

ROLLA WATER RESOURCES LUNCHEON

Thursday, September 24, 2009 (Note NEW Date!!)
11:45 a.m. - 1:00 p.m.

LUNCHEON LOCATION:
U.S. GEOLOGICAL SURVEY
1400 INDEPENDENCE ROAD
ROLLA, MO 65401

The 100-Year Flood: What Is It and Why Have We Had Two In Fifteen Years?

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Floods have a major impact on society and the environment. Since 1952, approximately 1,158 of 1,826 (63%) Federal disaster declarations were due directly to flooding, with an additional 292 due to hurricanes which had associated flooding. While public officials understand the damages and community trauma that can result from floods, the language scientists and engineers employ to characterize floods often serve as a source of confusion to both public officials and the public they serve. Overcoming such confusion is a key to both obtaining public support for better preparation for floods, and ultimately, reducing risks and damages.

Flooding is a stochastic hydrologic process, meaning that the process has a random nature and is governed by probability. The flood magnitude (or severity) is linked to the probability that a flood of that magnitude might be experienced or exceeded in a given period, with that period typically being a year. For example, engineers and scientists would talk about the annual exceedence probability of experiencing a particular magnitude flood. If the probability of an event of a particular magnitude is known, then the risk that event poses, as well as the risk of repeat occurrences of the event, can be assessed. Public confusion comes about when flood risk is expressed in terms of the periodicity or recurrence interval, as opposed to probability. For example, the 1-percent annual exceedence probability (AEP) flood has come to be known as the "100-year flood". In the mind of a majority of the public, the term implies an exceedence only once every hundred years. The USGS and other Federal agencies are making a highly deliberate movement toward probabilistic language (1-percent AEP flood) and away from recurrence interval language (100-year flood).

This talk will cover numerous aspects of the analysis, reporting, and use of flood frequency information along with discussion of selected flood science activities in the USGS.

---Next Luncheon---

Thursday, November 5, 2009 11:45 AM – 1:00 PM

"Development of Dam Breach Inundation Studies Using Advanced Remote Sensing—LiDAR for Emergency Action Planning"

Ryan Stack and Michael Weller
Missouri DNR Water Resources Center

Park in the USGS south lot (free parking) and enter the visitor entrance in the southwest corner of the building. For those of you attending the meeting from outside Rolla, you can find directions to the USGS Rolla Center at: <http://mcmweb.er.usgs.gov/>. The Rolla Water Resources Luncheon is a Brown Bag Lunch event. For those unfamiliar with the area and disinclined to brown bag it, you can find takeout options offerings among the Rolla restaurants found at: <http://mcmweb.er.usgs.gov/rollamap09ext.pdf>.