



Decentralized Stormwater Structural Best Management Practices

Decentralized Stormwater Structural Best Management Practices (BMP)

Description: System is small to moderate in size and accepts runoff from a single land use drainage area less than 10.0 acres.

Structural BMPType	Description
<p>Biofiltration</p> <p><i>(Examples: Lined rain garden.)</i></p>	<ul style="list-style-type: none"> • Vegetated BMP that filters stormwater through a specialized soil media and discharges via an underdrain. • Little to no overflow of captured runoff volume. • Outlet design requires surface ponding prior to surface outflow typically with a maximum ponding depth of 6 inches. • Site designs use soil media ideally 18-24 inches in depth to enhance filtration processes to retain pollutants. • Treatment Process: Bio-Chemical Cycling, Particle Capture • Vegetation: Yes • Location: Above Ground • Type: Decentralized
<p>Bioretention</p> <p><i>(Examples: Rain garden with infiltration)</i></p>	<ul style="list-style-type: none"> • Vegetated retention structure where the base of the BMP is not lined and allows for infiltration to unsaturated zone. • Designs may or may not include an underdrain to discharge some fraction of treated water. • Design will include either passive surface outlet or piped overflow to allow retention and ponding. • Design will include soil media ideally 18-24 inches in depth to enhance filtration processes to retain pollutants. • May include aggregate subsurface layer to enhance storage or infiltration. • Vegetation types must be able to tolerate stormwater ponding and drought conditions. • Treatment Process: Bio-Chemical Cycling, Particle Capture • Vegetation: Yes • Location: Above Ground • Type: Decentralized



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<p>Bioswale</p> <p><i>(Examples: Vegetated swale, Grass Swale, Grass Filter Strips, Vegetated Buffer Strips, Bioslopes)</i></p>	<ul style="list-style-type: none"> • Flow through areas with dense vegetation coverage (>80%) that allows for inundation of vegetated areas during storm runoff. • Design includes gentle sloped flow paths and dense vegetation to promote stormwater surface filtration and velocity reduction by vegetation (settling). • Infiltration performance and runoff volume reduction is variable. • Size and application of bioswales can vary. • Treatment Process: Bio-Chemical Cycling, Infiltration • Vegetation: Yes • Location: Above Ground • Type: Decentralized
<p>Catch Basin Insert</p> <p><i>(Examples: FloGard Filter, Stormexx, Ultra-Drain Guard.)</i></p>	<ul style="list-style-type: none"> • A small BMP designed to capture and retain sediment, leaf litter, trash, and coarse particles. • Sediment capture results in vertical accumulation of material at base of reservoir with regular material cleanout required. • Minimal to no stormwater volume reduction occurs. • Water quality improvement due to pollutant particle capture within BMP. • Typically accepts runoff from road or a single land use parking lot • Treatment Process: Particle Capture • Vegetation: No • Location: Below grade • Type: Decentralized
<p>Infiltration Feature</p> <p><i>(Examples: Infiltration Trench, Dry Well, Infiltration Trench Percolation Trench, French Drain, Roof Drip-Line)</i></p>	<ul style="list-style-type: none"> • Structure designed to retain stormwater from small impervious drainage area and infiltrate into unsaturated zone. • Land surface modified to sustain maximum infiltration rates. (Native soil may be replaced with highly permeable material.) • Vegetation is absent. • Treatment Process: Infiltration • Vegetation: No • Location: Above Ground or Below Ground • Type: Decentralized



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<p>Porous Pavement</p> <p><i>(Examples: Permeable Pavement, Porous Asphalt, Pervious Concrete, Porous Aggregate, Pervious Pavers, Permeable Pavers)</i></p>	<ul style="list-style-type: none"> • Durable, sustainable materials that create a pervious surface that allows stormwater to infiltrate into the underlying soil. • BMP can include an underlying reservoir to increase retention capacity and infiltration rates. • Constructed to minimize the volume of stormwater generated and routed downgradient or offsite. • Typically used for parking lots, sidewalks, driveways or other impervious surfaces • Treatment Process: Infiltration • Vegetation: No • Location: Above Ground • Type: Decentralized
<p>Settling Basin</p> <p><i>(Examples: Settling Pond, Sediment Basin, Decant Pond, Concrete Forebay)</i></p>	<ul style="list-style-type: none"> • Structure designed to detain stormwater volumes and settle particulate pollutants prior to outflow. • Pollutant load reductions occur; but no volume reduction due to impermeable base. • Often placed at the inlet of another structural BMP to pre-treat inflowing stormwater. • Large scale settling basin draining a mixed land use area can be classified as a treatment vault • Smaller sized settling basins can be classified and assessed as a catch basin. • Treatment Process: Particle Capture • Vegetation: No • Location: Above Ground • Type: Decentralized