RFC/WFO SUPPORT OF A POTENTIAL DAM FAILURE: A REVIEW OF THE WHITTENTON POND DAM CRISIS OF 2005

David R. Vallee Hydrologist-in-Charge / NOAA/NWS Northeast River Forecast Center And Nicole M. Belk Senior Service Hydrologist / NOAA/NWS Weather Forecast Office, Taunton

A series of heavy rain events struck southeast New England during the week of October 8-16, 2005. These events had their origins in the tropics, associated with the remnants of one depression and Tropical Storm Tammy. The 40 square mile watershed above the Whittenton Dam, in southeastern Massachusetts experienced over 11.5 inches of rain during the week of October 8-16, 2005 with nearly 7.5 inches of that total falling in a 6 hour period on the 18th. This rainfall led to widespread flooding and placed historical stress on the Whittenton Dam, located on the Mill River, in Taunton, MA.

The Whittenton Dam was a very old timber crib structure sitting on a rock and concrete pedestal that had a hydraulic height of nearly 12 feet. The structure experienced a near catastrophic failure due to the near 100 year-24 hour rainfall in the 17th-18th that was preceded by a 3 to 4 inches of rain earlier in the week. The City of Taunton, quick to recognize the severity of this life-threatening situation, ordered evacuations along the Mill River, closed schools and businesses and organized federal, state and local resources to craft a plan to alleviate the pressure behind the dam. Their efforts produced a national success story, saving the city from what could have been a devastating flash flood.

This presentation will review the hydro-meteorological conditions preceding the event and will discuss the operational support the Northeast River Forecast Center and the Weather Forecast Office in Taunton provided the city of Taunton.