Examining Tropical Storm Irene's Hydro-meteorological Impacts on the Northeast United States; A Northeast River Forecast Center Perspective

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Tropical cyclones are rather infrequent visitors to the Northeast United States, averaging about one landfall every decade. However, history has shown that in spite of their typical acceleration northward, a land falling tropical cyclone in the region can produce devastating inland flooding. Irene was indeed a classic New England breed of tropical cyclone, leaving in her wake, eight to fifteen inches of rain and tremendous widespread flooding throughout eastern New York, Vermont, northern New Hampshire and the western portions of Connecticut and Massachusetts. This presentation will examine the classic nature of Irene's approach, the significance of the antecedent conditions preceding her arrival, and the devastating flooding she produced throughout much of eastern New York and western New England.

PRESENTER'S BIO

David Vallee is the Hydrologist-in-Charge of the National Weather Service's Northeast River Forecast Center. The center provides detailed water resource forecasting information to National Weather Service Forecast Offices and the hundreds of federal, state and local water resource entities throughout the Northeast and New York. Under David's leadership, the Northeast River Forecast Center is one of four acceleration centers to have transitioned operations to the new Community Hydrologic Prediction System which has revolutionized the center's forecasting and modeling operations. His center has also led a regional initiative to introduce a new short-range

ensemble river forecasting methodology to assist with Decision Support Services.

Prior to becoming the Hydrologist-in-Charge, David served as Science and Operations Officer, and Hurricane Program Leader at the NWS Weather Forecast Office, in Taunton, MA from 2001 through 2006, and as Senior Service Hydrologist from 1993 through 2000. He began his National Weather Service Career as an Intern at T.F. Green State Airport. David has extensive experience leading hydrometeorological forecast and warning operations and directing weather research and training programs. David has conducted research on a variety of topics including flooding, severe weather forecasting and radar detection, and orographically enhanced heavy rainfall in southern New England.

David has served as the NWS lead investigator with the State University of New York, at Albany, on a multi-year project addressing Land Falling Tropical Cyclones in the Northeastern United States. This multi-faceted project was aimed at improving the forecasting of heavy precipitation associated with these land falling tropical cyclones, as well as developing a better understanding the mechanisms which lead to the recurvature and rapid acceleration of tropical cyclones as they approach the Northeast. David is most known locally for his outreach and education work on the behavior of New England Hurricanes, including many appearances on local radio and T.V. networks as well as the Weather Channel, the History Channel and the Discovery Channel.

David is a graduate of Lyndon State College. He is a life long resident of the Rhode Island, living in the northeast part of Cumberland*,* with his wife ***and two sets of twins!*** He considers it a tremendous privilege to be serving the people of the very region he calls home.