BEST MANAGEMENT PRACTICE (BMP) PLANNING USING THE BMP-DSS NAVIGATOR MODELING TOOL, ATHENS-CLARKE COUNTY, GEORGIA, 2012

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Abstract. Tetra Tech was contracted by Athens-Clarke County (ACC) for assistance in developing a Watershed Management Program to proactively reduce non-point source pollution associated with urban runoff and improve the overall health of the community's watersheds. An initial study program was developed in 2008 for three sub-watersheds; Brooklyn, Hunnicutt, and Trail Creek. In 2011, there additional watersheds; Tanyard, Cedar, and Shoal Creek were included. Significant improvements to the watershed management planning process were achieved through the inclusion of a site-scale model capable of evaluating and optimizing proposed management measures.

APPROACH

The site-scale model chosen to evaluate the management measures was the BMP-DSS Navigator tool developed by Tetra Tech. The BMP-DSS Navigator tool is used to quantify the benefit and cost of potential management options and to facilitate the decision making process. The modeling system supports watershed hydrologic and water quality analysis, simulation of various stormwater BMPs, and selection/placement optimization. For ACC, the BMP-DSS Navigator tool was used to simulate the effectiveness of proposed BMP's at reducing peak flows and pollutant loads for each of the management measures. Additionally, the model was used to optimize BMP size, placement, and to prepare cost effectiveness curves for each management measure.

RESULTS AND DISCUSSION

The inclusion of the BMP-DSS Navigator tool in the ACC watershed management program provides a comprehensive way to evaluate proposed watershed improvements that are consistent with the county's management objectives and resources.