Subject: Re: size of the x-year storm
From: Phillip J Zarriello <pzarriel@usgs.gov>
Date: 10/7/2011 9:34 AM
To: Gardner C Bent <gbent@usgs.gov>
CC: jane@thebeatnews.org

Jane,

Thank you for your interests in updating equations for estimating the magnitude of flood flows in Massachusetts. Currently Massachusetts has the dubious distinction of having the oldest flood-flow equations in the Nation (or will have as the outdated RI equations are currently being updated in cooperation with FEMA). The data used in Wandle's equations is the period of streamgage record up through 1975 as the equation were published in an earlier report in 1976. The 1981 report was a revision of the 1976 report using a new regression method at that time. Hence, the data used in the development of the Mass. equations is over 35 years out of date and as you know, a lot has happened during that time.

In addition to updating out dated flood-flow equations with new data and techniques we also need to closely examine trends in the frequency of large floods and how this may change in time. The recent state report on "The Changing Climate and Its Impact" (http://www.mass.gov/Eoeea/docs/eea/energy/cca/eea_climate_adaptation_report.pdf) recognizes the potential adverse affects of climate change on flood flows, but as you recognize, a good understanding of the current conditions is essential for planning and mitigation of flood risks and to set a bench mark for how things change in the future.

Gardner pointed out, the USGS has been trying to develop a cooperative program with the state to address this need for some time. In light of the recent state report, I think your concerns might be best expressed to Secretary Richard Sullivan of the Executive Office of Energy and Environmental Affairs. Through voices like yourself, the call for a comprehensive program to address this critical need might come to fruition.

Best regards,

-Phil