

Community Collaborative Rain, Hail & Snow Network



Southern



New England

August 2021

The rains came in July and kept on coming, making it the wettest July for New York and Massachusetts. It may tough to convince those on Cape Cod and the Islands that July was wet, but that is the variable nature of precipitation on display.

August continues the wet pattern with tropical systems of Fred passing through our area and Henri making landfall in Westerly RI. This newsletter is late in coming, so this newsletter is about July's precipitation and August's precipitation will be mentioned in the weeks to come.

July is a time to get away and a time to get together and it appears that many of you are doing just that. An uptick in multi-day reports shows that many of you got away and got together in July.

We start it all off with our observers, recently crossing over multiples of 1000 Daily Reports, our version of The "Grand" List.

Let's get into it.

The “Grand” List

Congratulations to all of these observers from our three states who have recently passed a milestone of 1000 Daily Reports.

2000 Daily Reports

CT-HR-23 Southington 0.9 ESE

1000 Daily Reports

MA-ES-25 Gloucester 4.3 N
MA-WR-69 Northbridge 1.7 WNW
CT-LT-28 Canaan 4.2 ESE

Significant Weather Reports

An excellent example from one of our observers for sending a Significant Weather report for 2"+ rain.

Submitted at 8:25AM....

| Significant Weather Report | |
|-----------------------------------|-----------------------------------|
| Station Number: | RI-NW-5 |
| Station Name: | Little Compton 1.7 NW |
| Date: | 8/5/2021 8:00 AM |
| Submitted | 8/05/2021 8:25 AM |
| Notes: | Still raining at observation time |
| Taken at Registered Location: | True |
| Precip Duration Minutes: | 1440 |
| New Precip Amount: | 3.10 in. |
| Total Precip Amount: | 3.10 in. |
| New Snow Depth: | NA |
| Total Snow Depth: | NA |
| Flooding: | Minor |

... and received at 8:26AM. This is what is received by the NWS and delivered to the Boston Forecast Office. It works!

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NZUS45 KBOU 051226  
CCRAHS
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intense rain report from CoCoRAHS spotter:
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08/05/2021 08:00 AM local time  
County: Newport RI  
Little Compton 1.7 NW (number RI-NW-5)  
Latitude: [REDACTED]  
Longitude [REDACTED]  
3.10 inches so far, with 3.10 inches in the past 24 hrs  
Flooding: Minor  
Comments: Still raining at observation time
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Received NWS Boulder Thu Aug 5 06:26:39 2021 MDT  
Sent to WFOs: BOX
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All of today's CoCoRAHS observations are in WRKCCR (Boulder and Pueblo only)  
Or at http://www.cocorahs.org (click on reports)
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News Items

Climate Norms: New climate norms have been released for the period 1991-2020. CoCoRaHS stations are included for their precipitation reports. Over 5400 stations across the network qualified. In our three states, the totals came to 57 stations in MA, 39 stations in CT, 11 stations in RI.

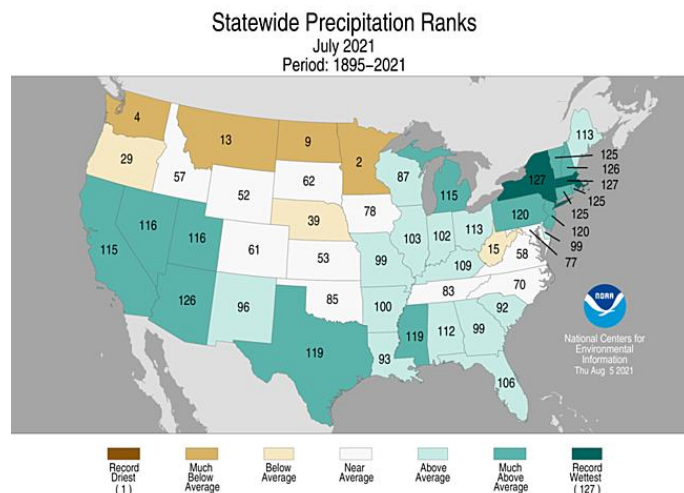
Website with supporting information here.

<https://www.cocorahs.org/Content.aspx?page=climate-normals>

Our states came into the network in Year 2008 & Year 2009, a bit on the late side from many of the other states in the network. The “Provisional normal” stations were determined for 10 years of daily values. Missing reports, and Multi-Day reports that spanned the beginning and ending of months, mattered. The “Pseudo-normals” must have EACH calendar month complete for at least 2 years. The criteria are tight and unique, and they belong to the National Center of Environmental Information (NCEI)

Congratulations to those stations that were selected.

Massachusetts had its wettest July on record. How did you know?



Around the 8th-9th-10th of each month, the NCEI publishes monthly climate graphics, that can be found on Twitter, under [@NOAANCEIClimate](https://twitter.com/NOAANCEIClimate)

Precipitation. Temperature. Monthly. Year-to-Date. State level. County level. Summary report. It's a lot of information.

The darkest of green, with the “127” rank, is the wettest July on record.

Observer tips

- Read the bottom of meniscus that is formed within the inner cylinder.
- Use **NOTHING** abrasive when cleaning your gauge. Soap and a sponge will do the job. The long handle on a wooden spoon will help forcing the sponge reach the bottom of the inner cylinder.
- On a dry day, check for leaks with your outer cylinder.
- Our gauges are great “dew collectors”: With clear skies and few clouds in the skies, avoid reporting that little amount on the bottom of your inner cylinder. It probably came from dew. Look for confirming cues of wet pavement and more BEFORE reporting non-zero precipitation.



Significant Weather Reports: Thank you for all of the reports sent in July and through Henri’s landfall in our area.

As you saw earlier, it only takes a minute’s time from when you press “Submit” to the time that report appears to the National Weather Service.

You have an opportunity to assist in verifying radar estimates in real-time and issuing Flood Warnings.

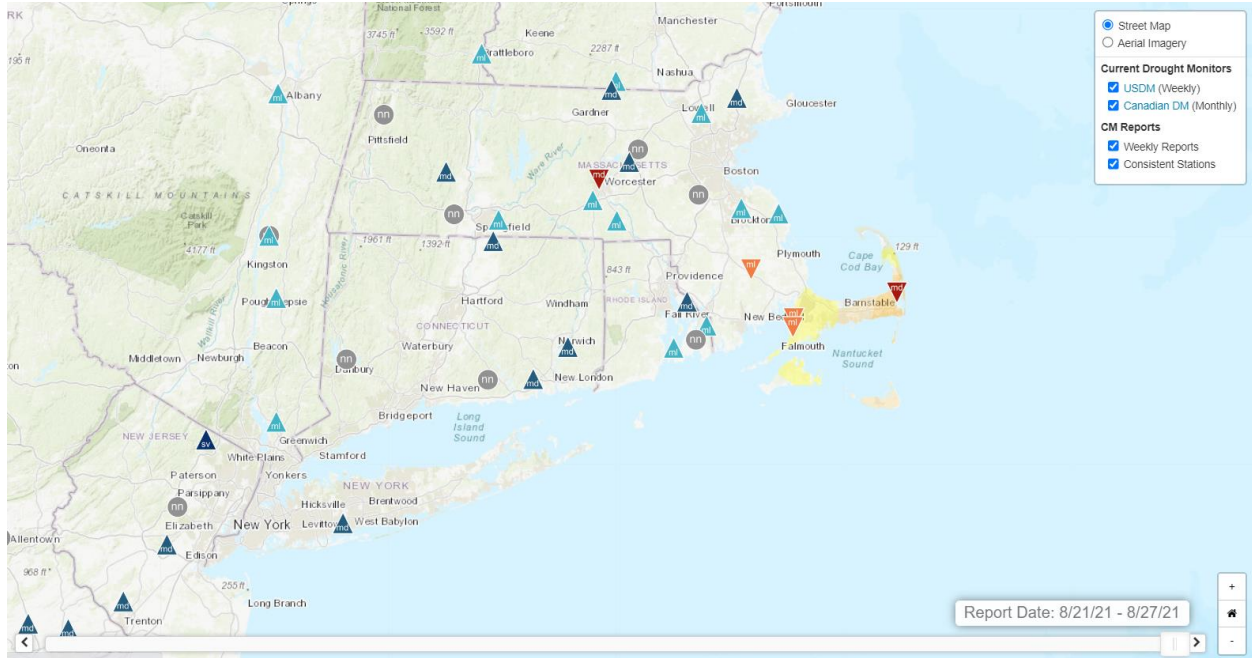
This real-time report only takes a minute to alarm at a forecaster’s workstation.

- **1” or more of rain in 1 hour or less.**
- **2” or more of rain. Even when you measure 2” or more with your morning observation.**
- **Flooding.**
- **Anything you feel is significant!**

mPING app for Apple and Android: Show the rest of us where the localized rain showers are. Use mPING to report rain and dense fog. Look around at some of the other choices too.

Condition Monitoring Reports

Thank you! to all that have submitted Condition Monitoring Reports, capturing the variability of conditions from west to east!



Orleans 3.0 S
Sat Aug 21 2021

We didn't need a hurricane, got a break on that, but we do need more rain. Grass and gardens are very dry,

MA-BA-51 -- General Awareness, Plants And Wildlife, Water Supply And Quality


Jamestown 0.3 SSE
Tue Aug 24 2021

TS Henri brought another 1.73" of rain. No major tree damage in my yard. Seasonal stream is flowing. Grass is green and needs to mowed at least once a week. No need to water the garden.

RI-NW-18 -- General Awareness, Plants And Wildlife


Detail and Summary for July 2021

From the National Weather Service (NWS) Climate sites for July 2021.



July 2021

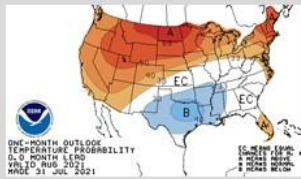
Regional Precipitation Summary




| Location | Station ID | July 2021 Precip | July departure from normal | May-Jun-Jul Precip | 3 month departure from normal | Feb-Jul Precip | 6 month departure from normal | Aug-Jul Precip | 12 month departure from normal |
|---------------|------------|------------------|----------------------------|--------------------|-------------------------------|----------------|-------------------------------|----------------|--------------------------------|
| Pittsfield MA | PSF | 10.60" | 6.42" | 18.33" | 5.78" | 27.39" | 4.93" | 45.91" | 0.84" |
| Bridgeport CT | BDR | 8.55" | 5.23" | 14.49" | 3.82" | 25.23" | 3.59" | 45.36" | 2.82" |
| Hartford CT | BDL | 10.15" | 5.98" | 18.72" | 6.48" | 27.33" | 4.86" | 50.74" | 5.06" |
| Worcester MA | ORH | 13.85" | 9.92" | 21.21" | 9.50" | 29.55" | 6.29" | 57.41" | 10.24" |
| Providence RI | PVD | 7.12" | 4.21" | 14.61" | 4.52" | 25.02" | 2.27" | 49.70" | 2.91" |
| Boston MA | BOS | 10.07" | 6.80" | 17.56" | 7.15" | 26.94" | 5.22" | 47.06" | 3.48" |

August 2021 Outlook

Air Temperature



Precipitation



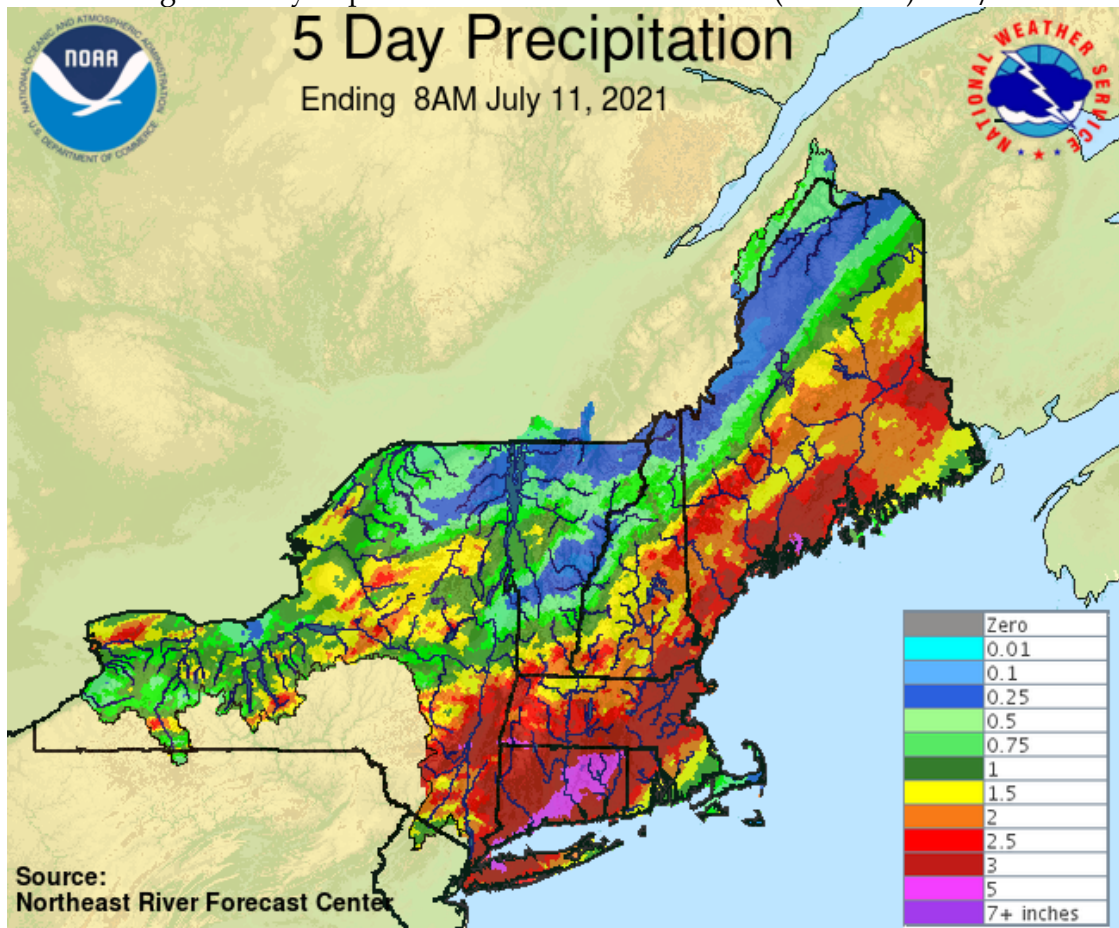
A = Above normal, B = Below normal, EC = Equal chances of above/below normal

July Highlights

174 stations with 10"+ precip totals for July. About half of our total list of complete stations.

From your reports for July 2021

| | |
|--------------------------------|--|
| Observers reporting | 576 |
| Reported all 31 days | 240 |
| Completed by Multi-Day Reports | 100 |
| Missing 1 or 2 reports | 104 |
| Daily Reports | 14,696 |
| Zero Reports | 4,250 |
| Non-Zero Reports | 10,446 |
| Daily Comments | 2,940 |
| Multi-Day Reports | 331 |
| Condition Monitoring Reports | 134 |
| Significant Weather Reports | 87 |
| Hail Reports | 3 |
| Snowfall Reports | 7,311 |
| Snow Depth Reports | 3,966 |
| Total SWE Reports | 2,664 |
| Highest Daily Report | 6.10" from Darien 2.4 NW (CT-FR-83) on 7/9 |



Welcome to another 13 new members to this list from around the area, Sterling CT, Shelburne Falls MA & Cranston RI.

The variable nature of precipitation is on display with double digit totals widespread and single digit totals toward the Cape and the Islands. All very impressive to see.

Keep scrolling to the bottom of this list and find Nolan's station at CO-LR-273. When you read Nolan's stories of irrigation ditches and pasture grasses, now you know why every drop counts in Colorado.

Cover all days in the month, no NA's, no overlapping Multi-Day reports and your station can be listed here.

This list is sorted by Watershed which is explained further in this 5 minute [video](#).

| Watershed | Watershed Name | Station Number | Station Name | Precip |
|------------------|--------------------------------|-----------------------|---------------------|---------------|
| 01070004 | Nashua | | | |
| 0107000401 | North Nashua River | MA-WR-44 | Westminster 0.6 WSW | 10.87" |
| 0107000401 | North Nashua River | MA-WR-8 | Fitchburg 1.6 SSW | 10.41" |
| 0107000401 | North Nashua River | MA-WR-22 | Fitchburg 2.0 NNE | 10.95" |
| 0107000402 | Headwaters Nashua River | MA-WR-93 | Holden 1.1 S | 12.33" |
| 0107000402 | Headwaters Nashua River | MA-WR-56 | Sterling 4.3 NW | 11.33" |
| 0107000402 | Headwaters Nashua River | MA-MD-25 | Ayer 0.1 SW | 10.28" |
| 0107000402 | Headwaters Nashua River | MA-MD-192 | Ayer 0.4 SSE | 9.99" |
| 0107000403 | Squannacook River | MA-MD-4 | Townsend 3.2 NW | 10.53" |
| 0107000403 | Squannacook River | MA-MD-47 | West Townsend 0.5 W | 11.14" |
| 0107000403 | Squannacook River | MA-MD-36 | Townsend 2.6 S | 11.77" |
| 0107000404 | Nissitissit River-Nashua River | MA-MD-189 | Pepperell 2.2 SSW | 12.00" |
| 0107000404 | Nissitissit River-Nashua River | MA-MD-169 | Pepperell 2.1 SSW | 12.18" |
| 01070005 | Concord | | | |
| 0107000501 | Sudbury River | MA-MD-89 | Sudbury 3.6 W | 11.19" |
| 0107000501 | Sudbury River | MA-MD-173 | Sudbury 2.7 WNW | 8.63" |
| 0107000501 | Sudbury River | MA-MD-178 | Framingham 2.0 NNE | 10.62" |
| 0107000501 | Sudbury River | MA-MD-193 | Sudbury 2.7 NNW | 12.56" |
| 0107000501 | Sudbury River | MA-MD-107 | Framingham 1.7 E | 11.16" |
| 0107000502 | Concord River | MA-WR-30 | Shrewsbury 1.6 NNE | 10.90" |

| | | | | |
|------------|-------------------------------------|-----------|----------------------|--------|
| 0107000502 | Concord River | MA-WR-28 | Berlin 1.3 WSW | 12.10" |
| 0107000502 | Concord River | MA-MD-115 | Hudson 1.4 NW | 11.02" |
| 0107000502 | Concord River | MA-WR-55 | Harvard 2.1 S | 12.04" |
| 0107000502 | Concord River | MA-MD-179 | Hudson 0.7 NW | 10.20" |
| 0107000502 | Concord River | MA-MD-12 | Acton 1.3 SW | 12.94" |
| 0107000502 | Concord River | MA-MD-51 | Maynard 0.7 ESE | 11.74" |
| 0107000502 | Concord River | MA-MD-62 | Chelmsford 1.2 E | 11.35" |
| 01070006 | Merrimack River | | | |
| 0107000612 | Stony Brook - Merrimack River | MA-MD-104 | Littleton 2.8 NNW | 10.95" |
| 0107000612 | Stony Brook - Merrimack River | MA-MD-105 | Littleton 0.9 WSW | 11.09" |
| 0107000612 | Stony Brook - Merrimack River | MA-MD-93 | Westford 1.5 SSW | 10.96" |
| 0107000613 | Shawsheen River | MA-MD-52 | Lexington 0.6 SW | 12.36" |
| 0107000613 | Shawsheen River | MA-MD-96 | Lexington 0.3 NE | 13.51" |
| 0107000613 | Shawsheen River | MA-ES-48 | Andover 0.6 E | 12.08" |
| 0107000614 | Powwow River - Merrimack River | MA-ES-66 | North Andover 0.3 NW | 11.80" |
| 0107000614 | Powwow River - Merrimack River | MA-ES-20 | Haverhill 0.7 N | 12.57" |
| 0107000614 | Powwow River - Merrimack River | MA-ES-4 | Groveland 0.5 WSW | 10.84" |
| 0107000614 | Powwow River - Merrimack River | MA-ES-61 | Amesbury 2.6 WSW | 11.70" |
| 0107000614 | Powwow River - Merrimack River | MA-ES-59 | Amesbury 1.2 N | 12.25" |
| 0107000614 | Powwow River - Merrimack River | MA-ES-68 | Newburyport 1.3 WNW | 12.30" |
| 0107000614 | Powwow River - Merrimack River | MA-ES-64 | Newburyport 0.4 NNW | 10.76" |
| 0107000614 | Powwow River - Merrimack River | MA-ES-70 | Newburyport 0.6 N | 11.86" |
| 0107000614 | Powwow River - Merrimack River | MA-ES-56 | Newburyport 1.0 ESE | 12.15" |
| 01080201 | Middle Connecticut | | | |
| 0108020105 | Fall River - Connecticut River | MA-FR-35 | Bernardston 1.0 SW | 13.45" |
| 0108020106 | Manhan River - Connecticut River | MA-HS-45 | Westhampton 0.4 WNW | 12.46" |
| 0108020106 | Manhan River - Connecticut River | MA-HS-8 | Williamsburg 1.2 WSW | 13.73" |
| 0108020106 | Manhan River - Connecticut River | MA-FR-43 | Conway 5.0 SSW | 15.26" |
| 0108020106 | Manhan River - Connecticut River | MA-HS-26 | Easthampton 0.5 SW | 11.29" |
| 0108020106 | Manhan River - Connecticut River | MA-HS-12 | Northampton 0.4 S | 13.08" |
| 0108020106 | Manhan River - Connecticut River | MA-HS-48 | Easthampton 1.0 E | 12.28" |
| 0108020106 | Manhan River - Connecticut River | MA-FR-12 | Sunderland 1.3 SE | 13.33" |
| 0108020106 | Manhan River - Connecticut River | MA-FR-36 | Montague 3.4 NNW | 16.27" |
| 0108020106 | Manhan River - Connecticut River | MA-FR-38 | Shutesbury 2.9 SW | 13.93" |
| 0108020107 | Batchelor Brook - Connecticut River | MA-HD-13 | Springfield 4.1 W | 14.28" |
| 01080202 | Miller | | | |
| 0108020201 | Upper Millers River | NH-CH-20 | Rindge 3.2 ESE | 12.41" |
| 0108020202 | Lower Millers River | MA-WR-40 | Gardner 1.4 SSW | 10.01" |
| 01080203 | Deerfield | | | |
| 0108020303 | North River | MA-FR-31 | Colrain 3.7 WNW | 12.46" |
| 0108020305 | Lower Deerfield River | MA-FR-17 | Buckland 1.8 ESE | 12.60" |

| | | | | |
|------------|-------------------------------------|-----------|--------------------------|--------|
| 0108020305 | Lower Deerfield River | MA-FR-42 | Shelburne Falls 0.4 ENE | 12.48" |
| 0108020305 | Lower Deerfield River | MA-FR-13 | Conway 2.9 NW | 14.80" |
| 0108020305 | Lower Deerfield River | MA-FR-10 | Conway 0.9 SW | 15.14" |
| 01080204 | Chicopee | | | |
| 0108020402 | Ware River | MA-WR-54 | Barre 1.4 NNE | 9.40" |
| 0108020403 | Quaboag River | MA-HD-26 | Brimfield 3.6 NW | 14.04" |
| 0108020403 | Quaboag River | MA-WR-75 | Warren 2.4 WSW | 13.55" |
| 0108020403 | Quaboag River | MA-WR-63 | Rutland 3.1 SW | 10.28" |
| 01080205 | Lower Connecticut | | | |
| 0108020501 | Mill River - Connecticut River | CT-HR-82 | Suffield 0.5 NNE | 10.98" |
| 0108020501 | Mill River - Connecticut River | CT-HR-57 | Suffield Depot 3.3 NNE | 13.44" |
| 0108020501 | Mill River - Connecticut River | MA-HD-33 | Agawam 1.1 SSW | 12.37" |
| 0108020501 | Mill River - Connecticut River | CT-HR-106 | Southwood Acres 0.3 WSW | 13.16" |
| 0108020501 | Mill River - Connecticut River | CT-HR-5 | Enfield 1.5 SE | 14.65" |
| 0108020501 | Mill River - Connecticut River | MA-HD-20 | Wilbraham 3.7 SSW | 18.58" |
| 0108020501 | Mill River - Connecticut River | MA-HD-30 | Hampden 2.0 NW | 17.30" |
| 0108020502 | Scantic River | CT-TL-26 | Broad Brook 2.6 ESE | 14.73" |
| 0108020502 | Scantic River | MA-HD-32 | East Longmeadow 2.3 ESE | 15.90" |
| 0108020502 | Scantic River | CT-TL-41 | Somers 0.3 S | 12.12" |
| 0108020502 | Scantic River | CT-TL-15 | Central Somers 0.3 N | 11.90" |
| 0108020502 | Scantic River | CT-TL-49 | Somers 1.2 NE | 13.24" |
| 0108020503 | Park River | CT-HR-39 | Farmington 1.6 SW | 10.90" |
| 0108020503 | Park River | CT-HR-63 | West Hartford 1.1 NNE | 12.69" |
| 0108020504 | Hockanum River | CT-HR-52 | Central Manchester 0.8 N | 15.23" |
| 0108020504 | Hockanum River | CT-HR-100 | Manchester 0.4 ENE | 13.03" |
| 0108020504 | Hockanum River | CT-TL-19 | Vernon 2.8 N | 12.57" |
| 0108020505 | Roaring Brook - Connecticut River | CT-HR-6 | Wethersfield 1.2 WSW | 11.48" |
| 0108020505 | Roaring Brook - Connecticut River | CT-HR-68 | Rocky Hill 1.3 E | 8.93" |
| 0108020505 | Roaring Brook - Connecticut River | CT-HR-22 | East Hartford 1.3 E | 12.95" |
| 0108020506 | Mattabesset River | CT-HR-15 | Southington 3.0 E | 9.00" |
| 0108020506 | Mattabesset River | CT-HR-65 | Newington 1.9 SSW | 9.75" |
| 0108020506 | Mattabesset River | CT-MD-25 | Middlefield 0.6 SE | 10.24" |
| 0108020507 | Higganum Creek - Connecticut River | CT-MD-33 | Middletown 0.3 SE | 9.96" |
| 0108020507 | Higganum Creek - Connecticut River | CT-MD-23 | Higganum 0.7 N | 8.49" |
| 0108020508 | Salmon River | CT-MD-22 | East Hampton 2.1 N | 9.05" |
| 0108020508 | Salmon River | CT-NL-70 | Colchester 0.6 ENE | 7.75" |
| 0108020509 | Eightmile River - Connecticut River | CT-NL-59 | Old Lyme 1.1 S | 5.44" |
| 0108020509 | Eightmile River - Connecticut River | CT-NL-63 | Old Lyme 1.7 NNE | 6.25" |
| 01080206 | Westfield | | | |
| 0108020603 | Outlet Westfield River | CT-HR-88 | Suffield Depot 6.0 WNW | 11.86" |
| 0108020603 | Outlet Westfield River | MA-HD-28 | Westfield 2.8 SE | 14.35" |

| | | | | |
|------------|--|-----------|----------------------------|--------|
| 0108020603 | Outlet Westfield River | MA-HD-29 | West Springfield 1.6 SSW | 14.34" |
| 01080207 | Farmington | | | |
| 0108020701 | Still River | CT-LT-44 | Winsted 1.0 WSW | 12.20" |
| 0108020702 | West Branch Farmington River | CT-LT-43 | Winsted 3.8 ESE | 11.44" |
| 0108020702 | West Branch Farmington River | CT-LT-18 | New Hartford Center 1.5 N | 11.50" |
| 0108020704 | Headwaters Farmington River | CT-LT-9 | New Hartford Center 3.2 SW | 9.40" |
| 0108020704 | Headwaters Farmington River | CT-HR-70 | Canton 1.5 W | 9.77" |
| 0108020704 | Headwaters Farmington River | CT-HR-28 | North Canton 0.8 SSW | 11.32" |
| 0108020705 | Salmon Brook | CT-HR-8 | North Granby 1.3 ENE | 12.62" |
| 0108020706 | Outlet Farmington River | CT-HR-113 | West Simsbury 0.4 S | 10.44" |
| 01090001 | Charles | | | |
| 0109000101 | Plum Island Sound - Frontal Atlantic Ocean | MA-ES-79 | Georgetown 1.2 WSW | 12.60" |
| 0109000101 | Plum Island Sound - Frontal Atlantic Ocean | MA-ES-19 | West Newbury 1.8 SSE | 11.66" |
| 0109000101 | Plum Island Sound - Frontal Atlantic Ocean | MA-ES-24 | Newburyport 0.8 SW | 12.16" |
| 0109000102 | Ipswich River | MA-MD-85 | Wilmington 2.2 WNW | 10.91" |
| 0109000102 | Ipswich River | MA-MD-125 | Tewksbury 3.6 SSE | 10.80" |
| 0109000102 | Ipswich River | MA-MD-160 | Reading 1.2 N | 11.36" |
| 0109000102 | Ipswich River | MA-ES-58 | Middleton 1.4 SSW | 13.59" |
| 0109000102 | Ipswich River | MA-ES-12 | Boxford 2.4 S | 12.44" |
| 0109000102 | Ipswich River | MA-ES-71 | Danvers 2.5 NNE | 12.92" |
| 0109000103 | Essex River - Frontal Atlantic Ocean | MA-ES-41 | Danvers 0.8 ESE | 12.85" |
| 0109000103 | Essex River - Frontal Atlantic Ocean | MA-ES-22 | Rockport 1.0 E | 10.51" |
| 0109000104 | Saugus River - Frontal Broad Sound | MA-MD-81 | Wakefield 0.5 NNW | 11.92" |
| 0109000104 | Saugus River - Frontal Broad Sound | MA-MD-126 | Melrose 0.5 NE | 12.57" |
| 0109000104 | Saugus River - Frontal Broad Sound | MA-ES-45 | Nahant 0.4 N | 12.06" |
| 0109000104 | Saugus River - Frontal Broad Sound | MA-ES-8 | Marblehead 0.8 SW | 11.61" |
| 0109000105 | Mystic River - Frontal Boston Harbor | MA-MD-123 | Lexington 1.3 SE | 12.79" |
| 0109000105 | Mystic River - Frontal Boston Harbor | MA-MD-182 | Lexington 2.1 ESE | 15.14" |
| 0109000105 | Mystic River - Frontal Boston Harbor | MA-MD-175 | Arlington 0.4 WNW | 13.49" |
| 0109000105 | Mystic River - Frontal Boston Harbor | MA-MD-7 | Winchester 0.7 SE | 13.57" |
| 0109000105 | Mystic River - Frontal Boston Harbor | MA-MD-44 | Medford 1.2 W | 12.06" |
| 0109000105 | Mystic River - Frontal Boston Harbor | MA-MD-11 | Cambridge 0.9 NNW | 12.70" |
| 0109000105 | Mystic River - Frontal Boston Harbor | MA-MD-170 | Somerville 0.5 W | 12.12" |
| 0109000106 | Upper Charles River | MA-WR-1 | Milford 2.3 NNW | 12.65" |
| 0109000106 | Upper Charles River | MA-MD-55 | Holliston 0.7 W | 13.58" |
| 0109000106 | Upper Charles River | MA-NF-64 | Medway 2.1 W | 11.31" |
| 0109000106 | Upper Charles River | MA-MD-42 | Holliston 0.8 S | 13.10" |
| 0109000106 | Upper Charles River | MA-NF-62 | Franklin 1.4 SW | 10.57" |
| 0109000106 | Upper Charles River | MA-MD-158 | Sherborn 1.1 NW | 12.53" |
| 0109000106 | Upper Charles River | MA-NF-11 | Millis 2.0 SW | 14.16" |
| 0109000106 | Upper Charles River | MA-NF-63 | Norfolk 1.1 W | 10.74" |

| | | | | |
|------------|---|-----------|-----------------------|--------|
| 0109000106 | Upper Charles River | MA-NF-50 | Millis 1.4 ENE | 10.95" |
| 0109000107 | Lower Charles River - Frontal Boston Harbor | MA-MD-120 | Natick 1.9 NNE | 11.29" |
| 0109000107 | Lower Charles River - Frontal Boston Harbor | MA-MD-119 | Watertown 1.1 W | 12.28" |
| 0109000107 | Lower Charles River - Frontal Boston Harbor | MA-MD-186 | Watertown 1.1 NW | 12.52" |
| 0109000107 | Lower Charles River - Frontal Boston Harbor | MA-MD-134 | Somerville 0.5 SSE | 12.40" |
| 0109000108 | Neponset River - Frontal Boston Harbor | MA-NF-1 | Norwood 1.3 NW | 12.18" |
| 0109000108 | Neponset River - Frontal Boston Harbor | MA-NF-54 | Quincy 1.2 W | 11.75" |
| 0109000109 | Whitmans Pond - Frontal Boston Harbor | MA-NF-32 | Quincy 1.8 WSW | 12.01" |
| 0109000109 | Whitmans Pond - Frontal Boston Harbor | MA-NF-39 | Weymouth 2.3 N | 12.11" |
| 0109000109 | Whitmans Pond - Frontal Boston Harbor | MA-PL-36 | Hingham 0.8 ESE | 11.64" |
| 01090002 | Cape Cod | | | |
| 0109000201 | North River - Frontal Massachusetts Bay | MA-PL-5 | Kingston 3.3 WNW | 9.54" |
| 0109000201 | North River - Frontal Massachusetts Bay | MA-PL-30 | Duxbury 3.7 W | 8.78" |
| 0109000201 | North River - Frontal Massachusetts Bay | MA-PL-48 | Marshfield 1.5 NNW | 8.04" |
| 0109000201 | North River - Frontal Massachusetts Bay | MA-PL-47 | Plymouth 1.1 NNW | 7.95" |
| 0109000201 | North River - Frontal Massachusetts Bay | MA-PL-2 | Sagamore Beach 1.0 NW | 5.35" |
| 0109000202 | Cape Cod | MA-BA-2 | Falmouth 3.1 NNW | 2.77" |
| 0109000202 | Cape Cod | MA-BA-57 | Falmouth 5.7 N | 2.83" |
| 0109000202 | Cape Cod | MA-BA-87 | Falmouth 1.5 NNW | 2.56" |
| 0109000202 | Cape Cod | MA-BA-50 | Falmouth 5.4 NNE | 2.39" |
| 0109000202 | Cape Cod | MA-BA-17 | East Falmouth 1.2 WNW | 3.05" |
| 0109000202 | Cape Cod | MA-BA-19 | East Falmouth 0.7 NW | 3.09" |
| 0109000202 | Cape Cod | MA-BA-11 | East Falmouth 1.4 ESE | 2.50" |
| 0109000202 | Cape Cod | MA-BA-83 | Mashpee 2.5 W | 3.27" |
| 0109000202 | Cape Cod | MA-BA-18 | Waquoit 0.6 SSW | 2.63" |
| 0109000202 | Cape Cod | MA-BA-45 | Sandwich 0.9 NNE | 4.37" |
| 0109000202 | Cape Cod | MA-BA-64 | Sandwich 1.5 SSE | 4.87" |
| 0109000202 | Cape Cod | MA-BA-79 | Mashpee 0.8 SSW | 2.88" |
| 0109000202 | Cape Cod | MA-BA-78 | Mashpee 4.6 S | 2.57" |
| 0109000202 | Cape Cod | MA-BA-10 | East Sandwich 2.3 SE | 3.39" |
| 0109000202 | Cape Cod | MA-BA-59 | Barnstable 3.6 W | 3.23" |
| 0109000202 | Cape Cod | MA-BA-76 | Barnstable 0.7 NE | 2.71" |
| 0109000202 | Cape Cod | MA-BA-22 | Yarmouth 0.9 NNW | 3.11" |
| 0109000202 | Cape Cod | MA-BA-72 | Yarmouth 2.0 S | 2.49" |
| 0109000202 | Cape Cod | MA-BA-77 | South Dennis 1.0 NW | 2.47" |
| 0109000202 | Cape Cod | MA-BA-52 | Truro 0.8 E | 6.65" |
| 0109000202 | Cape Cod | MA-BA-27 | Wellfleet 0.7 NW | 4.96" |
| 0109000202 | Cape Cod | MA-BA-42 | Orleans 1.8 S | 2.25" |
| 0109000202 | Cape Cod | MA-BA-51 | Orleans 3.0 S | 2.24" |
| 0109000202 | Cape Cod | MA-BA-12 | Orleans 1.1 E | 2.16" |
| 0109000202 | Cape Cod | MA-BA-7 | Wellfleet 3.0 E | 3.46" |

| | | | | |
|------------|---|-----------|---------------------------|--------|
| 0109000202 | Cape Cod | MA-BA-30 | Eastham 0.6 SW | 2.54" |
| 0109000202 | Cape Cod | MA-BA-43 | Chatham 0.4 WSW | 1.72" |
| 0109000204 | Paskamanset River - Frontal Buzzards Bay | MA-BR-52 | New Bedford 4.3 N | 6.87" |
| 0109000205 | Sakonnet Point - Frontal Rhode Island Sound | RI-NW-5 | Little Compton 1.7 NW | 5.48" |
| 0109000205 | Sakonnet Point - Frontal Rhode Island Sound | RI-NW-17 | Tiverton 4.4 SSE | 4.19" |
| 0109000205 | Sakonnet Point - Frontal Rhode Island Sound | RI-NW-7 | Little Compton 0.6 E | 3.43" |
| 0109000205 | Sakonnet Point - Frontal Rhode Island Sound | MA-BR-37 | Westport 0.9 ESE | 6.04" |
| 0109000206 | Elizabeth Islands - Marthas Vineyard | MA-DK-21 | Chilmark 0.9 E | 2.47" |
| 0109000206 | Elizabeth Islands - Marthas Vineyard | MA-DK-9 | West Tisbury 0.4 S | 3.32" |
| 0109000206 | Elizabeth Islands - Marthas Vineyard | MA-DK-2 | Vineyard Haven 0.8 WSW | 3.81" |
| 0109000206 | Elizabeth Islands - Marthas Vineyard | MA-DK-18 | Oak Bluffs 0.1 SW | 2.90" |
| 0109000206 | Elizabeth Islands - Marthas Vineyard | MA-DK-22 | Edgartown 1.3 WNW | 3.96" |
| 01090003 | Blackstone | | | |
| 0109000301 | Upper Blackstone River | MA-WR-41 | Auburn 2.6 SW | 13.99" |
| 0109000301 | Upper Blackstone River | MA-WR-43 | Leicester 2.4 ESE | 13.84" |
| 0109000301 | Upper Blackstone River | MA-WR-98 | Worcester 2.2 NW | 12.44" |
| 0109000301 | Upper Blackstone River | MA-WR-97 | Worcester 1.0 WSW | 13.08" |
| 0109000301 | Upper Blackstone River | MA-WR-81 | Worcester 1.6 SE | 12.46" |
| 0109000301 | Upper Blackstone River | MA-WR-100 | Douglas 1.9 NNE | 12.38" |
| 0109000301 | Upper Blackstone River | MA-WR-70 | Grafton 1.5 W | 11.80" |
| 0109000301 | Upper Blackstone River | MA-WR-69 | Northbridge 1.7 WNW | 11.39" |
| 0109000301 | Upper Blackstone River | MA-WR-91 | Grafton 0.9 NNE | 10.57" |
| 0109000302 | Lower Blackstone River | RI-PR-50 | Harrisville 1.2 SSE | 11.39" |
| 0109000302 | Lower Blackstone River | MA-WR-90 | Upton 0.4 NE | 12.32" |
| 0109000302 | Lower Blackstone River | RI-PR-28 | North Smithfield 0.7 SE | 11.14" |
| 0109000302 | Lower Blackstone River | RI-PR-89 | Woonsocket 1.8 WNW | 12.56" |
| 0109000302 | Lower Blackstone River | MA-NF-67 | Bellingham 3.6 SSW | 11.39" |
| 0109000302 | Lower Blackstone River | RI-PR-45 | Manville 0.4 WSW | 10.63" |
| 0109000302 | Lower Blackstone River | RI-PR-59 | Cumberland Hill 0.9 NW | 11.80" |
| 0109000302 | Lower Blackstone River | RI-PR-55 | Cumberland Hill 3.6 NNE | 11.00" |
| 0109000302 | Lower Blackstone River | RI-PR-106 | Valley Falls 1.1 W | 10.42" |
| 01090004 | Narragansett | | | |
| 0109000401 | Upper Taunton River | MA-BR-30 | Taunton 3.9 N | 9.41" |
| 0109000401 | Upper Taunton River | MA-NF-31 | Stoughton 1.2 E | 10.97" |
| 0109000401 | Upper Taunton River | MA-PL-22 | East Bridgewater 0.3 WSW | 9.70" |
| 0109000401 | Upper Taunton River | MA-PL-15 | Abington 1.2 NNE | 9.70" |
| 0109000401 | Upper Taunton River | MA-PL-60 | Abington 1.7 ESE | 8.24" |
| 0109000401 | Upper Taunton River | MA-PL-23 | Pembroke 2.8 SW | 7.98" |
| 0109000402 | Middle Taunton River | MA-PL-31 | Bridgewater 1.8 SE | 8.48" |
| 0109000402 | Middle Taunton River | MA-PL-17 | Plympton 0.9 NNE | 8.45" |
| 0109000403 | Threemile River | MA-BR-55 | NWS Boston/Norton 2.5 ESE | 9.64" |

| | | | | |
|------------|--|-----------|-------------------------|--------|
| 0109000404 | Ten Mile River | MA-BR-23 | Attleboro 0.9 ENE | 9.38" |
| 0109000405 | Wonnasquatucket River-Moshassuck River | RI-PR-33 | Greenville 0.7 NNW | 9.85" |
| 0109000405 | Woonasquatucket River-Moshassuck River | RI-PR-51 | North Smithfield 0.6 S | 11.00" |
| 0109000406 | Pawtuxet River | RI-KN-51 | Coventry 3.7 W | 6.99" |
| 0109000406 | Pawtuxet River | RI-KN-36 | Coventry 2.5 NW | 6.70" |
| 0109000406 | Pawtuxet River | RI-KN-21 | Coventry 1.9 NE | 7.01" |
| 0109000406 | Pawtuxet River | RI-KN-58 | Coventry 1.0 E | 6.09" |
| 0109000406 | Pawtuxet River | RI-PR-111 | Cranston 1.5 SW | 8.34" |
| 0109000406 | Pawtuxet River | RI-PR-71 | Cranston 1.3 N | 10.45" |
| 0109000406 | Pawtuxet River | RI-PR-112 | Cranston 1.7 NNE | 7.83" |
| 0109000406 | Pawtuxet River | RI-PR-105 | Cranston 2.3 ENE | 9.64" |
| 0109000407 | Palmer River | MA-BR-2 | Rehoboth 2.1 N | 8.67" |
| 0109000408 | Lower Taunton River - Frontal Mount Hope Bay | MA-NF-73 | Foxborough 3.1 E | 10.22" |
| 0109000408 | Lower Taunton River - Frontal Mount Hope Bay | MA-BR-61 | Mansfield 2.4 ENE | 9.68" |
| 0109000408 | Lower Taunton River - Frontal Mount Hope Bay | MA-BR-3 | Norton 1.8 NNE | 10.63" |
| 0109000408 | Lower Taunton River - Frontal Mount Hope Bay | MA-BR-16 | Somerset 0.4 SSE | 6.91" |
| 0109000408 | Lower Taunton River - Frontal Mount Hope Bay | MA-BR-72 | Somerset 2.3 NNE | 7.46" |
| 0109000408 | Lower Taunton River - Frontal Mount Hope Bay | MA-BR-58 | Dighton 3.3 NNW | 8.70" |
| 0109000408 | Lower Taunton River - Frontal Mount Hope Bay | MA-BR-8 | Dighton 1.1 WSW | 7.27" |
| 0109000409 | Narragansett Bay | RI-KN-17 | East Greenwich 1.2 NNE | 6.41" |
| 0109000409 | Narragansett Bay | RI-WS-54 | North Kingstown 2.7 WSW | 5.84" |
| 0109000409 | Narragansett Bay | RI-WS-50 | North Kingstown 3.1 NW | 8.85" |
| 0109000409 | Narragansett Bay | RI-KN-45 | East Greenwich 2.8 NE | 5.83" |
| 0109000409 | Narragansett Bay | RI-KN-15 | Warwick 4.3 SSW | 5.89" |
| 0109000409 | Narragansett Bay | RI-KN-30 | East Greenwich 2.0 NE | 5.92" |
| 0109000409 | Narragansett Bay | RI-KN-2 | East Greenwich 2.3 ESE | 6.43" |
| 0109000409 | Narragansett Bay | RI-KN-23 | Warwick 3.2 NNE | 7.18" |
| 0109000409 | Narragansett Bay | RI-KN-31 | Warwick 0.8 ENE | 6.21" |
| 0109000409 | Narragansett Bay | RI-PR-67 | Providence 1.6 NE | 9.16" |
| 0109000409 | Narragansett Bay | RI-KN-38 | Warwick 3.9 NNE | 7.17" |
| 0109000409 | Narragansett Bay | RI-PR-84 | Providence 2.7 NNE | 8.74" |
| 0109000409 | Narragansett Bay | RI-NW-18 | Jamestown 0.3 SSE | 4.18" |
| 0109000409 | Narragansett Bay | RI-PR-77 | Riverside 0.8 SE | 7.05" |
| 0109000409 | Narragansett Bay | RI-BR-5 | Barrington 1.3 WNW | 6.71" |
| 0109000409 | Narragansett Bay | RI-NW-27 | Newport 1.3 SW | 4.33" |
| 0109000409 | Narragansett Bay | RI-NW-4 | Middletown 1.1 SW | 4.16" |
| 0109000409 | Narragansett Bay | RI-NW-16 | Portsmouth 1.3 S | 4.64" |
| 0109000409 | Narragansett Bay | RI-NW-32 | Portsmouth 5.2 SSE | 3.88" |
| 0109000409 | Narragansett Bay | MA-BR-63 | Swansea 2.1 W | 6.87" |
| 0109000409 | Narragansett Bay | RI-NW-20 | Tiverton 1.0 SSW | 5.44" |
| 01090005 | Pawcatuck-Wood | | | |

| | | | | |
|------------|---|----------|-----------------------------|--------|
| 0109000501 | Wood River | RI-WS-1 | Hope Valley 3.7 S | 5.68" |
| 0109000501 | Wood River | RI-WS-64 | Hope Valley 1.8 NE | 5.96" |
| 0109000502 | Upper Pawcatuck River | RI-WS-51 | Richmond 2.4 SSE | 5.18" |
| 0109000502 | Upper Pawcatuck River | RI-WS-42 | Richmond 4.6 NNE | 6.61" |
| 0109000502 | Upper Pawcatuck River | RI-WS-45 | Charlestown 4.7 NNE | 6.41" |
| 0109000502 | Upper Pawcatuck River | RI-WS-77 | Kingston 0.7 WSW | 4.98" |
| 0109000503 | Lower Pawcatuck River | CT-NL-40 | Pawcatuck 1.8 SSE | 4.64" |
| 0109000503 | Lower Pawcatuck River | RI-WS-30 | Westerly 2.4 NNW | 5.47" |
| 0109000504 | Frontal Block Island Sound | RI-WS-36 | Charlestown 3.0 WSW | 4.61" |
| 0109000504 | Frontal Block Island Sound | RI-WS-71 | Wakefield-Peacedale 5.0 SW | 4.36" |
| 0109000504 | Frontal Block Island Sound | RI-WS-58 | Kingston 0.3 SW | 4.96" |
| 0109000504 | Frontal Block Island Sound | RI-WS-65 | Wakefield-Peacedale 0.9 W | 4.85" |
| 0109000504 | Frontal Block Island Sound | RI-WS-81 | Wakefield-Peacedale 0.4 SW | 4.77" |
| 0109000504 | Frontal Block Island Sound | RI-WS-70 | Wakefield-Peacedale 1.7 NNE | 5.07" |
| 01100001 | Quinebaug | | | |
| 0110000102 | French River | MA-WR-88 | Leicester 2.5 WSW | 13.74" |
| 0110000102 | French River | MA-WR-68 | Oxford 0.9 SSW | 13.39" |
| 0110000103 | Fivemile River | CT-WN-4 | East Killingly 1.3 SW | 10.65" |
| 0110000105 | Moosup River | CT-WN-8 | Moosup 1.7 NE | 10.43" |
| 0110000105 | Moosup River | CT-WN-25 | Sterling 2.6 N | 7.57" |
| 0110000105 | Moosup River | CT-WN-26 | Danielson 3.2 ESE | 8.67" |
| 0110000105 | Moosup River | RI-KN-14 | Greene 1.4 E | 8.79" |
| 0110000106 | Pachaug River | CT-NL-21 | Griswold 0.9 N | 7.22" |
| 01100002 | Shetucket | | | |
| 0110000201 | Willimantic River | CT-TL-2 | Staffordville 0.4 NNW | 16.76" |
| 0110000202 | Natchaug River | CT-TL-27 | Willington 2.7 SE | 16.83" |
| 0110000202 | Natchaug River | CT-TL-30 | Mansfield Center 2.7 NE | 11.27" |
| 0110000203 | Shetucket River | CT-WN-10 | South Windham 1.3 NNE | 9.01" |
| 0110000203 | Shetucket River | CT-NL-10 | Norwich 2.5 NNE | 7.60" |
| 01100003 | Thames | | | |
| 0110000302 | Thames River-Frontal New London Harbor | CT-NL-6 | New London 1.0 NNW | 5.70" |
| 0110000302 | Thames River-Frontal New London Harbor | CT-NL-50 | Norwich 5.4 SE | 7.64" |
| 0110000303 | Mystic River - Fronter Fishers Island Sound | CT-NL-62 | Salem 3.6 SE | 7.07" |
| 0110000303 | Mystic River - Frontal Fishers Island Sound | CT-NL-29 | East Lyme 0.5 SW | 6.36" |
| 0110000303 | Mystic River - Frontal Fishers Island Sound | CT-NL-22 | Central Waterford 2.7 SSW | 5.28" |
| 0110000303 | Mystic River - Frontal Fishers Island Sound | CT-NL-60 | Waterford 1.1 E | 6.22" |
| 0110000303 | Mystic River - Frontal Fishers Island Sound | CT-NL-46 | Mystic 3.4 NW | 6.30" |
| 0110000303 | Mystic River - Frontal Fishers Island Sound | CT-NL-37 | Mystic 1.6 W | 5.08" |
| 0110000303 | Mystic River - Frontal Fishers Island Sound | CT-NL-19 | Mystic 0.9 W | 5.13" |
| 0110000303 | Mystic River - Frontal Fishers Island Sound | CT-NL-24 | Stonington 1.4 NNW | 4.98" |
| 0110000303 | Mystic River - Frontal Fishers Island Sound | CT-NL-18 | Stonington 0.5 NNE | 4.27" |

| | | | | |
|------------|---|----------|----------------------------|--------|
| 01100004 | Quinnipiac | | | |
| 0110000401 | Quinnipiac River | CT-NH-14 | Prospect 1.9 ENE | 7.47" |
| 0110000401 | Quinnipiac River | CT-HR-55 | Southington 1.7 WNW | 8.28" |
| 0110000401 | Quinnipiac River | CT-HR-83 | Plainville 1.7 SW | 11.72" |
| 0110000401 | Quinnipiac River | CT-HR-23 | Southington 0.9 SSE | 7.77" |
| 0110000401 | Quinnipiac River | CT-HR-76 | Southington 1.0 ENE | 6.73" |
| 0110000401 | Quinnipiac River | CT-NH-44 | Wallingford Center 1.9 WNW | 9.06" |
| 0110000401 | Quinnipiac River | CT-NH-43 | Wallingford Center 3.3 NNW | 9.01" |
| 0110000401 | Quinnipiac River | CT-NH-75 | Meriden 2.8 WSW | 9.64" |
| 0110000401 | Quinnipiac River | CT-NH-42 | Wallingford Center 1.1 N | 9.58" |
| 0110000401 | Quinnipiac River | CT-NH-72 | Northford 0.8 SW | 12.54" |
| 0110000402 | Hammonasset River - Frontal Long Island Sound | CT-NH-21 | East Haven 3.5 SSW | 8.61" |
| 0110000402 | Hammonasset River - Frontal Long Island Sound | CT-NH-56 | Guilford Center 2.7 WSW | 7.06" |
| 0110000402 | Hammonasset River - Frontal Long Island Sound | CT-NH-50 | Madison Center 4.1 N | 9.55" |
| 0110000402 | Hammonasset River - Frontal Long Island Sound | CT-MD-32 | Killingworth 1.1 N | 10.07" |
| 0110000402 | Hammonasset River - Frontal Long Island Sound | CT-MD-21 | Killingworth 2.6 ESE | 9.61" |
| 0110000403 | Mill River - Frontal Long Island Sound | CT-NH-39 | West Haven 0.8 W | 10.29" |
| 0110000403 | Mill River - Frontal Long Island Sound | CT-NH-57 | New Haven 2.9 NNW | 8.69" |
| 01100005 | Housatonic | | | |
| 0110000501 | Headwaters Housatonic River | MA-BE-11 | Great Barrington 3.0 N | 13.52" |
| 0110000501 | Headwaters Housatonic River | MA-BE-20 | Lee 3.7 SE | 16.61" |
| 0110000502 | Williams River - Housatonic River | MA-BE-23 | Sheffield 1.6 NW | 15.65" |
| 0110000504 | Macedonia Brook - Housatonic River | CT-LT-20 | Warren 2.4 WNW | 10.82" |
| 0110000506 | Candlewood Lake-Housatonic River | CT-LT-37 | New Milford 3.1 WNW | 6.23" |
| 0110000506 | Candlewood Lake-Housatonic River | CT-LT-22 | New Milford 5.3 SSW | 5.75" |
| 0110000507 | Shepaug River | CT-LT-29 | Goshen 0.5 NW | 9.65" |
| 0110000508 | Still River - Housatonic River | CT-FR-85 | Danbury 3.0 W | 5.33" |
| 0110000508 | Still River - Housatonic River | CT-FR-43 | Bethel 0.5 E | 7.45" |
| 0110000508 | Still River - Housatonic River | CT-FR-41 | Bethel 3.5 NNE | 7.39" |
| 0110000508 | Still River - Housatonic River | CT-FR-9 | Brookfield 3.3 SSE | 7.36" |
| 0110000509 | Pomperaug River | CT-LT-34 | Woodbury Center 1.5 SSW | 9.30" |
| 0110000511 | Headwaters Naugatuck River | CT-LT-33 | Torrington 1.1 SSE | 9.83" |
| 0110000512 | Outlet Naugatuck River | CT-NH-80 | Seymour 1.2 WSW | 9.07" |
| 0110000512 | Outlet Naugatuck River | CT-NH-67 | Waterbury 1.3 WNW | 8.16" |
| 0110000512 | Outlet Naugatuck River | CT-NH-45 | Naugatuck 1.7 NNE | 7.09" |
| 0110000512 | Outlet Naugatuck River | CT-NH-22 | Prospect 0.5 SW | 6.81" |
| 0110000513 | Housatonic River - Frontal Long Island Sound | CT-FR-23 | Shelton 1.3 W | 8.69" |
| 0110000513 | Housatonic River - Frontal Long Island Sound | CT-FR-46 | Stratford 0.2 ESE | 9.77" |
| 01100006 | Saugatuck | | | |
| 0110000601 | Saugatuck River - Frontal Long Island Sound | CT-FR-58 | Ridgefield 3.6 N | 6.60" |
| 0110000601 | Saugatuck River - Frontal Long Island Sound | CT-FR-64 | Bethel 4.5 SSE | 9.41" |

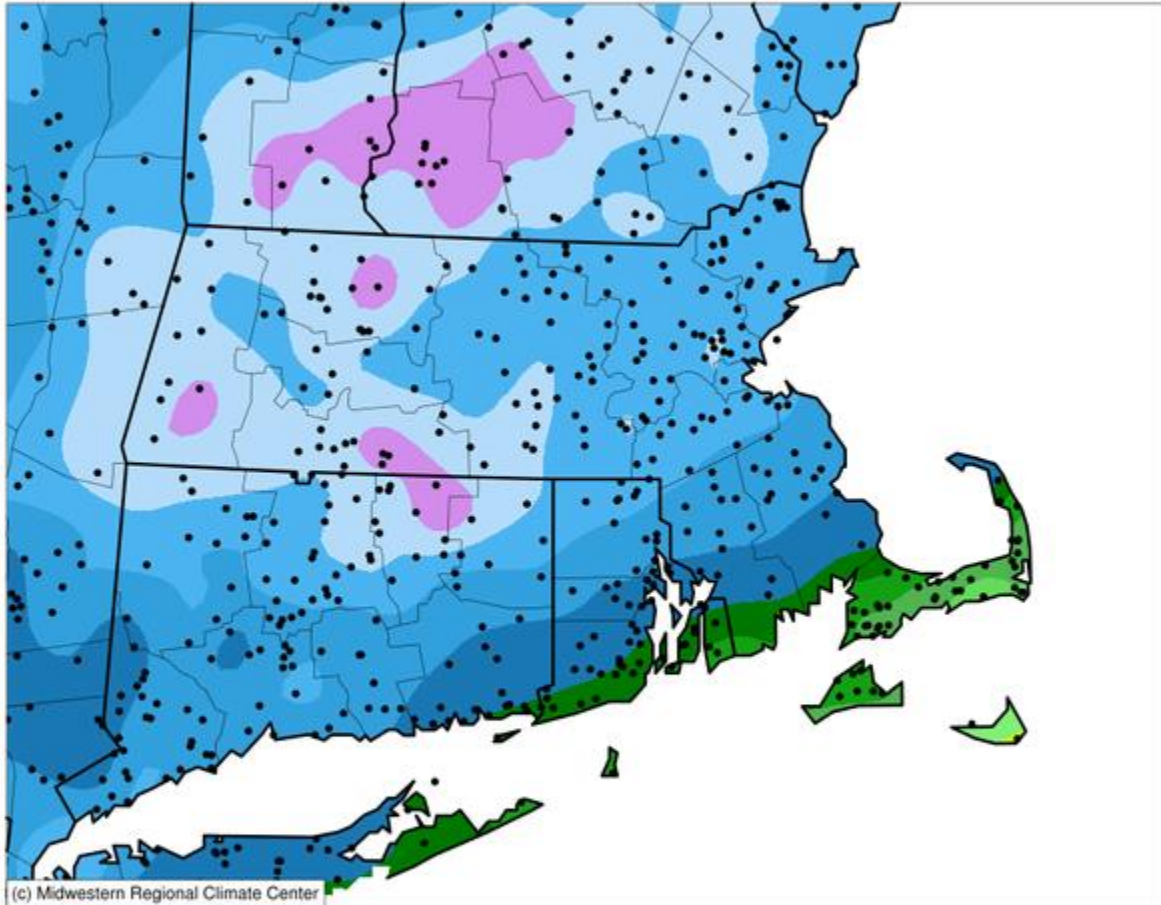
| | | | | |
|------------|--|-----------|-----------------------|--------|
| 0110000601 | Saugatuck River - Frontal Long Island Sound | CT-FR-78 | Redding 1.4 E | 10.25" |
| 0110000602 | Norwalk River - Frontal Norwalk Harbor | CT-FR-59 | New Canaan 3.8 N | 6.90" |
| 0110000602 | Norwalk River - Frontal Norwalk Harbor | CT-FR-29 | Ridgefield 1.9 SSE | 5.56" |
| 0110000602 | Norwalk River - Frontal Norwalk Harbor | CT-FR-63 | Wilton 1.9 NW | 7.19" |
| 0110000602 | Norwalk River - Frontal Norwalk Harbor | CT-FR-3 | New Canaan 1.9 ENE | 10.48" |
| 0110000602 | Norwalk River - Frontal Norwalk Harbor | CT-FR-25 | Norwalk 2.9 NNW | 10.98" |
| 0110000603 | Pequonnock River - Frontal Long Island Sound | CT-FR-60 | Fairfield 1.5 NE | 9.23" |
| 0110000603 | Pequonnock River - Frontal Long Island Sound | CT-FR-70 | Bridgeport 2.9 NNW | 8.87" |
| 0110000603 | Pequonnock River - Frontal Long Island Sound | CT-FR-67 | Trumbull 1.2 S | 9.57" |
| 0110000603 | Pequonnock River - Frontal Long Island Sound | CT-FR-26 | Stratford 0.9 W | 11.04" |
| 0110000604 | Mianus River-Rippowam River | CT-FR-39 | Stamford 4.2 S | 10.62" |
| 0110000604 | Mianus River-Rippowam River | CT-FR-83 | Darien 2.4 NW | 11.43" |
| 0110000604 | Mianus River-Rippowam River | CT-FR-35 | Darien 1.8 ENE | 10.71" |
| 02020003 | Hudson-Hoosic | | | |
| 0202000306 | Upper Hoosic River | MA-BE-21 | Cheshire 0.5 NNW | 12.34" |
| 02020006 | Middle Hudson | | | |
| 0202000603 | Wynants Kill - Hudson River | NY-AB-21 | NWS Albany | 8.28" |
| 02030203 | Long Island Sound | | | |
| 0203020300 | Long Island Sound | NY-SF-114 | Fishers Island 0.5 NE | 4.09" |
| 10190007 | Cache La Poudre | | | |
| 1019000708 | Horsetooth Reservoir - Cache La Poudre River | CO-LR-273 | FCL 2.2 NW | 0.29" |
| 19020401 | Anchorage | | | |
| 1902040107 | Rabbit Creek - Frontal Turnagain Arm | AK-AB-55 | Anchorage 7.6 SSE | 1.91" |

Here it is! July's map! Safe to say that it was above normal precipitation for many areas.

Rain does not fall the same on all.

Accumulated Precipitation (in)

July 01, 2021 to July 31, 2021



(c) Midwestern Regional Climate Center



0.01 0.1 0.5 1 1.5 2 3 4 5 7.5 10 12.5 15

Stations from the following networks used: COOP, FAA, CoCoRaHS,
Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 8/7/2021 11:15:13 AM CDT

“We do not live at the airport”

An average of 6.99” of precip in this list for July. Our list of complete stations averaged 9.45”. It’s all of those observers in western MA and northern CT, right?

The gauge matters! Use the 4” diameter gauge all year round. Our network does not use automated gauges. And we do not live at the airport!

| Location | Station ID | July 2021 Precip | July departure from normal | May-Jun-Jul Precip | 3 month departure from normal | Feb-Jul Precip | 6 month departure from normal | Aug-Jul Precip | 12 month departure from normal |
|---------------------|------------|------------------|----------------------------|--------------------|-------------------------------|----------------|-------------------------------|----------------|--------------------------------|
| White Plains NY | HPN | 4.44" | 0.73" | 13.38" | 1.30" | 21.42" | -2.57" | 39.88" | -9.47" |
| Danbury CT | DXR | 4.29" | -0.29" | 7.76" | -5.74" | 14.04" | -10.57" | 36.26" | -13.61" |
| New Haven CT | HVN | 6.82" | 2.81" | 13.22" | 1.02" | 21.82" | -2.00" | 39.23" | -7.88" |
| Meriden CT | MMK | 8.36" | 4.35" | 14.30" | 2.10" | 23.72" | -0.10" | 46.98" | -0.13" |
| Hartford CT | HFD | 11.41" | 7.41" | 16.32" | 4.44" | 23.53" | 1.55" | 44.56" | 0.96" |
| Willimantic CT | IJD | 8.31" | 4.22" | 16.35" | 4.22" | 21.96" | -2.00" | 39.02" | -9.40" |
| New London CT | GON | 4.42" | 0.65" | 10.01" | -1.72" | 19.57" | -3.59" | 38.43" | -8.06" |
| Westerly RI | WST | 4.21" | 0.42" | 9.57" | -1.69" | 16.85" | -6.88" | 36.05" | -11.34" |
| Newport RI | UUU | 3.69" | 0.24" | 10.19" | -0.60" | 19.10" | -3.89" | 39.81" | -6.52" |
| New Bedford MA | EWB | 4.63" | 1.31" | 8.34" | -2.62" | 17.42" | -6.59" | 32.95" | -15.41" |
| Hyannis MA | HYA | 2.00" | -1.24" | 7.77" | -2.52" | 16.21" | -7.08" | 33.92" | -13.77" |
| Nantucket MA | ACK | 0.97" | -2.12" | 5.89" | -4.11" | 12.46" | -8.25" | 31.86" | -12.56" |
| Marthas Vineyard MA | MVY | 1.12" | -1.79" | 7.54" | -2.00" | 17.47" | -3.67" | 32.61" | -12.55" |
| Taunton MA | TAN | 7.80" | 4.05" | 15.66" | 4.69" | 25.54" | 1.29" | 47.05" | -2.69" |
| Plymouth MA | PYM | 6.87" | 3.38" | 13.80" | 2.67" | 27.17" | 2.55" | 49.65" | 0.50" |
| Norwood MA | OWD | 9.79" | 6.01" | 17.65" | 6.24" | 27.02" | 3.72" | 48.28" | 1.22" |
| Bedford MA | BED | 11.14" | 7.42" | 20.06" | 8.57" | 28.64" | 5.80" | 48.21" | 2.50" |
| Lawrence MA | LWM | 10.53" | 6.86" | 16.72" | 5.22" | 23.50" | 1.27" | 42.62" | -0.54" |
| Fitchburg MA | FIT | 8.24" | 4.16" | 13.34" | 0.95" | 21.50" | -2.39" | 40.36" | -6.78" |
| Orange MA | ORE | 9.67" | 5.54" | 15.81" | 3.41" | 22.86" | 1.01" | 39.83" | -2.72" |
| Westfield MA | BAF | 12.82" | 8.73" | 22.35" | 9.47" | 30.54" | 6.36" | 53.73" | 5.34" |
| North Adams MA | AQW | 12.15" | 7.60" | 19.97" | 6.35" | 27.48" | 3.91" | 47.26" | 0.65" |

Rulers of the Snow

We are the Rulers of the Snow. It can be hot, humid and rainy in July, but we can do something that will define this climate: Report snow fall and snow depth on every day.

A list of 72 stations in July, plus a little extra from our friends, who reported snow fall and snow depth for all days. 654 stations across the entire network did the same, so this list equates to **11% of all stations** that did so across the entire network in July. We are the network leaders, during the summer months.

Using the mobile app? Look at the 2nd page of the mobile app, “More Details” on the Apple App, and fill in those snow values. Make a snow fall and snow depth measurement with every Daily Report, if you can safely do so, ***all year round***.

You’re in good company with Nolan at CO-LR-273!

| Station | Name | July 2021 Snowfall | Station | Name | July 2021 Snowfall |
|----------|----------------------------|--------------------|-----------|-------------------------|--------------------|
| MA-BE-21 | Cheshire 0.5 NNW | 0.0" | RI-PR-28 | North Smithfield 0.7 SE | 0.0" |
| CT-LT-22 | New Milford 5.3 SSW | 0.0" | RI-PR-33 | Greenville 0.7 NNW | 0.0" |
| CT-LT-34 | Woodbury Center 1.5 SSW | 0.0" | RI-PR-50 | Harrisville 1.2 SSE | 0.0" |
| CT-LT-44 | Winsted 1.0 WSW | 0.0" | RI-PR-51 | North Smithfield 0.6 S | 0.0" |
| CT-LT-9 | New Hartford Center 3.2 SW | 0.0" | RI-KN-14 | Greene 1.4 E | 0.0" |
| CT-FR-3 | New Canaan 1.9 ENE | 0.0" | RI-KN-2 | East Greenwich 2.3 ESE | 0.0" |
| CT-FR-9 | Brookfield 3.3 SSE | 0.0" | RI-WS-42 | Richmond 4.6 NNE | 0.0" |
| CT-NH-43 | Wallingford Center 3.3 NNW | 0.0" | RI-NW-18 | Jamestown 0.3 SSE | 0.0" |
| CT-NH-57 | New Haven 2.9 NNW | 0.0" | RI-NW-7 | Little Compton 0.6 E | 0.0" |
| MA-FR-10 | Conway 0.9 SW | 0.0" | MA-BR-3 | Norton 1.8 NNE | 0.0" |
| MA-FR-12 | Sunderland 1.3 SE | 0.0" | MA-MD-115 | Hudson 1.4 NW | 0.0" |
| MA-FR-13 | Conway 2.9 NW | 0.0" | MA-MD-119 | Watertown 1.1 W | 0.0" |
| MA-FR-17 | Buckland 1.8 ESE | 0.0" | MA-MD-12 | Acton 1.3 SW | 0.0" |
| MA-HS-45 | Westhampton 0.4 WNW | 0.0" | MA-MD-125 | Tewksbury 3.6 SSE | 0.0" |
| MA-HS-48 | Easthampton 1.0 E | 0.0" | MA-MD-126 | Melrose 0.5 NE | 0.0" |
| MA-HD-28 | Westfield 2.8 SE | 0.0" | MA-MD-47 | West Townsend 0.5 W | 0.0" |
| MA-HD-30 | Hampden 2.0 NW | 0.0" | MA-MD-51 | Maynard 0.7 ESE | 0.0" |
| CT-HR-22 | East Hartford 1.3 E | 0.0" | MA-MD-55 | Holliston 0.7 W | 0.0" |
| CT-TL-2 | Staffordville 0.4 NNW | 0.0" | MA-ES-12 | Boxford 2.4 S | 0.0" |

| | | | | | |
|----------|-----------------------|------|-----------|-----------------------|------|
| CT-TL-27 | Willington 2.7 SE | 0.0" | MA-ES-41 | Danvers 0.8 ESE | 0.0" |
| CT-MD-21 | Killingworth 2.6 ESE | 0.0" | MA-ES-48 | Andover 0.6 E | 0.0" |
| CT-MD-23 | Higganum 0.7 N | 0.0" | MA-ES-58 | Middleton 1.4 SSW | 0.0" |
| CT-MD-33 | Middletown 0.3 SE | 0.0" | MA-NF-11 | Millis 2.0 SW | 0.0" |
| MA-WR-41 | Auburn 2.6 SW | 0.0" | MA-NF-54 | Quincy 1.2 W | 0.0" |
| MA-WR-44 | Westminster 0.6 WSW | 0.0" | MA-NF-64 | Medway 2.1 W | 0.0" |
| MA-WR-54 | Barre 1.4 NNE | 0.0" | MA-PL-60 | Abington 1.7 ESE | 0.0" |
| MA-WR-69 | Northbridge 1.7 WNW | 0.0" | MA-BA-2 | Falmouth 3.1 NNW | 0.0" |
| MA-WR-75 | Warren 2.4 WSW | 0.0" | MA-BA-51 | Orleans 3.0 S | 0.0" |
| MA-WR-8 | Fitchburg 1.6 SSW | 0.0" | MA-BA-57 | Falmouth 5.7 N | 0.0" |
| MA-WR-88 | Leicester 2.5 WSW | 0.0" | MA-BA-72 | Yarmouth 2.0 S | 0.0" |
| CT-WN-10 | South Windham 1.3 NNE | 0.0" | MA-BA-76 | Barnstable 0.7 NE | 0.0" |
| CT-WN-26 | Danielson 3.2 ESE | 0.0" | MA-BA-77 | South Dennis 1.0 NW | 0.0" |
| CT-NL-10 | Norwich 2.5 NNE | 0.0" | MA-DK-22 | Edgartown 1.3 WNW | 0.0" |
| CT-NL-19 | Mystic 0.9 W | 0.0" | NY-SF-114 | Fishers Island 0.5 NE | 0.0" |
| CT-NL-21 | Griswold 0.9 N | 0.0" | CO-LR-273 | FCL 2.2 NW | 0.0" |
| CT-NL-29 | East Lyme 0.5 SW | 0.0" | AK-AB-55 | Anchorage 7.6 SSE | 0.0" |
| CT-NL-40 | Pawcatuck 1.8 SSE | 0.0" | | | |
| CT-NL-46 | Mystic 3.4 NW | 0.0" | | | |
| CT-NL-6 | New London 1.0 NNW | 0.0" | | | |

July 2021 as a calendar. Bright magenta for the highest number of reports. Green for the lowest number of reports.

474 Reports per Day was our reporting average for July 2021. 519 reports for a day is our single day record set on May 27th of this year.

July 2021

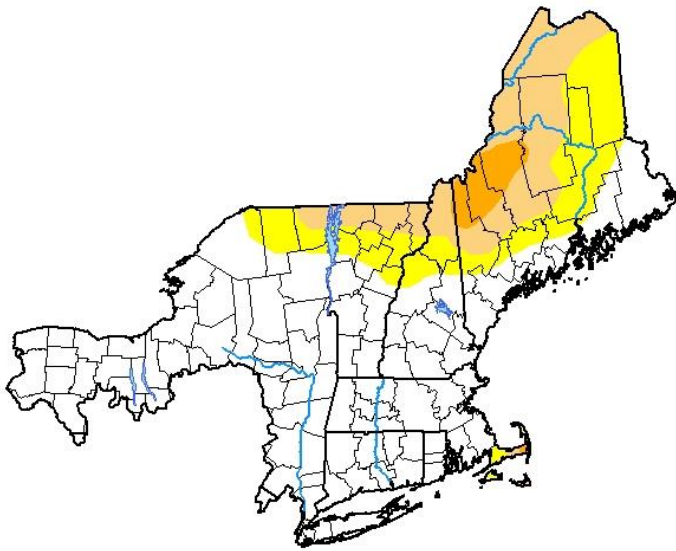
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | | | 1 505 | 2 505 | 3 489 |
| 4 479 | 5 459 | 6 461 | 7 494 | 8 508 | 9 515 | 10 504 |
| 11 450 | 12 494 | 13 473 | 14 474 | 15 469 | 16 451 | 17 469 |
| 18 477 | 19 473 | 20 477 | 21 461 | 22 450 | 23 447 | 24 457 |
| 25 470 | 26 470 | 27 460 | 28 490 | 29 454 | 30 487 | 31 424 |

When it comes to assessing drought, having all these CoCoRaHS observers leaves no doubt!

Please continue to report the conditions where you are. Strive to be a “Consistent Station” by submitting over 20 Condition Monitoring Reports in a 52-week period.

Every drop counts and zeros do too!

U.S. Drought Monitor Northeast RFC



August 24, 2021
(Released Thursday, Aug. 26, 2021)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | None | D0 | D1 | D2 | D3 | D4 |
|--|-------|-------|-------|-------|------|------|
| Current | 66.22 | 16.04 | 14.71 | 3.02 | 0.00 | 0.00 |
| Last Week <i>08-17-2021</i> | 66.22 | 16.04 | 14.79 | 2.94 | 0.00 | 0.00 |
| 3 Months Ago <i>05-25-2021</i> | 44.63 | 49.80 | 5.57 | 0.00 | 0.00 | 0.00 |
| Start of Calendar Year <i>12-29-2020</i> | 67.52 | 25.33 | 7.15 | 0.00 | 0.00 | 0.00 |
| Start of Water Year <i>09-29-2020</i> | 5.17 | 22.41 | 24.46 | 40.30 | 7.66 | 0.00 |
| One Year Ago <i>08-25-2020</i> | 15.30 | 27.12 | 38.48 | 19.10 | 0.00 | 0.00 |

Intensity:

- None
- 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. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Curtis Riganti
National Drought Mitigation Center



droughtmonitor.unl.edu

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

Wrap up

August 28 is a day etched in recent tropical cyclone history, for me anyway. Year 2005, Hurricane Katrina devastated the New Orleans area. Year 2011, Hurricane Irene came scraping up the east coast to our locale.

Different than text and graphics on a slide show, [read this story map about Hurricane Irene](#), prepared by members of the Albany and Boston Forecast Offices.

As you see Irene's storm track map, this adage is relevant again when it comes to tropical cyclones for our locale, "If it's in the Bahamas, it's your business!" Cyclones in The Bahamas are often a starting point to effect our locale.

Thursday September 7 is next in our series of WxTalk Webinars, "***Derechos: Nature's Wall of Wind***" Fresh from our experience with Henri, we must all give the wind its due respect. Derechos are not exclusively Midwest occurrences. Our locale came close over Labor Day Weekend, September 7, 1998, and from Ontario to the Adirondacks experienced devastation July 14-15, 1995. Recently, October 7, 2020 saw a derecho impact Central New York to the Cape and the Islands.

Register or view the recorded webinar and learn about the devastation that straight-line winds can make.

Thank you for all that you do for CoCoRaHS, whether with the rains of July, the storms named Fred or Henri, the present day, and in the days to come.