

## Looking Back on the March 2010 Floods

Is five years after an event time enough to consider it historical?

The floods in Rhode Island at the end of March 2010 certainly were called historic in the sense that their size and destructive power had not been seen since record-keeping began in the 1870s. People were displaced from homes and businesses. The Governor requested and the President declared the State a disaster area. The Federal Emergency Management Agency came to Rhode Island and opened Disaster Recovery Centers across the State. At the peak of the disaster, FEMA had 190 inspectors in the field to handle almost 26 thousand claims, evaluate damage, and direct almost \$32 million for housing assistance and repairs. The Small Business Association received over 24 thousand applications and approved \$42,921,200 in loans to homeowners, renters, nonprofit organizations and businesses. Damage to sewage treatment plants and industrial parks caused environmental harm to Narragansett Bay.

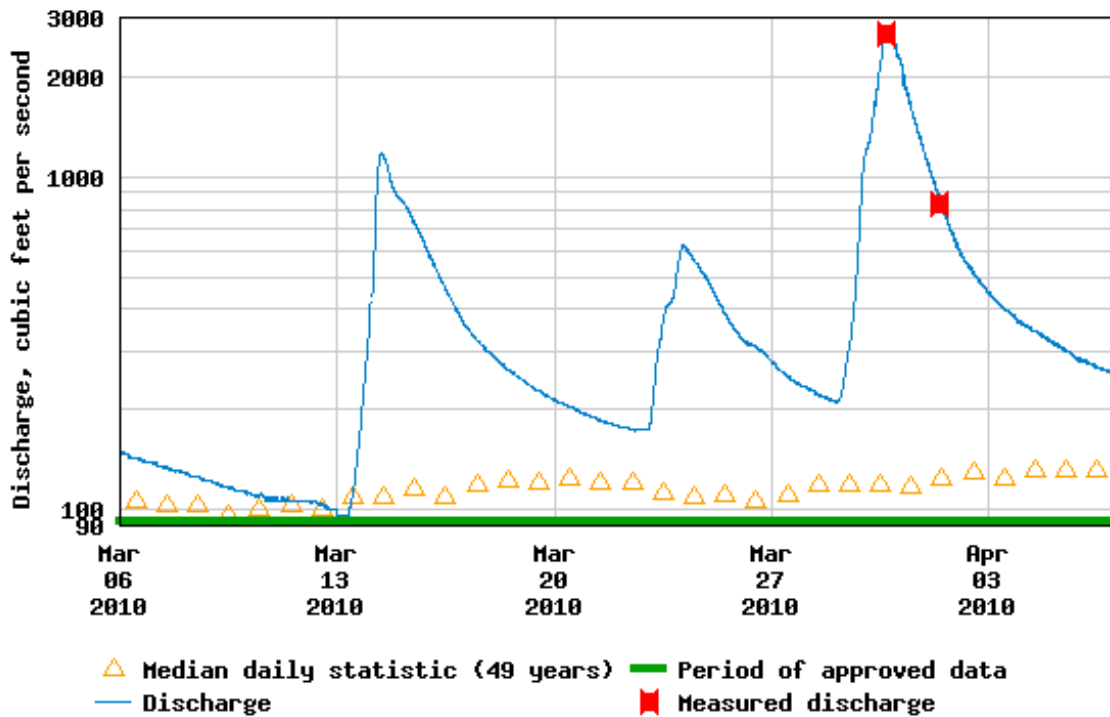
According to the *State of Rhode Island Action Plan: 2010 Floods* that was published in 2013 by the Rhode Island Office of Housing and Community Development:

1. The disaster was caused by exceptionally heavy spring rainfall along the North East coast when 16.32 inches of rain accumulated in Rhode Island during March, and more than 8.6 inches of rain fell over the three day period of March 28-30th.
2. The flooding itself led to in excess of \$200 million dollars of damage to Rhode Island infrastructure, homes, and businesses.
3. Multiple utility substations were flooded and more than 10,000 households lost power for multi-day periods.
4. Sections of forty major arterial roads and highways were closed, with many incurring significant structural damage; sections of I-95 were shutdown for three days, restricting north-south movement in the State. Numerous bridges, dams and wastewater treatment plants were damaged to the point of requiring replacement or major structural repairs.
5. The Blackstone, Pawtuxet, Woonasquatucket, Pawcatuck and other rivers reached record heights and overflowed.

The United States Geological Survey maintains stream flow gages at numerous locations throughout the State to monitor water levels. Usually the information is important during drought conditions. This chart for the station on the Wood River where it crosses under Route 165 shows how the three storms rapidly increased the flow. Typical flows in March average slightly more than 100 cubic feet per second. These storms raised it ultimately to more than 25 times that amount. Unlike the current season with temperatures well below freezing, March 2010 had been unusually warm and precipitation was liquid instead of frozen. Soils reached saturation so additional water ran off quickly and rapid movement meant the danger of erosion was high.



### USGS 01117800 WOOD RIVER NEAR ARCADIA, RI



Exeter escaped much of the major damage seen elsewhere in the State, mostly because of our rural landscape and minimal development. Hardest hit were the roads that washed out because of overflowing streams or excessive erosion along shoulders and drainage gullies.



Undercut road way, Route 165. Photo courtesy of Sheila Reynolds-Boothroyd.



Parris Brook overflowing Old Voluntown Road. Photo courtesy of Sheila Reynolds-Boothroyd.





Culvert replacement on Ten Rod Road where it crosses the Queens River at the Exeter Country Club.



Repairs were made over the summer that returned traffic to normal. We hardly give a thought now to those extraordinary days five years ago when the floods shut us down, but remembering our history will help us to prepare for the next set of exceptional storms that come our way.

#### Sources

Rhode Island Office of Housing and Community Development. December 2010, Revised August 2013. *State of Rhode Island Action Plan: 2010 Floods*. 43pp.

U.S. Geological Survey. National Water Information System: Web Interface. Chart acquired from [http://waterdata.usgs.gov/nwis/uv?site\\_no=01117800](http://waterdata.usgs.gov/nwis/uv?site_no=01117800).

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