

Vegetated Roofs

Structural Stormwater Best Management Practice

This factsheet is part of our structural stormwater BMP series. To access this series and many other educational resources, please visit: spcwater.org.

Vegetated Roofs are roofs that are covered with specialized media and planted with vegetation; this enables the roof to hydrologically perform in a manner similar to vegetated surfaces. The media holds water, which is eventually evapotranspired by the plants. They can be installed on flat and/or pitched roofs with a slope of $\leq 30\%$ in a variety of settings.

Vegetated roofs' primary function in stormwater management is volume reduction. Additional stormwater benefits include water quality improvements and some peak rate control. Environmental benefits beyond stormwater control include building temperature moderation and wildlife habitat.



This vegetated roof in Westmoreland County is located at the County Conservation District's office. This installation was part of extensive sustainable stormwater retrofit solutions across the site. *Photo: wcdpa.com*

Key Considerations for Vegetated Roofs

- Structural competency must be verified for both dead loads (when dry) and live loads (with rainfall retention)
- Require optimal waterproofing system to protect against biological and root damage
- Should not be fertilized or irrigated in order to achieve maximum benefits
- Performance is improved when coupled with ground infiltration measures
- Internal building drainage should be designed to manage large rainfall events without inundating the cover

BMP Profile

Name:
Vegetated Roof

Type:
Structural

Grouping:
Volume and Peak Rate
Reduction by Infiltration

Stormwater Management Benefits:

- Volume Reduction
- Water Quality Improvements
- Peak Rate Control

Potential Applications:

- Residential
- Commercial
- Ultra Urban
- Industrial
- Retrofit



**For more information
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