



## New Hampshire Learns Key Findings of Flood Impact Mitigation Study



URS Corporation recently completed work on a study that was undertaken to investigate causes of recent flooding in south-central and southeastern New Hampshire. An independent review panel offered insight into the results of the study, which will help N.H. citizens plan for flood events and allow federal, state and local officials to mitigate the impacts of future flooding.

The results of the study were presented by the project team during a public meeting in Rochester, N.H. on June 25, 2008. The independent review panel concurred with the study team's recommendations. On the review panel were Tom Sullivan, P.E., of Gomez and Sullivan (Chair), Will Thomas,

PH, of Michael Baker Corporation, and Brig. General Gerry Galloway (ret.), P.E., PhD, of the University of Maryland.

URS Corporation is the Federal Emergency Management Agency's (FEMA) contractor under the agency's Hazard Mitigation Technical Assistance Program (HMTAP). Subcontractors Watershed Concepts (a division of HSMM-AECOM) and **Riverside Technology, inc.** performed the field investigation and technical analyses.

The HMTAP task was developed in response to concerns voiced to local and state officials, including, New Hampshire Governor John Lynch, following severe flooding which took place in south-central and southeastern New Hampshire in May, 2006 and April, 2007, in an effort to learn about factors that could have exacerbated the flooding.

The study was performed to establish how such severe flooding occurred, whether the flooding was aggravated by manmade causes, such as dam operation and floodplain management, and what could be done in the future to mitigate flooding impacts.

Both the 2006 and 2007 flooding events displaced citizens, destroyed or damaged housing and infrastructures, disrupted transportation and emergency services, and caused severe economic impacts to the region. Each event resulted in a presidentially-declared disaster for New Hampshire.

The study focused on basins and dams within the Salmon Falls, Suncook, Piscataquog, and Souhegan Rivers, but its key findings and recommendations are generally applicable to river basins in south-central and southeastern New Hampshire.

The study examined the operations of 24 dams in the four-basin study area and found that only one dam aggravated the flooding. The report states that "in the May 2006 event, operations of the Milton Three Ponds Dam were performed to protect downstream dams in danger of failing. This action aggravated flooding in the lake shore upstream of the dam."

The study found that several actions could be taken to mitigate future flood damages. It highlights three critical recommendations intended to help reduce local flooding. These recommendations include measures to:

- *Improve Floodplain Management*
- *Improve Flood Forecasting*
- *Take a Watershed Approach to Flood Operations*

Other important recommendations include actions to:

- *Apply Vermont's Fluvial Erosion Hazard Methodology in New Hampshire*
- *Determine benefits and costs of certain potential structural improvements*
- *Make sure flashboard operations are safe*