

“Snowtober” Overview

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An historic fall snowstorm brought over two feet of snow to the Berkshires and Monadnocks on October 29th and 30th, 2011. Both Plainfield, MA and Jaffrey, NH recorded around 31 inches of snow, considered exceptional in mid winter and unprecedented for October. Much of the Connecticut River Valley and Worcester Hills received 12 to 20 inches of snow while the rest of interior southern New England received at least 4 inches of snow. Along the coast, damaging winds as high as 70 mph were reported on Cape Cod and the Islands and minor to moderate coastal flooding impacted east facing shorelines. The storm also presented a significant danger on the coastal waters where seas built as high as 25 feet.

Low pressure deepened rapidly as it tracked from the North Carolina coast and passed south of Nantucket. Precipitation started as snow early Saturday afternoon across the interior of southern New England, although a brief period of rain at the onset was common across the lower elevations. Rain in eastern Massachusetts and central Rhode Island mixed with and changed to snow Saturday night. A mesoscale band of heavy snow producing snowfall rates of 1 to 3 inches per hour affected northwest Connecticut, the Berkshires, Worcester Hills, and the Monadnocks for about a 12 hour period. The snow tapered off just after midnight in western New England and during the morning of October 30th near the coast.

Forecasts leading up to the storm correctly depicted the location of greatest impact. Forecast snowfall amounts, however, were too conservative. This was due to surface temperatures near freezing resulting in some melting and excessive settling of the snow, the likelihood of the precipitation starting as rain, and an understandable hesitancy of forecasters to predict snowfall that would be such an extreme anomaly from the climate record.

This presentation will describe the evolution of this historic winter storm, including analysis of numerical model data which showed the potential for a significant event several days in advance. Other data sets, including radar and satellite imagery, will be shown in order to illustrate the development of the mesoscale snow band which led to the unprecedented snowfall totals.

PRESENTER'S BIO

Joe DelliCarpini is the Science and Operations Officer at the National Weather Service in Taunton, MA. He is a native of the New York City area and received a Bachelor of Science degree in Meteorology from the State University of New York at Oswego.

His career with the National Weather Service began as a Student Trainee in Boston before going to the Binghamton, NY Weather Forecast Office (WFO) as a Meteorologist Intern. He returned to southern New England in 1996 as a Hydrologic Forecaster at the Northeast River Forecast Center in Taunton, before heading back to the WFO as both a General Forecaster and Senior Forecaster.

One of Joe's interests includes aviation meteorology. He is also involved with several regional and national teams related to aviation forecasting, and assists with training at the NWS Center Weather Service Unit at the Boston Air Route Traffic Control Center in Nashua, NH.

Joe and his wife Kelly have two children, Jessica and Jason. They live in Norwood, MA.