PATAPSCO UNTITLED TRIBUTARY WATERSHED BMP FEASIBILITY STUDY

DESCRIPTION

Anne Arundel County, MD

BayLand was selected by Anne Arundel County Department of Public Works to provide a watershed and stormwater management (SWM) best management practices (BMPs) assessment for an unnamed tributary watershed to the Patapsco River in northern Anne Arundel County. The project had an expedited schedule so the results could be used to initiate the design, permitting and construction phases using current fiscal year funding. All project tasks were completed on time with a draft report submitted within two months of Notice to Proceed. Final projects were subsequently selected for implementation.

The scope of the project consisted of performing an assessment of the 1,030-acre watershed to find SWM BMP capital improvement projects (CIPs) to implement to achieve pollutant and impervious area reductions. The watershed is near Brooklyn and is dominated by residential land use with 34% of the land being impervious. Most of the development in the watershed took place prior to 1985 and therefore, there are minimal existing SWM systems in the watershed. As a result, there were no locations where existing BMPs could be retrofitted and required finding locations where new BMPs could be installed.

The 1.6 square mile watershed was divided into nine subwatershed drainage areas. BayLand field staff walked all of the tributary stream channels, performed outfall inspections and evaluated potential locations for BMP CIPs. A total of 34 potential BMP CIPs were identified throughout the watershed.

From the 34 potential BMP CIPs, 15 were selected as the most suitable projects for implementation. These pollutant reductions represent a significant achievement toward meeting the County's TMDL reduction goals. The 264 acres of impervious area treated from the 15 projects, represents treating 75% of the watershed's total impervious area, which more than fulfills the County-wide MS4 permit goal of 20%. These pollutant and impervious area reductions could be implemented at an average cost of $36,000 per acre treated.

Client| Anne Arundel County Department of Public Works

Engineer | BayLand

Completed | 2014

PHOTOS