

## **Water Quality Monitoring and Models for Decision Making**

*Jodi L. Ryder<sup>1</sup>, Emily J. Summers<sup>2</sup>, Kathleen E. Inman<sup>1</sup>*

<sup>1</sup>Environmental Laboratory: US Army Engineer Research and Development Center, Vicksburg, MS, USA

<sup>2</sup>Department of Oceanography, Texas A&M University, College Station, TX USA

Water quality modeling can be a key component in understanding system changes and designing restoration approaches. But have modeling capabilities kept up with the new technologies in water quality monitoring? With a plethora of water monitoring devices available, as well as improvements in the ease of auto sampling in the field and lab, it is now possible to obtain vast quantities of water quality and other observational data. The precision and accuracy of in-field monitoring, including remote sensing, has improved as well. New communications, informatics, and automated algorithms also allow for rapid application of observational data to water resource decision making. This presentation will explore the changing water resources datascape and discuss implications for water quality modeling through the use of a numerical model sensitivity study. Potential gaps and opportunities for the next generation of water quality models to inform restoration will be discussed.

Contact Information: Jodi L. Ryder, US Army Engineer Research and Development Center, 3909 Halls Ferry RD, Vicksburg, MS, USA 39180, Phone: 601-631-1852, Email: Jodi.l.ryder@usace.army.mil