



Southern



New England

July 2016

Take a closer look at that flag. It is not what you are used to seeing. Count the stars and stripes and then dive deeper into our history. 3 of those stars and stripes belong to our 3 states. If your travels ever take you through Baltimore MD, do see where that flag is gallantly streaming.

There have been a few reports of Trace or higher with clear skies day and night. With so many clear nights, morning dew appears often. What to do about dew?

Ours is the largest precipitation database ever built. Take a look at another inquiry tool that will total stations' reports for a certain date range. It's the same inquiry tool used every month to obtain your totals for this newsletter.

Despite the lack of rainy days, your reporting continues to be strong. Read ahead to see the reporting statistics for the month of June.

One of our feature articles is about NOAA Weather Radio, another way of obtaining weather information and warnings.

Two other additions from recent news. The first is about Watersheds. The second is our CoCoRaHS theme song.

Welcome to all of our new observers.

Precipitation and Condensation

It's time for Morning observation. A look at your gauge and there's moisture all over and some in the inner cylinder. What do you report?

Look around for confirming cues. Is the pavement wet? Are there puddles of water? Another way to tell is to look at the funnel. If the water droplets are very small, it is condensation. Bigger droplets means precipitation.

We measure and report precipitation, not condensation. If you receive a few drops of rain or flakes of snow, report a Trace. If you are not sure, if the fog was so dense you had to use your car's wipers, make a comment. With clear skies, day and night, think twice before submitting a report of Trace or 0.01" or 0.02".

Total Precipitation Summary

As an observer, spend some time with the inquiry tools on the website. One tool to use is Total Precipitation Summary. Select a state, county and date range. The number of reports, daily report total and multi-day precipitation total appear. Click on a column to change the sort sequence. Click on the station ID to see the detail reports of that station.

View Data

- [Daily Precip Reports](#)
- [Daily Comments Reports](#)
- [Significant Weather Reports](#)
- [Multiple Day Reports](#)
- [Drought Impact Reports](#)

- [Days with Hail](#)
- [Search Hail Reports](#)
- [Station Hail Reports](#)
- [Station Precip Summary](#)

- [Water Year Summary](#)
- [Station Precip Summary](#)
- [Station Snow Summary](#)
- [Rainy Days Report](#)
- [Total Precip Summary](#)
- [List Stations](#)

View Data : Total Precipitation Summary US Units ▾

Search Location and Date Range

Location: USA ▾ Connecticut ▾ TL - Tolland ▾

Date Range:

Start Date: 6/1/2016 ▾ End Date: 6/30/2016 ▾

Search

7 Stations with 210 Reports over 30 Days

Station Number ▾	Station Name	Daily Precip Sum in.	Multi-Day Precip in.	Total Precip in.	Daily Snow Sum in.	# of Reports
CT-TL-2	Staffordville 0.4 NNW	2.55		2.55	0.0	30
CT-TL-4	Mansfield Center 1.9 SW	1.74		1.74	0.0	30
CT-TL-13	Crystal Lake 1.2 W	2.29		2.29	0.0	30
CT-TL-14	Storrs 1.5 SW	2.40		2.40	0.0	30
CT-TL-15	Central Somers 0.3 N	2.05		2.05	0.0	30
CT-TL-16	Vernon 3.5 NNE	3.31		3.31	0.0	30
CT-TL-18	Hebron 5.3 NW	2.44		2.44	0.0	30

Detail and Summary for June 2016

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

Location	Station ID	June 2016 Precip	June departure from normal	Apr-May-June Precip	3 month departure from normal	Jan-June Precip	6 month departure from normal
Pittsfield MA	PSF	2.50"	-1.90"	8.97"	-3.50"	16.60"	-4.84"
Bridgeport CT	BDR	1.26"	-2.35"	7.47"	-4.07"	16.80"	-4.68"
Hartford CT	BDL	2.01"	-2.34"	6.92"	-5.50"	15.95"	-6.21"
Worcester MA	ORH	1.66"	-2.53"	6.50"	-5.99"	17.38"	-6.04"
Providence RI	PVD	1.05"	-2.59"	8.14"	-3.41"	19.17"	-4.54"
Boston MA	BOS	1.33"	-2.35"	7.07"	-3.84"	17.67"	-4.17"

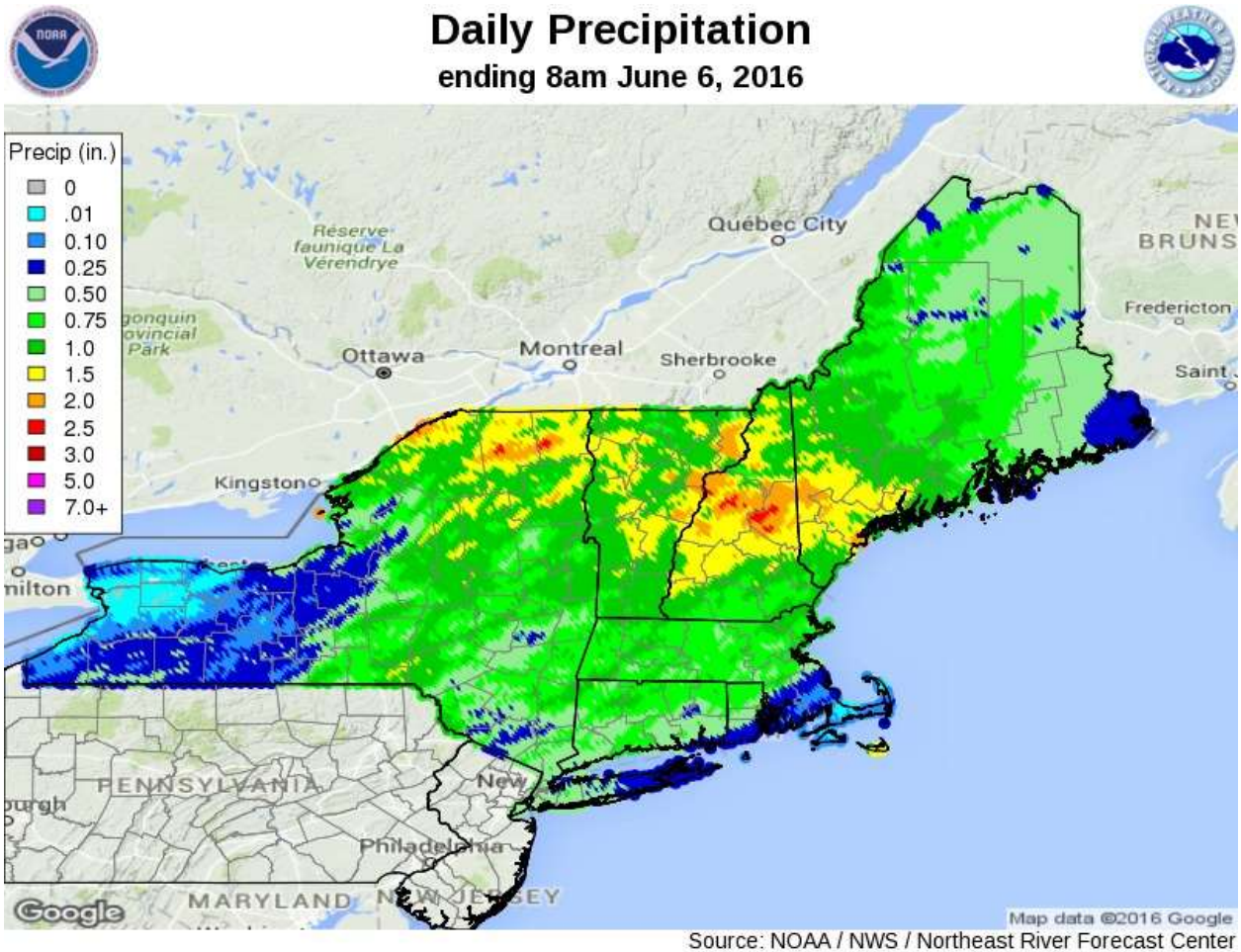
Another month of below normal precipitation. Spring rains were with us for the first week of June, with a widespread rain on June 5, a map from the NERFC included. Widespread rain on the 11th. Predawn thunderstorms woke some of us out of bed on the 21st. More rain on the 28th. Many days of clear skies, day and night.

Last June, our three states submitted 3464 daily reports. This month of June, our three states submitted over 3897 reports of zero! Add the remaining precipitation reports and our total was 5750 daily reports, which is very close to our record set last month on a 31 day month. Congratulations to all for making another record breaking month of 30 days and with so few days of precipitation to report.

It seems natural to report precipitation, but zeros, the stretch of clear days and nights, leaving no missing days by Daily or Multi-Day reporting, this is what helps define our climate. Currently, the climate is dry, and your volunteer efforts reporting for every day helps define that.

From your reports for June 2016

Observers reporting	245
Reported all 30 days	96
Completed by Multi-Day Reports	29
Missing 1 or 2 reports	40 *** Please look over your station data at end of the month.
Daily Reports	5750
Zero Reports	3897
Non-Zero Reports	1853
Comments	646
Multi-Day Reports	124
Significant Weather Reports	3
Hail Reports	0
Highest Daily Report	1.77 from Williamsburg MA (MA-HS-8) reported on 6/6



125 stations listed here. Another 4 page listing. With a little more effort, we can make it 5 pages long. Enjoy and learn from the variability that our network captures.

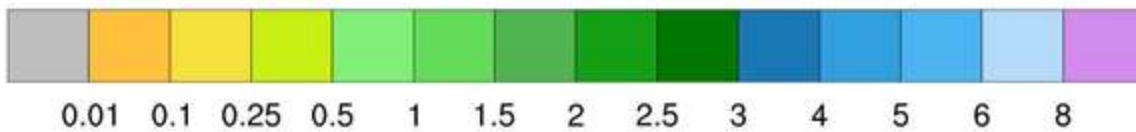
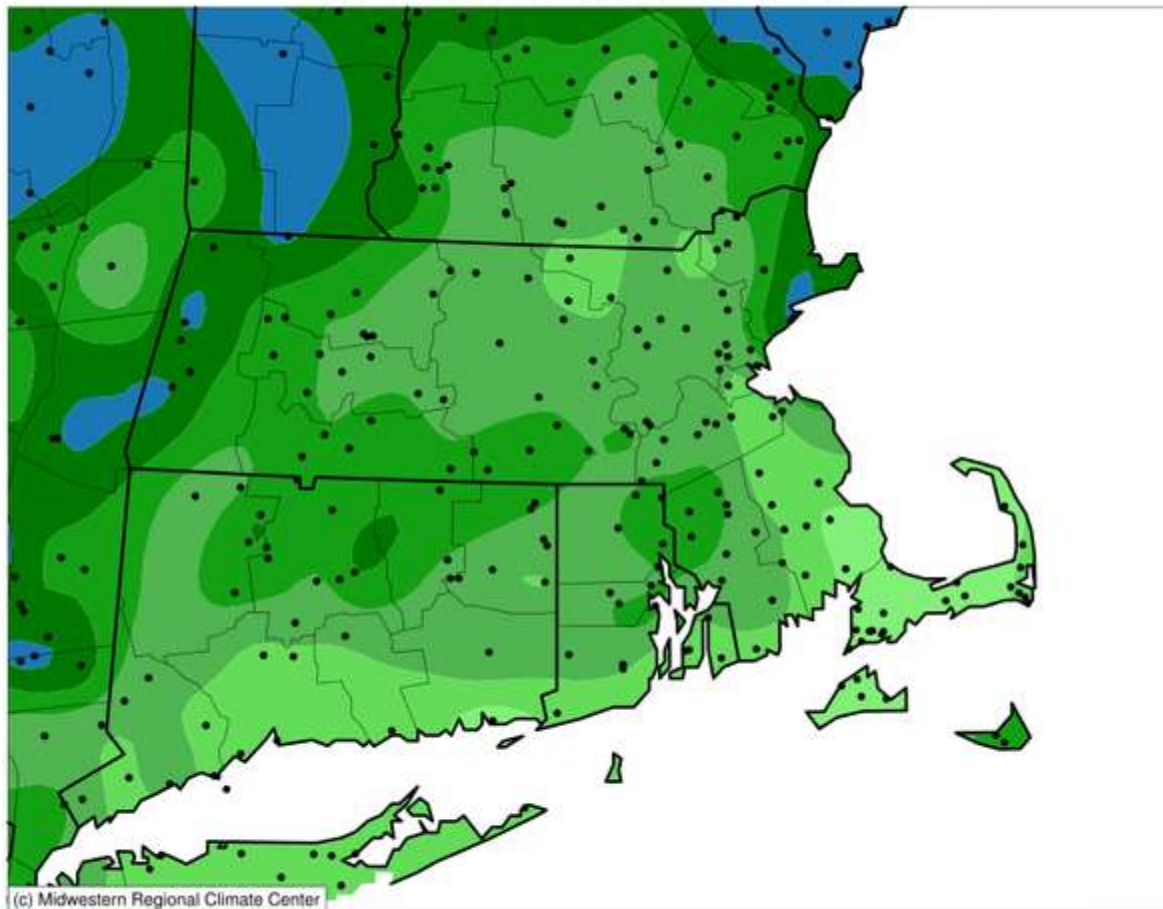
Station	Location	Precip	County & State
MA-BE-5	Tyringham 1.5 WNW	2.75"	Berkshire MA
CT-LT-14	Watertown 0.5 S	1.66"	Litchfield CT
CT-LT-9	New Hartford Center 3.2 SW	2.76"	Litchfield CT
CT-FR-39	Stamford 4.2 S	1.31"	Fairfield CT
CT-FR-37	Stamford 0.4 WNW	1.93"	Fairfield CT
CT-FR-29	Ridgefield 1.9 SSE	1.49"	Fairfield CT
CT-FR-3	New Canaan 1.9 ENE	1.22"	Fairfield CT
CT-FR-35	Darien 1.8 ENE	1.64"	Fairfield CT
CT-FR-41	Bethel 3.5 NNE	1.47"	Fairfield CT
CT-FR-9	Brookfield 3.3 SSE	1.61"	Fairfield CT
CT-FR-31	Newtown 4.6 SSW	1.43"	Fairfield CT
CT-FR-20	Westport 2.5 ENE	1.95"	Fairfield CT
CT-FR-32	Monroe 0.8 W	1.62"	Fairfield CT
CT-FR-42	Monroe 0.1 SE	1.56"	Fairfield CT
CT-FR-23	Shelton 1.3 W	1.35"	Fairfield CT
CT-NH-16	Milford 1.8 E	1.58"	New Haven CT
CT-NH-22	Prospect 0.5 SW	1.94"	New Haven CT
CT-NH-14	Prospect 1.9 ENE	1.19"	New Haven CT
CT-NH-21	East Haven 3.5 SSW	2.03"	New Haven CT
MA-FR-17	Buckland 1.8 ESE	2.29"	Franklin MA
MA-FR-13	Conway 2.9 NW	2.03"	Franklin MA
MA-FR-10	Conway 0.9 SW	1.85"	Franklin MA
MA-FR-12	Sunderland 1.3 SE	2.00"	Franklin MA
MA-HS-2	Westhampton 1.8 SW	2.32"	Hampshire MA
MA-HS-8	Williamsburg 1.2 WSW	2.31"	Hampshire MA
MA-HD-23	Springfield 2.5 WNW	2.10"	Hampden MA
MA-HD-16	Wales 0.4 SSW	2.09"	Hampden MA
CT-HR-24	Collinsville 0.9 NW	2.55"	Hartford CT
CT-HR-28	North Canton 0.8 SSW	2.84"	Hartford CT
CT-HR-23	Southington 0.9 SSE	1.61"	Hartford CT
CT-HR-15	Southington 3.0 E	1.83"	Hartford CT
CT-HR-8	North Granby 1.3 ENE	2.33"	Hartford CT
CT-HR-35	Weatogue 0.7 E	2.68"	Hartford CT
CT-HR-34	Granby 0.8 W	1.55"	Hartford CT
CT-HR-36	West Hartford 1.1 W	1.72"	Hartford CT
CT-HR-18	Berlin 2.4 SSE	1.82"	Hartford CT

CT-HR-11	West Hartford 2.7 SSE	1.96"	Hartford CT
CT-HR-6	Wethersfield 1.2 WSW	1.82"	Hartford CT
CT-HR-22	East Hartford 1.3 E	2.99"	Hartford CT
CT-HR-7	Central Manchester 2.7 SW	4.03"	Hartford CT
CT-TL-16	Vernon 3.5 NNE	3.31"	Tolland CT
CT-TL-15	Central Somers 0.3 N	2.05"	Tolland CT
CT-TL-18	Hebron 5.3 NW	2.44"	Tolland CT
CT-TL-13	Crystal Lake 1.2 W	2.29"	Tolland CT
CT-TL-14	Storrs 1.5 SW	2.40"	Tolland CT
CT-TL-2	Staffordville 0.4 NNW	2.55"	Tolland CT
CT-TL-4	Mansfield Center 1.9 SW	1.74"	Tolland CT
CT-MD-2	Portland 0.9 S	1.47"	Middlesex CT
CT-MD-5	Westbrook Center 1.1 N	1.23"	Middlesex CT
CT-MD-11	Westbrook Center 1.5 NE	1.19"	Middlesex CT
MA-WR-44	Westminster 0.6 WSW	1.30"	Worcester MA
MA-WR-8	Fitchburg 1.6 SSW	0.73"	Worcester MA
MA-WR-13	Leominster 1.5 S	1.93"	Worcester MA
MA-WR-28	Berlin 1.3 WSW	1.72"	Worcester MA
MA-WR-1	Milford 2.3 NNW	2.22"	Worcester MA
CT-WN-10	South Windham 1.3 NNE	1.33"	Windham CT
CT-WN-6	Dayville 2.0 ENE	1.73"	Windham CT
CT-WN-8	Moosup 1.7 NE	1.22"	Windham CT
CT-NL-5	Oakdale 2.6 WNW	2.25"	New London CT
CT-NL-22	Central Waterford 2.7 SSW	1.00"	New London CT
CT-NL-17	Waterford 2.2 N	1.04"	New London CT
CT-NL-6	New London 1.0 NNW	1.30"	New London CT
CT-NL-8	Uncasville-Oxoboxo Valley 1.6 ENE	1.34"	New London CT
CT-NL-19	Mystic 0.9 W	0.80"	New London CT
CT-NL-21	Griswold 0.9 N	1.96"	New London CT
CT-NL-18	Stonington 0.5 NNE	0.92"	New London CT
RI-PR-33	Greenville 0.7 NNW	1.83"	Providence RI
RI-PR-45	Manville 0.4 WSW	3.63"	Providence RI
RI-PR-17	Cranston 4.1 E	1.99"	Providence RI
RI-PR-44	Cranston 4.2 ENE	1.78"	Providence RI
RI-PR-32	Providence 2.3 NE	2.72"	Providence RI
RI-KN-2	East Greenwich 2.3 ESE	2.85"	Kent RI
RI-WS-25	Rockville 0.4 E	1.99"	Washington RI
RI-WS-32	Kingston 6.9 NNW	1.29"	Washington RI
RI-WS-31	Kingston 7.5 NNE	1.81"	Washington RI
RI-NW-4	Middletown 1.1 SW	0.80"	Newport RI
RI-NW-7	Little Compton 0.6 E	1.62"	Newport RI

MA-BR-23	Attleboro 0.9 ENE	2.09"	Bristol MA
MA-BR-2	Rehoboth 2.1 N	2.56"	Bristol MA
MA-BR-3	Norton 1.8 NNE	2.54"	Bristol MA
MA-BR-8	Dighton 1.1 WSW	2.00"	Bristol MA
MA-BR-30	Taunton 3.9 N	2.35"	Bristol MA
MA-BR-14	Dartmouth 2.5 SSW	1.10"	Bristol MA
MA-BR-32	Acushnet 1.8 SSE	1.97"	Bristol MA
MA-MD-47	West Townsend 0.5 W	1.32"	Middlesex MA
MA-MD-61	Stow 2.3 NW	1.40"	Middlesex MA
MA-MD-12	Acton 1.3 SW	1.54"	Middlesex MA
MA-MD-51	Maynard 0.7 ESE	1.34"	Middlesex MA
MA-MD-42	Holliston 0.8 S	2.49"	Middlesex MA
MA-MD-52	Lexington 0.6 SW	1.23"	Middlesex MA
MA-MD-54	Belmont 0.3 SE	1.39"	Middlesex MA
MA-MD-45	Wilmington 1.5 NE	1.90"	Middlesex MA
MA-MD-66	Woburn 1.2 SE	1.54"	Middlesex MA
MA-MD-7	Winchester 0.7 SE	1.68"	Middlesex MA
MA-MD-44	Medford 1.2 W	1.50"	Middlesex MA
MA-MD-11	Cambridge 0.9 NNW	1.55"	Middlesex MA
MA-ES-3	Haverhill 3.6 WNW	2.24"	Essex MA
MA-ES-20	Haverhill 0.7 N	2.12"	Essex MA
MA-ES-26	Haverhill 2.6 ESE	1.83"	Essex MA
MA-ES-12	Boxford 2.4 S	1.57"	Essex MA
MA-ES-1	Salisbury 3.7 NW	1.91"	Essex MA
MA-ES-2	Beverly 2.8 NW	0.54"	Essex MA
MA-ES-8	Marblehead 0.8 SW	3.16"	Essex MA
MA-SF-4	Brighton 0.5 W	1.90"	Suffolk MA
MA-SF-10	Chelsea 0.8 N	2.06"	Suffolk MA
MA-NF-11	Millis 2.0 SW	1.30"	Norfolk MA
MA-NF-1	Norwood 1.3 NW	1.97"	Norfolk MA
MA-NF-5	Weymouth 0.5 NW	1.05"	Norfolk MA
MA-PL-24	Whitman 1.1 WSW	1.35"	Plymouth MA
MA-PL-23	Pembroke 2.8 SW	1.11"	Plymouth MA
MA-PL-19	Rochester 1.2 NNW	1.39"	Plymouth MA
MA-PL-6	Middleborough 5.5 E	1.01"	Plymouth MA
MA-PL-5	Kingston 3.3 WNW	1.06"	Plymouth MA
MA-BA-8	Falmouth 1.8 WSW	0.67"	Barnstable MA
MA-BA-17	East Falmouth 1.2 WNW	0.92"	Barnstable MA
MA-BA-11	East Falmouth 1.4 ESE	0.98"	Barnstable MA
MA-BA-18	Waquoit 0.6 SSW	0.73"	Barnstable MA
MA-BA-47	Mashpee 2.4 WSW	0.83"	Barnstable MA

MA-BA-33	Brewster 1.5 ESE	0.81"	Barnstable MA
MA-BA-51	Orleans 3.0 S	1.08"	Barnstable MA
MA-BA-12	Orleans 1.1 E	0.83"	Barnstable MA
MA-BA-7	Wellfleet 3.0 E	0.63"	Barnstable MA
MA-BA-30	Eastham 0.6 SW	0.88"	Barnstable MA
MA-NT-1	Nantucket 3.8 WNW	1.29"	Nantucket MA
MA-DK-5	West Tisbury 2.9 N	0.75"	Dukes MA

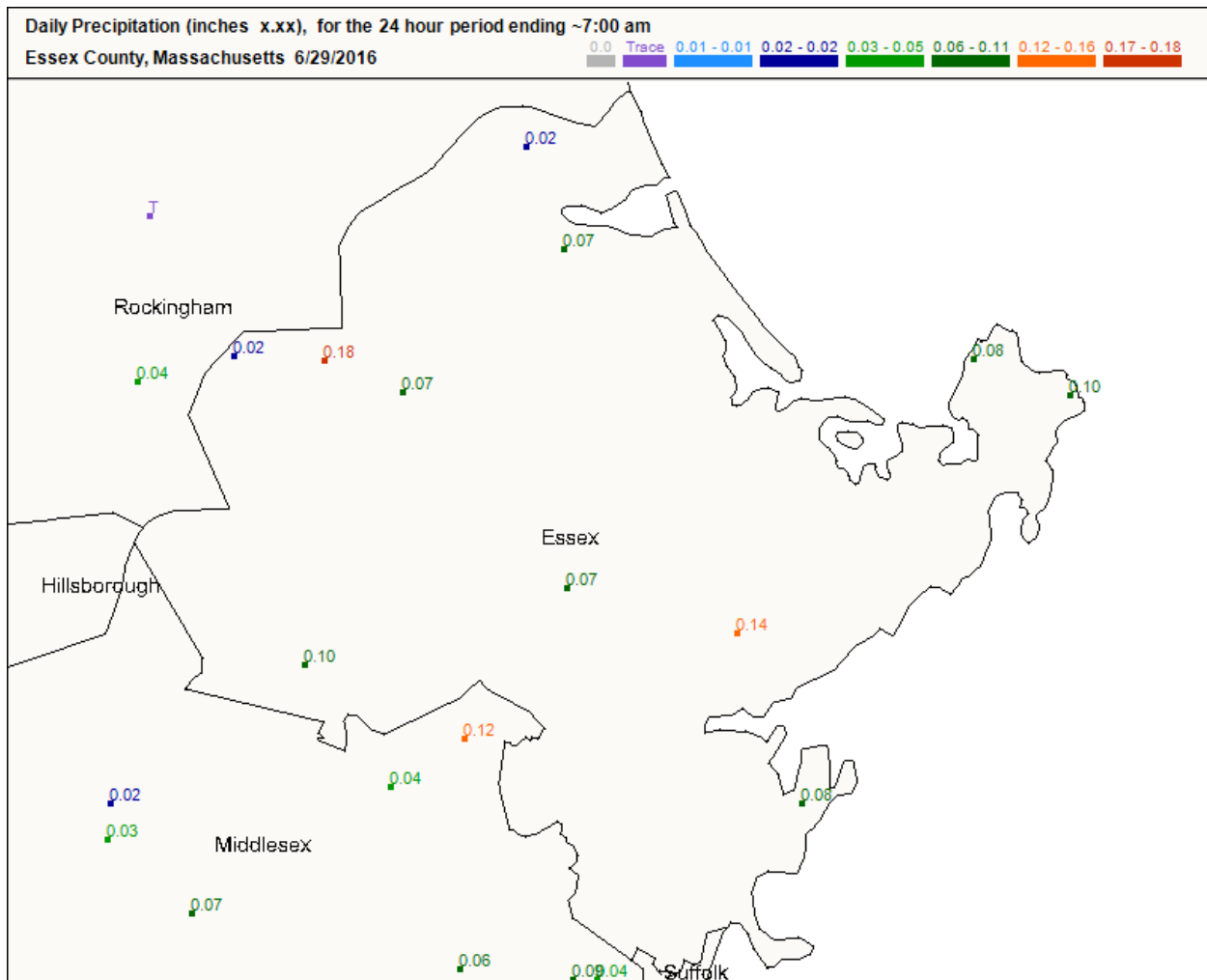
Accumulated Precipitation (in)
June 01, 2016 to June 30, 2016



Map of the Month – Essex County MA

A county by the bay and by the ocean. One of the original 4 counties of the Massachusetts Bay Company in 1643. Water, water, water everywhere in this county. The Merrimack River starts in New Hampshire and ends in the northern part. The Parker River and the Ipswich River south of that. In addition to the rivers, are lakes, marshes and swamps. 500 square miles of land, including 100 square miles of wetlands.

Our observers have all measured and reported 31”-36” in the past 12 months, confirming that this county is dry. With 750,000 residents, we could use more CoCoRaHS observers to monitor this drought condition within Essex County. If you know of someone who might be interested in measuring and mapping precipitation, ask them to join CoCoRaHS.

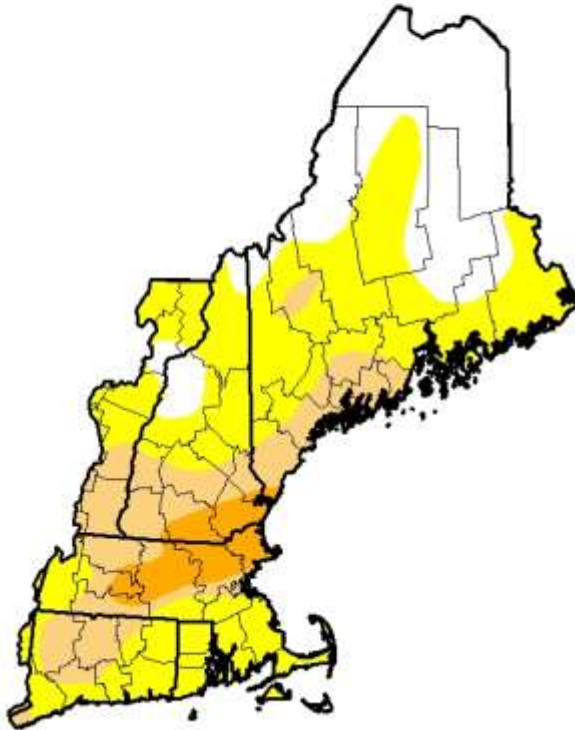


From the Drought Monitor.

No surprises here. The drought is getting worse while your reporting continues to get better. Every drop counts and zeros do too!

U.S. Drought Monitor New England Watershed

July 5, 2016
(Released Thursday, Jul. 7, 2016)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	26.96	47.70	19.25	6.10	0.00	0.00
Last Week <small>4/28/2016</small>	18.31	60.80	22.89	0.00	0.00	0.00
3 Months Ago <small>4/5/2016</small>	92.62	7.36	0.00	0.00	0.00	0.00
Start of Calendar Year <small>1/22/2016</small>	55.73	28.42	15.85	0.00	0.00	0.00
Start of Water Year <small>9/28/2015</small>	49.31	29.78	20.91	0.00	0.00	0.00
One Year Ago <small>7/2/2015</small>	69.90	24.58	5.53	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](#).

NOAA Weather Radio

Before The Weather Channel broadcasted on cable TV and before internet access became commonplace in residences, the National Weather Service continuously broadcasted weather forecasts and observations, around the clock, on VHF radio frequencies. What started out in 1974 with 64 transmitters now has over 1000 transmitters.

NOAA Weather Radio (NWR) has evolved from forecasters making recorded messages to automated digital text to speech voices. In addition to broadcasting weather forecasts and information, county specific alerts or Warnings can be broadcasted, alerting equipped radios of that county to Warnings. If your Weather Radio is equipped to receive these county specific warnings, think of a smoke detector going off, followed by the warning which is usually weather related.

While all of this seems outdated and obsolete with Wireless Emergency Alerts coming across cell phones and alerts coming across TV sets, consider the answers to these questions

- How can you receive alerts when you are asleep?
- Your cellphone may alert you to Tornado and Flash Flood warnings, but do you get alerted for any other Warnings, like Severe Thunderstorm?
- Do you know of anyone that doesn't have a cell phone, is elderly or unable to receive weather alerts?

Going to show you a website, but before that occurs, keep this important point in mind. Because of broadcast ranges and your local terrain, you may not be able to receive alerts, and you may not be able to receive a broadcasting station from your local NWS forecast office. Broadcast ranges do not stop at county or state borders. Pay attention to the location of other NWR stations in neighboring states and counties.

Editor's note: After purchasing a Midland WR300 radio, and walking it around my residence in Brookfield CT, I am able to find a NWR station from Highlands NY, on the west side of the Hudson River, part of Albany's Forecast Office. Pay attention to this next part. Proximity to broadcast antennas and terrain play important parts as to whether or not you will have success or may be inclined to return your radio, or get an external antenna.

I kept mine and use it to listen to Albany's broadcast and forecast periodically and receive alerts from the Albany area.

This link is a good starting point <http://www.weather.gov/box/nwr> Neighboring states are included. One correction: The broadcast antenna at Pack Monadnock NH is now part of the Gray (Portland) ME forecast office.

For those of you close to Boston MA, the area transmitters are listed and can be clicked upon for more details. For everyone else, click on the two letter abbreviation for the states, listed to the right.

Click on, scroll down, and read ALL of the tabs from "Introduction" to "Help".

NWS Boston - NOAA Weather Radio (NWR) Boston, MA
Weather Forecast Office

[Weather.gov](#) > [Boston, MA](#) > NWS Boston - NOAA Weather Radio (NWR)

Introduction Transmitters Broadcast Suites SAME / FIPS Codes Weekly Test Help

Boston Hyannis Providence Worcester Hartford Gloucester Pack Monadnock * * MA CT RI NH VT

County	FIPS Code	Transmitter	Call Sign	Frequency	Channel Number
Barnstable	025001	Hyannis	KEC73	162.550	7
Berkshire	025003	Albany	WXL34	162.550	7
Berkshire	025003	Conwall	WWH33	162.500	5
Berkshire	025003	Egremont	WXM82	162.450	3
Berkshire	025003	Marlboro	WXM88	162.425	2
Berkshire	025003	Mt. Greylock	WWF48	162.525	6
Bristol	025005	Boston	KHB35	162.475	4
Bristol	025005	Hyannis	KEC73	162.550	7
Bristol	025005	Providence	WXJ39	162.400	1
Dukes	025007	Hyannis	KEC73	162.550	7
Essex	025009	Boston	KHB35	162.475	4
Essex	025009	Deerfield	KZZ40	162.450	3



Quick explanation on FIPS Codes. FIPS stands for Federal Information Processing Standards. FIPS is the county code. SAME is the tone alert that the radio can make. If you buy a Weather Radio with a SAME receiver, program your county's 6 digit FIPS code ***and*** tune in your radio to a station that broadcasts that code. SAME programming and tuning is how a Weather Radio can sound off like a smoke detector for weather warnings and tests.

Websites for further exploration

<http://www.nws.noaa.gov/nwr/>

<http://www.nws.noaa.gov/nwr/info/usingsame.html>

http://www.nws.noaa.gov/nwr/coverage/station_listing.html

Especially if you live near a transmitter, try NOAA Weather Radio with SAME alerting.

Watersheds

Certainly, you all know where you live; a state, a county, a town, a street, a number. To hydrologists, inland locations are known by a region, subregion, basin, subbasin, and watershed; a location where water flows from a starting point to an ending point. Recently, CoCoRaHS headquarters released another animated [video](#) explaining watersheds.

Hydrologic Unit Codes are mentioned. Looking back at the Drought Monitor map is a good example of a Hydrologic Unit Code. That map is of Hydrologic Unit Code = 01, the New England Region, east of the Hudson River and Lake Champlain area.

To help find your hydrologic address, click on this [map](#). And click within that map to get to where you live. Try to locate your hydrologic address to 8 digits. Another [map](#) is here.

Come Hail or High Water

Someone finally did it. A theme song for our network has been created. Listen to Dewey Longuski's "[Come Hail or High Water](#)"

We're CoCoRaHS! Water is what we're all about!

Keep reporting your zeros, too.

Wrap up

Keep Significant Weather Reports and Hail Reports in mind as we continue in this season of convective thunderstorms. The flooding that struck West Virginia two weeks ago should remind us all that sometimes our low cost gauges can have a high value impact in real time should a significant event occur in your area.

Keep track of the start and stop times of the event. A simple guideline to use is 1" or more of precip in 1 hour or less of time. But if you feel it is significant, fill out a Significant Weather Report in real time.

Summer time is time for shorter newsletters.

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