Global Change and Sustainability Center
Spring Seminar Series

"Kansas City Middle Blue River Green Infrastructure Project"

Michelle A. Simon
Chief, Urban Watershed Management Branch, NRMRL, U.S. Environmental Protection Agency

Tuesday, February 25, 2014
4:00 to 5:00 p.m.
295 FASB (Sutton Bldg.)
Abstract

In 2010, Kansas City, MO (KCMO) signed a consent degree with EPA on combined sewer overflows. The City decided to use adaptive management in order to extensively utilize green infrastructure (GI) in lieu of, and in addition to, structural controls. KCMO installed 130 GI storm control units—primarily bioretention units—in a hundred acre-pilot; the GI installation was complete in July 2012. The study also included a matched control area with similar hydrology to compare sewershed flowrates with the GI pilot flow rates. EPA’s Office of Research and Development (ORD) has already collected sewershed flow data before and after GI installation, and performed studies on land use, soil infiltration, drainage areas, and individual bioretention unit performance. For this ongoing project, ORD is in the process of comparing the actual GI performance to SWMM and WinSLAMM model results. In addition, fecal coliform, total dissolved solids, metals, and nutrient water quality are being measured at select bioretention units. This study is one of the more complete community scale before and after GI projects.

Bio

Michelle Simon is a chemical engineer serving as Branch Chief for the Urban Watershed Branch in the Water Resources and Water Supply Division of the U.S.E.P.A. In this capacity, she has drawn upon her hydraulic and hydrologic modeling and waste water system design expertise to supervise several multimillion dollar, multiyear projects, namely, aging water infrastructure projects (condition assessment, and rehabilitation); green infrastructure projects (performed in Edison, NJ; Kansas City, Mo; Louisville, KY; and Cincinnati, OH); water system response to climate change; and the SWMM/SSOAP/SUSTAIN modeling effort.