



# Southern



# New England

**March 2016**

March Madness, our annual recruiting drive, is upon us and we always need more observers in our network. This is the best month to recruit a friend or family member and spread the word.

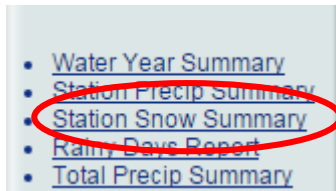
For the shortest month of the year, February packed much into it, and at last, some above normal precipitation values for much of the area.

We will get into the numbers soon enough, but more than usual to cover. Leading off is a quick article on Station Snow Summary. Take a look back at yours and others reports and see how the snow reports total for your station and others. One of our customers makes a contribution with an article, explaining more about how your reports are used. That was one unusual February storm that blew in here on Wednesday night into Thursday morning, February 24 – 25. An emphasis on putting quality into your reports. Ending with SKYWARN®, based upon recent mention in our national newsletter and Message of the Day.

Welcome to new observers from opposite ends of Fairfield and Windham Counties of CT to Worcester, Middlesex and Bristol Counties in MA who joined us in February. Join in! Be as surprised as the rest of us how low cost measuring tools have a high value impact.

# **Who looks at CoCoRaHS data? You should!**

Before Spring comes in, this article brings us back to the precipitation data bank that you make deposits to. Make a deposit. Make a withdrawal. See the value in your own reports. This time, make a withdrawal on your Snow Reports.



From the website and select “Station Snow Summary”

## View Data : Station Snow Report Summary US Units ▼

A screenshot of the 'Station Report Summary' form. It has a blue header with the title. Below the header are three input fields for 'Station 1', 'Station 2', and 'Station 3'. A yellow callout box with red arrows points to these fields, containing the text 'Enter your station.' and 'Enter a second or third station'. Below the station fields are two date pickers for 'Start Date' (set to 2/1/2016) and 'End Date' (set to 2/25/2016). At the bottom right, a 'Get Summary' button is circled in red.

The default is the current month to the current date. You can change that. Pick your station. Pick another station. Click on Get Summary.

Five values are displayed and totaled.

Date	Precip in.	Snowfall in.	Core Precip in.	Total Snow Depth in.	Total SWE in.
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One of the best parts of submitting reports to CoCoRaHS is the addition of a long list of numbers is done for you. We may not live in the Rocky, Cascade or Sierra Mountains, but it does snow here in a densely populated area. Making a snow fall and snow depth report every day shows where the snow is and where the snow is not.

# **How NWS Taunton Uses CoCoRaHS Data**

By Nicole Welk – Senior Service Hydrologist, NWS Taunton MA

Who uses CoCoRaHS precipitation reports from Southern New England?  
We do!!!

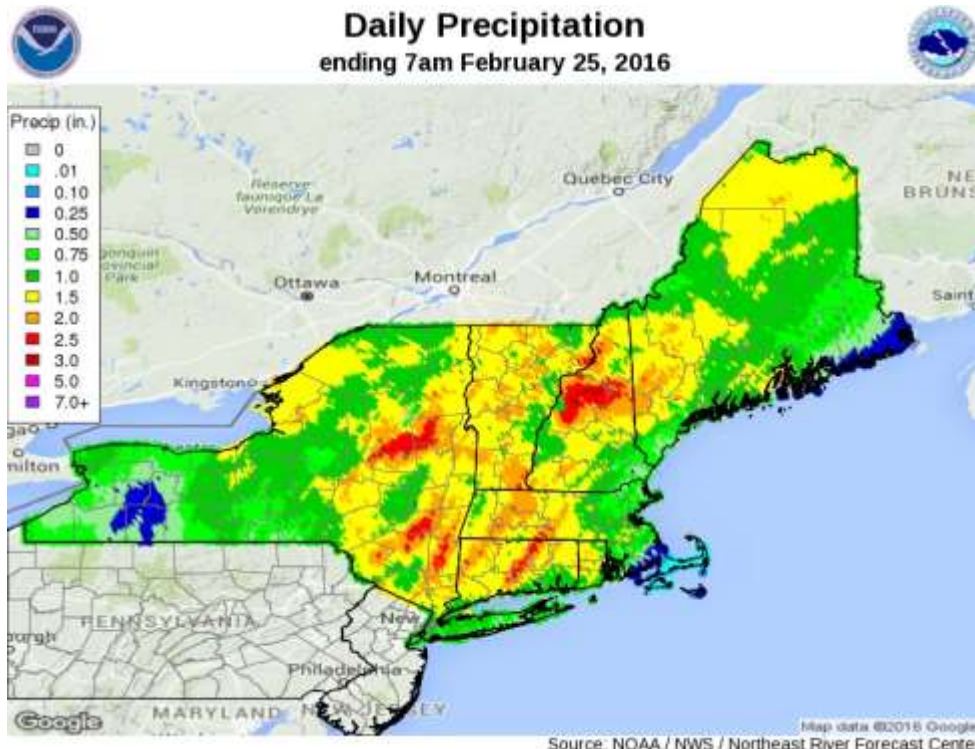
So many of you, every morning, are reporting your precipitation data into CoCoRaHS. Even reports of zero. Every one of these reports is helpful!

I'm the Senior Service Hydrologist at NWS Taunton/Boston, MA.

CoCoRaHS data is used in various ways here at our local NWS office and the co-located Northeast River Forecast Center (NERFC). Here are just a few of the ways.

- 💧 **Daily Precipitation map and Forecasted River Levels:** The NERFC gathers rainfall reports from throughout the New York and New England regions. This includes 24 hour CoCoRaHS precipitation totals. Your CoCoRaHS reports are used to help create a map showing 24 hour rainfall! For example, the rainfall maps can be accessed via this link:

<http://www.weather.gov/nerfc/ObservedPrecipitation> . The NERFC



utilizes the composite of 24 hour rainfall totals to help drive their river modeling for numerous River Forecast Points throughout New York and New England.

So your reports help to improve forecasted river levels in the area.

THIS MAP FROM THE NORTHEAST RIVER FORECAST CENTER SHOWS THE 24 HOUR PRECIPITATION ENDING ABOUT 7 AM FEBRUARY 25, 2016 ACROSS NEW YORK AND NEW ENGLAND. COCORAHLS LIQUID EQUIVALENT (RAIN OR MELTED SNOW) DATA IS USED TO HELP CREATE THIS MAP.

💧 **Big Precipitation Events:** Whether it's big rain or big snow, precipitation totals are in high demand during and after a big event. Here at NWS Taunton/Boston, we gather rainfall and snowfall totals across Rhode Island, Massachusetts (except for Berkshire County), and Hartford, Tolland and Windham Counties in Connecticut. CoCoRaHS precipitation totals make their way into Public Information Statements that we issue. Public Information Statements are typically issued here when we receive reports of at least 2 inches of snowfall, or at least 2 inches of rainfall. However, nowadays we often issue Public Information Statements for rain or snow amounts of less than 2 inches.

💧 **Snow Depth and SWE:** Your reports of snow depth, and the water content or snow water equivalent (SWE) of that snow, help us assess flood potential during the winter and spring months. When we are forecasting a warmup accompanied by rainfall, we can assess the snowmelt potential for that event, but to do that we need to know how much snow is on the ground, and how much water is in that snow. Some of our biggest flood events have been associated with rain accompanied by significant snowmelt. No snow on the ground? During the winter and spring, even that information can be very helpful!

💧 **Monthly precipitation summaries to help monitor Drought:** This is where all of your daily reports throughout the month really help out.



DROUGHT REGIONS FOR RHODE ISLAND

Every month, no matter how much precipitation falls, we compile formal reports of monthly precipitation totals for Rhode Island and the entire State of Connecticut. For Connecticut, we compile monthly rain/melted snow totals broken down by County. In Rhode Island, precipitation totals are determined by Drought Region. (See image to the left) We include much, but not all, of the CT and RI CoCoRaHS data in these formal monthly reports.

In Massachusetts, CoCoRaHS monthly precipitation totals are used locally here at NWS Taunton to help keep tabs on monthly precipitation excess or deficits.

How do you know whether or not your data are included?

- ✓ Did you report every day of the month, even when you had zero precipitation? Your data are included. Thank you for your reports!
- ✓ Did you report most days of the month, with multi-day totals for the other days? If the multi-day total does not overlap 2 months, your data are included. Thank you for your reports!
- ✓ Did you report most days of the month, but maybe missed a couple of days? We will look to see what days you missed, and refer to nearby CoCoRaHS sites with complete data sets to see whether or not you probably had measureable precipitation on those missing days. If nearby sites report zero on the days you missed, we are likely still going to use your data. However, if it is probable that measureable precipitation occurred on any day that you missed, we will likely not be able to use your data.

This is why all daily and multi-day precipitation data are helpful, whether your daily rain or snowfall total is zero inches or 10.00 inches!

Our hope is that this article will help to give you more insight on ways that your rainfall, snowfall and snow depth data are utilized. Thanks much for your reports. Please keep them coming!

# **Detail and Summary for February 2016**

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

Location	Station ID	Feb 2016 Precip	Feb departure from normal	Dec-Jan-Feb Precip	3 month departure from normal	Sep-Feb Precip	6 month departure from normal	Feb 2016 Snowfall	Feb snowfall departure from normal
Pittsfield MA	PSF	4.28"	1.60"	9.05"	0.45"	18.76"	-2.44"		
Bridgeport CT	BDR	4.90"	2.11"	12.10"	2.88"	18.62"	-1.11"	13.9"	5.8"
Hartford CT	BDL	4.87"	1.98"	11.08"	1.52"	20.63"	-1.07"	14.2"	3.2"
Worcester MA	ORH	5.27"	2.04"	12.04"	1.50"	21.01"	-2.42"	20.6"	5.0"
Providence RI	PVD	5.32"	2.03"	13.15"	1.78"	21.76"	-1.97"	11.5"	3.0"
Boston MA	BOS	4.17"	0.92"	11.72"	1.33"	19.46"	-2.30"	15.0"	4.1"

February had an assortment of rain and snow events. The first event started as rain on the 3<sup>rd</sup> and ended as a snow event on the 5<sup>th</sup> (see map on next page from the River Forecast Center), more snow on the 8<sup>th</sup> with blizzard conditions east, the bitterly cold weekend before President's Day, snow on the 15<sup>th</sup>, turning to freezing rain to rain on the 16<sup>th</sup>, and ending with the big wind, thunder and lightning, widespread 1"-2" rain event on the 24<sup>th</sup> into the 25<sup>th</sup>.

Your resilience is impressive and deserves to be commended. This February's weather presented a variety of severe weather conditions at our region. Blizzard conditions, thunder and lightning, flooding rains, strong gusts, freezing rain, tree damage from winds and wet snow, and sub-zero cold and wind chills. The next morning, you measure and report. You measure and report with even one report and comment using generator power.

Comparing February 2016 with February 2015, yes, there was an extra day. That is more than made up by a 45+% increase in the number of observers, reports, and complete stations. A record number of Comments, over 800, a 34% increase over the snow of last year. And my favorite, a 90% increase in the number of zeros reported. Heroes report their zeros!

Keep growing. March Madness. Keep up the great work!

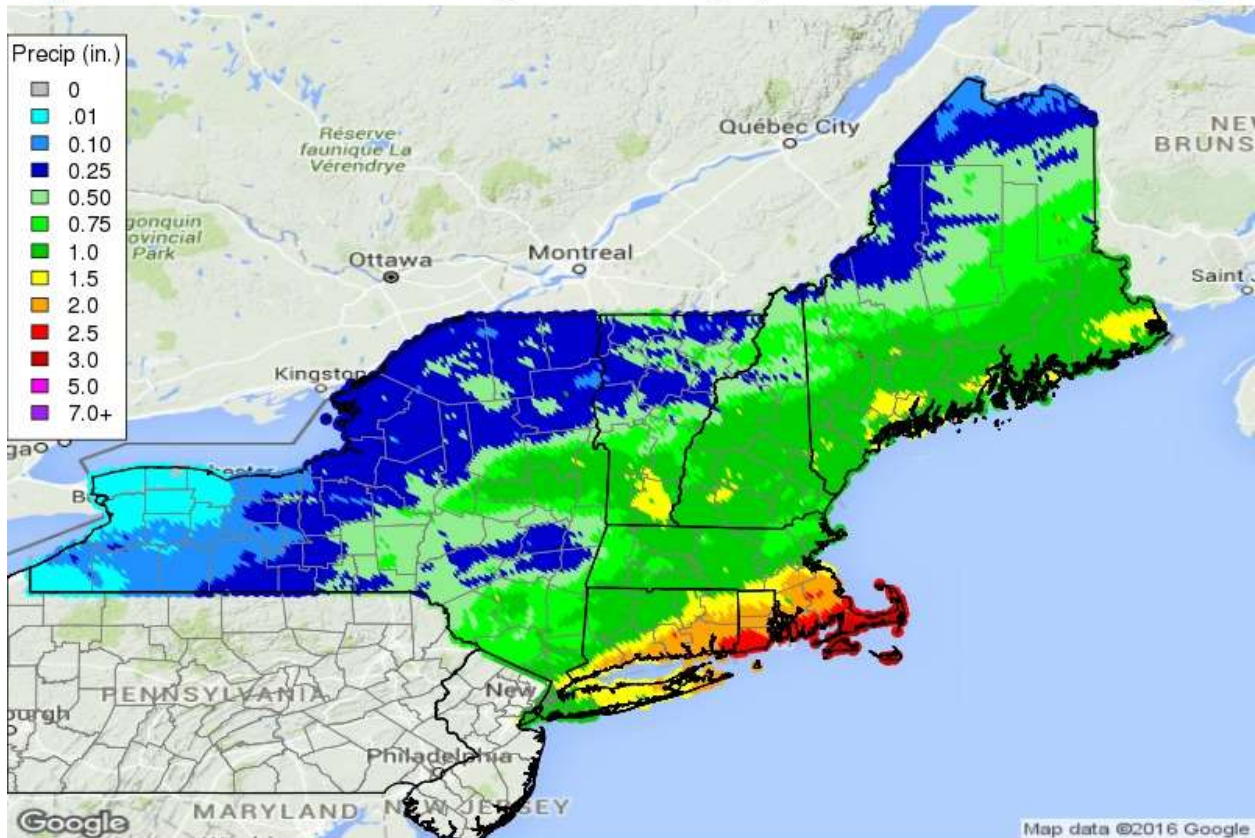


## From your reports for February 2016

Observers reporting	162
Reported all 29 days	62
Completed by Multi-Day Reports	8
Missing 1 or 2 reports	23
Daily Reports	3513
Zero Reports	1893
Non-Zero Reports	1620
SWE Monday Reports	106
Comments	811
Multi-Day Reports	65
Highest Daily Snowfall Report	13.0" from Staffordville CT (CT-TL-2) reported on 2/6
Highest Daily Report	3.04" from Conway MA (MA-FR-10) reported on 2/25



### 3 Day Precipitation ending 7am February 6, 2016



All 69 70! stations with complete precip data for February appear here.

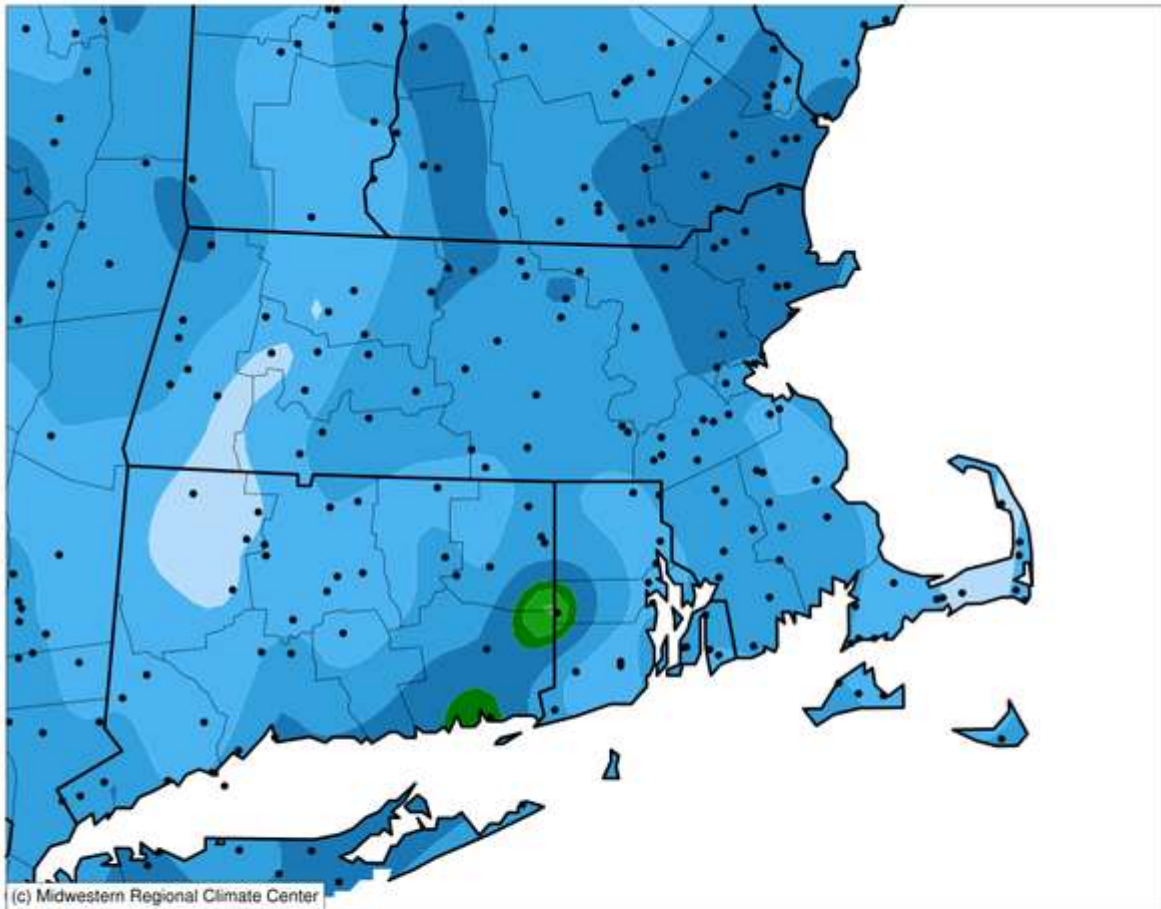
Station	Location	Precip	Snowfall	County & State
MA-BE-4	Becket 5.6 SSW	6.18"	17.1"	Berkshire MA
CT-LT-9	New Hartford Center 3.2 SW	5.85"	18.0"	Litchfield CT
CT-FR-9	Brookfield 3.3 SSE	5.66"	13.1"	Fairfield CT
CT-FR-23	Shelton 1.3 W	6.00"	14.8"	Fairfield CT
CT-NH-16	Milford 1.8 E	4.90"	15.9"	New Haven CT
CT-NH-14	Prospect 1.9 ENE	5.59"	10.9"	New Haven CT
MA-FR-10	Conway 0.9 SW	6.36"	11.5"	Franklin MA
MA-FR-12	Sunderland 1.3 SE	5.33"	14.0"	Franklin MA
MA-HS-2	Westhampton 1.8 SW	5.89"	12.6"	Hampshire MA
MA-HS-8	Williamsburg 1.2 WSW	5.97"	14.0"	Hampshire MA
MA-HS-10	Northampton 1.6 NE	4.22"	8.3"	Hampshire MA
CT-HR-24	Collinsville 0.9 NW	6.03"	17.1"	Hartford CT
CT-HR-15	Southington 3.0 E	5.71"	20.0"	Hartford CT
CT-HR-8	North Granby 1.3 ENE	5.88"	2.5"	Hartford CT
CT-HR-9	West Hartford 2.7 NNW	4.73"	12.5"	Hartford CT
CT-HR-18	Berlin 2.4 SSE	5.99"	18.2"	Hartford CT
CT-HR-11	West Hartford 2.7 SSE	5.03"	14.3"	Hartford CT
CT-HR-6	Wethersfield 1.2 WSW	5.75"	12.0"	Hartford CT
CT-HR-22	East Hartford 1.3 E	6.06"	15.0"	Hartford CT
CT-HR-5	Enfield 1.5 SE	5.03"	10.9"	Hartford CT
CT-HR-7	Central Manchester 2.7 SW	6.19"	16.3"	Hartford CT
CT-TL-2	Staffordville 0.4 NNW	5.42"	20.0"	Tolland CT
CT-MD-2	Portland 0.9 S	6.05"	1.0"	Middlesex CT
MA-WR-32	Auburn 1.9 ESE	3.11"	14.8"	Worcester MA
MA-WR-13	Leominster 1.5 S	4.14"	16.0"	Worcester MA
CT-WN-6	Dayville 2.0 ENE	3.23"	15.9"	Windham CT
CT-WN-8	Moosup 1.7 NE	5.44"	17.4"	Windham CT
CT-WN-4	East Killingly 1.3 SW	5.38"	16.0"	Windham CT
RI-PR-33	Greenville 0.7 NNW	5.74"	19.2"	Providence RI
RI-PR-17	Cranston 4.1 E	5.55"	14.5"	Providence RI
RI-PR-35	Cumberland Hill 3.7 E	4.97"	5.5"	Providence RI
RI-PR-32	Providence 2.3 NE	5.18"	12.8"	Providence RI
RI-KN-2	East Greenwich 2.3 ESE	5.36"	15.2"	Kent RI
RI-NW-4	Middletown 1.1 SW	3.37"	5.5"	Newport RI
RI-NW-11	Tiverton 0.8 SSW	6.80"	14.3"	Newport RI
RI-NW-5	Little Compton 1.7 NW	4.56"	13.1"	Newport RI
RI-NW-7	Little Compton 0.6 E	5.42"	11.1"	Newport RI
MA-BR-17	North Attleboro 0.8 E	4.56"	12.6"	Bristol MA
MA-BR-23	Attleboro 0.9 ENE	4.76"	8.0"	Bristol MA



MA-BR-3	Norton 1.8 NNE	5.39"	13.6"	Bristol MA
MA-BR-8	Dighton 1.1 WSW	4.94"	14.4"	Bristol MA
MA-BR-14	Dartmouth 2.5 SSW	4.50"	0.0"	Bristol MA
MA-MD-47	West Townsend 0.5 W	4.33"	11.7"	Middlesex MA
MA-MD-12	Acton 1.3 SW	4.54"	19.0"	Middlesex MA
MA-MD-51	Maynard 0.7 ESE	4.15"	16.0"	Middlesex MA
MA-MD-42	Holliston 0.8 S	4.50"	16.0"	Middlesex MA
MA-MD-52	Lexington 0.6 SW	3.26"	6.0"	Middlesex MA
MA-MD-45	Wilmington 1.5 NE	3.20"	12.3"	Middlesex MA
MA-MD-7	Winchester 0.7 SE	3.60"	10.7"	Middlesex MA
MA-MD-44	Medford 1.2 W	3.77"	12.9"	Middlesex MA
MA-ES-20	Haverhill 0.7 N	3.08"	17.2"	Essex MA
MA-ES-4	Groveland 0.5 WSW	3.82"	19.0"	Essex MA
MA-ES-12	Boxford 2.4 S	3.41"	10.8"	Essex MA
MA-ES-8	Marblehead 0.8 SW	3.76"	11.8"	Essex MA
MA-SF-2	Winthrop 0.2 N	3.67"	15.0"	Suffolk MA
MA-NF-16	Bellingham 4.7 S	4.75"	8.5"	Norfolk MA
MA-NF-11	Millis 2.0 SW	4.28"	14.3"	Norfolk MA
MA-NF-1	Norwood 1.3 NW	4.69"	14.6"	Norfolk MA
MA-NF-5	Weymouth 0.5 NW	5.08"	15.5"	Norfolk MA
MA-PL-12	East Bridgewater 1.7 WNW	4.82"	16.3"	Plymouth MA
MA-PL-15	Abington 1.2 NNE	4.78"	16.8"	Plymouth MA
MA-PL-5	Kingston 3.3 WNW	5.66"	19.4"	Plymouth MA
MA-BA-3	Falmouth 3.0 E	5.93"	16.5"	Barnstable MA
MA-BA-47	Mashpee 2.4 WSW	5.88"	16.5"	Barnstable MA
MA-BA-1	Yarmouth 2.3 SSE	7.20"	15.4"	Barnstable MA
MA-BA-27	Wellfleet 0.7 NW	5.86"	15.9"	Barnstable MA
MA-BA-12	Orleans 1.1 E	6.14"	8.3"	Barnstable MA
MA-BA-30	Eastham 0.6 SW	6.47"	18.8"	Barnstable MA
MA-NT-1	Nantucket 3.8 WNW	5.79"	0.0"	Nantucket MA
MA-DK-5	West Tisbury 2.9 N	6.08"	17.1"	Dukes MA

# Accumulated Precipitation (in)

February 01, 2016 to February 29, 2016



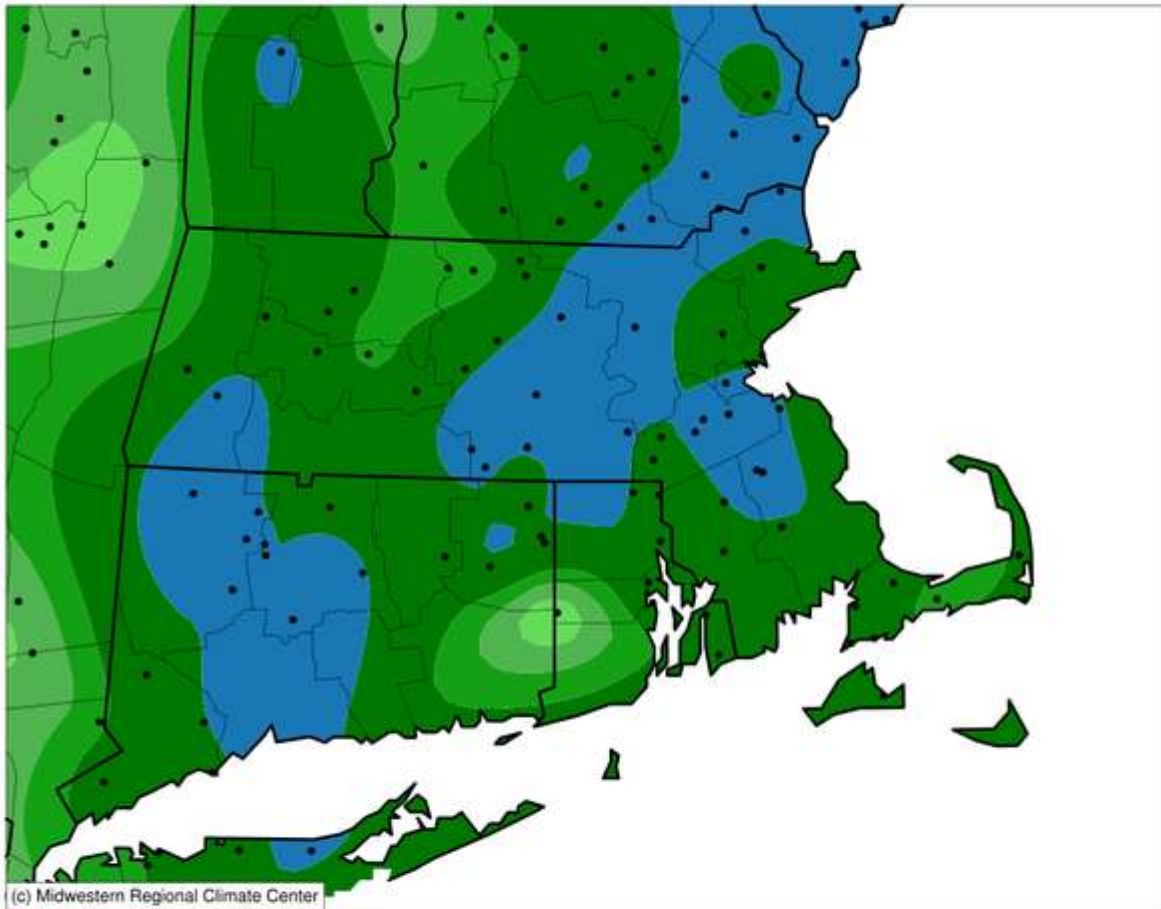
0.01 0.1 0.25 0.5 1 1.5 2 2.5 3 4 5 6 8

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

Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
Generated at: 3/2/2016 8:53:44 PM CST

# Accumulated Snowfall (in)

February 01, 2016 to February 29, 2016



0.01 0.5 1 2 3 5 7.5 10 15 20 25 30 40

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

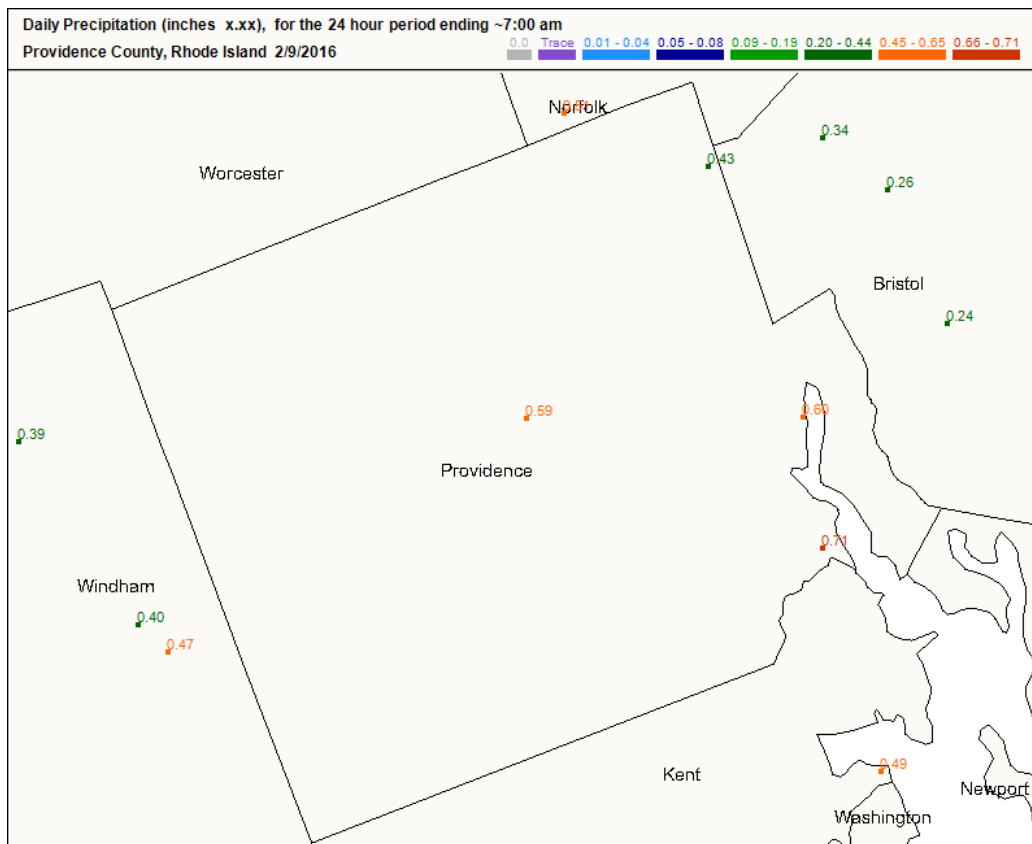
Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
Generated at: 3/2/2016 8:58:25 PM CST

## Map of the Month – Providence RI

From the north end of Rhode Island is this 400 square mile county, the largest county in the state. Home of the state capital of Providence and 600,000 residents, Providence County has the historic Blackstone River to the east, the Woonasquatucket River in the central part of the county, and the Pawtuxet River to the south. At the head of the Pawtuxet River is the Scituate Reservoir, holding 39 billion gallons of drinking water for more than half of the state's residents

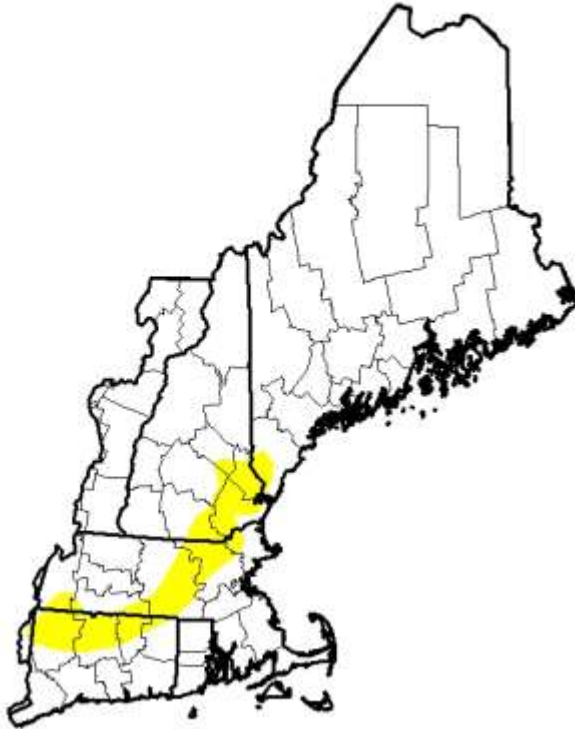
The smallest state in the nation is not the smallest state when it comes to population or demands for drinking water. **ALL** of Rhode Island's drinking water comes from precipitation. There are 7 Drought Regions within Rhode Island that are being reported on every month.

We need more observers, especially where there are none within the 7 Drought Regions, that being the North West and the Central West areas of the state. And eventually return to having a station on Block Island!



From the Drought Monitor. A big improvement here. Keep up the good reporting.

## U.S. Drought Monitor New England Watershed



**March 1, 2016**

(Released Thursday, Mar. 3, 2016)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	92.19	7.81	0.00	0.00	0.00	0.00
<b>Last Week</b> 2/23/2016	66.63	33.37	7.82	0.00	0.00	0.00
<b>3 Months Ago</b> 12/1/2015	98.58	40.42	15.42	0.00	0.00	0.00
<b>Start of Calendar Year</b> 12/31/2015	55.73	44.27	15.85	0.00	0.00	0.00
<b>Start of Water Year</b> 9/29/2015	49.31	50.69	20.91	0.00	0.00	0.00
<b>One Year Ago</b> 3/2/2015	100.00	0.00	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:**  
David Miskus  
NOAA/NWS/NCEP/CPC



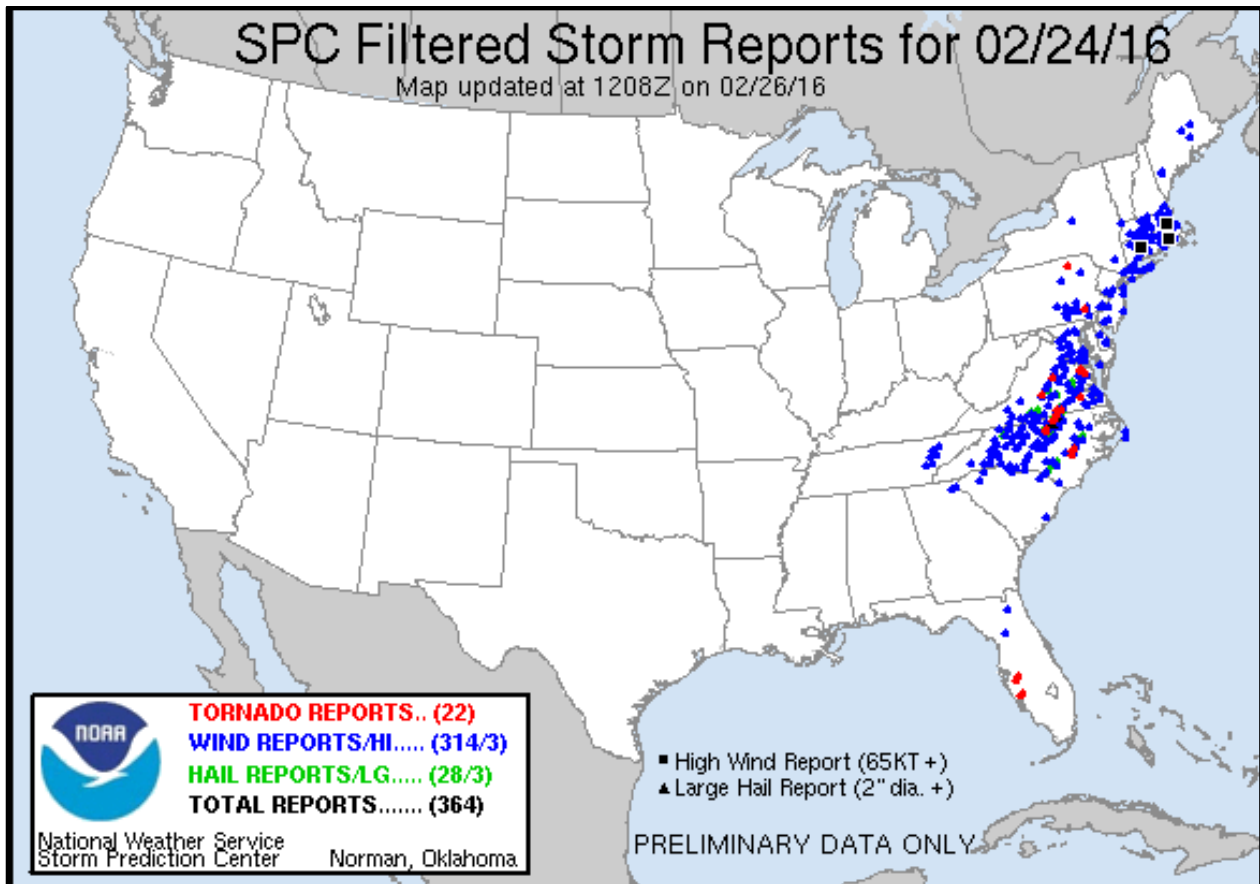
<http://droughtmonitor.unl.edu/>

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

# **February 24-25, 2016 Nighttime Severe Weather – A Rare Occurrence!**

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

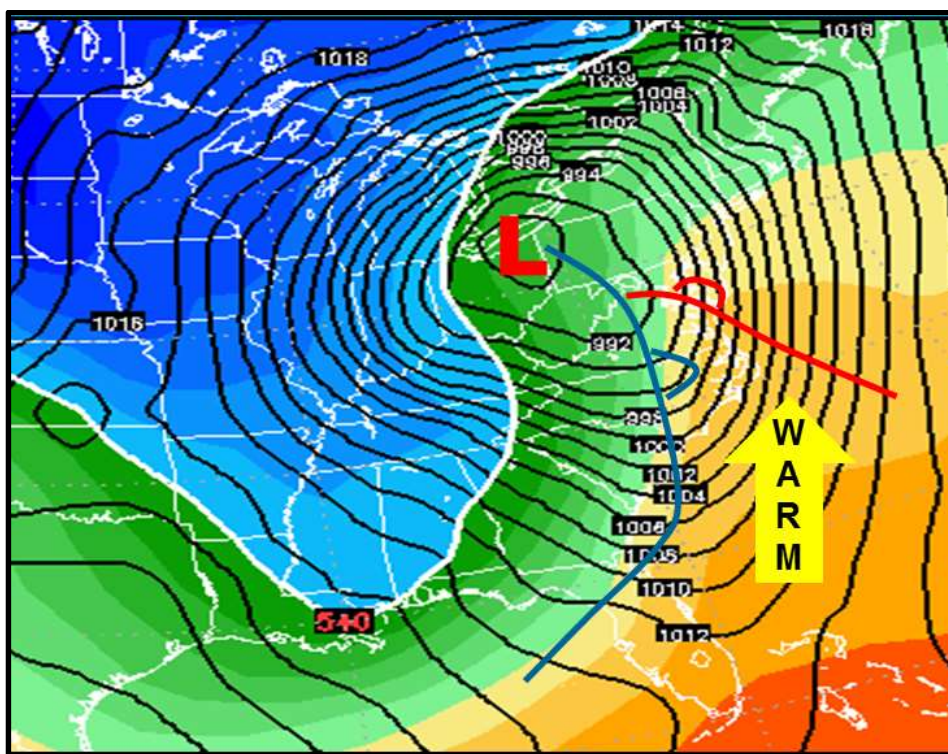
A line of severe thunderstorms produced wind gusts of 50 to 70 mph across much of southern New England during the evening of February 24 into the early morning of February 25, which resulted in widespread wind damage and tens of thousands of power outages. It is extremely rare to have a severe weather outbreak in February in this part of the country. In fact, records indicate the last time something of this magnitude occurred this time of year was in 1997!



STORM REPORTS FOR FEBRUARY 24-25, 2016. NOTE THE UNUSUALLY HIGH NUMBER OF DAMAGE REPORTS FROM THE CAROLINAS INTO SOUTHERN NEW ENGLAND.



So what caused this rare severe weather outbreak? Strong low pressure tracking across the eastern Great Lakes brought unusually warm and unstable air into southern New England, much like we see during the spring or fall. Winds were unusually strong just a few thousand feet off the ground, on the order of 80 to 100 mph! As thunderstorms developed in the warm air that night, they were able to bring most of those stronger wind speeds down to the ground. It's rare to see this happen during the night (remember August 4, 2015?) but even more rare for this to occur during the winter!



WEATHER MAP AT 7 PM WEDNESDAY, FEBRUARY 24, 2016

Even though there were many reports of wind damage (downed trees, wires, and large branches) we were fortunate in that there were no injuries. Since these storms rolled through during the middle of the night, most people were inside. There certainly could have been a different outcome if this happened during the day.

## **Points about Quality Reporting**

Continuing from last month's newsletter article on decimal points. One of the main charters of CoCoRaHS is to provide quality precipitation data.

Since the end of January, CoCoRaHS headquarters has a new staff member who looks closely at all of our reports. As others look at our reports, some of your reports may have their comments amended and your Coordinator is also notified.

Sometimes a Coordinator may send a message to verify the accuracy of your report to be pre-emptive of the quality inspections. Sometimes it could be for an unusually high precipitation value. Other instances can include a zero that does not seem correct, a multi-day value entered for a daily value, or what was mentioned last month, those pesky decimal points.

If you are contacted by a Coordinator, please reply and understand that we are trying to make sure the value of your report is being correctly reported.

A few points to pass on about reporting.

- Observer Notes. That text box in your Daily Report. Type a comment in that text box, if you can. Comments provide clarity, when reporting precipitation for those 100+ days that we get precipitation, or those few times you receive no precipitation when radar indicated it was in the area or it was in the forecast. If you can make comments about the precipitation you are reporting, they are a big help when looking at a precipitation report. And you will benefit from those comments when you see those comments appear on your Water Year Summary as further narration of what occurred.
- The more zeros to the right of the precipitation value, the more suspicious others will be that the value was rounded or was mistaken as a snow depth value. Comments from RI-WS-1 always put that suspicion away "actual measurement – not rounded. Showers – afternoon and evening" for only 0.20" on December 2 of last year. When that time occurs that you report 1.00", 3.00" or (gulp) 10.00", try to make a comment for that report.
- When you first became an observer, a default observation time-of-day was assigned. That default can be changed by a Coordinator, if

you ask, should you be unable to consistently take your observation at that time.

- Time-ing can be everything. Change the time of day that you are taking that observation when you report, if you find yourself taking an observation during or after a morning precipitation event,
- Multi-Day reporting is a topic for another newsletter. After writing about it last summer, one mistake that was common in the Water Year Summaries was getting the start and end dates correct without an overlap. A common mistake as I look at monthly reporting totals, a missing day appears before or after a Multi-Day Report.
- Pause, slow down, look over your report, before clicking or pressing the “Submit” button. Just a few seconds of looking and making a change to a value before you submit can save minutes of trying to edit an erroneous report. There is no feature on the app for editing a report. It is back to the website to edit a report.
- And speaking of the website, a recommendation to spend a short part of a lunch break or the evening with the website looking back at a table or a map of all of the reports and see how your report fits in to the precipitation mosaic that is created every day. There are thousands of people measuring and reporting just like you are. And for that, we thank you.

## **SKYWARN® Classes**

From the information that Nolan passed on in his recent newsletter and the appearance of it on the “Message of Day” after submitting a Daily Report.

Quick! To the links!

For Boston area: <http://www.weather.gov/box/skywarn#fragment-2>

For Southern CT: <http://www.weather.gov/okx/SkywarnTraining>

For Albany: <http://www.weather.gov/aly/skywarn>



SKYWARN® is a network started in 1971 to assist NWS Forecast Offices report in real time occurrences of severe weather. Where have we all heard about providing “ground truth” before? About half of the members of SKYWARN® are amateur radio operators. In this time of the internet, email and social media, making real time reports do not require the use of a radio or a telephone. Look at the website of each of the area Forecast Offices and you will see an icon to click on to submit a storm report.

A SKYWARN® training class is usually 2 hours in length with a break in the middle, making the time spent about 2.5 hours. If you have the time and the class is nearby, it is worthwhile attending, learning from and reporting when necessary. Why?

- Severe thunderstorms, derechos, hail, and tornadoes can strike our area. Learn what to look for.
- Learn about the updraft and downdraft nature of thunderstorms.
- You get more visual feedback that driving through flooded roads is not a good idea. Turn around. Don't drown.
- If the presenter is from NWS, you get an appreciation that weather forecasts are not only for your personal interests, but for every train, plane, crane, boat, ship, truck, airport, highway garage, marina, port, municipal and state government, emergency manager, and every other resident on a 24 x 7 x 365, this year 366, basis.
- There are severe weather events that come from wind, the rest come from precipitation. Your CoCoRaHS rain gauge is great equipment to have as a SKYWARN® spotter.
- From the New York City and Boston mass transit systems, “If you see something, say something” applies to weather conditions also. Sometimes, events occur that don't warrant a Significant Weather Report from your CoCoRaHS account, but a message as a SKYWARN® spotter that the Forecast Office should watch something you experienced in the area such as a river near bank full or much more than forecasted precipitation for part of the day, especially if there is more coming. See something. Say something.

Learn something more about weather conditions beyond precipitation. Participate if you can.

## **Wrap Up**

March comes in like a lion and leaves like a lamb. We live in New England. The lion can roar at any time. What is more likely to occur is a rapid increase in daylight, we set our clocks ahead one hour on March 13, and a rapid change will occur in the greening of grass later in the month. The vernal equinox comes after midnight on March 20 and spring will be here. The forsythia will start to bud. The crocus will bloom and green chutes of daffodils will appear. But the lion can roar at any time, so keep watch over your funnel and inner cylinder for a sudden return to winter weather or temperatures.

Keep making a new snow and snow depth report every day and participate in "SWE Monday" with your Monday observation. If you have bare ground, there are no zeros like snow zeros. Fill your snow section with zeros with bare ground outdoors. Say "nay" to the NA's. Collaboratively, we define where the snow is and where the snow is not!

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