



Maryland
Department of
the Environment

Facts About: Street Sweeping, Tree Planting, and Similar Alternative BMPs

Stormwater Best Management Practices (BMPs)

Alternative best management practices (BMPs), such as street sweeping and tree planting, differ from traditional stormwater management practices in that they do not have defined and distinct boundaries. Street sweeping performs a very important function as it keeps large debris and fine dust particulates from going down storm drains. Tree planting intercepts stormwater and slows runoff, promoting evapotranspiration, infiltration, and groundwater recharge.

Alternative BMPs

Street sweeping uses mechanical or vacuum-assisted sweeper trucks to remove the buildup of pollutants that have been deposited along streets or curbs. Mechanical sweeping removes large debris but can leave behind smaller debris or fine particulates, whereas regenerative or vacuum-assisted sweeping removes more debris and consequently more pollutants.

Catch basin cleaning and **storm drain vacuuming** are practices that involve performing routine cleanouts on targeted infrastructure with high sediment accumulation rates.

Impervious surface elimination improves urban hydrology and water quality by removing impervious surfaces and replacing them with pervious surfaces (see the alternative surfaces fact sheet) or vegetation.

Tree planting and **reforestation** provide water quality benefits by restoring areas with trees and vegetation that increase stormwater infiltration.



Storm drain vacuuming



Tree planting



Street sweeping



Impervious surface elimination (replaced by an alternative surface)

Design Variants

- Street sweeping
- Catch basin cleaning
- Storm drain vacuuming
- Impervious surface elimination
- Tree planting and reforestation

Pollutant Removal Efficiencies

Practice	Sediments	Phosphorus	Nitrogen
Mechanical street sweeping	10%	4%	4%
Regenerative/vacuum street sweeping	25%	6%	5%
Impervious surface elimination	84%	72%	13%
Tree planting and reforestation	93%	94%	71%
Catch basin cleaning and storm drain vacuuming (lbs reduced per ton removed)	420 lbs	1.4 lbs	3.5 lbs

More Information

For more specific information on street sweeping, tree planting, and similar alternative BMPs, go to "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits"