

“Correlation of in-stream turbidity with the arrangement of catchment roads using precision analytics”

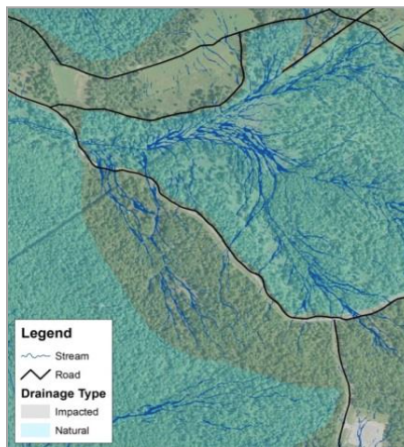
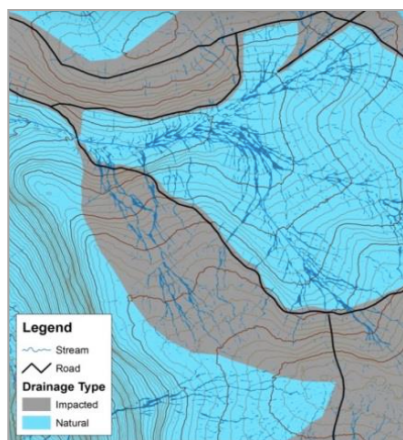
Instructor: James P. Shallenberger, Manager, Monitoring & Protection, Susquehanna River Basin Commission

Time and Location: Friday, Nov. 11, 2016, 2:00 to 4:00 p.m., Rm. 209 Academic West Building

Cost: Free and open to the public, consultants, government agencies, faculty, and students.

Reserve a space: Contact the Bucknell Center for Sustainability and the Environment by email: bcse@bucknell.edu or by phone: 570.577.2437 or 570.577.1490.

Description: This work session will introduce participants to processes and findings that emerged from a rigorous, multi-faceted NFWF-funded project to evaluate unconventional natural gas (UNG) production activities in the SusQ River Basin for possible effects on surface water resources. The session will summarize methods to link landscape digital modeling and continuous in-stream monitoring (CIM) data for turbidity according to mode-of-action processes in 15 case study watersheds distributed across 5 Pennsylvania ecoregions and gradients of land use and UNG activity. The case study findings demonstrate the disproportionate (in terms of surface area) role that road networks impart on stream turbidity. Moreover, the session will include results of a stakeholder survey and regulatory guidance review, both of which illustrate widespread knowledge/perception gaps exist between the importance of short-term Erosion and Sedimentation Control (ESC) measures and long-term influence of post-construction Best Management Practices (BMP) in terms of overall effects on aquatic resource integrity.



Mr. Shallenberger joined SRBC as Manager of the Monitoring & Protection Program in 2014 following more than 20 years as a consulting geoscientist, ecologist, and project manager. Early in his consulting career, Mr. Shallenberger worked extensively on hazardous site investigation and cleanup activities; however, after approximately 2000, Mr. Shallenberger's consulting activities largely were focused on ecological risk assessment; water supply planning and management; and, habitat restoration and mitigation.

The Monitoring & Protection Program emphasizes SRBC's substantial capabilities and commitment to water quality and biotic integrity science. The M&P Program is small, yet consists of a skilled and devoted group of scientists and environmental technicians who accomplish a tremendous amount of data collection and analytics throughout the Susquehanna River Basin.

