PLANNING BMPS FOR STREAM RESTORATION:
GET THE MOST BANG FOR YOUR BUCK

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ABSTRACT
Geographical targeting is the most efficient and cost-effective approach to watershed improvement. The Tennessee Valley Authority (TVA) develops detailed nonpoint pollutant source (NPS) inventories to identify, quantify, and prioritize contributors to environmental problems in watersheds. These land-use and land-activity GIS databases provide the means to effectively prioritize and target watershed restoration funds and, thus, achieve the greatest level of pollutant reduction for the least amount of funding. The comprehensive data — details, such as eroding road and stream banks, livestock sites, illegal dumps, and suspect septic systems — extracted from stereo photographs provides the first step in determining the cause of a pollution problem in the watershed. Data analysis transforms a dispersed, area-wide concern into a defined, site-specific problem by identifying sub-watersheds that are the greatest contributors to the pollution problem. Then, the specific sites that contribute the greatest pollutant loads in each priority sub-watershed can be determined. While providing a foundation for focusing efforts on priority impacted watersheds and identifying most-effective abatement measures for meeting TMDLs, these NPS assessments also serve as documentation of nonpoint sources to support application for water quality improvement grants and to provide the stimulus for agencies, industries, interest groups, and landowners to work toward a common goal.

Based on data from a recently completed watershed restoration project, this poster presentation will illustrate the NPS inventory and assessment process through photographs, maps, charts, and pollutant loading reports.

KEYWORDS
Nonpoint pollutant source, watershed, inventory, assessment, environmental, target, prioritize, identify, quantify, abatement, restoration, TMDL, documentation, land-use, land-activity, water quality, pollutant loadings, GIS