

MS4 NPDES Permits

Frequently Asked Questions (FAQ)

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Version 1.2

The Department of Environmental Protection (DEP) has developed this FAQ document to assist entities with small regulated municipal separate storm sewer systems (MS4s) and the general public in understanding the MS4 NPDES permit program, including the changes to the program made by DEP through its reissuance of the PAG-13 General Permit in June 2016, which became effective on March 16, 2018 (“[2018 PAG-13 General Permit](#)”). This document will be maintained by DEP and updated with additional content over time. Questions on the program may be directed to the appropriate [DEP regional office](#) or to DEP’s Bureau of Clean Water at (717) 787-5017 or RA-EPPAMS4@pa.gov.

Nothing in this document affects regulatory requirements. The interpretations herein are not an adjudication or a regulation. There is no intent on the part of DEP to give the interpretations in this document that weight or deference. This document provides a framework within which DEP will exercise administrative discretion in the future. DEP reserves the discretion to deviate from the interpretations in this document if circumstances warrant.

2018 PAG-13 NPDES General Permit

FAQ #1: What are the biggest changes in the 2018 PAG-13 NPDES General Permit?

A. Pollutant Reduction Plans (PRPs) – The 2013 PAG-13 General Permit required Chesapeake Bay (“Bay”) PRPs for discharges to the Chesapeake Bay watershed. The 2018 PAG-13 General Permit continues that obligation, but added the requirements that permittees estimate their existing sediment, Total Phosphorus (TP), and Total Nitrogen (TN) loads to the Bay, and that the PRP identify Best Management Practices (BMPs) that will reduce the loads by 10%, 5% and 3% respectively within 5 years following DEP’s approval of coverage (Appendix D of 2018 PAG-13 General Permit). Permittees may propose a presumptive approach in which a 10% sediment reduction is assumed to also result in a 5% TP reduction and a 3% TN reduction.

The development of a PRP is also required by the 2018 PAG-13 General Permit for discharges to local waters that are impaired for nutrients and/or sediment where there is no wasteload allocation (WLA) in a Total Maximum Daily Load (TMDL). Similar to Bay PRPs, these “Impaired Waters PRPs” require permittees to estimate pollutant loads and reduce those loads within 5 years following DEP’s approval of coverage (Appendix E of 2018 PAG-13 General Permit). If the impairment which triggered the

need for an Impaired Waters PRP is due to sediment alone, a minimum 10% sediment reduction is required. If the impairment is based on nutrients alone (phosphorus or nitrogen), a minimum 5% Total Phosphorus (TP) reduction is required. If the impairment is due to both sediment and nutrients, both sediment (10%) and TP (5%) must be controlled. Permittees may propose a presumptive approach in which a 10% sediment reduction is assumed to also result in a 5% TP reduction.

- B. TMDL Plans** – The 2013 PAG-13 General Permit required “TMDL Strategies” with Notices of Intent (NOIs) and individual permit applications and “TMDL Design Details” one year after permit issuance. The 2018 PAG-13 General Permit combined “Strategies” and “Design Details” into a single “MS4 TMDL Plan.” The 2018 General Permit clarified that MS4 TMDL Plans are required only for those MS4s with sediment and/or nutrient WLAs in a TMDL, and it requires those with TMDL Plan obligations to apply for an individual permit. TMDL Plans must be submitted with the next individual permit renewal application.

Note that TMDL Plans and PRPs need not be sealed by a professional engineer.

MS4s are required to complete a public participation process before submitting PRPs or TMDL Plans to DEP. See the [PRP Instructions](#) and [TMDL Plan Instructions](#) for details.

PRPs/TMDL Plans were due from specified current General Permit holders with the [Notice of Intent \(NOI\)](#) for coverage under the 2018 PAG-13 General Permit. New permittees and MS4s with current waivers had the option to request an “advanced waiver approval” from DEP; if approved, a PRP/TMDL Plan did not have to be submitted with the NOI/application. Plans are due from specified current individual permit holders 180 days before expiration of the permit, along with their permit renewal application.

- C. Pollutant Control Measures (PCMs)** – The 2013 PAG-13 General Permit made no distinction over the pollutant(s) of concern in a TMDL. If an MS4 was identified with a WLA in a TMDL for any pollutant, the MS4 was expected to develop and implement TMDL Strategies and Design Details. For the 2018 PAG-13 General Permit, DEP is requiring the development of MS4 TMDL Plans only when an MS4 is subject to nutrient and/or sediment WLAs. DEP has developed appendices in the 2018 PAG-13 General Permit for metals/pH related to abandoned mine drainage (Appendix A), pathogens (Appendix B) and priority organic compounds (Appendix C). These appendices require PCMs rather than PRPs or TMDL Plans; PCMs include the development of maps, an inventory of known or suspected sources of pollutants, and submission of a report documenting investigations into suspected sources. Due dates for the completion of PCMs are listed in **FAQ #52**.

Where an MS4 discharges to surface waters impaired for any pollutant besides nutrients, sediment, metals/pH, pathogens and priority organic compounds, there are no obligations for the MS4 permittee under the 2018 PAG-13 General Permit.

- D. Authorized Non-Stormwater Discharges** – DEP has modified the list of authorized non-stormwater discharges to MS4s in the 2018 General Permit as follows:

- In addition to air conditioning condensate, the discharge of non-contaminated water from geothermal systems is authorized.
- The discharge of water from residential (not commercial) car washing to the MS4 is authorized only when cleaning agents are not utilized.

- Dechlorinated swimming pool discharges are not authorized.
- Non-contaminated hydrostatic test water discharges that do not contain detectable concentrations of Total Residual Chlorine are authorized.

E. Reporting and Annual Fees – Under the 2013 PAG-13 General Permit, some MS4s were required to submit a report to DEP on an annual basis and some MS4s were required to submit a report every two years. All MS4s will report annually under the 2018 PAG-13 General Permit. The reporting period (following an initial transition period) is July 1 – June 30, and reports are due by September 30th.

A \$500 annual installment payment of the NOI fee is due by September 30th each year to DEP’s Bureau of Clean Water for MS4s with PAG-13 coverage.

Permit Coverage

FAQ #2: How do I determine if my small MS4 is regulated?

Not all small MS4s are regulated. Small MS4s are designated as regulated by either:

1. The Environmental Protection Agency’s (EPA’s) Automatic Nationwide Designation – all small MS4s located in Urbanized Areas (UAs) as defined by the Bureau of the Census; or
2. Discretionary designation by DEP.

Please see the [EPA Urbanized Area map](#) webpage to see if all or part of a municipality is located within a UA. You can also check DEP’s [MS4 Requirements GIS application](#). If you are still unsure, you may ask DEP if your municipality has a regulated small MS4.

FAQ #3: Only a portion of my municipality is within the UA. Is my small MS4 still regulated?

Yes, but only the outfalls which receive drainage from the UA are regulated.

FAQ #4: What must an MS4 do to meet the requirements of the MS4 NPDES permit?

The general requirement is to develop and implement a Stormwater Management Program (SWMP) of BMPs to reduce the discharge of pollutants from your regulated small MS4 to the Maximum Extent Practicable (MEP). This is accomplished by implementing the six (6) Minimum Control Measures (MCMs), which are: Public Education & Outreach; Public Participation/Involvement; Illicit Discharge Detection & Elimination; Construction Site Runoff Control; Post-Construction Runoff Control; and Pollution Prevention/Good Housekeeping. Each MCM requires implementation of BMPs according to an approved schedule. Annual reports are also required. In addition, an appropriate stormwater management ordinance must be adopted to provide local regulation of development and activities that affect stormwater runoff.

There are permittee-specific additional requirements for discharges to impaired waters with approved

TMDLs, impaired waters without approved TMDLs, and watersheds draining to the Chesapeake Bay. Please see the MS4 Requirements Table on [DEP's MS4 website](#) for a listing of the special requirements which apply to MS4 permits.

FAQ #5: My municipality has two separate urbanized areas. Am I required to have a separate permit for each?

No. A single MS4 permit is issued to the municipality which covers all of the UAs within the jurisdiction.

FAQ #6: Part of my municipality is served by a combined sewer system which collects both wastewater and stormwater. Is that area regulated under the MS4 permit?

No. Only the area that discharges stormwater directly to surface waters is regulated under MS4 NPDES permits. Areas which drain stormwater directly into a combined sewer system are therefore not regulated by MS4 permits.

FAQ #7: How do I determine if my regulated small MS4 is eligible for the NPDES PAG-13 General Permit?

Please see the "Discharges Not Authorized" section of the PAG-13 General Permit for eligibility requirements.

FAQ #8: How long is my permit or permit waiver valid?

For MS4s that receive coverage under the 2018 PAG-13 General Permit, coverage will continue to March 15, 2023, which is the expiration date of PAG-13, unless administratively extended by DEP. NOIs to remain covered under the reissued PAG-13 will be required; the deadline to file NOIs will be announced by DEP prior to the expiration date. Individual permits and waivers are generally valid for 5-year terms, and applications to renew the permit or waiver must be submitted at least 180 days prior to the expiration date of the permit or waiver.

FAQ #9: My municipality is an MS4 permittee, and there is a non-municipal MS4 permittee (like PENNDOT or a university campus) within my municipality. Is my municipality responsible for MS4 permit compliance on the non-municipal MS4 lands?

No. The non-municipal permittee's land is not part of the regulated area of the municipal MS4. DEP nevertheless strongly encourages neighboring MS4s to employ collaborative approaches to address their permit requirements.

PRPs/TMDL Plans

FAQ #10: What is the planning area for my PRP?

The planning area is the UA within the municipality which drains to impaired waters, plus any additional area outside the UA which drains into the MS4 conveyance system, less any areas which can be “parsed out” (see the [PRP Instructions](#), Attachment A). Parsing is optional, but if pursued, requires careful mapping. Note that the terms, “planning area” and “storm sewershed” are used interchangeably by DEP.

DEP has been asked whether “sheet flow” from rainfall near streams, which flows directly to streams, can be parsed out. The answer is yes if it does not enter the MS4. Precipitation that lands within approximately 150-300 feet of a stream can be assumed to not form discrete flow in its path to the stream. As a result, such flow does not need to be considered an outfall. However, if precipitation lands within 300 feet of a stream and drains to a conveyance (e.g., a swale) which contains municipal stormwater from upstream, that drainage is part of the sewershed and cannot be parsed out.

FAQ #11: Does an MS4 that discharges to a neighboring municipality’s MS4 instead of discharging directly to surface waters need to develop a TMDL Plan or PRP?

Yes, if the upstream municipality is identified in the MS4 Requirements Table with a requirement to prepare a TMDL Plan or a PRP.

FAQ #12: Under normal weather conditions none of the stormwater from part of my urbanized area makes it to a stream. It infiltrates or goes down a sinkhole. Can I parse out that area from my planning area?

No, unless you can demonstrate that stormwater flows never discharge to surface waters. That generally is possible only where stormwater flows are discharged to a regulated discharge well designed to handle all flows.

FAQ #13: When is my PRP or TMDL Plan due?

It is due as an attachment to the next NOI or application that is submitted to DEP for permit coverage unless the MS4 is eligible for a waiver and/or has received an advanced waiver approval from DEP.

FAQ #14: What are my options for calculating existing loads?

Pollutant loads are calculated based on the land use or land cover in the planning area. One approach is to use a web-based geo-referenced modeling and monitoring tool to derive land use/land cover distribution for a delineated area (one example is Wiki Watershed, which is available at <http://wikiwatershed.org/>). Such tools provide land uses from the National Land Cover Database (NLCD), which can be converted to percent pervious and impervious. MS4s may also estimate pervious and impervious acreage by using DEP’s [Statewide MS4 Land Cover Estimates](#). Loading rates provided in the [PRP Instructions \(3800-PM-BCW0100k\)](#) can be multiplied by the pervious and impervious acreage to estimate existing loads.

MS4s may optionally use models (such as [Mapshed](#) or other models). For TMDL Plans, existing (baseline) loads are typically calculated for the pollutant(s) that were of concern in the TMDL, but may optionally also be remodeled using Mapshed or equivalent. The baseline loads in a TMDL may be specific to an MS4 or generic (bulk/aggregate) to a group of MS4s that must be distributed among MS4s using a similar methodology, unless the MS4s identified in the TMDL work together in a collaborative TMDL Plan.

Note that load calculations are generally not a critical factor in PRP development because most BMP load reduction efficiencies are expressed as a percent. The exception is stream restoration which is expressed in pounds per foot per year units, which requires that the load reduction reflect an appropriate loading rate.

FAQ #15: How can Chapter 102 BMPs be used to satisfy PRP requirements?

The existing load estimate may be reduced to account for the entire pollutant reduction from Chapter 102 BMPs installed before PRP development. Chapter 102 BMPs installed after PRP development can be credited to the permit term load reduction requirement to the extent that they produce an annual pollutant reduction from pre-development conditions. If you wish to use Chapter 102-required BMPs towards the permit term pollutant load reduction requirement, reference the [Final CBP Approved Expert Panel Report on Stormwater Performance Standards](#).

A municipality may make use of the crediting opportunity of Chapter 102 BMPs by requiring developers to install controls that go beyond what is required by Chapter 102 permits. However, municipalities taking this route are cautioned that the performance curves in the Chesapeake Bay Expert Panel report “level off” as the BMP runoff storage volume to treatment area ratio increases. This results in less creditable load reduction for “super-sized” BMPs than what might be expected. More PRP credit will likely be achieved by requiring the installation of other BMPs in addition to what is required under Chapter 102.

Any Chapter 102 structural BMP used for either an existing load reduction or permit term load reduction must be functional, with O&M procedures in place, in order to be credited.

FAQ #16: My TMDL Strategy (and/or Design Details) was submitted as required by the 2013 MS4 permit. Am I required to recalculate the pollutant removal efficiencies to apply the now-required Chesapeake Bay Expert Panel reports?

Much of the TMDL planning work that was done in the 2013 permit term can be incorporated into TMDL Plans required for the 2018 permit. MS4s that submitted TMDL Strategies and Design Details under the 2013 permit and were approved by DEP will not be required, for the permit term starting in 2018, to recalculate BMP load reductions. Recalculations of load reductions for TMDL Strategies and Design Details which were submitted but not approved by DEP will however require that loads be calculated in accordance with current guidance.

FAQ #17: How do I know what impaired waters are within my municipality?

To assist MS4s with understanding obligations for their next NOI or individual permit application submission, DEP developed a MS4 Requirements Table for [municipal](#) and [non-municipal](#) MS4s that were

expected to apply for permit coverage and/or a waiver starting in 2017. The Table recognizes impairments up to 5 miles downstream of a MS4 as potentially being caused or contributed to by stormwater discharges from the MS4. This is because peak flows from the impervious surfaces in a UA frequently causes stream erosion, and the eroded sediment can be deposited far from the source of the discharge.

The Table was prepared using the 2014 Integrated Water Quality Monitoring and Assessment Report. It will not be revised to add any impairments identified in the 2016 or 2018 Integrated Reports. MS4s who feel they are listed incorrectly on the Table may send a request for Table modification to RA-EPPAMS4@pa.gov.

FAQ #18: Am I required to install BMPs in the watershed of each impaired water listed (each line) in the MS4 Requirements Table during the permit term?

No. Opportunities for BMP installation vary within a municipality, and some BMPs may not be possible to implement within the upcoming permit term. MS4s must calculate the total required load reduction for their entire planning area which drains to impaired waters, but can locate BMPs such that they reduce (for example) the sediment load in one sub-watershed by more than 10% and by less than 10% in another, so long as the total reduction is at least 10% of the total sediment load. The scale of this flexibility is generally the 12-digit Hydrologic Unit Code (HUC-12).

To clarify this flexibility, DEP developed a Pollutant Aggregation Suggestions for MS4 Requirements Table ("[Aggregations Table](#)") to supplement the MS4 Requirements Table. The Aggregations Table lists the impaired waters according to their HUC-12 location. MS4s may locate BMPs anywhere in the HUC-12 watershed in the planning area which drains to sediment or nutrient impaired waters.

For example, the following listing is included in the MS4 Requirements Table for Lansdale Borough:

MS4 Requirements Table (Municipal)

Anticipated Obligations for Subsequent NPDES Permit Term

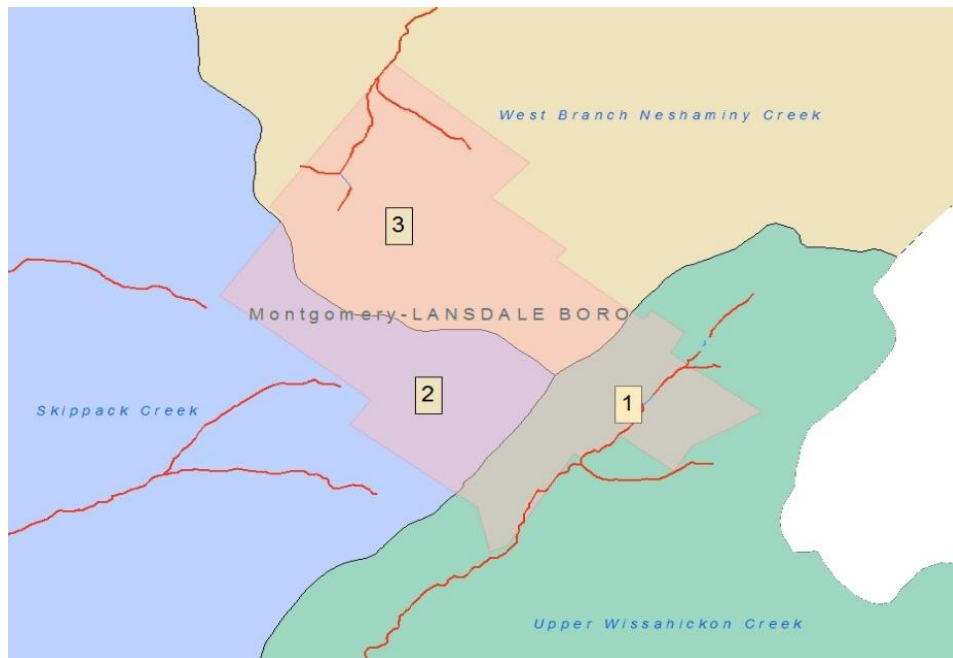
MS4 Name	NPDES ID	Individual Permit Required?	Reason	Impaired Downstream Waters or Applicable TMDL Name	Requirement(s)	Other Cause(s) of Impairment
Montgomery County						
LANSDALE BORO	PAG130038	Yes	TMDL Plan	Wissahickon TMDL	TMDL Plan-Siltation, Suspended Solids (4a)	Cause Unknown (4a)
				Wissahickon Creek	Appendix E-Nutrients (4a), Appendix B-Pathogens (5)	Other Habitat Alterations, Water/Flow Variability (4c)
				West Branch Neshaminy Creek	Appendix E-Excessive Algal Growth, Nutrients, Organic Enrichment/Low D.O. (5)	Water/Flow Variability (4c)
				Unnamed Tributaries to West Branch Neshaminy Creek		Flow Alterations (4c)
				Towamencin Creek	Appendix E-Excessive Algal Growth (5)	Water/Flow Variability (4c)
				Skippack Creek Watershed TMDL	TMDL Plan-Siltation (4a)	
				Skippack Creek	Appendix E-Excessive Algal Growth, Nutrients (5)	
				Neshaminy Creek TMDL	TMDL Plan-Siltation, Suspended Solids (4a)	
				Neshaminy Creek	Appendix B-Pathogens (5), Appendix E-Nutrients, Organic Enrichment/Low D.O. (5)	

The Aggregations Table separates the impaired surface waters among the three HUC-12 basins into which Lansdale drains.

Pollutant Aggregation Suggestions for MS4 Requirements Table (Municipal)

Anticipated Obligations for Subsequent NPDES Permit Term				
MS4 Name	Permit Number	HUC 12 Name	Impaired Downstream Waters or Applicable TMDL Name	Requirement(s)
Montgomery County				
LANSDALE BORO	PAG130038	Upper Wissahickon Creek	Wissahickon Creek, Wissahickon TMDL	Appendix B-Pathogens, Appendix E-Nutrients, TMDL Plan-Situation, Suspended Solids
		Skipack Creek	Skipack Creek Watershed TMDL, Skipack Creek, Towamencin Creek	Appendix E-Excessive Algal Growth, Nutrients, TMDL Plan-Situation
		Cooks Run-Neshaminy Creek, West Branch Neshaminy Creek	Neshaminy Creek, Neshaminy Creek TMDL, Neshaminy Creek, West Branch Neshaminy Creek	Appendix B-Pathogens, Appendix E-Excessive Algal Growth, Nutrients, Organic Enrichment/Low D.O., TMDL Plan-Situation, Suspended Solids

A visual interpretation of the location of the Borough in relation to its three HUC-12 basins is shown below.



Lansdale has the option to develop three Pollutant Reduction Plans (which could be combined into a single document), one for each HUC-12. For each PRP, the municipality would calculate the existing load in the planning area for that HUC-12 and locate BMPs anywhere in the planning area which drains to that HUC-12.

In circumstances in which it is not feasible to locate sufficient BMPs in each HUC-12 basin within the permit period, municipalities should discuss the issue with DEP in advance, and a larger scale planning approach may be considered.

FAQ #19: The MS4 Requirements Table lists an impaired stream and tributaries to that same stream as separate requirements for my MS4. Am I required to implement the specific required pollutant reduction in both?

No. The MS4 Requirements Table sometimes lists both impaired streams and upstream tributaries to that

stream. In such a situation, the pollutant load should be calculated for the planning area that drains to the stream, which would include the tributaries to that stream. BMPs can be located anywhere within the planning area as long as they reduce the load to the stream. If some tributaries are impaired and some are not, BMPs should be preferentially located in the impaired watersheds. Also, see FAQ #18 above.

FAQ #20: If an MS4 permittee proposed more BMPs in a PRP than needed, must all of those BMPs be implemented following permit issuance?

No. If an MS4 optionally includes more BMPs in its PRP or TMDL Plan than are required to satisfy its permit term load reduction, the extra BMPs are not required to be constructed within the permit term.

FAQ #21: Can a PRP or TMDL Plan be changed after approval by DEP?

Yes. Minor revisions to the design of BMPs do not require DEP review or additional public participation. Major revisions such as modification of the location, type or number of proposed BMPs, or changes to the storm sewershed map (as compared to the original PRP or TMDL Plan approved by DEP), will require public participation and DEP review. The same public participation requirements included as part of the original PRP or TMDL Plan development process also apply to major revisions. See the [PRP Instructions](#).

After public participation has taken place, the revised PRP or TMDL Plan must be submitted to the appropriate DEP regional office. PRP or TMDL Plan revision documentation may be submitted as an attachment to a permittee's Annual MS4 Status Report, or at any other time during the permit term. There is no additional fee associated with the submission of a PRP or TMDL Plan revision.

FAQ #22: Where can I find the legal definitions for Pollutant, Total Maximum Daily Load (TMDL), and Wasteload Allocation (WLA)?

TMDL, WLA, and Pollutant are defined in 25 Pa. Code § 96.1 as follows:

Pollutant — Any contaminant or other alteration of the physical, chemical, biological, or radiological integrity of surface water which causes or has the potential to cause pollution as defined in section 1 of The Clean Streams Law (35 P. S. § 691.1).

TMDL — *Total maximum daily load* — The sum of individual waste load allocations for point sources, load allocations for nonpoint sources and natural quality and a margin of safety expressed in terms of mass per time, toxicity or other appropriate measures.

WLA — *Wasteload allocation* — The portion of a surface water's loading capacity that is allocated to existing and future point source discharges.

FAQ #23: What is a Total Maximum Daily Load (TMDL)?

See definition above. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can assimilate and still meet water quality standards, and an allocation of the allowable discharge of that

pollutant load among the various sources. Pollutants can include alteration of the physical, chemical, biological, or radiological integrity of a surface water that causes, or has the potential to cause, pollution. Pollutant sources are characterized as either point sources that receive a WLA or nonpoint sources that receive a Load Allocation (LA). Point sources include all sources subject to regulation under NPDES permits, such as discharges from MS4s. Nonpoint sources include all remaining sources of the pollutant, including anthropogenic (manmade) and natural background sources. TMDLs must also account for seasonal variations in water quality and include a Margin of Safety (MOS) to account for uncertainty in the estimates of pollutant reductions necessary to meet water quality standards.

If a nutrient or sediment WLA in an approved TMDL is applicable to the discharges from a regulated small MS4, the MS4 permittee must develop and submit an TMDL Plan that is consistent with the assumptions and requirements of applicable WLA(s) in the TMDL.

FAQ #24: What targets must be met through a TMDL Plan and by when?

TMDL Plans involve short-term and long-term planning. Short-term plans are generally similar to PRPs. The objective for the short-term is to achieve the WLA(s) for the pollutant(s) of concern or, if the MS4 determines this is not feasible, then a reduction of 10% sediment and/or 5% TP compared to existing load within the next individual permit term. The long-term plan may be more conceptual, and the objective is achievement of the WLA(s). DEP will not prescribe when WLA(s) must be achieved in the individual permit issued to an MS4.

FAQ #25: I'm preparing my TMDL Plan. BMPs have been installed in the past that reduce the pollutant load. Can I credit the load reduction from those BMPs as part of my permit term load reduction obligation?

No, but all existing structural BMPs (regardless if installed under a Chapter 102 NPDES permit) installed prior to the TMDL approval date can be credited against the existing (baseline) load in the TMDL, because TMDLs typically assume no existing urban stormwater BMPs. In addition, non-Chapter 102 BMPs installed after the TMDL approval date, but before submission of the TMDL Plan, can be used to reduce the existing load. That reduced existing load is used to calculate the permit term obligation (generally a 10% sediment reduction if wasteload allocations cannot be achieved within the permit term). Any BMP which ceases to function must be repaired or replaced.

For Chapter 102 BMPs installed after the TMDL approval date, the net improvement (reduction) in pollutant loading can be credited to the existing load and reductions needed to achieve the wasteload allocations.

Consideration of existing structural BMPs for TMDL Plans is different than for PRPs. For PRPs, all existing structural BMPs that are functional and are maintained as of the date of PRP submission may be credited toward reducing the existing load estimate. The reason there is a difference relates to the fact that the baseline date for TMDL Plans is earlier than that for PRPs (i.e., the TMDL approval date).

FAQ #26: We plan to use MapShed to model the existing load. We noticed that MapShed not only analyzes land use in terms of pollutant loadings, but it also takes into account streambank erosion and groundwater. Can these two sources be excluded from the existing load determination since the basis of PRPs and TMDL Plans is focused more on land use?

You can exclude the loading from groundwater, but not streambank erosion. The streambank erosion routine was built into the MapShed model to account for downstream rate and volume impacts from development (impervious surfaces). There is a tool in the model that distributes the streambank erosion loads back to MS4s based on the UA, impervious surfaces, and other factors. Operationally, the model takes water out of the system when stormwater control BMPs are put in place and the streambank loads are linked to the volume removed.

Best Management Practices

FAQ #27: What are Stormwater Best Management Practices (BMPs)?

The term best management practices (BMPs) is defined at 25 Pa. Code § 92a.2 as “schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce pollutant loading to surface waters of this Commonwealth. The term includes treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. The term includes activities, facilities, measures, planning or procedures used to minimize accelerated erosion and sedimentation and manage stormwater to protect, maintain, reclaim and restore the quality of waters and the existing and designated uses of waters within this Commonwealth before, during and after earth disturbance activities.” Stormwater BMPs are BMPs that manage stormwater runoff.

FAQ #28: What kind of BMPs can I install?

MS4s have numerous options for the installation of BMPs. See the [Pennsylvania Stormwater BMP Manual](#) for examples. DEP recommends that MS4s look for BMPs that can be installed economically and in a relatively short period of time. Ownership is not an issue as BMPs can be publicly or privately-owned. A typical option to consider is the modification of existing flood control basins to improve their pollution control capability. Another option is to require the installation of stormwater control features at construction sites which disturb less than one acre, in which the net reduction due to BMPs can be credited toward the MS4’s permit obligation. Municipalities should also review their ordinances, zoning, and building codes to ensure that opportunities are not lost (for example, require curbs only where they are needed).

Permittees are cautioned to avoid over-reliance on street sweeping as a stormwater BMP. The effectiveness of street sweeping has been studied extensively in recent years, and the effectiveness values have been reduced. See [Recommendations of the Expert Panel to Define Removal Rates for Street and Storm Drain Cleaning Practices \(Long Version\)](#) (PDF).

In order to claim full credit, stream restoration projects must be “qualifying,” as defined in [Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects](#). See also the DEP summary of that report at [Considerations of Stream Restoration Projects](#).

FAQ #29: Where can I locate BMPs to address PRP or TMDL Plan obligations?

In general, BMPs must be located in the planning area that drains to the Chesapeake Bay or to the locally impaired waters. See FAQ #18 for limits on planning scale. An exception is allowed for BMPs like stream restoration, which are sometimes constructed downstream of the pollutant source; in such cases pollutant removal credit is limited to the proportion of the treated flow which originates from the planning area. Any permittee considering implementing a BMP outside of their planning area should coordinate with the appropriate DEP regional office to confirm that the proposed BMP will be eligible for pollutant load reduction credit. Also see FAQ #69.

FAQ #30: Can BMPs be located on private property?

Yes.

FAQ #31: Are municipalities required to have agreements with private property owners where BMPs will be constructed?

No, although permittees may use such agreements to protect their interest. DEP requires agreements between MS4s which are collaborating on individual BMPs or are participating in a joint PRP/TMDL Plan.

FAQ #32: What are the approved methods to calculate load reductions from BMPs?

The efficiency of BMPs must conform to EPA's Chesapeake Bay Model efficiencies (i.e., see Chesapeake Assessment Scenario Tool (CAST)) or Chesapeake Bay expert panel reports except as otherwise approved by DEP. For example, PRPs/TMDL Plans may also apply thoroughly vetted mechanistic models with self-contained BMP modules (e.g., Storm Water Management Model (SWMM), WinSLAMM) to demonstrate achievement of reduction targets. The use of differing load calculation methodologies should be avoided. This means for example that the methodology used to calculate existing loads discharged in a watershed must also be used to calculate the load to a BMP within that watershed.

DEP will not review the hydraulic loading rate of BMPs. That is a responsibility of the design engineer.

The BMP effectiveness values (as presented in [3800-PM-BCW0200m](#)) are being phased out by the Chesapeake Bay Program because they are outdated. They are, however, somewhat simpler to use than the expert panel reports, and for that reason DEP permits their use for PRPs and TMDL Plans for the 2018-2023 permit term. Permittees are cautioned that use of the expert panel reports frequently provides a small margin of additional load reduction. MS4s may use the effectiveness values in 3800-PM-BCW0200m for some BMPs and the expert panel reports for others. See the [PRP Instructions](#) and [TMDL Plan Instructions](#) for further details.

The BMP Effectiveness Values document or the [Final CBP Approved Expert Panel Report on Stormwater Retrofits](#) can be used to calculate the reductions for retrofit BMPs.

For stream restoration projects, use the Effectiveness Values document or the [Final Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects](#). All four Expert Panel reports are available through DEP's [municipal stormwater website](#).

FAQ #33: How much pollution control can be credited to local programs which regulate construction stormwater on sites less than one acre?

The difference between current land use pollutant load and the post-construction pollutant load.

FAQ #34: Is a sediment pond a BMP or a surface water?

A structure that was designed, built, and maintained as a BMP is a BMP, not a surface water. The outfall would be the discharge point into a stream below the BMP.

FAQ #35: I discharge to both Chesapeake Bay and locally impaired waters. Can a given BMP be credited to both obligations?

Yes, if the BMP is within the planning area and if the impaired water drains to the Chesapeake Bay.

FAQ #36: When must BMPs be installed in order to be credited to the 2018 Pollutant Reduction Plan (PRP) commitment?

PRP BMPs can be credited if they are completed after the date your PRP is prepared and are operational within five years after the effective date of permit coverage. BMPs installed as required by Chapter 102 post-construction stormwater management requirements are not creditable to the PRP obligation except as allowed in FAQ #15.

FAQ #37: How much detail must be provided in PRPs and TMDL Plans on selected BMPs?

A credible effort on the part of MS4s to demonstrate that selected BMPs will achieve the required pollutant reductions includes the following information on the selected BMPs:

- Type of BMP (identification based on Chesapeake Bay Model nomenclature wherever possible)
- Location of BMP on a storm sewershed map
- Identification of the area treated
- Calculations of estimated load (input)
- Calculations of estimated load reduction (output)
- Planned O&M

Complete or preliminary designs are not required as PRPs and TMDL Plans are planning level documents.

FAQ #38: We expect to have opportunities for future BMPs that are not sufficiently developed to specifically locate them in the current PRP. Can I describe them in general in the PRP and estimate their load reductions?

The conceptual BMPs you propose in the plan must be developed to the point that you can locate them on a map and estimate their specific load reductions. You can describe other BMPs that cannot yet be located as possibilities, but may not count them as planned load reductions. If the possibilities become realities, you can update the plan and eliminate any BMPs that you no longer plan to implement.

FAQ #39: What happens if a BMP proposed in a PRP/TMDL Plan is unimplementable or if a BMP is constructed but is no longer operational at the point in time five years after permit issuance?

The permittee must provide the required total pollutant load reduction five years after permit issuance. Permittees can substitute new BMPs as needed to provide the required total load reduction.

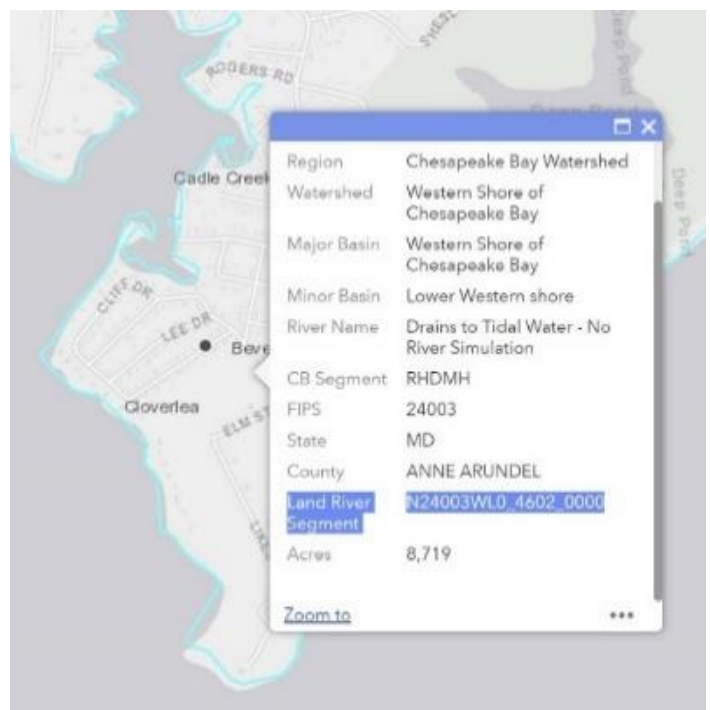
Note that significant changes to PRPs/TMDL Plans (like changes in BMPs or to the storm sewershed map) require submittal of the revised plan with documentation of completed public participation.

FAQ #40: May I use the Chesapeake Bay Phase 6 Model to Calculate Stream Restoration BMP Load Reductions?

The Expert Panel Report (page 14) provided a default removal rate of 44.88 lb/ft/year for stream restoration BMPs. That rate was used in the Effectiveness Values table, which was part of the 2018 PA MS4 permit package. The use of that rate was appropriate for MS4s which used the loading rates in the [Pollutant Reduction Plan Instructions](#) (page 11, Attachment B). The loading rates and the removal rates were based on the Phase 5.4 Chesapeake Bay Watershed Model (WSM).

Technical memoranda from the Chesapeake Bay Program have been circulated which indicate that Phase 6 of the Chesapeake Bay WSM calculates loadings and load reductions differently than the 5.4 version. The Phase 6 model removal rate of 248 lb/ft/year can be used; however, a land-river segment-specific Sediment Delivery Ratio (SDR) must be applied.

To determine the appropriate SDR, visit the [Chesapeake Bay GIS website](#) and type in the nearest physical address to the Stream Restoration BMP. Open the Layer List dropdown menu and make sure the NHD and P6 Land-River Segments modeling layers are turned on. Navigate to your site and click the on the land surrounding the physical address. This will open a window that contains the land-river



segment within which your site is located. See highlighted land-river segment in the provided screen shot.

Then, download [CAST Source Data](#) and click on the “Delivery Factors” worksheet. Once there, you can filter the spreadsheet for the corresponding land-river segment and load source. In the case of stream restoration, the load source would be Stream Bed and Bank.

FAQ #41: If you sample and report pollutant loads from outfalls, and can demonstrate minimal loadings, can BMP installation be avoided?

No. DEP generally discourages sampling of stormwater discharges for two reasons: 1) to obtain enough data to be useful, stormwater sampling is time-consuming and costly, and 2) the concentration of pollutants at the outfall does not reflect the impact of downstream stream erosion from peak flows from impervious areas. MS4s that want to address water quality impairments most efficiently should use advanced stormwater models (like Mapshed), maintain records on all BMPs, and add cost-effective new BMPs at every opportunity. If an MS4 would nevertheless like to use stormwater sampling to support its pollutant load estimates, the proposal should be submitted to DEP’s Bureau of Clean Water for review and comment prior to pursuing a monitoring program.

FAQ #42: Is a Chapter 102 (Construction Stormwater NPDES) permit required for BMPs constructed to satisfy a PRP/TMDL Plan?

Yes, if construction of the BMP will involve at least one acre of earth disturbance. This applies to both new BMPs and retrofit BMPs. However, in general BMPs will satisfy the requirements for site restoration under 25 Pa. Code § 102.8(n). While the construction of a BMP will not restore the land to its original condition, it will generally result in improvements in the control of stormwater runoff volume, rate and water quality (pollutant loading). An erosion and sediment control (E&S) Plan and a post-construction stormwater management (PCSM) Plan must be prepared, but the PCSM Plan would not need to include the stormwater analysis called for under § 102.8(g).

Waivers

FAQ #43: What is the benefit of receiving a waiver from permit coverage?

MS4s that receive a waiver from DEP are not subject to MS4 permit requirements for the five-year duration of the waiver.

FAQ #44: What are the criteria for waiver eligibility?

The criteria for a waiver are:

1. Population – the MS4 must satisfy at least one of these population criteria:
 - The MS4 serves a population less than 1,000 within the UA; or

- The MS4 serves less than 10,000 in the municipality (or applicant-owned property if the applicant is not a municipality).
2. TMDL – The MS4 does not discharge into waters which are subject to any EPA-approved TMDL. (Note that exceptions may be possible if no WLA is applicable to the MS4 and the applicant provides documentation demonstrating that stormwater discharges could not reasonably cause or contribute to the impairment that is the subject of the TMDL).
 3. Local Impairments – The MS4 does not discharge to a local surface water impaired for BOD (organic enrichment), sediment, pathogens, oil and grease, or nutrients. (Note that exceptions are possible if the applicant provides documentation demonstrating that stormwater discharges could not reasonably cause or contribute to the impairment).

FAQ #45: If my regulated small MS4 is eligible for a waiver and I submit a waiver request, must I also submit an NOI or Individual Permit Application?

Yes, you must submit your NOI or individual permit application and applicable fee together with your waiver request by the NOI or permit application due date.

FAQ #46: I've received my renewed permit, but believe that I meet the eligibility requirements for a waiver. Can I still apply for a waiver?

Yes, any MS4 that meets the waiver eligibility criteria may submit a NOI or application with an attached waiver request to the appropriate DEP regional office for review, at any time during the permit term. Submission of a NOI or application will require submission of a new review fee.

Ordinances

FAQ #47: Which ordinance option can I use?

Renewal permittees must include an executed ordinance consistent with DEP's 2013 or the [2022 Model Ordinance](#), or an executed ordinance consistent with an Act 167 Plan approved by DEP within the past 5 years, or an executed custom ordinance which meets the requirements of [DEP's Stormwater Ordinance Checklist](#) (either 2013 or 2022) with the NOI or permit application.

New permittees must satisfy the same requirement by the fourth year of permit coverage. Renewal permittees are required to meet the requirements of the 2022 model ordinance by September 30, 2022.

FAQ #48: How would DEP like to see permittees handle enforcement of discharges not allowed by permit? For example, residents washing their cars with cleaning agents?

Quality public education efforts by MS4s should minimize the need for local enforcement action. When that fails, municipalities have a responsibility to enforce their ordinances. Municipalities should attempt to have the discharge eliminated, but if enforcement efforts fail then the municipality can contact DEP for assistance. For clarification, residential car washing with cleaning agents is not prohibited by the NPDES

permit unless such washwater enters the MS4. Municipalities have an obligation under the NPDES permit effective March 2018 to update their stormwater management ordinances to include, among other things, the authorized non-stormwater discharges to an MS4. The ordinance update must be completed by September 30, 2022 for existing MS4 permittees and by the 4th year of permit coverage for new permittees. Discharges that do not conform to the list of authorized non-stormwater discharges would be considered illicit discharges.

FAQ #49: Some municipalities have outdated stormwater ordinances based upon Act 167 Plans. Can this create conflict between the ordinance and the Chapter 102 regulations?

It may. Despite the lack of reimbursement funding, the solution is for counties to update their Act 167 Plans. Act 167 requires review/revision and DEP approval of Act 167 Plans every five years. Until an Act 167 Plan is updated, new development projects may need to base PCSM design on Chapter 102 design standards, unless standards from an outdated Act 167 Plan are approved as an alternative to the design standards as part of a Chapter 102 application review.

Permit Fees

FAQ #50: What is the fee for a Notice of Intent (NOI) or Individual Permit (IP) Application? What is the annual fee?

General Permits: The initial NOI fee is \$500 for both new PAG-13 coverage and renewal of that coverage. If an MS4 currently has a waiver and is eligible for PAG-13 coverage, a waiver application (if eligible and desired) should be attached to the NOI.

Individual Permits: A \$5,000 fee is paid with the initial application for a new individual permit. The fee for renewal of individual permits is \$2,500. If an MS4 permittee previously had coverage under the PAG-13 but is no longer eligible for PAG-13 coverage, it must submit an individual permit application with a fee of \$2,500.

If an MS4 currently has a waiver and is not eligible for PAG-13 coverage, it must submit an individual permit application with a fee of \$2,500 (along with a waiver application if eligible and desired).

Applicable to both General Permits and Individual Permits: The above fees must be submitted 1) regardless if a waiver application is submitted with the NOI or application and 2) regardless if DEP has not acted on an NOI or individual permit application submitted in 2012 or later. Except for certain federal and state government entities that are exempt from fees under DEP's regulations, a check for the amount of the NOI fee must be included with the NOI or individual permit application. The check must be made payable to the "Commonwealth of Pennsylvania."

Annual Fees: If PAG-13 General Permit coverage is approved, thereafter an annual installment of the NOI fee of \$500 is due by September 30th each year. New MS4s (that have not previously had coverage under PAG-13 or an individual permit) will begin paying the annual fee on September 30th following the first full year of permit coverage. For example, if a new MS4 submits a PAG-13 NOI on September 16, 2017 but does not receive approval to operate until August 1, 2018, the first annual fee is due by September 30, 2019. Existing MS4s will pay the first \$500 annual installment payment by September 30, 2018.

If an individual permit is issued to an MS4, the MS4 must pay a \$500 annual fee by the anniversary of the effective date of the permit.

General Permittees should pay NOI fees as instructed, plus any annual fees as invoiced.

If DEP approves a waiver for an MS4, there is no annual fee.

Reporting

FAQ #51: How should MS4s make the transition to the new permit cycle with respect to periodic (annual or progress) reports?

The PAG-13 General Permit effective March 16, 2018 requires annual reporting for all MS4s with permit coverage. For existing MS4s, the first annual report will be due on September 30, 2018 and will be required annually thereafter by September 30th. For new MS4s, the first annual report will be due by September 30th after the first year of permit coverage, and will be required annually thereafter by September 30th. DEP will issue individual permits with the same annual reporting requirements.

The reporting period will normally run from July 1 – June 30. For existing MS4s, however, the first annual report will need to have a different reporting period to implement the transition. **To make the transition, all MS4s with existing permit coverage (both general and individual permits) with any reporting period that extends beyond June 30, 2017 will have a new reporting period end date of June 30, 2018, with the report being due on September 30, 2018.** (Note – submission of a progress report is no longer required with renewal NOIs or renewal applications).

Example 1 – Consider the following scenario of an existing MS4 with progress reporting requirements under the 2013 PAG-13 General Permit.

- Year 2 & 3 reporting period is May 1, 2015 to April 30, 2017 with the report being due by June 30, 2017 (60 days after end of reporting period).
- Year 4 & 5 reporting period would have been May 1, 2017 to April 30, 2019, however with the transition to the new reporting period of July 1 to June 30 under the 2018 PAG-13 General Permit, the new reporting end date will be June 30, 2018, with a due date of September 30, 2018.

Example 2 – Consider the following scenario of an existing MS4 with annual reporting requirements under an individual permit issued on August 15, 2014.

- Year 1 reporting period is August 15, 2014 to August 14, 2015, due by November 14, 2015 (90 days after end of reporting period).
- Year 2 reporting period is August 15, 2015 to August 14, 2016.
- Year 3 reporting period would have been August 15, 2016 to August 14, 2017, however to transition to the new reporting cycle of July 1 to June 30, the new reporting period end date will be June 30, 2018 with the report being due September 30, 2018.
- Year 4 reporting period is July 1, 2018 to June 30, 2019, due by September 30, 2019.
- Year 5 reporting period is July 1, 2019 to June 30, 2020, due by September 30, 2020.

FAQ #52: What are the reporting requirements for the Pollutant Control Measures (PCMs) listed in the permit?

The 2018 PAG-13 General Permit requires that the sources for the following pollutants be investigated, where applicable: metals/pH related to abandoned mine drainage (Appendix A), pathogens (Appendix B) and priority organic compounds (Appendix C). The due dates for PCM reporting requirements are:

- **Existing Permittees:**
 - Sewershed Mapping September 30, 2019
 - Source Inventory September 30, 2020
 - Source Investigation Report September 30, 2022

- **New Permittees:**
 - Sewershed Mapping September 30, following second year of permit coverage
 - Source Inventory September 30, following third year of permit coverage
 - Source Investigation Report September 30, following fifth year of permit coverage

If not already established, permittees with Appendix B requirements (pathogens) must enact an ordinance or SOP requiring proper management of animal wastes on property owned by the permittee according to the following schedule:

- If an ordinance or SOP already exists: Attach to the first Annual MS4 Status Report due following the first year of coverage for new permittees and no later than September 30, 2018 for existing permittees.

- If a new ordinance or SOP is enacted or adopted: The new ordinance or SOP must be attached to the first Annual MS4 Status Report due following enactment or adoption, but no later than September 30, 2022.

See Appendices A, B, and C of the [2018 PAG-13 General Permit](#) for additional information on PCM reporting requirements and due dates.

FAQ #53: May I submit our Annual MS4 Status Reports to DEP electronically?

MS4s wishing to submit the [Annual MS4 Status Report](#) electronically (i.e., via email or upload) to DEP may do so if the DEP regional office that will receive the report agrees to receive it electronically. In the future DEP expects to have an electronic system for annual reporting.

FAQ #54: My municipality has a joint MS4 permit with other municipalities (and/or could also be with other non-municipal MS4s). Should we provide a joint Annual Report or do we report separately?

Report jointly. You and the other municipalities are a single permittee, and compliance must be established on the overall performance of all of the participants.

FAQ #55: My MS4 municipality is sharing the costs and load reductions for a BMP with another MS4 municipality (we have separate permits). Do we both put the BMP on our respective Annual Reports?

No. The MS4 entity whose jurisdiction the BMP is located should include the BMP on their Annual Report. All municipalities participating in a joint PRP or TMDL Plan should report all BMPs implemented by all participating MS4s in the Final Report used to demonstrate compliance (due five years following the effective date of coverage). Also see FAQ #68.

FAQ #56: MS4s with a PRP or TMDL Plan requirement are required to provide a Final Report demonstrating compliance with the applicable pollutant load reductions, due 5 years after approval of permit coverage. What is the recommended format for that report?

MS4s should maintain an inventory of completed PRP BMPs and report them in the Annual Report in the year they are installed. A Final Report template is being developed by DEP that should be used to demonstrate permit compliance and will be posted to DEP's website in the future.

FAQ #57: The 2010 Census created new "urbanized area" for my existing MS4. When do I have to satisfy Minimum Control Measure (MCM) requirements of the permit for the new area?

Immediately, upon the effective date of coverage under the PAG-13 General Permit or the effective date of an individual permit, with the following exceptions:

- Mapping requirements in MCM #3, BMPs #2 and #3; and
- PCSM BMP Inventory in MCM #5, BMP #3.

For these requirements, the schedule associated with a new permittee may be applied to new UAs.

For mapping requirements in MCM #3, detailed maps of new UAs must be developed and submitted to DEP as an attachment to an Annual MS4 Status Report by September 30, 2022 or the 4th Annual MS4 Status Report following approval of coverage under this General Permit, whichever is later.

For the PCSM BMP Inventory in MCM #5, BMPs located within new UAs must be identified and all required information recorded by the end of the first year of permit coverage (for existing MS4s with PAG-13 coverage, the PCSM BMP Inventory for new UAs must be completed by March 15, 2019).

FAQ #58: The 2010 Census created new "urbanized area" for my existing MS4. Am I required to satisfy the mapping requirements for that new area as part of my NOI or application?

For existing MS4s there are specific mapping requirements associated with the NPDES permit:

- PRP/TMDL Plan – If a PRP or TMDL Plan is required as part of the NOI or application, the MS4 must attach a map that identifies land uses and/or impervious/pervious surfaces and the storm

sewershed boundary associated with each MS4 outfall that discharges to impaired surface waters, or surface waters draining to the Chesapeake Bay. In addition, the map must identify the proposed location(s) of structural BMP(s) that will be implemented to achieve the required pollutant load reductions. MS4s must address all UAs with the applicable drainage areas, including new UAs as of the 2010 census.

- PCMs – If PCMs are required, the permittee must develop map(s) of the storm sewershed(s) associated with all outfalls that discharge to surface waters subject to Appendices A, B and/or C. New UAs as of the 2010 census must be included. For existing permittees, the map(s) shall be submitted to DEP with an Annual MS4 Status Report due no later than September 30, 2019.
- MCM #3, BMPs #2 and #3 – MS4s must develop and maintain map(s) that show permittee and UA boundaries, the location of all outfalls, observation points, surface waters that receive discharges from those outfalls, and the entire storm sewer collection system within the permittee’s jurisdiction that are owned or operated by the permittee (including roads, inlets, piping, swales, catch basins, channels, and any other components of the storm sewer collection system), including privately-owned components of the collection system where conveyances or BMPs on private property receive stormwater flows from upstream publicly-owned components. As noted above, existing MS4s with new UAs have until September 30, 2022, or the fourth Annual MS4 Status Report, to provide map(s) with these details for new UAs. However, new UAs must be reflected in maps developed for PRPs, TMDL Plans, and PCMs, as applicable, on the schedules identified above, although the level of detail is not as significant as for MCM #3.

FAQ #59: May PRPs include pollutant load reductions from BMPs constructed using EPA Section 319 funding?

In accordance with an EPA grant limitation, pollutant load reductions funded with Section 319 funding may not be credited against load reduction requirements in the permit term that the BMP was constructed. The load reduction from such a BMP may however be used to reduce the existing load that is used to calculate the required load reduction for subsequent permit terms.

For example, assume a hypothetical existing (2017) MS4 sediment load of 100 lbs. In a current permit, a 10% reduction, or 10 lbs is required by 2023. Also assume that the subsequent 2023-2028 permit term requirement is an additional 10% reduction. If an MS4 accomplishes the 2018-2023 10% reduction, the 2023 resultant load would then be 90 lb, and the required 2023-2028 load reduction requirement would be 10% of that, or 9 lbs. At the end of 2028 achieving an existing load of 81 lbs would be required.

Assume an MS4 installs a S.319-funded project during the 2018-2023 permit term with a 5.0 lb load reduction. It does not count toward the 2018-2023 (current term) required load reduction. The MS4 would then begin the 2023-2028 permit term with a load of 85 lbs. If a 2023-2028 reduction of 10% were required as described above, the MS4 would be expected to reduce its load by 8.5 lbs by 2028.

Collaboration and Flexibilities

DEP strongly encourages MS4 permittees to work together to evaluate stormwater improvements and new BMP projects that will cost-effectively achieve permit obligations and improve local water quality. To that end, the questions and responses below are intended to provide permittees who hold NPDES MS4 permits with greater flexibility to select and locate projects and encourage cooperative watershed-based efforts between and amongst permittees.

As permittees consider the flexibilities described herein, it is important to understand the term “baseline” as used throughout this section. For the purpose of this FAQ, baseline is considered the pollutant load reduction required to meet the load allocation (LA) in an approved TMDL, or equivalent allocation as determined by DEP, after regulatory compliance is confirmed. For example, agricultural lands must comply with regulations relating to erosion and sediment control under 25 Pa. Code § 102.4(a) and regulations relating to manure management under 25 Pa. Code § 91.36(b) and have achieved the LA in an approved TMDL (or equivalent) to be considered as meeting their baseline requirement. These FAQs are consistent with all Pennsylvania laws, regulations and policies.

FAQ #60: Does DEP support collaborative efforts by MS4 permittees?

DEP strongly supports MS4 joint or collaborative efforts to find worthwhile projects in shared watersheds and to satisfy other MS4 permit obligations. To that end, DEP encourages MS4 jurisdictions to:

- Work together to fund, install, certify and verify performance, and maintain BMP projects through intermunicipal joint project agreements. These agreements should address how the reductions will be assigned to each participating MS4 jurisdiction and require detailed records to be maintained that identify reduction assignments when these occur.
- Work together to develop and implement PRPs through intermunicipal agreements or MOUs. DEP has developed some suggestions regarding core elements that should be addressed in these agreements, some of which can be found in FAQ #64, below.
- Work together to develop and produce educational materials, training, public meetings, and joint watershed events; share equipment; and achieve other elements of the required MCMs.

Overall, these collaborative efforts should assist permittees to achieve compliance with permit obligations and most often result in cost savings for the permittees as well.

FAQ #61: What if my municipality would like to join with another municipality or group of municipalities to operate under one NPDES permit?

MS4s that wish to be co-permittees (i.e., either desiring to operate together under one permit for the first time or desiring to join another group of MS4s under one permit) should contact DEP to evaluate the best approach for submission of coordinated permit applications and permit issuance.

FAQ #62: Can a County or Authority be a permittee?

Yes, with the understanding that the municipalities being served by the county or authority would be co-permittees with the county or authority because counties and authorities lack the ability to adopt and enforce ordinances.

FAQ #63: May permittees work together to satisfy MCM requirements, even if not co-permittees?

Yes. Sharing responsibilities for MCM implementation is authorized by federal (40 CFR § 122.35) and state (25 Pa. Code § 92a.32(a)) regulations and by MS4 NPDES permits. The permittee remains responsible for compliance with the permit obligations if the other entity fails to implement the control measure (or component thereof). Therefore, EPA and DEP encourage the permittee to enter into a legally binding agreement with that entity if the permittee wants to minimize any uncertainty about compliance with the permit. As long as a MS4 permittee reports (in the annual report) who is taking responsibility for MCM implementation on their behalf, and implementation of the MCM activities is completed, the MS4 permittee is in compliance.

FAQ #64: I would like to work collaboratively with other MS4 permittees to develop a joint Pollutant Reduction Plan. May I do that?

Yes. DEP highly recommends combined efforts to develop PRPs. Such arrangements provide an economy of scale for planning, design, construction, and O&M.

Any party can serve a leadership role in coordinating a combined effort. County planning commissions, county conservation districts, and larger municipalities are commonly selected by the permittees.

The planning area for a collaborative effort is the combined planning area for the participating MS4s. As long as the BMP(s) are located in the combined planning area and address the pollutants of concern, the pollutant reductions from BMPs may be shared between the collaborating MS4s. This means, for example, that municipalities which are “built out” can often cost-effectively contribute to BMP implementation in neighboring jurisdictions. See FAQ #18 for limits on planning scale.

It is not necessary for the participating permittees to be joint permittees, but when they are not, there must be a written agreement among the participants to ensure the plan will be implemented. DEP recommends that such agreements include the following topics:

- Scope of the Agreement
 - Complete Pollutant Reduction Plan implementation (or individual BMP implementation)

- Roles and Responsibilities
 - How projects will be selected
 - Selection of engineering and other contracted services
 - Long-term O&M
 - Adaptive management of the PRP (or the individual BMPs) over the permit term
 - Commitment to using the Plan (or to implementing the individual BMP)

- Allocations of Cost and pollutant reduction
 - Methodology for sharing the cost
 - Methodology for distributing the pollutant reductions
- Timeline for implementation
 - Schedule of milestones to complete and implement the plan (or the individual BMP)
 - Withdrawal and termination

The total pollutant reduction credit is distributed among participating permittees. When a municipality is partnering with a non-municipal MS4 permittee (like PENNDOT or a university campus), both the municipality and the non-municipal permittee can take full credit for the pollutant reduction (assuming both permittees include the drainage area to the BMP as part of their existing pollutant load) in Final Reports demonstrating compliance.

FAQ #65: Does DEP require certain elements in an Intermunicipal Agreement between MS4 jurisdictions for joint BMP projects or joint Pollution Reduction Plans?

No. DEP does not have legal authority to dictate contract terms between MS4 jurisdictions. However, DEP has recommended general elements that MS4s should address in such agreements. These include, but are not limited to, payment for projects, assignment of reductions (if applicable), certification and verification of performance at the time of the projects’ installation, long-term operation and maintenance obligations (including annual verification), and terms and conditions in the case of withdrawal by a party or termination of the agreement (see FAQ #64).

FAQ #66: If two or more MS4 jurisdictions that are all eligible for PAG-13 General Permit coverage create a joint or combined Chesapeake Bay or Impaired Waters PRP, are they required to obtain a single individual permit?

No, an individual permit is not required, and each MS4 jurisdiction may obtain their own General Permit coverage so long as each meets the General Permit eligibility criteria. The joint or combined PRP must identify the specific responsibilities for each MS4 jurisdiction, including: certification and verification of performance at the time of the projects’ installation; and ongoing long-term operation, maintenance and annual verification, so that each permittees’ compliance status can be evaluated, and appropriate project credit is calculated and distributed.

FAQ #67: What if an MS4 or collaborating MS4s ‘overshoot’ their pollution reduction objective(s) (e.g., reducing sediment more than is required over the course of the 2018-2023 permit term). Can the “excess” reduction(s) be applied to the subsequent permit term?

Additional reductions may be used to satisfy future pollutant load reduction obligations when applicable. It is important for each MS4 to track the pollutant load reduction that is applicable for each year of the permit term. PLEASE NOTE: As with many of DEP’s technical programs, science is constantly evolving as we continue to gather BMP performance and water quality data in Pennsylvania and nationwide. DEP is in the process of updating the Pennsylvania Stormwater BMP Manual to reflect the most current science. DEP is implementing and improving its Phase 3 Watershed Implementation Plan for the Chesapeake Bay

watershed, and the 2023 MS4 NPDES General Permit is not yet written. As a result, the approach used for determining pollutant loads and/or reduction obligations could be adjusted in the future based on updates in science or policy. Therefore, reductions generated now may not be equivalent to reductions that may be applied in the future.

Assuming that pollutant load reductions in the subsequent permit term will be identical to current requirements and there are no other changes, here is an example that illustrates how DEP may allow crediting of “excess” pollutant reductions:

An MS4 has an existing sediment load of 100 lbs. The MS4 is required to reduce 10% (10 lbs) in the first permit term, which will reduce the MS4’s sediment load to 90 lbs. If the subsequent permit also requires a 10% reduction, the MS4 would be expected to reduce its sediment load to 81 lbs by the end of the permit term (i.e., $90 \text{ lbs} - (90 \text{ lbs} \times 10\%) = 81 \text{ lbs}$). If the MS4 is able to reduce 15 lbs instead of 10 lbs during the first permit term, the additional load that is reduced (5 lbs) could be credited to the next permit term, such that only 4 lbs would need to be reduced in the next permit term (instead of 9 lbs).

FAQ #68: If I am participating in a joint PRP, how should I report the annual pollutant load reductions that are achieved by the group of MS4s that are part of the joint PRP?

MS4s should report the portion of the load reduction for those BMPs that were actually installed or completed in their jurisdictions in Annual Reports (i.e., MS4s under a joint PRP should not report the BMP in its Annual Report unless it is located within their jurisdiction). This is necessary to avoid “double counting” of BMP load reductions. For Final Reports that are developed to document compliance with NPDES permit requirements, MS4s that participate in a joint PRP or TMDL Plan should report 1) all BMPs actually installed or completed within their jurisdictional borders and 2) all BMPs actually installed or completed within the jurisdictional borders of all MS4s participating in the joint PRP or TMDL Plan.

FAQ #69: Are projects located within an MS4 jurisdiction’s borders, but outside of the MS4 storm sewershed (i.e., “planning area”), eligible toward the MS4 pollutant reduction goals/obligations?

Yes. DEP strongly suggests that all MS4 permittees consider and prioritize BMP projects located within the MS4 planning area, but it is also possible and allowable to sponsor structural BMPs outside of the MS4 planning area to satisfy load reduction requirements of NPDES permits. To be eligible the permittee proposing such projects within the MS4’s jurisdictional borders but outside the MS4 storm sewershed (planning area) must demonstrate in the planning document the BMP efficiencies, calculations or modeling, the reductions benefiting surface waters to which the MS4 discharges¹, and indicate that the MS4 jurisdiction holds sufficient legal rights to access the property. The MS4 jurisdiction must include certification and verification of performance at the time of the projects’ installation, include plans for long-term operation and maintenance and annual verification of the BMP(s), and provide for municipal access to the BMP if needed in the future.

Where these projects are proven to reduce pollutant loading, the MS4 permittee may be eligible for 100% of the pollutant load reductions realized in or downstream of the MS4. There are two options that MS4

¹ Must be a BMP located in the same watershed as the MS4 planning area and no further than 1 mile from the planning area boundary. The BMP must be within the jurisdiction of the municipality or municipalities that developed the PRP. DEP will not consider any BMP proposed beyond a HUC12 watershed.

jurisdictions and landowners hosting BMPs must consider. Both options require that parcel, where the BMP is located, will be in compliance with all applicable regulations and compliance as confirmed by DEP.

- a. The MS4 permittee may take credit for the full amount of pollutant load reduction achieved by the BMP. If this option is selected, the landowner must meet the entire load reductions expected on the land treated by the BMP (i.e., the baseline load) on the remainder of the parcel. For example, if a parcel is 100 acres and is required to reduce 50 pounds of pollutant under a TMDL, or equivalent, but enters into an agreement with an MS4 permittee to construct a BMP on 5 acres of the parcel, the landowner now must meet the full 50-pound reduction on the remaining 95 acres. DEP expects that the MS4 permittee and landowner will execute an agreement to ensure that: both the MS4 permittee and the landowner understand their individual obligations; identify where the MS4 load reductions will be generated; where and how the landowner will meet baseline; and identify any further reductions that may be required.
- b. The MS4 permittee may take credit only for the amount of pollutant load reduction achieved by the BMP that exceeds the baseline condition. In other words, both the landowner and MS4 permittee receive credit but only after the reduction obligation is met (i.e., baseline obligations are satisfied for the landowner and the MS4 receives anything extra). DEP expects that the MS4 permittee and landowner will execute an agreement to ensure that both the MS4 permittee and the landowner understand their individual obligations and identifies where the MS4 load reductions can be realized after the landowner meets baseline. Records identifying the pollutant load reduction necessary to achieve baseline and the amount of credit the MS4 received are necessary and will need to clearly distinguish this for tracking purposes.

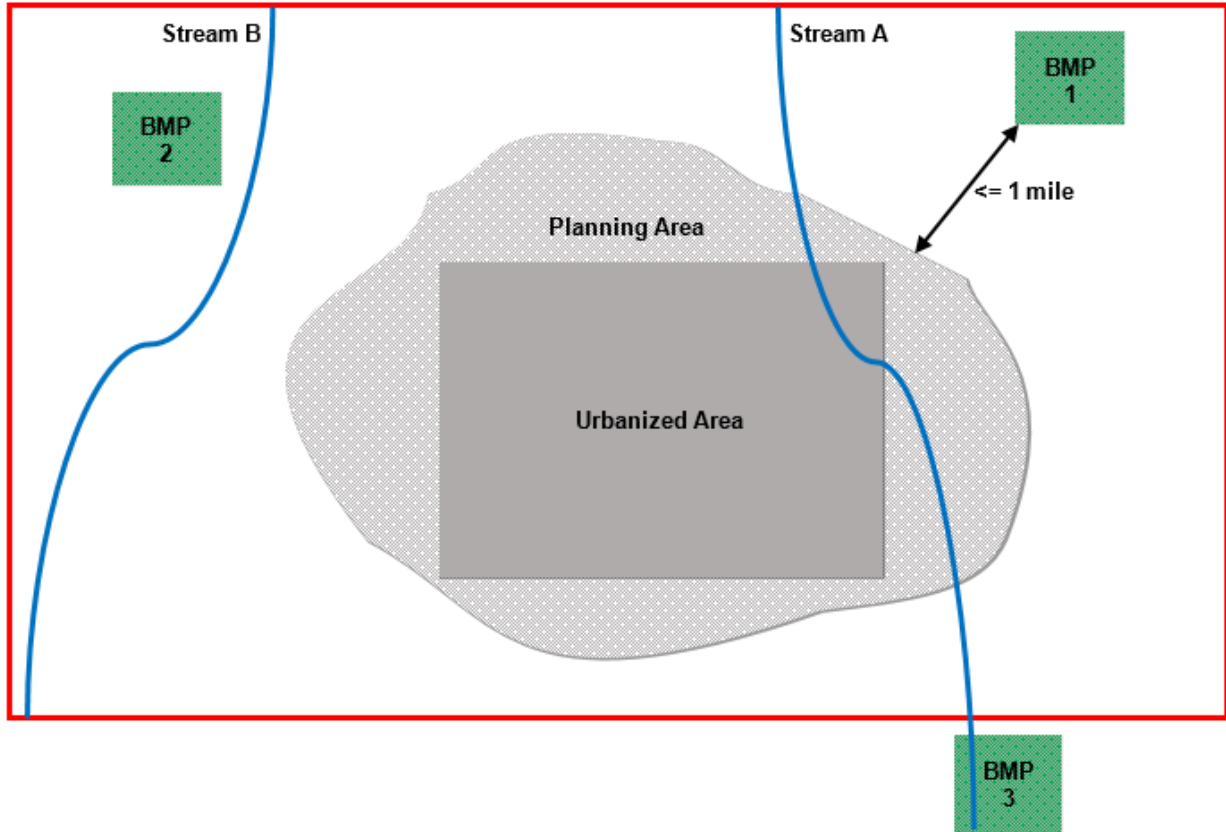
MS4 permittee wishing to pursue projects outside of PRP and TMDL planning areas where waters are impaired but are not subject to an approved TMDL should contact DEP's Bureau of Clean Water for an allocation determination.

Further, the non-urban land where a BMP may be located should not be added to the MS4 planning area, nor the permittee's area of responsibility, nor should the load therefrom (i.e., the non-urban land) be added to the 'sponsoring' MS4 permittee's (i.e., the permittee(s) proposing the new BMP to help satisfy load reductions) permit reduction obligations.

Example 1:

A municipality is preparing a PRP and is proposing 3 BMPs as illustrated below. The red line represents the MS4 jurisdictional boundary. The gray square is the urbanized area. The planning area is shown as the light gray shape and includes the urbanized area. All MS4 discharges from the planning area are to Stream A. Which BMPs would DEP find acceptable?

Municipal Jurisdictional Boundary



BMP 1 is located outside the planning area on non-urban lands, within the MS4 jurisdictional boundary, drains to Stream A (same stream that the MS4 discharges to), and is located less than or equal to 1 mile from the planning area boundary. BMP 1 is acceptable for use in a PRP. The MS4 permittee may either receive credit for expected pollutant removal above baseline (see FAQ #69.b) or the MS4 permittee may receive full credit (see FAQ #69.a). In both cases, an agreement between the landowner and the MS4 permittee is used to define roles, responsibilities, and reductions.

BMP 2 is also located outside the planning area on non-urban lands, and is within the MS4 jurisdictional boundary, but drains to Stream B. Since there are no MS4 discharges to Stream B, BMP 2 is not benefiting local impaired waters receiving MS4 discharges and is therefore not acceptable for use in a PRP to address local impairments. If Stream B drains to the Chesapeake Bay, and the MS4 permittee has an obligation to make reductions to waters tributary to the Chesapeake Bay, load reductions could be credited to the MS4 under a Chesapeake Bay PRP.

BMP 3 is a proposed stream/floodplain restoration project on Stream A. It would be located within 1 mile of the planning area boundary but would be located in the adjacent municipality. For this reason, BMP 3 would not be acceptable for use in a PRP unless the adjacent municipality collaborates in the development of the PRP, in which case BMP 3 may be used to help satisfy pollutant load reduction obligations for both municipalities.

Example 2:

An MS4 permittee proposes to pay for and maintain a BMP on agricultural land in the Chesapeake Bay watershed to help meet pollutant load reduction obligations under its NPDES permit. Under the Chesapeake Bay TMDL, every acre of agricultural land is expected to achieve baseline conditions. If, for example, an agricultural landowner has 100 acres and each acre is expected to achieve a Total Nitrogen reduction of 100 lbs under a TMDL, the total load reduction obligation is 10,000 lbs across the farm. If the MS4-sponsored BMP will treat stormwater from an area of 5 acres (with a load reduction obligation of 500 lbs to meet baseline), and the BMP is expected to achieve a reduction of 2,000 lbs, the MS4 may receive a credit of 1,500 lbs (i.e., beyond baseline) or 2,000 lbs (full credit). If the option for full MS4 credit is chosen, the farm will need to add the baseline (500 lbs) from the BMP treatment area to its load reduction obligation for the remaining 95 acres.

FAQ #70: Can an MS4 permittee sponsor a non-structural, annual BMP outside the planning area?

At this time, non-structural BMPs that are implemented annually (e.g., cover crops, no-till, etc.) outside of the planning area are not eligible for MS4 permittee sponsorship or for PRP/TMDL Plan credit toward pollutant load reductions under this FAQ.

Other Questions

FAQ #71: What effectiveness values should be used for agricultural BMPs that are installed in the planning area?

The PRP instructions state that MS4s must use the BMP effectiveness values contained within DEP's BMP Effectiveness Values document (3800-PM-BCW0100m), Chesapeake Bay Program expert panel reports, or other methods approved by DEP when determining pollutant load reductions in PRPs. The effectiveness values document does not contain values for agricultural BMPs. There are some instances in which agricultural land is part of the MS4's planning area and the MS4 permittee may choose to include the implementation of agricultural BMPs as part of their strategy to meet the pollutant load reduction obligation of their MS4 permit.

Certain non-structural annual practice BMPs that are located inside the planning area are eligible for MS4 credit. Any load reductions calculated for an agricultural BMP must be consistent with the load calculation methodology used to determine the permittee's baseline load. For example, if the permittee used the simplified method to calculate their existing load and wishes to use a cover crop BMP that is implemented within their planning area towards meeting the load reduction requirement of their MS4 permit, the loading to which the cover crop effectiveness value will be applied is the acres of cover crop multiplied by the simplified method previous loading rate.

The effectiveness values from the Chesapeake Bay Program include numerous variations for each type of agricultural BMP. The BMPs vary in pollutant load reduction effectiveness depending on the crop type, implementation methods, and location (hydrogeomorphic region). Therefore, for planning purposes DEP recommends that MS4s permittees wishing to implement agricultural BMPs use the following default rates when calculating pollutant load reductions:

BMP Type	TN (%)	TP (%)	TSS (%)
Cover Crops - Traditional	24	0	0

Tillage Type	% Residue	TN (%)	TP (%)	TSS (%)
Conventional Tillage	<15%	Does not qualify as a BMP		
Till – Low Residue	15 - 29%	5	9	18
Conservation Till	30 - 59 %	10	58	41
Till – High Residue	>60%	14	71	79

The values in the tables above are generalized values derived from the source data used by the CAST model for the two hydrogeomorphic regions in which agricultural land may be included in the UA (Piedmont Carbonate and Piedmont Crystalline). If after implementation the MS4 permittee is able to obtain more detailed documentation about the type of cover crops planted and implementation method, they may reference the CAST source data to find the specific category (and associated effectiveness values) for the implemented cover crop and update the load reduction calculations accordingly.

The effectiveness rates for agricultural BMPs included in the ModelMyWatershed (MMW) tool are not consistent with the current Chesapeake Bay Program guidance and therefore should not be used in pollutant load reduction calculations for MS4 purposes.

FAQ #72: What are municipalities required to do when areas are developed during the current permit term that create new MS4 areas?

If an area that was excluded from a permittee’s planning area (because stormwater runoff from that area did not enter the MS4) is developed during the permit term and runoff from the newly-developed area will now enter the MS4, the permittee does not need to revise their planning area to include the newly-developed area. The permittee does not need to revise their PRP now to account for increased existing load, since the existing load is calculated as of 2017 (or for individual permittees that submitted new or renewal applications after 2017, the date of PRP development). The revised planning area should be included as part of the permittee’s planning area in future permit terms.

If new outfalls are constructed that direct new stormwater flows from the MS4 to surface waters, the permittee must notify the appropriate DEP regional office about the new MS4 outfalls. For discharges to non-special protection waters, this notification can be included as part of the MS4 Annual Status Report. For new MS4 discharges to special protection waters, the permittee must notify DEP as soon as possible due to antidegradation considerations.

FAQ #73: What is expected of permittees with Pollutant Control Measure (PCM) requirements?

The PCM requirements, as described in Appendix A, B, and C of the PAG-13, do not require permittees to provide an exhaustive analysis of pollutant loads nor are they necessarily expected to propose actions

intended to reduce pollutant loads. Rather, PCMs are intended to serve as a roundup of the currently available information of these statewide high-priority pollutants. A summary of what is expected is listed below.

1. Mapping - Permittees must develop map(s) of the storm sewershed(s) associated with all outfalls that discharge to surface waters subject to an Appendix A, B, or C requirement. The purpose of this mapping is to identify the area the permittee is responsible for within its legal boundaries. Note that the appendix requirements apply to the entire watershed that drains to the impaired water; this includes both areas that drain directly into the impaired waters and indirectly (to a tributary that then drains to the impaired water).
2. Inventory - Once the map has been developed, the permittee must develop an inventory of all suspected and known sources of the pollutant of concern for the Appendix A, B, or C requirement within the identified storm sewershed(s) that discharge to impaired waters. The inventory must identify whether the source is suspected or known, the basis for this determination, the responsible party (if known), and any corrective action the permittee has taken or plans to take for any of these sources. The inventory does not need to be a formal report; an excel spreadsheet is sufficient to document the inventory.
3. Investigation - Once the inventory is complete, the permittee must complete an investigation of each suspected source. The investigation should document the methods used to make the determination of whether or not the suspected source(s) identified in the inventory is indeed a source contributing the impairment for which there is an Appendix A, B, or C requirement. This investigation must include stormwater sampling if the investigation is required as part of implementing the IDD&E program under MCM #3 of the MS4 permit, and otherwise is voluntary. Like the inventory, the investigation does not need to be a formal report; an excel spreadsheet is sufficient to meet this requirement.

Version History

Date	Version	Revision Reason
12/8/2020	1.2	Updated FAQ #8 (submission of a future NOI for PAG-13 coverage is anticipated); FAQ #14 (updated link to MapShed); FAQ #27 (updated BMP definition to match regulations); FAQ #40 (clarified instructions for selecting the proper Sediment Delivery Ratio (SDR)); and FAQ #49 (clarified that standards contained in an outdated Act 167 Plan could be utilized for Chapter 102 compliance if approved as an alternative design standard). Added FAQ #s 71-73.
10/21/2019	1.1	Reorganized and added FAQ #s 47-70.
1/23/2020	1.0	Original