“FROM HEADWATER STREAMS TO LARGE, RIVERINE WETLANDS: A LOOK INTO THE SCIENCE & ENGINEERING SOLUTIONS IN MANAGING OUR FRESHWATER RESOURCES”

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ABSTRACT

Across the US and globe, our freshwater resources are under pressure in response to a combination of our growing population and climate change. Thus, environmental engineers and scientists have a pivotal role in working towards long-term sustainable solutions. In this talk, I’ll share with you some case studies that illustrate my group’s research across the water quantity and quality space. We'll cover a range of spatial scales, from hydrologic interactions at the pore and reach scale to continental studies using data analytics. Along the way, I’ll share some newer approaches to examine spatial variability of water quality through watersheds, including a recent study on a river-reservoir-river system in southeast Virginia. The talk will end with some thoughts on how we can collectively move forward to positively impact our water resources.

BIOGRAPHY

Durelle “Scotty” Scott was raised in Northeastern Pennsylvania, where he spent much time playing in a local stream and catching crayfish. These early experiences led him to the water resources field and civil engineering. He received his B.S. in Civil Engineering from the University of Colorado in 1996, and his M.S. and Ph.D. in 1997 and 2001 in Civil and Environmental Engineering at the University of Colorado. During his graduate studies, Dr. Scott was in the Institute of Arctic and Alpine Research institute, and spent 1 ½ years as a visiting student in the Parson's lab at MIT. His Ph.D research focussed on the metal cycling within acid mine drainage impacted streams. Following graduate school, Dr. Scott was a research fellow at Landcare Research in New Zealand where he studied riverine carbon export, and a NRC postdoctoral fellow from 2003 - 2005 at the USGS. From 2005-2008, Dr. Scott was an assistant professor at the University of Nebraska, and moved to the Biological Systems Engineering Department at Virginia Tech in 2008. He currently resides in Blacksburg, Virginia with his family.