

A June 2011 "Special Issue", comprising 10 papers, was published in the internationally-focused Environmental Management journal. The special issue is the capstone of the ORNL-led Biological Monitoring and Abatement Program (BMAP).

The BMAP is a highly unique 25 year long program that was designed to evaluate biological conditions and trends in waters downstream of Department of Energy (DOE) facilities. The focus of the BMAP monitoring has been on aquatic pathways from sources to biota, primarily in Oak Ridge, Tennessee. The program is characterized by consistent, long-term sampling and analysis methods in a multidisciplinary and quantitative framework. Major components of the BMAP for EFPC include testing and monitoring of invertebrate and fish toxicity, bioindicators of fish health (including fish reproduction), fish contaminant accumulation, and instream communities (including periphyton, benthic macroinvertebrate, and fish). Key parallel components of the BMAP monitoring include water chemistry sampling, data management, and use of short-term investigative studies. Each of these monitoring components are presented in detail in the Special Issue's articles, with a focus on each component's application in East Fork Poplar Creek.

Special Issue in the journal "Environmental Management":

## **Long-Term Biological Monitoring of an Impaired Stream: Implications for Environmental Management**

Peterson, MJ 2011. Introduction to the Biological Monitoring and Abatement Program <<http://www.springerlink.com/content/kw3586w040982605/>> . Environmental Management 47:6:1005-1009.

Loar, JM, AJ Stewart, and JG Smith. 2011. Twenty-Five Years of Ecological Recovery of East Fork Poplar Creek: Review of Environmental Problems and Remedial Actions <<http://www.springerlink.com/content/y6041168147u3798/>> . Environmental Management 47:6:1010-1020.

Stewart, AJ, JG Smith, and JM Loar. 2011. Long-Term Water-Quality Changes in East Fork Poplar Creek, Tennessee: Background, Trends, and Potential Biological Consequences <<http://www.springerlink.com/content/r75126k645734158/>> . Environmental Management 47:6: 1021-1032.

Greeley, MS, LA Kszos, GW Morris, JG Smith, and AJ Stewart. 2011. Role of a Comprehensive Toxicity Assessment and Monitoring Program in the Management and Ecological Recovery of a Wastewater Receiving Stream <<http://www.springerlink.com/content/a428736144131vhn/>> Environmental Management 47:6: 1033-1046.

Adams, SM and KD Ham. Application of Biochemical and Physiological Indicators for Assessing Recovery of Fish Populations in a Disturbed Stream <<http://www.springerlink.com/content/e035352n15327771/>> Environmental Management 47:6: 1047-1063

Southworth, GR, MJ Peterson, WK Roy, and TJ Mathews. 2011. Monitoring Fish Contaminant Responses to Abatement Actions: Factors that Affect Recovery <<http://www.springerlink.com/content/h436l56m566365h2/>> Environmental Management 47:6: 1064-1076

Smith JG, CC Brandt, and SW Christensen. 2011. Long-Term Benthic Macroinvertebrate Community Monitoring to Assess Pollution Abatement Effectiveness <<http://www.springerlink.com/content/b2252l74237609x8/>> Environmental Management 47:6: 1077-1095

Ryon, MG. 2011. Recovery of Fish Communities in a Warm Water Stream Following Pollution Abatement <<http://www.springerlink.com/content/a084162hn824176w/>> Environmental Management 47:6: 1096-

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Christensen, SW, CC Brandt, and MK McCracken. 2011. Importance of Data Management in a Long-Term Biological Monitoring Program <<http://www.springerlink.com/content/q3w7ph34j3w722jp/>> Environmental Management 47:6: 1112-1124

Peterson, MJ, RA Efrogmson, and SM Adams. 2011. Long-Term Biological Monitoring of an Impaired Stream: Synthesis and Environmental Management Implications <<http://www.springerlink.com/content/w1052x1865850222/>> Environmental Management 47:6: 1125-1140

