the observers. If you are not receiving messages from Coordinators or our founder, Nolan Doesken, please look deeper within your email box for blocked messages.

Welcome to all of our new observers. We continue to grow in our area and we are pleased to have you as part of our network's growth.

## **Observation Notes – More about Comments**

CoCoRaHS has added another in the continuing series of animated training videos, this one on a subject that keeps getting mentioned, Observation Notes or Comments. The [video](#) was mentioned in Nolan's newsletter before Thanksgiving, and even Nolan can learn more from continuing on.

A guideline that we would like all of you to follow is one where if you have precipitation to report, that you accompany that report with a Comment that mentions the timing, intensities, or even repeats the precipitation values. A Comment is helpful if the report is just a T or 0.01" or 0.02" on those days with cloudy skies and drizzle or when you are new to the crew and unsure what to do about dew. A Comment is helpful for all precipitation reports small and large and everything in between.

The [animated video](#) goes on to mention what can happen if there is no Comment, that a web of conversations occurs between offices about a precipitation report. There is no cartoon exaggeration with that message. Those conversations do occur and have occurred.

Friday August 12, 2016. The evening before, an isolated rain cell dumped over 6" of rain in the Middletown/Portland CT region, reported by CT-MD-2. On that Friday morning, our National Coordinator, Henry Reges, and I were at the Forecast Office on the grounds of the Brookhaven Laboratories on Long Island NY. That one precipitation report from CT-MD-2 was mentioned in their office's daily 10am briefing and the web of conversations began, and being in the same room helped.

Also on that day, widespread and historic flooding was occurring in the Baton Rouge Louisiana area. Henry remarked to me that very few Comments were included in that area's precipitation reports. More was mentioned that with use of the mobile reporting app, the amount of Comments is declining.

My reply was, "If you want more Comments, then make another training video about it!" That suggestion was taken and completed.

CT-MD-2 did accompany that report with a Comment. You should too for all precipitation reports, small and large and everything in between. Your report may be unique in some way and starts that web of conversations.

# **Snow Reporting**

Last month, we covered Snow Measuring. Before we get into our annual refresher of Snow Reporting, a repeat on the message towards Observer Safety. None of this is worth getting injured or worse over. Your safety and overall well-being is important to us and we understand if you skip, delay or omit values in the Daily Report during the upcoming winter season.

You've come in out of the cold and it's time to make your report. Which values you place in which location is CRITICALLY important. Mix ups occur. Fresh in your mind is your new snow accumulation. That value is NOT the first value that you enter.

There is a one page guide for snow reporting on all of our [State sites](#).

The 1<sup>st</sup> value is for the melted amount within your gauge.

The 2<sup>nd</sup> value is for the accumulation of new snow, to the nearest 0.1”

The 3<sup>rd</sup> value is for the melted amount of the 2<sup>nd</sup> value.

The 4<sup>th</sup> value is the depth of total snow and ice on the ground, to the nearest ½”. Please fill in this value every day, even if it is zero.

The 5<sup>th</sup> value is the melted amount of the 4<sup>th</sup> value. Please fill in this value EVERY Monday going forward, part of our Snow Water Equivalent (SWE Monday) custom.

Look at [www.nohrsc.noaa.gov](http://www.nohrsc.noaa.gov) to see the far reaching destinations of your reports. To the left margin, the text box saying “Observations Near”, enter your town and press enter. New stations may take 3-4 weeks to appear, but all other stations reporting snow amounts should appear here.

Because our reports go directly to [www.nohrsc.noaa.gov](http://www.nohrsc.noaa.gov), please keep 2 things in mind

- Avoid mistakes. Only the first report gets sent, not the correction.
- Avoid false zeros. False zeros are a major source of error with the snow models.

Comments are helpful. Please make them with every report of snow.

# **Detail and Summary for November 2016**

From the National Weather Service (NWS) Climate sites for Nov 2016.

Location	Station ID	Nov 2016 Precip	Nov departure from normal	Sep-Oct-Nov Precip	3 month departure from normal	Jun-Nov Precip	6 month departure from normal
Pittsfield MA	PSF	2.85"	-1.08"	8.57"	-4.03"	17.84"	-7.50"
Bridgeport CT	BDR	4.23"	0.84"	11.21"	0.70"	20.43"	-1.11"
Hartford CT	BDL	3.06"	-0.83"	7.65"	-4.49"	16.05"	-8.55"
Worcester MA	ORH	3.89"	-0.39"	13.73"	0.84"	21.41"	-3.61"
Providence RI	PVD	3.46"	-1.05"	11.03"	-1.33"	18.74"	-4.15"
Boston MA	BOS	2.70"	-1.29"	9.54"	-1.83"	13.46"	-8.37"

We struggle to achieve a one month normal amount of precipitation.

Plenty of dry weather in first two weeks of the month, including Election Day, a rare all day rain on the 15<sup>th</sup>, predawn rain on the 20<sup>th</sup> that turned to snow, light rain in the afternoon of Thanksgiving, and another all day rain on the 29<sup>th</sup>.

Lake Effect snows from Lake Ontario brought over a foot of snow on the 20<sup>th</sup> into western parts of our Southern New England area, and some of that snow streamed towards New London County.

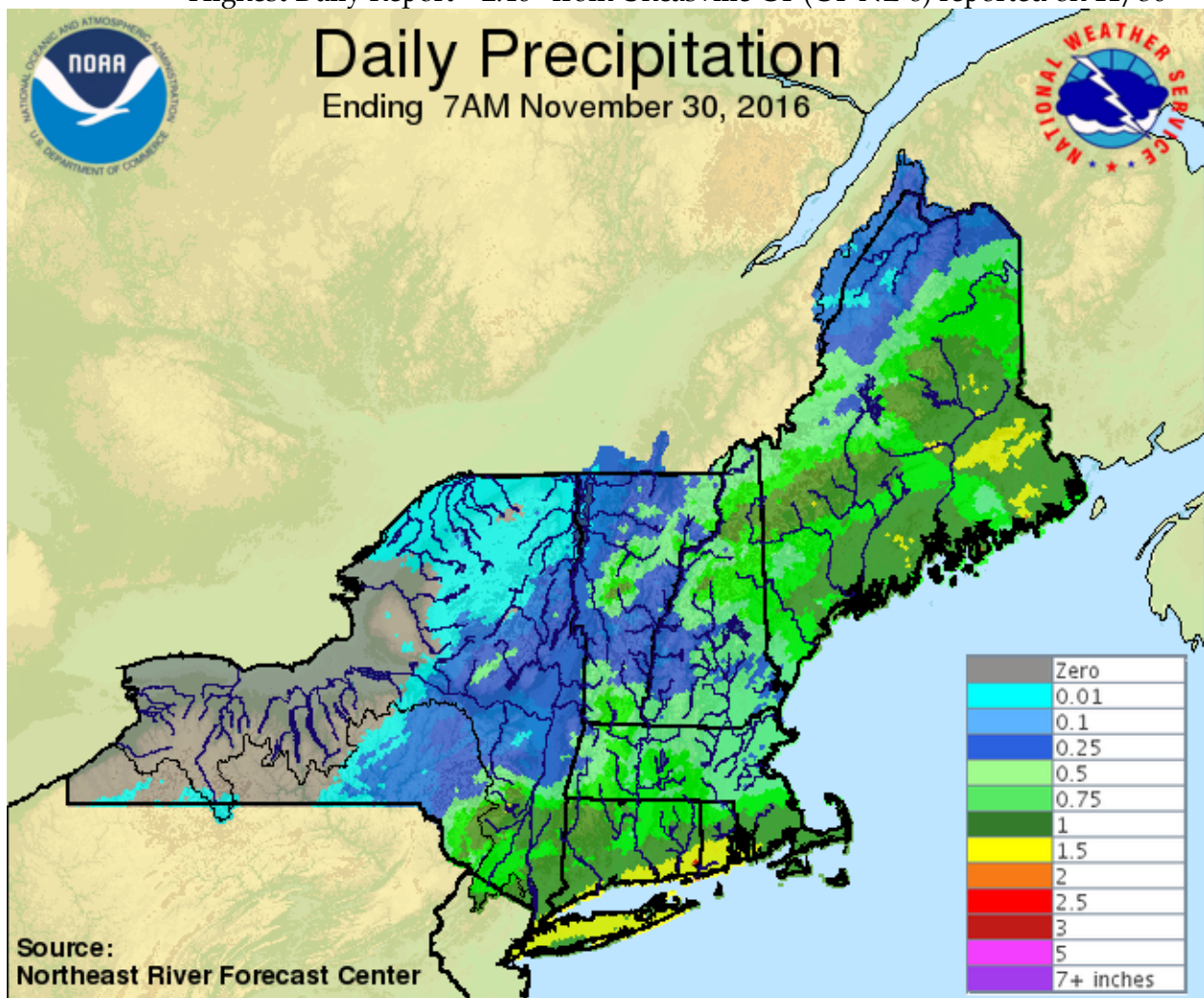
Other parts of the network are experiencing their normal wintertime decline in reporting. Not here. Rhode Island and Connecticut broke their one month reporting totals with one less day than last month. We were close to breaking 7000 Daily Reports in October. Let's break 7000 Daily Reports in December.

Last November, we submitted 3917 Daily Reports. This November, we submitted 4409 Daily Reports of ZERO! We continue to emphasize the importance of submitting zeroes. Our snowfall reports jumped 21% and our snow depth reports jumped 68% from last month. Please keep making snow fall and snow depth reports every day, even when it rains. There are no zeros like snow zeros. We define where the snow is and where it is not.

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

## From your reports for November 2016

Observers reporting	288
Reported all 30 days	147
Completed by Multi-Day Reports	42
Missing 1 or 2 reports	12
Daily Reports	6904
Zero Reports	4409
Non-Zero Reports	2495
Daily Comments	1195
Multi-Day Reports	137
Condition Monitoring Reports	54
Significant Weather Reports	10
Hail Reports	0
Snowfall Reports	3891
Snow Depth Reports	1239
Highest Daily Report	2.46" from Uncasville CT (CT-NL-8) reported on 11/30



<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	3.68"
01070004	Nashua			
0107000401	North Nashua River	MA-WR-44	Westminster 0.6 WSW	2.62"
0107000401	North Nashua River	MA-WR-8	Fitchburg 1.6 SSW	2.13"
0107000401	North Nashua River	MA-WR-13	Leominster 1.5 S	2.18"
0107000403	Squannacook River	MA-MD-47	West Townsend 0.5 W	2.39"
01070005	Concord			
0107000501	Sudbury River	MA-MD-75	Sherborn 2.3 WNW	2.08"
0107000502	Concord River	MA-WR-28	Berlin 1.3 WSW	2.62"
0107000502	Concord River	MA-WR-18	Northborough 0.6 SSE	2.58"
0107000502	Concord River	MA-WR-42	Northborough 2.3 N	2.47"
0107000502	Concord River	MA-MD-61	Stow 2.3 NW	2.10"
0107000502	Concord River	MA-MD-12	Acton 1.3 SW	2.30"
0107000502	Concord River	MA-MD-51	Maynard 0.7 ESE	2.11"
0107000502	Concord River	MA-MD-62	Chelmsford 1.2 E	2.03"
0107000502	Concord River	MA-MD-60	Billerica 2.0 W	2.11"
01070006	Merrimack River			
0107000613	Shawsheen River	MA-MD-52	Lexington 0.6 SW	2.08"
0107000614	Powwow River - Merrimack River	MA-ES-3	Haverhill 3.6 WNW	2.24"
0107000614	Powwow River - Merrimack River	MA-ES-20	Haverhill 0.7 N	1.97"
0107000614	Powwow River - Merrimack River	MA-ES-27	Amesbury 1.2 ENE	3.28"
01080201	Middle Connecticut			
0108020106	Manhan River - Connecticut River	MA-HS-2	Westhampton 1.8 SW	2.72"
0108020106	Manhan River - Connecticut River	MA-HS-8	Williamsburg 1.2 WSW	2.42"
0108020106	Manhan River - Connecticut River	MA-HS-10	Northampton 1.6 NE	2.33"
0108020106	Manhan River - Connecticut River	MA-FR-12	Sunderland 1.3 SE	2.48"
0108020107	Batchelor Brook - Connecticut River	MA-HD-13	Springfield 4.1 W	2.47"
01080202	Miller			
0108020202	Lower Millers River	MA-WR-39	Gardner 1.2 SW	2.64"
0108020202	Lower Millers River	MA-WR-40	Gardner 1.4 SSW	2.46"
01080203	Deerfield			
0108020305	Lower Deerfield River	MA-FR-17	Buckland 1.8 ESE	3.10"
0108020305	Lower Deerfield River	MA-FR-13	Conway 2.9 NW	3.34"
0108020305	Lower Deerfield River	MA-FR-10	Conway 0.9 SW	3.09"
01080205	Lower Connecticut			
0108020501	Mill River - Connecticut River	CT-HR-5	Enfield 1.5 SE	2.38"
0108020502	Scantic River	CT-TL-15	Central Somers 0.3 N	2.11"
0108020503	Park River	CT-HR-39	Farmington 1.6 SW	2.34"
0108020503	Park River	CT-HR-9	West Hartford 2.7 NNW	2.99"

0108020503	Park River	CT-HR-36	West Hartford 1.1 W	2.62"
0108020503	Park River	CT-HR-11	West Hartford 2.7 SSE	2.41"
0108020503	Park River	CT-HR-19	Newington 0.8 ENE	2.48"
0108020504	Hockanum River	CT-TL-16	Vernon 3.5 NNE	1.87"
0108020505	Roaring Brook - Connecticut River	CT-HR-6	Wethersfield 1.2 WSW	2.02"
0108020505	Roaring Brook - Connecticut River	CT-HR-22	East Hartford 1.3 E	2.08"
0108020505	Roaring Brook - Connecticut River	CT-HR-7	Central Manchester 2.7 SW	2.03"
0108020505	Roaring Brook - Connecticut River	CT-HR-40	Glastonbury Center 4.0 ENE	2.03"
0108020506	Mattabasset River	CT-HR-15	Southington 3.0 E	2.83"
0108020506	Mattabasset River	CT-HR-18	Berlin 2.4 SSE	2.38"
0108020506	Mattabasset River	CT-MD-12	Middletown 3.1 WNW	2.83"
0108020507	Higganum Creek - Connecticut River	CT-MD-2	Portland 0.9 S	2.65"
01080206	Westfield			
0108020601	Headwaters Westfield River	MA-HS-7	Plainfield 2.2 SW	2.88"
0108020601	Headwaters Westfield River	MA-HS-14	Plainfield 2.4 ESE	2.65"
01080207	Farmington			
0108020701	Still River	CT-LT-15	Colebrook 1.0 NE	3.71"
0108020702	West Branch Farmington River	MA-BE-4	Becket 5.6 SSW	3.16"
0108020704	Headwaters Farmington River	CT-LT-9	New Hartford Center 3.2 SW	3.47"
0108020704	Headwaters Farmington River	CT-HR-24	Collinsville 0.9 NW	3.13"
0108020705	Salmon Brook	CT-HR-8	North Granby 1.3 ENE	3.10"
01090001	Charles			
0109000101	Plum Island Soung - Frontal Atlantic Ocean	MA-ES-24	Newburyport 0.8 SW	3.20"
0109000102	Ipswich River	MA-MD-45	Wilmington 1.5 NE	2.14"
0109000102	Ipswich River	MA-ES-12	Boxford 2.4 S	2.68"
0109000102	Ipswich River	MA-ES-2	Beverly 2.8 NW	2.51"
0109000104	Saugus River - Frontal Broad Sound	MA-MD-81	Wakefield 0.5 NNW	2.13"
0109000104	Saugus River - Frontal Broad Sound	MA-SF-2	Winthrop 0.2 N	1.96"
0109000104	Saugus River - Frontal Broad Sound	MA-ES-8	Marblehead 0.8 SW	2.30"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-67	Lexington 2.3 SE	2.08"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-66	Woburn 1.2 SE	2.31"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-7	Winchester 0.7 SE	2.23"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-44	Medford 1.2 W	2.12"
0109000105	Mystic River - Frontal Boston Harbor	MA-MD-11	Cambridge 0.9 NNW	2.18"
0109000105	Mystic River - Frontal Boston Harbor	MA-SF-10	Chelsea 0.8 N	2.09"
0109000106	Upper Charles River	MA-WR-1	Milford 2.3 NNW	2.36"
0109000106	Upper Charles River	MA-MD-55	Holliston 0.7 W	2.26"
0109000106	Upper Charles River	MA-MD-42	Holliston 0.8 S	2.12"
0109000106	Upper Charles River	MA-NF-11	Millis 2.0 SW	2.18"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-76	Weston 1.1 S	2.04"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-SF-4	Brighton 0.5 W	2.19"

0109000107	Lower Charles River - Frontal Boston Harbor	MA-MD-74	Somerville 0.7 SSE	1.57"
0109000107	Lower Charles River - Frontal Boston Harbor	MA-SF-1	Boston 0.5 WSW	1.83"
0109000108	Neponset River - Frontal Boston Harbor	MA-NF-1	Norwood 1.3 NW	2.10"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-NF-5	Weymouth 0.5 NW	2.69"
0109000109	Whitmans Pond - Frontal Boston Harbor	MA-NF-28	Weymouth 1.8 NNE	1.72"
01090002	Cape Cod			
0109000201	North River - Frontal Massachusetts Bay	MA-PL-5	Kingston 3.3 WNW	2.36"
0109000201	North River - Frontal Massachusetts Bay	MA-PL-2	Sagamore Beach 1.0 NW	2.04"
0109000202	Cape Cod	MA-BA-14	North Falmouth 0.5 ENE	2.43"
0109000202	Cape Cod	MA-BA-13	Falmouth 0.6 NNW	2.79"
0109000202	Cape Cod	MA-BA-50	Falmouth 5.4 NNE	2.22"
0109000202	Cape Cod	MA-BA-17	East Falmouth 1.2 WNW	2.26"
0109000202	Cape Cod	MA-BA-3	Falmouth 3.0 E	2.42"
0109000202	Cape Cod	MA-BA-11	East Falmouth 1.4 ESE	2.18"
0109000202	Cape Cod	MA-BA-18	Waquoit 0.6 SSW	2.51"
0109000202	Cape Cod	MA-BA-47	Mashpee 2.4 WSW	2.75"
0109000202	Cape Cod	MA-BA-45	Sandwich 0.9 NNE	2.54"
0109000202	Cape Cod	MA-BA-22	Yarmouth 0.9 NNW	2.77"
0109000202	Cape Cod	MA-BA-33	Brewster 1.5 ESE	2.67"
0109000202	Cape Cod	MA-BA-27	Wellfleet 0.7 NW	1.79"
0109000202	Cape Cod	MA-BA-36	Harwich 2.6 ENE	2.50"
0109000202	Cape Cod	MA-BA-37	Orleans 0.8 W	2.22"
0109000202	Cape Cod	MA-BA-51	Orleans 3.0 S	2.72"
0109000202	Cape Cod	MA-BA-12	Orleans 1.1 E	2.32"
0109000202	Cape Cod	MA-BA-30	Eastham 0.6 SW	2.04"
0109000202	Cape Cod	MA-BA-43	Chatham 0.4 WSW	2.36"
0109000203	Mattapoissett River - Frontal Buzzards Bay	MA-PL-19	Rochester 1.2 NNW	2.19"
0109000203	Mattapoissett River - Frontal Buzzards Bay	MA-PL-6	Middleborough 5.5 E	2.57"
0109000204	Paskamanset River - Frontal Buzzards Bay	MA-BR-14	Dartmouth 2.5 SSW	2.38"
0109000204	Paskamanset River - Frontal Buzzards Bay	MA-BR-32	Acushnet 1.8 SSE	2.40"
0109000205	Skonnet Point - Frontal Rhode Island Sound	RI-NW-7	Little Compton 0.6 E	2.28"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-5	West Tisbury 2.9 N	2.90"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-9	West Tisbury 0.4 S	2.38"
0109000206	Elizabeth Islands - Marthas Vineyard	MA-DK-2	Vineyard Haven 0.8 WSW	2.77"
0109000207	Nantucket Island	MA-NT-1	Nantucket 3.8 WNW	2.23"
0109000207	Nantucket Island	MA-NT-2	Nantucket 2.2 E	2.34"
01090003	Blackstone			
0109000301	Upper Blackstone River	MA-WR-41	Auburn 2.6 SW	2.78"
0109000301	Upper Blackstone River	MA-WR-32	Auburn 1.9 ESE	2.80"
0109000302	Lower Blackstone River	RI-PR-50	Harrisville 1.2 SSE	2.81"
0109000302	Lower Blackstone River	RI-PR-28	North Smithfield 0.7 SE	2.64"



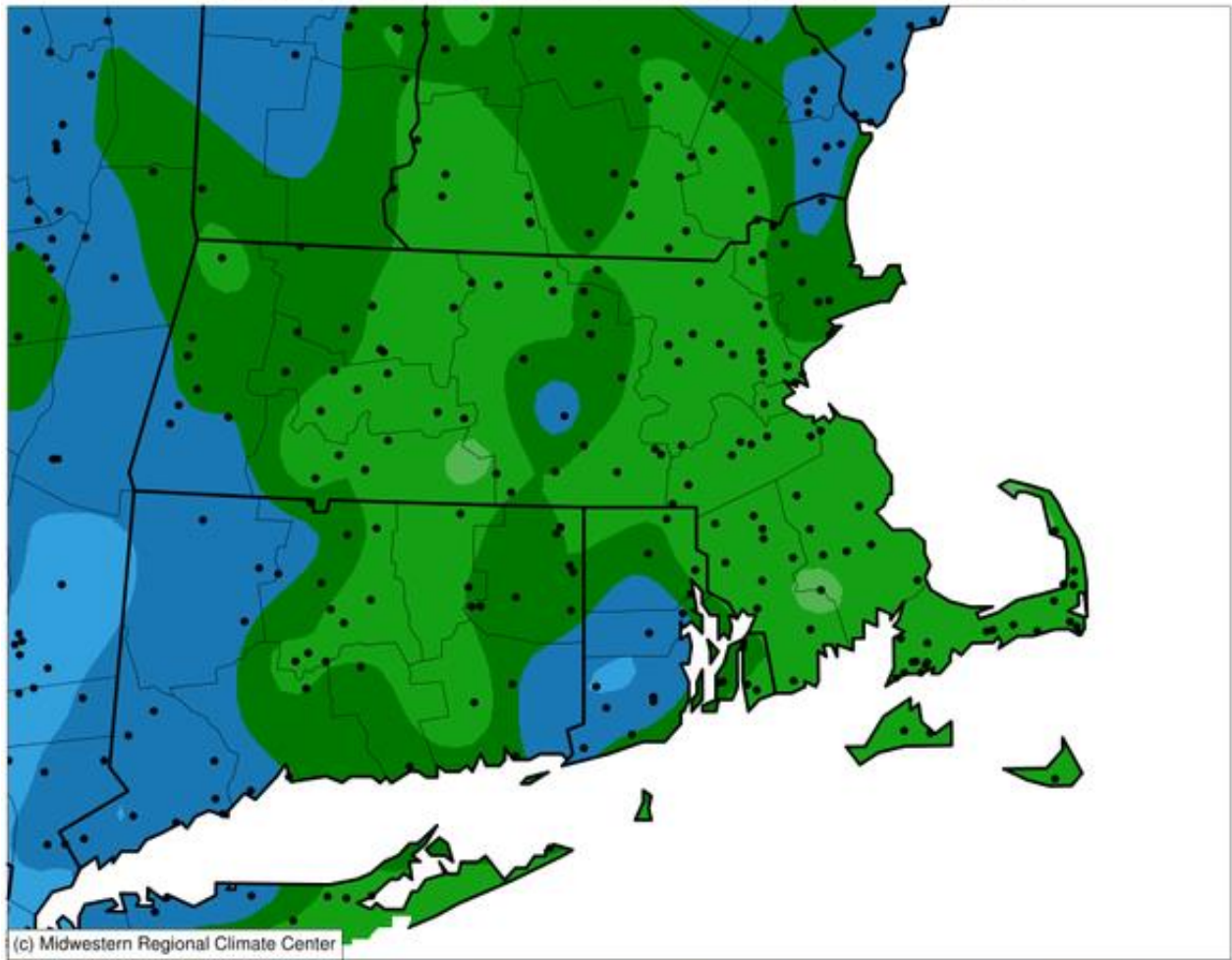
0109000302	Lower Blackstone River	MA-NF-26	Bellingham 2.4 S	2.14"
0109000302	Lower Blackstone River	MA-NF-16	Bellingham 4.7 S	2.35"
01090004	Narragansett			
0109000401	Upper Taunton River	MA-BR-30	Taunton 3.9 N	1.98"
0109000401	Upper Taunton River	MA-PL-22	East Bridgewater 0.3 WSW	1.62"
0109000401	Upper Taunton River	MA-PL-24	Whitman 1.1 WSW	1.63"
0109000401	Upper Taunton River	MA-PL-23	Pembroke 2.8 SW	2.08"
0109000403	Threemile River	MA-NF-19	Foxborough 1.8 SSW	1.55"
0109000403	Threemile River	MA-BR-33	Taunton 2.4 W	2.16"
0109000403	Threemile River	MA-BR-9	Taunton 2.6 NW	2.28"
0109000404	Ten Mile River	MA-BR-17	North Attleboro 0.8 E	2.03"
0109000404	Ten Mile River	MA-BR-23	Attleboro 0.9 ENE	1.89"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-33	Greenville 0.7 NNW	2.85"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-51	North Smithfield 0.6 S	2.77"
0109000405	Woonasquatucket River-Moshassuck River	RI-PR-48	Providence 1.2 NNW	2.52"
0109000406	Pawtuxet River	RI-PR-17	Cranston 4.1 E	2.61"
0109000407	Palmer River	MA-BR-2	Rehoboth 2.1 N	2.13"
0109000407	Palmer River	MA-BR-35	Swansea 4.6 WNW	2.42"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-3	Norton 1.8 NNE	2.19"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-16	Somerset 0.4 SSE	2.16"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-19	Somerset 2.0 NNE	2.17"
0109000408	Lower Taunton River - Frontal Mount Hope Bay	MA-BR-8	Dighton 1.1 WSW	2.64"
0109000409	Narragansett Bay	RI-WS-31	Kingston 7.5 NNE	3.78"
0109000409	Narragansett Bay	RI-KN-9	Warwick 2.4 SW	3.08"
0109000409	Narragansett Bay	RI-KN-2	East Greenwich 2.3 ESE	3.44"
0109000409	Narragansett Bay	RI-PR-32	Providence 2.3 NE	2.29"
0109000409	Narragansett Bay	RI-NW-4	Middletown 1.1 SW	2.55"
0109000409	Narragansett Bay	RI-NW-11	Tiverton 0.8 SSW	2.72"
0109000409	Narragansett Bay	RI-NW-5	Little Compton 1.7 NW	2.25"
01090005	Pawcatuck-Wood			
0109000501	Wood River	RI-WS-25	Rockville 0.4 E	4.54"
0109000501	Wood River	RI-WS-1	Hope Valley 3.7 S	3.91"
0109000502	Upper Pawcatuck River	RI-WS-32	Kingston 6.9 NNW	4.08"
0109000503	Lower Pawcatuck River	RI-WS-35	Westerly 1.0 SW	3.61"
01100001	Quinebaug			
0110000102	French River	CT-WN-2	North Grosvenor Dale 1.7 SSE	2.65"
0110000103	Fivemile River	CT-WN-6	Dayville 2.0 ENE	2.52"
0110000103	Fivemile River	CT-WN-4	East Killingly 1.3 SW	2.34"
0110000105	Mossup River	CT-WN-8	Moosup 1.7 NE	2.28"
0110000106	Pachaug River	CT-NL-21	Griswold 0.9 N	2.89"
01100002	Shetucket			

0110000201	Willmantic River	CT-TL-18	Hebron 5.3 NW	2.39"
0110000201	Willmantic River	CT-TL-14	Storrs 1.5 SW	2.32"
0110000201	Willmantic River	CT-TL-2	Staffordville 0.4 NNW	2.05"
0110000202	Natchaug River	CT-TL-4	Mansfield Center 1.9 SW	2.71"
0110000203	Shetucket River	CT-WN-10	South Windham 1.3 NNE	2.49"
0110000203	Shetucket River	CT-WN-11	Scotland 2.3 SSW	2.65"
0110000203	Shetucket River	CT-NL-10	Norwich 2.5 NNE	3.15"
01100003	Thames			
0110000302	Thames River-Frontal New London Harbor	CT-NL-7	Uncasville-Oxoboxo Valley 5.6 W	3.45"
0110000302	Thames River-Frontal New London Harbor	CT-NL-17	Waterford 2.2 N	3.30"
0110000302	Thames River-Frontal New London Harbor	CT-NL-6	New London 1.0 NNW	3.02"
0110000302	Thames River-Frontal New London Harbor	CT-NL-8	Uncasville-Oxoboxo Valley 1.6 ENE	3.58"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-22	Central Waterford 2.7 SSW	2.38"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-23	Mystic 1.4 W	2.85"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-19	Mystic 0.9 W	2.39"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-24	Stonington 1.4 NNW	3.16"
0110000303	Mystic River - Frontal Fishers Island Sound	CT-NL-18	Stonington 0.5 NNE	3.28"
01100004	Quinnipiac			
0110000401	Quinnipiac River	CT-NH-30	Cheshire Village 2.2 SE	2.90"
0110000401	Quinnipiac River	CT-HR-23	Southington 0.9 SSE	2.47"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-5	Westbrook Center 1.1 N	2.88"
0110000402	Hammonasset River - Frontal Long Island Sound	CT-MD-11	Westbrook Center 1.5 NE	2.92"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-16	Milford 1.8 E	3.51"
0110000403	Mill River - Frontal Long Island Sound	CT-NH-29	Hamden 3.0 WSW	3.80"
01100005	Housatonic			
0110000501	Headwaters Housatonic River	MA-BE-11	Great Barrington 3.0 N	3.56"
0110000501	Headwaters Housatonic River	MA-BE-3	Stockbridge .2 NNE	3.43"
0110000501	Headwaters Housatonic River	MA-BE-10	Pittsfield 2.0 NNW	2.99"
0110000508	Still River - Housatonic River	CT-FR-43	Bethel 0.5 E	3.18"
0110000508	Still River - Housatonic River	CT-FR-41	Bethel 3.5 NNE	3.16"
0110000508	Still River - Housatonic River	CT-FR-9	Brookfield 3.3 SSE	3.25"
0110000510	Eightmile Brook - Housatonic River	CT-FR-44	Newtown 4.3 E	3.31"
0110000511	Headwaters Naugatuck River	CT-LT-7	Litchfield 2.3 NNE	3.80"
0110000512	Outlet Naugatuck River	CT-LT-14	Watertown 0.5 S	3.00"
0110000512	Outlet Naugatuck River	CT-NH-26	Prospect 1.5 NW	3.26"
0110000512	Outlet Naugatuck River	CT-NH-22	Prospect 0.5 SW	3.25"
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-42	Monroe 0.1 SE	3.29"
0110000513	Housatonic River - Frontal Long Island Sound	CT-FR-23	Shelton 1.3 W	3.29"
01100006	Saugatuck			
0110000601	Saugatuck River - Frontal Long Island Sound	CT-FR-31	Newtown 4.6 SSW	3.46"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-29	Ridgefield 1.9 SSE	3.46"

0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-3	New Canaan 1.9 ENE	4.32"
0110000602	Norwalk River - Frontal Norwalk Harbor	CT-FR-25	Norwalk 2.9 NNW	4.13"
0110000603	Pequonnock River - Frontal Long Island Sound	CT-FR-20	Westport 2.5 ENE	3.31"
0110000604	Mianus River-Rippowam River	CT-FR-39	Stamford 4.2 S	3.80"
0110000604	Mianus River-Rippowam River	CT-FR-37	Stamford 0.4 WNW	4.01"
0110000604	Mianus River-Rippowam River	CT-FR-35	Darien 1.8 ENE	3.53"

## Accumulated Precipitation (in)

### November 01, 2016 to November 30, 2016



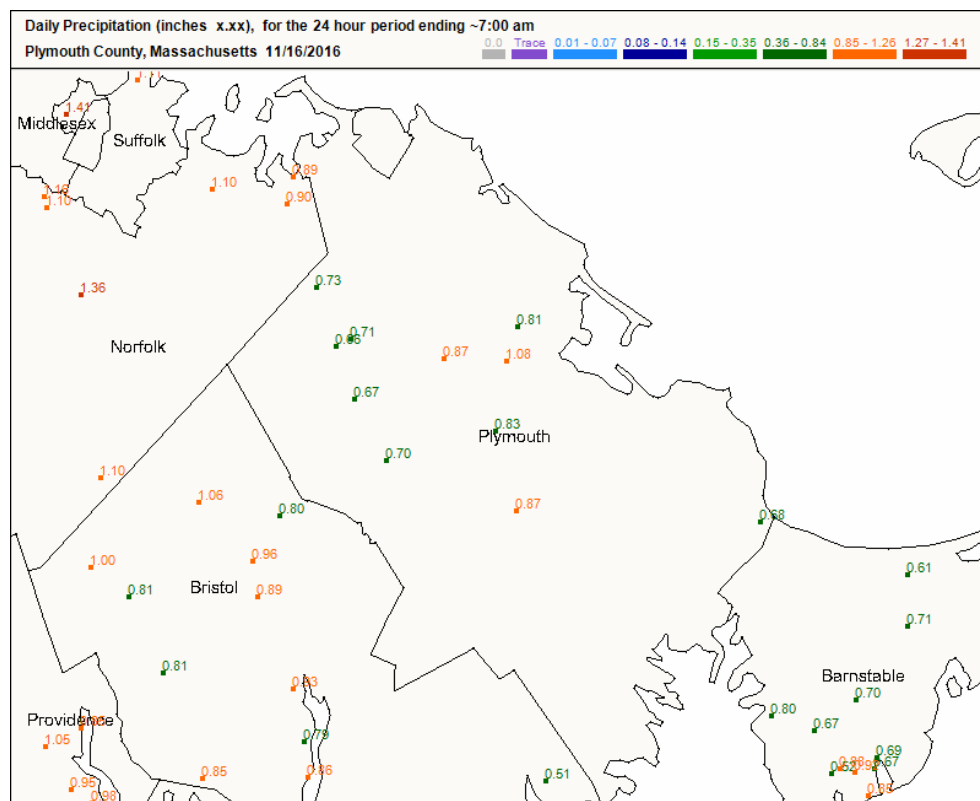
## **Map of the Month – Plymouth County MA**

One of the first English colonies in North America is now home to nearly 500,000 residents on 659 square miles of land. A county by the bay, bordering two bays and whose rivers go to a third bay; Cape Cod Bay to the east, Buzzards Bay to the south, and rivers that flow west towards Narragansett Bay.

Dotting the map are ponds as numerous as lakes are in some sections of Minnesota. There are over 450 lakes, ponds and reservoirs in Plymouth County. Assawompset Pond, located in the southwest part of the county, is the largest natural body of freshwater in Massachusetts.

Cranberry bogs make up 5% of the land in this county. In the Bridgewater area, its clay gives the distinctive red color to Boston City Hall Pavers, the brick that is pervasive throughout New England, home of the only brick manufacturer in Massachusetts.

Our network knows something about the importance to water to all of this. If you know of someone who can help fill in these gaps, ask them to join us at CoCoRaHS.

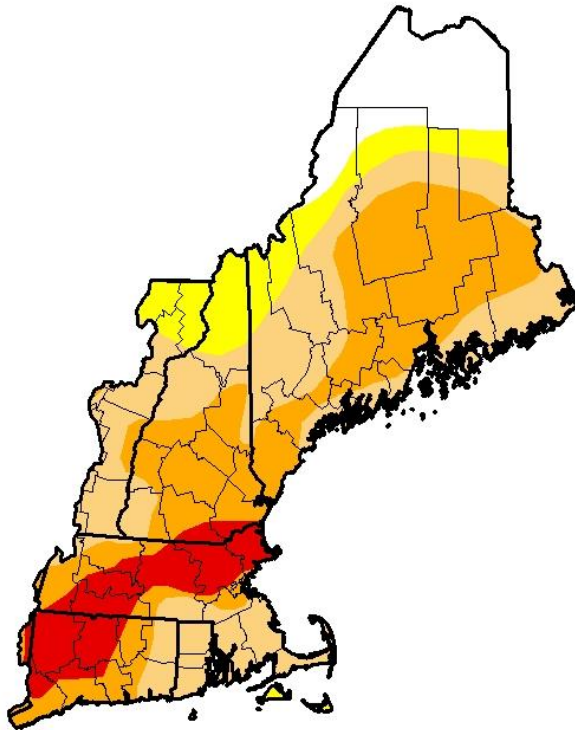


From the Drought Monitor.

The short term drought has been eased in eastern CT, RI and southeast MA, but a long term drought remains. Every drop counts and zeros do too!

## U.S. Drought Monitor New England Watershed

**December 6, 2016**  
(Released Thursday, Dec. 8, 2016)  
Valid 7 a.m. EST



*Drought Conditions (Percent Area)*

	None	D0	D1	D2	D3	D4
<b>Current</b>	11.38	10.81	33.12	34.60	10.09	0.00
<b>Last Week</b> <i>11/29/2016</i>	7.58	12.47	33.88	35.98	10.09	0.00
<b>3 Months Ago</b> <i>9/6/2016</i>	35.85	28.56	17.13	13.47	4.98	0.00
<b>Start of Calendar Year</b> <i>12/29/2015</i>	55.73	28.42	15.85	0.00	0.00	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>12/6/2015</i>	59.58	25.00	15.42	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:**  
Anthony Artusa  
NOAA/NWS/NCEP/CPC



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

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

# **Advanced Weather Satellite Now in Orbit**

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

On November 16 a new weather satellite, GOES-R, was launched into orbit from Cape Canaveral. This satellite is the most advanced weather satellite to date and will produce high-resolution images faster than current GOES satellites.

GOES-R uses a new instrument called the Advanced Baseline Imager (ABI) that uses several different applications related to weather, oceans, land, climate and hazards. The ABI will be useful in obtaining data and imagery about weather over the entire Western Hemisphere in real time.

The new satellite will be able to capture all the details of the weather in the same time it takes the current GOES satellites to produce one small image of a stormy region. With the current series of satellites, images of Earth are taken every 30 minutes, and the United States is scanned every 15 minutes. During a period of active weather, the satellites are placed in a position to scan one region every five minutes. GOES-R will routinely provide scans every 5 minutes with the option to produce 1-minute images when needed.

GOES-R will be able to measure cloud thickness and atmospheric moisture, track lightning and even monitor dangerous levels of air pollution. The satellite will monitor the "weather" of outer space. It will capture more advanced images of the sun and will be able to take other crucial measurements of space weather that could threaten Earth, disable communication systems, interrupt power utilities and even disrupt our navigation systems.

The GOES-R program is a collaborative satellite development and acquisition mission between the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA). The satellite will provide continuous imagery and atmospheric measurements of Earth's Western Hemisphere and space weather monitoring. The advanced spacecraft and instrument technology will result in more timely and accurate weather forecasts. It will improve support for the detection and observations of meteorological phenomena

and directly affect public safety, protection of property, and ultimately, economic health and development.

You can find out more about GOES-R at <http://www.goes-r.gov/>.

## **E-Mail Notifications**

We rely on email to communicate to you, the observers. There may be some instances where your email provider scans a message and deems it suspicious and blocks the message from appearing in your Inbox and treats it as Spam.

You are making the volunteer efforts, day after day, in all types of weather conditions. We want these monthly newsletters, and other messages, to be a way to demonstrate appreciation to those efforts, pass along some tips and reminders, and show where your reports connect into other stations making the same observations.

Please look in your spam folder for messages from your Coordinators and add our names and email addresses in your Contact list.

## **Wrap up**

Keep watch over your funnel and inner cylinder should rainfall occur with freezing temperatures afterwards. You may need to measure, write down, and empty your gauge before your regular observation time.

If you are headed to warmer locale this winter, please send a message to your Coordinator, so we don't get too concerned of your absence. While you are away, we hope that you think of us as often as we will think of you.

Take in the stillness and quiet that the early mornings and evenings have during this time of year. The Winter Solstice occurs on 5:44am on Wednesday December 21. Daylight will increase when we get into January.

Our best wishes to you all, however you spend your year-end holidays.

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