

BEST MANAGEMENT PRACTICES (BMP) AND MAINTENANCE

The goal of Best Management Practices (BMP) is to improve area water quality by preventing harmful pollutants from being carried by stormwater runoff into local water bodies. Locally, the Metropolitan St. Louis Sewer District (MSD) and surrounding municipalities have developed stormwater permit requirements to meet Federal Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Phase II, state and municipal (MS4) regulations. The permit requirements put into action control measures to address these potential sources of pollutants from entering our streams and waterways. As a property owner, you may recognize the following methods put in place during construction of your site or during a retrofit application.

BIORETENTION/RAIN GARDEN



Typically a bio-soil mixture basin either with a mulch layer or rock layer with trees and/or bushes. Routine maintenance activities for bioretention include inspection of condition for erosion, trash removal, weeding, and plant/tree trimming. Less frequent, but typical maintenance activities include mulch replacement, soil aeration, spot replacement of bio-soil and possibly some plant replacement.

DETENTION or RETENTION POND/BASINS



Typically an underground pipe system or grass basin with inlet and outlet control structures. Routine maintenance activities for this type of basin are inspection of condition for water conveyance and erosion, trash removal, evidence of sediment, removal of cattails and condition of structural components.

PERMEABLE (POROUS) PAVEMENT



Typically a paver-type brick or block and/or pervious pavement allowing water to infiltrate to an underground gravel reservoir. Routine maintenance activities for permeable (porous) pavement is inspection of condition of pavement for clogging, removal of sediment accumulated or trash removal, replacement of cracked pavement and visual inspection for water conveyance.

PROPRIETARY BMPs



Typically a method for water treatment such as a structure with a vortex and/or filter system to separate trash and oil from stormwater runoff. Other methods include an underground chamber system with a rock base. Routine maintenance activities for proprietary bmp's include removal of trash, vacuum oil and debris with a pump truck and visual inspection of water conveyance.

Several other methods exist such as amended soils, swales, filters, infiltration basin/trench, green roofs, rain barrel, natural area conservation, impervious area disconnection among others. With any type of system put in place to meet the regulations, quarterly inspections and yearly reports are required to be provided to many municipalities and MSD.

CONTRACT SERVICES

As your engineering consultant, The Clayton Engineering Company has the knowledge and expertise to inspect onsite BMP's on your behalf. We will perform MSD required quarterly inspections, document our findings, and recommend corrective actions required to fix any deficiencies prior to submitting a yearly report. Contact us today at 314-692-8888 if you have any questions regarding your maintenance requirements.

BMP MAINTENANCE EXAMPLES

MAINTAINED BIORETENTION BASIN



BIORETENTION BASIN NOT MAINTAINED



MAINTAINED SEPARATOR UNIT



SEPARATOR UNIT NOT MAINTAINED



MAINTAINED DETENTION STRUCTURE



DETENTION STRUCTURE NOT MAINTAINED



MAINTAINED DETENTION PIPE



DETENTION PIPE NOT MAINTAINED

