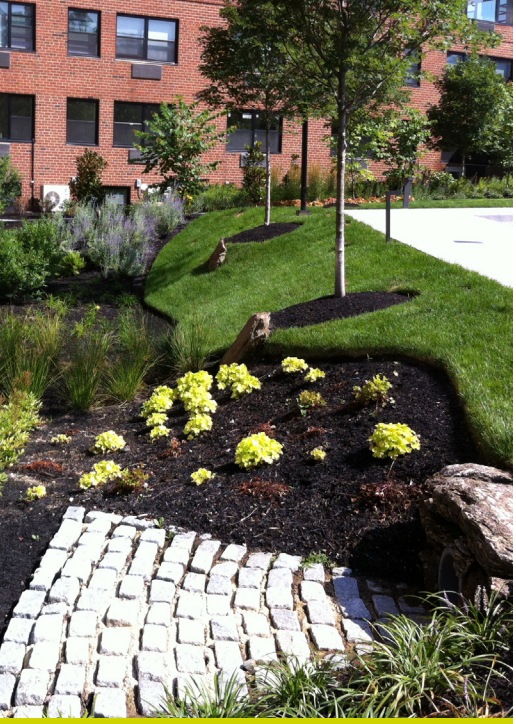

Bioinfiltration/ Bioretention

Description

Bioinfiltration and bioretention SMPs, or rain gardens, are vegetated depressions or basins that use surface storage, vegetation, planting soil, outlet controls, and other components to treat, detain, and retain stormwater runoff. These SMPs provide high-performance and cost-effective stormwater management, green space, and triple bottom line benefits. Both SMPs reduce stormwater volume and pollution by filtering runoff through a vegetated soil medium that promotes evapotranspiration. Bioinfiltration SMPs remove stormwater via infiltration into surrounding soils while bioretention SMPs attenuate runoff with flow-regulating underdrains. These SMPs can be found in a variety of configurations from relatively large and open vegetated basins to small-scale SMPs contained within flow-through planter boxes.

Key Advantages

- Flexible layout and easy to incorporate in landscaped areas
- Very effective at removing pollutants and reducing runoff volumes
- Generally one of the more cost-effective stormwater management options
- Relatively low maintenance activities costs
- Can contribute to better air quality and help reduce urban heat island impacts
- Can improve property values and site aesthetics through attractive landscaping
- Eligible for inclusion in an Expedited PCSMP Review project

Key Limitations

- May need to be combined with other SMPs to meet the Flood Control requirement
- May have limited opportunities for implementation due to the amount of open space available at the site

DEVELOPMENT ATTRIBUTES

Construction Costs	LOW
Operations & Maintenance Costs	MODERATE
Likeliness of Failure	LOW
Ground-Level Encroachment	HIGH
Building Footprint Encroachment	MODERATE
Triple Bottom Line Benefits	HIGH

COMPLIANCE ATTRIBUTES

Water Quality Effluent Pollutant Load: **Bioinfiltration**	Water Quality Effluent Pollutant Load: **Bioretention**	Water Quality Infiltration & Volume Reduction: **Bioinfiltration**	Water Quality Infiltration & Volume Reduction: **Bioretention**	Water Quality Evapotranspiration	Water Quality Rate Control	Channel Protection/ Flood Control/ PHS Rate Control
LOW	MODERATE	HIGH	MODERATE	MODERATE	Yes	MODERATE

A description of each evaluated attribute can be found in the SMP Hierarchy Ranking Criteria in Section 3.2.4.