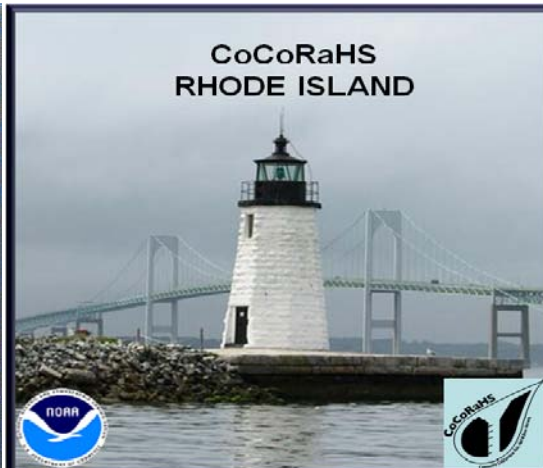


## Southern New England CoCoRaHS

**CoCoRaHS  
CONNECTICUT**

**JULY 2009**



# SUMMER 2009 NEWSLETTER

# **WELCOME!!!**

This is the first newsletter for CoCoRaHS observers in southern New England. Rhode Island was the first state in New England to join the network in April, 2008. Massachusetts became the next state in March, 2009. Connecticut will join CoCoRaHS in July.

So far, daily observations from our Massachusetts and Rhode Island observers have been excellent! We have a total of 57 observers signed up in the Bay State and 39 observers in the Ocean State. We hope to see similar numbers from Connecticut. Many observers have been reporting daily, even when no precipitation fell. Keep it up! ***Even Trace amounts and “zeroes” are important to CoCoRaHS!***

## **HOW IS MY DATA BEING USED???**

Daily and monthly rainfall totals are being used in a variety of ways, from National Weather Service offices to State Climatologists, Water Resources representatives, and the general public.

At the National Weather Service (NWS) in Taunton, for example, forecasters often look at 24-hour rainfall totals each day. Monthly totals are used to assess drought conditions in Massachusetts and Rhode Island, and have become an important supplement to NWS Co-Operative Observers and airport weather stations. In fact, your CoCoRaHS observations “fill in the gaps” and provide added detail that would otherwise not be available. A great example of how intense rainfall reports are used follows in the next section.

# CoCoRAHS IN ACTION:




## JULY, 2008 RHODE ISLAND FLASH FLOOD

On July 23, 2008, significant urban flash flooding affected Warwick and Providence, Rhode Island, as thunderstorms with torrential rain moved through the area. Our observer in Hope Valley, Harold Ward (RI-WS-1) gave the NWS Taunton office a “heads up” with an intense rainfall report at 3:15 pm:

### Rhode Island Intense Precipitation Reports

Display Date:

Showing 3 Records.

| Date ^    | Time    | Station Number | Station Name          | Duration Minutes | New Precip .in | Total Precip | New Snow Depth | Total Snow Depth | Flooding | State | County     | View  |
|-----------|---------|----------------|-----------------------|------------------|----------------|--------------|----------------|------------------|----------|-------|------------|---|
| 7/23/2008 | 3:15 PM | RI-WS-1        | Hope Valley 3.7 S     | 15               | 1.00           | NA           | NA             | NA               | No       | RI    | Washington |    |
| 7/23/2008 | 3:43 PM | RI-WS-1        | Hope Valley 3.7 S     | 30               | NA             | 1.36         | NA             | NA               | No       | RI    | Washington |    |
| 7/23/2008 | 4:00 PM | RI-PR-2        | Cumberland Hill 0.7 E | 30               | 1.69           | 1.69         | 0.0            | 0.0              | Minor    | RI    | Providence |  |

The rainfall total of 1.00” in 15 minutes alerted forecasters to the potential for urban flash flooding as the storms approached greater Providence. His next report at 3:43 pm of 1.36 inches in 30 minutes increased the forecasters’ confidence that flash flooding was likely. Knowing rainfall rates of 3 inches per hour typically cause significant flooding in urban areas, forecasters issued the following Flash Flood Warning at 3:51 pm:

BULLETIN - EAS ACTIVATION REQUESTED  
FLASH FLOOD WARNING  
NATIONAL WEATHER SERVICE TAUNTON MA  
351 PM EDT WED JUL 23 2008

THE NATIONAL WEATHER SERVICE IN TAUNTON HAS ISSUED A

\* FLASH FLOOD WARNING FOR...  
BRISTOL COUNTY IN RHODE ISLAND...  
THIS INCLUDES THE CITIES OF...BRISTOL...BARRINGTON...  
EASTERN KENT COUNTY IN RHODE ISLAND...  
THIS INCLUDES THE CITY OF WARWICK...  
NORTHWESTERN NEWPORT COUNTY IN RHODE ISLAND...  
SOUTHEASTERN PROVIDENCE COUNTY IN RHODE ISLAND...  
THIS INCLUDES THE CITY OF PROVIDENCE...  
EXTREME NORTHEASTERN WASHINGTON COUNTY IN RHODE ISLAND...  
BRISTOL COUNTY IN SOUTHEAST MASSACHUSETTS...  
THIS INCLUDES THE CITIES OF...TAUNTON...NORTH ATTLEBOROUGH...FALL  
RIVER...ATTLEBOROUGH...

\* UNTIL 515 PM EDT

\* AT 346 PM EDT...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED  
FLASH FLOODING WAS LIKELY TO OCCUR FROM THUNDERSTORMS WITH  
TORRENTIAL RAINFALL. A SPOTTER IN HOPE VALLEY REPORTED NEARLY ONE  
AND A HALF INCHES OF RAIN IN 30 MINUTES.

THESE STORMS WERE ALONG A LINE FROM SMITHFIELD TO EAST  
GREENWICH...MOVING NORTHEAST AT 20 MPH.

\* OTHER LOCATIONS IN THE WARNING INCLUDE BUT ARE NOT LIMITED TO  
JOHNSTON...NORTH PROVIDENCE...LINCOLN...EAST PROVIDENCE...CENTRAL  
FALLS...PAWTUCKET...SEEKONK...WARREN...TIVERTON...REHOBOTH...  
SWANSEA...SOMERSET...NORTON...DIGHTON...MANSFIELD...BERKLEY...  
FREETOWN...EASTON AND RAYNHAM

EXCESSIVE RUNOFF FROM HEAVY RAIN WILL CAUSE RAPID FLOODING OF SMALL  
CREEKS AND STREAMS. FLOODING OF URBAN AREAS...INCLUDING ROADS AND  
UNDERPASSES IS ALSO EXPECTED.

SIGNIFICANT ROADWAY FLOODING IS EXPECTED IN WARWICK AND PROVIDENCE...  
AS WELL AS IN SOUTHEAST MASSACHUSETTS.

DO NOT DRIVE INTO FLOODED AREAS. TURN AROUND...DONT DROWN!

So what happened? The thunderstorms dropped 4 to 5 inches of rain in the Providence area and caused significant urban flash flooding (see the reports listed below). Several roads were impassable and some people had to be rescued from their cars. Thanks to the Intense Rainfall report received at the NWS Taunton office, warnings were issued ahead of time and gave people advanced warning.

|  |             |                               |    |                                  |
|--|-------------|-------------------------------|----|----------------------------------|
| 0405 PM<br>07/23/2008  | FLASH FLOOD | WARWICK<br>KENT               | RI | 41.70N 71.42W<br>AMATEUR RADIO   |
| 2.5 FEET OF WATER FLOODING ROUTE 2.  |             |                               |    |                                  |
| 0410 PM<br>07/23/2008  | FLASH FLOOD | PROVIDENCE<br>PROVIDENCE      | RI | 41.82N 71.42W<br>AMATEUR RADIO   |
| ROUTE 10 IMPASSABLE DUE TO FLOODING.   |             |                               |    |                                  |
| 0410 PM<br>07/23/2008  | FLASH FLOOD | EAST PROVIDENCE<br>PROVIDENCE | RI | 41.80N 71.36W<br>TRAINED SPOTTER |
| 4.5 INCHES OF RAIN IN 45 MINUTES MEASURED IN RUMFORD SECTION OF EAST PROVIDENCE. WATER 2 FEET DEEP AT ALEXANDER AVE AND NORTH BROADWAY. TIME APPROXIMATE.      |             |                               |    |                                  |
| 0410 PM<br>07/23/2008  | FLASH FLOOD | WARWICK<br>KENT               | RI | 41.70N 71.42W<br>NWS EMPLOYEE    |
| CARS REPORTED TO BE FLOATING AT THE INTERSECTION OF ROUTE 5 AND NEW LONDON AVENUE. RADAR RAINFALL RATES OF 8 TO 10 INCHES PER HOUR WERE INDICATED AT THE TIME. |             |                               |    |                                  |
| 0414 PM<br>07/23/2008  | FLASH FLOOD | WEST WARWICK<br>KENT          | RI | 41.70N 71.52W<br>AMATEUR RADIO   |
| FIRE DEPARTMENT HQ WAS FLOODED.  |             |                               |    |                                  |
| 0420 PM<br>07/23/2008  | FLASH FLOOD | CRANSTON<br>PROVIDENCE        | RI | 41.77N 71.48W<br>AMATEUR RADIO   |
| PONTIAC AVENUE CLOSED DUE TO FLOODING.   |             |                               |    |                                  |

So, the message here is – don't be afraid to send in an Intense Rain or Hail report anytime during the day! They really do help NWS forecasters!!!

# YOUR CoCoRAHS STATE COORDINATORS

## CONNECTICUT



**ALAN DUNHAM** is the Observation Program Leader at NWS Taunton, and has oversight of several programs in the office, including ASOS (Automated Surface Observing Stations), Co-Operative Observers, and supplemental observational networks (mesonets, spotter networks, river and stream gauges). Alan also serves as Hydrologic Program Leader and is responsible for establishing flood stages for new river and stream gauges in southern New England.

## MASSACHUSETTS



**JOE DELLICARPINI** is the Science and Operations Officer at NWS Taunton, and is in charge of the office's training and research programs,

as well as incorporating the latest technology into forecast operations. He is a graduate of the State University of New York at Oswego, and has also worked at NWS offices in Binghamton, NY and the Northeast River Forecast Center in Taunton.

## **RHODE ISLAND**



**BILL SIMPSON** is a Hydro Meteorological Technician at NWS Taunton, and has over 30 years of weather experience, dating back to the mid 1970s when he enlisted in the Air Force as a Weather Observer. After 8 years in the military, Bill separated from active duty and joined the NWS at Chatham, MA. While at Chatham, Bill was an upper air weather sounding and radar specialist. In the mid 1990s, Bill transferred to Taunton where he now manages the upper air site at Chatham. He is also a key player in the Cooperative Observing Program.

As you can see, the NWS has become heavily involved in the CoCoRaHS program. We have already seen the benefits of incorporating CoCoRaHS data into Taunton's forecast operations. The data set coming from this growing volunteer force has been extremely helpful

to the forecast process. The use of this data will ultimately provide a great public service to the community – The Community Collaborative Rain, Hail and Snow Network – CoCoRaHS.

## **NEXT NEWSLETTER**

Look for the next Southern New England CoCoRaHS Newsletter this fall. We'll include information to get you ready for the winter, including how to take care of your rain gauge, measuring snow, and obtaining snow water equivalents. In the meantime, if you have any questions you'd like answered, email your State Coordinator and we'll get back to you!

