Best Management Practices Glossary of Terms

Restoration Focus Area

SHA's restoration focus includes systems, conveyances, and drainage area along state maintained roadways. SHA maintains its MS4 (Municipal Storm Sewer System) permit coverage for its roadway storm drain systems in nine (9) Maryland MS4 Phase I counties (Anne Arundel, Baltimore, Carroll, Charles, Frederick, Harford, Howard, Montgomery, and Prince George's) and in the two (2) MS4 Phase II counties (Cecil and Washington). The projects highlighted are currently being implemented in these eleven (11) counties.

Tree Planting

Tree plantings convert pervious grassy vegetated areas into forested areas. Reforestation is an economical and sustainable way to increase the uptake of pollutants (nitrogen and phosphorous) and reduce the flow of sediment from stormwater runoff that reaches local waterways and ultimately the Chesapeake Bay. Species planted include a mix of deciduous and evergreen trees native to the Chesapeake Bay region. Trees can reduce the intensity of stormwater runoff by intercepting rainfall in their canopy and bark, as well as directly absorbing water through their roots. Tree roots and fallen leaves can also improve soil conditions for infiltration and convert pollutants into less harmful substances. Tree plantings along rivers and streams have added water quality benefits. Creating or expanding forested stream buffers is an effective strategy because trees decrease the concentration of nutrients that flow directly into a stream from the land through absorption. Tree roots also slow soil erosion and sediment runoff by stabilizing of the stream bank.

Stormwater Control Structure

Structural stormwater management controls are engineered Best Management Practices (BMP) that receive stormwater runoff from developed areas and, using a variety of mechanisms, reduce pollutants and slow runoff velocities to minimize impacts when discharged to local waterways. SHA is locating roadways that currently do not have structural stormwater controls and implementing new BMPs to maximize water quality of roadway runoff.

Stream Restoration

Stream restoration restablishes the general structure, function, and self-sustaining behavior of the stream system prior to disturbance. The restoration design focuses on the physical and biological components of the stream system and its watershed. Restoration includes a broad range of measures such as removing watershed disturbances that are causing stream instability; installing structures and planting vegetation to protect stream banks and provide habitat; and reconstructing the curves, bends and depth of areas within the stream system. Stream restoration projects help reduce transporting sediment and nutrients to the Chesapeake Bay.

Outfall Stabilization

Outfall stabilization efforts address erosion and sediment in areas where significant erosion occurs near drainage ditches. The stabilization design will control flows for existing storm drains based on the magnitude and frequency of a flow event. Different methods are used to stabilize the outfall including bioengineering, rock riprap, vegetation and grade changes.

Pavement Removal

Impervious area removal involves identifying existing pavement surfaces that can be removed and replaced with vegetative cover, such as grass and trees. Existing impervious may include abandoned roadways, concrete ditches, and raised concrete medians. Removing impervious surfaces decreases stormwater runoff by allowing rainwater to infiltrate into the ground instead of rushing to the nearest stream. Allowing rainwater to naturally filter into the ground removes pollutants, recharges groundwater, and reduces the pollution entering local streams.