



Institutionalizing Green Infrastructure via Municipal Stormwater Permits

Brief Description:

This permit uses a 90th percentile rainfall performance standard approach to implement the onsite retention framework. Under natural conditions in the DC region, approximately 90% of the storms (those under about 1.2") will not generate runoff; in other words, all of the rainfall from small to medium-sized storms will stay on site, either soaking into the ground or taken up by vegetation. The performance standard in the permit seeks to mimic the natural hydrologic cycle by requiring the implementation of stormwater management measures that will handle 1.2" on site.

The permit also supports the framework, with specific implementation requirements for green roofs and tree plantings, a numeric drainage area retrofit requirements, a green landscaping incentive program provision, a manual to guide implementation of the new standard, and an offsite mitigation and payment-in-lieu program. Quantifiable, enforceable language is also a critical element to ensure that these provisions are implemented without exception by specific dates to meet robust standards.

Current Status:

The permit was issued in September 2011. The region successfully defended challenges to two aspects of the permit (not the ones outlined here), which pushed back the effective date of the permit but did not compromise its integrity. To date, the District of Columbia (the permittee) has proposed changes to stormwater ordinances to implement the performance standard and the offsite mitigation/payment-in-lieu program, has published the Stormwater Management Guidebook in a public notice, and has held numerous public training sessions on the new requirements.

Outcomes:

All development in the District of Columbia will soon be subject to this performance standard. The tree planting requirements are already being met, and the District of Columbia is on track to comply with the other elements as well. EPA

Subobjective:

Water Quality

Type:

Stormwater Management

Highlights:

- **What:** The District of Columbia's Municipal Separate Storm Sewer (MS4) permit requires onsite retention of 1.2" of rainfall from all 24-hour storms for all new and redevelopment projects 5,000 square feet or larger, as well as for most retrofit projects. Implementing the performance standard necessitates the use of green infrastructure—applying vegetation, soils, and natural processes to manage stormwater and create healthier urban environments. In addition, the permit includes an annual tree planting requirement and a square footage green roof installation requirement over the permit term.
- **Who:** EPA Region 3 issued this MS4 permit.
- **Why:** Most stormwater program water quality objectives cannot be met without onsite retention of the rainfall from all small to medium-sized storms. Simulations using the Chesapeake Bay Program watershed models indicate that timely attainment of the relevant wasteload allocations for nitrogen, phosphorus and sediment will result when performance standards and practices, as quantified in this MS4 permit, are applied to all development in the District of Columbia.

Region 3 believes this type of framework can be replicated elsewhere and has promoted it as a successful example for several Region 3 state programs reissuing MS4 permits. With adjustments for rainfall depth based on local or regional climate conditions, this framework can be used in any MS4 permit.

Lessons Learned/Recommendations:

This approach has been demonstrated to be “practicable.” Permit writers should not be wary about setting clear, numeric, and enforceable provisions.

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<http://www.epa.gov/reg3wapd/npdes/dcpermits.htm>

