

Presenter	Christine Miller Michael Baker Engineering, Inc.
Type	oral presentation
Category	Innovative watershed and stream restoration approaches/methods
Title	<i>A Watershed Approach to Stream Assessment and Restoration in an Urban Water Supply Watershed</i>
Abstract	<p>The McDowell Creek watershed drains directly into the primary drinking water supply reservoir for the Charlotte-Mecklenburg area. The watershed, which is approximately 29 square miles in area with 93 miles of streams, has experienced rapid development in recent years. Sediment from construction sites and bank erosion has destroyed aquatic habitat in McDowell Creek, prompting the NC DWQ to label McDowell Creek as biologically impaired. Charlotte-Mecklenburg SWS is targeting this watershed and has begun work on numerous projects to improve the water quality and restore the eroded stream channels of McDowell Creek and its tributaries.</p> <p>Baker, working with Storm Water Services, has recently completed a two-phase project to conduct a detailed assessment of the streams within the watershed. The goal of the assessment was to document riparian conditions and to prioritize riparian management needs within the watershed. The assessment included BEHI analysis, NBS measurements, habitat assessments, and geomorphic assessments. A comprehensive photo log and map book summarizing the stream reaches assessed were compiled. Management recommendations for each reach prioritized by need and feasibility were documented. Assessment data was compiled into a database for use within a GIS platform. This data was used by Charlotte-Mecklenburg SWS within the McDowell Creek Watershed Management Plan. As a result of this assessment, restoration efforts for two high priority major system reaches have already been awarded funding, and restoration efforts for three high priority minor system reaches are in the initial planning stages.</p> <p>This presentation will review the innovative watershed-scale approach taken by Charlotte-Mecklenburg SWS to reduce sediment loading to the drinking water supply. By comprehensively assessing all channels within the watershed and identifying sediment hot spots, restoration efforts can now be concentrated in high priority areas first.</p>