

Rolla Water Resources Luncheon Seminar

Thursday, October 25, 2012

11:45 a.m. - 1:00 p.m.

U.S. Geological Survey

1400 Independence Road

Rolla, MO 65401

Underwater Mapping and Imagery—Defying Death on the Mexican Border and Other Cool stuff we've seen and done with a Multibeam Echo Sounder

Richard Huizinga and Joe Richards

Hydrologists

U.S. Geological Survey

Rolla, MO

Bathymetric surveys using a multibeam echo sounder mapping system have been conducted on several lakes, and near bridges on the Missouri and Mississippi Rivers to obtain lake or channel bed elevations, determine the presence of scour holes near bridge piers in rivers, and to document conditions and changes of the bed with time. Dunes, ripples, scour holes, and turbulence features are evident on the bed in the high-resolution imagery obtained from the multibeam echo sounder mapping system, along with occasional, more exotic discoveries. Periodic surveys at several of the sites provide additional insight into the geomorphology at different flow conditions at a given site, and document the effects of construction at one of the sites. Sometimes, the survey just occurs in an “exotic” location...

Biography: Rick is a project hydrologist with the U.S. Geological Survey, and has over 20 years' experience with surface-water hydraulics and bridge scour. He has been working with multibeam echo sounders since 2008. He received his B.S. in Civil Engineering from the Missouri University of Science and Technology (Missouri S&T, formerly the University of Missouri-Rolla) in 1991, and his M.S. in Hydrology and Hydraulics from Missouri S&T in 1993. He is a member of the American Society of Civil Engineers, and is a registered Professional Engineer in Missouri and Kansas.

Joe is a project hydrologist with the U.S. Geological Survey, and has over 22 years' experience with groundwater and surface water data collection and analysis, spatial/temporal data manipulation, analysis, and presentation using geographic information system software, and groundwater modeling. He has been involved in bathymetric mapping since 2000. He received his B.S. in Geology and Mathematics from Missouri State University (formerly Southwest Missouri State University in Springfield) in 1987, and his M.S. in Hydrogeology from the University of Missouri-Columbia in 1990. He is a registered Professional Geologist in Missouri.

---Next Luncheon---

NEED A SPEAKER!!!!!!

Thursday, November 15, 2012, 11:45 AM – 1:00 PM

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://mcmcweb.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 take-out options offerings among the Rolla restaurants found at: <http://mcmcweb.er.usgs.gov/rollamap09ext.pdf>