## S. Kyle McKay

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Mr. McKay is a research civil engineer with the U.S. Army Engineer Research and Development Center (ERDC) Environmental Laboratory. Prior to joining ERDC, Mr. McKay received a B.S. in Environmental Engineering from



Colorado State University where he constructed and tested physical models of hydraulic and sediment transport processes at the Engineering Research Center. He also received an M.S. from University of Illinois Urbana-Champaign in Civil Engineering where his research focused on improving discharge prediction in flooded rivers. Since joining ERDC in 2007, Mr. McKay's research has focused broadly on examining ecological effects of infrastructure projects. Some of his research projects have addressed quantifying environmental benefits of ecosystem restoration, fish passage improvement, environmental flow management, vegetation-flow interaction, and the effects of woody vegetation on levee integrity. Mr. McKay serves as the U.S. Principal Representative to the International Navigation Association working group on "Alternative Bank Protection Methods for Inland Waterways". From August 2011-2012, Mr. McKay participated in the USACE long-term training program at the University of Georgia's Odum School of Ecology, where his doctoral research focuses on managing freshwater for ecological objectives. He is stationed in Athens, Georgia to facilitate cooperative research between ERDC, the University of Georgia, and EPA Ecosystem Research Division.

## **Recent Publications**

- **McKay S.K.**, Schramski J.R., Conyngham J.N., and Fischenich J.C. 2013. Assessing upstream fish passage connectivity with network analysis. Accepted to *Ecological Applications*.
- Stone M.C., Chen L., **McKay S.K.**, Goreham J., Acharya K., Fischenich C., and Stone A.B. 2013. Bending of submerged woody riparian vegetation as a function of hydraulic flow conditions. *River Research and Applications*, 29 (2), 195-205. doi: 10.1002/rra.1592.
- McKay S.K., Batt L., Bringolf R.B., Davie S., Elkins D.A., and Hoenke K. 2013. Fish passage in Georgia: Planning for the future. 2013 Georgia Water Resources Conference, Athens, Georgia.
- McKay S.K. and Rasmussen T.C. 2013. Declaring drought for effective water management. 2013 Georgia Water Resources Conference, Athens, Georgia.
- Pruitt B.A. and **McKay S.K.** 2013. Changes in flow duration in the Appalachian Piedmont. 2013 Georgia Water Resources Conference, Athens, Georgia.
- Fischenich J.C., **McKay S.K.**, Miller S.J., Price D., Pruitt B.A., Skaggs L.L., Suedel B.C., and Tazik D. 2013. Science-based framework for environmental benefits assessment. ERDC EL TR-13-4. U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.
- McKay S.K., Linkov I., Fischenich J.C., Miller S.J., and Valverde L.J. 2012. Ecosystem restoration objectives and metrics. ERDC TN-EMRRP-EBA-16. U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.
- Schultz M.S., **McKay S.K.**, and Hales L.Z. 2012. The quantification and evolution of resilience in integrated coastal systems. ERDC TR-12-7. Flood and Coastal Storm Damage Reduction Program. U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.