



# MARYLAND DEPARTMENT OF THE ENVIRONMENT

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## FACT SHEET

<b>NPDES Permit Number:</b>	<b>MD0068292</b>
<b>MDE Permit Number:</b>	<b>11-DP-3315</b>
<b>Public Comment Expiration Date:</b>	<b>July 19, 2012</b>
<b>Contact:</b>	<b>Brian Clevenger 410-537-3543</b>

The Maryland Department of the Environment, Water Management Administration (MDE/WMA) proposes to issue a National Pollutant Discharge Elimination System (NPDES) permit for Municipal Separate Storm Sewer System discharges to:

**Baltimore City**  
**100 N. Holliday Street**  
**Baltimore, MD 21202**  
**(410) 396-4900**

### Introduction

MDE proposes to renew Baltimore City's 2005 permit authorizing the discharge of stormwater from all municipal separate storm sewer system outfalls owned or operated by Baltimore City. This fact sheet provides basic information about the requirements in the City's draft permit. Contact information and procedures for submitting comments can be found at the end of the fact sheet.

The permit establishes conditions and prohibitions regarding the discharge of stormwater. It also relies on well-established State programs and an adaptive management approach to make continual improvements to the quality of the City's stormwater runoff. Maryland has a long history of developing statewide programs to reduce stormwater pollution, focusing on protecting and restoring the water quality of Chesapeake Bay and its tributaries.

Examples include Maryland's Erosion and Sediment Control Law, passed in 1970, to control runoff from construction sites and the Stormwater Management Law, passed in 1982, that required appropriate best management practices (BMPs) in order to maintain after development, as nearly as possible, the pre-development runoff conditions. Over the years, both programs have undergone significant revisions and enhancements, the most recent being the Stormwater Management Act of 2007 (Act). In addition to other innovative provisions included in a 2000 revision to the State's stormwater program, this legislation required environmental site design (ESD) to the maximum extent practicable (MEP) on all new development and redevelopment projects. These and other stand-alone State programs are incorporated by reference in this draft permit.



## **Permit Authority**

According to 40 Code of Federal Regulations (CFR) §122.26, owners of large and medium municipal separate storm sewer systems must obtain a National Pollutant Discharge Elimination System (NPDES) Permit. This permit is a joint federal and State permit and subject to federal and State regulations. The Clean Water Act (CWA), federal regulations, and numerous guidelines and policies of the United States Environmental Protection Agency (EPA) provide the federal permit requirements. The Annotated Code of Maryland, Environment Article, Code of Maryland Regulations (COMAR), and policies and guidelines of the MDE provide the State permitting requirements.

## **Permit History**

Baltimore City is classified as a large municipality and owns and operates a storm sewer system. The City's initial permit was issued on November 17, 1993 and reissued on February 8, 1999 and January 3, 2005. This proposed permit action is to issue a "fourth-generation" NPDES permit to Baltimore City to regulate the discharge of stormwater runoff from its storm drain system.

This permit represents another step forward for Baltimore City's NPDES municipal stormwater program. In 1993, the City's initial permit laid the foundation for a comprehensive approach to controlling runoff. This was done by inventorying and mapping storm drain system infrastructure; identifying sources of pollution; monitoring storm events to judge chemical, biological, and physical stream responses; and enhancing existing, and establishing new management programs. During subsequent permits, the City evaluated jurisdiction-wide water quality through a comprehensive stream assessment program, prioritized watersheds in order to perform more detailed analyses and guide management implementation, and began to restore existing impervious area.

Conditions of this permit require the City to possess the legal authority to control storm drain system pollutants, continue mapping its storm sewer system, monitor stormwater discharges, and develop and implement comprehensive management programs. New requirements under the permit include increasing impervious area treatment goals, supporting regional trash reduction strategies, and implementing ESD technologies for new and redevelopment projects to the MEP. The City will also be required to develop and implement plans to address stormwater waste load allocations (WLAs) established under EPA approved total maximum daily load (TMDL) estimates. Penalties for failure to comply with the terms of the permit are provided.

## **Regulated Permit Area**

EPA defines "municipal separate storm sewer system" as "...a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body...having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes...; (ii) Designed or used for collecting or conveying storm water;" [CFR 122.26(b)(8)]. Under this definition, anywhere that a regulated jurisdiction "owns or operates" infrastructure that conveys runoff is covered under this NPDES municipal separate stormwater system permit.

In the preamble to the original NPDES stormwater regulations (November 16, 1990), EPA included an extensive "comment and answer" discussion regarding permit area. Much of the discourse revolved around the demarcation of urban and rural areas and how they relate to municipal storm drain systems. "EPA recognizes that some of the counties addressed by today's rule have, in addition to areas with unincorporated urbanized populations, areas that are essentially rural or uninhabited" and "it is the intent of EPA that management plans and other components of the programs focus on the urbanized and developing areas of the county." Congress did not define "municipal separate storm sewer system" within the CWA, thus enabling "States or EPA Regions to define a system that best suits their various political and geographical conditions."

Maryland has historically considered the entire geographic area within the political boundaries of a Phase I NPDES municipal stormwater jurisdiction as the regulated "permit area." Since the inception of the NPDES municipal stormwater program, MDE has considered permit coverage to be jurisdiction-wide. This approach considered the fact that specific permit provisions, such as erosion and sediment control and stormwater management programs, are administered under State statute and as city-wide requirements. As an example, private development requires the City's approval for erosion and sediment control and stormwater management, and is subsequently inspected, maintained, and enforced under local authority. Most jurisdictions also own or operate a comprehensive road system throughout the entire locality that generates stormwater discharges. In this context, the entire jurisdiction can be viewed as the regulated permit area. Finally, as part of its preamble discussing this issue, EPA suggested that permit coverage may include areas where jurisdictions have control over land use decisions. Therefore, MDE defines regulated permit area as jurisdiction-wide and considers all provisions of this permit to apply to the geographic area of the City.

### **Watershed Restoration Area**

To achieve progress toward meeting water quality standards within the City's urban watersheds, this permit requires the City to commence and complete restoration efforts for 20% of the impervious area that is not already restored to the MEP. Similar permit conditions to restore 10% impervious surface area under prior permits have resulted in each Phase I jurisdiction determining what their direct responsibilities are regarding regulated permit area. Additionally, these same permitted jurisdictions are in the process of determining how Chesapeake Bay TMDLs and stormwater WLAs are to be met. MDE believes that some definitive statement regarding the regulated permit area is appropriate given the increased focus on the NPDES municipal stormwater permit program and its role for helping to restore Chesapeake Bay and to meet TMDLs and stormwater WLAs.

Any federal, State, municipal, or industrial properties that are defined in CFR as municipal separate storm sewer systems or industrial stormwater dischargers must obtain separate NPDES general stormwater permit coverage from MDE and will be subject to their own watershed restoration requirements in separate, future permits. For the purposes of determining applicable watershed restoration requirements as well as TMDL loads, these areas shall be subtracted from the City's regulated permit area. Subsequently, any impervious acres associated with these other stormwater permits should not be included in the City's assessment of impervious acres and the 20% requirement for restoration.

## **Stormwater System in Baltimore City**

Baltimore City has experienced population decline in the past two decades, from 736,014 in 1990 to 651,154 in 2000 and 620,961 in 2010 according to the United States Department of Commerce's Census information. Because a majority of Baltimore City's development occurred before the passage of the State's Stormwater Management Act in 1982, retrofitting antiquated storm drain infrastructure will be a priority for improving the water quality in many of the City's waterways.

Baltimore City covers an area of 87 square miles and has approximately 350 "major" outfalls. Major outfalls are defined by federal regulations as:

- An outfall pipe with an internal diameter of 36 inches or greater; or
- A discharge from other than a round pipe that drains fifty acres or more; or
- An outfall pipe with an internal diameter of 12 inches or greater that drains an area that includes land zoned for industrial use.

Stormwater from these outfalls is discharged into the Patapsco/Back River Watershed basin, one of Maryland's ten major Chesapeake Bay tributary basins. A number of stream segments in this basin are impacted by sediments, nutrients, fecal coliform, chlordane, and PCBs. Sixteen TMDLs have been approved and WLAs established for Lake Roland, the Gwynns Falls, the Jones Falls, Baltimore Harbor, Back River, and the Patapsco River. A WLA is that part of an impairing pollutant's total allowable discharge that is attributed to regulated point sources. Information regarding TMDLs in general, as well as Baltimore City specifically can be found at:

<http://mde.maryland.gov/programs/Water/TMDL/Pages/Programs/WaterPrograms/TMDL/index.aspx>

## **Maryland's NPDES Municipal Stormwater Permit Requirements**

The goals of Maryland's NPDES municipal stormwater permit program are to control stormwater pollutant discharges by implementing to the MEP the BMPs and programs required by this draft permit, show a reduction of pollutants pursuant to EPA approved TMDLs, and improve water quality. Compliance with the conditions in this permit will reduce pollutant discharges from Baltimore City's storm drain system. The permit requires implementation plans and measurable and steady reductions in pollutants to meet WLAs through an adaptive management process. Where EPA approved TMDLs have been established, an iterative approach is required to identify the additional or alternative stormwater controls that will need to be implemented in order to achieve WLAs.

The City will be required to regularly review and refine its BMPs to reduce pollutants to the MEP and show a net reduction in pollutant loadings over the five-year permit term. The City will evaluate and document progress toward meeting WLAs within its jurisdiction on an annual basis. This assessment will include a description of specific efforts undertaken to achieve compliance with EPA approved TMDLs.

## **Management Programs**

### **Stormwater Management**

The permit requires Baltimore City to implement a stormwater program in accordance with the Environment Article, Title 4, Subtitle 2, Annotated Code of Maryland

(<http://www.michie.com/maryland/lpext.dll?f=templates&fn=main-h.htm&cp=mdcode>)

and COMAR 26.17.02 (<http://www.dsd.state.md.us/comar/SearchTitle.aspx?scope=26>) .

Requirements of this program include stream channel protection, water quality treatment, and the incorporation of ESD to the MEP for all new developments and redevelopment projects in the State, with the goal of maintaining predevelopment runoff characteristics. Maryland's standard for determining the predevelopment characteristics is "woods in good condition" and equates to the management of all rain events up to approximately 2.7 inches in depth.

All jurisdictions in the State, including Baltimore City, are required to maintain and implement a stormwater management ordinance that is in compliance with the requirements of Maryland's stormwater program. These requirements include ensuring the proper construction and maintenance of all stormwater management features, through timely inspections of new ESD practices and structural stormwater management facilities as well as triennial inspections of completed ESD treatment systems and structural facilities. Maintenance procedures, including triennial inspection policies, are described in COMAR 26.17.02.11 .

By following the conditions in its approved ordinance, including mimicking natural hydrologic runoff characteristics, designing new projects to meet the "woods in good condition" criteria, and implementing ESD to the MEP, the City will be in compliance with this permit condition and with the requirements under 40 CFR for post-construction stormwater management. Additionally, adherence with the State's program should result in little or no additional pollutant loading from new development in a given watershed.

### **Erosion and Sediment Control**

The permit also requires the City to implement an erosion and sediment control program in accordance with the Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland

(<http://www.michie.com/maryland/lpext.dll?f=templates&fn=main-h.htm&cp=mdcode>)

and COMAR 26.17.01 (<http://www.dsd.state.md.us/comar/SearchTitle.aspx?scope=26>). By reference,

this requires the City to ensure that all projects disturbing more than 5,000 square feet have an approved erosion and sediment control plan; to regularly inspect all active projects; to maintain an effective enforcement program; and to have procedures to respond to complaints and violations regarding erosion and sediment control issues. Additionally, MDE regularly reviews the City's program and has minimum standards for the design and content of erosion and sediment control plans. While Maryland has had a model erosion and sediment control program for over forty years, incorporation of the program by reference in this permit will further ensure compliance with State requirements and improved runoff conditions.

### **Illicit Discharge Detection and Elimination**

The permit requires the City to ensure that all non-stormwater discharges to and from its storm sewer system, when found, are either permitted by MDE or eliminated. This can be accomplished by maintaining a robust inspection and oversight program, including the ability to take appropriate action

when illicit discharges do occur. As part of this program, Baltimore City is required to monitor all major storm drain outfalls each year, looking for illicit discharges. The City is also required to develop and maintain procedures for investigating complaints and handling enforcement actions. Additionally, routine surveys of commercial and industrial areas are required.

### **Trash and Litter**

An additional management program has been included in the permit requiring Baltimore City to support and implement strategies to reduce trash and increase recycling. The permit requires the City to evaluate current trash and litter control efforts, bolster public education, and develop additional strategies within those areas draining to a water body impaired by trash.

### **Property Management and Maintenance**

This program requires Baltimore City to submit a Notice of Intent and develop a pollution prevention plan for all City-owned facilities requiring coverage under the General Discharge Permit for Stormwater Associated with Industrial Activities. Currently, all City facilities requiring coverage have received it and have developed pollution prevention plans. These plans include an assessment of the property, focusing on activities that may contaminate stormwater runoff, and the implementation of BMPs to eliminate or treat any non stormwater discharges.

As a condition in the permit, the City will continue its efforts to reduce pollutants associated with the maintenance of City properties. Inlet cleaning, street sweeping, and litter pickup programs are all activities currently undertaken by Baltimore City along its roadways. Additionally, the City is reducing the use of pesticides, herbicides, and fertilizers and evaluating various applications of deicing materials. The permit language has been changed from the previous permit so that this program applies to all City property (e.g., parks), not just along roads and streets.

### **Public Education**

Public education has been an ongoing requirement of previous permits and is included currently. Baltimore City is an active member of local watershed groups, coordinates local clean-up days, and participates in public educational opportunities at local schools and community events. The City must continue to implement a program that includes information about stormwater runoff, water conservation, trash reduction and recycling, lawn care management, and provides a mechanism for reporting suspected illicit discharges and spills.

### **Total Maximum Daily Loads (TMDLs)**

#### **Watershed Assessments**

Baltimore City will identify and link sources of pollutants in stormwater runoff to specific water quality impacts on a watershed basis. The permit requires the City to conduct a systematic assessment of water quality for each watershed. These watershed assessments are to include detailed water quality analyses, identification of water quality improvement opportunities, and development and implementation of restoration plans to control stormwater discharges.

Assessment of controls is critical to determine the effectiveness of the NPDES stormwater management program. Therefore, chemical, biological, and physical monitoring will be required to document progress toward improving water quality and meeting applicable WLAs developed under

EPA approved TMDLs. Similarly, program activity measures (e.g., number of illicit discharges found and eliminated, pounds of material removed from storm drain inlets) will be used to measure program implementation and progress toward meeting water restoration goals.

### **Restoration Plans and Guidance**

This permit requires the City to submit a restoration plan for each EPA approved stormwater WLA. These plans will include a detailed schedule for implementing stormwater water quality projects, enhanced stormwater management programs, and alternative stormwater management initiatives necessary for meeting applicable stormwater WLAs. As described in the permit and in Maryland's Watershed Implementation Plan (Plan), the restoration plans will also involve developing an ongoing, iterative process for the implementation of projects and programs.

The permit and the Plan require the additional restoration of 20% of the City's impervious surface area not already restored to the MEP. Restoration of impervious area to the MEP means implementing specific programs and water quality improvement projects to meet WLAs and water quality standards. The recently published MDE document "Accounting for Stormwater Wasteload Allocations and Impervious Areas Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits" standardizes procedures for the reporting of traditional, new, and alternative BMPs and the impervious area they control. This document also provides information on how to calculate impervious surface and stormwater baseline loads and BMP pollutant removal efficiencies for showing progress toward meeting stormwater WLAs for NPDES accounting purposes. MDE will use this document to measure program implementation and progress toward meeting water restoration goals.

### **Public Participation**

Baltimore City will allow for public participation during the development of its watershed assessments and restoration plans. As part of this permit condition, the City must provide notice of its procedures for the public to obtain information and offer comment on the assessments and plans. A minimum 30 day comment period is required prior to finalizing any assessments or plans.

### **TMDL Compliance**

The permit requires Baltimore City to submit an annual TMDL assessment report evaluating the effectiveness of the City's restoration plans and progress made in achieving compliance with EPA approved TMDLs. Included in the report will be estimated pollutant load reductions from all completed structural and nonstructural water quality improvement projects, enhanced stormwater management programs, and alternative stormwater control initiatives. If necessary, a plan will also be included for implementing additional watershed restoration actions that can be enforced when benchmarks, deadlines, and applicable stormwater WLAs are not being met or when projected funding is inadequate.

### **Assessment and Reporting**

The City will be required to continue monitoring an approved watershed to determine the effectiveness of stormwater management practices for channel protection. Additionally, chemical, biological, and physical monitoring is required to assess the cumulative effects of watershed restoration activities. The draft permit also requires the continued submittal of an annual report to MDE detailing the status

of the various permit conditions and an evaluation of the effectiveness of the specific program components the City has selected and implemented.

### **Special Programmatic Conditions**

Baltimore City will be required to coordinate with the Chesapeake Bay TMDL. The City will also continue to work toward the completion of the State's Water Resources Element as required by the Maryland Economic Growth, Resource Protection and Planning Act of 1992 (Article 66B, Annotated Code of Maryland). The projects and programs proposed under this draft permit, as well those implemented during the City's previous stormwater permits and as part of the other State and local regulations all work toward meeting both of these conditions.

### **Enforcement and Penalties**

The permit regulates the discharge of stormwater through Baltimore City's municipal separate storm sewer system. It also requires the City to take all reasonable steps to minimize or prevent discharges that are in violation of permit conditions. Failure to comply with a permit is a violation of the CWA and is grounds for enforcement action; penalty assessment; permit termination, revocation, or modification; or denial of a permit renewal application.

EPA affirmed in the preamble to its Municipal Separate Storm Sewer System Phase II Stormwater Rule (FR Vol. 64, No. 235, 68731) that water quality-based controls, when implemented through the iterative process defined herein as the terms and conditions in this draft permit, are appropriate for the control of the discharge of pollutants from the City's municipal separate storm sewer system and will result in reasonable progress toward attainment of water quality standards. Successive iterations of the mix of BMPs and measurable goals will be driven by the objective of assuring maintenance of water quality standards.

### **Summary**

This permit represents another step forward for Baltimore City's NPDES municipal stormwater program. The City's initial permit laid the foundation for a comprehensive approach to controlling runoff. This was done by inventorying and mapping storm drain system infrastructure; identifying sources of pollution; monitoring storm events to judge chemical, biological, and physical stream responses; and enhancing existing, and establishing new management programs. The second and third permits, along with other Phase I permits in the State, built one of the most progressive municipal stormwater programs in the Mid-Atlantic Region. The City evaluated jurisdiction-wide water quality through a comprehensive biological stream assessment program, prioritized watersheds in order to perform more detailed analyses to guide management implementation, and began to restore existing impervious area.

The permit requires an additional twenty percent of the City's impervious area to be restored, strategies for reducing trash and litter to be developed, and TMDL implementation plans to be carried out according to the City's schedule in order to meet stormwater WLAs established for impaired waters. All of these requirements are in addition to existing city-wide management programs and ongoing

monitoring efforts and will go a long way toward making the City's and State's NPDES municipal program arguably one of the best in the country.

### **Public Review and Participation Opportunities**

Upon issuance, the tentative determination will be available on MDE's website at (<http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/SedimentandStormwaterHome/Pages/Programs/WaterPrograms/SedimentandStormwater/home/index.aspx>)

Copies of the document may also be procured at a cost of 36¢ per page. Written requests for copies should be directed to Mr. Brian Clevenger, Maryland Department of the Environment, Water Management Administration, Sediment, Stormwater and Dam Safety Program, 1800 Washington Boulevard, Suite 440, Baltimore, Maryland 21230-1708. Additional information on stormwater management can also be found on MDE's website or by calling Mr. Clevenger at 410-537-3543 or 1-800-633-6101.

Once tentative determination is issued, the public will have 20 days to request a hearing and 30 days to provide written comments. If no hearing request is made nor comments received, the tentative determination will be final. If requested, a public hearing will be held within one month of notification. MDE will prepare a written response to comments and written testimony received at the hearing prior to issuing a final determination. Final determination will be issued within one month of the hearing, after which the public has 15 days to request a judicial review.