

WATTS BRANCH WATERSHED ASSESSMENT



DESCRIPTION

PHOTOS

Rockville, Montgomery County, MD

BayLand conducted a 6-square mile watershed assessment of Watts Branch for the City of Rockville. 25 stream reaches totaling 18 miles were walked and evaluated using the Unified Stream Assessment methodology. The evaluation consisted of creating detailed field reconnaissance maps and documenting existing stream conditions. Data collected in the field included areas of significant bank erosion, head cuts, depositional features, debris jams, vertical and lateral stability, outfalls and the location and condition of in-stream structures. The condition of utility infrastructure (sewer, water, outfalls, etc.) included the following data: location, material, potential as a fish barrier, dimensions, evidence of discharge, restoration potential and the severity of the impact.

Geomorphic assessments using Rosgen methodology were conducted at 10 historic sites within the watershed and included bank erosion estimates based on the Bank Assessment of Non-point source Consequences of Sediment model. The results compared historic geomorphic data with current channel dimensions and patterns to determine stability trends within the stream system and verify bank erosion estimates.

As part of the watershed evaluation, the amount of impervious area treated and the amount of water quality volume provided by the 470 existing stormwater management (SWM) ponds were calculated. The impervious areas not being treated were identified to meet Phase II National Pollutant Discharge Elimination System municipal separate storm sewer system permit requirements. This enabled the City to target areas without treatment and upgrade existing SWM facilities. A hydrologic model was also prepared for the entire watershed to reflect changes in land use and the addition of numerous new SWM ponds throughout the watershed in the past 10 years.

Client | City of Rockville Department of Public Works

Engineer | BayLand

Subconsultants | Clear Creeks

Completed | 2014

