

# The WE Eye

A Southern New England  
Cooperative Weather Observer Newsletter



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## WxCODER & IV-ROCS

Users of WxCoder need to use the web address [www.wxcoder.org](http://www.wxcoder.org) rather than the old address [www.acis.dri.edu/wxcoder](http://www.acis.dri.edu/wxcoder).

If you ever encounter problems with WxCoder or IV-ROCS please let us know. Chances are that if you are having problems with WxCoder or IV-ROCS, others are as well. In order to get a quick fix, we need to know when there are issues.

## COOP PAGE

A Coop Page has been launched on Taunton's National Weather Service web site thanks to our Information Technology Officer, Jim Notchey. To access the Coop Page go to:

[www.weather.gov/boston](http://www.weather.gov/boston)

On the left hand side of the website, look for a yellow highlight titled "Office Programs." Under Office Programs, look for "Coop Program." By clicking on Coop Program, you will be led to some informative links. You will notice that we are now posting current and past copies of *The Weather Eye*!

## CoCoRaHS and CWOP

What is CoCoRaHS you wonder? It is an acronym for Community Collaborative Rain, Hail and Snow Network. For more information you can check out this website:

[www.cocorahs.org](http://www.cocorahs.org)

What is CWOP you wonder? CWOP is also an acronym which stands for Citizens Weather Observing Program. More information about CWOP can be found at:

[www.wxqa.com](http://www.wxqa.com)

The CoCoRaHS and CWOP networks are a mesonet of observations that complement existing observations by filling in gaps in the data network.

As a Cooperative Weather Observer, if you report your daily observation to our office, your observation gets ingested into our computer systems. CoCoRaHS observations also get ingested into our computer systems, whereas CWOP observations do not. We want to avoid redundancy in observations from the same location getting into our

computer systems. In order to do this we need to identify where there may be overlaps; therefore if you are a CoCoRaHS observer or plan to become one, please let us know by contacting Bill Simpson. Bill is the program leader for CoCoRaHS in our office.

If you are a CWOP observer or plan to become one, please contact Kim Buttrick. Kim would appreciate knowing which Coop Observers are part of this program.

**B91 HONORABLE MENTIONS**

September 2009:

In September 2009 we had a 2 day period with heavy rains. On September 11<sup>th</sup> and 12<sup>th</sup> Southeast Massachusetts and Southern Rhode Island received reports of over 2 inches of rain. Our coop station in East Wareham, MA received **7.42** inches of rain and our coop station in Hingham, MA reported **4.82** inches from this event.

Other reports received from the upper part of Cape Cod (near the Cape Cod canal) were: **6.00** inches from a Skywarn Amateur Radio observer in Bourne; **5.86** inches from an ASOS (Automated Surface Observing System) on Otis Air National Guard Base; and **3.75** inches from a CoCoRaHS observer in Sandwich.

The heavy rains as listed above prompted a Flash Flood Warning for Western Barnstable and Eastern Plymouth counties on the evening of Saturday, September 12, 2009.

February 2010:

At the end of February 2010, an upper level low pressure area remained nearly stationary

over our region for nearly 6 days. As the upper level low spiraled overhead, it wrapped surface low pressure systems around our region. During this unsettled weather period from February 23<sup>rd</sup> to February 28<sup>th</sup>, Southern New England experienced numerous weather hazards, such as heavy wet snow, high wind, heavy rain, street flooding, river flooding and coastal flooding.

Looking over your B91s, the end of February revealed significant amounts of precipitation, whether from plain rain, melted snow or a combination of both. Here are some 6 day totals (Feb 23-28) from select coop sites who reported 4 inches or more of precipitation:

|                         |      |
|-------------------------|------|
| Haverhill, MA           | 5.68 |
| Groveland, MA           | 5.54 |
| Marlow, NH              | 5.53 |
| Maynard, MA             | 5.46 |
| Edward MacDowell Lake   | 5.44 |
| Reading, MA             | 5.33 |
| Worthington, MA         | 5.33 |
| Ashburnham, MA          | 5.09 |
| Kingston, RI            | 5.00 |
| East Milford, NH        | 4.90 |
| Hudson, NH              | 4.80 |
| Massabesic Lake, NH     | 4.80 |
| Woonsocket, RI          | 4.70 |
| Franklin, MA            | 4.68 |
| Westfield, MA           | 4.66 |
| Lowell, MA              | 4.64 |
| Granville Dam, MA       | 4.55 |
| Otter Brook Lake, NH    | 4.53 |
| Hampton, CT             | 4.52 |
| Newburyport, MA         | 4.51 |
| Middleton, MA           | 4.43 |
| Tiverton, RI            | 4.41 |
| Milford, MA             | 4.38 |
| Walpole, MA             | 4.26 |
| Northbridge, MA         | 4.10 |
| Surry Mountain Lake, NH | 4.03 |



**WINTER ROARS IN LIKE A LION**  
**- for South Coastal New England**

The Winter Solstice, or the astronomical beginning of winter in the Northern Hemisphere, occurred on December 21, 2009. To herald in the winter solstice, how appropriate to have blizzard conditions across much of Southern New England on Sunday, December 20.

A Noreaster type storm began early Saturday evening December 19<sup>th</sup> along south coastal New England and was at its most intense state between Midnight and 8 am Sunday morning the 20<sup>th</sup>. There were reports of thunder and snowfall rates exceeding one inch per hour along with strong gusty north to northeast winds.

Coastal southeast New England received the brunt of the storm with amounts tapering to almost nil in the northwest fringe of our forecast area, where one could say winter meowed in like a kitten! Snow ended from west to east during the late morning and afternoon of Sunday the 20<sup>th</sup>.

Snowfall amounts around 20 inches were common across Rhode Island, Northeast Connecticut and Southeast Massachusetts (except outer Cape Cod and the islands).

To view a Public Information Statement from this storm and other winter storms go to:

<http://www.erh.noaa.gov/box/pnsevents/wxeventsCalendar.php>

**MARCH MADNESS & a 1-2-3 PUNCH**

A major Noreaster affected our region March 13-15, 2010 dumping significant rainfall amounts which caused major

flooding in many of our communities. The flood damage was so widespread and damaging that Governor Deval Patrick declared a State of Emergency for the Commonwealth of Massachusetts while Governor Donald Carcieri declared the same for the state of Rhode Island!

After the mid March heavy rains, our region was doused by 2 more excessive rain events, one on March 22-24 piggybacked by another on March 29-31 – thus the 1-2-3 punch and resultant March madness. The hardest hit areas were Rhode Island and Eastern Massachusetts. The water table was running high due to the mid month heavy rains, thus the additional heavy rains during the later half of March, caused rivers to go into flood yet again and in most cases record flood. These floods of record were not just 100 year floods but more like 500 year floods! By the end of March, the flooding was so widespread, devastating and dangerous that for the 2<sup>nd</sup> time in the month of March, the Governors of Massachusetts and Rhode Island declared States of Emergencies for their respective states. In response to the heavy rains of March, the U.S. Department of Homeland Security's Federal Emergency Management Agency announced Disaster Declarations for all of Rhode Island and Eastern Massachusetts (except Cape Cod and the islands) – the hardest hit flood areas. Our region even got a special visit by President Barack Obama on April 1, 2010 when he visited the Massachusetts Emergency Management Agency bunker in Framingham, MA.

To get a sense of the amount of rain reported by you - our Cooperative Weather Observers, a table follows listing Coop sites and the rainfall reported for the 3 excessive rain events. The last column shows the Coop site's monthly precipitation total for March 2010.

## MARCH 2010 PRECIPITATION

*Measured in hundredths of a inch and includes melted and liquid precipitation*

|  | <u>13<sup>th</sup>-15<sup>th</sup></u> | <u>22<sup>nd</sup>-24<sup>th</sup></u> | <u>29<sup>th</sup>-31<sup>st</sup></u> | <u>Monthly Total</u> |
|--|--|--|--|----------------------|
| <b><u>Connecticut</u> (Hartford, Tolland and Windham Counties)</b> |  |  |  |                      |
| Burlington   | 3.20                                   | 1.69                                   | 3.47                                   | 8.82                 |
| Hampton  | 3.02                                   | 2.67                                   | <b>6.14</b>                            | 12.17                |
| Shuttle Meadow Reservoir   | 2.78                                   | 1.80                                   | 4.55                                   | 9.78                 |
| Staffordville  | 2.53                                   | 1.50                                   | 3.96                                   | 8.27                 |
| Storrs   | 2.77                                   | 1.68                                   | 4.91                                   | 9.62                 |
| West Thompson Lake   | <b>4.29</b>                            | <b>2.87</b>                            | 5.12                                   | <b>12.66</b>         |

|   | <u>13<sup>th</sup>-15<sup>th</sup></u> | <u>22<sup>nd</sup>-24<sup>th</sup></u> | <u>29<sup>th</sup>-31<sup>st</sup></u> | <u>Monthly Total</u> |
|---|--|--|--|----------------------|
| <b><u>Massachusetts</u> (except Berkshire County)</b> |  |  |  |                      |
| Amherst   | 1.09                                   | 1.55                                   | 2.79                                   | 5.78                 |
| Ashburnham  | 5.16                                   | 1.72                                   | 3.99                                   | 11.32                |
| Ashburnham North                                      | 5.17                                   | 1.58                                   | 3.92                                   | 11.33                |
| Ashfield  | 2.57                                   | 1.34                                   | 3.64                                   | 7.95                 |
| Barre Falls Dam                                       | 3.49                                   | 1.42                                   | 3.07                                   | 8.39                 |
| Belchertown   | 1.36                                   | 1.40                                   | 2.91                                   | 6.06                 |
| Beverly   | 6.74                                   | 2.46                                   | 5.32                                   | 15.71                |
| Birch Hill Dam  | 3.52                                   | 1.42                                   | 2.96                                   | 8.48                 |
| Blue Hill   | 9.41                                   | 2.65                                   | 5.64                                   | 18.81                |
| Bridgewater   | 7.27                                   | 2.71                                   | 6.49                                   | 17.81                |
| Brockton  | 8.97                                   | 2.65                                   | 5.21                                   | 17.84                |
| Buffumville Lake                                      | 4.59                                   | 2.26                                   | 4.35                                   | 11.55                |
| Chatham   | 2.18                                   | 2.17                                   | 1.09                                   | 7.94                 |
| East Brimfield Lake                                   | 2.13                                   | 1.86                                   | 3.68                                   | 7.86                 |
| East Sandwich   | 4.75                                   | 2.73                                   | 3.20                                   | 12.71                |
| East Wareham  | 5.37                                   | 2.57                                   | 4.18                                   | 13.52                |
| Edgartown   | 3.24                                   | 2.10                                   | 2.07                                   | 8.65                 |
| Foxboro   | 6.48                                   | 2.52                                   | 6.07                                   | 15.62                |
| Franklin  | 5.57                                   | 2.41                                   | 5.66                                   | 14.57                |
| Granville Dam   | 3.15                                   | 1.78                                   | 3.87                                   | 9.19                 |
| Greenfield  | 0.91                                   | 1.59                                   | 2.79                                   | 5.71                 |
| Groveland   | <b>10.47</b>                           | 2.12                                   | 5.70                                   | 18.92                |
| Hardwick  | 2.58                                   | 1.34                                   | 3.14                                   | 7.33                 |
| Haverhill   | 10.06                                  | 2.11                                   | 5.46                                   | 17.83                |
| Hingham   | 8.37                                   | <b>2.81</b>                            | 5.20                                   | 17.49                |

|                   |      |      |             |              |
|-------------------|------|------|-------------|--------------|
| Hyannis           | 2.68 | 2.29 | 2.03        | 9.40         |
| Jamaica Plain     | 8.95 | 2.36 | 5.46        | 17.44        |
| Lawrence          | 4.66 | 1.77 | 4.64        | 11.77        |
| Leverett          | 1.06 | 1.50 | 2.58        | 5.61         |
| Lowell            | 5.82 | 2.14 | 4.90        | 13.72        |
| Marblehead        | 7.18 | 2.36 | 5.63        | 16.50        |
| Maynard           | 6.55 | 2.13 | 4.79        | 14.89        |
| Middleboro        | 6.42 | 2.71 | <b>7.42</b> | 18.39        |
| Middleton         | 9.26 | 2.52 | 6.65        | <b>19.19</b> |
| Milford           | 5.71 | 2.32 | 5.14        | 13.74        |
| Natick            | 4.75 | 1.95 | 4.81        | 12.03        |
| Newburyport       | 8.37 | 2.58 | 5.75        | 17.64        |
| Northbridge       | 4.52 | 2.58 | 4.94        | 12.44        |
| Norton            | 6.78 | 2.35 | 6.74        | 16.57        |
| Plymouth-Kingston | 4.77 | 2.61 | 4.88        | 14.32        |
| Reading           | 8.18 | 2.02 | 6.36        | 17.28        |
| Rochester         | 5.46 | 2.69 | 6.49        | 16.11        |
| Southbridge       | 2.78 | 1.94 | 4.42        | 9.44         |
| Sunderland        | 1.20 | 1.55 | 2.88        | 6.15         |
| Tully Lake        | 1.45 | 1.21 | 2.93        | 6.00         |
| Walpole           | 7.61 | 2.47 | 5.89        | 16.75        |
| Ware              | 1.64 | 1.20 | 3.06        | 6.17         |
| Westfield         | 2.23 | 1.75 | 4.14        | 8.64         |
| Worthington       | 2.94 | 1.73 | 3.23        | 8.28         |

**13<sup>th</sup>-15<sup>th</sup>**

**22<sup>nd</sup>-24<sup>th</sup>**

**29<sup>th</sup>-31<sup>st</sup>**

**Monthly Total**

***New Hampshire (Cheshire and Hillsborough Counties)***

|                       |             |             |             |              |
|-----------------------|-------------|-------------|-------------|--------------|
| East Milford          | 4.02        | 1.81        | 3.76        | 9.90         |
| Edward MacDowell Lake | 5.15        | 1.61        | 3.90        | 10.91        |
| Fitzwilliam           | 2.66        | 1.43        | 3.07        | 7.71         |
| Francestown           | 4.30        | 1.75        | 3.60        | 9.95         |
| Greenville            | <b>5.46</b> | 1.80        | <b>4.38</b> | <b>12.49</b> |
| Hudson                | 4.63        | 1.80        | 3.83        | 10.62        |
| Keene                 | 1.34        | 1.64        | 2.12        | 5.39         |
| Marlow                | 3.26        | 1.40        | 2.56        | 7.65         |
| Massabesic Lake       | 4.33        | 1.51        | 3.28        | 9.62         |
| Nashua                | 4.65        | <b>1.95</b> | 3.85        | 10.99        |
| Otter Brook Lake      | 2.61        | 1.35        | 1.96        | 6.19         |
| Surry Mountain Lake   | 1.41        | 1.46        | 1.99        | 5.06         |
| Walpole               | 0.76        | 1.45        | 1.75        | 4.08         |

|                            | <u>13<sup>th</sup>-15<sup>th</sup></u> | <u>22<sup>nd</sup>-24<sup>th</sup></u> | <u>29<sup>th</sup>-31<sup>st</sup></u> | <u>Monthly Total</u> |
|----------------------------|--|--|--|----------------------|
| <b><u>Rhode Island</u></b> |  |  |  |                      |
| Kingston                   | 4.71                                   | <b>4.84</b>                            | <b>9.32</b>                            | <b>19.37</b>         |
| North Foster               | <b>5.71</b>                            | 2.62                                   | 7.29                                   | 16.35                |
| Tiverton                   | 5.41                                   | 3.52                                   | 7.63                                   | 17.03                |
| Woonsocket                 | 4.16                                   | 2.54                                   | 6.23                                   | 13.62                |

## **SIGNIFICANT EVENTS and YOU**

During the 1-2-3 punch of March, our office received numerous 2 and even 3-day storm total rainfall reports from Skywarn spotters, Skywarn Amateur Radio observers, CoCoRaHS observers, Emergency Managers, media and the general public. During the unprecedented rain events of March, in addition to the daily observations received from Coop Observers, some Coop Observers also relayed their 2 and 3-day storm total rainfall to us. We ask that more of you do the same, namely during significant weather episodes that bring our region heavy snowfall or heavy rainfall.

What constitutes heavy rainfall or heavy snowfall? Storm total rainfall that amounts to 2.00 inches or more we consider significant. Storm total snowfall that amounts to 2.0 inches or more is also considered significant.

During extreme weather, we can add up your daily reports; however during these types of events our office becomes extremely busy, making simple math nearly impossible! So, if you can help us out and relay your storm totals to us it would be much appreciated!

You can relay storm total reports soon after the event ends, either by calling our office or entering this data through our website.

Phone numbers that Coop Observers can use to access our operations are:

800-243-1686

800-330-1147

or

508-823-2262

If you are phone shy and would prefer to enter storm totals through our website, go to:

[www.weather.gov/boston](http://www.weather.gov/boston)

On the left hand column, look for the yellow highlight "Current Hazards," then click on "Send Us Your Report." The rest should be simple enough; however if you have any questions please ask us! When filling out the on-line report form, make sure you enter your Coop ID number so we can identify you as a Cooperative Weather Observer!

Storm total reports that you relay to our office will more than likely appear in our Public Information Statements. These public statements are posted on our website and are used by emergency managers, media, plow operators, insurance companies and perhaps even a Governor or our President, to name but a few.

## **SPRING HAS SPRUNG**

The Vernal Equinox, or the astronomical beginning of spring in the Northern Hemisphere, occurred on March 20, 2010 at 1:32 pm EDT. The Vernal Equinox is one of two times during the year when the sun lies directly over the equator. The other time is during the Autumnal Equinox which will occur on September 22 of this year at 11:09 pm EDT. The Vernal and Autumnal Equinoxes allow for approximately equal amounts of daylight and darkness across the earth. The word equinox is derived from the Latin word meaning equal.

After March 20, the sun will continue its migration north of the equator until the sun reaches its northern most extent (the Tropic of Cancer – 23 degrees 26 minutes north latitude) on June 21<sup>st</sup>, the Summer Solstice.

The Summer Solstice will occur this year on June 21 at 7:28 am EDT.

Spring brings maple sugaring, a return of leaves to the trees, spring flowers and by late April and early May the growing season begins. Spring also signals the time to replace the innertube and funnel to your rain gauge!

### **NEW HAIL SIZE THRESHOLD**

For the severe weather season, the threshold criteria for hail size in a severe thunderstorm has changed from  $\frac{3}{4}$  inch or greater in diameter to 1 inch or greater in diameter. In other words the threshold hail size has changed from dime size to quarter size.

Pea =  $\frac{1}{4}$  inch  
Marble =  $\frac{1}{2}$  inch  
Dime =  $\frac{3}{4}$  inch  
Penny =  $\frac{7}{8}$  inch  
Quarter = 1 inch  
Half Dollar = 1  $\frac{1}{4}$  inches  
Ping Pong Ball = 1  $\frac{1}{2}$  inches  
Golf Ball = 1  $\frac{3}{4}$  inches  
Tennis Ball = 2  $\frac{1}{2}$  inches  
Baseball = 2  $\frac{3}{4}$  inches

If you observe hail falling from a thunderstorm and the hail measures 1 inch or greater in diameter (the size of a quarter or greater), the thunderstorm is considered severe! Another threshold that determines the severity of a thunderstorm is a wind gust of 58 mph (50 Kts) or greater.

If you encounter a severe thunderstorm, it is best to seek shelter immediately.

### **MONTHLY B91 DEADLINE**

If you mail, email or fax your monthly B91 form to our office, please send by the 5<sup>th</sup> of

the following month. If you can send your form earlier than that, then please do so!

If you submit your B91 form through WxCoder, please close out your form by the 5<sup>th</sup> of the following month. If you can close out your form earlier than that, then please do so! An end of month close-out in WxCoder is the digital equivalent of reviewing Weather Service forms, putting them in a sealed envelope and dropping it in the mail. No further changes will be accepted after a month is closed; however if you need to make changes after you have closed out your account, please let Kim Buttrick know. As the local administrator of WxCoder, she can unlock your account.

Getting your forms to our office in a timely manner helps speed up the quality control process. The quicker your forms are quality checked, the quicker they will be forwarded to the National Climatic Data Center for processing, archiving and publishing! For those Coop Observers who are already submitting their forms swiftly, thank you very much!

### **WE WELCOME**

We have a new Cooperative Weather Observing station at Granville Dam, MA. Ed Pratt, who works for the City of Westfield Water Department, is the Reservoir Caretaker at Granville Dam. Ed has been taking daily precipitation measurements at Granville Dam for nearly 20 years for the city of Westfield and for the state of Massachusetts. Ed's observations will now go from local to national as his observations will now become part of the nation's climate data record!





**WE RECOGNIZE**

Thanks to all of you for your dedication to and interest in weather data collection. Your daily efforts are much appreciated. When it comes to weather, you are the eyes and ears of your community. Look ahead to view a number of fellow Coop Observers that have received length of service (LOS) awards over the past 6 months.

Those not pictured but who received awards are as follows:

**Jeff Mangum, Project Manager, U.S. Army Corps of Engineers – Tully Lake, MA**

-15 year Length of Service award

**John Asseng, Park Ranger, U.S. Army Corps of Engineers – Surry Mountain Lake, NH**

-15 year Length of Service award

**Jason Robinson, Park Ranger, U.S. Army Corps of Engineers – West Thompson Lake, CT**

-5 year Certificate of Recognition

**Michelle Dwyer, Park Ranger, U.S. Army Corps of Engineers – West Thompson Lake, CT**

-5 year Certificate of Recognition



William E. Houghton (right) of Walpole, NH receives a 30 year Length of Service award with his wife Nancy Ann by his side. Bill and Nancy Ann celebrated their 50<sup>th</sup> wedding anniversary June 21, 2008!



The U.S. Army Corps of Engineers – Surry Mountain Lake, NH receives an Honored Institution Award for 50 years of service. Pictured from left to right: Christie Baker – Park Ranger, receiving a 10 year Length of Service award, Jim Lewis – Project Manager holding the 50 year Honored Institution Award and Eric Chouinard – Park Ranger.



Zach Koziol, Park Ranger with the U.S. Army Corps of Engineers at Birch Hill Dam, MA, receives a Certificate of Recognition for 5 years of dedication as a Cooperative Weather Observer. In addition, Birch Hill Dam received a 50 Year Honored Institution Award! Birch Hill Dam is located in Royalston, MA.



Robert Melancon (left), Plant Operator at the New Bedford Water Department – Quittacas Water Treatment Plant in Massachusetts, receives a 20 year Length of Service award from Kim Buttrick.



The crew above work at the Greenfield Water Pollution Control Facility in Greenfield, MA. Pictured from left to right: Cliff Bassett – Water Facilities Supervisor, Paul Zilinski – Plant Operator, Todd Little – Plant Operator and Mark Holley – Operations Supervisor. Cliff and Mark receive 20 year Length of Service awards.



Alan Mackiewicz (Al Mack for short), Head Caretaker at Shuttle Meadow Reservoir, receives a 15 year Length of Service award. Al works for the City of New Britain Board of Water Commissioners located in Connecticut. Do you think Al is a Red Sox fan? ☺



Donald F. Ives (right) gets recognized by Kim Buttrick for 15 years of service as a Cooperative Weather Observer in Worthington, MA.



Jason C. Tremblay, Project Manager with the U.S. Army Corps of Engineers at Edward MacDowell Lake, NH, receives a Certificate of Recognition for 5 years of dedication as a Cooperative Weather Observer. Edward MacDowell Lake is located in Peterborough, NH.



Cathy Dunlap, Park Ranger with the U.S. Army Corps of Engineers at West Thompson Lake, CT, receives a Certificate of Recognition for 5 years of dedication as a Cooperative Weather Observer. West Thompson Lake is located in North Grosvenordale, CT.



**Thanks to all of You!**

**CONTACT INFORMATION**

Have questions? In need of equipment or supplies?  
Equipment not working? Please contact Kim or Bill.

National Weather Service  
445 Myles Standish Blvd.  
Taunton, MA 02780

508-823-2262 or 508-823-1983 or  
800-243-1686  
Fax: 508-823-2321

Email: [Kimberly.Buttrick@noaa.gov](mailto:Kimberly.Buttrick@noaa.gov)

[William.Simpson@noaa.gov](mailto:William.Simpson@noaa.gov)

Web: [www.weather.gov/boston](http://www.weather.gov/boston)