



Southern



New England

May 2016

The Patriots Day holiday is behind us and the Memorial Day holiday is coming upon us. The summer vacation season is approaching. The first article is about the Multi-Day Accumulation Report to fill out for the time that you're out of town or taking days off.

After a detailed and summary look at precipitation numbers for the month of April, the next article is the 2nd in our state anniversary series, Massachusetts. As the State Coordinator, Joe DelliCarpini provides the background to Massachusetts being introduced to CoCoRaHS.

The widespread rain event that occurred on April 7, and was reported on April 8, showed once again why our network has its value. We found a few of our local airport gauges to compare with our gauges in the eastern half of our region.

This month of May marks the 10th anniversary of the floods that occurred in northeastern Massachusetts. Nicole Belk writes about the Mothers Day Floods of 2006, a 7"-13" rain event that affected Essex, Middlesex and Suffolk Counties in Massachusetts from May 12 -16, 2006.

Baseball season has begun and we are enjoying our new growth on this Field of Dreams. See what is said to keep up the recruiting efforts.

Welcome to all of the new observers to our growing network.

Multi-Day Accumulation

Are you taking some days off? Too hazardous to go outside for the morning observation? Our observers fill out Multi-Day Accumulation reports nearly 70-80 times per month.

Measuring is important. Reporting what you measure accurately is even more important.

Some common mistakes to avoid.

- Returning from taking day(s) off and entering a Daily report, instead of a Multi-Day Accumulation report. It is a common mistake because you submit a Daily Report so often. The relatively high precipitation value of the Daily Report is noticeable on the maps.
- When entering the Multi-Day Accumulation report, enter the correct month, day, and yes, the year of the start and end dates. If your last Daily Report was on a Saturday 4/16, then Sunday 4/17 is the first day of the Multi-Day report.



Multiple Day Accumulation Form		Submit Data	Reset
Station Number : CT-FR-9			
Station Name : Brookfield 3.3 SSE			
<input type="text" value="4/17/2016"/>	First day of accumulation period. This day should be one day after your last report.		
<input type="text" value="4/22/2016"/>	Date the rain gauge was emptied.		
<input type="text" value="7:00"/> AM	Time the rain gauge was emptied.		
<input checked="" type="radio"/> Yes <input type="radio"/> No Report was taken at registered location?			
<input type="text" value="0.75"/> in.	Multi Day Precipitation (in inches), or T for trace, or NA for unknown.		
<input type="text"/>	Total Depth of Snow on Ground (in inches)		
<input type="text"/>	Core Precipitation (in inches)		
Notes			
<input type="text" value="Rain fell over our Spring Break."/>			
		Submit Data	Reset

Detail and Summary for April 2016

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

Location	Station ID	Apr 2016 Precip	Apr departure from normal	Feb-Mar-Apr Precip	3 month departure from normal	Nov-Apr Precip	6 month departure from normal	Apr 2016 Snowfall	Apr snowfall departure from normal
Pittsfield MA	PSF	2.49"	-1.37"	9.03"	-0.88"	16.67"	-3.09"		
Bridgeport CT	BDR	2.71"	-1.42"	9.78"	-1.19"	18.21"	-2.58"	0.1"	-0.8"
Hartford CT	BDL	2.44"	-1.28"	9.51"	-0.72"	17.92"	-2.87"	6.9"	1.4"
Worcester MA	ORH	2.63"	-1.48"	11.39"	-0.16"	19.92"	-3.22"	10.0"	2.8"
Providence RI	PVD	3.91"	-0.45"	11.91"	-0.75"	22.36"	-2.89"	6.7"	0.6"
Boston MA	BOS	2.91"	-0.83"	10.24"	-1.07"	19.86"	-2.58"	6.6"	1.9"

The first Saturday of April brought about an extremely rare sequence of events. Three stations, CT-FR-3 (New Canaan CT), CT-FR-9 (Brookfield CT) and MA-MD-20 (Wilbraham MA) measured and reported rain in the morning, hail and in the evening, and snow overnight for the morning observation time. Rain, hail and snow in a 24 hour period.

The rest of the first week of April remained cloudy and rainy, and had the last measurable snow event which warranted Warnings in southeastern Massachusetts. A widespread rain event occurred on Thursday April 7, and was reported on Friday April 8. The map from the NERFC highlights the higher rainfalls in eastern sections.

The sun appeared on the 13th and stayed until the 24th, making Patriots Day sunny and pleasant. Light spring time rains ended the month and helped quell the risk of brush fires.

The growth we are experiencing is something you should all be proud of. Keep up the solid reporting. Keep checking over your reports and fill in any and all missing reports within the month.

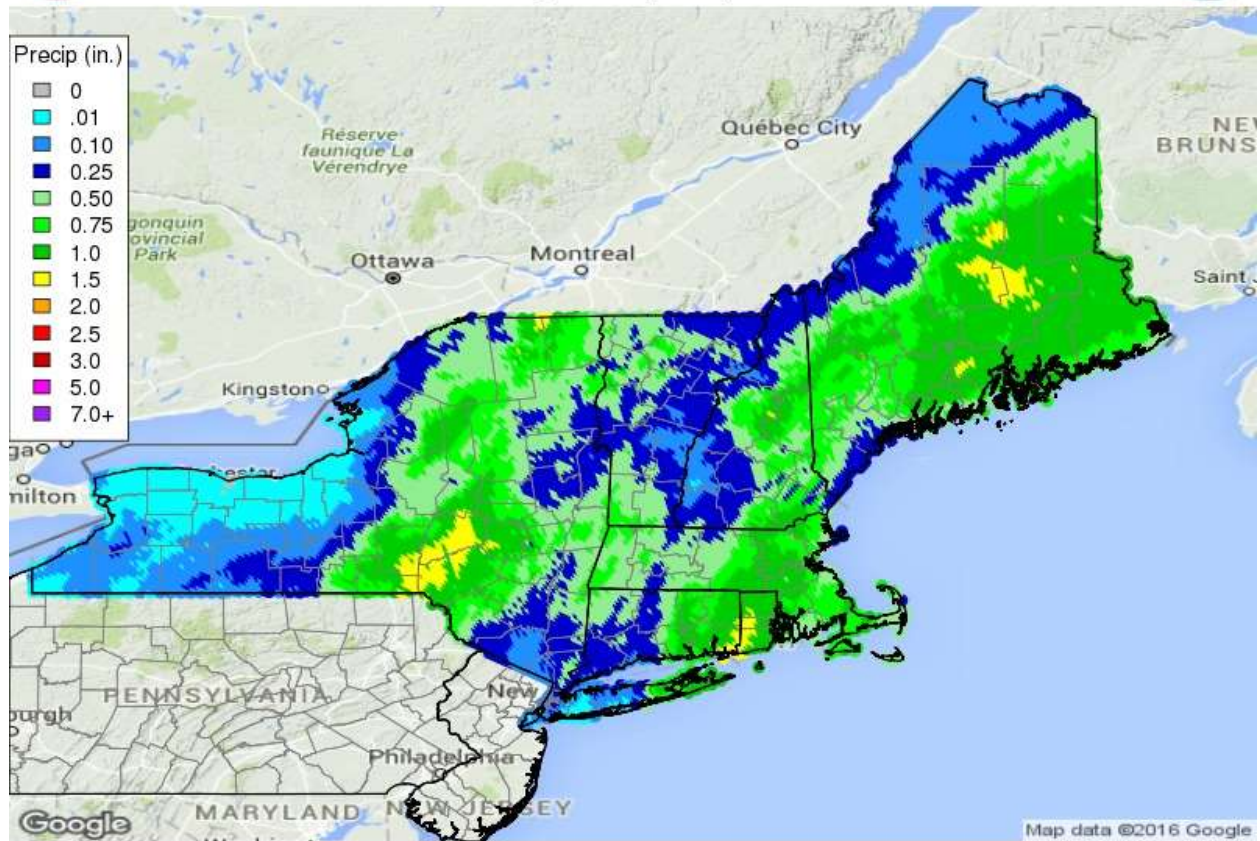
Take a look at the next few pages. It's the result of your collaborative efforts. 5000 Daily Reports!! Over 110 stations with complete reporting!! Congratulations, everyone!!

From your reports for April 2016

Observers reporting	224
Reported all 30 days	92
Completed by Multi-Day Reports	19
Missing 1 or 2 reports	27
Daily Reports	5078
Zero Reports	2637
Non-Zero Reports	2441
Comments	770
Multi-Day Reports	85
Significant Weather Reports	22
Hail Reports	7
Highest Daily Snowfall Report	7.3" from Dighton MA (MA-BR-8) reported on 4/5
Highest Daily Report	1.95" from Prospect CT (CT-NH-22) reported on 4/3



Daily Precipitation ending 8am April 8, 2016



Congratulations, everyone! We go deep into a 3rd page! Keep making this list longer by filling in missing reports during the month. Be a hero! Report your zeros! See the variability that our network captures.

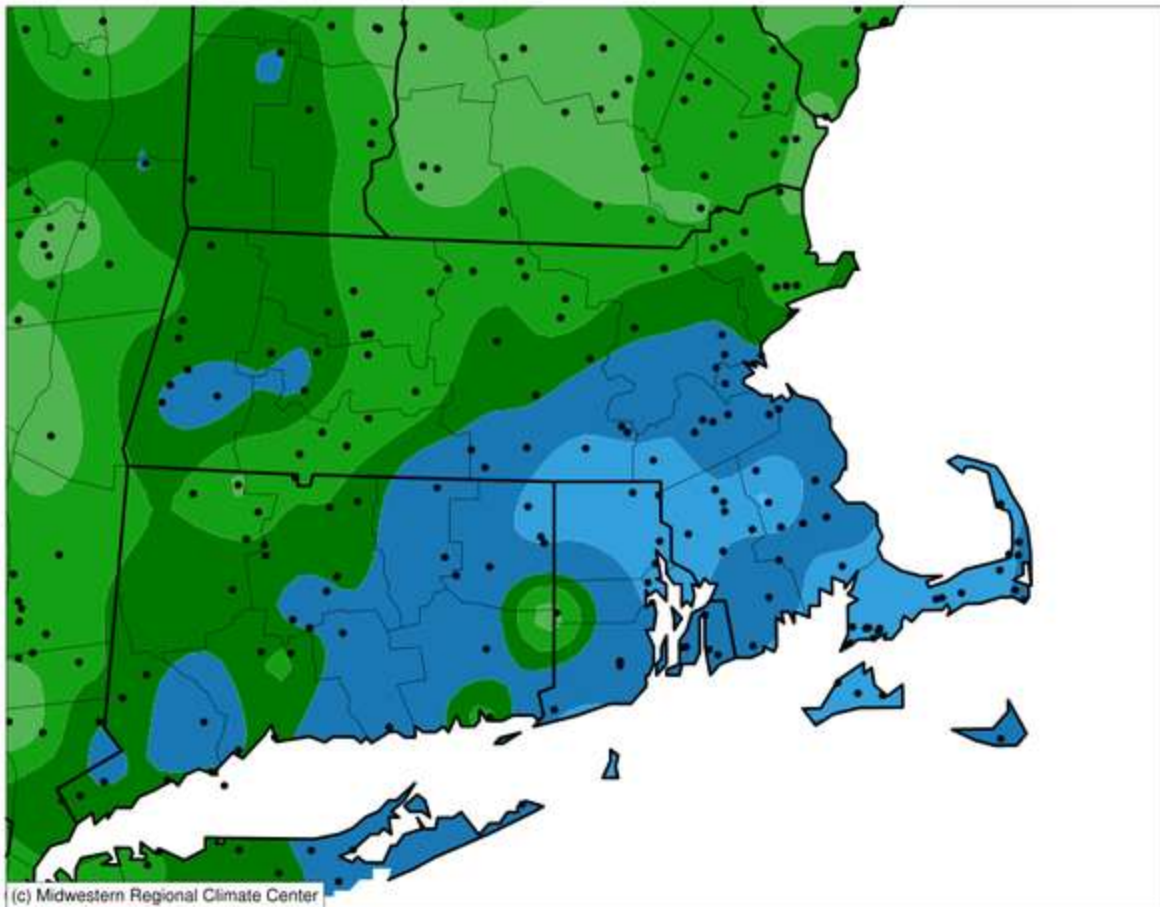
Station	Location	Precip	Snowfall	County & State
MA-BE-3	Stockbridge .2 NNE	3.06"	8.7"	Berkshire MA
MA-BE-4	Becket 5.6 SSW	3.59"	10.5"	Berkshire MA
CT-LT-7	Litchfield 2.3 NNE	2.70"	6.4"	Litchfield CT
CT-LT-14	Watertown 0.5 S	2.22"	0.0"	Litchfield CT
CT-LT-9	New Hartford Center 3.2 SW	2.54"	5.6"	Litchfield CT
CT-FR-37	Stamford 0.4 WNW	3.42"	0.0"	Fairfield CT
CT-FR-29	Ridgefield 1.9 SSE	4.06"	0.6"	Fairfield CT
CT-FR-3	New Canaan 1.9 ENE	3.08"	1.2"	Fairfield CT
CT-FR-9	Brookfield 3.3 SSE	2.80"	2.2"	Fairfield CT
CT-FR-31	Newtown 4.6 SSW	3.14"	0.0"	Fairfield CT
CT-FR-20	Westport 2.5 ENE	3.01"	0.0"	Fairfield CT
CT-FR-32	Monroe 0.8 W	3.93"	2.0"	Fairfield CT
CT-FR-23	Shelton 1.3 W	3.86"	2.1"	Fairfield CT
CT-FR-30	Stratford 0.5 WNW	2.86"	0.0"	Fairfield CT
CT-NH-16	Milford 1.8 E	3.10"	0.0"	New Haven CT
CT-NH-14	Prospect 1.9 ENE	2.52"	2.9"	New Haven CT
MA-FR-10	Conway 0.9 SW	2.97"	6.0"	Franklin MA
MA-FR-12	Sunderland 1.3 SE	2.43"	5.4"	Franklin MA
MA-HS-7	Plainfield 2.2 SW	3.42"	9.6"	Hampshire MA
MA-HS-14	Plainfield 2.4 ESE	3.06"	9.0"	Hampshire MA
MA-HS-8	Williamsburg 1.2 WSW	3.13"	7.5"	Hampshire MA
MA-HS-10	Northampton 1.6 NE	3.26"	7.7"	Hampshire MA
MA-HD-13	Springfield 4.1 W	2.48"	1.5"	Hampden MA
MA-HD-16	Wales 0.4 SSW	3.76"	0.0"	Hampden MA
CT-HR-24	Collinsville 0.9 NW	2.68"	5.9"	Hartford CT
CT-HR-28	North Canton 0.8 SSW	2.60"	4.4"	Hartford CT
CT-HR-23	Southington 0.9 SSE	2.57"	0.0"	Hartford CT
CT-HR-15	Southington 3.0 E	3.31"	9.1"	Hartford CT
CT-HR-29	Simsbury Center 0.8 S	2.47"	4.5"	Hartford CT
CT-HR-34	Granby 0.8 W	1.67"	0.0"	Hartford CT
CT-HR-9	West Hartford 2.7 NNW	2.41"	5.0"	Hartford CT
CT-HR-18	Berlin 2.4 SSE	3.19"	5.4"	Hartford CT
CT-HR-11	West Hartford 2.7 SSE	2.78"	5.3"	Hartford CT
CT-HR-6	Wethersfield 1.2 WSW	3.73"	5.0"	Hartford CT
CT-HR-22	East Hartford 1.3 E	3.00"	6.2"	Hartford CT

CT-HR-5	Enfield 1.5 SE	2.57"	3.5"	Hartford CT
CT-HR-7	Central Manchester 2.7 SW	2.75"	7.5"	Hartford CT
CT-TL-14	Storrs 1.5 SW	3.39"	6.2"	Tolland CT
CT-TL-2	Staffordville 0.4 NNW	3.86"	9.6"	Tolland CT
CT-MD-2	Portland 0.9 S	3.43"	0.0"	Middlesex CT
CT-MD-5	Westbrook Center 1.1 N	4.22"	0.0"	Middlesex CT
MA-WR-40	Gardner 1.4 SSW	2.52"	6.0"	Worcester MA
MA-WR-41	Auburn 2.6 SW	3.66"	10.3"	Worcester MA
MA-WR-32	Auburn 1.9 ESE	3.69"	6.1"	Worcester MA
MA-WR-28	Berlin 1.3 WSW	2.85"	7.2"	Worcester MA
MA-WR-1	Milford 2.3 NNW	3.71"	9.5"	Worcester MA
CT-WN-10	South Windham 1.3 NNE	2.90"	5.4"	Windham CT
CT-WN-8	Moosup 1.7 NE	4.49"	10.7"	Windham CT
CT-WN-4	East Killingly 1.3 SW	4.49"	9.5"	Windham CT
CT-NL-5	Oakdale 2.6 WNW	4.17"	0.0"	New London CT
CT-NL-22	Central Waterford 2.7 SSW	4.05"	0.9"	New London CT
CT-NL-17	Waterford 2.2 N	3.75"	1.5"	New London CT
CT-NL-8	Uncasville-Oxoboxo Valley 1.6 ENE	4.23"	0.0"	New London CT
CT-NL-18	Stonington 0.5 NNE	4.12"	0.0"	New London CT
RI-PR-33	Greenville 0.7 NNW	4.56"	10.4"	Providence RI
RI-PR-45	Manville 0.4 WSW	4.32"	7.9"	Providence RI
RI-PR-17	Cranston 4.1 E	4.71"	9.0"	Providence RI
RI-PR-32	Providence 2.3 NE	4.41"	7.6"	Providence RI
RI-KN-2	East Greenwich 2.3 ESE	4.27"	7.5"	Kent RI
RI-WS-25	Rockville 0.4 E	4.78"	6.0"	Washington RI
RI-WS-31	Kingston 7.5 NNE	4.30"	4.0"	Washington RI
RI-NW-4	Middletown 1.1 SW	2.95"	3.0"	Newport RI
RI-NW-11	Tiverton 0.8 SSW	4.04"	6.0"	Newport RI
RI-NW-5	Little Compton 1.7 NW	3.22"	2.5"	Newport RI
RI-NW-7	Little Compton 0.6 E	3.72"	2.1"	Newport RI
MA-BR-23	Attleboro 0.9 ENE	3.69"	4.6"	Bristol MA
MA-BR-2	Rehoboth 2.1 N	4.62"	9.0"	Bristol MA
MA-BR-3	Norton 1.8 NNE	4.33"	7.5"	Bristol MA
MA-BR-8	Dighton 1.1 WSW	4.11"	9.5"	Bristol MA
MA-BR-9	Taunton 2.6 NW	4.73"	11.4"	Bristol MA
MA-BR-30	Taunton 3.9 N	4.07"	7.2"	Bristol MA
MA-BR-14	Dartmouth 2.5 SSW	3.65"	0.0"	Bristol MA
MA-MD-47	West Townsend 0.5 W	1.97"	6.4"	Middlesex MA
MA-MD-12	Acton 1.3 SW	2.88"	6.5"	Middlesex MA
MA-MD-55	Holliston 0.7 W	3.81"	6.7"	Middlesex MA
MA-MD-51	Maynard 0.7 ESE	2.95"	7.6"	Middlesex MA

MA-MD-42	Holliston 0.8 S	3.75"	3.9"	Middlesex MA
MA-MD-52	Lexington 0.6 SW	3.01"	6.8"	Middlesex MA
MA-MD-67	Lexington 2.3 SE	3.07"	6.6"	Middlesex MA
MA-MD-45	Wilmington 1.5 NE	2.77"	3.4"	Middlesex MA
MA-MD-7	Winchester 0.7 SE	3.16"	5.0"	Middlesex MA
MA-MD-44	Medford 1.2 W	3.23"	5.5"	Middlesex MA
MA-MD-11	Cambridge 0.9 NNW	3.61"	0.0"	Middlesex MA
MA-ES-3	Haverhill 3.6 WNW	1.78"	6.0"	Essex MA
MA-ES-20	Haverhill 0.7 N	2.36"	4.2"	Essex MA
MA-ES-4	Groveland 0.5 WSW	2.53"	5.6"	Essex MA
MA-ES-12	Boxford 2.4 S	2.87"	4.5"	Essex MA
MA-ES-2	Beverly 2.8 NW	2.50"	4.3"	Essex MA
MA-SF-4	Brighton 0.5 W	3.28"	6.5"	Suffolk MA
MA-SF-10	Chelsea 0.8 N	3.63"	9.8"	Suffolk MA
MA-NF-11	Millis 2.0 SW	3.72"	0.0"	Norfolk MA
MA-NF-3	Franklin 0.7 NE	3.98"	7.5"	Norfolk MA
MA-NF-1	Norwood 1.3 NW	4.04"	9.2"	Norfolk MA
MA-PL-22	East Bridgewater 0.3 WSW	2.78"	0.5"	Plymouth MA
MA-PL-6	Middleborough 5.5 E	3.99"	0.0"	Plymouth MA
MA-PL-5	Kingston 3.3 WNW	3.87"	10.5"	Plymouth MA
MA-BA-2	Falmouth 3.1 NNW	4.30"	3.3"	Barnstable MA
MA-BA-17	East Falmouth 1.2 WNW	3.75"	0.5"	Barnstable MA
MA-BA-19	East Falmouth 0.7 NW	4.01"	3.6"	Barnstable MA
MA-BA-3	Falmouth 3.0 E	4.16"	3.0"	Barnstable MA
MA-BA-47	Mashpee 2.4 WSW	4.06"	1.7"	Barnstable MA
MA-BA-45	Sandwich 0.9 NNE	4.13"	3.5"	Barnstable MA
MA-BA-22	Yarmouth 0.9 NNW	4.48"	0.0"	Barnstable MA
MA-BA-36	Harwich 2.6 ENE	4.37"	0.0"	Barnstable MA
MA-BA-37	Orleans 0.8 W	3.96"	1.0"	Barnstable MA
MA-BA-51	Orleans 3.0 S	3.96"	1.5"	Barnstable MA
MA-BA-12	Orleans 1.1 E	4.11"	0.9"	Barnstable MA
MA-BA-30	Eastham 0.6 SW	4.26"	1.5"	Barnstable MA
MA-BA-43	Chatham 0.4 WSW	4.42"	0.0"	Barnstable MA
MA-DK-5	West Tisbury 2.9 N	5.20"	0.0"	Dukes MA
MA-DK-2	Vineyard Haven 0.8 WSW	4.75"	0.0"	Dukes MA

Accumulated Precipitation (in)

April 01, 2016 to April 30, 2016

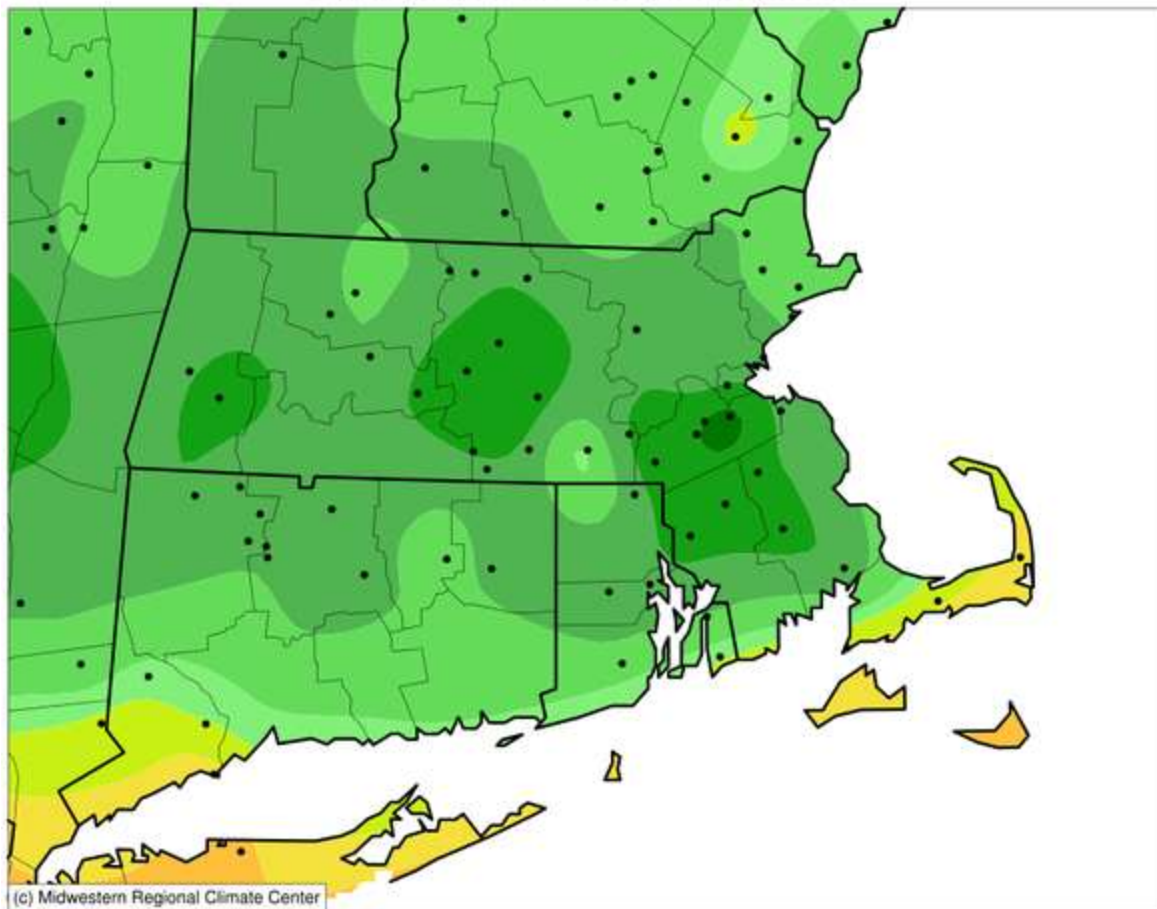


Stations from the following networks used: COOP, FAA, CoCoRaHS,

Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 5/4/2016 7:58:17 PM CDT

Accumulated Snowfall (in)

April 01, 2016 to April 30, 2016



Stations from the following networks used: COOP, FAA, CoCoRaHS,

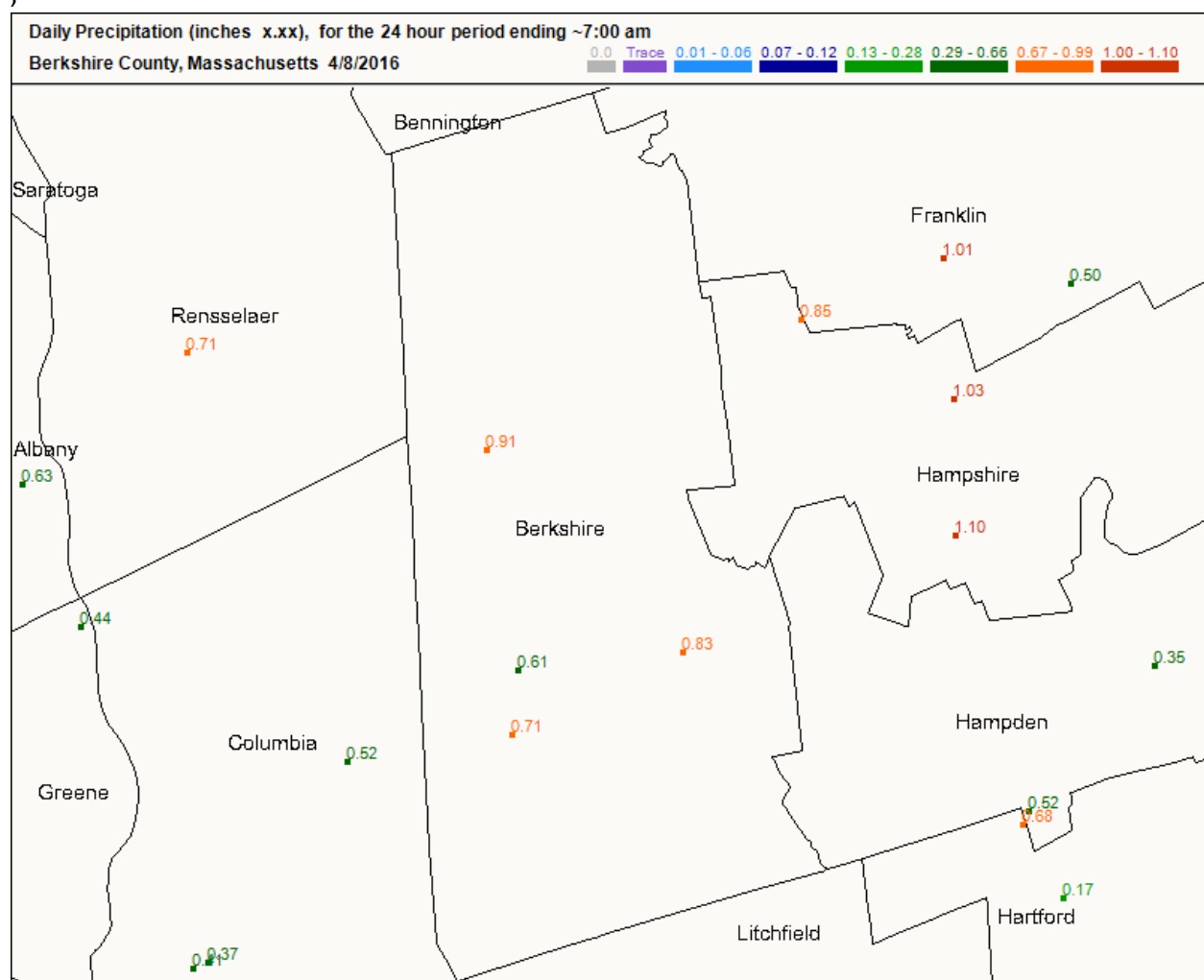
Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 5/4/2016 7:59:30 PM CDT

Map of the Month – Berkshire County MA

The westernmost county of Massachusetts is home to over 130,000 residents and the high ground that start several rivers. The Housatonic, Hoosic, Deerfield, and Farmington rivers all start in Berkshire County.

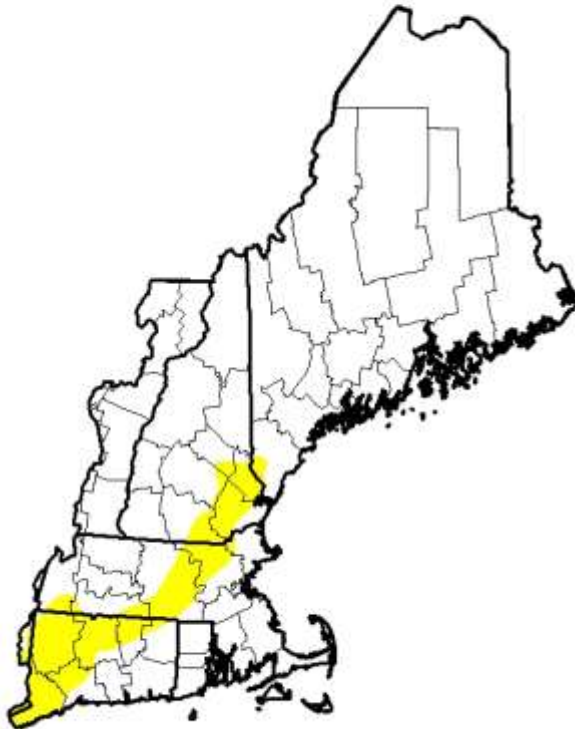
The headwaters means it starts here. Knowing how much rain or snow falls in these headwaters is critical in providing accurate river forecasts farther downstream. It helps the hydrologists at NERFC know if their model is using accurate data for precipitation and snow melt.

These four CoCoRaHS observers have been reporting regularly and could use some helpers. If you know of someone in the Berkshires, the CoCoRaHS network needs the help.



From the Drought Monitor. The southwestern part of our region is getting dry again.

U.S. Drought Monitor
New England Watershed



May 3, 2016

(Released Thursday, May 5, 2016)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	90.28	9.74	0.00	0.00	0.00	0.00
Last Week 4/26/2016	90.28	9.74	0.00	0.00	0.00	0.00
3 Months Ago 3/2/2016	67.25	42.75	9.39	0.00	0.00	0.00
Start of Calendar Year 1/22/2015	55.73	44.27	15.85	0.00	0.00	0.00
Start of Water Year 9/29/2015	49.31	50.69	20.91	0.00	0.00	0.00
One Year Ago 5/5/2015	32.06	67.94	0.00	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:

Brian Fuchs

National Drought Mitigation Center



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

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

Happy Anniversary, Massachusetts!



March 1, 2009. Massachusetts is admitted to CoCoRaHS, the 40th state to join the network.

These 24 observers joined in 2009 and have stayed active since. In total, they have made 50,026 daily reports through the end of April 2016. Several of these observers have made over 2,500 daily reports.

MA-BA-1	Yarmouth 2.3 SSE	MA-ES-2	Beverly 2.8 NW
MA-BA-2	Falmouth 3.1 NNW	MA-ES-3	Haverhill 3.6 WNW
MA-BA-3	Falmouth 3.0 E	MA-ES-4	Groveland 0.5 WSW
MA-BA-6	Marstons Mills 2.0 NW	MA-ES-8	Marblehead 0.8 SW
MA-BA-7	Wellfleet 3.0 E	MA-MD-7	Winchester 0.7 SE
MA-BA-8	Falmouth 1.8 WSW	MA-NF-1	Norwood 1.3 NW
MA-BR-2	Rehoboth 2.1 N	MA-NF-3	Franklin 0.7 NE
MA-BR-3	Norton 1.8 NNE	MA-PL-5	Kingston 3.3 WNW
MA-BR-8	Dighton 1.1 WSW	MA-PL-6	Middleborough 5.5 E
MA-BR-9	Taunton 2.6 NW	MA-SF-1	Boston 0.5 WSW
MA-DK-2	Vineyard Haven 0.8 WSW	MA-SF-2	Winthrop 0.2 N
MA-ES-1	Salisbury 3.7 NW	MA-WR-1	Milford 2.3 NNW

Massachusetts CoCoRaHS

Comments by Joe DelliCarpini – Science & Operations Officer, NWS Taunton MA and State Coordinator for Massachusetts

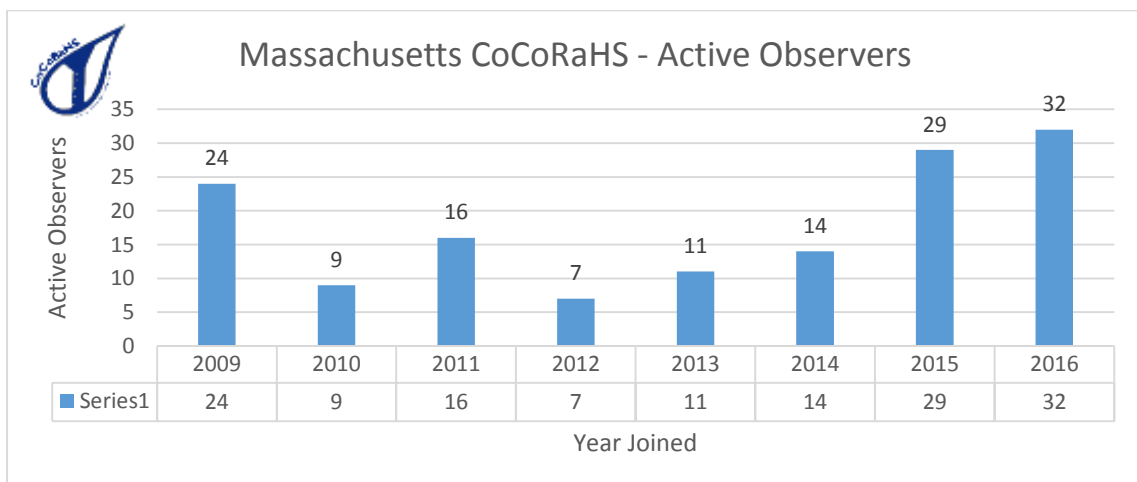
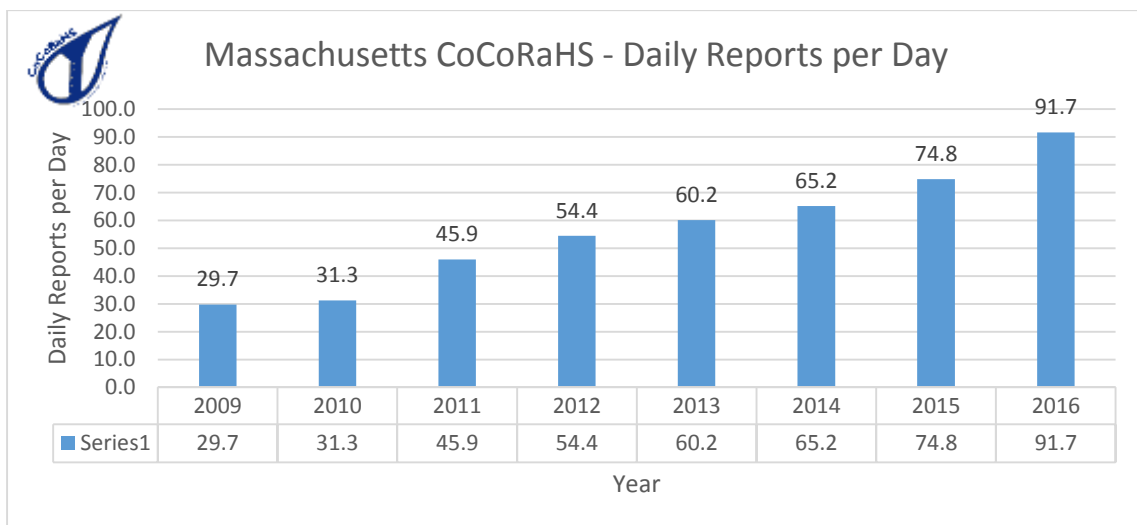


PROMOTIONAL PHOTO FOR MASSACHUSETTS CoCoRaHS (HENRY REGES)

After Rhode Island was established as the first state in New England to join CoCoRaHS in April 2008, Henry Reges set his sights on Massachusetts to join the growing network. As a frequent visitor to Plymouth to see family and friends, he provided us with a special photo which we still use today (left). It's not every day you see a 4-inch rain gauge next to a historical landmark!

Henry worked with our office to set up a meeting at the American Meteorological Society's (AMS) Headquarters in Boston. We also invited representatives from Massachusetts DCR (Department of Conservation and Recreation) to join us since they were a key partner of ours for drought and water resource management in the state. Henry felt it would be appropriate for the AMS Headquarters to be the first CoCoRaHS station in the Commonwealth and to this day you can see their reports listed under MA-SF-1. We began an aggressive recruiting campaign that included newspapers, TV meteorologists, and NWS Skywarn training sessions.

Prior to the March 1, 2009 startup we had 16 observers ready to go! During the first month, another 32 observers signed up, and as of this month we have grown to a total of 385 observers in Massachusetts. We want to give a special welcome to the 63 observers who signed up during this year's CoCoRaHS March Madness recruiting drive!

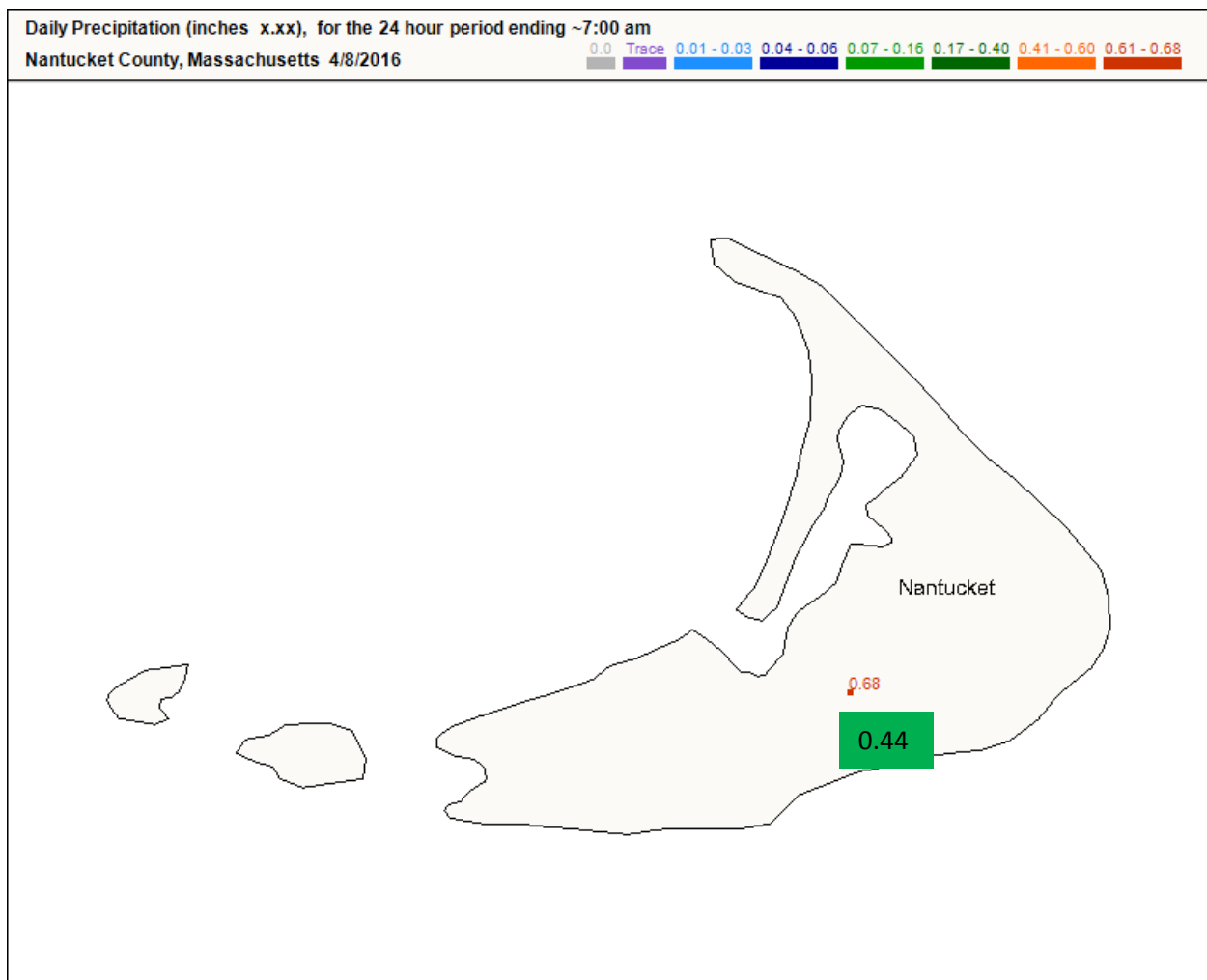


We Dare to Compare.... Continued

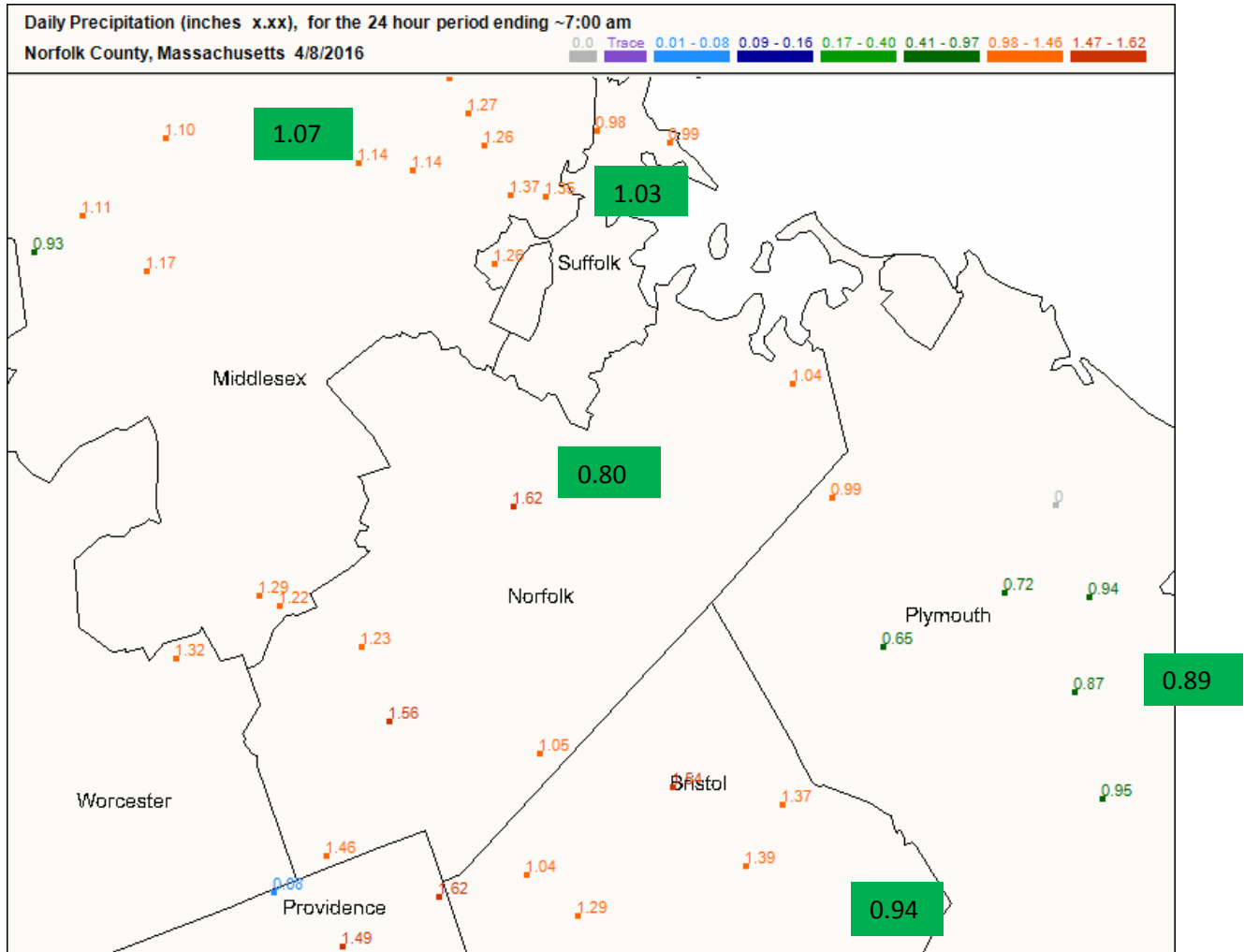
A widespread rain event occurred on April 7, and was reported on April 8. More rain fell in the eastern half of our region and once again, our network of gauges compares against the automated rain gauges at our area airports.

Spot the automated rain gauge, in a green box, that does not fit with surrounding reports.

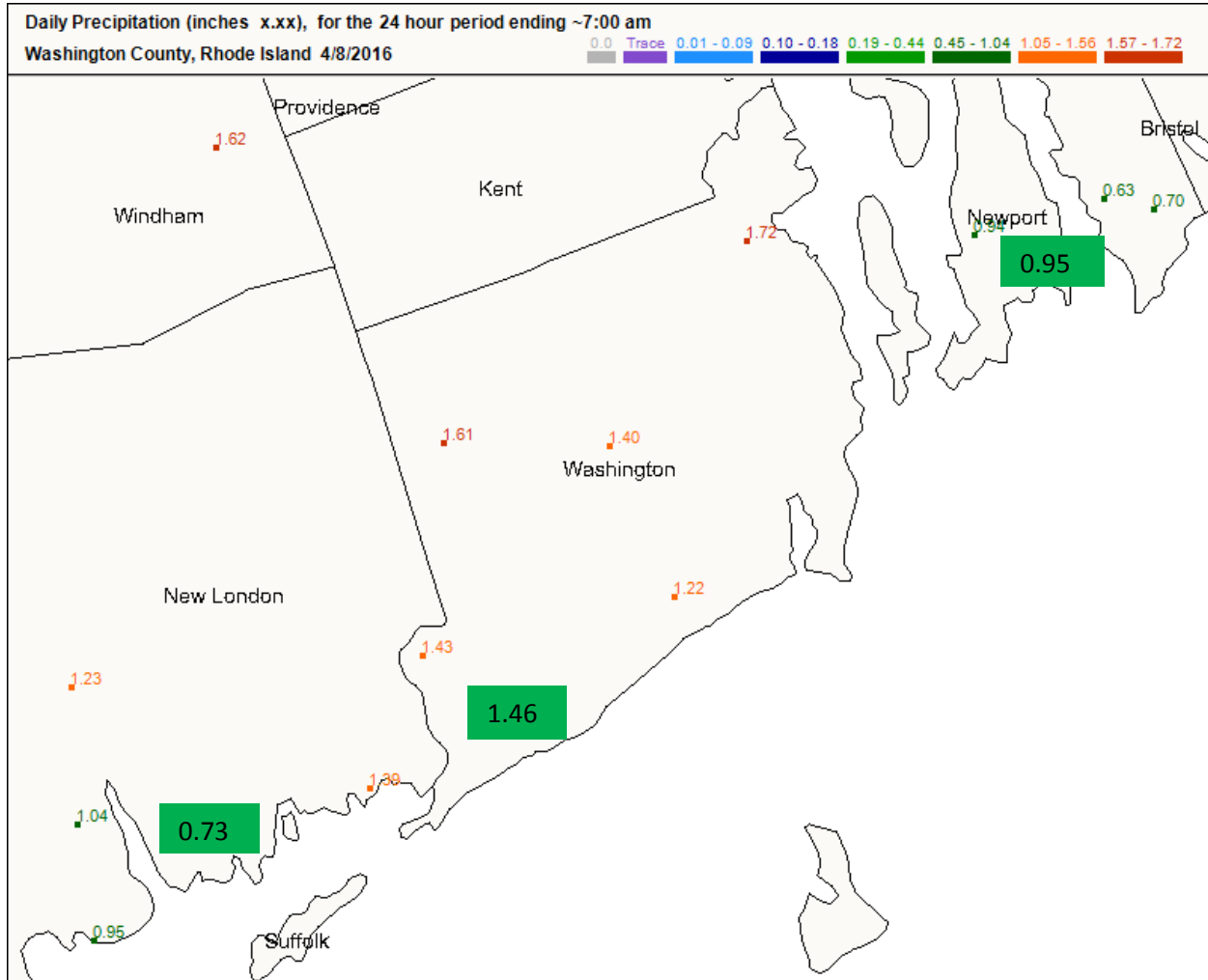
Nantucket County. One observation points out why we value our 4" diameter rain gauges, regardless if there on an island, the shoreline, the mountains, the river banks, or anywhere else!



Norfolk County and surrounding counties. 37 CoCoRaHS reports among 5 airports.



We are pleased with our new observers from New London County, casting a larger presence over the gauge at Groton/New London Airport.



10th Anniversary of the Mother's Day Floods

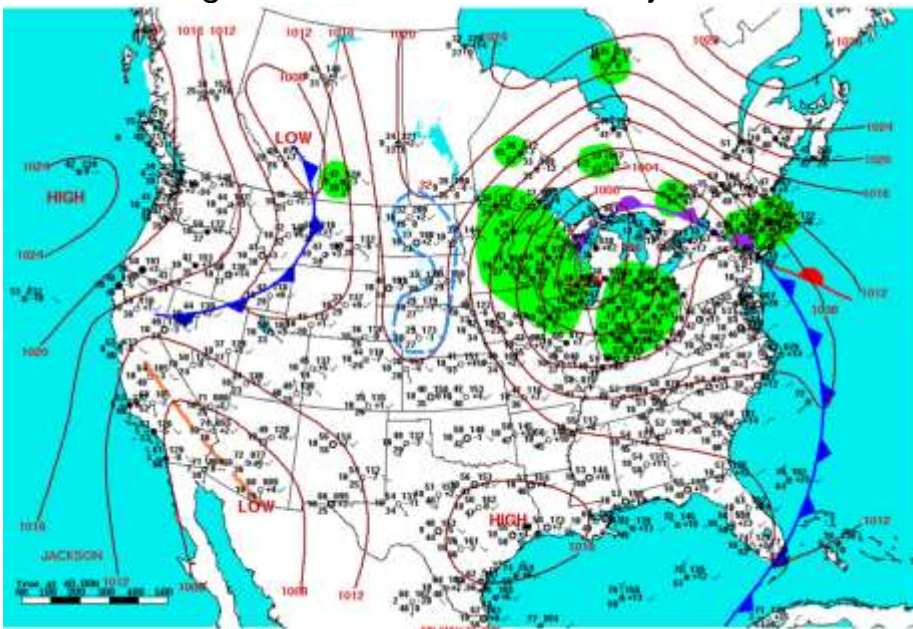
By Nicole Belk – Senior Service Hydrologist, NWS Taunton MA

Southern New England has not been a stranger to significant flood events within the past 10 or so years. Let's take a brief look into a major flood event that occurred 10 years ago this month, the Mother's Day 2006 Floods. We will be looking specifically at the freshwater flooding that occurred, but keep in mind that coastal flooding occurred as well!

Few likely remember that in 2006 we had a very dry early spring. Boston, Worcester and Providence all had less than 0.60" of rain for the entire month of March, while Hartford only had 0.78". It was the 2nd to 3rd driest March on record for all 4 locations. Through the month of April, rivers and streams were running at well below normal levels. This was fortuitous given what was to happen, however the rains Mother Nature would provide were no match for area waterways.

The atmosphere aloft set up a "blocking" pattern. This is a weather pattern that, once established, can stay in place for quite some time. For this event the "block" enabled a large upper low to remain centered just to our west, over the Ohio Valley. At the surface, a large low pressure system sat over the Great Lakes Region, with a warm front extending just south of New England. The front remained just south of New England from Friday May 12th thru the Mother's Day Weekend.

A deep plume of Atlantic moisture fed into our area. This resulted in a long duration, prolific rainfall event.



Surface Weather Map and Station Weather at 7:00 A.M. E.S.T.

Surface map from 7 am EST Friday May 12, 2006 showing a large low pressure system centered over the Great Lakes Region. This low pressure and its associated front moved very little for several days, contributing to the copious rainfall received within southern New England.

While all of southern New England received substantial rainfall from this event, the most extensive rainfall occurred over northeast Massachusetts, east coastal New Hampshire, and far southeast Maine. We will focus on northeast Massachusetts for this newsletter. Storm total rainfall from May 12th to May 16th ranged from 7 to 13 inches across much of Essex, Suffolk, and Middlesex Counties in northeast Massachusetts. The highest storm total was recorded by the Newburyport Cooperative Weather Observer, with a whopping event total of 14.47 inches. This was a LOT of rain!

The flooding that ensued was profound. Area rivers and streams swelled to levels rarely seen. The Merrimack River at Haverhill recorded its third highest crest on record. The Merrimack River at Lowell reached its fourth highest crest on record, a record long enough to include a historical event in April 1852. For the Merrimack River in Massachusetts, this was the most significant flood event since the advent of modern Flood Control in the watershed.

Many communities throughout Northeast Massachusetts were hit hard. Some examples of the flood impacts follow.

- Two fatalities occurred in the vicinity of the Ipswich River. One of the fatalities was reported to have occurred after a person drove around barricades in the road.
- A Presidential Disaster Declaration was made for Essex, Middlesex and Suffolk Counties.
- Drainage systems in Peabody and Salem became overwhelmed, leaving large sections of these two communities inundated by floodwaters.
- Stretches of major highways in northeast Massachusetts were shut down due to flooding, creating traffic gridlock in some communities, and major headaches for many Boston commuters. This included portions of Route 1, I-95, I-93 and Route 2.
- Major flooding occurred on the lower Shawsheen and Spicket Rivers, which meet the Merrimack River in the City of Lawrence. Numerous evacuations occurred in Lawrence, including those from the Mary Immaculate Nursing Home. The photo below shows the incredible flooding that occurred around and near the vicinity of Route 114 in Lawrence and the I-495 Exit 42 A/B interchange. The Shawsheen River

passes by this area on its way to the Merrimack River, although normally it passes under one small bridge!



Photo 1. Photo Credit: Amateur Radio Skywarn Spotters. Photo taken during the height of the May 2006 Floods: Route 114 at the I-495 interchange in Lawrence.



Photo credit: Joseph Zanca and Gerald Girouard, U.S. Geological Survey. This photo was taken at the intersection of Route 28 (North Main Street) and Route 133 (Haverhill St.), about 300 ft downstream of the Shawsheen River at Balmoral Street in Andover, MA river gage. The USGS often travels to flood areas during and after a flood event, to take river flow measurements and document high water marks.

Field of Dreams

As you can tell by the monthly newsletter messages from Joe, and by the few messages that occurred within the past week as we crossed the milestone of 5000 Daily Reports, the rapport that Joe and I share is a unique one and is one that I value very much.

“Where did all of these observers come from?” was asked recently. March Madness recruiting was special. Immediately, I thought of the scene from the 1989 movie “Field of Dreams”. What we experience every day does seem surreal at times. The map is like staring at a baseball field in the middle of a cornfield in Iowa and seeing baseball heroes play and hearing voices at times. It is exciting to have this network of observers and seeing it grow the way that it has.

The interaction between Joe and I does seem like the characters of Ray Kinsella and Terrance Mann at times. I can be very idealistic, like Ray Kinsella. I have gone the distance and traveled to the office to meet Joe. He didn't slam the door on me. We did not go to a ball game at Fenway, because I didn't try to kidnap him. I like to write, like Terrance Mann does. We swap roles at times, and the information and ideas just flow naturally.

My writing hit a chord with Joe and I modified the words of the movie for him. Joe thought it would be great to share those words with all of you.

Joe, people will join Joe. They'll join CoCoRaHS for reasons they can't even fathom. They'll come to your office not knowing for sure why they're doing it. They'll arrive at your door as innocent as children, longing for the knowledge of our climate. Of course, we won't mind if you join our network, you'll say. It's only \$30 for a rain gauge. They'll pass over the money without even thinking about it: for it is money they have and climate knowledge they lack. And they'll return to their residences; mount a gauge on a perfect afternoon. They'll find they have they have a wide open location on their property, where they planted flowers or grew vegetables. And they'll measure and report every day and it'll be as if they dipped themselves in a magic barrel of rain water. The climate science will be so thick they'll have to brush it away from their faces. People will join Joe. The one constant through all the years, Joe, has been precipitation. Satellite and radar images have rolled by like an army of steamrollers. They have been erased like a blackboard, reimaged and erased again. But precipitation has marked the time. This mapping, this reporting; it's a part of our past, Joe. It reminds us of all that once was real and accurate and it could be again. Oh... people will join Joe. People will most definitely join.

Thank *you* for joining and being an important part of this Field of Dreams.

Wrap up

As the days get longer, the storms get stronger. Be safe and informed with severe thunderstorm, tornado, hail and lightning events should they occur in your locale. Pay attention to your National Weather Service Forecast Office's issuance of Hazardous Weather Outlooks (HWO's), Watches and Warnings or Advisories.

The Weather Forecast Office for Southern CT has an Enhanced Hazardous Weather Outlook [site](#). The Weather Forecast Office for the Boston area will have one available early this summer.

This time of the year is a relevant time of year to look at the Storm Prediction Center's [website](#) from Norman OK. A nationwide outlook is given to the risk of storms occurring in a certain area across our continent.

The "H" is CoCoRaHS is for Hail. If you do experience hail, keep track of the start and end time of the hailstones, and when it's safe to do so, measure and report a Hail Report on the website. A tip to pass on with hail: Place a ruler on the ground with the hailstones, and take a digital picture of the ruler with the hailstones around it. Displaying the digital picture serves as a way to measure many hailstones around the ruler. A printable ruler and guide on hailstones can be found [here](#). Print, fold, and laminate because the hailstones will get the paper wet, and keep it handy for measuring hailstones.

A call to all of you to take 1 digital picture of your rain gauge. We would like to make a photo montage of all of your gauges. A close up picture of your gauge and point the camera in a direction that can make for a good background. Please make the digital picture more about the gauge.

We will make this call for pictures over the next 1 or 2 monthly newsletters. By the end of summer, we hope to have a photo montage put together. Email your photo along with your CoCoRaHS Station ID to joseph.dellicarpini@noaa.gov for MA & RI observers or to matt.spies@att.net for the CT observers. Subject: Gauge Photo please, so we can group these email messages together within our inbox.

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