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Efforts to improve water quality under the NPDES program have traditionally focused on reducing pollutants in discharges of industrial process wastewater and municipal sewage. As pollution control measures have been implemented for these discharges, it has become evident that diffuse sources of water pollution are also major contributors to water quality degradation. Past studies, including the Nationwide Urban Runoff Program (NURP) study (EPA 1983), have shown that storm water runoff from urban and industrial areas typically contain the same general types of pollutants that are often found in industrial wastewater discharges, with similar impacts on surface water quality. Pollutants commonly found in storm water runoff include heavy metals, pesticides, nutrients and synthetic organic compounds such as fuels, waste oils, solvents, lubricants and grease. These substances can have damaging effects on both human health and aquatic ecosystems. In addition, the high volumes of storm water discharged from municipal separate storm sewer systems in areas of rapid urbanization have had significant impacts on aquatic ecosystems due to physical modifications such as bank erosion and widening of channels.

With the growing concern and realization that storm water runoff, including both urban storm water and runoff from industrial sites, greatly contributes to surface water quality impairment, Congress added specific provisions to the CWA in 1987 (the Water Quality Act of 1987) to address storm water. To view these provisions, see section 402(p) of the CWA, 33 U.S.C. § 1342(p). Congress directed the EPA to develop regulations and require NPDES permits for discharges of storm water from sites of industrial activities and from large and medium sized urbanized areas.

In 1990, EPA published its municipal storm water regulations for medium and large cities or certain counties with populations of 100,000 or more. 55 Fed. Reg. 47990 (Nov. 16, 1990). The Phase II MS4 program, issued in 1999, requires the small MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their storm water discharges. 64 Fed. Reg. 68722 (Dec. 8, 1999). The Delaware DNREC was designated in 1992 as the NPDES permitting authority in Delaware under a Memorandum of Agreement between EPA Region III and DNREC.

**Activity Description**

A “municipal separate storm sewer system” is defined by the US EPA 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;” [40 C.F.R. § 122.26(b)(8)].

**Statutory and Regulatory Basis**

The Department proposes to issue this General Permit to those designated entities subject to the discharge limitations, terms and conditions outlined in the permit. Section 402 of the Federal CWA of 1977, as amended by the Water Quality Act of 1987 and as subsequently modified, and the implementing regulations at 40 CFR 122, as well as the state statute, 7 Del. C., Chapter 60.
**Permit History**

DNREC released a pre-notice draft Phase II General Permit in 2015 and received public comments until January 31, 2016. Many commenters noted problems with resource limitations, misunderstandings about regulatory requirements and proposed timelines. In general, the regulated community expressed serious concerns with the ability to meet substantive and administrative aspects of the proposed General Permit. DNREC reviewed the public comments and has responded with a new proposal that has been revised substantially. The Phase II MS4 Tier I General Permit is designed for those MS4s that currently hold a NPDES MS4 permit issued by the Department. The following permits DE0051152, DE0051144, DE0051161, and DE0051209 will be subsumed into this General Permit upon issuance.

**Receiving Waters and Stream Classification**

The State of Delaware is composed of four major drainage basins: the Piedmont, the Delaware Estuary, the Chesapeake Bay and the Inland Bays/Atlantic Ocean. These are further divided into forty-five sub-watersheds and assigned Hydrologic Unit Codes by the US Geological Survey. Under Section 303(d) of the Clean Water Act, DNREC is required to identify streams that do not meet water quality standards and to develop pollutant limits for these streams, called Total Maximum Daily Loads (TMDLs). The State’s 2509 miles of streams and 2954 acres of lakes, reservoirs and ponds are designated by DNREC for public or industrial water supply, primary or secondary contact recreation, fish, aquatic life and wildlife, cold water fish, agricultural water supply, harvestable waters or Exceptional Recreational and Ecological Significance uses. According to the 2012 305(b) report submitted to EPA, DNREC has determined that 85% of Delaware’s rivers and streams do not fully support the swimming use and 94% do not fully support the fish and wildlife use. Most of these waters do not meet the standards because of the contribution of pollutants from diffuse sources, such as those carried by storm water to the MS4.

**Proposed Permit Term and Conditions**

The Department proposes to issue this NPDES permit to small new MS4 entities for a period not to exceed five (5) years. Goals, limitations, monitoring requirements and other terms and conditions are described in the draft permit.

Conditions of this permit require the covered entities to possess the legal authority to: (1) control non-point source pollutants that enter the storm sewer systems, and (2) develop and implement management programs to minimize the pollutant contribution to and from the MS4.

**Basis for Proposed Discharge Limitations and Other Permit Conditions**

Storm water runoff picks up pollutants as it runs over the land surface. The quality of the storm water discharged to and from a MS4 depends upon the sources of pollutants. Minimizing such pollutant sources and the potential for exposure to them reduces the pollutant impact of storm water discharges. With this in mind, DNREC promotes a source reduction/pollution prevention approach for managing storm water runoff. Examples are sedimentation and erosion control programs for construction and land disturbing activities; land use planning and ordinances in
those areas subject to new development or redevelopment; public education and training programs; spill response and cleanup programs; and programs to detect and eliminate, unauthorized non-storm water discharges to the MS4. 

DNREC developed the discharge goals, limitations, terms and conditions outlined in the draft permit to further the policy and purposes of Title 7, Del. C., Chapter 60 and to achieve the water quality protection goals of the Federal CWA and its implementing regulations.

The statutory provisions governing discharges from MS4s are contained in Section 402(p)(3)(B) of the CWA, 33 U.S.C. § 1342(p)(3)(B), as amended. In general, Congress provided that permits for discharges from MS4s:

- may be issued on either a system-wide or jurisdiction-wide basis;
- shall prohibit any non-storm water discharges into the MS4s; and
- shall require controls to reduce the discharge of pollutants from MS4s to the maximum extent practicable.

This general permit follows the Phase II regulations of 40 C.F.R. 122.34, including specific “minimum control measures” – public education, public involvement, illicit discharge detection and elimination, construction and post-construction controls, and pollution prevention/good housekeeping for municipal operations. The regulations at 40 CFR 122.34 state that the use of BMPs in the implementation of the minimum control measures (MCMs) constitutes compliance with the narrative water quality criteria that apply to small new MS4s. The written plan to institute these MCMs is the required Storm Water Pollution Prevention and Management Plan (SWPP&MP). The BMPs require the MS4 to consider water quality in the development of the stormwater plan, so the permittee is expected to select and implement BMPs that address water quality concerns. There is no regulatory requirement to perform wet weather sampling, and the permittees are not required by the terms of this permit to collect or analyze stormwater samples.

In Delaware, the State has published reports on water quality impairments on its CWA Section 303(d) list, and has developed Total Maximum Daily Loads (TMDLs) pursuant to 40 CFR 130.7. Also, the State, in conjunction with watershed groups and other interested parties has developed Watershed Management/Implementation Plans and Pollution Control Strategies for implementing TMDLs, and has published these plans at http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedManagementPlans.aspx. The permittee should review these plans for the watershed that receives discharges from their MS4, and must adapt their SWPP&MP to the relevant Watershed Management Plan.

All the small new MS4s subject to the Tier II General Permit are located in Kent or Sussex County, where the TMDL pollutants of concern are total nitrogen, total phosphorus, dissolved oxygen and bacteria. The TMDLs state that the sources of these pollutants include agriculture, human waste, animal waste and sediment. MS4s do not have legal authority directly address agricultural sources of TMDL pollutants, but their efforts can be directed toward managing human waste, pet waste and sediment originating from within their municipal boundaries.

Examples of actions to reduce the discharge of pollutants prescribed for towns in the Watershed Plans include removing individual onsite wastewater systems, using low impact development
techniques to reduce runoff from construction sites and educating the public about water quality and urban sources of nutrients.

In order to comply with the requirements of the general permit, the permittee must identify the waters that receive discharge from their MS4, review the relevant Watershed Management Plan, review the EPA BMPs for each Minimum Control Measure, select appropriate BMPs to control the relevant pollutants, and describe the BMPs, including measuring techniques the permittee will use to determine whether the BMP was effective, in the SWPP&MP. The SWPP&MP is then submitted to DNREC and is subjected to notice and comment publication as “Option 2, Procedural Approach” in accordance with EPA’s National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System General Permit Remand” Rule.

**Storm Water Pollution Prevention and Management Program**

Under the draft General Permit, the permittee must develop and implement a Storm Water Pollution Prevention and Management Program (SWPP&MP) designed to control the quality of the storm water discharged from its MS4. The SWPP&MP must also outline measures that will reduce the discharge of pollutants from the MS4 and include a schedule for implementation.

The SWPP&MP focuses on the minimum control measures required by 40 C.F.R. § 122.34.

**Public Education/Public Involvement**

The permit requires the permittees to develop and implement a public education strategy and to conduct a public education survey. EPA has supplied resources and examples to assist the permittees in implementing a public education strategy. For example, see EPA’s “Getting in Step” guides and the EPA Nonpoint Source Outreach Toolbox [http://cfpub.epa.gov/npstbx/index.html](http://cfpub.epa.gov/npstbx/index.html). In addition, the Delaware Nursery and Landscape Association (DNLA) administers’ a “Livable Lawns” program. Permittees may satisfy the public education portion of the general permit by ensuring that the Livable Lawns literature is distributed within its jurisdiction and being prepared to answer or refer to the right contact within any questions from the public about the program.

Similarly, municipalities may coordinate with DNLA to provide public participation in its programs within the municipality’s jurisdiction. Any MS4 that seeks to comply with the general permit by coordinating with DLNA should be prepared to provide evidence of this coordination and the activities within the jurisdiction through returned surveys with addresses from the jurisdiction, memorandum of understanding with DLNA or other tangible evidence in the event of a DNREC or EPA inspection.

**Illicit Discharge Detection and Elimination**

The permittees are required to implement an illicit discharge detection and elimination (IDDE) program, and must maintain and enforce an ordinance that prohibits the discharge or disposal of used motor vehicle fluids, household hazardous wastes, grass clipping, leaf litter, domestic
animal wastes, sanitary sewer overflows (SSOs), and any other non-stormwater discharge to the system.

*Industrial Storm Water*

The permit requires the Phase II MS4 permittees to notify the Department in adding to the inventory of those industrial facilities if they become aware of new facilities in their jurisdiction that are subject to the State of Delaware’s Regulations Governing the Control of Water Pollution (Section 9.1 Industrial Storm Water Program).

*Mapping Requirement*

The permit requires the permittees to develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and locations of all waters of the United States that receive discharge from those outfalls. The permittees must annually revisit and update, as necessary, storm sewer and BMP mapping information.

*Construction and Post-Construction Storm Water Management*

The permittees are required to have a program to manage construction and post-construction storm water runoff. The Department has promulgated Sediment and Stormwater Regulations to control runoff from construction and post construction activities. The county conservation district of each county has been delegated authority to enforce these regulations. If the county conservation district reviews and enforces the state regulations within the boundaries of the MS4, the permittee must state this in the SWPP&MP. Since the state regulations are intended to control the discharge of stormwater from construction and post construction sites, the Department views this program as compliance with the MEP standard.

*Good Housekeeping*

The permittee is required to develop and implement a good housekeeping program that is designed to prevent and/or minimize discharges of pollutants associated with the permittee’s operations. The good housekeeping program must include: an employee training program; an inventory of all facilities owned or operated by any of the permittees located in the MS4 area, a street sweeping program, a program to reduce the contribution of pollutants associated with the application, storage and disposal of pesticides, herbicides, and fertilizers from permittees’ areas and activities; a program to manage pollutants associated with snow and ice management, including salt storage and alternate deicing practices, and a program to control litter on streets and highways, including the proper disposal of collected materials.

In addition, the Phase II Tier I General Permit includes the following requirements in accordance with 40 C.F.R. § 122.34(c) and (d).
**TMDL Plan**

The TMDL Plan will utilize the iterative implementation of programmatic BMPs that are designed to prevent, reduce, or remove the pollutants identified in the TMDL LAs. Working toward meeting TMDL LAs will be accomplished by implementing all components required to be included in the SWPP&MP and the development of a TMDL Plan with full implementation within year three (3) of the permit term.

**TMDL Performance Monitoring Plan**

The TMDL Performance Monitoring Plan is designed to demonstrate progress toward achieving applicable water quality standards. The evaluation will use water quality monitoring results or modeling tools to estimate pollutant reductions and determine the effectiveness of the TMDL Plan. Monitoring may include BMP, outfall, or in-stream monitoring, as appropriate, to estimate pollutant reductions. The permittee may conduct monitoring, utilize existing data, establish partnerships, or collaborate with other MS4 operators or other third parties, as appropriate. The methodology used for assessment will be described in the TMDL Plan. The monitoring plan is also expected to identify and prioritize portions of the MS4 that require additional pollutant controls.

**Dry Weather Screening Plan**

The general permit requires the permittee to implement a program to detect illicit discharges. Where such discharges are identified, the permit requires appropriate corrective action, by either elimination of the discharge or by obtaining an NPDES permit for these discharges.

**In-Stream Monitoring**

The general permit allows state 305(b) reports to be used as a substitute for in-stream monitoring, if adequate, as determined by the Department, to meet the goals of the SWPP&MP. However, the permittee may choose to provide in-stream monitoring data as part of their TMDL Plan to support goals of TMDL within the MS4 area.

**Evaluation of the SWPP&MP**

The general permit requires the permittee to conduct a comprehensive effectiveness analysis of the SWPP&MP, with analysis measures to be described in a SWPP&MP monitoring plan that is included with the SWPP&MP. The analysis will quantify the associated expected load reductions to estimate the anticipated progress toward meeting all applicable LAs, and the progress toward meeting the program’s goals and objectives as outlined within the SWPP&MP. The analysis will further determine whether the implementation of the current and revised BMPs identified in the SWPP&MP are sufficient to make progress toward meeting LAs or if implementation of additional BMPs beyond those selected are necessary.
Public Notice and Process for Reaching a Final Decision

The public notice of the Department’s issuance of the General Permit outlined herein will be published in the Wilmington News Journal and the Delaware State News on XXXX #, 2017. Interested persons are invited to submit their written views on the draft permit and the tentative determinations made with respect to this NPDES draft permit. The Department will not hold a public hearing on this application unless the Department receives a meritorious request to do so or unless the notice of this proposal generates substantial public interest. A public hearing request shall be deemed meritorious if it exhibits a familiarity with the application and a reasoned statement of the permit’s probable impact. The request for a public hearing shall be in writing and shall state the nature of the issues to be raised at the hearing. All comments received by the close of business at 4:30 pm on XXXX #, 2017, will be considered by the Department in preparing the final permit.

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References:
