



Friday, February 28<sup>th</sup>, 2014 at 3:00pm  
E1419 Lafferre Hall

## Management challenges due to geomorphic instability and climate change in Ozark river systems

**Professor Robert T. Pavlowsky**

**Director, Ozarks Environmental and Water Resources Institute**

**Director, Geospatial Sciences Program**

**Missouri State University**

Flood magnitude and frequency are used to explain river channel changes caused by land use disturbance and/or climate change in watersheds. Less attention has been given to climate-driven changes in flood regime over the past 50 years. Results from investigations of historical and recent (1950 – 2012) variability of flood magnitude and frequency on rivers within the Ozark Plateaus region of southern Missouri include: flood magnitudes ranging from 1-year to 100-year recurrence intervals exhibited a >20% increase in bankfull discharge since 1950. The 100-year flood record indicated an increase in large floods over the past 20 years. Implications of these flood trends include: ecological, water quality and infrastructure issues caused by excessive gravel bar sedimentation and related channel instability in the Ozarks may be explained by climate-change influence.



Dr. Pavlowsky received his B.S. in Natural Resource Management and M.S. in Geography from Rutgers University in New Jersey. He earned his Ph.D. in geography at the University of Wisconsin-Madison in the areas of fluvial geomorphology, environmental geochemistry, and water quality. He has been at Missouri State since 1997 and recent projects focus on stream restoration, channel stability, water quality trends, human impacts, sedimentation patterns, and sediment contamination in Ozark streams and lakes.

P.E. PDH Record of Attendance: \_\_\_\_\_ Date: \_\_\_\_\_

MU Certification by: \_\_\_\_\_ Title: \_\_\_\_\_

Signature of Certifying Representative: \_\_\_\_\_

*For information: John Bowders ([bowders@missouri.edu](mailto:bowders@missouri.edu) or 573-882-8351). 1 PDH credit awarded for attending this seminar*