Media Filters

Description

Media filters are structures or excavated areas containing a layer of sand, compost, organic material, peat, or other filter media. They reduce pollutant levels in stormwater runoff by filtering sediments, metals, hydrocarbons, and other pollutants. Filtered stormwater is released to a sewer, receiving water, or downstream SMP. Media filters are designed to allow higher rates of stormwater flow than traditional filters and enable smaller SMP footprints by allowing for faster filtration. Facilitating evapotranspiration, vegetated media filters are useful in meeting the Water Quality requirement when placed upstream of a noninfiltrating SMP. Non-vegetated media filters can assist in meeting the Water Quality requirement when placed upstream or downstream of a non-infiltrating SMP.

Key Advantages

- Have highly flexible designs and configurations that can be useful in meeting the Water Quality requirement where space-constrained, highly developed, or otherwise challenging locations prevent the use of traditional surface-level or rooftop SMPs and infiltration is not feasible
- Can be designed to be visible from the surface or completely subsurface, located beneath parking lots or other impervious areas

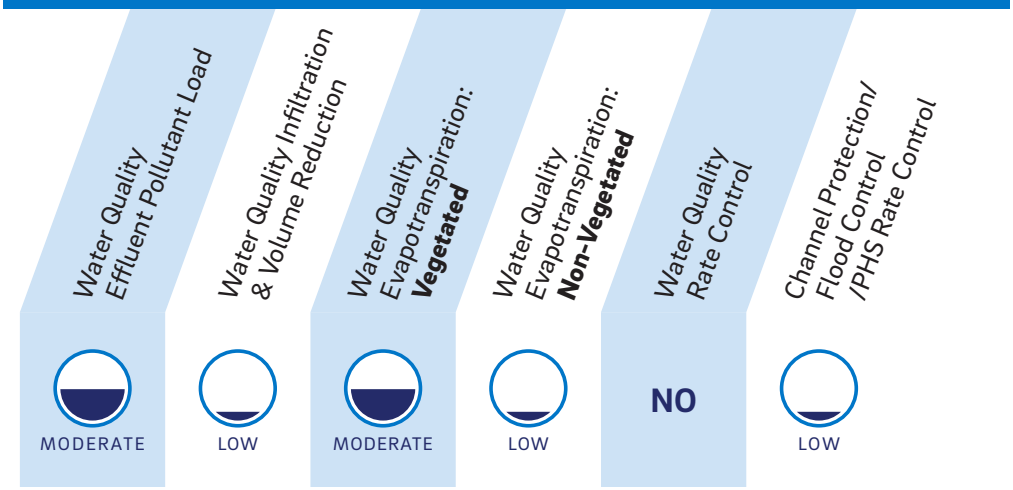
Key Limitations

- Do not offer, when non-vegetated, many of the ancillary benefits associated with surface vegetated SMPs, including aesthetic value, improved air quality, and habitat creation
- Do not reduce the volume of stormwater runoff like bioretention basins and green roofs do
- May have sizing requirements that result in large footprints due to filtration rates for filter media such as sand

DEVELOPMENT ATTRIBUTES

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

COMPLIANCE ATTRIBUTES



A description of each evaluated attribute can be found in the SMP Hierarchy Ranking Criteria in Section 3.2.2.