



Department of Civil and Environmental Engineering

# DISTINGUISHED SEMINAR

## Managing the Physical, Chemical and Ecological Challenges of Sediments



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Ph.D., P.E.**

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Distinguished  
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**Thursday  
March 21,  
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103 Churchill  
Hall  
12:00 PM

*This seminar is free and  
open to the public.*

**Abstract:** Contaminated sediments are increasingly recognized as an important component of the ecology of rivers, lakes and harbors. Human actions and historical engineering efforts to control floods and water flows have disrupted many of the natural processes and hinder the normal function of these systems. They are also the ultimate repository of many of the contaminants we release into the environment and the legacy of this contamination now poses a substantial barrier to recovery of those systems. Effective assessment and management requires the application of engineering principles to understand the natural sediment environment and how to effectively intervene in the most efficient, effective and least disruptive manner. The presentation will summarize some recent activities by our group to more effectively assess and manage surface waters and sediment challenges. The emphasis will be on the ecological challenges in the lower Yangtze of the Three Gorges Project in central China and the assessment and management of legacy contamination by hydrophobic

organics and mercury in the rivers of the United States.

**About:** Dr. Reible is the Donovan Maddox Distinguished Engineering Chair and Paul Whitfield Horn Professor at Texas Tech University. He holds a PhD in Chemical Engineering from the California Institute of Technology. He is a Board Certified Environmental Engineer, a Professional Engineer (LA) and in 2005 was elected to the National Academy of Engineering for the “development of widely used approaches for the management of contaminated sediments”. His research is focused on the fate, transport and management of contaminants in the environment and the sustainable management of water resources. He has authored or edited six books and more than 190 journal articles and book chapters. Research support as a principal investigator has totaled more than \$35 million. He is currently the lead scientist on the Chinese 111 project on Eco-Fluvial Dynamics examining the ecological and environmental challenges in the middle and lower Yangtze River.