

Seven Focus Areas for a Quality Urban Municipal Stormwater Plan to Reduce Pollutants

Developed by the Pennsylvania Stormwater Workgroup of the Campaign for Clean Water



U.S. EPA

Background: In the developed or urbanized landscape, storm events result in waterways and water treatment facilities receiving volumes of polluted runoff because hard surfaces such as rooftops, roadways and parking lots channel water rapidly across the landscape instead of absorbing it into the ground where pollutants are filtered and flow is slowed on its passage to a river or treatment facility.

In Pennsylvania, urban stormwater is a major cause of pollution that is costly for managers to treat for industrial and commercial business use and at facilities that deliver our drinking water. Polluted runoff also impacts habitat for fish and wildlife as well as our ability to enjoy healthy waterways for recreation.

To control polluted urban stormwater, the U.S. Environmental Protection Agency (EPA) began administering a permit program known as the Municipal Separate Storm Sewer System (MS4) in 1990 as part to the National Pollutant Discharge Elimination System that had proven success controlling discrete sources of water pollution. In Pennsylvania, the Department of Environmental Protection (DEP) issues MS4 permits to cover approximately 1,000 urban municipalities. Those municipalities identify best management practices (BMPs) that are appropriate control measures for their urban jurisdiction.

In recent years, municipalities with runoff to impaired waterways must align their strategies for BMP implementation with clean-up plans designed to achieve a Total Maximum Daily Load (TMDL) of the pollutant of concern. In the Chesapeake Bay watershed the TMDL clean-up plan is focused on nutrient and sediment pollution which includes urban stormwater sources. Now, municipalities submitting applications or Notice of Intent (NOI) for MS4 permit coverage in Pennsylvania that also have responsibility to address impairments must include a Pollutant Reduction Plan (PRP) to ensure the most impacted waterways are improved by urban stormwater BMP controls.



The Seven Focus Areas: Pennsylvania’s Campaign for Clean Water Stormwater Workgroup provides this outline of expected and exceptional considerations for approaches in seven focus areas of the PRP. We encourage citizen-based groups interested in local watershed health, DEP permit reviewers and municipal stormwater managers to use this outline to guide PRP development, review, and evolution through the 5-year permit cycle.

1. Public Participation

What is Required	Municipal applicants must make the PRP available for public review for 45 days and accept public comment for 30 days. They also must accept comment on the PRP at a public meeting and make a record of consideration of relevant comments received.
What is Even Better	Municipalities should include a presentation of the PRP at the public meeting and seek additional venues to present the PRP and solicit comment such as meetings of watershed groups or other citizen-based groups. Outreach should be sure to target the impaired sub-watershed populations and environmental justice zones. Municipalities should include a plan to update and engage the public on PRP activity throughout the permit’s 5-year cycle.
Additional Consideration	Because of the complex nature of the permit and the high relevance of clean stormwater to the community, municipalities should seek opportunities to educate the benefits of stormwater control through the PRP while soliciting comment and should ensure adequate time to develop comment responses.

Note: The due date for submission of NOIs with completed PRPs is September 16, 2017. The PRP must be available for public comment at least 45 days in advance of PRP submission. For more information, visit the [DEP Stormwater Management – Municipal Stormwater](#) web page.

2. Map

What is Required	At minimum, the map associated with the PRP must include the following components: land use and/ or impervious surfaces, the storm sewershed boundary, and the location of the proposed BMPs.
What is Even Better	A map that shows impaired streams, attaining streams, and high quality or exceptional value streams.
Additional Consideration	Municipalities can parse out areas that are permitted by another party responsible for stormwater discharges, such as PennDOT. While this may decrease the current pollutant load, it can result in missed opportunity for identifying ideal locations for BMPs. If the map includes parsed areas, we recommend checking for over parsing and cut out areas that could be great location for a BMP that will reduce the pollutant(s) of concern.

3 and 4. Pollutant(s) of Concern and Existing Loading

What is Required	DEP’s “MS4 Requirements Table” provides a list of each PRP the municipality must submit. If the MS4 discharges to waters in the Chesapeake Bay watershed, then Appendix D requires reduction of 10% sediment, 5% phosphorus, and 3% nitrogen. If the MS4 discharges to locally impaired waters for sediment or nutrients, then a PRP with the same above reductions is required.
What is Even Better	Current BMPs to reduce stormwater pollutants can be included to reduce the existing loading. Verification that existing BMPs is performing to specified function will ensure the MS4 is including the correct calculation of the existing load.
Additional Consideration	MS4 permit applicants can use any method of their choosing to calculate both the existing loading and the reductions created by the BMPs. It is important that the same calculation methodology is used to calculate the current and reduced loading.

5. BMPs to Reduce Pollutant Loading

What is Required	MS4 municipalities are required to develop and implement PRPs and/or TMDL plans with BMPs to reduce sediment by at least 10% of existing pollutant loads or meet TMDL wasteload allocations. MS4s are also required ensure operation and maintenance (O&M) of existing and proposed BMPs. Municipalities can take credit for existing BMPs against existing loads, while proposed BMPs can be credited to load reductions during the 5-year permit.
What is Even Better	Municipalities that plan to rely on a single BMP to meet MS4 permit requirements should consider a suite of BMPs, unless planning, design, and landowner(s) agreement(s) have been completed. A list of alternate BMPs included as part of PRPs/TMDL plans provide back-up options in case implementation of any of the proposed primary BMPs and sites are found to be infeasible during the 5-year permit period.
Additional Consideration	With a 10% reduction in sediment loads, DEP allows MS4s to assume 5% reduction in Total Phosphorus (TP) and 3% reduction in Total Nitrogen (TN). Municipalities should include calculations for TP and TN to ensure pollution reduction obligations are met for TP and/or TN.



6. Municipal Funding for PRP Implementation

What is Required	Pollutant Reduction Plans must demonstrate financial feasibility including costs of implementation, O&M, and administration. PRPs are required to list each BMP, its sponsor or partners, and preferred funding source(s). Plans are also required to note any alternative sources in case preferred options do not materialize.
What is Even Better	PRPs should provide information on estimated project costs and implementation timeline. This information should also include milestone dates and status (e.g. conceptual, engineering design, landowner permission granted, permits obtained etc.) Potential funding sources should indicate volunteer/in-kind support and longer term financial mechanisms for administration and maintenance such as bonds, loans or fee programs.
Additional Consideration	PRPs should identify cost sharing opportunities (e.g. several municipalities collectively purchase a street sweeper or vacuum truck, or cost share projects located outside municipal boundaries that benefit an entire stream)

7. Parties Responsible for Operation & Maintenance of Best Management Practices

What is Required	Permittees have an obligation to properly operate and maintain all facilities and systems of treatment and control that are installed or used by the permittee to achieve compliance with the conditions of this permit. For the PRP, applicants must identify the following for each selected BMP: <ul style="list-style-type: none"> - The party(ies) responsible for ongoing O&M; - The activities involved with O&M for each BMP; and - The frequency at which O&M activities will occur.
What is Even Better	The O&M activity should include inspection for each BMP at regular, and reasonable, intervals so adjustments can be made to maintenance overtime as needed. A mechanism for citizens to report BMPs in need of maintenance should be included. The records of inspections, operation, and maintenance that municipalities are required to create should be available for public inspection.
Additional Consideration	If third parties are providing O&M, obligations of each party should be clearly defined and agreed upon.

Efficiencies can be achieved in permit administration with activities that find synergies across the seven focus areas. By example, municipalities can develop milestone tracking and reporting across categories. Watershed groups can be leveraged to assist with educational components of the focus area. And, neighboring municipalities can explore cost sharing agreements or joint planning and even applications.