

Tedesco, L.P., Pascual, D.L., Shrake, L.K., and Hall, B.E., 2006, A comprehensive and straightforward method for identifying and prioritizing restoration sites in Eagle Creek Watershed, IN: Rivers Institute Non-Point Source Pollution Conference, 2006 Nov.

A comprehensive and straightforward method for identifying and prioritizing restoration sites in Eagle Creek watershed, Indiana

Lenore P. Tedesco, Denise Lani Pascual, Lora K. Shrake, and Bob E. Hall

Indiana University-Purdue University, Indianapolis, Indiana

Watershed plans often fail due to planning processes that are too big and too complicated to be effective. Guidelines for watershed plans often list some 16 categories of information necessary for a successful plan. As identifying and prioritizing restoration sites are a critical piece to watershed planning, developing a simple but comprehensive tool for evaluating watersheds would help to facilitate the creation and implementation of successful watershed plans. In 2004, work on Central Indiana's Eagle Creek Watershed (11-Digit-HUC #05120201120) necessitated the development of such a tool. Confronted with historical data collections including a 1992-1996 NAWQA study, monitoring data collected by a volunteer citizens group (Eagle Creek Watershed Taskforce), on-going data collections from County Health Departments, and studies by IUPUI researchers and graduate students resulting in a large repository of water quality and land use/land cover data that had never before been consolidated or analyzed. To identify areas of concern, researchers parsed data into two broad categories: data that spoke to the level of water quality degradation and data that spoke to the level of vulnerability to on-going and future degradation. These were then used in an overall evaluation to develop priorities. This evaluation included the two categories of data sources and a Feasibility Evaluation, resulting in a simple process for identifying and prioritizing areas based on three criteria: (1) Level of Degradation; (2) Level of Vulnerability; and (3) Feasibility of Restoration. This process was used to show which subwatersheds within Eagle Creek Watershed should be targeted for restoration and remediation and allowed researchers to develop comprehensive plans to address each subwatershed's specific level of degradation and level of vulnerability to on-going and future degradation.