FACT SHEET

NPDES Permit Number:	**MDR 055500**
MDE Permit Number:	**26-IM-5500**
Public Comment Period Expiration Date:	**January 28, 2027**
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The Maryland Department of the Environment, Water and Science Administration (MDE) proposes to issue a National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4).

Introduction

MDE proposes to issue the small MS4 municipal general discharge permit (permit #MDR 055500, 26-IM-5500) (collectively, the "general permit"). The conditions of the general permit require MS4 owners or operators to establish and implement stormwater management programs to effectively control the discharge of pollutants into storm drain systems and to improve water quality. This fact sheet provides basic information about the general permit's requirements. Contact information and procedures for submitting comments are provided at the end of this fact sheet.

MDE is the United States Environmental Protection Agency's (EPA) delegated permitting authority responsible for issuing NPDES permits in the State of Maryland. In Maryland, ten jurisdictions and the State Highway Administration (MDOT SHA) are covered under individual NPDES discharge permits for stormwater. This general permit provides NPDES coverage to an additional 32 municipalities and seven counties classified as small MS4 operators.

This general permit is the third iteration of MDE's general permit for small MS4s. The general permit requires continuation of programs implemented under the previous permit, builds on existing programs, and incorporates lessons learned from implementation by Maryland's MS4 community. In addition, new scientific knowledge related to stormwater best management practice (BMP) implementation and design guidelines is incorporated to improve practice efficiency and continue efforts toward restoring the Chesapeake Bay and local waterways. Significant program enhancements required in the new general permit will result in the following:

- Increasing statewide efforts to make progress toward pollution reduction and water quality goals for the Chesapeake Bay and local waterways by requiring the completion of restoration projects identified by permittees covered under the prior general permit to restore twenty percent of untreated impervious area in small MS4s.
- Completing an additional ten percent restoration of untreated impervious area.

- Evaluating outreach and public participation efforts to include communities with environmental justice concerns.
- Improving strategies to eliminate illicit discharges by encouraging prioritized outfall inspections at areas considered to have the highest pollutant potential.
- Strengthening efforts toward storm drain system operation and maintenance.
- Advancing Statewide efforts to reduce salt, a pollutant of emerging concern, by requiring training and implementation of best practices for winter weather management.
- Improving procedures for BMP operation and maintenance to ensure long-term pollution reduction performance is optimized.

The general permit is effective for a five-year term unless administratively continued by MDE. Compliance with the general permit will support Maryland's broader goals of improving local water quality and contribute to long-standing efforts to restore the Chesapeake Bay.

Permit Authority

Title 40 Code of Federal Regulations (CFR) § 122.32(a) requires operators of small MS4s that meet specified conditions to obtain NPDES permit coverage. MDE's small MS4 general permit is subject to federal and State regulations. The federal Clean Water Act (CWA), CFR, and numerous guidelines of the United States (U.S.) Environmental Protection Agency (EPA) provide the legal framework for permit requirements. The general permit also relies on long-established Statewide programs under the Environment Article, Annotated Code of Maryland, Code of Maryland Regulations (COMAR), and policies and guidelines of MDE to comply with the goals of the CWA and State law. Statewide requirements incorporated by reference in the general permit include addressing Maryland's long-established erosion and sediment control and stormwater management regulatory provisions.

General Permit History

EPA's NPDES municipal stormwater regulations were published in two phases. In 1990, NPDES Phase I regulations established requirements for stormwater discharges associated with 11 categories of industrial activity and for large and medium MS4s serving populations of 250,000 or greater and 100,000 or greater, respectively. In Maryland, ten jurisdictions and the State Highway Administration (MDOT SHA) were covered under individual municipal NPDES stormwater permits to comply with the Phase I regulations. These entities were considered priority sources that needed comprehensive stormwater programs to minimize the discharge of pollutants and improve water quality.

In December 1999, EPA promulgated the NPDES Phase II rule to designate additional sources of stormwater discharges from small MS4s to be covered under NPDES permits. Federal regulations under 40 CFR § 122.34 describe small MS4 permit requirements and include the implementation of six minimum control measures (MCMs). These six measures are public education and outreach; public involvement and participation; illicit discharge detection and elimination; construction site stormwater runoff control; post-construction runoff control; and pollution prevention and good housekeeping.

EPA also published regulation changes affecting NPDES small MS4 general permits on December 9, 2016, known as the "Remand Rule" (81 FR No. 237). The new rule revised federal regulations to clarify that the permitting authority is responsible for establishing requirements that meet the standard of reducing pollutants to the maximum extent practicable (MEP). This requires MDE to establish clear, specific, and measurable permit provisions to meet the standard of reducing pollutants to the MEP and to meet the water quality goals of the CWA.

In June 2023 (88 FR No. 112), the EPA updated the Phase II rule to address changes in U.S. Census Bureau terminology. Since 1999, small MS4s were regulated based on their location within "urbanized areas." However, in March 2022, the Census Bureau stopped using that specific term. To maintain consistency, EPA's new rule clarifies that designations are now based on "urban areas" with populations of at least 50,000. Because this matches the previous definition of an "urbanized area," the automatic designation criteria remain unchanged from the original Phase II program requirements.

MDE's first-generation small MS4 general permit was issued on April 14, 2003. MDE identified a total of 55 jurisdictions that met the designation criteria for coverage under that permit. Many of these municipalities later became co-permittees under their respective county's Phase I MS4 permits. The remaining 19 municipalities and 2 counties were subject to the provisions of the first-generation small MS4 general permit. These permittees implemented the six MCMs to meet the MEP standard.

The second generation of the small MS4 general permit expanded coverage to 29 municipalities and 6 counties. The second-generation small MS4 general permit required that permittees expand their efforts under the six MCMs by continuing to map storm drain systems, performing dry weather outfall inspections, developing a Good Housekeeping Plan to control the discharge of stormwater pollution at certain priority locations, and conducting annual training of personnel and contractors in stormwater topics. The permit further required planning for the restoration of untreated impervious surfaces to make progress toward the Chesapeake Bay and local water quality goals. To do so, permittees developed an analysis of their total existing impervious area and identified potential projects to restore twenty percent of the untreated impervious area. Permittees were required to develop and submit a list of projects and implementation schedules to meet the twenty percent impervious area restoration target.

MDE has developed this third-generation small MS4 general permit consistent with the "Comprehensive General Permit" described in the Remand Rule. This general permit builds on progress made under the previous permit by requiring improvements to the MCM programs. Permittees renewing coverage under the general permit must complete restoration projects identified in the previous permit (No. 13-IM-5500, MDR055500, hereafter referred to as the 2018 general permit) to meet the twenty percent restoration target. Furthermore, renewal permittees must restore an additional ten percent of their respective impervious area baseline, and new permittees must submit plans to do the same in the next permit cycle.

Designation Criteria for Small MS4 Permit Coverage

Designation criteria for regulating small MS4s are based on federal regulations. Regulated MS4s must obtain NPDES permit coverage by the effective date of the permit by either submitting a Notice of Intent form in accordance with the permit or applying for an individual NPDES MS4 permit.

Designation criteria are included below for MS4s located in the following locations:

1. Urban areas with a population of 50,000 or greater, as determined by the latest Decennial Census by the U.S. Census Bureau:

   MS4 regulations under 40 CFR § 122.32(a)(1) automatically designate small MS4s based upon location in urban areas with a population of 50,000 or more, based on the latest Decennial Census by the U.S. Census Bureau. In addition, the preamble to the small MS4 regulations (64 FR 68751, December 8, 1999) clarifies that any small MS4 automatically designated into the NPDES program for any given census year due to location within an urban area with a population of 50,000 or more will remain regulated regardless of subsequent census calculations. The EPA has developed urban area maps that represent the areas to be automatically designated in the NPDES program.

2. Other areas designated by MDE:

   Federal regulations under 40 CFR §§ 122.26(a)(9)(i)(D) and 123.35(b) require State permitting authorities to evaluate additional MS4s for inclusion into the NPDES permit program. This evaluation is based on water quality considerations to determine "whether a storm water discharge results in or has the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts." 40 CFR § 123.35(b)(1)(i). MDE used water quality data in TMDL documentation and the Maryland Biological Stream Survey (MBSS) to evaluate additional MS4s for inclusion in the NPDES permit program.

   Accordingly, based on the guidance in 40 CFR § 123.35(b)(2), MDE evaluated the water quality data noted above and instream conditions in the following locations:

   a) Small MS4s with populations greater than 10,000 and a population density of at least 1,000 people per square mile located outside of urban areas defined by the U.S. Census Bureau with a population of 50,000 or greater;
   b) Small MS4s located next to or within existing jurisdictions regulated under Phase I MS4 permits; and
   c) Small MS4s within a local government's jurisdiction but located outside of an urban area as determined by the U.S. Census Bureau. Numerous counties covered under the previous general permit requested the flexibility to implement programs and practices county-wide; however, they questioned their designation outside of the urban area with a population of 50,000 or greater. Therefore, MDE examined water quality data in these locations to evaluate the MS4 coverage area for these jurisdictions.

Based on the criteria outlined above, MDE has designated six counties and 31 municipalities that must obtain coverage under this small MS4 general permit. Additional information on MDE's designation criteria is included in Appendix A of the general permit. A complete list of these jurisdictions is provided in Table 1 below.

MS4 General Permit Waiver Criteria

The Code of Federal Regulations specifies that certain jurisdictions may be waived from permit coverage under one of the following conditions:

1. An MS4 that serves a population of less than 1,000 within an urban area with a population of 50,000 or greater and does not contribute substantially to the pollutant loadings of a physically interconnected regulated MS4 jurisdiction, and does not need stormwater controls based on wasteload allocations (WLAs) in an EPA-approved or established total maximum daily load (TMDL). Jurisdictions that meet this criterion are automatically waived; or

2. An MS4 that serves a population of less than 10,000 and the permitting authority has evaluated receiving waters and determined that additional stormwater controls are not needed based on WLAs associated with an EPA-approved TMDL. Alternatively, if a TMDL has not been approved, MDE may perform an equivalent analysis to evaluate the source(s) and allocation(s) for the pollutants of concern and determine whether the current and future discharges from the MS4 have the potential to result in exceedances of water quality standards or other significant water quality impacts.

Municipalities that discharge stormwater runoff combined with municipal sewage (i.e., combined sewer systems) must obtain NPDES discharge permits for the discharges from their combined systems and, therefore, are not subject to NPDES MS4 requirements for those discharges. 40 CFR § 122.26(a)(7). This general permit does not authorize discharges from combined sewer systems.

General Permit Requirements

The small MS4 regulatory requirements are based on the implementation of six minimum control measures. In addition, MS4 permits must require stormwater controls to reduce the discharge of pollutants to the MEP and such other provisions as necessary to protect water quality. Successful implementation of the six minimum control measures and other permit conditions constitutes compliance with the standard of reducing pollutants to the MEP, also referred to as the MS4 permit standard. Below is a general description of permit requirements to meet this standard.

Public Education and Outreach

Federal regulation 40 CFR § 122.34(b)(1) requires permittees to develop, implement, update, and maintain a public education and outreach program to reduce the discharge of pollutants caused by stormwater runoff. The general permit's requirements include the following:

- Develop and distribute educational materials describing the impacts of stormwater discharges on receiving waters, the reason that controlling these discharges is important, and what actions the public and personnel can take to reduce pollutants in stormwater runoff.
- Evaluate outreach opportunities to reach communities with environmental justice concerns.
- Develop a personnel training program that addresses appropriate topics to prevent and reduce the discharge of pollutants into the storm drain system.

Public Involvement and Participation
Federal regulation 40 CFR § 122.34(b)(2) requires permittees to develop, implement, update, and maintain a public involvement and participation program to reduce the discharge of pollutants caused by stormwater runoff. The general permit's requirements include the following:

- Promote and conduct public participation events for permittee personnel and local residents within the jurisdiction, such as adopt-a-stream programs, storm drain stenciling, stream cleanups, tree plantings, and Earth Day events.
- Evaluate public involvement opportunities to reach communities with environmental justice concerns.
- Allow public access to the permittee's progress reports.

Illicit Discharge Detection and Elimination
Federal regulation 40 CFR § 122.34(b)(3) requires permittees to develop, implement, update, and maintain an illicit discharge detection and elimination program to reduce the discharge of pollutants caused by stormwater runoff. The general permit's requirements include the following:

- Maintain a map of the permittee's storm drain system, identifying all outfalls, conveyances, stormwater BMPs, and surface waters of the State that receive stormwater discharges from the permittee's MS4.
- Adopt an enforceable ordinance or other regulation that prohibits illicit discharges into the MS4 with appropriate enforcement mechanisms.
- Develop standard operating procedures specifying outfall screening locations and frequency, inspection checklists, and illicit discharge investigation and elimination procedures.
- Prioritize areas with higher pollution potential, such as dense commercial areas and areas with aging infrastructure.
- Evaluate education efforts to reach communities with environmental justice concerns.
- Maintain documentation of illicit discharge screening efforts, complaints, and investigations.

Construction Site Stormwater Runoff Control
Federal regulation 40 CFR § 122.34(b)(4) requires permittees to develop, implement, update, and maintain a construction site stormwater runoff control program. The Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland and State erosion and sediment control regulations under COMAR 26.17.01 established a statewide erosion and sediment control program to control construction site runoff well before the EPA's stormwater requirements. The State's statute and COMAR specify the requirements for any construction activity that disturbs 5,000 square feet of earth or 100 cubic yards or more of earth. Because Maryland's erosion and sediment control program regulates more earth disturbing activities than the NPDES regulations, MDE considers compliance with the State statute to be a qualifying program to comply with this minimum control measure. The general permit's requirements include the following:

- Adopt an MDE-approved erosion and sediment control ordinance which includes procedures for plan review and approval of construction drawings, and inspection and enforcement of construction projects. A jurisdiction may accept the program that is implemented by its respective county, Soil Conservation District, or the State of Maryland.

- Comply with design criteria and performance requirements established in the *2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control* (MDE, 2011) or most recent revision and COMAR 26.17.01.
- Develop procedures for receiving, investigating, and resolving complaints from any interested party related to construction activities.
- Ensure appropriate personnel are trained in Maryland's Responsible Personnel Certification.
- Perform inspections of construction sites to ensure compliance with approved sediment and erosion control plans or coordinate with MDE or MDE-delegated authority as applicable to ensure compliance.
- Track active construction sites and report the amount of disturbed area to MDE.

Post Construction Stormwater Management

Federal regulation 40 CFR § 122.34(b)(5) requires permittees to develop, implement, update, and maintain a post-construction stormwater management program. The Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland and COMAR 26.17.02 establish a statewide stormwater management program. The State's statute and COMAR require all Maryland jurisdictions to have an approved local program to ensure that stormwater management for new development and redevelopment is addressed for construction projects that disturb 5,000 square feet or more of earth, which is more stringent than NDPES regulations. MDE considers compliance with the State statute to be a qualifying program that complies with this minimum control measure.

MDE is also committed to adapting Maryland's stormwater programs to address climate change. MDE recognizes the urgency needed to address climate change and is in the process of updating precipitation data and integrating updated flood control standards into the statewide erosion control and stormwater management programs. When updates are made to the State stormwater management regulations and the Maryland Stormwater Design Manual, local ordinances will also need to be updated to include these new standards.

The general permit's requirements include the following:

- Adopt an MDE-approved stormwater management ordinance that provides plan review and approval processes and inspection and enforcement procedures that ensure proper construction and maintenance of BMPs. A municipality may accept an MDE-approved stormwater program implemented by its respective county.
- Comply with design criteria and performance requirements established in the Maryland Stormwater Design Manual.
- Implement thermal stormwater management strategies in cold water and thermally impaired watersheds.
- Perform triennial inspections of stormwater BMPs and use appropriate enforcement measures to ensure proper performance of all privately owned stormwater facilities.
- Perform routine maintenance of publicly owned BMPs and verify long-term performance.
- Develop and maintain a stormwater BMP database to verify proper maintenance of BMPs.
- Ensure appropriate personnel are trained in proper BMP design, performance, inspection, and routine maintenance.

Pollution Prevention and Good Housekeeping
Federal regulation 40 CFR § 122.34(b)(6) requires permittees to develop, implement, update, and maintain pollution prevention and good housekeeping techniques and procedures to reduce pollutants from all municipal operations. The general permit's requirements include the following:

- Ensure that appropriate personnel and contractors receive training designed to address the importance of water quality protection through pollution prevention and good housekeeping measures.
- Develop and implement good housekeeping plans at all facilities that describe procedures to detect and correct any pollutant discharge, release, leak, or spill on site.
- Develop and implement practices to reduce salt use during winter weather deicing, train personnel and contractors in best practices, and educate the public on the impacts of winter salt on local waters and human health.
- Develop procedures for performing stormwater conveyance system inspections to ensure proper functionality.
- Evaluate and report on opportunities for increasing the solar reflectance of impervious surfaces in cold water and thermally impaired watersheds.
- Document any spill, discharge, or unauthorized release and efforts related to containment and clean up.
- Track and report efforts to reduce fertilizers, pesticides, and winter salt on roads, sidewalks, and parking lots.
- Maintain proper coverage under the General Permit for Stormwater Discharges Associated with Industrial Activity for applicable properties.

Impervious Area Restoration
MDE is required to issue NPDES permits that are consistent with the assumptions and requirements of applicable total maximum daily loads (TMDLs) in accordance with 40 CFR § 122.44(d)(1)(vii)(B). Furthermore, 40 CFR § 122.34(c) states that small NPDES MS4 general permits must include more stringent terms and conditions, including permit requirements that modify, or are in addition to, the minimum control measures based on approved TMDLs, or where the permitting authority determines such terms and conditions are required to protect water quality. To meet these regulatory obligations, MDE relied on Maryland's Watershed Implementation Plan (WIP) to establish strategies to make progress toward Chesapeake Bay and local water quality goals for the previous general permit issued in 2018.

Maryland's Phase II WIP, developed in 2012, incorporates a scientific model to assign pollutant load reductions from major pollutant sources (e.g., wastewater treatment plants, agriculture, stormwater) to meet the Chesapeake Bay water quality goals. The Phase II WIP established the twenty percent impervious area restoration requirement as the key strategy for the stormwater sector to achieve the necessary nutrient and sediment load reductions to meet the Chesapeake Bay TMDL by 2025. In keeping with the Phase II WIP strategy, the previous MS4 general permit required the small MS4 community to develop planning and implementation schedules to meet the twenty percent impervious area restoration target. A more recent version of the Phase III WIP was developed in 2019; however, this document did not identify additional strategies for the small MS4 community beyond completion of the twenty percent target by 2025 noted in the Phase II WIP. However, the Chesapeake Bay Program is developing a new model, and MDE will identify additional pollutant load reductions for the stormwater sector in a Phase IV WIP when the new model is available.

Given that the strategies in the Phase IV WIP are not yet available to determine water quality goals for this general permit, MDE relied on more recent scientific documentation to determine whether additional water quality requirements are needed as part of this general permit. Specifically, the document "Achieving Water Quality Goals in the Chesapeake Bay: A Comprehensive Evaluation of System Response", an independent report from the Scientific and Technical Advisory Committee (STAC) of the Chesapeake Bay Program (CBP) provided a more recent analysis of water quality conditions of the Bay (STAC, 2023) and recommendations for enhancing efforts to meet water quality goals. This report noted that progress toward meeting the Bay TMDL and water quality standards has been slower than expected and offered options for how progress can be accelerated. The report indicated that current actions to reduce pollutants from developed lands are not sufficient (the STAC report referred to "developed lands" as "nonpoint sources"). Specifically, the report noted that:

> *"Meeting the TMDL depends to a significant degree on reducing nonpoint sources of pollutants. Agriculture is the largest remaining source of nutrient loads to the Bay, and urban nonpoint sources are the fastest growing. To date, CBP partner efforts to reduce nonpoint sources of nutrients have not produced sufficient levels of best management practice (BMP) implementation to meet the TMDL, and the implementation that has occurred may not be producing the pollutant reductions expected."*

The report concluded that TMDL targets are not likely to be achieved without increasing efforts to address nonpoint source loads (i.e., developed lands). Given the above, it is reasonable for MDE to conclude that additional restoration requirements are needed in this general permit to protect water quality and support Bay restoration efforts. The amount of restoration required in the permit is based on MDE's evaluation of MS4 annual progress reports submitted by permittees that identified additional restoration plans with projected implementation dates through 2030. These restoration plans show that permittees can continue to implement restoration in addition to the twenty percent target in the 2018 permit. Further information on MDE's determination of the amount of restoration that will be required in the permit is provided below.

The restoration requirements in this general permit incorporate an iterative permitting approach consistent with MDE's long history of restoration implementation as part of NPDES permitting. For example, the first permits issued to Phase I MS4 jurisdictions in the early 1990s required development of retrofit assessments and implementation schedules within the first five-year permit term. Subsequent permits required Phase I MS4 jurisdictions to perform watershed assessments and develop a plan to retrofit ten percent of the untreated impervious area. Later permits issued between 2014 and 2015 built on those strategies and required twenty percent of the jurisdiction's untreated impervious area to be restored by the end of the permit term. Each Phase I MS4 permit dating back to the early 1990s is available at MDE's NPDES MS4 website. The iterative permitting approach continuously builds on progress achieved during each permit cycle, resulting in the implementation of projects that were originally identified and planned in prior permit terms.

Based on the history of restoration permitting and implementation experience from the Phase I community, MDE has incorporated a similar iterative approach toward restoration program development and implementation when drafting general permits for the Phase II MS4 community. Accordingly, the MS4 general permit issued in 2018 incorporated a planning goal for restoration because that was the first general permit with a restoration requirement. The restoration requirements

focused on program development of the necessary resources to effectively plan, design, secure funding, and obtain necessary permits to enable long-term success. Enforceable deliverables under the previous permit required restoration implementation schedules that identified projects to meet the twenty percent target. MDE has used the restoration schedules and implementation progress achieved under the 2018 general permit to inform requirements and deadlines in the new general permit.

Given the iterative process described above, MDE's decision to develop restoration requirements in the tentative determination Phase II MS4 general permit considered the following information:

- Progress toward completing the twenty percent restoration pollution reduction targets identified in the Phase III WIP for small MS4 permittees.
- Recommendations in the STAC, 2023 report that specify that increased efforts will be required to meet Chesapeake Bay water quality goals.
- Restoration plans and implementation schedules submitted by permittees that include projected implementation dates out to 2030. These plans show additional restoration is feasible beyond the twenty percent requirement in the previous permit.
- Implementation challenges reported by permittees related to funding, resource limitations, and competing priorities within local governments to address MS4 permit requirements.
- Ongoing maintenance obligations of completed projects to maintain pollution reductions achieved in prior permits. This growing level of effort needs to be considered when developing restoration requirements in the reissued general permit.

Restoration Accomplishments by Small MS4 Permittees

Permittee accomplishments toward meeting the twenty percent planning requirements in the 2018 general permit are summarized as follows:

- The 2018 general permit required permittees to develop planning schedules to restore twenty percent of each permittee's untreated impervious area during the next permit cycle (i.e., under this general permit). This equates to 7,261 acres of total impervious surface restoration among all permittees. Many permittees moved forward with implementing their planned impervious surface restoration projects while the prior general permit remained in effect. Progress toward this goal included:
    - Permittees completed 7,566 acres of restoration as of the Tentative Determination of this general permit. This progress included projects implemented between 2006 and 2018 because those projects were never accounted in Bay progress reporting. The goal of 7,261 acres was exceeded because some permittees exceeded their target
    - While some permittees exceeded their target, others are working to complete their twenty percent target. These permittees have developed plans and schedules to address the remaining twenty percent restoration target for their respective jurisdictions. Collectively, these permittees will restore an additional 1,352 acres required to meet their twenty percent restoration target for their respective jurisdictions under this general permit.
- In 2023, MDE recommended that permittees identify additional restoration opportunities beyond the twenty percent requirement. In response, permittees submitted annual reports identifying projects to restore an extra 3,529 acres. These findings demonstrate that requiring more restoration is feasible.

- Permittees continue to maintain BMPs to achieve the pollution reductions for practices installed to meet the twenty percent restoration target. Efforts to ensure proper operation and maintenance require significant investment and commitment.

Establishing Impervious Area Restoration Requirements in the Reissued Permit

Based on the above information, MDE determined that some permittees need additional time to complete the twenty percent target. However, because submitted restoration plans have identified additional projects that permittees have demonstrated are achievable during the next five years, MDE finds that further implementation is feasible in this general permit. Because this is a general permit, MDE also recognizes that continued flexibility is needed to meet the numerous challenges that individual permittees may experience related to the availability of resources, funding, expertise, and limitations while this permit is in effect. Therefore, the permit requires adaptive management strategies to allow permittees the ability to adapt to growing challenges while continuously maintaining a growing number of BMPs. Given the above, restoration requirements in the reissued general permit include:

- Renewal permittees are required to complete projects to meet the twenty percent target.
- All renewal permittees must implement an additional ten percent impervious area restoration. This will be achieved by implementing restoration plans identified during the previous permit. Based on information received from MS4 permittees, MDE has determined that an additional ten percent restoration (or 3,630 acres) represents a maximum extent practicable (MEP) level of effort for the municipal small MS4 Phase II community.
- All new permittees must plan to implement ten percent restoration of their baselines, consistent with the planning strategy for the prior permit.
- Permittees will incorporate adaptive management strategies to achieve compliance with requirements. An adaptive management report must be developed to address any setbacks or delays and describe measures taken to attain compliance.
- Permittees must update operation and maintenance plans for BMPs already completed for restoration. Performing required BMP inspections and maintenance will ensure that BMPs continue to function as designed and pollutant load reductions achieved by completed restoration projects will continue to occur. This also ensures that pollution reduction goals under the Phase III WIP will be maintained in the future.
- Permittees must submit a Restoration Capabilities Assessment in the fourth year MS4 Progress Report to inform restoration targets in the next permit cycle. This assessment must include:
    - A list of restoration projects and estimated credits with projected implementation dates within five years after the expiration of this general permit.
    - Restoration opportunities for installing green infrastructure or other stormwater projects in communities with environmental justice concerns.
    - Other initiatives that include other local priorities involving stormwater management.

These requirements incorporate MDE's iterative permitting approach to ensure that adequate maintenance of BMPs will result in retaining the annual pollutant reductions achieved by completed projects, while ensuring additional restoration is implemented during the permit term. Permittees will demonstrate compliance with this goal through the incorporation of adaptive management and the implementation of robust maintenance programs. This will ensure greater progress toward achieving Chesapeake Bay and local water quality goals during this permit.

Based on implementation experience with the Phase I and Phase II MS4 communities, MDE recognizes that setting appropriate restoration targets in NPDES discharge permits requires building on strategies and accomplishments of prior permits. However, crafting general permit requirements that apply to 39 jurisdictions requires options and flexibility. The level of restoration required in the general permit will provide flexibility and represent an MEP level of effort while advancing progress toward necessary Bay restoration efforts as documented in the STAC, 2023 report.

Impervious Acre Crediting Criteria

Restoration efforts may include the use of ESD practices, structural stormwater BMPs, retrofitting, stream restoration, or other alternative restoration practices. Trading with other sectors may be considered as another method to achieve pollutant load reductions via the Maryland Nutrient Trading Program, as authorized by COMAR 26.08.11. Acceptable design criteria for stormwater BMPs are outlined in the Maryland Stormwater Design Manual and *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated* (Accounting Guidance).

The Accounting Guidance incorporates the Phase 6 Chesapeake Bay Watershed Model, new and updated BMPs approved by the CBP expert panels, and additional BMPs that provide multiple benefits (e.g., increased climate resiliency and green infrastructure credits), and nutrient trading options. An equivalent impervious acre (EIA) credit has been developed for alternative BMPs such as street sweeping, tree planting, stream restoration, and the elimination of discovered nutrient discharges from grey infrastructure, among other approved practices. The EIA is based on reducing urban pollutant loads until they mimic the runoff from forest land cover. The Accounting Guidance was developed with contributions from environmental non-governmental organizations, MS4 jurisdictions, State agencies, and EPA.

Addressing Local Water Quality

Research has demonstrated that stormwater BMPs are effective for reducing nutrients, sediments, and other pollutants associated with local TMDLs. As discussed above, the impervious acre restoration metric is a surrogate for providing treatment of pollutants from urban stormwater runoff, which contributes to progress toward water quality goals for both the Chesapeake Bay and local waterways. In addition to nutrients and sediments, research indicates that stormwater BMPs are effective at removing other toxic pollutants in stormwater. The Chesapeake Stormwater Network (CSN) released the report, *Potential Benefits of Nutrient and Sediment Practices to Reduce Toxic Contaminants in the Chesapeake Bay Watershed* in December 2015. The report linked treatment of urban toxic contaminants to reductions in sediment, as they share many characteristics, or the contaminants bind, adsorb, or attach to sediment particles. Removal of these contaminants will also reduce pollution and make progress toward addressing TMDL impairments in local waterways. This includes polychlorinated biphenyls (PCBs), mercury, and chlordane.

Another local TMDL in Maryland is bacteria, measured by the indicators *Escherichia coli*, Enterococcus, and fecal coliform. The National Pollutant Removal Performance Database (Version 3, 2007) provided bacteria removal efficiencies for many stormwater BMPs already used for water quality treatment, such as wet ponds, wetlands, and filtering practices. In addition, Baltimore County identified that several practices, including riparian buffers and wet ponds, have bacteria reduction benefits. As another example, Anne Arundel County's strategy to reduce bacteria includes the retrofit of pre-2002 constructed ponds to meet current MDE stormwater criteria.

In summary, implementation of CBP-approved BMPs to meet restoration targets will reduce nutrients, sediments, and other pollutants such as PCBs, bacteria, mercury, and chlordane in local streams and waters. Installing BMPs with specific performance standards and providing implementation schedules will provide confidence that small MS4s will demonstrate progress toward meeting the water quality goals for local waterways as well as the Chesapeake Bay.

Reporting Progress to MDE

As described above, the six minimum control measures and impervious area restoration targets establish specific deliverables and tasks that permittees shall accomplish to comply with the conditions of the general permit. MDE has developed an MS4 Progress Report in Appendix D of the general permit, which specifies the information that must be submitted annually to MDE for the permittee to document compliance with the general permit. MDE will assess each permittee's progress toward successful implementation of all program elements and evaluate significant compliance with the terms and conditions of the general permit.

Sharing Responsibilities

Permittees may choose to partner with or share responsibilities with other entities to meet compliance with any or all permit requirements. Several partnerships were forged under the previous permit that enabled progress to be made in a more efficient and collaborative way. However, each permittee remains responsible for compliance with all conditions of the general permit. Therefore, when coordinating partnerships, it is recommended that a legally binding contract, memorandum of understanding, or similar document be executed between permittees to avoid conflicts in meeting permit requirements.

Summary

Maryland's small municipal MS4 general permit represents another step forward in stormwater management, restoration, and water quality improvement. This general permit supports Maryland's efforts to restore the Chesapeake Bay and improve local water quality. The permit builds on the restoration planning efforts established in the previous permit to address water quality impacts from urban areas that were developed prior to the State's stormwater management program. These restoration efforts build upon the six minimum control measures and existing programs that were required under the previous permit cycle. Together, they ensure a comprehensive watershed management strategy to control pollutants in stormwater, improve the health of local streams and rivers, and meet water quality standards.

Public Review and Participation Opportunities

This Tentative Determination will be available on MDE's website. Hard copies of the draft permit are available upon request at a cost of $0.36 per page.

MDE will hold three public hearings in accordance with COMAR 26.08.04 regarding this Tentative Determination. Each hearing will cover the same information. To join virtually, you must register online 12 hours prior to the hearing at https://docs.google.com/forms/d/e/1FAIpQLSf5ZhcEDK0fEI2iPiJU7mVZG_x5ym2nj_vmsjCwYDjg8es4BQ/viewform. No registration is required for in-person attendance. The hearings will be:

City of Frederick, C. Burr Artz Public Library, Community Room on Thursday, December 3, 2026, at 6:00 PM at 110 E Patrick St, Frederick, MD 21701. Pre-register to join virtually. (In case of inclement weather, this hearing will be held on December 15, 2026, at the same time and location.)

Town of North East, at Cecil County Public Library, North East Meeting Room on Tuesday, December 8, 2026, at 6:00 PM, at 485 Mauldin Ave, North East, MD 21901. Pre-register to join virtually. (In case of inclement weather, this hearing will be held on December 16, 2026, at the same time and location.)

Town of Easton, at Talbot County Free Library, Main Branch, Main Meeting Room on Monday, December 17, 2026, at 6:00 PM at 100 W Dover St, Easton, MD 21601. Pre-register to join virtually. (In case of inclement weather, this hearing will be held on January 7, 2027, at the same time and location.)

Individuals who require reasonable accommodation or a language interpreter to participate in one of the meetings should contact MDE by email at mde.accommodations@maryland.gov or call 410-537-3152 (MD Relay TTY: 7-1-1) at least 5 business days in advance of the meeting. A video recording and transcript of the public hearings will be made available online.

Comments on this Tentative Determination must be submitted to MDE within 90 days of this notice. The standard 30-day period is extended by 60 days per Section 1-606(d)(1)(ii) of the Environment Article. MDE will respond to all pertinent comments when issuing a Final Determination. Once issued, qualifying interested persons under Section 1-601(c) of the Environment Article will have 30 days to request a judicial review.

To submit comments or request a hard copy of the permit, email Phase2MS4.MDE@Maryland.gov or send via U.S. Mail to the Maryland Department of the Environment, Water and Science Administration, Stormwater, Dam Safety, and Flood Management Program, 1800 Washington Boulevard, Baltimore, Maryland 21230-1708. For more information on this permit and MDE's stormwater program you may contact Deborah Cappuccitti, Stormwater Program Review, at Deborah.Cappuccitti@Maryland.gov.

Table 1. Jurisdictions Designated for Small MS4 Permit Coverage
Aberdeen
Allegany County*
Annapolis
Bel Air
Boonsboro
Bowie
Brunswick
Calvert County
Cecil County
Charlestown*
Delmar*
Easton
Elkton
Emmitsburg
Frederick
Frostburg*
Fruitland
Gaithersburg
Hagerstown
Havre De Grace
Indian Head
La Plata
Middletown
Myersville
New Market*
North East
Perryville
Queen Anne's County
Rising Sun
Rockville
Salisbury
Smithsburg
St. Mary's County
Takoma Park
Thurmont
Walkersville
Washington County
Wicomico County
Williamsport

**New permittee*